FLUID CONNECTORS

PRODUCT RANGE



ENGLISH/ESPAÑOL

manuli®
RUBBER INDUSTRIES

FLUID CONNECTORS PRODUCT RANGE

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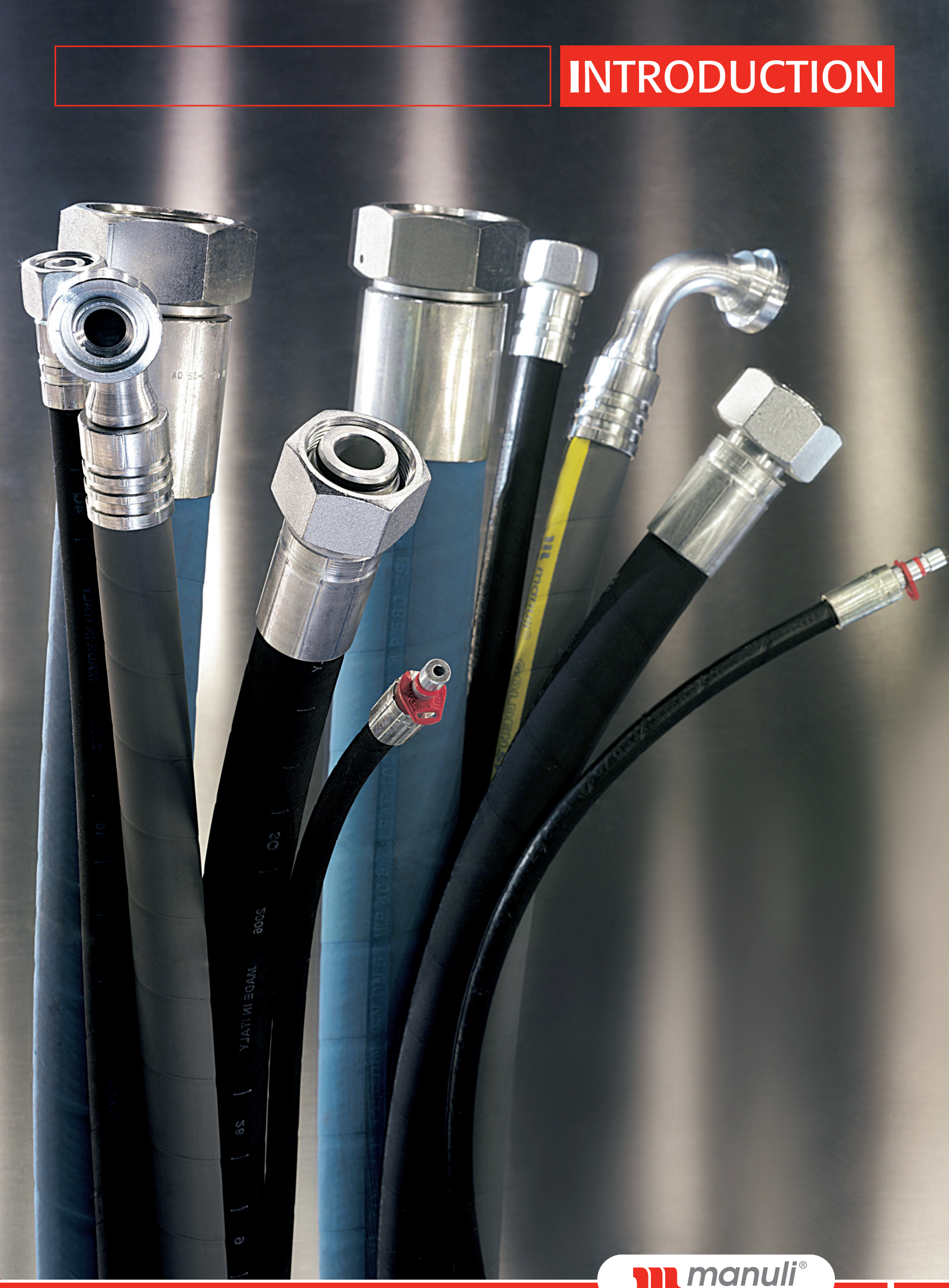
INTRODUCTION



ENGINEERING FOCUS

ENFOQUE DEL ENGINEERING

MISSION

Manuli Hydraulics Group is active in the design, manufacture and sale of a wide range of hoses, connectors and machines for conveying power in high/very high pressure hydraulic circuits and fluids in refrigeration units.

The MRI Group's offer consists of:

- Hose assemblies for high and very high pressure hydraulics systems
- Hose assemblies and hose kits for mobile refrigeration systems
- Wire spiral reinforced rubber hoses
- Wire braid reinforced rubber hoses
- Textile braid reinforced rubber hoses
- Reinforced thermoplastic hoses
- Metal fittings
- Quick couplings
- Adaptors
- Staple-lock adaptors and fittings for underground mining applications
- Assembling machines
- Other fluid connectors

MISION

Manuli Hydraulics Group es activo en el diseño, fabricación y venta de la amplia gama de mangueras, racores y máquinas para circuitos hidráulicos de alta y muy alta presión y fluidos en unidades de refrigeración.

La oferta de Manuli consiste en:

- Latiguillos para sistemas hidráulicos para alta y muy alta presión
- Latiguillos y kits de mangueras para sistemas mobiles de refrigeración
- Mangueras con refuerzo espiral
- Mangueras con refuerzo de malla
- mangueras con refuerzo textil
- mangueras termoplásticas reforzadas
- Racores
- Enchufes Rápidos
- Adaptadores
- Racores y Adaptadores Staple-lock para aplicaciones de minería
- Máquinas de ensamblaje
- Otros conectores ded fluidos



MADE IN manuli®

MANULI COMPLETE OFFER:

HOSES ▪ FITTINGS ▪ QUICK COUPLINGS ▪ ADAPTORS ▪ MANIPULATED TUBES ▪ ASSEMBLING MACHINES ▪ HYDRAULIC AND REFRIGERATION ASSEMBLIES ▪ HOSE PROTECTIONS

Manuli products are used in the following applications: construction and public works, underground and open pit mining, maintenance services, forestry, agriculture, waterblasting and cleaning,refrigeration, material handlingand logistics, industrial machines,industrial services, energy, other industrial applications.

Los productos de Manuli se utilizan para lo siguiente: obras de construcción pública, minería subterránea y a cielo abierto, servicios de mantenimiento, forestal, agricultura, hidroaspiración e hidrodepuración, refrigeración, logística y tratamiento de materiales, máquinas industriales, servicios industriales, energía, y otros usos industriales.

manuli® RUBBER INDUSTRIES

R&D AND CERTIFICATIONS

I+D Y CERTIFICADOS

Technological and product innovation is carried out at the Aldo Occari Technology and Product Development Centre (AOTC) intense research activity.Playing a strategic role in the business and with continuous and significant investments, the Aldo Occari Technology and Product Development Centre employs more than 30 professionals, skilled in:

- rubber technology and materials development
- hydraulic and refrigeration applications
- hose and fittings technology development
- advanced design methodologies (engineering, CAD design, technical benchmarking, FMEA analysis, etc.)
- integrated hose and fittings design
- development of assembling machines and instructions
- technical service and application engineering.

Aldo Occari Technology and Product Development Centre activities encompass the development of co-design projects in confidential alliances with Original Equipment Customers (OEM). The two partners benefit from exchanging know-how and the cooperation helps Manuli to better understand the ever demanding requirements of fluid conveying applications. Enhancing still further MRI's capability and expertise in providing complete fluid connector solutions.

En el Centro de Desarrollo Tecnológico y del Producto Aldo Occari (AOTC), de intensa actividad de investigación, se lleva a cabo innovación tecnológica y del producto.Jugando un papel estratégico en el sector y con inversiones importantes y continuas, el Centro de Desarrollo Tecnológico y del Producto Aldo Occari da empleo a más de 30 profesionales, calificados en:

- tecnología de caucho y desarrollo de materiales
- aplicaciones hidráulicas y de refrigeración
- desarrollo tecnológico de accesorios y mangueras
- metodologías de diseño avanzado (ingeniería, diseño CAD, benchmarking, análisis FMEA, etc.)
- diseño de accesorios y mangueras integradas
- desarrollo de máquinas de montaje e instrucciones
- servicio técnico e ingeniería aplicada.

Las actividades del Centro de Desarrollo Tecnológico y del Producto Aldo Occari acompañan el desarrollo de los proyectos de diseño mediante relaciones confidenciales con fabricantes de maquinaria (OEM). Los dos socios se benefician del intercambio de conocimientos y la cooperación permite a Manuli comprender mejor los altos requisitos de las aplicaciones para el transporte de flujo. Ampliando aún más la capacidad de MRI y la especialización en oferta de soluciones para la conexión de flujo.

ALDO OCCARI
TECHNOLOGY & PRODUCT
DEVELOPMENT CENTRE

Certifications of MRI plants worldwide

Certificaciones de plantas MRI

ISO 9001:2000/9002 for Quality Assurance

- Manuli Rubber Industries (I)
- Manuli Hydraulics (Suzhou) (P.R.C.)
- Manuli Hydraulics Polska (PL)
- Manuli Hydraulics Europe (CZ)
- Manuli Hydraulics U.K. (U.K.)
- Manuli OTIM (F)
- Manuli Hydraulics Korea (K)
- Techmaflex (F)

ISO 14001:2004 for Environmental Management

- Manuli Rubber Industries (I)
- Manuli Hydraulics Korea (K)
- Manuli Hydraulics Polska (PL)
- Manuli Hydraulics Europe (CZ)
- Manuli Hydraulics (Suzhou) (P.R.C.)

OHSAS 1800: 1999 certified plants

- Manuli Rubber Industries (I)
- Manuli Hydraulics (Suzhou) (P.R.C.)

The AOTC main goalis to offer the best value added systems to Manuli customers, in terms of quality, range of products, cost saving, technical assistance, problem solving, and marketing services.

El objetivo principal del AOTC es el de ofrecer los sistemas de mayor valor añadido para los clientes de Manuli, en términos de calidad,gama de productos, reducción de costes, asistencia técnica, resolución de problemas, y servicios de marketing.

ENGINEERING FOCUS

ENFOQUE DEL ENGINEERING

THE MANULI NETWORK

Manuli Rubber Industries provides technical competence and commercial support throughout:

SALES FACILITIES in Europe, Asia, North, South and Central America;

OEM ASSEMBLING UNITS in Europe, Asia and South America;

A PREMIER DISTRIBUTOR NETWORK with a wide-spread presence all over the world.

www.manuli-hydraulics.com offers a wide range of product and value-added services, such as:

- technical products database and related approvals
- product assembler, fluid compatibility and pressure loss tools
- e-learning platform
- e-merchandising & e-advertisement areas
- order entry and order tracking
- claim management
- Premier Distributor area
- e-draulics news.

LA RED MANULI

La amplia red de oficinas de ventas está distribuida alrededor del mundo como sigue:

OFICINAS DE VENTAS en Europa, Asia y Pacifico, América del Norte, Centroamérica y Suramérica;

UNIDADES DE ENSAMBLE PARA EQUIPO ORIGINAL en Europa y Asia;

LA RED DE PREMIER DISTRIBUTORS con presencia en todo el mundo.

Un CLICK con la red de ventas se realiza a través del nuevo portal www.manuli-hydraulics.com, lanzado para ofrecer:

- base de datos de productos técnicos y correspondientes Certificaciones
- herramientas para el ensamble de producto y guía de compatibilidad de fluidos
- plataforma E-learning
- áreas de Promociones y Notas de prensa
- ingreso y registro directo de pedidos
- reclamaciones
- localización de Premier Distibutora por pais
- noticias de interés en el campo hidraulico.

www.manuli-hydraulics.com



Manuli network guarantees availability of its products and services worldwide.

La red de Manuli garantiza la disponibilidad de productos y servicios alrededor del mundo.

THE COMPLETE PACKAGE

UN PAQUETE COMPLETO

HOSE LINE

Manuli Rubber Industries has established a worldwide market recognition for superior performance, reliability and long lasting durable products.

Hydraulic hose range & assemblies

- UNIVERSAL HOSE RANGE
  meeting and, in many cases, exceeding the main International Standards (SAE, DIN, EN, ISO).
- EXTREME HOSE RANGE
  offering products designed to guarantee superior performance which exceeds the standards in terms of:
  - extreme temperature resistance
  - superior abrasion resistance
  - flame retardant cover
  - very high pressure resistance
  - extreme ozone and weather resistance
  - superior flexibility, compactness and lightness.
- SPECIAL HOSE RANGE
  offering hose assemblies designed to satisfy demands of specific applications in heavy duty working conditions.

Refrigeration hose range, assemblies and kits

Reinforced rubber hoses, fittings & hose assemblies for air conditioning and mobile refrigeration systems.





LINEA DE MANGUERAS

Manuli Rubber Industries es reconocida en el mercado mundial por su rendimiento superior, seguridad y productos de larga durabilidad.

Gama de mangueras hidraulicas

- GAMA UNIVERSAL DE MANGUERAS
  Cumpliendo y en algunos casos excediendo las principales especificaciones internacionales (SAE, DIN, EN, ISO).
- GAMA EXTREMA DE MANGUERAS
  Estas mangueras están diseñadas para garantizar un rendimiento superior en donde exceden los estándares de fabricación como:
  - alta resistencia a la temperatura
  - superior resistencia a la abrasión
  - cubierta ignifuga
  - resistencia a presiones muy altas
  - gran resistencia al ozono y humedad
  - mangueras muy flexibles, compactas y ligeras.
- GAMA DE MANGUERAS ESPECIALES
  Fabricación de ensambles diseñados para aplicaciones especiales en condiciones de trabajo pesado.

Gama de mangueras y ensambles para refrigeración

Mangueras de caucho reforzadas, ensambles y conexiones para aire acondicionado y unidades móviles de refrigeración.

MRI full hose range is universally recognized for its high performance, superior quality and long-lasting durability.

Toda la gama de mangueras MRI es reconocida a nivel mundial por su rendimiento, calidad y gran durabilidad.

manuli® RUBBER INDUSTRIES

THE COMPLETE PACKAGE

UN PAQUETE COMPLETO

FITTINGS LINE

The MRI crimped fittings range is composed of more than 2000 references meeting the most common international standards (SAE, DIN, BSP, JIC, ORFS, etc.) and specific requirements set by important OEMs.

eCOAT™ The Manuli fittings range with the new eco friendly zinc plating treatment with improved corrosion resistance.
All MF2000 and MF3000 fittings are made from solid stock (without welding).
The crimped fittings range includes:

MF2000® - MULTIFIT TYPE (MF)
High-tech swaged fittings is the MRI universal solution for wire spiral and braid hoses, which offers a simple and cost effective solution aimed at reducing production, distribution and assembling costs.

MF2000® - INTERLOCK TYPE (IL)
This solution guarantees maximum reliability for very high pressure wire spiral hoses in heavy-duty applications.

MF2000® - XTRALOCK TYPE (XL)
The fittings concept designed for ultra high-pressure hydraulic power lines and water blasting applications.

MF2000® - BLASTLOCK TYPE (BL)
Fittings suggested for waterblasting applications.

MF2000® - PUSH LOCK TYPE (PL)
The insert solution for low pressure applications without the need for swaged ferrule.

MF2000® - EASY FIT
The threadless termination end fittings with plug-in connection for an easy installation in rescricted spaces.

MF3000™ - PRECRIMPED TYPE
The MRI fittings range with pre-crimped ferrules, corresponding to the US standard requirements.

LINEA DE CONEXIONES

Las conexiones prensadas Manuli están conformadas por cerca de 2000 referencias fabricadas bajo especificaciones internacionales (SAE, DIN, BSP, JIC, ORFS, etc.) y algunas soluciones específicas requeridas por los más importantes fabricantes de equipo original (OEMs).

eCOAT™ La gama completa de conexiones destaca el nuevo tratamiento de zincado para garantizar y mejorar la resistencia a la corrosión. La gama de conexiones se divide como sigue:

MF2000® - TIPO MULTIFIT (MF)
Los conectores de tipo permanente y de alta tecnología son la solución universal de Manuli Rubber Industries para las mangueras con refuerzo en acero en espiral y trenzadas, los cuales ofrecen una solución efectiva en costos enfocada a reducir los costos de producción, distribución y ensamble.

MF2000® - TIPO INTERLOCK (IL)
Esta solución garantiza la fiabilidad máxima para mangueras de acero en espiral de muy alta presión en aplicaciones de trabajo pesado.

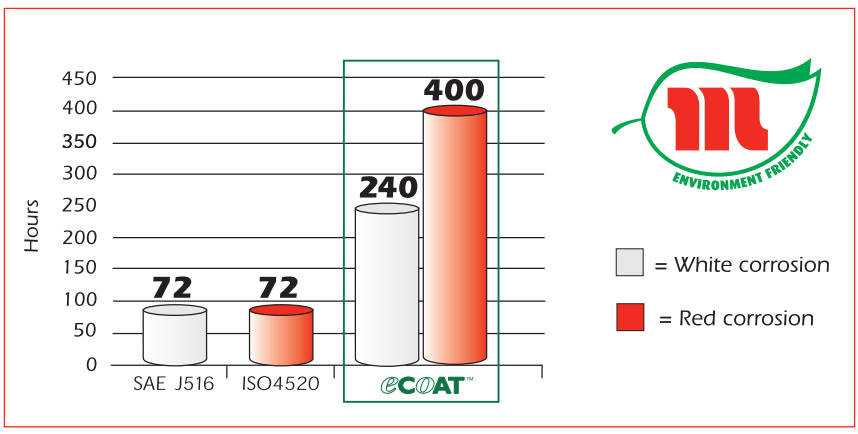
MF2000® - TIPO XTRALOCK (XL)
El concepto de conectores diseñado para líneas de potencia hidráulica de ultra alta presión y aplicaciones de inyección de agua a muy alta presión.

MF2000® - TIPO BLASTLOCK (BL)
Racores para uso exclusivo con aplicaciones de inyección de agua a presión.

MF2000® - TIPO PUSH LOCK (PL)
La solución de inserto para aplicaciones de baja presión sin la necesidad de utilizar abrazadera.

MF2000® - EASY FIT
La solución sin rosca (plug-in) segura una conexión rapida tambien con istalaciónes con espacios reducido.

MF3000™ - TIPO PRECRIMPED
La gama de conectores MRI con casquillos pre-prensados, correspondientes a los requerimientos estándares de los Estados Unidos.



Ecoat improved corrosion resistance.

Don't mix and match!
Use only Manuli Rubber Industries' original components to enhance the quality of hose assemblies.

No mezcle insertos ni ferrules ni mangueras diferentes a la marca Manuli!
Use solamente componentes originales de Manuli Rubber Industries para aumentar la calidad de los ensambles de las mangueras.
Solo así se puede garantizar la calidad del ensamble.

THE COMPLETE PACKAGE

UN PAQUETE COMPLETO

QUICK COUPLINGS RANGE

Manuli Rubber Industries has further enlarged its integrated product range offering to the market the new Q-Safe quick couplings, spare parts and accessories.

The Q-Safe quick couplings range includes:

- **MQS-A** - ISO-A poppet and ball valves couplings
- **MQS-AP** - ISO-A under pressure couplings
- **MQS-N** - Standard poppet and ball valves couplings
- **MQS-AF** - Push-pull couplings
- **MQS-AFP** - Push-pull under pressure couplings
- **MQS-VB** - Braking circuit valves
- **MQS-VS** - Agricultural valves
- **MQS-F** - Flat-Face couplings
- **MQS-SG** - Screw-type couplings
- **MQS-SC** - Screw-type for Hydraulic Cylinders couplings
- **MQS-ST** - Screw-type for trucks couplings
- **MQS-CV** - Check valves.

Manuli Q-Safe series are provided with environment friendly surface coating Cr3 (trivalent chrome) for exceeding ISO 4520 requirements (salt spray resistance: 240 hours for white corrosion and 400 for red corrosion), which offers an excellent resistance to corrosion.

The Q-Safe quick coupling range offers:

- **increased resistance against wear and brinelling**, by hardening critical areas in the nipple and the sleeve
- **improved resistance to pressure impulses**, by increasing the thickness of the back-up ring
- **100% tested products** in terms of sealing and connectability.

GAMA DE ENCHUFES RÁPIDOS

Manuli Ruber Industries ha ampliado su gama de producto ofreciendo al mercado los nuevos enchufes rápidos Q-Safe, recambios y accesorios.

La gama de productos Q-Safe incluye:

- **MQS-A** - ISO-A acoplamientos con válvulas de punzón y bola
- **MQS-AP** - ISO-A acoplamiento bajo presión
- **MQS-N** acoplamiento con válvula de punzón estándar y bola
- **MQS-AF** acoplamiento Push-pull
- **MQS-AFP** acoplamiento bajo presión Push-pull
- **MQS-VB** válvula de circuito de freno
- **MQS-VS** valvulas agrícolas
- **MQS-F** acoplamientos Cara Plana
- **MQS-SG** acoplamientos tipo Roscado
- **MQS-SC** acoplamientos para Cilindors Hidráulicos tipo roscado
- **MQS-ST** acoplamiento para camión tipo Roscado
- **MQS-CV** válvulas antiretorno.

"La serie Q-Safe de Manuli presenta un revestimiento de superficie ecológico Cr3 (cromado trivalente) que sobrepasan los requisitos de ISO 4520 (resistencia a niebla salina: 240 horas para la corrosión blanca y 400 para la corrosión roja), lo que ofrece una excelente resistencia a la corrosión."

La gama de productos Q-Safe ofrece:

- **la resistencia aumentada contra el uso y brinelling**, endureciendo las áreas críticas en la espiga y el casquillo
- **excelente resistencia a los impulsos** por el aumento del espesor de la junta
- **producto 100% probado** para la estanquidad y conectividad.



The Q-Safe range assures quick connection and disconnection, leak-free performance, solutions for different applications and total interchangeability with products on the market.

La gama Q-Safe asegura una conexión y desconexión rápida, libre de fugas, soluciones para las aplicaciones diferentes y una total intecambiabilidad con los productos en el mercado.

THE COMPLETE PACKAGE

EL PAQUETE COMPLETO

ADAPTORS RANGE

The Manuli Rubber Industries adaptors MF4000, can be classified in different groups depending on configuration type (JIC, ORFS, BSP, NPTF, NPSM, etc.).

MF4000 range is manufactured from solid piece of steel that eliminates the potential leak points typical of brazed fittings.

Standard O-Ring supplied with MF4000 adaptors range are made in NBR 90±5 shore A and they are suitable for petroleum-base and non flammable water-base hydraulic fluids.

All the product range is zinc plated in order to provide corrosion protection responding to SAE and ISO standards when tested according to ASTM-B117, ISO 9227 salt spray test method.

GAMA DE ADAPTADORES

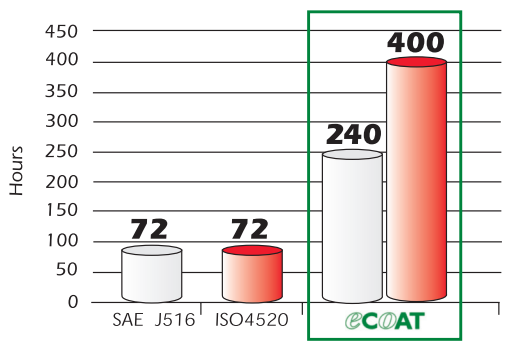
Los adaptadores MF4000 de Manuli Rubber Industries, puede ser clasificado en diversos grupos dependiendo del tipo de configuración (JIC, ORFS, BSP, NPTF, NPSM, etc.).

La gama MF4000 está fabricada desde una pieza sólida de acero que elimina los puntos de la fuga potenciales típicos de montajes soldados.

La junta tórica estándar montada en la gama de adaptadores MF4000 son NBR 90±5 shore A y son aptas para fluidos hidráulicos con base en petróleo y base de agua.

Nuestros productos tienen un cincado plateado para proporcionar la protección de la corrosión siguiendo la norma SAE e ISO según ASTM-B117, ISO 9227 método niebla salina.







= White corrosion

= Red corrosion

Ecoat improved corrosion resistance.

MF4000 adaptors range complete Manuli hose, fittings and quick coupling integrated offer.

Los adaptadores MF4000 completan la oferta con la manguera, conexiones y acoplamientos rápidos Manuli.

THE COMPLETE PACKAGE

UN PAQUETE COMPLETO

ASSEMBLING MACHINES

Manuli Rubber Industries completes its product package with a wide range of assembling machines, equipment, tools and operating instructions, approved to guarantee full compatibility with our fittings solutions. Assembling machines are engineered and designed by Manuli Rubber Industries to be perfectly integrated in its complete package.

The use of the Manuli Assembling machines is recommended for a proper hose assembling procedure. Follow Manuli assembly instructions, it secures the high quality of hose assembly.



MAQUINAS DE ENSAMBLE

Manuli Rubber Industries completa su paquete de productos con un amplia gama de máquinas de ensamble cuidadosamente seleccionadas, equipo e instrucciones/herramientas las cuales están probadas para garantizar completa compatibilidad con nuestras soluciones de prensado. Las máquinas de ensamblaje son parte de un paquete integral ofrecido por Manuli; dichas máquinas son diseñadas y optimizadas con la larga experiencia de Manuli en el sector hidráulico.

El uso de las máquinas de ensamblaje Manuli es recomendado en un procedimiento adecuado de ensamble demangueras, en concordancia con las instrucciones de los ensambles Manuli considerando aspectos de seguridad y requerimientos de la alta calidad de los conectores de fluidos.

MANULI ASSEMBLING MACHINES OFFER:

- CRIMPING MACHINES
- CUTTING MACHINES
- SKIVING MACHINES
- INSERT PUSHING MACHINES
- PRESSURE TEST MACHINES

MADE IN manuli®

To ensure proper product selection and assembling operation, Manuli provides specialized training program available also on line.

Para asegurarse de la selección apropiada del producto y ensamble, el departamento de ventas de MRI y su red de asistencia, proveen un programa de formación especializado se puede conseguir on line.

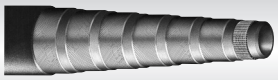
HYDRAULIC PRODUCT RANGE



HOSES

SUMMARY

UNIVERSAL HOSE RANGE

Hose Manguera	Norm Norma		Page Página
GOLDENSPIR®/4SP	EN 856 4SP	 Wire spiral reinforced hoses	23
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SUMMARY

EXTREME HOSE RANGE

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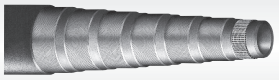
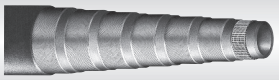
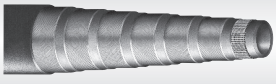
SHIELDMASTER®/5000	Outstanding abrasion resistance		51
SHIELDMASTER®/6000	Outstanding abrasion resistance		52
SHIELDMASTER®/2 PLUS MINE	Outstanding abrasion resistance MSHAapproved		53
SHIELDMASTER®/5000 MINE	Outstanding abrasion resistance MSHAapproved	 Wire spiral reinforced hoses	54
SHIELDMASTER®/6000 MINE	Outstanding abrasion resistance MSHAapproved		55
XTRAFLEX™/4000	Extreme Flexibility		56
XTRAFLEX™/5000	Extreme Flexibility		57
XTRAFLEX™/6000	Extreme Flexibility		58
ROCKMASTER®/1SN	Abrasion, weather & heat resistance		59
ROCKMASTER®/2SN	Abrasion, weather & heat resistance		60
ROCKMASTER®/2ST	Abrasion, weather & heat resistance	 Wire braid reinforced hoses	61
ROCKMASTER®/2 PLUS	Abrasion, weather & heat resistance		62
ROCKMASTER®/1SC	Abrasion, weather & heat resistance		63
ROCKMASTER®/2SC	Abrasion, weather & heat resistance		64
ROCKMASTER®/4SP	Abrasion, weather & heat resistance		65
ROCKMASTER®/4SH	Abrasion, weather & heat resistance		66
ROCKMASTER®/12	Abrasion, weather & heat resistance	 Wire spiral reinforced hoses	67
ROCKMASTER®/13	Abrasion, weather & heat resistance		68
ROCKMASTER®/15	Abrasion, weather & heat resistance		69

HI-PER HOSE RANGE

Hose Manguera	Key Performance Características especiales		Page Página
ETERNITY™/2	High service life and reliability	 Wire braid reinforced hoses	70
DIAMONDSPIR™	Very high pressure rating	 Wire spiral reinforced hoses	71

HOSES

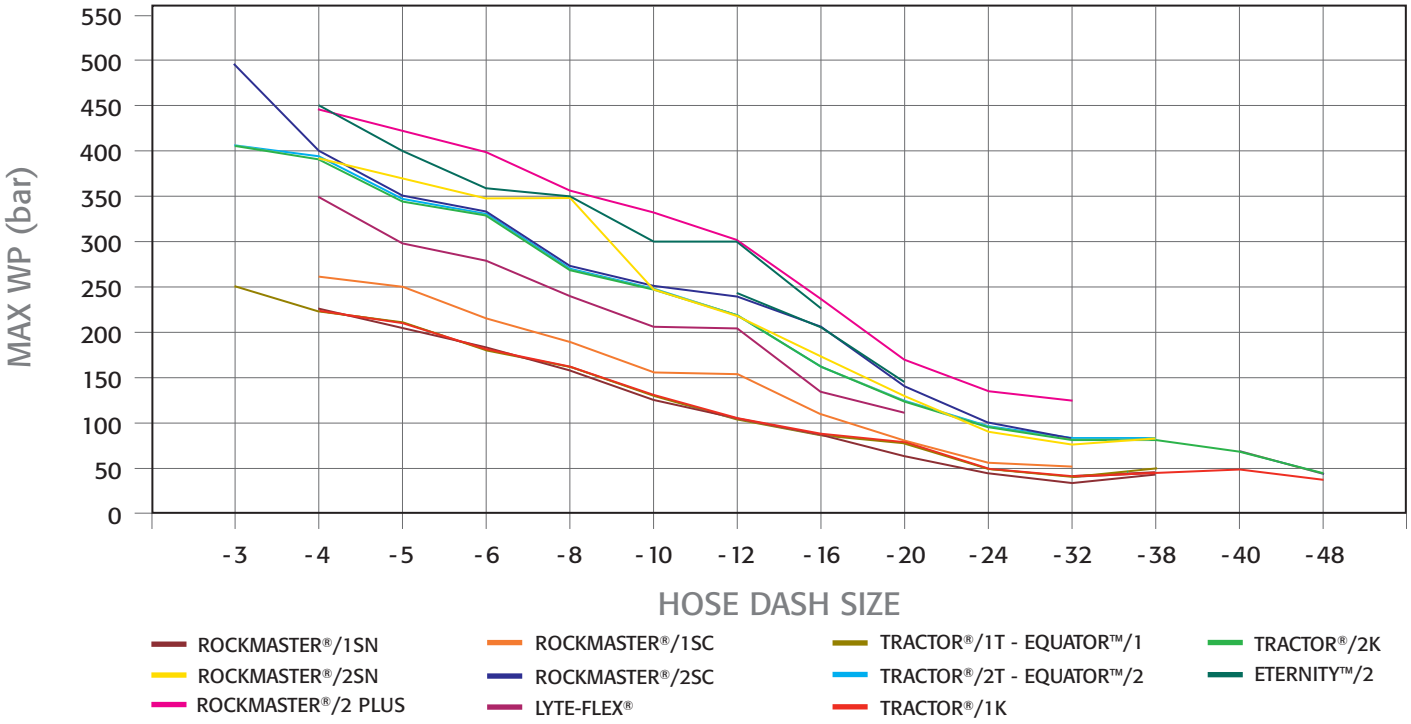
SUMMARY

HOSE SIZE		WORKING PRESSURE (bar)													
	DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76
	DASH	- 3	- 4	- 5	- 6	- 8	- 10	- 12	- 16	- 20	- 24	- 32	- 38	- 40	- 48
GOLDENSPIR®/4SP			485		450	420	380	380	320						
GOLDENSPIR®/4SH								420	385	350	300	250			
GOLDENSPIR®/12					280	280	280	280	280						
TRACTOR®/1T		250	225	215	180	160	130	105	88	63	50	40	50		
TRACTOR®/2T		415	400	350	330	275	250	215	165	125	90	80	90		
TRACTOR®/1K			225	215	180	160	130	105	88	63	50	40		50	35
TRACTOR®/2K			400	350	330	275	250	215	165	125	100	90		70	45
LYTE-FLEX®			350	297	280	245	210	210	140						
HARVESTER®/17			210	210	210	210									
MULTITEX		35	30	30	30	30	30	30	30						
PUSHFIT			35	35	35	25	25	21	14						
ADLER/2					79	70		52	39						
ASTRO/2			75	68	63	58	50	45	40	35					
ASTRO/3			145	130	110	93	80	70	55	45	40	33			
HYDROPLAST/HYDROTWIN		210	192	187	175	140									
EQUATOR™/1			225	215	180	160	130	105	88	65	50	40		35	
EQUATOR™/2			400	350	330	275	250	215	175	150	100	90			
JACKMASTER			725*		725*										
FIREND			225		180	160		105							
PILOT		150	150	120	100	100									
NOZONE®/2K			400	350	330	275	250	215							
SHIELDMASTER®/1500								105	105	105	105	105			
SHIELDMASTER®/2000			140		140	140									
SHIELDMASTER®/4000			276	276	276	276	276	276	276	276	276	276			
SHIELDMASTER®/5000			345	345	345	345	345	345	345						
SHIELDMASTER®/6000			420		420	420	420	420	420	420	420	420			
SHIELDMASTER®/2 PLUS MINE			450		400	362		310	240	175	146	130			
SHIELDMASTER®/5000 MINE			345	345	345	345	345	345	345	345					
SHIELDMASTER®/6000 MINE										420	420	420			
XTRAFLEX™/4000								280	280	280					
XTRAFLEX™/5000								350	350	350					
XTRAFLEX™/6000								420	420	420					
ROCKMASTER®/1SN			225	215	180	160	130	105	90	65	50	40	50		
ROCKMASTER®/2SN			400	350	350	350	250	215	175	140	100	90	90		
ROCKMASTER®/2ST		415	400	350	350	350	250	215	175	140	100	90			
ROCKMASTER®/2 PLUS			450		400	362	340	310	240	175	146	130			70
ROCKMASTER®/1SC			260	250	225	190	150	150	110	75	50	50			
ROCKMASTER®/2SC		420	400	350	330	275	250	245	210	140	100	90		70	45
ROCKMASTER®/4SP			485		450	420	380	380	320	210	185	175			
ROCKMASTER®/4SH							450	420	385	350	300	250			
ROCKMASTER®/12					280	280	280	280	280	210	175	175			
ROCKMASTER®/13			690		690	620		350	350	350	350	350			
ROCKMASTER®/15								420	420	420	420				
ETERNITY™/2			450	400	365	350	300	300	225						
DIAMONDSPIR™								560	560	525	475	420		350	210

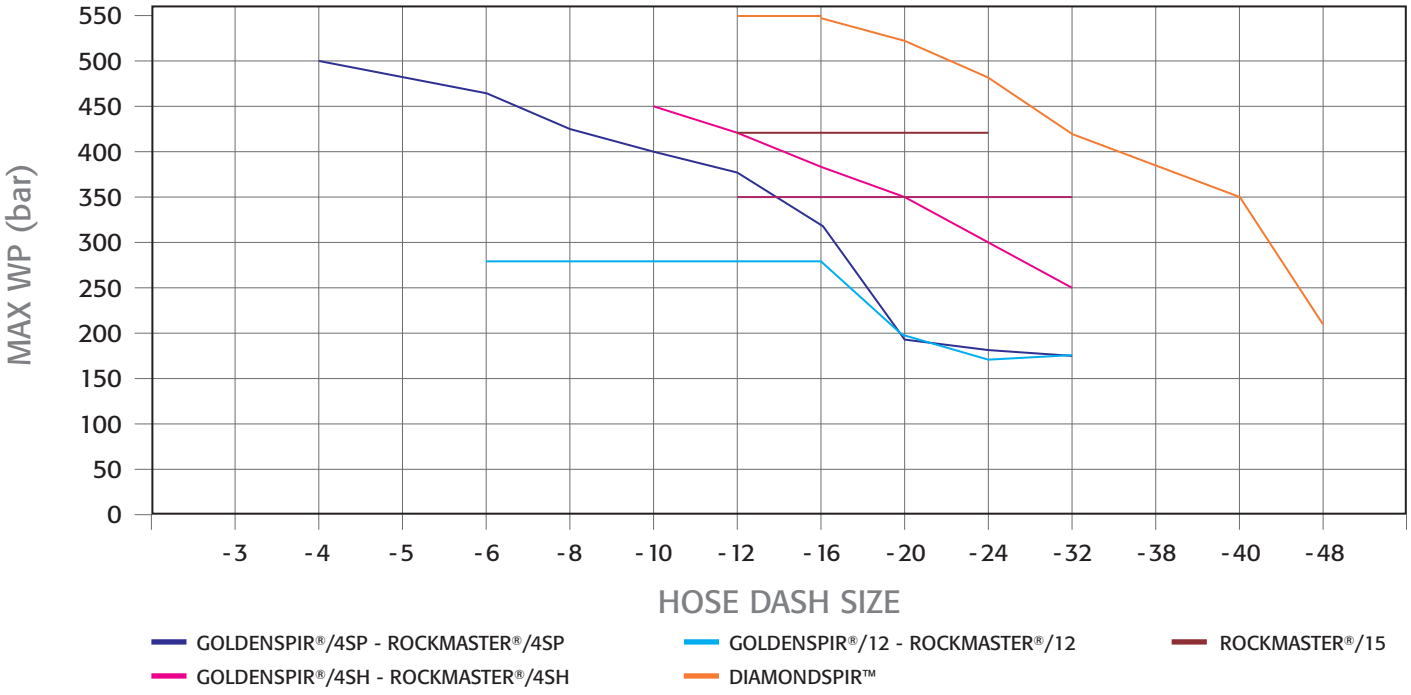
*safety factor burst/working pressure 2:1

GUIDE TO SELECT MANULI® HOSE BY W.P.

HOSE DASH SIZE TO MAXIMUM WORKING PRESSURE - BRAID HOSE



HOSE DASH SIZE TO MAXIMUM WORKING PRESSURE - SPIRAL HOSE



The above graphs do not include the isobaric hose lines: Shieldmaster 1500/2000/4000/5000/6000 (see pg. 48-54) and Xtraflex 4000/5000/6000 (see pg.55-57).

Los gráficos anteriores no incluyen las mangueras isobáricas: Shieldmaster 1500/2000/4000/5000/6000 (ver pag. 48-54) y Xtraflex 4000/5000/6000 (ver pág. 55-57)

HOSES

LEGEND OF SYMBOLS

Inside Diameter (I.D.)
Diámetro interior (I.D.)

Outside Diameter (O.D.)
Diámetro externo (O.D.)

Minimum bend radius
Radio mínimo de curvatura

Reinforcement Outside Diameter (R.O.D.)
Diámetro externo del refuerzo (R.O.D.)

Maximum working pressure
Presión máxima de trabajo

Ferrule / Socket
Casquillo (socket)

Burst pressure: it is the minimum guaranteed burst pressure of the hose, equivalent or superior to the reference specifications minimum requirements.
Presión de rotura: es la mínima presión de rotura garantizada de la manguera, equivalente o superior a los requerimientos mínimos de las especificaciones de referencia

Weight
Peso



Insert
Espiga
MF MF2000® Multifit type
IL MF2000® Interlock type
XL MF2000® Xtralock type
BL MF2000® Blastlock type
PL MF2000® Push-Lock type

Continuous service: refers to the working temperature range.
Servicio continuo: se refiere a la gama de temperatura de trabajo.

Max operating temperature (Intermittent service): peaks of temperature of short duration and total cumulative duration lower than 5% of the total service life.
Temperatura máxima de operación (servicio intermitente): picos de temperatura de corta duración y duración total acumulada menor a 5% de la vida total de servicio.

Recommended fluids: fluid types that the hose can convey with excellent / good chemical compatibility.
Fluidos recomendados: tipos de fluidos que la manguera puede trabajar con compatibilidad química excelente/buena.

Hose service life: cumulative duration of time in which the hose is under operative conditions.
Vida de servicio de la manguera: duración acumulada de tiempo en el cual la manguera está bajo condiciones de operación.

MRI TYPE APPROVALS:
Certification bodies

TIPOS DE APROBACIONES MRI:
Entidades de Certificación

ABS	American Bureau of Shipping
BV	Bureau Veritas
BWB	Bundesamt für Wehrtechnik und Beschaffung (available upon request)
DNV	Det Norske Veritas
FRAS	Fire Resistant and Anti-Static (Australian Dept. Mineral Resources)
GL	Germanischer Lloyd
MADI-CERT	GOST-R accreditation (Russian Federation and CIS)
KRS	Korean Register of Shipping
LOBA	Landesoberbergsamt Nordrhein - Westfalen
LR	Lloyd's Register of Shipping
MAKNII	State Makeyevka Research Institute of Work Safety in Mining Industry (Ukraine)
MSHA	Mine Safety and Health Administration
RINA	Registro Italiano Navale
(B)	Polish Safety Certification type "B" for mining
MED	Marine Equipment Directive (European Directive)

HOSE SIZE CORRESPONDENCE TABLE

HOSE SIZE			
DN	**dash**	**mm**	**inch**
5	- 3	4,8	3/16"
6	- 4	6,3	1/4"
8	- 5	8,0	5/16"
10	- 6	9,5	3/8"
12	- 8	12,7	1/2"
16	- 10	16,0	5/8"
19	- 12	19,0	3/4"
25	- 16	25,4	1"
31	- 20	32,0	1.1/4"
38	- 24	38,0	1.1/2"
51	- 32	50,8	2"
60	- 38	60,0	2.3/8"
63	- 40	63,5	2.1/2"
76	- 48	76,2	3"
89	- 56	88,9	3.1/2"
102	- 64	101,6	4"

FLUID COMPATIBILITY CHART

Fluid	Temp (°C)	Wire Spiralled	Wire Braided			Textile Braided	TPE Wire Braided
		GOLDENSPIR® DIAMONDSPIR™ SHIELDMASTER® ROCKMASTER® XTRAFLEX™	ETERNITY™/2 NOZONE® 2K	TRACTOR® SHIELDMASTER® ROCKMASTER® HARVESTER®/17 PILOT LYTE-FLEX® COVER	EQUATOR™	ADLER ASTRO MULTITEX PUSHFIT SPIRTEX/K	HYDROPLAST HYDROTWIN
STRAIGHT PETROLEUM-BASE							
Agip OSO 32	100	E	E	E	G	E	G
Agip Tecsint SL5W40	100	G	G	F	F	F	F
Aral Vitam DF Top 46	100	E	E	G	-	G	G
Aral Vitam GF 68	100	E	E	E	E	E	E
Atlas Copco Roto Inject Fluid	100	G	G	F	G	G	E
Atlas Copco Roto Inject Fluid Plus	100	F	F	F	F	G	E
Bechem Hydrostar PM 46	100	E	E	E	G	E	-
BP energol HLP 46	100	G	G	F	-	-	-
BP Vanellus C 5	100	G	G	F	G	F	-
Castrol Brayco 717	100	G	G	G	F	G	G
Castrol Hyspin HDH 7000	100	E	E	E	E	E	-
Castrol Lift oil	100	E	E	E	E	G	G
Cepsa Hydraulico HM 46	100	E	E	G	E	G	E
Chevron Rycon MV	100	G	G	F	G	G	-
Esso Nuto H46	100	G	G	F	E	F	E
Esso Nuto HS 46 (REVISED 07)	100	F	F	F	E	F	-
Esso Univis N46	100	G	G	F	E	F	-
Exxon Humble H 46	100	G	G	F	G	G	-
Exxon Humble H 46 (REVISED 07)	100	G	G	F	-	-	-
Foltzermspringoli Hydra 46	100	C	C	C	E	-	-
Fuchs OM 13	100	G	G	E	G	E	E
Fuchs OM 65	100	G	G	G	-	G	G
Fuchs Renolin B15 VG46	100	G	G	F	-	-	-
Fuchs Renolin MR 520	100	G	G	E	G	E	E
Gulf Armony AW 46	100	G	G	F	E	F	E
Houghton Vital fluid L46AL	100	G	G	E	G	-	-
Igol Marine Fluid	100	G	G	G	-	-	-
Igol ZNS 46	100	G	G	F	E	-	-
Irving Hydraulics 46	100	G	G	F	E	G	-
Kluber summit hysyn FG 46	100	F	F	C	C	F	-
Komatsu KPO 10 Powertrain TO 10	100	E	E	G	G	G	E
Mobil DTE 13	100	G	G	C	E	G	-
Mobil DTE 25	100	G	G	F	E	F	E
Mobil DTE 25 (revised 07)	100	G	G	C	E	F	-
Mobil Delwac 13 10 10W20	100	G	G	E	G	E	G
Mobil excel 46	100	G	G	F	E	F	-
Neste Hydrauli 32 Super	100	G	G	F	E	-	-
Neste Hydrauli 46 Super	100	G	G	F	E	-	-
Nyco Hydraunic oil FH3 (MIL H 46170 C-1)	100	E	E	G	E	G	-
OMD 90	100	G	G	G	-	G	G
PetroCanada Hydrex AW 46	100	G	G	G	E	F	C
Q8 Handel 68	100	G	G	F	E	F	E
Q8 Heller 46	100	G	G	G	E	F	-
Rautio ergo MIX	100	G	G	F	E	-	-
Shell Astron HL 46	100	E	E	G	G	-	-
Shell Corena D	100	G	G	F	E	F	G
Shell Helix Ultra 5W40	100	G	G	F	G	F	-
Shell Rimula X	100	E	E	G	E	G	E
Shell Targon AL plus	100	G	G	E	-	G	-
Shell Tellus 46	100	E	E	E	E	E	E
Shell Tellus S 46	100	E	E	G	E	G	E
Shell Tellus T 32	100	E	E	G	E	G	-
Shell Tellus T 46	100	E	E	F	G	-	-
Shell tellus 68	100	E	E	F	E	F	-
Shell tellus 68	120	G	G	-	-	-	-

HOSES

FLUID COMPATIBILITY CHART

Fluid	Temp (°C)	Wire Spiralled	Wire Braided			Textile Braided	TPE Wire Braided
		GOLDENSPIR® DIAMONDSPIR™ SHIELDMASTER® ROCKMASTER® XTRAFLEX™	ETERNITY™/2 NOZONE® 2K	TRACTOR® SHIELDMASTER® ROCKMASTER® HARVESTER®/17 PILOT LYTE-FLEX® COVER	EQUATOR™	ADLER ASTRO MULTITEX PUSHFIT SPIRTEX/K	HYDROPLAST HYDROTWIN
Shell V oil 1404	100	G	G	G	G	G	G
Smallmann Crownpress 46	100	G	G	G	E	G	E
Sunoco Sunvis 746	100	E	E	G	E	F	G
Sunoco Sunvis 846	100	G	G	G	G	F	G
Texaco HDZ 46	100	E	E	F	E	F	G
Texaco Rando HD 46	100	E	E	G	E	G	E
Texaco Rando HD VZ	100	G	G	F	F	G	G
Total Azolla HZS 46	100	G	G	F	E	-	-
Total Azolla ZS 46	100	G	G	G	E	G	E
Total Dacnis VS 45	100	G	G	F	E	F	-
Unil Hydro S46	100	G	G	F	E	F	G
Unil Opal HV 46	100	G	G	F	E	-	-
Valvoline HVLP 68	100	F	F	C	E	-	-
HIGHLY REFINED PETROLEUM BASE							
Aeroshell Fluid 41	100	E	E	E	F	E	F
Castrol Aero HF 585 B	100	G	G	E	F	E	C
Chevron Hydraulic AW 46	100	F	F	F	F	F	-
Mobil Aero HF MIL H5606	100	E	E	E	C	G	-
Nyco Hydraunic Oil FH 51 - MIL H5606	100	G	G	E	F	E	F
Nyco Hydraunic Oil FH 6 - MIL H6083	100	G	G	E	F	E	F
Shell Tegula V32	100	G	G	F	E	F	E
Total Equis ZS 46	100	F	F	C	-	F	-
SYNTHETIC HYDROCARBON BASED							
Agip SINT 2000	100	G	G	E	G	E	G
Ambra Hitech 46	100	E	E	E	G	E	G
Castrol Transynd RD	100	G	G	G	E	G	E
Mav Chemical Sint Plus 2005 ISO46	100	G	G	F	F	G	-
Mobil Jet oil II	100	G	G	G	F	E	-
Mobil SHC 524	100	G	G	F	E	F	E
Mobil Term 605	100	G	G	G	E	G	-
Pentosin CHF 11 S	100	G	G	F	E	F	-
Pfinder Apresol	100	G	G	G	E	G	E
Shell Tellus Arctic 32	100	G	G	E	G	E	E
Teboil Polar Hydraulic	100	G	G	E	G	E	E
PAO (POLY ALPHA OLEPHINE)							
Agip Arnica 46	100	E	E	G	E	G	-
Anderol 8768	100	G	G	C	C	C	-
Atlas Copco Roto H	100	G	G	F	E	F	E
Avia Syntofluid PE B 30	100	G	G	G	-	G	G
BP A 0629L/028	100	G	G	G	E	G	G
Millers Millfood 32	100	F	F	C	G	F	E
Shaffer 254 Supreme ISO 32 TH 220	100	F	F	C	G	C	
Shell Cassida HF 46	100	G	G	G	E	G	G
ATF							
Agip ATF 2D Gear	100	G	G	C	G	C	-
Exxon Dexron II	100	G	G	F	E	F	E
Mobil ATF fluid	100	E	E	F	E	G	E
Shell Dexron III	100	G	G	C	-	G	-
Shell Dexron III	80	E	E	G	-	-	-
Shell Donax TD	100	E	E	G	E	G	-
PHOSPHATE-ESTER OILS							
Akzo Fyrquel	100	C	C	C	-	C	-
Solutia Skydroll 500	100	C	C	C	C	C	C
WATER EMULSION							
Houghton Hydravis BC 84005 (60°C)	100	E	E	E	C	E	E
Houghton OX 40	100	E	E	E	G	E	E

manuli® RUBBER INDUSTRIES

FLUID COMPATIBILITY CHART

Fluid	Temp (°C)	GOLDENSPIR® DIAMONDSPIR™ SHIELDMASTER® ROCKMASTER® XTRAFLEX™	ETERNITY™/2 NOZONE® 2K	TRACTOR® SHIELDMASTER® ROCKMASTER® HARVESTER®/17 PILOT LYTE-FLEX® COVER	EQUATOR™	ADLER ASTRO MULTITEX PUSHFIT SPIRTEX/K	HYDROPLAST HYDROTWIN
		Wire Spiralled	Wire Braided			Textile Braided	TPE Wire Braided
Houghton Safe 620	100	G	G	E	F	G	G
Microcorte 530	100	G	G	G	C	F	-
Nalco Varidos FSK 40%	100	E	E	E	E	E	-
Petrofer Ultra Safe 620	100	E	E	E	C	E	-
Stuart Hydrocor CC44	100	F	F	G	C	G	
Water Glycol emulsion (50%)	100	E	E	E	G	E	E
Wisura WM3021 2,8% in H_2O	100	E	E	E	G	E	E
POLYGLYCOL							
DOT 3	100	G	G	C	-	C	C
DOT 4	100	G	G	C	G	C	F
Mobil Glycol 30	100	E	E	E	E	E	G
PAG SP 10	100	G	G	G	-	F	E
SSR Ultra coolant	100	E	E	G	G	G	G
Stuart Isocore E68 Plus	100	E	E	G	F	E	-
ESTER & POLYOL ESTER							
Act Ecosafe FR	100	G	G	F	F	G	-
Anderol 497	100	F	F	G	C	G	-
Anderol Seco 68	100	C	C	G	C	-	-
Castrol Anvol SWX 68	100	G	G	E	F	G	-
Castrol Icematic SW 100	100	G	G	G	-	F	E
Dea Triton SE 55	100	G	G	G	-	G	E
Emkarate RL 100S	100	G	G	F	-	F	G
Fuchs Plantohyd 46 s	100	G	G	E	F	E	-
Ingersoll Rand Ultra Plus Coolant	100	G	G	G	E	-	-
Metlube HFR 220	100	G	G	F	E	F	-
Mobil Arctic EAL 22	100	E	E	G	G	G	G
Quaker Quintolubric N822-300	100	G	G	G	-	G	-
Quaker Quintolubric 888	100	G	G	G	F	E	-
QUAKER QUINTOLUBRIC 888-46	100	C	C	F	C	-	-
QUAKER QUINTOLUBRIC 888-68	100	C	C	G	C	-	-
BIOLOGICAL ESTER OILS							
ADDINOL OKOSYNTH SUPER HEES 46	100	-	-	G	-	-	-
Addinol okosynth super HEES 46 S	100	F	F	F	C	-	-
Agip Arnica Extra Plus	100	G	G	G	F	G	E
Agip Arnica Plus	100	E	E	E	E	E	E
Agip Arnica S46	100	E	E	E	G	E	E
Aral Vitam EHF 46	100	E	E	E	G	G	G
Avia Biofluid BP 32	100	G	G	G	F	G	-
Avia Syntofluid F 46	100	E	E	E	G	G	E
Avia Syntofluid N 32	100	G	G	E	G	E	G
Avia Syntofluid N 46	100	E	E	E	F	E	G
Bremer Rivolta SBH 23	100	E	E	E	G	G	E
Castrol Carelube HY 46	100	G	G	G	F	G	G
Castrol Hyspin EL 46	100	E	E	E	-	E	-
Dea Econa E 46	100	G	G	E	G	E	E
Esso Hydraulikoel HE 46	100	E	E	E	G	E	E
Fina Biohydran SE 46	100	G	G	G	-	G	G
Finke Aviaticon HY HE	100	G	G	E	-	E	G
Fragol HE 46	100	G	G	G	F	G	E
Fuchs Eco Hyd 46 S NWG	100	E	E	E	F	G	-
Fuchs Plantohyd 46	100	E	E	E	E	E	E
Fuchs Plantosyn 3268 Eco	100	F	F	E	E	E	G
Fuchs Plantosyn 3268	100	F	F	G	E	G	G
Fuchs Plantosyn 46 HVI	100	G	G	F	G	G	G
Fuchs Plantohyd Super S46	100	G	G	G	G	-	-
Houghton Cosmolubric HF 130	100	G	G	G	F	G	-

HOSES

FLUID COMPATIBILITY CHART

		GOLDENSPIR® DIAMONDSPIR™ SHIELDMASTER® ROCKMASTER® XTRAFLEX™	ETERNITY™/2 NOZONE® 2K	TRACTOR® SHIELDMASTER® ROCKMASTER® HARVESTER®/17 PILOT LYTE-FLEX® COVER	EQUATOR™	ADLER ASTRO MULTITEX PUSHFIT SPIRTEX/K	HYDROPLAST HYDROTWIN
	Temp (°C)	**Wire Spiralled**	**Wire Braided**			**Textile Braided**	**TPE Wire Braided**
Igol Matic Fluid BIO 46	**100**	**E**	**G**	**G**	**E**	**G**	**-**
Igo Ticma Fluid BIO 46	**100**	**G**	**G**	**G**	**F**	**-**	**-**
Komatsu Genuine Bio 46 G4	**100**	**E**	**E**	**E**	**E**	**G**	**E**
Mobil Hydrofluid HFDU	**100**	**E**	**E**	**E**	**G**	**E**	**E**
Motorex Oekosint 46	**100**	**G**	**G**	**G**	**F**	**E**	**-**
Neste BIO Hydrauli Longlife 46	**100**	**F**	**F**	**G**	**F**	**-**	**-**
Neste Biohydrauli SE 46	**100**	**G**	**G**	**G**	**G**	**-**	**-**
OMV Biohyd MS 46	**100**	**G**	**G**	**G**	**-**	**G**	**G**
Panolin EP Gear Synth 30 VDT	**100**	**F**	**F**	**E**	**C**	**E**	**G**
Panolin HLP 46	**100**	**G**	**G**	**E**	**E**	**E**	**E**
Panolin GRO Sint 46	**100**	**G**	**G**	**G**	**F**	**-**	**E**
Quaker Quintolubric N852	**100**	**G**	**G**	**G**	**C**	**E**	**-**
Q8 Holbein	**100**	**E**	**E**	**G**	**G**	**G**	**-**
Raisio Biosafe SE 46	**100**	**G**	**G**	**G**	**F**	**G**	**-**
Shell Irus Fluid DU 68	**100**	**G**	**G**	**G**	**G**	**G**	**-**
Shell Naturelle HFE 46	**100**	**G**	**G**	**E**	**F**	**E**	**G**
Teboil Eco 46	**100**	**E**	**E**	**G**	**F**	**G**	**G**
Texaco Hydra 46	**100**	**E**	**E**	**E**	**F**	**E**	**G**
Texaco Synstar HT 68	**100**	**G**	**G**	**E**	**F**	**E**	**G**
York 777	**100**	**G**	**G**	**G**	**F**	**G**	**E**
BIOLOGICAL VEGETABLE OILS							
Binol Hydra P ii 46	**100**	**E**	**E**	**G**	**-**	**G**	**-**
Bp Biohyd 46	**100**	**G**	**G**	**E**	**G**	**E**	**-**
Casgtrol Biotech Alpin 22	**100**	**E**	**E**	**E**	**F**	**E**	**-**
Castrol Carelube HTG	**100**	**G**	**G**	**E**	**F**	**G**	**G**
Fuchs Plantohyd 46 N	**100**	**E**	**E**	**E**	**E**	**E**	**E**
Fuchs Planto Hytrac	**100**	**E**	**E**	**E**	**G**	**G**	**G**
J. Deere Biohygard II	**100**	**E**	**E**	**E**	**E**	**G**	**G**
Mobil EAL 224 H	**100**	**G**	**G**	**E**	**F**	**E**	**G**
Quaker Greensave N 40	**100**	**G**	**G**	**G**	**F**	**G**	**G**
Tamoil Green Hydro Safety 46	**100**	**E**	**E**	**E**	**-**	**E**	**G**
Texaco Biostar Hydraulic 32	**100**	**G**	**G**	**E**	**G**	**E**	**-**
Ukabiol HY 46 HTG	**100**	**G**	**G**	**E**	**C**	**E**	**G**

***These notes shall be intended only as a guide to chemical compatibility with the internal fluid; other combined factors in working operations, as pressure, temperature, vibrations and so on, may impact on the service life.**

Estas notas deben ser interpretadas solo como una guía de la compatibilidad química con el fluido interno; otros factores combinados en operaciones de trabajo, como presión, temperatura, vibraciones, etc. Pueden impactar en la vida de servicio.

E = Excellent - Small or negligible change of compound properties: no problem for use.
Excelente - Cambio insignificante de las propiedades del compuesto: ningún problema de uso.

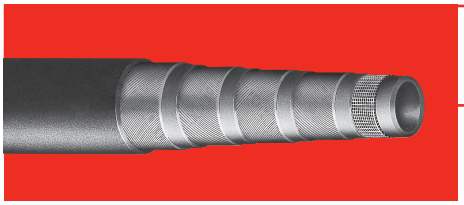
G = Good - Minor changes of compound properties: product certification according to standard qualification tests needed.
Bueno - Cambios menores de las propiedades del compuesto: certificación del producto de acuerdo con las pruebas de calificación estándar necesarias.

F = Fair - Significant changes of some compound properties: product validation under simulated or actual working conditions required.
Regular - Cambios significativos en algunas propiedades del compuesto: validación de producto bajo condiciones de trabajo simuladas o actuales requeridas.

C = Conditional - Significant change of some compound properties: use is not recommended unless an hose validation availability.
Condicional - Cambios relevantes de algunas propiedades del compuesto: su uso no está recomendado a menos que exista validación de la manguera.

The hydraulic hoses of the Manuli product range are not designed for immersion in the service fluid. This type of special applications should be avoided or carefully studied with additional external protections for the hoses, selection of special hose types, e.g. with thermoplastic cover and validation on the specific application. The turbulence of the fluid, the high temperature and nature of the fluid as well as other elements may impact the properties or integrity of the hose cover material (the cover compound of the hose is designed to resist to oil drops and external agents, not immersion in the service fluid).
For more detailed information contact Manuli Rubber Industries

La gama de productos de las mangueras hidráulicas Manuli no están diseñadas para la inmersión en el fluido de servicio. Este tipo de aplicaciones especiales debe evitarse o estudiarse cuidadosamente con protecciones adicionales externas para las mangueras, la selección de mangueras especiales, por ejemplo con cubierta termoplástica y aprobada para la aplicación específica. La turbulencia del fluido, la alta temperatura y la naturaleza del fluido así como otros elementos pueden impactar las propiedades o integridad de la cubierta de la manguera (el compuesto de la cubierta de la manguera está diseñada para resistir aceites y agentes externos, pero no la inmersión en el fluido de servicio).
Para más información contacte con Manuli Rubber Industries.



GOLDENSPIR®/4SP

EN 856 4SP

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10009006*	6	-4	1/4"	14,7	0,58	17,6	0,69	485	7030	2400	34800	100	3,94	605	0,41	MF+M00910-04
H10009010*	10	-6	3/8"	17,6	0,69	21,1	0,83	450	6520	2000	29005	110	4,33	770	0,52	MF+M00910-06
H10009012*	12	-8	1/2"	20,3	0,80	24,3	0,96	420	6090	1750	25370	120	4,72	925	0,62	MF+M00910-08
H10009016*	16	-10	5/8"	23,7	0,93	27,9	1,10	380	5510	1600	23200	140	5,51	1145	0,77	MF+M00910-10
H10009019*	19	-12	3/4"	28,2	1,11	31,9	1,26	380	5510	1600	23200	170	6,69	1510	1,01	MF+M00920-12
H10009025*	25	-16	1"	35,0	1,38	39,0	1,54	320	4640	1400	20300	340	13,39	1970	1,32	MF+M00920-16

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at 1.000.000 impulse cycles ▪ Over standard pressure resistance ▪ bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso ▪ Resistencia de presión superior a estandar ▪ bio compatible con aceites minerales y biologicos

MAIN APPLICATIONS
Very high pressure power lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service)
257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de muy alta presión

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

MAXIMA TEMPERATURA DE OPERACION
(Servicio intermitente)
257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

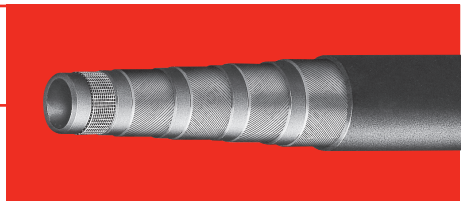
INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 856 4SP - ISO 3862-1 4SP
TYPE APPROVALS: ABS, BV, DNV, GL, GOST R, KRS, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 espirales de acero de alta resistencia
CUBIERTA: Caucho sintético resistente al ambiente
ESPECIFICACIONES APLICABLES: EN 856 4SP - ISO 3862-1 4SP
APROBACIONES: ABS, BV, DNV, GL, GOST R, KRS, LR

BWB Approval available upon request
Aprobaciones disponible bajo pedido

GOLDENSPIR®/4SH

EN 856 4SH



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10040019*	19	-12	3/4"	28,2	1,11	31,9	1,26	420	6090	1750	25370	210	8,27	1540	1,03	IL+M01300-12
H10040025*	25	-16	1"	35,1	1,38	38,1	1,50	385	5580	1750	25370	220	8,66	2085	1,40	IL+M01300-16
H10040032*	31	-20	1.1/4"	42,2	1,66	45,0	1,77	350	5070	1400	20300	420	16,50	2460	1,65	IL+M01400-20
H10040040*	38	-24	1.1/2"	49,1	1,93	52,4	2,06	300	4350	1250	18120	560	22,05	3190	2,14	IL+M01400-24
H10040051*	51	-32	2"	63,5	2,50	67,5	2,66	250	3620	1000	14500	700	27,56	4500	3,02	IL+M01400-32

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at 1.000.000 flexing impulse cycles ▪ Over standard pressure resistance ▪ bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso flexibles ▪ Resistencia de presión superior a estandar ▪ bio compatible con aceites minerales y biologicos

MAIN APPLICATIONS
Very high pressure power lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service)
257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de muy alta presión

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

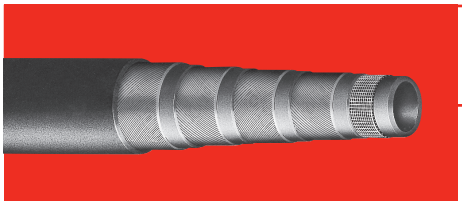
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - INTERLOCK TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 856 4SH - ISO 3862-1 4SH
TYPE APPROVALS: ABS, BV, DNV, GL, GOST-R, KRS, LR

ESPIGA: MF2000® - TIPO INTERLOCK
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 espirales de acero de alta resistencia
CUBIERTA: Caucho sintético resistente al ambiente
ESPECIFICACIONES APLICABLES: EN 856 4SH - ISO 3862-1 4SH
APROBACIONES: ABS, BV, DNV, GL, GOST-R, KRS, LR

BWB Approval available upon request
Aprobaciones disponible bajo pedido



GOLDENSPIR®/12

EN 856 R12

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10028010*	10	-6	3/8"	17,3	0,68	20,0	0,79	280	4060	1600	23200	100	3,94	630	0,42	MF+M00910-06
H10028012*	12	-8	1/2"	20,4	0,80	23,5	0,93	280	4060	1350	19570	125	4,92	775	0,52	MF+M00910-08
H10028016*	16	-10	5/8"	24,4	0,96	27,2	1,07	280	4060	1300	18850	140	5,51	1005	0,67	MF+M00910-10
H10028019*	19	-12	3/4"	27,4	1,08	30,4	1,20	280	4060	1300	18850	150	5,91	1198	0,80	MF+M00920-12
H10028025*	25	-16	1"	35,0	1,38	37,6	1,48	280	4060	1150	16670	225	8,86	1720	1,15	MF+M00920-16

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at 1.000.000 impulse cycles ▪ Over standard pressure resistance ▪ Outstanding ozone and weather resistance ▪ Bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso ▪ Resistencia de presión superior al estándar ▪ Resistente al ozono y humedad ▪ Bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
High pressure power lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F
-40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service)
257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de alta presión

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F
-40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
257°F 125°C

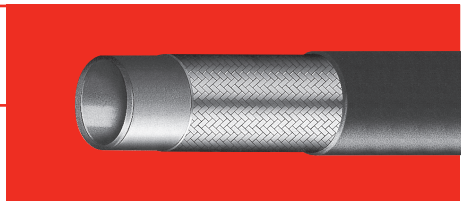
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Environment resistant synthetic rubber, black colour
APPLICABLE SPECS.: EN 856 R12 - SAE 100 R12 - ISO 3862-1 R12
TYPE APPROVALS: ABS, BV, BV (MED), DNV, GOST-R, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 espirales de acero de alta resistencia
CUBIERTA: Caucho sintético resistente al ambiente, color negro
ESPECIFICACIONES APLICABLES: EN 856 R12 - SAE 100 R12 - ISO 3862-1 R12
APROBACIONES: ABS, BV, BV (MED), DNV, GOST-R, LR

TRACTOR®/1T

EN 853 1SN



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H02004005*	5	-3	3/16"	9,5	0,37	11,5	0,45	250	3620	1000	14500	89	3,50	195	0,13	MF+M03400-03
H02004A06*	6	-4	1/4"	11,2	0,44	13,2	0,52	225	3260	900	13050	100	3,94	220	0,15	MF+M03400-04
H02004008*	8	-5	5/16"	12,8	0,50	14,8	0,58	215	3110	850	12320	114	4,49	270	0,18	MF+M03400-05
H02004010*	10	-6	3/8"	15,1	0,59	17,1	0,67	180	2610	720	10440	127	5,00	340	0,23	MF+M03400-06
H02004012*	12	-8	1/2"	18,1	0,71	20,1	0,79	160	2320	640	9280	178	7,01	410	0,27	MF+M03400-08
H01006016*	16	-10	5/8"	21,3	0,84	23,3	0,92	130	1880	520	7540	200	7,87	510	0,34	MF+M03400-10
H01006019*	19	-12	3/4"	25,3	1,00	27,3	1,07	105	1520	420	6090	240	9,45	620	0,42	MF+M03400-12
H01006025*	25	-16	1"	33,1	1,30	35,1	1,38	88	1270	350	5070	300	11,81	930	0,62	MF+M03400-16
H01006032*	31	-20	1.1/4"	40,6	1,60	43,3	1,70	63	910	250	3620	419	16,50	1250	0,84	MF+M03400-20
H01006040*	38	-24	1.1/2"	47,0	1,85	49,7	1,96	50	720	200	2900	500	19,69	1600	1,07	MF+M03400-24
H01006051*	51	-32	2"	60,4	2,38	63,1	2,48	40	580	160	2320	630	24,80	2200	1,47	MF+M03400-32
H01006060*	60	-38	2.3/8"	68,8	2,71	71,5	2,81	50	720	200	2900	650	25,59	2245	1,50	MF+M03400-38

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

EN/DIN rated working pressure ▪ Smooth cover FRAS approved (DN 5÷12)
Presión de trabajo acorde a Norma EN/DIN ▪ Cubierta lisa con aprobación FRAS (DN 5÷12)

MAIN APPLICATIONS
Low-medium pressure lines, return lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service)
250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja y media presión, líneas de retorno

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

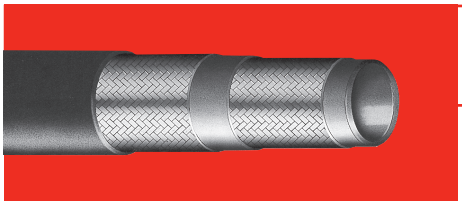
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
250°F 121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 853 1SN - SAE 100 R1AT - ISO 1436-1 1SN/R1AT
TYPE APPROVALS: ABS, BV (DN 5÷51), DNV, FRAS (DN 5÷12), GL (DN 5÷51), GOST-R, KRS, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Una trenza de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: EN 853 1SN - SAE 100 R1AT - ISO 1436-1 1SN/R1AT
APROBACIONES: ABS, BV (DN 5÷51), DNV, FRAS (DN 5÷12), GL (DN 5÷51), GOST-R, KRS, LR

BWB Approval available upon request
Aprobaciones disponible bajo pedido



TRACTOR®/2T

EN 853 2SN

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01027005*	5	-3	3/16"	11,3	0,44	13,3	0,52	415	6010	1650	23920	89	3,50	315	0,21	MF+M03400-03
H01027006*	6	-4	1/4"	12,7	0,50	14,7	0,58	400	5800	1600	23200	100	3,94	360	0,24	MF+M03400-04
H01027008*	8	-5	5/16"	14,3	0,56	16,3	0,64	350	5070	1400	20300	114	4,49	400	0,27	MF+M03400-05
H01027010*	10	-6	3/8"	16,7	0,66	18,7	0,74	330	4780	1320	19140	127	5,00	510	0,34	MF+M03400-06
H01027012*	12	-8	1/2"	19,8	0,78	21,8	0,86	275	3980	1100	15950	178	7,01	620	0,42	MF+M03400-08
H01027016*	16	-10	5/8"	23,0	0,91	25,0	0,98	250	3620	1000	14500	200	7,87	715	0,48	MF+M03400-10
H01027019*	19	-12	3/4"	27,0	1,06	29,0	1,14	215	3110	860	12470	240	9,45	955	0,64	MF+M03400-12
H01027025*	25	-16	1"	34,8	1,37	36,8	1,45	165	2390	660	9570	300	11,81	1320	0,88	MF+M03400-16
H01027032*	31	-20	1.1/4"	44,3	1,74	47,0	1,85	125	1810	500	7250	419	16,50	1965	1,32	MF+M03400-20
H01027040*	38	-24	1.1/2"	50,7	2,00	53,4	2,10	90	1300	360	5220	500	19,69	2265	1,52	MF+M03400-24
H01027051*	51	-32	2"	63,5	2,50	66,2	2,61	80	1160	320	4640	630	24,80	3115	2,09	MF+M03400-32
H01027060*	60	-38	2.3/8"	68,8	2,71	71,5	2,81	90	1300	360	5220	650	25,59	2660	1,78	MF+M03400-38

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

EN/DIN rated working pressure ▪ Wide range of type approvals available
Presión de trabajo del rango EN/DIN ▪ Amplia gama de aprobaciones y normas

MAIN APPLICATIONS
Medium-high pressure lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service)
250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de media y alta presión

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
250°F 121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

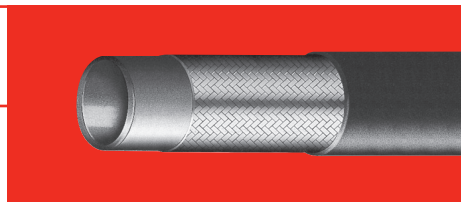
INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 853 2SN - SAE 100 R2AT - ISO 1436-1 2SN/R2AT
TYPE APPROVALS: ABS, BV (DN 5÷51), DNV, GL, GOST-R, KRS, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos trenzas de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: EN 853 2SN - SAE 100 R2AT - ISO 1436-1 2SN/R2AT
APROBACIONES: ABS, BV (DN 5÷51), DNV, GL, GOST-R, KRS, LR

BWB Approval available upon request
Aprobaciones disponible bajo pedido

TRACTOR®/1K

EN 857 1SC



PART. REF.	HOSE SIZE			R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN. BEND RADIUS		WEIGHT		FITTING
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01013006*	6	6	1/4"	10,2	0,40	12,0	0,47	225	3260	1050	15220	50	1,97	180	0,12	MF+M00820-04
H01013008*	8	8	5/16"	11,5	0,45	13,6	0,54	215	3110	1000	14500	55	2,17	210	0,14	MF+M00820-05
H01013010*	10	10	3/8"	13,6	0,54	15,5	0,61	180	2610	850	12320	60	2,36	260	0,17	MF+M00820-06
H01013012*	12	12	1/2"	17,1	0,67	18,9	0,74	160	2320	660	9570	70	2,76	335	0,22	MF+M00820-08
H01013016*	16	16	5/8"	20,6	0,81	22,4	0,88	130	1880	620	8990	90	3,54	440	0,29	MF+M00820-10
H01013019*	19	19	3/4"	23,9	0,94	25,9	1,02	105	1520	480	6960	100	3,94	535	0,36	MF+M00820-12
H01013025*	25	25	1"	31,3	1,23	33,3	1,31	88	1270	400	5800	160	6,30	765	0,51	MF+M00820-16
H01013031*	31	31	1.1/4"	38,4	1,51	40,9	1,61	63	910	300	4350	210	8,27	1105	0,74	MF+M00820-20
H01013038*	38	38	1.1/2"	45,0	1,77	47,5	1,87	50	720	200	2900	300	11,81	1240	0,83	MF+M00820-24
H01013051*	51	51	2"	58,0	2,28	60,5	2,38	40	580	160	2320	400	15,75	1660	1,11	MF+M00820-32
H01013063*	63	63	2.1/2"	70,5	2,78	73,0	2,87	50	720	200	2900	760	29,92	2170	1,45	MF+M03400-40
H01013076*	76	76	3"	85,0	3,35	87,7	3,45	35	500	140	2030	900	35,43	2870	1,92	MF+M03400-48

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging.**
Please see the full list of alternative options on Manuli web site.

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

High flexibility and excellent bend radius ▪ Low weight ▪ Range extension to DN 76 ▪ Large size 63÷76 MSHA approved ▪ Vacuum resistance with SAE 100 R4 performance approved on sizes up to DN 31
Alta flexibilidad y excelente radio de curvatura ▪ Bajo peso ▪ Tamaños hasta DN 76 ▪ Aprobación MSHA DN 63÷76 ▪ Resistencia al vacio (SAE 100 R4) aprobada para los tamaños hasta DN 31

MAIN APPLICATIONS
Low-medium pressure lines with installation constraints, pilot lines, return lines (suction lines DN ≤31)

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja y media presión en espacios reducidos, líneas piloto, líneas de retorno (líneas de succión DN ≤31)

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

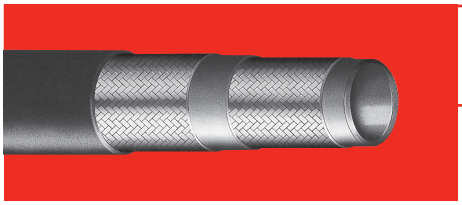
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 250°F 121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 857 1SC and ISO 11237-1 1SC
TYPE APPROVALS: ABS, GL, GOST-R, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Una trenza de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: EN 857 1SC y ISO 11237-1 1SC
APROBACIONES: ABS, GL, GOST-R, LR

For hydraulic lift applications according to EN 81-2 specification: **DN 19: WP = 50 bar - DN 25: WP = 50 bar**
The ref. spec. EN 81-2 is identified in the standard hose branding for these specific applications.
Para aplicaciones de elevadores hidráulicos con la especificación EN 81-2: **DN 19: WP = 50 bar - DN 25: WP = 50 bar**
La referencia específica EN 81-2 está identificada en el marcaje de la manguera para estas aplicaciones específicas.



TRACTOR®/2K

EN 857 2SC

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01025006*	6	-4	1/4"	11,3	0,44	13,1	0,52	400	5800	1850	26820	45	1,77	270	0,18	MF+M03400-04
H01025008*	8	-5	5/16"	12,9	0,51	14,7	0,58	350	5070	1700	24650	55	2,17	325	0,22	MF+M03400-05
H01025010*	10	-6	3/8"	15,0	0,59	16,8	0,66	330	4780	1500	21750	65	2,56	395	0,26	MF+M03400-06
H01025012*	12	-8	1/2"	18,5	0,73	20,3	0,80	275	3980	1220	17690	80	3,15	495	0,33	MF+M03400-08
H01025016*	16	-10	5/8"	21,8	0,86	23,6	0,93	250	3620	1050	15220	90	3,54	595	0,40	MF+M03400-10
H01025019*	19	-12	3/4"	25,6	1,01	27,6	1,09	215	3110	920	13340	120	4,72	800	0,54	MF+M03400-12
H01025025*	25	-16	1"	33,0	1,30	35,2	1,39	165	2390	720	10440	160	6,30	1135	0,76	MF+M03400-16
H01025031*	31	-20	1.1/4"	41,1	1,62	43,6	1,72	125	1810	560	8120	250	9,84	1610	1,08	MF+M03400-20
H01025038*	38	-24	1.1/2"	47,7	1,88	50,7	2,00	100	1450	400	5800	300	11,81	1935	1,30	MF+M03400-24
H01025051*	51	-32	2"	60,4	2,38	63,4	2,50	90	1300	360	5220	400	15,75	2490	1,67	MF+M03400-32
H01025063*	63	-40	2.1/2"	73,0	2,87	76,0	2,99	70	1010	300	4350	760	29,92	3050	2,04	MF+M03400-40
H01025076*	76	-48	3"	87,8	3,46	90,5	3,56	45	650	180	2610	900	35,43	3295	2,21	MF+M03400-48

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

High flexibility and excellent bend radius ▪ Low weight ▪ Range extension to DN 76 ▪ Vacuum reistance with SAE 100 R4 performance approved on sizes up to DN 76

Alta flexibilidad y excelente radio de curvatura ▪ Bajo peso ▪ Tamaños hasta DN 76 ▪ Resistencia al vacio (SAE 100 R4) aprobada para los tamaños hasta DN 76

MAIN APPLICATIONS
Medium-high pressure lines with installation constraints, return lines and suction lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de media y alta presión en espacios reducidos, líneas de retorno y de succión

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 250°F 121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 857 2SC, ISO 11237-1 2SC, SAE 100 R16S
TYPE APPROVALS: ABS, DNV, GL (DN 6÷51), GOST-R, LR

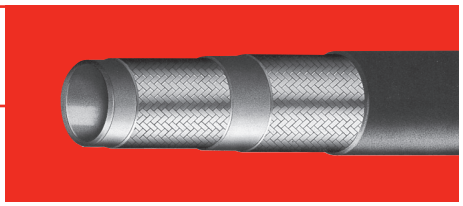
ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos trenzas de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: EN 857 2SC, ISO 11237-1 2SC, SAE 100 R16S
APROBACIONES: ABS, DNV, GL (DN 6÷51), GOST-R, LR

BWB Approval available upon request
Aprobaciones disponible bajo pedido

For hydraulic lift applications according to EN 81-2 specification: **DN 31: WP = 50 bar - DN 38: WP = 50 bar - DN 51: WP = 45 bar** These ratings are identified with additional embossed branding on the hose references.
Para aplicaciones de elevadores hidráulicos con la especificación EN 81-2: DN 31: WP = 50 bar - DN 38: WP = 50 bar - DN 51: WP = 45 bar Estos ratios están identificados con el marcaje en relieve en las referencias de las mangueras

LYTE-FLEX®

SAE 100 R16



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01084006*	6	-4	1/4"	11,6	0,46	13,2	0,52	350	5070	1400	20300	50	1,97	260	0,17	MF+M03400-04
H01084008*	8	-5	5/16"	12,9	0,51	14,5	0,57	297	4300	1190	17250	55	2,17	285	0,19	MF+M03400-05
H01084010*	10	-6	3/8"	15,4	0,61	17,0	0,67	280	4060	1120	16240	63	2,48	385	0,26	MF+M03400-06
H01084012*	12	-8	1/2"	18,5	0,73	20,3	0,80	245	3550	980	14210	88	3,46	465	0,31	MF+M03400-08
H01084016*	16	-10	5/8"	22,2	0,87	24,0	0,94	210	3040	840	12180	100	3,94	605	0,41	MF+M03400-10
H01084019*	19	-12	3/4"	25,6	1,01	27,7	1,09	210	3040	840	12180	120	4,72	795	0,53	MF+M03400-12
H01084025*	25	-16	1"	32,3	1,27	34,6	1,36	140	2030	560	8120	150	5,91	1090	0,73	MF+M03400-16

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

SAE 100 R2 pressure rating ▪ Lightness and flexibility

Gama de presión SAE 100 R2 ▪ Bajo peso y flexibilidad

MAIN APPLICATIONS
Medium pressure lines with installation constraints

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service)
250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycols and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de media presión en espacios reducidos

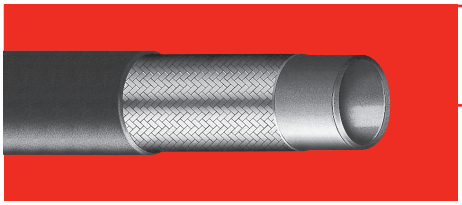
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
250°F 121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: SAE 100 R16 - ISO 11237-1 R16; in addition: DN 16, 19 SAE 100 R17 - ISO 11237-1 R17
TYPE APPROVALS: GOST-R, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: SAE 100 R16 - ISO 11237-1 R16; adicionalmente aplica para: DN 16, 19 SAE 100 R17 - ISO 11237-1 R17
APROBACIONES: GOST-R, LR



HARVESTER®/17

SAE 100 R17

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01056006*	6	-4	1/4"	10,2	0,40	12,0	0,47	210	3040	840	12180	50	1,97	180	0,12	MF+M00820-04
H01056008*	8	-5	5/16"	11,5	0,45	13,6	0,54	210	3040	840	12180	55	2,17	210	0,14	MF+M00820-05
H01056A10*	10	-6	3/8"	14,4	0,57	16,2	0,64	210	3040	840	12180	65	2,56	315	0,21	MF+M03400-06
H01056A12*	12	-8	1/2"	17,9	0,70	19,7	0,78	210	3040	840	12180	90	3,54	435	0,29	MF+M03400-08

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Isobaric pressure rating ▪ Compact hose structures for installations in narrow spaces

Gama de presión isobárica ▪ Estructura compacta de mangueras para espacios reducidos

MAIN APPLICATIONS
Medium pressure lines with installation constraints

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service)
250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycols and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de media presión en espacios reducidos

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
250°F 121°C

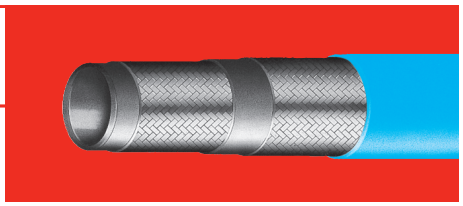
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: SAE 100 R17 - ISO 11237-1 R17
TYPE APPROVALS: GOST-R, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Un refuerzo trenzado de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: SAE 100 R17 - ISO 11237-1 R17
APROBACIONES: GOST-R, LR

CPH/2SC

CABLE PROTECTION HOSE



PART. REF.	HOSE SIZE										
					R.O.D.		O.D.		WEIGHT		FERRULE
	DN	dash	mm	inch	mm	inch	mm	inch	g/m	lb/ft	
H01033010	10	-06	9,5	3/8"	15,0	0,59	16,8	0,66	395	0,26	M03400-06
H01033012	12	-08	12,7	1/2"	18,5	0,73	20,3	0,80	495	0,33	M03400-08
H01033019	19	-12	19,0	3/4"	25,6	1,01	27,6	1,09	815	0,55	M03400-12

Standard packaging: box / Embalaje estándar: caja

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

High flexibility ▪ Low weight ▪ High-tech manufacturing process ▪ Easy routing ▪ Blue flame retardant cover ▪ MSHA approved

Alta Flexibilidad ▪ Bajo Peso ▪ Proceso de alta tecnología ▪ Ruta fácil ▪ Cubierta azul con retardante a llama ▪ aprovación MSHAç

MAIN APPLICATIONS
Cable protection hose for mining applications.

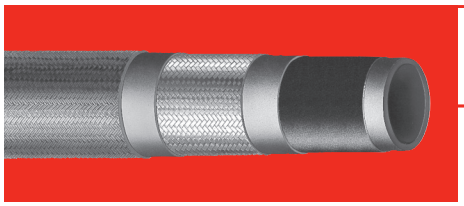
CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

PRINCIPALES APLICACIONES
Cable de protección de manguera para aplicaciones mineras.

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Blue synthetic rubber with high ozone and weather resistance
APPLICABLE SPECS.: MANULI design
TYPE APPROVALS: LOBA, MSHA

TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos trenzas de acero de alta rersistencia
CUBIERTA: Caucho sintético azul con alta resistencia al ozono y a la intemperie
ESPECIFICACIONES APLICABLES: diseño Manuli
APROVACIONES: LOBA, MSHA



COVER

SAE 100 R5

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H05002005*	5	-4	3/16"	-	-	13,2	0,52	210	3040	840	12180	75	2,95	220	0,15	MF+M00310-03
H05002006*	6	-5	1/4"	-	-	14,8	0,58	210	3040	840	12180	85	3,35	258	0,17	MF+M00310-04
H05002008*	8	-6	5/16"	-	-	17,1	0,67	157	2270	630	9130	100	3,94	310	0,21	MF+M00310-05
H05002010*	10	-8	13/32"	-	-	19,4	0,76	140	2030	560	8120	115	4,53	360	0,24	MF+M00310-06
H05002012*	12	-10	1/2"	-	-	23,3	0,92	122	1760	490	7100	140	5,51	485	0,32	MF+M00310-08
H05002016*	16	-12	5/8"	-	-	27,3	1,07	105	1520	420	6090	165	6,50	650	0,44	MF+M00310-10
H05002022*	22	-16	7/8"	-	-	31,2	1,23	56	810	224	3250	185	7,28	609	0,41	*
H05002028*	28	-20	1.1/8"	-	-	38,0	1,50	43	625	175	2530	229	9,02	795	0,53	*
H05002035*	35	-24	1.3/8"	-	-	44,3	1,74	35	500	140	2030	265	10,43	1020	0,68	*
H05002046*	46	-32	1.13/16"	-	-	56,1	2,21	24	350	98	1420	335	13,19	1420	0,95	*

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

* **Contact Manuli Rubber Industries** / Consulte a Manuli Rubber Industries

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

General purpose hose ▪ Wear resistant cover

Manguera de aplicacion general ▪ Cubierta resistente al desgaste

MAIN APPLICATIONS
Low-medium pressure lines, general purpose applications

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service)
250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water, diesel fuel (up to 200°F 93°C)

PRINCIPALES APLICACIONES
Líneas de baja y media presión, aplicaciones generales

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
250°F 121°C

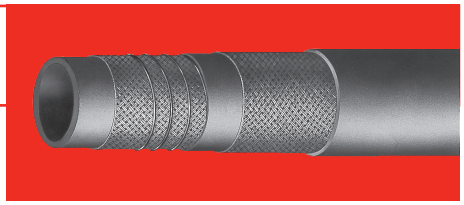
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua, aceite diesel (hasta 200°F 93°C)

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: One textile braid
APPLICABLE SPECS.: SAE 100 R5

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Un refuerzo trenzado de acero de alta resistencia
CUBIERTA: Un refuerzo textil
ESPECIFICACIONES APLICABLES: SAE 100 R5

SPIRTEX/K

SAE 100 R4



PART. REF.	HOSE SIZE			R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN. BEND RADIUS		WEIGHT		FITTING
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H30005016*	16	-10	5/8"	-	-	26,0	1,02	21	300	64	930	96	3,78	590	0,40	MF+M00310-10
H30005019*	19	-12	3/4"	-	-	29,0	1,14	21	300	84	1220	125	4,92	550	0,37	MF+M00310-12
H30005025*	25	-16	1"	-	-	35,0	1,38	17	250	70	1010	150	5,91	680	0,46	MF+M00920-16
H30005031*	31	-20	1.1/4"	-	-	42,0	1,65	14	200	56	810	200	7,87	840	0,56	MF+M00920-20
H30005038*	38	-24	1.1/2"	-	-	48,5	1,91	10	140	42	610	254	10,00	1024	0,70	MF+M00910-24
H30005051*	51	-32	2"	-	-	61,5	2,42	7	100	28	410	300	11,81	1420	0,95	MF+M00910-32
H30005063*	63	-40	2.1/2"	-	-	76,0	2,99	4	62	17	250	355	13,98	2150	1,44	MF+M03400-40
H30005076*	76	-48	3"	-	-	88,0	3,46	4	56	16	230	457	17,99	2850	1,91	MF+M03400-48
H30005090*	89	-56	3.1/2"	-	-	103,0	4,06	3	45	12	180	530	20,87	3450	2,31	*
H30005102*	102	-64	4"	-	-	115,0	4,53	2	35	10	140	610	24,02	3900	2,61	*

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

* **Contact Manuli Rubber Industries** / Consulte a Manuli Rubber Industries

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Resistance to vacuum ▪ New compact SAE 100 R4 architecture
Resistencia al vacío ▪ Nueva estructura compacta acorde a Norma SAE 100 R4

MAIN APPLICATIONS
Suction lines, return lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

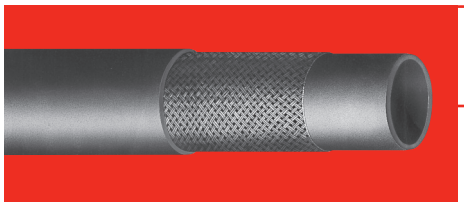
PRINCIPALES APLICACIONES
Líneas de succión, líneas de retorno

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two textile reinforcements with steel helical body wire
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: SAE 100 R4
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos refuerzos textiles con cuerpo de acero helicoidal
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: SAE 100 R4
APROBACIONES: GOST-R



MULTITEX

SAE 100 R6 EN 854 R6/1TE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H09067005*	5	-3	3/16"	-	-	11,0	0,43	35	500	140	2030	35	1,38	93	0,06	MF+M00820-03
H09067006*	6	-4	1/4"	-	-	12,6	0,50	30	430	120	1740	45	1,77	117	0,07	MF+M00820-04
H09067008*	8	-5	5/16"	-	-	14,1	0,56	30	430	120	1740	65	2,56	135	0,10	MF+M00820-05
H09067010*	10	-6	3/8"	-	-	15,8	0,62	30	430	120	1740	75	2,95	165	0,11	MF+M00820-06
H09067012*	12	-8	1/2"	-	-	19,4	0,76	30	430	120	1740	90	3,54	215	0,15	MF+M00820-08
H09067016*	16	-10	5/8"	-	-	23,0	0,91	30	430	120	1740	115	4,53	285	0,19	MF+M00820-10
H09067019*	19	-12	3/4"	-	-	26,0	1,02	30	430	120	1740	140	5,51	325	0,22	MF+M00820-12
H09067025*	25	-16	1"	-	-	32,0	1,26	30	430	120	1740	150	5,91	430	0,29	MF+M00820-16

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

High flexibility ▪ Wide range of fluid compatibility ▪ MF2000® Multifit type couplability ▪ Push-On hose with MF2000® Push-Lock insert type without ferrule

Alta flexibilidad ▪ Amplia gama de compatibilidad de aceite mineraly biológico ▪ Tipo de conexiones MF2000® Multifit ▪ Manguera Push-On con espiga tipo Push-Lock MF2000® sin férula

MAIN APPLICATIONS
Low pressure lines, return lines, drain lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F
-40°C / +121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja presión, líneas de retorno, líneas de drenaje

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F
-40°C / +121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

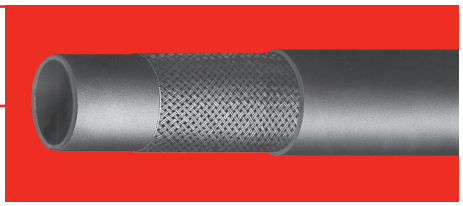
INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high resistance textile braid
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: SAE 100 R6 - EN 854 R6/1TE - ISO 4079-1 R6/1TE
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Un refuerzo textil de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: SAE 100 R6 - EN 854 R6/1TE - ISO 4079-1 R6/1TE
APROBACIONES: GOST-R

Working Pressure with Push-Lock fittings:
DN 5, 6, 8, 10, 12, 16, 19: 17 bar - DN 25: 12 bar
Presión de trabajo con racores Push-Lock:
DN 5, 6, 8, 10, 12, 16, 19: 17 bar - DN 25: 12 bar

PUSHFIT

PUSH-ON HOSE, SAE J30 R6



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H09066006*	6	-4	1/4"	-	-	12,7	0,50	35	510	140	2030	76	2,99	130	0,09	MF2000® PUSH-LOCK
H09066008*	8	-5	5/16"	-	-	14,3	0,56	35	510	140	2030	76	2,99	160	0,11	MF2000® PUSH-LOCK
H09066010*	10	-6	3/8"	-	-	15,8	0,62	35	510	140	2030	76	2,99	175	0,12	MF2000® PUSH-LOCK
H09066012*	12	-8	1/2"	-	-	19,6	0,77	25	360	100	1450	127	5,00	235	0,16	MF2000® PUSH-LOCK
H09066016*	16	-10	5/8"	-	-	23,6	0,93	25	360	100	1450	150	5,91	320	0,21	MF2000® PUSH-LOCK
H09066019*	19	-12	3/4"	-	-	28,3	1,11	21	300	84	1210	180	7,09	470	0,31	MF2000® PUSH-LOCK
H09066025*	25	-16	1"	-	-	33,9	1,33	14	200	56	810	240	9,45	525	0,35	MF2000® PUSH-LOCK

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Push-On hose with MF2000® Push-Lock insert type without ferrule ▪ High aging resistance ▪ Fuel application with push-on fittings (clamps recommended in fuel applications)

Manguera Push-On con espiga tipo Push-Lock MF2000® sin férula ▪ Alta resistencia al envejecimiento ▪ Aplicación para combustibles con la conexión push-on ▪ Abrazaderas son recomendadas en aplicaciones manejando derivados del petróleo

MAIN APPLICATIONS
Push-on hose for low pressure lines, return lines, drain lines. Used in fuel system or in the crankcase of internal combustion engines in mobile (truck, bus, off-highway, vehicles), stationary and marine applications

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water, diesel fuel, gasoline

PRINCIPALES APLICACIONES
Manguera push-on usada en líneas de baja presión, de retorno y de drenaje. Usada en sistemas de combustibile o en la carcaza de motores de combustión interna, en aplicaciones móviles estacionarias o marinas

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 250°F 121°C

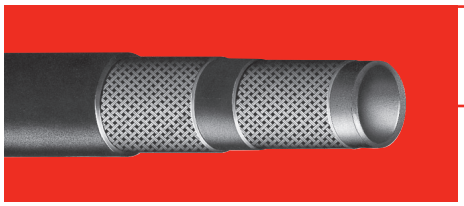
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua, aceite diesel

INSERT: MF2000® - PUSH-LOCK TYPE
TUBE: Fuel and oil resistant synthetic rubber compound
REINFORCEMENT: One textile braid
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: SAE J30 R6
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO PUSH-LOCK
TUBO: Compuesto de caucho sintético resistente a los derivados del petróleo
REFUERZO: Un refuerzo textil
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: SAE J30 R6
APROBACIONES: GOST-R

Working Pressure according to SAE J30 R6:
DN 6, 8, 10: 3,4 bar (50 psi)
DN 12, 16, 19, 25: 2,4 bar (35 psi)
clamps recommended in fuel application

Presión de trabajo según SAE J30 R6:
DN 6, 8, 10: 3,4 bar (50 psi)
DN 12, 16, 19, 25: 2,4 bar (35 psi)
abrazaderas recomendadas para aplicación de combustible



ADLER/2

EN 854 R3

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H09020010*	10	-6	3/8"	-	-	19,0	0,75	79	1140	315	4560	100	3,94	300	0,20	MF+M00310-06
H09020012*	12	-8	1/2"	-	-	23,8	0,94	70	1010	280	4060	125	4,92	450	0,30	MF+M00310-08
H09020019*	19	-12	3/4"	-	-	31,6	1,24	52	750	210	3040	150	5,91	645	0,43	MF+M00310-12
H09020025*	25	-16	1"	-	-	37,5	1,48	39	565	158	2290	203	7,99	785	0,53	MF+M00310-16

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Wide range of fluid compatibility
Amplia gama de compatibilidad de aceite mineral y biológico

MAIN APPLICATIONS
Low pressure lines, return lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F
-40°C / +121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water, diesel fuel (up to 200°F 93°C)

PRINCIPALES APLICACIONES
Líneas de baja presión, líneas de retorno

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F
-40°C / +121°C

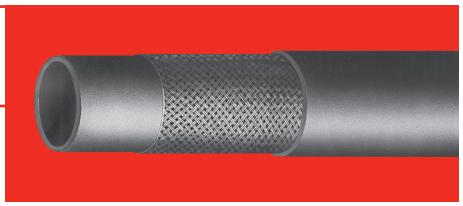
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua, aceite diesel (hasta 200°F 93°C)

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high resistance textile braids
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 854 R3 - SAE 100 R3 - ISO 4079-1 R3
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos trenzas textiles de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: EN 854 R3 - SAE 100 R3 - ISO 4079-1 R3
APROBACIONES: GOST-R

ASTRO/2

EN 854 2TE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H09045006*	6	-4	1/4"	-	-	13,0	0,51	75	1080	300	4350	40	1,57	130	0,09	MF+M00820-04
H09045008*	8	-5	5/16"	-	-	14,6	0,57	68	980	272	3940	50	1,97	145	0,10	MF+M00820-05
H09045010*	10	-6	3/8"	-	-	16,1	0,63	63	910	252	3650	60	2,36	180	0,12	MF+M00820-06
H09045012*	12	-8	1/2"	-	-	19,2	0,76	58	840	232	3360	70	2,76	220	0,15	MF+M00820-08
H09045016*	16	-10	5/8"	-	-	23,6	0,93	50	720	200	2900	90	3,54	290	0,19	MF+M00820-10
H09045019*	19	-12	3/4"	-	-	26,5	1,04	45	650	180	2610	110	4,33	365	0,24	MF+M00820-12
H09045025*	25	-16	1"	-	-	33,4	1,31	40	580	160	2320	130	5,12	525	0,35	MF+M00820-16
H09045032*	31	-20	1.1/4"	-	-	41,5	1,63	35	500	140	2030	140	5,51	695	0,47	MF+M00820-20

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Wide range of fluid compatibility
Amplia gama de compatibilidad de aceite mineral y biológico

MAIN APPLICATIONS
Low pressure lines, return lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +257°F
-40°C / +125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

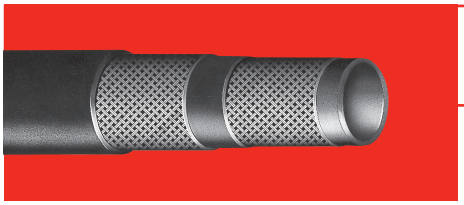
PRINCIPALES APLICACIONES
Líneas de baja presión, líneas de retorno

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +257°F
-40°C / +125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high resistance textile braid
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 854 2TE - ISO 4079-1 2TE
TYPE APPROVALS: GL, GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Una trenza textil de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: EN 854 2TE - ISO 4079-1 2TE
APROBACIONES: GL, GOST-R



ASTRO/3

EN 854 3TE

PART. REF.	HOSE SIZE															
		R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN. BEND RADIUS		WEIGHT		FITTING		
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H09046006*	6	-4	1/4"	-	-	14,2	0,56	145	2100	580	8410	45	1,77	150	0,10	MF+M00310-04
H09046008*	8	-5	5/16"	-	-	16,6	0,65	130	1880	520	7540	55	2,17	210	0,14	MF+M00310-05
H09046010*	10	-6	3/8"	-	-	18,2	0,72	110	1590	440	6380	70	2,76	230	0,15	MF+M00310-06
H09046012*	12	-8	1/2"	-	-	21,5	0,85	93	1340	372	5390	85	3,35	290	0,19	MF+M00310-08
H09046016*	16	-10	5/8"	-	-	25,6	1,01	80	1160	320	4640	105	4,13	385	0,26	MF+M00310-10
H09046019*	19	-12	3/4"	-	-	28,8	1,13	70	1010	280	4060	130	5,12	450	0,30	MF+M00310-12
H09046025*	25	-16	1"	-	-	35,4	1,39	55	790	220	3190	150	5,91	570	0,38	MF+M00310-16
H09046032*	31	-20	1.1/4"	-	-	42,5	1,67	45	650	180	2610	190	7,48	730	0,49	MF+M00310-20
H09046040*	38	-24	1.1/2"	-	-	49,4	1,94	40	580	160	2320	240	9,45	930	0,62	MF+M00910-24
H09046051*	51	-32	2"	-	-	62,2	2,45	33	470	132	1910	300	11,81	1300	0,87	MF+M00910-32

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Wide range of fluid compatibility
Amplia gama de compatibilidad de aceite mineral y biológico

MAIN APPLICATIONS
Low-medium pressure lines, return lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F
-40°C / +121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja y media presión, líneas de retorno

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F
-40°C / +121°C

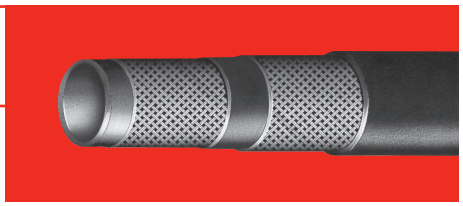
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high resistance textile braids
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: EN 854 3TE - ISO 4079-1 3TE
TYPE APPROVALS: GL, GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite.
REFUERZO: Dos trenzas textiles de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: EN 854 3TE - ISO 4079-1 3TE
APROBACIONES: GL, GOST-R

HYDROPLAST

EN 855 R7



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H30010005*	5	-3	3/16"	-	-	10,2	0,40	210	3040	840	12180	35	1,38	80	0,05	MF+M00820-03
H30010006*	6	-4	1/4"	-	-	12,0	0,47	192	2780	770	11160	50	1,97	95	0,06	MF+M00820-04
H30010008*	8	-5	5/16"	-	-	14,3	0,56	187	2710	750	10870	55	2,17	135	0,09	MF+M00820-05
H30010010*	10	-6	3/8"	-	-	16,3	0,64	175	2530	700	10150	75	2,95	165	0,11	MF+M00820-06
H30010012*	12	-8	1/2"	-	-	20,3	0,80	140	2030	560	8120	95	3,74	225	0,15	MF+M00820-08

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

High flexibility ▪ Tight bend radius ▪ Excellent abrasion resistance
Gran flexibilidad ▪ Reducido radio de curvatura ▪ Excelente resistencia a la abrasión

MAIN APPLICATIONS
Medium pressure hydraulic applications, hoisting, hydraulic transmission

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
212°F 100°C for oil,
149°F 65°C for air, water and water based fluids

RECOMMENDED FLUIDS
Mineral and biological oils, ASTM 1, ASTM 3, polyglycol based oils, water, water oil emulsions

PRINCIPALES APLICACIONES
Líneas de media presión hidráulica, montacargos y transmisión hidráulica

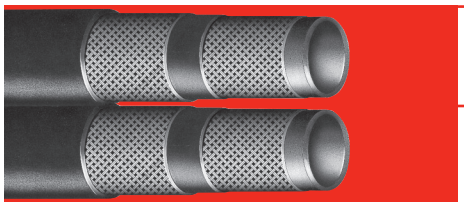
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
212°F 100°C para aceite,
149°F 65°C para aire, agua y liquídos con base de agua

FLUIDOS RECOMENDADOS
Aceite mineral y biologico, ASTM 1, ASTM 3, polyglicol en base de aceite, agua, aceite en emulsion acuosa

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant thermoplastic Elastomer
REINFORCEMENT: Two polyester braids
COVER: Thermoplastic elastomer with high ozone and abrasion resistance
APPLICABLE SPECS.: EN 855 R7, SAE 100R7
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Elastomero termoplastico, resistente al aceite
REFUERZO: Dos trenzas de poliester
CUBIERTA: Elastomero termoplástico resistente al ozono ya la abrasión
ESPECIFICACIONES APLICABLES: EN 855 R7, SAE 100R7
APROBACIONES: GOST-R



HYDROTWIN

EN 855 R7

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H30011005*	5	-3	3/16"	-	-	10,2	0,40	210	3040	840	12180	35	1,38	160	0,11	MF+M00820-03
H30011006*	6	-4	1/4"	-	-	12,0	0,47	192	2780	770	11160	50	1,97	190	0,13	MF+M00820-04
H30011008*	8	-5	5/16"	-	-	14,3	0,56	187	2710	750	10870	55	2,17	270	0,18	MF+M00820-05
H30011010*	10	-6	3/8"	-	-	16,3	0,64	175	2530	700	10150	75	2,95	330	0,22	MF+M00820-06
H30011012*	12	-8	1/2"	-	-	20,3	0,80	140	2030	560	8120	95	3,74	450	0,30	MF+M00820-08

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

High flexibility ▪ Tight bend radius ▪ Excellent abrasion resistance ▪ Twin version
Gran flexibilidad ▪ Reducido radio de curvatura ▪ Excelente resistencia a la abrasión ▪ Versión gemela

MAIN APPLICATIONS
Medium pressure hydraulic applications, hoisting, hydraulic transmission

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F
-40°C / +100°C

MAX OPERATING TEMPERATURE
212°F 100°C for oil,
149°F 65°C for air, water and water based fluids

RECOMMENDED FLUIDS
Mineral and biological oils, ASTM 1, ASTM 3, polyglycol based oils, water, water oil emulsions

PRINCIPALES APLICACIONES
Líneas de median presión hidráulica, montacargos y transmisión hidráulica

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F
-40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
212°F 100°C para aceite,
149°F 65°C para aire, agua y liquídos con base de agua

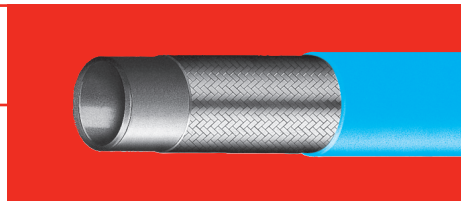
FLUIDOS RECOMENDADOS
Aceite mineral y biologico, ASTM 1, ASTM 3, polyglicol en base de aceite, agua, aceite en emulsion acuosa

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant thermoplastic elastomer
REINFORCEMENT: Two polyester braids
COVER: Thermoplastic elastomer with high ozone and abrasion resistance
APPLICABLE SPECS.: EN 855 R7, SAE 100R7
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Elastomero termoplastico, resistente al aceite
REFUERZO: Dos trenzas de poliester
CUBIERTA: Elastomero termoplástico resistente al ozono y a la abrasión
ESPECIFICACIONES APLICABLES: EN 855 R7, SAE 100R7
APROBACIONES: GOST-R

EQUATOR™/1

EXTREME TEMPERATURE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01059006*	6	-4	1/4"	11,0	0,43	13,4	0,53	225	3260	1000	14500	100	3,94	240	0,16	MF+M00120-04
H01059008*	8	-5	5/16"	12,6	0,50	15,0	0,59	215	3110	900	13050	114	4,49	280	0,19	MF+M00120-05
H01059010*	10	-6	3/8"	15,0	0,59	17,3	0,68	180	2610	800	11600	127	5,00	340	0,23	MF+M00120-06
H01059012*	12	-8	1/2"	18,1	0,71	20,5	0,81	160	2320	680	9860	178	7,01	435	0,29	MF+M00120-08
H01059016*	16	-10	5/8"	21,3	0,84	23,5	0,93	130	1880	600	8700	200	7,87	505	0,34	MF+M00120-10
H01059019*	19	-12	3/4"	25,2	0,99	27,7	1,09	105	1520	500	7250	240	9,45	645	0,43	MF+M00120-12
H01059025*	25	-16	1"	33,1	1,30	35,8	1,41	88	1270	360	5220	300	11,81	980	0,66	MF+M00120-16
H01059032*	31	-20	1.1/4"	40,6	1,60	43,5	1,71	65	940	345	5000	420	16,54	1305	0,87	MF+M00110-20
H01059038*	38	-24	1.1/2"	46,9	1,85	50,0	1,97	50	720	290	4200	500	19,69	1550	1,04	MF+M00110-24
H01059051*	51	-32	2"	60,4	2,38	63,1	2,48	40	580	250	3620	630	24,80	2250	1,51	MF+M00110-32
H01059063*	63	-40	2.1/2"	72,0	2,83	74,6	2,94	35	500	140	2030	600	23,62	2425	1,62	MF+M03400-40

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Wide range temperature resistance ▪ EN/DIN pressure rating ▪ Outstanding ozone resistance ▪ Superior weather and UV resistance

Amplia gama de resistencia a la temperatura ▪ Presión de trabajo acorde a Norma EN/DIN ▪ Gran resistencia al ozono ▪ Superior resistencia a la intemperie y rayos UV

MAIN APPLICATIONS
Low-medium pressure lines in extreme temperature conditions (foundries, com-pressors, hydraulics within engine compartments, etc.)

CONTINUOUS SERVICE TEMPERATURE RANGE
-67°F / +275°F -55°C / +135°C

MAX OPERATING TEMPERATURE
(Intermittent service) 300°F 150°C

RECOMMENDED FLUIDS
Mineral oils, glycols and polyglycols, transmission fluids, air with oil vapours, mineral oils in aqueous emulsion (up to 212°F 100°C)

! Compressed air applications require cover pin-pricking and additional safety devices

PRINCIPALES APLICACIONES
Líneas de baja a media presión en extremas condiciones de temperatura (fundición, compresores, componentes hidráulicos dentro de motores, etc.)

TEMPERATURA CONTINUA DE SERVICIO
-67°F / +275°F -55°C / +135°C

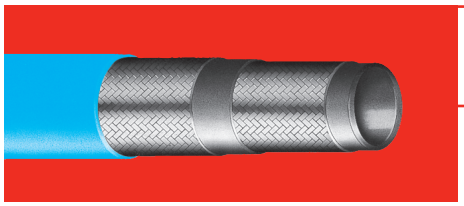
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 300°F 150°C

FLUIDOS RECOMENDADOS
Aceite mineral, glicoles y poliglicoles, aire con vapores de aceite, aceite mineral en emulsión acuosa (hasta 212°F 100°C)

! Para aplicaciones con aire comprimido se requiere de una cubierta especial y un dispositivo de seguridad

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Blue synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 853 1SN - SAE 100 R1AT - ISO 1436-1 1SN/R1AT
TYPE APPROVALS: ABS, BV, BV MED (DN 6÷31), DNV, GL, GOST-R, LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Un refuerzo trenzado de acero de alta resistencia
CUBIERTA: Caucho sintético azul con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 853 1SN - SAE 100 R1AT - ISO 1436-1 1SN/R1AT
APROBACIONES: ABS, BV, BV MED (DN 6÷31), DNV, GL, GOST-R, LR



EQUATOR™/2

EXTREME TEMPERATURE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01061006*	6	-4	1/4"	12,7	0,50	14,9	0,59	400	5800	1725	25010	100	3,94	390	0,26	MF+M00910-04
H01061008*	8	-5	5/16"	14,3	0,56	16,5	0,65	350	5070	1480	21460	114	4,49	435	0,29	MF+M00910-05
H01061010*	10	-6	3/8"	16,7	0,66	19,0	0,75	330	4780	1400	20300	127	5,00	535	0,36	MF+M00910-06
H01061012*	12	-8	1/2"	19,8	0,78	22,0	0,87	275	3980	1200	17400	178	7,01	645	0,43	MF+M00910-08
H01061016*	16	-10	5/8"	23,0	0,91	25,2	0,99	250	3620	1020	14790	200	7,87	770	0,52	MF+M00910-10
H01061019*	19	-12	3/4"	27,0	1,06	29,0	1,14	215	3110	900	13050	240	9,45	925	0,62	MF+M00920-12
H01061025*	25	-16	1"	34,8	1,37	37,0	1,46	175	2530	700	10150	300	11,81	1360	0,91	MF+M00920-16
H01061032*	31	-20	1.1/4"	44,3	1,74	47,0	1,85	150	2170	600	8700	420	16,54	2030	1,36	MF+M00920-20
H01061040*	38	-24	1.1/2"	50,7	2,00	53,4	2,10	100	1450	410	5940	500	19,69	2275	1,52	MF+M00910-24
H01061051*	51	-32	2"	63,5	2,50	66,2	2,61	90	1300	370	5360	630	24,80	3155	2,11	MF+M00910-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Wide range temperature resistance ▪ EN/DIN pressure rating ▪ Outstanding ozone resistance ▪ Superior weather and UV resistance

Amplia gama de resistencia a la temperatura ▪ Presión de trabajo acorde a Norma EN/DIN ▪ Gran resistencia al ozono ▪ Superior resistencia a la intemperie y rayos UV

MAIN APPLICATIONS
Medium-high pressure lines in extreme temperature conditions (foundries, compressors, hydraulics within engine compartments, etc.)

CONTINUOUS SERVICE TEMPERATURE RANGE
-67°F / +275°F -55°C / +135°C

MAX OPERATING TEMPERATURE
(Intermittent service) 300°F 150°C

RECOMMENDED FLUIDS
Mineral oils, glycols and polyglycols, transmission fluids, air with oil vapours, mineral oils in aqueous emulsion (up to 212°F 100°C)

! Compressed air applications require cover pin-pricking and additional safety devices

PRINCIPALES APLICACIONES
Líneas de mediana a alta presión en extremas condiciones de temperatura (fundición, compresores, componentes hidráulicos dentro de motores, etc.)

TEMPERATURA CONTINUA DE SERVICIO
-67°F / +275°F -55°C / +135°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 300°F 150°C

FLUIDOS RECOMENDADOS
Aceite mineral, glicoles y poliglicoles, aire con vapores de aceite, aceite mineral en emulsión acuosa (hasta 212°F 100°C)

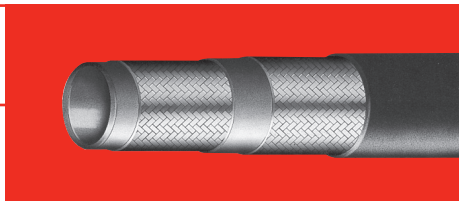
! Para aplicaciones con aire comprimido se requiere de una cubierta especial y un dispositivo de seguridad

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Blue synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 853 2SN - SAE 100 R2AT - ISO 1436-1 2SN/R2AT
TYPE APPROVALS: ABS, BV, BV (MED), DNV, GL, GOST-R, LR,

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia
CUBIERTA: Caucho sintético azul con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 853 2SN - SAE 100 R2AT - ISO 1436-1 2SN/R2AT
APROBACIONES: ABS, BV, BV (MED), DNV, GL, GOST-R, LR,

JACKMASTER

EXTREME STATIC PRESSURE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01034006*	6	-4	1/4"	12,7	0,50	14,7	0,58	725	10500	1450	21025	100	3,94	360	0,24	MF+M03400-04
H01034010*	10	-6	3/8"	15,0	0,59	16,8	0,66	725	10500	1450	21025	127	5,00	395	0,26	MF+M03400-06

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Weight-lifting by means of jacking system ▪ Extreme static pressure ▪ Tested /approved for specific jacking applications ▪ Test certificate available upon request

Levantamiento de peso por medio de sistemas hidraulicos ▪ Extrema presión estatica ▪ Probada y aprobada para aplicaciones de levantamiento ▪ Certificado de prueba

MAIN APPLICATIONS
Jacking systems

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 250°F 121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

! Product designed for jacking applications. Any different use may reduce service life. Please contact Manuli Rubber Industries for more information

PRINCIPALES APLICACIONES
Sistemas de levantamiento de peso

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

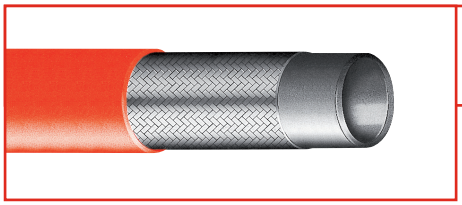
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 250°F 121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceites vegetales y de colza, aceites con base en glicoles y poliglicoles, aceites basados en éster sintético, aceites en emulsión acuosa, agua

! Producto diseñado para aplicaciones de levantamiento de peso. Cualquier otro uso, quizás reduzca el tiempo de vida útil. Consulte a Manuli, para mayor información

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: IJ100 hydraulic jack spec.
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a la intemperie
ESPECIFICACIONES APLICABLES: IJ100 para levantamiento hidráulic
APROBACIONES: GOST-R



FIREND

FIRE SUPPRESSION SYSTEMS

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01124006*	6	-4	1/4"	11,0	0,43	13,0	0,51	225	3260	900	13050	100	3,94	220	0,15	MF+M03400-04
H01124010*	10	-6	3/8"	15,0	0,59	17,0	0,67	180	2610	720	10440	127	5,00	325	0,22	MF+M03400-06
H01124012*	12	-8	1/2"	18,1	0,71	20,1	0,79	160	2320	640	9280	178	7,01	410	0,28	MF+M03400-04
H01124019*	19	-12	3/4"	25,3	1,00	27,9	1,09	105	1520	420	6090	240	9,45	655	0,44	MF+M03400-06

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

SAE 100R1S and ISO 1SN rated working pressure ▪ Flame retardant red cover ▪ Excellent performance for standard hydraulic applications ▪ Embossed indelible branding ▪ No skive MF2000 (two-pieces) and MF3000 (one-piece) fittings

SAE 100R1S y ISO 1SN presión de trabajo activa ▪ Cubierta roja con retardante a la llama ▪ Excelentes características para aplicaciones hydráulicas estándar ▪ Marcada en reliebe ▪ Racores para No pelar MF2000 (dos piezas) y MF3000 (una pieza).

MAIN APPLICATIONS
Use in fire suppression systems of off-road vehicles, mining equipment, stationary engines. The hose present red cover for easy identification in the fire suppression system.

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°C / +100°C

-40°F / +212°F

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils, glycols and polyglycols, mineral oils in aqueous emulsion, water, water based fire extinguishing agents.

PRINCIPALES APLICACIONES
Use en los sistemas de supresión de fuego de vehículos móbiles, equipos para mineria, artefactos estacionarios. La manguera presenta la cubierta roja para una identificación fácil en el sistema de supresión de fuego.

TEMPERATURA CONTINUA DE SERVICIO
-40°C / +100°C

-40°F / +212°F

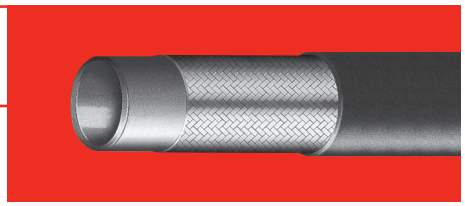
FLUIDOS RECOMENDADOS
Aceites minerales, acetes vegetales y sintéticos con base ester, glicoles y polyglicoles, aceites minerales en emulsión de agua, agua, agua basada en agentes que extinguen el fuego.

INSERT: MF2000 (no-skive) – MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel wire braid
COVER: Red synthetic rubber with high ozone, abrasion and weather resistance.
APPLICABLE SPECS.: ISO 1436-1SN, SAE J517 type 100R1S and R1AT, EN 853 1SN
TYPE APPROVALS: MSHA

ESPIGA: MF2000 (no-skive) – MULTIFIT TYPE
TUBO: Caucho sintético resistente al aceite
REFUERZO: Una malla de acero reforzado
CUBIERTA: Caucho sisntético Rojo, resistente al ozono, abrasión y ambiente.
ESPECIFICACIONES APLICABLES: ISO 1436-1SN, SAE J517 type 100R1S and R1AT, EN 853 1SN
APROBACIONES: MSHA

PILOT

EXTREME LIGHTNESS



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01015005*	5	-3	3/16"	8,7	0,34	10,5	0,41	150	2170	600	8700	20	0,79	145	0,10	MF+M00820-03
H01015A06*	6	-4	1/4"	9,9	0,39	11,5	0,45	150	2170	600	8700	25	0,98	155	0,10	MF+M00820-04
H01015008*	8	-5	5/16"	11,5	0,45	13,1	0,52	120	1740	480	6960	30	1,18	185	0,12	MF+M00820-05
H01015010*	10	-6	3/8"	13,2	0,52	14,8	0,58	100	1450	400	5800	40	1,57	210	0,14	MF+M00820-06
H01015012*	12	-8	1/2"	16,2	0,64	18,0	0,71	100	1450	400	5800	50	1,97	270	0,18	MF+M00820-08

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

High temperature working conditions ▪ ROCKMASTER® cover compound, for tough environment, high abrasion, ozone, aging resistance ▪ DN 12: new fitting solution with M00820-08 no-skive ferrule ▪ Superior lightness and flexibility ▪ Extreme compact structure ▪ Approved at 1.000.000 cycles at rated working pressure ▪ Kink resistant solution for pilot applications

Condiciones de trabajo registrando altas temperaturas ▪ ROCKMASTER® compuesto de la cubierta ofreciendo alta resistencia a la abrasión, ozono, trabajo pesado y envejecimiento ▪ DN12: nueva solución en cuanto a conexiones para usar con el ferrul para no-pelar M00820-08 ▪ Superior ligereza y flexibilidad ▪ Extrema presión compacta ▪ Aprobada para 1.000.000 de ciclos de presión de trabajo ▪ Su alta flexibilidad evita que la manguera se enrede

MAIN APPLICATIONS
Specifically studied for pilot lines, useful also for low pressure lines with installation constraints. Ideal for severe installations, e.g. for engine compartments and for high temperature applications

SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

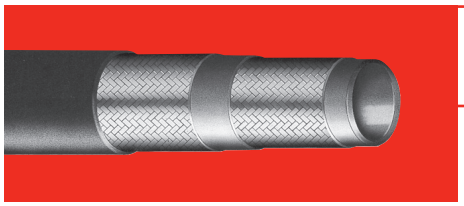
PRINCIPALES APLICACIONES
Estudiada específicamente para líneas piloto, útil también para líneas de baja presión en espacios reducidos. Ideal para operación en condiciones severas, ej. Compartimentos de motores y aplicaciones donde se registran altas temperaturas

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceites vegetales y de colza, aceites con base en glicoles y poliglicoles, aceites basados en éster sintético, aceites en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Environment resistant synthetic rubber
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Una trenza de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia a la intemperie
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R



NOZONE®/2K

OUTSTANDING OZONE RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01039006*	6	-4	1/4"	11,3	0,44	13,1	0,52	400	5800	1850	26820	45	1,77	275	0,18	MF+M03400-04
H01039008*	8	-5	5/16"	12,9	0,51	14,7	0,58	350	5070	1700	24650	55	2,17	335	0,22	MF+M03400-05
H01039010*	10	-6	3/8"	15,0	0,59	16,8	0,66	330	4780	1500	21750	65	2,56	400	0,27	MF+M03400-06
H01039012*	12	-8	1/2"	18,5	0,73	20,3	0,80	275	3980	1220	17690	80	3,15	505	0,34	MF+M03400-08
H01039016*	16	-10	5/8"	21,8	0,86	23,6	0,93	250	3620	1050	15220	90	3,54	605	0,41	MF+M03400-10
H01039019*	19	-12	3/4"	25,6	1,01	27,6	1,09	215	3110	920	13340	120	4,72	815	0,55	MF+M03400-12

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Outstanding ozone resistance ▪ Superior weather and UV resistance ▪ High temperature resistance
Gran resistencia al ozono ▪ Superior resistencia a la intemperie y a los rayos UV ▪ Resistencia a las altas temperaturas

MAIN APPLICATIONS
Medium-high pressure lines with installation constraints and extreme environmental conditions

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F
-40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 275°F 135°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de media a alta presión en espacios reducidos y extremas condiciones ambientales

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F
-40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 275°F 135°C

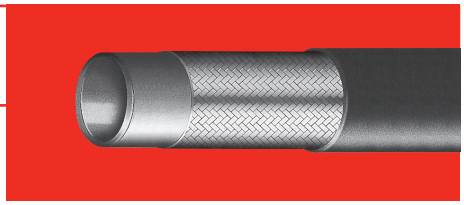
FLUIDOS RECOMENDADOS
Aceite mineral, aceites vegetales y aceites basados en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 857 2SC and ISO 11237-1 2SC
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos trenzas de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 857 2SC y ISO 11237-1 2SC
APROBACIONES: GOST-R

SHIELDMASTER®/1500

OUTSTANDING ABRASION RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01A00019*	19	-12	3/4"	23,9	0,94	26,3	1,04	105	1520	480	6960	100	3,94	540	0,36	MF+M00820-12
H01A00025*	25	-16	1"	31,2	1,23	33,7	1,33	105	1520	420	6090	160	6,30	770	0,52	MF+M00820-16
H01A00031*	31	-20	1.1/4"	41,3	1,63	44,3	1,74	105	1520	560	8120	250	9,84	1610	1,08	MF+M00110-20
H01A00038*	38	-24	1.1/2"	47,7	1,88	50,7	2,00	105	1520	450	6520	300	11,81	1880	1,26	MF+M00110-24
H01A00051*	51	-32	2"	60,4	2,38	63,4	2,50	105	1520	420	6090	400	15,75	2420	1,62	MF+M00110-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Outstanding abrasion and ozone resistance ▪ Compact overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ FROST suitable for very cold environments

Gran resistencia a la abrasión y al ozono ▪ Dimensiones generales estándar ▪ Fácil ensamble y montaje (no se requieren mangas de protección) ▪ Gama de presión isobárica ▪ FROST disponible para ambientes extremadamente fríos

MAIN APPLICATIONS
Low pressure lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMPERATURE
-67°F -55°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and rape seed oils, glycols and polyglycols based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja presión con extremas condiciones de abrasión (Ej. Mangueras rozando entre si, contactos con bordes cortantes y partículas/cuerpos extraños, abrasión debida a deslizamiento sobre el suelo, evita el uso de protectores de cubierta en espiral tipo coil.)

INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C

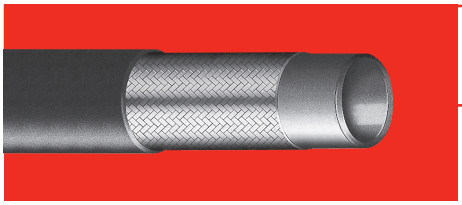
MIN EXTERNAL TEMPERATURE
-67°F -55°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceites vegetales y de colza, aceites con base en glicoles y poliglicoles, aceites basados en éster sintético, aceites en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braids (DN 19÷25). Two high tensile steel braids (DN 31÷51)
COVER: Composite bi-layer structure with oustanding abrasion resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Una trenza de acero de alta resistencia (DN 19a25). Dos trenzas de acero de alta resistencia (DN 31 a 51)
CUBIERTA: Estructura de compuesto de doble capa con gran resistencia a la abrasión
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R



SHIELDMASTER®/2000

OUTSTANDING ABRASION RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01106A06*	6	-4	1/4"	10,2	0,40	12,3	0,48	140	2030	560	8120	50	1,97	185	0,12	MF+M00120-04
H01106010*	10	-6	3/8"	13,6	0,54	15,8	0,62	140	2030	560	8120	60	2,36	265	0,18	MF+M00120-06
H01106012*	12	-8	1/2"	17,1	0,67	19,3	0,76	140	2030	560	8120	70	2,76	345	0,23	MF+M00120-08

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Outstanding abrasion and ozone resistance ▪ Compact overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ FROST suitable for very cold environments ▪ Compact solution for difficult installation

Gran resistencia a la abrasión y al ozono ▪ Dimensiones generales estándar • Fácil ensamble y montaje (no se requieren mangas de protección) ▪ Gama de presión isobárica ▪ FROST disponible para ambientes extremadamente fríos ▪ Gran flexibilidad para ser instalada en espacios reducidos

MAIN APPLICATIONS
Low pressure lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards). Pilot lines with shield architecture

INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C

MIN. EXTERNAL TEMPERATURE
-67°F -55°C

MAX. OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS Mineral oils, vegetable oils and rape seed oils, glycols and polyglycols based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja presión con extremas condiciones de abrasión (Ej. Mangueras rozando entre si, contactos con bordes cortantes y partículas/cuerpos extraños, abrasión debida a deslizamiento sobre el suelo, evita el uso de protectores de cubierta en espiral tipo coil.). Líneas pilota con proteccion superior en su cubierta

INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMPERATURE
-67°F -55°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

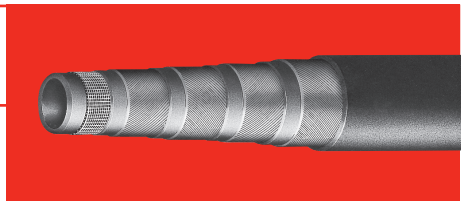
FLUIDOS RECOMENDADOS Aceite mineral, aceites vegetales y de colza, aceites con base en glicoles y poliglicoles, aceites basados en éster sintético, aceites en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Composite bi-layer structure with oustanding abrasion resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Un refuerzo trenzado de acero de alto tensil
CUBIERTA: Estructura de compuesto de doble capa con gran resistencia a la abrasión
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R

SHIELDMASTER®/4000

OUTSTANDING ABRASION RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01031006*	6	-4	1/4"	11,6	0,46	13,6	0,54	276	4000	1110	16090	50	1,97	260	0,17	MF+M00120-04
H01031008*	8	-5	5/16"	12,9	0,51	14,9	0,59	276	4000	1110	16090	57	2,24	285	0,19	MF+M00120-05
H01031010*	10	-6	3/8"	15,4	0,61	17,4	0,69	276	4000	1110	16090	63	2,48	390	0,26	MF+M00120-06
H01031012*	12	-8	1/2"	18,5	0,73	20,7	0,81	276	4000	1110	16090	80	3,15	535	0,36	MF+M00120-08
H01031016*	16	-10	5/8"	22,7	0,89	25,1	0,99	276	4000	1110	16090	90	3,54	620	0,42	MF+M00120-10
H01031019*	19	-12	3/4"	27,1	1,07	29,7	1,17	276	4000	1110	16090	120	4,72	1100	0,74	MF+M00120-12
H01031025*	25	-16	1"	35,1	1,38	38,1	1,50	276	4000	1110	16090	267	10,51	1935	1,30	MF+M00920-16
H01031031*	31	-20	1.1/4"	43,8	1,72	47,0	1,85	276	4000	1110	16090	400	15,75	2585	1,73	MF+M00920-20
H01031038*	38	-24	1.1/2"	50,0	1,97	53,5	2,11	276	4000	1110	16090	500	19,69	3155	2,11	MF+M00910-24
H01031051*	51	-32	2"	63,5	2,50	68,0	2,68	276	4000	1110	16090	700	27,56	4560	3,06	IL+M01400-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Outstanding abrasion and ozone resistance ▪ Compact overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ FROST suitable for very cold environments

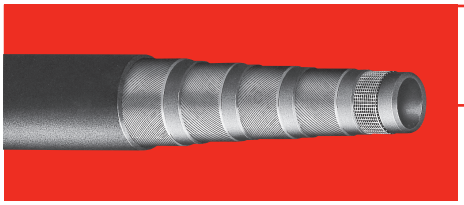
Gran resistencia a la abrasión y al ozono ▪ Dimensiones generales estándar ▪ Fácil ensamble y montaje (no se requieren mangas de protección) ▪ Gama de presión isobárica ▪ FROST disponible para ambientes extremadamente fríos

MAIN APPLICATIONS
High pressure lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)
INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C
MIN EXTERNAL TEMPERATURE
-67°F -55°C
MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C
RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils, (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja presión con extremas condiciones de abrasión (Ej. Mangueras rozando entre si, contactos con bordes cortantes y partículas/ cuerpos extraños, abrasión debida a deslizamiento sobre el suelo, evita el uso de protectores de cubierta en espiral tipo coil.)
INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C
MIN EXTERNAL TEMPERATURE
-67°F -55°C
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE (DN 6÷38)
MF2000® - INTERLOCK TYPE (DN 51)
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids (DN 6÷19).
Four high tensile steel spirals (DN 25÷51)
COVER: Composite bi-layer structure with oustanding abrasion resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT (DN 6÷38)
MF2000® - TIPO INTERLOCK (DN 51)
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia (DN 6÷19).
Cuatro refuerzos en espiral de acero de alta resistencia (DN 25÷51)
CUBIERTA: Estructura de compuesto de doble capa con gran resistencia a la abrasión
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R



SHIELDMASTER®/5000

OUTSTANDING ABRASION RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01032006*	6	-4	1/4"	11,6	0,46	13,6	0,54	345	5000	1380	20010	50	1,97	260	0,17	MF+M00120-04
H01032008*	8	-5	5/16"	12,9	0,51	15,1	0,59	345	5000	1380	20010	55	2,17	330	0,22	MF+M00120-05
H01032010*	10	-6	3/8"	15,0	0,59	17,2	0,68	345	5000	1380	20010	65	2,56	405	0,27	MF+M00120-06
H01032012*	12	-8	1/2"	19,8	0,78	22,2	0,87	345	5000	1380	20010	120	4,72	655	0,44	MF+M00910-08
H01032016*	16	-10	5/8"	24,4	0,96	27,2	1,07	345	5000	1380	20010	200	7,87	990	0,66	MF+M00910-10
H01032019*	19	-12	3/4"	28,2	1,11	31,2	1,23	345	5000	1380	20010	230	9,06	1385	0,93	IL+M01300-12
H01032025*	25	-16	1"	35,1	1,38	38,1	1,50	345	5000	1380	20010	267	10,51	1935	1,30	IL+M01300-16

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Outstanding abrasion and ozone resistance ▪ Compact overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ FROST suitable for very cold environments

Gran resistencia a la abrasión y al ozono ▪ Dimensiones generales estandar ▪ Fácil ensamble y montaje (no se requieren mangas de protección) ▪ Gama de presión isobárica ▪ FROST disponible para ambientes extremadamente fríos

MAIN APPLICATIONS
Heavy duty power lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMPERATURE
-67°F -55°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión para trabajo pesado con extremas condiciones de abrasión (Ej. Mangueras rozando entre si, contactos con bordes cortantes y partículas/cuerpos extraños, abrasión debida a deslizamiento sobre el suelo, evita el uso de protectores de cubierta en espiral tipo coil)

INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C

MIN EXTERNAL TEMPERATURE
-67°F -55°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

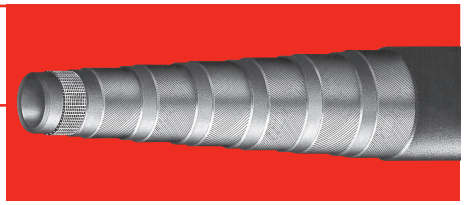
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceites con base en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE (DN 6÷16)
MF2000® - INTERLOCK TYPE (DN 19÷25)
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids (DN 6÷12). Four high tensile steel spirals (DN 16÷25)
COVER: Composite bi-layer structure with oustanding abrasion resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT (DN 6÷16)
MF2000® - INTERLOCK TYPE (DN 19÷25)
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero (DN 6÷12). Cuatro refuerzos en espiral (DN 16÷25)
CUBIERTA: Estructura de compuesto de doble capa con gran resistencia a la abrasión
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R

SHIELDMASTER®/6000

OUTSTANDING ABRASION RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01A32006*	6	-4	1/4"	11,3	0,44	13,5	0,53	420	6090	1680	24360	45	1,77	280	0,19	MF+M00120-04
H01A32010*	10	-6	3/8"	17,6	0,69	20,6	0,81	420	6090	1680	24360	110	4,33	720	0,48	MF+M00910-06
H01A32012*	12	-8	1/2"	20,3	0,80	23,5	0,93	420	6090	1680	24360	120	4,72	845	0,57	MF+M00910-08
H01A32016*	16	-10	5/8"	23,7	0,93	27,0	1,06	420	6090	1680	24360	140	5,51	1000	0,67	MF+M00910-10
H01A32019*	19	-12	3/4"	28,2	1,11	32,0	1,26	420	6090	1680	24360	170	6,69	1475	0,99	IL+M01300-12
H01A32025*	25	-16	1"	35,1	1,38	38,1	1,50	420	6090	1680	24360	220	8,66	2045	1,37	IL+M01300-16
H01A32031*	31	-20	1.1/4"	46,3	1,82	49,5	1,95	420	6090	1680	24360	267	10,51	3680	2,47	IL+M01300-20
H01A32038*	38	-24	1.1/2"	54,6	2,15	57,8	2,28	420	6090	1680	24360	315	12,40	4765	3,13	IL+M01300-24
H01A32051*	51	-32	2"	68,4	2,69	72,0	2,83	420	6090	1680	24360	600	23,62	6745	4,52	XL+M01800-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging.**
Please see the full list of alternative options on Manuli web site.

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KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Outstanding abrasion and ozone resistance ▪ Compact overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Isobaric pressure rating ▪ FROST suitable for very cold environments

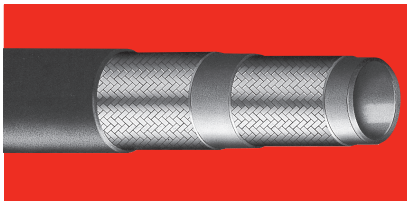
Gran resistencia a la abrasión y al ozono ▪ Dimensiones generales estandar ▪ Fácil ensamble y montaje (no se requieren mangas de protección) ▪ Gama de presión isobárica ▪ FROST disponible para ambientes extremadamente fríos

MAIN APPLICATIONS
Heavy duty power lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)
INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C
MIN EXTERNAL TEMPERATURE
-67°F -55°C
MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C
RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión para trabajo pesado con extremas condiciones de abrasión (Ej. Mangueras rozando entre si, contactos con bordes cortantes y partículas/cuerpos extraños, abrasión debida a deslizamiento sobre el suelo, evita el uso de protectores de cubierta en espiral tipo coil)
INTERNAL TEMPERATURE
-49°F / +212°F -45°C / +100°C
MIN EXTERNAL TEMPERATURE
-67°F -55°C
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceites con base en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE (DN 6÷16)
MF2000® - INTERLOCK TYPE (DN 19÷38)
MF2000® - XTRALOCK TYPE (DN 51)
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids (DN 6).
Four high tensile steel spirals (DN 10÷25).
Six high tensile steel spirals (DN 31÷51)
COVER: Composite bi-layer structure with oustanding abrasion resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT (DN 6÷16)
MF2000® - TIPO INTERLOCK (DN 19÷38)
MF2000® - TIPO XTRALOCK (DN 51)
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero (DN 6).
Cuatro refuerzos en espiral (DN 10÷25). Seis refuerzos en espiral de acero de altaresistencia desde (DN 31÷51)
CUBIERTA: Estructura de compuesto de doble capa con gran resistencia a la abrasión
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R



SHIELDMASTER®/2 PLUS MINE

OUTSTANDING ABRASION RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01122006*	6	-4	1/4"	11,3	0,44	13,1	0,52	450	6520	1800	26100	45	1,77	260	0,17	MF+M03400-04
H01122010*	10	-6	3/8"	16,7	0,66	18,5	0,73	400	5800	1600	23200	127	5,00	525	0,35	MF+M00910-06
H01122012*	12	-8	1/2"	20,1	0,79	22,1	0,87	362	5240	1450	21020	150	5,91	745	0,50	MF+M00910-08
H01122019*	19	-12	3/4"	27,1	1,07	29,3	1,15	310	4490	1240	17980	230	9,06	1070	0,71	MF+M00920-12
H01122025*	25	-16	1"	35,1	1,38	37,8	1,49	240	3480	960	13920	300	11,81	1590	1,06	MF+M00920-16
H01122031*	31	-20	1.1/4"	44,5	1,75	47,2	1,86	175	2530	700	10150	380	14,96	2150	1,43	MF+M00920-20
H01122038*	38	-24	1.1/2"	51,0	2,01	53,7	2,11	146	2110	584	8468	450	17,72	2500	1,67	MF+M00910-24
H01122051*	51	-32	2"	62,8	2,47	65,5	2,58	130	1880	520	7540	600	23,62	3090	2,06	MF+M00910-32

Standard packaging: reel (DN 6÷25) / Embalaje estándar: bobina (DN 6÷25)

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KEY PERFORMANCE CARACTERISTICAS ESPECIALES

MSHA approved composite cover for mining applications ▪ Outstanding abrasion and ozone resistance ▪ Easy assembling and mounting operations, no protection sleeves are required ▪ Indelible branding with embossed technology ▪ Reduced bend radius for difficult installations ▪ Flame retardant and electrical antistaticity cover properties

Aprovación MSHA cubierta compuesta para aplicaciones mineras ▪ Excelente resistencia a la abrasión y al ozono ▪ Fácil de ensamblar y montar, no se requiere protecciones ▪ Marcado en reliebe indeleble ▪ Radio de curvatura reducido para instalaciones difíciles ▪ Cubierta con retardante a la llama y electricidad antiestática

MAIN APPLICATIONS
High pressure lines with installations constraints in heavy duty environmental conditions, specific installations with severe abrasion conditions, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°C / +100°C -40°F / +212°F

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F - 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de alta presión con instalaciones constreñidas en condiciones medioambientales muy duras, instalaciones con severas condiciones de abrasión, minas de subsuelo y abiertas

TEMPERATURA CONTINUA DE SERVICIO
-40°C / +100°C -40°F / +212°F

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

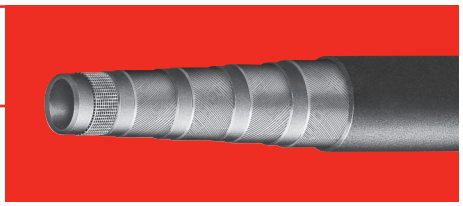
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite con base en éster sintético (hasta 212°F - 100°C), glicoles y poliglicoles, aceite en emulsión acuosa, agua

TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two wire braids of high tensile steel wire
COVER: Composite bi-layer structure with outstanding abrasion & ozone resistance.
APPLICABLE SPECS.: EN 853 type 2SN - ISO 1436-1 type 2SN - SAE J517 type 100R2AT
Exceed performances of:
- BCS 174 (British Coal Specification 1992)
- ISO 6805 type 4 (Rubber hoses and hose assemblies for underground mining - Wire reinforced hydraulic types for coal mining)
TYPE APPROVALS: MSHA (FRAS, LOBA, (B), MA requested)

TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos trenzas de acero de alta rersistencia
CUBIERTA: Estructura compuesta con bi-capa con excelente resistencia a la abrasión y al ozono.
ESPECIFICACIONES APLICABLES: EN 853 tipo 2SN - ISO 1436-1 tipo 2SN - SAE J517 tipo 100R2AT
Excede las características de:
- BCS 174 (especificación 1992 del carbón británico)
- ISO 6805 tipo 4 (Mangueras de caucho y ensamblajes para minas - malla de acero reforzada tipo hidráulico para minas de carbón)
APROBACIONES: MSHA (FRAS, LOBA, (B), MA requerido

SHIELDMASTER®/5000 MINE

OUTSTANDING ABRASION RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01104006*	6	-4	1/4"	11,6	0,46	13,6	0,54	345	5000	1380	20010	50	1,97	260	0,17	MF+M00120-04
H01104008*	8	-5	5/16"	12,9	0,51	15,1	0,59	345	5000	1380	20010	55	2,17	330	0,22	MF+M00120-05
H01104010*	10	-6	3/8"	15,0	0,59	17,2	0,68	345	5000	1380	20010	65	2,56	405	0,27	MF+M00120-06
H01104012*	12	-8	1/2"	19,8	0,78	22,2	0,87	345	5000	1380	20010	120	4,72	655	0,45	MF+M00910-08
H01104016*	16	-10	5/8"	24,4	0,96	27,2	1,07	345	5000	1380	20010	200	7,87	1015	0,68	MF+M00910-10
H01104019*	19	-12	3/4"	28,2	1,11	31,2	1,23	345	5000	1380	20010	230	9,06	1420	0,95	IL+M01300-12
H01104025*	25	-16	1"	35,1	1,38	38,1	1,50	345	5000	1380	20010	267	10,51	1980	1,33	IL+M01300-16
H01104031*	31	-20	1.1/4"	42,2	1,66	45,2	1,78	345	5000	1380	20010	350	13,78	2500	1,68	IL+M01400-20

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

MSHA approved cover for mining applications ▪ Outstanding abrasion and ozone resistance ▪ Compact overall dimensions ▪ Easy assembly and mounting operations (no protection sleeves required) ▪ Indelible branding with embossed technology

Cubierta especial, con aprobación MSHA para aplicaciones de minería ▪ Gran resistencia a la abrasión y al ozono ▪ Dimensiones generales estándar ▪ Fácil ensamble y montaje (no se requieren mangas de protección) ▪ Marcado indeleble realzado

MAIN APPLICATIONS
Heavy duty power lines with extreme abrasion conditions (e.g. bunched-up hoses, localised contacts with sharp edges and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards)

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión para trabajo pesado con extremas condiciones de abrasión (Ej. Mangueras rozando entre si, contactos con bordes cortantes y partículas/cuerpos extraños, abrasión debida a deslizamiento sobre el suelo, evita el uso de protectores de cubierta en espiral tipo coil

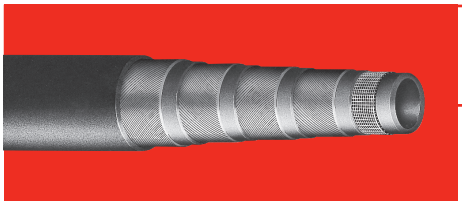
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal, aceites con base en éster sintético (hasta 212°F 100°C), aceites basados en glicoles y poliglicoles, aceite en emulsión acuosa y agua

INSERT: MF2000® - MULTIFIT TYPE (DN 6÷16)
MF2000® - INTERLOCK TYPE (DN 19÷31)
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids (DN 6÷12). Four high tensile steel spirals (DN 16÷31)
COVER: Composite bi-layer structure with oustanding abrasion resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R, MSHA

ESPIGA: MF2000® - TIPO MULTIFIT (DN 6÷16)
MF2000® - TIPO INTERLOCK (DN 19÷31)
TUBO: Caucho sintético, resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia (DN 6÷12). Cuatro refuerzos en espiral de acero de alta resistencia (DN 16÷31)
CUBIERTA: Estructura de compuesto de doble capa con gran resistencia a la abrasión
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R, MSHA



SHIELDMASTER®/6000 MINE

OUTSTANDING ABRASION RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10086031*	31	-20	1.1/4"	46,3	1,82	49,5	1,95	420	6090	1680	24360	260	10,24	3680	2,45	IL+M01300-20
H10086038*	38	-24	1.1/2"	54,6	2,15	57,8	2,28	420	6090	1680	24360	310	12,20	4765	3,18	IL+M01300-24
H10086051*	51	-32	2"	68,4	2,69	72,0	2,83	420	6090	1680	24360	600	23,62	6745	4,50	XL+M01800-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

MSHA approved composite cover for mining applications ▪ Outstanding abrasion and ozone resistance ▪ Easy assembling and mounting operations, no protection sleeves are required ▪ Indelible branding with embossed technology ▪ Reduced bend radius for difficult installations Flame retardant and electrical antistaticity cover properties

Aprovación MSHA cubierta compuesta para aplicaciones mineras ▪ Excelente resistencia a la abrasión y al ozono ▪ Fácil de ensamblar y montar, no se requiere protecciones ▪ Marcado en reliebe indeleble ▪ Radio de curvatura reducido para instalaciones difíciles ▪ Cubierta con retardante a la llama y electricidad antiestática

MAIN APPLICATIONS
Heavy duty power lines with extreme abrasion conditions (e.g. bunches of hoses, localised contacts with sharp edges, and extraneous bodies/particles, wear due to sliding over the ground, alternative to spring guards), underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°C / 100°C -40°F / 212°F

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F - 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
líneas de muy alta presión con condiciones extremas de abrasión (ejemplo, los manojos de mangueras, contactos localizados con bordes afilados, y cuerpos/partículas extraña, uso debido a resbalar encima de la tierra, alternativa a las protecciones), minas subterráneas y abiertas

TEMPERATURA CONTINUA DE SERVICIO
-40°C / 100°C -40°F / 212°F

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

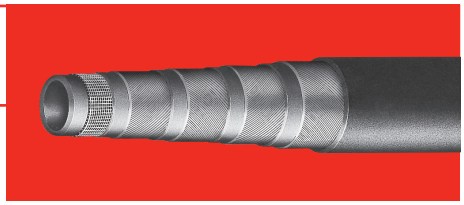
FLUIDOS RECOMENDADOS
Aceite mineral, aceites vegetales y aceites basados en éster sintético (hasta 212°F - 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

TUBE: Oil resistant synthetic rubber
REINFORCEMENT: 6 high tensile steel wire spirals
COVER: Composite bi-layer structure with outstanding abrasion and ozone resistance.
APPLICABLE SPECS.: ISO 3862-1 type R15 - SAE J517 type 100R15
Exceed performances of:
- BCS 174 (British Coal Specification 1992)
- ISO 6805 type 6 (Rubber hoses and hose assemblies for underground mining - Wire reinforced hydraulic types for coal mining)
TYPE APPROVALS: MSHA (FRAS, LOBA, Ⓑ, MA requested)

TUBO: Caucho sintético, resistente al aceite
REFUERZO: 6 espirales de acero reforzado
CUBIERTA: Estructura compuesta con bi-capa con excelente resistencia a la abrasión y al ozono.
ESPECIFICACIONES APLICABLES: ISO 3862-1 tipo R15 - SAE J517 tipo 100R15
Excede las características de:
- BCS 174 (especificación 1992 del carbón británico)
- ISO 6805 tipo 4 (Mangueras de caucho y ensamblajes para minas - malla de acero reforzada tipo hidráulico para minas de carbón)
APROBACIONES: MSHA (FRAS, LOBA, Ⓑ, MA requerido

XTRAFLEX™/4000

EXTREME FLEXIBILITY



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10065019*	19	-12	3/4"	27,4	1,08	30,4	1,20	280	4060	1120	16240	120	4,72	1135	0,76	MF+M00920-12
H10065025*	25	-16	1"	35,1	1,38	38,1	1,50	280	4060	1120	16240	150	5,91	1950	1,31	MF+M00920-16
H10065031*	31	-20	1.1/4"	43,8	1,72	47,0	1,85	280	4060	1120	16240	210	8,27	2605	1,75	MF+M00920-20

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Excellent flexibility (low bending force) ▪ Reduced bend radius ▪ Easy mounting in severe installations ▪ Isobaric pressure rating ▪ bio biological and mineral oils compatibility

Excelente flexibilidad ▪ Reducido radio de curvatura ▪ Fácil montaje en instalaciones difíciles ▪ Gama de presión isobárica ▪ bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
High pressure power lines with short assemblies in severe installations

RECOMMENDED LENGTH BETWEEN FIXTURES
DN 19 ≤ 80 cm; DN 25 ≤ 120 cm; DN 31 ≤ 160 cm

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de alta presión con ensambles cortos en instalaciones difíciles

LONGITUD RECOMENDADA ENTRE PUNTOS FIJOS
DN 19 ≤ 80 cm; DN 25 ≤ 120 cm; DN 31 ≤ 160 cm

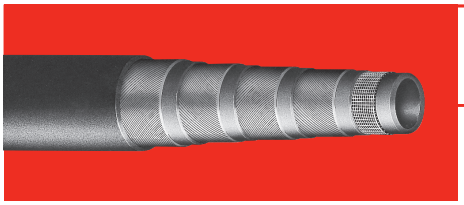
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Synthetic rubber with high ozone, weather and heat resistance.
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: MSHA

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor.
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: MSHA



XTRAFLEX™/5000

EXTREME FLEXIBILITY

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10016019*	19	-12	3/4"	28,2	1,11	31,2	1,23	350	5070	1400	20300	120	4,72	1400	0,94	IL+M01300-12
H10016025*	25	-16	1"	35,1	1,38	38,1	1,50	350	5070	1400	20300	150	5,91	1950	1,31	IL+M01300-16
H10016031*	31	-20	1.1/4"	42,2	1,66	45,2	1,78	350	5070	1400	20300	350	13,78	2470	1,65	IL+M01400-20

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Excellent flexibility (low bending force) ▪ Reduced bend radius ▪ Easy mounting in severe installations ▪ Isobaric pressure rating ▪ Bio biological and mineral oils compatibility

Excelente flexibilidad ▪ Reducido radio de curvatura ▪ Fácil montaje en instalaciones difíciles ▪ Gama de presión isobárica ▪ Bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
Heavy duty power lines with short assemblies in severe installations

RECOMMENDED LENGTH BETWEEN FIXTURES
DN 19≤80 cm; DN 25≤120 cm; DN 31≤160 cm

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de alta presión y trabajo pesado con ensambles cortos en instalaciones difíciles

LONGITUD RECOMENDADA ENTRE PUNTOS FIJOS
DN 19≤80 cm; DN 25≤120 cm; DN 31≤160 cm

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

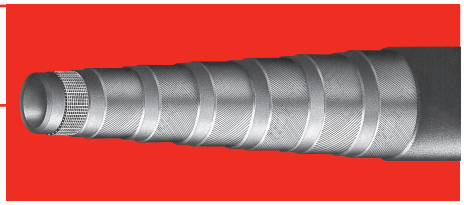
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - INTERLOCK TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: MSHA

ESPIGA: MF2000® - TIPO INTERLOCK
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: MSHA

XTRAFLEX™/6000

EXTREME FLEXIBILITY



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10078019*	19	-12	3/4"	28,2	1,11	32,0	1,26	420	6090	1680	24360	170	6,69	1520	1,02	IL+M01300-12
H10078025*	25	-16	1"	35,1	1,38	38,1	1,50	420	6090	1680	24360	220	8,66	2075	1,39	IL+M01300-16
H10078031*	31	-20	1.1/4"	46,3	1,82	49,5	1,95	420	6090	1680	24360	267	10,51	3725	2,50	IL+M01300-20

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Excellent flexibility (low bending force) ▪ Reduced bend radius ▪ Easy mounting in severe installations ▪ Isobaric pressure rating ▪ Bio biological and mineral oils compatibility

Excelente flexibilidad ▪ Reducido radio de curvatura ▪ Fácil montaje en instalaciones difíciles ▪ Gama de presión isobárica ▪ Bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
Heavy duty power lines with short assemblies in severe installations

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F
-40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service)
257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de alta presión y trabajo pesado con ensambles cortos en instalaciones difíciles

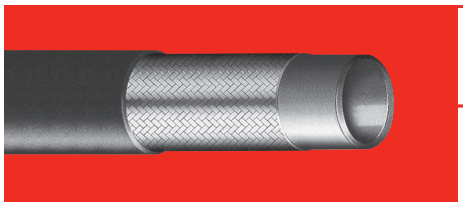
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F
-40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente)
257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - INTERLOCK TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals DN 19÷25. Six high tensile steel spirals DN 31
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: MSHA

ESPIGA: MF2000® - TIPO INTERLOCK
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia DN 19÷25. 6 refuerzos de acero en espiral de alta resistencia DN 31
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: MSHA



ROCKMASTER®/1SN

ABRASION, WEATHER & HEAT RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01007006*	6	-4	1/4"	11,0	0,43	13,0	0,51	225	3260	1000	14500	100	3,94	240	0,16	MF+M03400-04
H01007008*	8	-5	5/16"	12,6	0,50	14,6	0,57	215	3110	950	13770	114	4,49	255	0,17	MF+M03400-05
H01007010*	10	-6	3/8"	15,0	0,59	17,0	0,67	180	2610	800	11600	127	5,00	360	0,24	MF+M03400-06
H01007012*	12	-8	1/2"	18,1	0,71	20,1	0,79	160	2320	680	9860	178	7,01	450	0,30	MF+M03400-08
H01007016*	16	-10	5/8"	21,3	0,84	23,3	0,92	130	1880	600	8700	200	7,87	510	0,34	MF+M03400-10
H01007019*	19	-12	3/4"	25,3	1,00	27,3	1,07	105	1520	500	7250	240	9,45	610	0,41	MF+M03400-12
H01007025*	25	-16	1"	33,1	1,30	35,1	1,38	90	1300	360	5220	300	11,81	920	0,62	MF+M03400-16
H01007032*	31	-20	1.1/4"	40,6	1,60	43,3	1,70	65	940	260	3770	419	16,50	1250	0,84	MF+M03400-20
H01007040*	38	-24	1.1/2"	47,0	1,85	49,7	1,96	50	720	260	3770	500	19,69	1600	1,07	MF+M03400-24
H01007051*	51	-32	2"	60,4	2,38	63,1	2,48	40	580	250	3620	630	24,80	2200	1,47	MF+ M03400-32
H01007060*	60	-38	2.3/8"	68,8	2,71	71,5	2,81	50	720	200	2900	650	25,59	2210	1,48	MF+M03400-38

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover

Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica

MAIN APPLICATIONS
Low-medium pressure lines, return lines, in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja y media presión, líneas de retorno, en condiciones ambientales de trabajo pesado, instalaciones especificas con condiciones de abrasión severa, aplicaciones marinas, en minas subterráneas y minas a cielo abierto

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

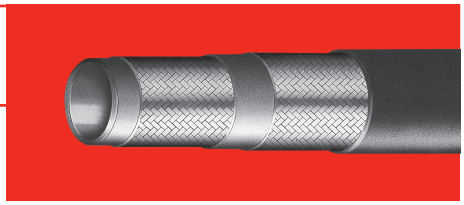
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceite basado en éster sintético, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 853 1SN - SAE 100 R1AT - ISO 1436-1 1SN/R1AT
TYPE APPROVALS: DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Un refuerzo trenzado de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 853 1SN - SAE 100 R1AT - ISO 1436-1 1SN/R1AT
APROBACIONES: DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA

ROCKMASTER®/2SN

ABRASION, WEATHER & HEAT RESISTANCE



PART. REF.	HOSE SIZE			R.O.D.		O.D.		MAX W.P.		BURST PRESSURE		MIN. BEND RADIUS		WEIGHT		FITTING
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01038006*	6	-4	1/4"	12,7	0,50	14,7	0,58	400	5800	1750	25370	50	1,97	360	0,24	MF+M03400-04
H01038008*	8	-5	5/16"	14,3	0,56	16,3	0,64	350	5070	1480	21460	60	2,36	395	0,26	MF+M03400-05
H01038010*	10	-6	3/8"	16,7	0,66	18,7	0,74	350	5070	1400	20300	70	2,76	505	0,34	MF+M03400-06
H01038012*	12	-8	1/2"	19,8	0,78	21,8	0,86	350	5070	1400	20300	89	3,50	640	0,43	MF+M03400-08
H01038016*	16	-10	5/8"	23,0	0,91	25,0	0,98	250	3620	1020	14790	100	3,94	710	0,48	MF+M03400-10
H01038019*	19	-12	3/4"	27,0	1,06	29,0	1,14	215	3110	900	13050	130	5,12	945	0,63	MF+M03400-12
H01038025*	25	-16	1"	34,8	1,37	36,8	1,45	175	2530	700	10150	160	6,30	1305	0,87	MF+M03400-16
H01038032*	31	-20	1.1/4"	44,3	1,74	47,0	1,85	140	2030	560	8120	419	16,50	1940	1,30	MF+M03400-20
H01038040*	38	-24	1.1/2"	50,7	2,00	53,4	2,10	100	1450	500	7250	500	19,69	2245	1,50	MF+M03400-24
H01038051*	51	-32	2"	63,5	2,50	66,2	2,61	90	1300	420	6090	630	24,80	3085	2,07	MF+M03400-32
H01038060*	60	-38	2.3/8"	68,8	2,71	71,5	2,81	90	1300	360	5220	650	25,59	2635	1,77	MF+M03400-38

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Over standard pressure resistance

Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ Resistencia a la presión superior a lo indicado en la Norma

MAIN APPLICATIONS
Medium-high pressure lines in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de media y alta presión en condiciones ambientales de trabajo pesado, instalaciones especificas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

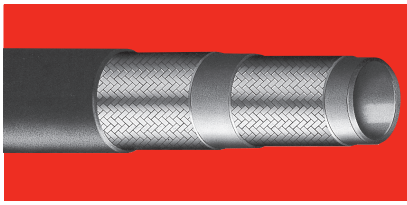
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceite basado en éster sintético, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 853 2SN - SAE 100 R2AT - ISO 1436-1 2SN/R2AT
TYPE APPROVALS: DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA, RINA (DN 38÷51), (B) (DN 8÷51)

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Dos trenzas de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 853 2SN - SAE 100 R2AT - ISO 1436-1 2SN/R2AT
APROBACIONES: DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA, RINA (DN 38÷51), (B) (DN 8÷51)



ROCKMASTER®/2ST

ABRASION, WEATHER & HEAT RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01035005*	5	-3	3/16"	11,3	0,44	15,6	0,61	415	6010	2000	29000	89	3,50	390	0,26	MF+M00910-03
H01035006*	6	-4	1/4"	12,7	0,50	17,2	0,68	400	5800	1750	25370	100	3,94	460	0,31	MF+M00910-04
H01035008*	8	-5	5/16"	14,3	0,56	18,9	0,74	350	5070	1480	21460	114	4,49	510	0,34	MF+M00910-05
H01035010*	10	-6	3/8"	16,7	0,66	21,3	0,84	350	5070	1400	20300	127	5,00	635	0,43	MF+M00910-06
H01035012*	12	-8	1/2"	19,8	0,78	24,5	0,96	350	5070	1400	20300	178	7,01	770	0,52	MF+M00910-08
H01035016*	16	-10	5/8"	23,0	0,91	27,7	1,09	250	3620	1020	14790	200	7,87	890	0,60	MF+M00910-10
H01035019*	19	-12	3/4"	27,0	1,06	31,6	1,24	215	3110	900	13050	240	9,45	1115	0,75	MF+M00920-12
H01035025*	25	-16	1"	34,8	1,37	39,5	1,56	175	2530	670	9710	300	11,81	1530	1,03	MF+M00920-16
H01035032*	31	-20	1.1/4"	44,3	1,74	50,6	1,99	140	2030	560	8120	419	16,50	2335	1,56	MF+M00920-20
H01035040*	38	-24	1.1/2"	50,7	2,00	57,0	2,24	100	1450	500	7250	500	19,69	2680	1,80	MF+M00910-24
H01035051*	51	-32	2"	63,5	2,50	69,8	2,75	90	1300	420	6090	630	24,80	3625	2,43	MF+M00910-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Over standard pressure resistance

Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ Resistencia a la presión superior a lo indicado en la Norma

MAIN APPLICATIONS
Medium-high pressure lines in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de media y alta presión en condiciones ambientales de trabajo pesado, instalaciones especificas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

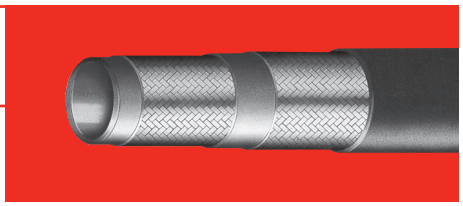
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceite basado en éster sintético, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 853 2ST - SAE 100 R2A - ISO 1436-1 2ST/R2A
TYPE APPROVALS: GOST-R, LOBA, LR, (B) (DN 6÷51)

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Dos trenzas de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 853 2ST - SAE 100 R2A - ISO 1436-1 2ST/R2A
APROBACIONES: FRAS, GOST-R, LOBA, LR, (B) (DN 6÷51)

ROCKMASTER®/2PLUS

ABRASION, WEATHER & HEAT RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01101006*	6	-4	1/4"	11,3	0,44	13,1	0,52	450	6520	1800	26100	45	1,77	260	0,17	MF+M03400-04
H01101010*	10	-6	3/8"	16,7	0,66	18,5	0,73	400	5800	1600	23200	127	5,00	525	0,35	MF+M00910-06
H01101012*	12	-8	1/2"	20,1	0,79	22,1	0,87	362	5240	1450	21020	178	7,01	745	0,50	MF+M00910-08
H01101016*	16	-10	5/8"	23,2	0,91	25,2	0,99	340	4930	1360	19720	200	7,87	870	0,58	MF+M00910-10
H01101019*	19	-12	3/4"	27,1	1,07	29,3	1,15	310	4490	1240	17980	240	9,45	1070	0,72	MF+M00920-12
H01101025*	25	-16	1"	35,1	1,38	37,8	1,49	240	3480	960	13920	300	11,81	1590	1,07	MF+M00920-16
H01101032*	31	-20	1.1/4"	44,5	1,75	47,2	1,86	175	2530	700	10150	419	16,50	2150	1,44	MF+M00920-20
H01101038*	38	-24	1.1/2"	51,0	2,01	53,7	2,11	146	2110	584	8460	500	19,69	2500	1,68	MF+M00910-24
H01101051*	51	-32	2"	62,8	2,47	65,5	2,58	130	1880	530	7680	630	24,80	3090	2,07	MF+M00910-32
H01101076*	76	-48	3"	87,8	3,46	91,4	3,60	70	1010	280	4060	500	19,69	3990	2,67	MF+M03400-48 skive solution

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Superior pressure rating ▪ Skive fittings solution

Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ Resistencia a la presión superior a lo indicado en la Norma ▪ Conexiones para mangueras que requieren pelarse

MAIN APPLICATIONS
High pressure lines with installation constraints in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de alta presión en condiciones ambientales de trabajo pesado, instalaciones especificas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

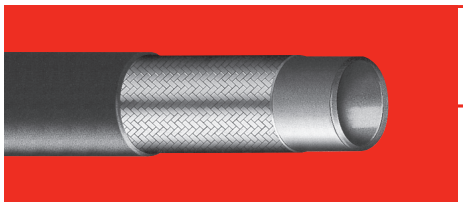
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceite basado en éster sintético, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: MANULI® Design:
Exceed ISO 1436-2SN, EN 853-2SN, SAE J517 type 100 R2 AT
Performance BCS 174, ISO 6805 type 4
TYPE APPROVALS: DNV, GOST-R, LR, MSHA

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Diseño MANULI®:
Excede ISO 1436-2SN, EN 853-2SN, SAE J517 tipo 100 R2 AT
Performance BCS 174, ISO 6805 type 4
APROBACIONES: DNV, GOST-R, LR, MSHA



ROCKMASTER®/1SC

ABRASION, WEATHER & HEAT RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01108006*	6	-4	1/4"	10,2	0,40	12,0	0,47	260	3770	1050	15220	50	1,97	175	0,12	MF+M00120-04
H01108008*	8	-5	5/16"	11,6	0,46	13,7	0,54	250	3620	1000	14500	55	2,17	212	0,14	MF+M00120-05
H01108010*	10	-6	3/8"	13,6	0,54	15,5	0,61	225	3260	900	13050	60	2,36	251	0,17	MF+M00120-06
H01108012*	12	-8	1/2"	17,3	0,68	19,1	0,75	190	2750	760	11020	70	2,76	360	0,24	MF+M00820-08
H01108016*	16	-10	5/8"	20,6	0,81	22,4	0,88	150	2170	600	8700	90	3,54	430	0,28	MF+M00820-10
H01108019*	19	-12	3/4"	23,9	0,94	25,9	1,02	150	2170	600	8700	100	3,94	540	0,36	MF+M00820-12
H01108025*	25	-16	1"	31,3	1,23	33,1	1,30	110	1590	440	6380	160	6,30	770	0,51	MF+M00820-16
H01108031*	31	-20	1.1/4"	38,4	1,51	40,9	1,61	75	1090	300	4350	210	8,27	1060	0,71	MF+M00820-20
H01108038*	38	-24	1.1/2"	45,0	1,77	47,5	1,87	50	720	200	2900	300,	11,81	1190	0,80	MF+M00820-24
H01108051*	51	-32	2"	58,0	2,28	60,5	2,38	50	720	200	2900	400	15,75	1590	1,06	MF+M00820-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

New compact one wire braid hose line ▪ High temperature resistance for the most severe service and OEM applications ▪ Working pressure exceeds 1SC standards ▪ Superior protection with ROCKMASTER® cover compound ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Vacuum resistance with SAE 100 R4 performance approved on sizes up to DN 31

Nueva manguera compacta de una trenza de alambre ▪ Resistencia a altas temperaturas, trabajo pesado y aplicaciones requeridas por fabricantes de equipo original (OEM) ▪ La presión de trabajo excede los estándares 1SC ▪ El compuesto de la cubierta de la ROCKMASTER® ofrece protección superior ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ Resistencia al vacio (SAE 100 R4) aprobada para los tamaños hasta DN 31

MAIN APPLICATIONS
Low-medium pressure lines with installation constraints in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de baja y media presión, líneas de retorno, en condiciones ambientales de trabajo pesado, instalaciones especificas con condiciones de abrasión severa, aplicaciones marinas, en minas subterráneas y minas a cielo abierto

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

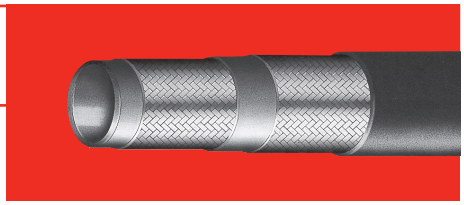
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceite basado en éster sintético, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 857 1SC - ISO 11237-1 1SC
TYPE APPROVALS: LR

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Un refuerzo trenzado de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Exceed EN 857 1SC - ISO 11237-1 1SC
APROBACIONES: LR

ROCKMASTER®/2SC

ABRASION, WEATHER & HEAT RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01030005*	5	-3	3/16"	9,7	0,38	11,5	0,45	420	6090	2000	29000	40	1,57	215	0,14	MF+M03400-03
H01030006*	6	-4	1/4"	11,3	0,44	13,1	0,52	400	5800	1850	26820	45	1,77	265	0,18	MF+M03400-04
H01030008*	8	-5	5/16"	12,9	0,51	14,7	0,58	350	5070	1700	24650	55	2,17	320	0,21	MF+M03400-05
H01030010*	10	-6	3/8"	15,0	0,59	16,8	0,66	330	4780	1500	21750	65	2,56	390	0,26	MF+M03400-06
H01030012*	12	-8	1/2"	18,5	0,73	20,3	0,80	275	3980	1220	17690	80	3,15	490	0,33	MF+M03400-08
H01030016*	16	-10	5/8"	21,8	0,86	23,6	0,93	250	3620	1050	15220	90	3,54	590	0,40	MF+M03400-10
H01030019*	19	-12	3/4"	25,6	1,01	27,6	1,09	245	3550	980	14210	120	4,72	795	0,53	MF+M03400-12
H01030025*	25	-16	1"	33,0	1,30	35,2	1,39	210	3040	840	12180	150	5,91	1160	0,78	MF +M03400-16
H01030031*	31	-20	1.1/4"	41,1	1,62	43,6	1,72	140	2030	560	8120	250	9,84	1555	1,04	MF+M03400-20
H01030038*	38	-24	1.1/2"	47,7	1,88	50,7	2,00	100	1450	400	5800	300	11,81	1845	1,24	MF+M03400-24
H01030051*	51	-32	2"	60,4	2,38	63,4	2,50	90	1300	360	5220	400	15,75	2375	1,59	MF+M03400-32
H01030063*	63	-40	2.1/2"	73,0	2,87	76,0	2,99	70	1010	300	4350	760	29,92	2955	1,98	MFvM03400-40
H01030076*	76	-48	3"	87,8	3,46	90,5	3,56	45	650	180	2610	900	35,43	3155	2,11	MF+M03400-48

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging.**
Please see the full list of alternative options on Manuli web site.

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Working pressure improvement ▪ Range extension to DN 76 ▪ Vacuum resistance with SAE 100 R4 performance approved on sizes up to DN 76

Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ Resistencia de presión superior a lo indicado a la norma ▪ Tamaños hasta DN 76 ▪ Resistencia al vacio (SAE 100 R4) aprobada para los tamaños hasta DN 76

MAIN APPLICATIONS
Medium-high pressure lines with installation constraints in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining, return and suction lines

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +212°F -40°C / +100°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión de media y alta en espacios reducidos en condiciones ambientales de trabajo pesado, instalaciones especificas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto, líneas de retorno y de succión

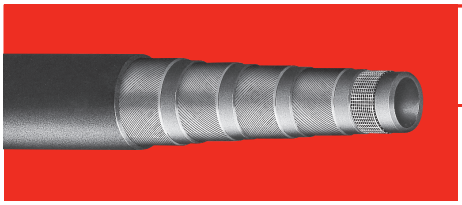
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +212°F -40°C / +100°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceite basado en éster sintético, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 857 2SC - ISO 11237-1 2SC, SAE 100 R 16S; in addition: DN 25 SAE 100 R17, ISO 11237-1 R17
TYPE APPROVALS: GOST-R, LOBA (DN 5÷25), LR, MSHA, RINA (DN 6÷31), (B) (DN 8÷25)

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético resistente al aceite
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor.
ESPECIFICACIONES APLICABLES: Excede EN 857 2SC - ISO 11237-1 2SC, SAE 100 R 16S; adicionalmente aplica para: DN 25 SAE 100 R17, ISO 11237-1 R17
APROBACIONES: GOST-R, LOBA (DN 5÷25), LR, MSHA, RINA (DN 6÷31), (B) (DN 8÷25)



ROCKMASTER®/4SP

ABRASION, WEATHER & HEAT RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10008006*	6	-4	1/4"	14,7	0,58	17,6	0,69	485	7030	2400	34800	125	4,92	585	0,39	MF+M00910-04
H10008010*	10	-6	3/8"	17,6	0,69	21,1	0,83	450	6520	2000	29000	125	4,92	740	0,50	MF+M00910-06
H10008012*	12	-8	1/2"	20,3	0,80	24,3	0,96	420	6050	1750	25370	175	6,89	890	0,60	MF+M00910-08
H10008016*	16	-10	5/8"	23,7	0,93	27,9	1,10	380	5510	1600	23200	200	7,87	1090	0,73	MF+M00910-10
H10008019*	19	-12	3/4"	28,2	1,11	31,9	1,26	380	5510	1600	23200	240	9,45	1470	0,99	MF+M00920-12
H10008025*	25	-16	1"	35,0	1,38	39,0	1,54	320	4640	1400	20300	340	13,39	1910	1,28	MF+M00920-16
H10008032*	31	-20	1.1/4"	46,1	1,81	49,7	1,96	210	3040	1250	18120	460	18,11	2985	2,01	MF+M00920-20
H10008038*	38	-24	1.1/2"	52,4	2,06	56,1	2,21	185	2680	1000	14500	560	22,05	3500	2,35	MF+M00910-24
H10008051*	51	-32	2"	65,4	2,57	69,0	2,72	175	2530	1000	14500	660	25,98	5000	3,36	MF+M00910-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at 1.000.000 impulse cycles ▪ Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Upgraded temperature resistance ▪ bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso ▪ Superior resistencia a la temperatura incrementada ▪ Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
Very high pressure power lines in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión muy alta en condiciones ambientales de trabajo pesado, instalaciones específicas con condiciones de abrasión severa, aplicaciones marinas, subterráneas y minas a cielo abierto

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

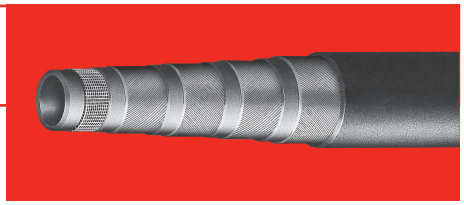
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite basado en éster sintético, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 856 4SP - ISO 3862-1 4SP
TYPE APPROVALS: DNV, DNV (MED), FRAS, GOST-R, LOBA, MSHA, RINA (DN 6÷16), (B)

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 856 4SP - ISO 3862-1 4SP
APROBACIONES: DNV, DNV (MED), FRAS, GOST-R, LOBA, MSHA, RINA (DN 6÷16), (B)

ROCKMASTER®/4SH

ABRASION, WEATHER & HEAT RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10044016*	16	-10	5/8"	25,5	1,00	28,5	1,12	450	6520	1850	26820	180	7,09	1290	0,86	IL+M01300-10
H10044019*	19	-12	3/4"	28,2	1,11	31,9	1,26	420	6090	1750	25370	210	8,27	1500	1,04	IL+M01300-12
H10044025*	25	-16	1"	35,1	1,38	38,1	1,50	385	5580	1750	25370	220	8,66	2040	1,37	IL+M01300-16
H10044032*	31	-20	1.1/4"	42,2	1,66	45,0	1,77	350	5070	1400	20300	420	16,50	2435	1,64	IL+M01400-20
H10044038*	38	-24	1.1/2"	49,1	1,93	52,4	2,06	300	4350	1250	18120	560	22,05	3165	2,13	IL+M01400-24
H10044051*	51	-32	2"	63,5	2,50	67,5	2,66	250	3620	1000	14500	700	27,56	4460	3,00	IL+M01400-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at 1.000.000 flexing impulse cycles ▪ Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Upgraded temperature resistance ▪ bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso flexibles ▪ Resistencia a la temperatura incrementada ▪ Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
Very high pressure power lines in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión muy alta en condiciones ambientales de trabajo pesado, instalaciones específicas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

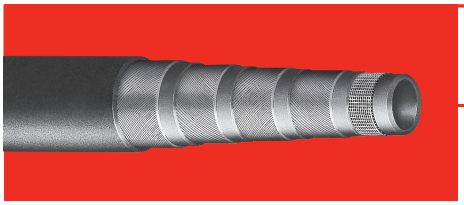
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - INTERLOCK TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 856 4SH -ISO 3862-1 4SH
TYPE APPROVALS: DNV, DNV (MED), FRAS. GOST-R, LOBA (DN 19÷51), LR, MSHA, (B) (DN 19÷51)

ESPIGA: MF2000® - TIPO INTERLOCK
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 856 4SH - ISO 3862-1 4SH
APROBACIONES: DNV, DNV (MED), FRAS. GOST-R, LOBA (DN 19÷51), LR, MSHA, (B) (DN 19÷51)



ROCKMASTER®/12

ABRASION, WEATHER & HEAT RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10031010*	10	-6	3/8"	17,3	0,68	20,0	0,79	280	4060	1600	23200	100	3,94	620	0,42	MF+M00910-06
H10031012*	12	-8	1/2"	20,4	0,80	23,5	0,93	280	4060	1350	19570	125	4,92	760	0,51	MF+M00910-08
H10031016*	16	-10	5/8"	24,4	0,96	27,1	1,07	280	4060	1300	18850	140	5,51	990	0,66	MF+M00910-10
H10031019*	19	-12	3/4"	27,4	1,08	30,4	1,20	280	4060	1300	18850	150	5,91	1175	0,79	MF+M00920-12
H10031025*	25	-16	1"	35,0	1,38	37,5	1,48	280	4060	1150	16670	225	8,86	1690	1,14	MF+M00920-16
H10031A32*	31	-20	1.1/4"	43,1	1,70	45,9	1,81	210	3040	1000	14500	250	9,84	2270	1,52	MF+M00920-20
H10031040*	38	-24	1.1/2"	50,0	1,97	53,3	2,10	175	2530	1000	14500	500	19,69	3120	2,10	MF+M00910-24
H10031051*	51	-32	2"	63,6	2,50	66,7	2,63	175	2530	800	11600	630	24,80	4420	2,96	MF+M00910-32

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging.**
Please see the full list of alternative options on Manuli web site.

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at1.000.000 impulse cycles ▪ Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ Bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso ▪ Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ Bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
High pressure power lines in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión de trabajo pesado, transmisiones hidrostáticas, en condiciones ambientales de trabajo pesado, instalaciones específicas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

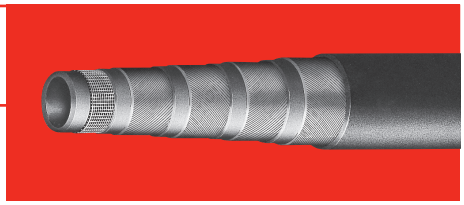
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 856 R12 - SAE 100 R12 - ISO 3862-1 R12
TYPE APPROVALS: ABS, BV, BV (MED), FRAS, GOST-R, LR, MSHA

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 856 R12 - SAE 100 R12 - ISO 3862-1 R12
APROBACIONES: ABS, BV, BV (MED), FRAS, GOST-R, LR, MSHA

ROCKMASTER®/13

ABRASION, WEATHER & HEAT RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10035A06*	6	-4	1/4"	14,6	0,57	17,6	0,69	690	10000	3250	47120	120	4,72	645	0,43	*
H10035A10*	10	-6	3/8"	17,4	0,69	20,4	0,80	690	10000	2900	42050	150	5,98	815	0,55	*
H10035A12*	12	-8	1/2"	21,5	0,85	24,5	0,96	620	8990	2500	36250	200	7,99	1125	0,75	*
H10035019*	19	-12	3/4"	29,0	1,14	31,8	1,25	350	5070	1950	28270	240	9,45	1620	1,09	IL+M01300-12
H10035025*	25	-16	1"	36,0	1,42	39,2	1,54	350	5070	1650	23920	300	11,81	2195	1,47	IL+M01300-16
H10035A32*	31	-20	1.1/4"	46,0	1,81	48,8	1,92	350	5070	1500	21750	420	16,50	3285	2,21	IL+M01300-20
H10035040*	38	-24	1.1/2"	54,6	2,15	57,5	2,26	350	5070	1600	23200	500	19,69	4720	3,17	IL+M01300-24
H10035051*	51	-32	2"	68,4	2,69	72,0	2,83	350	5070	1500	21750	630	24,80	6825	4,57	IL+M01300-32

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

* **Contact Manuli Rubber Industries** / Consulte a Manuli Rubber Industries

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at 1.000.000 flexing impulse cycles ▪ Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso flexibles ▪ Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
Heavy duty power lines, hydrostatic transmissions, in heavy duty environmental conditions, specific installa-tions with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión de trabajo pesado, transmisiones hidrostáticas, en condiciones ambientales de trabajo pesado, instalaciones específicas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

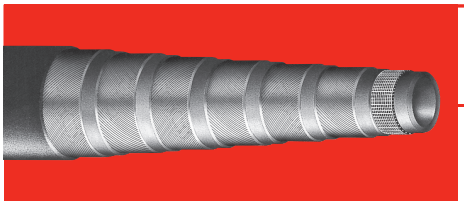
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - INTERLOCK TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals (DN 6÷31). Six high tensile steel spirals (DN 38÷51)
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed EN 856 R13 - SAE 100 R13 - ISO 3862-1 R13
TYPE APPROVALS: ABS (DN 19÷51), BV (DN 19÷51), BV MED (DN 19÷51), FRAS, GOST-R, LOBA, RINA (DN 38÷51), (B) (DN 31÷51)

ESPIGA: MF2000® - TIPO INTERLOCK
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia (DN 6÷31). 6 refuerzos de acero en espiral de alta resistencia (DN 38÷51)
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede EN 856 R13 - SAE 100 R13 - ISO 3862-1 R13
APROBACIONES: ABS (DN 19÷51), BV (DN 19÷51), BV MED (DN 19÷51), FRAS, GOST-R, LOBA, RINA (DN 38÷51), (B) (DN 31÷51)



ROCKMASTER®/15

ABRASION, WEATHER & HEAT RESISTANCE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10049019*	19	-12	3/4"	28,2	1,11	31,0	1,22	420	6090	1750	25370	265	10,43	1430	0,96	IL+M01300-12
H10049025*	25	-16	1"	35,1	1,38	38,1	1,50	420	6090	1750	25370	267	10,51	2040	1,37	IL+M01300-16
H10049A32*	31	-20	1.1/4"	46,3	1,82	49,5	1,95	420	6090	1680	24360	267	10,51	3670	2,46	IL+M01300-20
H10049040*	38	-24	1.1/2"	54,6	2,15	57,5	2,26	420	6090	1680	24360	315	12,40	4720	3,17	IL+M01300-24

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Approved at 1.000.000 flexing impulse cycles ▪ Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ bio biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso flexibles ▪ Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistencia a la llama en una amplia gama de especificaciones ▪ Cubierta antiestática y atóxica ▪ bio compatible con aceites minerales y biológicos

MAIN APPLICATIONS
Heavy duty power lines, hydrostatic transmissions, in heavy duty environmental conditions, specific installations with severe abrasion conditions, marine applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de presión de trabajo pesado, transmisiones hidrostáticas, en condiciones ambientales de trabajo pesado, instalaciones específicas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

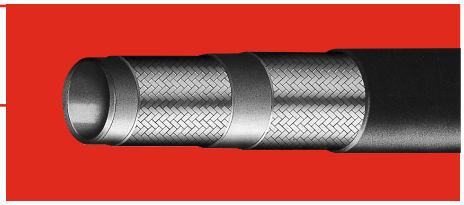
FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - INTERLOCK TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals (DN 19÷25). Six high tensile steel spirals (DN 31÷38)
COVER: Synthetic rubber with high ozone, weather and heat resistance
APPLICABLE SPECS.: Exceed SAE 100 R15 - ISO 3862-1 R15
TYPE APPROVALS: ABS, BV, BV (MED), DNV, FRAS, GL, GOST-R, LOBA, LR, MSHA, (B) (only DN 38)

ESPIGA: MF2000® - TIPO INTERLOCK
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 4 refuerzos de acero en espiral de alta resistencia (DN 19÷25). 6 refuerzos de acero en espiral de alta resistencia(DN 31÷38)
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor
ESPECIFICACIONES APLICABLES: Excede SAE 100 R15 - ISO 3862-1 R15
APROBACIONES: ABS, BV, BV (MED), DNV, FRAS, GL, GOST-R, LOBA, LR, MSHA, (B) (solo DN 38)

ETERNITY™/2

HIGH SERVICE LIFE AND RELIABILITY



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01102006*	6	-4	1/4"	11,3	0,44	13,1	0,51	450	6520	1800	26100	45	1,77	260	0,17	MF+M00120-04
H01102008*	8	-5	5/16"	12,9	0,50	14,7	0,58	400	5800	1600	23200	55	2,17	310	0,21	MF+M00120-05
H01102010*	10	-6	3/8"	15,0	0,59	16,8	0,66	365	5290	1460	21170	65	2,56	380	0,25	MF+M00120-06
NEW H01102A12**	12	-8	1/2"	18,6	0,73	20,4	0,80	350	5070	1400	20300	80	3,15	570	0,37	MF+M00120-08
H01102016*	16	-10	5/8"	22,7	0,89	24,7	0,97	300	4350	1200	17400	90	3,54	710	0,48	MF+M00120-10
H01102019*	19	-12	3/4"	27,1	1,07	29,3	1,15	300	4350	1200	17400	120	4,72	1070	0,72	MF+M00120-12
H01102025*	25	-16	1"	33,7	1,33	35,9	1,41	225	3260	900	13050	160	6,30	1340	0,90	MF+M00120-16

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

* **Plus Version WP350 bar** / Versión Plus WP350 bar

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

The Hi-Performance solution for toughest OEM specifications ▪ Performance far exceeds EN 857-2SC ▪ Improved impulse and service life duration ▪ High temperature and environmental resistance ▪ Enhanced flex impulse resistance with M00120 skive ferrule

La solución de alto rendimiento para las exigentes especificaciones de equipo original (OEM) ▪ Su rendimiento excede la Norma EN857-2SC ▪ Mejorada resistencia a impulsos y mayor vida útil ▪ Resistencia a altas temperaturas y medio ambiente ▪ Acentuado flexing para asegurar una buena resistencia a impulsos con M00120 casquillo para pelado

MAIN APPLICATIONS
High pressure lines with installation constraints in severe OEM applications

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE:
275°F 135°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 212°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de alta presión con restricciones para la instalación en aplicaciones severas para equipo original (OEM)

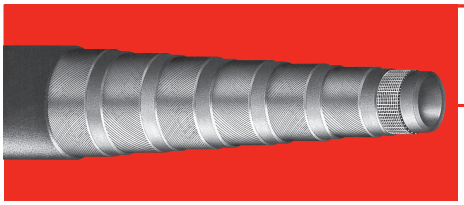
TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN:
257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 212°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Synthetic rubber with high ozone, abrasion and weather resistance.
APPLICABLE SPECS.: Exceed EN857 2SC, SAE 100 R16S and ISO 11237-1 2SC
TYPE APPROVALS: DNV, DNV (MED), GOST-R, MSHA

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 2 refuerzos de acero en espiral de alta resistencia
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor.
ESPECIFICACIONES APLICABLES: Excede EN857 2SC, SAE 100 R16S and ISO 11237-1 2SC
APROBACIONES: DNV, DNV (MED), GOST-R, MSHA



DIAMONDSPIR™

VERY HIGH PRESSURE

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING*

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
NEW H10018019*	19	-12	3/4"	29,1	1,15	32,1	1,26	560	8120	2240	32480	280	11,02	1685	1,13	XL+M01750-12
H10018025*	25	-16	1"	38,2	1,50	41,2	1,62	560	8120	2240	32480	350	13,78	2895	1,94	XL+M01800-16
H10018032*	31	-20	1.1/4"	47,7	1,88	50,9	2,00	525	7610	2100	30450	420	16,54	4220	2,84	XL+M01800-20
H10018038*	38	-24	1.1/2"	55,2	2,17	58,7	2,31	475	6880	1900	27550	500	19,69	5245	3,52	XL+M01800-24
H10018051*	51	-32	2"	68,4	2,69	71,9	2,83	420	6090	1680	24360	600	23,62	6710	4,51	XL+M01800-32
H10018063*	63	-40	2.1/2"	82,8	3,26	87,4	3,44	350	5070	1400	20300	800	31,50	8975	6,03	XL+M01800-40
H10018076*	76	-48	3"	90,8	3,57	94,6	3,72	210	3040	870	12610	900	35,43	7960	5,35	XL+M01800-48

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

*** The use of Xtralock flange is strongly recommended. M68610-12-12 and M68690-12-12 fittings for Diamondspir are allowed too.**
El uso de la brida Xtralock se recomienda fuertemente. Los racores M68610-12-12 y M68690-12-12 se permiten para Diamondspir también

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Very high pressure resistance ▪ Approved with severe fatigue tests ▪ Superior abrasion resistance ▪ High ozone and weather resistance ▪ Flame resistance to a wide range of spec. ▪ Antistatic and antitoxic cover ▪ bio biological and mineral oils compatibility

Superior resistencia a la presión ▪ Aprobado con prueba de maximo esfuerzo ▪ Superior resistencia a la abrasión ▪ Alta resistencia al ozono y a la intemperie ▪ Resistente a la llama ▪ Cubierta antiestática y atoxica ▪ bio compatible con aceite mineral y biológico

MAIN APPLICATIONS
Heavy duty power lines, hydrostatic transmissions in heavy duty environmental conditions, specific installations with severe abrasion conditions, off-shore applications, underground and open pit mining

CONTINUOUS SERVICE TEMPERATURE RANGE
-40°F / +250°F -40°C / +121°C

MAX OPERATING TEMPERATURE
(Intermittent service) 257°F 125°C

RECOMMENDED FLUIDS
Mineral oils, vegetable oils and synthetic ester based oils (up to 210°F 100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

PRINCIPALES APLICACIONES
Líneas de muy extrema presión en condiciones ambientales de trabajo pesado, transmisión hidstática, instalaciones específicas con condiciones de abrasión severa, aplicaciones marinas, minas subterráneas y minas a cielo abierto

TEMPERATURA CONTINUA DE SERVICIO
-40°F / +250°F -40°C / +121°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 257°F 125°C

FLUIDOS RECOMENDADOS
Aceite mineral, aceite vegetal y aceite basado en éster sintético (hasta 210°F 100°C), glicoles y poliglicoles, aceite mineral en emulsión acuosa, agua

INSERT: MF2000® - XTRALOCK TYPE
TUBE: Oil resistant synthetic rubber
REINFORCEMENT: Six high tensile steel spirals (DN 25÷76), four high tensile steel spirals (DN 19)
COVER: Synthetic rubber with high abrasion, ozone, weather and heat resistance.
APPLICABLE SPECS.: MANULI® Design - ISO 6807-D (DN 76), exceed ISO 3862 R15
TYPE APPROVALS: ABS (DN 25÷76), GOST-R, MSHA

ESPIGA: MF2000® - TIPO XTRALOCK
TUBO: Caucho sintético, resistente al aceite
REFUERZO: 6 refuerzos de acero en espiral de alta resistencia al ozono (DN 25÷76), 4 refuerzos de acero en espiral de alta resistencia al ozono (DN 19)
CUBIERTA: Caucho sintético con alta resistencia al ozono, intemperie y calor.
ESPECIFICACIONES APLICABLES: Diseño MANULI® - ISO 6807-D (DN 76), excede ISO 3862 R15
APROBACIONES: ABS (DN 25÷76), GOST-R, MSHA

MF2000®

CRIMPED FITTINGS



manuli® RUBBER INDUSTRIES

SUMMARY

The range of hydraulic fittings apply to English BS (British Standard), American SAE and German DIN (Deutsches Institut für Normung) norms. Additional items conforming to Japanese norms JIS (Japanese Industrial Standard), French NF and some flanged head fittings for OEM applications are also included in the range.
For braid hose, MF2000® range is available with a no-skive or skive assembling technology.
For wire spiral hose MF2000® range is used with external skive.
For the highest pressure levels, the Interlock range is reccomended with internal and external skiving operations.

La gama de conexiones hidráulicas sigue las normas Inglesas BS (British Standard), Americanas SAE, Alemanas DIN (Deutsches Institut fur Normung), Japonesas JIS (Japanese Industrial Standard), las francesas NF, conexiones bridadas y aplicaciones para equipo original (OEM).
Para la manguera con refuerzo trenzado, las conexiones serie MF2000® están disponibles con una tecnología de ensamble con o sin pelado. Para las mangueras con refuerzo en espiral se usa la serie MF2000® con pelado externo de la manguera, mientras que para una muy alta presión, la serie Interlock debe ser usada con pelado interno y externo.

Description Descripción	Reference Referencia	Page Página
FERRULE MF2000® MULTIFIT TYPE CASQUILLO MF2000® TIPO MULTIFIT		
SKIVE FERRULE FOR WIRE BRAID HOSES CASQUILLO CON PELADO PARA MANGUERA CON TRENZA DE ACERO	M00110/M00120	91
SKIVE FERRULE FOR WIRE BRAID AND SPIRAL HOSES CASQUILLO CON PELADO PARA MANGUERA CON TRENZA Y ESPIRAL DE ACERO	M00910/M00920	92
NO-SKIVE FERRULE FOR WIRE BRAID HOSES CASQUILLO SIN PELADO PARA MANGUERA CON TRENZA DE ACERO	M03400	92
NO-SKIVE FERRULE FOR TEXTILE BRAID HOSES CASQUILLO SIN PELADO PARA MANGUERA CON REFUERZO TEXTIL TRENZADO	M00310	93
NO-SKIVE FERRULE FOR COMPACT HOSES CASQUILLO SIN PELADO PARA MANGUERA COMPACTA	M00820	93
INSERT MF2000® MULTIFIT TYPE ESPIGAS MF2000® TIPO MULTIFIT		
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BSP MALE TAPERED MACHO BSP ROSCA CONICA	M10710	94
BSP MALE PARALLEL 60° CONE SEAT - BS5200 MACHO BSP PARALELO ASIENTO A 60° - BS5200	M10510	95
BSP FEMALE 60° CONE - BS5200 HEMBRA BSP ASIENTO A 60° - BS5200	M20512 / M20513	96
90° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CODO DE 90° ASIENTO A 60° - BS5200	M20592 / M20593	97
45° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CODO DE 45° ASIENTO A 60° - BS5200	M20542 / M20543	98
BSP O-RING FEMALE 60° CONE - BS5200 HEMBRA BSP CON O-RING ASIENTO A 60° - BS5200	M20812 / M20813	99
90° BSP O-RING FEMALE 60° CONE - BS5200 HEMBRA BSP CON O-RING CODO DE 90° ASIENTO A 60° - BS5200	M20892 / M20893	100
45° BSP O-RING FEMALE 60° CONE - BS5200 HEMBRA BSP CON O-RING CODO DE 45° ASIENTO A 60° - BS5200	M20842 / M20843	101

SUMMARY

Description Descripción	Reference Referencia	Page Página
90° BSP O-RING FEMALE COMPACT ELBOW 60° CONE - BS5200 HEMBRA BSP CON O-RING CODO COMPACTO DE 90° ASIENTO A 60° - BS5200	M20882F	101
BSP MALE FLAT SEAT MACHO BSP CARA PLANA	M10610	102
BSP FEMALE FLAT SEAT HEMBRA BSP CARA PLANA	M20612 / M20613	102
SAE STANDARD CONNECTIONS CONEXIONES TIPO SAE		
JIC MALES AND FEMALES MACHOS Y HEMBRAS JIC		
JIC MALE 37° CONE - SAE J516/J514 JIC MACHO ASIENTO A 37° - SAE J516/J514	M12510	103
JIC FEMALE 37° CONE SEAT - SAE J516/J514 JIC HEMBRA ASIENTO A 37° - SAE J516/J514	M22512 / M22513	104
NEW JIC FEMALE 37° CONE SEAT DOUBLE EXAGON - SAE J516/J514 JIC HEMBRA ASIENTO A 37° DOBLE TUERCA - SAE J516/J514	M22711 / M22711K	105
JIC FEMALE 37° CONE SEAT DOUBLE EXAGON COMPACT TYPE - SAE J516/J514 JIC HEMBRA ASIENTO A 37° DOBLE TUERCA TIPO COMPACTO - SAE J516/J514	M22712K	105
JIC FEMALE 37° CONE SEAT DOUBLE EXAGON - SAE J516/J514 JIC HEMBRA ASIENTO A 37° DOBLE TUERCA - SAE J516/J514	M22712	106
90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 90° ASIENTO A 37° - SAE J516/J514	M22592 / M22593	107
90° JIC FEMALE LONG DROP ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO LARGO DE 90° ASIENTO A 37° - SAE J516/J514	M24792 / M24793	108
45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 45° ASIENTO A 37° - SAE J516/J514	M22542 / M22543	109
90° JIC FEMALE COMPACT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO COMPACTO DE 90° ASIENTO A 37° - SAE J516/J514	M22582F	110
ORFS MALES AND FEMALES MACHOS Y HEMBRAS ORFS		
ORFS MALE - SAE J1453 ORFS MACHO - SAE J1453	M12410	111
ORFS FEMALE - SAE J516/J1453 ORFS HEMBRA - SAE J516/J1453	M22411	112
90° ORFS FEMALE - SAE J516/J1453 ORFS HEMBRA CODO DE 90° - SAE J516/J1453	M22491 / M22493	113
90° ORFS FEMALE LONG DROP - SAE J516/J1453 ORFS HEMBRA CODO DE 90° LARGO - SAE J516/J1453	M24493	114
45° ORFS FEMALE - SAE J516/J1453 ORFS HEMBRA CODO DE 45° - SAE J516/J1453	M22441 / M22443	115
SAE MALES AND FEMALES MACHOS Y HEMBRAS SAE		
SAE MALE O-RING BOSS TYPE - SAE J516/J514 SAE MACHO CON O-RING TIPO BOSS - SAE J516/J514	M13010	116
SAE SWIVEL MALE O-RING BOSS TYPE - SAE J516/J514 SAE MACHO GIRATORIO CON O-RING TIPO BOSS - SAE J516/J514	M14310	117
90° SAE SWIVEL MALE O-RING BOSS TYPE - SAE J516/J514 SAE MACHO GIRATORIO CON O-RING CODO DE 90° TIPO BOSS - SAE J516/J514	M14390	117
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SUMMARY

Description Descripción	Reference Referencia	Page Página
90° SAE FEMALE SWEPT ELBOW 45° CONE SEAT - SAE J516/J512 SAE HEMBRA CODO DE 90º ASIENTO A 45º - SAE J516/J512	M22692	118
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NPTF MALE 30° CONE SEAT - SAE J516 NPTF MACHO ASIENTO A 30º - SAE J516	M12810	119
NPTF SWIVEL MALE 30° CONE SEAT - SAE J516 NPTF MACHO GIRATORIO ROSCA ASIENTO A 30° - SAE J516	M14110	120
NPSM FEMALE 30° CONE NPSM HEMBRA ASIENTO A 30º	M22812	120
SAE FLANGES 3000/6000 psi BRIDAS SAE 3000/6000 psi		
STRAIGHT SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA RECTA SAE 3000 psi CÓDIGO 61 - SAE J516/J518	M23311	121
22.5° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 22.5º SAE 3000 psi CÓDIGO 61 - SAE J516/J518	M23321	122
30° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 30º SAE 3000 psi CÓDIGO 61 - SAE J516/J518	M23331	122
45° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 45º SAE 3000 psi CÓDIGO 61 - SAE J516/J518	M23341	123
60° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 60º SAE 3000 psi CÓDIGO 61 - SAE J516/J518	M23361	124
67.5° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 67.5º SAE 3000 psi CÓDIGO 61 - SAE J516/J518	M23371	124
90° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 90º SAE 3000 psi CÓDIGO 61 - SAE J516/J518	M23391	125
STRAIGHT SAE FLANGE 6000 psi CODE 62 - SAE J516/J518 BRIDA RECTA SAE 6000 psi CÓDIGO 62 - SAE J516/J518	M23611	126
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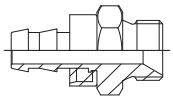
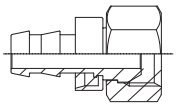
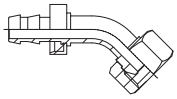
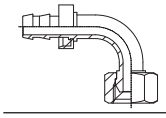
L10510 	BSP MALE PARALLEL 60° CONE SEAT BS5200 MACHO BSP PARALELO ASIENTO A 60° BS5200	179
L20513 	BSP FEMALE 60°CONE - BS5200 HEMBRA BSP ASIENTO A 60° - BS5200	179
L20543 	45° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CODO DE 45° ASIENTO A 60° - BS5200	180
L20593 	90° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CODO DE 90° ASIENTO A 60° - BS5200	180

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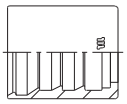
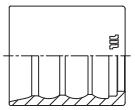
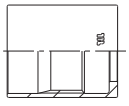
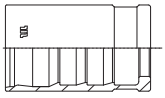
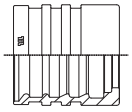
M00110 	SKIVE FERRULE FOR WIRE BRAID HOSES CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO	91
M00120 	SKIVE FERRULE FOR WIRE BRAID HOSES CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO	91
M00310 	NO-SKIVE FERRULE FOR TEXTILE BRAID HOSES CASQUILLO SIN PELADO PARA MANGUERAS CON REFUERZO TEXTIL TRENZADO	93
M00820 	NO-SKIVE FERRULE FOR COMPACT HOSES CASQUILLO SIN PELADO PARA MANGUERAS COMPACTA	93
M00910 	SKIVE FERRULE FOR WIRE BRAID AND SPIRAL HOSES CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA Y ESPIRAL DE ACERO	92

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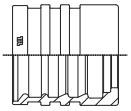
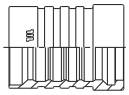
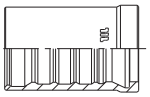
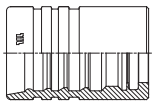
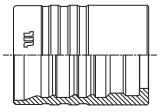
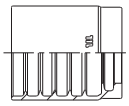
M00920 	SKIVE FERRULE FOR WIRE BRAID AND SPIRAL HOSES CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA Y ESPIRAL DE ACERO	92
M01300 	DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO	158
M01400 	DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO	158
NEW M01750 	DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (4 PLY) CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN SPIRAL - TRABAJO PESADO	172
M01800 	DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY) CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN SPIRAL - TRABAJO PESADO	172
M03400 	NO-SKIVE FERRULE FOR WIRE BRAID HOSES CASQUILLO SIN PELADO PARA MANGUERAS CON TRENZA DE ACERO	92

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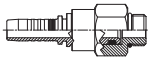
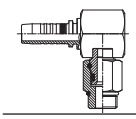
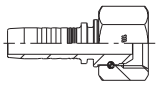
M14310 	SAE SWIVEL MALE O-RING BOSS TYPE SAE J516/J514 SAE MACHO GIRATORIO CON O-RING TIPO BOSS - SAE J516/J514	117
M14390 	90° SAE SWIVEL MALE O-RING BOSS TYPE - SAE J516/J514 SAE MACHO GIRATORIO CON O-RING CODO DE 90° TIPO BOSS - SAE J516/J514	117
M20512 	BSP FEMALE 60° CONE - BS5200 HEMBRA BSP ASIENTO A 60° - BS5200	96

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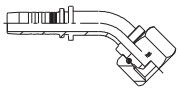
M20542 	45° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CODO DE 45° ASIENTO A 60° - BS5200	98
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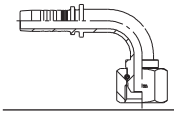
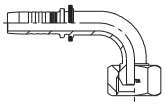
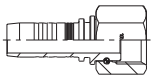
M20592 	90° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CODO DE 90° ASIENTO A 60° - BS5200	97
M20593 	90° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CODO DE 90° ASIENTO A 60° - BS5200	97
M20612 	BSP FEMALE FLAT SEAT HEMBRA BSP CARA PLANA	102
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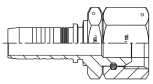
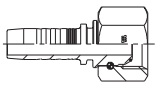
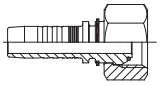
M20712 	JIS BSP FEMALE 60° CONE (NISSAN) JIS B 8363 HEMBRA JIS BSP ASIENTO A 60° (NISSAN) JIS B 8363	149
M20812 	BSP O-RING FEMALE 60° CONE BS5200 HEMBRA BSP CON O-RING ASIENTO A 60° - BS5200	99
M20813 	BSP O-RING FEMALE 60° CONE BS5200 HEMBRA BSP CON O-RING ASIENTO A 60° - BS5200	99

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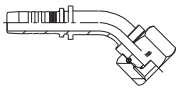
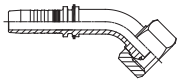
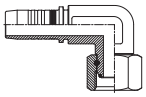
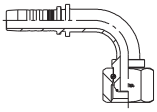
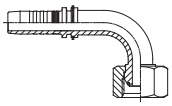
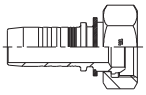
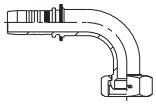
	**M20842** 45° BSP O-RING FEMALE 60° CONE BS5200 HEMBRA BSP CON O-RING CODO DE 45° ASIENTO A 60° - BS5200	100
	**M20843** 45° BSP O-RING FEMALE 60° CONE BS5200 HEMBRA BSP CON O-RING CODO DE 45° ASIENTO A 60° - BS5200	101
	**M20882F** 90° BSP O-RING FEMALE COMPACT ELBOW 60° CONE - BS5200 HEMBRA BSP CON O-RING CODO COMPACTO DE 90° ASIENTO A 60° BS5200	101
	**M20892** 90° BSP O-RING FEMALE 60° CONE BS5200 HEMBRA BSP CON O-RING CODO DE 90° ASIENTO A 60° - BS5200	100
	**M20893** 90° BSP O-RING FEMALE 60° CONE BS5200 HEMBRA BSP CON O-RING CODO DE 90° ASIENTO A 60° - BS5200	100
	**M21013** METRIC FEMALE 60° CONE DIN 20078/3863 HEMBRA METRICA ASIENTO A 60° DIN 20078/3863	134
	**M21093** 90° METRIC FEMALE SWEPT ELBOW 60° CONE - DIN 20078/3863 HEMBRA METRICA CODO DE 90° ASIENTO A 60° - DIN 20078/3863	134
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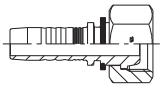	**M21313** METRIC FEMALE MULTISEAL DIN 20078/3868 HEMBRA METRICA ASIENTO UNIVERSAL DIN 20078/3868	135
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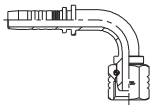	**M21392** 90° METRIC FEMALE SWEPT ELBOW MULTISEAL DIN 20078/3868 HEMBRA METRICA CODO DE 90° ASIENTO UNIVERSAL - DIN 20078/3868	136

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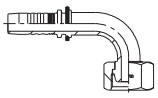	**M21393** 90° METRIC FEMALE SWEPT ELBOW MULTISEAL DIN 20078/3868 HEMBRA METRICA CODO DE 90° ASIENTO UNIVERSAL - DIN 20078/3868	136
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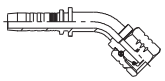
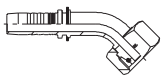
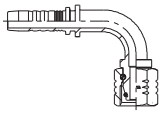
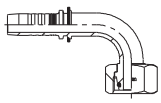
	**M21542** 45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24° SERIE LIGERA DIN 20066/3865	140
	**M21543** 45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24° SERIE LIGERA DIN 20066/3865	140
	**M21592** 90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24° SERIE LIGERA DIN 20066/3865	139
	**M21593** 90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24° SERIE LIGERA DIN 20066/3865	139
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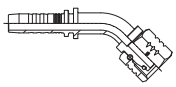	**M21642** 45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 45° CONO 24° SERIE PESADA DIN 20066/3865	144
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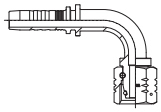
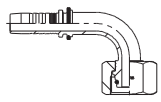
M21692 	90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24° SERIE PESADA DIN 20066/3865	143
M21693 	90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24° SERIE PESADA DIN 20066/3865	143
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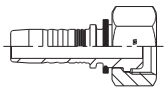
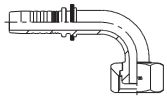
M21813 	FRENCH METRIC FEMALE GAZ TYPE HEMBRA METRICA FRANCES TIPO GAZ	147
M21893 	90° FRENCH METRIC FEMALE GAZ TYPE HEMBRA METRICA FRANCES CODO DE 90° TIPO GAZ	147
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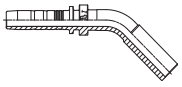
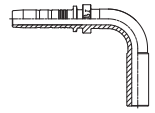
M22040 	45° METRIC STANDPIPE L.T. DIN 2353 ESPIGA LISA METRICA SERIE LIGERA CODO DE 45° - DIN 2353	133
M22090 	90° METRIC STANDPIPE L.T. DIN 2353 ESPIGA LISA METRICA SERIE LIGERA CODO DE 90° - DIN 2353	131
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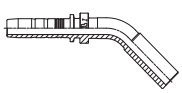
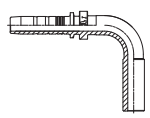
M22140 	45° METRIC STANDPIPE H.T. DIN 2353 ESPIGA LISA METRICA SERIE PESADA CODO DE 45° - DIN 2353	133
M22190 	90° METRIC STANDPIPE H.T. DIN 2353 ESPIGA LISA METRICA SERIE PESADA CODO DE 90° - DIN 2353	132

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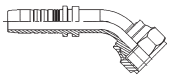
M22441 	45° ORFS FEMALE - SAE J516/J1453 ORFS HEMBRA CODO DE 45° SAE J516/J1453	115
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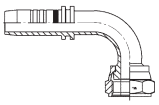
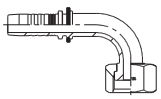
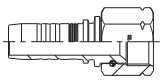
M22491 	90° ORFS FEMALE - SAE J516/J1453 ORFS HEMBRA CODO DE 90° SAE J516/J1453	113
M22493 	90° ORFS FEMALE - SAE J516/J1453 ORFS HEMBRA CODO DE 90° SAE J516/J1453	113
M22512 	JIC FEMALE 37° CONE SEAT SAE J516/J514 JIC HEMBRA ASIENTO A 37° SAE J516/J514	104
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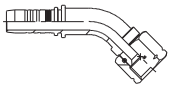
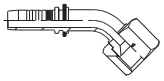
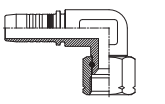
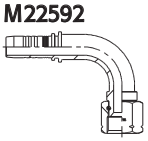
M22542 	45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 45° ASIENTO A 37° - SAE J516/J514	109
M22543 	45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 45° ASIENTO A 37° - SAE J516/J514	109
M22582F 	90° JIC FEMALE COMPACT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO COMPACTO DE 90° ASIENTO A 37° - SAE J516/J514	110
M22592 	90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 90° ASIENTO A 37° - SAE J516/J514	107

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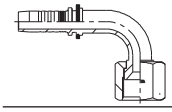
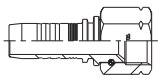
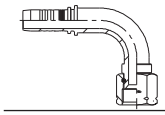
	**M22593** 90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 90° ASIENTO A 37° - SAE J516/J514	107
	**M22612** SAE FEMALE 45° CONE SEAT SAE J516/J512 SAE HEMBRA ASIENTO A 45° SAE J516/J512	118
	**M22692** 90° SAE FEMALE SWEPT ELBOW 90° CONE SEAT - SAE J516/J512 SAE HEMBRA CODO DE 90° ASIENTO A 45° - SAE J516/J512	118
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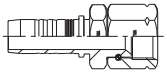	**M22712** JIC FEMALE 37° CONE SEAT DOUBLE EXAGON SAE J516/J514 JIC HEMBRA ASIENTO A 37° DOBLE TUERCA SAE J516/J514	106
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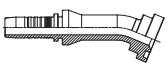
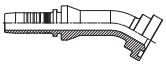
	**M23321** 22.5° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 22.5° SAE 3000 psi CODIGO 61 - SAE J516/J518	122
	**M23331** 30° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 30° SAE 3000 psi CODIGO 61 - SAE J516/J518	122

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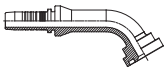
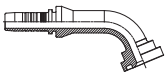
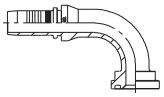
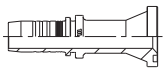
	**M23361** 60° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 60° SAE 3000 psi CODIGO 61 - SAE J516/J518	124
	**M23371** 67.5° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 67.5° SAE 3000 psi CODIGO 61 - SAE J516/J518	124
	**M23391** 90° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 90° SAE 3000 psi CODIGO 61 - SAE J516/J518	125
	**M23611** STRAIGHT SAE FLANGE 6000 psi CODE 62 - SAE J516/J518 BRIDA RECTA SAE 6000 psi CODIGO 62 - SAE J516/J518	127
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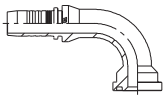	**M23691** 90° SAE FLANGE 6000 psi CODE 62 - SAE J516/J518 BRIDA CODO DE 90° SAE 6000 psi CODIGO 62 - SAE J516/J518	127
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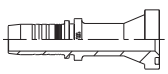	**M23911** STRAIGHT SUPERCAT FLANGE BRIDA RECTA SUPERCAT	151
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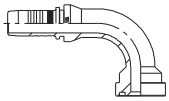	**M23991** 90° SUPERCAT FLANGE BRIDA SUPERCAT CODO DE 90°	152

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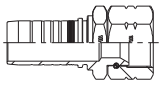	**M24012** JIS METRIC FEMALE 60° CONE SEAT (KOMATSU) JIS B 8363 HEMBRA METRICA JIS ASIENTO A 60° (KOMATSU) JIS B 8363	148
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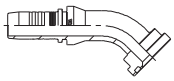
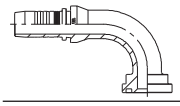
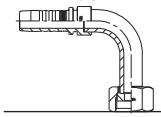
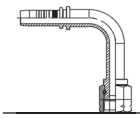
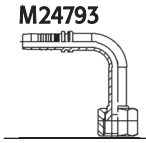
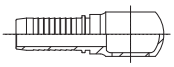
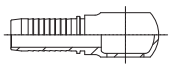
	**M24141** 45° KOMATSU FLANGE BRIDA KOMATSU CODO DE 45°	150
	**M24191** 90° KOMATSU FLANGE BRIDA KOMATSU CODO DE 90°	150
	**M24493** 90° ORFS FEMALE LONG DROP SAE J516/J1453 ORFS HEMBRA CODO DE 90° LARGO SAE J516/J1453	114
	**M24792** 90° JIC FEMALE LONG DROP ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO LARGO DE 90° ASIENTO A 37° - SAE J516/J514	108
	**M24793** 90° JIC FEMALE LONG DROP ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO LARGO DE 90° ASIENTO A 37° - SAE J516/J514	108
	**O20310** BSP BANJO BSP BANJO	153
	**O20910** METRIC BANJO - DIN 7642 BANJO METRICO - DIN 7642	153

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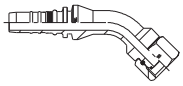
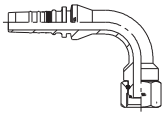
	**M45842** 45° BSP O-RING FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CON O-RING CODO DE 45° ASIENTO A 60° - BS5200	160
	**M45892** 90° BSP O-RING FEMALE SWEPT ELBOW 60° CONE - BS5200 HEMBRA BSP CON O-RING CODO DE 90° ASIENTO A 60° - BS5200	160
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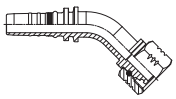
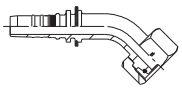
	**M46642** 45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24° SERIE PESADA DIN 20066/3865	171
	**M46643** 45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24° SERIE PESADA DIN 20066/3865	171

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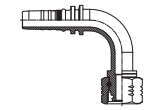
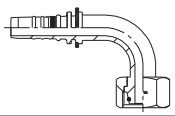
	**M46692** 90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24° SERIE PESADA DIN 20066/3865	171
	**M46693** 90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T. DIN 20066/3865 HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24° SERIE PESADA DIN 20066/3865	171
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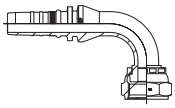	**M47491** 90° ORFS FEMALE - SAE J516/J1453 ORFS HEMBRA CODO DE 90° CARA PLANA SAE J516/J1453	163
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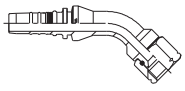
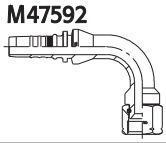
	**M47542** 45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 45° ASIENTO A 37° SAE J516/J514	162
	**M47592** 90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 JIC HEMBRA CODO DE 90° ASIENTO A 37° SAE J516/J514	162
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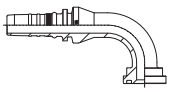	**M48390** 90° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518 BRIDA CODO DE 90° SAE 3000 psi CODIGO 61 - SAE J516/J518	165

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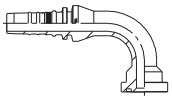
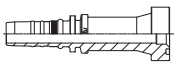
	**M48690** 90° SAE FLANGE 6000 psi CODE 62 - SAE J516/J518 BRIDA CODO DE 90° SAE 6000 psi CODIGO 62 - SAE J516/J518	167
	**M48910** STRAIGHT SUPERCAT SERIES FLANGE BRIDA RECTA SUPERCAT	169
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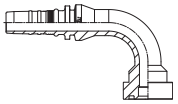	**M48990** 90° SUPERCAT SERIES FLANGE BRIDA SUPERCAT CODO DE 90°	169
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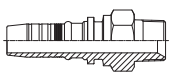
NEW 	**M52810** NPTF MALE 60° CONE SEAT - SAE J516 NPTF MACHO ASIENTO A 60° - SAE J516	172
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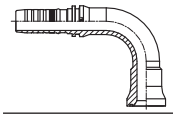
M68590	90° XTRAFLANGE  BRIDA 90° XTRAFLANGE	174
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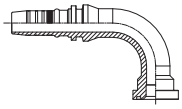
M68690	90° SAE FLANGE CODE 62 - SAE J516/J518  BRIDA CODO DE 90° SAE CODIGO 62 - SAE J516/J518	173
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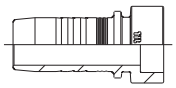
MF2000® ACCESSORIES
ACCESORIOS

MIP	BRAZING TAIL  ESPIGA SOLDABLE (SALVAVIDAS)	155
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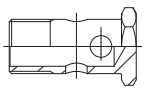
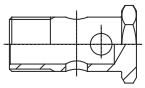
O80210	BSP BOLT  PASADOR BSP	157
O80810	METRIC BOLT - DIN 7643  PASADOR METRICO - DIN 7643	157

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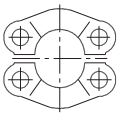
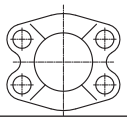
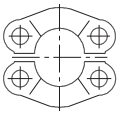
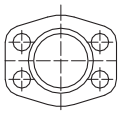
O83308	SAE SPLIT FLANGE CLAMPS 3000 psi CODE 61 - SAE J518  SEMIBRIDA SAE 3000 psi CODIGO 61 - SAE J518	156
O83607	SAE ONE-PIECE FLANGE CLAMPS CODE 62 - SAE J518  BRIDA ENTERA SAE PARA FLANGE CODIGO 62 - SAE J518	175
O83609	SAE SPLIT FLANGE CLAMPS 6000 psi CODE 62 - SAE J518  SEMIBRIDA SAE 6000 psi CODIGO 62 - SAE J518	156
O88507	ONE-PIECE XTRAFLANGE CLAMPS  BRIDA ENTERA PARA XTRAFLANGE	175

FITTINGS PART NUMBERING SYSTEM

FIRST DIGIT PRIMER DIGITO

1 2 3 4 5

The numbers stated in this position (from 0 to 8), refer respectively to the following descriptions:
Los números colocados en esta posición (de 0 a 8) se refieren respectivamente a las siguientes descripciones:

0 = Crimped Ferrule / Casquillo para prensado
1 = Multifit Type Male / Espiga macho tipo Multifit
2 = Multifit Type Female / Espiga hembra tipo Multifit
3 = Interlock Crimped Male / Espiga macho tipo Interlock
4 = Interlock Crimped Female / Espiga hembra tipo Interlock
5 = Xtralock Type Male / Espiga macho tipo Xtralock
6 = Xtralock Type Female / Espiga hembra tipo Xtralock
8 = Split Flange or Bolt / Semi brida o pasador

SECOND AND THIRD DIGIT SECUNDO Y TERCER DIGITO

1 2 3 4 5

MULTIFIT	INTERLOCK XTRALOCK	DESCRIPTION DESCRIPCION
00		**Blank insert /** Espiga doble
03		**BSP Banjo** / BSP Banjo
05	55	**BSP Parallel Thread (60° cone)** / BSP Rosca paralela (asiento a 30°)
06		**BSP Parallel Thread (Flat face)** / BSP Rosca paralela (cara plana)
07	57	**BSP Male Tapered Thread - JIS BSP Female** / BSP Rosca macho conica - JIS BSP hembra
08	58	**BSP Parallel Thread O-Ring (60° cone)** / BSP Rosca paralela con O-Ring (asiento a 30°)
09		**Metric Banjo** / Metric Banjo
10		**Metric Thread (60° cone superlight)** / Rosca métrica (asiento a 30° súper ligero)
11		**Male Metric Thread (24° cone light type)** / Rosca métrica (asiento a 24° tipo ligero)
12	62	**Male Metric Thread (24° cone heavy type)** / Rosca métrica (asiento a 24° tipo pesado)
13		**Metric Thread (Multiseal cone)** / Rosca métrica (asiento universal)
15		**Female Metric Thread (24° cone O-Ring light type** / Rosca métrica (asiento a 24° con O-Ring serie ligera)
16	66	**Female Metric Thread (24° cone O-Ring heavy type)** / Rosca métrica (asiento a 24° con O-Ring serie pesada)
17		**Metric Thread (French Millimetric)** / Rosca métrica (Milimétrico francés)
18		**Metric Thread (French gaz)** / Rosca métrica (francés gaz)
20		**DIN Metric Standpipe L.T.** / Tubo métrico DIN serie ligera (L.T.)
21		**DIN Metric Standpipe H.T.** / Tubo métrico DIN serie pesada (H.T.)
25	75	**JIC Thread (37° cone)** / JIC Rosca (asiento a 37°)
27		**JIC Thread double exag. (37° cone)** / JIC doble rosca (asiento a 37°)
24	74	**ORFS type** / Tipo ORFS
26		**SAE Thread (45° cone)** / Rosca SAE (asiento a 45°)
28	78	**NPTF/NPSM Thread** / Rosca NPTF/NPSM
30		**SAE O-Rinh Thread** / Rosca SAE con O-Ring
33	83	**Code 61 SAE flange 3000 psi** / Brida código 61 SAE 3000 psi
	85	**Xtraflange** / Brida Xtraflange
36	86	**Code 62 SAE flange 6000 psi** / Brida código 62 SAE 6000 psi
38		**JIS (Toyota) Thread** / Rosca JIS (Toyota)
39	89	**Supercat flange** / Brida Supercat
40		**JIS (Komatsu) Thread** / Rosca JIS (Komatsu)
41		**NPTF Swivel Male** / NPTF macho giratorio
43		**SAE O-Ring Thread Swivel Male** / SAE Tipo O-Ring rosca macho giratorio
44		**ORFS Long Drop Elbow** / ORFS asiento codo largo
47		**JIC Thread (37° cone) Elbow Long Drop** / JIC Cuerda recta, (asiento a 37°) codo largo
48		**Staple Lock Connection** / Conexión Staple-lock
49		**Wash Cleaning Female** / Hembra arandela de desgaste

When the first digit is 8, it denotes Bolt type or SAE split flange, namely:
Cuando el primer dígito es 8, denota tipo pasador o Semi brida SAE, respectivamente:

SAE Split Flange 3000 psi / Semi brida código 61 (SAE 3000 psi) = 33
Xtraflange / Brida Xtraflange = 85
SAE Split Flange 6000 psi / Semi brida código 61 (SAE 6000 psi) = 36
BSP Bolt / Pasador BSP = 02
Metric Bolt / Pasador métrico = 08

FOURTH DIGIT CUARTO DIGITO

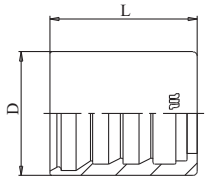
1 2 3 4 5

1 = Straight / Recto
2 = 22,5° Swept / Codo de 22,5°
3 = 30° Swept / Codo de 30°
4 = 45° Swept / Codo de 45°
6 = 60° Swept / Codo de 60°
7 = 67,5° Swept / Codo de 67,5°
8 = Compact type / Tipo compacto
9 = 90° Swept / Codo de 90°

FIFTH DIGIT QUINTO DIGITO

1 2 3 4 5

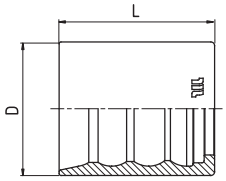
3 = Slip-on Nut / Tuerca libre (deslizable sobre la espiga)
2 = Thrust-wire Nut / Tuerca con seguro (giratoria sobre la espiga)
1 = Crimped-back Nut - Multiflt flange / Tuerca prensada o tipo sólido (brida tipo Multifit)
0 = Male/Ferrule - Interlock/Xtralock flange / Macho/Casquillo - Brida tipo Interlock/Xtralock



M00110

SKIVE FERRULE FOR WIRE BRAID HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO



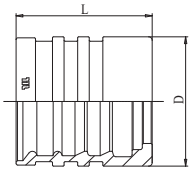
M00120

SKIVE FERRULE FOR WIRE BRAID HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M00120-03	5	3/16"	- 03		17,0	23,9				
M00120-04	6	1/4"	- 04		19,5	28,0				
M00120-05	8	5/16"	- 05		20,0	28,6				
M00120-06	10	3/8"	- 06		23,0	30,0				
M00120-08	12	1/2"	- 08		26,7	32,0				
M00120-10	16	5/8"	- 10		32,0	38,0				
M00120-12	19	3/4"	- 12		35,8	41,7				
M00120-16	25	1"	- 16		43,0	47,0				
M00110-20	31	1.1/4"	- 20		50,5	59,0				
M00110-24	38	1.1/2"	- 24		57,0	70,0				
M00110-32	51	2"	- 32		70,0	72,0				

FERRULE

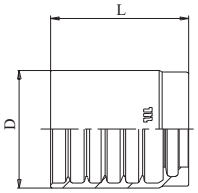


M00910/M00920

SKIVE FERRULE FOR WIRE BRAID AND SPIRAL HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA Y ESPIRAL DE ACERO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M00910-03	5	3/16"	- 03		20,6	26,0				
M00910-04	6	1/4"	- 04		22,0	30,0				
M00910 -05	8	5/16"	- 05		24,0	31,0				
M00910-06	10	3/8"	- 06		26,0	33,0				
M00910-08	12	1/2"	- 08		30,0	34,0				
M00910-10	16	5/8"	- 10		33,0	39,0				
M00920-12	19	3/4"	- 12		38,0	40,0				
M00920-16	25	1"	- 16		46,0	54,0				
M00920-20	31	1.1/4"	- 20		57,0	60,0				
M00910-24	38	1.1/2"	- 24		65,0	70,0				
M00910-32	51	2"	- 32		79,0	72,0				

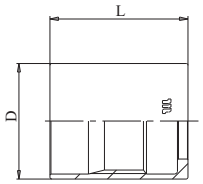


M03400

NO-SKIVE FERRULE FOR WIRE BRAID HOSES

CASQUILLO SIN PELADO PARA MANGUERAS CON TRENZA DE ACERO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M03400-03	5	3/16"	- 03		21,0	23,0				
M03400-04	6	1/4"	- 04		23,0	30,1				
M03400-05	8	5/16"	- 05		24,0	30,0				
M03400-06	10	3/8"	- 06		26,0	31,1				
M03400-08	12	1/2"	- 08		29,0	33,4				
M03400-10	16	5/8"	- 10		33,0	37,0				
M03400-12	19	3/4"	- 12		37,0	42,0				
M03400-16	25	1"	- 16		46,0	51,0				
M03400-20	31	1.1/4"	- 20		59,0	59,0				
M03400-24	38	1.1/2"	- 24		67,0	67,0				
M03400-32	51	2"	- 32		80,0	72,0				
M03400-38	60	2.3/8"	- 38		82,5	69,0				
M03400-40	63	2. 1/2"	- 40		88,2	68,8				
M03400-48	76	3"	- 48		103,0	75,0				

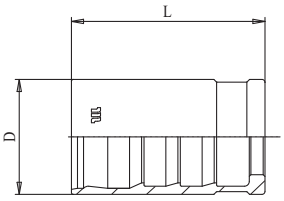


M00310

NO-SKIVE FERRULE FOR TEXTILE BRAID HOSES

CASQUILLO SIN PELADO PARA MANGUERAS CON REFUERZO TEXTIL TRENZADO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M00310-03	5	3/16"	- 03		17,5	27,0				
M00310-04	6	1/4"	- 04		19,3	30,0				
M00310-05	8	5/16"	- 05		21,0	32,0				
M00310-06	10	3/8"	- 06		24,0	32,0				
M00310-08	12	1/2"	- 08		28,4	34,0				
M00310-10	16	5/8"	- 10		33,0	37,0				
M00310-12	19	3/4"	- 12		37,0	43,0				
M00310-16	25	1"	- 16		43,5	51,0				
M00310-20	31	1.1/4"	- 20		50,0	59,0				



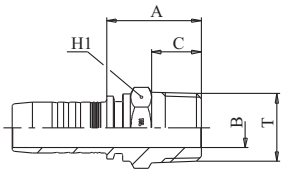
M00820

NO-SKIVE FERRULE FOR COMPACT HOSES

CASQUILLO SIN PELADO PARA MANGUERA COMPACTA

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M00820-03	5	3/16"	- 03		14,0	26,4				
M00820-04	6	1/4"	- 04		18,0	30,2				
M00820-05	8	5/16"	- 05		19,0	32,0				
M00820-06	10	3/8"	- 06		22,0	33,0				
M00820-08	12	1/2"	- 08		26,0	33,9				
M00820-10	16	5/8"	- 10		29,0	35,9				
M00820-12	19	3/4"	- 12		33,0	41,7				
M00820-16	25	1"	- 16		41,0	49,7				
M00820-20	31	1.1/4"	- 20		48,0	57,0				
M00820-24	38	1.1/2"	- 24		55,5	66,0				
M00820-32	51	2"	- 32		68,6	70,0				

BS STANDARD CONNECTIONS



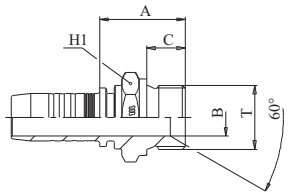
M10710

BSP MALE TAPERED

MACHO BSP (BSPT) ROSCA CONICA

PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1
M10710-03-02	5	3/16"	- 03	1/8" - 28	4,5	20,6	8,0		12
M10710-03-04	5	3/16"	- 03	1/4" - 19	4,5	24,5	12,0		14
M10710-04-02	6	1/4"	- 04	1/8" - 28	4,5	21,0	8,0		12
M10710-04-04	6	1/4"	- 04	1/4" - 19	4,5	25,0	12,0		14
M10710-04-06	6	1/4"	- 04	3/8" - 19	7,0	26,0	12,0		19
M10710-04-08	6	1/4"	- 04	1/2" - 14	10,0	29,5	15,0		22
M10710-05-06	8	5/16"	- 05	3/8" - 19	7,0	26,5	12,0		19
M10710-05-08	8	5/16"	- 05	1/2" - 14	10,0	30,0	15,0		22
M10710-06-06	10	3/8"	- 06	3/8" - 19	7,0	27,1	12,0		19
M10710-06-08	10	3/8"	- 06	1/2" - 14	10,0	30,6	15,0		22
M10710-08-04	12	1/2"	- 08	1/4" - 19	4,5	26,0	12,0		19
M10710-08-08	12	1/2"	- 08	1/2" - 14	10,0	31,1	15,0		22
M10710-10-08	16	5/8"	- 10	1/2" - 14	10,0	31,0	15,0		22
M10710-10-12	16	5/8"	- 10	3/4" - 14	17,0	37,0	17,0		27
M10710-12-12	19	3/4"	- 12	3/4" - 14	17,0	35,5	17,0		27
M10710-16-16	25	1"	- 16	1" - 11	22,5	41,8	21,0		36
M10710-20-20	31	1.1/4"	- 20	1.1/4" - 11	28,5	47,5	23,0		46
M10710-24-24	38	1.1/2"	- 24	1.1/2" - 11	32,0	50,0	23,0		50
M10710-32-32	51	2"	- 32	2" - 11	44,0	55,4	27,0		65

BS STANDARD CONNECTIONS



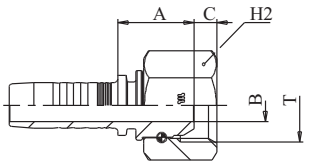
M10510

BSP MALE PARALLEL 60° CONE SEAT - BS5200

MACHO BSP PARALELO ASIENTO A 60° - BS5200

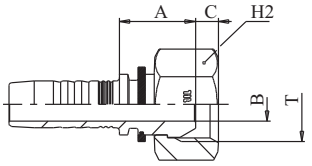
PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1
M10510-03-02	5	3/16"	- 03	1/8" - 28	3,5	22,5	10,0		14
M10510-04-02	6	1/4"	- 04	1/8" - 28	3,5	22,5	10,0		14
M10510-04-04	6	1/4"	- 04	1/4" - 19	5,0	25,5	11,0		19
M10510-04-06	6	1/4"	- 04	3/8" - 19	8,0	27,0	12,0		22
M10510-05-04	8	5/16"	- 05	1/4" - 19	5,0	26,0	11,0		19
M10510-05-06	8	5/16"	- 05	3/8" - 19	8,0	27,5	12,0		22
M10510-06-04	10	3/8"	- 06	1/4" - 19	5,0	26,0	11,0		19
M10510-06-06	10	3/8"	- 06	3/8" - 19	8,0	28,1	12,0		22
M10510-06-08	10	3/8"	- 06	1/2" - 14	11,0	30,6	14,0		27
M10510-08-06	12	1/2"	- 08	3/8" - 19	8,0	28,1	12,0		22
M10510-08-08	12	1/2"	- 08	1/2" - 14	11,0	31,1	14,0		27
M10510-08-10	12	1/2"	- 08	5/8" - 14	14,5	33,1	16,0		30
M10510-08-12	12	1/2"	- 08	3/4" - 14	17,0	34,1	16,0		32
M10510-10-10	16	5/8"	- 10	5/8" - 14	14,5	33,1	16,0		30
M10510-10-12	16	5/8"	- 10	3/4" - 14	17,0	34,1	16,0		32
M10510-12-12	19	3/4"	- 12	3/4" - 14	17,0	35,5	16,0		32
M10510-12-16	19	3/4"	- 12	1" - 11	22,5	39,5	19,0		41
M10510-16-16	25	1"	- 16	1" - 11	22,5	40,8	19,0		41
M10510-16-20	25	1"	- 16	1.1/4" - 11	28,5	44,8	20,0		50
M10510-20-20	31	1.1/4"	- 20	1.1/4" - 11	28,5	46,5	20,0		50
M10510-24-24	38	1.1/2"	- 24	1.1/2" - 11	33,5	49,5	22,0		55
M10510-32-32	51	2"	- 32	2" - 11	46,0	53,9	25,0		70

BS STANDARD CONNECTIONS



M20512

BSP FEMALE 60° CONE - BS5200 (THRUST-WIRE NUT)
HEMBRA BSP ASIENTO A 60° - BS5200 (TUERCA CON SEGURO)

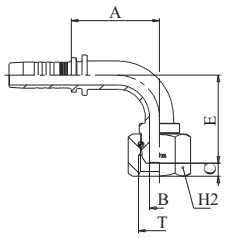


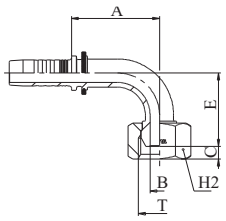
M20513

BSP FEMALE 60° CONE - BS5200 (SLIP-ON NUT)
HEMBRA BSP ASIENTO A 60° - BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_2
M20512-03-02	5	3/16"	- 03	1/8" - 28	3,1	14,8	4,4		14
M20513-03-04	5	3/16"	- 03	1/4" - 19	4,0	16,5	5,4		19
M20512-04-02	6	1/4"	- 04	1/8" - 28	3,1	15,5	4,4		14
M20513-04-04	6	1/4"	- 04	1/4" - 19	4,0	17,0	5,4		19
M20513-04-06	6	1/4"	- 04	3/8" - 19	7,0	19,1	6,0		22
M20512-05-04	8	5/16"	- 05	1/4" - 19	4,1	17,5	4,2		19
M20513-05-06	8	5/16"	- 05	3/8" - 19	7,0	19,1	6,0		22
M20512-06-04	10	3/8"	- 06	1/4" - 19	4,1	18,1	4,2		19
M20513-06-06	10	3/8"	- 06	3/8" - 19	7,0	19,6	6,0		22
M20513-06-08	10	3/8"	- 06	1/2" - 14	9,3	20,0	6,5		27
M20512-08-06	12	1/2"	- 08	3/8" - 19	7,1	20,9	6,0		22
M20513-08-08	12	1/2"	- 08	1/2" - 14	9,3	20,4	6,5		27
M20512-08-10	12	1/2"	- 08	5/8" - 14	12,1	21,9	10,2		28
M20512-08-12	12	1/2"	- 08	3/4" - 14	15,0	23,4	9,0		32
M20512-10-10	16	5/8"	- 10	5/8" - 14	12,5	21,7	10,2		28
M20512-10-12	16	5/8"	- 10	3/4" - 14	15,0	23,2	9,0		32
M20512-12-12	19	3/4"	- 12	3/4" - 14	15,0	24,5	9,0		32
M20512-12-16	19	3/4"	- 12	1" - 11	19,8	26,0	10,5		38
M20512-16-16	25	1"	- 16	1" - 11	19,8	27,3	10,5		38

BS STANDARD CONNECTIONS





M20592

90° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 (THRUST-WIRE NUT)

HEMBRA BSP CODO DE 90º ASIENTO A 60º - BS5200 (TUERCA CON SEGURO)

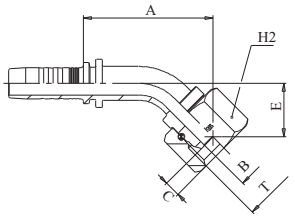
M20593

90° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 (SLIP-ON NUT)

HEMBRA BSP CODO DE 90º ASIENTO A 60º - BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M20592-03-02	5	3/16"	- 03	1/8" -28	3,1	21,5	4,4	26,0	14
M20592-04-02	6	1/4"	- 04	1/8" -28	3,1	28,5	4,4	27,0	14
M20593-04-04	6	1/4"	- 04	1/4" -19	4,0	29,5	5,4	29,0	19
M20593-04-06	6	1/4"	- 04	3/8" -19	7,0	29,5	6,0	31,0	22
M20592-05-04	8	5/16"	- 05	1/4" -19	4,1	26,5	5,4	29,5	19
M20593-05-06	8	5/16"	- 05	3/8" -19	7,0	32,0	6,0	27,5	22
M20593-06-06	10	3/8"	- 06	3/8" -19	7,0	36,5	6,0	31,5	22
M20593-06-08	10	3/8"	- 06	1/2" -14	9,3	36,5	6,5	32,0	27
M20592-08-06	12	1/2"	- 08	3/8" -19	7,0	45,0	6,0	41,0	22
M20593-08-08	12	1/2"	- 08	1/2" -14	9,3	45,0	6,5	36,5	27
M20592-08-10	12	1/2"	- 08	5/8" -14	12,1	44,0	10,2	44,0	28
M20592-08-12	12	1/2"	- 08	3/4" -14	15,0	44,0	9,0	45,5	32
M20592-10-10	16	5/8"	- 10	5/8" -14	12,5	53,5	10,2	53,5	28
M20592-10-12	16	5/8"	- 10	3/4" -14	15,0	53,5	9,0	55,0	32
M20592-12-12	19	3/4"	- 12	3/4" -14	15,5	61,5	9,0	59,5	32
M20592-12-16	19	3/4"	- 12	1" -11	19,8	61,5	10,5	62,0	38
M20592-16-16	25	1"	- 16	1" -11	19,8	79,5	10,5	76,0	38

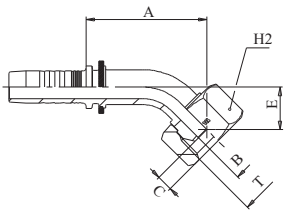
BS STANDARD CONNECTIONS



M20542

45° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 (THRUST-WIRE NUT)

HEMBRA BSP CODO DE 45° ASIENTO A 60° - BS5200 (TUERCA CON SEGURO)



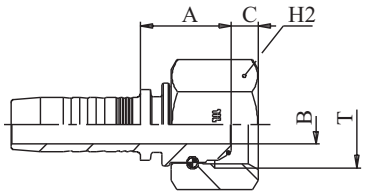
M20543

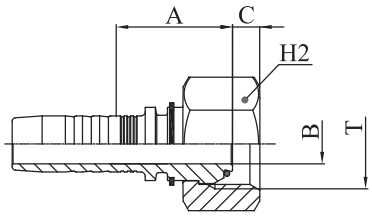
45° BSP FEMALE SWEPT ELBOW 60° CONE - BS5200 (SLIP-ON NUT)

HEMBRA BSP CODO DE 45° ASIENTO A 60° - BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE		DIMENSIONS mm						
	DN	inch	Size	T	B	A	C	E		H_2
M20543-04-04	6	1/4"	- 04	1/4" - 19	4,0	36,0	5,4	15,0		19
M20543-04-06	6	1/4"	- 04	3/8" - 19	7,0	37,5	6,0	16,0		19
M20543-05-06	8	5/16"	- 05	3/8" - 19	7,0	38,0	6,0	13,5		22
M20543-06-06	10	3/8"	- 06	3/8" - 19	7,0	42,0	6,0	15,0		22
M20543-06-08	10	3/8"	- 06	1/2" - 14	9,3	42,5	6,5	16,0		27
M20543-08-08	12	1/2"	- 08	1/2" - 14	9,3	49,5	6,5	17,0		27
M20542-08-10	12	1/2"	- 08	5/8" - 14	12,1	54,5	10,2	22,5		28
M20542-10-10	16	5/8"	- 10	5/8" - 14	12,5	63,0	10,2	26,0		28
M20542-10-12	16	5/8"	- 10	3/4" - 14	15,0	64,0	9,0	27,0		32
M20542-12-12	19	3/4"	- 12	3/4" - 14	15,5	70,5	9,0	28,5		32
M20542-12-16	19	3/4"	- 12	1" - 11	19,8	72,5	10,5	30,0		38
M20542-16-16	25	1"	- 16	1" - 11	19,8	91,0	10,5	36,5		38

BS STANDARD CONNECTIONS





M20812

BSP O-RING FEMALE 60° CONE - BS5200 (THRUST-WIRE NUT)

HEMBRA BSP CON O-RING ASIENTO A 60º - BS5200 (TUERCA CON SEGURO)

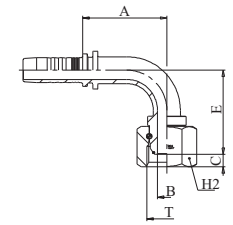
M20813

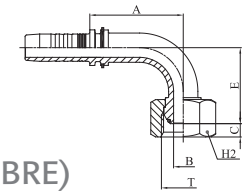
BSP O-RING FEMALE 60° CONE - BS5200 (SLIP-ON NUT)

HEMBRA BSP CON O-RING ASIENTO A 60º - BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE		DIMENSIONS mm						
	DN	inch	Size	T	B	A	C			H_2
M20813-04-04	6	1/4"	- 04	1/4" - 19	4,0	17,5	4,9			19
M20812-06-04	10	3/8"	- 06	1/4" - 19	4,0	18,1	4,9			19
M20813-06-06	10	3/8"	- 06	3/8" - 19	7,0	20,4	6,1			22
M20813-08-08	12	1/2"	- 08	1/2" - 14	9,3	20,4	6,5			27
M20812-10-10	16	5/8"	- 10	5/8" - 14	12,5	22,1	9,7			30
M20812-12-12	19	3/4"	- 12	3/4" - 14	15,0	25,0	8,5			32
M20812-16-16	25	1"	- 16	1" - 11	19,8	27,3	10,6			38
M20812-16-20	25	1"	- 16	1.1/4" - 11	26,1	30,8	10,5			50
M20812-20-20	31	1.1/4"	- 20	1.1/4" - 11	26,0	31,5	10,5			50
M20812-20-24	31	1.1/4"	- 20	1.1/2" - 11	32,1	29,5	12,5			60
M20812-24-24	38	1.1/2"	- 24	1.1/2" - 11	32,0	30,5	12,5			60
M20812-32-32	51	2"	- 32	2" - 11	42,0	31,9	16,1			70

BS STANDARD CONNECTIONS





M20892

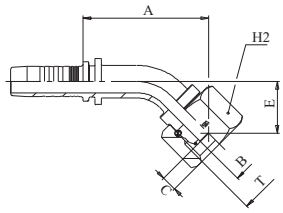
90° BSP O-RING FEMALE 60° CONE - BS5200 (THRUST-WIRE NUT)
HEMBRA BSP CON O-RING CODO DE 90º ASIENTO A 60º - BS5200 (TUERCA CON SEGURO)

M20893

90° BSP O-RING FEMALE 60° CONE - BS5200 (SLIP-ON NUT)
HEMBRA BSP CON O-RING CODO DE 90º ASIENTO A 60º - BS5200 (TUERCA LIBRE)

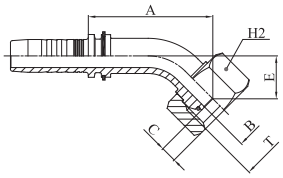
PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M20893-04-04	6	1/4"	- 04	1/4" - 19	4,0	28,5	4,9	28,5	19
M20892-06-04	10	3/8"	-06	1/4" - 19	4,0	35,5	4,9	33,0	19
M20893-06-06	10	3/8"	- 06	3/8" - 19	7,0	35,5	6,1	36,0	22
M20893-08-08	12	1/2"	- 08	1/2" - 14	9,3	44,5	6,5	42,0	27
M20892-10-10	16	5/8"	- 10	5/8" - 14	12,5	53,0	9,7	55,0	30
M20892-12-12	19	3/4"	- 12	3/4" - 14	15,0	61,5	8,5	60,0	32
M20892-16-16	25	1"	- 16	1" - 11	19,8	79,5	10,6	76,0	38
M20892-16-20	25	1"	- 16	1.1/4" - 11	26,1	79,5	10,5	78,5	50
M20892-20-20	31	1.1/4"	- 20	1.1/4" - 11	26,0	90,5	10,5	83,5	50
M20892-20-24	31	1.1/4"	- 20	1.1/2" - 11	32,1	90,5	12,5	84,5	60
M20892-24-24	38	1.1/2"	- 24	1.1/2" - 11	32,0	108,0	12,5	98,5	60
M20892-32-32	51	2"	- 32	2" - 11	42,0	131,0	16,1	110,5	70

BS STANDARD CONNECTIONS



M20842

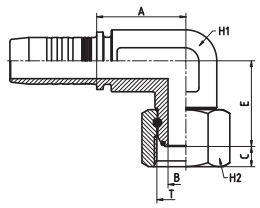
45° BSP O-RING FEMALE 60° CONE - BS5200 (THRUST-WIRE NUT)
HEMBRA BSP CON O-RING CODO DE 45° ASIENTO A 60° BS5200 (TUERCA CON SEGURO)



M20843

45° BSP O-RING FEMALE 60° CONE - BS5200 (SLIP-ON NUT)
HEMBRA BSP CON O-RING CODO DE 45° ASIENTO A 60° BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M20843-04-04	6	1/4"	- 04	1/4" -19	4,0	36,0	4,9	15,0	19
M20843-06-06	10	3/8"	- 06	3/8" -19	7,0	44,5	6,1	18,5	22
M20843-08-08	12	1/2"	- 08	1/2" -14	9,3	52,0	6,5	20,5	27
M20842-10-10	16	5/8"	- 10	5/8" -14	12,5	63,5	9,7	27,5	30
M20842-12-12	19	3/4"	- 12	3/4" -14	15,5	71,0	8,5	29,0	32
M20842-16-16	25	1"	- 16	1" -11	19,8	90,5	10,6	35,6	38
M20842-20-20	31	1.1/4"	- 20	1.1/4" -11	26,0	101,5	10,5	39,0	50
M20842-24-24	38	1.1/2"	- 24	1.1/2" -11	32,0	118,0	12,5	45,0	60
M20842-32-32	51	2"	- 32	2" -11	42,0	134,0	16,1	47,0	70



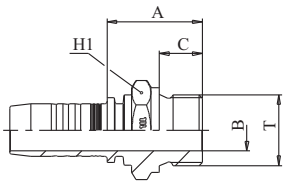
M20882F

90° BSP O-RING FEMALE COMPACT ELBOW 60° CONE BS5200 (THRUST-WIRE NUT)
HEMBRA BSP CON O-RING CODO COMPACTO DE 90° ASIENTO A 60° - BS5200 (TUERCA CON SEGURO)

PART. REF.	HOSE BORE			DIMENSIONS mm						
	DN	inch	Size	T	B	A	C	E	H_1	H_2
M20882-04-04F	6	1/4"	- 04	1/4" - 19	4,0	20,0	4,9	22,0	14	19
M20882-06-06F	10	3/8"	- 06	3/8" - 19	7,0	23,1	6,1	27,5	19	22
M20882-08-08F	12	1/2"	- 08	1/2" - 14	9,3	24,9	6,5	31,1	22	27
M20882-10-10F	16	5/8"	- 10	5/8" - 14	12,5	24,6	9,7	32,5	24	28
M20882-12-12F	19	3/4"	- 12	3/4" - 14	15,0	37,5	8,5	36,0	27	32
M20882-16-16F	25	1"	- 16	1" - 11	20,0	51,8	10,6	44,0	36	38

MULTIFIT TYPE

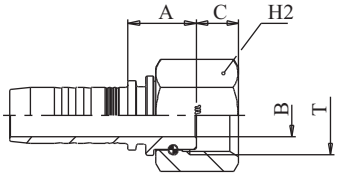
BS STANDARD CONNECTIONS



M10610

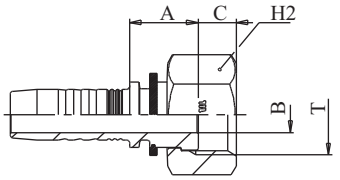
BSP MALE FLAT SEAT
MACHO BSP CARA PLANA

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	
M10610-06-06	10	3/8"	- 06	3/8" - 19	9,5	28,1	12,0		22	
M10610-06-08	10	3/8"	- 06	1/2" - 14	13,0	30,6	14,0		27	
M10610-08-08	12	1/2"	- 08	1/2" - 14	13,0	31,1	14,0		27	
M10610-12-12	19	3/4"	- 12	3/4" - 14	18,0	35,5	16,0		32	



M20612

BSP FEMALE FLAT SEAT (THRUST-WIRE NUT)
HEMBRA BSP CARA PLANA (TUERCA CON SEGURO)

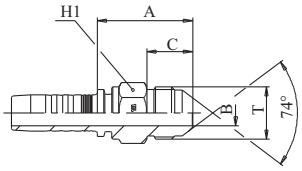


M20613

BSP FEMALE FLAT SEAT (SLIP-ON NUT)
HEMBRA BSP CARA PLANA (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C			H_2
M20613-04-04	6	1/4"	- 04	1/4" - 19	4,0	14,5	7,9			19
M20613-06-06	10	3/8"	- 06	3/8" - 19	7,0	16,6	9,0			22
M20613-06-08	10	3/8"	- 06	1/2" - 14	9,3	17,5	9,8			27
M20613-08-08	12	1/2"	- 08	1/2" - 14	9,3	17,9	9,8			27
M20612-08-12	12	1/2"	- 08	3/4" - 14	15,0	20,9	11,5			32
M20612-10-12	16	5/8"	- 10	3/4" - 14	15,0	20,7	11,5			32
M20612-12-12	19	3/4"	- 12	3/4" -14	15,0	22,0	11,5			32
M20612-12-16	19	3/4"	- 12	1" - 11	19,8	23,5	13,0			38
M20612-16-16	25	1"	- 16	1" - 11	19,8	24,8	13,0			38

SAE STANDARD CONNECTIONS



M12510

JIC MALE 37° CONE - SAE J516/J514

JIC MACHO ASIENTO A 37° - SAE J516/J514

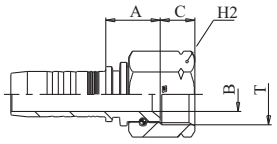
PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm				
	DN	inch	Size	T	B	A	C	H_1
M12510-04-04	6	1/4"	- 04	7/16" - 20	4,0	28,0	14,0	12
M12510-04-05	6	1/4"	- 04	1/2" - 20	5,5	29,0	14,0	14
M12510-04-06	6	1/4"	- 04	9/16" - 18	7,0	29,0	14,0	17
M12510-05-05	8	5/16"	- 05	1/2" - 20	5,5	29,0	14,0	14
M12510-05-06	8	5/16"	- 05	9/16" - 18	7,0	29,0	14,0	17
M12510-06-06	10	3/8"	- 06	9/16" - 18	7,0	29,6	14,0	17
M12510-06-08	10	3/8"	- 06	3/4" - 16	9,3	34,1	16,5	19
M12510-06-10	10	3/8"	- 06	7/8" - 14	12,5	38,6	19,5	24
M12510-08-06	12	1/2"	- 08	9/16" - 18	7,0	32,0	14,0	19
M12510-08-08	12	1/2"	- 08	3/4" - 16	9,3	34,4	16,5	19
M12510-08-10	12	1/2"	- 08	7/8" - 14	12,5	38,9	19,5	24
M12510-08-12	12	1/2"	- 08	1.1/16" - 12	15,0	42,9	22,0	27
M12510-10-10	16	5/8"	- 10	7/8" - 14	12,5	39,2	19,5	24
M12510-10-12	16	5/8"	- 10	1.1/16" - 12	15,0	42,7	22,0	27
M12510-12-10	19	3/4"	- 12	7/8" - 14	12,5	41,5	19,5	27
M12510-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	44,0	22,0	27
M12510-12-14	19	3/4"	- 12	1.3/16" - 12	16,0	44,5	22,5	32
M12510-12-16	19	3/4"	- 12	1.5/16" - 12	19,8	47,0	23,0	34
M12510-16-12	25	1"	- 16	1.1/16" - 12	15,0	44,8	22,0	32
M12510-16-16	25	1"	- 16	1.5/16" - 12	19,8	47,8	23,0	34
M12510-16-20	25	1"	- 16	1.5/8" - 12	26,0	52,8	24,3	42
M12510-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	53,5	24,3	42
M12510-20-24	31	1.1/4"	- 20	1.7/8" - 12	32,0	60,5	27,5	50
M12510-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	60,5	27,5	50
M12510-32-32	51	2"	- 32	2.1/2" - 12	42,0	71,8	34,0	65

MULTIFIT TYPE

SAE STANDARD CONNECTIONS

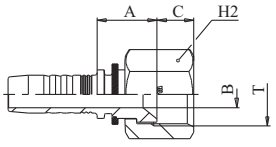
M22512

JIC FEMALE 37° CONE SEAT - SAE J516/J514 (THRUST-WIRE NUT)
JIC HEMBRA ASIENTO A 37° - SAE J516/J514 (TUERCA CON SEGURO)



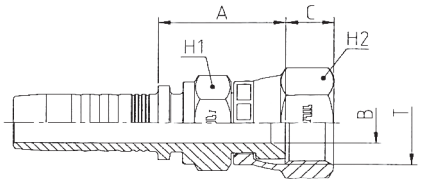
M22513

JIC FEMALE 37° CONE SEAT - SAE J516/J514 (SLIP-ON NUT)
JIC HEMBRA ASIENTO A 37° - SAE J516/J514 (TUERCA LIBRE)



PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_2
M22513-03-04	5	3/16"	- 03	7/16" - 20	3,0	15,1	9,0		15
M22512-04-04	6	1/4"	- 04	7/16" - 20	4,0	15,5	8,2		17
M22512-04-05	6	1/4"	- 04	1/2" - 20	4,0	15,8	9,2		17
M22513-04-06	6	1/4"	- 04	9/16" - 18	4,0	16,5	9,8		19
M22512-05-05	8	5/16"	- 05	1/2" - 20	5,5	16,0	9,2		17
M22512-05-06	8	5/16"	- 05	9/16" - 18	7,0	15,7	9,7		19
M22513-05-08	8	5/16"	- 05	3/4" - 16	5,5	16,7	10,7		22
M22512-06-05	10	3/8"	- 06	1/2" - 20	5,5	16,6	9,5		17
M22512-06-06	10	3/8"	- 06	9/16" - 18	7,0	16,1	9,2		19
M22513-06-08	10	3/8"	- 06	3/4" - 16	7,0	17,3	10,7		22
M22513-06-10	10	3/8"	- 06	7/8" - 14	9,3	18,1	12,4		27
M22512-08-08	12	1/2"	- 08	3/4" - 16	9,3	19,9	10,2		22
M22513-08-10	12	1/2"	- 08	7/8" - 14	9,3	18,5	12,4		27
M22513-08-12	12	1/2"	- 08	1.1/16" - 12	12,5	21,8	13,8		32
M22512-10-10	16	5/8"	- 10	7/8" - 14	12,5	19,9	12,3		27
M22513-10-12	16	5/8"	- 10	1.1/16" - 12	12,5	21,7	13,8		32
M22512-12-10	19	3/4"	- 12	7/8" - 14	12,5	21,5	12,3		27
M22512-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	22,5	14,2		32
M22512-12-14	19	3/4"	- 12	1.3/16" - 12	15,0	23,1	14,8		36
M22512-12-16	19	3/4"	- 12	1.5/16" - 12	19,8	23,0	15,2		38
M22512-16-12	25	1"	- 16	1.1/16" - 12	15,0	23,3	14,4		32
M22512-16-16	25	1"	- 16	1.5/16" - 12	19,8	23,8	15,2		38
M22512-16-20	25	1"	- 16	1.5/8" - 12	26,0	29,8	16,2		50
M22512-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	30,0	16,2		50
M22512-20-24	31	1.1/4"	- 20	1.7/8" - 12	32,0	35,0	18,8		60
M22512-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	35,0	18,8		60
M22512-32-32	51	2"	- 32	2.1/2" - 12	44,0	35,4	24,0		75

SAE STANDARD CONNECTIONS



NEW M22711

JIC FEMALE 37° CONE SEAT DOUBLE EXAGON - SAE J516/J514 (CRIMPED-BACK NUT)

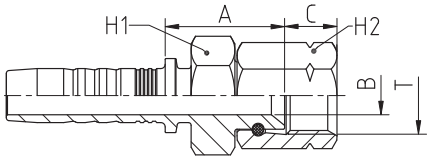
JIC HEMBRA ASIENTO A 37° DOBLE TUERCA - SAE J516/J514 (TUERCA PRENSADA)

NEW M22711K

JIC FEMALE 37° CONE SEAT DOUBLE EXAGON COMPACT TYPE - SAE J516/J514 (CRIMPED-BACK NUT)

JIC HEMBRA ASIENTO A 37° DOBLE TUERCA TIPO COMPACTO - SAE J516/J514 (TUERCA PRENSADA)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_1	H_2
M22711-03-04K	5	3/16"	- 03	7/16" - 20	4,0	20	9	12	15
M22711-04-04K	6	1/4"	- 04	7/16" - 20	4,0	20,5	9	12	15
M22711-04-06K	6	1/4"	- 04	9/16" - 18	7,0	21,6	9,5	14	17
M22711-06-06K	10	3/8"	- 06	9/16" - 18	7,0	22,1	9,5	17	17
M22711-06-08	10	3/8"	- 06	3/4" - 16	9,3	21,7	10,7	19	22
M22711-08-08	12	1/2"	- 08	3/4" - 16	9,3	26,9	10,7	19	22
M22711-08-10K	12	1/2"	- 08	7/8" - 14	9,3	29,6	12,5	22	25
M22711-10-10K	16	5/8"	- 10	7/8" - 14	9,3	29,5	12,5	22	25
M22711-12-12	19	3/4"	- 12	1.1/16" - 12	15	30,1	14,1	27	32



M22712K

JIC FEMALE 37° CONE SEAT DOUBLE EXAGON COMPACT TYPE - SAE J516/J514 (THRUST-WIRE NUT)

JIC HEMBRA ASIENTO A 37° DOBLE TUERCA TIPO COMPACTO - SAE J516/J514 (TUERCA CON SEGURO)

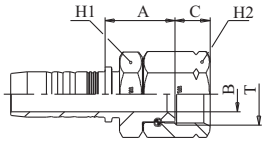
PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_1	H_2
M22712-03-04K	5	3/16"	- 03	7/16" - 20	4,0	20,5	8,2	12	15
M22712-04-04K	6	1/4"	- 04	7/16" - 20	4,0	21,0	8,2	12	15
M22712-04-06K	6	1/4"	- 04	9/16" - 18	7,0	24,1	9,2	14	17
M22712-06-06K	10	3/8"	- 06	9/16" - 18	7,0	24,6	9,2	17	17
M22712-08-10K	12	1/2"	- 08	7/8" - 14	12,5	28,4	12,6	22	25
M22712-10-10K	16	5/8"	- 10	7/8" - 14	12,5	29,0	12,6	22	25

SAE STANDARD CONNECTIONS

M22712

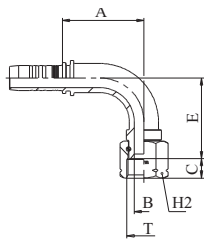
JIC FEMALE 37° CONE SEAT DOUBLE EXAGON - SAE J516/J514 (THRUST-WIRE NUT)

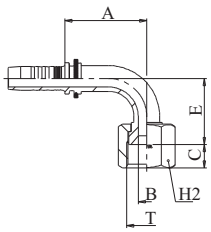
JIC HEMBRA ASIENTO A 37° DOBLE TUERCA - SAE J516/J514 (TUERCA CON SEGURO)



PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	H_2
M22712-03-04	5	3/16"	- 03	7/16" - 20	4,0	20,5	8,2		12	17
M22712-04-04	6	1/4"	- 04	7/16" - 20	4,0	21,0	8,2		12	17
M22712-04-05	6	1/4"	- 04	1/2" - 20	4,0	21,5	9,2		12	17
M22712-04-06	6	1/4"	- 04	9/16" - 18	7,0	24,1	9,2		14	19
M22712-05-05	8	5/16"	- 05	1/2" - 20	5,5	21,5	9,2		14	17
M22712-05-06	8	5/16"	- 05	9/16" - 18	7,0	24,1	9,2		14	19
M22712-05-08	8	5/16"	- 05	3/4" - 16	9,3	26,0	10,6		19	22
M22712-06-04	10	3/8"	- 06	7/16" - 20	4,0	24,5	8,2		17	17
M22712-06-05	10	3/8"	- 06	1/2" - 20	5,5	25,0	9,2		17	17
M22712-06-06	10	3/8"	- 06	9/16" - 18	7,0	24,6	9,2		17	19
M22712-06-08	10	3/8"	- 06	3/4" - 16	9,3	27,1	10,2		19	22
M22712-06-10	10	3/8"	- 06	7/8" - 14	12,5	28,0	12,3		22	27
M22712-08-06	12	1/2"	- 08	9/16" - 18	7,0	24,7	9,2		19	19
M22712-08-08	12	1/2"	- 08	3/4" - 16	9,3	27,4	10,2		19	22
M22712-08-10	12	1/2"	- 08	7/8" - 14	12,5	28,4	12,3		22	27
M22712-08-12	12	1/2"	- 08	1.1/16" - 12	14,0	30,0	14,2		27	32
M22712-10-08	16	5/8"	- 10	3/4" - 16	9,3	28,5	10,2		22	22
M22712-10-10	16	5/8"	- 10	7/8" - 14	12,5	29,0	12,3		22	27
M22712-10-12	16	5/8"	- 10	1.1/16" - 12	15,0	29,5	14,2		27	32
M22712-12-08	19	3/4"	- 12	3/4" - 16	9,3	30,0	10,2		27	22
M22712-12-10	19	3/4"	- 12	7/8" - 14	12,5	30,0	12,3		27	27
M22712-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	31,5	14,2		27	32
M22712-12-14	19	3/4"	- 12	1.3/16" - 12	15,0	33,0	14,8		30	36
M22712-12-16	19	3/4"	- 12	1.5/16" - 12	19,8	32,5	15,2		32	38
M22712-16-12	25	1"	- 16	1.1/16" - 12	12,5	33,8	14,2		32	32
M22712-16-16	25	1"	- 16	1.5/16" - 12	19,8	34,3	15,2		32	38
M22712-16-20	25	1"	- 16	1.5/8" - 12	26,0	42,8	16,2		41	50
M22712-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	43,5	16,2		41	50
M22712-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	51,0	18,8		50	60
M22712-32-32	51	2"	- 32	2.1/2" - 12	42,0	55,5	24,0		65	75

SAE STANDARD CONNECTIONS





M22592

90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 (THRUST-WIRE NUT)

JIC HEMBRA CODO DE 90° ASIENTO A 37° - SAE J516/J514 (TUERCA CON SEGURO)

M22593

90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 (SLIP-ON NUT)

JIC HEMBRA CODO DE 90° ASIENTO A 37° - SAE J516/J514 (TUERCA LIBRE)

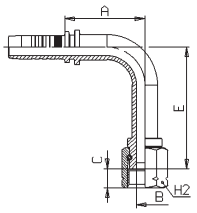
PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M22593-03-04	5	3/16"	- 03	7/16" - 20	3,0	26,0	9,0	23,5	15
M22592-04-04	6	1/4"	- 04	7/16" - 20	4,0	28,5	8,2	27,0	17
M22592-04-05	6	1/4"	- 04	1/2" - 20	4,0	28,5	9,2	27,5	17
M22593-04-06	6	1/4"	- 04	9/16" - 18	4,0	29,5	9,8	28,0	19
M22593-04-08	6	1/4"	- 04	3/4" - 16	7,0	29,3	11,0	30,5	22
M22592-05-05	8	5/16"	- 05	1/2" - 20	5,5	29,5	9,2	27,5	17
M22592-05-06	8	5/16"	- 05	9/16" - 18	7,0	31,0	9,2	28,5	19
M22592-06-05	10	3/8"	- 06	1/2" - 20	5,5	30,1	9,5	26,5	17
M22592-06-06	10	3/8"	- 06	9/16" - 18	7,0	35,5	9,2	32,5	19
M22593-06-08	10	3/8"	- 06	3/4" - 16	7,0	36,5	10,7	29,5	22
M22593-06-10	10	3/8"	- 06	7/8" - 14	9,3	36,5	12,4	31,5	27
M22592-08-06	12	1/2"	- 08	9/16" - 18	7,0	37,0	9,2	33,0	19
M22592-08-08	12	1/2"	- 08	3/4" - 16	9,3	44,0	10,2	41,0	22
M22593-08-10	12	1/2"	- 08	7/8" - 14	9,3	45,0	12,4	36,0	27
M22593-08-12	12	1/2"	- 08	1.1/16" - 12	12,5	45,0	13,8	36,0	32
M22592-10-10	16	5/8"	- 10	7/8" - 14	12,5	53,5	12,3	52,5	27
M22593-10-12	16	5/8"	- 10	1.1/16" - 12	12,5	51,5	13,8	50 ,0	32
M22592-12-10	19	3/4"	- 12	7/8" - 14	12,5	55,0	12,3	52,5	27
M22592-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	62,0	14,2	58,0	32
M22592-12-14	19	3/4"	- 12	1.3/16" - 12	15,0	62,0	14,8	58,0	36
M22592-12-16	19	3/4"	- 12	1.5/16" - 12	19,8	62,0	15,2	57,5	38
M22592-16-16	25	1"	- 16	1.5/16" - 12	19,8	77,0	15,2	67,0	38
M22592-16-20	25	1"	- 16	1.5/8" - 12	26,0	77,5	16,2	74,5	50
M22592-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	90,5	16,2	86,5	50
M22592-20-24	31	1.1/4"	- 20	1.7/8" - 12	32,0	90,5	18,8	91,0	60
M22592-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	108,0	18,8	100,5	60
M22592-32-32	51	2"	- 32	2.1/2" - 12	44,0	142,0	24,0	137,0	75

SAE STANDARD CONNECTIONS

M24792

90° JIC FEMALE LONG DROP ELBOW 37° CONE SEAT - SAE J516/J514 (THRUST-WIRE NUT)

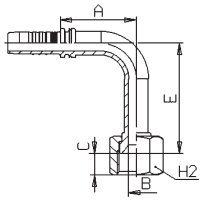
JIC HEMBRA CODO LARGO DE 90° ASIENTO A 37° - SAE J516/J514 (TUERCA CON SEGURO)



M24793

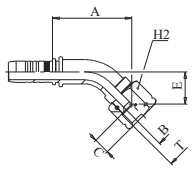
90° JIC FEMALE LONG DROP ELBOW 37° CONE SEAT - SAE J516/J514 (SLIP-ON NUT)

JIC HEMBRA CODO LARGO DE 90° ASIENTO A 37° - SAE J516/J514 (TUERCA LIBRE)



PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M24792-04-04	6	1/4"	- 04	7/16" - 20	4,0	28,5	8,2	45,0	17
M24792-04-05	6	1/4"	- 04	1/2" - 20	4,0	28,5	9,2	45,0	17
M24793-04-06	6	1/4"	- 04	9/16" - 18	4,0	29,5	9,8	55,5	19
M24792-06-06	10	3/8"	- 06	9/16" - 18	7,0	35,5	9,2	55,0	19
M24793-06-08	10	3/8"	- 06	3/4" - 16	7,0	36,5	10,7	61,5	22
M24792-08-08	12	1/2"	- 08	3/4" - 16	9,4	40,6	10,3	61,5	22
M24793-08-10	12	1/2"	- 08	7/8" - 14	9,4	45,0	12,4	65,0	27
M24792-10-10	16	5/8"	- 10	7/8" - 14	12,5	53,5	12,3	65,5	27
M24792-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	62,0	14,2	94,5	32
M24792-16-16	25	1"	- 16	1.5/16" - 12	19,8	77,0	15,2	110,0	38

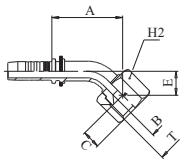
SAE STANDARD CONNECTIONS



M22542

45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 (THRUST-WIRE NUT)

JIC HEMBRA CODO DE 45° ASIENTO A 37° - SAE J516/J514 (TUERCA CON SEGURO)



M22543

45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 (SLIP-ON NUT)

JIC HEMBRA CODO DE 45° ASIENTO A 37° - SAE J516/J514 (TUERCA LIBRE)

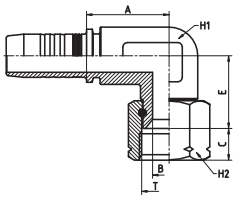
PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M22542-04-04	6	1/4"	- 04	7/16" - 20	4,0	35,5	8,2	14,5	17
M22542-04-05	6	1/4"	- 04	1/2" - 20	4,0	35,7	9,2	14,5	17
M22543-04-06	6	1/4"	- 04	9/16" - 18	4,0	35,5	9,8	14,0	19
M22542-05-05	8	5/16"	- 05	1/2" - 20	5,5	37,5	9,2	14,5	17
M22542-05-06	8	5/16"	- 05	9/16" - 18	7,0	38,0	9,2	14,5	19
M22542-06-06	10	3/8"	- 06	9/16" - 18	7,0	42,0	9,2	16,5	19
M22543-06-08	10	3/8"	- 06	3/4" - 16	7,0	41,0	10,7	14,0	22
M22543-06-10	10	3/8"	- 06	7/8" - 14	9,3	42,5	12,4	15,5	27
M22542-08-08	12	1/2"	- 08	3/4" - 16	9,3	52,0	10,2	20,0	22
M22543-08-10	12	1/2"	- 08	7/8" - 14	9,3	49,5	12,4	17,0	27
M22543-08-12	12	1/2"	- 08	1.1/16" - 12	12,5	50,0	13,8	17,0	32
M22542-10-10	16	5/8"	- 10	7/8" - 14	12,5	62,0	12,3	25,5	27
M22543-10-12	16	5/8"	- 10	1.1/16" - 12	12,5	60,0	13,8	24,0	32
M22542-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	70,0	14,2	27,5	32
M22542-12-14	19	3/4"	- 12	1.3/16" - 12	15,0	69,0	14,8	27,5	36
M22542-12-16	19	3/4"	- 12	1.5/16" - 12	19,8	70,0	15,2	27,5	38
M22542-16-12	25	1"	- 16	1.1/16" - 12	15,0	72,5	14,2	27,5	32
M22542-16-16	25	1"	- 16	1.5/16" - 12	19,8	86,0	15,2	32,0	38
M22542-16-20	25	1"	- 16	1.5/8" - 12	26,0	90,0	16,2	36,0	50
M22542-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	103,5	16,2	41,5	50
M22542-20-24	31	1.1/4"	- 20	1.7/8" - 12	32,0	106,5	18,8	44,5	60
M22542-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	119,0	18,8	46,5	60
M22542-32-32	51	2"	- 32	2.1/2"- 12	44,0	163,0	24,0	68,0	75

SAE STANDARD CONNECTIONS

M22582F

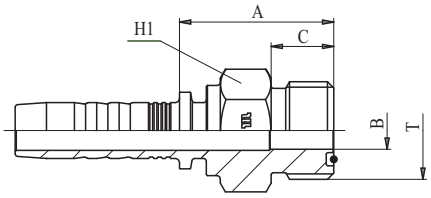
90° JIC FEMALE COMPACT ELBOW 37° CONE SEAT SAE J516/J514 (THRUST-WIRE NUT)

JIC HEMBRA CODO COMPACTO DE 90º ASIENTO A 37º - SAE J516/J514 (TUERCA CON SEGURO)



PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_1	H_2
M22582-04-04F	6	1/4"	- 04	7/16" - 20	4,0	20,0	8,2	20,5	14	17
M22582-04-06F	6	1/4"	- 04	9/16" - 18	7,0	20,0	9,2	21,5	14	19
M22582-06-06F	10	3/8"	- 06	9/16" - 18	7,0	23,1	9,2	24,0	19	19
M22582-06-08F	10	3/8"	- 06	3/4" - 16	9,3	26,6	10,2	28,0	22	22
M22582-08-08F	12	1/2"	- 08	3/4" - 16	9,3	24,9	10,2	28,0	22	22
M22582-08-10F	12	1/2"	- 08	7/8" - 14	12,5	24,9	12,3	29,0	22	27
M22582-12-12F	19	3/4"	- 12	1.1/16" - 12	15,0	37,5	14,2	33,0	27	32
M22582-16-16F	25	1"	- 16	1.5/16" - 12	20,0	51,8	15,2	40,0	36	38

SAE STANDARD CONNECTIONS



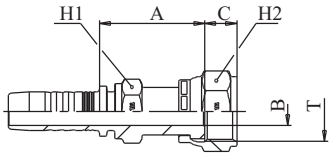
M12410

ORFS MALE - SAE J1453

ORFS MACHO - SAE J1453

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	
M12410-04-04	6	1/4"	- 04	9/16" - 18	4,0	24,0	9,8		16	
M12410-04-06	6	1/4"	- 04	11/16" - 16	6,7	26,6	11,2		19	
M12410-05-06	8	3/8"	- 05	11/16" - 16	6,7	27,0	11,2		19	
M12410-06-06	10	5/16"	- 06	11/16" - 16	6,7	27,6	11,2		19	
M12410-06-08	10	3/8"	- 06	13/16" - 16	9,3	30,0	12,8		22	
M12410-08-08	12	1/2"	- 08	13/16" - 16	9,3	30,6	12,8		22	
M12410-08-10	12	1/2"	- 08	1" - 14	12,5	35,0	15,5		27	
M12410-10-10	16	5/8"	- 10	1" - 14	12,5	34,7	15,5		27	
M12410-10-12	16	5/8"	- 10	1.3/16" - 12	15,0	37,5	17,0		32	
M12410-12-12	19	3/4"	- 12	1.3/16" - 12	15,0	39,0	17,0		32	
M12410-12-16	19	3/4"	- 12	1.7/16" - 12	19,8	40,5	17,5		38	
M12410-16-16	25	1"	- 16	1.7/16" - 12	19,8	41,8	17,5		38	
M12410-20-20	31	1.1/4"	- 20	1.11/16" - 12	26,0	46,3	17,5		46	
M12410-24-24	38	1.1/2"	- 24	2"- 12	32,0	48,6	17,5		55	

SAE STANDARD CONNECTIONS



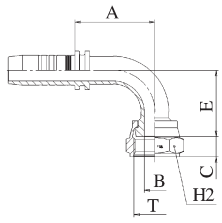
M22411

ORFS FEMALE - SAE J516/J1453 (CRIMPED-BACK NUT)

ORFS HEMBRA - SAE J516/J1453 (TUERCA PRENSADA)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_1	H_2
M22411-04-04	6	1/4"	- 04	9/16" - 18	4,0	27,5	8,0	13	19
M22411-04-06	6	1/4"	- 04	11/16" - 16	7,0	30,0	9,5	16	22
M22411-05-06	8	5/16"	- 05	11/16" - 16	7,0	30,5	9,5	16	22
M22411-06-06	10	3/8"	- 06	11/16" - 16	7,0	31,1	9,5	16	22
M22411-06-08	10	3/8"	- 06	13/16" - 16	9,3	35,6	11,0	19	24
M22411-08-06	12	1/2"	- 08	11/16" - 16	7,0	31,9	9,5	19	22
M22411-08-08	12	1/2"	- 08	13/16" - 16	9,3	35,9	11,0	19	24
M22411-08-10	12	1/2"	- 08	1" - 14	11,5	38,4	13,5	24	30
M22411-08-12	12	1/2"	- 08	1.3/16" - 12	13,9	41,9	14,5	28	36
M22411-10-10	16	5/8"	- 10	1" - 14	11,5	38,7	13,5	24	30
M22411-10-12	16	5/8"	- 10	1.3/16" - 12	13,9	42,0	14,5	28	36
M22411-12-10	19	3/4"	- 12	1" - 14	11,5	41,0	13,5	28	30
M22411-12-12	19	3/4"	- 12	1.3/16" - 12	13,9	43,5	14,5	28	36
M22411-12-16	19	3/4"	- 12	1.7/16" - 12	19,8	45,5	15,0	36	41
M22411-16-12	25	1"	- 16	1.3/16" - 12	13,9	45,8	14,5	36	36
M22411-16-16	25	1"	- 16	1.7/16" - 12	19,8	46,3	15,0	36	41
M22411-16-20	25	1"	- 16	1.11/16" - 12	26,0	49,5	14,8	41	50
M22411-20-20	31	1.1/4"	- 20	1.11/16" - 12	26,0	49,0	14,8	41	50
M22411-24-24	38	1.1/2"	- 24	2" - 12	32,0	54,0	15,8	50	60

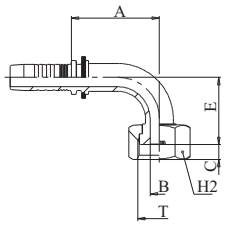
SAE STANDARD CONNECTIONS



M22491

90° ORFS FEMALE - SAE J516/J1453 (CRIMPED-BACK NUT)

ORFS HEMBRA CODO DE 90º - SAE J516/J1453 (TUERCA PRENSADA)



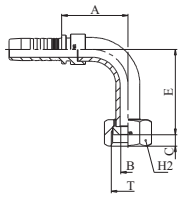
M22493

90° ORFS FEMALE - SAE J516/J1453 (SLIP-ON NUT)

ORFS HEMBRA CODO DE 90º - SAE J516/J1453 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M22493-04-04	6	1/4"	- 04	9/16" - 18	4,0	27,5	8,2	24,0	17
M22493-04-06	6	1/4"	- 04	11/16" - 16	7,0	27,5	9,5	22,0	22
M22493-05-06	8	5/16"	- 05	11/16" - 16	7,0	32	9,5	23,0	22
M22493-06-06	10	3/8"	- 06	11/16" - 16	7,0	30,0	9,5	24,0	22
M22493-06-08	10	3/8"	- 06	13/16" - 16	9,3	30,0	11,0	26,5	24
M22491-08-06	12	1/2"	- 08	11/16" - 16	7,0	30,9	9,5	24,5	22
M22493-08-08	12	1/2"	- 08	13/16" - 16	9,3	40,5	11,0	30,0	24
M22493-08-10	12	1/2"	- 08	1" - 14	11,5	40,5	13,5	30,0	30
M22493-08-12	12	1/2"	- 08	1.3/16" - 12	13,9	39,5	14,5	37,5	36
M22493-10-10	16	5/8"	- 10	1" - 14	11,5	48,0	13,5	37,5	30
M22493-10-12	16	5/8"	- 10	1.3/16" - 12	13,9	48,0	14,5	41,0	36
M22491-12-10	19	3/4"	- 12	1" - 14	11,5	49,0	13,5	38,0	30
M22493-12-12	19	3/4"	- 12	1.3/16" - 12	13,9	56,5	14,5	48,0	36
M22493-12-16	19	3/4"	- 12	1.7/16" - 12	19,8	56,5	14,8	47,5	41
M22491-16-12	25	1"	- 16	1.3/16" - 12	13,9	57,6	14,5	48,0	36
M22493-16-16	25	1"	- 16	1.7/16" - 12	19,8	71,5	14,8	56,0	41
M22493-16-20	25	1"	- 16	1.11/16" - 12	26,0	71,5	14,8	58,5	50
M22493-20-20	31	1.1/4"	- 20	1.11/16" - 12	26,0	83,0	14,8	66,0	50
M22493-24-24	38	1.1/2"	- 24	2" - 12	32,0	102,0	14,8	79,5	60

SAE STANDARD CONNECTIONS



M24493*

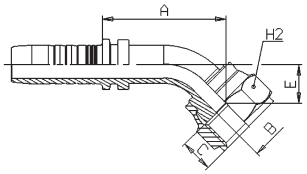
90° ORFS FEMALE LONG DROP - SAE J516/J1453 (SLIP-ON NUT)

ORFS HEMBRA CODO DE 90° LARGO - SAE J516/J1453 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E		H_2
M24493-04-04	6	1/4"	- 04	9/16" - 18	4,4	24,5	8,2	45,5		17
M24493-06-06	10	3/8"	- 06	11/16" - 16	7,0	31,5	9,5	53,5		22
M24493-06-08	10	3/8"	- 06	13/16" - 16	6,7	32,0	11,0	53,5		24
M24493-08-08	12	1/2"	- 08	13/16" - 16	10,0	37,0	11,0	63,5		24
M24493-08-10	12	1/2"	- 08	1" - 14	9,6	37,0	13,5	64,0		30
M24493-10-10	16	1/2"	- 10	1" - 14	9,6	41,0	13,5	69,0		30
M24493-10-12	16	5/8"	- 10	1.3/16" - 12	12,7	41,0	14,5	73,0		36
M24493-12-12	19	5/8"	- 12	1.3/16" - 12	15,5	45,5	14,5	96,0		36
M24493-16-16	25	1"	- 16	1.7/16" - 12	20,6	58,5	14,8	113,5		41

*** Brazed solution** / Con soldadura

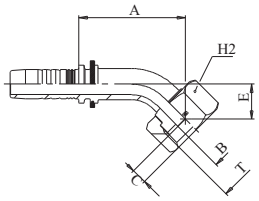
SAE STANDARD CONNECTIONS



M22441

45° ORFS FEMALE - SAE J516/J1453 (CRIMPED-BACK NUT)

ORFS HEMBRA CODO DE 45° - SAE J516/J1453 (TUERCA PRENSADA)



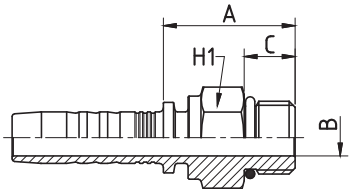
M22443

45° ORFS FEMALE - SAE J516/J1453 (SLIP-ON NUT)

ORFS HEMBRA CODO DE 45° - SAE J516/J1453 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M22443-04-04	6	1/4"	- 04	9/16" - 18	4,0	31,0	8,2	10,5	17
M22443-04-06	6	1/4"	- 04	11/16" - 16	7,0	31,0	9,5	10,5	22
M22443-05-06	8	5/16"	- 05	11/16" - 16	7,0	34,0	9,5	10,5	22
M22443-06-06	10	3/8"	- 06	11/16" - 16	7,0	32,5	9,5	11,0	22
M22443-06-08	10	3/8"	- 06	13/16" - 16	9,3	34,0	11,0	12,5	24
M22441-08-06	12	1/2"	- 08	11/16" - 16	7,0	33,0	9,5	11,0	22
M22443-08-08	12	1/2"	- 08	13/16" - 16	9,3	42,0	11,0	13,0	24
M22443-08-10	12	1/2"	- 08	1" - 14	11,5	42,0	13,5	13,5	30
M22443-08-12	12	1/2"	- 08	1.3/16" - 12	13,9	46,5	14,5	18,5	36
M22443-10-10	16	5/8"	- 10	1" - 14	11,5	49,0	13,5	16,0	30
M22443-10-12	16	5/8"	- 10	1.3/16" - 12	13,9	51,5	14,5	18,5	36
M22441-12-10	19	3/4"	- 12	1" - 14	11,5	50,5	13,5	16,5	30
M22443-12-12	19	3/4"	- 12	1.3/16" - 12	13,9	60,5	14,5	21,5	36
M22443-12-16	19	3/4"	- 12	1.7/16" - 12	19,8	61,0	14,8	21,0	41
M22443-16-16	25	1"	- 16	1.7/16" - 12	19,8	72,0	14,8	23,5	41
M22443-16-20	25	1"	- 16	1.11/16" - 12	26,0	74,0	14,8	25,2	50
M22443-20-20	31	1.1/4"	- 20	1.11/16" - 12	26,0	82,0	14,8	27,0	50
M22443-24-24	38	1.1/2"	- 24	2" - 12	32,0	98,0	14,8	31,5	60

SAE STANDARD CONNECTIONS

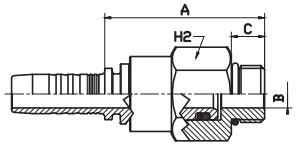


M13010

SAE MALE O-RING BOSS TYPE - SAE J516/J514

SAE MACHO CON O-RING TIPO BOSS - SAE J516/J514

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	
M13010-04-04	6	1/4"	- 04	7/16" - 20	4,0	24,0	9,1		14	
M13010-04-06	6	1/4"	- 04	9/16" - 18	7,1	24,5	9,9		17	
M13010-06-06	10	3/8"	- 06	9/16" - 18	7,0	25,6	9,9		17	
M13010-06-08	10	3/8"	- 06	3/4" - 16	9,3	28,6	11,1		22	
M13010-08-08	12	1/2"	- 08	3/4" - 16	9,3	28,9	11,1		22	
M13010-08-10	12	1/2"	- 08	7/8" - 14	12,5	31,9	12,7		25	
M13010-10-12	16	5/8"	- 10	1.1/16" - 12	15,0	37,7	15,1		32	
M13010-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	39,5	15,1		32	
M13010-12-16	19	3/4"	- 12	1.5/16" - 12	19,8	40,0	15,1		38	
M13010-16-16	25	1"	- 16	1.5/16" - 12	19,8	41,0	15,1		38	

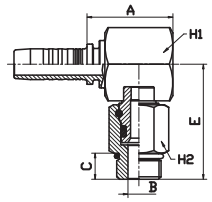


M14310*

SAE SWIVEL MALE O-RING BOSS TYPE - SAE J516/J514
SAE MACHO GIRATORIO CON O-RING TIPO BOSS - SAE J516/J514

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C			H_2
M14310-04-04	6	1/4"	- 04	7/16" - 20	4,0	41,0	9,1			17
M14310-04-06	6	1/4"	- 04	9/16" - 18	7,0	44,0	9,9			22
M14310-06-06	10	3/8"	- 06	9/16" - 18	7,0	45,9	9,9			22
M14310-06-08	10	3/8"	- 06	3/4" - 16	7,0	47,8	11,1			22
M14310-08-08	12	1/2"	- 08	3/4" - 16	9,3	50,9	11,1			27
M14310-08-10	12	1/2"	- 08	7/8" - 14	9,3	42,2	13,0			27
M14310-08-12	12	1/2"	- 08	1.1/16" - 12	12,5	49,4	15,0			32
M14310-10-10	16	5/8"	- 10	7/8" - 14	9,3	41,4	13,0			27
M14310-12-12	19	3/4"	- 12	1.1/16" - 12	12,5	47,8	15,0			32

*** Not to be used as a live swivel** / No usar como una pieza giratoria viva



M14390*

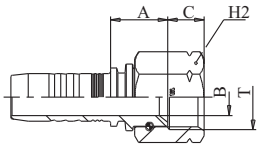
90° SAE SWIVEL MALE O-RING BOSS TYPE - SAE J516/J514
SAE MACHO GIRATORIO CON O-RING CODO COMPACTO DE 90°
TIPO BOSS - SAE J516/J514

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_1	H_2
M14390-06-06	10	3/8"	- 06	9/16" - 18	5,7	20,1	9,9	40,0	22	17
M14390-06-08	10	3/8"	- 06	3/4" - 16	7,0	20,1	11,1	44,4	22	22
M14390-08-08	12	1/2"	- 08	3/4" - 16	9,3	22,1	11,1	49,0	27	22
M14390-08-10	12	1/2"	- 08	7/8" - 14	9,3	27,5	13,0	47,5	27	27
M14390-10-10	16	5/8"	- 10	7/8" - 14	9,3	28,0	13,0	47,5	27	27
M14390-12-12	19	3/4"	- 12	1.1/16" - 12	12,5	27,5	15,0	55,5	32	32

*** Brazed solution - Not to be used as a live swivel** / Solución soldada - No usar como pieza giratoria viva

SAE STANDARD CONNECTIONS

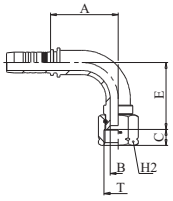
M22612



SAE FEMALE 45° CONE SEAT - SAE J516/J512 (THRUST-WIRE NUT)
SAE HEMBRA ASIENTO A 45° - SAE J516/J512 (TUERCA CON SEGURO)

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C			H_2
M22612-04-04	6	1/4"	- 04	7/16" - 20	4,0	15,5	8,2			17
M22612-06-06	10	3/8"	- 06	5/8" - 18	7,0	16,6	10,8			22
M22612-12-12	19	3/4"	- 12	1.1/16" - 14	15,0	22,7	14,4			32

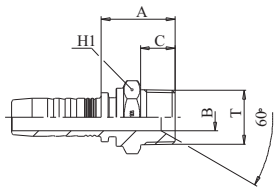
M22692



90° SAE FEMALE SWEPT ELBOW 45° CONE SEAT - SAE J516/J512 (THRUST-WIRE NUT)
SAE HEMBRA CODO DE 90° ASIENTO A 45° - SAE J516/J512 (TUERCA CON SEGURO)

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E		H_2
M22692-04-04	6	1/4"	- 04	7/16" - 20	4,0	28,3	8,0	27,0		17
M22692-06-06	10	3/8"	- 06	5/8" - 18	7,0	35,5	10,8	33,0		22
M22692-12-12	19	3/4"	- 12	1.1/6" - 14	15,0	62,0	14,4	58,0		32

SAE STANDARD CONNECTIONS



M12810

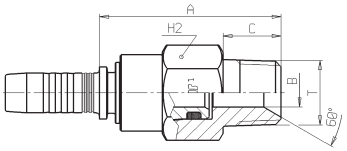
NPTF MALE 30° CONE SEAT - SAE J516

NPTF MACHO ASIENTO A 30° - SAE J516

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1
M12810-03-02	5	3/16"	- 03	1/8" - 27	4,0	23,6	10,0		12
M12810-03-04	5	3/16"	- 03	1/4" - 18	5,5	29,1	14,5		14
M12810-04-02	6	1/4"	- 04	1/8" - 27	4,0	24,1	10,0		12
M12810-04-04	6	1/4"	- 04	1/4" - 18	5,5	29,0	14,5		14
M12810-04-06	6	1/4"	- 04	3/8" - 18	9,3	31,5	14,5		19
M12810-04-08	6	1/4"	- 04	1/2" - 14	9,3	33,5	19,2		24
M12810-05-04	8	5/16"	- 05	1/4" - 18	5,5	30,0	14,5		14
M12810-05-06	8	5/16"	- 05	3/8" - 18	9,3	32,0	14,5		19
M12810-06-04	10	3/8"	- 06	1/4" - 18	5,5	30,1	14,5		14
M12810-06-06	10	3/8"	- 06	3/8" - 18	9,3	28,6	14,5		19
M12810-06-08	10	3/8"	- 06	1/2" - 14	12,5	34,6	19,2		24
M12810-08-06	12	1/2"	- 08	3/8" - 18	9,3	28,9	14,5		19
M12810-08-08	12	1/2"	- 08	1/2" - 14	12,5	34,9	19,2		24
M12810-08-12	12	1/2"	- 08	3/4" - 14	16,0	35,4	19,2		27
M12810-10-08	16	5/8"	- 10	1/2" - 14	12,5	38,7	19,2		24
M12810-10-12	16	5/8"	- 10	3/4" - 14	16,0	40,2	19,2		27
M12810-12-12	19	3/4"	- 12	3/4" - 14	16,0	36,5	19,2		27
M12810-12-08	19	3/4"	- 12	1/2" - 14	12,5	36,5	13,6		27
M12810-12-16	19	3/4"	- 12	1" - 11,5	19,8	46,0	24,2		36
M12810-16-12	25	1"	- 16	3/4" - 14	15,5	38,8	19,2		32
M12810-16-16	25	1"	- 16	1" - 11,5	19,8	43,8	24,2		36
M12810-16-20	25	1"	- 16	1.1/4" - 11,5	26,0	56,3	25,0		46
M12810-20-20	31	1.1/4"	- 20	1.1/4" - 11,5	26,0	56,5	25,0		46
M12810-24-24	38	1.1/2"	- 24	1.1/2" - 11,5	32,0	57,6	26,0		50
M12810-32-32	51	2"	- 32	2" - 11,5	45,0	64,3	26,5		65

SAE STANDARD CONNECTIONS

M14110*

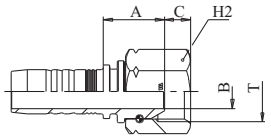


NPTF SWIVEL MALE 30° CONE SEAT - SAE J516
NPTF MACHO GIRATORIO ROSCA ASIENTO A 30° - SAE J516

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_2
M14110-04-02	6	1/4"	- 04	1/8" - 27	3,0	41,9	10,0		17
M14110-04-04	6	1/4"	- 04	1/4" - 18	4,0	46,4	14,5		17
M14110-04-06	6	1/4"	- 04	3/8" - 18	7,0	46,4	14,5		19
M14110-06-04	10	3/8"	- 06	1/4" - 18	4,0	50,5	14,5		22
M14110-06-06	10	3/8"	- 06	3/8" - 18	7,0	50,5	14,5		22
M14110-06-08	10	3/8"	- 06	1/2" - 14	9,3	55,2	19,2		24
M14110-08-08	12	1/2"	- 08	1/2" - 14	9,3	59,0	19,2		27
M14110-12-12	19	3/4"	- 12	3/4" - 14	16,0	57,9	19,2		32
M14110-16-16	25	1"	- 16	1" - 11,5	19,8	65,8	24,2		38

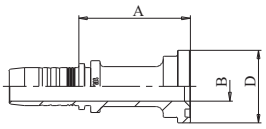
*** Not to be used as a live swivel /** No usar como una pieza giratoria viva

M22812



NPSM FEMALE 30° CONE (THRUST-WIRE NUT)
NPSM HEMBRA ASIENTO A 30° (TUERCA CON SEGURO)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_2
M22812-04-04	6	1/4"	- 04	1/4" - 18	4,0	17,5	4,2		19
M22812-06-06	10	3/8"	- 06	3/8" - 18	7,0	20,9	6,0		22
M22812-08-08	12	1/2"	- 08	1/2" - 14	9,3	22,8	6,5		27
M22812-12-12	19	3/4"	- 12	3/4" - 14	15,0	24,5	9,0		32
M22812-16-16	25	1"	- 16	1" - 11,5	19,8	27,3	10,5		38



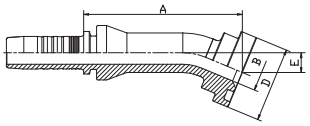
M23311

STRAIGHT SAE FLANGE 3000 psi CODE 61 - SAE J516/J518

BRIDA RECTA SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size		B	A	D			
M23311-08-08	12	1/2"	- 08	1/2"	9,3	50,9	30,3			
M23311-08-12	12	1/2"	- 08	3/4"	15,0	57,7	38,0			
M23311-10-12	16	5/8"	- 10	3/4"	15,0	65,7	38,0			
M23311-12-12	19	3/4"	- 12	3/4"	15,0	58,0	38,0			
M23311-12-16	19	3/4"	- 12	1"	20,0	58,0	44,6			
M23311-16-16	25	1"	- 16	1"	19,8	64,3	44,6			
M23311-16-20	25	1"	- 16	1.1/4"	26,0	70,3	51,0			
M23311-20-20	31	1.1/4"	- 20	1.1/4"	26,0	70,5	51,0			
M23311-20-24	31	1.1/4"	- 20	1.1/2"	32,0	72,5	60,5			
M23311-24-24	38	1.1/2"	- 24	1.1/2"	32,0	75,6	60,5			
M23311-24-32	38	1.1/2"	- 24	2"	42,0	75,6	71,6			
M23311-32-32	51	2"	- 32	2"	42,0	78,9	71,6			
M23311-32-40	51	2"	- 32	2.1/2"	56,0	80,9	84,3			
M23311-38-40	60	2.3/8"	- 38	2.1/2"	56,0	84,0	84,3			
M23311-40-40	63	2.1/2"	- 40	2.1/2"	56,0	84,0	84,3			
M23311-48-48	76	3"	- 48	3"	69,0	86,0	101,6			

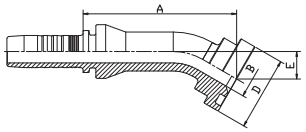
M23321



22.5° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518
BRIDA CODO DE 22.5° SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23321-08-08	12	1/2"	- 08	1/2"	9,3	63,9	30,3	8,0		
M23321-12-12	19	3/4"	- 12	3/4"	15,0	74,7	38,0	9,8		
M23321-12-16	19	3/4"	- 12	1"	20,0	74,7	44,6	9,8		
M23321-16-16	25	1"	- 16	1"	19,8	88,8	44,6	11,5		
M23321-20-20	31	1.1/4"	- 20	1.1/4"	26,0	100,0	51,0	12,0		
M23321-20-24	31	1.1/4"	- 20	1.1/2"	32,0	101,8	60,5	12,8		

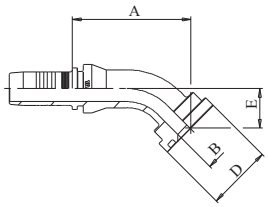
M23331



30° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518
BRIDA CODO DE 30° SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23331-08-08	12	1/2"	- 08	1/2"	9,3	62,6	30,3	11,2		
M23331-12-12	19	3/4"	- 12	3/4"	15,0	73,2	38,0	13,9		
M23331-12-16	19	3/4"	- 12	1"	20,0	73,2	44,6	13,9		
M23331-16-16	25	1"	- 16	1"	19,8	86,8	44,6	16,4		
M23331-20-20	31	1.1/4"	- 20	1.1/4"	26,0	98,0	51,0	17,4		
M23331-24-24	38	1.1/2"	- 24	1.1/2"	32,0	114,3	60,5	20,0		

SAE STANDARD CONNECTIONS



M23341

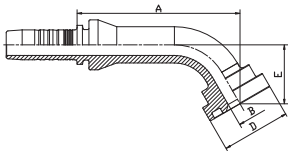
45° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518

BRIDA CODO DE 45° SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23341-08-08	12	1/2"	- 08	1/2"	9,3	58,5	30,3	18,5		
M23341-08-12	12	1/2"	- 08	3/4"	15,0	59,5	38,0	19,0		
M23341-10-12	16	5/8"	- 10	3/4"	15,0	61,0	38,0	22,0		
M23341-12-12	19	3/4"	- 12	3/4"	15,0	68,5	38,0	23,0		
M23341-12-16	19	3/4"	- 12	1"	20,0	68,5	44,6	23,0		
M23341-16-16	25	1"	- 16	1"	19,8	81,5	44,6	27,5		
M23341-16-20	25	1"	- 16	1.1/4"	26,0	81,5	51,0	27,5		
M23341-20-20	31	1.1/4"	- 20	1.1/4"	26,0	92,0	51,0	29,5		
M23341-20-24	31	1.1/4"	- 20	1.1/2"	32,0	93,5	60,5	31,0		
M23341-24-24	38	1.1/2"	- 24	1.1/2"	32,0	107,5	60,5	34,5		
M23341-24-32	38	1.1/2"	- 24	2"	42,0	107,5	71,6	34,5		
M23341-32-32	51	2"	- 32	2"	42,0	124,0	71,6	39,0		

SAE STANDARD CONNECTIONS

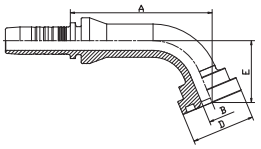
M23361



60° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518
BRIDA CODO DE 60° SAE 3000 psi CODIGO 61 - SAE J516/J518

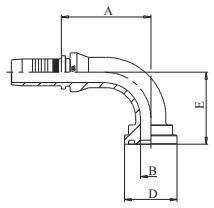
PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23361-08-08	12	1/2"	- 08	1/2"	9,3	71,5	30,3	25,8		
M23361-12-12	19	3/4"	- 12	3/4"	15,0	86,9	38,0	33,0		
M23361-16-16	25	1"	- 16	1"	19,8	104,0	44,6	39,0		
M23361-16-20	25	1"	- 16	1.1/4"	26,0	104,0	44,6	39,0		
M23361-20-20	31	1.1/4"	- 20	1.1/4"	26,0	120,0	51,0	43,0		
M23361-20-24	31	1.1/4"	- 20	1.1/2"	32,0	121,0	60,5	44,7		
M23361-24-24	38	1.1/2"	- 24	1.1/2"	32,0	143,6	60,5	50,7		

M23371



67.5° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518
BRIDA CODO DE 67.5° SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23371-08-08	12	1/2"	- 08	1/2"	9,3	67,9	30,3	29,6		
M23371-12-12	19	3/4"	- 12	3/4"	15,0	82,2	38,0	38,0		
M23371-12-16	19	3/4"	- 12	1"	20,0	82,2	44,6	38,0		
M23371-16-16	25	1"	- 16	1"	19,8	98,6	44,6	45,0		
M23371-20-20	31	1.1/4"	- 20	1.1/4"	26,0	114,0	51,0	50,0		
M23371-24-24	38	1.1/2"	- 24	1.1/2"	32,0	136,4	60,5	59,2		



M23391

90° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518

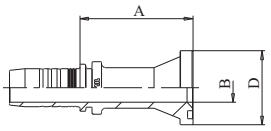
BRIDA CODO DE 90° SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE		FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23391-08-08	12	1/2"	- 08	1/2"	9,3	54,5	30,3	40,0		
M23391-08-12	12	1/2"	- 08	3/4"	15,0	54,5	38,0	41,0		
M23391-10-12	16	5/8"	- 10	3/4"	15,0	56,0	38,0	47,5		
M23391-12-12	19	3/4"	- 12	3/4"	15,0	64,5	38,0	52,0		
M23391-12-16	19	3/4"	- 12	1"	20,0	64,5	44,6	52,0		
M23391-16-16	25	1"	- 16	1"	19,8	77,5	44,6	62,0		
M23391-16-20	25	1"	- 16	1.1/4"	26,0	77,5	51,0	62,0		
M23391-20-20	31	1.1/4"	- 20	1.1/4"	26,0	90,5	51,0	70,0		
M23391-20-24	31	1.1/4"	- 20	1.1/2"	32,0	90,5	60,5	72,0		
M23391-24-24	38	1.1/2"	- 24	1.1/2"	32,0	108,0	60,5	84,0		
M23391-24-32	38	1.1/2"	- 24	2"	42,0	108,0	71,6	84,0		
M23391-32-32	51	2"	- 32	2"	42,0	129,0	71,6	99,0		
M23391-40-40*	63	2.1/2"	- 40	2.1/2"	52,0	88,5	84,3	88,0		
M23391-48-48*	76	3"	- 48	3"	61,0	124,0	101,6	115,0		

All items are made from solid with the exception of (*) / Todos los ítems son fabricados sin soldadura exceptuando (*)

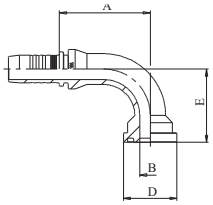
SAE STANDARD CONNECTIONS

M23611



STRAIGHT SAE FLANGE 6000 psi CODE 62 - SAE J516/J518
BRIDA RECTA SAE 6000 psi CODIGO 62 - SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D			
M23611-08-08	12	1/2"	- 08	1/2"	9,3	52,1	31,8			
M23611-08-12	12	1/2"	- 08	3/4"	15,0	68,4	41,5			
M23611-10-08	16	5/8"	- 10	1/2"	9,3	52,0	31,8			
M23611-10-12	16	5/8"	- 10	3/4"	15,0	70,2	41,5			
M23611-12-12	19	3/4"	- 12	3/4"	15,0	69,0	41,5			
M23611-12-16	19	3/4"	- 12	1"	20,0	81,0	47,7			
M23611-16-16	25	1"	- 16	1"	19,8	82,3	47,7			
M23611-16-20	25	1"	- 16	1.1/4"	26,0	89,8	54,2			
M23611-20-20	31	1.1/4"	- 20	1.1/4"	26,0	84,5	54,2			
M23611-20-24	31	1.1/4"	- 20	1.1/2"	32,0	90,5	63,7			
M23611-24-24	38	1.1/2"	- 24	1.1/2"	32,0	92,6	63,7			
M23611-32-32	51	2"	- 32	2"	42,0	107,9	79,6			



M23691

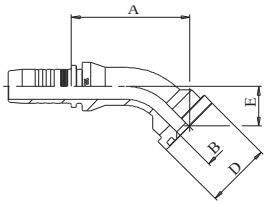
90° SAE FLANGE 6000 psi CODE 62 - SAE J516/J518

BRIDA CODO DE 90° SAE 6000 psi CODIGO 62 - SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23691-08-08	12	1/2"	- 08	1/2"	9,3	54,5	31,8	45,0		
M23691-08-12	12	1/2"	- 08	3/4"	15,0	54,5	41,5	53,0		
M23691-10-12	16	5/8"	- 10	3/4"	15,0	56,0	41,5	58,0		
M23691-10-16	16	5/8"	- 10	1"	19,8	55,7	47,7	65,0		
M23691-12-12	19	3/4"	- 12	3/4"	15,0	64,0	41,5	59,0		
M23691-12-16	19	3/4"	- 12	1"	20,0	64,5	47,7	65,0		
M23691-16-16	25	1"	- 16	1"	19,8	73,5	47,7	68,0		
M23691-16-20	25	1"	- 16	1.1/4"	26,0	73,5	54,2	75,0		
M23691-20-20	31	1.1/4"	- 20	1.1/4"	26,0	85,5	54,2	81,0		
M23691-20-24	31	1.1/4"	- 20	1.1/2"	32,0	85,5	63,7	91,5		
M23691-24-24	38	1.1/2"	- 24	1.1/2"	32,0	106,0	63,7	94,5		
M23691-32-32	51	2"	- 32	2"	42,0	138,0	79,6	132,0		

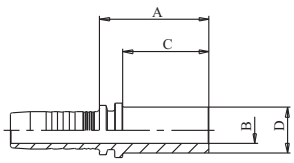
SAE STANDARD CONNECTIONS

M23641



45° SAE FLANGE 6000 psi CODE 62 - SAE J516/J518
BRIDA CODO DE 45° SAE 6000 psi CODIGO 62 - SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M23641-08-08	12	1/2"	- 08	1/2"	9,3	62,0	31,8	22,0		
M23641-08-12	12	1/2"	- 08	3/4"	15,0	68,0	41,5	27,5		
M23641-10-12	16	5/8"	- 10	3/4"	15,0	67,5	41,5	31,0		
M23641-12-12	19	3/4"	- 12	3/4"	15,0	73,0	41,5	28,0		
M23641-12-16	19	3/4"	- 12	1"	20,0	77,0	47,7	32,5		
M23641-16-12	25	1"	- 16	3/4"	15,0	80,0	41,5	30,0		
M23641-16-16	25	1"	- 16	1"	19,8	83,5	47,7	32,5		
M23641-16-20	25	1"	- 16	1.1/4"	26,0	88,5	54,2	37,5		
M23641-20-20	31	1.1/4"	- 20	1.1/4"	26,0	95,5	54,2	37,5		
M23641-20-24	31	1.1/4"	- 20	1.1/2"	32,0	102,5	63,7	45,0		
M23641-24-24	38	1.1/2"	- 24	1.1/2"	32,0	118,0	63,7	44,0		
M23641-32-32	51	2"	- 32	2"	42,0	151,5	79,6	60,5		



M22010

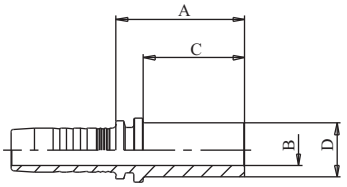
METRIC STANDPIPE STRAIGHT L.T. - DIN 2353

ESPIGA LISA METRICA RECTA SERIE LIGERA - DIN 2353

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size	D	B	A	C			
M22010-03-04	5	3/16"	- 03	4	2,0	29,6	22,0			
M22010-03-06	5	3/16"	- 03	6	3,0	28,6	22,0			
M22010-04-06	6	1/4"	- 04	6	3,0	29,5	22,0			
M22010-05-10	8	5/16"	- 05	10	7,0	30,5	23,0			
M22010-06-10	10	3/8"	- 06	10	7,0	30,6	23,0			
M22010-06-12	10	3/8"	- 06	12	8,0	30,6	23,0			
M22010-06-15	10	3/8"	- 06	15	10,5	32,6	25,0			
M22010-08-12	12	1/2"	- 08	12	8,0	30,9	23,0			
M22010-08-15	12	1/2"	- 08	15	10,5	32,9	25,0			
M22010-08-18	12	1/2"	- 08	18	12,5	33,9	26,0			
M22010-10-18	16	5/8"	- 10	18	12,5	34,2	26,0			
M22010-10-22	16	5/8"	- 10	22	15,0	36,2	28,0			
M22010-12-18	19	3/4"	- 12	18	15,0	36,2	26,0			
M22010-12-22	19	3/4"	- 12	22	15,0	38,0	28,0			
M22010-16-28	25	1"	- 16	28	20,5	41,3	30,0			
M22010-20-35	31	1.1/4"	- 20	35	26,0	48,5	36,0			
M22010-24-42	38	1.1/2"	- 24	42	32,0	52,6	40,0			

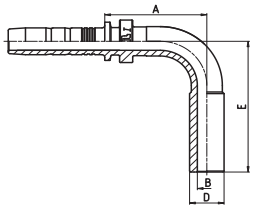
DIN STANDARD CONNECTIONS

M22110



METRIC STANDPIPE STRAIGHT H.T. - DIN 2353
ESPIGA LISA METRICA RECTA SERIE PESADA - DIN 2353

PART. REF.	HOSE BORE			PIPE	DIMENSIONS mm					
	DN	inch	Size	D	B	A	C			
M22110-03-08	5	3/16"	- 03	8	3,0	30,6	24,0			
M22110-04-08	6	1/4"	- 04	8	4,0	31,5	24,0			
M22110-04-10	6	1/4"	- 04	10	4,0	33,5	26,0			
M22110-04-12	6	1/4"	- 04	12	7,0	33,5	26,0			
M22110-05-12	8	5/16"	- 05	12	7,0	33,5	26,0			
M22110-06-14	10	3/8"	- 06	14	8,0	36,6	29,0			
M22110-08-14	12	1/2"	- 08	14	9,3	36,9	29,0			
M22110-08-16	12	1/2"	- 08	16	10,5	37,9	30,0			
M22110-10-20	16	5/8"	- 10	20	12,5	44,2	36,0			
M22110-12-20	19	3/4"	- 12	20	15,0	46,0	36,0			
M22110-12-25	19	3/4"	- 12	25	15,0	50,0	40,0			
M22110-16-25	25	1"	- 16	25	15,0	51,3	40,0			
M22110-16-30	25	1"	- 16	30	20,5	55,3	44,0			
M22110-16-38	25	1"	- 16	38	26,0	61,3	50,0			
M22110-20-30	31	1.1/4"	- 20	30	20,5	56,5	44,0			
M22110-20-38	31	1.1/4"	- 20	38	26,0	62,5	50,0			
M22110-24-38	38	1.1/2"	- 24	38	26,0	62,6	50,0			



M22090

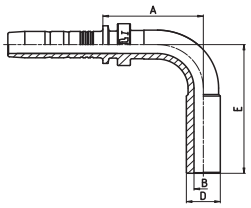
90° METRIC STANDPIPE L.T. - DIN 2353

ESPIGA LISA METRICA SERIE LIGERA CODO DE 90° - DIN 2353

PART. REF.	HOSE BORE			PIPE	DIMENSIONS mm					
	DN	inch	Size	D	B	A		E		
M22090-03-06	5	3/16"	- 03	6	3,0	22,5		34,0		
M22090-04-06	6	1/4"	- 04	6	3,0	23,0		34,0		
M22090-05-10	8	5/16"	- 05	10	7,0	29,5		40,0		
M22090-06-10	10	3/8"	- 06	10	7,0	34,0		42,5		
M22090-06-12	10	3/8"	- 06	12	8,0	34,0		45,0		
M22090-08-15	12	1/2"	- 08	15	10,5	42,0		52,0		
M22090-08-18	12	1/2"	- 08	18	12,5	42,0		55,0		
M22090-10-18	16	5/8"	- 10	18	12,5	49,0		59,0		
M22090-12-22	19	3/4"	- 12	22	15,0	54,5		63,0		
M22090-16-28	25	1"	- 16	28	19,8	67,5		75,0		
M22090-20-35	31	1.1/4"	- 20	35	26,0	80,5		94,0		

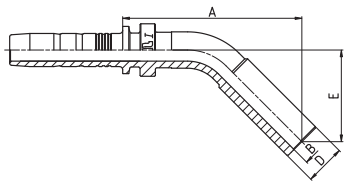
DIN STANDARD CONNECTIONS

M22190



90° METRIC STANDPIPE H.T. - DIN 2353
ESPIGA LISA METRICA SERIE PESADA CODO DE 90° - DIN 2353

PART. REF.	HOSE BORE			PIPE	DIMENSIONS mm					
	DN	inch	Size	D	B	A		E		
M22190-04-08	6	1/4"	- 04	8	4,0	27,0		38,0		
M22190-04-10	6	1/4"	- 04	10	6,0	27,0		41,0		
M22190-04-12	6	1/4"	- 04	12	7,0	27,0		44,0		
M22190-05-12	8	5/16"	- 05	12	7,0	30,5		44,0		
M22190-06-14	10	3/8"	- 06	14	9,3	35,0		51,0		
M22190-08-14	12	1/2"	- 08	14	9,3	42,0		53,5		
M22190-08-16	12	1/2"	- 08	16	10,5	43,0		55,0		
M22190-10-20	16	5/8"	- 10	20	12,5	49,0		66,5		
M22190-12-20	19	3/4"	- 12	20	15,0	54,5		69,0		
M22190-12-25	19	3/4"	- 12	25	15,0	57,5		75,0		
M22190-16-25	25	1"	- 16	25	15,0	61,5		76,5		
M22190-16-30	25	1"	- 16	30	19,8	69,5		87,0		

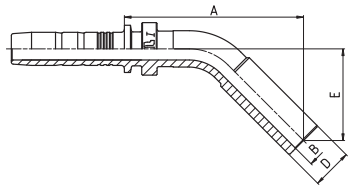


M22040

45° METRIC STANDPIPE L.T. - DIN 2353

ESPIGA LISA METRICA SERIE LIGERA CODO DE 45° - DIN 2353

PART. REF.	HOSE BORE			PIPE	DIMENSIONS mm					
	DN	inch	Size	D	B	A		E		
M22040-04-06	6	1/4"	- 04	6	3,0	38,0		20,5		
M22040-05-10	8	5/16"	- 05	10	7,0	44,5		22,5		
M22040-06-10	10	3/8"	- 06	10	7,0	47,5		23,0		
M22040-06-12	10	3/8"	- 06	12	8,0	49,5		25,0		
M22040-08-15	12	1/2"	- 08	15	10,5	58,0		28,0		
M22040-10-18	16	5/8"	- 10	18	12,5	63,5		30,5		
M22040-12-22	19	3/4"	- 12	22	15,0	69,0		32,0		
M22040-16-28	25	1"	- 16	28	19,8	81,5		37,0		



M22140

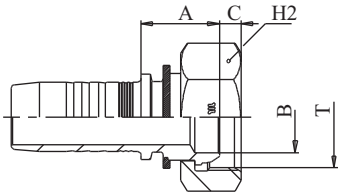
45° METRIC STANDPIPE H.T. - DIN 2353

ESPIGA LISA METRICA SERIE PESADA CODO DE 45° - DIN 2353

PART. REF.	HOSE BORE			PIPE	DIMENSIONS mm					
	DN	inch	Size	D	B	A		E		
M22140-04-08	6	1/4"	- 04	8	4,0	42,0		22,0		
M22140-04-10	6	1/4"	- 04	10	6,0	44,0		24,0		
M22140-06-14	10	3/8"	- 06	14	9,3	54,5		29,0		
M22140-08-16	12	1/2"	- 08	16	10,5	61,0		30,0		
M22140-10-20	16	5/8"	- 10	20	12,5	69,0		36,0		
M22140-12-25	19	3/4"	- 12	25	15,0	80,5		40,5		
M22140-16-25	25	1"	- 16	25	15,0	82,0		41,0		

DIN STANDARD CONNECTIONS

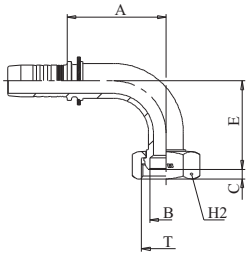
M21013



METRIC FEMALE 60° CONE - DIN 20078/3863
HEMBRA METRICA ASIENTO A 60° - DIN 20078/3863

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_2
M21013-12-30	19	3/4"	- 12	M 30x1,5	20,0	21,0	8,1		36
M21013-16-38	25	1"	- 16	M 38x1,5	26,0	22,8	7,6		46
M21013-20-45	31	1.1/4"	- 20	M 45x1,5	33,0	23,5	8,1		50
M21013-24-52	38	1.1/2"	- 24	M 52x1,5	40,0	25,0	8,1		60

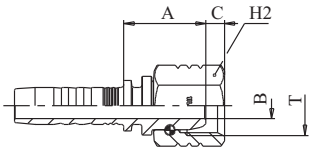
M21093



90° METRIC FEMALE SWEPT ELBOW 60° CONE - DIN 20078/3863
HEMBRA METRICA CODO DE 90° ASIENTO A 60° - DIN 20078/3863

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
M21093-12-30	19	3/4"	- 12	M 30x1,5	20,0	61,5	8,1	54,5	36
M21093-16-38	25	1"	- 16	M 38x1,5	26,0	76,5	7,6	63,0	46

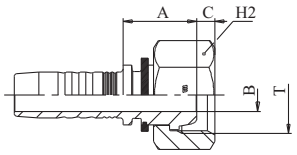
DIN STANDARD CONNECTIONS



M21312

METRIC FEMALE MULTISEAL - DIN 20078/3868 (THRUST-WIRE NUT)

HEMBRA METRICA ASIENTO UNIVERSAL - DIN 20078/3868 (TUERCA CON SEGURO)



M21313

METRIC FEMALE MULTISEAL - DIN 20078/3868 (SLIP-ON NUT)

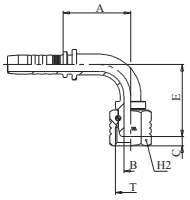
HEMBRA METRICA ASIENTO UNIVERSAL - DIN 20078/3868 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C			H_2
M21313-03-12	5	3/16"	- 03	M 12x1,5	6	3,0	18,6	3,7			14
M21313-04-14	6	1/4"	- 04	M 14x1,5	8	4,0	19,5	3,8			17
M21313-04-16	6	1/4"	- 04	M 16x1,5	10	4,0	19,5	4,0			19
M21313-05-16	8	5/16"	- 05	M 16x1,5	10	5,5	19,5	4,0			19
M21313-05-18	8	5/16"	- 05	M 18x1,5	12	5,5	19,6	4,0			22
M21312-06-16	10	3/8"	- 06	M 16x1,5	10	7,0	21,6	5,0			19
M21313-06-18	10	3/8"	- 06	M 18x1,5	12	7,0	20,1	4,0			22
M21313-06-22	10	3/8"	- 06	M 22x1,5	15	7,0	21,1	5,2			27
M21313-08-22	12	1/2"	- 08	M 22x1,5	15	9,3	21,5	5,2			27
M21313-10-26	16	5/8"	- 10	M 26x1,5	18	12,5	22,1	5,5			32

DIN STANDARD CONNECTIONS

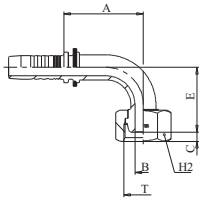
M21392

90° METRIC FEMALE SWEPT ELBOW MULTISEAL
DIN 20078/3868 (THRUST-WIRE NUT)
HEMBRA METRICA CODO DE 90° ASIENTO UNIVERSAL
DIN 20078/3868 (TUERCA CON SEGURO)



M21393

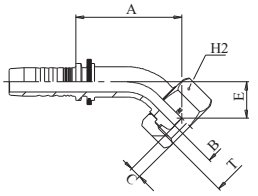
90° METRIC FEMALE SWEPT ELBOW MULTISEAL
DIN 20078/3868 (SLIP-ON NUT)
HEMBRA METRICA CODO DE 90° ASIENTO UNIVERSAL
DIN 20078/3868 (TUERCA LIBRE)



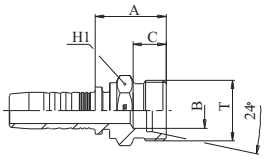
PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M21393-04-14	6	1/4"	- 04	M 14x1,5	8	4,0	29,5	3,8	29,5	17
M21393-04-16	6	1/4"	- 04	M 16x1,5	10	4,0	29,5	4,0	29,5	19
M21393-05-16	8	5/16"	- 05	M 16x1,5	10	5,5	32,0	4,0	29,0	19
M21392-06-16	10	3/8"	- 06	M 16x1,5	10	7,0	35,5	5,0	38,0	19
M21393-06-18	10	3/8"	- 06	M 18x1,5	12	7,0	36,5	4,0	31,5	22
M21393-06-22	10	3/8"	- 06	M 22x1,5	15	7,0	36,5	5,2	32,0	27
M21393-08-22	12	1/2"	- 08	M 22x1,5	15	9,3	45,0	5,2	36,5	27
M21393-10-26	16	5/8"	- 10	M 26x1,5	18	12,5	51,5	5,5	50,0	32

M21343

45° METRIC FEMALE SWEPT ELBOW MULTISEAL
DIN 20078/3868 (SLIP-ON NUT)
HEMBRA METRICA CODO DE 45° ASIENTO UNIVERSAL
DIN 20078/3868 (TUERCA LIBRE)



PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M21343-04-14	6	1/4"	- 04	M 14x1,5	8	4,0	36,5	3,8	15,0	17
M21343-04-16	6	1/4"	- 04	M 16x1,5	10	4,0	36,5	4,0	15,0	19
M21343-05-16	8	5/16"	- 05	M 16x1,5	10	5,5	39,0	4,0	15,0	19
M21343-06-18	10	3/8"	- 06	M 18x1,5	12	7,0	42,0	4,0	15,5	22
M21343-06-22	10	3/8"	- 06	M 22x1,5	15	7,0	42,5	5,2	15,5	27
M21343-08-22	12	1/2"	- 08	M 22x1,5	15	9,3	49,5	5,2	17,0	27
M21343-10-26	16	5/8"	- 10	M 26x1,5	18	12,5	60,0	5,5	24,0	32



M11110

METRIC MALE 24° CONE SEAT L.T. - DIN 20066/3861

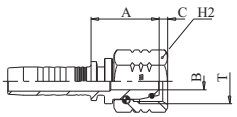
MACHO METRICO ASIENTO A 24° SERIE LIGERA DIN 20066/3861

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_1
M11110-04-12	6	1/4"	- 04	M 12x1,5	6	4,0	21,5	10,0		14
M11110-04-14	6	1/4"	- 04	M 14x1,5	8	4,0	21,5	10,0		14
M11110-04-16	6	1/4"	- 04	M 16x1,5	10	7,0	23,5	11,0		17
M11110-04-18	6	1/4"	- 04	M 18x1,5	12	9,0	23,5	11,0		19
M11110-05-16	8	5/16"	- 05	M 16x1,5	10	7,0	24,0	11,0		17
M11110-05-18	8	5/16"	- 05	M 18x1,5	12	9,0	24,0	11,0		19
M11110-06-16	10	3/8"	- 06	M 16x1,5	10	7,0	24,1	11,0		17
M11110-06-18	10	3/8"	- 06	M 18x1,5	12	9,0	24,6	11,0		19
M11110-06-22	10	3/8"	- 06	M 22x1,5	15	10,0	25,6	12,0		22
M11110-08-22	12	1/2"	- 08	M 22x1,5	15	10,0	25,6	12,0		22
M11110-08-26	12	1/2"	- 08	M 26x1,5	18	12,5	26,4	12,0		27
M11110-10-22	16	5/8"	- 10	M 22x1,5	15	10,0	25,5	12,0		22
M11110-10-26	16	5/8"	- 10	M 26x1,5	18	12,5	26,7	12,0		27
M11110-12-30	19	3/4"	- 12	M 30x2	22	15,0	30,0	14,0		30
M11110-16-36	25	1"	- 16	M 36x2	28	20,0	32,3	14,0		36
M11110-20-45	31	1.1/4"	- 20	M 45x2	35	26,0	40,5	16,0		46
M11110-24-52	38	1.1/2"	- 24	M 52x2	42	32,0	42,6	16,0		55

DIN STANDARD CONNECTIONS

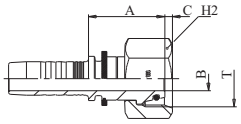
M21512

O-RING METRIC FEMALE 24° CONE L.T.
DIN 20066/3865 (THRUST-WIRE NUT)
HEMBRA METRICA CON O-RING ASIENTO A 24° SERIE LIGERA
DIN 20066/3865 (TUERCA CON SEGURO)



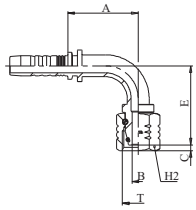
M21513

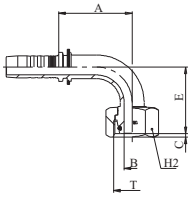
O-RING METRIC FEMALE 24° CONE L.T.
DIN 20066/3865 (SLIP-ON NUT)
HEMBRA METRICA CON O-RING ASIENTO A 24° SERIE LIGERA
DIN 20066/3865 (TUERCA LIBRE)



PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_2
M21513-03-12	5	3/16"	- 03	M 12x1,5	6	3,0	21,9	1,7		14
M21512-04-12	6	1/4"	- 04	M 12x1,5	6	3,0	21,1	2,2		17
M21513-04-14	6	1/4"	- 04	M 14x1,5	8	4,0	22,1	1,7		17
M21513-04-16	6	1/4"	- 04	M 16x1,5	10	6,0	22,6	2,1		19
M21513-04-18	6	1/4"	- 04	M 18x1,5	12	7,0	21,9	2,3		22
M21512-05-14	8	5/16"	- 05	M 14x1,5	8	4,0	20,0	1,7		17
M21513-05-16	8	5/16"	- 05	M 16x1,5	10	6,0	22,6	2,1		19
M21513-05-18	8	5/16"	- 05	M 18x1,5	12	7,0	21,9	2,3		22
M21512-06-16	10	3/8"	- 06	M 16x1,5	10	6 ,0	23,1	3,0		19
M21513-06-18	10	3/8"	- 06	M 18x1,5	12	7,0	22,4	2,3		22
M21513-06-22	10	3/8"	- 06	M 22x1,5	15	9,3	25,0	2,3		27
M21512-08-18	12	1/2"	- 08	M 18x1,5	12	7,0	29,0	2,9		22
M21513-08-22	12	1/2"	- 08	M 22x1,5	15	9,3	25,4	2,3		27
M21513-08-26	12	1/2"	- 08	M 26x1,5	18	12,5	26,1	2,5		32
M21513-10-26	16	5/8"	- 10	M 26x1,5	18	12,5	26,0	2,5		32
M21513-10-30	16	5/8"	- 10	M 30x2	22	15,0	34,0	3,6		36
M21512-12-26	19	3/4"	- 12	M 26x1,5	18	12,5	31,1	3,6		32
M21513-12-30	19	3/4"	- 12	M 30x2	22	15,0	28,2	3,6		36
M21513-12-36	19	3/4"	- 12	M 36x2	28	20,0	28,3	3,8		41
M21513-16-36	25	1"	- 16	M 36x2	28	19,8	29,4	3,8		41
M21513-20-45	31	1.1/4"	- 20	M 45x2	35	26,0	32,9	5,1		50
M21513-24-52	38	1.1/2"	- 24	M 52x2	42	32,0	32,8	5,1		60

DIN STANDARD CONNECTIONS





M21592

90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T.
DIN 20066/3865 (THRUST-WIRE NUT)
HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24°
SERIE LIGERA - DIN 20066/3865 (TUERCA CON SEGURO)

M21593

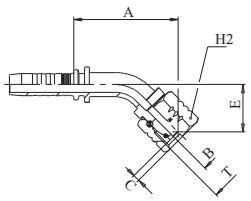
90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T.
DIN 20066/3865 (SLIP-ON NUT)
HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24°
SERIE LIGERA - DIN 20066/3865 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M21593-03-12	5	3/16"	- 03	M 12x1,5	6	3,0	26,0	1,7	30,0	14
M21592-04-12	6	1/4"	- 04	M 12x1,5	6	3,0	28,5	2,2	32,5	17
M21593-04-14	6	1/4"	- 04	M 14x1,5	8	4,0	29,5	1,7	31,5	17
M21593-04-16	6	1/4"	- 04	M 16x1,5	10	6,0	29,5	2,1	32,0	19
M21593-04-18	6	1/4"	- 04	M 18x1,5	12	7,0	29,5	2,3	33,0	22
M21593-05-16	8	5/16"	- 05	M 16x1,5	10	6,0	32,0	2,1	32,5	19
M21593-05-18	8	5/16"	- 05	M 18x1,5	12	7,0	32,0	2,3	35,0	22
M21592-06-16	10	3/8"	- 06	M 16x1,5	10	6,0	35,5	3,0	40,0	19
M21593-06-18	10	3/8"	- 06	M 18x1,5	12	7,0	36,5	2,3	33,5	22
M21593-06-22	10	3/8"	- 06	M 22x1,5	15	9,3	36,5	2,3	35,0	27
M21592-08-18	12	1/2"	- 08	M 18x1,5	12	7,0	44,0	2,9	48,0	22
M21593-08-22	12	1/2"	- 08	M 22x1,5	15	9,3	45,0	2,3	39,5	27
M21593-08-26	12	1/2"	- 08	M 26x1,5	18	12,5	45,0	2,5	40,0	32
M21593-10-26	16	5/8"	- 10	M 26x1,5	18	12,5	51,5	2,5	53,0	32
M21593-10-30	16	5/8"	- 10	M 30x2	22	15,0	51,5	3,6	54,0	36
M21593-12-30	19	3/4"	- 12	M 30x2	22	15,0	61,5	3,6	59,0	36
M21593-16-36	25	1"	- 16	M 36x2	28	19,8	76,5	3,8	69,5	41
M21593-20-45	31	1.1/4"	- 20	M 45x2	35	26,0	93,5	5,1	81,0	50
M21593-24-52	38	1.1/2"	- 24	M 52x2	42	32,0	107,5	5,1	98,0	60

DIN STANDARD CONNECTIONS

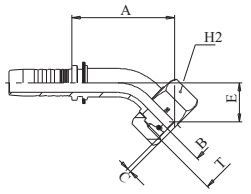
M21542

45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T.
DIN 20066/3865 (THRUST-WIRE NUT)
HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24°
SERIE LIGERA - DIN 20066/3865 (TUERCA CON SEGURO)

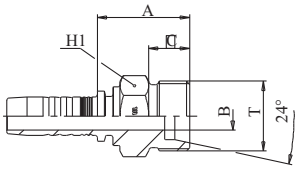


M21543

45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE L.T.
DIN 20066/3865 (SLIP-ON NUT)
HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24°
SERIE LIGERA - DIN 20066/3865 (TUERCA LIBRE)



PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M21543-04-14	6	1/4"	- 04	M 14x1,5	8	4,0	38,0	1,7	16,5	17
M21543-04-16	6	1/4"	- 04	M 16x1,5	10	6,0	38,0	2,1	17,0	19
M21543-05-16	8	5/16"	- 05	M 16x1,5	10	6,0	41,5	2,1	17,5	19
M21543-05-18	8	5/16"	- 05	M 18x1,5	12	7,0	41,5	2,3	17,0	22
M21542-06-16	10	3/8"	- 06	M 16x1,5	10	6,0	47,5	3,0	21,5	19
M21543-06-18	10	3/8"	- 06	M 18x1,5	12	7,0	43,5	2,3	16,5	22
M21543-06-22	10	3/8"	- 06	M 22x1,5	15	9,3	45,0	2,3	18,0	27
M21543-08-22	12	1/2"	- 08	M 22x1,5	15	9,3	52,0	2,3	19,0	27
M21543-10-26	16	5/8"	- 10	M 26x1,5	18	12,5	62,0	2,5	26,5	32
M21543-12-30	19	3/4"	- 12	M 30x2	22	15,0	71,0	3,6	28,5	36
M21543-16-36	25	1"	- 16	M 36x2	28	19,8	85,0	3,8	32,0	41
M21543-20-45	31	1.1/4"	- 20	M 45x2	35	26,0	99,5	5,1	36,0	50
M21543-24-52	38	1.1/2"	- 24	M 52x2	42	32,0	117,0	5,1	44,5	60



M11210

METRIC MALE 24° CONE SEAT H.T. - DIN 20066/3861

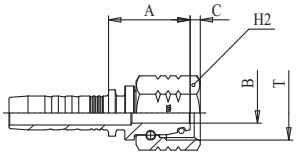
MACHO METRICO ASIENTO A 24° - SERIE PESADA DIN 20066/3861

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_1	
M11210-04-16	6	1/4"	- 04	M 16x1,5	8	4,0	25,5	12,0		17	
M11210-04-18	6	1/4"	- 04	M 18x1,5	10	6,0	26,5	12,0		19	
M11210-04-20	6	1/4"	- 04	M 20x1,5	12	7,0	29,0	12,0		22	
M11210-05-20	8	5/16"	- 05	M 20x1,5	12	7,0	29,0	12,0		22	
M11210-06-18	10	3/8"	- 06	M 18x1,5	10	7,0	27,1	12,0		19	
M11210-06-20	10	3/8"	- 06	M 20x1,5	12	7,0	29,1	12,0		22	
M11210-06-22	10	3/8"	- 06	M 22x1,5	14	8,0	31,1	14,0		22	
M11210-08-24	12	1/2"	- 08	M 24x1,5	16	9,3	31,6	14,0		24	
M11210-10-30	16	5/8"	- 10	M 30x2	20	15,0	35,7	16,0		30	
M11210-12-30	19	3/4"	- 12	M 30x2	20	15,0	37,0	16,0		30	
M11210-12-36	19	3/4"	- 12	M 36x2	25	19,8	41,0	18,0		36	
M11210-16-36	25	1"	- 16	M 36x2	25	19,8	42,3	18,0		36	
M11210-16-42	25	1"	- 16	M 42x2	30	25,0	44,3	20,0		46	
M11210-20-52	31	1.1/4"	- 20	M 52x2	38	30,0	50,5	22,0		55	

DIN STANDARD CONNECTIONS

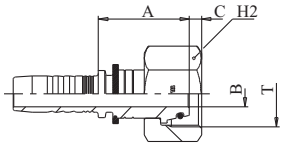
M21612

O-RING METRIC FEMALE 24° CONE H.T.
DIN 20066/3865 (THRUST-WIRE NUT)
HEMBRA METRICA CON O-RING ASIENTO A 24°
SERIE PESADA - DIN 20066/3865 (TUERCA CON SEGURO)



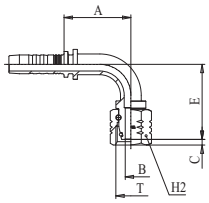
M21613

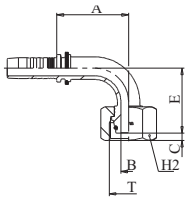
O-RING METRIC FEMALE 24° CONE H.T.
DIN 20066/3865 (SLIP-ON NUT)
HEMBRA METRICA CON O-RING ASIENTO A 24°
SERIE PESADA - DIN 20066/3865 (TUERCA LIBRE)



PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_2
M21613-03-16	5	3/16"	- 03	M 16x1,5	8	3,2	21,9	3,4		19
M21613-04-14	6	1/4"	- 04	M 14x1,5	6	3,0	23,5	3,5		17
M21613-04-16	6	1/4"	- 04	M 16x1,5	8	4,0	22,2	3,4		19
M21613-04-18	6	1/4"	- 04	M 18x1,5	10	4,0	28,0	3,0		22
M21613-04-20	6	1/4"	- 04	M 20x1,5	12	7,0	25,7	2,5		24
M21613-05-18	8	5/16"	- 05	M 18x1,5	10	5,5	28,0	3,0		22
M21613-05-20	8	5/16"	- 05	M 20x1,5	12	5,5	24,8	2,5		24
M21613-06-20	10	3/8"	- 06	M 20x1,5	12	7,0	25,3	2,5		24
M21613-06-22	10	3/8"	- 06	M 22x1,5	14	7,0	32,6	3,0		27
M21613-08-24	12	1/2"	- 08	M 24x1,5	16	9,3	26,7	3,0		30
M21613-10-30	16	5/8"	- 10	M 30x2	20	12,5	30,6	3,5		36
M21612-12-30	19	3/4"	- 12	M 30x2	20	12,5	33,5	2,2		36
M21613-12-36	19	3/4"	- 12	M 36x2	25	15,0	34,1	4,5		41
M21612-16-36	25	1"	- 16	M 36x2	25	15,0	35,3	1,7		41
M21613-16-42	25	1"	- 16	M 42x2	30	19,8	35,4	6,3		50
M21613-20-52	31	1.1/4"	- 20	M 52x2	38	26,0	37,5	8,0		60
M21613-24-52	38	1.1/2"	- 24	M 52x2	38	26,0	49,6	8,0		60

DIN STANDARD CONNECTIONS





M21692

90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (THRUST-WIRE NUT)
HEMBRA METRICA CON O-RING CODO DE 90º ASIENTO A 24º
SERIE PESADA - DIN 20066/3865 (TUERCA CON SEGURO)

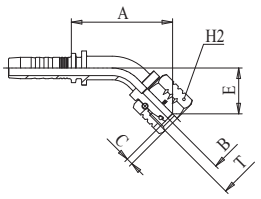
M21693

90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (SLIP-ON NUT)
HEMBRA METRICA CON O-RING CODO DE 90º ASIENTO A 24º
SERIE PESADA - DIN 20066/3865 (TUERCA LIBRE)

PART. REF.	HOSE BORE	THREAD	PIPE	DIMENSIONS mm						
	DN	inch	Size	T	mm	B	A	C	E		H_2
M21693-04-16	6	1/4"	- 04	M 16x1,5	8	4,0	29,5	3,4	29,5		19
M21693-04-18	6	1/4"	- 04	M 18x1,5	10	4,0	29,5	3,0	31,0		22
M21693-04-20	6	1/4"	- 04	M 20x1,5	12	5,5	29,5	2,5	34,5		24
M21693-05-20	8	5/16"	- 05	M 20x1,5	12	5,5	32,0	2,5	34,0		24
M21693-06-20	10	3/8"	- 06	M 20x1,5	12	7,0	36,5	2,5	35,0		24
M21693-06-22	10	3/8"	- 06	M 22x1,5	14	7,0	36,5	3,0	37,0		27
M21693-06-24	10	3/8"	- 06	M 24x1,5	16	9,3	36,5	3,0	36,0		30
M21693-08-24	12	1/2"	- 08	M 24x1,5	16	9,3	45,0	3,0	40,5		30
M21693-10-30	16	5/8"	- 10	M 30x2	20	12,5	51,5	3,5	57,5		36
M21692-12-30	19	3/4"	- 12	M 30x2	20	12,5	61,5	2,2	67,5		36
M21693-12-36	19	3/4"	- 12	M 36x2	25	15,0	61,5	4,5	64,5		41
M21692-16-36	25	1"	- 16	M 36x2	25	15,0	79,5	1,7	86,0		41
M21693-16-42	25	1"	- 16	M 42x2	30	19,8	79,0	6,3	74,5		50
M21693-20-52	31	1.1/4"	- 20	M 52x2	38	26,0	93,5	8,0	85,5		60

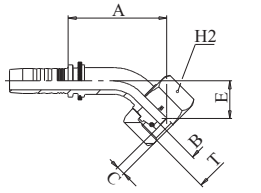
DIN STANDARD CONNECTIONS

M21642



45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (THRUST-WIRE NUT)
HEMBRA METRICA CON O-RING CODO DE 45° CONO 24°
SERIE PESADA - DIN 20066/3865 (TUERCA CON SEGURO)

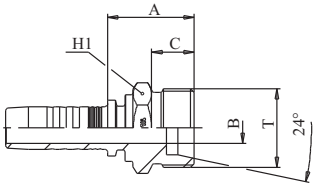
M21643



45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (SLIP-ON NUT)
HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24°
SERIE PESADA - DIN 20066/3865 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M21643-04-16	6	1/4"	- 04	M 16x1,5	8	4,0	36,0	3,4	15,0	19
M21643-04-18	6	1/4"	- 04	M 18x1,5	10	4,0	37,5	3,0	16,5	22
M21643-05-20	8	5/16"	- 05	M 20x1,5	12	5,5	42,5	2,5	18,5	24
M21643-06-20	10	3/8"	- 06	M 20x1,5	12	7,0	45,0	2,5	18,0	24
M21643-06-22	10	3/8"	- 06	M 22x1,5	14	7,0	46,5	3,0	19,5	27
M21643-08-24	12	1/2"	- 08	M 24x1,5	16	9,3	52,5	3,0	20,0	30
M21643-10-30	16	5/8"	- 10	M 30x2	20	12,5	65,5	3,5	29,5	36
M21642-12-30	19	3/4"	- 12	M 30x2	20	12,5	76,5	2,2	34,0	36
M21643-12-36	19	3/4"	- 12	M 36x2	25	15,0	75,0	4,5	32,5	41
M21643-16-42	25	1"	- 16	M 42x2	30	19,8	90,0	6,3	35,5	50
M21643-20-52	31	1.1/4"	- 20	M 52x2	38	26,0	103,0	8,0	39,5	60

NF STANDARD CONNECTIONS

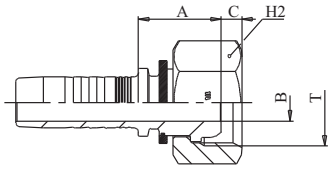


M11710

FRENCH METRIC MALE 24° CONE SEAT MILLIMETRIC TYPE

MACHO METRICO FRANCES ASIENTO A 24° TIPO MILIMETRICO

PART. REF.	HOSE BORE			THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_1	
M11710-10-2718	16	5/8"	- 10	M 27x1,5	18	12,5	28,7	14,0		28	
M11710-10-2720	16	5/8"	- 10	M 27x1,5	20	12,5	28,7	14,0		28	
M11710-12-30	19	3/4"	- 12	M 30x1,5	22	15,0	30,0	14,0		30	
M11710-12-33	19	3/4"	- 12	M 33x1,5	25	15,0	31,0	14,0		34	



M21713

FRENCH METRIC FEMALE MILLIMETRIC TYPE (SLIP-ON NUT)

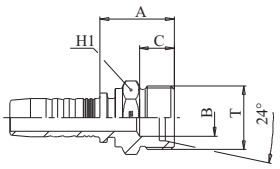
HEMBRA METRICA FRANCES TIPO MILIMETRICO (TUERCA LIBRE)

PART. REF.	HOSE BORE			THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C			H_2
M21713-10-2718	16	5/8"	- 10	M 27x1,5	18	12,5	22,2	5,1			32
M21713-10-2720	16	5/8"	- 10	M 27x1,5	20	12,5	22,2	5,1			32
M21713-12-30	19	3/4"	- 12	M 30x1,5	22	15,0	25,5	4,1			36
M21713-12-33	19	3/4"	- 12	M 33x1,5	25	15,0	25,5	4,1			38
M21713-16-36	25	1"	- 16	M 36x1,5	28	19,8	27,8	4,8			41
M21713-16-39	25	1"	- 16	M 39x1,5	30	19,8	28,3	4,3			46

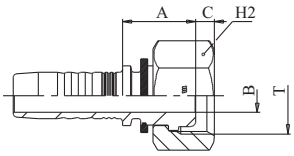
NF STANDARD CONNECTIONS

M11810

FRENCH METRIC MALE 24° CONE SEAT GAZ TYPE
MACHO METRICO FRANCES ASIENTO A 24° TIPO GAZ



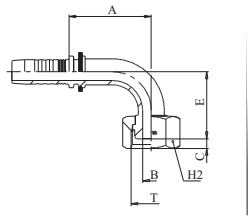
PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_1
M11810-05-20	8	5/16"	- 05	M 20x1,5	13,25	8,0	27,0	12,0		22
M11810-06-20	10	3/8"	- 06	M 20x1,5	13,25	8,0	27,6	12,0		22
M11810-06-24	10	3/8"	- 06	M 24x1,5	16,75	12,0	28,1	12,0		24
M11810-08-24	12	1/2"	- 08	M 24x1,5	16,75	12,0	28,4	12,0		24
M11810-10-30	16	5/8"	- 10	M 30x1,5	21,25	15,0	31,7	14,0		30
M11810-12-36	19	3/4"	- 12	M 36x1,5	26,75	21,0	34,0	14,0		36
M11810-16-45	25	1"	- 16	M 45x1,5	33,50	26,0	39,3	16,0		46



M21813

FRENCH METRIC FEMALE GAZ TYPE (SLIP-ON NUT)
HEMBRA METRICA FRANCES TIPO GAZ (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_2
M21813-04-20	6	1/4"	- 04	M 20x1,5	13,25	7,0	22,1	4,3		24
M21813-05-20	8	5/16"	- 05	M 20x1,5	13,25	7,0	22,1	4,3		24
M21813-06-20	10	3/8"	- 06	M 20x1,5	13,25	7,0	22,6	4,3		24
M21813-06-24	10	3/8"	- 06	M 24x1,5	16,75	9,3	25,6	4,0		30
M21813-08-24	12	1/2"	- 08	M 24x1,5	16,75	9,3	26,5	4,0		30
M21813-08-30	12	1/2"	- 08	M 30x1,5	21,25	12,5	23,6	5,1		36
M21813-10-30	16	5/8"	- 10	M 30x1,5	21,25	12,5	23,7	5,1		36
M21813-12-36	19	3/4"	- 12	M 36x1,5	26,75	15,0	27,0	4,8		41
M21813-16-45	25	1"	- 16	M 45x1,5	33,50	19,8	26,8	4,6		50

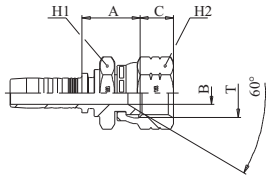


M21893

90° FRENCH METRIC FEMALE GAZ TYPE (SLIP-ON NUT)
HEMBRA METRICA FRANCES CODO DE 90° TIPO GAZ (TUERCA LIBRE)

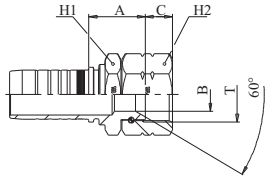
PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M21893-05-20	8	5/16"	- 05	M 20x1,5	13,25	7,0	32,0	4,3	29,5	24
M21893-06-20	10	3/8"	- 06	M 20x1,5	13,25	7,0	36,5	4,3	33,5	24
M21893-08-24	12	1/2"	- 08	M 24x1,5	16,75	12,0	45,0	4,0	41,0	30
M21893-10-30	16	5/8"	- 10	M 30x1,5	21,25	12,5	51,5	5,1	53,5	36
M21893-12-36	19	3/4"	- 12	M 36x1,5	26,75	15,0	61,5	4,8	60,0	41

JIS STANDARD CONNECTIONS



M24011

JIS METRIC FEMALE 60° CONE SEAT (KOMATSU)
JIS B 8363 (CRIMPED-BACK NUT)
HEMBRA METRICA JIS ASIENTO A 60° (KOMATSU)
JIS B 8363 (TUERCA PRENSADA)

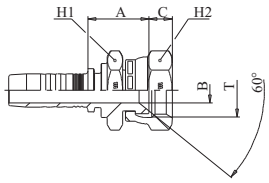


M24012

JIS METRIC FEMALE 60° CONE SEAT (KOMATSU)
JIS B 8363 (THRUST-WIRE NUT)
HEMBRA METRICA JIS ASIENTO A 60° (KOMATSU)
JIS B 8363 (TUERCA CON SEGURO)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_1	H_2
M24011-04-14	6	1/4"	- 04	M 14x1,5	4,0	23,0	10,5	19	19
M24011-04-18	6	1/4"	- 04	M 18x1,5	4,0	22,6	11,5	24	24
M24011-05-16	8	5/16"	- 05	M 16x1,5	5,5	22,5	9,3	21	21
M24011-06-14	10	3/8"	- 06	M 14x1,5	4,0	23,6	10,5	19	19
M24011-06-18	10	3/8"	- 06	M 18x1,5	7,0	23,6	11,5	24	24
M24011-08-22	12	1/2"	- 08	M 22x1,5	9,3	24,9	14,0	27	27
M24011-10-24	16	5/8"	- 10	M 24x1,5	12,5	26,7	15,1	32	32
M24011-12-30	19	3/4"	- 12	M 30x1,5	15,0	31,5	18,3	36	36
M24011-16-33	25	1"	- 16	M 33x1,5	19,8	33,3	21,3	41	41
M24011-20-36	31	1.1/4"	- 20	M 36x1,5	19,8	41,0	20,0	46	46
M24012-24-42	38	1.1/2"	- 24	M 42x1,5	26,0	44,0	18,8	55	55

JIS STANDARD CONNECTIONS

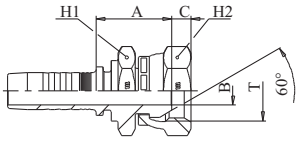


M23811

JIS BSP FEMALE 60° CONE SEAT (TOYOTA) - JIS B 8363 (CRIMPED-BACK NUT)

HEMBRA JIS BSP ASIENTO A 60° (TOYOTA) - JIS B 8363 (TUERCA PRENSADA)

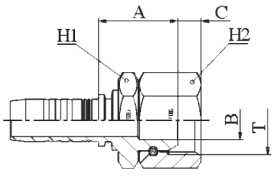
PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_1	H_2
M23811-04-04	6	1/4"	- 04	1/4" - 19	4,0	18,5	8,3	19	19
M23811-06-06	10	3/8"	- 06	3/8" - 19	7,0	23,1	10,0	22	22
M23811-08-08	12	1/2"	- 08	1/2" - 14	9,3	23,0	11,5	27	27
M23811-12-12	19	3/4"	- 12	3/4" - 14	15,0	26,0	13,5	32	32
M23811-16-16	25	1"	- 16	1" - 11	19,8	30,3	14,5	38	38



M20711

JIS BSP FEMALE 60° CONE (NISSAN) - JIS B 8363 (CRIMPED-BACK NUT)

HEMBRA JIS BSP ASIENTO A 60° (NISSAN) - JIS B 8363 (TUERCA PRENSADA)



M20712

JIS BSP FEMALE 60° CONE (NISSAN) - JIS B 8363 (THRUST-WIRE NUT)

HEMBRA JIS BSP ASIENTO A 60° (NISSAN) - JIS 8363 (TUERCA CON SEGURO)

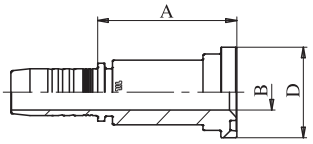
PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_1	H_2
M20711-04-04	6	1/4"	- 04	1/4" - 19	4,0	22,5	4,5	19	19
M20711-06-06	10	3/8"	- 06	3/8" - 19	7,0	24,6	6,4	22	22
M20711-08-08	12	1/2"	- 08	1/2" - 14	9,3	26,4	6,7	27	27
M20712-10-12	16	5/8"	- 10	3/4" - 14	15,0	30,7	9,0	32	32
M20711-12-12	19	3/4"	- 12	3/4" - 14	15,0	30,0	8,9	32	32

ORIGINAL EQUIPMENT CONNECTIONS

M24111

STRAIGHT KOMATSU FLANGE

BRIDA RECTA KOMATSU

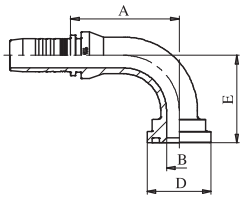


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D			
M24111-10-10	16	5/8"	- 10	5/8"	14,0	65,7	34,0			

M24191

90° KOMATSU FLANGE

BRIDA KOMATSU CODO DE 90°

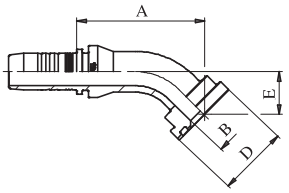


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	C	E		
M24191-10-10	16	5/8"	- 10	5/8"	14,0	56,0	34,0	47,5		

M24141

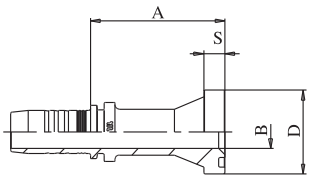
45° KOMATSU FLANGE

BRIDA KOMATSU CODO DE 45°



PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	C	E		
M24141-10-10	16	5/8"	- 10	5/8"	14,0	61,0	34,0	22,0		

ORIGINAL EQUIPMENT CONNECTIONS



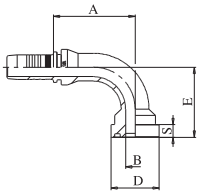
M23911

STRAIGHT SUPERCAT FLANGE

BRIDA RECTA SUPERCAT

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	S		
M23911-12-12	19	3/4"	- 12	3/4"	15,0	74,5	41,5	14,3		
M23911-16-16	25	1"	- 16	1"	19,8	86,8	47,7	14,3		
M23911-16-20	25	1"	- 16	1.1/4"	26,0	92,3	54,0	14,3		
M23911-20-20	31	1.1/4"	- 20	1.1/4"	26,0	86,0	54,0	14,3		
M23911-24-24	38	1.1/2"	- 24	1.1/2"	32,0	94,0	63,6	14,3		

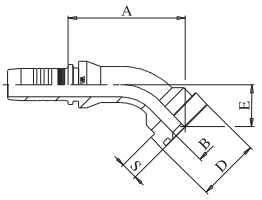
ORIGINAL STANDARD CONNECTIONS



M23991

90° SUPERCAT FLANGE
BRIDA SUPERCAT CODO DE 90°

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E	S	
M23991-12-12	19	3/4"	- 12	3/4"	15,0	64,5	41,5	64,5	14,3	
M23991-16-16	25	1"	- 16	1"	19,8	77,5	47,7	76,5	14,3	
M23991-16-20	25	1"	- 16	1.1/4"	26,0	75,5	54,0	80,5	14,3	
M23991-20-20	31	1.1/4"	- 20	1.1/4"	26,0	85,5	54,0	87,0	14,3	

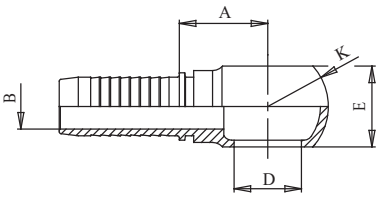


M23941

45° SUPERCAT FLANGE
BRIDA SUPERCAT CODO DE 45°

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E	S	
M23941-12-12	19	3/4"	- 12	3/4"	15,0	77,0	41,5	32,0	14,3	
M23941-16-16	25	1"	- 16	1"	19,8	89,5	47,7	36,5	14,3	
M23941-16-20	25	1"	- 16	1.1/4"	26,0	92,5	54,0	40,5	14,3	
M23941-20-20	31	1.1/4"	- 20	1.1/4"	26,0	99,0	54,0	41,5	14,3	

BANJO CONNECTIONS

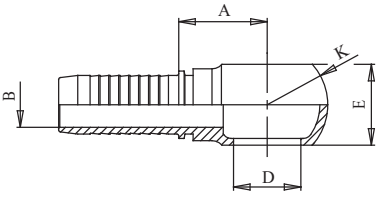


O20310

BSP BANJO

BSP BANJO

PART. REF.	HOSE BORE			BSP BOLT	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E	K	
O20310-04-04	6	1/4"	- 04	1/4" - 19	4,1	22	13,3	14,0	24,0	
O20310-05-06	8	5/16"	- 05	3/8" - 19	5,1	23	16,7	18,0	28,0	
O20310-06-06	10	3/8"	- 06	3/8" - 19	7,1	24,1	16,7	18,0	28,0	
O20310-06-08	10	3/8"	- 06	1/2" - 14	7,1	27,1	21,2	22,0	35,0	
O20310-08-08	12	1/2"	- 08	1/2" - 14	9,6	27,5	21,2	22,0	35,0	
O20310-10-10	16	5/8"	- 10	5/8" - 14	12,1	28,2	23,0	23,5	38,0	
O20310-12-12	19	3/4"	- 12	3/4" - 14	15,0	36,5	26,7	29,0	45,0	
O20310-16-16	25	1"	- 16	1" - 11	20,0	44,5	33,4	36,0	54,0	



O20910

METRIC BANJO - DIN 7642

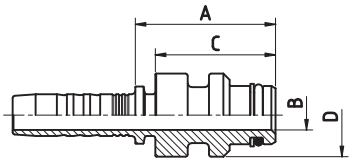
BANJO METRICO - DIN 7642

PART. REF.	HOSE BORE			MATRIC BOLT	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E	K	
O20910-04-12	6	1/4"	- 04	M12 x 1,5	4,1	21	12,0	12,0	20,0	
O20910-04-14	6	1/4"	- 04	M14 x 1,5	4,1	21,5	14,0	14,0	24,0	
O20910-05-14	8	5/16"	- 05	M14 x 1,5	5,1	23,1	14,0	14,0	24,0	
O20910-06-14	10	3/8"	- 06	M14 x 1,5	7,1	24,1	14,0	14,0	24,0	
O20910-06-16	10	3/8"	- 06	M16 x 1,5	7,1	24,1	16,0	18,0	28,0	
O20910-06-18	10	3/8"	- 06	M18 x 1,5	7,1	27,1	18,0	20,0	32,0	
O20910-08-18	12	1/2"	- 08	M18 x 1,5	9,6	27,5	18,0	20,0	32,0	
O20910-08-22	12	1/2"	- 08	M22 x 1,5	9,6	27,5	22,0	22,0	35,0	
O20910-10-22	16	5/8"	- 10	M22 x 1,5	12,1	28,2	22,0	23,5	38,0	
O20910-12-26	19	3/4"	- 12	M26 x 1,5	15,0	36,5	26,0	29,0	45,0	

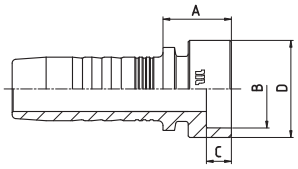
M14810

STAPLE-LOCK MALE - DIN 20043 - SAE J1467

MACHO RECTO STAPLE-LOCK (MINERIA) DIN 20043 - SAE J1467



PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		B	A	C	D		
M14810-04-04	6	1/4"	- 04		4,0	33,0	28,7	15,0		
M14810-06-06	10	3/8"	- 06		7,0	33,6	28,8	20,0		
M14810-08-08	12	1/2"	- 08		9,3	33,9	28,7	24,0		
M14810-12-12	19	3/4"	- 12		15,0	35,0	28,9	29,0		
M14810-16-16	25	1"	- 16		19,8	42,3	35,1	39,0		
M14810-20-20	31	1.1/4"	- 20		26,0	42,5	34,6	46,0		
M14810-24-24	38	1.1/2"	- 24		32,0	51,5	40,0	55,0		
M14810-32-32	51	2"	- 32		42,0	48,9	40,0	64,0		

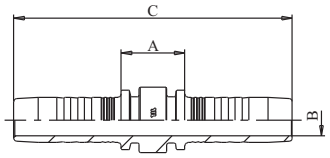


MIP

BRAZING TAIL

ESPIGA SOLDABLE (SALVAVIDAS)

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		B	A	C	D		
M03IP06	5	3/16"	- 03		6,0	11,5	5,0	10,0		
M04IP08	6	1/4"	- 04		8,0	13,0	5,0	12,0		
M05IP10	8	5/16"	- 05		10,0	13,5	6,0	14,0		
M06IP12	10	3/8"	- 06		12,0	13,5	6,0	16,0		
M06IP14	10	3/8"	- 06		14,0	13,5	6,0	18,0		
M08IP15	12	1/2"	- 08		15,0	14,0	6,0	20,0		
M08IP16	12	1/2"	- 08		16,0	14,0	6,0	20,0		
M10IP18	16	5/8"	- 10		18,0	15,0	7,0	23,0		
M12IP22	19	3/4"	- 12		22,0	16,0	7,0	26,0		
M16IP28	25	1"	- 16		28,0	18,5	8,0	34,0		
M20IP35	31	1.1/4"	- 20		35,0	21,5	9,0	40,0		
M24IP40	38	1.1/2"	- 24		40,0	21,5	9,0	50,0		
M32IP50	51	2"	- 32		50,0	23,0	10,0	60,0		
M40IP60	63	2.1/2"	- 40		60,0	22,0	10,0	73,0		
M48IP70	76	3"	- 48		70,0	38,0	10,0	89,0		



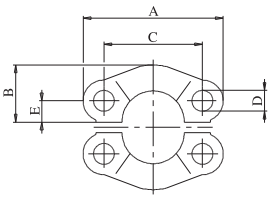
M10050

DOUBLE CONNECTOR

CONECTOR DOBLE

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		B	A	C			
M10050-04-04	6	1/4"	- 04		4,0	14,0	69,0			
M10050-05-05	8	5/16"	- 05		5,5	14,0	70,0			
M10050-06-06	10	3/8"	- 06		7,0	14,7	73,5			
M10050-08-08	12	1/2"	- 08		9,3	15,8	78,0			
M10050-10-10	16	5/8"	- 10		12,5	15,4	84,0			
M10050-12-12	19	3/4"	- 12		15,0	18,5	91,5			
M10050-16-16	25	1"	- 16		19,8	22,6	119,0			

ACCESSORIES

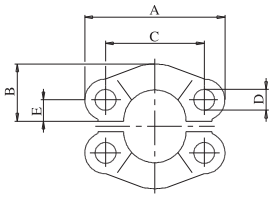


O83308

SAE SPLIT FLANGE CLAMPS 3000 psi CODE 61 - SAE J518

SEMIBRIDA SAE 3000 psi CODIGO 61 - SAE J518

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		B	A	C	D	E	
O83308-08	12	1/2"	- 08		23,0	54,0	38,1	9,0	8,7	
O83308-12	19	3/4"	- 12		26,1	65,1	47,6	11,0	11,1	
O83308-16	25	1"	- 16		29,4	69,8	52,4	11,0	13,1	
O83308-20	31	1.1/4"	- 20		36,5	79,4	58,7	12,0	15,1	
O83308-24	38	1.1/2"	- 24		41,3	93,7	69,8	13,5	17,8	
O83308-32	51	2"	- 32		48,4	101,6	77,8	13,5	21,4	
O83308-40	63	2.1/2"	- 40		54,4	114,3	88,9	13,5	25,4	
O83308-48	76	3"	- 48		65,3	135,0	106,4	16,5	30,9	

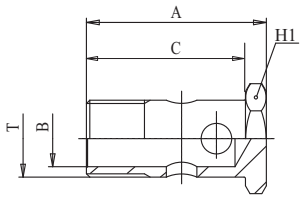


O83609

SAE SPLIT FLANGE CLAMPS 6000 psi CODE 62 - SAE J518

SEMIBRIDA SAE 6000 psi CODIGO 62 - SAE J518

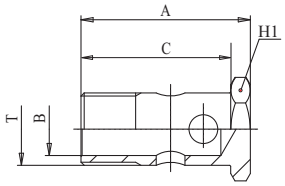
PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		B	A	C	D	E	
O83609-08	12	1/2"	- 08		23,8	56,3	40,5	9,0	9,1	
O83609-12	19	3/4"	- 12		30,2	71,4	50,8	11,0	11,9	
O83609-16	25	1"	- 16		34,9	80,9	57,1	13,0	13,9	
O83609-20	31	1.1/4"	- 20		38,9	95,2	66,7	15,0	15,8	
O83609-24	38	1.1/2"	- 24		47,6	112,7	79,4	17,0	18,2	
O83609-32	51	2"	- 32		57,1	133,3	96,8	21,0	22,2	



O80210

BSP BOLT
PASADOR BSP

PART. REF.	HOSE BORE			DIMENSIONS mm					
				T	B	A	C		H1
O80210-04				1/4" - 19	7,0	32,0	25,0		17
O80210-06				3/8" - 19	9,0	38,0	31,0		22
O80210-08				1/2" - 14	13,0	46,0	38,0		27
O80210-10				5/8" - 14	13,5	49,0	41,0		30
O80210-12				3/4" - 14	17,0	56,0	46,0		32
O80210-16				1" - 11	22,0	69,0	58,0		41



O80810

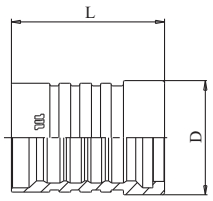
METRIC BOLT - DIN 7643
PASADOR METRICO - DIN 7643

PART. REF.	HOSE BORE			DIMENSIONS mm					
				T	B	A	C		H1
O80810-12				M12 x 1,5	6,0	28,0	23,0		17
O80810-14				M14 x 1,5	8,0	32,0	25,0		19
O80810-16				M16 x 1,5	9,0	38,0	31,0		22
O80810-18				M18 x 1,5	11,0	44,0	36,0		24
O80810-22				M22 x 1,5	13,0	46,0	38,0		27
O80810-26				M26 x 1,5	17,0	56,0	46,0		32

FERRULE

M01300

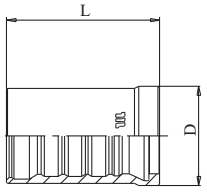
DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES
CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO



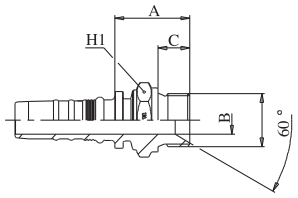
PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M01300-10	16	5/8"	- 10		36,0	43,5				
M01300-12	19	3/4"	- 12		40,0	53,0				
M01300-16	25	1"	- 16		49,0	66,0				
M01300-20	31	1.1/4"	- 20		60,0	88,5				
M01300-24	38	1.1/2"	- 24		69,3	102,0				
M01300-32	51	2"	- 32		86,5	108,0				

M01400

DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES
CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO



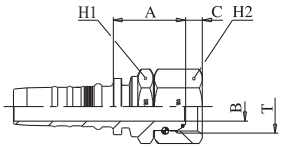
PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M01400-20	31	1.1/4"	- 20		57,0	88,0				
M01400-24	38	1.1/2"	- 24		64,3	102,0				
M01400-32	51	2"	- 32		83,5	108,0				



M35510

BSP MALE PARALLEL 60° CONE SEAT - BS5200
MACHO BSP PARALELO ASIENTO A 60° - BS5200

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	
M35510-12-12	19	3/4"	- 12	3/4" - 14	17,0	37,3	16,0		32	
M35510-16-16	25	1"	- 16	1" - 11	22,5	43,0	19,0		41	
M35510-20-20	31	1.1/4"	- 20	1.1/4" - 11	29,0	50,5	20,0		50	
M35510-24-24	38	1.1/2"	- 24	1.1/2" - 11	33,5	54,0	22,0		55	
M35510-32-32	51	2"	- 32	2" - 11	42,0	57,5	25,0		70	



M45812

BSP O-RING FEMALE 60° CONE - BS5200
(THRUST-WIRE NUT)
HEMBRA BSP CON O-RING ASIENTO A 60° - BS5200
(TUERCA CON SEGURO)

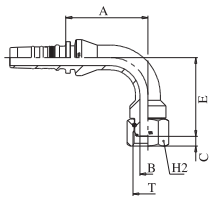
PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm						
	DN	inch	Size	T	B	A	C		H_1	H_2
M45812-12-12	19	3/4"	- 12	3/4" - 14	14,3	35,8	8,5		32	32
M45812-16-16	25	1"	- 16	1" - 11	19,0	39,0	10,6		41	41
M45812-20-20	31	1.1/4"	- 20	1.1/4" - 11	26,0	47,5	10,1		50	50
M45812-24-24	38	1.1/2"	- 24	1.1/2" - 11	32,0	47,5	12,5		60	60
M45812-32-32	51	2"	- 32	2" - 11	42,0	47,0	16,1		70	70

BS STANDARD CONNECTIONS

M45892

90° BSP O-RING FEMALE SWEPT ELBOW 60° CONE - BS5200 (THRUST-WIRE NUT)

HEMBRA BSP CON O-RING CODO DE 90° ASIENTO A 60° - BS5200 (TUERCA CON SEGURO)

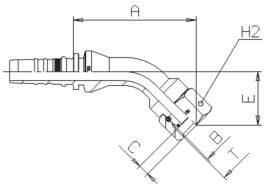


PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H2
M45892-12-12	19	3/4"	- 12	3/4" - 14	14,3	72,5	8,5	70,0	32
M45892-16-16	25	1"	- 16	1" - 11	19,0	82,5	10,6	80,5	41
M45892-20-20	31	1.1/4"	- 20	1.1/4" - 11	26,0	98,6	10,1	98,0	50
M45892-24-24	38	1.1/2"	- 24	1.1/2" - 11	32,0	111,5	12,5	109,0	60
M45892-32-32	51	2"	- 32	2" - 11	42,0	143,0	16,1	140,5	70

M45842

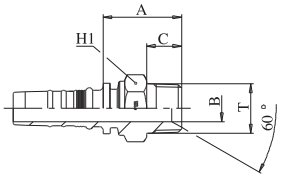
45° BSP O-RING FEMALE SWEPT ELBOW 60° CONE - BS5200 (THRUST-WIRE NUT)

HEMBRA BSP CON O-RING CODO DE 45° ASIENTO A 60° - BS5200 (TUERCA CON SEGURO)



PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H2
M45842-12-12	19	3/4"	- 12	3/4" - 14	14,3	88,5	8,5	35,0	32
M45842-16-16	25	1"	- 16	1" - 11	19,0	97,0	10,6	40,0	41
M45842-20-20	31	1.1/4"	- 20	1.1/4" - 11	26,0	120,0	10,1	49,5	50
M45842-24-24	38	1.1/2"	- 24	1.1/2" - 11	32,0	126,0	12,5	50,0	60
M45842-32-32	51	2"	- 32	2" - 11	42,0	162,0	16,1	66,5	70

SAE STANDARD CONNECTIONS

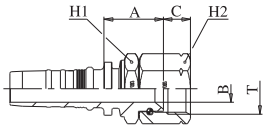


M37810

NPTF MALE 30° CONE SEAT - SAE J516

NPTF MACHO ASIENTO A 30° - SAE J516

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	
M37810-12-12	19	3/4"	- 12	3/4" - 14	16,0	43,3	19,2		32	
M37810-16-16	25	1"	- 16	1" - 11,5	19,0	49,5	24,2		41	
M37810-20-20	31	1.1/4"	- 20	1.1/4" - 11,5	26,0	61,0	25,0		46	
M37810-24-24	38	1.1/2"	- 24	1.1/2" - 11,5	32,0	62,5	26,0		50	
M37810-32-32	51	2"	- 32	2" - 11,5	42,0	66,5	26,5		70	



M47512

JIC FEMALE 37° CONE SEAT - SAE J516/J514 (THRUST-WIRE NUT)

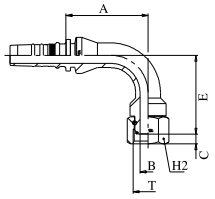
JIC HEMBRA ASIENTO A 37° - SAE J516/J514 (TUERCA CON SEGURO)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm						
	DN	inch	Size	T	B	A	C		H_1	H_2
M47512-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	31,3	14,2		32	32
M47512-16-16	25	1"	- 16	1.5/16" - 12	21,7	34,0	15,2		41	41
M47512-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	46,0	16,2		50	50
M47512-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	52,0	18,8		55	60
M47512-32-32	51	2"	- 32	2.1/2" - 12	42,0	49,5	24,0		70	75

M47592

90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 (THRUST-WIRE NUT)

JIC HEMBRA CODO DE 90° ASIENTO A 37° - SAE J516/J514 (TUERCA CON SEGURO)

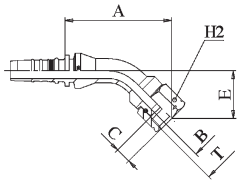


PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E		H_2
M47592-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	73,0	14,2	66,0		32
M47592-16-16	25	1"	- 16	1.5/16" - 12	21,7	82,5	15,2	77,5		41
M47592-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	98,5	16,2	92,0		50
M47592-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	115,5	18,8	106,0		60
M47592-32-32	51	2"	- 32	2.1/2" - 12	42,0	144,5	24,0	137,0		75

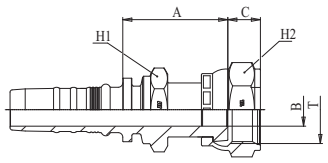
M47542

45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516/J514 (THRUST-WIRE NUT)

JIC HEMBRA CODO DE 45° ASIENTO A 37° - SAE J516/J514 (TUERCA CON SEGURO)



PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E		H_2
M47542-12-12	19	3/4"	- 12	1.1/16" - 12	15,0	86,5	14,2	33,0		32
M47542-16-16	25	1"	- 16	1.5/16" - 12	21,7	95,0	15,2	37,0		41
M47542-20-20	31	1.1/4"	- 20	1.5/8" - 12	26,0	115,5	16,2	45,0		50
M47542-24-24	38	1.1/2"	- 24	1.7/8" - 12	32,0	126,5	18,8	50,0		60

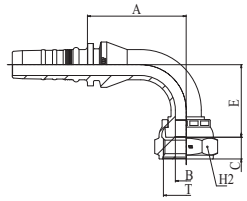


M47411

ORFS FEMALE - SAE J516/J1453 (CRIMPED BACK NUT)

ORFS HEMBRA CARA PLANA - SAE J516/J1453 (TUERCA PRENSADA)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	H_2
M47411-12-12	19	3/4"	- 12	1.3/16" - 12	14,3	46,3	14,5		32	36
M47411-16-16	25	1"	- 16	1.7/16" - 12	19,0	48,8	15,0		41	41
M47411-20-20	31	1.1/4"	- 20	1.11/16" - 12	24,0	54,8	14,8		50	50
M47411-24-24	38	1.1/2"	- 24	2" - 12	30,5	57,4	15,8		60	60



M47491

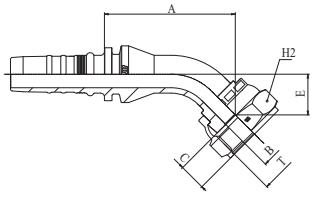
90° ORFS FEMALE - SAE J516/J1453 (CRIMPED-BACK NUT)

ORFS HEMBRA CODO DE 90° CARA PLANA - SAE J516/J1453 (TUERCA PRENSADA)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E		H_2
M47491-12-12	19	3/4"	- 12	1.3/16" - 12	14,3	65,5	14,5	48,0		36
M47491-16-16	25	1"	- 16	1.7/16" - 12	19,0	85,0	15,0	54,0		41
M47491-20-20	31	1.1/4"	- 20	1.11/16" - 12	24,0	98,5	14,8	65,0		50
M47491-24-24	38	1.1/2"	- 24	2" - 12	30,5	115,5	15,8	79,5		60

M47441

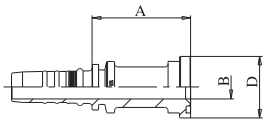
45° ORFS FEMALE - SAE J516/J1453 (CRIMPED-BACK NUT)
ORFS HEMBRA CODO DE 45° CARA PLANA - SAE J516/J1453 (TUERCA PRENSADA)



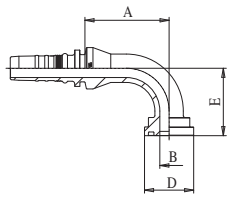
PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E		H_2
M47441-12-12	19	3/4"	- 12	1.3/16" - 12	14,3	69,0	14,5	21,5		36
M47441-16-16	25	1"	- 16	1.7/16" - 12	19,0	84,5	15,0	22,0		41
M47441-20-20	31	1.1/4"	- 20	1.11/16" - 12	24,0	96,5	14,8	26,0		50
M47441-24-24	38	1.1/2"	- 24	2" - 12	30,5	111,5	15,8	31,5		60

M48310

STRAIGHT SAE FLANGE 3000 psi CODE 61 - SAE J516/J518
BRIDA RECTA SAE 3000 psi CODIGO 61 - SAE J516/J518



PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D			
M48310-12-12	19	3/4"	- 12	3/4"	16,0	60,8	38,0			
M48310-12-16	19	3/4"	- 12	1"	20,0	65,8	44,6			
M48310-16-16	25	1"	- 16	1"	20,0	67,0	44,6			
M48310-16-20	25	1"	- 16	1.1/4"	26,0	73,0	51,0			
M48310-20-20	31	1.1/4"	- 20	1.1/4"	26,0	75,0	51,0			
M48310-20-24	31	1.1/4"	- 20	1.1/2"	32,0	80,0	60,5			
M48310-24-24	38	1.1/2"	- 24	1.1/2"	32,0	80,5	60,5			
M48310-24-32	38	1.1/2"	- 24	2"	42,0	87,5	71,6			
M48310-32-32	51	2"	- 32	2"	42,0	82,5	71,6			

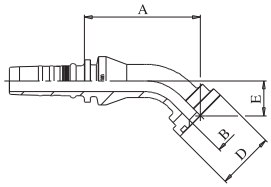


M48390

90° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518

BRIDA CODO DE 90° SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	D	E	
M48390-12-12	19	3/4"	- 12	3/4"	16,0	73,0	38,0	52,0	
M48390-12-16	19	3/4"	- 12	1"	20,0	73,0	44,6	52,0	
M48390-16-16	25	1"	- 16	1"	20,0	84,0	44,6	62,0	
M48390-16-20	25	1"	- 16	1.1/4"	26,0	84,0	51,0	62,0	
M48390-20-20	31	1.1/4"	- 20	1.1/4"	26,0	99,0	51,0	70,0	
M48390-20-24	31	1.1/4"	- 20	1.1/2"	32,0	98,5	60,5	72,0	
M48390-24-24	38	1.1/2"	- 24	1.1/2"	32,0	111,5	60,5	84,0	
M48390-32-32	51	2"	- 32	2"	42,0	133,0	71,6	99,0	

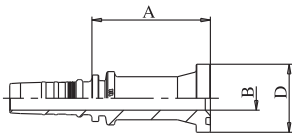


M48340

45° SAE FLANGE 3000 psi CODE 61 - SAE J516/J518

BRIDA CODO DE 45° SAE 3000 psi CODIGO 61 - SAE J516/J518

PART. REF.	HOSE BORE		FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E	
M48340-12-12	19	3/4"	- 12	3/4"	16,0	76,5	38,0	23,0	
M48340-16-16	25	1"	- 16	1"	20,0	87,5	44,6	27,5	
M48340-16-20	25	1"	- 16	1.1/4"	26,0	88,0	51,0	27,0	
M48340-20-20	31	1.1/4"	- 20	1.1/4"	26,0	105,0	51,0	29,5	
M48340-20-24	31	1.1/4"	- 20	1.1/2"	32,0	101,5	60,5	31,0	
M48340-24-24	38	1.1/2"	- 24	1.1/2"	32,0	111,0	60,5	34,5	
M48340-32-32	51	2"	- 32	2"	42,0	128,5	71,6	39,0	



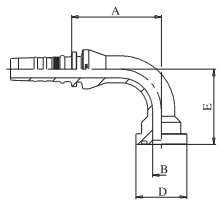
M48610

STRAIGHT SAE FLANGE 6000 psi CODE 62 - SAE J516/J518

BRIDA RECTA SAE 6000 psi CODIGO 62 - SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D			
M48610-12-12	19	3/4"	- 12	3/4"	16,0	71,8	41,4			
M48610-12-16	19	3/4"	- 12	1"	20,0	83,8	47,7			
M48610-16-12	25	1"	- 16	3/4"	16,0	80,5	41,4			
M48610-16-16	25	1"	- 16	1"	20,0	85,0	47,7			
M48610-16-20	25	1"	- 16	1.1/4"	26,0	89,0	54,2			
M48610-20-16	31	1.1/4"	- 20	1"	20,0	86,9	47,7			
M48610-20-20	31	1.1/4"	- 20	1.1/4"	26,0	91,0	54,2			
M48610-20-24	31	1.1/4"	- 20	1.1/2"	32,0	97,0	63,7			
M48610-24-20	38	1.1/2"	- 24	1.1/4"	26,0	101,0	54,2			
M48610-24-24	38	1.1/2"	- 24	1.1/2"	32,0	97,5	63,7			
M48610-24-32	38	1.1/2"	- 24	2"	42,0	112,5	79,6			
M48610-32-32	51	2"	- 32	2"	42,0	112,5	79,6			

SAE STANDARD CONNECTIONS



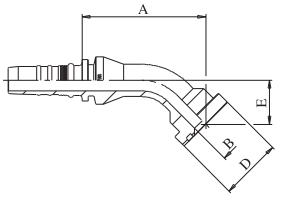
M48690

90° SAE FLANGE 6000 psi CODE 62 - SAE J516/J518

BRIDA CODO DE 90° SAE 6000 psi CODIGO 62 - SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M48690-12-12	19	3/4"	- 12	3/4"	16,0	73,0	41,4	59,0		
M48690-12-16	19	3/4"	- 12	1"	20,0	73,0	47,7	65,0		
M48690-16-12	25	1"	- 16	3/4"	16,0	81,5	41,4	62,0		
M48690-16-16	25	1"	- 16	1"	20,0	81,5	47,7	68,0		
M48690-16-20	25	1"	- 16	1.1/4"	26,0	79,0	54,2	76,0		
M48690-20-16	31	1.1/4"	- 20	1"	20,0	98,5	47,7	79,0		
M48690-20-20	31	1.1/4"	- 20	1.1/4"	26,0	98,5	54,2	81,0		
M48690-20-24	31	1.1/4"	- 20	1.1/2"	32,0	98,5	63,7	91,5		
M48690-24-20	38	1.1/2"	- 24	1.1/4"	26,0	111,0	54,2	91,0		
M48690-24-24	38	1.1/2"	- 24	1.1/2"	32,0	112,5	63,7	94,5		
M48690-24-32	38	1.1/2"	- 24	2"	42,0	112,5	79,6	110,5		
M48690-32-32	51	2"	- 32	2"	42,0	140,5	79,6	132,0		

SAE STANDARD CONNECTIONS



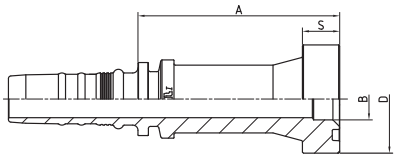
M48640

45° SAE FLANGE 6000 psi CODE 62 - SAE J516/J518

BRIDA CODO DE 45° SAE 6000 psi CODIGO 62 - SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E		
M48640-12-12	19	3/4"	- 12	3/4"	16,0	81,5	41,4	28,0		
M48640-12-16	19	3/4"	- 12	1"	20,0	86,0	47,7	32,5		
M48640-16-12	25	1"	- 16	3/4"	16,0	87,5	41,4	28,0		
M48640-16-16	25	1"	- 16	1"	20,0	91,5	47,7	32,5		
M48640-16-20	25	1"	- 16	1.1/4"	26,0	94,0	54,2	37,5		
M48640-20-16	31	1.1/4"	- 20	1"	20,0	106,5	47,7	36,0		
M48640-20-20	31	1.1/4"	- 20	1.1/4"	26,0	108,0	54,2	37,5		
M48640-20-24	31	1.1/4"	- 20	1.1/2"	32,0	115,0	63,7	45,0		
M48640-24-24	38	1.1/2"	- 24	1.1/2"	32,0	124,5	63,7	44,0		
M48640-24-32	38	1.1/2"	- 24	2"	42,0	135,5	79,6	55,5		
M48640-32-32	51	2"	- 32	2"	42,0	154,0	79,6	60,5		

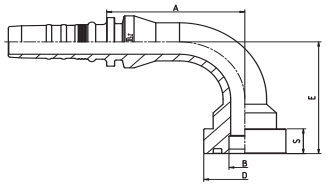
ORIGINAL STANDARD CONNECTIONS



M48910

STRAIGHT SUPERCAT SERIES FLANGE
BRIDA RECTA SUPERCAT

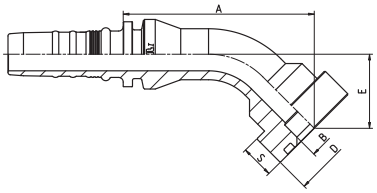
PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	S		
M48910-12-12	19	3/4"	- 12	3/4"	16,0	77,4	41,5	14,3		
M48910-16-16	25	1"	- 16	1"	20,0	81,8	47,7	14,3		
M48910-20-20	31	1.1/4"	- 20	1.1/4"	26,0	85,0	54,0	14,3		
M48910-24-24	38	1.1/2"	- 24	1.1/2"	32,0	89,2	63,6	14,3		



M48990

90° SUPERCAT SERIES FLANGE
BRIDA SUPERCAT CODO DE 90°

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E	S	
M48990-12-12	19	3/4"	- 12	3/4"	16,0	73,0	41,5	64,5	14,3	
M48990-16-16	25	1"	- 16	1"	20,0	88,5	47,7	76,5	14,3	
M48990-20-20	31	1.1/4"	- 20	1.1/4"	26,0	98,5	54,0	85,0	14,3	
M48990-24-24	38	1.1/2"	- 24	1.1/2"	32,0	112,5	63,6	96,5	14,3	



M48940

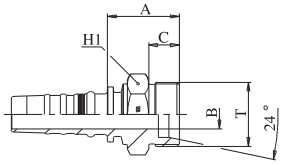
45° SUPERCAT SERIES FLANGE
BRIDA SUPERCAT CODO DE 45°

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	inch	Size		B	A	D	E	S	
M48940-12-12	19	3/4"	- 12	3/4"	16,0	85,5	41,5	32,0	14,3	
M48940-16-16	25	1"	- 16	1"	20,0	100,5	47,7	36,5	14,3	
M48940-20-20	31	1.1/4"	- 20	1.1/4"	26,0	110,5	54,0	40,5	14,3	
M48940-24-24	38	1.1/2"	- 24	1.1/2"	32,0	125,5	63,6	45,5	14,3	

INTERLOCK TYPE

DIN STANDARD CONNECTIONS

M36210

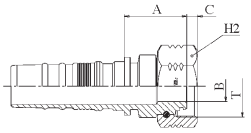


METRIC MALE 24° CONE SEAT H.T. - DIN 20066/3861

MACHO METRICO ASIENTO A 24° SERIE PESADA - DIN 20066/3861

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C		H_1	
M36210-10-30	16	5/8"	- 10	M 30x2	20	15,0	26,0	16,0		30	
M36210-12-36	19	3/4"	- 12	M 36x2	25	14,3	43,8	18,0		36	
M36210-16-42	25	1"	- 16	M 42x2	30	19,0	47,0	20,0		46	
M36210-20-52	31	1.1/4"	- 20	M 52x2	38	24,0	55,0	22,0		55	
M36210-24-52	38	1.1/2"	-24	M 52x2	38	30,5	55,6	22,0		55	

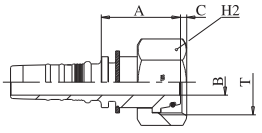
M46612



O-RING METRIC FEMALE 24° CONE H.T. - DIN 20066/3865 (THRUST WIRE NUT)

HEMBRA METRICA CON O-RING ASIENTO A 24° SERIE PESADA DIN 20066/3865 (TUERCA CON SEGURO)

M46613

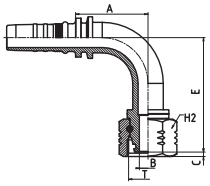


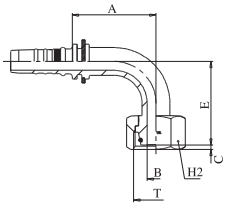
O-RING METRIC FEMALE 24° CONE H.T. - DIN 20066/3865 (SLIP-ON NUT)

HEMBRA METRICA CON O-RING ASIENTO A 24° SERIE PESADA DIN 20066/3865 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C			H_2
M46613-10-30	16	5/8"	- 10	M 30x2	20	12,0	37,5	3,5			36
M46612-12-30	19	3/4"	- 12	M 30x2	20	12,5	50,3	3,2			36
M46613-12-36	19	3/4"	- 12	M 36x2	25	14,3	40,5	3,4			41
M46613-12-42	19	3/4"	- 12	M 42x2	30	19,0	45,4	5,3			50
M46612-16-36	25	1"	- 16	M 36x2	25	16,0	46,8	4,1			41
M46613-16-42	25	1"	- 16	M 42x2	30	19,0	44,5	5,3			50
M46613-20-52	31	1.1/4"	- 20	M 52x2	38	26,0	40,5	8,0			60
M46612-24-52	38	1.1/2"	- 24	M 52x2	38	26,0	52,5	8,8			60

DIN STANDARD CONNECTIONS





M46692

90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (THRUST-WIRE NUT)

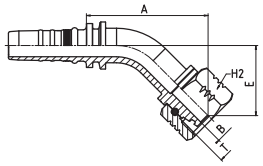
HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24°
SERIE PESADA - DIN 20066/3865 (TUERCA CON SEGURO)

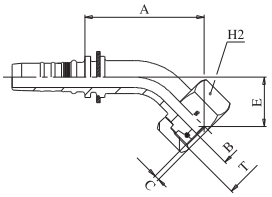
M46693

90° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (SLIP-ON NUT)

HEMBRA METRICA CON O-RING CODO DE 90° ASIENTO A 24°
SERIE PESADA - DIN 20066/3865 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M46693-10-30	16	5/8"	- 10	M 30x2	20	12,0	52,5	3,5	57,5	36
M46692-12-30	19	3/4"	- 12	M 30x2	20	12,5	64,0	3,2	68,5	36
M46693-12-36	19	3/4"	- 12	M 36x2	25	14,3	67,5	3,4	67,5	41
M46692-16-36	25	1"	- 16	M 36x2	25	16,0	82,0	4,1	89,0	41
M46693-16-42	25	1"	- 16	M 42x2	30	19,0	82,0	5,3	75,5	50
M46693-20-52	31	1.1/4"	- 20	M 52x2	38	26,0	100,0	8,0	86,5	60





M46642

45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (THRUST-WIRE NUT)

HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24°
SERIE PESADA - DIN 20066/3865 (TUERCA CON SEGURO)

M46643

45° O-RING METRIC FEMALE SWEPT ELBOW 24° CONE H.T.
DIN 20066/3865 (SLIP-ON NUT)

HEMBRA METRICA CON O-RING CODO DE 45° ASIENTO A 24°
SERIE PESADA - DIN 20066/3865 (TUERCA LIBRE)

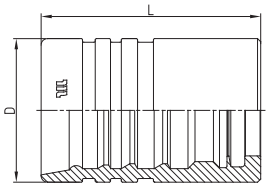
PART. REF.	HOSE BORE		THREAD	PIPE	DIMENSIONS mm					
	DN	inch	Size	T	mm	B	A	C	E	H_2
M46642-12-30	19	3/4"	- 12	M 30x2	20	12,5	79,7	3,2	34,8	36
M46643-12-36	19	3/4"	- 12	M 36x2	25	14,3	81,5	3,4	33,5	41
M46642-16-36	25	1"	- 16	M 36x2	25	16,0	103,0	4,1	45,5	41
M46643-16-42	25	1"	- 16	M 42x2	30	19,0	93,5	5,3	36,0	50
M46643-20-52	31	1.1/4"	- 20	M 52x2	38	26,0	110,0	8,0	40,0	60

XTRALOCK TYPE

DIAMONDSPIR HOSE RANGE

M01750

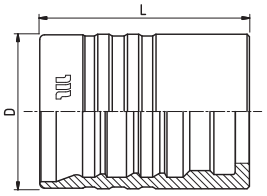
DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (4 PLY)
CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO



PART. REF.	HOSE BORE				DIMENSIONS mm			
	DN	inch	Size		D	L		
M01750-12	19	3/4"	- 12		45,1	69,0		

M01800

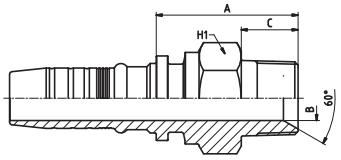
DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY)
CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO



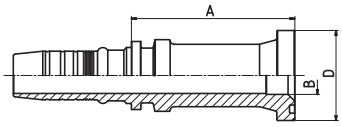
PART. REF.	HOSE BORE				DIMENSIONS mm			
	DN	inch	Size		D	L		
M01800-16	25	1"	- 16		53,5	68,0		
M01800-20	31	1.1/4"	- 20		64,5	88,2		
M01800-24	38	1.1/2"	- 24		73,0	97,8		
M01800-32	51	2"	- 32		86,5	108,0		
M01800-40	63	2.1/2"	- 40		103,0	135,0		
M01800-48	76	3"	- 48		113,5	125,0		

M52810/M57810

NPTF MALE 60° CONE SEAT SAE J516
NPTF MACHO ASIENTO A 60° SAE J516



PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm			
	DN	inch	Size	T	B	A	C	H_1
M52810-12-12	19	3/4"	- 12	3/4" - 14	15,0	49,4	21,0	32
M57810-16-16	25	1"	- 16	1" - 11.5	19,0	60,4	24,2	41
M57810-20-20	31	1.1/4"	- 20	1.1/4" - 11.5	26,1	63,9	28,0	46
M57810-24-24	38	1.1/2"	- 24	1.1/2" - 11.5	32,1	70,4	30,0	55
M57810-32-32	51	2"	- 32	2" - 11.5	42,0	75,5	35,0	70



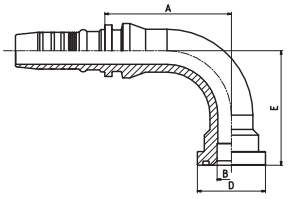
M68610

STRAIGHT SAE FLANGE CODE 62 - SAE J516/J518

BRIDA RECTA SAE CÓDIGO 62 SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm			
	DN	inch	Size		B	A	D	
M68610-12-12	19	3/4"	-12	3/4"	16,0	74,0	41,4	
M68610-16-16	25	1"	- 16	1"	20,0	86,0	47,7	
M68610-20-20	31	1.1/4"	- 20	1.1/4"	26,0	91,0	54,2	
M68610-24-24	38	1.1/2"	- 24	1.1/2"	32,0	97,5	63,7	
M68610-32-32	51	2"	- 32	2"	42,0	112,5	79,6	
M68610-40-32	63	2.1/2"	- 40	2"	41,0	115,0	79,6	
M68610-40-40 *	63	2.1/2"	- 40	2.1/2"	51,5	127,0	107,8	
M68610-48-48 *	76	3"	- 48	3"	63,0	167,0	131,9	

*** Manuli specification** / Manuli especificación



M68690

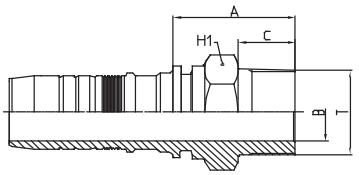
90° SAE FLANGE CODE 62 SAE J516/J518

BRIDA CODO DE 90° SAE CÓDIGO 62 SAE J516/J518

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm			
	DN	inch	Size		B	A	D	E
M68690-12-12	19	3/4"	-12	3/4"	16,0	75,0	41,4	59,0
M68690-16-16	25	1"	- 16	1"	20,0	89,0	47,7	80,0
M68690-20-20	31	1.1/4"	- 20	1.1/4"	24,0	110,0	54,2	93,0
M68690-24-24	38	1.1/2"	- 24	1.1/2"	38,5	125,0	63,7	110,0
M68690-32-32	51	2"	- 32	2"	42,0	148,0	79,6	136,0

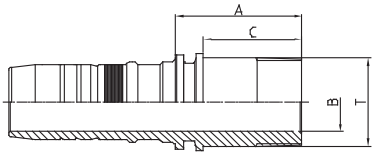
XTRALOCK TYPE

DIAMONDSPIR HOSE RANGE



M53410

API MALE WITH HEXAGONAL BODY
MACHO API CON CUERPO HEXAGONAL

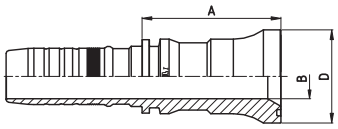


M53410...H00

API MALE WITH CYLINDRICAL BODY
MACHO API CON CUERCO CILINDRICO

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1
M53410-32-32	51	2″	- 32	2″ - 11,5	41	75,5	35		70
M53410-32-32H00	51	2″	- 32	2″ - 11,5	41	76,5	60		-
M53410-40-40	63	2.1/2″	- 40	2.1/2″ - 11,5	51,5	95	43		80
M53410-40-40H00	63	2.1/2″	- 40	2.1/2″ - 11,5	51,5	99,5	81		-
M53410-48-48	76	3″	- 48	3″ - 11,5	62,5	123,5	51,5		100
M53410-48-48H00	76	3″	- 48	3″ - 11,5	62,5	115	100		-
M53410-48-64	76	3″	-48	4″ - 8	62,5	151,5	56		125
M53410-48-64H00	76	3″	- 48	4″ - 8	62,5	151,5	118		-

XTRAFLANGE

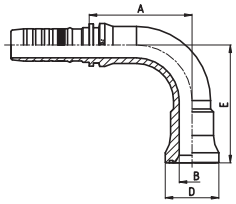


M68510

STRAIGHT XTRAFLANGE

BRIDA RECTA EXTRAFLANGE

PART. REF.	HOSE BORE		FLANGE	DIMENSIONS mm				W.P.	WEIGHT
	DN	inch	Size		B	A	D		bar	kg
M68510-16-16	25	1″	- 16	1″	20,0	69,5	47,7		560	0,6
M68510-20-20	31	1.1/4″	- 20	1.1/4″	24,0	88,0	54,4		560	1,0
M68510-24-24	38	1.1/2″	- 24	1.1/2″	30,5	102,0	63,7		560	1,4
M68510-32-32	51	2″	- 32	2″	41,0	129,0	79,6		450	2,7
M68510-40-40	63	2.1/2″	- 40	2.1/2″	51,5	149,0	99,2		350	4,4



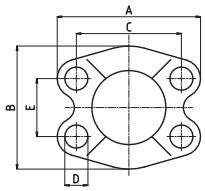
M68590

90° XTRAFLANGE

BRIDA 90° EXTRAFLANGE

PART. REF.	HOSE BORE		FLANGE	DIMENSIONS mm					W.P.	WEIGHT
	DN	inch	Size		B	A	D	E	bar	kg
M68590-16-16	25	1″	- 16	1″	20,0	84,2	47,7	90,0	560	0,8
M68590-20-20	31	1.1/4″	- 20	1.1/4″	24,0	107,0	54,4	120,0	560	1,5
M68590-24-24	38	1.1/2″	- 24	1.1/2″	30,5	122,2	63,7	140,0	560	2,2
M68590-32-32	51	2″	- 32	2″	41,0	147,5	79,6	180,0	450	4,3

ACCESSORIES

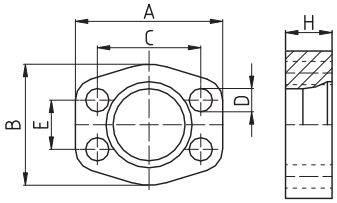


O83607

SAE ONE-PIECE FLANGE CLAMPS CODE 62 - SAE J518

BRIDA ENTERA SAE PARA FLANGE CODIGO 62 - SAE J518

PART. REF.	HOSE BORE		DIMENSIONS mm				
	DN	inch	Size	B	A	C	D	E
O83607-12	19	3/4"	-12	60,0	72,0	50,8	10,5	23,8
O83607-16	25	1"	- 16	70,0	81,0	57,2	13,0	27,8
O83607-20	31	1.1/4"	- 20	78,0	96,0	66,7	15,0	31,8
O83607-24	38	1.1/2"	- 24	96,0	113,0	79,4	17,0	36,5
O83607-32	51	2"	- 32	114,0	134,0	96,8	21,0	44,4
O83607-40	63	2.1/2"	- 40	150,0	175,0	123,8	25,0	58,7
O83607-48	76	3"	- 48	178,0	210,0	152,4	32,0	71,4



O88507

ONE-PIECE XTRAFLANGE CLAMPS

BRIDA ENTERA PARA XTRAFLANGE

PART. REF.	FLANGE SIZE			DIMENSIONS mm						BOLT	WEIGHT
	DN	inch	Size	B	A	C	D	E	H	lenght mm	kg
O88507-16	25	1"	- 16	66,7	80,0	57,2	13,0	27,8	24,0	50,0	0,5
O88507-20	31	1.1/4"	- 20	78,0	95,0	66,7	15,0	31,7	30,0	65,0	0,9
O88507-24	38	1.1/2"	- 24	94,0	112,0	79,4	17,0	36,5	36,0	75,0	1,6
O88507-32	51	2"	- 32	114,0	133,0	96,8	21,0	44,5	47,0	100,0	2,7
O88507-40	63	2.1/2"	- 40	150,0	180,0	123,8	26,0	58,8	55,0	110,0	6,4

XTRALOCK TYPE

ASSEMBLING INSTRUCTIONS

The following assembling instructions are strongly recommended on heavy duty applications.
Debido al exigente desempeño de la aplicación, estas instrucciones de ensamble son recomendadas ampliamente.

M68610 - M68690

PART. REF.	FLANGE SIZE	SPLIT FLANGE TYPE	ONE-PIECE FLANGE TYPE	OR (NBR 90 ShA) SAE J515	METRIC BOLT DIMENSIONS (Class. 10.9)	UNC BOLT DIMENSIONS (Grade 8)	BOLT THREAD LENGTH (mm)	BOLT TORQUE (Nm)
M68610-16-16	1"		O83607-16	32,92x3,53	M 12	7/16-14	45	130
M68690-16-16	1"		O83607-16	32,92x3,53	M 12	7/16-14	45	130
M68610-20-20	1.1/4"		O83607-20	37,69x3,53	M 14	1/2-13	45	180
M68690-20-20	1.1/4"		O83607-20	37,69x3,53	M 14	1/2-13	45	180
M68610-24-24	1.1/2"		O83607-24	47,22x3,53	M 16	5/8-11	55	290
M68690-24-24	1.1/2"		O83607-24	47,22x3,53	M 16	5/8-11	55	290
M68610-32-32	2"		O83607-32	56,74x3,53	M 20	3/4-10	70	450
M68690-32-32	2"		O83607-32	56,74x3,53	M 20	3/4-10	70	450
M68610-40-32	2"	O83609-32		56,74x3,53	M 20	3/4-10	70	450
M68610-40-40	2.1/2"		O83607-40	69,44x3,53	M 24	1-8	80	550
M68610-48-48	3"		O83607-48	85,32x3,53	M 30	1.1/4-7	90	650

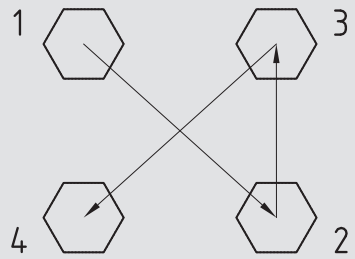
M68510 - M68590

PART. REF.	FLANGE SIZE	ONE-PIECE FLANGE TYPE	OR (NBR 90 ShA) SAE J515	METRIC BOLT DIMENSIONS (Class. 10.9)	UNC BOLT DIMENSIONS (Grade 8)	BOLT THREAD LENGTH (mm)	BOLT TORQUE (Nm)
M68510-16-16	1"	O88507-16	32,92x3,53	M 12	7/16-14	50	130
M68590-16-16	1"	O88507-16	32,92x3,53	M 12	7/16-14	50	130
M68510-20-20	1.1/4"	O88507-20	37,69x3,53	M 14	1/2-13	65	180
M68590-20-20	1.1/4"	O88507-20	37,69x3,53	M 14	1/2-13	65	180
M68510-24-24	1.1/2"	O88507-24	47,22x3,53	M 16	5/8-11	75	290
M68590-24-24	1.1/2"	O88507-24	47,22x3,53	M 16	5/8-11	75	290
M68510-32-32	2"	O88507-32	56,74x3,53	M 20	3/4-10	95	450
M68590-32-32	2"	O88507-32	56,74x3,53	M 20	3/4-10	95	450
M68510-40-40	2.1/2"	O88507-40	69,44x3,53	M 24	1-8	110	550

XTRALOCK TYPE

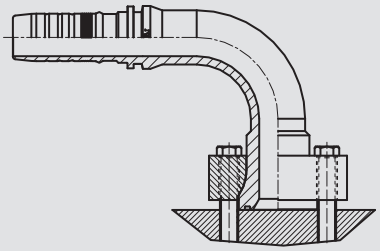
ASSEMBLING INSTRUCTIONS

SCREWS HAVE TO BE TORQUED WITH THE FOLLOWING SCHEME:
LOS TORNILLOS DEBEN SER AJUSTADOS DE ACUERDO AL SIGUIENTE ESQUEMA:



XTRAFLANGE ASSEMBLING SCHEME:

ESQUEMA PARA ENSAMBLAR UN EXTRAFLANGE:



During the installation it is recommended to apply a light torque to each screw before the final one to avoid:
- misalignements between flanges and clamps
- clamp halves damages during installation

Es importante que todos tornillos estén preajustados antes de aplicar el valor final del torque recomendado para evitar desalineación entre los flanges y las abrazaderas o daños en las medialunas durante la instalación.

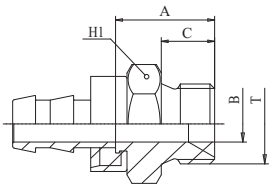
RECOMMENDATIONS RECOMENDACIONES

- **the crimping operation to apply XTRALOCK fittings must be carried out with proper high performance crimping/assembling machines (crimping force higher than 2800-3000 kN) and approved by Manuli Rubber Industries, in order to guarantee the optimum couplings assembly deformations and hose gripping;**
- **special crimping machines with long die sets are requested for the large size XTRALOCK fittings (double crimping operation is not recommemded);**
- **the use of uncut split flanges (one piece flanges) is recommended for the best performance of the assemblies in heavy duty applications;**
- **it is recommended to follow the detailed assembly instructions supplied by Manuli Rubber Industries to customers, assemblers and operators using the integrated package DIAMONDSPIR hose & XTRALOCK fittings.**

- la operación de crimpado para aplicar las conexiones XTRALOCK debe ser llevada a cabo con máquinas de alto comportamiento para crimpado/ensamble (fuerza de crimpado mayor que 2800-3000 kN) y aprobadas por Manuli Rubber Industries, para garantizar las óptimas deformaciones de acople y ensamble y agarre de la manguera;
- las máquinas especiales con largos juegos de dados son requeridas para las conexiones XTRALOCK de mayor tamaño (una operación de doble crimpado no es recomendada);
- se recomienda el uso de bridas no cortadas (bridas de una pieza) para el mejor desempeño de los ensambles en aplicaciones de trabajo pesado;
- se recomienda seguir las instrucciones detalladas de ensamble suministradas por Manuli Rubber Industries a los clientes, ensambladores y operadores usando el paquete integrado Manguera DIAMONDSPIR & Acoples XTRALOCK.

PUSH-LOCK TYPE

BS STANDARD CONNECTIONS

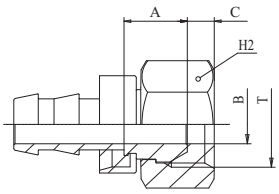


L10510*

BSP MALE PARALLEL 60° CONE SEAT - BS5200
MACHO BSP PARALELO ASIENTO A 60º - BS5200

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C		H_1	
L10510-04-04	6	1/4"	- 04	1/4" - 19	5,0	18,9	11,0		19	
L10510-04-06	6	1/4"	- 04	3/8" - 19	8,0	21,0	12,0		22	
L10510-06-06	10	3/8"	- 06	3/8" - 19	8,0	21,0	12,0		22	
L10510-08-08	12	1/2"	- 08	1/2" - 14	11,0	25,0	14,0		27	
L10510-10-10	16	5/8"	- 10	5/8" - 14	14,5	26,5	16,0		30	
L10510-12-12	19	3/4"	- 12	3/4" - 14	17,0	28,0	16,0		32	
L10510-16-16	25	1"	- 16	1" - 11	22,5	32,0	19,0		41	

(*) no ferrule needed - ***no necesita casquillo***



L20513*

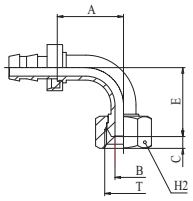
BSP FEMALE 60°CONE - BS5200 (SLIP-ON NUT)
HEMBRA BSP ASIENTO A 60º - BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE			THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C			H_2
L20513-04-04	6	1/4"	- 04	1/4" - 19	4,0	10,9	5,8			19
L20513-04-06	6	1/4"	- 04	3/8" - 19	7,0	13,0	6,0			22
L20513-06-06	10	3/8"	- 06	3/8" - 19	7,0	13,0	6,0			22
L20513-08-08	12	1/2"	- 08	1/2" - 14	9,5	14,5	6,5			27
L20513-10-10	16	5/8"	- 10	5/8" - 14	12,0	14,0	9,0			28
L20513-12-12	19	3/4"	- 12	3/4" - 14	16,0	15,5	9,0			32
L20513-12-16	19	3/4"	- 12	1" - 11	19,0	17,0	11,0			38
L20513-16-16	25	1"	- 16	1" - 11	19,0	17,0	11,0			38

(*) no ferrule needed - ***no necesita casquillo***

PUSH-LOCK TYPE

BS STANDARD CONNECTIONS



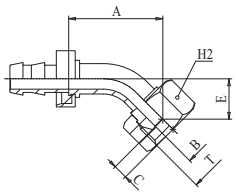
L20593*

90° BSP FEMALE SWEPT ELBOW 60°CONE - BS5200 (SLIP ON NUT)

HEMBRA BSP CODO DE 90° ASIENTO A 60° - BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
L20593-04-04	6	1/4"	- 04	1/4" - 19	4,0	24,0	5,8	24,0	19
L20593-06-06	10	3/8"	- 06	3/8" - 19	7,0	32,0	6,0	32,0	22
L20593-08-08	12	1/2"	- 08	1/2" - 14	9,5	36,0	6,5	38,5	27
L20593-10-10	16	5/8"	- 10	5/8" - 14	12,0	43,5	9,0	41,0	28
L20593-12-12	19	3/4"	- 12	3/4" - 14	16,0	46,0	9,0	46,5	32
L20593-12-16	19	3/4"	- 12	1" - 11	19,0	46,0	11,0	48,5	38
L20593-16-16	25	1"	- 16	1" - 11	19,0	51,0	11,0	54,0	38

*** No ferrule needed** / No necesita casquillo



L20543*

45° BSP FEMALE SWEPT ELBOW 60°CONE - BS5200 (SLIP ON NUT)

HEMBRA BSP CODO DE 45° ASIENTO A 60° - BS5200 (TUERCA LIBRE)

PART. REF.	HOSE BORE		THREAD	DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	E	H_2
L20543-04-04	6	1/4"	- 04	1/4" - 19	4,0	29,0	5,8	12,0	19
L20543-06-06	10	3/8"	- 06	3/8" - 19	7,0	36,5	6,0	15,0	22
L20543-08-08	12	1/2"	- 08	1/2" - 14	9,5	42,0	6,5	18,5	27
L20543-10-10	16	5/8"	- 10	5/8" - 14	12,0	48,5	9,0	19,0	28
L20543-12-12	19	3/4"	- 12	3/4" - 14	16,0	50,5	9,0	21,0	32
L20543-16-16	25	1"	- 16	1" - 11	19,0	54,0	11,0	24,0	38

*** No ferrule needed** / No necesita casquillo

MF™ 4000

ADAPTORS
PRODUCTS RANGE



manuli® RUBBER INDUSTRIES

ADAPTORS

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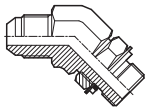
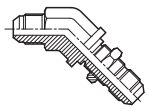
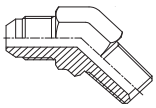
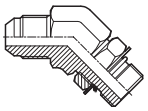
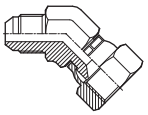
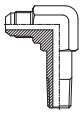
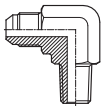
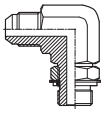
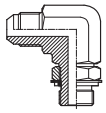
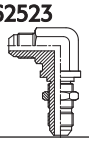
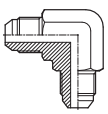
	**A532509** 45° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE O-RING BOSS TYPE (ISO 1179-3) ADAPTADOR AJUSTABLE CODO 45° JIC MACHO ASIENTO A 74° (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	222
	**A532523** 45° ELBOW BULKHEAD ADAPTOR JIC MALE 74° CONE (SAE J514) ADAPTADOR CODO 45° REFORZADO JIC MACHO ASIENTO A 74° (SAE J514)	222
NEW 	**A532528** 45° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514) NPTF MALE 60° CONE SEAT (SAE J514) ADAPTADOR CODO 45° MACHO JIC ASIENTO A 74° (SAE J514) - MACHO NPTF 60° (SAE J514)	223
	**A532531** 45° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) SAE MALE O-RING BOSS TYPE (SAE J1926) ADAPTADOR AJUSTABLE CODO 45° JIC MACHO ASIENTO A 74° (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)	224
	**A552525** 45° ELBOW ADAPTOR JIC MALE 74° CONE JIC FEMALE 74° CONE SEAT (SAE J514) ADAPTADOR CODO 45° JIC MACHO ASIENTO A 74° JIC HEMBRA ASIENTO A 74° (SAE J514)	221
	**A562502** 90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE TAPERED LONG (ISO 7) ADAPTADOR CODO 90° JIC MACHO ASIENTO A 74° (SAE J514) BSP MACHO CÓNICO LARGO (ISO 7)	229
	**A562507** 90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE TAPERED (ISO 7) ADAPTADOR CODO 90° JIC MACHO ASIENTO A 74° (SAE J514) BSP MACHO CÓNICO (ISO 7)	227
	**A562509** 90° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE O-RING BOSS TYPE (ISO 1179-3) ADAPTADOR AJUSTABLE CODO 90° JIC MACHO ASIENTO A 74° (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	226
	**A562519** 90° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) METRIC MALE (ISO 6149) ADAPTADOR AJUSTABLE CODO 90° JIC MACHO ASIENTO 74° (SAE J514) MACHO METRICO (ISO 6149)	229
	**A562523** 90° ELBOW BULKHEAD ADAPTOR JIC MALE 74° CONE (SAE J514) ADAPTADOR CODO 90° PASATABIQUE JIC MACHO ASIENTO A 74° (SAE J514)	225
	**A562525** 90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514) ADAPTADOR CODO 90° JIC MACHO ASIENTO A 74° (SAE J514)	224

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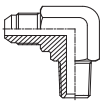
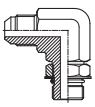
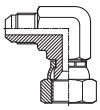
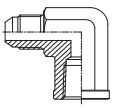
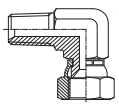
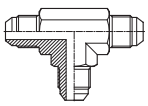
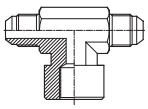
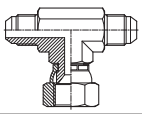
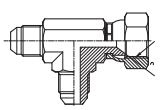
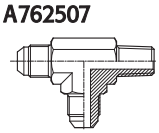
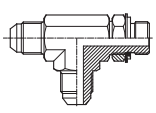
NEW 	**A562528** 90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514) NPTF MALE 60° CONE SEAT (SAE J514) ADAPTADOR CODO 90° MACHO JIC ASIENTO A 74° (SAE J514) - MACHO NPTF 60° (SAE J514)	228
	**A562531** 90° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) SAE MALE O-RING BOSS TYPE (SAE J1926) ADAPTADOR AJUSTABLE CODO 90° JIC MACHO ASIENTO A 74° (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)	230
	**A582525** 90° ELBOW ADAPTOR JIC MALE 74° CONE JIC FEMALE 74° CONE SEAT (SAE J514) ADAPTADOR CODO 90° JIC MACHO ASIENTO A 74° JIC HEMBRA 74° (SAE 1514)	225
NEW 	**A582534** 90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514) NPTF FIXED FEMALE (SAE J514) ADAPTADOR CODO 90° MACHO JIC ASIENTO A 74° (SAE J514) - HEMBRA FIJO NPTF (SAE J514)	231
NEW 	**A582825** 90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) JIC FEMALE 74° CONE SEAT (SAE J514) ADAPTADOR CODO 90° MACHO NPTF ASIENTO A 60° (SAE J514) - HEMBRA JIC 74° (SAE J514)	228
	**A702525** UNION TEE JIC MALE 74° CONE (SAE J514) TE MACHO JIC ASIENTO A 74° (SAE J514)	231
	**A712502** BRANCH TEE JIC MALE 74° CONE (SAE J514) BSP FEMALE TAPERED (ISO 7) TE MACHO JIC ASIENTO A 74° (SAE J514) BSP HEMBRA CÓNICA (ISO 7)	234
	**A712525** BRANCH TEE JIC MALE 74° CONE JIC FEMALE 74° CONE SEAT (SAE J514) TE MACHO JIC ASIENTO A 74° JIC HEMBRA ASIENTO A 74° (SAE J514)	232
	**A722525** RUN TEE JIC MALE 74° CONE JIC FEMALE 74° CONE SEAT (SAE J514) TE MACHO JIC ASIENTO A 74° JIC HEMBRA ASIENTO A 74° (SAE J514)	235
	**A762507** RUN TEE JIC MALE 74° CONE (SAE J514) BSP MALE TAPERED (ISO 7) TE MACHO JIC ASIENTO A 74° (SAE J514) BSP MACHO CÓNICO (ISO 7)	236
	**A762509** RUN TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514) BSP MALE O-RING BOSS TYPE (ISO 1179-3) TE AJUSTABLE MACHO JIC ASIENTO A 74° (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	236

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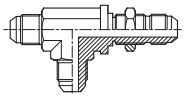
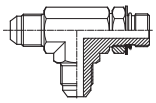
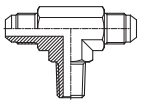
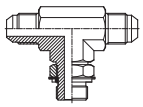
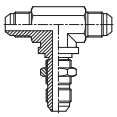
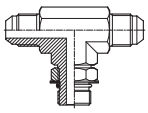
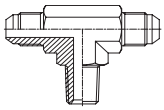
	**A762523** RUN TEE BULKHEAD JIC MALE 74° CONE (SAE J514) TE PASATABIQUE MACHO JIC ASIENTO A 74° (SAE J514)	236
	**A762531** RUN TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514) SAE MALE O-RING BOSS TYPE (SAE J1926) TE AJUSTABLE MACHO JIC ASIENTO A 74° (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)	237
	**A782507** BRANCH TEE JIC MALE 74° CONE (SAE J514) BSP MALE TAPERED (ISO 7) TE MACHO JIC ASIENTO A 74° (SAE J514) BSP MACHO CÓNICO (ISO 7)	233
	**A782509** BRANCH TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514) BSP MALE O-RING BOSS TYPE (ISO 1179-3) TE AJUSTABLE MACHO JIC ASIENTO A 74° (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	236
	**A782523** BRANCH TEE BULKHEAD JIC MALE 74° CONE (SAE J514) TE PASATABIQUE MACHO JIC ASIENTO A 74° (SAE J514)	232
	**A782531** BRANCH TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514)SAE MALE O-RING BOSS TYPE (SAE J1926) TE AJUSTABLE MACHO JIC ASIENTO A 74° (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)	235
	NEW **A782528** BRANCH TEE JIC MALE 74° CONE (SAE J514) NPTF MALE 60° CONE SEAT (SAE J514) TE MACHO JIC ASIENTO A 74° (SAE J514) - MACHO NPTF 60° (SAE J514)	234

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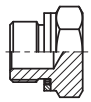	**A400300** MALE PLUG BSP OR BOSS (ISO 1179-3) MACHO BOSS BSP O TAPON (ISO 1179-3)	238
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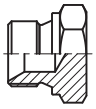
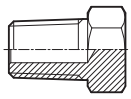
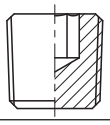
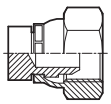
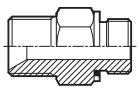
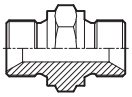
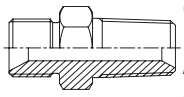
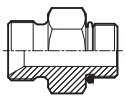
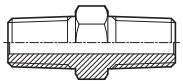
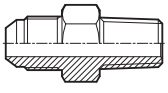
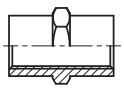
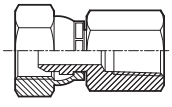
	**A400500D** MALE PLUG BSP PARALLEL 60° CONE SEAT DIN PROFILE (ISO 228) TAPON MACHO BSP PARALELO ASIENTO A 60° PERFIL DIN (ISO 228)	239
	**A400700** MALE PLUG BSP TAPERED (ISO 7) TAPON MACHO BSP CÓNICO (ISO 7)	239
	**A400700E** BSPT MALE PLUG "HEXAGONAL SOCKET HEAD" (ISO 7) TAPON MACHO BSPT (ISO 7)	240
	**A410500** FEMALE PLUG BSP PARALLEL 60° CONE SEAT (ISO 228) TAPON HEMBRA BSP PARALELO ASIENTO A 60° (ISO 228)	240
	**A500503** STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) BSP MALE O-RING BOSS TYPE (ISO 1179-3) ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° (ISO 228) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	243
	**A500505** STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) ADAPTADOR RECTO BSP PARALELO MACHO ASIENTO A 60° (ISO 228)	241
	NEW **A500528** STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) NPTF MALE 60° CONE SEAT (SAE J514) ADAPTADOR MACHO RECTO BPS PARALELO ASIENTO A 60° (ISO 228) - MACHO NPTF 60° (SAE J514)	245
	**A500530** STRAIGHT ADAPTOR BSP MALE 60° CONE SEAT (ISO 228)SAE MALE O-RING BOSS TYPE (SAE J1926) ADAPTADOR RECTO BSP MACHO ASIENTO A 60° (ISO 228)SAE MACHO TIPO O-RING BOSS (SAE J1926)	246
	**A500707** STRAIGHT ADAPTOR BSP MALE TAPERED (ISO 7) ADAPTADOR RECTO BSP MACHO CÓNICO (ISO 7)	250
	**A502507** STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514)BSP MALE TAPERED (ISO 7) ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514) BSP MACHO CÓNICO (ISO 7)	244
	**A510404** STRAIGHT ADAPTOR BSP FIXED FEMALE ADAPTADOR RECTO BSP FIJO HEMBRA	247
	**A510502** STRAIGHT ADAPTOR BSP FEMALE 60° CONE (ISO 228) BSP FEMALE TAPERED (ISO 7) ADAPTADOR RECTO BSP HEMBRA ASIENTO A 60° (ISO 228) BSP HEMBRA CÓNICA (ISO 7)	248

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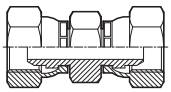
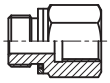
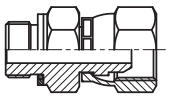
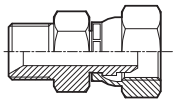
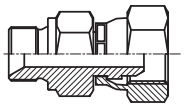
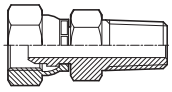
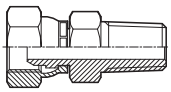
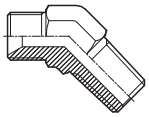
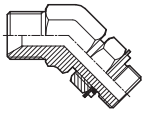
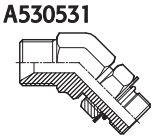
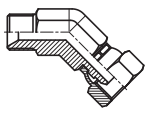
	**A510505** STRAIGHT ADAPTOR BSP FEMALE 60° CONE (ISO 228) ADAPTADOR RECTO BSP HEMBRA ASIENTO A 60° (ISO 228)	246
	**A520304** STRAIGHT ADAPTOR BSP MALE OR BOSS (ISO 1179-3) BSP FIXED FEMALE (ISO 1179-1) ADAPTADOR RECTO MACHO BSP O BOSS (ISO 1179-3) BSP FIJO HEMBRA (ISO 1179-1)	249
	**A520305** STRAIGHT ADAPTOR BSP MALE OR BOSS (ISO 1179-3) BSP FEMALE 60° CONE (ISO 228) ADAPTADOR RECTO MACHO BSP O BOSS (ISO 1179-3) BSP HEMBRA ASIENTO A 60° (ISO 228)	248
	**A520505** STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT BSP FEMALE 60° CONE (ISO 228) ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° BSP HEMBRA ASIENTO A 60° (ISO 228)	242
	**A520505D** STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT DIN PROFILE BSP FEMALE 60° CONE (ISO 228) ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° PERFIL DIN BSP HEMBRA ASIENTO A 60° (ISO 228)	242
	NEW **A520528** STRAIGHT ADAPTER BSP MALE 60° CONE SEAT (ISO 228) NPSM SWIVEL FEMALE 60° CONE (SAE J514) ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° (ISO 228) HEMBRA GIRATORIO 60° NPSM (SAE J514)	243
	**A520705** STRAIGHT ADAPTOR BSP FEMALE 60° CONE (ISO 228) BSP MALE TAPERED (ISO 7) ADAPTADOR RECTO BSP HEMBRA ASIENTO A 60° (ISO 228) BSP MACHO CÓNICO (ISO 7)	247
	**A530507** 45° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) - BSP MALE TAPERED (ISO 7) ADAPTADOR CODO 45° BSP MACHO PARALELO ASIENTO A 60° (ISO 228) - BSP MACHO CÓNICO (ISO 7)	251
	**A530509** 45° ELBOW ADJUSTABLE ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) - BSP MALE O-RING BOSS TYPE (ISO 1179-3) ADAPTADOR AJUSTABLE CODO 45° BSP MACHO PARALELO ASIENTO A 60° (ISO 228) - BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	251
	**A530531** 45° ELBOW ADJUSTABLE ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) SAE MALE O-RING BOSS TYPE (SAE J1926) ADAPTADOR AJUSTABLE CODO 45° BSP MACHO PARALELO ASIENTO A 60° (ISO 228) SAE MACHO TIPO O-RING BOSS (SAE J1926)	253
	**A550505** 45° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT BSP FEMALE 60° CONE (ISO 228) ADAPTADOR CODO 45° BSP MACHO PARALELO ASIENTO A 60° BSP HEMBRA 60° (ISO 228)	252

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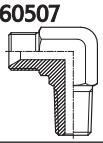
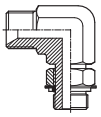
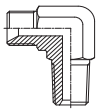
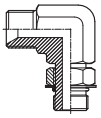
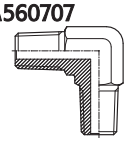
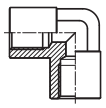
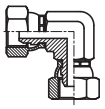
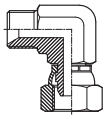
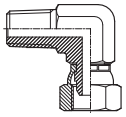
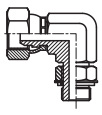
	**A560507** 90° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) BSP MALE TAPERED (ISO 7) ADAPTADOR CODO 90° BSP MACHO PARALELO ASIENTO A 60° (ISO 228) BSP MACHO CÓNICO (ISO 7)	254
	**A560509** 90° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE O-RING BOSS TYPE (ISO 1179-3) ADAPTADOR AJUSTABLE CODO 90° JIC MACHO ASIENTO A 74° (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	254
	NEW **A560528** 90° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) NPTF MALE 60° CONE SEAT (SAE J514) ADAPTADOR CODO 90° MACHO BPS PARALELO (ISO 228) - MACHO NPTF 60° (SAE J514)	255
	**A560531** 90° ELBOW ADJUSTABLE ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) SAE MALE O-RING BOSS TYPE (SAE J1926) ADAPTADOR AJUSTABLE CODO 90° JIC MACHO ASIENTO A 74° (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	255
	**A560707** 90° ELBOW ADAPTOR BSP MALE TAPERED (ISO 7) ADAPTADOR CODO 90° BSP MACHO CÓNICO (ISO 7)	257
	**A570404** 90° ELBOW ADAPTOR BSP FIXED FEMALE ADAPTADOR CODO 90° BSP HEMBRA FIJO	258
	**A570505** 90° ELBOW ADAPTOR BSP FEMALE 60° CONE (ISO 228) ADAPTADOR CODO 90° BSP HEMBRA ASIENTO A 60° (ISO 228)	257
	**A580505** 90° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT BSP FEMALE 60° CONE (ISO 228) ADAPTADOR CODO 90° MACHO PARALELO ASIENTO A 60° BSP HEMBRA 60° (ISO 228)	253
	**A580705** 90° ELBOW ADAPTOR BSP MALE TAPERED (ISO 7) BSP FEMALE 60° CONE (ISO 228) ADAPTADOR CODO 90° BSP MACHO CÓNICO (ISO 7) BSP HEMBRA ASIENTO A 60° (ISO 228)	256
	**A580905** 90° ELBOW ADJUSTABLE ADAPTOR BSP MALE OR BOSS (ISO 1179) BSP FEMALE 60° CONE (ISO 228) ADAPTADOR AJUSTABLE CODO 90° BSP O BOSS MACHO (ISO 1179) BSP HEMBRA ASIENTO A 60° (ISO 228)	256

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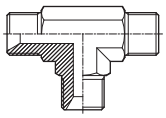
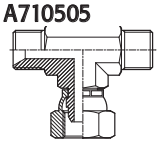
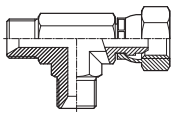
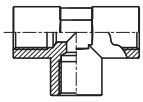
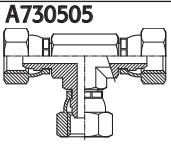
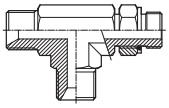
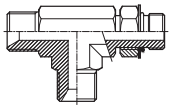
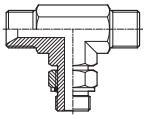
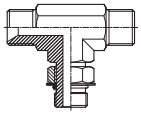
	**A700505** **UNION TEE BSP MALE 60° CONE SEAT (ISO 228)** TE UNION BSP MACHO ASIENTO A 60º (ISO 228)	258
	**A710505** **BRANCH TEE BSP MALE 60° CONE SEAT BSP FEMALE 60° CONE (ISO 228)** TE MACHO ASIENTO A 60º BSP HEMBRA 60º CONO (ISO 228)	260
	**A720505** **RUN TEE BSP MALE 60° CONE SEAT BSP FEMALE 60° CONE (ISO 228)** TE BSP MACHO ASIENTO A 60º BSP HEMBRA ASIENTO A 60º (ISO 228)	262
	**A730404** **UNION TEE BSP FIXED FEMALE** TE BSP HEMBRA FIJA	259
	**A730505** **UNION TEE BSP FEMALE 60° CONE (ISO 228)** TE BSP HEMBRA ASIENTO A 60º (ISO 228)	259
	**A760509** **RUN TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228)BSP MALE O-RING BOSS TYPE (ISO 1179-3)** TE AJUSTABLE BSP MACHO ASIENTO A 60º (ISO 228) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	262
	**A760531** **RUN TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228) SAE MALE O-RING BOSS TYPE (SAE J1926)** TE AJUSTABLE BSP MACHO ASIENTO A 60º (ISO 228) MACHO SAE TIPO O-RING BOSS (SAE J1926)	263
	**A780509** **BRANCH TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228) BSP MALE O-RING BOSS TYPE (ISO 1179-3)** TE AJUSTABLE BSP MACHO ASIENTO A 60º (ISO 228) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	260
	**A780531** **BRANCH TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228) SAE MALE O-RING BOSS TYPE (SAE J1926)** TE AJUSTABLE MACHO JIC ASIENTO A 74º (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)	261

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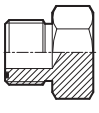
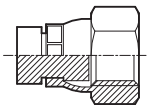
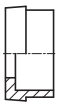
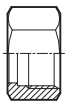
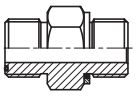
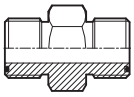
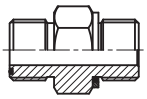
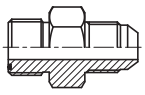
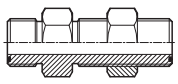
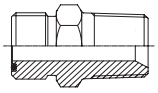
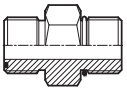
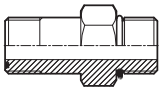
	**A402400** **MALE PLUG ORFS (SAE J1453)** TAPON MACHO ORFS (SAE J1453)	264
	**A412400** **FEMALE PLUG ORFS (SAE J1453)** TAPON HEMBRA ORFS (SAE J1453)	264
	**A422400** **SLEEVE ORFS (SAE J1453)** FÉRULA ORFS (SAE J1453)	265
	**A432400** **NUT ORFS (SAE J1453)** TUERCA ORFS (SAE J1453)	265
	**A502403** **STRAIGHT ADAPTOR ORFS MALE (SAE J1453)BSP OR BOSS MALE (ISO 1179)** ADAPTADOR RECTO ORFS MACHO (SAE J1453) BSP O BOSS MACHO (ISO 1179)	267
	**A502424** **STRAIGHT ADAPTOR ORFS MALE (SAE J1453)** ADAPTADOR RECTO ORFS MACHO (SAE J1453)	266
	**A502419** **STRAIGHT ADAPTOR ORFS MALE (SAE J1453) METRIC MALE (ISO 6149)** ADAPTADOR RECTO ORFS MACHO (SAE J1453) METRICO MACHO (ISO 6149)	269
	**A502425** **STRAIGHT ADAPTOR ORFS MALE (SAE J1453) JIC MALE 74° CONE (SAE J514)** ADAPTADOR RECTO ORFS MACHO (SAE J1453) JIC MACHO ASIENTO A 74° (SAE J514)	267
	**A502427** **STRAIGHT BULKHEAD ADAPTOR ORFS MALE (SAE J1453)** ADAPTADOR RECTO DOBLE TUERCA ORFS MACHO (SAE J1453)	266
	NEW **A502428** **STRAIGHT ADAPTOR ORFS MALE (SAE J1453) NPTF MALE 60° CONE SEAT (SAE J514)** ADAPTADOR MACHO RECTO ORFS (SAE J1453) MACHO NPTF 60° (SAE J514)	268
	**A502430** **STRAIGHT ADAPTOR ORFS MALE (SAE J1453) SAE MALE O-RING BOSS TYPE (SAE J1926)** ADAPTADOR RECTO ORFS MACHO (SAE J1453) SAE MACHO TIPO O-RING BOSS (SAE J1926)	268
	**A502930** **STRAIGHT ADAPTOR LONG ORFS MALE (SAE J1453) SAE MALE O-RING BOSS TYPE (SAE J1926)** ADAPTADOR RECTO LARGO ORFS MACHO (SAE J1453) SAE MACHO TIPO O-RING BOSS (SAE J1926)	269

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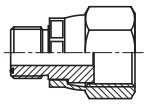
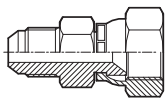
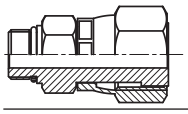
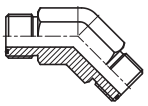
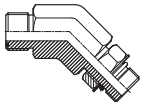
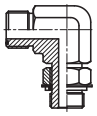
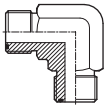
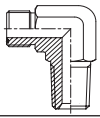
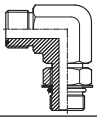
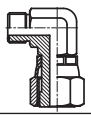
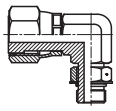
	**A522424** STRAIGHT ADAPTOR ORFS MALE ORFS SWIVEL FEMALE (SAE J1453) ADAPTADOR RECTO ORFS MACHO ORFS HEMBRA GIRATORIO (SAE J1453)	270
	**A522524** STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514) ORFS FEMALE (SAE J1453) ADAPTADOR RECTO JIC MACHO ASIENTO A 74° (SAE J514) ORFS HEMBRA (SAE J1453)	270
	**A523024** STRAIGHT ADAPTOR SAE OR BOSS MALE (SAE J1926) ORFS FEMALE (SAE J1453) ADAPTADOR RECTO SAE O BOSS MACHO (SAE J1926) ORFS HEMBRA (SAE J1453)	271
	**A532424** 45° ELBOW ADAPTOR ORFS MALE (SAE J1453) ADAPTADOR CODO 45° ORFS MACHO (SAE J1453)	271
	**A532431** 45° ELBOW ADJUSTABLE ADAPTOR ORFS MALE (SAE J1453) SAE MALE O-RING BOSS TYPE (SAE J1926) ADAPTADOR AJUSTABLE CODO 45° ORFS MACHO (SAE J1453) MACHO SAE TIPO O-RING BOSS (SAE J1926)	272
	**A562409** 90° ELBOW ADJUSTABLE ADAPTOR ORFS MALE (SAE J1453) BSP OR BOSS MALE (ISO 1179) ADAPTADOR AJUSTABLE CODO 90° ORFS MACHO (SAE J1453) BSP O BOSS MACHO (ISO 1179)	269
	**A562424** 90° ELBOW ADAPTOR ORFS MALE (SAE J1453) ADAPTADOR CODO 90° ORFS MACHO (SAE J1453)	272
	**A562428** 90° ELBOW ADAPTOR ORFS MALE (SAE J1453) NPTF MALE 60° CONE SEAT (SAE J514) ADAPTADOR CODO 90° MACHO ORFS (SAE J1453) - MACHO NPTF 60° (SAE J514)	274
	**A562431** 90° ELBOW ADJUSTABLE ADAPTOR ORFS MALE (SAE J1453) SAE MALE O-RING BOSS TYPE (SAE J1926) ADAPTADOR AJUSTABLE CODO 90° ORFS MACHO (SAE J1453) SAE MACHO TIPO O-RING BOSS (SAE J1926)	274
	**A582424** 90° ELBOW ADAPTOR ORFS MALE-ORFS FEMALE (SAE J1453) ADAPTADOR CODO 90° ORFS MACHO-ORFS HEMBRA (SAE J1453)	275
	**A583124** 90° ELBOW ADJUSTABLE ADAPTOR ORFS FEMALE (SAE J1453) SAE OR BOSS MALE (SAE J1926) ADAPTADOR AJUSTABLE CODO 90° ORFS HEMBRA (SAE J1453) SAE O BOSS MACHO (SAE J1926)	275

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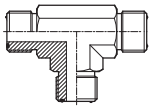
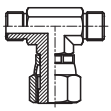
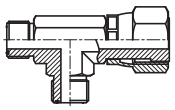
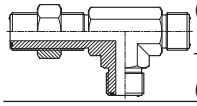
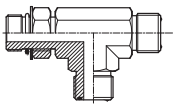
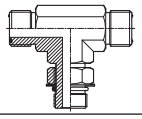
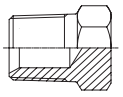
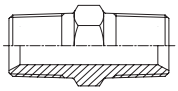
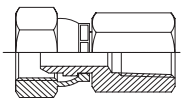
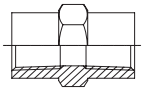
	**A702424** UNION TEE ORFS MALE (SAE J1453) TE UNION ORFS MACHO (SAE J1453)	276
	**A712424** BRANCH TEE ORFS MALE - ORFS FEMALE (SAE J1453) TE MACHO ORFS - ORFS HEMBRA (SAE J1453)	278
	**A722424** RUN TEE ORFS MALE - ORFS FEMALE (SAE J1453) TE MACHO ORFS - ORFS HEMBRA (SAE J1453)	278
	**A762427** RUN TEE BULKHEAD ORFS MALE (SAE J1453) TE PASATABIQUE MACHO ORFS (SAE J1453)	277
	**A762431** RUN TEE ADJUSTABLE ORFS MALE (SAE J1453) SAE MALE O-RING BOSS TYPE (SAE J1926) TE AJUSTABLE ORFS MACHO (SAE J1453) SAE MACHO TIPO O-RING BOSS (SAE J1926)	277
	**A782431** BRANCH TEE ADJUSTABLE ORFS MALE (SAE J1453) SAE MALE O-RING BOSS TYPE (SAE J1926) TE AJUSTABLE MACHO ORFS (SAE J1453) SAE MACHO TIPO O-RING BOSS (SAE J1926)	276

NPTF - NPSM ADAPTORS

NEW RANGE

	**A402800** MALE PLUG NPTF 60° CONE SEAT (SAE J514) TAPÓN MACHO NPTF ASIENTO A 60° (SAE J514)	279
	**A502828** STRAIGHT ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) ADAPTADOR MACHO RECTO ASIENTO A 60° (SAE J514)	279
	**A512834** STRAIGHT ADAPTOR NPSM SWIVEL FEMALE 60° CONE (SAE J514) NPTF FIXED FEMALE (SAE J514) ADAPTADOR HEMBRA GIRATORIO NPSM ASIENTO A 60° (SAE J514) - HEMBRA FIJO NPTF (SAE J514)	281
	**A513434** STRAIGHT ADAPTOR NPTF FIXED FEMALE (SAE J514) ADAPTADOR RECTO HEMBRA FIJO NPTF (SAE J514)	282

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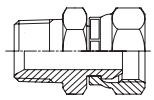
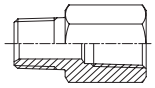
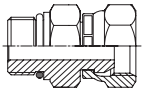
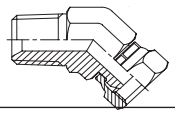
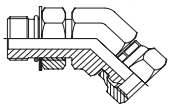
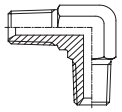
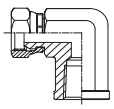
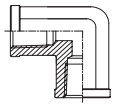
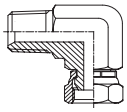
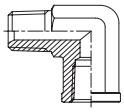
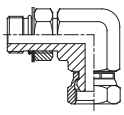
A522828 	STRAIGHT ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) NPSM SWIVEL FEMALE 60° CONE (SAE J514) ADAPTADOR MACHO RECTO ASIENTO A 60° (SAE J514) - HEMBRA GIRATORIO 60° NPSM (SAE J514) BSP HEMBRA ASIENTO A 60° (ISO 228)	280
A522834 	INCREASE ADAPTORS / REDUCER BUSHINGS NPTF MALE - NPTF FIXED FEMALE (SAE J514) ADAPTADOR PROLONGADOR / REDUCTOR MACHO NPTF - HEMBRA FIJA NPTF	281
A523028 	STRAIGHT ADAPTOR SAE MALE O-RING BOSS TYPE (SAE J1926) NPSM SWIVEL FEMALE 60° CONE (SAE J514) ADAPTADOR RECTO MACHO SAE TIPO O-RING BOSS (SAE J1926) - HEMBRA GIRATORIO 60° NPSM (SAE J514)	282
A552828 	45° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) NPSM SWIVEL FEMALE 60° CONE (SAE J514) ADAPTADOR CODO 45° NPTF MACHO ASIENTO A 60° (SAE J514) - HEMBRA GIRATORIO 60° NPSM (SAE J514)	283
A553128 	45° ELBOW ADJUSTABLE ADAPTOR SAE MALE O-RING BOSS TYPE (SAE J1926) NPSM SWIVEL FEMALE 60° CONE (SAE J514) ADAPTADOR ADJUSTABLE CODO 45° SAE TIPO O-RING BOSS (SAE J1916) - HEMBRA GIRATORIO 60° NPSM (SAE J514)	283
A562828 	90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) ADAPTADOR MACHO CODO 90° NPTF ASIENTO A 60° (SAE J514)	284
A572834 	90° ELBOW ADAPTOR NPSM SWIVEL FEMALE 60° CONE (SAE J514) NPTF FIXED FEMALE (SAE J514) ADAPTADOR HEMBRA CODO 90° NPSM GIRATORIO ASIENTO A 60° (SAE J514) - HEMBRA FIJO NPTF (SAE J514)	286
A573434 	90° ELBOW ADAPTOR NPTF FIXED FEMALE (SAE J514) ADAPTADOR CODO 90° HEMBRA FIJO NPTF (SAE J514)	286
A582828 	90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) NPSM SWIVEL FEMALE 60° CONE (SAE J514) ADAPTADOR MACHO CODO 90° NPTF ASIENTO A 60° (SAE J514) - HEMBRA GIRATORIO 60° NPSM (SAE J514)	284
A582834 	90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) NPTF FIXED FEMALE (SAE J514) ADAPTADOR MACHO CODO 90° NPTF ASIENTO A 60° (SAE J514) - HEMBRA FIJO NTPF (SAE J514)	285
A583128 	90° ELBOW ADJUSTABLE ADAPTOR SAE MALE O-RING BOSS TYPE (SAE J1926) NPSM SWIVEL FEMALE 60° CONE (SAE J514) ADAPTADOR MACHO ADJUSTABLE CODO 90° SAE TIPO O-RING BOSS (SAE J1916) - HEMBRA GIRATORIO 60° NPSM (SAE J514)	285

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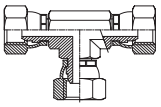
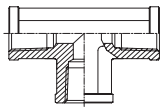
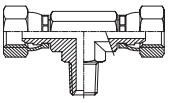
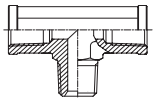
A732828 	UNION TEE NPSM SWIVEL FEMALE 60° CONE (SAE J514) TE HEMBRA NPSM GIRATORIO 60° (SAE J514)	287
A733434 	UNION TEE NPTF FIXED FEMALE (SAE J514) TE HEMBRA NPSM FIJO (SAE J514)	287
A742828 	BRANCH TEE NPSM SWIVEL FEMALE 60° CONE (SAE J514) NPTF MALE 60° CONE SEAT (SAE J514) TE HEMBRA NPSM GIRATORIO 60° (SAE J514) - MACHO NPTF ASIENTO A 60° (SAE J514)	288
A742834 	BRANCH TEE NPTF FIXED FEMALE (SAE J514) NPTF MALE 60° CONE SEAT (SAE J514) TE HEMBRA NPTF FIJO (SAE J514) - MACHO NPTF ASIENTO A 60° (SAE J514)	288

THE CONCEPT

The adaptor is an interface for connecting a number of ports without direct compatibility. Adaptors can be classified into PRODUCT GROUPS (JIC, ORFS, BSP, etc.) depending on end configuration type.
MF4000 range is manufactured from a solid piece of steel; Straight adaptors are manufactured from cold drawn bars and 45°, 90°, Tee and Cross geometry one are forged and then machined. This process eliminates the potential leak points that are typical of brazed fittings.
Standard O-rings supplied with MF4000 adaptors range are made in NBR 90 ±5 Shore A and they are suitable for petroleum-base and non flammable water-base hydraulic fluids.
Our products are zink plated so to provide corrosion protection responding to SAE and ISO standards when tested according to ASTM-B117, ISO 9227 salt spray test method.
In order to make the best choice among the product groups, some key features are provided in the following table.

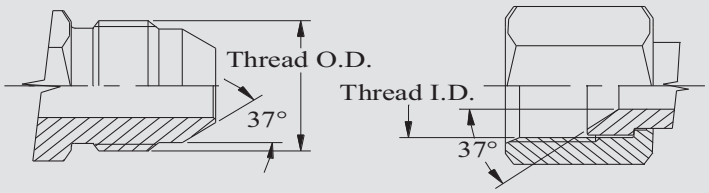
El adaptador es una interfase para conectar un número de roscas sin compatibilidad directa. Los adaptadores pueden ser clasificados en GRUPOS DE PRODUCTO (JIC, ORFS, BSP, etc.) dependiendo del tipo de configuración de su terminal.
La gama MF4000 está fabricada de una pieza sólida de acero, tanto rectos como en tes, y en cruz, a 45° y a 90°, las geometrías son forjadas y luego mecanizadas. Este proceso elimina las posibles fugas que son típicas de los adaptadores soldados.
Los O-rings estándares suministrados con los adaptadores MF4000 son de NBR 90 ±5 Shore A y son apropiados para fluidos hidráulicos con base en petróleo y no inflamables con base en agua.
Nuestros productos tienen un cincado plateado para proporcionar protección contra la corrosión respondiendo a los estándares SAE e ISO y para cumplir con el método de evaluación con salmuera ASTM-B177, ISO 9227.
Para hacer su mejor selección entre los grupos de productos, algunos puntos claves son suministrados en la siguiente tabla.

STEEL TUBE FITTINGS COMPARISON
CUADRO COMPARATIVO ENTRE TIPOS DE CONECTOR

MAIN CHARACTERISTICS FEATURE CARACTERISTICA

		JIC	BSP	ORFS
PERFORMANCE COMPORTAMIENTO	Pressure Capability Capacidad de presión	Medium to High Media a Alta	Medium to High Media a Alta	Very High Muy alta
	Seal Reliability Confiabilidad de sellado	Good Buena	Good Buena	Excellent Excelente
	Vibration Resistance in Rigid Systems Resistencia a la vibración en sistemas rígidos	Good Buena	Very Good Muy buena	Excellent Excelente
ASSEMBLY ENSAMBLE		Very Good Muy bueno	Good Bueno	Excellent Excelente
		Easy and quick tube preparation and good ease of installation Fácil y rápida preparación del tubo y buena facilidad de instalación	Easy and quick tube preparation and good ease of installation Fácil y rápida preparación del tubo y buena facilidad de instalación	Easy and quick tube preparation and excellent ease of installation Fácil y rápida preparación del tubo y buena facilidad de instalación
OIL SEAL TYPE TIPO DE SELLADO		Metal to Metal Metal a Metal	Metal to Metal Metal a Metal	Elastomeric Seal Sellado elastomérico
TEMPERATURE CAPABILITY RESISTENCIA A TEMPERATURA	Without O-ring Sin O-ring	(-50°C +260°C)	(–50°C +260°C)	NOT AVAILABLE NO DISPONIBLE
	With O-ring Con O-ring	NOT AVAILABLE** NO DISPONIBLE**	(–35°C +125°C)	(–35°C +125°C)
CURRENT USE USO ACTUAL		Used throughout the world Usado en todo el mundo	Mainly used in Japan & British Commonwealth countries Usado principalmente en Japón y los países de la Unión Británica	Mainly used in North America, gaining importance in Europe and Japan Usado principalmente en Norteamérica, ganando importancia en Europa y Japón
SPECIFICATIONS ESPECIFICACIONES		SAE J514 and ISO 8431-2 SAE J514 e ISO 8431-2	BS 5200 and ISO 8434-6 BS 5200 e ISO 8434-6	SAE J1453 and ISO 8431-3 SAE J1453 e ISO 8431-3

TERMINATION ENDS
SAE J514, 37° FLARE - JIC



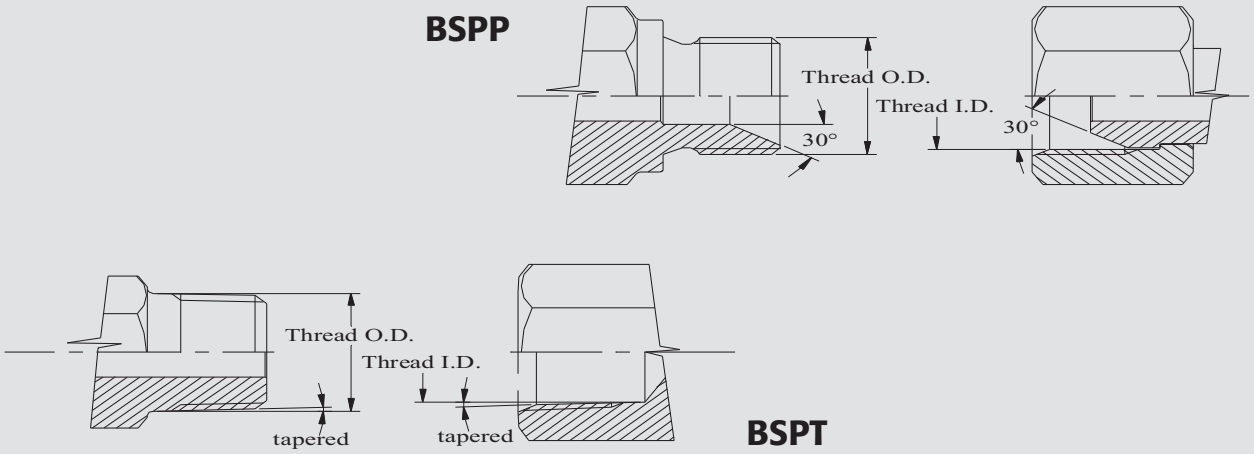
This connection type is very common in hydraulic circuits. Both the male and female have a 37° cone seat. When the straight threads are engaged the seal takes place. The connection is held mechanically by the threads.
WARNING: In sizes -04, -05, -08, and -10, the threads of the SAE 37° and SAE 45° are the same but the connectors have different sealing angles.

Este tipo de conexión es muy común en circuitos hidráulicos. Tanto el macho como la hembra tienen un asiento de 37° y cuando las roscas están unidas tiene lugar el sellado. La conexión está sostenida mecánicamente por la rosca.
PRECAUCION: En los tamaños -04, -05, -08, y -10, la rosca de la SAE 37° y SAE 45° es la misma pero se debe tener cuidado en no confundir estos dos conectores porque tienen diferentes ángulos de sellado.

Inch size	Dash	Nominal Thread size	Male thread O.D.		Female thread I.D.		Working pressure		Suggested torque values (Nm)	
			mm	inch	mm	inch	bar	psi	min.	max.
1/4"	- 04	7/16" - 20	11,2	0,44	9,9	0,39	310	4490	12	15
5/16"	- 05	1/2" - 20	12,7	0,50	11,4	0,45	310	4490	18	22
3/8"	- 06	9/16" - 18	14,2	0,56	12,9	0,51	280	4060	24	32
1/2"	- 08	3/4" - 16	19,0	0,75	17,0	0,67	280	4060	45	52
5/8"	- 10	7/8" - 14	22,3	0,88	20,3	0,80	210	3040	68	80
3/4"	- 12	1.1/16" - 12	26,9	1,06	24,9	0,98	210	3040	93	105
7/8"	- 14	1.3/16" - 12	30,0	1,18	27,7	1,09	210	3040	115	130
1"	- 16	1.5/16" - 12	33,3	1,31	31,0	1,22	180	2610	130	148
1.1/4"	- 20	1.5/8" - 12	41,4	1,63	39,1	1,54	140	2030	175	192
1.1/2"	- 24	1.7/8" - 12	47,7	1,88	45,5	1,79	100	1450	215	230

TERMINATION ENDS

British Standard Pipe - BSP (BSPP Parallel - ISO 228 - PT & BSPT Tapered - ISO 7 - PT)

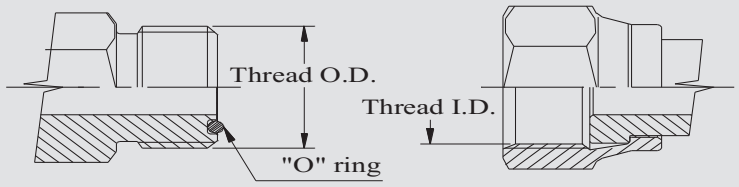


The British connection has two types of threads: BSPP and BSPT.
The BSPP thread is parallel and the male has a 30° flare seat which seals with a BSPP female on its 30° cone seat. The threads hold the connection mechanically.
The BSPT male thread is tapered and usually mates with a port. The seal takes place by thread distorsion, therefore sealant is recommended.
The BSPP/BSPT are similar to NPSM/NPT American connections with exception for the thread pitch that is different in most sizes.

La conexión Británica tiene dos tipos de rosca: BSPP y BSPT.
La cuerda BSPP es paralela y el macho tiene un asiento ensanchado de 30° el cual sella con una hembra BSP con su asiento de 30°. Los hilos sostienen la conexión mecánicamente.
La rosca macho BSPT es cónica y usualmente encaja con otra rosca. El sellado tiene lugar por la distorsión del hilo razón por la cual se recomienda un sellante.
Los BSPP/BSPT son similares a las conexiones americanas NPSM/NPT excepto por el hilo de rosca que es diferente en la mayoría de los tamaños.

Inch size	Dash	Nominal Thread size	Male thread O.D.		Female thread I.D.		Working pressure		Suggested torque values (Nm)	
			mm	inch	mm	inch	bar	psi	min.	max.
1/8"	- 02	1/8" - 28	10,3	0,41	9,4	0,37	350	5070	10	12
1/4"	- 04	1/4" - 19	13,7	0,54	12,4	0,49	350	5070	15	20
3/8"	- 06	3/8" - 19	17,3	0,68	15,7	0,62	350	5070	25	32
1/2"	- 08	1/2" - 14	21,3	0,84	19,3	0,76	315	4560	45	55
5/8"	- 10	5/8" - 14	22,9	0,90	21,1	0,83	315	4560	55	65
3/4"	- 12	3/4" - 14	26,9	1,06	24,9	0,98	250	3620	80	93
1"	- 16	1" - 11	33,3	1,31	31,5	1,24	200	2900	104	120
1.1/4"	- 20	1.1/4" - 11	42,2	1,66	40,1	1,58	160	2320	150	170
1.1/2"	- 24	1.1/2" - 11	48,3	1,90	46,2	1,82	125	1810	210	230

TERMINATION ENDS
SAE J1453, O-RING Face Seal - ORFS

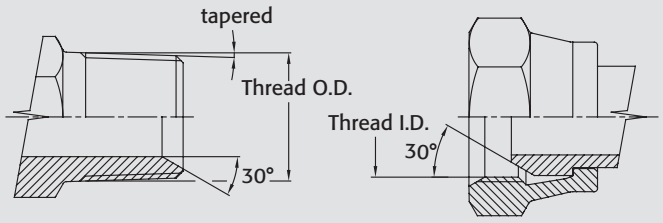


This connection offers the best leakage control available in the market and it is designed to work with very high pressures.
The male has a straight thread with an O-ring in the face. The female has a straight thread with a machined flat face. The seal is made by the compression of the O-ring onto the female flat face and the connection is mechanically held in place by the threads.

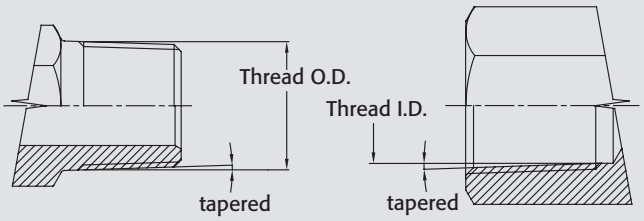
Esta conexión ofrece el mejor control de fugas disponible en el mercado en la actualidad y está diseñado para trabajar con presiones muy altas.
El macho tiene un hilo recto y un O-ring en la cara mientras que la hembra tiene un hilo recto con una cara plana mecanizada. El sellado se hace por la compresión del O-ring en la cara plana hembra y la conexión es mecánicamente sostenida en su lugar por la rosca.

Inch size	Dash	Nominal Thread size	Male thread O.D.		Female thread I.D.		Working pressure		Suggested torque values (Nm)		O-ring dimensions
			mm	inch	mm	inch	bar	psi	min.	max.	
1/4"	- 04	9/16" - 18	14,2	0,56	12,9	0,51	420	6090	15	18	7,65x1,78
3/8"	- 06	11/16" - 16	17,3	0,68	16,0	0,63	420	6090	24	28	9,25x1,78
1/2"	- 08	13/16" - 16	20,6	0,81	19,0	0,75	400	5800	43	50	12,42x1,78
5/8"	- 10	1" - 14	25,4	1,00	23,6	0,93	400	5800	62	68	15,6x1,78
3/4"	- 12	1.3/16" - 12	30,0	1,18	27,8	1,10	400	5800	93	100	18,77x1,78
1"	- 16	1.7/16" - 12	36,6	1,44	34,5	1,36	350	5070	125	140	23,52x1,78
1.1/4"	- 20	1.11/16" - 12	42,7	1,68	40,6	1,60	270	3910	170	190	29,87x1,78
1.1/2"	- 24	2" - 12	50,8	2,00	48,8	1,92	210	3040	210	230	37,82x1,78

NPTF MALE - NPSM SWIVEL FEMALE
NPTF MACHO - NPSM HEMBRA GIRATORIA



NPTF MALE - NPTF FEMALE
NPTF MACHO - NPTF HEMBRA



American Standard Pipe - NPTF Dryseal Taper Thread SAE J476 - ANSI B1.20.3
NPSM Straight Thread ANSI B1.20.1

NPTF and NPSM threads are American connections having a 60° angle between the flanks.
The NPTF male and female threads are tapered they have controlled truncation to assure metal to metal contact between crest and root and sealing on the thread.
The NPTF male machined with a 30° flare seat mates also with NPSM female (parallel thread). In this case the sealing is ensured on the metal to metal contact between the cones.

WARNING: Torque values need to be reduced by 50% in the NPTF/NPSM connections and by 25-30% if sealant is present.

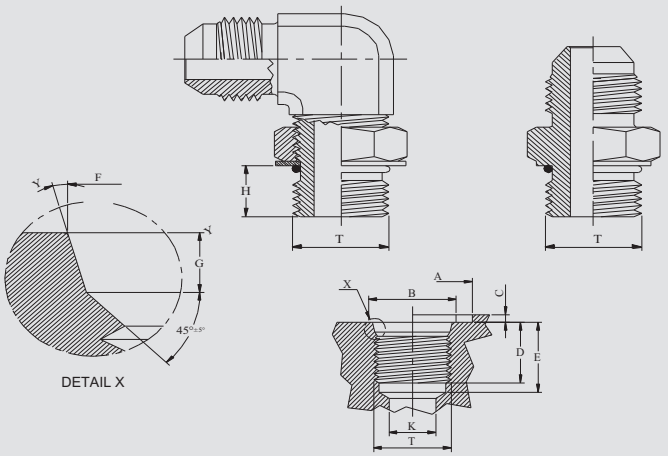
Las roscas NPTF y NPSM son conexiones Americanas que tienen un ángulo de 60º entre los hilos.
El macho NPTF y la rosca hembra son cónicos y controlan el trucamiento para asegurar el contacto metal con metal entre cresta y raíz y crear la estanquidad en la rosca.
El macho NPTF tiene un asiento cónico de 30º también para la unión con la hembra NPTF/NPSM (rosca cilíndrica). En este caso la estanqueidad se realiza con el contacto metal con metal entre los conos.

ADVERTENCIA: Los valores de apriete necesita ser reducidos un 50% en las conexiones NPTF/NPSM y un 25-30% si se aplica sellante.

Inch size Tamaño pulgadas	Dash módulo	Nominal thread size Tamano rosca	Male thread o.d. Rosca Macho		Female thread i.d. Rosca hembra		Working pressure Presión máxima trabajo		Suggested tourque values (Nm) Par de apriete máxima
			mm	inch	mm	inch	bar	psi	min.
1/8"	-02	1/8"-27	10,4	0,41	9,2	0,36	345	5000	20
1/4"	-04	1/4"-18	14,0	0,55	12,2	0,48	345	5000	30
3/8"	-06	3/8"-18	17,3	0,68	15,5	0,61	275	4000	40
1/2"	-08	1/2"-14	21,6	0,85	19,2	0,76	240	3500	55
3/4"	-12	3/4"-14	26,9	1,06	24,6	0,97	155	2250	70
1"	-16	1"-11,5	33,8	1,33	30,7	1,21	135	2000	90
1.1/4"	-20	1.1/4"-11,5	42,4	1,67	39,4	1,55	110	1625	100
1.1/2"	-24	1.1/2"-11,5	48,5	1,91	45,5	1,79	85	1250	120

PORT DIMENSIONS

UNF-UN Thread Port Dimensions (SAE J475 - J1926)



Thread Dimensions	7/16"-20	1/2"-20	9/16"-18	3/4"-16	7/8"-14	1.1/16"-12	1.3/16"-12	1.5/16"-12	1.5/8"-12	1.7/8"-12
T Nom.	11,11	12,7	14,29	19,05	22,23	26,99	30,16	33,34	41,27	47,62
C Max.	1,5	1,5	1,5	2,4	2,4	2,4	2,4	3	3	3
D Min.	12	12	13	15	17	20	20	20	20	20
E Min.	14	14	16	18	20	24	24	24	24	24
K Min.	5	6	7,5	10	12,5	16	18	21	27	33
A Min.	21	23	25	30	34	41	45	49	58	65
B Min.	15	16	18	22	26	32	35	38	48	54
F ± 0,05	12,45	14,05	15,70	20,65	24	29,20	32,40	35,55	43,55	49,90
G ± 0,2	2,5	2,6	2,7	2,7	2,7	3,5	3,5	3,5	3,5	3,5
Y ± 1°	12°	12°	12°	15°	15°	15°	15°	15°	15°	15°
H Ref.	9,5	9,5	10,5	12	13,5	15,5	15,5	15,5	15,5	15,5
O-ring	8,92x1,83	10,52x1,83	11,9x1,98	16,36x2,21	19,18x2,46	23,47x2,95	26,59x2,95	29,74x2,95	37,47x3,00	43,7x3,00
Assembly torque (Nm)	21	26	37	74	105	180	225	285	305	390

TECHNICAL NOTES

Sealing with O-ring.

- If face of port is on machined surface, dimensions A and C need not apply as long as the surface requirements (Ra min 3,2) are able to avoid damage to the OR during installation.
- C is maximum recommended spotface depth to permit sufficient wrench grip for proper tightening of the fitting or locknut.
- Spot faced surface (dimension B) must be squared (0,2 mm) to thread in port.
- F diameter must be concentric (0,1mm) to thread in port.
- Surface on lenght G needs Ra 3,2 min in order to avoid damage on OR during installation.

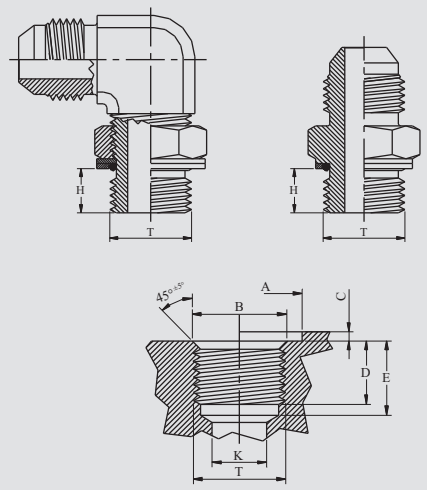
NOTAS TECNICAS

Sellando con O-ring.

- Si la superficie de la cara de la rosca está mecanizada, las dimensiones A y C no necesitan ser aplicadas ya que los requerimientos de la superficie (Ra min 3,2) puedan evitar el daño al O-ring durante la instalación.
- C es la maxima profundidad recomendada para permitir un apropiado encaje del acople o la contratuerca.
- La superficie expuesta (dimensión B) debe ser alineada (0,2 mm) con las roscas.
- El diámetro F debe ser concéntrico (0,1 mm) con las roscas.
- La superficie en la longitud G necesita Ra 3,2 min para evitar daño en el O-ring durante la instalación.

PORT DIMENSIONS

BSPP Thread Port Dimensions (retaining RING seat type) (ISO 1179-3)



Thread Dimensions	1/8"-28	1/4"-19	3/8"-19	1/2"-14	3/4"-14	1"-11	1.1/4"-11	1.1/2"-11
T Nom.	9,73	13,16	16,66	20,96	26,44	33,25	41,91	47,80
C Max.	1	1,5	2	2,5	2,5	2,5	2,5	2,5
D Min.	8	12	12	14	16	18	20	22
E Min.	13	18,5	18,5	22	24	27	29	31
A Min.	17	21	24,5	30	37	46	54	61
B +0.2/-0	9,8	13,2	16,7	21	27,1	33,3	42	47,9
H Ref.	6,5	9	9,5	11,5	13,5	15	16	16
O-ring	7,97x1,88	10,80x2,62	13,95x2,62	17,86x2,62	23,47x2,62	29,70x3,53	37,70x3,53	44x3,53
Assembly torque (Nm)	20	35	70	100	190	300	330	400

TECHNICAL NOTES

Sealing with O-ring and retaining washer.

- If face of port is on machined surface, dimensions A and C need not apply as long as the surface requirements (Ra min 3,2) are able to avoid damage to the OR during installation.
- C is maximum recommended spotface depth to permit sufficient wrench grip for proper tightening of the fitting or locknut.
- Spot faced surface (dimension B) must be squared (0,2 mm) to thread in port.
- F diameter must be concentric (0,1 mm) to thread in port.

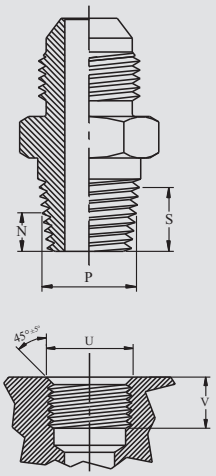
NOTAS TECNICAS

Sellando con O-ring y washer.

- Si la superficie de la cara de la rosca está mecanizada, las dimensiones A y C no necesitan ser aplicadas ya que los requerimientos de la superficie (Ra min 3,2) puedan evitar el daño al O-ring durante la instalación.
- C es la maxima profundidad recomendada para permitir un apropiado encaje del acople o la contratuerca.
- La superficie expuesta (dimensión B) debe ser alineada (0,2 mm) con las roscas.
- El diámetro F debe ser concéntrico (0,1 mm) con las roscas.

PORT DIMENSIONS

BSPT Thread Port Dimensions (ISO 7-Thread)



Thread Dimensions	1/8"-28	1/4"-19	3/8"-19	1/2"-14	3/4"-14	1"-11	1.1/4"-11	1.1/2"-11
V Min.	5,5	8,5	8,5	10,5	13	14,5	17	17
U	9,72	13,15	16,66	20,95	26,44	33,24	41,91	47,8
N	4	6	6,4	8,2	9,5	10,4	12,7	12,7
S - Working Thread	6,5	9,7	10,1	13,2	14,5	16,8	19,1	19,1

TECHNICAL NOTES

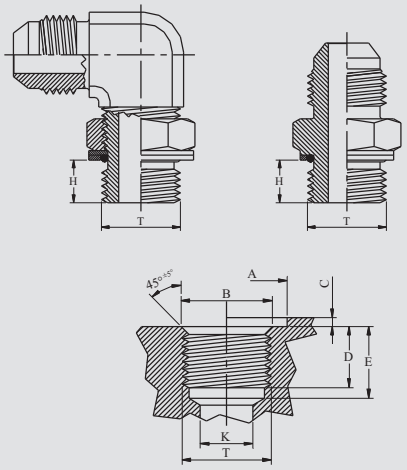
Sealing achieved by machting female parallel thread (port) and male tapered (fitting).

NOTAS TECNICAS

El sellado se obtiene acoplando la rosca paralela hembra (puerto) con el macho cónico (adaptador).

PORT DIMENSIONS

Metric Thread Port Dimensions (retaining RING seat type) (ISO 6149)



Thread Dimensions	10x1	12x1.5	14x1.5	16x1.5	18x1.5	20x1.5	22x1.5	26x1.5	27x2	33x2	42x2	48x2
T Nom.	10	12	14	16	18	20	22	26	27	33	42	48
C Max.	1	1,5	1,5	1,5	2	2	2,5	2,5	2,5	2,5	2,5	2,5
D Min.	8	12	12	12	12	14	14	16	16	18	20	22
E Min.	13,5	18,5	18,5	18,5	18,5	20,5	20,5	22,5	24	26	28	30
A Min.	16	20	21,5	24	27	30	32	36	37	45	55	62
B	10	12	14	16	18	20	22	26	27	33	42	48
H Ref.	8	9	9	10,5	12	12	12.5	12.5	14.5	14.5	15	17.5
O-ring	8,1x1,6	9,3x2,2	11,3x2,2	13,3x2,2	15,3x2,2	17,3x2,2	19,3x2,2	23,6x2,9	23,6x2,9	29,6x2,9	38,6x2,9	44,6x2,9
Assembly torque (Nm)	20	35	45	55	70	80	100	170	170	310	330	410

TECHNICAL NOTES

Sealing with O-ring and retaining washer.

- If face of port is on machined surface. dimensions A and C need not apply as long as the surface requirements (Ra min 3,2) are able to avoid damage to the OR during installation.
- C is maximum recommended spotface depth to permit sufficient wrench grip for proper tightening of the fitting or locknut.
- Spot faced surface (dimension B) must be squared (0,2 mm) to thread in port.
- F diameter must be concentric (0,1 mm) to thread in port.

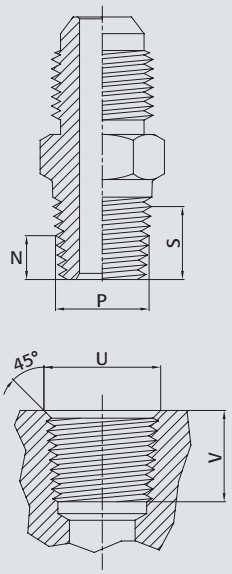
NOTAS TECNICAS

Sellando con O-ring y washer.

- Si la superficie de la cara del puerto está maquinada, las dimensiones A y C no necesitan ser aplicadas ya que los requerimientos de la superficie (Ra min 3,2) puedan evitar el daño al O-ring durante la instalación.
- C es la maxima profundidad recomendada para permitir un apropiado encaje del acople o la contratuerca.
- La superficie expuesta (dimensión B) debe ser alineada (0,2 mm) a la cuerda en el puerto.
- El diámetro F debe ser concéntrico (0,1 mm) a la cuerda en el Puerto.

PORT DIMENSIONS

NPTF Thread Port Dimensions (SAE J476)



THREAD DIMENSIONS	1/8"-27	1/4"-18	3/8"-18	1/2"-14	3/4"-14	1"-11.5	1.1/4"-11.5	1.1/2"-11.5
V Min.	7,9	11,4	11,7	15,4	15,9	19,0	19,5	19,5
U ref.	10,2	13,5	17	21,2	26,5	33,1	41,9	48
N	4,1	5,8	6,1	8,1	8,6	10,2	10,7	10,7
P	9,5	12,5	15,9	19,8	25,1	31,5	40,2	46,3
S - Working Thread	7,6	11,6	11,8	15,4	15,7	19,6	20,2	20,6

TECHNICAL NOTES

Sealing achieved by matching female tapered thread and male tapered thread (deformation at the crest).

NOTAS TÉCNICAS

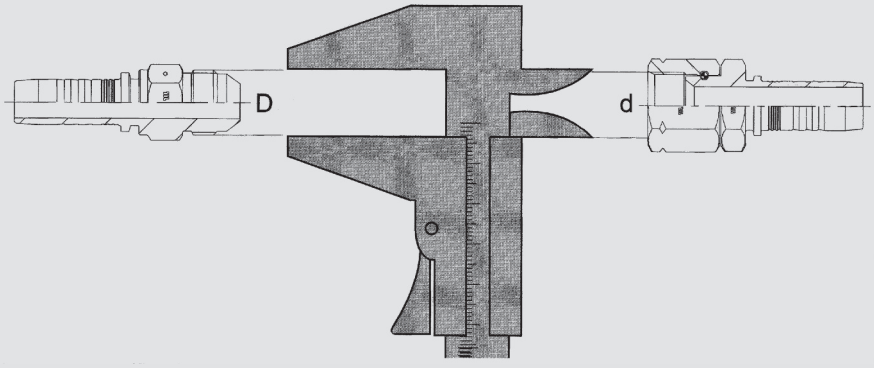
La estanqueidad se logra por el emparejamiento de los hilos en las roscas macho y hembra (deformación de las crestas).
No se aconseja una frecuente conexión y desconexión.

ADAPTORS

END-THREAD MEASUREMENT

To identify thread size temination end, measure the exterior male thread diameter O.D. or the internal female thread diameter I.D., and then, looking to the column mm, you will get the correspondent thread size.

Para identificar la medida de la cuerda, mida el diámetro exterior de la cuerda en el macho O.D. o el diámetro interior de la cuerda en la hembra I.D, luego mirando la columna mm obtendrá el tamaño correspondiente de la rosca.



MALE O.D.	mm	FEMALE I.D.
	8,5	3/8"-24 UNF
	8,7	1/8"-28 GAS
	9,2	1/8"-27 NPSM
3/8"-24 UNF	9,4	
1/8"-28 GAS	9,6	
M10x1	10,0	7/16"-20 UNF
1/8"-27 NPTF	10,4	
	10,5	M12x1,5
7/16"-20 UNF	11,0	
	11,4	1/2"-20 UNF
	11,6	1/4"-19 GAS
M12x1,5	12,0	
	12,2	1/4"-18 NPSM
1/2"-20 UNF	12,5	M14x1,5
1/4"-19 GAS	13,0	9/16"-18 UNF
1/4"-18 NPTF	13,9	
M14x1,5	14,0	
9/16"-18 UNF	14,2	
	14,5	M16x1,5
	14,6	5/8"-18 UNF
	15,1	3/8"-19 GAS
	15,5	3/8"-18 NPSM
5/8"-18 UNF	15,7	
M16x1,5	16,0	11/16"-16 UN
	16,5	M18x1,5
3/8"-19 GAS	16,6	
3/8"-18 NPTF	17,3	
11/16"-16 UN	17,4	3/4"-16 UNF
M18x1,5	18,0	
	18,5	M20x1,5
	18,8	1/2"-14 GAS
3/4"-16 UNF	19,0	13/16"-16 UN

MALE O.D.	mm	FEMALE I.D.
	19,2	1/2"-14 NPSM
M20x1,5	20,0	
	20,3	7/8"-14 UNF
13/16"-16 UN	20,5	M22x1,5
1/2"-14 GAS	20,8	
	21,1	5/8"-14 GAS
1/2"-14 NPTF	21,6	
M22x1,5	22,0	
7/8"-14 UNF	22,2	
	22,5	M24x1,5
5/8"-14 GAS	22,8	
	23,8	1"-14 UNS
M24x1,5	24,0	
	24,5	M26x1,5
	24,6	3/4"-14 GAS-NPSM
	24,9	1.1/16"-12 UN
	25,0	M27x2
1"-14 UNS	25,3	
M26x1,5	26,0	
3/4"-14 GAS	26,3	
1.1/16"-12 UN	26,7	
3/4"-14 NPTF	26,9	
M27x2	27,0	
	27,9	1.3/16"-12 UN
	28,0	M30x2
M30x2	30,0	
1.3/16"-12 UN	30,1	
	30,7	1"-11,5 NPSM
	30,9	1"-11 GAS
	31,0	M33x2
	31,2	1.5/16"-12 UN
M33x2	33,0	

MALE O.D.	mm	FEMALE I.D.
1"-11 GAS	33,2	
1.5/16"-12 UN	33,3	
1"-11,5 NPTF	33,8	
	34,0	M36x2
M36x2	36,0	
	39,1	1.5/8"-12 UN
	39,4	1.1/4"-11,5 NPSM
	39,5	1.1/4"-11 GAS
	40,0	M42x2
1.5/8"-12 UN	41,1	
1.1/4"-11 GAS	41,7	
M42x2	42,0	
1.1/4"-11,5 NPTF	42,4	
	43,0	M45x2
M45x2	45,0	
	45,2	1.1/2"-11 GAS
	45,5	1.1/2"-11,5 NPSM
	45,7	1.7/8"-12 UN
	46,0	M48x2
1.7/8"-12 UN	47,5	
1.1/2"-11 GAS	47,7	
M48x2	48,0	
1.1/2"-11,5 NPTF	48,5	
	48,8	2"-12 UN
	50,0	M52x2
2"-12 UN	50,7	
M52x2	52,0	
	57,0	2"-11 GAS
2"-11 GAS	59,4	
2"-11,5 NPTF	60,6	
	61,2	2.1/2"-12 UN
2.1/2"-12 UN	63,3	

COUPLING CHART FOR MANULI FITTINGS & ADAPTORS

Type	AC 37°	BSP 30°	ORFS Face Seal
MF2000® MULTIFIT	M12510	M10710	M12410
	M22512/M22513	M10510	M22411
	M22712	M20512/M20513	M22491 /M22493
	M22592/M22593	M20592/M20593	M22441 /M22443
	M22542/M22543	M20542/M20543	M24493
	M22582	M20812/M20813	
	M24792	M20892/M20893	
		M20842 / M20843	
		M20882	
MF2000® INTERLOCK	M47512	M35710	M47411
	M47592	M35510	M47491
	M47542	M45812	M47441
		M45892	
		M45842	
MF2000® PUSH-LOCK		L10510	
		L20513	
		L20593	
		L20543	

The MANULI® fittings part numbers, shown in the above chart, correspond to each adaptors type.

Los números de parte de las conexiones MANULI®, correspondientes a cada rango de adaptadores, son mostrados en el cuadro de arriba.

PART NUMBERING SYSTEM

FIRST DIGIT PRIMER DIGITO



The numbers stated in this position (from 4 to 9) refer respectively to the ends number
Los números indicados en esta posición (de 4 a 9) se refieren respectivamente al número de terminales
4 = **one end** / un terminal
5 = **two ends** / dos terminales
7 = **three ends** / tres terminales
9 = **four ends** / cuatro terminales

SECOND DIGIT SECUNDO DIGITO

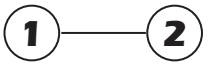


The numbers stated in this position (from 0 to 9) refer respectively to the gender and geometry of the ends
Los números indicados en esta posición (de 0 a 9) se refieren respectivamente al género y geometría de los terminales

One end / Un terminal

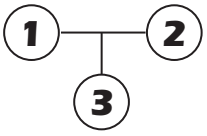
second digit segundo dígito	end gender género del terminal
0	**male plug** / tapón macho
1	**female plug** / tapón hembra
2	**sleeve** / férula
3	**nut** / tuerca

Two ends / Dos terminales



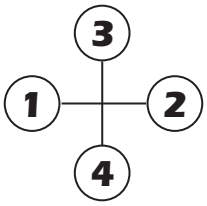
second digit segundo dígito	1st end gender género del 1er terminal	2nd end gender género del 2° terminal	geometry geometría
0	**male** / macho	**male** / macho	**straight** / recto
1	**female** / hembra	**female** / hembra	**straight** / recto
2	**male** / macho	**female** / hembra	**straight** / recto
3	**male** / macho	**male** / macho	**45° elbow** / codo de 45°
4	**female** / hembra	**female** / hembra	**45° elbow** / codo de 45°
5	**male** / macho	**female** / hembra	**45° elbow** / codo de 45°
6	**male** / macho	**male** / macho	**90° elbow** / codo de 90°
7	**female** / hembra	**female** / hembra	**90° elbow** / codo de 90°
8	**male** / macho	**female** / hembra	**90° elbow** / codo de 90°

Three ends / Tres terminales



second digit segundo dígito	1st end gender género del 1er terminal	2nd end gender género del 2° terminal	3rd end gender género del 3er terminal
0	**male** / macho	**male** / macho	**male** / macho
1	**male** / macho	**male** / macho	**female** / hembra
2	**male** / macho	**female** / hembra	**male** / macho
3	**female** / hembra	**female** / hembra	**female** / hembra
4	**female** / hembra	**female** / hembra	**male** / macho
5	**female** / hembra	**male** / macho	**female** / hembra
6	**male 1** / macho 1	**male 2** / macho 2	**male 1** / macho 1
7	**female 1** / hembra 1	**female 2** / hembra 2	**female 1** / hembra 1
8	**male 1** / macho 1	**male 1** / macho 1	**male 2** / macho 2
9	**female 1** / hembra 1	**female 1** / hembra 1	**female 2** / hembra 2

PART NUMBERING SYSTEM



Four ends / Cuatro terminales

second digit segundo dígito	1st end gender género del 1er terminal	2nd end gender género del 2° terminal	3rd en gender género del 3er terminal	4th en gender género del 4° terminal
0	**male** / macho	**male** / macho	**male** / macho	**male** / macho
1	**male 1** / macho 1	**male 1** / macho 1	**male 1** / macho 1	**male 2** / macho 2
2	**male 1** / macho 1	**male 2** / macho 2	**male 1** / macho 1	**male 2** / macho 2
3	**male** / macho	**male** / macho	**male** / macho	**female** / hembra
4	**male** / macho	**female** / hembra	**male** / macho	**female** / hembra
5	**male** / macho	**female** / hembra	**female** / hembra	**female** / hembra
6	**female** / hembra	**female** / hembra	**female** / hembra	**female** / hembra
7	**female 1** / hembra 1	**female 1** / hembra 1	**female 1** / hembra 1	**female 2** / hembra 2
8	**female 1** / hembra 1	**female 2** / hembra 2	**female 1** / hembra 1	**female 2** / hembra 2
9	**male** / macho	**male** / macho	**female** / hembra	**female** / hembra

THIRD AND FOURTH DIGIT TERCERO Y CUARTO DÍGITO

1 2 **3** **4** 5 6

The numbers stated in these positions indicate the first end.
Los números establecidos en estas posiciones indican la punta final referida al segundo dígito.

FIFTH AND SIXTH DIGIT QUINTO Y SEXTO DÍGITO

1 2 3 4 **5** **6**

The numbers stated in these positions indicate the second end.
Los números establecidos en estas posiciones indican la punta final referida al tercer dígito.

02 **BSP Male Tapered Thread long - BSP Female Tapered Thread**
Rosca BSP macho cónico largo - Rosca BSP hembra cónica

03 **BSP Male Parallel Thread O-ring (Flat Face) - ISO 1179-3**
Rosca BSP macho paralelo con O-ring (cara plana) - ISO 1179-3

04 **BSP Female fixed** / Rosca BSP hembra

05 **BSP Parallel Thread (60° cone)** / Rosca BSP paralela con asiento a 60º

07 **BSP Male Tapered Thread** / Rosca BSP macho cónico

09 **BSP Parallel Thread O-ring (Flat Face) adjustable - ISO 1179-3**
Rosca BSP Paralela con O-ring (cara plana) ajustable - ISO 1179-3

19 **Metric ISO 6149 O-ring (Flat Face)** / Rosca métrica ISO 6149 con O-ring (cara plana)

22 **JIC Thread (37° cone) long** / Rosca JIC larga (asiento a 37°)

23 **JIC Thread (37° cone) bulkhead /** Rosca JIC (asiento a 37°) pasatabique

24 **ORFS type** / Tipo ORFS

25 **JIC Thread (37° cone)** / Rosca JIC (asiento a 37°)

27 **ORFS type bulkhead** / Rosca ORFS pasatabique

28 **NPTF male - NPSM swivel female** / Macho NPTF - Hembra NPSM giratoria

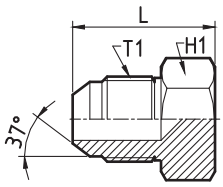
29 **ORFS type long** / Tipo ORFS larga

30 **SAE O-ring boss type** / SAE O-ring tipo boss

31 **SAE O-ring boss type adjustable** / SAE O-ring tipo boss ajustable

34 **NPFT female fixed** / Hembra fija NPFT

JIC ADAPTORS

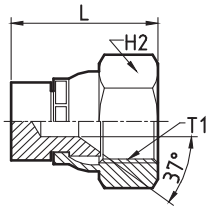


A402500

MALE PLUG JIC (SAE J514)

TAPON MACHO JIC (SAE J514)

PART. REF.	THREADS	DIMENSIONS mm	
	T_1 (UNF)	L	H_1
A402500-04	7/16" - 20	20,0	14
A402500-05	1/2" - 20	21,0	14
A402500-06	9/16" - 18	23,0	16
A402500-08	3/4" - 16	25,0	22
A402500-10	7/8" - 14	29,0	24
A402500-12	1.1/16" - 12	33,0	30
A402500-14	1.3/16" - 12	34,0	32
A402500-16	1.5/16" - 12	36,0	35
A402500-20	1.5/8" - 12	41,0	43
A402500-24	1.7/8" - 12	44,0	50



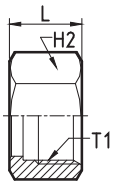
A412500

FEMALE PLUG JIC (SAE J514)

TAPON HEMBRA JIC (SAE J514)

PART. REF.	THREADS	DIMENSIONS mm	
	T_1 (UNF)	L	H_2
A412500-04	7/16" - 20	24,0	16
A412500-05	1/2" - 20	25,0	16
A412500-06	9/16" - 18	27,0	19
A412500-08	3/4" - 16	31,0	22
A412500-10	7/8" - 14	32,0	27
A412500-12	1.1/16" - 12	34,0	32
A412500-14	1.3/16" - 12	34,0	35
A412500-16	1.5/16" - 12	39,0	38
A412500-20	1.5/8" - 12	44,0	50
A412500-24	1.7/8" - 12	48,0	55

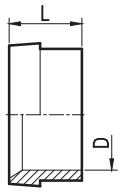
JIC ADAPTORS



A432500

NUT JIC (SAE J514)
TUERCA JIC (SAE J514)

PART. REF.	O.D. PIPE mm	THREADS	DIMENSIONS mm	
		T_1 (UNF)	L	H_2
A432500-06-04	6	7/16" - 20	15,5	16
A432500-08-05	8	1/2" - 20	17,0	17
A432500-10-06	10	9/16" - 18	18,3	19
A432500-12-08	12	3/4" - 16	21,3	24
A432500-14-10	14	7/8" - 14	24,5	27
A432500-15-10	15	7/8" - 14	24,5	27
A432500-16-10	16	7/8" - 14	24,5	27
A432500-18-12	18	1.1/16" - 12	26,0	32
A432500-20-12	20	1.1/16" - 12	26,0	32
A432500-25-16	25	1.5/16" - 12	28,5	38
A432500-30-20	30	1.5/8" - 12	31,0	50
A432500-32-20	32	1.5/8" - 12	31,0	50
A432500-38-24	38	1.7/8" - 12	36,0	55

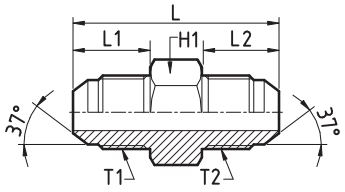


A422500

SLEEVE JIC (SAE J514)
FÉRULA JIC (SAE J514)

PART. REF.	O.D. PIPE mm	THREADS	DIMENSIONS mm
	D	T_1 (UNF)	L
A422500-06-04	6	7/16" - 20	10,5
A422500-08-05	8	1/2" - 20	11,5
A422500-10-06	10	9/16" - 18	12,5
A422500-12-08	12	3/4" - 16	14,5
A422500-14-10	14	7/8" - 14	16,5
A422500-15-10	15	7/8" - 14	16,5
A422500-16-10	16	7/8" - 14	16,5
A422500-18-12	18	1.1/16" - 12	17,0
A422500-20-12	20	1.1/16" - 12	17,0
A422500-25-16	25	1.5/16" - 12	19,5
A422500-30-20	30	1.5/8" - 12	23,0
A422500-32-20	32	1.5/8" - 12	23,0
A422500-38-24	38	1.7/8" - 12	28,5

JIC ADAPTORS

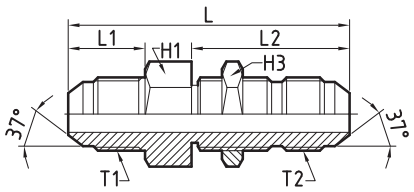


A502525

STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514)

ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L	L_1	L_2	H_1
A502525-04-04	7/16" - 20	7/16" - 20	34,0	14,0	14,0	12
A502525-05-05	1/2" - 20	1/2" - 20	36,0	15,0	15,0	14
A502525-06-06	9/16" - 18	9/16" - 18	38,0	16,0	16,0	14
A502525-06-08	9/16" - 18	3/4" - 16	43,0	17,0	18,0	19
A502525-08-08	3/4" - 16	3/4" - 16	41,0	17,0	17,0	19
A502525-08-10	3/4" - 16	7/8" - 14	48,0	19,0	21,0	22
A502525-10-10	7/8" - 14	7/8" - 14	46,0	18,5	18,5	22
A502525-10-12	7/8" - 14	1.1/16" - 12	56,0	22,0	24,0	27
A502525-12-12	1.1/16" - 12	1.1/16" - 12	52,0	21,0	21,0	27
A502525-16-16	1.5/16" - 12	1.5/16" - 12	60,0	25,0	25,0	35
A502525-20-20	1.5/8" - 12	1.5/8" - 12	65,0	26,5	26,5	44
A502525-24-24	1.7/8" - 12	1.7/8" - 12	71,0	29,0	29,0	50
A502525-32-32	2.1/2" - 12	2.1/2" - 12	86,0	35,0	35,0	65

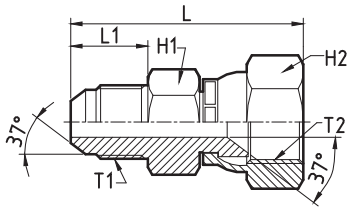


A502523

STRAIGHT BULKHEAD ADAPTOR JIC MALE 74° CONE (SAE J514)

ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (UNF)	T_2 (UNF)	L	L_1	L_2	H_1	H_3
A502523-04-04	7/16" - 20	7/16" - 20	53,0	14,0	31,5	16	16
A502523-05-05	1/2" - 20	1/2" - 20	53,5	15,0	31,0	19	16
A502523-06-06	9/16" - 18	9/16" - 18	56,0	16,0	33,0	19	19
A502523-08-08	3/4" - 16	3/4" - 16	62,0	18,5	36,0	24	24
A502523-10-10	7/8" - 14	7/8" - 14	69,5	19,5	40,0	27	27
A502523-12-12	1.1/16" - 12	1.1/16" - 12	79,0	22,0	45,5	32	32
A502523-16-16	1.5/16" - 12	1.5/16" - 12	80,0	23,0	45,5	38	38
A502523-20-20	1.5/8" - 12	1.5/8" - 12	87,0	26,0	46,5	50	50
A502523-24-24	1.7/8" - 12	1.7/8" - 12	90,0	29,0	47,0	55	55
A502523-32-32	2.1/2" - 12	2.1/2" - 12	106,5	35,0	53,0	70	70



A522525

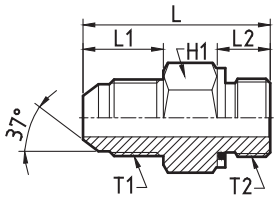
STRAIGHT ADAPTOR JIC MALE 74° CONE
JIC FEMALE 74° CONE SEAT (SAE J514)
ADAPTADOR MACHO RECTO JIC ASIENTO A 74°
JIC HEMBRA ASIENTO A 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L	L_1	H_1	H_2
A522525-04-06	7/16" - 20	9/16" - 18	42,0	14,0	14	19
A522525-04-08	7/16" - 20	3/4" - 16	47,0	15,0	19	22
A522525-04-10	7/16" - 20	7/8 " - 14	50,0	16,0	22	27
A522525-04-12	7/16" - 20	1.1/16" - 12	55,0	16,0	27	32
A522525-05-06	1/2" - 20	9/16" - 18	42,0	15,0	14	19
A522525-05-08	1/2" - 20	3/4" - 16	47,0	15,0	19	22
A522525-06-06	9/16" - 18	9/16" - 18	42,0	16,0	14	19
A522525-06-08	9/16" - 18	3/4" - 16	48,0	16,0	19	22
A522525-06-10	9/16" - 18	7/8 " - 14	51,0	16,0	22	27
A522525-06-12	9/16" - 18	1.1/16" - 12	55,0	16,0	27	32
A522525-08-08	3/4" - 16	3/4" - 16	50,0	18,0	19	22
A522525-08-10	3/4" - 16	7/8 " - 14	53,0	18,0	22	27
A522525-08-12	3/4" - 16	1.1/16" - 12	56,0	18,0	27	32
A522525-10-12	7/8" - 14	1.1/16" - 12	58,0	21,0	27	32
A522525-12-14	1.1/16" - 12	1.3/16" - 12	62,0	24,0	30	35
A522525-12-16	1.1/16" - 12	1.5/16" - 12	67,0	24,0	35	38
A522525-12-20	1.1/16" - 12	1.5/8" - 12	71,0	24,0	43	50
A522525-14-16	1.3/16" - 12	1.5/16" - 12	68,0	25,0	35	38
A522525-14-20	1.3/16" - 12	1.5/8" - 12	70,0	25,0	43	50
A522525-16-20	1.5/16" - 12	1.5/8" - 12	70,0	25,0	43	50
A522525-20-24	1.5/8" - 12	1.7/8" - 12	78,0	28,0	50	55

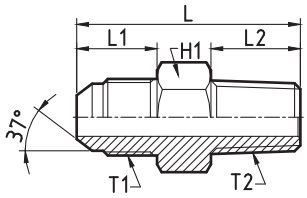
JIC ADAPTORS

A502503

STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514)
BSP MALE O-RING BOSS TYPE (ISO 1179-3)
ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514)
BSP MACHO TIPO O-RING BOSS (ISO 1179-3)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (BSPP)	L	L_1	L_2	H_1
A502503-04-02	7/16" - 20	1/8" - 28	30,0	15,0	8,5	14
A502503-04-04	7/16" - 20	1/4" - 19	36,0	16,0	12,0	19
A502503-04-06	7/16" - 20	3/8" - 19	36,5	16,0	12,0	22
A502503-04-08	7/16" - 20	1/2" - 14	40,5	16,0	14,0	27
A502503-05-02	1/2" - 20	1/8" - 28	30,0	15,0	8,5	14
A502503-05-04	1/2" - 20	1/4" - 19	36,5	16,0	12,0	19
A502503-05-06	1/2" - 20	3/8" -19	36,5	16,0	12,0	22
A502503-06-04	9/16" - 18	1/4" - 19	37,0	16,0	12,0	19
A502503-06-06	9/16" - 18	3/8" -19	37,0	17,0	12,0	22
A502503-06-08	9/16" - 18	1/2" - 14	41,0	17,0	14,0	27
A502503-08-04	3/4" - 16	1/4" - 19	39,0	18,0	12,0	19
A502503-08-06	3/4" - 16	3/8" - 19	39,0	18,0	12,0	22
A502503-08-08	3/4" -16	1/2" - 14	43,0	19,0	14,0	27
A502503-08-12	3/4" - 16	3/4" - 14	47,0	19,0	16,0	32
A502503-10-06	7/8" - 14	3/8" - 19	42,0	21,0	12,0	22
A502503-10-08	7/8" - 14	1/2" - 14	45,0	21,0	14,0	27
A502503-10-12	7/8" - 14	3/4" - 14	49,0	21,0	16,0	32
A502503-12-08	1.1/16" - 12	1/2" - 14	48,0	24,0	14,0	27
A502503-12-12	1.1/16" - 12	3/4" - 14	52,0	24,0	16,0	32
A502503-12-16	1.1/16" - 12	1" - 11	55,0	24,0	18,0	41
A502503-14-12	1.3/16" - 12	3/4" - 14	54,0	23,0	16,0	32
A502503-16-12	1.5/16" - 12	3/4" - 14	53,0	25,0	16,0	35
A502503-16-16	1.5/16" - 12	1" - 11	55,0	25,0	18,0	41
A502503-16-20	1.5/16" - 12	1.1/4" - 11	60,0	26,0	20,0	50
A502503-20-16	1.5/8" - 12	1" - 11	59,0	28,0	18,0	43
A502503-20-20	1.5/8" - 12	1.1/4" - 11	62,0	28,0	20,0	50
A502503-24-20	1.7/8" - 12	1.1/4" - 11	64,0	30,0	20,0	50
A502503-24-24	1.7/8" - 12	1.1/2" - 11	67,0	30,0	22,0	55



A502507

STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE TAPERED (ISO 7)

ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514) BSP MACHO CÓNICO (ISO 7)

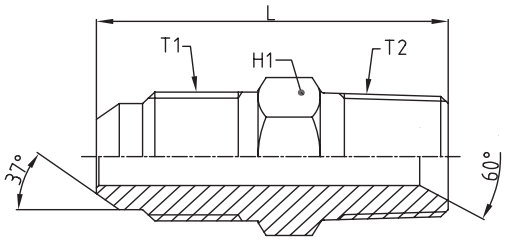
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (BSPT)	L	L_1	L_2	H_1
A502507-04-02	7/16" - 20	1/8" - 28	31,0	14,0	11,0	12
A502507-04-04	7/16" - 20	1/4" - 19	34,0	14,0	14,0	14
A502507-04-06	7/16" - 20	3/8" - 19	40,0	16,0	16,0	19
A502507-05-02	1/2" - 20	1/8" - 28	32,0	15,0	11,0	14
A502507-05-04	1/2" - 20	1/4" - 19	36,0	15,0	14,0	14
A502507-05-06	1/2" - 20	3/8" - 19	40,0	16,0	16,0	19
A502507-05-08	1/2" - 20	1/2" - 14	44,0	16,0	18,0	22
A502507-06-02	9/16" - 18	1/8" - 28	33,0	16,0	11,0	14
A502507-06-04	9/16" - 18	1/4" - 19	36,0	16,0	14,0	14
A502507-06-06	9/16" - 18	3/8" - 19	40,0	16,0	16,0	19
A502507-06-08	9/16" - 18	1/2" - 14	44,0	17,0	18,0	22
A502507-08-04	3/4" - 16	1/4" - 19	40,0	18,0	14,0	19
A502507-08-06	3/4" - 16	3/8" - 19	41,0	18,0	16,0	19
A502507-08-08	3/4" - 16	1/2" - 14	45,0	18,0	18,0	22
A502507-08-12	3/4" - 16	3/4" - 14	49,0	19,0	20,0	27
A502507-10-06	7/8" - 14	3/8" - 19	42,5	20,0	16,0	22
A502507-10-08	7/8" - 14	1/2" - 14	46,0	20,0	18,0	22
A502507-10-12	7/8" - 14	3/4" - 14	50,0	20,0	20,0	27
A502507-12-08	1.1/16" - 12	1/2" - 14	51,0	24,0	18,0	27
A502507-12-12	1.1/16" - 12	3/4" - 14	53,0	24,0	20,0	27
A502507-12-16	1.1/16" - 12	1" - 11	59,0	24,0	23,0	35
A502507-16-12	1.5/16" - 12	3/4" - 14	57,0	25,0	20,0	35
A502507-16-16	1.5/16" - 12	1" - 11	60,0	25,0	23,0	35
A502507-16-20	1.5/16" - 12	1.1/4" - 11	65,0	25,0	26,0	44
A502507-20-16	1.5/8" - 12	1" - 11	65,0	28,0	23,0	44
A502507-20-20	1.5/8" - 12	1.1/4" - 11	65,0	28,0	25,0	44
A502507-20-24	1.5/8" - 12	1.1/2" - 11	71,0	28,0	29,0	50
A502507-24-20	1.7/8" - 12	1.1/4" - 11	71,0	30,0	26,0	50
A502507-24-24	1.7/8" - 12	1.1/2" - 11	71,0	30,0	29,0	50
A502507-24-32	1.7/8" - 12	2" - 11	81,0	30,0	33,5	65
A502507-32-24	2.1/2" - 12	1.1/2" - 11	81,0	35,5	29,0	65
A502507-32-32	2.1/2" - 12	2" - 11	86,0	35,5	33,5	65

JIC ADAPTORS

A502528 NEW

STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514) NPTF MALE 60° CONE SEAT (SAE J514)

ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514) MACHO NPTF 60° (SAE J514)

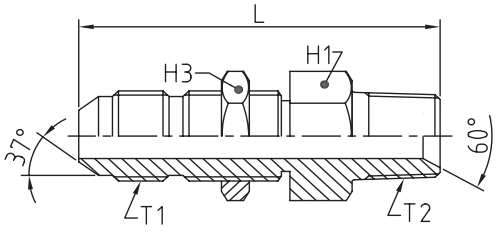


PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L	H1			
A502528-04-02	7/16"-20	1/8"-27	31,0	13			
A502528-04-04	7/16"-20	1/4"-18	36,0	14			
A502528-05-04	1/2"-20	1/4"-18	36,0	14			
A502528-06-04	9/16"-18	1/4"-18	36,3	16			
A502528-06-06	9/16"-18	3/8"-18	36,3	19			
A502528-06-08	9/16"-18	1/2"-14	42,9	22			
A502528-08-06	3/4"-16	3/8"-18	38,9	19			
A502528-08-08	3/4"-16	1/2"-14	45,5	22			
A502528-10-08	7/8"-14	1/2"-14	48,0	24			
A502528-10-12	7/8"-14	3/4"-14	49,5	27			
A502528-12-08	1.1/16"-12	1/2"-14	52,3	27			
A502528-12-12	1.1/16"-12	3/4"-14	52,3	27			
A502528-12-16	1.1/16"-12	1"-11,5	57,2	35			
A502528-16-12	1.5/16"-12	3/4"-14	53,6	35			
A502528-16-16	1.5/16"-12	1"-11,5	58,4	35			
A502528-16-20	1.5/16"-12	1.1/4"-11,5	61,0	44			
A502528-20-20	1.5/8"-12	1.1/4"-11,5	62,2	44			
A502528-24-24	1.7/8"-12	1.1/2"-11,5	68,0	50			

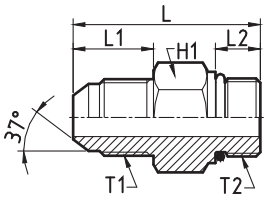
A502328 NEW

STRAIGHT ADAPTOR JIC MALE BULKHEAD 74° CONE (SAE J514) NPTF MALE 60° CONE SEAT (SAE J514)

ADAPTADOR MACHO PASATABIQUE RECTO JIC ASIENTO A 74° (SAE J514) - MACHO NPTF 60° (SAE J514)



PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L	H1	H3		
A502328-04-04	7/16"-20	1/4"-18	52,8	17	17		
A502328-06-04	9/16"-18	1/4"-18	55,4	22	22		
A502328-08-06	3/4"-16	3/8"-18	61,7	24	24		
A502328-10-08	7/8"-14	1/2"-14	71,1	30	30		
A502328-12-12	1.1/16"-12	3/4"-14	74,2	36	36		
A502328-16-16	1.5/16"-12	1"-11,5	78,7	41	41		



A502530

STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514) SAE MALE O-RING BOSS TYPE (SAE J1926)

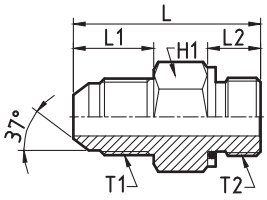
ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L	L_1	L_2	H_1
A502530-04-04	7/16" - 20	7/16" - 20	31,0	15,0	9,5	14
A502530-04-05	7/16" - 20	1/2" - 20	31,0	15,0	9,5	16
A502530-04-06	7/16" - 20	9/16" - 18	34,0	16,0	10,0	19
A502530-05-04	1/2" - 20	7/16" - 20	32,0	16,0	9,5	14
A502530-05-05	1/2" - 20	1/2" - 20	32,0	16,0	9,5	16
A502530-05-06	1/2" - 20	9/16" - 18	34,0	16,0	10,0	19
A502530-06-04	9/16" - 18	7/16" - 20	32,0	16,0	9,5	14
A502530-06-05	9/16" - 18	1/2" - 20	32,0	16,0	9,5	16
A502530-06-06	9/16" - 18	9/16" - 18	35,0	16,0	10,0	19
A502530-06-08	9/16" - 18	3/4" - 16	36,5	17,0	11,5	22
A502530-06-12	9/16" - 18	1.1/16" - 12	45,0	17,0	15,5	32
A502530-08-06	3/4" - 16	9/16" - 18	37,0	18,0	10,0	19
A502530-08-08	3/4" - 16	3/4" - 16	37,5	18,0	11,5	22
A502530-08-10	3/4" - 16	7/8" - 14	41,5	18,0	13,0	27
A502530-08-12	3/4" - 16	1.1/16" - 12	47,0	19,5	15,5	32
A502530-10-08	7/8" - 14	3/4" - 16	41,5	20,0	11,5	22
A502530-10-10	7/8" - 14	7/8" - 14	43,0	20,0	13,0	27
A502530-10-12	7/8" - 14	1.1/16" - 12	48,0	21,0	15,5	32
A502530-12-08	1.1/16" - 12	3/4" - 16	45,0	24,0	11,5	27
A502530-12-10	1.1/16" - 12	7/8" - 14	47,0	24,0	13,0	27
A502530-12-12	1.1/16" - 12	1.1/16" - 12	51,0	24,0	15,5	32
A502530-12-16	1.1/16" - 12	1.5/16" - 12	52,0	24,0	15,5	38
A502530-16-12	1.5/16" - 12	1.1/16" - 12	53,0	25,0	15,5	35
A502530-16-16	1.5/16" - 12	1.5/16" - 12	54,0	25,0	15,5	38
A502530-16-20	1.5/16" - 12	1.5/8" - 12	56,0	25,0	15,5	50
A502530-20-20	1.5/8" - 12	1.5/8" - 12	58,5	28,0	15,5	50
A502530-24-24	1.7/8" - 12	1.7/8" - 12	60,0	29,0	15,5	55
A502530-32-32	2.1/2" - 12	2.1/2" - 12	70,5	35,0	15,5	70

JIC ADAPTORS

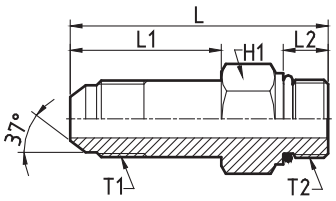
A502519

STRAIGHT ADAPTOR JIC MALE (SAE J514)
METRIC MALE (ISO 6149)
ADAPTADOR MACHO RECTO JIC (SAE J514)
MACHO METRICO (ISO 6149)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (METRIC)	L	L_1	L_2	H_1
A502519-04-10	7/16" - 20	10x1	30,0	15,0	9,0	16
A502519-04-12	7/16" - 20	12x1.5	34,0	15,0	11,0	19
A502519-05-10	1/2" - 20	10x1	30,0	15,0	9,0	16
A502519-05-12	1/2" - 20	12x1.5	35,0	16,0	11,0	19
A502519-05-14	1/2" - 20	14x1.5	35,0	16,0	11,0	19
A502519-05-18	1/2" - 20	18x1.5	38,0	16,0	14,0	22
A502519-06-12	9/16" - 18	12x1.5	35,0	16,0	11,0	19
A502519-06-14	9/16" - 18	14x1.5	35,0	16,0	11,0	19
A502519-06-16	9/16" - 18	16x1.5	37,5	17,0	12,5	22
A502519-06-18	9/16" - 18	18x1.5	39,0	17,0	14,0	22
A502519-06-22	9/16" - 18	22x1.5	42,0	17,0	15,0	27
A502519-08-16	3/4" - 16	16x1.5	39,0	19,0	12,5	22
A502519-08-18	3/4" - 16	18x1.5	41,0	19,0	14,0	24
A502519-10-18	7/8" - 14	18x1.5	42,0	20,0	14,0	24
A502519-10-22	7/8" - 14	22x1.5	45,0	20,0	15,0	27
A502519-12-22	1.1/16" - 12	22x1.5	49,0	24,0	15,0	27
A502519-12-27	1.1/16" - 12	27x2	54,0	24,0	18,5	32
A502519-16-27	1.5/16" - 12	27x2	55,0	25,0	18,5	35
A502519-16-33	1.5/16" - 12	33x2	56,0	25,0	18,5	41
A502519-20-42	1.5/8" - 12	42x2	62,0	28,0	19,0	50
A502519-24-48	1.7/8" - 12	48x2	67,0	30,0	22,0	55

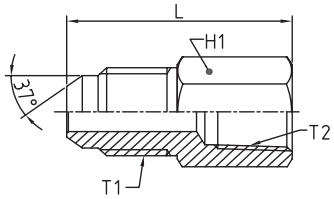
JIC ADAPTORS



A502230

STRAIGHT ADAPTOR LONG JIC MALE 74° CONE
SAE MALE O-RING BOSS TYPE (SAE J1926)
ADAPTADOR MACHO RECTO LARGO JIC ASIENTO A 74°
SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L	L_1	L_2	H_1
A502230-04-04	7/16" - 20	7/16" - 20	53,0	35,5	9,5	14
A502230-05-05	1/2" - 20	1/2" - 20	54,5	37,0	9,5	16
A502230-06-06	9/16" - 18	9/16" - 18	58,5	39,5	10,0	19
A502230-08-08	3/4" - 16	3/4" - 16	68,5	48,0	11,5	22
A502230-10-10	7/8" - 14	7/8" - 14	77,0	53,0	13,0	27
A502230-12-12	1.1/16" - 12	1.1/16" - 12	91,5	63,5	15,5	32
A502230-16-16	1.5/16" - 12	1.5/16" - 12	101,0	72,0	15,5	38
A502230-20-20	1.5/8" - 12	1.5/8" - 12	119,0	88,0	15,5	50
A502230-24-24	1.7/8" - 12	1.7/8" - 12	130,5	98,5	15,5	55
A502230-32-32	2.1/2" - 12	2.1/2" - 12	160,0	123,0	15,5	70



NEW

A522534

STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514)
NPTF FIXED FEMALE (SAE J514)
ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514)
HEMBRA NPTF 74° (SAE J514)

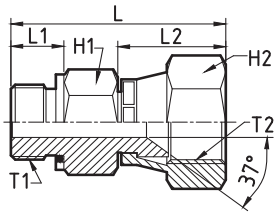
PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L	H1			
A522534-04-04	7/16"-20	1/4"-18	35,3	19			
A522534-05-04	1/2"-20	1/4"-18	35,3	19			
A522534-06-04	9/16"-18	1/4"-18	35,6	19			
A522534-06-06	9/16"-18	3/8"-18	37,0	22			
A522534-08-08	3/4"-16	1/2"-14	45,5	27			
A522534-10-08	7/8"-14	1/2"-14	48,0	27			
A522534-12-12	1.1/16"-12	3/4"-14	52,3	35			
A522534-16-16	1.5/16"-12	1"-11,5	59,7	41			
A522534-20-20	1.5/8"-12	1.1/4"-11,5	63,3	50			

JIC ADAPTORS

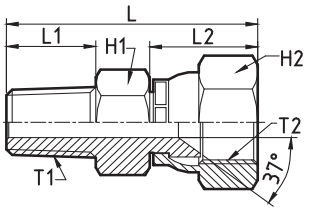
A520325

STRAIGHT ADAPTOR JIC FEMALE 74° CONE SEAT (SAE J514)
BSP MALE O-RING BOSS TYPE (ISO 1179-3)

ADAPTADOR HEMBRA RECTO JIC ASIENTO A 74° (SAE J514)
BSP MACHO TIPO O-RING BOSS (ISO 1179-3)



PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (BSPP)	T_2 (UNF)	L	L_1	L_2	H_1	H_2
A520325-02-04	1/8" - 28	7/16" - 20	32,0	8,5	17,0	14	16
A520325-02-05	1/8" - 28	1/2" - 20	33,0	8,5	18,0	14	16
A520325-04-04	1/4" - 19	7/16" - 20	37,0	12,0	17,0	19	16
A520325-04-05	1/4" - 19	1/2" - 20	38,0	12,0	18,0	19	16
A520325-04-06	1/4" - 19	9/16" - 18	39,5	12,0	19,5	19	19
A520325-04-08	1/4" - 19	3/4" - 16	43,5	12,0	23,5	19	22
A520325-06-04	3/8" - 19	7/16" - 20	37,0	12,0	17,0	22	16
A520325-06-05	3/8" - 19	1/2" - 20	38,5	12,0	18,0	22	16
A520325-06-06	3/8" - 19	9/16" - 18	40,0	12,0	19,5	22	19
A520325-06-08	3/8" - 19	3/4" 16	43,5	12,0	23,3	22	22
A520325-06-10	3/8" - 19	7/8" - 14	46,0	12,0	25,0	22	27
A520325-08-04	1/2" - 14	7/16" - 20	41,0	14,0	17,0	27	16
A520325-08-06	1/2" - 14	9/16" - 18	43,5	14,0	20,0	27	19
A520325-08-08	1/2" - 14	3/4" - 16	47,5	14,0	23,5	27	22
A520325-08-10	1/2" - 14	7/8" - 14	49,0	14,0	25,0	27	27
A520325-08-12	1/2" - 14	1.1/16" - 12	51,5	14,0	27,5	27	32
A520325-12-08	3/4" - 14	3/4" - 16	53,0	16,0	23,5	32	22
A520325-12-10	3/4" - 14	7/8" - 14	54,0	16,0	25,0	32	27
A520325-12-12	3/4" - 14	1.1/16" - 12	55,5	16,0	27,5	32	32
A520325-12-14	3/4" - 14	1.3/16" - 12	55,0	16,0	27,0	32	32
A520325-12-16	3/4" - 14	1.5/16" - 12	54,0	16,0	31,0	35	38
A520325-16-12	1" - 11	1.1/16" - 12	58,0	18,0	27,5	41	32
A520325-16-16	1" - 11	1.5/16" - 12	61,5	18,0	31,0	41	38
A520325-16-20	1" - 11	1.5/8" - 12	64,0	18,0	32,0	43	50
A520325-20-16	1.1/4" - 11	1.5/16" - 12	66,0	20,0	35,0	50	38
A520325-20-20	1.1/4" - 11	1.5/8" - 12	67,0	20,0	32,0	50	50
A520325-20-24	1.1/4" - 11	1.7/8" - 12	70,5	20,0	35,5	50	55
A520325-24-24	1.1/2" - 11	1.7/8" - 12	74,5	22,0	35,5	55	55



A520725

STRAIGHT ADAPTOR JIC FEMALE 74° CONE SEAT (SAE J514) - BSP MALE TAPERED (ISO 7)

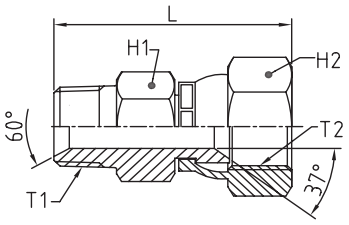
ADAPTADOR HEMBRA RECTO JIC ASIENTO A 74° (SAE J514) BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (BSPT)	T_2 (UNF)	L	L_1	L_2	H_1	H_2
A520725-02-04	1/8" - 28	7/16" - 20	34,0	11,0	17,0	12	16
A520725-02-05	1/8" - 28	1/2" - 20	35,0	11,0	18,0	14	16
A520725-04-04	1/4" - 19	7/16" - 20	39,7	14,0	17,0	14	16
A520725-04-05	1/4" - 19	1/2" - 20	38,0	14,0	28,0	14	16
A520725-04-06	1/4" - 19	9/16" - 18	39,5	14,0	19,5	14	19
A520725-04-08	1/4" - 19	3/4" - 16	45,5	14,0	23,5	19	22
A520725-06-06	3/8" - 19	9/16" - 18	43,5	16,0	19,5	19	19
A520725-06-08	3/8" - 19	3/4" - 16	47,5	16,0	23,5	19	22
A520725-06-10	3/8" - 19	7/8" 14	49,0	16,0	25,0	22	27
A520725-08-06	1/2" - 14	9/16" - 18	47,0	19,0	19,5	22	19
A520725-08-08	1/2" - 14	3/4" - 16	51,0	19,0	23,5	22	22
A520725-08-10	1/2" - 14	7/8" - 14	53,0	19,0	25,0	22	27
A520725-08-12	1/2" - 14	1.1/16" - 12	57,0	19,0	27,5	27	32
A520725-12-10	3/4" - 14	7/8" - 14	55,0	20,0	25,0	27	27
A520725-12-12	3/4" - 14	1.1/16" - 12	57,5	20,0	27,5	27	32
A520725-12-14	3/4" - 14	1.3/16" - 12	59,0	20,0	27,0	32	35
A520725-12-16	3/4" - 14	1.5/16" - 12	63,0	20,0	31,0	35	38
A520725-16-12	1" - 11	1.1/16" - 12	62,5	23,0	27,5	35	32
A520725-16-16	1" - 11	1.5/16" - 12	64,0	23,0	31,0	35	38
A520725-16-20	1" - 11	1.5/8" - 12	68,0	23,0	32,0	44	50
A520725-20-20	1.1/4" - 11	1.5/8" - 12	71,0	26,0	32,0	44	50
A520725-24-24	1.1/2" - 11	1.7/8" - 12	80,0	29,0	35,5	50	55

JIC ADAPTORS

A522825 NEW

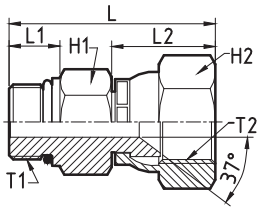
STRAIGHT ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514)
JIC FEMALE 74° CONE SEAT (SAE J514)
ADAPTADOR MACHO RECTO NPTF ASIENTO A 74° (SAE J514)
HEMBRA JIC 74° (SAE J514)



PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (UNF)	L	H1	H2		
A522825-02-04	1/8"-27	7/16"-20	34,3	13	16		
A522825-04-04	1/4"-18	7/16"-20	39,6	16	16		
A522825-04-06	1/4"-18	9/16"-18	42,6	14	19		
A522825-06-06	3/8"-18	9/16"-18	41,4	19	19		
A522825-06-08	3/8"-18	3/4"-16	43,9	22	22		
A522825-08-08	1/2"-14	3/4"-16	50,3	22	22		
A522825-12-12	3/4"-14	1.1/16"-12	57,9	27	32		
A522825-16-16	1"-11,5	1.5/16"-12	65,0	35	38		
A522825-20-20	1.1/4"-11,5	1.5/8"-12	72,0	44	50		

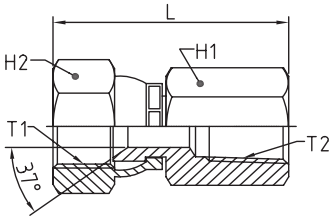
A523025

STRAIGHT ADAPTOR SAE MALE O-RING BOSS TYPE (SAE J1926)
JIC FEMALE 74° CONE SEAT (SAE J514)
ADAPTADOR MACHO RECTO SAE TIPO O-RING BOSS (SAE J1926)
JIC HEMBRA ASIENTO A 74° (SAE J514)



PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (UNF)	L	L1	L2	H1	H2
A523025-04-04	7/16" - 20	7/16" - 20	32,5	9.5	17,0	14	16
A523025-05-05	1/2" - 20	1/2" - 20	36,0	9.5	18,0	16	16
A523025-06-06	9/16" - 18	9/16" - 18	37,5	10,0	19,5	19	19
A523025-08-08	3/4" - 16	3/4" - 16	43,5	11,5	23,5	22	22
A523025-10-10	7/8" - 14	7/8" - 14	48,0	13,0	25,0	27	27
A523025-12-12	1.1/16" - 12	1.1/16" - 12	55,5	15,5	27,5	32	32
A523025-14-14	1.3/16" - 12	1.3/16" - 12	54,5	15,5	27,0	35	35
A523025-16-16	1.5/16" - 12	1.5/16" - 12	59,0	15,5	31,0	38	38
A523025-20-20	1.5/8" - 12	1.5/8" - 12	62,5	15,5	32,0	50	50
A523025-24-24	1.7/8" - 12	1.7/8" - 12	68,0	15,5	35,5	55	55

JIC ADAPTORS



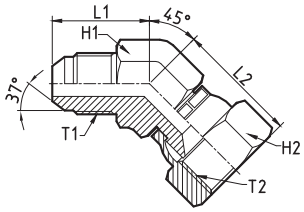
NEW

A512534

STRAIGHT ADAPTOR JIC FEMALE 74° CONE SEAT (SAE J514) NPTF FIXED FEMALE (SAE J514)

ADAPTADOR MACHO RECTO JIC ASIENTO A 74° (SAE J514) HEMBRA FIJO NPTF (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L	H1	H2		
A512534-06-06	9/16"-18	3/8"-18	42,8	22	19		
A512534-08-06	3/4"-16	3/8"-18	45,3	22	22		
A512534-08-08	3/4"-16	1/2"-14	48,5	27	22		
A512534-10-08	7/8"-14	1/2"-14	50,8	27	27		
A512534-12-12	1.1/16"-12	3/4"-14	58,0	35	32		
A512534-16-16	1.5/16"-12	1"-11,5	66,4	41	38		
A512534-20-20	1.5/8"-12	1.1/4"-11,5	71,8	50	50		



A552525

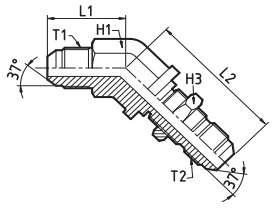
45° ELBOW ADAPTOR JIC MALE 74° CONE JIC FEMALE 74° CONE SEAT (SAE J514)

ADAPTADOR CODO 45° JIC MACHO ASIENTO A 74° JIC HEMBRA ASIENTO A 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_2
A552525-04-04	7/16" - 20	7/16" - 20	22,0	24,5	14	16
A552525-05-05	1/2" - 20	1/2" - 20	22,0	26,5	14	16
A552525-06-06	9/16" - 18	9/16" - 18	22,0	28,5	14	19
A552525-08-08	3/4" - 16	3/4" - 16	26,0	32,0	19	22
A552525-10-10	7/8" - 14	7/8" - 14	30,0	37,0	22	27
A552525-12-12	1.1/16" - 12	1.1/16" - 12	32,5	38,5	27	32
A552525-16-16	1.5/16" - 12	1.5/16" - 12	40,0	45,0	35	38
A552525-20-20	1.5/8" - 12	1.5/8" - 12	46,0	51,5	44	50
A552525-24-24	1.7/8" - 12	1.7/8" - 12	49,0	57,5	50	55

JIC ADAPTORS

A532523

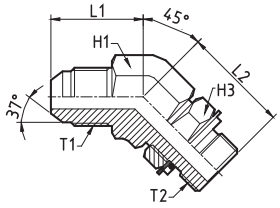


45° ELBOW BULKHEAD ADAPTOR JIC MALE 74° CONE (SAE J514)

ADAPTADOR CODO 45° REFORZADO JIC MACHO ASIENTO A 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_3
A532523-04-04	7/16" - 20	7/16" - 20	22,0	39,0	14	16
A532523-05-05	1/2" - 20	1/2" - 20	22,0	39,0	14	16
A532523-06-06	9/16" - 18	9/16" - 18	22,0	42,5	14	19
A532523-08-08	3/4" - 16	3/4" - 16	26,0	49,0	19	24
A532523-10-10	7/8" - 14	7/8" - 14	30,0	55,0	22	27
A532523-12-12	1.1/16" - 12	1.1/16" - 12	32,5	62,0	27	32
A532523-16-16	1.5/16" - 12	1.5/16" - 12	40,0	65,0	35	38
A532523-20-20	1.5/8" - 12	1.5/8" - 12	46,0	67,0	41	50
A532523-24-24	1.7/8" - 12	1.7/8" - 12	49,0	67,5	50	55

A532509

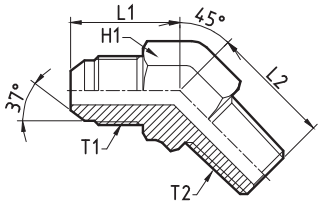


45° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE O-RING BOSS TYPE (ISO 1179-3)

ADAPTADOR AJUSTABLE CODO 45° JIC MACHO ASIENTO A 74° (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (BSPP)	L_1	L_2	H_1	H_3
A532509-04-02	7/16" - 20	1/8" - 28	22,0	26,5	14	14
A532509-04-04	7/16" - 20	1/4" - 19	22,0	28,0	14	19
A532509-05-04	1/2" - 20	1/4" - 19	22,0	28,0	14	19
A532509-06-04	9/16" - 18	1/4" - 19	22,0	28,0	14	19
A532509-06-06	9/16" - 18	3/8" - 19	25,0	33,0	19	22
A532509-08-06	3/4" - 16	3/8" - 19	26,0	33,0	19	22
A532509-08-08	3/4" - 16	1/2" - 14	26,0	38,5	22	27
A532509-10-08	7/8" - 14	1/2" - 14	30,0	38,5	22	27
A532509-10-12	7/8" - 14	3/4" - 14	31,5	43,0	27	32
A532509-12-12	1.1/16" - 12	3/4" - 14	32,5	43,0	27	32
A532509-16-16	1.5/16" - 12	1" - 11	40,0	47,0	35	41
A532509-20-20	1.5/8" - 12	1.1/4" - 11	46,0	48.5	44	50

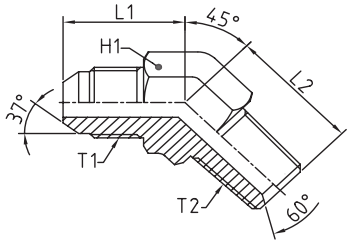
JIC ADAPTORS



A532507

45° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514)
BSP MALE TAPERED (ISO 7)
ADAPTADOR CODO 45° MACHO JIC ASIENTO A 74° (SAE J514)
BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS	DIMENSIONS mm		
	T_1 (UNF)	T_2 (BSPT)	L_1	L_2	H_1
A532507-04-02	7/16" - 20	1/8" - 28	22,0	18,0	14
A532507-04-04	7/16" - 20	1/4" - 19	22,0	21,0	14
A532507-05-04	1/2" - 20	1/4" - 19	22,0	21,0	14
A532507-06-04	9/16" - 18	1/4" - 19	22,0	21,0	14
A532507-06-06	9/16" - 18	3/8" - 19	26,0	26,0	19
A532507-08-06	3/4" - 16	3/8" - 19	26,0	26,0	19
A532507-08-08	3/4" - 16	1/2" - 14	28,0	31,0	22
A532507-10-08	7/8" - 14	1/2" - 14	28,0	31,0	22
A532507-12-12	1.1/16" - 12	3/4" - 14	32,5	31,5	27
A532507-16-16	1.5/16" - 12	1" - 11	40,0	41,0	35
A532507-20-20	1.5/8" - 12	1.1/4" - 11	46,0	46,0	44
A532507-24-24	1.7/8" - 12	1.1/2" - 11	49,0	46,5	50
A532507-32-32	2.1/2" - 12	2" - 11	58,0	55,0	65



NEW

A532528

45° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514)
NPTF MALE 60° CONE SEAT (SAE J514)
ADAPTADOR CODO 45° MACHO JIC ASIENTO A 74° (SAE J514)
MACHO NPTF 60° (SAE J514)

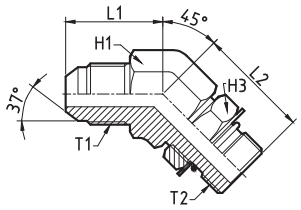
PART. REF.	THREADS	DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L1	L2	H1	
A532528-04-02	7/16"-20	1/8"-27	18,3	16,3	11	
A532528-04-04	7/16"-20	1/4"-18	20,8	21,8	14	
A532528-05-04	1/2"-20	1/4"-18	20,8	21,8	14	
A532528-06-04	9/16"-18	1/4"-18	21,0	21,8	14	
A532528-06-06	9/16"-18	3/8"-18	22,1	24,1	19	
A532528-08-08	3/4"-16	1/2"-14	25,2	29,7	22	
A532528-08-12	3/4"-16	3/4"-14	26,4	30,5	27	
A532528-10-08	7/8"-14	1/2"-14	28,2	29,7	22	
A532528-12-12	1.1/16"-12	3/4"-14	32,5	30,5	27	
A532528-16-16	1.5/16"-12	1"-11,5	37,3	37,6	33	
A532528-20-20	1.5/8"-12	1.1/4"-11,5	40,4	42,4	41	

JIC ADAPTORS

A532531

45° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) SAE MALE O-RING BOSS TYPE (SAE J1926)

ADAPTADOR AJUSTABLE CODO 45° JIC MACHO ASIENTO A 74° (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)

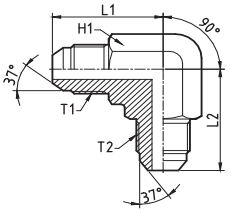


PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_3
A532531-04-04	7/16" - 20	7/16" - 20	22,0	26,5	14	16
A532531-05-05	1/2" - 20	1/2" - 20	22,0	26,5	14	16
A532531-06-06	9/16" - 18	9/16" - 18	22,0	28,0	14	19
A532531-06-08	9/16" - 18	3/4" - 16	24,0	33,0	19	24
A532531-08-06	3/4" - 16	9/16" - 18	26,0	30,0	19	19
A532531-08-08	3/4" - 16	3/4" - 16	26,0	33,0	19	24
A532531-08-10	3/4" - 16	7/8" - 14	28,0	38,5	22	27
A532531-10-10	7/8" - 14	7/8" - 14	30,0	38,5	22	27
A532531-12-10	1.1/16" - 12	7/8" - 14	32,5	41,5	27	27
A532531-12-12	1.1/16" - 12	1.1/16" - 12	32,5	43,0	27	32
A532531-16-16	1.5/16" - 12	1.5/16" - 12	40,0	47,0	35	38
A532531-20-20	1.5/8" - 12	1.5/8" - 12	46,0	48,5	44	50

A562525

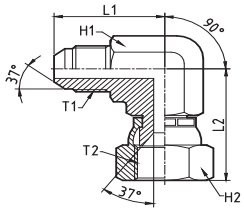
90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514)

ADAPTADOR CODO 90° JIC MACHO ASIENTO A 74° (SAE J514)



PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1
A562525-04-04	7/16" - 20	7/16" - 20	22,5	22,5	12
A562525-05-05	1/2" - 20	1/2" - 20	25,0	25,0	14
A562525-06-06	9/16" - 18	9/16" - 18	26,0	26,0	14
A562525-08-08	3/4" - 16	3/4" - 16	31,5	31,5	19
A562525-10-10	7/8" - 14	7/8" - 14	36,5	36,5	22
A562525-12-12	1.1/16" - 12	1.1/16" - 12	42,0	42,0	27
A562525-16-16	1.5/16" - 12	1.5/16" - 12	46,0	46,0	35
A562525-20-20	1.5/8" - 12	1.5/8" - 12	52,0	52,0	41
A562525-24-24	1.7/8" - 12	1.7/8" - 12	59,0	59,0	50
A562525-32-32	2.1/2" - 12	2.1/2" - 12	75,0	75,0	65

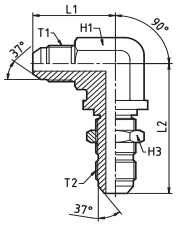
JIC ADAPTORS



A582525

90° ELBOW ADAPTOR JIC MALE 74° CONE
JIC FEMALE 74° CONE SEAT (SAE J514)
ADAPTADOR CODO 90º JIC MACHO ASIENTO A 74º
JIC HEMBRA 74º (SAE 1514)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_2
A582525-04-04	7/16" - 20	7/16" - 20	25,0	26,0	14	16
A582525-05-05	1/2" - 20	1/2" - 20	25,0	28,0	14	16
A582525-06-06	9/16" - 18	9/16" - 18	27,0	31,0	14	19
A582525-08-08	3/4" - 16	3/4" - 16	31,5	35,5	19	22
A582525-10-10	7/8" - 14	7/8" - 14	36,5	42,0	22	27
A582525-12-12	1.1/16" - 12	1.1/16" - 12	42,0	45,5	27	32
A582525-16-16	1.5/16" - 12	1.5/16" - 12	46,0	51,5	35	38
A582525-20-20	1.5/8" - 12	1.5/8" - 12	52,0	59,0	41	50
A582525-24-24	1.7/8" - 12	1.7/8" - 12	59,0	67,0	50	55



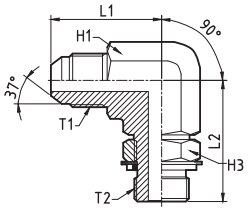
A562523

90° ELBOW BULKHEAD ADAPTOR JIC MALE 74° CONE (SAE J514)
ADAPTADOR CODO 90º PASATABIQUE JIC MACHO ASIENTO A 74º (SAE J514)

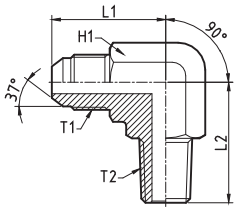
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_3
A562523-04-04	7/16" - 20	7/16" - 20	24,0	41,0	14	16
A562523-05-05	1/2" - 20	1/2" - 20	24,0	43,0	14	16
A562523-06-06	9/16" - 18	9/16" - 18	24,0	45,0	14	19
A562523-08-08	3/4" - 16	3/4" - 16	31,5	54,0	19	24
A562523-10-10	7/8" - 14	7/8" - 14	35,0	60,0	24	27
A562523-12-12	1.1/16" - 12	1.1/16" - 12	38,0	68,0	27	32
A562523-16-16	1.5/16" - 12	1.5/16" - 12	48,0	71,0	36	38

A562509

90° ELBOW ADJUSTABLE ADAPTOR JIC MALE
74° CONE (SAE J514) BSP MALE O-RING BOSS TYPE (ISO 1179-3)
ADAPTADOR AJUSTABLE CODO 90º JIC MACHO ASIENTO
A 74º (SAE J514) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (BSPP)	L_1	L_2	H_1	H_3
A562509-04-02	7/16" - 20	1/8" - 28	25,0	26,5	14	14
A562509-04-04	7/16" - 20	1/4" - 19	25,0	31,5	14	19
A562509-04-06	7/16" - 20	3/8" - 19	28,5	36,5	19	22
A562509-04-08	7/16" - 20	1/2" - 14	31,0	43,0	22	27
A562509-05-02	1/2" - 20	1/8" - 28	25,0	26,5	14	14
A562509-05-04	1/2" - 20	1/4" - 19	25,0	31,5	14	19
A562509-05-06	1/2" - 20	3/8" - 19	28,5	36,5	19	22
A562509-06-04	9/16" - 18	1/4" - 19	27,0	31,5	14	19
A562509-06-06	9/16" - 18	3/8" - 19	29,0	36,5	19	22
A562509-06-08	9/16" - 18	1/2" - 14	31,0	43,0	22	27
A562509-08-04	3/4" - 16	1/4" - 19	31,5	33,5	19	19
A562509-08-06	3/4" - 16	3/8" - 19	31,5	36,5	19	22,
A562509-08-08	3/4" - 16	1/2" - 14	34,0	43,0	22	27,
A562509-08-12	3/4" - 16	3/4" - 14	37,0	49,0	27	32,
A562509-10-06	7/8" - 14	3/8" - 19	36,5	39,5	22	22
A562509-10-08	7/8" - 14	1/2" - 14	36,5	43,0	22	27
A562509-10-12	7/8" - 14	3/4" - 14	39,5	49,0	27	32
A562509-12-08	1.1/16" - 12	1/2" - 14	42,0	45,5	27	27
A562509-12-12	1.1/16" - 12	3/4" - 14	42,0	49,0	27	32
A562509-12-16	1.1/16" - 12	1" - 11	46,0	52,0	35	41
A562509-16-12	1.5/16" - 12	3/4" - 14	46,0	52,0	35	32
A562509-16-16	1.5/16" - 12	1" - 11	46,0	52,0	35	41
A562509-16-20	1.5/16" - 12	1.1/4" - 11	52,0	57,0	41	50
A562509-20-16	1.5/8" - 12	1" - 11	52,0	57,0	41	41
A562509-20-20	1.5/8" - 12	1.1/4" - 11	52,0	57,0	41	50
A562509-24-20	1.7/8" - 12	1.1/4" - 11	59,0	65,0	50	50
A562509-24-24	1.7/8" - 12	1.1/2" - 11	59,0	65,0	50	55



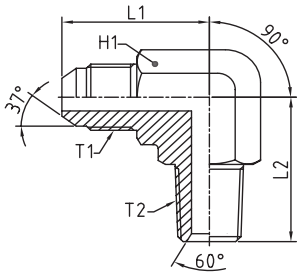
A562507

90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514) BSP MALE TAPERED (ISO 7)

ADAPTADOR CODO 90º JIC MACHO ASIENTO A 74º (SAE J514) BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF)	T_2 (BSPT)	L_1	L_2	H_1
A562507-04-02	7/16" - 20	1/8" - 28	22,5	21,0	12
A562507-04-04	7/16" - 20	1/4" - 19	26,0	27,0	14
A562507-04-06	7/16" - 20	3/8" - 19	28,5	31,0	19
A562507-05-02	1/2" - 20	1/8" - 28	26,0	23,0	14
A562507-05-04	1/2" - 20	1/4" - 19	26,0	27,0	14
A562507-05-06	1/2" - 20	3/8" - 19	28,5	31,0	19
A562507-06-04	9/16" - 18	1/4" - 19	26,0	27,0	14
A562507-06-06	9/16" - 18	3/8" - 19	29,0	31,0	19
A562507-06-08	9/16" - 18	1/2" - 14	33,0	37,0	22
A562507-08-04	3/4" - 16	1/4" - 19	31,5	31,0	19
A562507-08-06	3/4" - 16	3/8" - 19	31,5	31,0	19
A562507-08-08	3/4" - 16	1/2" - 14	34,0	37,0	22
A562507-10-06	7/8" - 14	3/8" - 19	36,5	34,0	22
A562507-10-08	7/8" - 14	1/2" - 14	36,5	37,0	22
A562507-10-12	7/8" - 14	3/4" - 14	39,5	40,5	27
A562507-12-08	1.1/16" - 12	1/2" - 14	42,0	40,5	27
A562507-12-12	1.1/16" - 12	3/4" - 14	42,0	40,5	27
A562507-12-16	1.1/16" - 12	1" - 11	46,0	48,0	35
A562507-16-12	1.5/16" - 12	3/4" - 14	46,0	46,0	35
A562507-16-16	1.5/16" - 12	1" - 11	46,0	48,0	35
A562507-16-20	1.5/16" - 12	1.1/4" - 11	52,0	57,0	41
A562507-20-16	1.5/8" - 12	1" - 11	52,0	54,0	41
A562507-20-20	1.5/8" - 12	1.1/4" - 11	52,0	57,0	41
A562507-20-24	1.5/8" - 12	1.1/2" - 11	59,0	65,0	50
A562507-24-20	1.7/8" - 12	1.1/4" - 11	59,0	65,0	50
A562507-24-24	1.7/8" - 12	1.1/2" - 11	59,0	65,0	50
A562507-24-32	1.7/8" - 12	2" - 11	72,0	74,0	65
A562507-32-24	2.1/2" - 12	1.1/2" - 11	75,0	74,0	65
A562507-32-32	2.1/2" - 12	2" - 11	75,0	74,0	65

JIC ADAPTORS

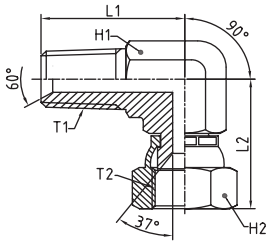


A562528 NEW

90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514)
NPTF MALE 60° CONE SEAT (SAE J514)
ADAPTADOR CODO 90° MACHO JIC ASIENTO A 74° (SAE J514)
MACHO NPTF 60° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L1	L2	H1		
A562528-04-02	7/16"-20	1/8"-27	22,6	19,8	11		
A562528-04-04	7/16"-20	1/4"-18	26,7	27,7	14		
A562528-05-04	1/2"-20	1/4"-18	26,7	27,7	14		
A562528-06-04	9/16"-18	1/4"-18	26,9	27,7	14		
A562528-06-06	9/16"-18	3/8"-18	29,0	31,0	19		
A562528-06-08	9/16"-18	1/2"-14	31,0	37,3	22		
A562528-08-06	3/4"-16	3/8"-18	31,8	31,0	19		
A562528-08-08	3/4"-16	1/2"-14	33,8	37,3	22		
A562528-08-12	3/4"-16	3/4"-14	36,0	40,4	27		
A562528-10-08	7/8"-14	1/2"-14	36,8	37,3	22		
A562528-10-12	7/8"-14	3/4"-14	39,1	40,4	27		
A562528-12-08	1.1/16"-12	1/2"-14	42,2	40,4	27		
A562528-12-12	1.1/16"-12	3/4"-14	42,2	40,4	27		
A562528-12-16	1.1/16"-12	1"-11,5	44,7	50,0	33		
A562528-16-12	1.5/16"-12	3/4"-14	46,0	45,2	33		
A562528-16-16	1.5/16"-12	1"-11,5	46,0	50,0	33		
A562528-20-20	1.5/8"-12	1.1/4"-11,5	52,3	60,5	41		
A562528-24-24	1.7/8"-12	1.1/2"-11,5	59,2	67,0	48		

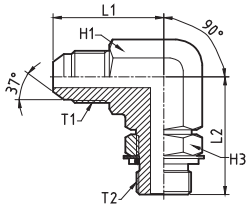
A582825 NEW



90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514)
JIC FEMALE 74° CONE SEAT (SAE J514)
ADAPTADOR CODO 90° MACHO NPTF ASIENTO A 60° (SAE J514)
HEMBRA JIC 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (UNF)	L1	L2	H1	H2	
A582825-02-04	1/8"-27	7/16"-20	19,8	25,4	11	16	
A582825-04-04	1/4"-18	7/16"-20	27,7	29,0	14	16	
A582825-04-06	1/4"-18	9/16"-18	27,7	31,8	14	19	
A582825-06-06	3/8"-18	9/16"-18	31,0	32,6	19	19	
A582825-06-08	3/8"-18	3/4"-16	31,0	35,0	19	22	
A582825-08-08	1/2"-14	3/4"-16	37,3	38,4	22	22	
A582825-12-12	3/4"-14	1.1/16"-12	40,4	44,5	27	32	
A582825-16-16	1"-11,5	1.5/16"-12	50,0	50,8	33	38	
A582825-20-20	1.1/4"-11,5	1.5/8"-12	60,5	58,7	41	50	

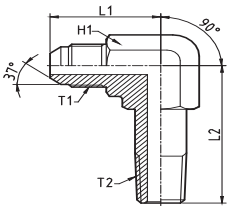
JIC ADAPTORS



A562519

90° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514)
METRIC MALE (ISO 6149)
ADAPTADOR AJUSTABLE CODO 90º JIC MACHO ASIENTO 74° (SAE J514)
MACHO METRICO (ISO 6149)

PART. REF.	THREADS	DIMENSIONS mm			
	T_1 (UNF)	T_2 (METRIC)	L_1	L_2	H_1	H_3
A562519-04-10	7/16" - 20	10x1	25,0	27,0	14	14
A562519-04-12	7/16" - 20	12x1.5	25,0	31,5	14	17
A562519-05-10	1/2" - 20	10x1	25,0	27,0	14	14
A562519-05-12	1/2" - 20	12x1.5	25,0	31,5	14	17
A562519-05-14	1/2" - 20	14x1.5	25,0	31,5	14	19
A562519-06-14	9/16" - 18	14x1.5	27,0	31,5	14	19
A562519-06-16	9/16" - 18	16x1.5	29,0	36,5	19	22
A562519-08-16	3/4" - 16	16x1.5	31,5	36,5	19	22
A562519-08-18	3/4" - 16	18x1.5	31,5	39,5	19	24
A562519-10-18	7/8" - 14	18x1.5	36,5	41,5	22	24
A562519-10-22	7/8" - 14	22x1.5	36,5	43,0	22	27
A562519-12-22	1.1/16" - 12	22x1.5	42,0	45,5	27	27
A562519-12-27	1.1/16" - 12	27x2	42,0	50,5	27	32
A562519-16-27	1.5/16" - 12	27x2	46,0	55,0	35	32
A562519-16-33	1.5/16" - 12	33x2	46,0	55,0	35	41
A562519-20-42	1.5/8" - 12	42x2	52,0	60,0	41	50
A562519-24-48	1.7/8" - 12	48x2	59,0	64,0	50	55



A562502

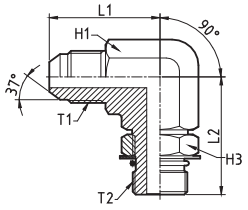
90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514)
BSP MALE TAPERED LONG (ISO 7)
ADAPTADOR CODO 90º JIC MACHO ASIENTO A 74º (SAE J514)
BSP MACHO CÓNICO LARGO (ISO 7)

PART. REF.	THREADS	DIMENSIONS mm			
	T_1 (UNF)	T_2 (BSPT)	L_1	L_2	H_1
A562502-04-02	7/16" - 20	1/8" - 28	24,0	49,0	14
A562502-04-04	7/16" - 20	1/4" - 19	24,0	49,0	14
A562502-05-04	1/2" - 20	1/4" - 19	24,0	49,0	14
A562502-06-04	9/16" - 18	1/4" - 19	24,0	49,0	14
A562502-08-06	3/4" - 16	3/8" - 16	31,5	61,0	19
A562502-08-08	3/4" - 16	1/2" - 14	34,0	73,0	24
A562502-10-08	7/8" - 14	1/2" - 14	35,5	73,0	24
A562502-12-12	1.1/16" - 12	3/4" - 14	37,0	87,0	27
A562502-16-16	1.5/16" - 12	1" - 11	46,0	107,0	35

A562531

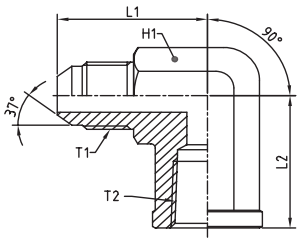
90° ELBOW ADJUSTABLE ADAPTOR JIC MALE 74° CONE (SAE J514) SAE MALE O-RING BOSS TYPE (SAE J1926)

ADAPTADOR AJUSTABLE CODO 90º JIC MACHO ASIENTO A 74º (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_3
A562531-04-04	7/16" - 20	7/16" - 20	25,0	26,5	14	16
A562531-04-06	7/16" - 20	9/16" - 18	25,0	31,5	14	19
A562531-05-04	1/2" - 20	7/16" - 20	25,0	26,5	14	16
A562531-05-05	1/2" - 20	1/2" - 20	25,0	27,5	14	16
A562531-05-06	1/2" - 20	9/16" - 18	25,0	31,5	14	19
A562531-06-04	9/16" - 18	7/16" - 20	27,0	30,0	14	16
A562531-06-05	9/16" - 18	1/2" - 20	27,0	30,0	14	16
A562531-06-06	9/16" - 18	9/16" - 18	27,0	31,5	14	19
A562531-06-08	9/16" - 18	3/4" - 16	29,0	36,5	19	24
A562531-06-10	9/16" - 18	7/8" - 14	31,0	43,0	22	27
A562531-08-06	3/4" - 16	9/16" - 18	31,5	33,5	19	19
A562531-08-08	3/4" - 16	3/4" - 16	31,5	36,5	19	24
A562531-08-10	3/4" - 16	7/8" - 14	34,0	43,0	22	27
A562531-08-12	3/4" - 16	1.1/16" - 12	37,0	49,0	27	32
A562531-10-06	7/8" - 14	9/16" - 18	36,5	37,0	22	19
A562531-10-08	7/8" - 14	3/4" - 16	36,5	39,5	22	24
A562531-10-10	7/8" - 14	7/8" - 14	36,5	43,0	22	27
A562531-10-12	7/8" - 14	1.1/16" - 12	39,5	49,0	27	32
A562531-12-08	1.1/16" - 12	3/4" - 16	42,0	44,0	27	24
A562531-12-10	1.1/16" - 12	7/8" - 14	42,0	47,0	27	27
A562531-12-12	1.1/16" - 12	1.1/16" - 12	42,0	49,0	27	32
A562531-12-16	1.1/16" - 12	1.5/16" - 12	46,0	52,0	35	38
A562531-16-12	1.5/16" - 12	1.1/16" - 12	46,0	52,0	35	32
A562531-16-16	1.5/16" - 12	1.5/16" - 12	46,0	52,0	35	38
A562531-16-20	1.5/16" - 12	1.5/8" - 12	52,0	57,0	41	50
A562531-20-16	1.5/8" - 12	1.5/16" - 12	52,0	57,0	41	38
A562531-20-20	1.5/8" - 12	1.5/8" - 12	52,0	57,0	41	50
A562531-20-24	1.5/8" - 12	1.7/8" - 12	59,0	65,0	50	55
A562531-24-20	1.7/8" - 12	1.5/8" - 12	59,0	65,0	50	50
A562531-24-24	1.7/8" - 12	1.7/8" - 12	59,0	65,0	50	55

JIC ADAPTORS

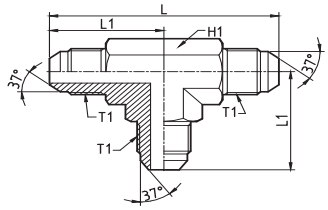


NEW

A582534

90° ELBOW ADAPTOR JIC MALE 74° CONE (SAE J514)
NPTF FIXED FEMALE (SAE J514)
ADAPTADOR CODO 90° MACHO JIC ASIENTO A 74° (SAE J514)
HEMBRA FIJO NPTF (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L1	L2	H1		
A582534-04-04	7/16"-20	1/4"-18	31,0	22,4	19		
A582534-05-04	1/2"-20	1/4"-18	31,0	22,4	19		
A582534-06-04	9/16"-18	1/4"-18	31,2	22,4	19		
A582534-06-06	9/16"-18	3/8"-18	33,3	25,9	22		
A582534-08-08	3/4"-16	1/2"-14	38,6	31,2	27		
A582534-10-08	7/8"-14	1/2"-14	41,7	31,2	27		
A582534-12-12	1.1/16"-12	3/4"-14	48,0	34,5	33		
A582534-16-16	1.5/16"-12	1"-11,5	55,1	41,2	41		



A702525

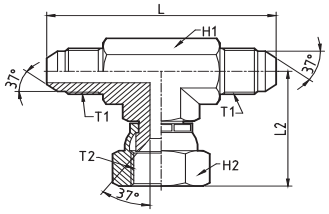
UNION TEE JIC MALE 74° CONE (SAE J514)
TE MACHO JIC ASIENTO A 74° (SAE J514)

PART. REF.	THREADS	DIMENSIONS mm		
	T_1 (UNF)	L	L_1	H_1
A702525-04-04	7/16" - 20	45,0	22,5	12
A702525-05-05	1/2" - 20	50,0	25,0	14
A702525-06-06	9/16" - 18	54,0	27,0	14
A702525-08-08	3/4" - 16	63,0	31,5	19
A702525-10-10	7/8" - 14	73,0	36,5	22
A702525-12-12	1.1/16" - 12	84,0	42,0	27
A702525-16-16	1.5/16" - 12	92,0	46,0	36
A702525-20-20	1.5/8" - 12	104,0	52,0	41
A702525-24-24	1.7/8" - 12	118,0	59,0	50

JIC ADAPTORS

A712525

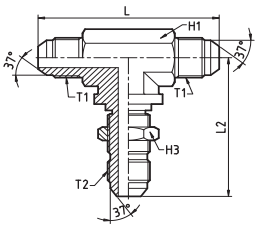
BRANCH TEE JIC MALE 74° CONE
JIC FEMALE 74° CONE SEAT (SAE J514)
TE MACHO JIC ASIENTO A 74°
JIC HEMBRA ASIENTO A 74° (SAE J514)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_2
A712525-04-04	7/16" - 20	7/16" - 20	52,0	26,0	14	16
A712525-05-05	1/2" - 20	1/2" - 20	52,0	28,0	14	16
A712525-06-06	9/16" - 18	9/16" - 18	54,0	31,0	14	19
A712525-08-08	3/4" - 16	3/4" - 16	63,0	35,5	19	22
A712525-10-10	7/8" - 14	7/8" - 14	73,0	42,0	22	27
A712525-12-12	1.1/16" - 12	1.1/16" - 12	84,0	45,5	27	32
A712525-16-16	1.5/16" - 12	1.5/16" - 12	92,0	51,5	36	38
A712525-20-20	1.5/8" - 12	1.5/8" - 12	104,0	59,0	41	50
A712525-24-24	1.7/8" - 12	1.7/8" - 12	118,0	67,0	50	55

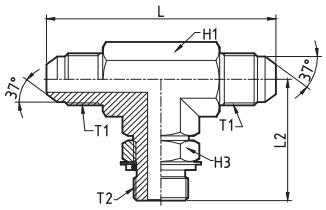
A782523

BRANCH TEE BULKHEAD JIC MALE 74° CONE (SAE J514)
TE PASATABIQUE MACHO JIC ASIENTO A 74° (SAE J514)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L_1	L_2	H_1	H_3
A782523-04-04	7/16" - 20	7/16" - 20	49,0	40,5	14	16
A782523-05-05	1/2" - 20	1/2" - 20	52,0	41,0	14	16
A782523-06-06	9/16" - 18	9/16" - 18	55,0	46,0	14	19
A782523-08-08	3/4" - 16	3/4" - 16	69,0	53,5	19	24
A782523-10-10	7/8" - 14	7/8" - 14	79,0	60,5	22	27
A782523-12-12	1.1/16" - 12	1.1/16" - 12	90,0	68,0	27	32
A782523-16-16	1.5/16" - 12	1.5/16" - 12	98,0	71,0	35	38
A782523-20-20	1.5/8" - 12	1.5/8" - 12	110,0	79,0	41	50
A782523-24-24	1.7/8" - 12	1.7/8" - 12	118,0	87,0	50	55

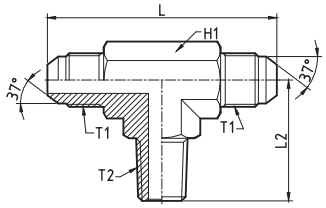
JIC ADAPTORS



A782509

BRANCH TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514)
BSP MALE O-RING BOSS TYPE (ISO 1179-3)
TE AJUSTABLE MACHO JIC ASIENTO A 74° (SAE J514)
BSP MACHO TIPO O-RING BOSS (ISO 1179-3)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (BSPP)	L	L_2	H_1	H_3
A782509-04-04	7/16" - 20	1/4" - 19	50,0	31,5	14	19
A782509-04-06	7/16" - 20	3/8" - 19	57,0	36,5	19	22
A782509-05-04	1/2" - 20	1/4" - 19	50,0	31,5	14	19
A782509-05-06	1/2" - 20	3/8" - 19	57,0	36,5	19	22
A782509-06-04	9/16" - 18	1/4" - 19	54,0	31,5	14	19
A782509-06-06	9/16" - 18	3/8" - 19	58,0	36,5	19	22
A782509-06-08	9/16" - 18	1/2" - 14	62,0	43,0	22	27
A782509-08-06	3/4" - 16	3/8" - 19	63,0	36,5	19	22
A782509-08-08	3/4" - 16	1/2" - 14	68,0	43,0	22	27
A782509-10-06	7/8" - 14	3/8" - 19	73,0	39,5	22	22
A782509-10-08	7/8" - 14	1/2" - 14	73,0	43,0	22	27
A782509-10-12	7/8" - 14	3/4" - 14	79,0	49,0	27	32
A782509-12-12	1.1/16" - 12	3/4" - 14	84,0	49,0	27	32
A782509-12-16	1.1/16" - 12	1" - 11	92,0	52,0	36	41
A782509-16-12	1.5/16" - 12	3/4" - 14	92,0	52,0	36	32
A782509-16-16	1.5/16" - 12	1" - 11	92,0	52,0	36	41

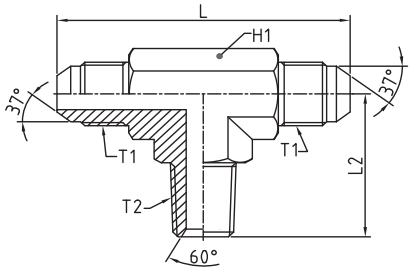


A782507

BRANCH TEE JIC MALE 74° CONE (SAE J514)
BSP MALE TAPERED (ISO 7)
TE MACHO JIC ASIENTO A 74° (SAE J514)
BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF)	T_2 (BSPT)	L	L_2	H_1
A782507-04-02	7/16" - 20	1/8" - 28	45,0	21,0	12
A782507-05-02	1/2" - 20	1/8" - 28	50,0	23,0	14
A782507-06-04	9/16" - 18	1/4" - 19	54,0	27,0	14
A782507-08-06	3/4" - 16	3/8" - 19	63,0	31,0	19
A782507-10-08	7/8" - 14	1/2" - 14	73,0	37,0	22
A782507-12-12	1.1/16" - 12	3/4" - 14	84,0	40,5	27
A782507-16-16	1.5/16" - 12	1" - 11	92,0	46,0	36
A782507-20-20	1.5/8" - 12	1.1/4" - 11	104,0	54,0	41
A782507-24-24	1.7/8" - 12	1.1/2" - 11	118,0	60,0	50

JIC ADAPTORS



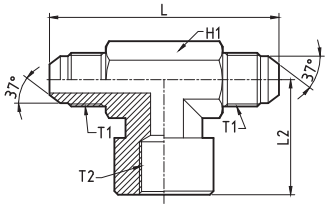
A782528

NEW

BRANCH TEE JIC MALE 74° CONE (SAE J514)
NPTF MALE 60° CONE SEAT (SAE J514)
TE MACHO JIC ASIENTO A 74° (SAE J514) -
MACHO NPTF 60° (SAE J514)

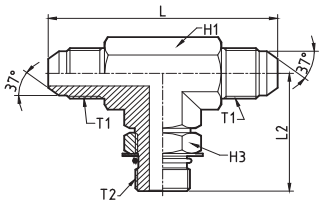
PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L	L2	H1		
A782528-04-04	7/16"-20	1/4"-18	53,3	27,7	14		
A782528-05-04	1/2"-20	1/4"-18	53,3	27,7	14		
A782528-06-04	9/16"-18	1/4"-18	53,9	27,7	14		
A782528-06-06	9/16"-18	3/8"-18	57,9	31,0	19		
A782528-08-08	3/4"-16	1/2"-14	67,6	37,3	22		
A782528-10-08	7/8"-14	1/2"-14	73,7	37,3	22		
A782528-12-12	1.1/16"-12	3/4"-14	84,3	40,4	27		
A782528-16-16	1.5/16"-12	1"-11,5	92,0	50,0	33		
A782528-20-20	1.5/8"-12	1.1/4"-11,5	104,7	60,5	41		

A712502



BRANCH TEE JIC MALE 74° CONE (SAE J514)
BSP FEMALE TAPERED (ISO 7)
TE MACHO JIC ASIENTO A 74° (SAE J514)
BSP HEMBRA CÓNICA (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF)	T_2 (BSPT)	L	L_2	H_1
A712502-04-02	7/16" - 20	1/8" - 28	48,0	17,0	17
A712502-05-02	1/2" - 20	1/8" - 28	50,0	19,0	17
A712502-06-04	9/16" - 18	1/4" - 19	57,0	22,5	19
A712502-08-06	3/4" - 16	3/8" - 19	68,0	26,0	22
A712502-10-08	7/8" - 14	1/2" - 14	79,0	31,0	27
A712502-12-12	1.1/16" - 12	3/4" - 14	89,0	34,5	36
A712502-16-16	1.5/16" - 12	1" - 11	104,0	41,0	41
A712502-20-20	1.5/8" - 12	1.1/4" - 11	118,0	43,0	50

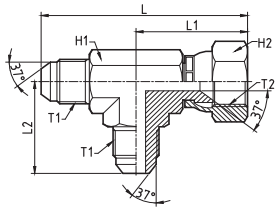


A782531

BRANCH TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514) SAE MALE O-RING BOSS TYPE (SAE J1926)

TE AJUSTABLE MACHO JIC ASIENTO A 74° (SAE J514) SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L	L_2	H_1	H_3
A782531-04-04	7/16" - 18	7/16" - 18	50,0	26,5	14	16
A782531-05-05	1/2" - 20	1/2" - 20	50,0	27,5	14	16
A782531-06-06	9/16" - 18	9/16" - 18	54,0	31,5	14	19
A782531-08-08	3/4" - 16	3/4" - 16	63,0	36,5	19	24
A782531-10-10	7/8" - 14	7/8" - 14	73,0	43,0	22	27
A782531-12-12	1.1/16" - 12	1.1/16" - 12	84,0	49,0	27	32
A782531-16-16	1.5/16" - 12	1.5/16" - 12	92,0	52,0	36	38



A722525

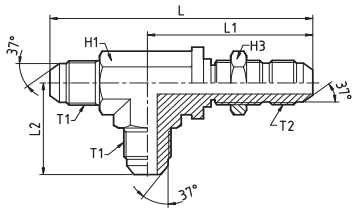
RUN TEE JIC MALE 74° CONE JIC FEMALE 74° CONE SEAT (SAE J514)

TE MACHO JIC ASIENTO A 74° JIC HEMBRA ASIENTO A 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (UNF)	T_2 (UNF)	L	L_1	L_2	H_1	H_2
A722525-04-04	7/16" - 20	7/16" - 20	52,0	26,0	26,0	14	16
A722525-05-05	1/2" - 20	1/2" - 20	54,0	28,0	26,0	14	16
A722525-06-06	9/16" - 18	9/16" - 18	58,0	31,0	27,0	14	19
A722525-08-08	3/4" - 16	3/4" - 16	67,0	35,5	31,5	19	22
A722525-10-10	7/8" - 14	7/8" - 14	78,5	42,0	36,5	22	27
A722525-12-12	1.1/16" - 12	1.1/16" - 12	87,5	45,5	42,0	27	32
A722525-16-16	1.5/16" - 12	1.5/16" - 12	97,5	51,5	46,0	36	38
A722525-20-20	1.5/8" - 12	1.5/8" - 12	111,0	59,0	52,0	41	50
A722525-24-24	1.7/8" - 12	1.7/8" - 12	126,0	67,0	59,0	50	55

JIC ADAPTORS

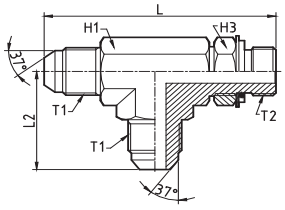
A762523



RUN TEE BULKHEAD JIC MALE 74° CONE (SAE J514)
TE PASATABIQUE MACHO JIC ASIENTO A 74º (SAE J514)

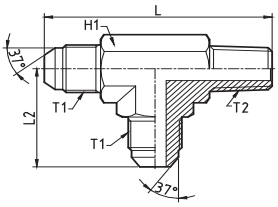
PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (UNF)	T_2 (UNF)	L	L_1	L_2	H_1	H_3
A762523-04-04	7/16" - 20	7/16" - 20	65,0	40,5	24,5	14	16
A762523-05-05	1/2" - 20	1/2" - 20	67,0	41,0	26,0	14	16
A762523-06-06	9/16" - 18	9/16" - 18	73,6	46,0	27,5	14	19
A762523-08-08	3/4" - 16	3/4" - 16	88,0	53,5	34,5	19	24
A762523-10-10	7/8" - 14	7/8" - 14	100,0	60,5	39,5	22	27
A762523-12-12	1.1/16" - 12	1.1/16" - 12	113,0	68,0	45,0	27	32
A762523-16-16	1.5/16" - 12	1.5/16" - 12	120,0	71,0	49,0	35	38
A762523-20-20	1.5/8" - 12	1.5/8" - 12	134,0	79,0	55,0	41	50
A762523-24-24	1.7/8" - 12	1.7/8" - 12	146,0	87,0	59,0	50	55

A762509



RUN TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514)
BSP MALE O-RING BOSS TYPE (ISO 1179-3)
TE AJUSTABLE MACHO JIC ASIENTO A 74º (SAE J514)
BSP MACHO TIPO O-RING BOSS (ISO 1179-3)

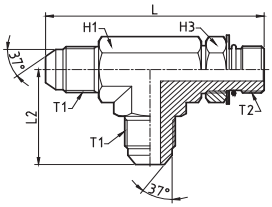
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (BSPP)	L	L_2	H_1	H_3
A762509-04-04	7/16" - 20	1/4" - 19	56,5	25,0	14	19
A762509-04-06	7/16" - 20	3/8" - 19	65,0	28,5	19	22
A762509-05-04	1/2" - 20	1/4" - 19	56,5	25,0	14	19
A762509-05-06	1/2" - 20	3/8" - 19	65,0	28,5	19	22
A762509-06-04	9/16" - 18	1/4" - 19	58,5	27,0	14	19
A762509-06-06	9/16" - 18	3/8" - 19	65,5	29,0	19	22
A762509-06-08	9/16" - 18	1/2" - 14	74,0	31,0	22	27
A762509-08-06	3/4" - 16	3/8" - 19	68,0	31,5	19	22
A762509-08-08	3/4" - 16	1/2" - 14	77,0	34,0	22	27
A762509-10-06	7/8" - 14	3/8" - 19	76,0	36,5	22	22
A762509-10-08	7/8" - 14	1/2" - 14	79,5	36,5	22	27
A762509-10-12	7/8" - 14	3/4" - 14	88,5	39,5	27	32
A762509-12-12	1.1/16" - 12	3/4" - 14	91,0	42,0	27	32
A762509-12-16	1.1/16" - 12	1" - 11	98,0	46,0	36	41
A762509-16-12	1.5/16" - 12	3/4" - 14	98,0	46,0	36	32
A762509-16-16	1.5/16" - 12	1" - 11	98,0	46,0	36	41



A762507

RUN TEE JIC MALE 74° CONE (SAE J514)
BSP MALE TAPERED (ISO 7)
TE MACHO JIC ASIENTO A 74° (SAE J514)
BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF)	T_2 (BSPT)	L	L_2	H_1
A762507-04-02	7/16" - 20	1/8" - 28	43,5	22,5	12
A762507-05-02	1/2" - 20	1/8" - 28	48,0	25,0	14
A762507-06-04	9/16" - 18	1/4" - 19	54,0	27,0	14
A762507-08-06	3/4" - 16	3/8" - 19	62,5	31,5	19
A762507-10-08	7/8" - 14	1/2" - 14	73,5	36,5	22
A762507-12-12	1.1/16" - 12	3/4" - 14	82,5	42,0	27
A762507-16-16	1.5/16" - 12	1" - 11	92,0	46,0	36
A762507-20-20	1.5/8" - 12	1.1/4" - 11	106,0	52,0	41
A762507-24-24	1.7/8" - 12	1.1/2" - 11	119,0	59,0	50

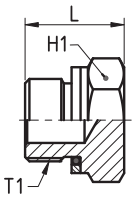


A762531

RUN TEE ADJUSTABLE JIC MALE 74° CONE (SAE J514)
SAE MALE O-RING BOSS TYPE (SAE J1926)
TE AJUSTABLE MACHO JIC ASIENTO A 74° (SAE J514)
SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF)	L	L_2	H_1	H_3
A762531-04-04	7/16" - 20	7/16" - 20	51,5	25,0	14	16
A762531-05-05	1/2" - 20	1/2" - 20	52,5	25,0	14	16
A762531-06-06	9/16" - 18	9/16" - 18	58,5	27,0	14	19
A762531-08-08	3/4" - 16	3/4" - 16	68,0	31,5	19	24
A762531-10-10	7/8" - 14	7/8" - 14	79,5	36,5	22	27
A762531-10-12	7/8" - 14	1.1/16" - 12	88,5	39,5	27	32
A762531-12-12	1.1/16" - 12	1.1/16" - 12	91,0	42,0	27	32
A762531-16-16	1.5/16" - 12	1.5/16" - 12	98,0	46,0	36	38

BSP ADAPTORS

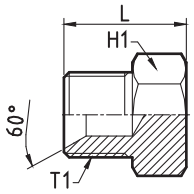


A400300

MALE PLUG BSP OR BOSS (ISO 1179-3)

MACHO BOSS BSP O TAPON (ISO 1179-3)

PART. REF.	THREADS	DIMENSIONS mm	
	T1 (UNF)	L	H1
A400300-04	1/4" - 19	21,0	19
A400300-06	3/8" - 19	22,0	22
A400300-08	1/2" - 14	27,0	27
A400300-12	3/4" - 14	32,0	36
A400300-16	1" - 11	36,0	41
A400300-20	1.1/4" - 11	41,0	50
A400300-24	1.1/2" - 11	42,0	55



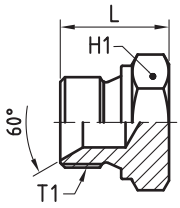
A400500

MALE PLUG BSP PARALLEL 60° CONE SEAT (ISO 228)

TAPON MACHO BSP PARALELO ASIENTO A 60° (ISO 228)

PART. REF.	THREADS	DIMENSIONS mm	
	T1 (BSPP)	L	H1
A400500-02	1/8" - 28	16,0	12
A400500-04	1/4" - 19	19,0	14
A400500-06	3/8" - 19	23,0	19
A400500-08	1/2" - 14	27,0	22
A400500-12	3/4" - 14	30,0	27
A400500-16	1" - 11	34,0	35
A400500-20	1.1/4" - 11	40,0	43
A400500-24	1.1/2" - 11	43,0	50

BSP ADAPTORS

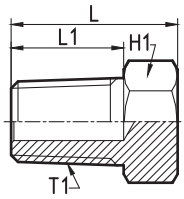


A400500D

MALE PLUG BSP PARALLEL 60° CONE SEAT DIN PROFILE (ISO 228)

TAPON MACHO BSP PARALELO ASIENTO A 60° PERFIL DIN (ISO 228)

PART. REF.	THREADS	DIMENSIONS mm	
	T_1 (BSPP)	L	H_1
A400500-04D	1/4" - 19	19,0	19
A400500-06D	3/8" - 19	20,0	22
A400500-08D	1/2" - 14	25,0	27
A400500-10D	5/8" - 14	26,0	30
A400500-12D	3/4" - 14	27,0	32
A400500-16D	1" - 11	31,5	41
A400500-20D	1.1/4" - 11	34,0	50
A400500-24D	1.1/2" - 11	37,0	55



A400700

MALE PLUG BSP TAPERED (ISO 7)

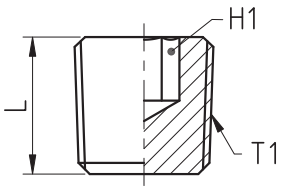
TAPON MACHO BSP CÓNICO (ISO 7)

PART. REF.	THREADS	DIMENSIONS mm		
	T_1 (BSPT)	L	L_1	H_1
A400700-02	1/8" - 28	17,5	11,5	12
A400700-04	1/4" - 19	20,5	14,0	14
A400700-06	3/8" - 19	24,0	16,0	19
A400700-08	1/2" - 14	26,5	18,5	22
A400700-12	3/4" - 14	32,0	20,0	27
A400700-16	1" - 11	36,0	24,0	35
A400700-20	1.1/4" - 11	41,5	25,5	43
A400700-24	1.1/2" - 11	43,0	29,0	50

A400700E

BSPT MALE PLUG "HEXAGONAL SOCKET HEAD" (ISO 7)

TAPON MACHO BSPT (ISO 7)

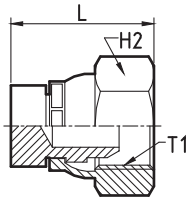


PART. REF.	THREADS	DIMENSIONS mm	
	T_1 (BSPP)	L	H_1
A400700E-02	1/8" - 28	8,0	5
A400700E-04	1/4" - 19	10,0	7
A400700E-06	3/8" - 19	10,0	8
A400700E-08	1/2" - 14	10,0	10
A400700E-12	3/4" - 14	12,0	12
A400700E-16	1" - 11	12,0	17
A400700E-20	1.1/4" - 11	18,0	22
A400700E-24	1.1/2" - 11	20,0	24

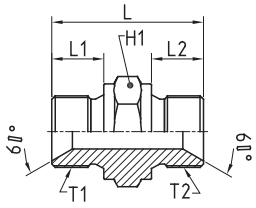
A410500

FEMALE PLUG BSP PARALLEL 60° CONE SEAT (ISO 228)

TAPON HEMBRA BSP PARALELO ASIENTO A 60° (ISO 228)



PART. REF.	THREADS	DIMENSIONS mm	
	T_1 (BSPP)	L	H_2
A410500-02	1/8" - 28	21,0	14
A410500-04	1/4" - 19	23,0	19
A410500-06	3/8" - 19	27,0	22
A410500-08	1/2" - 14	30,0	27
A410500-10	5/8" - 14	26,0	30
A410500-12	3/4" - 14	35,0	32
A410500-16	1" - 11	39,0	41
A410500-20	1.1/4" - 11	43,0	50
A410500-24	1.1/2" - 11	48,0	55



A500505

STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228)

ADAPTADOR RECTO BSP PARALELO MACHO ASIENTO A 60° (ISO 228)

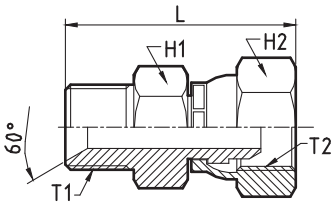
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_1	L_2	H_1
A500505-02-02	1/8" - 28	1/8" - 28	25,0	8,7	8,7	14
A500505-02-04	1/8" - 28	1/4" - 19	29,0	8,7	11,0	19
A500505-04-04	1/4" - 19	1/4" - 19	32,0	11,0	11,0	19
A500505-04-06	1/4" - 19	3/8" - 19	33,0	11,0	12,0	22
A500505-04-08	1/4" - 19	1/2" - 14	36,5	11,0	14,0	27
A500505-04-12	1/4" - 19	3/4" - 14	39,0	11,0	16,0	32
A500505-06-06	3/8" - 19	3/8" - 19	34,0	12,0	12,0	22
A500505-06-08	3/8" - 19	1/2" - 14	37,0	12,0	14,0	27
A500505-06-10	3/8" - 19	5/8" - 14	39,0	12,0	16,0	30
A500505-06-12	3/8" - 19	3/4" - 14	41,0	12,0	16,0	32
A500505-08-08	1/2" - 14	1/2" - 14	39,5	14,0	14,0	27
A500505-08-10	1/2" - 14	5/8" - 14	41,5	14,0	16,0	30
A500505-08-12	1/2" - 14	3/4" - 14	43,5	14,0	16,0	32
A500505-08-16	1/2" - 14	1" - 11	47,5	14,0	19,0	41
A500505-10-10	5/8"-14	5/8" - 14	43,5	16,0	16,0	30
A500505-10-12	5/8" - 14	3/4" - 14	44,5	16,0	16,0	32
A500505-12-12	3/4" - 14	3/4" - 14	44,5	16,0	16,0	32
A500505-12-16	3/4" - 14	1" - 11	48,5	16,0	19,0	41
A500505-12-20	3/4" - 14	1.1/4" - 11	52,5	16,0	20,0	50
A500505-16-16	1" - 11	1" - 11	51,5	19,0	19,0	41
A500505-16-20	1" - 11	1.1/4" - 11	55,5	19,0	20,0	50
A500505-16-24	1" - 11	1.1/2" - 11	58,5	19,0	22,0	55
A500505-20-20	1.1/4" - 11	1.1/4" - 11	56,5	20,0	20,0	50
A500505-20-24	1.1/4" - 11	1.1/2" - 11	59,5	20,0	22,0	55
A500505-24-24	1.1/2" - 11	1.1/2" - 11	61,5	22,0	22,0	55
A500505-24-32	1.1/2" - 11	2" - 11	67,5	22,0	25,0	70
A500505-32-32	2" - 11	2" - 11	71,0	25,0	25,0	70

BSP ADAPTORS

A520505

STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT
BSP FEMALE 60° CONE (ISO 228)

ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60°
BSP HEMBRA ASIENTO A 60° (ISO 228)

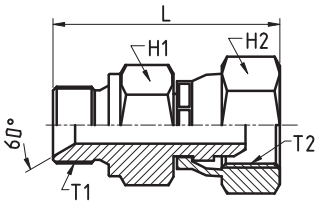


PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPP)	T_2 (BSPP)	L	H_1	H_2
A520505-04-04	1/4" - 19	1/4" - 19	36,0	14	19
A520505-06-06	3/8" - 19	3/8" - 19	42,0	19	22
A520505-08-08	1/2" - 14	1/2" - 14	48,5	22	27
A520505-12-12	3/4" - 14	3/4" - 14	57,0	27	32
A520505-16-16	1" - 11	1" - 11	64,5	35	41
A520505-20-20	1.1/4" - 11	1.1/4" - 11	72,0	44	50
A520505-24-24	1.1/2" - 11	1.1/2" - 11	79,0	50	55

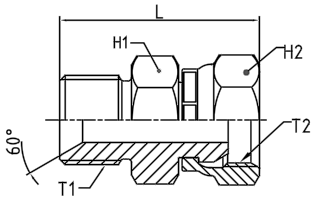
A520505D

STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT
DIN PROFILE BSP FEMALE 60° CONE (ISO 228)

ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° PERFIL DIN
BSP HEMBRA ASIENTO A 60° (ISO 228)



PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPP)	T_2 (BSPP)	L	H_1	H_2
A520505-04-04D	1/4" - 19	1/4" - 19	38,0	19	19
A520505-04-06D	1/4" - 19	3/8" - 19	39,5	19	22
A520505-04-08D	1/4" - 19	1/2" - 14	42,0	22	27
A520505-06-04D	3/8" - 19	1/4" - 19	38,0	22	19
A520505-06-06D	3/8" - 19	3/8" - 19	40,5	22	22
A520505-06-08D	3/8" - 19	1/2" - 14	43,0	22	27
A520505-08-06D	1/2" - 14	3/8" - 19	43,5	27	22
A520505-08-08D	1/2" - 14	1/2" - 14	46,0	27	27
A520505-08-12D	1/2" - 14	3/4" - 14	51,0	27	32
A520505-10-10D	5/8" - 14	5/8" - 14	51,0	30	30
A520505-12-08D	3/4" - 14	1/2" - 14	49,0	32	27
A520505-12-12D	3/4" - 14	3/4" - 14	54,0	32	32
A520505-12-16D	3/4" - 14	1" - 11	55,0	35	41
A520505-16-12D	1" - 11	3/4" - 14	59,5	41	32
A520505-16-16D	1" - 11	1" - 11	64,0	41	41
A520505-20-20D	1.1/4" - 11	1.1/4" - 11	67,0	50	50
A520505-24-24D	1.1/2" - 11	1.1/2" - 11	78,0	55	55



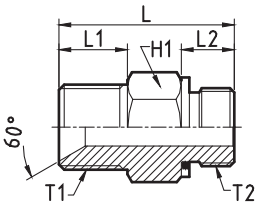
NEW

A520528

STRAIGHT ADAPTER BSP MALE 60° CONE SEAT (ISO 228) NPSM SWIVEL FEMALE 60° CONE (SAE J514)

ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° (ISO 228) HEMBRA GIRATORIO 60° NPSM (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (NPSM)	L	H_1	H_2	
A520528-06-06	3/8"-19	3/8"-18	40,5	19	22	
A520528-08-06	1/2"-14	3/8"-18	43,5	22	22	
A520528-08-08	1/2"-14	1/2"-14	46,0	22	27	
A520528-08-12	1/2"-14	3/4"-14	51,0	27	32	
A520528-16-08	1"-11	1/2"-14	57,0	35	27	
A520528-16-12	1"-11	3/4"-14	59,5	35	32	
A520528-16-16	1"-11	1"-11,5	64,0	35	38	
A520528-24-24	1.1/2"-11	1.1/2"-11,5	78,0	50	54	



A500503

STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) BSP MALE O-RING BOSS TYPE (ISO 1179-3)

ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° (ISO 228) BSP MACHO TIPO O-RING BOSS (ISO 1179-3)

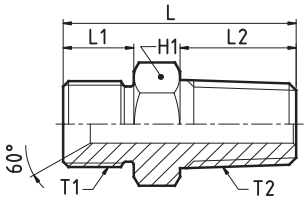
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_1	L_2	H_1
A500503-04-04	1/4" - 19	1/4" - 19	33,0	13,0	12,0	19
A500503-04-06	1/4" - 19	3/8" - 19	34,0	13,0	12,0	22
A500503-06-04	3/8" - 19	1/4" - 19	36,0	15,0	12,0	19
A500503-06-06	3/8" - 19	3/8" - 19	36,0	15,0	12,0	22
A500503-06-08	3/8" - 19	1/2" - 14	39,0	15,0	14,0	27
A500503-08-06	1/2" - 14	3/8" - 19	39,0	18,0	12,0	22
A500503-08-08	1/2" - 14	1/2" - 14	42,0	18,0	14,0	27
A500503-08-12	1/2" - 14	3/4" - 14	46,0	18,0	16,0	32
A500503-12-08	3/4" - 14	1/2" - 14	44,0	20,0	14,0	27
A500503-12-12	3/4" - 14	3/4" - 14	48,0	20,0	16,0	32
A500503-12-16	3/4" - 14	1" - 11	50,0	20,0	18,0	41
A500503-16-12	1" - 11	3/4" - 14	50,0	22,0	16,0	35
A500503-16-16	1" - 11	1" - 11	52,0	22,0	18,0	41
A500503-16-20	1" - 11	1.1/4" - 11	56,0	22,0	20,0	50
A500503-20-16	1.1/4" - 11	1" - 11	57,0	26,0	18,0	43
A500503-20-20	1.1/4" - 11	1.1/4" - 11	60,0	26,0	20,0	50
A500503-24-20	1.1/2" - 11	1.1/4" - 11	60,0	27,0	20,0	50
A500503-24-24	1.1/2" - 11	1.1/2" - 11	63,0	27,0	22,0	55

BSP ADAPTORS

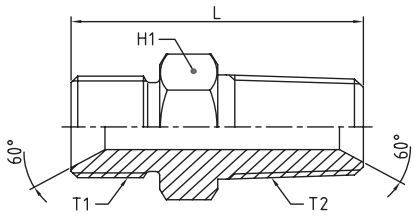
A500507

STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) - BSP MALE TAPERED (ISO 7)

ADAPTADOR RECTO BSP MACHO PARALELO ASIENTO A 60° (ISO 228) - BSP MACHO CÓNICO (ISO 7)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPT)	L	L_1	L_2	H_1
A500507-02-02	1/8" - 28	1/8" - 28	23,0	8,0	10,0	12
A500507-02-04	1/8" - 28	1/4" - 19	28,0	8,0	14,0	14
A500507-04-02	1/4" - 19	1/8" - 28	28,0	12,0	10,0	14
A500507-04-04	1/4" - 19	1/4" - 19	32,0	12,0	14,0	14
A500507-04-06	1/4" - 19	3/8" - 19	33,0	12,0	15,0	19
A500507-04-08	1/4" - 19	1/2" - 14	37,0	12,0	17,0	22
A500507-06-04	3/8" - 19	1/4" - 19	33,0	13,0	14,0	19
A500507-06-06	3/8" - 19	3/8" - 19	34,0	13,0	15,0	19
A500507-06-08	3/8" - 19	1/2" - 14	38,0	13,0	17,0	22
A500507-08-04	1/2" - 14	1/4" - 19	37,0	15,0	14,0	22
A500507-08-06	1/2" - 14	3/8" - 19	38,0	15,0	15,0	22
A500507-08-08	1/2" - 14	1/2" - 14	40,0	15,0	17,0	22
A500507-08-10	1/2" - 14	5/8" - 14	44,0	15,0	20,0	27
A500507-08-12	1/2" - 14	3/4" - 14	44,0	15,0	20,0	27
A500507-10-08	5/8" - 14	1/2" - 14	42,0	16,0	17,0	27
A500507-12-08	3/4" - 14	1/2" - 14	43,0	17,0	17,0	27
A500507-12-12	3/4" - 14	3/4" - 14	46,0	17,0	20,0	27
A500507-12-16	3/4" - 14	1" - 11	50,0	17,0	23,0	35
A500507-16-12	1" - 11	3/4" - 14	50,0	20,0	20,0	35
A500507-16-16	1" - 11	1" - 11	53,0	20,0	23,0	35
A500507-16-20	1" - 11	1.1/4" - 11	58,0	20,0	26,0	44
A500507-20-16	1.1/4" - 11	1" - 11	56,0	21,0	23,0	44
A500507-20-20	1.1/4" - 11	1.1/4" - 11	59,0	21,0	26,0	44
A500507-20-24	1.1/4" - 11	1.1/2" - 11	62,0	21,0	27,0	50
A500507-24-20	1.1/2" - 11	1.1/4" - 11	62,0	22,0	26,0	50
A500507-24-24	1.1/2" - 11	1.1/2" - 11	63,0	22,0	27,0	50
A500507-32-32	2" - 11	2" - 11	72,0	25,0	30,0	65



NEW **A500528**

STRAIGHT ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228) NPTF MALE 60° CONE SEAT (SAE J514)

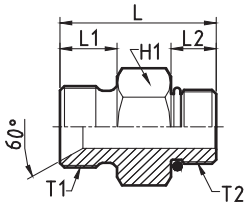
ADAPTADOR MACHO RECTO BPS PARALELO ASIENTO A 60° (ISO 228) MACHO NPTF 60° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (BSPP)	T2 (NPTF)	L	H1			
A500528-04-04	1/4"-19	1/4"-18	31,5	16			
A500528-04-06	1/4"-19	3/8"-18	31,5	19			
A500528-06-06	3/8"-19	3/8"-18	32,5	19			
A500528-08-08	1/2"-14	1/2"-14	40,0	22			
A500528-12-12	3/4"-14	3/4"-14	44,0	27			
A500528-16-16	1"-11	1"-11,5	53,0	35			
A500528-20-20	1.1/4"-11	1.1/4"-11,5	57,0	44			
A500528-24-24	1.1/2"-11	1.1/2"-11,5	63,0	50			

BSP ADAPTORS

A500530

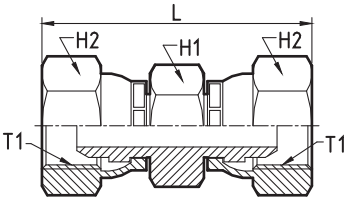
STRAIGHT ADAPTOR BSP MALE 60° CONE SEAT (ISO 228)
SAE MALE O-RING BOSS TYPE (SAE J1926)
ADAPTADOR RECTO BSP MACHO ASIENTO A 60° (ISO 228)
SAE MACHO TIPO O-RING BOSS (SAE J1926)



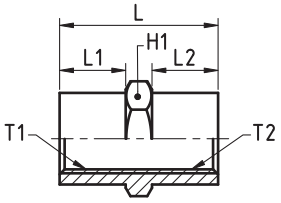
PART. REF.	THREADS		DIMENSIONS mm			
	T1 (BSPP)	T2 (UNF)	L	L1	L2	H1
A500530-04-04	1/4" - 19	7/16" - 20	27,5	11,0	9,0	14
A500530-04-06	1/4" - 19	9/16" - 18	29,0	11,0	10,0	17
A500530-04-08	1/4" - 19	3/4" - 16	33,5	11,0	11,0	22
A500530-04-10	1/4" - 19	7/8" - 14	38,5	11,0	13,0	27
A500530-06-06	3/8" - 19	9/16" - 18	31,5	12,0	10,0	17
A500530-06-08	3/8" - 19	3/4" - 16	33,5	12,0	11,0	22
A500530-06-10	3/8" - 19	7/8" - 14	35,5	12,0	13,0	27
A500530-08-06	1/2" - 14	9/16" - 18	35,0	12,0	10,0	22
A500530-08-08	1/2" - 14	3/4" - 16	36,0	14,0	11,0	22
A500530-08-10	1/2" - 14	7/8" - 14	39,0	14,0	13,0	27
A500530-10-06	5/8" - 14	9/16" - 18	37,0	16,0	10,0	27
A500530-10-08	5/8" - 14	3/4" - 16	37,0	16,0	11,0	27
A500530-10-10	5/8" - 14	7/8" - 14	40,5	16,0	13,0	27
A500530-10-12	5/8" - 14	1.1/16" - 12	44,5	16,0	15,0	32
A500530-12-08	3/4" - 14	3/4" - 16	42,0	16,0	11,0	32
A500530-12-12	3/4" - 14	1.1/16" - 12	46,0	16,0	15,0	32
A500530-12-16	3/4" - 14	1.5/16" - 12	46,0	16,0	17,0	41
A500530-16-12	1" - 11	1.1/16" - 12	48,0	19,0	15,0	41
A500530-16-16	1" - 11	1.5/16" - 12	48,0	19,0	15,0	41

A510505

STRAIGHT ADAPTOR BSP FEMALE 60° CONE (ISO 228)
ADAPTADOR RECTO BSP HEMBRA ASIENTO A 60° (ISO 228)



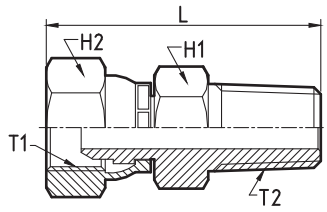
PART. REF.	THREADS	DIMENSIONS mm		
	T1 (BSPP)	L	H1	H2
A510505-04-04	1/4" - 19	39,0	14	19
A510505-06-06	3/8" - 19	45,0	19	22
A510505-08-08	1/2" - 14	52,0	22	27
A510505-12-12	3/4" - 14	63,0	27	32
A510505-16-16	1" - 11	74,0	35	41
A510505-20-20	1.1/4" - 11	77,0	44	50
A510505-24-24	1.1/2" - 11	87,0	50	55



A510404

STRAIGHT ADAPTOR BSP FIXED FEMALE
ADAPTADOR RECTO BSP FIJO HEMBRA

PART. REF.	THREADS		DIMENSIONS mm			
	T1 (BSPP)	T2 (BSPP)	L	L1	L2	H1
A510404-02-02	1/8" - 28	1/8" - 28	20,0	7,0	7,0	14
A510404-02-04	1/8" - 28	1/4" - 19	25,0	7,0	12,0	19
A510404-04-04	1/4" - 19	1/4" - 19	30,0	12,0	12,0	19
A510404-04-06	1/4" - 19	3/8" - 19	30,0	12,0	12,0	24
A510404-06-06	3/8" - 19	3/8" - 19	30,0	12,0	12,0	24
A510404-06-08	3/8" - 19	1/2" - 14	35,0	12,0	15,0	27
A510404-08-08	1/2" - 14	1/2" - 14	38,0	15,0	15,0	27
A510404-08-12	1/2" - 14	3/4" - 14	40,0	15,0	15,0	35
A510404-12-12	3/4" - 14	3/4" - 14	40,0	15,0	15,0	36
A510404-12-16	3/4" - 14	1" - 11	47,0	15,0	19,0	41
A510404-16-16	1" - 11	1" - 11	51,0	19,0	19,0	41
A510404-16-20	1" - 11	1.1/4" - 11	50,0	19,0	19,0	55
A510404-20-20	1.1/4" - 11	1.1/4" - 11	51,0	19,0	19,0	55
A510404-24-24	1.1/2" - 11	1.1/2" - 11	51,0	19,0	19,0	60



A520705

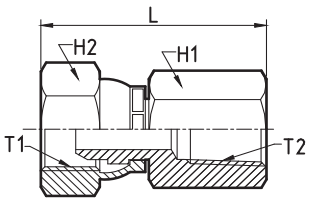
STRAIGHT ADAPTOR BSP FEMALE 60° CONE (ISO 228) BSP MALE TAPERED (ISO 7)
ADAPTADOR RECTO BSP HEMBRA ASIENTO A 60° (ISO 228) BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T1 (BSPP)	T2 (BSPT)	L	H1	H2
A520705-04-04	1/4" - 19	1/4" - 19	37,0	14	19
A520705-06-06	3/8" - 19	3/8" - 19	43,0	19	22
A520705-06-08	3/8" - 19	1/2" - 14	46,0	22	27
A520705-08-06	1/2" - 14	3/8" - 19	46,0	22	22
A520705-08-08	1/2" - 14	1/2" - 14	49,0	22	27
A520705-12-12	3/4" - 14	3/4" - 14	56,0	27	32
A520705-16-16	1" - 11	1" - 11	66,0	35	41
A520705-20-20	1.1/4" - 11	1.1/4" - 11	72,0	44	50
A520705-24-24	1.1/2" - 11	1.1/2" - 11	80,0	50	55

BSP ADAPTORS

A510502

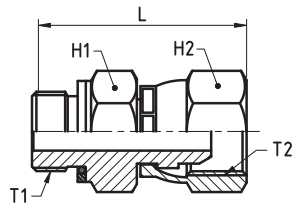
STRAIGHT ADAPTOR BSP FEMALE 60° CONE (ISO 228)
BSP FEMALE TAPERED (ISO 7)
ADAPTADOR RECTO BSP HEMBRA ASIENTO A 60º (ISO 228)
BSP HEMBRA CÓNICA (ISO 7)



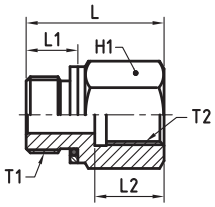
PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPP)	T_2 (BSPT)	L	H_1	H_2
A510502-04-04	1/4" - 19	1/4" - 19	34,0	19	19
A510502-06-06	3/8" - 19	3/8" - 19	40,0	22	22
A510502-08-08	1/2" - 14	1/2" - 14	47,0	27	27
A510502-12-12	3/4" - 14	3/4" - 14	53,0	35	32
A510502-16-16	1" - 11	1" - 11	61,0	41	41
A510502-20-20	1.1/4" - 11	1.1/4" - 11	67,0	50	50
A510502-24-24	1.1/2" - 11	1.1/2" - 11	73,0	55	55

A520305

STRAIGHT ADAPTOR BSP MALE OR BOSS (ISO 1179-3)
BSP FEMALE 60° CONE (ISO 228)
ADAPTADOR RECTO MACHO BSP O BOSS (ISO 1179-3)
BSP HEMBRA ASIENTO A 60º (ISO 228)



PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPP)	T_2 (BSPP)	L	H_1	H_2
A520305-04-04	1/4" - 19	1/4" - 19	36,5	19	19
A520305-06-06	3/8" - 19	3/8" - 19	39,5	22	22
A520305-08-08	1/2" - 14	1/2" - 14	45,5	27	27
A520305-12-12	3/4" - 14	3/4" - 14	54,0	32	32
A520305-16-16	1" - 11	1" - 11	61,5	41	41
A520305-20-20	1.1/4" - 11	1.1/4" - 11	67,0	50	50
A520305-24-24	1.1/2" - 11	1.1/2" - 11	73,5	55	55



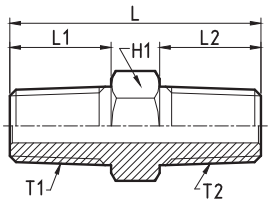
A520304

STRAIGHT ADAPTOR BSP MALE OR BOSS (ISO 1179-3) BSP FIXED FEMALE (ISO 1179-1)

ADAPTADOR RECTO MACHO BSP O BOSS (ISO 1179-3) BSP FIJO HEMBRA (ISO 1179-1)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_1	L_2	H_1
A520304-02-04	1/8" - 28	1/4" - 19	28,0	8,0	17,0	19
A520304-04-06	1/4" - 19	3/8" - 19	36,0	12,0	17,0	24
A520304-06-04	3/8" - 19	1/4" - 19	30,0	12,0	17,0	22
A520304-06-08	3/8" - 19	1/2" - 14	41,0	12,0	20,0	30
A520304-08-06	1/2" - 14	3/8" - 19	36,0	14,0	17,0	27
A520304-08-12	1/2" - 14	3/4" - 14	46,0	14,0	22,0	36
A520304-12-08	3/4" - 14	1/2" - 14	41,0	16,0	20,0	32
A520304-12-16	3/4" - 14	1" - 11	51,0	16,0	24,5	41
A520304-16-12	1" - 11	3/4" - 14	47,0	18,0	22,0	41
A520304-16-20	1" - 11	1.1/4" - 11	57,0	18,0	26,5	55
A520304-20-16	1.1/4" - 11	1" - 11	52,0	20,0	24,5	50
A520304-20-24	1.1/4" - 11	1.1/2" - 11	60,0	20,0	28,5	60

BSP ADAPTORS

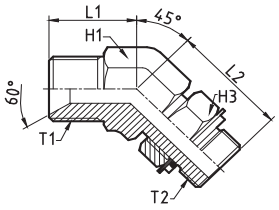


A500707

STRAIGHT ADAPTOR BSP MALE TAPERED (ISO 7)

ADAPTADOR RECTO BSP MACHO CÓNICO (ISO 7)

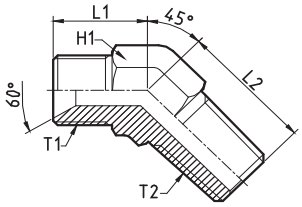
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPT)	T_2 (BSPT)	L	L_1	L_2	H_1
A500707-02-02	1/8" - 28	1/8" - 28	25,0	10,0	10,0	12
A500707-02-04	1/8" - 28	1/4" - 19	30,0	10,0	14,0	14
A500707-02-06	1/8" - 28	3/8" - 19	31,0	10,0	15,0	19
A500707-04-04	1/4" - 19	1/4" - 19	34,0	14,0	14,0	14
A500707-04-06	1/4" - 19	3/8" - 19	35,0	14,0	15,0	19
A500707-04-08	1/4" - 19	1/2" - 14	39,0	14,0	17,0	22
A500707-06-06	3/8" - 19	3/8" - 19	36,0	15,0	15,0	19
A500707-06-08	3/8" - 19	1/2" - 14	40,0	15,0	17,0	22
A500707-06-12	3/8" - 19	3/4" - 14	44,0	15,0	20,0	27
A500707-08-08	1/2" - 14	1/2" - 14	42,0	17,0	17,0	22
A500707-08-12	1/2" - 14	3/4" - 14	46,0	17,0	20,0	27
A500707-08-16	1/2" - 14	1" - 11	50,0	17,0	23,0	35
A500707-12-12	3/4" - 14	3/4" - 14	49,0	20,0	20,0	27
A500707-12-16	3/4" - 14	1" - 11	53,0	20,0	23,0	35
A500707-16-16	1" - 11	1" - 11	56,0	23,0	23,0	35
A500707-16-20	1" - 11	1.1/4" - 11	61,0	23,0	26,0	44
A500707-20-20	1.1/4" - 11	1.1/4" - 11	64,0	26,0	26,0	44
A500707-20-24	1.1/4" - 11	1.1/2" - 11	67,0	26,0	27,0	50
A500707-24-24	1.1/2" - 11	1.1/2" - 11	68,0	27,0	27,0	50
A500707-24-32	1.1/2" - 11	2" - 11	74,0	27,0	30,0	65
A500707-32-32	2" - 11	2" - 11	77,0	30,0	30,0	65



A530509

45° ELBOW ADJUSTABLE ADAPTOR BSP MALE PARALLEL
60° CONE SEAT (ISO 228) - BSP MALE O-RING BOSS TYPE (ISO 1179-3)
ADAPTADOR AJUSTABLE CODO 45° BSP MACHO PARALELO
ASIENTO A 60° (ISO 228) - BSP MACHO TIPO O-RING BOSS (ISO 1179-3

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L_1	L_2	H_1	H_3
A530509-04-04	1/4" - 19	1/4" - 19	21,0	28,0	14	19
A530509-04-06	1/4" - 19	3/8" - 19	23,0	33,0	19	22
A530509-06-04	3/8" - 19	1/4" - 19	25,0	33,0	19	19
A530509-06-06	3/8" - 19	3/8" - 19	25,0	33,0	19	22
A530509-06-08	3/8" - 19	1/2" - 14	26,0	38,5	22	27
A530509-08-06	1/2" - 14	3/8" - 19	28,0	38,5	22	22
A530509-08-08	1/2" - 14	1/2" - 14	28,0	38,5	22	27
A530509-08-12	1/2" - 14	3/4" - 14	30,0	43,0	27	32
A530509-12-08	3/4" - 14	1/2" - 14	33,0	43,0	27	27
A530509-12-12	3/4" - 14	3/4" - 14	33,0	43,0	27	32
A530509-12-16	3/4" - 14	1" - 11	35,0	47,0	35	41
A530509-16-12	1" - 11	3/4" - 14	38,0	46,0	35	32
A530509-16-16	1" - 11	1" - 11	38,0	47,0	35	41
A530509-16-20	1" - 11	1.1/4" - 11	40,0	48,5	44	50
A530509-20-16	1.1/4" - 11	1" - 11	45,0	48,5	44	41
A530509-20-20	1.1/4" - 11	1.1/4" - 11	45,0	48,5	44	50



A530507

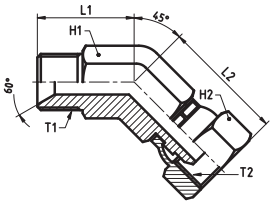
45° ELBOW ADAPTOR BSP MALE PARALLEL
60° CONE SEAT (ISO 228) - BSP MALE TAPERED (ISO 7)
ADAPTADOR CODO 45° BSP MACHO PARALELO
ASIENTO A 60° (ISO 228) - BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPP)	T_2 (BSPT)	L_1	L_2	H_1
A530507-04-04	1/4" - 19	1/4" - 19	21,0	21,0	14
A530507-06-06	3/8" - 19	3/8" - 19	25,0	26,0	19
A530507-08-08	1/2" - 14	1/2" - 14	28,0	31,0	22
A530507-12-12	3/4" - 14	3/4" - 14	33,0	31,5	27
A530507-16-16	1" - 11	1" - 11	38,0	41,0	35
A530507-20-20	1.1/4" - 11	1.1/4" - 11	45,0	46,0	44
A530507-24-24	1.1/2" - 11	1.1/2" - 11	47,0	48,0	50
A530507-32-32	2" - 11	2" - 11	56,0	55,0	65

A550505

45° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT BSP FEMALE 60° CONE (ISO 228)

ADAPTADOR CODO 45º BSP MACHO PARALELO ASIENTO A 60º BSP HEMBRA 60º (ISO 228)

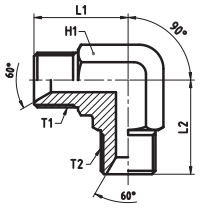


PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L_1	L_2	H_1	H_2
A550505-04-04	1/4" - 19	1/4" - 19	21,0	23,0	14	19
A550505-06-06	3/8" - 19	3/8" - 19	25,0	28,0	19	22
A550505-08-08	1/2" - 14	1/2" - 14	28,0	29,5	22	27
A550505-12-12	3/4" - 14	3/4" - 14	33,0	37,0	27	32
A550505-16-16	1" - 11	1" - 11	38,0	46,0	35	41
A550505-20-20	1.1/4" - 11	1.1/4" - 11	45,0	51,5	44	50
A550505-24-24	1.1/2" - 11	1.1/2" - 11	47,0	55,0	50	55

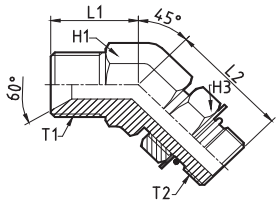
A560505

90° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228)

ADAPTADOR CODO 90º BSP MACHO PARALELO ASIENTO A 60º (ISO 228)



PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPP)	T_2 (BSPP)	L_1	L_2	H_1
A560505-04-04	1/4" - 19	1/4" - 19	25,0	25,0	14
A560505-06-06	3/8" - 19	3/8" - 19	29,0	29,0	19
A560505-08-08	1/2" - 14	1/2" - 14	33,0	33,0	22
A560505-12-12	3/4" - 14	3/4" - 14	38,0	38,0	27
A560505-16-16	1" - 11	1" - 11	45,0	45,0	35
A560505-20-20	1.1/4" - 11	1.1/4" - 11	52,0	52,0	41
A560505-24-24	1.1/2" - 11	1.1/2" - 11	59,0	59,0	50

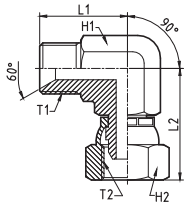


A530531

45° ELBOW ADJUSTABLE ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228)SAE MALE O-RING BOSS TYPE (SAE J1926)

ADAPTADOR AJUSTABLE CODO 45º BSP MACHO PARALELO ASIENTO A 60º (ISO 228) SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (UNF)	L_1	L_2	H_1	H_3
A530531-04-06	1/4" - 19	9/16" - 18	21,0	28,0	14	19
A530531-06-08	3/8" - 19	3/4" - 16	25,0	33,0	19	24
A530531-08-10	1/2" - 14	7/8" - 14	28,0	38,5	22	27
A530531-12-12	3/4" - 14	1.1/16" - 12	33,0	43,0	27	32
A530531-16-16	1" - 11	1.5/16" - 12	38,0	47,0	35	38
A530531-20-20	1.1/4" - 11	1.5/8" - 12	45,0	48,5	44	50



A580505

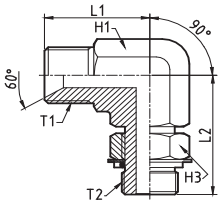
90° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT BSP FEMALE 60° CONE (ISO 228)

ADAPTADOR CODO 90º MACHO PARALELO ASIENTO A 60º BSP HEMBRA 60º (ISO 228)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L_1	L_2	H_1	H_2
A580505-04-04	1/4" - 19	1/4" - 19	25,0	28,0	14	19
A580505-06-06	3/8" - 19	3/8" - 19	29,0	31,0	19	22
A580505-08-08	1/2" - 14	1/2" - 14	33,0	37,0	22	27
A580505-12-12	3/4" - 14	3/4" - 14	38,0	45,0	27	32
A580505-16-16	1" - 11	1" - 11	45,0	52,0	35	41
A580505-20-20	1.1/4" - 11	1.1/4" - 11	52,0	62,0	41	50
A580505-24-24	1.1/2" - 11	1.1/2" - 11	59,0	73,0	50	55

BSP ADAPTORS

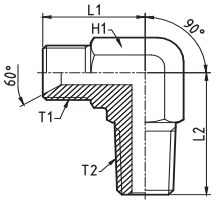
A560509



90° ELBOW ADJUSTABLE ADAPTOR BSP MALE PARALLEL
60° CONE SEAT (ISO 228) - BSP MALE O-RING BOSS TYPE (ISO 1179-3)
ADAPTADOR AJUSTABLE CODO 90º BSP MACHO PARALELO
ASIENTO A 60º (ISO 228) - BSP MACHO TIPO O-RING BOSS (ISO 1179-3)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L_1	L_2	H_1	H_3
A560509-04-04	1/4" - 19	1/4" - 19	25,0	31,5	14	19
A560509-04-06	1/4" - 19	3/8" - 19	26,0	36,5	19	22
A560509-06-04	3/8" - 19	1/4" - 19	29,0	33,5	19	19
A560509-06-06	3/8" - 19	3/8" - 19	29,0	36,5	19	22
A560509-06-08	3/8" - 19	1/2" - 14	30,0	43,0	22	27
A560509-08-06	1/2" - 14	3/8" - 19	33,0	39,5	22	22
A560509-08-08	1/2" - 14	1/2" - 14	33,0	43,0	22	27
A560509-08-12	1/2" - 14	3/4" - 14	36,0	49,0	27	32
A560509-12-08	3/4" - 14	1/2" - 14	38,0	45,5	27	27
A560509-12-12	3/4" - 14	3/4" - 14	38,0	49,0	27	32
A560509-12-16	3/4" - 14	1" - 11	42,0	52,0	35	41
A560509-16-12	1" - 11	3/4" - 14	45,0	52,0	35	32
A560509-16-16	1" - 11	1" - 11	45,0	52,0	35	41
A560509-16-20	1" - 11	1.1/4" - 11	52,0	57,0	41	50
A560509-20-16	1.1/4" - 11	1" - 11	52,0	57,0	41	41
A560509-20-20	1.1/4" - 11	1.1/4" - 11	52,0	57,0	41	50

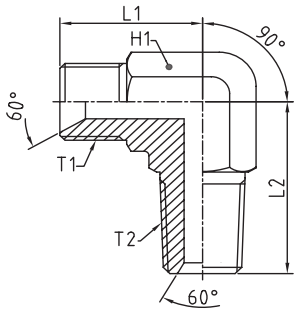
A560507



90° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228)
BSP MALE TAPERED (ISO 7)
ADAPTADOR CODO 90º BSP MACHO PARALELO ASIENTO A 60º (ISO 228)
BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPP)	T_2 (BSPT)	L_1	L_2	H_1
A560507-04-04	1/4" - 19	1/4" - 19	25,0	27,0	14
A560507-06-06	3/8" - 19	3/8" - 19	29,0	31,0	19
A560507-08-08	1/2" - 14	1/2" - 14	33,0	37,0	22
A560507-12-12	3/4" - 14	3/4" - 14	38,0	42,0	27
A560507-16-16	1" - 11	1" - 11	45,0	48,0	35
A560507-20-20	1.1/4" - 11	1.1/4" - 11	52,0	57,0	41
A560507-24-24	1.1/2" - 11	1.1/2" - 11	59,0	65,0	50
A560507-32-32	2" - 11	2" - 11	73,0	74,0	65

BSP ADAPTORS



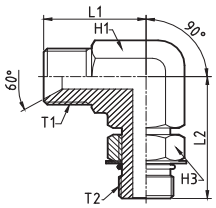
NEW

A560528

90° ELBOW ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228)NPTF MALE 60° CONE SEAT (SAE J514)

ADAPTADOR CODO 90° MACHO BPS PARALELO ASIENTO A 60° (ISO 228) MACHO NPTF 60° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (BSPP)	T2 (NPTF)	L1	L2	H1		
A560528-04-04	1/4"-19	1/4"-18	26,0	28,0	14		
A560528-06-06	3/8"-19	3/8"-18	29,0	31,0	19		
A560528-08-08	1/2"-14	1/2"-14	34,0	37,5	22		
A560528-12-12	3/4"-14	3/4"-14	41,0	40,0	27		
A560528-16-16	1"-11	1"-11,5	45,0	50,0	33		
A560528-20-20	1.1/4"-11	1.1/4"-11,5	52,0	60,0	41		



A560531

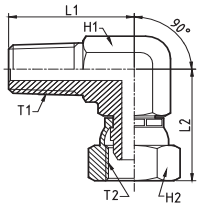
90° ELBOW ADJUSTABLE ADAPTOR BSP MALE PARALLEL 60° CONE SEAT (ISO 228)SAE MALE O-RING BOSS TYPE (SAE J1926)

ADAPTADOR AJUSTABLE CODO 90º BSP MACHO PARALELO ASIENTO A 60º (ISO 228) SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (UNF)	L_1	L_2	H_1	H_3
A560531-04-06	1/4" - 19	9/16" - 18	25,0	31,5	14	19
A560531-06-08	3/8" - 19	3/4" - 16	29,0	36,5	19	24
A560531-08-10	1/2" - 14	7/8" - 14	33,0	43,0	22	27
A560531-12-12	3/4" - 14	1.1/16" - 12	38,0	49,0	27	32
A560531-16-16	1" - 11	1.5/16" - 12	45,0	52,0	35	38
A560531-20-20	1.1/4" - 11	1.5/8" - 12	52,0	57,0	41	50

BSP ADAPTORS

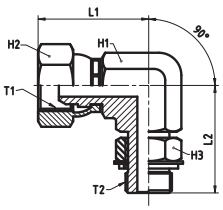
A580705



90° ELBOW ADAPTOR BSP MALE TAPERED (ISO 7)
BSP FEMALE 60° CONE (ISO 228)
ADAPTADOR CODO 90° BSP MACHO CÓNICO (ISO 7)
BSP HEMBRA ASIENTO A 60° (ISO 228)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPT)	T_2 (BSPP)	L_1	L_2	H_1	H_2
A580705-04-04	1/4" - 19	1/4" - 19	27,0	28,0	14	19
A580705-06-06	3/8" - 19	3/8" - 19	31,0	31,0	19	22
A580705-08-08	1/2" - 14	1/2" - 14	37,0	37,0	22	27
A580705-12-12	3/4" - 14	3/4" - 14	40,5	45,0	27	32
A580705-16-16	1" - 11	1" - 11	48,0	52,0	35	41
A580705-20-20	1.1/4" - 11	1.1/4" - 11	57,0	62,0	41	50
A580705-24-24	1.1/2" - 11	1.1/2" - 11	65,0	73,0	50	55

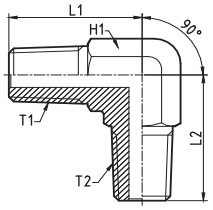
A580905



90° ELBOW ADJUSTABLE ADAPTOR BSP MALE OR BOSS (ISO 1179)
BSP FEMALE 60° CONE (ISO 228)
ADAPTADOR AJUSTABLE CODO 90° BSP O BOSS MACHO (ISO 1179)
BSP HEMBRA ASIENTO A 60° (ISO 228)

PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (BSPP)	T_2 (BSPP)	L_1	L_2	H_1	H_2	H_3
A580905-04-04	1/4" - 19	1/4" - 19	28,0	32,0	14	19	19
A580905-06-06	3/8" - 19	3/8" - 19	31,0	37,0	19	22	22
A580905-08-08	1/2" - 14	1/2" - 14	37,0	43,0	22	27	27
A580905-12-12	3/4" - 14	3/4" - 14	45,0	49,0	27	32	32
A580905-16-16	1" - 11	1" - 11	52,0	52,0	35	41	41
A580905-20-20	1.1/4" - 11	1,1/4" - 11	59,5	57,0	41	50	50
A580905-24-24	1.1/2" - 11	1,1/2" - 11	67,0	65,0	50	55	55

BSP ADAPTORS

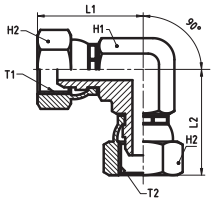


A560707

90° ELBOW ADAPTOR BSP MALE TAPERED (ISO 7)

ADAPTADOR CODO 90° BSP MACHO CÓNICO (ISO 7)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (BSPT)	T_2 (BSPT)	L_1	L_2	H_1
A560707-02-02	1/8" - 28	1/8" - 28	21,0	21,0	12
A560707-04-04	1/4" - 19	1/4" - 19	25,0	25,0	14
A560707-06-06	3/8" - 19	3/8" - 19	31,0	31,0	19
A560707-08-08	1/2" - 14	1/2" - 14	35,0	35,0	22
A560707-12-12	3/4" - 14	3/4" - 14	41,0	41,0	27
A560707-16-16	1" - 11	1" - 11	48,0	48,0	35
A560707-20-20	1.1/4" - 11	1.1/4" - 11	55,0	55,0	41
A560707-24-24	1.1/2" - 11	1.1/2" - 11	60,0	60,0	50
A560707-32-32	2" - 11	2" - 11	74,0	74,0	65



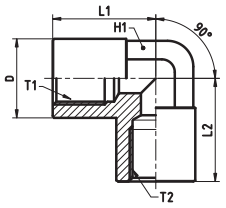
A570505

90° ELBOW ADAPTOR BSP FEMALE 60° CONE (ISO 228)

ADAPTADOR CODO 90° BSP HEMBRA ASIENTO A 60° (ISO 228)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP	L_1	L_2	H_1	H_2
A570505-04-04	1/4" - 19	1/4" - 19	28,0	28,0	14	19
A570505-06-06	3/8" - 19	3/8" - 19	31,0	31,0	19	22
A570505-08-08	1/2" - 14	1/2" - 14	37,0	37,0	24	27
A570505-12-12	3/4" - 14	3/4" - 14	45,0	45,0	27	32
A570505-16-16	1" - 11	1" - 11	54,0	54,0	35	41
A570505-20-20	1.1/4" - 11	1.1/4" - 11	59,5	59,5	41	50
A570505-24-24	1.1/2" - 11	1.1/2" - 11	67,0	67,0	50	55

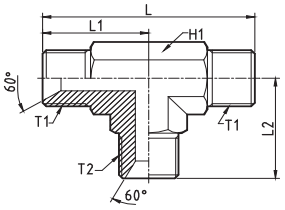
BSP ADAPTORS



A570404

90° ELBOW ADAPTOR BSP FIXED FEMALE
ADAPTADOR CODO 90° BSP HEMBRA FIJO

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L_1	L_2	D	H_1
A570404-02-02	1/8" - 28	1/8" - 28	22,5	22,5	19	17
A570404-04-04	1/4" - 19	1/4" - 19	22,5	22,5	24,0	21
A570404-06-06	3/8" - 19	3/8" - 19	26,0	26,0	28,0	25
A570404-08-08	1/2" - 14	1/2" - 14	28,5	28,5	33,0	30
A570404-12-12	3/4" - 14	3/4" - 14	33,0	33,0	40,0	37
A570404-16-16	1" - 11	1" - 11	38,5	38,5	47,0	43
A570404-20-20	1.1/4" - 11	1.1/4" - 11	46,0	46,0	56,0	52
A570404-24-24	1.1/2" - 11	1.1/2" - 11	49,0	49,0	63,0	59

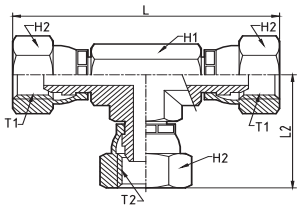


A700505

UNION TEE BSP MALE 60° CONE SEAT (ISO 228)
TE UNION BSP MACHO ASIENTO A 60° (ISO 228)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP	L	L_1	L_2	H_1
A700505-04-04	1/4" - 19	1/4" - 19	50,0	25,0	25,0	14
A700505-06-06	3/8" - 19	3/8" - 19	58,0	29,0	29,0	19
A700505-08-08	1/2" - 14	1/2" - 14	66,0	33,0	33,0	22
A700505-12-12	3/4" - 14	3/4" - 14	76,0	38,0	38,0	27
A700505-16-16	1" - 11	1" - 11	90,0	45,0	45,0	36
A700505-20-20	1.1/4" - 11	1.1/4" - 11	104,0	52,0	52,0	41
A700505-24-24	1.1/2" - 11	1.1/2" - 11	118,0	59,0	59,0	50

BSP ADAPTORS

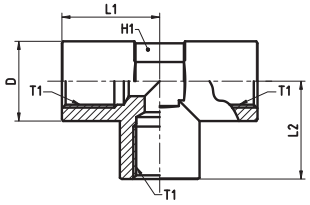


A730505

UNION TEE BSP FEMALE 60° CONE (ISO 228)

TE BSP HEMBRA ASIENTO A 60° (ISO 228)

PART. REF.	THREADS	DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_2	H_1	H_2
A730505-04-04	1/4" - 19	1/4" - 19	56,0	28,0	14	19
A730505-06-06	3/8" - 19	3/8" - 19	62,0	31,0	19	22
A730505-08-08	1/2" - 14	1/2" - 14	74,0	37,0	22	27
A730505-12-12	3/4" - 14	3/4" - 14	90,0	45,0	27	32
A730505-16-16	1" - 11	1" - 11	108,0	54,0	35	41
A730505-20-20	1.1/4" - 11	1.1/4" - 11	124,0	62,0	41	50
A730505-24-24	1.1/2" - 11	1.1/2" - 11	146,0	73,0	50	55



A730404

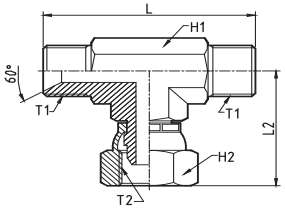
UNION TEE BSP FIXED FEMALE

TE BSP HEMBRA FIJA

PART. REF.	THREADS	DIMENSIONS mm			
	T_1 (BSPP)	L_1	L_2	D	H_1
A730404-02-02	1/8" - 28	22,0	22,0	16,0	17
A730404-04-04	1/4" - 19	22,0	22,0	24,0	19
A730404-06-06	3/8" - 19	25,0	25,0	27,0	24
A730404-08-08	1/2" - 14	28,5	28,5	33,0	30
A730404-12-12	3/4" - 14	32,5	32,5	39,0	36
A730404-16-16	1" - 11	36,5	36,5	47,0	43
A730404-20-20	1.1/4" - 11	44,0	44,0	56,0	52
A730404-24-24	1.1/2" - 11	49,0	49,0	63,0	58

A710505

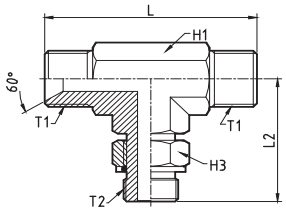
BRANCH TEE BSP MALE 60° CONE SEAT
BSP FEMALE 60° CONE (ISO 228)
TE MACHO ASIENTO A 60°
BSP HEMBRA 60° CONO (ISO 228)



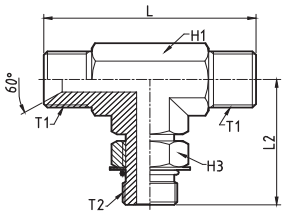
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_2	H_1	H_2
A710505-04-04	1/4" - 19	1/4" - 19	50,0	28,0	14	19
A710505-06-06	3/8" - 19	3/8" - 19	58,0	31,0	19	22
A710505-08-08	1/2" - 14	1/2" - 14	66,0	37,0	22	27
A710505-12-12	3/4" - 14	3/4" - 14	76,0	45,0	27	32
A710505-16-16	1" - 11	1" - 11	90,0	54,0	36	41
A710505-20-20	1.1/4" - 11	1.1/4" - 11	104,0	62,0	41	50
A710505-24-24	1.1/2" - 11	1.1/2" - 11	118,0	73,0	50	55

A780509

BRANCH TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228)
BSP MALE O-RING BOSS TYPE (ISO 1179-3)
TE AJUSTABLE BSP MACHO ASIENTO A 60° (ISO 228)
BSP MACHO TIPO O-RING BOSS (ISO 1179-3)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_2	H_1	H_3
A780509-04-04	1/4" - 19	1/4" - 19	50,0	31,5	14	19
A780509-06-06	3/8" - 19	3/8" - 19	58,0	36,5	19	22
A780509-08-08	1/2" - 14	1/2" - 14	66,0	43,0	22	27
A780509-12-12	3/4" - 14	3/4" - 14	76,0	49,0	27	32
A780509-16-16	1" - 11	1" - 11	90,0	52,0	36	41
A780509-20-20	1.1/4" - 11	1.1/4" - 11	104,0	57,0	41	50
A780509-24-24	1.1/2" - 11	1.1/2" - 11	118,0	64,0	50	55



A780531

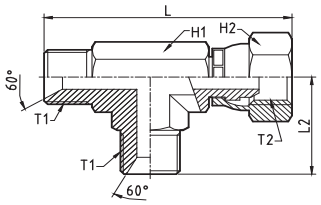
BRANCH TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228)
SAE MALE O-RING BOSS TYPE (SAE J1926)
TE AJUSTABLE BSP MACHO ASIENTO A 60º (ISO 228)
SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (UNF)	L	L_2	H_1	H_3
A780531-04-04	1/4" - 19	7/16" - 20	50,0	26,0	14	16
A780531-06-06	3/8" - 19	9/16" - 18	58,0	34,5	19	19
A780531-08-08	1/2" - 14	3/4" - 16	66,0	39,5	22	24
A780531-08-10	1/2" - 14	7/8" - 14	66,0	43,0	22	27
A780531-12-10	3/4" - 14	7/8" - 14	76,0	45,5	27	27
A780531-12-12	3/4" - 14	1.1/16" - 12	76,0	49,0	27	32
A780531-16-16	1" - 11	1.5/16" - 12	90,0	52,0	36	38
A780531-20-20	1.1/4" - 11	1.5/8" - 12	104,0	57,0	41	50
A780531-24-24	1.1/2" - 11	1.7/8" - 12	118,0	64,0	50	55

BSP ADAPTORS

A720505

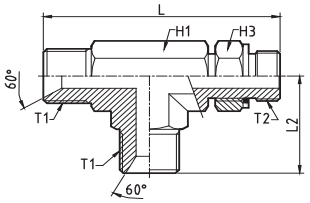
RUN TEE BSP MALE 60° CONE SEAT
BSP FEMALE 60° CONE (ISO 228)
TE BSP MACHO ASIENTO A 60°
BSP HEMBRA ASIENTO A 60° (ISO 228)



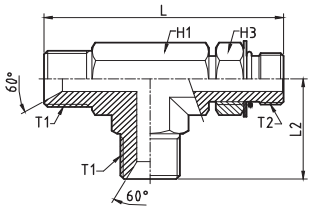
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_2	H_1	H_2
A720505-04-04	1/4" - 19	1/4" - 19	53,0	25,0	14	19
A720505-06-06	3/8" - 19	3/8" - 19	60,0	29,0	19	22
A720505-08-08	1/2" - 14	1/2" - 14	70,0	33,0	22	27
A720505-12-12	3/4" - 14	3/4" - 14	83,0	38,0	27	32
A720505-16-16	1" - 11	1" - 11	99,0	45,0	36	41
A720505-20-20	1.1/4" - 11	1.1/4" - 11	114,0	52,0	41	50
A720505-24-24	1.1/2" - 11	1.1/2" - 11	132,0	59,0	50	55

A760509

RUN TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228)
BSP MALE O-RING BOSS TYPE (ISO 1179-3)
TE AJUSTABLE BSP MACHO ASIENTO A 60° (ISO 228)
BSP MACHO TIPO O-RING BOSS (ISO 1179-3)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (BSPP)	L	L_2	H_1	H_3
A760509-04-04	1/4" - 19	1/4" - 19	56,5	25,0	14	19
A760509-06-06	3/8" - 19	3/8" - 19	65,5	29,0	19	22
A760509-08-08	1/2" - 14	1/2" - 14	76,0	33,0	22	27
A760509-12-12	3/4" - 14	3/4" - 14	87,0	38,0	27	32
A760509-16-16	1" - 11	1" - 11	97,0	45,0	36	41
A760509-20-20	1.1/4" - 11	1.1/4" - 11	109,0	52,0	41	50
A760509-24-24	1.1/2" - 11	1.1/2" - 11	123,0	59,0	50	55

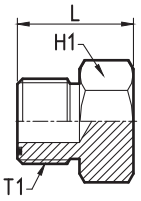


A760531

RUN TEE ADJUSTABLE BSP MALE 60° CONE SEAT (ISO 228)
SAE MALE O-RING BOSS TYPE (SAE J1926)
TE AJUSTABLE BSP MACHO ASIENTO A 60º (ISO 228)
MACHO SAE TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (BSPP)	T_2 (UNF)	L	L_2	H_1	H_3
A760531-04-04	1/4" - 19	7/16" - 20	51,0	25,0	14	16
A760531-06-06	3/8" - 19	9/16" - 18	63,5	29,0	19	19
A760531-08-08	1/2" - 14	3/4" - 16	72,5	33,0	22	24
A760531-08-10	1/2" - 14	7/8" - 14	76,0	33,0	22	27
A760531-12-10	3/4" - 14	7/8" - 14	83,5	38,0	27	27
A760531-12-12	3/4" - 14	1.1/16" - 12	87,0	38,0	27	32
A760531-16-16	1" - 11	1.5/16" - 12	97,0	45,0	36	38
A760531-20-20	1.1/4" - 11	1.5/8" - 12	109,0	52,0	41	50
A760531-24-24	1.1/2" - 11	1.7/8" - 12	123,0	59,0	50	55

ORFS ADAPTORS

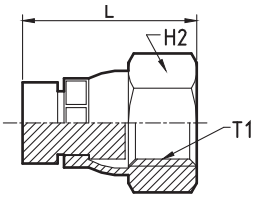


A402400

MALE PLUG ORFS (SAE J1453)

TAPON MACHO ORFS (SAE J1453)

PART. REF.	THREADS	DIMENSIONS mm	
	T_1 (UNF/S-UN)	L	H_1
A402400-04	9/16" - 18	16,5	16
A402400-06	11/16" - 16	19,5	19
A402400-08	13/16" - 16	21,0	22
A402400-10	1" - 14	23,5	27
A402400-12	1.3/16" - 12	29,0	32
A402400-16	1.7/16" - 12	31,5	38
A402400-20	1.11/16" - 12	31,5	46
A402400-24	2" - 12	31,5	55



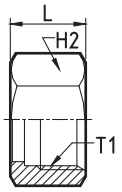
A412400

FEMALE PLUG ORFS (SAE J1453)

TAPON HEMBRA ORFS (SAE J1453)

PART. REF.	THREADS	DIMENSIONS mm	
	T_1 (UNF/S-UN)	L	H_2
A412400-04	9/16" - 18	23,0	19
A412400-06	11/16" - 16	28,0	22
A412400-08	13/16" - 16	31,0	24
A412400-10	1" - 14	36,0	30
A412400-12	1.3/16" - 12	39,0	36
A412400-16	1.7/16" - 12	43,0	41
A412400-20	1.11/16" - 12	44,0	50
A412400-24	2" - 12	48,0	60

ORFS ADAPTORS

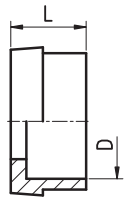


A432400

NUT ORFS (SAE J1453)

TUERCA ORFS (SAE J1453)

PART. REF.	O.D. PIPE mm	THREADS	DIMENSIONS mm	
		T1 (UNF/S-UN)	L	H2
A432400-06-04	6	9/16" - 18	14,5	17
A432400-10-06	10	11/16" - 16	17,0	22
A432400-12-08	12	13/16" - 16	21,0	24
A432400-16-10	16	1" - 14	23,5	30
A432400-20-12	20	1.3/16" - 12	26,0	36
A432400-25-16	25	1.7/16" - 12	27,0	41
A432400-30-20	30	1.11/16" - 12	28,0	50,
A432400-38-24	38	2" - 12	28,0	60



A422400

SLEEVE ORFS (SAE J1453)

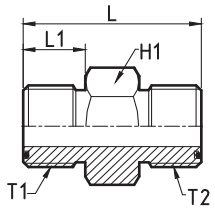
FÉRULA ORFS (SAE J1453)

PART. REF.	O.D. PIPE mm	THREADS	DIMENSIONS mm
	D	T1 (UNF/S-UN)	L
A422400-06-04	6	9/16" - 18	9,5
A422400-10-06	10	11/16" - 16	9,5
A422400-12-08	12	13/16" - 16	9,5
A422400-16-10	16	1" - 14	10,5
A422400-20-12	20	1.3/16" - 12	14,0
A422400-25-16	25	1.7/16" - 12	15,5
A422400-30-20	30	1.11/16" - 12	15,5
A422400-38-24	35	2" - 12	15,5

A502424

STRAIGHT ADAPTOR ORFS MALE (SAE J1453)

ADAPTADOR RECTO ORFS MACHO (SAE J1453)

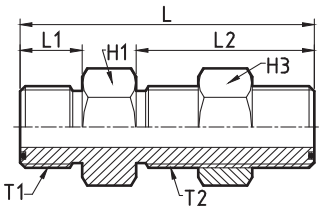


PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L	L_1	H_1
A502424-04-04	9/16" - 18	9/16" - 18	27,5	10,0	16
A502424-06-06	11/16" - 16	11/16" - 16	31,0	11,0	19
A502424-08-08	13/16" - 16	13/16" - 16	35,5	13,0	22
A502424-10-10	1" - 14	1" - 14	42,5	15,5	27
A502424-12-12	1.3/16" - 12	1.3/16" - 12	47,0	17,0	32
A502424-16-16	1.7/16" - 12	1.7/16" - 12	49,5	17,5	38
A502424-20-20	1.11/16" - 12	1.11/16" - 12	51,5	17,5	46
A502424-24-24	2" - 12	2" - 12	53,0	17,5	55

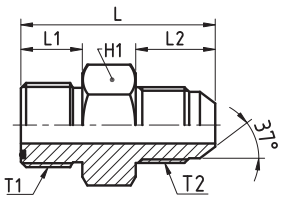
A502427

STRAIGHT BULKHEAD ADAPTOR ORFS MALE (SAE J1453)

ADAPTADOR RECTO DOBLE TUERCA ORFS MACHO (SAE J1453)



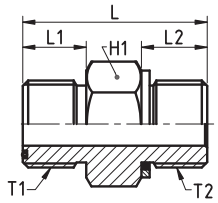
PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L	L_1	L_2	H_1	H_3
A502427-04-04	9/16" - 18	9/16" - 18	48,5	10,0	31,5	22	22
A502427-06-06	11/16" - 16	11/16" - 16	54,0	11,0	34,0	27	27
A502427-08-08	13/16" - 16	13/16" - 16	58,5	13,0	36,5	30	30
A502427-10-10	1" - 14	1" - 14	66,5	15,5	40,5	32	32
A502427-12-12	1.3/16" - 12	1.3/16" - 12	69,0	17,0	41,5	38	38
A502427-16-16	1.7/16" - 12	1.7/16" - 12	70,0	17,5	42,0	46	46
A502427-20-20	1.11/16" - 12	1.11/16" - 12	70,0	17,5	42,0	50	50
A502427-24-24	2" - 12	2" - 12	70,0	17,5	42,0	60	60



A502425

STRAIGHT ADAPTOR ORFS MALE (SAE J1453)
JIC MALE 74° CONE (SAE J514)
ADAPTADOR RECTO ORFS MACHO (SAE J1453)
JIC MACHO ASIENTO A 74° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF)	L	L_1	L_2	H_1
A502425-04-04	9/16" - 18	7/16" - 20	32,5	10,0	15,0	17
A502425-06-06	11/16" - 16	9/16" - 18	35,5	11,0	16,0	19
A502425-08-08	13/16" - 16	3/4" - 16	40,5	13,0	18,0	22
A502425-10-10	1" - 14	7/8" - 14	47,0	15,5	21,0	27
A502425-12-12	1.3/16" - 12	1.1/16" - 12	52,5	17,0	24,0	32
A502425-16-16	1.7/16" - 12	1.5/16" - 12	56,0	17,5	25,0	41
A502425-20-20	1.11/16" - 12	1.5/8" - 12	60,0	17,5	28,0	46



A502403

STRAIGHT ADAPTOR ORFS MALE (SAE J1453)
BSP OR BOSS MALE (ISO 1179)
ADAPTADOR RECTO ORFS MACHO (SAE J1453)
BSP O BOSS MACHO (ISO 1179)

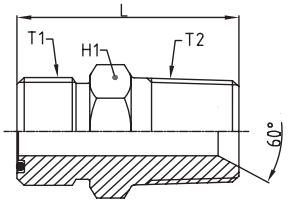
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (BSPP)	L	L_1	L_2	H_1
A502403-04-04	9/16" - 18	1/4" - 19	30,0	10,0	12,0	19
A502403-04-06	9/16" - 18	3/8" - 19	31,0	10,0	12,0	22
A502403-06-04	11/16" - 16	1/4" - 19	32,5	11,0	12,0	19
A502403-06-06	11/16" - 16	3/8" - 19	32,5	11,0	12,0	22
A502403-06-08	11/16" - 16	1/2" - 14	35,5	11,0	14,0	27
A502403-08-06	13/16" - 16	3/8" - 19	34,5	13,0	12,0	22
A502403-08-08	13/16" - 16	1/2" - 14	37,0	13,0	14,0	27
A502403-08-12	13/16" - 16	3/4" - 14	41,0	13,0	16,0	32
A502403-10-08	1" - 14	1/2" - 14	39,5	15,5	14,0	27
A502403-10-12	1" - 14	3/4" - 14	43,5	15,5	16,0	32
A502403-12-12	1.3/16" - 12	3/4" - 14	45,0	17,0	16,0	32
A502403-12-16	1.3/16" - 12	1" - 11	49,0	17,0	18,0	41
A502403-16-16	1.7/16" - 12	1" - 11	50,0	17,5	18,0	41
A502403-16-20	1.7/16" - 12	1.1/4" - 11	54,0	17,5	20,0	50

ORFS ADAPTORS

A502428

NEW

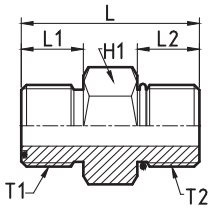
STRAIGHT ADAPTOR ORFS MALE (SAE J1453)
NPTF MALE 60° CONE SEAT (SAE J514)
ADAPTADOR MACHO RECTO ORFS (SAE J1453)
MACHO NPTF 60° (SAE J514)



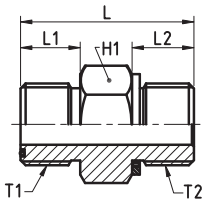
PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF/S-UN)	T2 (NPTF)	L	H1			
A502428-04-04	9/16"-18	1/4"-18	32,0	16			
A502428-04-06	9/16"-18	3/8"-18	32,0	19			
A502428-06-04	11/16"-16	1/4"-18	34,0	19			
A502428-06-06	11/16"-16	3/8"-18	34,0	19			
A502428-06-08	11/16"-16	1/2"-14	39,4	24			
A502428-08-06	13/16"-16	3/8"-18	36,8	22			
A502428-08-08	13/16"-16	1/2"-14	41,7	22			
A502428-10-08	1"-14	1/2"-14	46,2	27			
A502428-12-12	1.3/16"-12	3/4"-14	49,3	32			
A502428-16-16	1.7/16"-12	1"-11,5	55,6	38			
A502428-20-20	1.11/16"-12	1.1/4"-11,5	58,4	46			

A502430

STRAIGHT ADAPTOR ORFS MALE (SAE J1453)
SAE MALE O-RING BOSS TYPE (SAE J1926)
ADAPTADOR RECTO ORFS MACHO (SAE J1453)
SAE MACHO TIPO O-RING BOSS (SAE J1926)



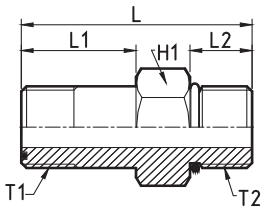
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF)	L	L_1	L_2	H_1
A502430-04-04	9/16" - 18	7/16" - 20	28,5	10,0	9,5	16
A502430-06-06	11/16" - 16	9/16" - 18	32,0	11,0	10,0	19
A502430-08-08	13/16" - 16	3/4" - 16	36,5	13,0	11,5	22
A502430-10-10	1" - 14	7/8" - 14	43,0	15,5	13,0	27
A502430-12-12	1.3/16" - 12	1.1/16" - 12	48,5	17,0	15,5	32
A502430-16-16	1.7/16" - 12	1.5/16" - 12	50,5	17,5	15,5	38
A502430-20-20	1.11/16" - 12	1.5/8" - 12	52,5	17,5	15,5	50
A502430-24-24	2" - 12	1.7/8" - 12	54,0	17,5	15,5	55



A502419

STRAIGHT ADAPTOR ORFS MALE (SAE J1453)
METRIC MALE (ISO 6149)
ADAPTADOR RECTO ORFS MACHO (SAE J1453)
METRICO MACHO (ISO 6149)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (METRIC)	L	L_1	L_2	H_1
A502419-04-10	9/16" - 18	10 x 1	26,0	10,0	9,0	17
A502419-04-12	9/16" - 18	12 x 1,5	28,0	10,0	11,0	17
A502419-06-14	11/16" - 16	14 x 1,5	31,0	11,0	11,0	19
A502419-06-16	11/16" - 16	16 x 1,5	33,0	11,0	12,5	22
A502419-08-18	13/16" - 16	18 x 1,5	36,0	13,0	14,0	24
A502419-08-22	13/16" - 16	22 x 1,5	38,0	13,0	15,0	27
A502419-10-22	1" - 14	22 x 1,5	40,5	15,5	15,0	27
A502419-10-27	1" - 14	27 x 2	46,0	15,5	18,5	32
A502419-12-27	1.3/16" - 12	27 x 2	47,5	17,0	18,5	32
A502419-12-33	1.3/16" - 12	33 x 2	49,0	17,0	18,5	41
A502419-16-33	1.7/16" - 12	33 x 2	50,0	17,5	18,5	41
A502419-16-42	1.7/16" - 12	42 x 2	52,0	17,5	19,0	50
A502419-20-42	1.11/16" - 12	42 x 2	52,0	17,5	19,0	50
A502419-20-48	1.11/16" - 12	48 x 2	56,0	17,5	22,0	55

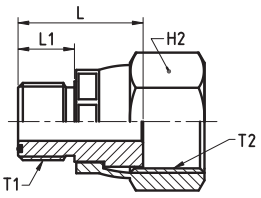


A502930

STRAIGHT ADAPTOR LONG ORFS MALE (SAE J1453)
SAE MALE O-RING BOSS TYPE (SAE J1926)
ADAPTADOR RECTO LARGO ORFS MACHO (SAE J1453)
SAE MACHO TIPO O-RING BOSS (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF)	L	L_1	L_2	H_1
A502930-04-04	9/16" - 18	7/16" - 20	52,5	34,0	9,5	16
A502930-06-06	11/16" - 16	9/16" - 18	57,5	37,0	10,0	19
A502930-08-08	13/16" - 16	3/4" - 16	68,0	44,5	11,5	22
A502930-10-10	1" - 14	7/8" - 14	79,0	52,5	13,0	27
A502930-12-12	1.3/16" - 12	1.1/16" - 12	95,5	64,0	15,5	32
A502930-16-16	1.7/16" - 12	1.5/16" - 12	105,0	73,0	15,5	38
A502930-20-20	1.11/16" - 12	1.5/8" - 12	121,0	86,5	15,5	46
A502930-24-24	2" - 12	1.7/8" - 12	133,5	97,0	15,5	55

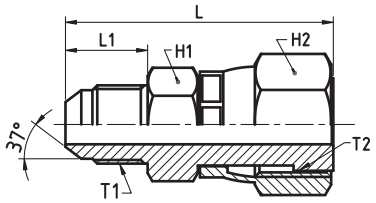
A522424



STRAIGHT ADAPTOR ORFS MALE ORFS SWIVEL FEMALE (SAE J1453)
ADAPTADOR RECTO ORFS MACHO ORFS HEMBRA GIRATORIO (SAE J1453)

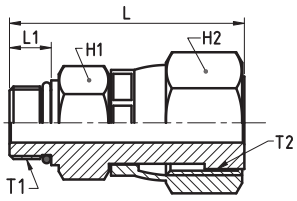
PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L	L_1	H_2
A522424-04-06	9/16" - 18	11/16" - 16	20,0	10,0	22
A522424-04-08	9/16" - 18	13/16" - 16	22,0	10,0	24
A522424-06-08	11/16" - 16	13/16" - 16	23,0	11,0	24
A522424-06-10	11/16" - 16	1" - 14	24,0	11,0	30
A522424-08-10	13/16" - 16	1" - 14	25,5	13,0	30
A522424-08-12	13/16" - 16	1.3/16" - 12	27,5	13,0	36
A522424-10-12	1" - 14	1.3/16" - 12	29,5	15,5	36
A522424-10-16	1" - 14	1.7/16" - 12	32,0	15,5	41
A522424-12-16	1.3/16" - 12	1.7/16" - 12	33,0	17,0	41
A522424-12-20	1.3/16" - 12	1.11/16" - 12	33,5	17,0	50
A522424-16-20	1.7/16" - 12	1.11/16" - 12	34,0	17,5	50
A522424-20-24	1.11/16" - 12	2" - 12	34,0	17,5	60

A522524



STRAIGHT ADAPTOR JIC MALE 74° CONE (SAE J514)
ORFS FEMALE (SAE J1453)
ADAPTADOR RECTO JIC MACHO ASIENTO A 74° (SAE J514)
ORFS HEMBRA (SAE J1453)

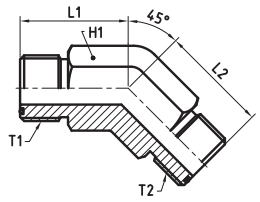
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF/S-UN)	L	L_1	H_1	H_2
A522524-04-04	7/16" - 20	9/16" - 18	39,0	15,0	17	19
A522524-06-06	9/16" - 18	11/16" - 16	43,0	16,0	22	22
A522524-08-08	3/4" - 16	13/16" - 16	48,5	18,0	24	24
A522524-10-10	7/8" - 14	1" - 14	57,0	21,0	30	30
A522524-12-12	1.1/16" - 12	1.3/16" - 12	63,0	24,0	36	36
A522524-16-16	1.5/16" - 12	1.7/16" - 12	67,0	25,0	41	41
A522524-20-20	1.5/8" - 12	1.11/16" - 12	73,0	28,0	50	50



A523024

STRAIGHT ADAPTOR SAE OR BOSS MALE (SAE J1926)
ORFS FEMALE (SAE J1453)
ADAPTADOR RECTO SAE O BOSS MACHO (SAE J1926)
ORFS HEMBRA (SAE J1453)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF)	T_2 (UNF/S-UN)	L	L_1	H_1	H_2
A523024-04-04	7/16" - 20	9/16" - 18	33,0	9,5	17	19
A523024-06-06	9/16" - 18	11/16" - 16	36,0	10,0	19	22
A523024-08-08	3/4" - 16	13/16" - 16	41,0	11,5	22	24
A523024-10-10	7/8" - 14	1" - 14	47,5	13,0	27	30
A523024-12-12	1.1/16" - 12	1.3/16" - 12	54,0	15,5	32	36
A523024-16-16	1.5/16" - 12	1.7/16" - 12	56,0	15,5	41	41
A523024-20-20	1.5/8" - 12	1.11/16" - 12	60,0	15,5	46	50

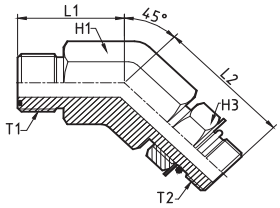


A532424

45° ELBOW ADAPTOR ORFS MALE (SAE J1453)
ADAPTADOR CODO 45° ORFS MACHO (SAE J1453)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L_1	L_2	H_1
A532424-04-04	9/16" - 18	9/16" - 18	16,0	16,0	14
A532424-06-06	11/16" - 16	11/16" - 16	20,0	20,0	19
A532424-08-08	13/16" - 16	13/16" - 16	22,0	22,0	19
A532424-10-10	1" - 14	1" - 14	26,0	26,0	27
A532424-12-12	1.3/16" - 12	1.3/16" - 12	31,0	31,0	35
A532424-16-16	1.7/16" - 12	1.7/16" - 12	34,0	34,0	44
A532424-20-20	1.11/16" - 12	1.11/16" - 12	34,0	34,0	44

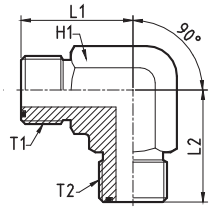
A532431



45° ELBOW ADJUSTABLE ADAPTOR ORFS MALE (SAE J1453)
SAE MALE O-RING BOSS TYPE (SAE J1926)
ADAPTADOR AJUSTABLE CODO 45° ORFS MACHO (SAE J1453)
MACHO SAE TIPO O-RING BOSS (SAE J1926)

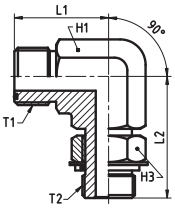
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF)	L_1	L_2	H_1	H_3
A532431-04-04	9/16" - 18	7/16" - 20	16,0	26,5	14	16
A532431-06-06	11/16" - 16	9/16" - 18	19,0	33,0	19	19
A532431-08-08	13/16" - 16	3/4" - 16	20,5	36,5	19	24
A532431-10-10	1" - 14	7/8" - 14	23,5	43,0	27	27
A532431-12-12	1.3/16" - 12	1.1/16" - 12	29,0	46,0	35	32
A532431-16-16	1.7/16" - 12	1.5/16" - 12	30,0	47,0	35	38
A532431-20-20	1.11/16" - 12	1.5/8" - 12	32,0	48,5	44	50

A562424



90° ELBOW ADAPTOR ORFS MALE (SAE J1453)
ADAPTADOR CODO 90° ORFS MACHO (SAE J1453)

PART. REF.	THREADS		DIMENSIONS mm		
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L_1	L_2	H_1
A562424-04-04	9/16" - 18	9/16" - 18	21,5	21,5	14
A562424-06-06	11/16" - 16	11/16" - 16	25,0	25,0	19
A562424-08-08	13/16" - 16	13/16" - 16	28,0	28,0	19
A562424-10-10	1" - 14	1" - 14	33,5	33,5	27
A562424-12-12	1.3/16" - 12	1.3/16" - 12	37,5	37,5	30
A562424-16-16	1.7/16" - 12	1.7/16" - 12	41,5	41,5	36
A562424-20-20	1.11/16" - 12	1.11/16" - 12	44,5	44,5	41
A562424-24-24	2" - 12	2" - 12	49,0	49,0	50



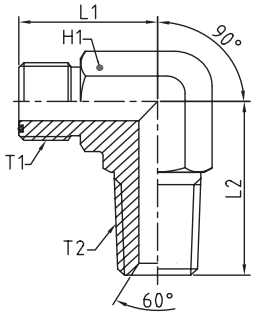
A562409

90° ELBOW ADJUSTABLE ADAPTOR ORFS MALE (SAE J1453) BSP OR BOSS MALE (ISO 1179)

ADAPTADOR AJUSTABLE CODO 90º ORFS MACHO (SAE J1453) BSP O BOSS MACHO (ISO 1179)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (BSPP)	L_1	L_2	H_1	H_3
A562409-04-04	9/16" - 18	1/4" - 19	21,5	32,0	14	19
A562409-04-06	9/16" - 18	3/8" - 19	23,5	36,5	19	22
A562409-06-04	11/16" - 16	1/4" - 19	25,0	32,0	19	19
A562409-06-06	11/16" - 16	3/8" - 19	25,0	36,5	19	22,
A562409-06-08	11/16" - 16	1/2" - 14	27,0	43,0	22	27
A562409-08-06	13/16" - 16	3/8" - 19	28,0	36,5	19	22
A562409-08-08	13/16" - 16	1/2" - 14	28,0	43,0	22	27
A562409-08-12	13/16" - 16	3/4" - 14	33,5	48,0	30	32
A562409-10-08	1" - 14	1/2" - 14	33,5	48,0	27	27
A562409-10-12	1" - 14	3/4" - 14	33,5	48,0	27	32
A562409-12-12	1.3/16" - 12	3/4" - 14	37,5	48,0	30	32
A562409-12-16	1.3/16" - 12	1" - 11	38,0	56,0	33	41
A562409-16-16	1.7/16" - 12	1" - 11	41,5	56,0	36	41
A562409-20-20	1.11/16" - 12	1.1/4" - 11	44,5	58,0	41	50

ORFS ADAPTORS



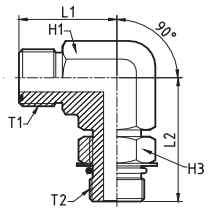
A562428 NEW

90° ELBOW ADAPTOR ORFS MALE (SAE J1453)
NPTF MALE 60° CONE SEAT (SAE J514)
ADAPTADOR CODO 90° MACHO ORFS (SAE J1453)
MACHO NPTF 60° (SAE J514)

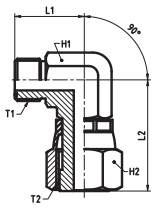
PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF/S-UN)	T2 (NPTF)	L1	L2	H1		
A562428-04-04	9/16"-18	1/4"-18	21,6	28,5	14		
A562428-04-06	9/16"-18	3/8"-18	23,4	31,0	19		
A562428-06-04	11/16"-16	1/4"-18	24,9	27,7	19		
A562428-06-06	11/16"-16	3/8"-18	24,9	31,0	19		
A562428-06-08	11/16"-16	1/2"-14	29,2	37,3	22		
A562428-08-06	13/16"-16	3/8"-18	27,9	31,0	19		
A562428-08-08	13/16"-16	1/2"-14	27,9	37,3	22		
A562428-10-08	1"-14	1/2"-14	33,3	37,3	27		
A562428-10-12	1"-14	3/4"-14	33,3	40,4	27		
A562428-12-12	1.3/16"-12	3/4"-14	37,3	40,4	30		
A562428-16-16	1.7/16"-12	1"-11,5	41,7	50,0	36		
A562428-20-20	1.11/16"-12	1.1/4"-11,5	44,7	60,5	41		

A562431

90° ELBOW ADJUSTABLE ADAPTOR ORFS MALE (SAE J1453)
SAE MALE O-RING BOSS TYPE (SAE J1926)
ADAPTADOR AJUSTABLE CODO 90° ORFS MACHO (SAE J1453)
SAE MACHO TIPO O-RING BOSS (SAE J1926)



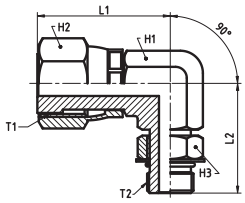
PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF)	L_1	L_2	H_1	H_3
A562431-04-04	9/16" - 18	7/16" - 20	21,5	26,0	14	16
A562431-04-06	9/16" - 18	9/16" - 18	21,5	31,5	14	19
A562431-06-06	11/16" - 16	9/16" - 18	25,0	34,5	19	19
A562431-08-08	13/16" - 16	3/4" - 16	28,0	36,5	19	24
A562431-10-10	1" - 14	7/8" - 14	33,5	45,5	27	27
A562431-12-12	1.3/16" - 12	1.1/16" - 12	37,5	52,0	32	32
A562431-16-16	1.7/16" - 12	1.5/16" - 12	41,5	57,0	36	38
A562431-20-20	1.11/16" - 12	1.5/8" - 12	44,5	57,0	41	50



A582424

90° ELBOW ADAPTOR ORFS MALE-ORFS FEMALE (SAE J1453)
ADAPTADOR CODO 90° ORFS MACHO-ORFS HEMBRA (SAE J1453)

PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L_1	L_2	H_1	H_2
A582424-04-04	9/16" - 18	9/16" - 18	21,5	26,5	14	19
A582424-06-06	11/16" - 16	11/16" - 16	25,0	29,0	19	22
A582424-08-08	13/16" - 16	13/16" - 16	28,0	38,0	19	24
A582424-10-10	1" - 14	1" - 14	33,5	41,0	27	30
A582424-12-12	1.3/16" - 12	1.3/16" - 12	37,5	46,5	30	36
A582424-16-16	1.7/16" - 12	1.7/16" - 12	41,5	53,5	35	41
A582424-20-20	1.11/16" - 12	1.11/16" - 12	44,5	58,0	41	50

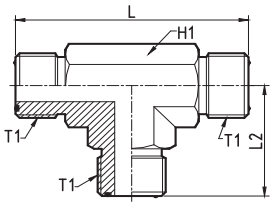


A583124

90° ELBOW ADJUSTABLE ADAPTOR ORFS FEMALE (SAE J1453)
SAE OR BOSS MALE (SAE J1926)
ADAPTADOR AJUSTABLE CODO 90° ORFS HEMBRA (SAE J1453)
SAE O BOSS MACHO (SAE J1926)

PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (UNF/S-UN)	T_2 (UNF)	L_1	L_2	H_1	H_2	H_3
A583124-04-04	9/16" - 18	7/16" - 20	26,5	30,0	14	19	16
A583124-06-06	11/16" - 16	9/16" - 18	29,0	37,0	19	22	19
A583124-08-08	13/16" - 16	3/4" - 16	34,0	40,5	19	24	24
A583124-10-10	1" - 14	7/8" - 14	41,0	47,0	27	30	27
A583124-12-12	1.3/16" - 12	1.1/16" - 12	46,5	52,0	32	36	32
A583124-16-16	1.7/16" - 12	1.5/16" - 12	51,0	57,0	36	41	38
A583124-20-20	1.11/16" - 12	1.5/8" - 12	58,0	62,0	41	50	50

ORFS ADAPTORS



A702424

UNION TEE ORFS MALE (SAE J1453)

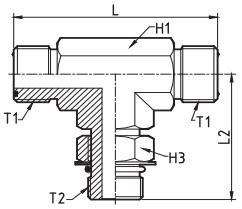
TE UNION ORFS MACHO (SAE J1453)

PART. REF.	THREADS	DIMENSIONS mm		
	T_1 (UNF/S-UN)	L	L_2	H_1
A702424-04-04	9/16" - 18	43,0	21,5	14
A702424-06-06	11/16" - 16	50,0	25,0	19
A702424-08-08	13/16" - 16	56,0	28,0	19
A702424-10-10	1" - 14	66,5	33,5	27
A702424-12-12	1.3/16" - 12	75,0	37,5	32
A702424-16-16	1.7/16" - 12	83,5	41,5	36
A702424-20-20	1.11/16" - 12	89,5	44,5	41
A702424-24-24	2" - 12	97,5	48,5	50

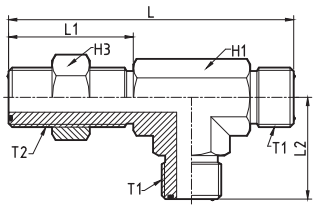
A782431

BRANCH TEE ADJUSTABLE ORFS MALE (SAE J1453)
SAE MALE O-RING BOSS TYPE (SAE J1926)

TE AJUSTABLE MACHO ORFS (SAE J1453)
SAE MACHO TIPO O-RING BOSS (SAE J1926)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF)	L	L_2	H_1	H_3
A782431-04-04	9/16" - 18	7/16" - 20	43,0	26,0	14	16
A782431-06-06	11/16" - 16	9/16" - 18	50,0	34,5	19	19
A782431-08-08	13/16" - 16	3/4" - 16	56,0	36,5	19	24
A782431-10-10	1" - 14	7/8" - 14	66,5	45,5	27	27
A782431-12-12	1.3/16" - 12	1.1/16" - 12	75,0	52,0	36	32
A782431-16-16	1.7/16" - 12	1.5/16" - 12	83,5	57,0	36	38
A782431-20-20	1.11/16" - 12	1.5/8" - 12	89,5	61,0	41	50

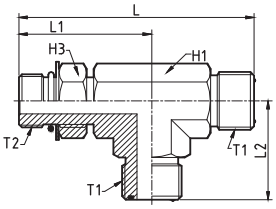


A762427

RUN TEE BULKHEAD ORFS MALE (SAE J1453)

TE PASATABIQUE MACHO ORFS (SAE J1453)

PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L	L_1	L_2	H_1	H_3
A762427-04-04	9/16" - 18	9/16" - 18	69,0	47,0	22,5	14	22
A762427-06-06	11/16" - 16	11/16" - 16	78,0	52,0	26,0	19	27
A762427-08-08	13/16" - 16	13/16" - 16	84,5	55,5	29,0	19	30
A762427-10-10	1" - 14	1" - 14	97,5	63,0	34,5	27	35
A762427-12-12	1.3/16" - 12	1.3/16" - 12	110,0	67,5	38,5	32	38
A762427-16-16	1.7/16" - 12	1.7/16" - 12	113,5	71,0	42,5	36	46
A762427-20-20	1.11/16" - 12	1.11/16" - 12	120,5	75,5	45,5	41	50



A762431

RUN TEE ADJUSTABLE ORFS MALE (SAE J1453)
SAE MALE O-RING BOSS TYPE (SAE J1926)

TE AJUSTABLE ORFS MACHO (SAE J1453)
SAE MACHO TIPO O-RING BOSS (SAE J1926)

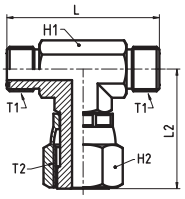
PART. REF.	THREADS		DIMENSIONS mm				
	T_1 (UNF/S-UN)	T_2 (UNF)	L	L_1	L_2	H_1	H_3
A762431-04-04	9/16" - 18	7/16" - 20	48,0	26,5	21,5	14	16
A762431-06-06	11/16" - 16	9/16" - 18	59,5	34,5	25,0	19	19
A762431-08-08	13/16" - 16	3/4" - 16	64,5	36,5	28,0	19	24
A762431-10-10	1" - 14	7/8" - 14	79,0	45,5	33,5	27	27
A762431-12-12	1.3/16" - 12	1.1/16" - 12	89,5	52,0	37,5	27	32
A762431-16-16	1.7/16" - 12	1.5/16" - 12	98,5	57,0	41,5	36	38
A762431-20-20	1.11/16" - 12	1.5/8" - 12	105,5	61,0	44,5	41	50

ORFS ADAPTORS

A712424

BRANCH TEE ORFS MALE - ORFS FEMALE (SAE J1453)

TE MACHO ORFS - ORFS HEMBRA (SAE J1453)

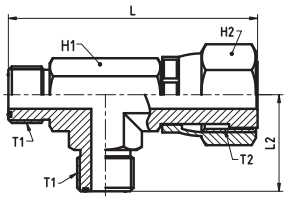


PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L	L_2	H_1	H_2
A712424-04-04	9/16" -18	9/16" -18	43,0	26,5	14	19
A712424-06-06	11/16" -16	11/16" -16	50,0	29,0	19	22
A712424-08-08	13/16" -16	13/16" -16	56,0	38,0	19	24
A712424-10-10	1" -14	1" -14	67,0	41,0	27	30
A712424-12-12	1.3/16" -12	1.3/16" -12	75,0	46,5	27	36
A712424-16-16	1.7/16" -12	1.7/16" -12	83,0	53,5	36	41
A712424-20-20	1.11/16" -12	1.11/16" -12	89,0	58,0	41	50

A722424

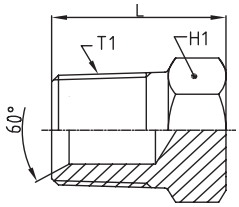
RUN TEE ORFS MALE - ORFS FEMALE (SAE J1453)

TE MACHO ORFS - ORFS HEMBRA (SAE J1453)



PART. REF.	THREADS		DIMENSIONS mm			
	T_1 (UNF/S-UN)	T_2 (UNF/S-UN)	L	L_2	H_1	H_2
A722424-04-04	9/16" - 18	9/16" - 18	48,0	21,5	14	19
A722424-06-06	11/16" - 16	11/16" - 16	54,0	25,0	19	22
A722424-08-08	13/16" - 16	13/16" - 16	66,0	28,0	19	24
A722424-10-10	1" - 14	1" - 14	74,5	33,5	27	30
A722424-12-12	1.3/16" - 12	1.3/16" - 12	84,0	37,5	27	36
A722424-16-16	1.7/16" - 12	1.7/16" - 12	95,0	41,5	36	41
A722424-20-20	1.11/16" - 12	1.11/16" - 12	102,5	44,5	41	50

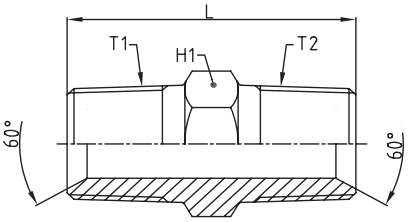
NPTF - NPSM ADAPTORS



NEW **A402800**

MALE PLUG NPTF 60° CONE SEAT (SAE J514)
TAPÓN MACHO NPTF ASIENTO A 60° (SAE J514)

PART. REF.	THREADS	DIMENSIONS mm				
	T1 (NPTF)	L	H1			
A402800-02	1/8"-27	15,2	11			
A402800-04	1/4"-18	21,6	16			
A402800-06	3/8"-18	21,6	19			
A402800-08	1/2"-14	27,9	22			
A402800-12	3/4"-14	29,7	27			
A402800-16	1"-11,5	34,5	33			
A402800-20	1.1/4"-11,5	37,3	44			
A402800-24	1.1/2"-11,5	39,9	50			



NEW **A502828**

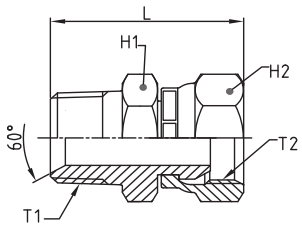
STRAIGHT ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514)
ADAPTADOR MACHO RECTO ASIENTO A 60° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPTF)	L	H1			
A502828-02-02	1/8"-27	1/8"-27	26,9	11			
A502828-02-04	1/8"-27	1/4"-18	32,0	16			
A502828-04-04	1/4"-18	1/4"-18	36,8	16			
A502828-04-06	1/4"-18	3/8"-18	36,8	19			
A502828-06-06	3/8"-18	3/8"-18	36,8	19			
A502828-06-08	3/8"-18	1/2"-14	43,2	22			
A502828-08-08	1/2"-14	1/2"-14	48,0	22			
A502828-08-12	1/2"-14	3/4"-14	49,8	27			
A502828-12-12	3/4"-14	3/4"-14	49,8	27			
A502828-12-16	3/4"-14	1"-11,5	54,5	35			
A502828-16-16	1"-11.1/2	1"-11,5	59,4	35			
A502828-20-20	1.1/4"-11.1/2	1.1/4"-11,5	63,0	44			
A502828-24-24	1.1/2"-11.1/2	1.1/2"-11,5	66,3	50			

NPTF - NPSM ADAPTORS

A522828 NEW

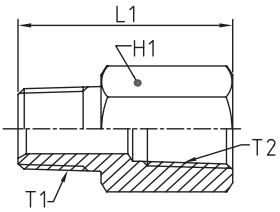
STRAIGHT ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514)
NPSM SWIVEL FEMALE 60° CONE (SAE J514)
ADAPTADOR MACHO RECTO ASIENTO A 60° (SAE J514)
HEMBRA GIRATORIO 60° NPSM (SAE J514)



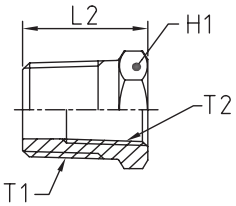
PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPSM)	L	H1	H2		
A522828-02-04	1/8"-27	1/4"-18	31,5	17	19		
A522828-04-04	1/4"-18	1/4"-18	36,0	17	19		
A522828-04-06	1/4"-18	3/8"-18	38,6	19	22		
A522828-06-04	3/8"-18	1/4"-18	37,9	19	19		
A522828-06-06	3/8"-18	3/8"-18	38,6	22	22		
A522828-08-06	1/2"-14	3/8"-18	45,0	22	22		
A522828-08-08	1/2"-14	1/2"-14	48,0	27	27		
A522828-08-12	1/2"-14	3/4"-14	53,1	32	32		
A522828-12-08	3/4"-14	1/2"-14	49,0	27	27		
A522828-12-12	3/4"-14	3/4"-14	53,3	32	32		
A522828-12-16	3/4"-14	1"-11,5	54,9	38	38		
A522828-16-12	1"-11,5	3/4"-14	58,2	38	32		
A522828-16-16	1"-11,5	1"-11,5	59,7	38	38		
A522828-20-20	1.1/4"-11,5	1.1/4"-11,5	64,0	44	50		
A522828-24-24	1.1/2"-11,5	1.1/2"-11,5	68,3	54	54		

NPTF - NPSM ADAPTORS

INCREASE ADAPTOR



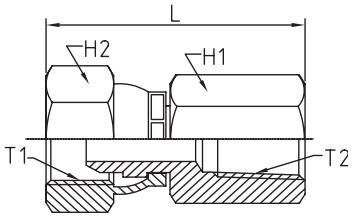
REDUCER BUSHING



NEW A522834

INCREASE ADAPTOR / REDUCER BUSHING
NPTF MALE - NPTF FIXED FEMALE (SAE J514)
ADAPTADOR PROLONGADOR / REDUCTOR MACHO NPTF
HEMBRA FIJA NPTF

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPTF)	L1	L2	H1		
A522834-02-04	1/8"-27	1/4"-18	30,7	-	19		
A522834-04-02	1/4"-18	1/8"-27	-	21,6	16		
A522834-04-06	1/4"-18	3/8"-18	36,6	-	22		
A522834-06-04	3/8"-18	1/4"-18	-	21,6	19		
A522834-06-08	3/8"-18	1/2"-14	42,7	-	27		
A522834-08-04	1/2"-14	1/4"-18	-	27,9	22		
A522834-08-06	1/2"-14	3/8"-18	-	27,9	22		
A522834-08-12	1/2"-14	3/4"-14	49,0	-	35		
A522834-12-06	3/4"-14	3/8"-18	-	29,7	27		
A522834-12-08	3/4"-14	1/2"-14	-	29,7	27		
A522834-12-16	3/4"-14	1"-11,5	55,4	-	41		
A522834-16-12	1"-11,5	3/4"-14	-	34,5	35		
A522834-16-20	1"-11,5	1.1/4"-11,5	62,5	-	50		
A522834-20-16	1.1/4"-11,5	1"-11,5	-	37,3	44		
A522834-20-24	1.1/4"-11,5	1.1/2"-11,5	63,5	-	60		
A522834-24-20	1.1/2"-11,5	1.1/4"-11,5	-	39,9	50		

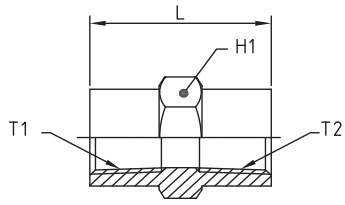


NEW A512834

STRAIGHT ADAPTOR NPSM SWIVEL FEMALE 60° CONE (SAE J514)
NPTF FIXED FEMALE (SAE J514)
ADAPTADOR HEMBRA GIRATORIO NPSM ASIENTO A 60° (SAE J514)
HEMBRA FIJO NPTF (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPSM)	T2 (NPTF)	L	H1	H2		
A512834-04-04	1/4"-18	1/4"-18	36,0	19	19		
A512834-04-06	1/4"-18	3/8"-18	37,6	22	19		
A512834-06-06	3/8"-18	3/8"-18	38,1	22	22		
A512834-06-08	3/8"-18	1/2"-14	43,7	27	22		
A512834-08-08	1/2"-14	1/2"-14	46,7	27	27		
A512834-12-12	3/4"-14	3/4"-14	50,0	32	32		
A512834-16-16	1"-11,5	1"-11,5	59,7	38	38		
A512834-20-20	1.1/4"-11,5	1.1/4"-11,5	61,0	50	50		
A512834-24-24	1.1/2"-11,5	1.1/2"-11,5	64,0	54	54		

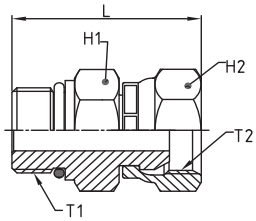
NPTF - NPSM ADAPTORS



A513434 NEW

STRAIGHT ADAPTOR NPTF FIXED FEMALE (SAE J514)
ADAPTADOR RECTO HEMBRA FIJO NPTF (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPTF)	L	H1			
A513434-02-02	1/8"-27	1/8"-27	19,0	16			
A513434-04-04	1/4"-18	1/4"-18	28,7	19			
A513434-06-06	3/8"-18	3/8"-18	28,7	22			
A513434-08-08	1/2"-14	1/2"-14	38,1	27			
A513434-12-12	3/4"-14	3/4"-14	38,9	35			
A513434-16-16	1"-11,5	1"-11,5	48,0	41			
A513434-20-20	1.1/4"-11,5	1.1/4"-11,5	49,0	50			
A513434-24-24	1.1/2"-11,5	1.1/2"-11,5	49,0	60			

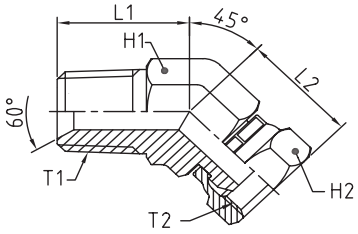


A523028 NEW

STRAIGHT ADAPTOR SAE MALE O-RING BOSS TYPE (SAE J1926)
NPSM SWIVEL FEMALE 60° CONE (SAE J514)
ADAPTADOR RECTO MACHO SAE TIPO O-RING BOSS (SAE J1926)
HEMBRA GIRATORIO 60° NPSM (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPSM)	L	H1	H2		
A523028-04-04	7/16"-20	1/4"-18	33,0	14	19		
A523028-05-04	1/2"-20	1/4"-18	32,5	16	19		
A523028-06-04	9/16"-18	1/4"-18	33,8	19	19		
A523028-06-06	9/16"-18	3/8"-18	35,3	19	22		
A523028-08-06	3/4"-16	3/8"-18	36,8	22	22		
A523028-08-08	3/4"-16	1/2"-14	40,1	22	27		
A523028-08-12	3/4"-16	3/4"-14	44,7	27	32		
A523028-10-08	7/8"-14	1/2"-14	42,7	27	27		
A523028-10-12	7/8"-14	3/4"-14	46,5	27	32		
A523028-12-12	1.1/16"-12	3/4"-14	49,5	32	32		
A523028-16-16	1.5/16"-12	1"-11,5	52,3	38	38		

NPTF - NPSM ADAPTORS

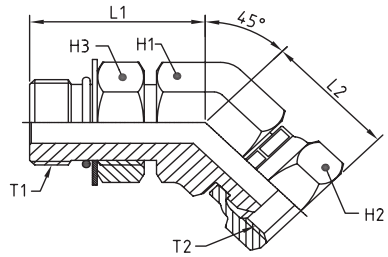


NEW **A552828**

45° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514) NPSM SWIVEL FEMALE 60° CONE (SAE J514)

ADAPTADOR CODO 45° NPTF MACHO ASIENTO A 60° (SAE J514) HEMBRA GIRATORIO 60° NPSM (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPSM)	L1	L2	H1	H2	
A552828-04-04	1/4"-18	1/4"-18	21,8	23,4	14	19	
A552828-06-06	3/8"-18	3/8"-18	24,1	25,9	19	22	
A552828-06-08	3/8"-18	1/2"-14	24,9	29,5	22	27	
A552828-08-08	1/2"-14	1/2"-14	29,7	29,5	22	27	
A552828-12-12	3/4"-14	3/4"-14	30,5	34,8	27	32	
A552828-16-16	1"-11,5	1"-11,5	37,6	38,1	33	38	
A552828-20-20	1.1/4"-11,5	1.1/4"-11,5	42,4	41,9	41	50	



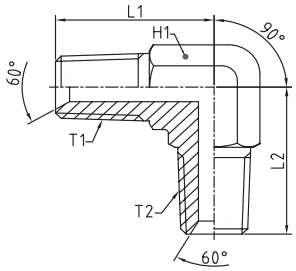
NEW **A553128**

45° ELBOW ADJUSTABLE ADAPTOR SAE MALE O-RING BOSS TYPE (SAE J1926) NPSM SWIVEL FEMALE 60° CONE (SAE J514)

ADAPTADOR ADJUSTABLE CODO 45° SAE TIPO O-RING BOSS (SAE J1916) - HEMBRA GIRATORIO 60° NPSM (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPSM)	L1	L2	H1	H2	H3
A553128-04-06	7/16"-20	3/8"-18	27,4	26,4	19	22	16
A553128-08-06	3/4"-16	3/8"-18	33,0	27,2	19	22	22
A553128-08-08	3/4"-16	1/2"-14	33,0	29,7	19	27	22
A553128-08-12	3/4"-16	3/4"-14	36,0	34,8	27	32	22
A553128-10-08	7/8"-14	1/2"-14	38,6	29,5	22	27	27
A553128-12-12	1.1/16"-12	3/4"-14	43,9	34,8	27	32	32
A553128-16-16	1.5/16"-12	1"-11,5	47,2	38,1	33	38	38

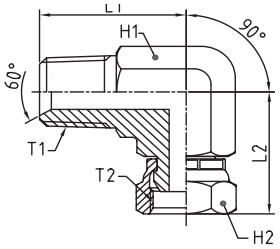
NPTF - NPSM ADAPTORS



A562828 NEW

90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514)
ADAPTADOR MACHO CODO 90° NPTF ASIENTO A 60° (SAE J514)

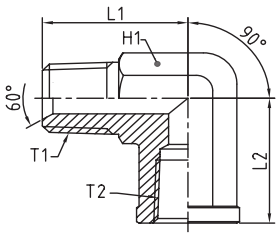
PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPTF)	L1	L2	H1		
A562828-02-02	1/8"-27	1/8"-27	19,8	19,8	11		
A562828-04-04	1/4"-18	1/4"-18	27,7	27,7	14		
A562828-04-06	1/4"-18	3/8"-18	31,0	31,0	19		
A562828-06-06	3/8"-18	3/8"-18	31,0	31,0	19		
A562828-06-08	3/8"-18	1/2"-14	32,5	37,3	22		
A562828-08-08	1/2"-14	1/2"-14	37,3	37,3	22		
A562828-12-12	3/4"-14	3/4"-14	40,4	40,4	27		
A562828-16-16	1"-11.1/2	1"-11.1/2	50,0	50,0	33		
A562828-20-20	1.1/4"-11.1/2	1.1/4"-11.1/2	60,5	60,5	41		



A582828 NEW

90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514)
NPSM SWIVEL FEMALE 60° CONE (SAE J514)
ADAPTADOR MACHO CODO 90° NPTF ASIENTO A 60° (SAE J514)
HEMBRA GIRATORIO 60° NPSM (SAE J514)

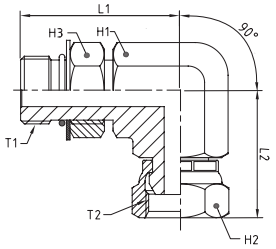
PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPSM)	L1	L2	H1	H2	
A582828-04-04	1/4"-18	1/4"-18	27,7	27,2	14	19	
A582828-04-06	1/4"-18	3/8"-18	31,0	30,5	19	22	
A582828-06-04	3/8"-18	1/4"18	31,0	29,5	19	19	
A582828-06-06	3/8"-18	3/8"-18	31,0	30,5	19	22	
A582828-06-08	3/8"-18	1/2"-14	32,5	35,3	22	27	
A582828-08-06	1/2"-14	3/8"-18	37,3	31,8	22	22	
A582828-08-08	1/2"-14	1/2"-14	37,3	35,3	22	27	
A582828-12-12	3/4"-14	3/4"-14	40,4	41,9	27	32	
A582828-16-16	1"-11,5	1"-11,5	50,0	48,0	33	38	
A582828-20-20	1.1/4"-11,5	1.1/4"-11,5	60,5	54,6	41	50	
A582828-24-24	1.1/2"-11,5	1.1/2"-11,5	67,0	58,7	48	54	



NEW **A582834**

90° ELBOW ADAPTOR NPTF MALE 60° CONE SEAT (SAE J514)
NPTF FIXED FEMALE (SAE J514)
ADAPTADOR MACHO CODO 90° NPTF ASIENTO A 60° (SAE J514)
HEMBRA FIJO NTPF (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPTF)	L1	L2	H1		
A582834-02-02	1/8"-27	1/8"-27	19,8	16,8	14		
A582834-02-04	1/8"-27	1/4"-18	22,9	22,4	19		
A582834-04-02	1/4"-18	1/8"-27	27,7	17,0	14		
A582834-04-04	1/4"-18	1/4"-18	27,7	22,4	19		
A582834-04-06	1/4"-18	3/8"-18	31,0	25,9	22		
A582834-06-04	3/8"-18	1/4"-18	31,0	25,7	19		
A582834-06-06	3/8"-18	3/8"-18	31,0	25,9	22		
A582834-06-08	3/8"-18	1/2"-14	32,5	31,2	27		
A582834-08-06	1/2"-14	3/8"-18	37,3	25,9	22		
A582834-08-08	1/2"-14	1/2"-14	37,3	31,2	27		
A582834-12-12	3/4"-14	3/4"-14	40,4	34,5	33		
A582834-16-16	1"-11,5	1"-11,5	50,0	41,2	41		
A582834-20-20	1.1/4"-11,5	1.1/4"-11,5	60,5	43,2	48		
A582834-24-24	1.1/2"-11,5	1.1/2"-11,5	67,0	52,8	65		

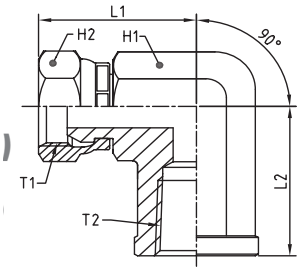


NEW **A583128**

90° ELBOW ADJUSTABLE ADAPTOR SAE MALE O-RING BOSS TYPE (SAE J1926) NPSM SWIVEL FEMALE 60° CONE (SAE J514)
ADAPTADOR MACHO ADJUSTABLE CODO 90° SAE TIPO O-RING BOSS (SAE J1916) - HEMBRA GIRATORIO 60° NPSM (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (UNF)	T2 (NPSM)	L1	L2	H1	H2	H3
A583128-04-04	7/16"-20	1/4"-18	26,2	24,9	11	19	16
A583128-06-04	9/16"-18	1/4"-18	31,8	27,2	14	19	19
A583128-06-06	9/16"-18	3/8"-18	31,8	28,2	14	22	19
A583128-08-06	3/4"-16	3/8"-18	36,8	30,5	19	22	22
A583128-08-08	3/4"-16	1/2"-14	36,8	33,5	19	27	22
A583128-08-12	3/4"-16	3/4"-14	41,2	41,9	27	32	22
A583128-10-08	7/8"-14	1/2"-14	43,2	35,3	22	27	27
A583128-10-12	7/8"-14	3/4"-14	45,2	41,2	27	32	27
A583128-12-12	1.1/16"-12	3/4"-14	49,3	41,9	27	32	32
A583128-16-16	1.5/16"-12	1"-11.1/2	52,0	48,0	33	38	38

NPTF - NPSM ADAPTORS

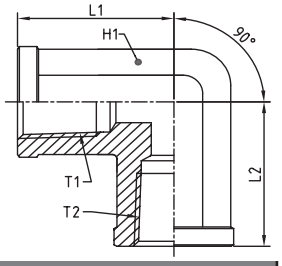


A572834 NEW

90° ELBOW ADAPTOR NPSM SWIVEL FEMALE 60° CONE (SAE J514) NPTF FIXED FEMALE (SAE J514)

ADAPTADOR HEMBRA CODO 90° NPSM GIRATORIO ASIENTO A 60° (SAE J514) HEMBRA FIJO NPTF (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPSM)	T2 (NPTF)	L1	L2	H1	H2	
A572834-04-04	1/4"-18	1/4"-18	30,0	22,4	19	19	
A572834-06-06	3/8"-18	3/8"-18	32,3	25,9	22	22	
A572834-08-08	1/2"-14	1/2"-14	38,6	31,2	27	27	
A572834-12-12	3/4"-14	3/4"-14	46,2	34,5	33	32	
A572834-16-16	1"-11,5	1"-11,5	52,8	41,5	41	38	
A572834-20-20	1.1/4"-11,5	1.1/4"-11,5	57,2	43,2	48	50	
A572834-24-24	1.1/2"-11,5	1.1/2"-11,5	71,9	52,8	65	54	



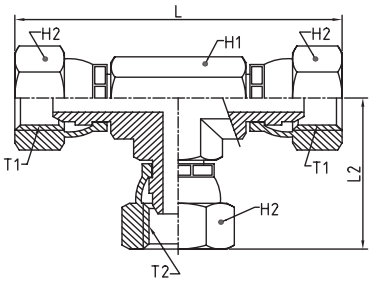
A573434 NEW

90° ELBOW ADAPTOR NPTF FIXED FEMALE (SAE J514)

ADAPTADOR CODO 90° HEMBRA FIJO NPTF (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPTF)	L1	L2	H1		
A573434-02-02	1/8"-27	1/8"-27	16,8	16,8	14		
A573434-02-04	1/8"-27	1/4"-18	22,4	22,4	19		
A573434-04-04	1/4"-18	1/4"-18	22,4	22,4	19		
A573434-06-06	3/8"-18	3/8"-18	25,9	25,9	22		
A573434-06-08	3/8"-18	1/2"-14	31,2	31,2	27		
A573434-08-08	1/2"-14	1/2"-14	31,2	31,2	27		
A573434-12-12	3/4"-14	3/4"-14	34,5	34,5	33		
A573434-16-16	1"-11,5	1"-11,5	41,2	41,2	41		
A573434-20-20	1.1/4"-11,5	1.1/4"-11,5	43,2	43,2	48		
A573434-24-24	1.1/2"-11,5	1.1/2"-11,5	52,8	52,8	65		

NPTF - NPSM ADAPTORS



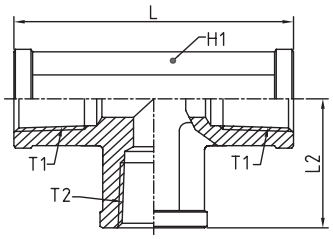
NEW

A732828

UNION TEE NPSM SWIVEL FEMALE 60° CONE (SAE J514)

TE HEMBRA NPSM GIRATORIO 60° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPSM)	T2 (NPSM)	L	L2	H1	H2	
A732828-04-04	1/4"-18	1/4"-18	54,4	27,2	14	19	
A732828-06-06	3/8"-18	3/8"-18	61,0	30,5	19	22	
A732828-08-08	1/2"-14	1/2"-14	70,6	35,3	22	27	
A732828-12-12	3/4"-14	3/4"-14	83,8	41,9	27	32	
A732828-16-16	1"-11,5	1"-11,5	96,0	48,0	33	38	
A732828-20-20	1.1/4"-11,5	1.1/4"-11,5	109,2	54,6	41	50	



NEW

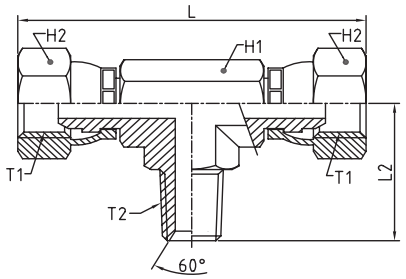
A733434

UNION TEE NPTF FIXED FEMALE (SAE J514)

TE HEMBRA NPSM FIJO (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPTF)	L	L2	H1		
A733434-02-02	1/8"-27	1/8"-27	33,5	16,8	14		
A733434-04-04	1/4"-18	1/4"-18	44,7	22,4	19		
A733434-06-06	3/8"-18	3/8"-18	51,8	25,9	22		
A733434-08-08	1/2"-14	1/2"-14	62,5	31,2	27		
A733434-12-12	3/4"-14	3/4"-14	69,0	34,5	33		
A733434-16-16	1"-11.1/2	1"-11.1/2	82,3	41,2	41		
A733434-20-20	1.1/4"-11.1/2	1.1/4"-11.1/2	86,4	43,2	48		
A733434-24-24	1.1/2"-11.1/2	1.1/2"-11.1/2	105,7	52,8	65		

NPTF - NPSM ADAPTORS



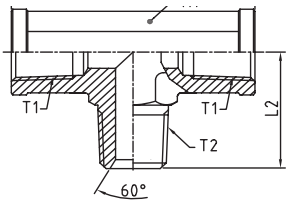
A742828 NEW

BRANCH TEE NPSM SWIVEL FEMALE 60° CONE (SAE J514)
NPTF MALE 60° CONE SEAT (SAE J514)
TE HEMBRA NPSM GIRATORIO 60° (SAE J514)
MACHO NPTF ASIENTO A 60° (SAE J514)

PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPSM)	T2 (NPTF)	L	L2	H1	H2	
A742828-04-04	1/4"-18	1/4"-18	54,4	27,7	14	19	
A742828-06-06	3/8"-18	3/8"-18	61,0	31,0	19	22	
A742828-08-08	1/2"-14	1/2"-14	70,6	37,3	22	27	
A742828-12-12	3/4"-14	3/4"-14	83,8	40,4	27	32	
A742828-16-16	1"-11,5	1"-11,5	96,0	50,0	33	38	
A742828-20-20	1.1/4"-11,5	1.1/4"-11,5	109,2	60,5	41	50	

A742834 NEW

BRANCH TEE NPTF FIXED FEMALE (SAE J514)
NPTF MALE 60° CONE SEAT (SAE J514)
TE HEMBRA NPTF FIJO (SAE J514) -
MACHO NPTF ASIENTO A 60° (SAE J514)



PART. REF.	THREADS		DIMENSIONS mm				
	T1 (NPTF)	T2 (NPTF)	L	L2	H1		
A742834-02-02	1/8"-27	1/8"-27	33,5	19,8	14		
A742834-04-04	1/4"-18	1/4"-18	44,7	27,7	19		
A742834-06-06	3/8"-18	3/8"-18	51,8	31,0	22		
A742834-08-08	1/2"-14	1/2"-14	62,5	37,3	27		
A742834-12-12	3/4"-14	3/4"-14	69,0	40,4	33		
A742834-16-16	1"-11,5	1"-11,5	82,3	50,0	41		

MF2000®

WATER CLEANING & BLASTING



HOSES

SUMMARY

WATER CLEANING & BLASTING HOSE RANGE

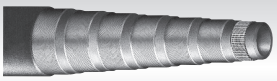
The **water cleaning** hose range is dedicated to hobby and professional water cleaning machines, with cold and hot water (not suitable for vapour steam applications).
It is designed according to safety norm IEC-2 with safety factor burst/working pressure 4:1.
The **water blasting** hose range is designed with criteria of maximum robustness and easy handling, complete with a dedicated fitting solution, in consideration of safety and performance aspects connected with blasting applications.
Safety factor burst/working pressure is 2,5:1, it complies with international specifications (AS/NZ 4233.2, RMA-USA, ISO 7751, BFPA-UK, prEN1829-2).

La gama de mangueras para **limpieza con agua** está dedicado a las máquinas de limpieza manuales y profesionales, con agua fría o caliente (no recomendadas para aplicaciones con vapor).
Está diseñado de acuerdo con las normas de seguridad IEC-2 con factor de seguridad de 4 a 1 (presión de estallamiento/presión de trabajo).
La gama de mangueras para **limpieza con agua a extrema presión** está diseñado con criterio de máxima fortaleza y fácil manejo, junto con una solución de ensamble dedicada, en consideración de aspectos de seguridad y comportamiento conectado con este tipo de aplicaciones.
El factor de seguridad es de 2,5:1 (presión de estallamiento/presión de trabajo) y cumple con las especificaciones internacionales (AS/NZ 4233.2, RMA-USA, ISO 7751, BFPA-UK, prEN1829-2).

	Norm Norma		Page Página
WATER CLEANING			
SUPERJET	PRESSURE WASH		291
SUPERJET/PLUS	PRESSURE WASH		292
PROJET	PRESSURE WASH		293
WATER BLASTING			
GOLDENBLAST™	SAFE WATERBLAST TECHNOLOGY		294
GOLDENBLAST™/PLUS	SAFE WATERBLAST TECHNOLOGY		295
GOLDENBLAST™/SIX	SAFE WATERBLAST TECHNOLOGY		296



Wire braid reinforced hoses
Mangueras con refuerzo de acero trenzado



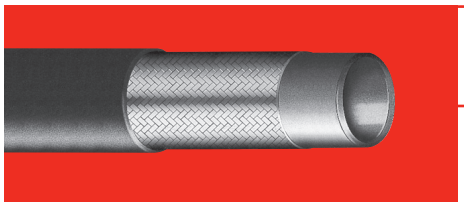
Wire spiral reinforced hoses
Mangueras con refuerzo en espiral

GUIDE TO SELECT MANULI® HOSE BY W.P.

HOSE SIZE		WORKING PRESSURE (bar)													
	DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76
	DASH	- 3	- 4	- 5	- 6	- 8	- 10	- 12	- 16	- 20	- 24	- 32	- 38	- 40	- 48
SUPERJET			280	250	210	170									
SUPERJET/PLUS			400	350	330	275									
PROJET			400	400	400	350									
GOLDENBLAST™					750	750									
GOLDENBLAST™/PLUS					1250	1100		1000							
GOLDENBLAST™/SIX						1450		1350							

*safety factor burst/working pressure 4:1

*safety factor burst/working pressure 2,5:1



SUPERJET

PRESSURE WASH

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H02001006*	6	-4	1/4"	11,2	0,44	13,2	0,52	280	4060	1120	16240	100	3,94	225	0,15	MF+M03400-04
H02001008*	8	-5	5/16"	12,8	0,50	14,8	0,58	250	3620	1000	14500	114	4,49	255	0,17	MF+M03400-05
H02001010*	10	-6	3/8"	15,1	0,59	17,1	0,67	210	3040	840	12180	127	5,00	330	0,22	MF+M03400-06
H02001012*	12	-8	1/2"	18,1	0,71	20,1	0,79	170	2460	680	9860	178	7,01	400	0,27	MF+M03400-08

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Dust free smooth surface ▪ Indelible branding ▪ Easy handling ▪ Good abrasion resistance ▪ Designed to meet IEC-2 (safety factor 4:1)

Superficie externa lisa ▪ Marca indeleble ▪ Fácil manejo ▪ Buena resistencia a la abrasión ▪ Fabricada según la Norma IEC-2 (factor de seguridad 4:1)

MAIN APPLICATIONS
Water-cleaning equipment, ideal for hobby and semi-professional machines

CONTINUOUS SERVICE TEMPERATURE RANGE
+15°F / +275°F -10°C / +135°C

MAX OPERATING TEMPERATURE
(Intermittent service) 300°F 150°C

RECOMMENDED FLUIDS
Water, mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion

! Product designed for pressure wash applications. Any different use may reduce service life. Please contact Manuli Rubber Industries for more information

PRINCIPALES APLICACIONES
Equipos para lavar con agua, ideal para máquinas semi-profesionales

TEMPERATURA CONTINUA DE SERVICIO
+15°F / +275°F -10°C / +135°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 300°F 150°C

FLUIDOS RECOMENDADOS
Agua, aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa

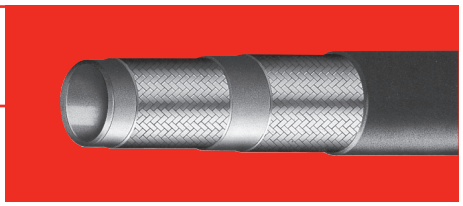
! Producto diseñado para aplicaciones de lavado a presión. Cualquier otro uso, quizás reduzca el tiempo de vida útil. Consulte a Manuli, para mayor información

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Water resistant synthetic rubber
REINFORCEMENT: One high tensile steel braid
COVER: Environment resistant synthetic rubber. Available also in blue colour (first 6 code's digits: "H02002")
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al agua
REFUERZO: Un refuerzo trenzado de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a intemperie. Disponible también en color azul (primeros 6 dígitos del código: "H02002")
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R

SUPERJET/PLUS

PRESSURE WASH



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01A78006*	6	-4	1/4"	12,7	0,50	14,7	0,58	400	5800	1600	23200	55	2,16	350	0,23	MF+M03400-04
H01A78008*	8	-5	5/16"	14,3	0,56	16,3	0,64	350	5070	1400	20300	60	2,36	390	0,26	MF+M03400-05
H01A78010*	10	-6	3/8"	15,0	0,59	16,8	0,66	330	4780	1320	19140	65	2,56	380	0,25	MF+M03400-06
H01A78012*	12	-8	1/2"	18,5	0,73	20,3	0,80	275	3980	1100	15950	80	3,15	470	0,31	MF+M03400-08

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Very high pressure resistance ▪ Lightness and flexibility ▪ Easy handling ▪ Good abrasion resistance ▪ Designed to meet IEC-2 (safety factor 4:1)

Elevada resistencia a la presión ▪ Bajo peso y flexibilidad ▪ Fácil manejo ▪ Buena resistencia a la abrasión ▪ Fabricada acorde a Norma IEC-2 (factor de seguridad 4:1)

MAIN APPLICATIONS
Professional water-cleaning machines

CONTINUOUS SERVICE TEMPERATURE RANGE
+15°F / +275°F -10°C / +135°C

MAX OPERATING TEMPERATURE
(Intermittent service) 300°F 150°C

RECOMMENDED FLUIDS
Water, mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion

! Product designed for pressure wash applications. Any different use may reduce service life. Please contact Manuli Rubber Industries for more information

PRINCIPALES APLICACIONES
Equipos para lavar con agua, ideal para máquinas profesionales

TEMPERATURA CONTINUA DE SERVICIO
+15°F / +275°F -10°C / +135°C

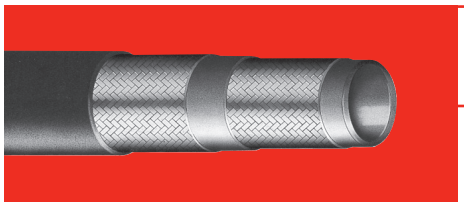
MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 300°F 150°C

FLUIDOS RECOMENDADOS
Agua, aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa

! Producto diseñado para aplicaciones de lavado a presión. Cualquier otro uso, quizás reduzca el tiempo de vida útil. Consulte a Manuli, para mayor información

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Water resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Environment resistant synthetic rubber. Available also in blue colour (first 6 code's digits: "H02002")
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al agua
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a intemperie. Disponible también en color azul (primeros 6 dígitos del código: "H02002")
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R



PROJET

PRESSURE WASH

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H01A94006*	6	-4	1/4"	11,3	0,44	13,1	0,52	400	5800	1600	23200	45	1,77	260	0,17	MF+M00120-04
H01A94008*	8	-5	5/16"	12,9	0,51	14,6	0,57	400	5800	1600	23200	100	3,94	300	0,20	MF+M00120-05
H01A94010*	10	-6	3/8"	16,7	0,66	18,5	0,73	400	5800	1600	23200	130	5,12	510	0,34	MF+M00910-06
H01A94012*	12	-8	1/2"	19,8	0,78	21,8	0,86	350	5070	1400	20300	178	7,01	630	0,42	MF+M00910-08

Standard packaging: reel / Embalaje estándar: bobina

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Very high pressure resistance ▪ Lightness and flexibility ▪ Easy handling ▪ Good abrasion resistance ▪ Designed to meet IEC-2 (safety factor 4:1)

Elevada resistencia a la presión ▪ Bajo peso y flexibilidad ▪ Fácil manejo ▪ Buena resistencia a la abrasión ▪ Fabricada acorde a Norma IEC-2 (factor de seguridad 4:1)

MAIN APPLICATIONS
Professional water-cleaning machines

CONTINUOUS SERVICE TEMPERATURE RANGE
+15°F / +275°F -10°C / +135°C

MAX OPERATING TEMPERATURE
(Intermittent service) 300°F 150°C

RECOMMENDED FLUIDS: Water, mineral oils, vegetable and rape seed oils, glycol and polyglycol based oils, synthetic ester based oils, oils in aqueous emulsion

! Product designed for pressure wash applications. Any different use may reduce service life. Please contact Manuli Rubber Industries for more information

PRINCIPALES APLICACIONES
Equipos para lavar con agua, ideal para máquinas profesionales

TEMPERATURA CONTINUA DE SERVICIO
+15°F / +375°F -10°C / +135°C

MÁXIMA TEMPERATURA DE OPERACIÓN
(Servicio intermitente) 300°F 150°C

FLUIDOS RECOMENDADOS
Agua, aceite mineral, aceite vegetal y de colza, aceites basados en glicoles y poliglicoles, aceites con base en éster sintético, aceite en emulsión acuosa

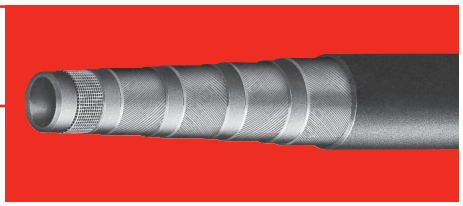
! Producto diseñado para aplicaciones de lavado a presión. Cualquier otro uso, quizás reduzca el tiempo de vida útil. Consulte a Manuli, para mayor información

INSERT: MF2000® - MULTIFIT TYPE
TUBE: Water resistant synthetic rubber
REINFORCEMENT: Two high tensile steel braids
COVER: Environment resistant synthetic rubber. Available also in blue colour (first 6 code's digits: "H02002")
APPLICABLE SPECS.: MANULI® Design
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO MULTIFIT
TUBO: Caucho sintético, resistente al agua
REFUERZO: Dos refuerzos trenzados de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a intemperie. Disponible también en color azul (primeros 6 dígitos del código: "H02002")
ESPECIFICACIONES APLICABLES: Diseño MANULI®
APROBACIONES: GOST-R

GOLDENBLAST™

SAFE WATERBLAST TECHNOLOGY



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10072010*	10	-6	3/8"	17,6	0,69	20,2	0,80	750	10870	1875	27180	180	7,09	700	0,47	BL+ M01700-06
H10072A12*	12	-8	1/2"	20,3	0,80	23,0	0,91	750	10870	1875	27180	220	8,66	825	0,55	BL+ M01700-08

Standard packaging: box / Embalaje estándar: caja

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Basic hose line for scale removing applications ▪ Compactness, lightness and flexibility ▪ Safety factor 2,5:1 (accepted world standard as specified by RMA-USA, BFPA-UK, DIN-Germany, ISO 7751) ▪ High abrasion resistance cover

Gama de manguera básica para aplicaciones de remoción de escala ▪ Compacta, liviana y flexible ▪ Factor de seguridad 2,5:1 (especificaciones mundiales aceptadas como las especificadas por RMA-USA, BFPA-UK, DIN-Alemania, ISO 7751) ▪ Cubierta de alta resistencia a la abrasión

MAIN APPLICATIONS
Scale removing applications using extreme high working pressure such as:
- building and industrial sectors (roadworks, removal of concrete from reinforced concrete structures safeguarding metal components)
- scale removal ships hulls in shipyard
- dust elimination

CONTINUOUS SERVICE TEMPERATURE RANGE
+15÷158°F -10÷70°C

MAX OPERATING TEMPERATURE
-40÷200°F -40÷93°C

RECOMMENDED FLUIDS
Water, water soap, emulsions

PRINCIPALES APLICACIONES
Aplicaciones para remoción de escala usando presión de trabajo extremadamente alta como:
- sectores de construcción e industriales (trabajos en carreteras, remoción de concreto de estructuras de concreto reforzado, salvaguardando los componentes metálicos)
- remoción de escala de cascos de barcos en astilleros
- eliminación de suciedad

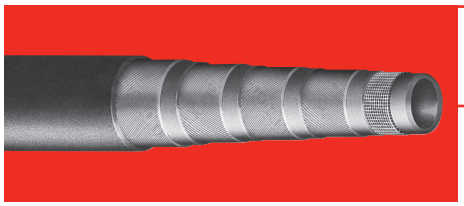
TEMPERATURA CONTINUA DE SERVICIO
+15÷158°F -10÷70°C

MÁXIMA TEMPERATURA DE OPERACIÓN
-40÷200°F -40÷93°C

FLUIDOS RECOMENDADOS
Agua, agua jabonosa, emulsiones

INSERT: MF2000® - BLASTLOCK TYPE
TUBE: Water resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Synthetic rubber with high temperature, ozone and abrasion resistance
APPLICABLE SPECS.: MANULI® Design, Australian Std. AS/NZS 4233.2
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO BLASTLOCK
TUBO: Caucho sintético, resistente al agua
REFUERZO: 4 refuerzos en espiral de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a altas temperaturas, ozono y abrasion
ESPECIFICACIONES APLICABLES: Diseño MANULI®, Australian Std. AS/NZS 4233.2
APROBACIONES: GOST-R



GOLDENBLAST™/PLUS

SAFE WATERBLAST TECHNOLOGY

PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10066010*	10	-6	3/8"	17,4	0,69	20,0	0,79	1250	18120	3125	45310	230	9,06	800	0,54	BL+ M01700-06
H10066A12*	12	-8	1/2"	21,5	0,85	24,1	0,95	1100	15950	2750	39870	230	9,06	1105	0,74	BL+ M01700-08
H10066019*	19	12	3/4"	29,0	1,14	32,0	1,26	1000	14500	2500	36250	250	9,84	1730	1,16	BL+ M01700-12

Standard packaging: box / Embalaje estándar: caja

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Hose line for waterblasting with pressures up to 1250 bar ▪ Compactness, lightness and flexibility ▪ Safety factor 2,5:1 (accepted world standard as specified by RMA-USA, BFPA-UK, DIN-Germany, ISO 7751) ▪ High abrasion resistance cover

Gama de mangueras para agua a presión con presiones hasta de 1250 bar ▪ Compacta, liviana y flexible ▪ Factor de seguridad 2,5:1 (especificaciones mundialmente aceptadas como las especificadas por RMA-USA, BFPA-UK, DIN-Alemania, ISO 7751) ▪ Cubierta resistente a la alta abrasión

MAIN APPLICATIONS
Scale removing applications using extreme high working pressure such as:
- building and industrial sectors (roadworks, removal of concrete from reinforced concrete structures safeguarding metal components)
- scale removal ships hulls in shipyard
- dust elimination

CONTINUOUS SERVICE TEMPERATURE RANGE
+15÷158°F -10÷70°C

MAX OPERATING TEMPERATURE
-40÷200°F -40÷93°C

RECOMMENDED FLUIDS
Water, water soap, emulsions

PRINCIPALES APLICACIONES
Aplicaciones para remoción de escala usando presión de trabajo extremadamente alta como:
- sectores de construcción e industriales (trabajos en carreteras, remoción de concreto de estructuras de concreto reforzado, salvaguardando los componentes metálicos)
- remoción de escala de cascos de barcos en astilleros
- eliminación de suciedad

TEMPERATURA CONTINUA DE SERVICIO
+15÷158°F -10÷70°C

MÁXIMA TEMPERATURA DE OPERACIÓN
-40÷200°F -40÷93°C

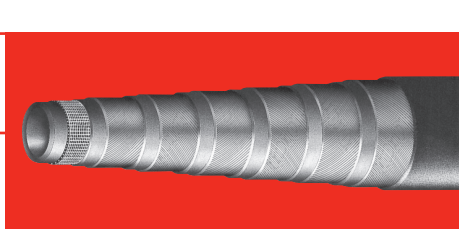
FLUIDOS RECOMENDADOS
Agua, agua jabonosa, emulsiones

INSERT: MF2000® - BLASTLOCK TYPE
TUBE: Water resistant synthetic rubber
REINFORCEMENT: Four high tensile steel spirals
COVER: Synthetic rubber with very high temperature, ozone and abrasion resistance
APPLICABLE SPECS.: MANULI® Design, Australian Std. AS/NZS 4233.2
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO BLASTLOCK
TUBO: Caucho sintético, resistente al agua
REFUERZO: 4 refuerzos en espiral de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a altas tempeeraturas, ozono y abrasion
ESPECIFICACIONES APLICABLES: Diseño MANULI®, Australian Std. AS/NZS 4233.2
APROBACIONES: GOST-R

GOLDENBLAST™/SIX

SAFE WATERBLAST TECHNOLOGY



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING

	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	
H10067012*	12	-8	1/2"	25,9	1,02	28,9	1,14	1450	21020	3625	52560	250	9,84	1870	1,25	BL+ M01800-08
H10067019*	19	-12	3/4"	32,4	1,28	35,4	1,39	1350	19570	3375	48930	280	11,02	2570	1,72	BL+ M01800-12

Standard packaging: box / Embalaje estándar: caja

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Six wire spiral hose dedicated to severe applications with pressures up to 1450 bar ▪ Compactness, lightness and flexibility ▪ Safety factor 2,5:1 (accepted world standard as specified by RMA-USA, BFPA-UK, DIN-Germany, ISO 7751) ▪ High abrasion resistance cover

Manguera de seis alambres en espiral dedicada a aplicaciones severas con presiones hasta de 1450 bar ▪ Compacta, liviana y flexible ▪ Factor de seguridad 2,5:1 (especificaciones mundialmente aceptadas como las especificadas por RMA-USA, BFPA-UK, DIN-Alemania, ISO 7751) ▪ Cubierta resistente a la alta abrasión

MAIN APPLICATIONS
Scale removing applications using extreme high working pressure such as:
- building and industrial sectors (roadworks, removal of concrete from reinforced concrete structures safeguarding metal components)
- scale removal ships hulls in shipyard
- dust elimination

CONTINUOUS SERVICE TEMPERATURE RANGE
+15÷158°F -10÷70°C

MAX OPERATING TEMPERATURE
-40÷200°F -40÷93°C

RECOMMENDED FLUIDS
Water, water soap emulsions

PRINCIPALES APLICACIONES
Aplicaciones para remoción de escala usando presión de trabajo extremadamente alta como:
- sectores de construcción e industriales (trabajos en carreteras, remoción de concreto de estructuras de concreto reforzado, salvaguardando los componentes metálicos)
- remoción de escala de cascos de barcos en astilleros
- eliminación de suciedad

TEMPERATURA CONTINUA DE SERVICIO
+15÷158°F -10÷70°C

MÁXIMA TEMPERATURA DE OPERACIÓN
-40÷200°F -40÷93°C

FLUIDOS RECOMENDADOS
Agua, agua jabonosa, emulsiones

INSERT: MF2000® - BLASTLOCK TYPE
TUBE: Water resistant synthetic rubber
REINFORCEMENT: Six high tensile steel spirals
COVER: Synthetic rubber with very high temperature, ozone and abrasion resistance
APPLICABLE SPECS.: MANULI® Design, Australian Std. AS/NZS 4233.2
TYPE APPROVALS: GOST-R

ESPIGA: MF2000® - TIPO BLASTLOCK
TUBO: Caucho sintético, resistente al agua
REFUERZO: 6 refuerzos en espiral de acero de alta resistencia
CUBIERTA: Caucho sintético resistente a altas tempeeraturas, ozono y abrasion
ESPECIFICACIONES APLICABLES: Diseño MANULI®, Australian Std. AS/NZS 4233.2
APROBACIONES: GOST-R

MF2000®

CRIMPED FITTINGS

For Water Cleaning & Blasting



manuli® RUBBER INDUSTRIES

SUMMARY

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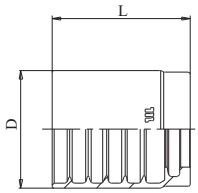
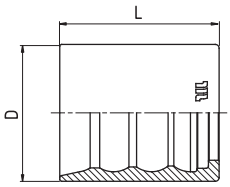


M03400

NO-SKIVE FERRULE FOR WIRE BRAID HOSES

CASQUILLO SIN PELADO PARA MANGUERAS CON TRENZA DE ACERO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M03400-04	6	1/4"	- 04		23,0	30,1				
M03400-05	8	5/16"	- 05		24,0	30,0				
M03400-06	10	3/8"	- 06		26,0	31,1				
M03400-08	12	1/2"	- 08		29,0	33,4				

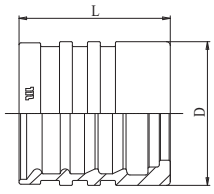


M00120

SKIVE FERRULE FOR WIRE BRAID HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M00120-04	6	1/4"	- 04		19,5	28,0				
M00120-05	8	5/16"	- 05		20,0	28,6				



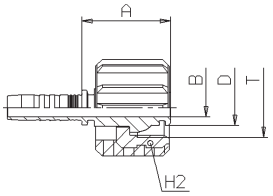
M00910

SKIVE FERRULE FOR WIRE BRAID AND SPIRAL HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA Y ESPIRAL DE ACERO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M00910-06	10	3/8"	- 06		26,0	33,0				
M00910-08	12	1/2"	- 08		30,0	34,0				

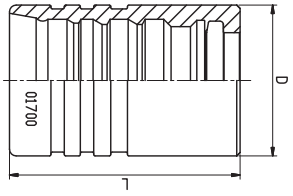
WASH CLEANER HOSES



M24913

WASH CLEANER FEMALE
WASH CLEANER HEMBRA

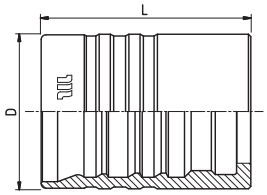
PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	T	B	A	D	H_2		
M24913-04-22	6	1/4"	- 04	M 22x1.5	5,0	34,0	13,9	27		
M24913-05-22	8	5/16"	- 05	M 22x1.5	5,5	34,0	13,9	27		
M24913-06-22	10	3/8"	- 06	M 22x1.5	7,0	34,0	13,9	27		



M01700

DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (4 PLY)
CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO

PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M01700-06	10	3/8"	- 06		29,7	57,5				
M01700-08	12	1/2"	- 08		34,0	65,0				
M01700-12	19	3/4"	- 12		45,1	69,0				



M01800

DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY)
CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL - TRABAJO PESADO

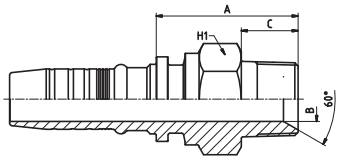
PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size		D	L				
M01800-08	12	1/2"	- 08		38,3	64,4				
M01800-12	19	3/4"	- 12		48,6	69,0				

The BLASTLOCK fittings have to be used with the GOLDENBLAST hoses only, that are suggested for waterblasting applications. Please refer to XTRALOCK fittings dedicated to DIAMONDSPIR For hydraulic applications.
Los racores BLASTLOCK son para uso exclusivo con la manguera GOLDENBLAST, con aplicaciones de inyección de agua a presión. Por favor refiérase a los racores XTRALOCK, dedicados para DIAMONDSPIR, para aplicaciones hidráulicas.

M57810

NPTF MALE 60° CONE SEAT SAE J516

NPTF MACHO ASIENTO A 60° SAE J516

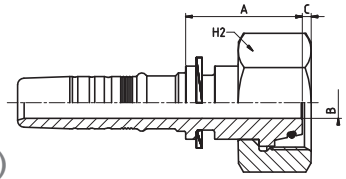


PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_2		
M57810-06-06	10	3/8"	- 06	3/8" - 18	8,5	38,0	15,5	22		
M57810-08-08	12	1/2"	- 08	1/2" - 14	10,0	44,6	21,0	27		
M57810-12-12	20	3/4"	- 12	3/4" - 14	15,0	49,4	21,0	32		

M66613

O-RING METRIC FEMALE 24° CONE H.T. - DIN 3865 (SLIP-ON NUT)

HEMBRA MÉTRICA CON O-RING ASIENTO A 24° SERIE PESADA (TUERCA LIBRE)



PART. REF.	HOSE BORE				DIMENSIONS mm					
	DN	inch	Size	T	B	A	C	H_2		
M66613-06-22	10	3/8"	- 06	M 22x1.5	14,0	4,8	32,0	3,5	27	
M66613-06-24	10	3/8"	- 06	M 24x1.5	16,0	6,3	34,2	4,0	32	
M66613-08-24	12	1/2"	- 08	M 24x1.5	16,0	6,3	35,4	4,0	32	
M66613-12-36	20	3/4"	- 12	M 36x2	25,0	12,0	44,7	3,4	46	

BLASTLOCK TYPE

GOLDENBLAST HOSES

The following assembling instructions are strongly recommended on heavy-duty applications.
Debido al exigente desempeño de la aplicación, estas instrucciones de ensamble son recomendadas ampliamente.

M66613

ASSEMBLING INSTRUCTIONS INSTRUCCIONES DE ENSAMBLE

PART. REF.	THREAD SIZE	OR SUPPLIED (NBR 90 ShA)	TIGHTENING TORQUE (Nm)
M66613-06-22	M 22x1,5	10x2	70
M66613-08-24	M 24x1,5	12x2	100
M66613-12-36	M 36x2	20,3x2,4	190

RECOMMENDATIONS RECOMENDACIONES

- **the crimping operation to apply BLASTLOCK fittings must be carried out with proper high performance crimping/assembling machines (crimping force higher than 2800-3000 kN) and approved by Manuli Rubber Industries, in order to guarantee the optimum coupling assembly deformations and hose gripping;**
- **it is recommended to follow the detailed assembling instructions supplied by Manuli Rubber Industries to customers, assemblers and operators using the integrated package GOLDENBLAST hose & BLASTLOCK fittings;**
- **each assembly must be pressure tested at the pressure level according to the reference specification (at least 1,25 times the WP for minimum 30 seconds) considering safety implications;**
- **specialised personnel is recommended for the assembling operation of BLASTLOCK fittings.**

- la operación de crimpado para aplicar los acoples BLASTLOCK debe ser llevada a cabo con máquinas de alto desempeño para crimpado/ensamble (fuerza de crimpado mayor que 2800-3000 kN) y aprobadas por Manuli Rubber Industries, para garantizar las óptimas deformaciones de acople y ensamble y agarre de la manguera;
- se recomienda seguir las instrucciones detalladas de ensamble suministradas por Manuli Rubber Industries a los clientes, ensambladores y operadores usando el paquete integrado Mangueras GOLDENBLAST & Acoples BLASTLOCK;
- cada ensamble debe ser probado de acuerdo con las especificaciones de la referencia (al menos 1,25 veces la presión de trabajo por un mínimo de 30 segundos) considerando las implicaciones de seguridad;
- se recomienda utilizar personal especializado para la operación de ensamble de los acoples BLASTLOCK.

BLASTLOCK TYPE

GOLDENBLAST HOSES

RECOMMENDATIONS

Please find enclosed the following recommendations for the safe and correct use of Manuli Goldenblast product line.

- **DON'T MIX AND MATCH:** MRI strictly recommends the use of its integrated waterblasting package. The use of alternative hose or fittings can result in the assembly poor quality and reliability.
- In line with international regulations, **all waterblasting assemblies should be tested** to 150% of the indicated maximum static working pressure before using.
- If waterblast assemblies are used with a pressure rate exceeding the maximum working pressure indicated, the assemblies structure suffers for over-stressed situation.
  For the same reason, also **pulsating pressure** situations need to be avoided.
- **Relief valves** should be used to preserve waterblast equipment and hose assemblies.
- When **safety devices** are applied to prevent fitting blow-off, hose elongation and contraction need to be taken in consideration.
  Under pressure, the hose can vary from -4% up to +2% in lenght!
- **Waterblast assemblies should never be used in "hang down" position** because it brings hose reinforcement restriction to contraction/elongation and fittings over-stress to support the weight of the hanging hose.
- Strictly avoid to apply any **external force** on the hose assembly, such as axial tension, twisting, kinking or crushing.
- **Temperature** influences the resistance to leakage. Working temperature should be maintained below 70°C.
- Hose assemblies need to be replaced in case of **damage**, such as:
  - hose cover abrasion, cuts, chemical attack, corrosion
  - reinforcement crushing or twisting
- **High pressure water has always to be considered extremely dangerous.**
  Anyone handling waterblasting equipment should wear proper protective clothing, boots and eyes protection.



RECOMENDACIONES

Para el uso correcto y seguro de los ensambles con GOLDENBLAST para agua a presión, MRI establece las siguientes recomendaciones:

- NO MEZCLE: MRI recomienda estrictamente el uso de su paquete integrado para agua a presión. El uso de mangueras y acoples alternativos con productos MRI pueden resultar en una pobre calidad del ensamble y dudosa fiabilidad.
- En línea con las regulaciones internacionales, todos los ensambles para agua a presión deben ser examinados al 150% de la presión de trabajo estática máxima antes de ponerlo en servicio.
- Usar acoples para agua a presión con presiones que exceden las presiones máximas de trabajo establecidas lleva a un sobre-recargo de la estructura interna. Las válvulas de alivio deben ser usadas para preservar el equipo para agua a presión y los ensambles de las mangueras.
- Presión pulsante también lleva a sobre-recargo de la estructura interna de la manguera y necesita ser evitada en el uso del equipo para agua a presión.
- El uso de implementos de seguridad contra desprendimiento de acoples o tramos de cadena para juntar mangueras debe permitir la elongación o contracción de la manguera. Bajo presión la manguera puede variar en longitud desde -4% hasta +2%
- Los ensambles para agua a presión nunca deben ser usados colgando hacia abajo; esto parece ser un hábito ampliamente difundido, sin embargo, lleva a sobre-recarga de esfuerzo de la manguera, restricción de la libre contracción/elongación y recargo excesivo en el acople, el cual está soportando el peso de la manguera colgando.
- Las fuerzas externas que llevan a tensión axial, torceduras, aplastamiento o enroscamiento de la manguera, deben ser estrictamente evitadas.
- La resistencia al goteo en los acoples de los ensambles está influenciada por la temperatura: para evitar pérdida de rendimiento, la temperatura de trabajo debe ser mantenida por debajo de los 70°C.
- Cualquier daño de la cubierta de la manguera (abrasión, cortes, ataque de químicos ácidos, corrosión de los alambres de acero al carbón) o el refuerzo (aplastamiento, torceduras) requiere el reemplazo del ensamble para evitar el riesgo de fallas inesperadas de la manguera.
- El agua con alta presión ha sido siempre considerada como extremadamente peligrosa. Cualquier persona que maneje un equipo para agua con presión debe usar la ropa de protección apropiada, botas y protector para los ojos.

REFRIGERATION PRODUCT RANGE



manuli® RUBBER INDUSTRIES

INTRODUCTION

THE OFFER

Manuli Refrigeration offer consists of reinforced rubber hoses, fittings, hose assemblies and kits.

The Refrigeration **offer** is designed specifically to satisfy the most restricted requirements aimed to the development of:

- **bus air conditioning** and **mobile refrigeration** systems for "on-road industrial vehicles"
- **air conditioning systems** applied on off-highway industrial vehicles such as: agricultural machines, earth-moving machines, forestry machines, etc.

The above systems are supplied both directly to manufacturers which need significant product volumes and through specialized distributors operating as part of the Manuli Premier Distributors Network.



LA OFERTA

La oferta de Refrigeración consiste en las recono-cidas mangueras de caucho reforzado Manuli, acoples, ensambles de mangueras y kits.

La **oferta** de Refrigeración está diseñada específicamente para satisfacer los requerimientos más estrictos enfocados al desarrollo de:

- **aire acondicionado para buses** y sistemas móviles de refrigeración para "vehículos industriales en movimiento"
- **sistemas de aire acondicionado** aplicado en vehículos industriales fuera de carretera como: máquinas para la agricultura, máquinas para mover tierra, máquinas cosechadoras, etc.

Los sistemas arriba mencionados son suministrados directamente a los fabricantes que necesitan volúmenes significativos de producto y a través de distribuidores especializados que operan como parte de la Red de Premier Distributors de Manuli.



Bus air conditioning
Aire acondicionado para buses



Off highway air conditioning
Aire acondicionado para vehículos fuera de carretera



Mobile refrigeration
Refrigeración móvil

ASSEMBLING INSTRUCTIONS

Manuli Rubber Industries, which has always been committed to offering its customers the best possible service, has developed: a special "field-attachable" fitting technology allowing a convenient mounting and disassembly operation, in particular:

- Frigoclic® fitting range technology
- Reusable fitting range technology

Furthermore crimped fitting solution is completely integrated on all hose lines.

The following pages describe the main steps to correctly assembly our products.

- **Refrimaster with clamp**
- **Refrimaster with ferrule**
- **Refristar with reusable fittings**
- **Refristar with crimped fittings**
- **Refrifast with one-piece crimped fittings**

Please browse through the above procedures before consulting our catalogue and selecting the most suitable product for your need.

Manuli Rubber Industries, que ha estado siempre comprometida a ofrecer a sus clientes el mejor servicio posible, ha desarrollado: una tecnología especial "acorde a la necesidad" permitiendo un montaje conveniente y operación de desensamblaje, en particular:

- tecnología para el rango de acoples Frigoclic®
- tecnología para el rango de acoples reusables

Acople crimpado cle o que está completamente integrado con toda la línea de mangueras.

Las siguientes páginas describen los principales pasos para ensamblar correctamente nuestros productos.

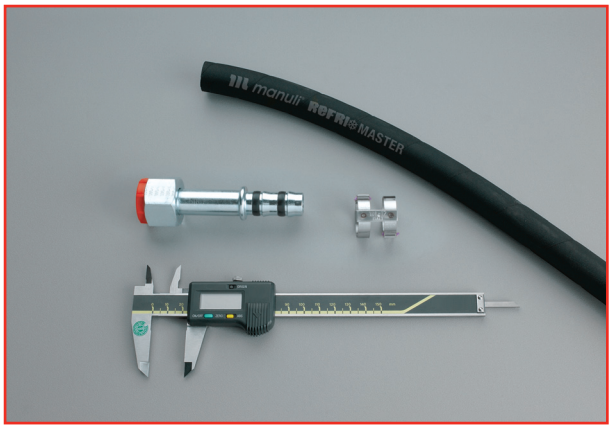
- **Refrimaster con abrazadera**
- **Refrimaster con casquillo**
- **Refristar con acoples reusable**
- **Refristar con acoples permanentes**
- **Refrifast con racor prensado en una pieza**

Por favor examine los procedimientos antes de consultar nuestro catálogo y seleccionar el producto más conveniente para sus necesidades.

ASSEMBLING INSTRUCTIONS - REFRIMASTER PROCEDURE

REFRIMASTER WITH CLAMP
REFRIMASTER CON ABRAZADERA

The fitting operations are extremely simple, and consist of the following procedures:
Las operaciones de acople son extremadamente simples, y consisten en los siguientes procedimientos:



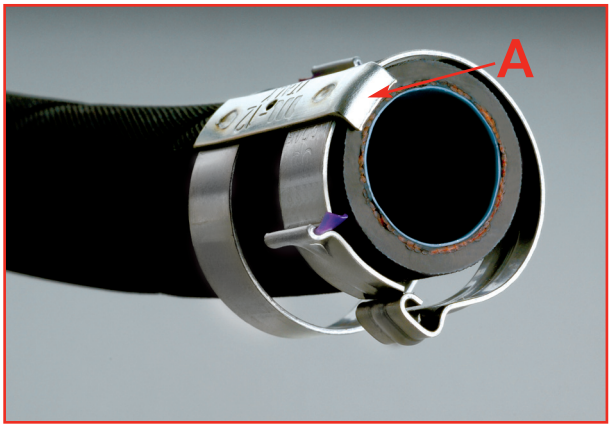
1 **Check the dimensions of the components.**
Verifique las dimensiones de los componentes.



2 **Cut the end of the hose in a perpendicular direction, using the manual cutter.**
Corte el extremo de la manguera en una dirección perpendicular, usando el cortador manual.



3 **Verify the end of the hose to be cut in a perpendicular direction.**
Verifique que el extremo de la manguera esté cortado en dirección perpendicular (a escuadra).

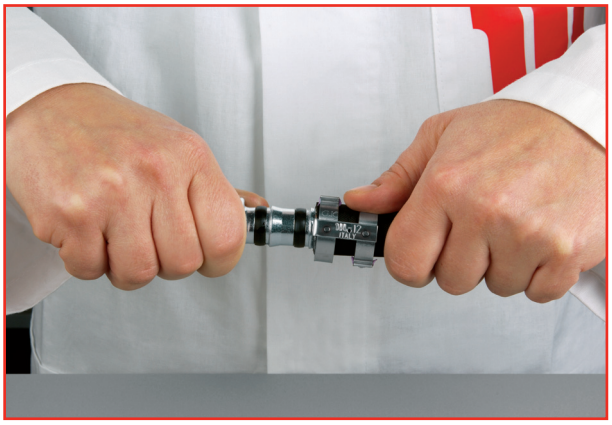


4 **Place the double clamp on the flexible hose in such a way that the tooth of bar A comes contact with the end of the hose that has been cut.**
Coloque la abrazadera doble en la manguera flexible de tal manera que el diente de la barra A entre en contacto con el extremo de la manguera que ha sido cortado.

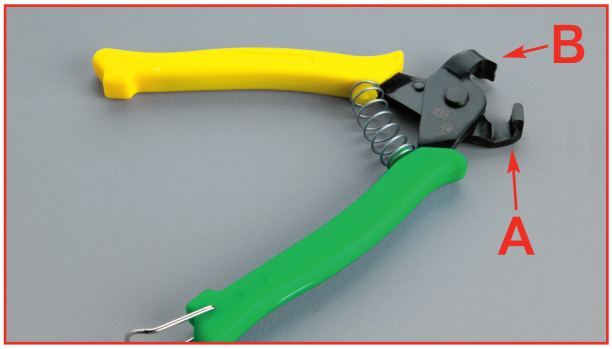
ASSEMBLING INSTRUCTIONS - REFRIMASTER PROCEDURE



5 **Grease the end of the fitting joint with the same oil used in the air conditioning system.**
Lubrique el extremo del racor con el mismo aceite usado en el sistema de aire acondicionado.

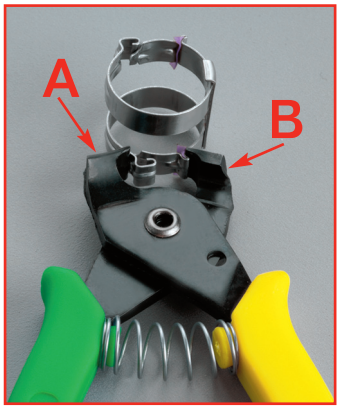


6 **Find the correct orientation and insert completely the fitting into the hose.**
Encuentre la orientación correcta e inserte completamente el acople dentro de la manguera.



7 **A = round nose** / nariz redonda
B = thin nose / nariz delgada

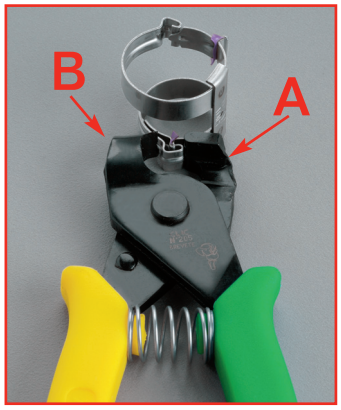
8 9 10 **To place the fitting, position the round nose of the pliers (A) at the hook shaped end of the clamp and the thin nose (B) at the end with the hooked teeth. Tighten the double clamp until the click using the special "CLICK" open-close pliers. To disassemble, just reverse the position of the ends of the pliers on the clamp.**
Para colocar el racor en su lugar, coloque la nariz redonda de los alicates (A) en la parte con gancho de la abrazadera y la parte delgada de la nariz (B) en el final con los dientes enganchados. Asegure la abrazadera doble hasta que cierre usando el "CLICK" especial de los alicates para abrir y cerrar. Para desensamblarlo, reverse la posición de las puntas de los alicates en la abrazadera.



8 **Closing** / Cierre



9 **Tighting the double clamp until click to close. Reverse the position of the pliers to open.**
Asegure la abrazadera doble hasta que cierre usando el "CLICK". Para desensamblarlo, reverse la posición de las puntas de los alicantes en la abrazadera.



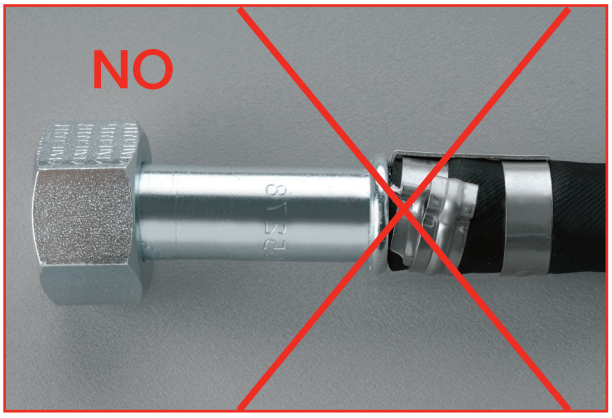
10 **Opening** / Apertura

WARNING: **Do not reuse the clamp** / PRECAUCION: No reutilice la abrazadera

ASSEMBLING INSTRUCTIONS - REFRIMASTER PROCEDURE



11 Verify the parallelism of the two clamps.
Verifique el paralelismo de las dos abrazaderas.



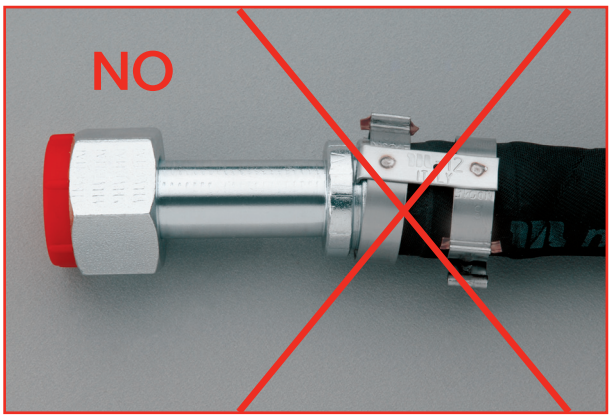
12 Pay attention in tightening clamp in the right way.
Preste atención a asegurar la abrazadera de la manera correcta.

13 14 15 16

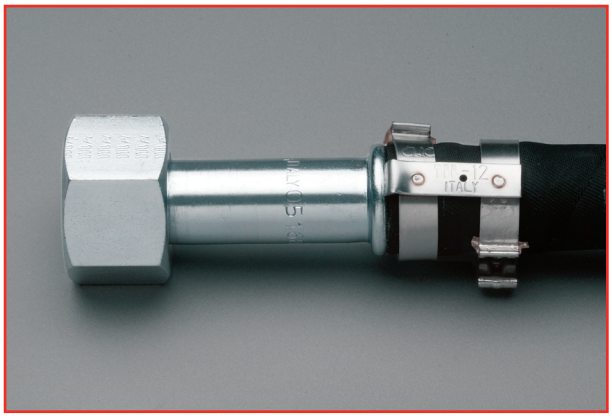
WARNING: Position correctly the clamp / PRECAUCION: Coloque la abrazadera correctamente



13 Right / Correcto
Solution with brazed insert / Solución con inserto abrazado



14 Wrong / Incorrecto



15 Right / Correcto



16 Wrong / Incorrecto

Solution with insert obtained by deformation / Solución con inserto obtenido por deformación

ASSEMBLING INSTRUCTIONS - REFRIMASTER PROCEDURE

REFRIMASTER MOUNTING KIT
REFRIMASTER KIT DE MONTAJE/ENSAMBLE



1 Mounting kit.
Kit de montaje.



2 Manual cutter.
Cortador manual.



3 "CLIC" open-close pliers.
Alicates de "CLIC" abrir-cerrar.

Manuli Rubber Industries is able to supply:

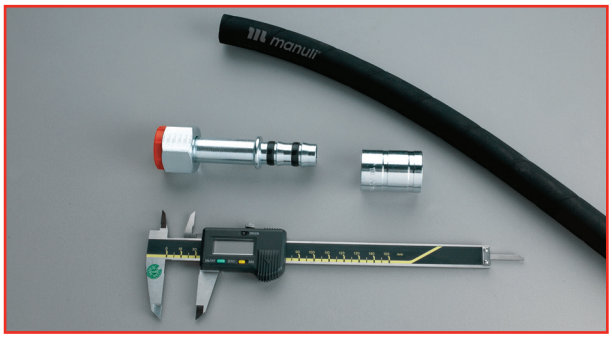
- a practical mounting kit containing all tools necessary for the correct assembly of the Frigoclic® coupling
- the separate supply of hose in rolls, relevant fitting and complete kits according to customer specifications
- the possibility of servicing customers in all the most important countries (on the basis of minimum lot purchase order).

Manuli Rubber Industries tiene el agrado de suministrar:

- un práctico equipo de ensamble que contiene todas las herramientas necesarias para el ensamble correcto de los racores Frigoclic®
- el suministro separado de manguera en rollos, acoples relacionados y kits completos de acuerdo con las especificaciones del cliente
- la posibilidad de servicio al cliente en todos los países más importantes (sobre la base de la orden de compra mínima).

ASSEMBLING INSTRUCTIONS - REFRIMASTER PROCEDURE

REFRIMASTER WITH FERRULE
REFRIMASTER CON CASQUILLO



1 **Check the dimensions of the components.**
Verifique las dimensiones de los componentes.



2 **Cut the end of the hose in a perpendicular direction, using the manual cutter.**
Corte la punta de la manguera en dirección perpendicular, usando el cortador manual.



3 **Verify the end of the hose to be cut in a perpendicular direction.**
Verifique que la punta de la manguera esté cortada en dirección perpendicular (a escuadra).



4 **Place the ferrule on the flexible hose so that the ferrule tooth touches the end of the cut hose.**
Coloque el casquillo en la manguera flexible de tal manera que el diente del casquillo haga contacto con la punta de la manguera que ha sido cortada.

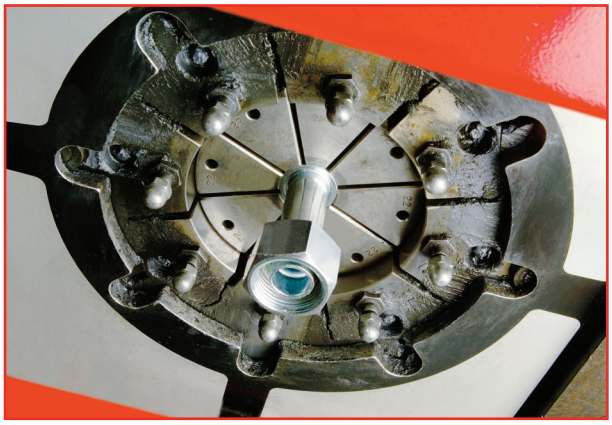


5 **Grease the end of the fitting joint with the same oil used in the air conditioning system.**
Lubrique la punta del racor con el mismo aceite usado en el sistema de aire acondicionado.



6 **Find the correct orientation and insert completely the fitting into the hose.**
Encuentre la orientación correcta e inserte completamente el acople dentro de la manguera.

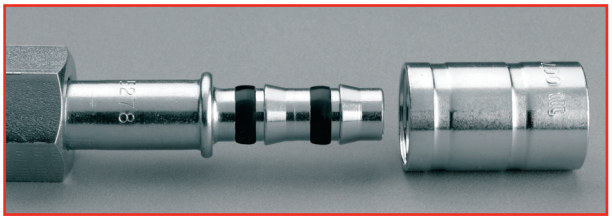
ASSEMBLING INSTRUCTIONS - REFRIMASTER PROCEDURE



7 **Set up the crimping machine selecting the die set that is closed to the specified dimension. Crimp to the specified diameter (table a). Ensure the dies fully cover the ferrule length.**
Aliste la máquina crimpadora seleccionando el conjunto de dados que más se acerque a la dimensión especificada. Crimpe al diámetro específico (tabla a). Asegúrese que los dados cubran completamente la longitud del casquillo.



9 **Inspect the crimping dimension using a calibrated vernier. Check the diameter at the centre of the ferrule following the values in table a.**
Verifique la dimensión de crimpado usando un vernier calibrado. Controle el diámetro en el centro del casquillo siguiendo los valores dados en la tabla a.

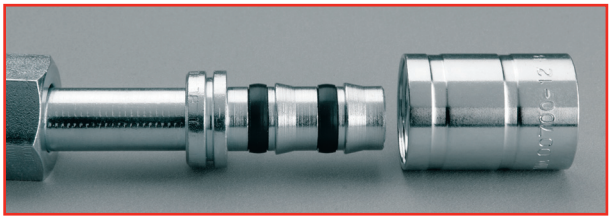


before / antes



after / después

Solution with insert obtained by deformation
Solución con inserto obtenido por deformación



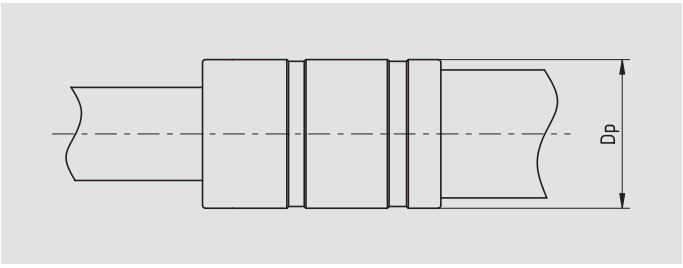
before / antes



after / después

Solution with brazed insert
Solución con inserto ajustado

8 **Pay attention in coupling insert and ferrule.**
Preste atención al acoplamiento del inserto y el casquillo.

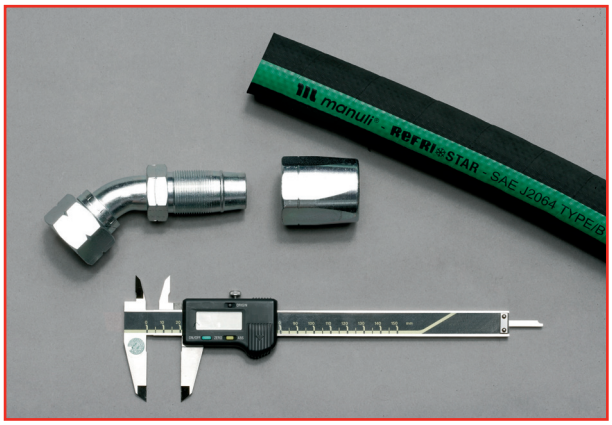


HOSE SIZE			Dp (±0,1 mm)
DN	Dash	Inch	mm
8	- 06	5/16"	16,9
10	- 08	13/32"	19,9
13	- 10	1/2"	21,8
16	- 12	5/8"	26,0

Table a / Tabla a

ASSEMBLING INSTRUCTIONS - REFRISTAR PROCEDURE

REFRISTAR WITH REUSABLE FITTINGS
REFRISTAR CON ACOPLES REUSABLES



1 Check the dimensions of the components.
Verifique las dimensiones de los componentes.



4 Cut the hose by using a proper sharpened disc (see fig. 4), **do not use an abrasive disc.**
The hose must be square and clean cut.
Avoid cutting the hose not perpendicularly or cutting the hose causing damages on its wire braid (see fig. 2, 3) for a proper cutting hose operation. Clean the hose carefully from any cutting residue.
Corte la manguera usando un disco afilado apropiado (ver fig. 4), **no use un disco abrasivo.**
La manguera debe estar cortada a escuadra y limpia. Evite cortar la manguera de manera no perpendicular o cortar la manguera causando daños en sus alambres trenzados (ver fig. 2, 3) para un corte apropiado de la manguera.
Limpie la manguera cuidadosamente de cualquier residuo del corte.



2 Wrong cut / Corte incorrecto

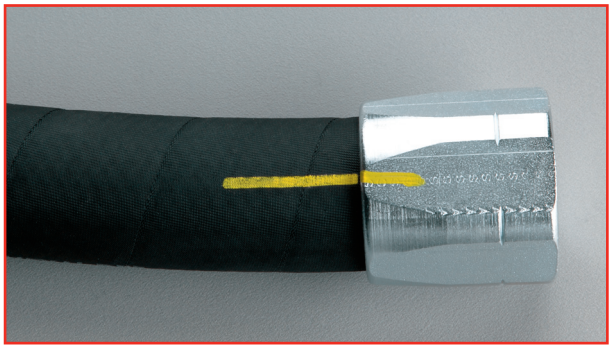


3 Right cut / Corte correcto



5 Secure in position the socket i.e. by using a benchvise.
Screw the hose counterclockwise into the socket until it reaches the bottom.
Unscrew 1/4 turn to prevent damage in screwing.
Asegure en posición el socket, por ejemplo usando una prensa.
Atornille la manguera en dirección de las agujas del reloj dentro del socket hasta que llegue al fondo.
Destornille 1/4 de vuelta para prevenir daño.

ASSEMBLING INSTRUCTIONS - REFRISTAR PROCEDURE



6 **Mark the socket and the hose using an indelible felt tip pen, to verify any absence of hose rotation inside the socket during the fittings crewing.**
Marque el socket y la manguera usando un lapicero de felpa con tinta indeleble, para verificar que la manguera no rote dentro del socket durante el proceso de inserción del racor.



8 **Insert the fitting into the hose. Press slightly and screw by hand turning clockwise the first threads. Then by using an appropriate spanner or a screwspanner on the hexagon, screw the fitting into the socket with a continuous and constant rotation motion and verify any absence of hose rotation inside the socket during the fitting screwing. Complete the screwing until the fitting reaches the bottom against the socket. Never overtighten. Assembling is now finished.**
Inserte el racor dentro de la manguera. Presione ligeramente y atornille con la mano moviendo en dirección a las agujas del reloj los primeros filamentos. Luego usando una llave de tuercas apropiada sobre el hexágono, atornille el racor dentro del socket con un movimiento de rotación continuo y constante y verifique que la manguera no haya rotado dentro del socket durante el proceso de inserción. Complete el ajuste hasta que el racor llegue al fondo contra el socket. Nunca lo apriete demasiado. El ensamble está ahora terminado.



7 **Position the hose complete with socket i.e. by using a bench vise. Grease with a lot of oil the threading and the taper of the fitting as well as the inside of hose.**
WARNING: Use the same lubricant used in the A/C system.
Coloque la manguera completa con el socket por ejemplo usando una prensa. Lubrique con una generosa cantidad de aceite la superficie del cono y del racor así como el interior de la manguera.
PRECAUCION: Utilice el mismo lubricante usado en el sistema de aire acondicionado.



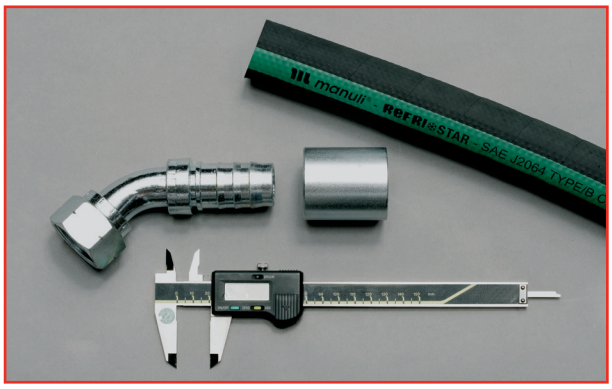
9 **You can leave a margin of max 3 mm between the hexagon of the fitting and the socket. Verify allignment.**
Es aceptable dejar un margen de máximo 3 mm entre el hexágono del racor y el socket. Verifique la alineación.

ASSEMBLING INSTRUCTIONS - REFRISTAR PROCEDURE

REFRISTAR WITH CRIMPED FITTINGS
REFRISTAR CON ACOPLES PERMANENTES

It is important that hose assemblies for A/C vehicles (for instance off highway), A/C Buses and Mobile Refrigeration using Manuli Hose, Ferrules & Fittings are manufactured to the procedures below:

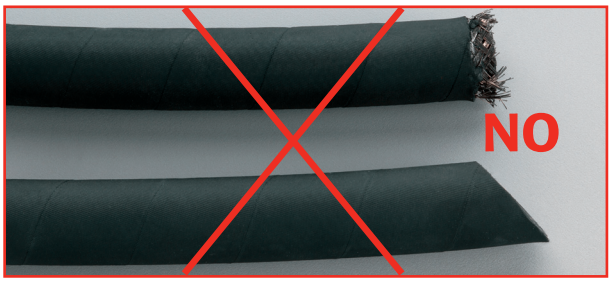
Es importante que los ensambles de mangueras para aire acondicionado para vehículos (por ejemplo para equipos fuera de carretera), aire acondicionado para buses y refrigeración móvil usando Mangueras, Casquillos y Acoples/racores Manuli sean fabricados según los siguientes procedimientos:



1 **Check the dimensions of the components.**
Verifique las dimensiones de los componentes.



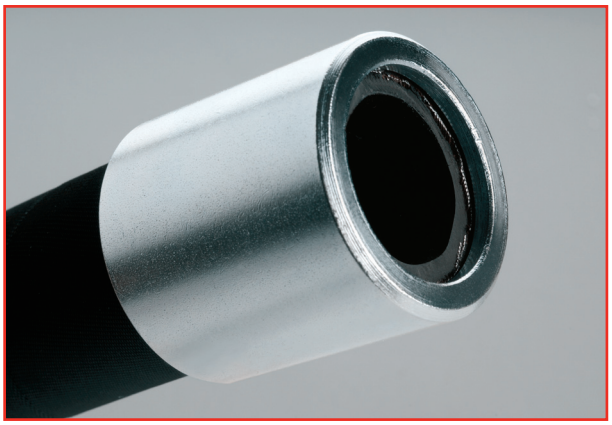
4 **Cut the hose by using a proper sharpened disc (see fig. 4), do not use an abrasive disc. The hose must be square and clean cut. Avoid cutting the hose not perpendicularly or cutting the hose causing damages on its wire braid (see fig. 2, 3) for a proper cutting hose operation. Clean the hose carefully from any cutting residue.**
Corte la manguera usando el disco afilado apropiado (ver fig. 4). **No use un disco abrasivo**. La manguera debe estar cortada a escuadra y limpia. Asegúrese que el corte de la manguera sea perpendicular y evite que el corte de la manguera cause daños en sus alambres (ver fig. 2, 3) para una operación apropiada de corte de la manguera. Limpie cuidadosamente la manguera de cualquier residuo de corte.



2 **Wrong cut** / Corte incorrecto



3 **Right cut** / Corte correcto

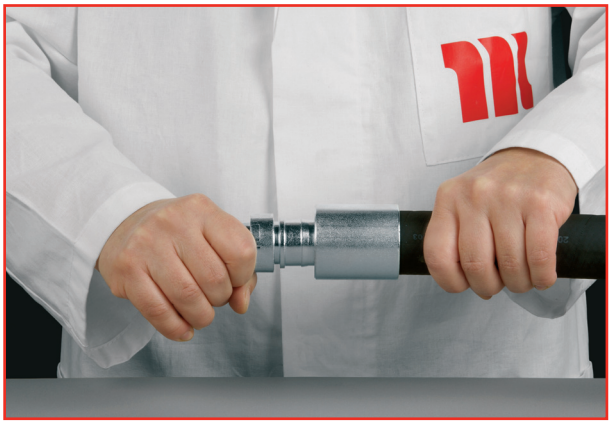


5 **Place the ferrule on the flexible hose so that the ferrule tooth touches the end of the cut hose.**
Coloque el casquillo en la manguera flexible de tal manera que los dientes hagan contacto con la punta de la manguera que ha sido cortada.

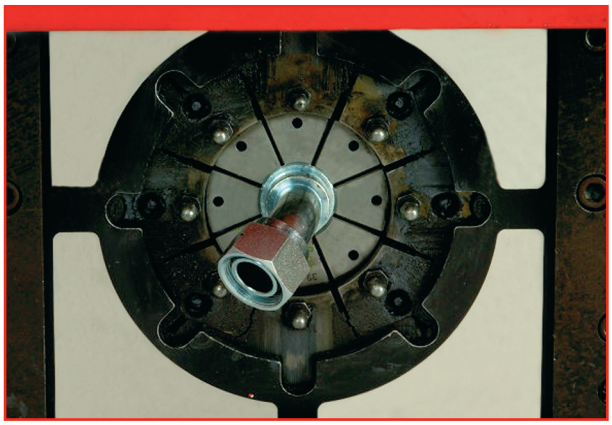
ASSEMBLING INSTRUCTIONS - REFRISTAR PROCEDURE



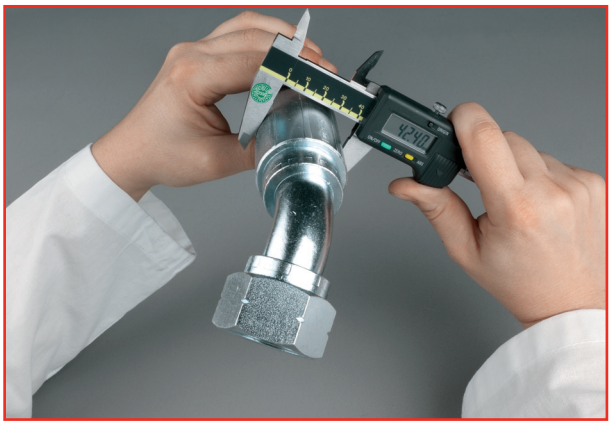
6 **Grease the end of the fitting joint with the same oil used in the air conditioning system.**
Lubrique la punta del racor con el mismo aceite usado en el sistema de aire acondicionado.



7 **Find the correct orientation and insert completely the fitting into the hose.**
Encuentre la orientación correcta e inserte completamente el racor en la manguera.



8 **Set up the crimping machine selecting the die set that is closed to the specified dimension. Crimp to the specified diameter. Ensure the dies fully cover the ferrule length.**
Acondicione la máquina crimpadora seleccionando el conjunto de dados que más se acerque a la dimensión especificada. Crimpe al diámetro especificado. Asegúrese que los dados cubran totalmente la longitud del casquillo.



9 **Inspect the crimping dimension using a calibrated vernier. Check the diameter at the centre of the ferrule following the values on the table b.**
Inspeccione la dimensión de crimpado usando un vernier calibrado. Verifique el diámetro en el centro del casquillo siguiendo los valores de la tabla b.

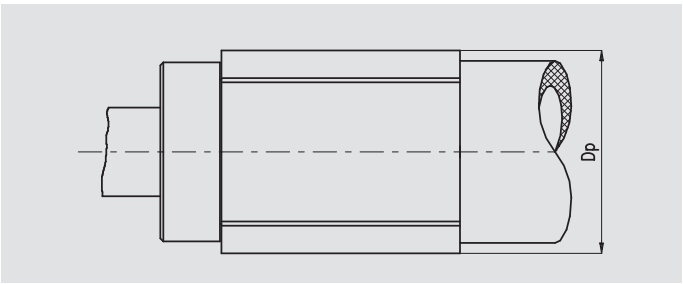


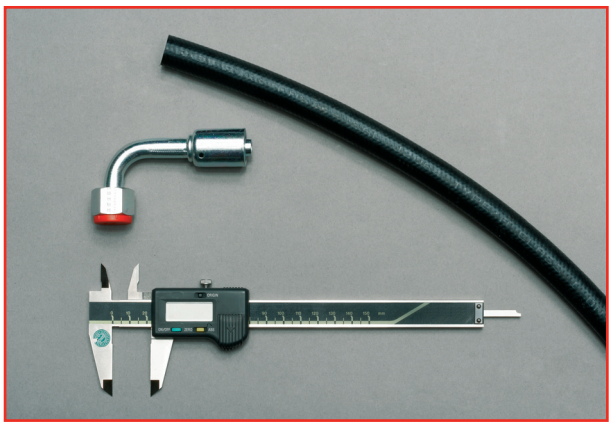
Table b / Tabla b

HOSE SIZE			Dp (±0,1 mm)
DN	**Dash**	**Inch**	**mm**
5	- 04	3/16"	15,2
8	- 06	5/16"	20,2
10	- 08	13/32"	21,3
12	- 10	1/2"	26,0
16	- 12	5/8"	30,8
22	- 16	7/8"	34,4
28	- 20	1.1/8"	42,5

ASSEMBLING INSTRUCTIONS - REFRIFAST PROCEDURE

REFRIFAST WITH ONE-PIECE CRIMPED FITTINGS
REFRIFAST CON RACOR PRENSADO EN UNA PIEZA

The fitting operations are extremely simple, and consist of the following procedures:
El montaje es extremadamente simple y consiste en los siguientes procedimientos:



1 **Check the dimensions of the components.**
Compruebe las dimensiones de los componentes.



2 **Cut the end of the hose in a perpendicular direction, using the manual cutter.**
Corte la manguera en dirección perpendicular, usando el cortador manual.



3 **Verify the end of the hose to be cut in a perpendicular direction.**
Verifique que la manguera ha sido cortada en dirección perpendicular.

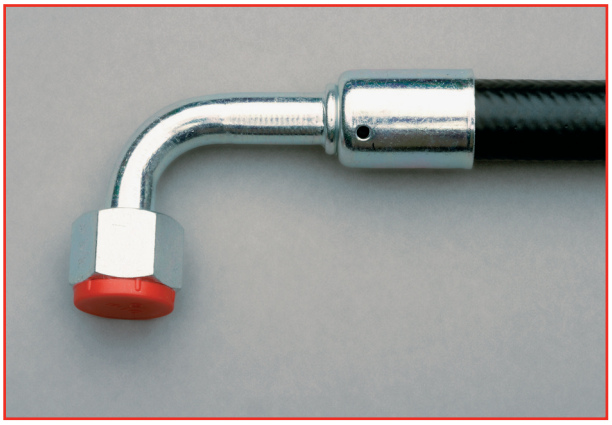


4 **Grease the end of the fitting joint with the same oil used in the air conditioning system.**
Lubrique los extremos (mangueras y racores) con el mismo aceite usado en el sistema del aire acondicionado.

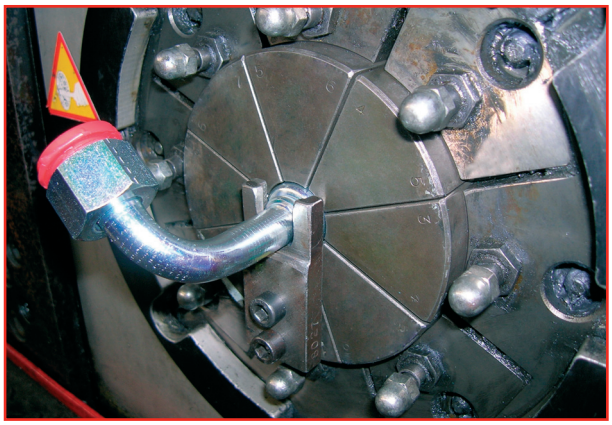
ASSEMBLING INSTRUCTIONS - REFRIFAST PROCEDURE



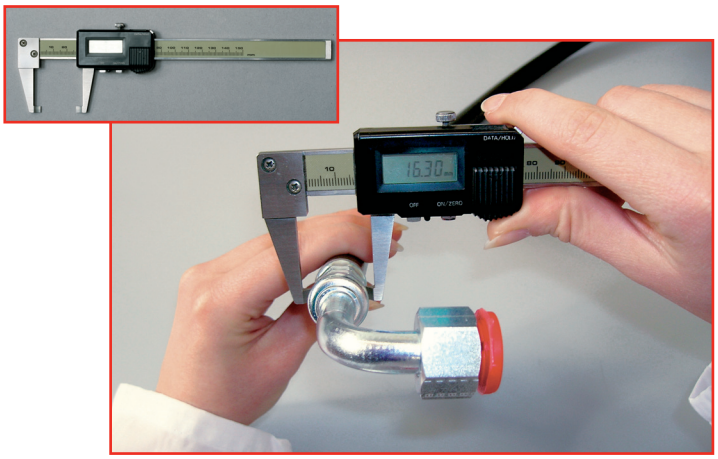
5 **Find the correct orientation and insert completely the fitting into the hose.**
Compruebe la orientación correcta e inserte completamente el racor en la manguera.



6 **Check the correct position of the hose through the proper hole in the ferrule.**
Compruebe la correcta posición de la manguera a través del orificio en el casquillo.



7 **Set up the criping machine selecting the die set that is closed to the dimension specified diameter. Place the fitting on the proper positioner to ensure that it is in the correct position (table c).**
Prepara la máquina seleccionando las mordazas adecuadas para prensar el diámetro especificado. Ponga el racor en la máquina y verifique que está en la posición correcta (tabla c).



8 **Inspect the crimping dimension using the proper calibrated vernier. Check the dimensions following the values in table c.**
Inspeccione el diámetro de prensado usando el nonio el calibrado apropiado. Compruebe las dimensiones que siguiendo los valores en la tabla c.

Strictly use Manuli die sets bubble crimping.
Usar estrictamente mordazas Manuli para prensado con burbuja.

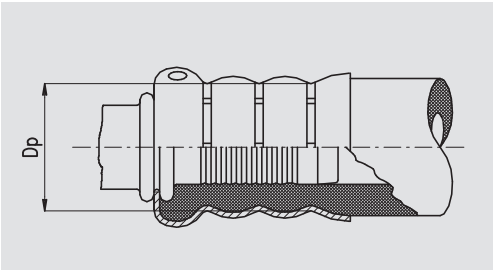


Table c / Tabla c

HOSE SIZE			Dp ±0,2 mm
DN	Dash	Inch	mm
8	- 06	5/16"	14,8
10	- 08	13/32"	16,3
12	- 10	1/2"	18,8
16	- 12	5/8"	21,1



REFRIGERATION HOSES

manuli® RUBBER INDUSTRIES

LEGEND OF SYMBOL

Inside Diameter (I.D.)
Diámetro interno (I.D.)

Outside Diameter (O.D.)
Diámetro externo (O.D.)

Working pressure
Presión de trabajo

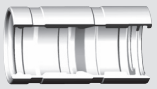
Burst pressure
Presión de estallamiento

Weight
Peso

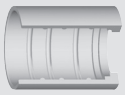
Minimum bend radius
Radio mínimo de curvatura



Refrimaster clamp
Abrazadera Refrimaster



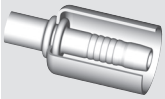
Refrimaster ferrule
Casquillo Refrimaster



Crimp ferrule for Refristar
Casquillo para crimpar Refristar



Reusable ferrule for Refristar
Casquillo reusable para Refristar



One piece fitting for Refrifast
Conexion en una pieza para Refrifast

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No responsibility is undertaken when our products are used incorrectly or wrongly fitted.

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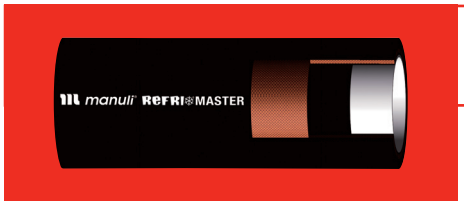


REFRI®MASTER

SAE J2064 TYPE E

STANDARD PART. REF.	HOSE SIZE	I.D.	O.D.	WORKING PRESSURE	BURST PRESSURE	WEIGHT	MIN. BEND RADIUS
	DN	Dash	inch	mm	mm	bar	bar	g/m	mm
H09002008*	8	- 06	5/16"	8,0	12,7	35	> 250	90	40,0
H09002010*	10	- 08	13/32"	10,5	16,0	35	> 250	140	50,0
H09002013*	13	- 10	1/2"	13,0	18,1	35	> 150	160	80,0
H09002016*	16	- 12	5/8"	16,0	21,7	35	> 150	200	90,0

Standard packaging: coil / Embalaje estándar: rollo

* **The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Universal hose, compatible with the most common refrigerants and compressor lubricants ▪ Low permeability to refrigerant fluid ▪ Compact dimensions ▪ Low weight and high flexibility ▪ Field attachable and crimped solutions available with Frigoclic® insert

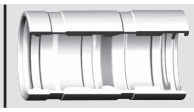
Manguera universal, compatible con los mas comunes refrigerantes y lubricantes para compresores ▪ Baja permeabilidad al fluido refrigerante ▪ Dimensiones compactas ▪ Bajo peso, alta flexibilidad ▪ Baja transmisión de ruido ▪ Gama de racores integrados con inserto Frigoclic® estandarizado

SPECIFICATIONS: SAE J2064 Type E Class I
MAIN APPLICATIONS: Mobile refrigeration and air conditioning systems: bus, off highway equipment
CONSTRUCTION:
- TUBE: high temperature resistant thermoplastic (PA) veneer
- REINFORCEMENT: one textile braid
- COVER: high temperature and environmental resistant syntethic rubber (EPDM)

REFRIGERANTS: Compatibility with a wide range of refrigerants (eg. R134a, R404A, R407C)
LUBRICANTS: Compatibility with the most common compressor lubricants (e.g. PAG, POE, Mineral Oils)
CONTINUOUS WORKING TEMPERATURE:
-40°C / +125°C -40°F / +257°F
MAX. PEAK TEMPERATURE: +140°C +284°F

ESPECIFICACIONES: SAE J2064 Tipo E Clase I
PRINCIPALES APLICACIONES: Refrigeración móvil y sistemas de aire acondicionado en: bus, equipo fuera de carretera
CONSTRUCCIÓN:
- TUBO: termoplástico resistente a las altas temperaturas (PA)
- REFUERZO: una trenza textil
- CUBIERTA: caucho sintético resistente a las altas temperaturas y al ambiente (EPDM)

REFRIGERANTES: Compatibilidad con un amplio rango de refrigerantes (ej. R134a, R404A, R407C)
LUBRICANTES: Compatibilidad con los lubricantes de compresores más comunes (ej. PAG, POE, Aceites Minerales)
TEMPERATURA DE TRABAJO CONTINUO:
-40°C / +125°C -40°F / +257°F
PICO MAXIMO DE TEMPERATURA: +140°C +284°F




HOSE SIZE			REFRIMASTER FERRULE	REFRIMASTER CLAMP
DN	DASH	INCH	CODE	CODE
8	- 06	5/16"	C00700-06	C01000-06
10	- 08	13/32"	C00700-08	C01000-08
13	- 10	1/2"	C00700-10	C01000-10
16	- 12	5/8"	C00700-12	C01000-12

Fittings compatible with Refrimaster
Racores compatibles con Refrimaster

FRIGOCLIC® guarantee of sealing / garantía de sellado



ONE insert
UN SOLO inserto

field attachable clamp
abrazadera instalable en campo



crimped ferrule
casquillo para crimpado



TWO coupling solutions for any applications
DOS soluciones de acoplado acorde a requerimientos

NOTE: Guaranteed performance only with our fittings.
Comportamiento garantizado solamente con nuestras conexiones.

WARNING: Ask MRI about other refrigerants and lubrificants
PRECAUCION: Pregunte a MRI acerca de otros refrigerantes y lubricantes

REFRI❄STAR

SAE J2064 TYPE B



STANDARD PART. REF.	HOSE SIZE	I.D.	O.D.	WORKING PRESSURE	BURST PRESSURE	WEIGHT	MIN. BEND RADIUS
	DN	Dash	inch	mm	mm	bar	bar	g/m	mm
H01110005*	5	- 04	3/16"	4,8	13,0	35	> 150	210	85,0
H01110008*	8	- 06	5/16"	8,0	17,2	35	> 150	320	85,0
H01110010*	10	- 08	13/32"	10,5	19,3	35	> 150	370	95,0
H01110012*	12	- 10	1/2"	12,7	23,4	35	> 150	530	115,0
H01110016*	16	- 12	5/8"	16,0	27,3	35	> 150	675	135,0
H01110022*	22	- 16	7/8"	22,0	31,2	35	> 150	705	155,0
H01110028*	28	- 20	1.1/8"	28,0	38,0	35	> 150	930	190,0
H01110035*	35	- 24	1.3/8"	35,0	45,0	35	> 150	980	230,0

Standard packaging: coil / Embalaje estándar: rollo

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Low permeability ▪ High flexibility ▪ Compatible with the most common refrigerant and compressor lubricants

Baja permeabilidad • Alta flexibilidad ▪ Compatible con los ms comunes refrigerantes y lubricantes para compresor

SPECIFICATIONS: SAE J2064 Type B Class I
MAIN APPLICATIONS: Bus and off-highway equipments air conditioning systems
CONSTRUCTION:
- TUBE: low permeability to the refrigerant fluid and wide compatibility with the most common compressor lubricant (IIR)
- REINFORCEMENT: one steel wire braid
- COVER: high temperature and environmental resistant syntethic rubber (CSM)

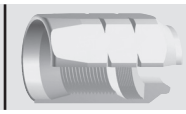
REFRIGERANTS: Compatibility with a wide range of refrigerants (eg. R134a, R404A, R407C)
LUBRICANTS: Compatibility with the most common compressor lubricants (e.g. PAG, POE, Mineral Oils)
CONTINUOUS WORKING TEMPERATURE:
-40°C / +125°C -40°F / +257°F

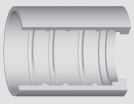
ESPECIFICACIONES: SAE J2064 Tipo B Clase I0
PRINCIPALES APLICACIONES: Sistemas de aire acondicionado en buses y equipo fuera de carretera
CONSTRUCCIÓN:
- TUBO: baja permeabilidad al fluido refrigerante y amplia compatibilidad con los ms comunes lubricantes para compresor (IIR)
- REFUERZO: una trenza de acero
- CUBIERTA: caucho sintético resistente a las altas temperaturas y al ambiente (CSM)

REFRIGERANTES: Compatibilidad con una amplia gama de refrigerantes (ej. R134a, R404A, R407C)
LUBRICANTES: Compatibilidad con los lubricantes de compresores más comunes (ej. PAG, POE, Aceites Minerales)
TEMPERATURA DE TRABAJO CONTINUO:
-40°C / +125°C -40°F / +257°F

WARNING: Ask MRI about other refrigerants and lubrificants
PRECAUCION: Pregunte a MRI acerca de otros refrigerantes y lubricantes

NOTE: Guaranteed performance only with our fittings.
Comportamiento garantizado solamente con nuestras conexiones.





HOSE SIZE			STAR-FIT FERRULE (Reusable solution)	STAR-CRIMP FERRULE (Crimped solution)
DN	DASH	INCH	CODE	CODE
5	- 04	3/16"	K00400-04	C00300-04
8	- 06	5/16"	K00400-06	C00300-06
10	- 08	13/32"	K00400-08	C00300-08
12	- 10	1/2"	K00400-10	C00300-10
16	- 12	5/8"	K00400-12	C00300-12
22	- 16	7/8"	K00400-16	C00300-16
28	- 20	1.1/8"	K00400-20	C00300-20
35	- 24	1.3/8"	K00400-24	



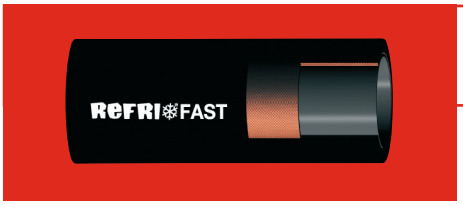






TWO coupling solutions for any applications
DOS soluciones de acoplado acorde a requerimientos

manuli® RUBBER INDUSTRIES



REFRI FAST

SAE J2064 TYPE A

STANDARD PART. REF.	HOSE SIZE	I.D.	O.D.	WORKING PRESSURE	BURST PRESSURE	WEIGHT	MIN. BEND RADIUS
	DN	Dash	inch	mm	mm	bar	bar	g/m	mm
H09068008*	8	6	5/16"	8,2	15,5	35	>150	165	30
H09068010*	10	8	13/32"	10,5	18,0	35	>150	200	50
H09068012*	12	10	1/2"	12,7	20,0	35	>150	250	60
H09068016*	16	12	5/8"	16	23,5	35	>150	290	80

Standard packaging: reel / Embalaje estándar: bobina

*** The complete code for each item is composed by 13 digits, the last 4 digits indicate the type of packaging. Please see the full list of alternative options on Manuli web site.**

* El código completo de cada posición está compuesto por 13 dígitos, los últimos 4 dígitos indican el tipo de embalaje. Por favor vea la lista completa o una opción alternativa el la página web de Manuli

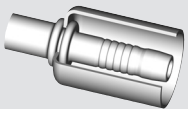
KEY PERFORMANCE CARACTERISTICAS ESPECIALES

Higher compact dimensions within type A hoses and outside diameter comparable with reduced barrier hoses ▪ Low weight ▪ Easy installation in space constraints ▪ High flexibility and low bend radius ▪ Compatible with a wide range of refrigerants and lubricants ▪ Low refrigerants permeability and moisture ingression

Superior dimensión compacta en la manguera tipo A y diámetro exterior comparable con las mangueras compactas "barrier" ▪ Fácil instalación en espacios reducidos ▪ Alta flexibilidad y radio de curvatura ▪ Compatible con una gama amplia de refrigerantes y lubricantes ▪ Baja permeabilidad al refrigerante y al incremento de humedad

Specifications: SAE J2064 Type A Class I
MAIN APPLICATIONS: A/C system for off-highway vehicles, small/medium busses and special vehicles such as recreation vehicles, ambulances and military vehicles.
CONSTRUCTION:
TUBE: low refrigerant fluid permeability and wide compatibility with the most common compressor lubricant (IIR)
REINFORCEMENT: one textile braid
COVER: high temperature (max 125°C) and environmental (ozone resistance) resistant synthetic rubber (EPDM)
REFRIGERANTS: compatibility with a wide range of refrigerants, such as R134a, R404A, R407C
LUBRICANTS: compatibility with the most common compressor lubricants, such as PAG, POE and mineral oils
CONTINUOUS WORKING TEMPERATURE
-40°C / +125°C • -40°F / +257°F

ESPECIFICACIONES: SAE J2064 Tipo A Clase I
APLICACIONES PRINCIPALES: vehículos en carretera, vehículos de recreación y especiales como ambulancias, buses, vehículos del ejercito.
CONSTRUCCIÓN:
TUBO: Baja permeabilidad al refrigerente y compatible con el lubricante más común del compresor (IIR)
REFUERZO: una trenza textil
CUBIERTA: alta temperatura (max 125°C) y medioambiental (resistente al ozono). Caucho sintético resistente (EPDM)
REFRIGERANTE: compatible con una gama amplia de refrigerantes, como R134a, R404A, R407C
LUBRICANTES: compatibilidad con el lubricante más común del compresor, como PAG, POE y aceites minerales.
TEMPERATURA DE TRABAJO CONTINUO:
-40°C / +125°C • -40°F / +257°F



HOSE SIZE			FERRULE EXTERNAL DIAMETER
DN	DASH	INCH	mm
8	- 06	5/16"	22,0
10	- 08	13/32"	22,0
12	- 10	1/2"	25,8
16	- 12	5/8"	28,4

WARNING: Ask MRI about other refrigerants and lubrificants
PRECAUCION: Pregunte a MRI acerca de otros refrigerantes y lubricantes

NOTE: Guaranteed performance only with our fittings.
Comportamiento garantizado solamente con nuestras conexiones.

REFRI®

REFRIGERATION FITTINGS



manuli® RUBBER INDUSTRIES

REFRIGERATION FITTINGS

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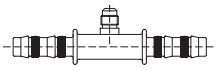
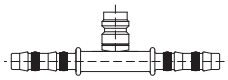
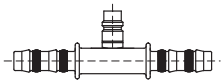
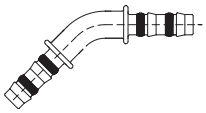
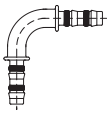
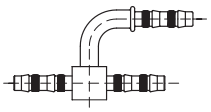
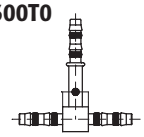
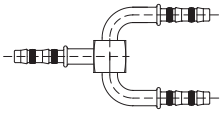
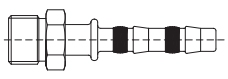
C30012 	STRAIGHT CONNECTION FITTING 1/4" SAE CHARGE VALVE CONEXION RECTA CON VÁLVULA DE CARGA 1/4" SAE	354
C30015 	STRAIGHT CONNECTION FITTING WITH HIGH PRESSURE VALVE CONEXION RECTA CON VÁLVULA DE ALTA PRESION	353
C30016 	STRAIGHT CONNECTION FITTING WITH LOW PRESSURE VALVE CONEXION RECTA CON VÁLVULA DE BAJA PRESION	353
C30040 	CONNECTION FITTING 45° ELBOW RACOR CODO 45°	354
C30090 	CONNECTION FITTING 90° ELBOW CONEXION CODO 90°	355
C300h0 	"h" CONNECTION FITTINGS CONEXION EN "h"	353
C300T0 	3 WAYS CONNECTION FITTINGS RACORES PARA CONEXION DE 3 VIAS	352
C300Y0 	"Y" CONNECTION FITTINGS CONEXION EN "Y"	352
C37910 	STRAIGHT MALE WITH O-RING SEAT MACHO RECTO CON O-RING	356

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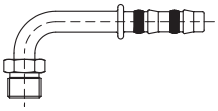
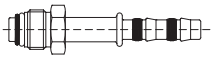
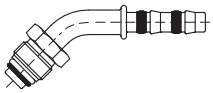
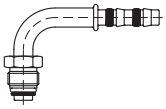
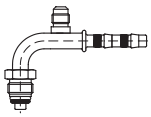
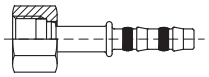
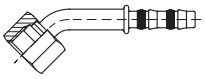
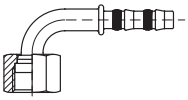
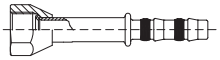
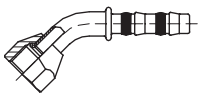
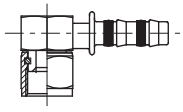
C37990 	MALE WITH O-RING SEAT 90° ELBOW MACHO CON O-RING CODO 90°	356
C38010 	STRAIGHT O-RING MALE MACHO O-RING RECTO	350
C38040 	O-RING MALE 45° ELBOW MACHO O-RING CODO 45°	350
C38090 	O-RING MALE 90° ELBOW MACHO O-RING CODO 90°	350
C38092 	O-RING MALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE MACHO O-RING CODO 90° CON VÁLVULA DE CARGA 1/4" SAE	351
C42410 	STRAIGHT ORS FLAT SEAL FEMALE HEMBRA ORS ASIENTO PLANO RECTO	355
C42440 	ORS FLAT SEAL FEMALE 45° ELBOW HEMBRA ORS ASIENTO PLANO CODO 45°	355
C42490 	ORS FLAT SEAL FEMALE 90° ELBOW HEMBRA ORS ASIENTO PLANO CODO 90°	356
C42610 	45° SAE STRAIGHT FEMALE HEMBRA 45° SAE RECTO	343
C42640 	45° SAE FEMALE 45° ELBOW HEMBRA RECTA SAE CODO 45°	344
C42680 	SHORT VERSION 45° SAE FEMALE 90° ELBOW HEMBRA 45° SAE TIPO CORTO CODO 90°	344

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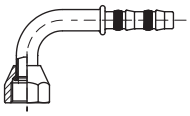
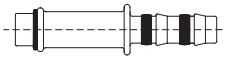
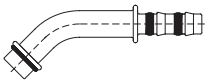
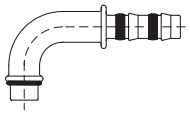
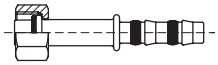
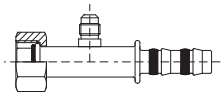
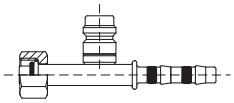
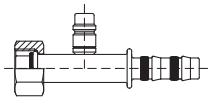
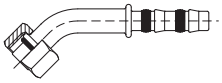
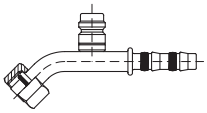
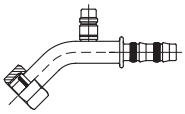
C42690 	45° SAE FEMALE 90° ELBOW HEMBRA 45° SAE CODO 90°	344
C47610 	STRAIGHT FITTING FOR EXPANSION VALVE CONEXION RECTA PARA VÁLVULA DE EXPANSIÓN	351
C47640 	FITTING FOR EXPANSION VALVE 45° ELBOW CONEXION PARA VÁLVULA DE EXPANSION CODO 45°	351
C47690 	FITTING FOR EXPANSION VALVE 90° ELBOW CONEXION PARA VÁLVULA DE EXPANSION CODO 90°	351
C47910 	STRAIGHT O-RING FEMALE HEMBRA O-RING RECTO	345
C47912 	STRAIGHT O-RING FEMALE 1/4" SAE CHARGE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE CARGA 1/4" SAE	346
C47915 	STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE ALTA PRESION	345
C47916 	STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION	346
C47940 	O-RING FEMALE 45° ELBOW HEMBRA O-RING CODO 45°	346
C47945 	O-RING FEMALE 45° ELBOW WITH HIGH PRESSURE VALVE HEMBRA O-RING CODO 45° CON VÁLVULA DE ALTA PRESION	347
C47946 	O-RING FEMALE 45° ELBOW WITH LOW PRESSURE VALVE HEMBRA O-RING CODO 45° CON VÁLVULA DE BAJA PRESION	347

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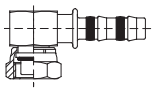
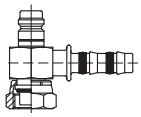
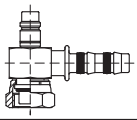
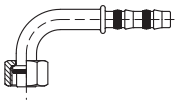
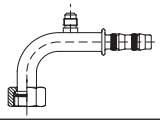
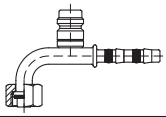
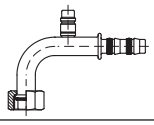
C47980 	SHORT VERSION O-RING FEMALE 90° ELBOW HEMBRA O-RING TIPO CORTO CODO 90°	349
C47985 	SHORT VERSION O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE ALTA PRESION	349
C47986 	SHORT VERSION O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE BAJA PRESION	349
C47990 	O-RING FEMALE 90° ELBOW HEMBRA O-RING CODO 90°	347
C47992 	O-RING FEMALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE CARGA 1/4" SAE	348
C47995 	O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE ALTA PRESION	348
C47996 	O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE BAJA PRESION	348

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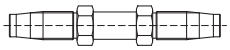
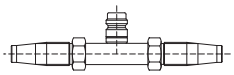
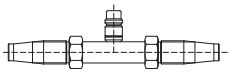
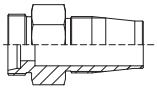
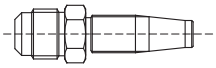
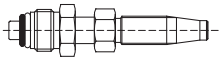
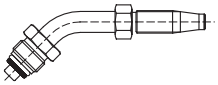
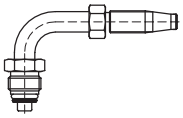
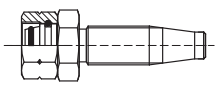
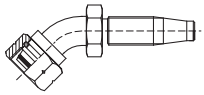
K30010 	STRAIGHT CONNECTION FITTING RACOR RECTO	367
K30015 	STRAIGHT CONNECTION FITTING WITH HIGH PRESSURE VALVE RACOR RECTO CON VÁLVULA DE ALTA PRESION	367
K30016 	STRAIGHT CONNECTION FITTING WITH LOW PRESSURE VALVE RACOR RECTO CON VÁLVULA DE BAJA PRESION	367
K31110 	STRAIGHT 24° MALE DIN MACHO 24° DIN RECTO	368
K32610 	STRAIGHT 45° SAE FLARE MALE MACHO CÓNICO 45° SAE RECTO	359
K38010 	STRAIGHT O-RING MALE MACHO O-RING RECTO	362
K38040 	O-RING MALE 45° ELBOW MACHO O-RING CODO 45°	363
K38090 	O-RING MALE 90° ELBOW MACHO O-RING CODO 90°	363
K41510 	STRAIGHT 24° DIN FLARE O-RING OGIVAL FEMALE HEMBRA O-RING OGIVA 24° DIN CÓNICO RECTO	363
K41540 	24° DIN FLARE O-RING OGIVAL FEMALE 45° ELBOW HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 45°	364

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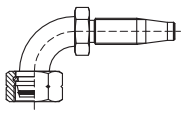
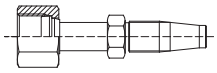
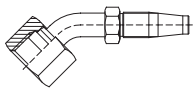
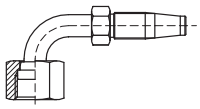
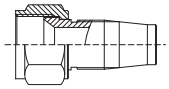
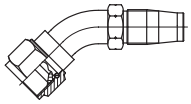
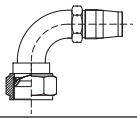
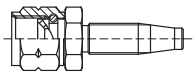
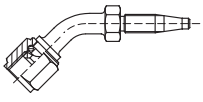
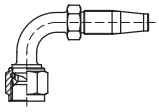
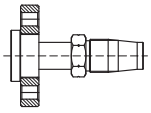
K41590 	24° DIN FLARE O-RING OGIVAL FEMALE 90° ELBOW HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 90°	364
K42410 	STRAIGHT ORS FLAT SEAL FEMALE HEMBRA ASIENTO PLANO ORS RECTO	365
K42440 	ORS FLAT SEAL FEMALE 45° ELBOW HEMBRA ASIENTO PLANO ORS CODO 45°	366
K42490 	ORS FLAT SEAL FEMALE 90° ELBOW HEMBRA ASIENTO PLANO ORS CODO 90°	366
K42510 	JIC 37° STRAIGHT FEMALE FITTING HEMBRA JIC 37° RECTO	368
K42540 	JIC 37° FEMALE FITTING 45° ELBOW HEMBRA JIC 37° CODO 45°	368
K42590 	JIC 37° FEMALE FITTING 90° ELBOW HEMBRA JIC 37° CODO 90°	368
K42610 	45° SAE STRAIGHT FEMALE HEMBRA 45° SAE RECTO	357
K42640 	45° SAE FEMALE 45° ELBOW HEMBRA 45° SAE CODO 45°	358
K42690 	45° SAE FEMALE 90° ELBOW HEMBRA 45° SAE CODO 90°	358
K43710 	STRAIGHT FLANGE FITTING FLANGE RECTO	364

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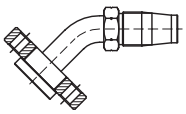
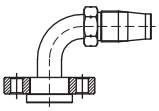
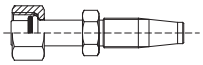
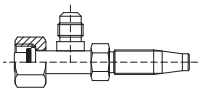
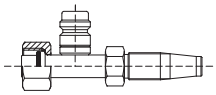
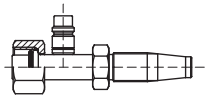
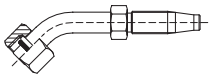
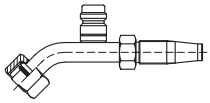
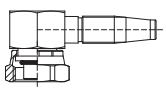
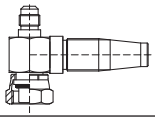
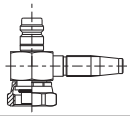
K43740 	FLANGE FITTING 45° ELBOW FLANGE CODO 45°	365
K43790 	FLANGE FITTING 90° ELBOW FLANGE CODO 90°	365
K47910 	STRAIGHT O-RING FEMALE HEMBRA O-RING RECTO	359
K47912 	STRAIGHT O-RING FEMALE WITH 1/4" SAE CHARGE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE CARGA 1/4" SAE	360
K47915 	STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE ALTA PRESION	360
K47916 	STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION	360
K47940 	O-RING FEMALE 45° ELBOW HEMBRA O-RING CODO 45°	360
K47945 	O-RING FEMALE 45° ELBOW WITH HIGH PRESSURE VALVE HEMBRA O-RING CODO 45° CON VÁLVULA DE ALTA PRESION	362
K47980 	SHORT VERSION O-RING FEMALE 90° ELBOW HEMBRA O-RING TIPO CORTO CODO 90°	369
K47982 	SHORT VERSION O-RING FEMALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE CARGA 1/4" SAE	369
K47985 	SHORT VERSION O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE ALTA PRESION	369

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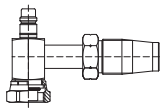
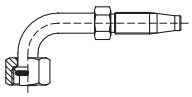
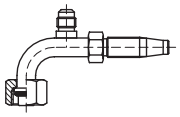
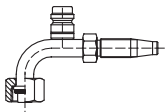
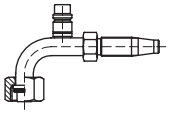
K47986 	SHORT VERSION O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE BAJA PRESION	369
K47990 	O-RING FEMALE 90° ELBOW HEMBRA O-RING CODO 90°	361
K47992 	O-RING FEMALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE CARGA 1/4" SAE	361
K47995 	O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE ALTA PRESION	361
K47996 	O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE BAJA PRESION	362

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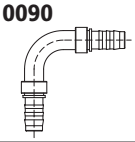
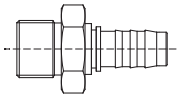
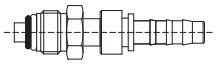
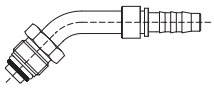
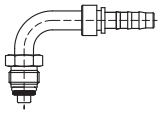
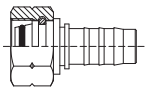
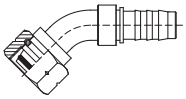
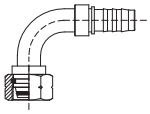
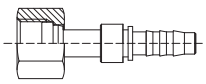
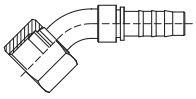
C10090 	CONNECTION 90° ELBOW ACOPLE CODO 90°	377
C17910 	STRAIGHT MALE WITH O-RING SEAT MACHO CON ASIENTO O-RING RECTO	374
C18010 	STRAIGHT O-RING MALE MACHO O-RING RECTO	374
C18040 	O-RING MALE 45° ELBOW MACHO O-RING CODO 45°	374
C18090 	O-RING MALE 90° ELBOW MACHO O-RING CODO 90°	374
C21510 	STRAIGHT 24° DIN FLARE O-RING OGIVAL FEMALE HEMBRA O-RING OGIVA 24° DIN CÓNICO RECTO	375
C21540 	24° DIN FLARE O-RING OGIVAL FEMALE 45° ELBOW HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 45°	375
C21590 	24° DIN FLARE O-RING OGIVAL FEMALE 90° ELBOW HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 90°	375
C22410 	STRAIGHT ORS FLAT SEAL FEMALE HEMBRA ASIENTO PLANO ORS RECTO	376
C22440 	ORS FLAT SEAL FEMALE 45° ELBOW HEMBRA ASIENTO PLANO ORS CODO 45°	377

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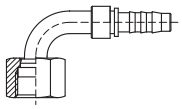
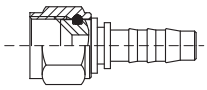
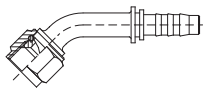
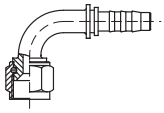
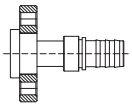
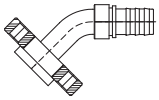
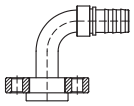
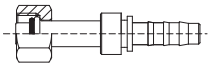
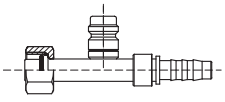
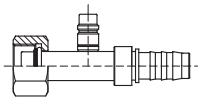
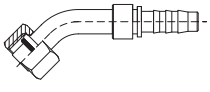
C22490 	ORS FLAT SEAL FEMALE 90° ELBOW HEMBRA ASIENTO PLANO ORS CODO 90°	377
C22610 	45° SAE STRAIGHT FEMALE HEMBRA 45° SAE RECTO	370
C22640 	45° SAE FEMALE 45° ELBOW HEMBRA 45° SAE CODO 45°	370
C22690 	45° SAE FEMALE 90° ELBOW HEMBRA 45° SAE CODO 90°	371
C23710 	STRAIGHT FLANGE FITTING FLANGE RECTO	375
C23740 	FLANGE FITTING 45° ELBOW FLANGE CODO 45°	376
C23790 	FLANGE FITTING 90° ELBOW FLANGE CODO 90°	376
C27910 	STRAIGHT O-RING FEMALE HEMBRA O-RING RECTO	371
C27915 	STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE HEMBRA O-RING RECTA CON VÁLVULA DE ALTA PRESION	371
C27916 	STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION	372
C27940 	O-RING FEMALE 45° ELBOW HEMBRA O-RING CODO 45°	372

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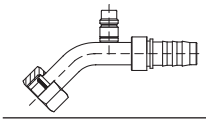
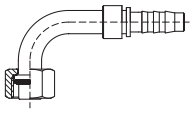
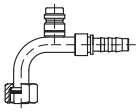
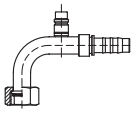
C27946 	O-RING FEMALE 45° ELBOW WITH LOW PRESSURE VALVE HEMBRA O-RING CODO 45° CON VÁLVULA DE BAJA PRESION	372
C27990 	O-RING FEMALE 90° ELBOW HEMBRA O-RING CODO 90°	373
C27995 	O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE ALTA PRESION	373
C27996 	O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE HEMBRA O-RING CODO 90° CON VÁLVULA DE BAJA PRESION	373

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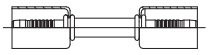
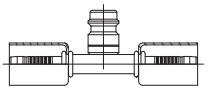
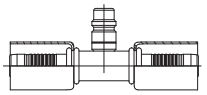
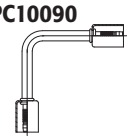
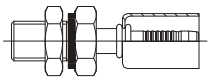
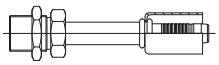
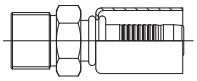
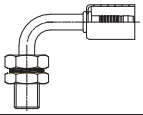
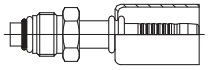
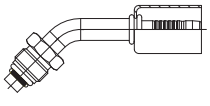
OPC10010 	CONNECTION FITTING CONEXION	386
OPC10015 	CONNECTION FITTING WITH HIGH PRESSURE VALVE CONEXION CON VÁLVULA DE ALTA PRESION	387
OPC10016 	CONNECTION FITTING WITH LOW PRESSURE VALVE CONEXION CON VÁLVULA DE BAJA PRESION	387
OPC10090 	CONNECTION FITTING 90° ELBOW CONEXION CODO 90°	386
OPC17910...H...Q 	STRAIGHT MALE WITH O-RING SEAT WITH COUNTER NUT AND Q-RING MACHO RECTO PASATABIQUE CON O-RING Y Q-RING	388
OPC17910...H 	STRAIGHT MALE WITH O-RING SEAT WITH COUNTER NUT MACHO RECTO PASATABIQUE CON O-RING	388
OPC17910 	STRAIGHT MALE WITH O-RING SEAT MACHO RECTO CON O-RING	387
OPC17990...H...Q 	STRAIGHT MALE WITH O-RING SEAT WITH COUNTER NUT AND Q-RING 90° ELBOW CODO MACHO 90° PASATABIQUE CON O-RING Y Q-RING	388
OPC18010 	STRAIGHT O-RING MALE MACHO O-RING RECTO	384
OPC18040 	O-RING MALE 45° ELBOW MACHO O-RING CODO 45°	384

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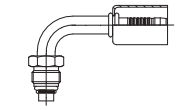
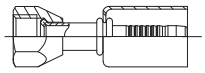
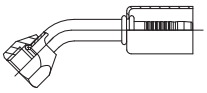
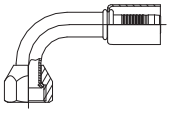
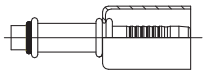
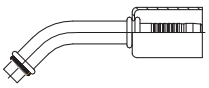
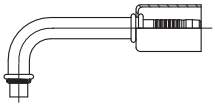
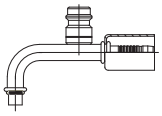
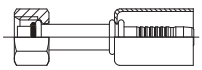
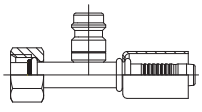
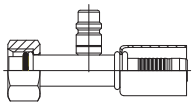
OPC18090 	O-RING MALE 90° ELBOW MACHO O-RING CODO 90°	384
OPC22610 	45° SAE STRAIGHT FEMALE HEMBRA 45° SAE RECTO	378
OPC22640 	45° SAE FEMALE 45° ELBOW HEMBRA SAE 45º CODO 45°	379
OPC22690 	45° SAE FEMALE 90° ELBOW HEMBRA 45° SAE CODO 90°	379
OPC27610 	STRAIGHT FITTING FOR EXPANSION VALVE CONEXION RECTA PARA VÁLVULA DE EXPANSIÓN	385
OPC27640 	FITTING FOR EXPANSION VALVE 45° ELBOW CONEXION PARA VÁLVULA DE EXPANSION CODO 45°	385
OPC27690 	FITTING FOR EXPANSION VALVE 90° ELBOW CONEXION PARA VÁLVULA DE EXPANSION CODO 90°	385
OPC27695 	FITTING FOR EXPANSION VALVE WITH HIGH PRESSURE VALVE 90° ELBOW CONEXION PARA VÁLVULA DE EXPANSION CON VÁLVULA DE ALTA PRESION CODO 90°	386
OPC27910 	STRAIGHT O-RING FEMALE HEMBRA O-RING RECTO	380
OPC27915 	STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE ALTA PRESION	380
OPC27916 	STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION	380

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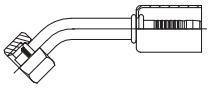
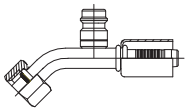
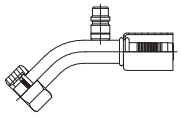
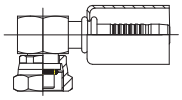
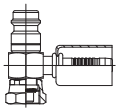
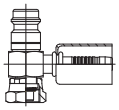
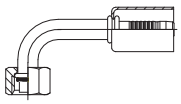
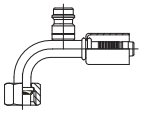
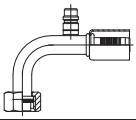
OPC27940 	O-RING FEMALE 45° ELBOW HEMBRA O-RING CODO 45°	381
OPC27945 	O-RING FEMALE WITH HIGH PRESSURE VALVE 45° ELBOW HEMBRA O-RING CON VÁLVULA DE ALTA PRESION CODO 45°	381
OPC27946 	O-RING FEMALE WITH LOW PRESSURE VALVE 45° ELBOW HEMBRA O-RING CON VÁLVULA DE BAJA PRESION CODO 45°	381
OPC27980 	SHORT VERSION O-RING FEMALE HEMBRA O-RING TIPO CORTO	383
OPC27985 	SHORT VERSION O-RING FEMALE WITH HIGH PRESSURE VALVE HEMBRA O-RING TIPO CORTO CON VÁLVULA DE ALTA PRESION	383
OPC27986 	SHORT VERSION O-RING FEMALE WITH LOW PRESSURE VALVE HEMBRA O-RING TIPO CORTO CON VÁLVULA DE BAJA PRESION	383
OPC27990 	O-RING FEMALE 90° ELBOW HEMBRA O-RING CODO 90°	382
OPC27995 	O-RING FEMALE WITH HIGH PRESSURE VALVE 90° ELBOW HEMBRA O-RING CON VÁLVULA DE ALTA PRESION CODO 90°	382
OPC27996 	O-RING FEMALE WITH LOW PRESSURE VALVE 90° ELBOW HEMBRA O-RING CON VÁLVULA DE BAJA PRESION CODO 90°	382

FITTINGS - PART NUMBERING SYSTEM

TWO PIECES (CRIMPED AND CLAMP SOLUTIONS) & "HOSE TO HOSE" A/C AND REFRI CONNECTORS

DOS PIEZAS (SOLUCION DE CRIMPADO Y ABRAZADERA) Y CONECTORES REFRI PARA AIRE ACONDICIONADO Y REFRIGERACIÓN "MANGUERA A MANGUERA"

0 1 2 3 4 5 – 6 7 – 8 9 – 10 11

First tail size (insert)
Tamaño de primera terminacion (inserto)

Termination end size or metric thread in mm / Second tail size
Tamaño de terminación de rosca métrico en mm / Tamaño de segunda terminacion

Third tail size (only for 3-ways hose to hose connectors)
Tamaño de tercera terminacion (solo para manguera de 3 vías a conectores de manguera)

DIGIT "0"

0 1 2 3 4 5

C **Always** / Siempre

DIGIT "1"

0 **1** 2 3 4 5

1 **Male or "Hose to hose" Connectors type Star-crimp** / Conectores macho o "Manguera a Manguera" tipo Star-crimp
2 **Female or Flange type Star-crimp** / Hembra o flange tipo Star-crimp
3 **Male or "Hose to hose" Connectors type Frigoclic®** / Conectores macho o "Manguera a Manguera" tipo Frigoclic®
4 **Female or Flange type Frigoclic®** / Hembra o flange tipo Frigoclic®

DIGIT "2-3"

0 1 **2 3** 4 5

The numbers stated in these positions refer to the termination end or to the second tail. For the coding, see table "Termination Ends Type".
Los números establecidos en estas posiciones se refieren a la terminación final o a la segunda terminacion. Para codificación, ver tabla "Tipo de Terminación Final".

DIGIT "4"

0 1 2 3 **4** 5

1 **Straight** / Recto
2 **22,5° Swept** / Curvado a 22,5°
3 **30° Swept** / Curvado a 30°
4 **45° Swept** / Curvado a 45°
6 **60° Swept** / Curvado a 60°
7 **67,5° Swept** / Curvado a 67,5°
8 **Compact type** / Tipo compacto
9 **90° Swept** / Curvado a 90°

H **3-ways connector with "h" configuration** / Conector de 3 vías con configuración "h"
T **3-ways connector with "T" configuration** / Conector de 3 vías con configuración "T"
Y **3-ways connector with "Y" configuration** / Conector de 3 vías con configuración "Y"

S **Pipe with more than one bend** / Tubo con más de una curva

DIGIT "5"

0 1 2 3 4 **5**

0 **No charge valve** / Ninguna válvula de carga
2 **1/4" SAE charge valve (thread 7/16"-20-UNF)** / 1/4" SAE válvula de carga (cuerda 7/16"-20-UNF)
5 **High Pressure charge valve** / Válvula de carga de alta presión
6 **Low Pressure charge valve** / Válvula de carga de baja presión

FITTINGS - PART NUMBERING SYSTEM

PRIORITY OF THE TAILS FOR "HOSE TO HOSE" CONNECTORS
PRIORIDAD DE LAS TERMINALES PARA CONECTORES "MANGUERA A MANGUERA"

Double connectors

One tail takes priority respect to the other tail (different family) following this order:

ONE PIECE tail → refer to ONE PIECE CODING
REUSABLE tail → refer to REUSABLE CODING
FRIGOCLIC® tail → refer to TWO PIECES CODING
STAR-CRIMP tail → refer to TWO PIECES CODING

Conectores dobles

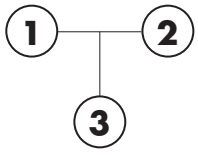
Un terminal tiene prioridad respecto al otro (familia diferente) siguiendo este orden:

Terminal ONE PIECE → se refiere a CODIFICACION UNA PIEZA
Terminal REUSABLE → se refiere a CODIFICACION REUSABLE
Terminal FRIGOCLIC® → se refiere a CODIFICACION DE DOS PIEZAS
Terminal STAR-CRIMP → se refiere a CODIFICACION DE DOS PIEZAS

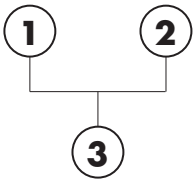
RULES FOR THE SIZE INDICATION IN THE HOSE TO HOSE CONNECTORS
REGLAS PARA LA INDICACIÓN DEL TAMAÑO EN LOS CONECTORES MANGUERA A MANGUERA

In the double connectors, when the tails are part of the same family, the first size is the smallest. If the tails have the same size, this is repeated two times.
In the double connectors, when the tails are part of different families, the size sequence is the same of the tails sequence (the first size indicates the first tail, the second size indicates the second tail).
In the 3-ways connectors, tails in position "1" and "2" must be part of the same family. All the sizes are indicated following this order:

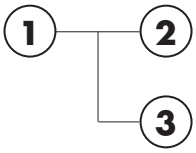
En los conectores dobles, cuando los terminales son parte de la misma familia, el primer tamaño es el más pequeño. Si las terminales tienen el mismo tamaño, esto se repite dos veces.
En los conectores dobles, cuando las terminales son parte de familias diferentes, la secuencia de tamaño es la misma de la secuencia de las terminales (el primer tamaño indica la primera terminal, el segundo tamaño indica la segunda terminal).
En los conectores de 3 vías, las terminales en la posición "1" y "2" deben ser parte de la misma familia. Todos los tamaños están indicados siguiendo este orden:



"T" configuration
configuración

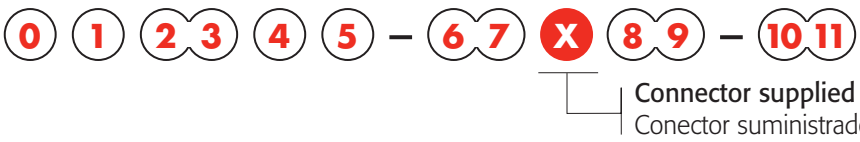


"Y" configuration
configuración



"h" configuration
configuración

CONNECTORS SUPPLIED WITH FERRULE OR CLAMP
CONECTORES SUMINISTRADOS CON CASQUILLO O ABRAZADERA



For connectors supplied with ferrule or clamp, the second dash is replaced by a letter referring to the type of ferrule or clamp:
Para conectores suministrados con casquillo o abrazadera, el segundo numero guión es reemplazado por una letra para referirse al tipo de casquillo o abrazadera:

A **Ferrule type C00700** / Casquillo tipo C00700
C **Ferrule type C00300** / Casquillo tipo C00300
R **Clamp type C01000** / Abrazadera tipo C01000

FITTINGS - PART NUMBERING SYSTEM

REUSABLE & "HOSE TO HOSE" CONNECTORS

CONECTORES REUSABLES Y "MANGUERA A MANGUERA"

0 1 2 3 4 5 – 6 7 – 8 9 – 10 11

First tail size (insert)
Tamaño de primera terminacion (inserto)

Termination end size or metric thread in mm / Second tail size
Tamaño de terminación de rosca métrico en mm / Tamaño de segunda terminacion

Third tail size (only for 3-ways hose to hose connectors)
Tamaño de tercera terminacion (solo para manguera de 3 vías a conectores de manguera)

DIGIT "0"

0 1 2 3 4 5

K **Always** / Siempre

DIGIT "1"

0 **1** 2 3 4 5

3 **Male or "Hose to hose" Connectors (A/C and REFRI application)**
Conectores macho o "Manguera a Manguera" (aplicación REFRI y aire acondicionado)

4 **Female or Flange (A/C and REFRI application)** / Hembra o flange (aplicación REFRI y aire acondicionado)

DIGIT "2-3"

0 1 **2 3** 4 5

The numbers stated in these positions refer to the termination end or to the second tail.
For the coding, see table "Termination Ends Type".
Los números establecidos en estas posiciones se refieren a la terminación final o a la segunda terminacion. Para codificación, ver tabla "Tipo de Terminación Final".

DIGIT "4"

0 1 2 3 **4** 5

1 **Straight** / Recto
2 **22,5° Swept** / Curvado a 22,5°
3 **30° Swept** / Curvado a 30°
4 **45° Swept** / Curvado a 45°
6 **60° Swept** / Curvado a 60°
7 **67,5° Swept** / Curvado a 67,5°
8 **Compact type** / Tipo compacto
9 **90° Swept** / Curvado a 90°

H **3-ways connector with "h" configuration** / Conector de 3 vías con configuración "h"
T **3-ways connector with "T" configuration** / Conector de 3 vías con configuración "T"
Y **3-ways connector with "Y" configuration** / Conector de 3 vías con configuración "Y"

S **Pipe with more than one bend** / Tubo con más de una curvatura

DIGIT "5"

0 1 2 3 4 **5**

0 **No charge valve** / Ninguna válvula de carga
2 **1/4" SAE charge valve (thread 7/16"-20-UNF)** / 1/4" SAE válvula de carga (cuerda 7/16"-20-UNF)
5 **High Pressure charge valve** / Válvula de carga de alta presión
6 **Low Pressure charge valve** / Válvula de carga de baja presión

FITTINGS - PART NUMBERING SYSTEM

PRIORITY OF THE TAILS FOR "HOSE TO HOSE" CONNECTORS (A/C AND REFRI APPLICATION)
PRIORIDAD DE LOS TERMINALES DE LOS CONECTORES "MANGUERA A MANGUERA" (APLICACIÓN PARA AIRE ACONDICIONADO Y REFRIGERACIÓN)

Double connectors

One tail takes priority respect to the other tail (different family) following this order:

ONE PIECE tail → refer to ONE PIECE CODING
REUSABLE tail → refer to REUSABLE CODING
FRIGOCLIC® tail → refer to TWO PIECES CODING
STAR-CRIMP tail → refer to TWO PIECES CODING

Conectores dobles

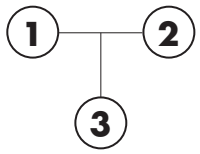
Un terminal tiene prioridad respecto al otro (familia diferente) siguiendo este orden:

Terminal ONE PIECE → se refiere a CODIFICACION UNA PIEZA
Terminal REUSABLE → se refiere a CODIFICACION REUSABLE
Terminal FRIGOCLIC® → se refiere a CODIFICACION DE DOS PIEZAS
Terminal STAR-CRIMP → se refiere a CODIFICACION DE DOS PIEZAS

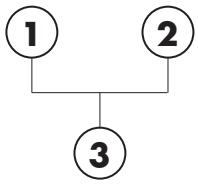
RULES FOR THE SIZE INDICATION IN THE HOSE TO HOSE CONNECTORS
REGLAS PARA LA INDICACIÓN DEL TAMAÑO EN LOS CONECTORES MANGUERA A MANGUERA

In the double connectors, when the tails are part of the same family, the first size is the smallest. If the tails have the same size, this is repeated two times.
In the double connectors, when the tails are part of different families, the size sequence is the same of the tails sequence (the first size indicates the first tail, the second size indicates the second tail).
In the 3-ways connectors, tails in position "1" and "2" must be part of the same family. All the sizes are indicated following this order:

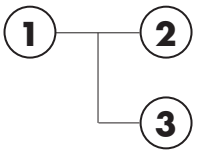
En los conectores dobles, cuando los terminales son parte de la misma familia, el primer tamaño es el más pequeño. Si las terminales tienen el mismo tamaño, esto se repite dos veces.
En los conectores dobles, cuando las terminales son parte de familias diferentes, la secuencia de tamaño es la misma de la secuencia de las terminales (el primer tamaño indica la primera terminal, el segundo tamaño indica la segunda terminal).
En los conectores de 3 vías, las terminales en la posición "1" y "2" deben ser parte de la misma familia. Todos los tamaños están indicados siguiendo este orden:



"T" configuration
configuración

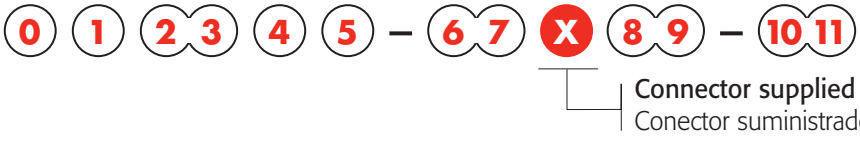


"Y" configuration
configuración



"h" configuration
configuración

CONNECTORS SUPPLIED WITH FERRULE (A/C AND REFRI APPLICATION)
CONECTORES SUMINISTRADOS CON CASQUILLO (APLICACIÓN PARA A/C Y REFRI)



For connectors supplied with ferrule, the second dash is replaced by a letter referring to the type of ferrule or clamp:
Para conectores suministrados con casquillo, el segundo numero guión es reemplazado por una letra para referirse al tipo de casquillo o abrazadera:

B **Ferrule type K00400** / Casquillo tipo K00400

FITTINGS - PART NUMBERING SYSTEM

ONE PIECE & "HOSE TO HOSE" A/C AND REFRI CONNECTORS

UNA PIEZA Y "MANGUERA A MANGUERA" A/C Y REFRI CONECTORS

0 1 2 3 4 5 – 6 7 – 8 9 – 10 11

First tail size (insert)
Tamaño de primera terminacion (inserto)

Termination end size or metric thread in mm / Second tail size
Tamaño de terminación de rosca métrico en mm / Tamaño de segunda terminacion

Third tail size (only for 3-ways hose to hose connectors)
Tamaño de tercera terminacion (solo para manguera de 3 vías a conectores de manguera)

DIGIT "0"

0 1 2 3 4 5

OPC **Always** / Siempre

DIGIT "1"

0 **1** 2 3 4 5

1 **Male or "Hose to hose" Connectors obtained by deformation**
Conectores macho o "Manguera a Manguera" obtenido por deformación
2 **Female or flange obtained by deformation** / Hembra o flange obtenido por deformación
3 **Male or "Hose to hose" Connectors obtained by brazing**
Conectores macho o "Manguera a Manguera" obtenido por soldadura
4 **Female or flange obtained by brazing** / Hembra o flange obtenido por soldadura

DIGIT "2-3"

0 1 **2 3** 4 5

The numbers stated in these positions refer to the termination end or to the second tail.
For the coding, see table "Termination Ends Type".
Los números establecidos en estas posiciones se refieren a la terminación final o a la segunda terminacion. Para codificación, ver tabla "Tipo de Terminación Final".

DIGIT "4"

0 1 2 3 **4** 5

1 **Straight** / Recto
2 **22,5° Swept** / Curvado a 22,5°
3 **30° Swept** / Curvado a 30°
4 **45° Swept** / Curvado a 45°
6 **60° Swept** / Curvado a 60°
7 **67,5° Swept** / Curvado a 67,5°
8 **Compact type** / Tipo compacto
9 **90° Swept** / Curvado a 90°

H **3-ways connector with "h" configuration** / Conector de 3 vías con configuración "h"
T **3-ways connector with "T" configuration** / Conector de 3 vías con configuración "T"
Y **3-ways connector with "Y" configuration** / Conector de 3 vías con configuración "Y"

S **Pipe with more than one bend** / Tubo con más de una curvatura

DIGIT "5"

0 1 2 3 4 **5**

0 **No charge valve** / Ninguna válvula de carga
2 **1/4" SAE charge valve (thread 7/16"-20-UNF)** / 1/4" SAE válvula de carga (cuerda 7/16"-20-UNF)
5 **High Pressure charge valve** / Válvula de carga de alta presión
6 **Low Pressure charge valve** / Válvula de carga de baja presión

FITTINGS - PART NUMBERING SYSTEM

PRIORITY OF THE TAILS FOR "HOSE TO HOSE" CONNECTORS
PRIORIDAD DE LOS TERMINALES DE LOS CONECTORES "MANGUERA A MANGUERA"

Double connectors

One tail takes priority respect to the other tail (different family) following this order:

ONE PIECE tail ⟶ refer to ONE PIECE CODING
REUSABLE tail ⟶ refer to REUSABLE CODING
FRIGOCLIC® tail ⟶ refer to TWO PIECES CODING
STAR-CRIMP tail ⟶ refer to TWO PIECES CODING

3-ways connectors

Two tails must be always part of the same family.
The first tail refers to the family with two tails.

Conectores dobles

Un terminal tiene prioridad respecto al otro (familia diferente) siguiendo este orden:

Terminal ONE PIECE ⟶ se refiere a CODIFICACION UNA PIEZA
Terminal REUSABLE ⟶ se refiere a CODIFICACION REUSABLE
Terminal FRIGOCLIC® ⟶ se refiere a CODIFICACION DE DOS PIEZAS
Terminal STAR-CRIMP ⟶ se refiere a CODIFICACION DE DOS PIEZAS

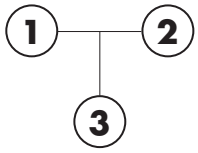
Conector 3 vías

Dos colas siempre deben ser parte de la misma familia.
Las primeras colas se refieren a la familia con dos colas.

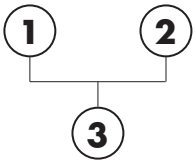
RULES FOR THE SIZE INDICATION IN THE HOSE TO HOSE CONNECTORS
REGLAS PARA LA INDICACIÓN DEL TAMAÑO EN LOS CONECTORES MANGUERA A MANGUERA

In the double connectors, when the tails are part of the same family, the first size is the smallest. If the tails have the same size, this is repeated two times. In the double connectors, when the tails are part of different families, the size sequence is the same of the tails sequence (the first size indicates the first tail, the second size indicates the second tail). In the 3-ways connectors, tails in position "1" and "2" must be part of the same family. All the sizes are indicated following this order:

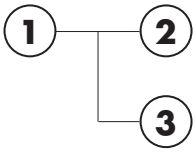
En los conectores dobles, cuando los terminales son parte de la misma familia, el primer tamaño es el más pequeño. Si las terminales tienen el mismo tamaño, esto se repite dos veces. En los conectores dobles, cuando las terminales son parte de familias diferentes, la secuencia de tamaño es la misma de la secuencia de las terminales (el primer tamaño indica la primera terminal, el segundo tamaño indica la segunda terminal). En los conectores de 3 vías, las terminales en la posición "1" y "2" deben ser parte de la misma familia. Todos los tamaños están indicados siguiendo este orden:



"T" configuration
configuración



"V" configuration
configuración



"h" configuration
configuración

HOSE TO HOSE CONNECTORS (DIFFERENT FAMILIES) WITH FERRULE OR CLAMP
MANGUERA A MANGUERA CONECTORES (DIFERENTES FAMILIAS) CON CASQUILLO O ABRAZADERA

0 1 2 3 4 5 – 6 7 **X** 8 9 – 10 11

Connector supplied with ferrule or clamp
Conector suministrados con casquillo o abrazadera

For hose to hose connectors, having at least one tail (different from one-piece tail) supplied with ferrule or clamp, the second dash is replaced by a letter referring to the type of ferrule or clamp:

A **Ferrule type C00700** / Casquillo tipo C00700
B **Ferrule type K00400** / Casquillo tipo K00400
C **Ferrule type C00300** / Casquillo tipo C00300
R **Clamp type C01000** / Abrazadera tipo C01000

FITTINGS - PART NUMBERING SYSTEM

TERMINATION ENDS TYPE

DIGIT	DESCRIPTION / DESCRIPCIÓN
00	**Double connector (same tail in two-ends connectors) / No end (plug)** Conector doble (mismo terminal en los conectores de dos puntas) / No final (tapón
10	**Metric Thread (60° cone superlight)** Rosca métrico (asiento a 60° cono super ligero)
11	**Male Metric Thread (24° cone light type)** Rosca métrico macho (asiento a 24° super ligero)
15	**Female Metric Thread (24° cone O-ring light type)** Rosca métrico hembra (asiento a 24° tipo O-ring ligero)
24	**ORFS type** / Tipo ORFS
25	**JIC Thread (37° cone)** / Rosca JIC (asiento a 37°)
26	**SAE Thread (45° cone)** / Rosca SAE (asiento a 45°)
27	**JIC Thread double exag. 37° cone / ORFS type Bulkhead** Rosca JIC doble hexágono 37° / tipo ORFS con manparo
29	**ORFS male type long / Flanged Block for compressor connection (A/C and Refri application)** Macho para Conexión Rápida cono 30° (aplicación A/C y Refri)
37	**Flange (A/C and Refri application)** Flange (aplicación en aire acondicionado y refrigeración)
53	**Manometer Port / Male for Quick Connection 30° cone seat (A/C and Refri application)** Macho tipo largo/ Brida de Bloque para conexión al compresor (aplicación A/C y Refri)
76	**Expansion valve (A/C and Refri application)** Válvula de expansión (aplicación en aire acondicionado y refrigeración)
79	**Female O-ring and Fixed male O-ring seat (A/C and Refri application)** O-ring hembra y asiento fijo O-ring macho (aplicación en aire acondicionado y refrigeración)
80	**Male Swivel O-ring (A/C and Refri application)** Macho giratorio con O-ring (aplicación en aire acondicionado y refrigeración)

"HOSE TO HOSE" CONNECTORS / CONECTORES "MANGUERA A MANGUERA"

C1	**"STAR-CRIMP" tail (A/C and Refri application)** Terminal STAR-CRIP (aplicación en aire acondicionado y refrigeración)
C3	**"FRIGOCLIC®" tail (A/C and Refri application)** Terminal FRIGOCLIC® (aplicación en aire acondicionado y refrigeración)
K3	**"REUSABLE" tail (A/C and Refri application)** Terminal REUSABLE (aplicación en aire acondicionado y refrigeración)

FITTINGS - PART NUMBERING SYSTEM – SPECIAL SUFFIX

The special suffix allows the identification of special features not included in the standard coding and must be placed at the end of the code.
El sufijo especial permite la identificación de aditamentos especiales no incluidos en la codificación estándar y debe estar colocado al final del código.

SPECIAL SUFFIX SUFIJO ESPECIAL

0 0 0	**DROP OF THE ELBOW (in mm)** LONGITUD DEL CODO (en mm)
S C	**SOLID CONE (for special termination ends generally supplied with O-ring)** ASIENTO SOLIDO (para terminal especial generalmente suministrado con O-ring)
Q	**SPECIAL QUADRING GASKET (only refrigeration)**

FITTINGS - PART NUMBERING SYSTEM

SIZE DETERMINATION
DETERMINACIÓN DEL TAMAÑO

The first two digits identify the flexible size, the second two digits identify the connection size.
Los primeros dos dígitos identifican el tamaño de la conexión, los segundos dos dígitos identifican el tamaño de la manguera flexible.

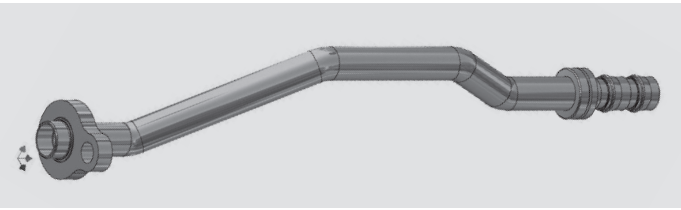
CONNECTION SIZE TAMAÑO DE LA CONEXION

DASH	SAE	SAE 45° FLARE FITTING THREAD	JIC 37° FLARE FITTING THREAD	FEMALE O-RING AND MALE O-RING SEAT FITTING THREAD	MALE O-RING FITTING THREAD	O-RING METRIC FITTING THREAD	ORS FACE SEAL FITTING	DIN 3901/3902 FITTING THREAD
- 04	1/4"	7/16"-20-UNF	7/16"-20-UNF	-	-	-	9/16"-18-UNF	-
- 06	3/8"	5/8"-18-UNF	9/16"-18-UNF	5/8"-18-UNF	5/8"-18-UNF	-	11/16"-16-UN	-
- 08	1/2"	3/4"-16-UNF	3/4"-16-UNF	3/4"-16-UNF	3/4"-18-UNS	M20x1.5	13/16"-16-UN	-
- 10	5/8"	7/8"-14-UNF	7/8"-14-UNF	7/8"-14-UNF	7/8"-18-UNS	M24x1.5	1"-14-UNS	M22x1.5
- 11	-	-	-	1"-14-UNS	-	-	-	-
- 12	3/4"	1.1/16"-14-UNS	1.1/16"-12-UNF	1.1/16"-14-UNS	1.1/16"-16-UN	M27x2	1.1/16"-14-UN	M26x1.5
- 16	1"	1.5/16"-14-UNF	1.5/16"-12-UNF	1.5/16"-14-UNF	-	-	1.7/16"-12-UN	M30x2
- 18	-	-	-	-	-	-	-	M36x2
- 20	1.1/4"	-	1.5/8"-12-UN	-	-	-	1.11/16"-12-UN	-
- 22	-	-	-	-	-	-	-	M45x2
- 24	1.1/2"	-	1.7/8"-12-UN	-	-	-	-	-

NOTE: The size for expansion valve fittings and for SDB compressor fittings is replaced by the bulge diameter: 14 and 23 for expansion valve; 26 and 30 for SDB compressor.
NOTA: El tamaño para los racores para válvula de expansion y para compresores SDB están reemplazados por el diámetro entrante: 14 y 23 para válvula de expansión, 26 y 30 para compresor SDB.

FLEXIBLE HOSE SIZE / TAMAÑO MANGUERA FLEXIBLE

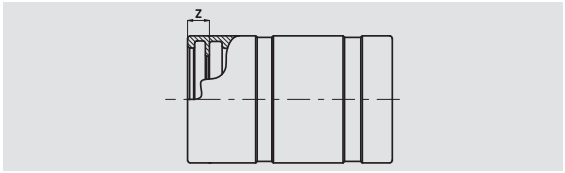
HOSE SIZE			SAE
DN	DASH	INCH	
5	- 04	3/16"	1/4"
8	- 06	5/16"	3/8"
10	- 08	13/32"	1/2"
(12) 13	- 10	1/2"	5/8"
16	- 12	5/8"	3/4"
22	- 16	7/8"	1"
28	- 20	1.1/8"	1.1/4"
35	- 24	1.3/8"	1.1/2"



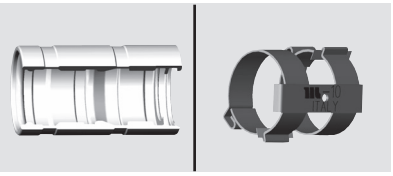
ON REQUEST
fittings for special applications can be manufactured (codesign with the customer will be very appreciate)

A SOLICITUD
Racores para aplicaciones especiales pueden ser fabricados (el co-diseño con el cliente será muy apreciado)

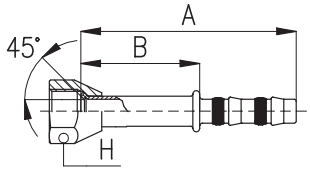
FRIGOCLIC® WITH FERRULE CUT-OFF DIMENSION



HOSE SIZE			DIMENSIONS mm
DN	DASH	Inch	Z
8	- 06	5/16"	9,0±0,1
10	- 08	13/32"	10,0±0,1
13	- 10	1/2"	12,5±0,1
16	- 12	5/8"	11,5±0,1



HOSE SIZE			REFRIMASTER FERRULE	REFRIMASTER CLAMP
DN	DASH	Inch	CODE	CODE
8	- 06	5/16"	**C00700-06**	**C01000-06**
10	- 08	13/32"	**C00700-08**	**C01000-08**
13	- 10	1/2"	**C00700-10**	**C01000-10**
16	- 12	5/8"	**C00700-12**	**C01000-12**



C42610

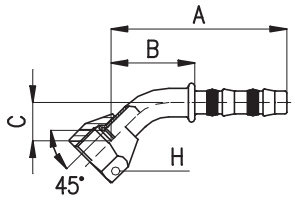
45° SAE STRAIGHT FEMALE
HEMBRA 45° SAE RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		H
C42610-06-04	8	- 06	5/16"	7/16"-20-UNF-2B	78,5	39,9		14
C42610-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	77,8	39,2		19
C42610-08-06	10	- 08	13/32"	5/8"-18-UNF-2B	78,0	39,4		19
C42610-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	86,1	47,5		22
C42610-10-08	13	- 10	1/2"	3/4"-16-UNF-2B	84,0	45,4		22
C42610-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	86,3	47,7		27
C42610-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	87,0	48,4		27

SAE J2064 TYPE E

C42640

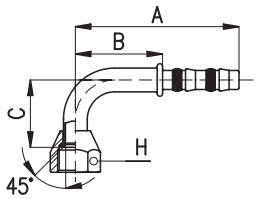
45° SAE FEMALE 45° ELBOW
HEMBRA RECTA SAE CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C42640-06-04	8	- 06	5/16"	7/16"-20-UNF-2B	82,5	43,9	18,0	14
C42640-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	83,6	45,0	14,0	19
C42640-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	91,3	52,7	16,0	22
C42640-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	102,3	63,7	16,0	27
C42640-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	100,5	61,9	16,0	27
C42640-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	95,7	57,1	26,5	32

C42690

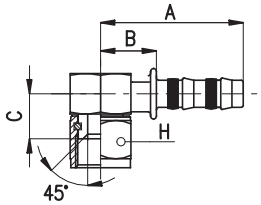
45° SAE FEMALE 90° ELBOW
HEMBRA 45° SAE CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C42690-06-04	8	- 06	5/16"	7/16"-20-UNF-2B	70,5	31,9	33,0	14
C42690-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	81,8	43,2	26,0	19
C42690-08-06	10	- 08	13/32"	5/8"-18-UNF-2B	77,0	38,4	26,0	19
C42690-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	82,7	44,1	34,0	22
C42690-10-08	13	- 10	1/2"	3/4"-16-UNF-2B	86,0	47,4	34,0	22
C42690-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	103,1	64,5	37,0	27
C42690-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	99,0	60,4	37,0	27
C42690-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	85,1	46,5	53,0	32

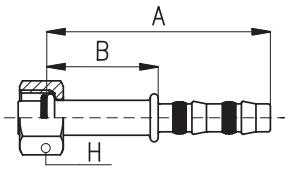
C42680

SHORT VERSION 45° SAE FEMALE 90° ELBOW
HEMBRA 45° SAE TIPO CORTO CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C42680-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	65,0	27,0	20,0	27

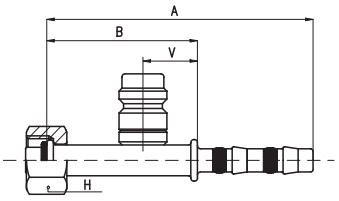
SAE J2064 TYPE E



C47910

STRAIGHT O-RING FEMALE
HEMBRA O-RING RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H	
C47910-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	68,9	30,3	19	
C47910-06-08	8	- 06	5/16"	3/4"-16-UNF-2B	83,5	44,9	22	
C47910-08-06	10	- 08	13/32"	5/8"-18-UNF-2B	74,0	35,4	19	
C47910-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	85,0	46,4	22	
C47910-08-08105	10	- 08	13/32"	3/4"-16-UNF-2B	105,0	66,4	22	
C47910-08-11	10	- 08	13/32"	1"-14-UNS-2B	86,0	44,4	25	
C47910-10-08	13	- 10	1/2"	3/4"-16-UNF-2B	103,0	64,4	22	
C47910-10-08103	13	- 10	1/2"	3/4"-16-UNF-2B	103,0	64,4	22	
C47910-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	85,0	46,5	27	
C47910-10-11	13	- 10	1/2"	1"-14-UNS-2B	82,4	43,8	29	
C47910-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	87,6	49,0	27	
C47910-12-11	16	- 12	5/8"	1"-14-UNS-2B	86,0	47,4	29	
C47910-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	94,2	55,6	32	



C47915

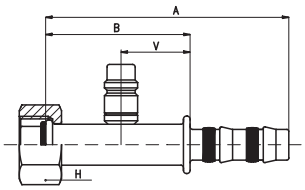
STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H	V±1
C47915-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	88,9	50,3	19	18,1
C47915-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	95,0	56,5	22	24,0
C47915-08-11	10	- 08	13/32"	1"-14-UNS-2B	86,0	47,4	29	26,9
C47915-10-08	13	- 10	1/2"	3/4"-16-UNF-2B	97,0	58,4	22	26,0
C47915-12-10	16	- 10	5/8"	7/8"-14-UNF-2B	94,0	55,4	27	26,0

SAE J2064 TYPE E

C47916

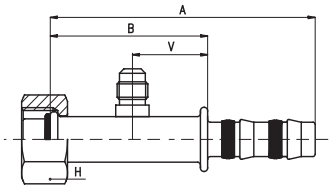
STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H	V±1
C47916-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	95,0	56,4	27	27,0
C47916-10-11	13	- 10	1/2"	1"-14-UNS-2B	82,4	43,8	29	22,3
C47916-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	94,0	55,4	27	26,0

C47912

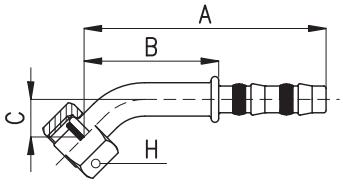
STRAIGHT O-RING FEMALE 1/4" SAE CHARGE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE CARGA 1/4" SAE



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C47912-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	95,0	56,4	27,0	27

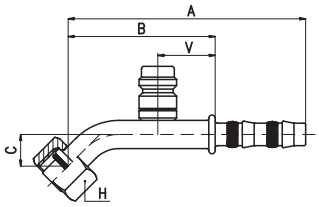
C47940

O-RING FEMALE 45° ELBOW
HEMBRA O-RING CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C47940-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	84,9	46,3	12,5	19
C47940-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	91,3	52,7	13,5	22
C47940-08-11	10	- 08	13/32"	1"-14-UNS-2B	106,0	67,4	22,0	25
C47940-10-08	13	- 10	1/2"	3/4"-16-UNF-2B	87,0	48,4	13,5	22
C47940-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	107,7	69,1	24,0	27
C47940-10-11	13	- 10	1/2"	1"-14-UNS-2B	105,2	67,3	22,0	29
C47940-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	108,5	69,9	24,0	27
C47940-12-11	16	- 12	5/8"	1"-14-UNS-2B	106,5	67,9	22,0	29
C47940-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	115,9	77,3	27,0	32

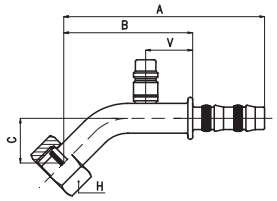
SAE J2064 TYPE E



C47945

O-RING FEMALE 45° ELBOW WITH HIGH PRESSURE VALVE
HEMBRA O-RING CODO 45° CON VÁLVULA DE ALTA PRESION

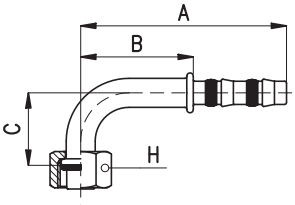
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H	V±1
C47945-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	101,3	62,7	13,5	22	24,4



C47946

O-RING FEMALE 45° ELBOW WITH LOW PRESSURE VALVE
HEMBRA O-RING CODO 45° CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H	V±1
C47946-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	107,7	69,1	24,0	27	25,2
C47946-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	108,5	69,9	24,0	27	26,0



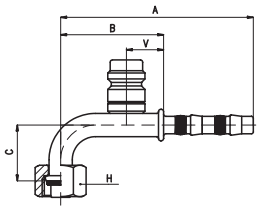
C47990

O-RING FEMALE 90° ELBOW
HEMBRA O-RING CODO 90°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C47990-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	72,9	34,3	24,0	19
C47990-06-08	8	- 06	5/16"	3/4"-16-UNF-2B	88,0	49,4	30,0	22
C47990-08-06	10	- 08	13/32"	5/8"-18-UNF-2B	79,0	40,4	24,0	19
C47990-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	85,6	47,0	30,0	22
C47990-08-08037	10	- 08	13/32"	3/4"-16-UNF-2B	89,1	50,5	36,5	22
C47990-08-11	10	- 08	13/32"	1"-14-UNS-2B	84,0	45,4	39,0	25
C47990-10-08	13	- 10	1/2"	3/4"-16-UNF-2B	90,5	51,9	36,5	22
C47990-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	104,0	65,4	45,0	27
C47990-10-11	13	- 10	1/2"	1"-14-UNS-2B	107,2	68,6	39,0	29
C47990-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	101,0	62,4	45,0	27
C47990-12-11	16	- 12	5/8"	1"-14-UNS-2B	99,1	60,5	39,0	29
C47990-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	104,9	66,3	54,5	32

SAE J2064 TYPE E

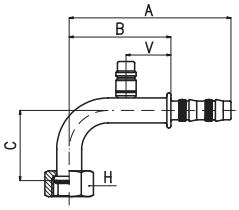
C47995



O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H	V±1
C47995-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	82,9	44,3	24,0	19	16,0
C47995-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	89,1	50,5	36,5	22	24,5
C47995-10-08	13	- 10	1/2"	3/4"-16-UNF-2B	90,5	51,9	36,5	22	26,0

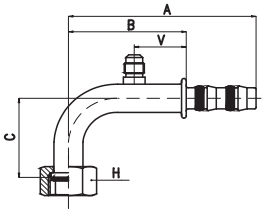
C47996



O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE BAJA PRESION

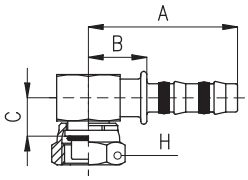
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H	V±1
C47996-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	103,9	65,3	45,0	27	28,8
C47996-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	101,0	62,4	45,0	27	26,0

C47992



O-RING FEMALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE CARGA 1/4" SAE

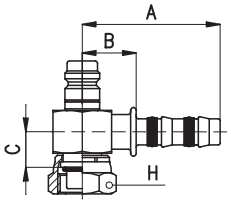
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H	V±1
C47992-08-08	8	- 08	13/32"	3/4"-16-UNF-2B	89,1	50,5	36,5	22	24,6
C47992-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	103,8	65,2	45,0	27	28,8



C47980

SHORT VERSION O-RING FEMALE 90° ELBOW
HEMBRA O-RING TIPO CORTO CODO 90°

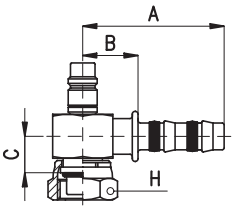
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C47980-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	56,0	18,0	16,0	22
C47980-08-11	10	- 08	13/32"	1"-14-UNS-2B	59,5	21,5	16,4	29
C47980-10-10	13	- 10	1/2"	7/8"-14-UNF-2B	58,5	20,5	16,4	27
C47980-10-11	13	- 10	1/2"	1"-14-UNS-2B	59,5	21,5	16,4	29
C47980-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	65,0	26,5	16,4	27
C47980-12-11	16	- 12	5/8"	1"-14-UNS-2B	65,0	26,5	24,2	29



C47985

SHORT VERSION O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE
HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C47985-08-11	10	- 08	13/32"	1"-14-UNS-2B	59,5	21,5	16,4	29



C47986

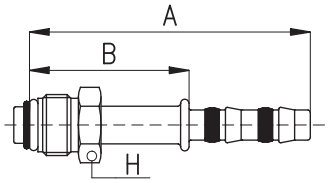
SHORT VERSION O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE
HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C47986-10-11	13	- 10	12"	1"-14-UNS-2B	59,5	21,5	16,4	29
C47986-12-11	16	- 12	5/8"	1"-14-UNS-2B	65,0	26,5	24,2	25

SAE J2064 TYPE E

C38010

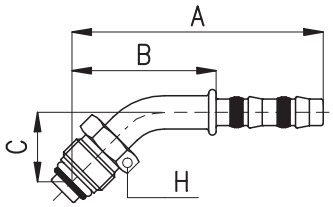
STRAIGHT O-RING MALE
MACHO O-RING RECTO



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H	
C38010-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	70,2	31,6	17	
C38010-08-06	10	- 08	13/32"	5/8"-18-UNF-2A	74,0	35,4	17	
C38010-08-08	10	- 08	13/32"	3/4"-18-UNS-2A	89,4	50,8	22	
C38010-10-10	13	- 10	1/2"	7/8"-18-UNS-2A	91,6	53,0	22	
C38010-12-10	16	- 12	5/8"	7/8"-18-UNS-2A	86,0	47,4	22	

C38040

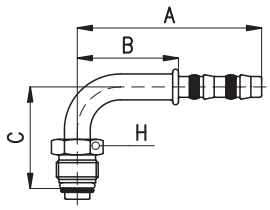
O-RING MALE 45° ELBOW
MACHO O-RING CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C38040-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	92,7	54,1	21,5	17
C38040-08-06	10	- 08	13/32"	5/8"-18-UNF-2A	94,0	55,4	21,4	17
C38040-08-08	10	- 08	13/32"	3/4"-18-UNS-2A	100,9	62,3	25,0	22
C38040-10-10	13	- 10	1/2"	7/8"-18-UNS-2A	112,4	73,8	28,5	22
C38040-12-10	16	- 12	5/8"	7/8"-18-UNS-2A	113,0	74,4	28,5	22
C38040-12-12	16	- 12	5/8"	1.1/16"-16-UN-2A	123,0	84,3	33,4	27

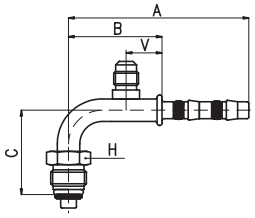
C38090

O-RING MALE 90° ELBOW
MACHO O-RING CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C38090-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	80,6	42,0	37,5	17
C38090-08-06	10	- 08	13/32"	5/8"-18-UNF-2A	77,0	38,4	37,5	17
C38090-08-08	10	- 08	13/32"	3/4"-18-UNS-2A	83,0	44,4	47,0	22
C38090-10-10	13	- 10	1/2"	7/8"-18-UNS-2A	100,9	62,3	54,5	22
C38090-12-10	16	- 12	5/8"	7/8"-18-UNS-2A	99,0	60,4	54,5	22

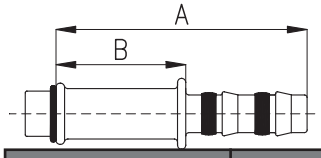
SAE J2064 TYPE E



C38092

O-RING MALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE
MACHO O-RING CODO 90° CON VÁLVULA DE CARGA 1/4" SAE

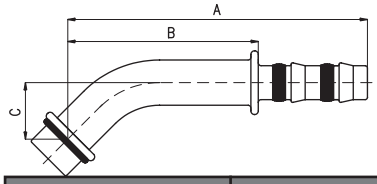
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H	V±1
C38092-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	80,2	41,6	37,5	17	16,0



C47610

STRAIGHT FITTING FOR EXPANSION VALVE
CONEXION RECTA PARA VÁLVULA DE EXPANSIÓN

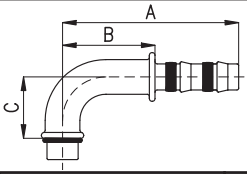
INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C47610-06-06	8	- 06	5/16"		77,9	39,3		
C47610-08-06	10	- 08	13/32"		84,1	45,5		
C47610-10-12	13	- 10	1/2"		92,0	53,4		
C47610-12-12	16	- 12	5/8"		92,0	53,4		



C47640

FITTING FOR EXPANSION VALVE 45° ELBOW
CONEXION PARA VÁLVULA DE EXPANSION CODO 45°

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	
C47640-06-06	8	- 06	5/16"		105,0	66,4	14,0	
C47640-10-12	13	- 10	1/2"		106,0	86,0	20,0	
NEW C47640-12-12	16	- 12	5/8"		115,9	77,3	27,0	



C47690

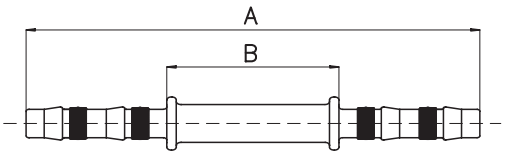
FITTING FOR EXPANSION VALVE 90° ELBOW
CONEXION PARA VÁLVULA DE EXPANSION CODO 90°

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	
C47690-06-06	8	- 06	5/16"		93,9	55,3	22,0	
NEW C47690-10-10	13	- 10	1/2"		103,8	65,2	45,0	
C47690-10-12	13	- 10	1/2"		104,3	65,7	41,5	
C47690-12-12	16	- 12	5/8"		99,0	60,4	41,5	

SAE J2064 TYPE E

C30010

STRAIGHT CONNECTION FITTINGS
RACORES PARA CONEXION RECTOS

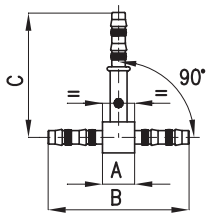


INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C30010-06-06	8	- 06	5/16"		120,0	42,8		
C30010-08-08	10	- 08	13/32"		124,0	47,0		
C30010-10-10	13	- 10	1/2"		124,0	47,0		
C30010-12-12	16	- 12	5/8"		124,0	47,0		

C300T0

3 WAYS CONNECTION FITTINGS
RACORES PARA CONEXION DE 3 VIAS

For clamp solution only
Unicamente para uso con abrazadera

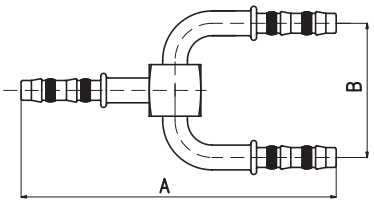


INSERT CODE ONLY	HOSE SIZE 1			HOSE SIZE 2			HOSE SIZE 3			DIMENSIONS mm		
	DN	Dash	Inch	DN	Dash	Inch	DN	Dash	Inch	A±2.5	B±2.5	C±2
C300T0-06-06-06	08	- 06	5/16"	08	- 06	5/16"	08	- 06	5/16"	22,8	100,0	85,5
C300T0-06-06-08	08	- 06	5/16"	08	- 06	5/16"	08	- 06	5/16"	22,8	100,0	85,5
C300T0-08-08-08	08	- 06	5/16"	08	- 06	5/16"	08	- 06	5/16"	22,8	100,0	86,5
C300T0-08-08-10	10	- 08	13/32"	10	- 08	13/32"	12	- 10	1/2"	22,8	100,0	88,5
C300T0-08-10-10	13	- 10	1/2"	10	- 08	13/32"	10	- 08	13/32"	22,8	100,0	88,5
C300T0-08-10-12	10	- 08	13/32"	10	- 08	13/32"	16	- 12	5/8"	22,8	100,0	88,5
C300T0-10-10-10	13	- 10	1/2"	12	- 10	1/2"	12	- 10	1/2"	22,8	100,0	88,5
C300T0-10-10-12	13	- 10	1/2"	12	- 10	1/2"	16	- 12	5/8"	22,8	100,0	88,5
C300T0-10-12-12	16	- 12	5/8"	12	- 10	1/2"	16	- 12	5/8"	22,8	100,0	88,5
C300T0-12-12-12	16	- 12	5/8"	16	- 12	5/8"	16	- 12	5/8"	22,8	100,0	88,5

C300Y0

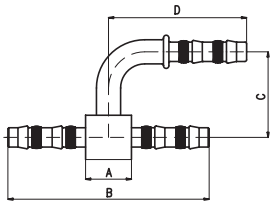
"Y" CONNECTION FITTING
CONEXION EN "Y"

For clamp solution only
Unicamente para uso con abrazadera



INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C300Y0-08-08-08	8	- 08	13/32"		152,5	65,0		
C300Y0-12-12-12	16	- 12	5/8"		152,0	83,0		

SAE J2064 TYPE E

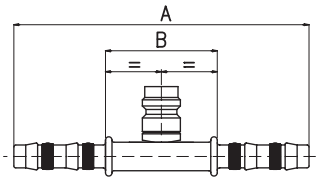


C300h0

"h" CONNECTION FITTINGS
CONEXION EN "h"

For clamp solution only
Unicamente para uso con abrazadera

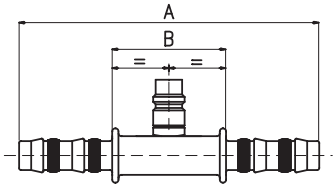
INSERT CODE ONLY	HOSE SIZE 1			HOSE SIZE 2			HOSE SIZE 3			DIMENSIONS mm			
	DN	Dash	Inch	DN	Dash	Inch	DN	Dash	Inch	A±2.5	B±2.5	C±2	D±2.5
C300h0-06-06-10	08	- 06	5/16"	08	- 06	5/16"	12	- 10	1/2"	22,8	100,0	62,5	78,0
C300h0-08-08-08	10	- 08	13/32"	10	- 08	13/32"	10	- 08	13/32"	22,8	100,0	42,5	68,0
C300h0-08-08-06	10	- 08	13/32"	10	- 08	13/32"	08	- 06	5/16"	22,8	100,0	42,5	72,0
C300h0-06-10-06	13	- 10	1/2"	08	- 06	5/16"	08	- 06	5/16"	22,8	100,0	48,5	65,0
C300h0-10-10-06	13	- 10	1/2"	12	- 10	1/2"	08	- 06	5/16"	22,8	100,0	48,5	65,0
C300h0-10-10-12	13	- 10	1/2"	12	- 10	1/2"	16	- 12	5/8"	22,8	100,0	62,5	75,0
C300h0-10-12-10	16	- 12	5/8"	12	- 10	1/2"	12	- 10	1/2"	22,8	100,0	62,5	78,0
C300h0-12-12-10	16	- 12	5/8"	16	- 12	5/8"	12	- 10	1/2"	22,8	100,0	42,5	68,5
C300h0-12-12-12	16	- 12	5/8"	16	- 12	5/8"	16	- 12	5/8"	22,8	100,0	62,5	75,0



C30015

STRAIGHT CONNECTION FITTING WITH HIGH PRESSURE VALVE
CONEXION RECTA CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C30015-06-06	8	- 06	5/16"		124,0	46,8		
C30015-08-08	10	- 08	13/32"		124,0	47,0		
C30015-10-10	13	- 10	1/2"		124,0	47,0		
C30015-12-12	16	- 12	5/8"		124,0	47,0		



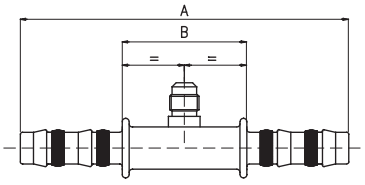
C30016

STRAIGHT CONNECTION FITTING WITH LOW PRESSURE VALVE
CONEXION RECTA CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C30016-10-10	13	- 10	1/2"		124,0	47,0		
C30016-12-12	16	- 12	5/8"		124,0	47,0		

SAE J2064 TYPE E

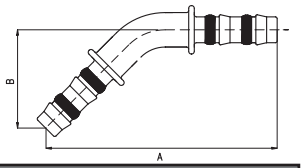
C30012



STRAIGHT CONNECTION FITTING 1/4" SAE CHARGE VALVE
CONEXION RECTA CON VÁLVULA DE CARGA 1/4" SAE

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C30012-06-06	8	- 06	5/16"		120,0	43,0		
C30012-08-08	10	- 08	13/32"		124,0	47,0		
C30012-10-10	13	- 10	1/2"		124,0	47,0		
C30012-12-12	16	- 12	5/8"		124,0	47,0		

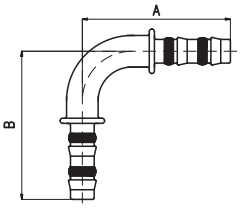
C30040



CONNECTION FITTING 45° ELBOW
CONEXION CODO 45°

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C30040-06-06	8	- 06	5/16"		113,5	47,0		
C30040-08-08	10	- 08	13/32"		121,0	50,0		
C30040-10-10	13	- 10	1/2"		118,5	49,0		
C30040-12-12	16	- 12	5/8"		106,0	44,0		

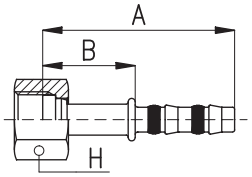
SAE J2064 TYPE E



C30090

CONNECTION FITTING 90° ELBOW
CONEXION CODO 90°

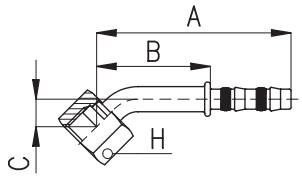
INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C30090-06-06	8	- 06	5/16"		70,0	70,0		
C30090-08-08	10	- 08	13/32"		75,0	75,0		
C30090-10-10	13	- 10	1/2"		75,0	75,0		
C30090-12-12	16	- 12	5/8"		75,0	75,0		



C42410

STRAIGHT ORS FLAT SEAL FEMALE
HEMBRA ORS ASIENTO PLANO RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H	
C42410-06-04	8	- 06	5/16"	9/16"-18-UNF-2B	72,0	33,4	19	
C42410-06-06	8	- 06	5/16"	11/16"-16-UN-2B	70,0	31,4	22	
C42410-08-08	10	- 08	13/32"	13/16"-16-UN-2B	74,5	35,9	27	
C42410-10-08	10	- 08	13/32"	13/16"-16-UN-2B	74,5	35,9	27	
C42410-10-10	13	- 10	1/2"	1"-14-UNS-2B	85,0	46,4	30	
C42410-12-12	16	- 12	5/8"	1.3/16"-12-UN-2B	85,0	46,4	36	



C42440

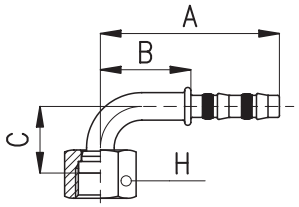
ORS FLAT SEAL FEMALE 45° ELBOW
HEMBRA ORS ASIENTO PLANO CODO 45°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C42440-06-04	8	- 06	5/16"	9/16"-18-UNF	64,0	25,4	10,0	19
C42440-06-06	8	- 06	5/16"	11/16"-16-UN-2B	65,0	26,4	10,5	22
C42440-08-08	10	- 08	13/32"	13/16"-16-UN-2B	93,0	54,4	13,0	27
C42440-10-08	10	- 10	1/2"	13/16"-16-UN	93,0	54,4	13,0	27
C42440-10-10	13	- 10	1/2"	1"-14-UNS-2B	82,0	43,4	18,0	30
C42440-12-12	16	- 12	5/8"	1.3/16"-12-UN-2B	94,0	55,4	30,5	36

SAE J2064 TYPE E

C42490

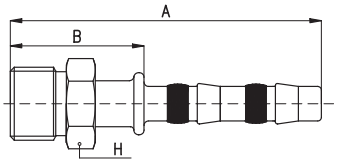
ORS FLAT SEAL FEMALE 90° ELBOW
HEMBRA ORS ASIENTO PLANO CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C42490-06-04	8	- 06	5/16"	9/16"-18-UNF-2B	61,5	22,9	22,5	19
C42490-06-06028	8	- 06	5/16"	11/16"-16-UN-2B	72,0	33,4	27,5	22
C42490-06-08	8	- 06	5/16"	13/16"-16-UN-2B	81,0	42,2	29,0	27
C42490-08-08	10	- 08	13/32"	13/16"-16-UN-2B	78,0	39,4	29,0	27
C42490-10-08	13	- 10	1/2"	13/16"-16-UN-2B	78,0	34,9	29,0	27
C42490-10-10	13	- 10	1/2"	1"-14-UNS-2B	75,0	36,4	36,0	30
C42490-12-10	16	- 12	5/8"	1"-14-UNS-2B	75,0	36,4	36,0	30
C42490-12-12	16	- 12	5/8"	1.3/16"-12-UN-2B	84,0	45,4	45,0	36

C37910

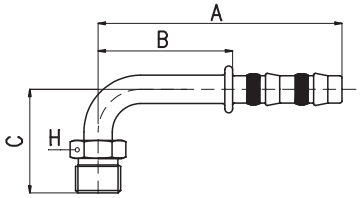
STRAIGHT MALE WITH O-RING SEAT
MACHO RECTO CON O-RING



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H	
C37910-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	67,7	29,1	17	
C37910-08-10	10	- 08	13/32"	7/8"-14-UNF-2A	75,0	36,4	24	
C37910-10-10	13	- 10	1/2"	7/8"-14-UNF-2A	77,8	36,6	24	

C37990

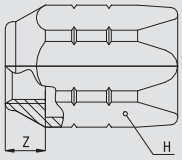
MALE WITH O-RING SEAT 90° ELBOW
MACHO CON O-RING CODO 90°



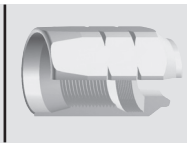
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C37990-08-06	10	- 08	13/32"	5/8"-18-UNF-2A	86,0	47,4	36,5	17
C37990-10-08	13	- 10	1/2"	3/4"-16-UNF-2A	87,0	48,4	41,5	22

SAE J2064 TYPE B

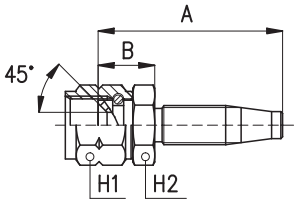
CUT-OFF DIMENSION



HOSE SIZE			DIMENSIONS mm	
DN	DASH	INCH	Z	H
5	- 04	3/16"	9,0±0,1	16
8	- 06	5/16"	10,0±0,1	21
10	- 08	13/32"	12,5±0,1	24
12	- 10	1/2"	9,0±0,1	28
16	- 12	5/8"	11,5±0,1	32
22	- 16	7/8"	10,0±0,1	38
28	- 20	1.1/8"	10,0±0,1	46
35	- 24	1.3/8"	10,0±0,1	50



HOSE SIZE			STAR-FIT FERRULE (reusable solution)
DN	DASH	INCH	CODE
5	- 04	3/16"	K00400-04
8	- 06	5/16"	K00400-06
10	- 08	13/32"	K00400-08
12	- 10	1/2"	K00400-10
16	- 12	5/8"	K00400-12
22	- 16	7/8"	K00400-16
28	- 20	1.1/8"	K00400-20
35	- 24	1.3/8"	K00400-24



K42610

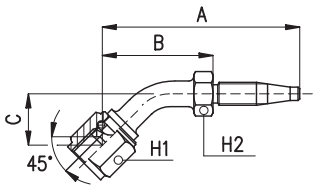
45° SAE STRAIGHT FEMALE
HEMBRA 45° SAE RECTO

INSERT CODE ONLY	HOSE SIZE		THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	H2
K42610-04-04	5	- 04	3/16"	7/16"-20-UNF-2B	41,0	14,0	15	15
K42610-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	50,5	15,5	19	19
K42610-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	59,0	18,0	22	22
K42610-10-08	12	- 10	1/2"	3/4"-16-UNF-2B	64,0	18,0	22	22
K42610-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	65,0	19,0	27	27
K42610-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	68,5	19,0	27	27
K42610-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	91,0	41,5	32	24
K42610-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	67,5	29,5	32	32
K42610-16-16H00	22	- 16	7/8"	1.5/16"-14-UNS-2B	61,5	14,5	38	38

SAE J2064 TYPE B

K42640

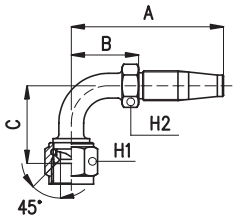
45° SAE FEMALE 45° ELBOW
HEMBRA 45° SAE CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K42640-04-04	5	- 04	3/16"	7/16"-20-UNF-2B	68,5	41,5	16,0	15	12
K42640-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	88,0	53,3	16,5	19	15
K42640-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	94,7	53,7	16,5	22	18
K42640-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	94,5	48,5	23,5	27	21
K42640-12-08	16	- 12	5/8"	3/4"-16-UNF-2B	113,0	63,5	26,5	22	24
K42640-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	99,5	50,0	23,5	27	24
K42640-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	104,5	55,0	26,5	32	24
K42640-16-10	22	- 16	7/8"	7/8"-14-UNF-2B	97,0	50,0	23,5	27	30
K42640-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	101,5	54,5	26,5	32	30
K42640-16-16	22	- 16	7/8"	1.5/16"-14-UNS-2B	115,0	68,0	32,5	38	30

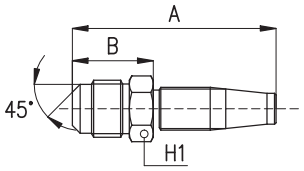
K42690

45° SAE FEMALE 90° ELBOW
HEMBRA 45° SAE CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K42690-04-04	5	- 04	3/16"	7/16"-20-UNF-2B	55,0	28,0	25,5	15	12
K42690-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	72,5	37,5	30,5	19	15
K42690-08-06	10	- 08	13/32"	5/8"-18-UNF-2B	73,5	32,5	37,5	19	18
K42690-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	73,5	32,5	37,5	22	18
K42690-10-08	12	- 10	1/2"	3/4"-16-UNF-2B	79,5	33,5	42,5	22	21
K42690-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	83,5	37,5	46,5	27	21
K42690-12-08	16	- 12	5/8"	3/4"-16-UNF-2B	84,0	34,5	42,5	22	24
K42690-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	89,0	39,5	46,5	27	24
K42690-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	94,0	44,5	53,0	32	24
K42690-16-10	22	- 16	7/8"	7/8"-14-UNF-2B	86,5	39,5	46,5	27	30
K42690-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	90,5	43,5	53,0	32	30
K42690-16-16	22	- 16	7/8"	1.5/16"-14-UNS-2B	101,5	54,5	66,5	38	30

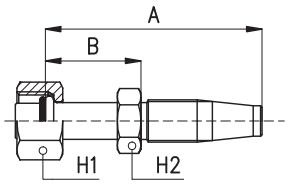
SAE J2064 TYPE B



K32610

STRAIGHT 45° SAE FLARE MALE
MACHO CÓNICO 45° SAE RECTO

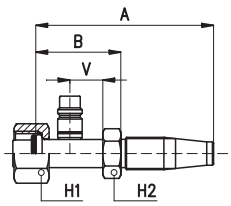
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	
K32610-04-04	5	- 04	3/16"	7/16"-20-UNF-2B	47,5	18,7	12	
K32610-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	57,7	22,7	16	
K32610-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	68,0	27,0	19	
K32610-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	78,4	32,4	24	
K32610-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	85,9	36,4	27	
K32610-16-16	22	- 16	7/8"	1.5/16"-14-UNS-2B	85,0	39,0	36	



K47910

STRAIGHT O-RING FEMALE
HEMBRA O-RING RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	H2
K47910-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	69,0	34,0	19	14
K47910-08-06	10	- 08	13/32"	5/8"-18-UNF-2B	76,5	35,5	19	18
K47910-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	85,5	44,5	22	18
K47910-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	96,0	50,0	27	21
K47910-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	101,5	52,0	27	24
K47910-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	110,0	60,5	32	24
K47910-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	107,5	60,5	32	30



K47916

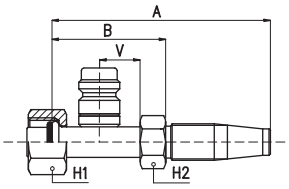
STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	V±1	H1	H2
K47916-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	101,5	52,0	16,0	27	24
K47916-16-12	22	- 16	7/8"	1.1/16"-14-UNF-2B	107,5	60,5	16,0	32	30

SAE J2064 TYPE B

K47915

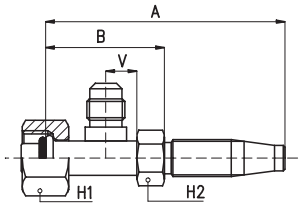
STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE ALTA PRESION



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	V±1	H1	H2
K47915-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	85,5	44,5	16,0	22	18

K47912

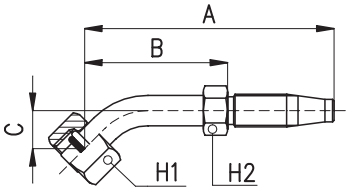
STRAIGHT O-RING FEMALE WITH 1/4" SAE CHARGE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE CARGA 1/4" SAE



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	V±1	H1	H2
K47912-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	67,3	32,3	9,0	19	14

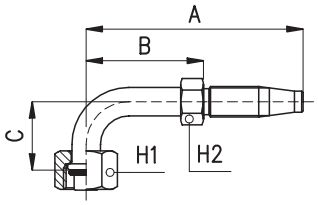
K47940

O-RING FEMALE 45° ELBOW
HEMBRA O-RING CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±0.10	B±0.10	C±0.08	H1	H2
K47940-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	82,0	47,0	12,5	19	14
K47940-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	90,5	49,5	13,5	22	18
K47940-10-08	12	- 10	1/2"	3/4"-16-UNF-2B	95,5	49,5	13,5	22	21
K47940-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	117,0	71,0	24,0	27	21
K47940-10-11	12	- 10	1/2"	1"-14-UNF-2B	115,0	69,0	22,0	29	21
K47940-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	122,5	73,0	24,0	27	24
K47940-12-11	16	- 12	5/8"	1"-14-UNS-2B	120,5	71,0	22,0	29	24
K47940-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	130,5	81,0	27,0	32	24
K47940-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	128,0	81,0	27,0	32	30

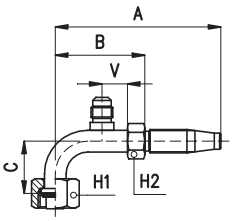
SAE J2064 TYPE B



K47990

O-RING FEMALE 90° ELBOW
HEMBRA O-RING CODO 90°

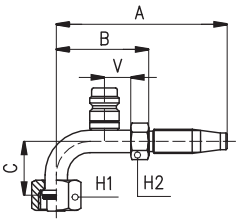
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±0.10	B±0.10	C±0.08	H1	H2
K47990-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	74,0	39,0	24,0	19	14
K47990-08-06	10	- 08	13/32"	5/8"-18-UNF-2B	81,5	40,5	24,0	19	18
K47990-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	89,5	48,5	30,0	22	18
K47990-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	109,5	63,5	45,0	27	21
K47990-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	115,0	65,5	45,0	27	24
K47990-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	119,5	70,0	54,5	32	24
K47990-16-10	22	- 16	7/8"	7/8"-14-UNF-2B	112,5	65,5	45,0	27	30
K47990-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	117,0	70,0	54,5	32	30
K47990-20-12	28	- 20	1.1/8"	1.1/16"-14-UNS-2B	115,0	69,0	54,5	32	36



K47992

O-RING FEMALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE CARGA 1/4" SAE

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm					
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H1	H2
K47992-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	117,0	70,0	54,5	16,0	32	30

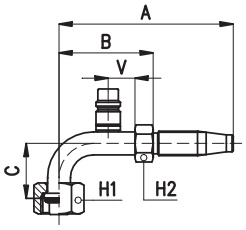


K47995

O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm					
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H1	H2
K47995-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	94,0	53,0	36,5	16,0	22	18

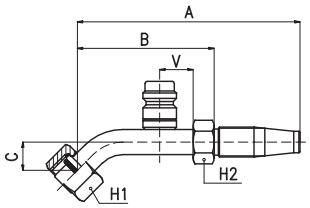
SAE J2064 TYPE B



K47996

O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE BAJA PRESION

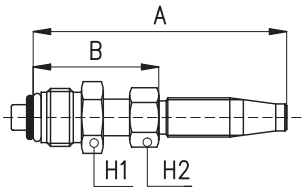
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm					
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H1	H2
K47996-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	109,5	63,5	45,0	16,0	27	21
K47996-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	115,0	65,5	45,0	16,0	27	24
K47996-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	116,0	69,0	54,5	16,0	32	30



K47945

O-RING FEMALE 45° ELBOW WITH HIGH PRESSURE VALVE
HEMBRA O-RING CODO 45° CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm					
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H1	H2
K47945-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	106,8	65,3	13,5	16,0	22	18

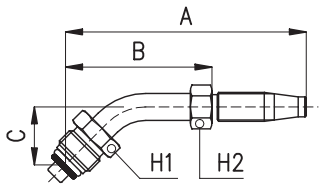


K38010

STRAIGHT O-RING MALE
MACHO O-RING RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
K38010-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	69,4	34,4	17	14
K38010-08-08	10	- 08	13/32"	3/4"-18-UNS-2B	85,5	44,5	22	18
K38010-10-10	12	- 10	1/2"	7/8"-18-UNS-2B	94,5	48,5	22	21

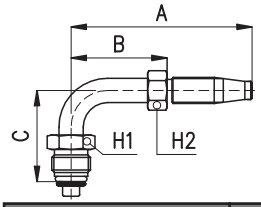
SAE J2064 TYPE B



K38040

O-RING MALE 45° ELBOW
MACHO O-RING CODO 45°

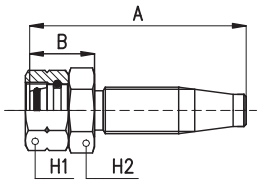
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K38040-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	89,5	54,5	21,5	17	14
K38040-08-08	10	- 08	13/32"	3/4"-18-UNS-2B	106,5	65,5	25,0	22	18
K38040-10-10	12	- 10	1/2"	7/8"-18-UNS-2B	121,5	75,5	28,5	22	21



K38090

O-RING MALE 90° ELBOW
MACHO O-RING CODO 90°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K38090-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	74,5	39,5	37,5	17	14
K38090-08-08	10	- 08	13/32"	3/4"-18-UNS-2B	89,5	48,5	47,0	22	18
K38090-10-10	12	- 10	1/2"	7/8"-18-UNS-2B	109,0	63,0	54,5	22	21



K41510

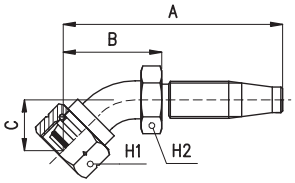
STRAIGHT 24° DIN FLARE O-RING OGIVAL FEMALE
HEMBRA O-RING OGIVA 24° DIN CÓNICO RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K41510-12-26	16	- 12	5/8"	M 26x1.5	92,0	42,5	32	27	
K41510-12-30	16	- 12	5/8"	M 30x2	94,5	45,0	36	24	
K41510-16-30	22	- 16	7/8"	M 30x2	74,0	27,0	36	36	
K41510-16-36	22	- 16	7/8"	M 36x2	75,8	28,8	41	36	
K41510-20-36	28	- 20	1.1/8"	M 36x2	76,8	30,8	41	41	

SAE J2064 TYPE B

K41540

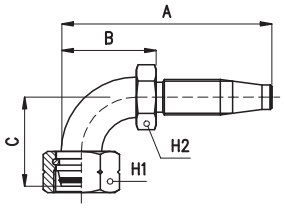
24° DIN FLARE O-RING OGIVAL FEMALE 45° ELBOW
HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K41540-12-26	16	- 12	5/8"	M 26x1.5	107,0	57,2	28,7	32	24
K41540-12-30	16	- 12	5/8"	M 30x2	107,0	57,5	29,0	36	34
K41540-16-30	22	- 16	7/8"	M 30x2	104,0	57,1	29,4	36	30
K41540-16-36	22	- 16	7/8"	M 36x2	117,0	69,9	30,0	41	30
K41540-20-36	28	- 20	1.1/8"	M 36x2	115,0	68,9	34,0	41	36

K41590

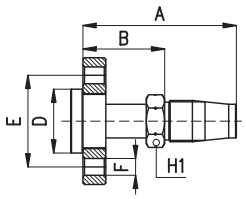
24° DIN FLARE O-RING OGIVAL FEMALE 90° ELBOW
HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K41590-08-26	10	- 08	13/32"	M 26x1.5	86,5	45,5	60,0	32	24
K41590-12-26	16	- 12	5/8"	M 26x1.5	94,0	44,5	56,0	32	24
K41590-12-30	16	- 12	5/8"	M 30x2	91,0	41,5	56,5	36	30
K41590-16-30	22	- 16	7/8"	M 30x2	91,0	43,5	56,5	36	30
K41590-16-36	22	- 16	7/8"	M 36x2	101,5	54,5	69,3	41	30
K41590-20-30	28	- 20	1.1/8"	M 30x2	89,4	43,5	56,5	36	36
K41590-20-36	28	- 20	1.1/8"	M 36x2	101,0	54,5	69,3	41	36

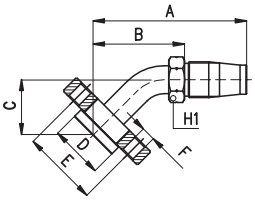
K43710

STRAIGHT FLANGE FITTING
FLANGE RECTO



INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm					
	DN	Dash	Inch		A±2.5	B±2.5	D	E	F	H1
K43710-16-16	22	- 16	7/8"		108,5	61,5	41,8	60,0	Ø 11,0	30
K43710-20-16	28	- 20	1.1/8"		102,5	56,5	41,8	60,0	Ø 11,0	36

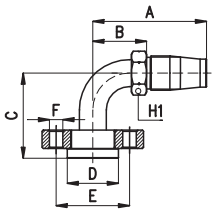
SAE J2064 TYPE B



K43740

FLANGE FITTING 45° ELBOW
FLANGE CODO 45°

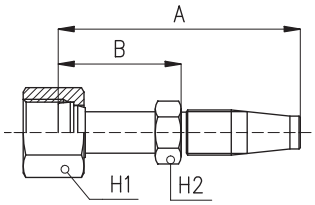
INSERT CODE ONLY	HOSE SIZE			DIMENSIONS mm						
	DN	Dash	Inch	A±2.5	B±2.5	C±2	D	E	F	H1
K43740-16-16	22	- 16	7/8"	119,0	72,0	44,0	41,8	60,0	Ø 11,0	30
K43740-20-16	28	- 20	1.1/8"	122,5	76,5	44,0	41,8	60,0	Ø 11,0	36



K43790

FLANGE FITTING 90° ELBOW
FLANGE CODO 90°

INSERT CODE ONLY	HOSE SIZE			DIMENSIONS mm						
	DN	Dash	Inch	A±2.5	B±2.5	C±2	D	E	F	H1
K43790-16-16	22	- 16	7/8"	90,5	43,5	79,5	41,8	60,0	Ø 11,0	30
K43790-20-16	28	- 20	1.1/8"	100,5	54,5	88,5	41,8	60,0	Ø 11,0	36
NEW K43790-20-16097	28	- 20	1.1/8"	100,5	54,5	96,5	48,0	60,0	Ø 11,0	36



K42410

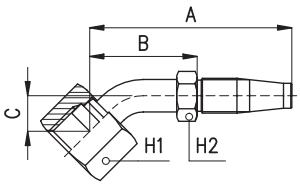
STRAIGHT ORS FLAT SEAL FEMALE
HEMBRA ASIENTO PLANO ORS RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	H2
K42410-04-04	5	- 04	3-16"	9/16"-18-UNF-2B	61,0	34,0	19	12
K42410-06-06	8	- 06	5-16"	11-16"-UN-2B	69,0	34,0	22	14
K42410-08-08	10	- 08	13/32"	13/16"-16-UN-2B	78,0	37,0	27	18
K42410-10-10	12	- 10	1/2"	1"-14-UNS-2B	93,5	47,5	30	21
K42410-12-12	16	- 12	5/8"	1.3/16"-12-UN-2B	99,0	49,5	36	24
K42410-12-16	16	- 12	5/8"	1.7/16"-12-UNF-2B	52,5	102,0	41	27
K42410-12-16079	16	- 12	5/8"	1.7/16"-12-UNF-2B	29,0	78,5	41	24
K42410-16-16	22	- 16	7/8"	1.7/16"-12-UN-2B	117,5	70,5	41	30
K42410-16-20	22	- 16	7/8"	1.11/16"-UN-2B	69,5	116,5	50	30
K42410-20-20	28	- 20	1.1/8"	1.11/16"-12-UN-2B	114,5	68,5	50	36
K42410-24-24	35	- 24	1.3/8"	2"-12-UN	115,5	70,5	60	46

SAE J2064 TYPE B

K42440

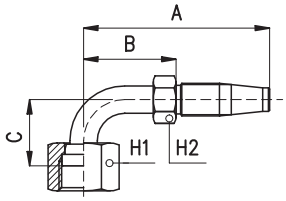
ORS FLAT SEAL FEMALE 45° ELBOW
HEMBRA ASIENTO PLANO ORS CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K42440-04-04	5	- 04	3/16"	9/16"-18-UNF-2B	52,2	25,2	10,0	19	12
K42440-06-06	8	- 05	5/16"	11/16"-16-UN-2B	62,3	27,3	10,5	22	14
K42440-08-08	10	- 08	13/32"	13/16"-16-UN-2B	96,5	55,5	13,0	27	18
K42440-10-10	12	- 10	1/2"	1"-14-UNS-2B	86,5	40,5	16,0	30	21
K42440-12-12	16	- 12	5/8"	1.3/16"-12-UN-2B	115,0	65,5	17,0	36	24
K42440-16-16	22	- 16	7/8"	1.7/16"-12-UN-2B	115,5	68,5	40,5	41	30
K42440-20-20	28	- 20	1.1/8"	1.11/16"-12-UN-2B	111,5	66,5	27,0	50	36
K42440-24-24	35	- 24	1.3/8"	2"-12-UN	115,5	70,5	29,0	60	46

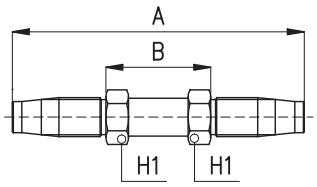
K42490

ORS FLAT SEAL FEMALE 90° ELBOW
HEMBRA ASIENTO PLANO ORS CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K42490-04-04	5	- 04	3/16"	9/16"-18-UNF-2B	50,5	23,5	22,5	19	12
K42490-06-06	8	- 06	5/16"	11/16"-16-UN-2B	62,5	27,5	25,5	22	14
K42490-08-08	10	- 08	13/32"	13/16"-16-UN-2B	81,5	40,5	29,0	27	18
K42490-10-10	12	- 10	1/2"	1"-14-UNS-2B	83,5	37,5	36,0	30	21
K42490-12-12	16	- 12	5/8"	1.3/16"-12-UN-2B	98,0	48,5	45,0	36	24
K42490-16-16	22	- 16	7/8"	1.7/16"-12-UN-2B	117,5	70,5	48,0	41	30
K42490-20-20	28	- 20	1.1/8"	1.11/16"-12-UN-2B	104,5	58,5	56,0	50	36

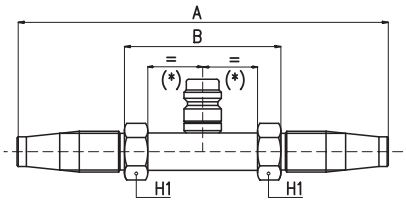
SAE J2064 TYPE B



K30010

STRAIGHT CONNECTION FITTING
RACOR RECTO

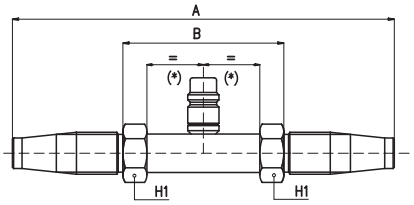
INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	
K30010-04-04	5	- 04	3/16"		89,0	35,0	12	
K30010-06-06	8	- 06	5/16"		115,0	45,0	14	
K30010-08-08	10	- 08	13/32"		128,0	46,0	18	
K30010-10-10	12	- 10	1/2"		141,0	49,0	21	
K30010-12-12	16	- 12	5/8"		154,5	55,5	24	
K30010-16-16	22	- 16	7/8"		145,0	51,0	30	
K30010-20-20	28	- 20	1.1/8"		163,0	71,0	36	



K30015

STRAIGHT CONNECTION FITTING WITH HIGH PRESSURE VALVE
RACOR RECTO CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	
K30015-08-08	10	- 08	13/32"		150,0	68,0	18	
K30015-10-10	12	- 10	1/2"		159,0	67,0	21	



K30016

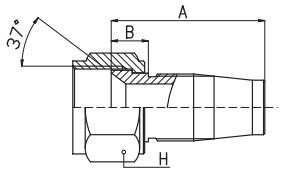
STRAIGHT CONNECTION FITTING WITH LOW PRESSURE VALVE
RACOR RECTO CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	
K30016-10-10	12	- 10	1/2"		159,0	67,0	21	
K30016-12-12	16	- 12	5/8"		181,0	82,0	24	

SAE J2064 TYPE B

K42510

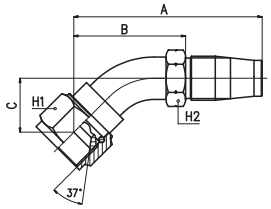
JIC 37° STRAIGHT FEMALE FITTING
HEMBRA JIC 37° RECTO



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	H2
K42510-16-12	22	- 16	7/8"	1.1/16"-12-UNF-2B	78,5	31,5	32,0	30
K42510-16-16	22	- 16	7/8"	1.5/16"-12-UNF-2B	62,0	15,0	38,0	

K42540

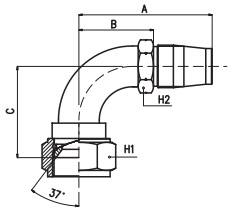
JIC 37° FEMALE FITTING 45° ELBOW
HEMBRA JIC 37° CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K42540-16-16	22	- 16	7/8"	1.5/16"-12-UNF-2B	115,5	68,5	33,0	38	30

K42590

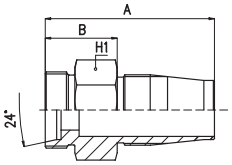
JIC 37° FEMALE FITTING 90° ELBOW
HEMBRA JIC 37° CODO 90°



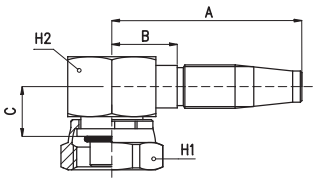
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K42590-16-16	22	- 16	7/8"	1.5/16"-12-UNF-2B	101,5	54,5	67,5	38	30
K42590-20-20	28	- 20	1.1/8"	1.5/8"-12-UNF-2B	104,5	58,5	71,5	50	36

K31110

STRAIGHT 24° MALE DIN
MACHO 24° DIN RECTO



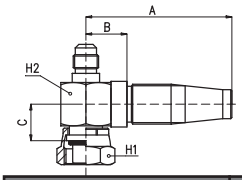
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	
K31110-16-30	22	- 16	7/8"	M 30x2	71,0	24,0	32	



K47980

SHORT VERSION O-RING FEMALE 90° ELBOW
HEMBRA O-RING TIPO CORTO CODO 90°

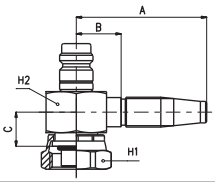
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K47980-08-11	10	- 08	13/32"	1"-14-UNF-2B	62,5	21,5	16,4	29	29
K47980-10-11	12	- 10	1/2"	1"-14-UNS-2B	67,5	21,5	16,4	29	29
K47980-12-11	16	- 12	5/8"	1"-14-UNS-2B	75,5	26,0	24,2	29	25



K47982

SHORT VERSION O-RING FEMALE 90° ELBOW WITH 1/4" SAE CHARGE VALVE
HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE CARGA 1/4" SAE

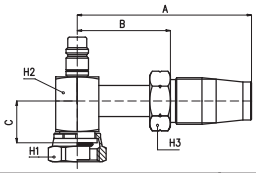
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K47982-10-08	12	- 10	1/2"	3/4"-16-UNF-2B	64,0	18,0	16,0	22	22
K47982-10-11	12	- 10	1/2"	1"-14-UNS-2B	67,5	21,5	16,4	29	29
K47982-12-08	16	- 12	5/8"	3/4"-16-UNF-2B	52,5	102,0	16,0	22	22
K47982-16-10	22	- 16	7/8"	7/8"-14-UNF-2B	101,5	54,5	16,4	27	27
K47982-16-11	22	- 16	7/8"	1"-14-UNS-2B	54,0	101,0	24,2	29	25



K47985

SHORT VERSION O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE
HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K47985-08-11	10	- 08	13/32"	1"-14-UNS-2B	21,5	62,5	16,4	29	29
K47985-12-11	16	- 12	5/8"	1"-14-UNS-2B	24,0	75,5	24,2	29	25

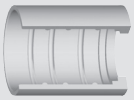


K47986

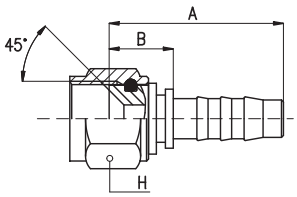
SHORT VERSION O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE
HEMBRA O-RING TIPO CORTO CODO 90° CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
K47986-12-11	16	- 12	5/8"	1"-14-UNS-2B	24,0	75,5	24,2	29	25
K47986-16-11	22	- 16	7/8"	1"-14-UNS-2B	54,0	101,0	24,2	29	25

SAE J2064 TYPE B



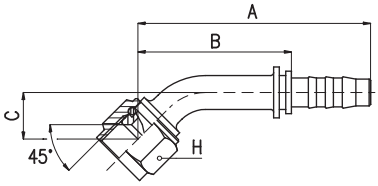
HOSE SIZE			STAR-CRIMP FERRULE (crimped solution)
DN	DASH	INCH	CODE
5	- 04	3/16"	**C00300-04**
8	- 06	5/16"	**C00300-06**
10	- 08	13/32"	**C00300-08**
12	- 10	1/2"	**C00300-10**
16	- 12	5/8"	**C00300-12**
22	- 16	7/8"	**C00300-16**
28	- 20	1.1/8"	**C00300-20**



C22610

45° SAE STRAIGHT FEMALE
HEMBRA 45° SAE RECTO

INSERT CODE ONLY	HOSE SIZE		THREAD	DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	H
C22610-04-04	5	- 04	3/16"	7/16"-20-UNF-2B	34,2	14,5	15
C22610-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	42,0	16,0	19
C22610-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	44,3	16,3	22
C22610-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	50,3	17,3	27
C22610-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	50,3	18,8	32

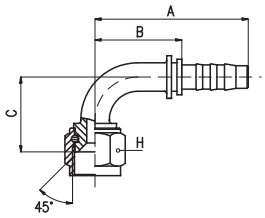


C22640

45° SAE FEMALE 45° ELBOW
HEMBRA 45° SAE CODO 45°

INSERT CODE ONLY	HOSE SIZE		THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C22640-04-04	5	- 04	3/16"	7/16"-20-UNF-2B	68,2	48,5	12,0	15
C22640-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	73,7	47,7	15,5	19
C22640-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	82,3	54,3	16,5	22
C22640-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	95,3	62,3	19,5	27
C22640-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	97,0	65,5	20,5	32

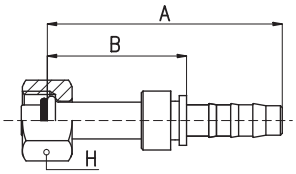
SAE J2064 TYPE B



C22690

45° SAE FEMALE 90° ELBOW
HEMBRA 45° SAE CODO 90°

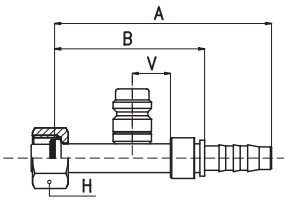
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C22690-04-04	5	- 04	3/16"	7/16"-20-UNF-2B	52,2	32,5	26,0	15
C22690-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	57,0	31,0	29,5	19
C22690-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	64,5	36,5	31,5	22
C22690-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	74,5	41,5	38,5	27
C22690-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	78,5	47,0	49,5	32



C27910

STRAIGHT O-RING FEMALE
HEMBRA O-RING RECTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H	
C27910-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	64,0	38,0	19	
C27910-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	76,0	48,0	22	
C27910-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	86,5	53,5	27	
C27910-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	94,5	63,0	32	
C27910-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	97,5	64,5	32	



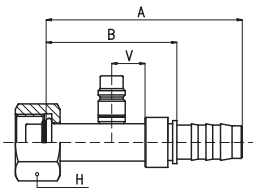
C27915

STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE
HEMBRA O-RING RECTA CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	V±1	H
C27915-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	90.8	62.8	16,0	22
C27915-08-11	10	- 08	13/32"	1"-14-UNS-2B	78.0	50.0	16,0	29
C27915-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	94.5	63.0	16,0	32

C27916

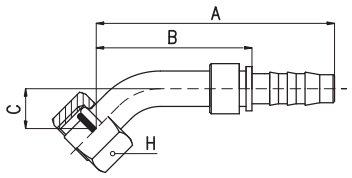
STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	V±1	H
C27916-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	97,5	64,5	16,0	32

C27940

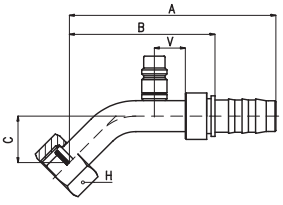
O-RING FEMALE 45° ELBOW
HEMBRA O-RING CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C27940-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	77,0	51,0	12,5	19
C27940-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	81,0	53,0	13,5	22
C27940-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	107,0	74,0	24,0	27
C27940-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	106,5	75,0	24,0	27
C27940-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	114,5	83,0	27,0	32
C27940-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	118,0	85,0	27,0	32

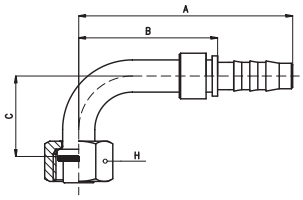
C27946

O-RING FEMALE 45° ELBOW WITH LOW PRESSURE VALVE
HEMBRA O-RING CODO 45° CON VÁLVULA DE BAJA PRESION



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H1	H2
C27946-12-10	12	- 12	5/8"	7/8"-14-UNF-2B	106,5	75,0	24,0	16,0	27

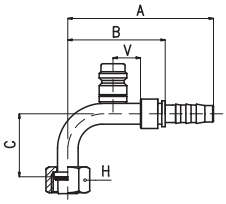
SAE J2064 TYPE B



C27990

O-RING FEMALE 90° ELBOW
HEMBRA O-RING CODO 90°

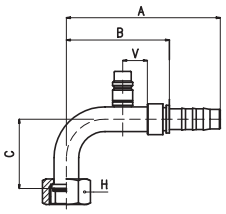
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C27990-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	69,0	43,0	24,0	19
C27990-06-06036	8	- 06	5/16"	5/8"-18-UNF-2B	74,0	48,0	35,5	19
C27990-06-06060	8	- 06	5/16"	5/8"-18-UNF-2B	68,8	42,8	60,0	19
C27990-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	80,0	52,0	30,0	22
C27990-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	100,0	67,0	45,0	27
C27990-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	99,5	68,0	45,0	27
C27990-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2B	104,0	72,5	54,5	32
C27990-16-10	22	- 16	7/8"	7/8"-14-UNF-2B	104,0	70,0	45,0	27
C27990-16-12	22	- 16	7/8"	1.1/16"-14-UNS-2B	107,0	74,0	54,5	32



C27995

O-RING FEMALE 90° ELBOW WITH HIGH PRESSURE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H
C27995-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	84,5	56,5	36,5	16,0	22
C27995-08-11	10	- 08	13/32"	1"-14-UNS-2B	92,8	64,8	39,0	16,0	29



C27996

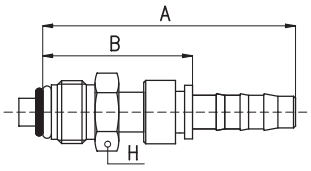
O-RING FEMALE 90° ELBOW WITH LOW PRESSURE VALVE
HEMBRA O-RING CODO 90° CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H
C27996-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	99,8	67,0	45,0	16,0	27

SAE J2064 TYPE B

C18010

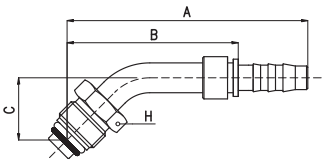
STRAIGHT O-RING MALE
MACHO O-RING RECTO



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		H
C18010-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	63,8	38,0		17
C18010-16-10	22	- 16	7/8"	7/8"-14-UNF-2B	87,5	54,5		22

C18040

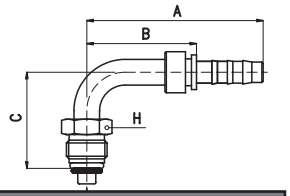
O-RING MALE 45° ELBOW
MACHO O-RING CODO 45°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C18040-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	83,5	57,5	21,5	17
C18040-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	11,5	78,5	28,5	22

C18090

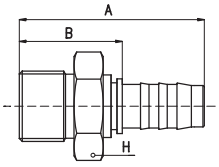
O-RING MALE 90° ELBOW
MACHO O-RING CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C18090-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	69,0	43,0	37,5	17
C18090-06-06060	8	- 06	5/16"	5/8"-18-UNF-2A	69,0	42,8	60,0	17
C18090-10-10	12	- 10	1/2"	7/8"-14-UNF-2A	99,5	66,5	54,5	22
C18090-16-10	22	- 16	7/8"	7/8"-14-UNF-2A	102,0	69,0	54,5	22
C18090-16-10072	22	- 16	7/8"	7/8"-14-UNF-2A	102,0	69,0	72,0	22

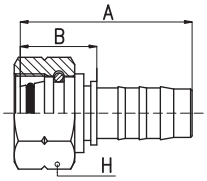
C17910

STRAIGHT MALE WITH O-RING SEAT
MACHO CON ASIENTO O-RING RECTO



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		H
C17910-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	50,5	24,5		17
C17910-12-12	16	- 12	5/8"	1.1/16"-14-UNS-2A	71,0	39,5		30

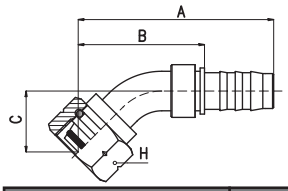
SAE J2064 TYPE B



C21510

STRAIGHT 24° DIN FLARE O-RING OGIVAL FEMALE
HEMBRA O-RING OGIVA 24° DIN CÓNICO RECTO

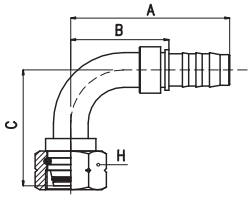
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		H
C21510-16-30	22	- 16	7/8"	M 30x2	61,0	28,0		36
C21510-20-36	28	- 20	1.1/8"	M 36x2	74,5	30,5		41



C21540

24° DIN FLARE O-RING OGIVAL FEMALE 45° ELBOW
HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 45°

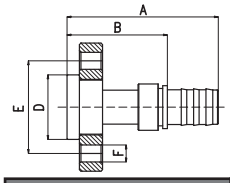
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C21540-16-30	22	- 16	7/8"	M 30x2	95,0	62,0	29,0	36
C21540-20-36	28	- 20	1.1/8"	M 36x2	118,5	74,5	34,5	41



C21590

24° DIN FLARE O-RING OGIVAL FEMALE 90° ELBOW
HEMBRA O-RING OGIVA 24° DIN CÓNICO CODO 90°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C21590-16-30	22	- 16	7/8"	M 30x2	81,5	48,5	56,5	36
C21590-20-36	28	- 20	1.1/8"	M 36x2	105,0	61,0	69,5	41



C23710

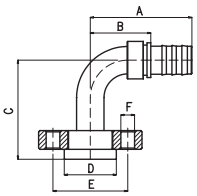
STRAIGHT FLANGE FITTING
FLANGE RECTO

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	D	E	F
C23710-16-16	22	- 16	7/8"		98,0	65,0	41,8	60,0	Ø 11,0
C23710-20-16	28	- 20	1.1/8"		115,0	71,0	41,8	60,0	Ø 11,0

SAE J2064 TYPE B

C23790

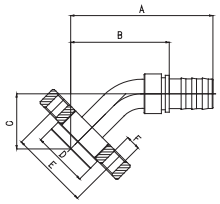
FLANGE FITTING 90° ELBOW
FLANGE CODO 90°



INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm					
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H1	H2
C23790-16-16	22	- 16	7/8"		81,5	48,5	79,5	41,8	60,0	Ø 11,0
C23790-20-16	28	- 20	1.1/8"		105,0	61,0	88,5	41,8	60,0	Ø 11,0

C23740

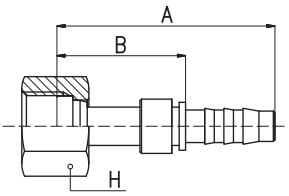
FLANGE FITTING 45° ELBOW
FLANGE CODO 45°



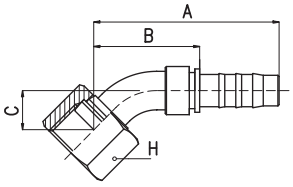
INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm					
	DN	Dash	Inch		A±2.5	B±2.5	C±2	D	E	F
C23740-16-16	22	- 16	7/8"		107,1	74,6	41,7	41,8	60,0	Ø 11,0
C23740-20-16	28	- 20	1.1/8"		126,4	82,9	44,3	41,8	60,0	Ø 11,0

C22410

STRAIGHT ORS FLAT SEAL FEMALE
HEMBRA ASIENTO PLANO ORS RECTO



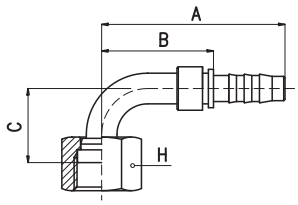
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		H
C22410-10-08	12	- 10	1/2"	13/16"-16-UN-2B	73,4	41,3		27
C22410-10-10	12	- 10	1/2"	1"-14-UNS-2B	84,0	51,0		30
C22410-16-16	22	- 16	7/8"	1.7/16"-12-UN-2B	108,5	75,5		41
C22410-20-20	28	- 20	1.1/8"	1.11/16"-12-UN-2B	119,0	75,0		50



C22440

ORS FLAT SEAL FEMALE 45° ELBOW
HEMBRA ASIENTO PLANO ORS CODO 45°

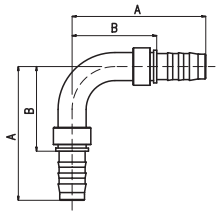
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C22440-10-10	12	- 10	1/2"	1"-14-UNS-2B	77,0	44,0	16,0	30
C22440-16-16	22	- 16	7/8"	1.7/16"-12-UN-2B	106,5	73,5	40,5	41
C22440-20-20	28	- 20	1.1/8"	1.11/16"-12-UN-2B	115,0	71,0	25,5	50



C22490

ORS FLAT SEAL FEMALE 90° ELBOW
HEMBRA ASIENTO PLANO ORS CODO 90°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
C22490-16-16	22	- 16	7/8"	1.7/16"-12-UN-2B	108,5	75,5	48,0	41
C22490-20-20	28	- 20	1.1/8"	1.11/16"-12-UN-2B	109,0	65,0	56,0	50

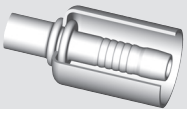


C10090

CONNECTION 90° ELBOW
ACOPLE CODO 90°

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5		
C10090-06-06	8	- 06	5/16"		74,8	48,8		
C10090-16-16	22	- 16	7/8"		91,0	58,5		

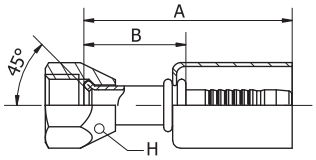
SAE J2064 TYPE A



HOSE SIZE			FERRULE EXTERNAL DIAMETER
DN	DASH	INCH	mm
8	- 06	5/16"	22,0
10	- 08	13/32"	22,0
12	- 10	1/2"	25,8
16	- 12	5/8"	28,4

OPC22610

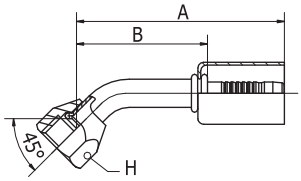
45° SAE STRAIGHT FEMALE
HEMBRA 45° SAE RECTO



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	H
OPC22610-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	53,2	26,0	19
OPC22610-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	58,7	28,5	22
OPC22610-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	60,7	30,0	27
OPC42610-12-12*	16	- 12	5/8"	1.1/16"-14-UNS	94,3	59,5	32

* **Obtained by brazing** / Obtenido por soldadura

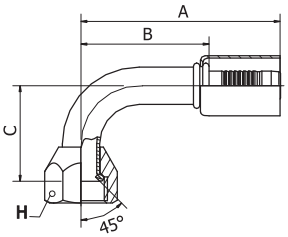
SAE J2064 TYPE A



OPC22640

45° SAE FEMALE 45° ELBOW
HEMBRA SAE 45° CODO 45°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC22640-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	73,7	46,5	12,5	19
OPC22640-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	84,7	54,5	15,0	22
OPC22640-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	114,5	83,8	26,5	27



OPC22690

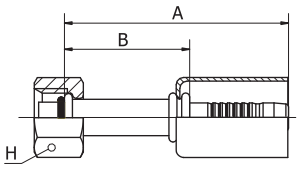
45° SAE FEMALE 90° ELBOW
HEMBRA 45° SAE CODO 90°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC22690-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	69,2	42,0	26,0	19
OPC22690-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	75,2	45,0	35,0	22
OPC22690-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	85,7	55,0	41,0	27

SAE J2064 TYPE A

OPC27910

STRAIGHT O-RING FEMALE
HEMBRA O-RING RECTO

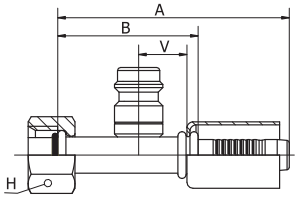


INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	H
OPC27910-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	61,2	34,0	19
OPC27910-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	66,2	36,0	22
OPC27910-08-11	10	- 08	13/32"	1"-14-UNS-2B	65,7	35,5	29
OPC27910-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	67,7	37,0	27
OPC27910-10-10078	12	- 10	1/2"	7/8"-14-UNF-2B	77,7	47,0	27
OPC27910-10-11	12	- 10	1/2"	1"-14-UNS-2B	56,2	25,5	29
OPC27910-10-11076	12	- 10	1/2"	1"-14-UNS-2B	76,2	45,5	29
OPC27910-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	68,96	39,6	27
OPC27910-12-10079	16	- 12	5/8"	7/8"-14-UNF-2B	78,9	46,9	27
OPC47910-12-11 *	16	- 12	5/8"	1"-14-UNS-2B	51,2	16,4	29
OPC47910-12-12 *	16	- 12	5/8"	1.1/16"-14-UNS	67,8	33,0	32

* **Obtained by brazing** / Obtenido por soldadura

OPC27915

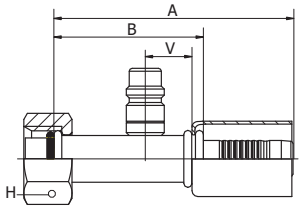
STRAIGHT O-RING FEMALE WITH HIGH PRESSURE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE ALTA PRESION



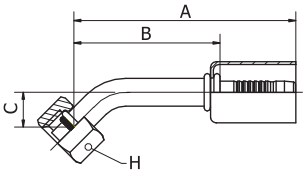
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	V±1	H
OPC27915-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	70,7	43,5	16,0	19
OPC27915-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	76,7	46,5	16,0	22
OPC27915-08-11	10	- 08	13/32"	1"-14-UNS-2B	82,7	52,5	16,0	29

OPC27916

STRAIGHT O-RING FEMALE WITH LOW PRESSURE VALVE
HEMBRA O-RING RECTO CON VÁLVULA DE BAJA PRESION



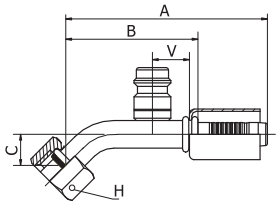
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	V±1	H
OPC27916-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	81,7	51	16,0	27
OPC27916-10-11	12	- 10	1/2"	1"-14-UNS-2B	78,7	48	16,0	29



OPC27940

O-RING FEMALE 45° ELBOW
HEMBRA O-RING CODO 45°

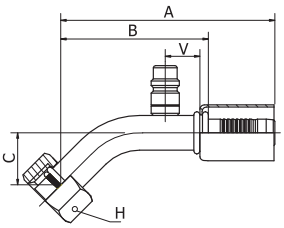
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC27940-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	79,7	52,5	12,5	19
OPC27940-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	87,7	57,5	13,5	22
OPC27940-08-11	10	- 08	13/32"	1"-14-UNS-2B	84,7	54,5	14,0	29
OPC27940-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	98,7	68,0	24,0	27
OPC27940-10-11	12	- 10	1/2"	1"-14-UNS-2B	97,7	67,0	22,0	29
OPC27940-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	98,7	66,7	24,0	27



OPC27945

O-RING FEMALE WITH HIGH PRESSURE VALVE 45° ELBOW
HEMBRA O-RING CON VÁLVULA DE ALTA PRESION CODO 45°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H
OPC27945-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	79,7	52,5	12,5	16,0	19
OPC27945-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	87,7	57,5	13,5	16,0	22
OPC27945-08-11	10	- 08	13/32"	1"-14-UNS-2B	84,7	54,5	14,0	16,0	29



OPC27946

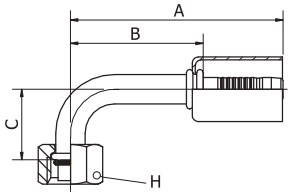
O-RING FEMALE WITH LOW PRESSURE VALVE 45° ELBOW
HEMBRA O-RING CON VÁLVULA DE BAJA PRESION CODO 45°

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H
OPC27946-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	98,7	68,0	24,0	16,0	27
OPC27946-10-11	12	- 10	1/2"	1"-14-UNS-2B	97,7	67,0	22,0	16,0	29

SAE J2064 TYPE A

OPC27990

O-RING FEMALE 90° ELBOW
HEMBRA O-RING CODO 90°

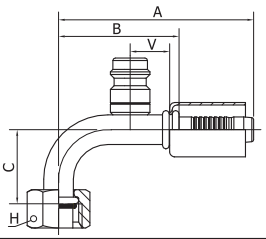


INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC27990-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	72,2	45	24,0	19
OPC27990-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	78,7	48,5	30,0	22
OPC27990-08-11	10	- 08	13/32"	1"-14-UNS-2B	77,7	47,5	33,0	29
OPC27990-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	91,7	61,0	46,5	27
OPC27990-10-11	12	- 10	1/2"	1"-14-UNS-2B	92,7	62,0	39,0	29
OPC27990-12-10	16	- 12	5/8"	7/8"-14-UNF-2B	88,7	56,7	45,0	27
OPC27990-12-11	16	- 12	5/8"	1"-14-UNS-2B	92,2	60,2	38,0	29
OPC47990-12-12*	16	- 12	5/8"	1.1/16"-14-UNS	102,8	68,0	54,5	32

* **Obtained by brazing** / Obtenido por soldadura

OPC27995

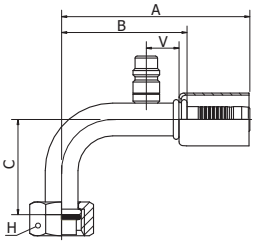
O-RING FEMALE WITH HIGH PRESSURE VALVE 90° ELBOW
HEMBRA O-RING CON VÁLVULA DE ALTA PRESION CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H
OPC27995-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	72,2	45,0	24,0	16,0	19
OPC27995-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	78,8	48,5	30,0	16,0	22
OPC27995-08-11	10	- 08	13/32"	1"-14-UNS-2B	79,2	49,0	32,0	16,0	29

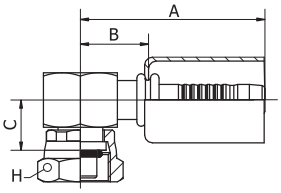
OPC27996

O-RING FEMALE WITH LOW PRESSURE VALVE 90° ELBOW
HEMBRA O-RING CON VÁLVULA DE BAJA PRESION CODO 90°



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1	H
OPC27996-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	91,7	61,0	46,5	16,0	27
OPC27996-10-11	12	- 10	1/2"	1"-14-UNS-2B	92,7	62,0	39,0	16,0	29

SAE J2064 TYPE A

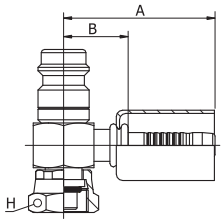


OPC27980

SHORT VERSION O-RING FEMALE
HEMBRA O-RING TIPO CORTO

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC27980-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	47,0	17,5	12,9	19
OPC27980-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	52,0	19,0	16,0	22
OPC27980-08-11	10	- 08	13/32"	1"-14-UNS-2B	55,5	22,5	16,4	29
OPC27980-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	55,0	21,5	16,4	27
OPC27980-10-11	12	- 10	1/2"	1"-14-UNS-2B	56,0	22,5	16,4	29
OPC47980-12-11 *	16	- 12	5/8"	1"-14-UNS-2B	56,3	21,5	24,2	29

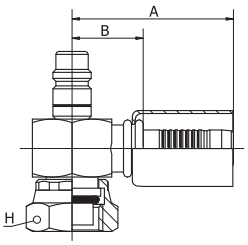
* **Obtained by brazing** / Obtenido por soldadura



OPC27985

SHORT VERSION O-RING FEMALE WITH HIGH PRESSURE VALVE
HEMBRA O-RING TIPO CORTO CON VÁLVULA DE ALTA PRESION

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC27985-06-06	8	- 06	5/16"	5/8"-18-UNF-2B	47,0	17,5	12,9	19
OPC27985-08-08	10	- 08	13/32"	3/4"-16-UNF-2B	52,0	19,0	16,0	22
OPC27985-08-11	10	- 08	13/32"	1"-14-UNS-2B	55,5	22,5	16,4	29



OPC27986

SHORT VERSION O-RING FEMALE WITH LOW PRESSURE VALVE
HEMBRA O-RING TIPO CORTO CON VÁLVULA DE BAJA PRESION

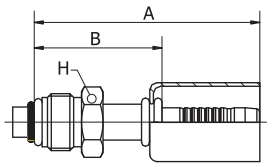
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC27986-10-10	12	- 10	1/2"	7/8"-14-UNF-2B	55,0	21,5	16,4	27
OPC27986-10-11	12	- 10	1/2"	1"-14-UNS-2B	56,0	22,5	16,4	29
OPC47986-12-11 *	16	- 12	5/8"	1"-14-UNS-2B	56,3	21,5	24,2	29

* **Obtained by brazing** / Obtenido por soldadura

SAE J2064 TYPE A

OPC18010

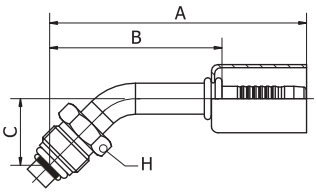
STRAIGHT O-RING MALE
MACHO O-RING RECTO



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	H
OPC18010-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	62,7	35,5	17
OPC18010-08-08	10	- 08	13/32"	3/4"-18-UNS-2A	82,2	52,0	22
OPC18010-10-10	12	- 10	1/2"	7/8"-18-UNS-2A	74,2	43,5	22
OPC18010-12-10	16	- 12	5/8"	7/8"-18-UNS-2A	69,7	37,7	22

OPC18040

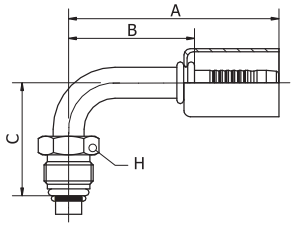
O-RING MALE 45° ELBOW
MACHO O-RING CODO 45°



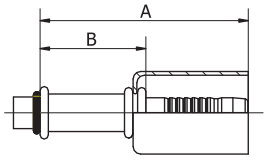
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC18040-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	82,7	55,5	21,5	17
OPC18040-08-08	10	- 08	13/32"	3/4"-18-UNS-2A	96,7	66,5	25,0	22
OPC18040-10-10	12	- 10	1/2"	7/8"-18-UNS-2A	102,2	71,5	30,0	22
OPC18040-12-10	16	- 12	5/8"	7/8"-18-UNS-2A	132,2	100,2	27,0	22

OPC18090

O-RING MALE 90° ELBOW
MACHO O-RING CODO 90°



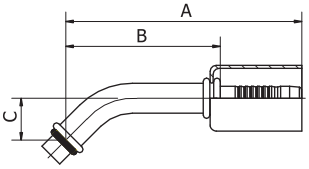
INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	H
OPC18090-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	67,7	40,5	36,5	17
OPC18090-08-08	10	- 08	13/32"	3/4"-18-UNS-2A	78,7	48,5	48,0	22
OPC18090-10-10	12	- 10	1/2"	7/8"-18-UNS-2A	86,7	56,0	54,5	22



OPC27610

STRAIGHT FITTING FOR EXPANSION VALVE
CONEXION RECTA PARA VÁLVULA DE EXPANSIÓN

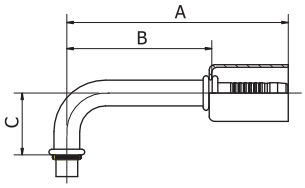
INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	
OPC27610-06-06	8	- 06	5/16"		55,2	28,0	
OPC27610-10-12	12	- 10	1/2"		56,7	26,0	



OPC27640

FITTING FOR EXPANSION VALVE 45° ELBOW
CONEXION PARA VÁLVULA DE EXPANSION CODO 45°

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	C±2
OPC27640-06-06	8	- 06	5/16"		78,7	51,5	14,0
OPC27640-10-12	12	- 10	1/2"		98,7	68,0	18,5
OPC27640-12-12	16	- 12	5/8"		96,2	64,2	18,5



OPC27690

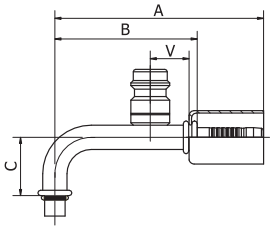
FITTING FOR EXPANSION VALVE 90° ELBOW
CONEXION PARA VÁLVULA DE EXPANSION CODO 90°

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	C±2
OPC27690-06-06	8	- 06	5/16"		85,7	58,5	24,0
OPC27690-10-12	12	- 10	1/2"		94,2	63,5	42,5

SAE J2064 TYPE A

OPC27695

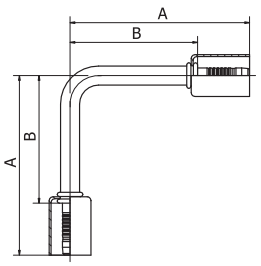
FITTING FOR EXPANSION VALVE
WITH HIGH PRESSURE VALVE 90° ELBOW
CONEXION PARA VÁLVULA DE EXPANSION
CON VÁLVULA DE ALTA PRESION CODO 90°



INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	C±2	V±1
OPC27695-06-06	8	- 06	5/16"		85,7	58,5	24,0	16,0

OPC10090

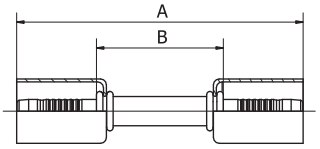
CONNECTION FITTING 90° ELBOW
CONEXION CODO 90°



INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	
OPC10090-06-06	8	- 06	5/16"		94,3	67,1	
OPC10090-08-08	10	- 08	13/32"		93,7	63,5	
OPC10090-10-10	12	- 10	1/2"		98,1	67,4	

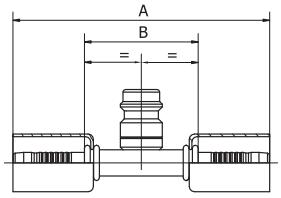
OPC10010

CONNECTION FITTING
CONEXION



INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	
OPC10010-06-06	8	- 06	5/16"		97,4	43,0	
OPC10010-08-08	10	- 08	13/32"		99,4	39,0	
OPC10010-10-10	12	- 10	1/2"		101,4	40,0	
OPC10010-12-12	16	- 12	5/8"		105,4	41,4	

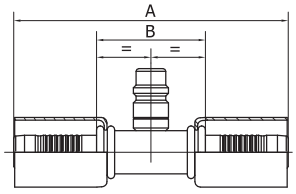
SAE J2064 TYPE A



OPC10015

CONNECTION FITTING WITH HIGH PRESSURE VALVE
CONEXION CON VÁLVULA DE ALTA PRESION

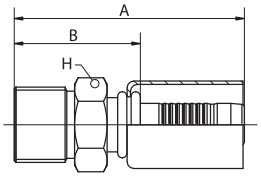
INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	
OPC10015-06-06	8	- 06	5/16"		97,4	43,0	
OPC10015-08-08	10	- 08	13/32"		94,0	33,6	



OPC10016

CONNECTION FITTING WITH LOW PRESSURE VALVE
CONEXION CON VÁLVULA DE BAJA PRESION

INSERT CODE ONLY	HOSE SIZE				DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	
OPC10016-10-10	12	- 10	1/2"		96,0	34,6	
OPC10016-12-12	16	- 12	5/8"		117,9	53,9	



OPC17910

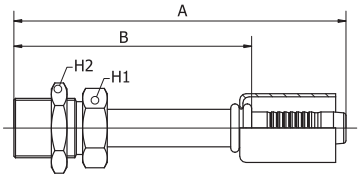
STRAIGHT MALE WITH O-RING SEAT
MACHO RECTO CON O-RING

INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm		
	DN	Dash	Inch		A±2.5	B±2.5	H
NEW OPC17910-06-06	8	- 06	5/16"	5/8"-18-UNF-2A	56,0	28,5	17
OPC17910-10-10	12	- 10	1/2"	7/8"-14-UNF-2A	68,3	33,8	24

SAE J2064 TYPE A

OPC17910...H

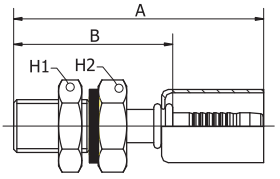
STRAIGHT MALE WITH O-RING SEAT WITH COUNTER NUT
MACHO RECTO PASATABIQUE CON O-RING



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	H2
OPC17910-08-08H25	10	- 08	13/32"	3/4"-16-UNF-2A	106,2	76,0	22	25

OPC17910...H...Q

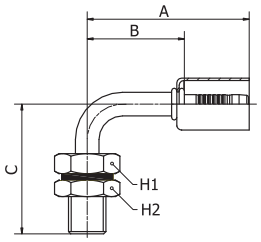
STRAIGHT MALE WITH O-RING SEAT WITH COUNTER NUT AND Q-RING
MACHO RECTO PASATABIQUE CON O-RING Y Q-RING



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm			
	DN	Dash	Inch		A±2.5	B±2.5	H1	H2
OPC17910-06-06H24Q	8	- 06	5/16"	5/8"-18-UNF-2A	75,2	48,0	24	24
OPC17910-10-10H29Q	12	- 10	1/2"	7/8"-14-UNF-2A	82,7	52,0	29	29

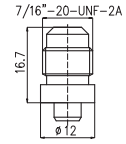
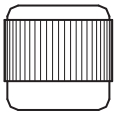
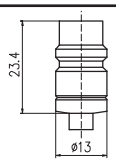
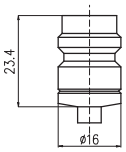
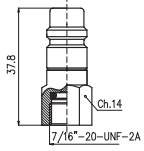
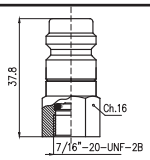
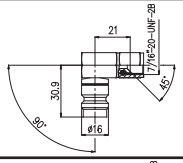
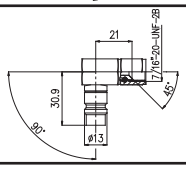
OPC17990...H...Q

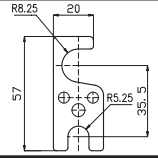
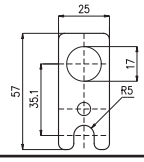
MALE WITH O-RING SEAT WITH COUNTER NUT AND Q-RING 90° ELBOW
CODO MACHO 90° PASATABIQUE CON O-RING Y Q-RING



INSERT CODE ONLY	HOSE SIZE			THREAD	DIMENSIONS mm				
	DN	Dash	Inch		A±2.5	B±2.5	C±21	H1	H2
OPC17990-06-06H24Q	8	- 06	5/16"	5/8"-18-UNF-2A	68,4	41,2	55,0	24	24
OPC17990-10-10H30Q	12	- 10	1/2"	7/8"-14-UNF-2A	85,4	54,7	64,0	29	30

ACCESSORIES

CODE CODIGO	VALVE TYPE TIPO DE VÁLVULA	CHARACTERISTICS CARACTERÍSTICAS	VALVE CORE MECANISMO	CAP TAPA
9000984		**CHARGE VALVE** - 1/4" SAE **FOR R134A** **VÁLVULA DE CARGA** - 1/4" SAE PARA R134A		
9000981		**LOW** PRESSURE CHARGE VALVE **FOR R134A** VÁLVULA DE CARGA DE **BAJA** PRESION PARA R134A		
9000980		**HIGH** PRESSURE CHARGE VALVE **FOR R134A** VÁLVULA DE CARGA DE **ALTA** PRESION PARA R134A		
9000983		**LOW** PRESSURE **VALVE ADAPTER** ADAPTADOR PARA VÁLVULA DE **BAJA** PRESION		
9000982		**HIGH** PRESSURE **VALVE ADAPTER** ADAPTADOR PARA VÁLVULA DE **ALTA** PRESION		
1003326		**90° LOW** PRESSURE **VALVE ADAPTER** 90° ADAPTADOR PARA VÁLVULA DE **BAJA** PRESION		
1004323		**90° HIGH** PRESSURE **VALVE ADAPTER** 90° ADAPTADOR PARA VÁLVULA DE **ALTA** PRESION		

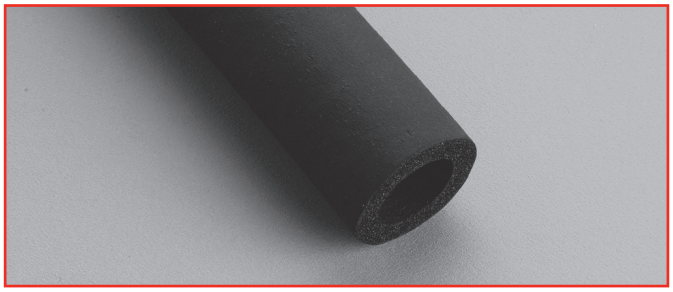
CODE CODIGO	PLATE PLATINA	CHARACTERISTICS CARACTERÍSTICAS
9001181		**PLATE** TO FIX THE TUBE TO THE EXPANSION VALVE **PLATINA** PARA FIJAR EL TUBO A LA VÁLVULA DE EXPANSION
9001182		**PLATE** TO FIX THE TUBE TO THE EXPANSION VALVE **PLATINA** PARA FIJAR EL TUBO A LA VÁLVULA DE EXPANSION

ACCESSORIES

ELASTOMERIC INSULATING SLEEVE
MANGA AISLANTE ELASTOMERICA

CODE CÓDIGO	DESCRIPTION DESCRIPCIÓN	I.D. (mm)	WALL THICKNESS GROSOR DE LA PARED (mm)
9001127	**ARM-D12x6**	12,0	6,0
9001128	**ARM-D14x6**	14,0	6,0
9001133	**ARM-D18x9**	18,0	9,0
9001134	**ARM-D22x9**	22,0	9,0

FURTHER DIMENSIONS AVAILABLE ON REQUEST - OTRAS DIMENSIONES DISPONIBLES A SOLICITUD



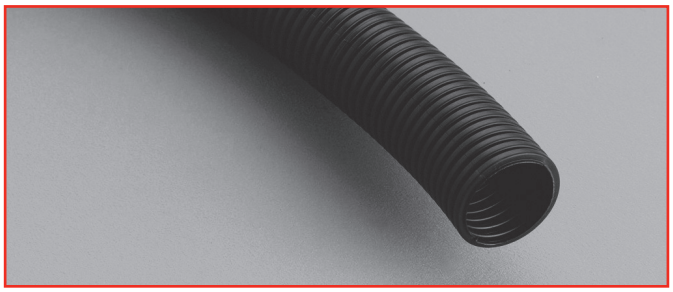
COMPOSITION: Elastomeric foam compounded by synthetic rubber MAIN APPLICATION: Protection to avoid condensation for refrigeration and air conditioning system TECHNICAL DATA: Temperaure resistance -40°C - +105°C

COMPOSICION: Espuma elastomérica a base de caucho sintético PRINCIPAL APLICACIÓN: Protección para evitar condensación
DATOS TÉCNICOS: Resistencia a la temperatura -40°C - +105°C

CORRUGATED TUBE
TUBO CORRUGADO

CODE CÓDIGO	DESCRIPTION DESCRIPCIÓN	I.D. (mm)	WALL THICKNESS GROSOR DE LA PARED (mm)
2009051	**DN17 SLITTED**	16,8	1,8
2007947	**DN19 SLITTED**	19,4	2,0
2008438	**DN22 SLITTED**	21,8	1,7
2009064	**DN23 SLITTED**	23,7	2,0

FURTHER DIMENSIONS AVAILABLE ON REQUEST - OTRAS DIMENSIONES DISPONIBLES A SOLICITUD



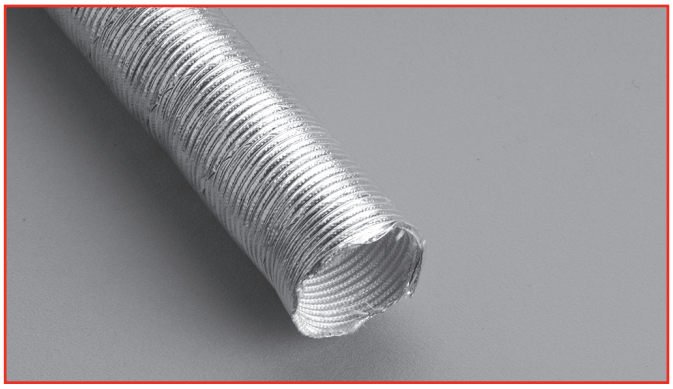
COMPOSITION: Modified polypropilen MAIN APPLICATION: Abrasion resistance

COMPOSICION: Polipropileno modificado PRINCIPAL APLICACIÓN: Resistencia a la abrasión

SLEEVE FOR PROTECTION FROM RADIANT HEAT
MANGA DE PROTECCION DEL CALOR POR RADIACION

CODE CÓDIGO	DESCRIPTION DESCRIPCIÓN	I.D. (mm)	WALL THICKNESS GROSOR DE LA PARED (mm)
2001265	**WEST-SR-D20**	20,0	1,4
2001266	**WEST-SR-D24**	24,5	1,4
9001267	**WEST-SR-D26**	26,5	1,5
9007095	**WEST-SR-D28**	28,0	1,5
9007156	**WEST-SR-D30**	30,0	1,6
9007096	**WEST-SR-D32**	32,0	1,6
9007154	**WEST-SR-D34**	34,0	1,6

FURTHER DIMENSIONS AVAILABLE ON REQUEST - OTRAS DIMENSIONES DISPONIBLES A SOLICITUD



COMPOSITION: Inner layer: glassfabbric material laminated on aluminium - Outer layer: aluminium alloy
MAIN APPLICATION: Protection against heat radiation sources for A/C hose assemblies TECHNICAL DATA: Temperaure resistance -40°C - +250°C

COMPOSICION: Cubierta interior: fibra de vidrio laminado en aluminio Cubierta exterior: aleación de aluminio
PRINCIPAL APLICACIÓN: Protección contra el calor por radiacion DATOS TÉCNICOS: Resistencia a la temperatura -40°C - +250°C

PLASTIC PROTECTIVE COIL SPRING
PROTECCIÓN BE MANGUERAS

CODE CÓDIGO	DESCRIPTION DESCRIPCIÓN	I.D. (mm)	WALL THICKNESS GROSOR DE LA PARED (mm)
JP12B03016I099	**HT PROTECTION SPRING DN16**	16,0	1,8
JP12B03019I099	**HT PROTECTION SPRING DN19**	19,0	2,3

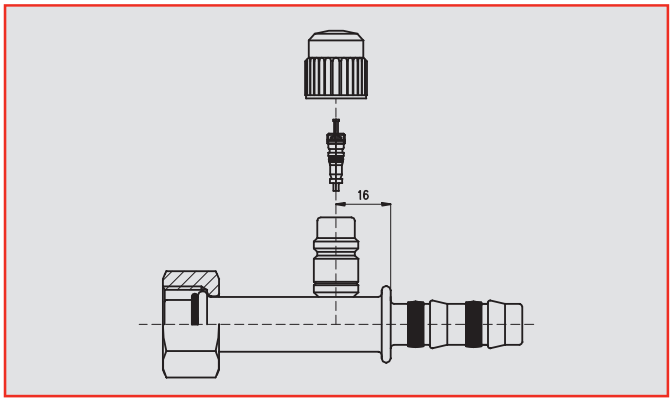
FURTHER DIMENSIONS AVAILABLE ON REQUEST - OTRAS DIMENSIONES DISPONIBLES A SOLICITUD



COMPOSITION: Black polyammide, rounded profile MAIN APPLICATION: Hose abrasion protection TECHNICAL DATA: Service Temperaure range -40°C - +120°C

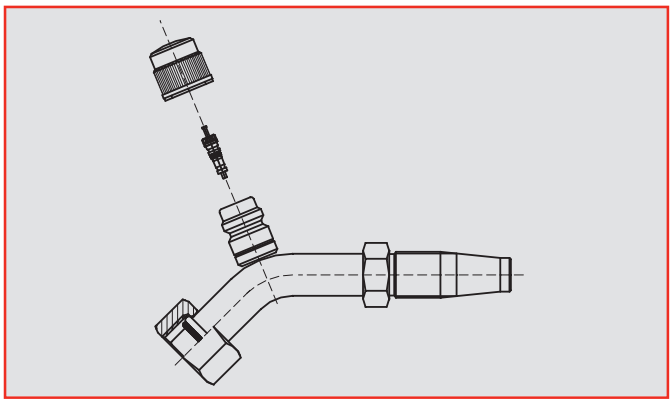
COMPOSICION: Poliamida negro, perfil redondeado PRINCIPAL APLICACIÓN: Protección contra abrasión tubos y conducción múltiple DATOS TÉCNICOS: Temperatura de servicio -40°C - +120°C

SPECIAL FEATURES



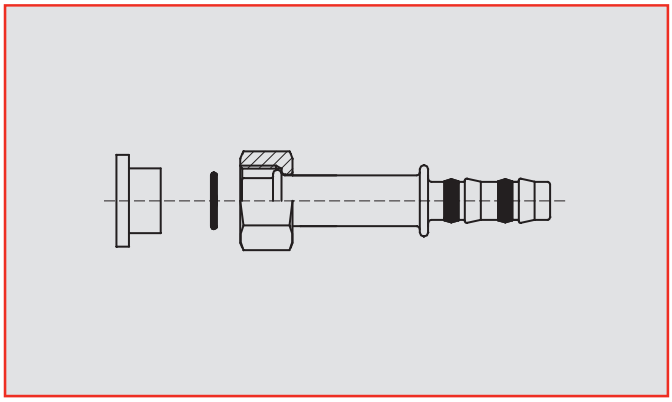
All fittings may be supplied with a charge valve equipped with cap and core positioned at 16 mm.

Todos los acoples/racores pueden ser suministrados con una válvula de carga equipada con tapa y mecanismo posicionada a 16 mm.



Different distances according to customer's request are feasible.

Distancias diferentes de acuerdo con las solicitudes del cliente.



All fittings are equipped with protection cap and (where needed) a green HNBR O-ring.

Todos los racores con piloto están equipados con un tapón de protección y un O-ring en HNBR de color verde.

ASSEMBLING MACHINES



ASSEMBLING MACHINES

INTRODUCTION

Manuli assembling machines are part of the complete product range and are designed according to high quality standards and optimised through the long Manuli experience in the hydraulic market.
Manuli assembling machines are recommended for high performance and safe hose assembling procedure.
Assembling machines are tested and approved with laboratory testing and field validated.
The Index (next page) offers a guideline to select the proper machine with reference to the applications and performance requested.
Manuli assembling machines catalogue is available in a specific publication and on Manuli web site.
Special machines not included in the present catalogue are available upon request, as well as the original spare parts.



Las máquinas ensambladoras son parte de un paquete integral ofrecido da Manuli, diseñadas y fabricadas acorde a los más altos estándares de calidad para asegurar un óptimo desempeño y seguridad para el operario en cumplimiento con las normas EC.
El uso de las máquinas ensambladoras Manuli es recomendado en un procedimiento adecuado de ensamble de mangueras, en concordancia con las instrucciones de los ensambles Manuli considerando aspectos de seguridad y requerimientos de la alta calidad de los conectores de fluidos.
Las máquinas son probadas y validadas en el campo con pruebas en el laboratorio.
El VISUAL INDEX ofrece una guía para la selección de la máquina adecuada para el uso específico requerido; de hecho la operación de un ensamble correcto está estrictamente asociada con las máquinas y el herramental utilizado.
El catálogo de máquinas ensambladoras se puede consiguer on line.
Máquinas especiales no incluidas en este catálogo están disponibles bajo pedido así como los repuestos originales.

ASSEMBLING MACHINES

INDEX

CRIMPING MACHINES MÁQUINAS DE PRENSAR

MODEL	MACHINE TYPE	APPLICATION SECTOR	INDICATIVE CAPACITY	MACHINE PERFORMANCE
MHP80	hand pump, portable	on-site repair	2wb: 1″ max. ▪ 4ws: 1/2″ max.	manual machine for small sizes
MHP137	hand pump, portable	on-site repair	2wb: 1.1/4″ max. ▪ 4ws: 1.1/4″ max.	manual machine for small/medium sizes
MB120	benchtop	after market service	2wb: 1.1/4″ max. ▪ 4ws: 1″ max.	medium crimping force, small/medium sizes, limited productivity
MB137	benchtop	after market service	2wb: 1.1/4″ max. ▪ 4ws: 1.1/4″ max.	medium crimping force, small/medium sizes, limited productivity
MB137S	benchtop	after market service	2wb: 1.1/4″ max. ▪ 4ws: 1.1/4″ max.	medium crimping force, small/medium sizes, medium productivity
MB207	benchtop	after market service	2wb: 1.1/2″ max. ▪ 4ws: 1.1/4″ max. ▪ 6ws: 1″ max.	medium crimping force, medium productivity
MB240	benchtop	after market service	2wb: 2″ max. ▪ 4ws: 2″ max. ▪ 6ws: 1″ max.	medium crimping force, medium productivity
MB263	benchtop	after market service	2wb: 3″ max. ▪ 4ws: 2″ max. ▪ 6ws: 1.1/2″ max.	high crimping force, medium productivity, large size OK
MB340	benchtop	after market service	2wb: 3″ max. ▪ 4ws: 2″ max. ▪ 6ws: 2″ max.	high crimping force, medium productivity, large size OK
MV137	for mobile van	on-site repair mobile van	2wb: 1.1/4″ max. ▪ 4ws: 1.1/4″ max.	medium crimping force, limited productivity
MV240	for mobile van	on-site repair mobile van	2wb: 2″ max. ▪ 4ws: 2″ max. ▪ 6ws: 1″ max.	medium crimping force, limited productivity
MS140	stand-type	assembling production unit	2wb: 1.1/4″ max. ▪ 4ws: 1.1/4″ max.	medium crimping force, high productivity
MS280	stand-type	assembling production unit	2wb: 3″ max. ▪ 4ws: 2″ max. ▪ 6ws: 2″ max.	high crimping force, high productivity, large size OK
MS320	stand-type	assembling production unit	2wb: 3″ max. ▪ 4ws: 2″ max. ▪ 6ws: 2″ max.	high crimping force, high productivity, large size OK
MS400	stand-type	assembling production unit	2wb: 3″ max. ▪ 4ws: 3″ max. ▪ 6ws: 3″ max.	very high crimping force, high productivity, very large opening

CUTTING MACHINES MÁQUINAS DE CORTAR

MODEL	MACHINE TYPE	APPLICATION SECTOR	INDICATIVE CAPACITY	MACHINE PERFORMANCE
M22 CUT	benchtop	after market service	2wb: 1.1/4″ max. ▪ 4ws: 1″ max.	medium size capacity
M30 CUT	benchtop	after market service	2wb: 2″ max. ▪ 4ws: 2″ max.	wide hose range capacity
M75 CUT	stand-type	production unit	2wb: 3″ max. ▪ 4ws: 2″ max. ▪ 6ws: 2″ max.	whole hose range capacity
M90 CUT	stand-type	production unit	2wb: 3″ max. ▪ 4ws: 3″ max. ▪ 6ws: 3″ max.	whole hose range capacity

SKIVING MACHINES MÁQUINAS DE PELAR

MODEL	MACHINE TYPE	APPLICATION SECTOR	INDICATIVE CAPACITY	MACHINE PERFORMANCE
M50 SKY	benchtop	after market service	2wb: 2″ max. ▪ 4ws: 2″ max.	wide hose range capacity
M205 SKY	stand-type	production unit	2wb: 2″ max. ▪ 4ws: 2″ max. ▪ 6ws: 3″ max.	whole hose range capacity

INSERT PUSHING MACHINES MÁQUINAS DE INSERTAR

MODEL	MACHINE TYPE	APPLICATION SECTOR	INDICATIVE CAPACITY	MACHINE PERFORMANCE
M1500 INS	benchtop	production unit	2wb: 2″ max. ▪ 4ws: 2″ max. ▪ 6ws: 2″ max.	whole hose range capacity

PRESSURE TEST MACHINES BANCOS DE PRUEBA

MODEL	MACHINE TYPE	APPLICATION SECTOR	INDICATIVE CAPACITY	MACHINE PERFORMANCE
MTB1500	stand-type	after market service	2wb: 2″ max. ▪ 4ws: 2″ max. ▪ 6ws: 2″ max.	wide hose range capacity
MTB2500	stand-type	after market service	2wb: 2″ max. ▪ 4ws: 2″ max. ▪ 6ws: 2″ max.	wide hose range capacity

ASSEMBLING MACHINES

INDEX

CRIMPING MACHINES MÁQUINAS DE PRENSAR

MODEL	CRIMPING FORCE	N° OF CRIMPING PER HOUR	MAX CRIMPING DIAMETER		OPENING WITH DIES (DIE DIAMETER)		MASTER DIE LENGHT		N° STD. KIT OF DIE SETS	MOTOR	VOLTAGES	DIMENSIONS (L x W x H)		WEIGHT	
	T		mm	inch	mm	inch	mm	inch		kW		mm	inch	kg	lbs
MHP80	80	n/a	43	1,693	+20	+0,787	56	2,205	-	n/a	n/a	330 x 250 x 400	13" x 10" x 16"	28	60
MHP137	137	n/a	56	2,205	+18	+0,709	60	2,362	6	n/a	n/a	480 x 250 x 340	19" x 10" x 13"	55	120
MB120	120	450	56	2,205	+18	+0,709	60	2,362	6	2,2	400V 3ph, 220V 1ph/3ph	605 x 600 x 650	24" x 24" x 26"	95	210
MB137	137	450	56	2,205	+28	+1,102	75	2,952	10	2,2	400V 3ph, 220V 1ph/3ph	605 x 600 x 650	24" x 24" x 26"	100	220
MB137S	137	850	56	2,205	+28	+1,102	75	2,952	10	3	400V 3ph, 220V 3ph/1ph	1130 x 670 x 1200	45" x 26" x 47"	130	290
MB207	207	625	63	2,48	+38	+1,496	100	3,937	10	3	400V 3ph, 220V 3ph/1ph	1130 x 670 x 1200	45" x 26" x 47"	190	418
MB240	240	625	76	2,992	+38	+1,496	100	3,937	12	4	400V 3ph, 220V 3ph/1ph	1130 x 670 x 1200	45" x 26" x 47"	190	418
MB263	263	850	130	5,118	+52	+2,047	125	4,921	13	5,5	400V 3ph, 220V 3ph/1ph	1130 x 670 x 1200	45" x 26" x 47"	280	616
MB340	340	850	130	5,118	+38	+1,496	125	4,921	13	5,5	400V 3ph, 220V 3ph/1ph	1130 x 670 x 1200	45" x 26" x 47"	280	616
MV137	137	n/a	56	2,205	+28	+1,102	75	2,952	10	2	12V dc, 24V dc	480 x 370 x 450	19" x 15" x 18"	75	165
MV240	240	n/a	76	2,992	+38	+1,496	100	3,937	12	2	12V dc, 24V dc	500 x 400 x 580	19" x 16" x 23"	125	275
MS140	140	2100	56	2,205	+45	+1,772	80	3,149	10	5,5	400V 3ph, 220V 3ph	890 x 810 x 1390	35" x 32" x 55"	675	1485
MS280	280	1850	130	5,118	+70	+2,756	100	3,937	13	5,5	400V 3ph, 220V 3ph	1060 x 865 x 1500	41" x 34" x 60"	1300	2860
MS320	320	1600	130	5,118	+80	+3,149	100	3,937	13	5,5	400V 3ph, 220V 3ph	1060 x 865 x 1500	41" x 34" x 60"	1330	2900
MS400	400	1400	160	6,299	+85	+3,346	125	4,921	13	5,5	400V 3ph, 220V 3ph	1260 x 930 x 1690	50" x 37" x 77"	2000	4400

CUTTING MACHINES MÁQUINAS DE CORTAR

MODEL	SPEED ROTATION	BLADE DIAMETER		MAX OD OF HOSE		MOTOR	VOLTAGES	DIMENSIONS (L x W x H)		WEIGHT	
	rpm	mm	inch	mm	inch	kW		mm	inch	kg	lbs
M22 CUT	3000	300	11,81	50	2	2,2	400V 3ph, 220V 3ph	500 x 520 x 650	20" x 20" x 25"	36	79
M30 CUT	3000	300	11,81	85	3,350	3	400V 3ph, 220V 3ph	650 x 420 x 700	25" x 16" x 27"	57	125
M75 CUT	3000	520	20,470	125	5	7,5	400V 3ph, 220V 3ph	910 x 820 x 1280	36" x 32" x 50"	215	474
M90 CUT	3000	520	20,470	125	5	9	400V 3ph, 220V 3ph	1000 x 1060 x 1350	39" x 42" x 53"	260	573

SKIVING MACHINES MÁQUINAS DE PELAR

MODEL	SPEED ROTATION	MOTOR	VOLTAGES	DIMENSIONS (L x W x H)		WEIGHT	
	rpm	kW		mm	inch	kg	lbs
M50 SKY	100	0,25	400V 3ph, 220V 3ph	500 x 660 x 360	20" x 26" x 14"	45	100
M205 SKY	205	0,75	400V 3ph, 220V 3ph	1130 x 580 x 550	44" x 23" x 22"	130	287

INSERT PUSHING MACHINES MÁQUINAS DE INSERTAR

MODEL	PUSH FORCE ON THE FITTING	HOSE CLAMPING	MAXIMUM OD OF HOSE		DIMENSIONS (L x W x H)		WEIGHT	
	psi	psi	mm	inch	mm	inch	kg	lbs
M1500 INS	1500 kgf (1500 daN)	550 kgf (550 daN)	73	3"	750 x 660 x 300	30" x 26" x 12"	70	155

PRESSURE TEST MACHINES BANCOS DE PRUEBA

MODEL	MAXIMUM PRESSURE	CONNECTION DIAMETER	MAXIMUM AIR INPUT	DIMENSIONS (L x W x H)		WEIGHT	
	psi	bsp	psi	mm	inch	kg	lbs
MTB1500	21755	3/8"	116	2500 x 800 x 1050	98" x 31" x 41"	175	385
MTB2500	36259	3/8"	116	2500 x 800 x 1050	98" x 31" x 41"	175	385

WARRANTY

Manuli® products have to be assembled strictly in accordance with Manuli® instructions and limitations.

DON'T MIX AND MATCH: use always Manuli® original couplings and hoses.

Manuli® hose, couplings and assembling machines are tested as an effective and reliable system, the use of different products and machines may cause premature hose failures, property damages, serious injury or death.

MANULI® DISCLAIMS ANY WARRANTIES, EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY LOSS OR DAMAGE, WHETHER DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL WHICH MIGHT ARISE OUT OF CRIMPED HOSE ASSEMBLIES NOT PRODUCED FROM GENUINE MANULI® HOSE FITTINGS, HOSE AND EQUIPMENT, IN CONFORMANCE WITH MANULI® PROCESS SPECIFICATIONS FOR EACH SPECIFIC HOSE ASSEMBLY.

Manuli® assembling informations chart is the only official guide to select proper hose and fittings combinations and determine crimping compatibility.

Los productos Manuli® son parte de un sistema de ingeniería, los cuales deben ser ensamblados y usados siguiendo is instrucciones estrictas de Manuli®.

No mezcle y combine: use siempre mangueras y conexiones originales Manuli®.

Las mangueras, conexiones y máquinas de prensado están probadas como un sistema de ensamble seguro y efectivo y el uso con otros productos y/o maquinas de crimpado o grafado quizá produzca ensambles fuera del comportamiento especificado. Procure seguir siempre cualquier instrucción o limitación de Manuli®, el no hacerlo podría causar fallas en el ensamble, reportando daños, lesiones o muerte.

La garantía aplicará solo si el consumidor o usuario final usa manguera, conexiones, componentes de manguera, y equipo de crimpado debidamente probado y especificado por Manuli®.

MANULI® RECHAZA CUALQUIER GARANTIA, EXPLICITA O IMPLICITA Y NO ASUME RESPONSABILIDAD ALGUNA POR PERDIDA O DAÑO YA SEA DIRECTO, INDIRECTO, CONCECUENCIAL O ACCIDENTAL DEBIDO A ENSAMBLES FUERA DE ESPECIFICACIONES Y EVIDENTEMENTE NO PRODUCIDOS CON MANGUERAS, CONEXIONES Y EQUIPO DE ENSAMBLE MANULI®.

La compatibilidad de mangueras y conexiones descritas en este catálogo es solamente para tomarse como referencia. La tabla de instrucciones de prensado es la guía oficial para una apropiada selección de manguera y conexión, determinando la compatibilidad entre manguera y conexión.

HOSE PROTECTIONS



manuli® RUBBER INDUSTRIES

HOSE PROTECTIONS PRODUCT RANGE

GAMA DE TUBOS FLEXIBLES DE PROTECCIÓN

Manuli Rubber Industries, thanks to its experience in the hydraulic fluid connectors sector, has developed a strong, easy to install, and high-tech hose protections range for hoses and piping.

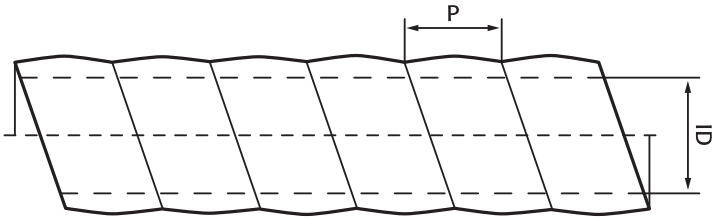
Manuli hose protections are dedicated to heavy demanding applications and when the environment and safety policies are key factors to prevent injury, fluid jetting, abrasion or hose bundling. Hose protections reduce downtime and maintenance cost. The range meets all safety requirements of international specifications such as ISO, EN and SAE.

Manuli hose protections successful performances are the results of a severe material selection, technological and design studies, as well as laboratory tests. In particular, high-tech polyamide material is recommended for the most severe applications, assuring outstanding performance in flexibility, abrasion temperature and environment agents resistance.

Manuli Rubber Industries, gracias a su experiencia en el sector de los conectores de fluidos hidráulicos, ha desarrollado una gama de potentes tubos flexibles de protección de alta tecnología y fácil instalación para tubos y conducciones.

Los tubos flexibles de protección Manuli están pensados en difíciles aplicaciones y cuando el ambiente y las políticas de seguridad son factores clave para prevenir accidentes, salidas a chorro de fluidos, abrasión o conducción múltiple. La gama cumple con la normativa internacional como ISO, EN y SAE.

El alto rendimiento de los tubos flexibles de protección Manuli es el resultado de una rígida selección de material, estudios tecnológicos y de diseño y de pruebas en laboratorio. En particular, el material de poliamida de alta tecnología está recomendado en las más rígidas aplicaciones ya que asegura un rendimiento sobresaliente en cuanto a flexibilidad, temperatura de abrasión y resistencia a los agentes medioambientales. Los tubos flexibles de protección reducen el coste de mantenimiento y el tiempo de inactividad.



How to calculate quantity of protection spring:

L = (Hose OD / Spring ID) x (length of hose to be covered)

Cómo calcular la cantidad de muelle de protección:

L = (Tubo OD / Muelle ID) x (longitude del tubo a cubrir)

Manuli hose protections range includes the following product lines:

PROTECTION SPRINGS - PS

- black or yellow polyethylene, basic line spring guard
- service temperature: -40°C to +90°C; -40°F to +194°F
- recommended to protect hoses from abrasions and wearing with external parts in construction, agriculture and forestry machineries applications

MINING PROTECTION SPRINGS - MPS

- black with red lines, thermoplastic spring guard, MSHA (flame retardant) and FRAS (electrical antistaticity) approved
- service temperature: -40°C to +90°C; -40°F to +194°F
- recommended for severe mining applications, for both hose bundling and protections when high abrasion and tough environment condition resistance are requested

Los tubos flexibles de protección Manuli incluyen las siguientes líneas de producto:

MUELLES DE PROTECCIÓN - PS

- polietileno negro o amarillo, línea básica de guarnición de muelle
- temperatura de servicio: -40°C a +90°C; -40°F a +194°F
- recomendado para proteger los tubos flexibles de abrasiones y desgaste con partes externas en construcción, agricultura y aplicaciones en maquinaria de ingeniería forestal

PROTECCIÓN MUELLES MINERÍA - MPS

- negros con líneas rojas, guarnición muelle termoplástico, MSHA (ignición lenta) y con acreditación FRAS (antiestático)
- temperatura de servicio: -40°C a +90°C; -40°F a +194°F
- recomendado para severas aplicaciones de minería, para conducción múltiple y protecciones cuando se requiere una alta resistencia a la abrasión y a duras condiciones medioambientales

HOSE PROTECTIONS PRODUCT RANGE

GAMA DE TUBOS FLEXIBLES DE PROTECCIÓN

HT PROTECTION SPRINGS - HTPS

- black polyamide, high temperature line spring guard
- service temperature: -40°C to +120°C; -40°F to +248°F
- recommended for hoses proximity to hot surface when long durability, high temperature environment, flexibility and high abrasion resistance are requested

TEXTILE SLEEVES - TSL

- black polyester, high abrasion resistance textile sleeve
- service temperature: -50°C to +100°C; -58°F to +212°F; temperature peaks up to +140°C / +284°F
- recommended to protect the working environment from sudden fluid jetting (jetting energy breaking) of the hydraulic hose and the hose from abrasion

FIRE SLEEVES - FSL

- orange silicon sleeve with one braid of glass fibers
- service temperature: -60°C to + 260°C; -76°F to + 500°F
- recommended for hydraulic hose applications suffering for very high temperature sources and thermal irradiation such as siderurgy, foundries, glassworks, railways industries.

In order to complete the offer, Manuli suggest also a textile clinch strap, a very useful tool for hose bundling and support to hang to the machine. The clinch strap is recommended for difficult and long hose assemblies installation applications, such as drilling machines, when protection from dangerous hose damage is requested.

For MRI sales conditions please refer to Fluid Connectors Product Range catalogue.

HT MUELLES PROTECCIÓN - HTPS

- poliamida negra, línea de alta temperatura guarnición muelle
- temperatura de servicio: -40°C a +120°C; -40°F a +248°F
- recomendado cuando se necesita duración en el tiempo, ambiente de alta temperatura, flexibilidad y alta resistencia a la abrasión

MANGUITOS TEXTILES - TSL

- manguito textil de poliéster negro, de alta resistencia a la abrasión
- temperatura de servicio: -50°C a +100°C; -58°F a +212°F; picos de temperatura hasta +140°C / +248°F
- recomendado para proteger el ambiente de trabajo de repentinas salidas a chorro de fluidos (jetting energy breaking) de tubos hidráulicos y de la abrasión

MANGUITOS IGNÍFUGOS - FSL

- manguito de silicona naranja con un trenzado de fibra de vidrio
- temperatura de servicio: -60°C a +260°C; -76°F a +500°F
- recomendado para aplicación en tubos hidráulicos expuestos a fuentes de altísimas temperaturas e irradiación termica como fundiciones, fábricas de vidrio, industria del ferrocarril.

Para completar y enriquecer la protección de tubos flexibles ofrecida, Manuli sugiere también un gancho de banda, una herramienta muy útil para la conducción múltiple y apoyo al enganche a la máquina. Se recomienda el paso para instalación de ensamblaje de tubos flexibles difíciles y largos como máquinas de perforar cuando se existe riesgo de daño a los tubos.

Para las condiciones de venta de MRI, por favor vea el catálogo de la Gama de Productos Fluid Connectors.



Manuli products range offers an integrated and complete hose and connectors package.

La gama de productos Manuli ofrece un paquete completo de mangueras y conexiones.

HOSE PROTECTIONS SUMMARY

SUMARIO TUBOS DE PROTECCIÓN

PRODUCT LINE TYPE TIPO DE LÍNEA DE PRODUCTO	**KEY FEATURES** / CARACTERÍSTICAS CLAVE					
	Material Material	**Size (mm)** Tamaño (mm)	**Colour** Color	**Temperature range** Banda temperatura	**Specifications** Particularidades	**Key properties** Propiedades clave
PROTECTION SPRING **PS**	polyethilene	9 - 84	black or yellow	min -40 °C max +90 °C	Manuli design	high flexibility, high abrasion resistance
MINING PROTECTION SPRING **MPS**	polyethilene (antistatic)	12 - 84	black with 2 red lines	min -40 °C max +90 °C	Manuli design MSHA FRAS ISO 6805	high abrasion resistance, flame retardant and antistatic properties
HT PROTECTION SPRING **HTPS**	polyammide	10 - 60	black	min. -40 °C max +120 °C	Manuli design	high temperature and abrasion resistance, very high flexibility
TEXTILE SLEEVE **TSL**	polyester fibers	18 - 110	black	min. -50 °C max +100 °C peaks +140 °C	Manuli design MSHA FRAS MDG41	fluid energy diffusion, anti abrasive, flame retardant and antistatic properities
FIRE SLEEVE **FSL**	silicon sleeve with fiber glass braid	13 - 76	orange	min. -60 °C max +260 °C peaks +1500 °C	Manuli design NFF16-101 and P92-507 (class FO and M2)	extreme heat resistance, extreme flexibility at low temperature
TEXTILE CLINCH STRAP **TCS**	polyester fibers	400 - 1500	black	min. -50 °C max +100 °C	Manuli design MSHA FRAS	flame retardant and antistatic properties

PART NUMBERING SYSTEM

SISTEMA DE REFERENCIAS

DIGIT "0" DÍGITO "0"



J **Accessories** / Accesorios

DIGIT "1" DÍGITO "1"



P **Protection** / Protección

DIGIT "2" DÍGITO "2"



The number stated in this position indicates the protection type:
El número establecido en esta posición indica el tipo de protección:

1 **Spring** / Muelle
2 **Sleeve** / Manguito
3 **Clinch** / Gancho

DIGIT "3" DÍGITO "3"



The number stated in this position indicates the material:
El número establecido en esta posición indica el material:

1 **Polyethilene** / Polietileno
2 **Polyammide** / Poliamida
3 **Polyester** / Poliéster
4 **Silicone** / Silicona

DIGIT "4" DÍGITO "4"



The letter stated in this position indicates the color:
La letra establecida en esta posición indica el color:

B **Black** / Negro
Y **Yellow** / Amarillo
A **Orange** / Naranja

DIGIT "5"-"6" DÍGITO "5"-"6"



The numbers stated in these positions indicate the product family:
Los números establecidos en estas posiciones indican la familia del producto:

01 **Protection spring** / Protección muelle
02 **Mining protection spring** / Protección muelle minería
03 **HT protection spring** / HT protección muelle
04 **Flat protection spring** / Protección muelle lisa
05 **Fire sleeve** / Manguito ignífugo
06 **Textile sleeve** / Manguito textil
10 **Textile clinch strap** / Banda enganche textil

DIGIT "7"-"8"-"9" DÍGITO "7"-"8"-"9"



The numbers stated in these positions indicate the inside diameter in mm.
Los números establecidos en estas posiciones indicant el diámetro interior en mm.

DIGIT "10"-"11"-"12"-"13" DÍGITO "10"-"11"-"12"-"13"



Branding and package information / Marcado e información paquete
Some letters in any position of the last four digits are used to describe different branding, packaging.
Algunas letras en cualquier posición de los últimos cuatro dígitos se usan para describir diferentes marcados envasado.

Branding information / Información marcado

E **Embossed** / Relieve
I **Ink-jet** / Chorro-tinta
T **Textile** / Textil

Package information / Información envasado

0 **Box** / Caja

Branding / Marcado

99 **Standard** / Estándar

PS

PROTECTION SPRING

STANDARD PART. REF. (*)	INSIDE DIAMETER (ID)		OUTER DIAMETER (OD)		WALL THICKNESS		BAND WIDTH (pitch P)		WRAPPING RANGE		WEIGHT		STD. PACK TOTAL LENGTH	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	g/m	lb/ft	m	ft
JP11B01009E099	9,0	0,35	13,0	0,51	2,00	0,079	11,0	0,43	9-13	0,35-0,51	50	0,03	20	66
JP11B01012E099	12,0	0,47	16,5	0,65	2,25	0,089	13,0	0,51	12-17	0,47-0,67	60	0,04	20	66
JP11B01015E099	15,0	0,59	20,0	0,79	2,50	0,098	15,5	0,61	15-22	0,59-0,87	90	0,06	20	66
JP11B01019E099	19,0	0,75	24,5	0,96	2,75	0,108	19,0	0,75	19-28	0,75-1,10	150	0,10	20	66
JP11B01023E099	23,0	0,91	30,0	1,18	3,50	0,138	23,0	0,91	23-33	0,91-1,30	225	0,15	20	66
JP11B01031E099	30,5	1,20	39,0	1,54	4,25	0,167	29,0	1,14	30-44	1,20-1,73	350	0,24	20	66
JP11B01038E099	38,0	1,50	46,5	1,83	4,25	0,167	36,0	1,42	38-65	1,50-2,56	400	0,27	20	66
JP11B01047E099	47,0	1,85	58,0	2,28	5,50	0,217	39,5	1,56	47-70	1,85-2,76	600	0,40	20	66
JP11B01061E099	61,0	2,40	73,0	2,87	6,00	0,236	44,0	1,73	61-90	2,40-3,54	950	0,64	20	66
JP11B01071E099	70,5	2,78	84,5	3,33	7,00	0,276	51,0	2,01	70-150	2,78-5,90	1150	0,77	20	66
JP11B01084E099	84,0	3,31	99,0	3,90	7,50	0,295	56,0	2,20	84-200	3,31-7,87	1500	1,01	10	33

* Colours available: black (5th digit "B"), yellow (5th digit "Y")
Colores disponibles: negro (5º dígito "B"), amarillo (5º dígito "Y")

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

▪ High flexibility ▪ High abrasion resistance ▪ Water, oils, fuel and hydraulic fluids resistance ▪ Easy to install, no clamps needed ▪ High ozone and external agents resistance

▪ Alta flexibilidad ▪ Alta resistencia a la abrasión ▪ Resistencia al agua, aceites, gasóleo y fluidos hidráulicos ▪ Fácil de instalar, no se necesitan abrazaderas ▪ Alta resistencia al ozono y a agentes externos

MAIN APPLICATIONS
Hose abrasion protection and hose bundling.

MATERIAL
High density black polyethilene, rounded profile. Available in black or yellow colour.

SERVICE TEMPERATURE RANGE
-40°C to +90°C / -40°F to +194°F

APPLICABLE SPECIFICATIONS
Manuli design.

MANULI BRAND
Embossed.

PRINCIPALES APLICACIONES
Protección contra abrasion tubos y conducción múltiple.

MATERIAL
Polietileno negro alta densidad, perfil redondeado. Disponible en los colores negro y amarillo.

GAMA TEMPERATURA SERVICIO
-40°C a +90°C / -40°F a +194°F

PARTICULARIDADES APLICABLES
Diseño Manuli.

MARCA MANULI
Relieve.



MPS

MINING PROTECTION SPRING

STANDARD PART. REF.	INSIDE DIAMETER (ID)		OUTER DIAMETER (OD)		WALL THICKNESS		BAND WIDTH (pitch P)		WRAPPING RANGE		WEIGHT		STD. PACK TOTAL LENGTH	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	g/m	lb/ft	m	ft
JP11B02012E099	12,0	0,47	16,5	0,65	2,25	0,089	13,0	0,51	12-17	0,47-0,67	60	0,04	20	66
JP11B02015E099	15,0	0,59	20,0	0,79	2,50	0,098	15,5	0,61	15-22	0,59-0,87	90	0,06	20	66
JP11B02019E099	19,0	0,75	24,5	0,96	2,75	0,108	19,0	0,75	19-28	0,75-1,10	150	0,10	20	66
JP11B02023E099	23,0	0,91	30,0	1,18	3,50	0,138	23,0	0,91	23-33	0,91-1,30	225	0,15	20	66
JP11B02031E099	30,5	1,20	39,0	1,54	4,25	0,167	29,0	1,14	30-44	1,20-1,73	350	0,24	20	66
JP11B02038E099	38,0	1,50	46,5	1,83	4,25	0,167	36,0	1,42	38-65	1,50-2,56	400	0,27	20	66
JP11B02047E099	47,0	1,85	58,0	2,28	5,50	0,217	39,5	1,56	47-70	1,85-2,76	600	0,40	20	66
JP11B02061E099	61,0	2,40	73,0	2,87	6,00	0,236	44,0	1,73	61-90	2,40-3,54	950	0,64	20	66
JP11B02071E099	70,5	2,78	84,5	3,33	7,00	0,276	51,0	2,01	70-150	2,78-5,90	1150	0,77	20	66
JP11B02084E099	84,0	3,31	99,0	3,90	7,50	0,295	56,0	2,20	84-200	3,31-7,87	1500	1,01	10	33

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

▪ Flame retardant and electrical antistaticity properties ▪ High flexibility ▪ High abrasion resistance ▪ Water, oils, fuel and hydraulic fluids resistance ▪ Easy to install, no clamps needed ▪ High visibility in field thanks to red central lines

▪ Ignición retardada y propiedades electricidad antiestática ▪ Alta flexibilidad ▪ Alta resistencia a la abrasión ▪ Resistencia al agua, aceite y fluidos hidráulicos ▪ Fácil de instalar, no se necesitan abrazaderas ▪ Alta visibilidad en campo gracias a las líneas rojas centrales

MAIN APPLICATIONS
Hose abrasion protection and hose bundling in mining applications.

MATERIAL
High density black polyethilene (antistatic) with red lines, rounded profile.

SERVICE TEMPERATURE RANGE
-40°C to +90°C / -40°F to +194°F

APPLICABLE SPECIFICATIONS
MSHA, FRAS (flame retardant and antistatic - Australian mines), ISO 6805, Polish Safety "B" (in progress), BCS 174 (in progress), MA (Chinese mining approval in progress).

MANULI BRAND
Embossed.

PRINCIPALES APLICACIONES
Protección contra abrasión tubos y conducción múltiple.

MATERIAL
Polietileno negro alta densidad (antiestático) con líneas rojas, perfil redondeado.

GAMA TEMPERATURA SERVICIO
-40°C a +90°C / -40°F a +194°F

PARTICULARIDADES APLICABLES
MSHA, FRAS (ignición retardada y antiestática - minas australianas), ISO 6805, Polish Safety "B" (en curso), BCS 174 (en curso), MA (aprobación minas chinas en curso).

MARCA MANULI
Relieve.



HTPS

HT PROTECTION SPRING

STANDARD PART. REF.	INSIDE DIAMETER (ID)		OUTER DIAMETER (OD)		WALL THICKNESS		BAND WIDTH (pitch P)		WRAPPING RANGE		WEIGHT		STD. PACK TOTAL LENGTH (*)	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	g/m	lb/ft	m	ft
JP12B03010I099	9,5	0,37	11,5	0,45	1,00	0,039	6,9	0,27	9-13	0,37-0,52	27	0,02	240	787
JP12B03013I099	12,7	0,50	16,3	0,64	1,80	0,071	13,0	0,51	13-17	0,50-0,67	45	0,03	240	787
JP12B03016I099	16,0	0,63	19,6	0,77	1,80	0,071	13,0	0,51	16-22	0,63-0,87	55	0,04	240	787
JP12B03019I099	19,0	0,75	23,6	0,93	2,30	0,091	16,0	0,63	19-28	0,75-1,10	100	0,07	240	787
JP12B03025I099	25,4	1,00	30,0	1,18	2,30	0,091	16,0	0,63	25-40	1,00-1,57	110	0,07	240	787
JP12B03028I099	28,0	1,10	35,2	1,39	3,60	0,142	25,0	0,98	28-48	1,10-1,89	225	0,15	120	394
JP12B03035I099	35,0	1,38	42,2	1,66	3,60	0,142	25,0	0,98	35-50	1,38-1,96	270	0,18	120	394
JP12B03050I099	50,0	1,97	60,0	2,36	5,00	0,197	35,0	1,38	50-70	1,96-2,76	540	0,36	60	197
JP12B03060I099	60,0	2,36	70,0	2,76	5,00	0,197	35,0	1,38	60-80	2,36-3,15	640	0,43	36	118

* Piece lengths of 12 meters (39,4 ft)
Longitud piezas de 12 metros (39,4 ft)

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

▪ Very low bend radius ▪ High flexibility ▪ High temperature resistance ▪ High abrasion resistance ▪ Water, oils, fuel and hydraulic fluids resistance ▪ Easy to install, no clamps needed

▪ Ángulo radio muy bajo ▪ Alta flexibilidad ▪ Alta resistencia a temperatura ▪ Alta resistencia a la abrasión ▪ Resistencia al agua, aceite y fluidos hidráulicos ▪ Fácil de instalar, no se necesitan abrazaderas

MAIN APPLICATIONS
Hose abrasion protection and hose bundling.

MATERIAL
Black polyammide, rounded profile.

SERVICE TEMPERATURE RANGE
-40°C to +120°C / -40°F to +248°F

APPLICABLE SPECIFICATIONS
Manuli design.

MANULI BRAND
White ink-jet.

PRINCIPALES APLICACIONES
Protección contra abrasión tubos y conducción múltiple.

MATERIAL
Poliamida negro, perfil redondeado.

GAMA TEMPERATURA SERVICIO
-40°C a +120°C / -40°F a +248°F

PARTICULARIDADES APLICABLES
Diseño Manuli.

MARCA MANULI
Chorro tinta blanco.



The spiral presents the "left" orientation.
La espiral presenta orientación "izquierda".

TEXTILE SLEEVE

STANDARD PART. REF.	INSIDE DIAMETER (ID)		EXTERNAL FLATTENED WIDTH		STD. PACK TOTAL LENGTH (*)			
	mm	inch	mm	inch	m	ft	kg	lb
JP23B06018I099	18	0,71	32,0	1,26	50	164	2,0	4,4
JP23B06023I099	23	0,91	40,0	1,57	50	164	2,2	4,8
JP23B06029I099	29	1,14	49,0	1,93	50	164	2,5	5,5
JP23B06036I099	36	1,42	56,0	2,20	50	164	3,0	6,6
JP23B06040I099	40	1,57	63,0	2,48	50	164	3,2	7,0
JP23B06056I099	56	2,20	88,0	3,46	50	164	4,0	8,8
JP23B06063I099	63	2,48	105,0	4,13	50	164	5,0	11,0
JP23B06071I099	71	2,80	115,0	4,53	50	164	5,5	12,1
JP23B06093I099	93	3,66	146,0	5,75	50	164	7,2	15,9
JP23B06110I099	110	4,33	176,0	6,93	50	164	8,5	18,7

* No more than 2 lengths per coil
No más de 2 largos por espiral

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

- High abrasion resistance
- Water, oils, fuel and hydraulic fluids resistance
- Easy to install with simple clamps to extremities
- Fluid energy diffusion in case of hose failure avoiding the direct jetting

- Alta resistencia a la abrasión
- Resistencia al agua, aceite y fluidos hidráulicos
- Fácil de instalar, con sencillas abrazaderas en los extremos
- Difusión de la energia del fluido en caso de fallo tubo evitando el chorro directo

MAIN APPLICATIONS
Suitable to protect assemblies from external agents and the sorrounding space from possible fluid jetting. Hose abrasion protection and hose bundling, where high flexibility and long durability are requested. Hose protections and low pressure hydraulic applications (e.g. pilot applications).

MATERIAL
Hard wearing resistance black woven polyester, manufactured from flame retardant yarn, complete with antistatic treatment.

SERVICE TEMPERATURE RANGE
-50°C to +100°C, peak +140°C / -58°F to +212°F, peak +284°F

APPLICABLE SPECIFICATIONS
MSHA (IC-213/04) and FRAS approvals, flame retardant and antistatic according to ISO 6805, compliant with safety requirements of MDG41 par 3.7.2.8 hose energy diffusion devices.

MANULI BRAND
White ink-jet.

PRINCIPALES APLICACIONES
Adecuado para proteger ensamblajes y espacio que rodea de los agentes externos y de eventuales chorros de fluido. Protección abrasión a tubos y conducción múltiple cuando se requiere alta flexibilidad y duración en el tiempo. Protecciones tubos y aplicaciones hidráulicas baja presión (ej. aplicaciones piloto).

MATERIAL
Alta resistencia al desgaste de tejido poliéster negro, hecho con hilo de ignición retardada, con tratamiento antiestático.

GAMA TEMPERATURA SERVICIO
-50°C a +100°C, pico +140°C / -58°F a +212°F, pico +284°F

PARTICULARIDADES APLICABLES
Certificaciones MSHA (IC-213/04) y FRAS, ignición retardada y antiestática de acuerdo con la norma ISO 6805, cumple con la normativa de seguridad establecida en MDG41 par 3.7.2.8 sobre mecanismos de difusión energía tubos.

MARCA MANULI
Chorro tinta blanco.



FLS

FIRE SLEEVE

STANDARD PART. REF.	INSIDE DIAMETER (ID)		APPROXIMATE WALL THICKNESS		LINEAR WEIGHT		STD. PACK TOTAL LENGTH (*)	
	mm	inch	mm	inch	g/m	lb/ft	m	ft
JP24A05013I099	13,0	0,51	4,0	0,157	200	0,13	50	164,0
JP24A05016I099	16,0	0,63	4,0	0,157	220	0,15	50	164,0
JP24A05019I099	19,0	0,75	4,0	0,157	240	0,16	50	164,0
JP24A05022I099	22,0	0,87	4,0	0,157	260	0,17	50	164,0
JP24A05025I099	25,0	0,98	4,0	0,157	290	0,19	50	164,0
JP24A05032I099	32,0	1,26	4,0	0,157	380	0,26	50	164,0
JP24A05038I099	38,0	1,50	4,0	0,157	440	0,30	50	164,0
JP24A05045I099	45,0	1,77	4,0	0,157	490	0,33	25	82,0
JP24A05051I099	51,0	2,01	4,0	0,157	540	0,36	25	82,0
JP24A05064I099	64,0	2,52	4,0	0,157	680	0,46	20	65,6
JP24A05076I099	76,0	2,99	4,0	0,157	880	0,59	20	65,6

* The product can be supplied in one piece or more respecting the global length fixed per each box (the minimum length is over 10% the whole package quantity)
El producto puede suministrarse en una pieza o más en función de la longitud global fijada para cada caja (la longitud mínima es un 10% superior a la cantidad total del embalaje)

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

▪ Extreme heat resistance ▪ Easy to install without clamps ▪ Designed to protect and insulate hydraulic hoses and bundle of hoses against attack of flames, projection of metals, melting glass, projection of vapours, etc. ▪ Excellent flexibility at low temperatures

▪ Resistencia extrema al calor ▪ Fácil instalación sin abrazadera ▪ Diseñado para proteger y aislar los tubos hidráulicos y la conducción multiple contra las llamas, proyección metales, fundición vidrio, proyección vapores, etc. ▪ Flexibilidad extrema a bajas temperaturas

MAIN APPLICATIONS
Hose protections from high external temperatures, heat irradiation (e.g. iron and steel industry, foundries, glassworks, shipbuilding, railways, etc.). Reflected or induced heat, projection of metal or melting glass, occasional very high temperatures. Cable protection.

MATERIAL
Orange silicone, inside 1 braid of glass fibers.

SERVICE TEMPERATURE RANGE
-60°C to +260°C, peaks 15 minutes 1100°C, 1 minute 1500°C
-76°F to + 500°F, peaks 15 minutes 2012°F, 1 minute 2732°F

APPLICABLE SPECIFICATIONS
Manuli design, classified FO and M2 as per NFF16-101 and P92-507 standard.

MANULI BRAND
White ink-jet.

PRINCIPALES APLICACIONES
Protección tubo de alta temperature exterior, irradiación calor (ej. industria hierro y acero, fundiciones, industria del vidrio, astilleros, industria del ferrocarril, etc.). Calor reflejado o inducido, proyección metal o vidrio fundido, muy altas temperatures ocasionales. Protección cable.

MATERIAL
Silicona naranaja, en interior fibres de vidrio trenzado.

GAMA TEMPERATURA SERVICIO
-60°C a +260°C, picos 15 minutos 1100°C, 1 minuto 1500°C
-76°F a +500°F, picos 15 minutos 2012°F, 1 minuto 2732°F

PARTICULARIDADES APLICABLES
Diseño manuli, clasificado FO y M2 como para NFF16-101 y P92-507 estándar.

MARCA MANULI
Chorro tinta blanco.



TEXTILE CLINCH STRAP

STANDARD PART. REF.	LENGTH (circumference of hose bundles)		STRIP WIDTH		STD. PACK QUANTITY		
	mm	inch	mm	inch	number of straps per package	kg	lb
JP33B10040T099	400	15,7	25	0,98	100	5,0	11,0
JP33B10080T099	800	31,5	25	0,98	100	6,0	13,2
JP33B10150T099	1500	59,1	25	0,98	100	7,5	16,5

KEY PERFORMANCE CARACTERISTICAS ESPECIALES

▪ High abrasion resistance ▪ Water, oils, fuel and hydraulic fluids resistance ▪ Easy to install ▪ Eyelet for hose bundling hanging purpose ▪ Metal buckle for a robust fastening in any environment

▪ Alta resistencia a la abrasión ▪ Resistencia al agua, aceite y fluidos hidráulicos ▪ Fácil de instalar ▪ Ojal para colgar conducción múltiple ▪ Hebilla metálica para un ajuste robusto en cualquier ambiente

MAIN APPLICATIONS
Suitable for single or multiple hose bundling. Self-lubricating to reduce wear on hose and cables.

MATERIAL
Hard wearing resistance woven polyester, manufactured from dope-dyed flame retardant yarn, complete with antistatic treatment.

SERVICE TEMPERATURE RANGE
-50°C to +100°C / -58°F to +212°F

APPLICABLE SPECIFICATIONS
Manuli design, MSHA (ref. no. IC-213/04) and FRAS approvals. Certified fire resistant and antistatic according to AS 1334.9-82, BS 2050-78, NCB 245-85.

PRINCIPALES APLICACIONES
Adecuado para conducción múltiple o sencilla. Auto lubricación para reducir desgaste en tubos y cables.

MATERIAL
Alta resistencia al desgaste de tejido poliéster, hecho con hilo de ignición retardada, con tratamiento antiestático.

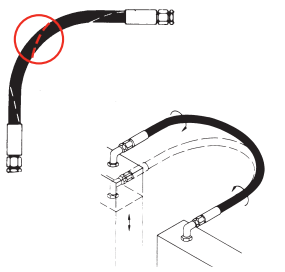
GAMA TEMPERATURA SERVICIO
-50°C a +100°C/ -58°F a +212°F

PARTICULARIDADES APLICABLES
Diseño Manuli, certificaciones MSHA (ref. nº. IC-213/04) y FRAS. Certificado resistente al fuego y antiestático de acuerdo con AS 1334.9-82, BS 2050-78, NCB 245-85.



HOSE INSTALLATION GUIDE GUÍA DE INSTALACIÓN DE LA MANGUERA

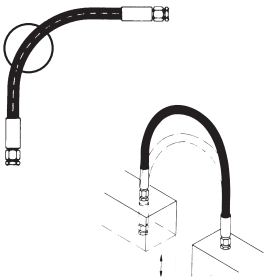
NO - WRONG USE

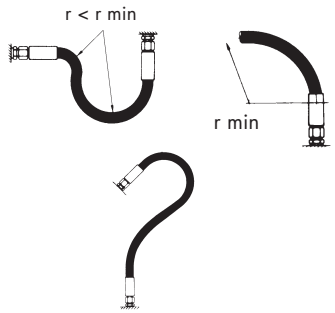


Avoid to twist the hose assembly. During installation avoid moving parts that can cause twisting effects on the hose assemblies.

Evite torcer la manguera. Durante la instalación evite partes en movimiento que puedan causar excesivo radio de curvatura a las mangueras.

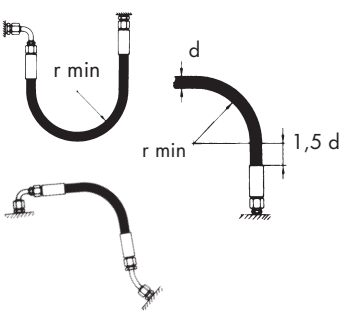
YES - CORRECT USE

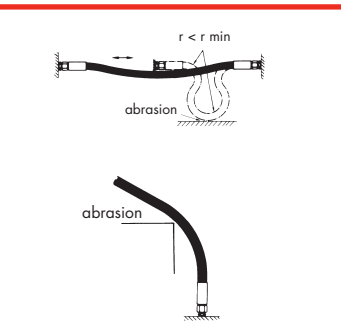




Use proper fittings to avoid tight bend radius.
Do not start hose bending closer than 1,5 time "d" to the ferrule.

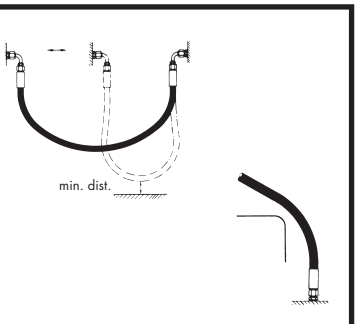
Use los racores apropiados para evitar un excesivo radio de curvatura.
No inicie la flexión de la manguera más cerca que 1,5 veces "d" del casquillo.

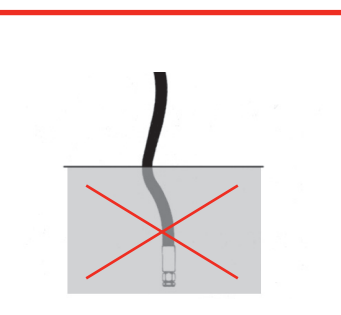




Avoid interference with objects that can cause abrasion or damage to the hose.
On flexing applications, pay particular attention to avoid tensile stress or abrasion.

Evite la interferencia con objetos que puedan causar la abrasión o puedan dañar a la manguera.
En aplicaciones flexibles, preste particular atención para evitar tensiones o abrasión.





The hydraulic hoses of the Manuli product range are not designed for immersion in the service fluid. This type of special applications should be avoided or carefully studied (pg 21).

La gama de productos de las mangueras hidráulicas Manuli no están diseñadas para la inmersión en el fluido de servicio. Este tipo de aplicaciones especiales debe evitarse o estudiarse cuidadosamente (pg 21).

For detailed information concerning the recommended practices for Hydraulic Hose assemblies, please refer to SAEJ1273. This document should be used as a guide to be considered when selecting, routing, fabricating, installing, replacing, maintaining and storing hose for hydraulic systems.
Para informacion mas detallada referente a las practicas recomendadas para el ensamble de manguera hidraulica por favor consultar la norma SAE J1273. Este documento deberia ser usado como guia para seleccionar, fabricar, instalar, reemplazar, reparar y almacenar manguera cuando se trate de sistemas hidraulicos.

WARNING

ADVERTENCIAS

PRODUCT SELECTION

The foregoing description of the Manuli® hoses, fittings and hose assemblies, manufactured by Manuli Rubber Industries and subsidiaries, and the general installation instructions are provided as information to be considered when selecting hose, fittings and hose assemblies for a particular application. Additional factors which must be considered in selecting proper hoses, fittings and hose assemblies for any particular application include hose size, hose length, involved fluids, ambient and operating temperatures, system operating pressures, static head pressures and installation design for the application. Failure to consider all material factors in selecting a hose, fitting and hose assembly for a particular application can result in reducing the hose assembly life or other failures which can result in serious bodily injury or property damage. If there are any questions concerning the use of Manuli® hoses, fittings and hose assemblies for a particular application, please contact Manuli Rubber Industries.

SELECCIÓN DEL PRODUCTO

La anterior descripción de las mangueras Manuli®, las conexiones y el ensamble de mangueras, fabricadas por Manuli Rubber Industries y sus subsidiarias, y las instrucciones generales de instalación son suministradas como información a ser considerada cuando seleccione la manguera, las conexiones y ensambles de manguera para una aplicación particular. Los factores adicionales, los cuales deben ser considerados para seleccionar la manguera apropiada, las conexiones y ensambles de mangueras para una aplicación particular incluyen tamaño y longitud de la manguera, fluidos involucrados, temperaturas de ambiente y de operación, presiones de sistema de operación, presion estática y diseños de instalación para la aplicación. Los fallos al considerar todos los factores materiales al seleccionar una manguera, conexiones y ensamble para una particular aplicación pueden convertirse en la reducción de la vida útil del ensamble de la manguera u otras fallas que pueden resultar en una seria herida corporal o daño a la propiedad. Si hay algunas preguntas sobre el uso de las mangueras Manuli®, conexiones y ensamble de mangueras para una aplicación particular, por favor contacte a Manuli Rubber Industries.

PRODUCT INSTALLATION

The foregoing description of Manuli® hoses, fittings and hose assemblies and the general installation instructions are provided as information to be considered when installing Manuli® products.
Proper installation of hoses and fittings is essential to the safe and proper operation of hose assemblies.
Additional factors which must be considered in achieving a proper installation include correct minimum bend radius to avoid hose collapse, possible abrasion of hoses on rough surfaces or cutting edges, correct hose length given the relation of potential movement between hose ends, possible twisting or torsion of hoses in operation or installation, and possible high temperature in areas around the hoses. Failure to consider all material factors with respect to installation and improper installation of hoses, fittings and hose assemblies can result in reducing the hose assembly life or other failures that could result in serious bodily injury or property damage.

INSTALACIÓN DEL PRODUCTO

La anterior descripción de las mangueras Manuli, conexiones y ensambles de mangueras, y las instrucciones generales de instalación son suministradas como información a ser considerada cuando instale productos Manuli®. La instalación apropiada de mangueras y conexiones es esencial para la seguridad y apropiada operación de los ensambles de mangueras. Los factores adicionales los cuales deben ser considerados para obtener una correcta instalación incluyen el conocimiento del radio mínimo de curvatura para evitar el colapso de la manguera, posible abrasión de la manguera sobre superficies duras o bordes cortantes, longitud correcta de la manguera dada la relación del movimiento potencial entre las puntas de la manguera, posible torsión de las mangueras en operación o instalación, y posibles altas temperaturas en áreas alrededor de las mangueras. Los fallos al considerar todos los factores materiales con respecto a la instalación, e incorrecta instalación de mangueras, conexiones y ensambles pueden convertirse en una reducción de la vida útil del ensamble de la manguera u otros fallos que pueden originar serias heridas corporales y daño a la propiedad.

HOSE INTEGRATION

Manuli® hoses and fittings are designed as integral parts of hose assembly system to be used together and they should only be used together or in conjunction with other types of fittings for the Manuli® hose recommended by Manuli Rubber Industries and subsidiaries.
Failure to do so may result in reducing the hose assembly life or other failures which can result in serious bodily injury or property damage.
Product Selection, Product Installation and Hose Integration guide lines are essential to the proper operation and safe use of the Manuli® hoses, fittings, hose assemblies and related equipment. Improper installation of the hoses, fittings and hose assemblies can result in serious injury or property damage.
Further information on selection, installation and maintenance of hose and hose assemblies is described in "SAE Recommended Practice J1273 2001".
If you have any questions regarding the proper product selection and hose installation, please contact the Manuli Technical Center based in Italy.

WARNING!
Failure or improper selection or improper use of any of the products found on this Manuli® catalogue or related items can cause death, personal injury and/or property damage. Before using any product, it is important that you analyze all aspects of your application and review the information explained in the current catalogue.

MRI reserves the right to modify any data. Eventual and any kind of modification can be carried out without any notice.

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INTEGRACIÓN DE LA MANGUERA

Las mangueras y conexiones Manuli® están diseñadas como partes integrales del sistema de ensamble de mangueras para ser usados conjuntamente. Eventualmente, algún otro tipo de conexión puede ser utilizado previa recomendación de Manuli Rubber Industries o una Subsidiaria.
Un fallo en lo anterior podría reducir la vida útil del ensamble de la manguera u otros fallos que podrían convertirse en serias heridas corporales o daños a la propiedad.
Las guías para la selección del producto, instalación e integración son esenciales para la operación apropiada y uso seguro de las mangueras, conexiones y máquinas de ensamble Manuli® y equipo relacionado. La instalación inapropiada de las mangueras, conexiones y ensambles de mangueras pueden resultar en serias heridas o daños a la propiedad.
Mas información sobre selección, instalación y mantenimiento de las mangueras se describe en la Norma "SAE recomendación J1273 NOV 91".
Si tiene alguna pregunta sobre la selección apropiada e instalación de la manguera por favor contacte al Centro Técnico de Manuli® en Italia.

ADVERTENCIA!
El descuido o una inadecuada selección o un inadecuado uso de alguno de los productos descritos en el catalogo de Manuli® pueden causar muerte, lesion personal y/o daño a la propriedad.
Antes de usar algun producto, es importante que usted analice todos los aspectos relacionados con su correcta aplicación previa revisión de la informacion presentada en este catálogo.

MRI se reserva el derecho de modificar algun dato. Eventualmente, algunas modificaciones pueden realizarse sin notificaciones alguna.

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SALES TERMS & CONDITIONS

CONDICIONES DE VENTA

STANDARD TERMS AND CONDITIONS OF SALES MANULI RUBBER INDUSTRIES ("MRI")

ALL GOODS AND SERVICES PROVIDED BY MRI ARE FURNISHED ONLY ON THE TERMS AND CONDITIONS STATED BELOW:

1. PURPOSE. These standard terms and conditions of sales apply to the relationship involving the supply of products by any company of Manuli Rubber Group, Hydraulic Business Unit (referred to below as MRI) to professional operators (referred to below as Buyer or Buyers).
2. SUPPLY ORDERING PROCESS. The Buyer may issue purchase orders to MRI in the following ways:
   2.A) By fax
   2.B) By e-mail
   2.C) On-line, only in the case of Buyers previously authorized to do so by means of a suitable activation procedure. This activation is essential if orders are to be placed on-line. The Buyer activation is by allocation of an identity code (user-id) and password to enable it to be recognized each time an order is placed, and takes place by filling in and returning the schedule set out in the home page of MRI's web site as described in the Request for Information section. The Buyer has the right to refuse the request for activation or cancel an existing activation.
3. CONTRACT FORMATION. All orders for MRI goods are subject to written acceptance by MRI by e-mail, fax or post. For on-line orders to MRI as described in point 2.C above, the authorized Buyer is first identified through his user-id and password, then selects the products, quantities and delivery address as guided by the system and issued the supply order. The order sent to MRI on-line is accepted only if specifically confirmed by this latter by e-mail, fax or post.

   Any and all terms in Buyer's purchase orders, acknowledgments, confirmations, or other business forms ("Buyer's Forms") which vary, conflict with or add to, or are in any way inconsistent with, the terms provided below are REJECTED by MRI and shall not be part of any agreement between the Buyer and MRI unless specifically agreed to in a writing document signed by MRI. MRI's acceptance of a purchase order or the commencement of performance by MRI shall neither change nor add to this Agreement; THE TERMS PROVIDED BELOW SHALL PREVAIL OVER ANY VARYING, ADDITIONAL OR CONFLICTING TERMS IN THE BUYER'S FORMS. For all on-line orders, these Standard Terms and Conditions of Sale, as available to the Buyer on the web site www.manuli-hydraulics.com, are applicable.
4. INFORMATION MADE AVAILABLE TO THE BUYER. Before the issue of the purchase order, MRI will provide the Buyer with all the commercial information on the products that it may require. After the order has been placed, MRI will inform the Buyer of the stages of the order through MRI service structure or, for those Buyers in possession of User_ID and Password, through MRI's web site.
5. PRICES. MRI reserves the right to alter the prices, discounts and payment conditions in force when the contract is confirmed and the Buyer expressly acknowledges and agrees upon such right. However, any modifications will become effective after notification of these has been issued, and they will apply only to the part of the supply that has not been completed. In such a case the Buyer may cancel the contract for the part not completed within 2 (two) weeks of the issue of notification of the increase and MRI shall have no liability, directly or indirectly, whatsoever.
6. TAXES. Prices do not include country, federal, state or local taxes, now or hereafter enacted, applicable to the goods sold, which tax or taxes will be added by MRI to the sales prices where MRI has the legal obligation to collect them, and will be paid by the Buyer or reimbursed by the Buyer to MRI if paid by MRI, unless the Buyer provides MRI with a proper tax exemption certificate.
7. SHIPPING, TITLE AND DELIVERY. Shipments shall be EXW as such term is defined in the Incoterms 2000, unless differently agreed upon in writing. Shipping dates are approximate and are based to a great extent on prompt receipt by MRI of all necessary information from the Buyer. MRI shall not be liable for any loss or expense incurred by the Buyer in the event that MRI fails to meet the specified delivery schedule(s) due to production or other delays due to unforeseen circumstances.
8. RETURNS. MRI will accept returns only upon prior agreement and at conditions to be defined between the parties.
9. TOLERANCES. Due to MRI's requirements, tolerances of +/-10% of the confirmed quantities, as and if applicable, are always allowed and accepted.
10. PAYMENT. Payment shall be made within the agreed upon period from the date of invoice, in the agreed upon currency at the address shown on the invoice. If payment in full is not received by MRI by the due date, the Buyer shall be in breach hereof. The Buyer will incur a charge of 0.6% per month on the unpaid balance to cover the administration costs of collection. Such charges may be in addition to other remedies exercisable by MRI. The amount of credit may be changed or credit withdrawn by MRI at any time. On any order on which credit is not extended by MRI, shipment or delivery shall be made, at MRI's election, Cash on order (in whole or part), letters of credit with all costs of collection paid by the Buyer or other terms as agreed between the parties.
11. SUSPENSION OF THE CONTRACT. Should the Buyer fail to comply in whole or in part even with only one of the supply conditions or if there are any changes of any kind in the Buyer's company name, form or trading capacity, as well as in the event of proven difficulty in meeting the payments to MRI or third parties, MRI will have the right to suspend any further deliveries and convert any premiums that have matured, bank transfers or other deeds of payment unless a suitable guarantee is issued.
12. FORCE MAJEURE. MRI shall not be responsible for any delay or failure to perform due to causes beyond its reasonable control. These causes shall include, without limitation, fire, flood, earthquake, accident, acts of the public enemy, war, acts of terrorism, riot, epidemic, quarantine restrictions, labor dispute, labor shortages, interruption of transportation, inability to secure raw materials or machinery, extraordinary increases in such raw materials prices, rationing or embargoes, acts of God, acts of Government or any agency thereof, acts of any state or local government or any agency thereof, and judicial action. Similar causes shall excuse the Buyer for failure to take goods ordered by the Buyer, provided reasonable notice is given to MRI of such contingency. However, the Buyer shall not be excused from the terms hereof for (i) any goods shipped prior to receipt of such notice; or (ii) goods already in transit when the contingency occurs.
13. LIMITATION OF LIABILITIES. THE BUYER AND MRI AGREE THAT (I) THE SOLE AND EXCLUSIVE REMEDIES FOR BREACH OF ANY WARRANTY CONCERNING THE GOODS SHALL BE REPAIR OR REPLACEMENT OF THOSE GOODS OR THEIR COMPONENT PARTS OR REFUND OF THE PURCHASE PRICE; AND (II) MRI SHALL HAVE THE EXCLUSIVE RIGHT TO SELECT ANY SUCH REMEDY IN ITS SOLE DISCRETION.

    MRI SHALL NOT BE LIABLE FOR CONTINGENT, INCIDENTAL OR CONSEQUENTIAL DAMAGES TO PERSONS OR PROPERTY AND MRI'S SOLE LIABILITIES AND BUYER'S EXCLUSIVE REMEDIES HEREUNDER ARE AS PROVIDED IN THESE STANDARD TERMS AND CONDITIONS OF SALES. MRI SHALL NOT BE LIABLE FOR ANY EXCESS REPROCUREMENT COSTS, SPECIFIC PERFORMANCE OR DELAY IN DELIVERY.

Notwithstanding any implication to the contrary, MRI shall have no liability whatsoever unless and until the Buyer shall have paid the full purchase price of all goods delivered.

14. WARRANTY AND CLAIMS. MRI warrants that the Products will be free of defects in material and workmanship for a period equal to twelve (12) months from the date of shipping from MRI to the Buyer or, with the sole exception of assembly machines, within two thousand (2000) hours of use, whichever comes first. In case of claims presented in the correct way and regarded as founded, MRI agrees to replace or repair the defective product when these are returned to its premises.

    a. This warranty does not cover any faults caused by normal deterioration, accelerated deterioration caused by special physical, chemical or electrochemical conditions, insufficient maintenance or incorrect repair, failure to follow the storage, user and operating instructions, use of unsuitable materials, the effects of a chemical or electrolyte process, assembly operations not carried out using only MRI's original parts or MRI's original certified parts, using MRI's assembly machines and in strict accordance with MRI's latest assembly instructions to be found always updated at www.manuli-hydraulics.com, or any other faults arising as a result of circumstances over which the supplier has no control. This warranty does not cover faults caused by modifications made by the customer or a third party, or assembly or installation operations carried out by these latter without observance of the operating and installation conditions and/or the technical specifications of the products.

    b. IN NO EVENT SHALL MRI BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. NO PRODUCT IS WARRANTED AS BEING FIT FOR A PARTICULAR PURPOSE. The warranties described above apply only if (i) the Product has not been misused, tampered or abused in any manner nor have repairs been attempted thereon; (ii) written notice of failure within the warranty period is forwarded to MRI and MRI's direction for properly identifying Products returned under warranty are followed; and (iii) with the return, a notice authorizing MRI to examine and disassemble returned Products to the extent MRI deems it necessary to ascertain the cause of failure. The warranties stated herein are exclusive. THERE ARE NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, BEYOND THOSE SET FORTH HEREIN, and MRI does not assume any other obligation or liability in connection with the sale or use of the Products.

    c. The receipt by the Buyer or its customer(s) of any of the Products shall constitute the Buyer' unqualified acceptance of same and waiver by the Buyer of all claims hereunder (OTHER THAN CLAIMS NOT DISCOVERABLE UPON RECEIPT AND INSPECTION) unless the Buyer gives written notice of the same to MRI within eight (8) days after its receipt or, in the event of concealed defects, the claim should be sent to MRI in writing within eight (8) days of their discovery, and in any case within a period of twelve (12) months from shipping from MRI to the Buyer, or, with the sole exception of assembly machines, within two thousand (2000) hours of use, whichever comes first. In any case, whenever possible, the Buyer shall send MRI a sample of the defective product to follow up the claim procedure.

    d. No claim of any kind, where as to Products delivered or for delay in delivery or failure to deliver, and whether or not based on negligence, shall be greater in amount that the purchase price of the Products with respect to which such claim is made. IN NO EVENT SHALL MRI BE LIABLE FOR INDIRECT, INCIDENTAL SPECIAL, OR CONSEQUENTIAL DAMAGES, WHETHER OR NOT CAUSED BY OR RESULTING FROM THE NEGLIGENCE THEREOF. It is expressly understood that any technical advise furnished by MRI with respect to the use of the Products, shall not be deemed to be a representation that the Products may be so used successfully or that such use will offer any specific result, and MRI does not assume any obligation or liability for any advice given or results obtained.

    e. The Buyer shall indemnify and hold MRI harmless against any and all loss damage, cost, or expense of any kind incurred by reason of any negligence, breach or other fault of the Buyer imposed by law upon MRI for damages assessed because of property damage or bodily injuries or death sustained or resulting from the sale, use, or handling of the Products except to the extent caused by the negligence of or breach of this Agreement by MRI, and the MRI has notified the Buyer in writing of any third party's claims or demands within sixty (60) days after MRI received notice thereof.

15. RESERVE. For the orders sent to MRI on-line, these will be accepted only after the correct completion of the activation procedure described in point 2.C above, which takes place using a user-id and password. The Buyer is aware that the revelation of the user-id and password to unauthorized parties would enable these to make orders in his name. Consequently, the Buyer will guard his identity code and password with maximum diligence and reserve, as he will be held responsible for any abusive use of these. MRI will take no responsibility for abusive use of the user-id and password, and the order will remain fully valid and effective after confirmation of it has been issued.

    a. The Buyer agrees to exonerate MRI from any action, request or claim, including claims for compensation for damages, deriving directly or indirectly from the use or abuse of the user-id and password by any party.

    b. The Buyer agrees to inform MRI of the loss or theft of the password, whereupon MRI will deactivate the password in question and issue a new one.

16 ENTIRE AGREEMENT. THESE TERMS AND CONDITIONS, INCLUDING THE LIMITED WARRANTY AND DISCLAIMER AND LIMITATIONS OF LIABILITY, ARE A COMPLETE AND FULL EXPRESSION OF THE AGREEMENT BETWEEN THE PARTIES. The terms hereof may not be varied, supplemented, qualified, modified, waived or interpreted by any prior or subsequent course of performance or conduct between the parties (including the shipment of goods hereunder) or by any usage of the trade or by conflicting or additional terms upon the face or reverse of any form to which this is attached or a part of, nor may it be modified by any agent, employee, or representatives of MRI unless such modification or representation is made in writing and signed by a duly authorized officer of MRI. Stenographic or clerical errors are subject to correction.

17. SEVERABILITY. If any term of this Agreement is held to be illegal or unenforceable, such term shall be severed from this Agreement and the remaining terms shall remain in force.

18. ASSIGNS. This Agreement shall be binding on and inure to the benefit of the successors and assigns of the entire business and goodwill of either MRI or Buyer, or of that part of the business of either used in the performance of such contract, but shall not be otherwise assignable by Buyer.

19. PROPRIETARY RIGHTS. Trademarks, service marks and other product identifications are MRI's property at all times and shall only be used in connection with the products. The Buyer shall not remove or deface any such marks.

20. CORRESPONDENCE. All correspondence regarding this contract will be sent to MRI's Customer Service structure:
fax: +39 02 62713383;
telephone: +39 02 62713450;
help desk: +39 02 62713456;
email address: customerservice@manulirubber.com

21. INTERPRETATION. The validity, performance and construction of these terms and conditions and any sale made hereunder shall be governed by the laws of the Italy. All the terms hereof shall be interpreted in the manner which enhances its enforceability.

MANULI RUBBER INDUSTRIES S.p.A

SALES NETWORK

EUROPE

(CZ) **MANULI HYDRAULICS EUROPE S.r.o.**
Prumyslova 1500, 69123 Pohorelice - Czech Republic
Ph +420 519 301711 - Fax +420 519 301712
mheurope@mnulihydraulics.cz

(D) **MANULI HYDRAULICS GmbH**
Carl Benz Strasse, 5 - 68723 Schwetzingen - Germany
Ph +49 6202 28020 - Fax +49 6202 18306
info@manuli-gmbh.de

(E) **MANULI HYDRAULICS IBERICA, S.l.u.**
Polígono el Pla, calle el Pla 166 oficina D9 Apartado1444
08980 Sant Feliu de Llobregat (Barcelona) - Spain
Ph +34 936 856 118 - Fax +34 936 856 119
info@manuli@hydraulics.es

(F) **MANULI OTIM S.A.S.**
Z.A. de la Fourquetiere, 44 Rue Gustave Eiffel
B.P. 121 - 44154 Ancenis - France
Ph +33 240 98 83 02 - Fax +33 240 98 84 01
std@manuli-otim.fr

(GB) **MANULI HYDRAULICS UK Ltd.**
Nasmyth Business Centre, Green Lane, Patricroft - Manchester M30 0SN
Ph +44 161 787 8085 - Fax +44 161 788 7627
office@manuli-hydraulics.co.uk

(RUS) **MANULI HYDRAULICS RUS 000**
Second Entuziastov str. 5.40/221 - 111024 Moscow, Russia
Ph +7 495 223 54 75 - Fax +7 495 223 54 76
mhrus@manulihydraulics.ru

(F) **MANULI FLUICONNECTO S.A.S.**
Rue de Grande Bretagne, 42-44 - BP 60237
44472 CARQUEFOU Cedex - France
Ph +33 240 93 57 99 - Fax +33 240 93 69 56
std@manuli-sonatra.fr

(CZ) **MANULI FLUICONNECTO S.r.o.**
Ul. Herspicka 758/14, Provozovna, 602 00 Brno - Czech Republic
Ph +420 544 501 067 - Fax +420 544 501 068
brno@fluiconnecto.com

(EST) **FLUICONNECTO OÜ**
Pallasti 1, 11412 Tallin - Estonia
Ph +372 60 60 946 - Fax +372 60 60 947
tallinn@fluiconnecto.com

(H) **MANULI FLUICONNECTO KFT**
Ocsai út 5, 1239 Budapest - Hungary
Ph +36 1 287 30 33 - Fax +36 1 286 25 43
budapest@fluiconnecto.com

(LT) **MANULI FLUICONNECTO UAB**
Kirtimu g. 11 - LT 02300 Vilnius - Lithuania
Ph +370 5 26 45 810 - Fax +370 5 26 45 820
vilnius@fluiconnecto.com

(LV) **MANULI FLUICONNECTO SIA**
Krustpils iela 6, Riga LV 1073 - Latvia
Ph +371 78 28 686/687 - Fax +371 78 28 688
riga@fluiconnecto.com

(PL) **MANULI FLUICONNECTO Sp.zo.o**
Mikolowska 93, 43100 Tychy - Poland
Ph +48 32 222 01 30 - Fax +48 32 222 01 39
tychy@fluiconnecto.com

(UA) **MANULI FLUICONNECTO TOV**
Derevoobrobna 6B, 01013 Kyiv - Ukraine
Ph +38 44 545 70 67 - Fax +38 44 545 70 68
kyiv@fluiconnecto.com

AMERICAS

(BR) **MANULI HIDRAULICA BRASIL Ltda**
Avenida General Motors, 100 - Bairro Iporanga
18087-165 - Sorocaba - SP - Brazil
Ph +55 15 2101-1600 - Fax +55 15 2101-1640
mhbra@manuli-hydraulics.com

(MEX) **MANULI HYDRAULICS DE MEXICO Sa. de C.v.**
Poniente 128 number 590 storehouse 1
Indutrial Vallejo Zone - 02300 Mexico City, Mexico
Ph + 52 55 57196141 - Fax + 52 55 57196198
info@manulihydraulics.com

(USA) **MANULI HYDRAULICS (AMERICAS) Inc.**
410 Keystone Drive - Suite 420 - Warrendale, PA 15086 - U.S.A.
Ph +1 724 778 3380 - Fax +1 724 778 3381
administration@manuli-hydraulics.us

(AR) **MANULI FLUICONNECTO S.r.l.**
Colectora Panamericana Este 26361 Don Torcuato
1611 Buenos Aires - Argentina
Ph +54 114 727 6200/6800 - Fax +54 114 727 6900
info@fluiconecto.com.ar

ASIA PACIFIC

(IND) **MANULI HYDRAULICS INDIA (Pte) Ltd.**
S.No.1465/2-B, Sriperumbudur Village - Sriperumbudur Taluk
Kanchipuram Dist, Tamilnadu - India 602 105
Ph +91 44 27162089 - Fax +91 44 27162113

(JAP) **MANULI HYDRAULICS JAPAN K.K.**
AJ Building 3F, 3-3-10, Minami-Senba, Chuo-ku
Osaka, 542-0081, Japan
Ph +81 6 6252 0413 - Fax +81 6 6252 0414
service.jp@manuli-hydraulics.com

(KOR) **MANULI HYDRAULICS KOREA Co. Ltd.**
UngNam-Dong, 61-17 - ChangWon City, GyeongNam, Korea
Ph +82 55 237 6211 - Fax +82 55 285 6387
info@manuli.co.kr

(PRC) **MANULI HYDRAULICS (SUZHOU) Co. Ltd.**
Shanghai Representative Office
Shanghai Representative Office
Rm. 201-01, Yindong Mansion, 58 Xinjinqiao Rd. Pudong
New District, 201206 Shanghai, China
Ph +86 21 5866 5108 - Fax +86 21 5866 4275
service@manuli-hydraulics.com

Guangzhou Representative Office
Rm. 11B2, Zhongcheng Mansion, Qingnian Rd. Luogang
District, 510730 Guangzhou, Guangdong Province, China
Ph +86 20 8208 6357 - Fax +86 20 8208 6358
service@manuli-hydraulics.com

Shenyang Representative Office
Rm. 2406, Dongyu Mansion, 2 Heping South Street,
Heping District, 110001 Shenyang, Liaoning Province, China
Ph +86 21 5866 5108 - Fax +86 21 5866 4275
service@manuli-hydraulics.com

Wuhan Representative Office
Rm. 4604, Wuhan Plaza, 688 Jiefang Road, 430022 Wuhan,
Hebei Province, China
Ph +86 27 8571 7833 - Fax +86 27 8571 7833
service@manuli-hydraulics.com

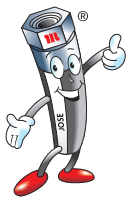
(SGP) **MANULI HYDRAULICS FAR EAST Pte Ltd.**
52 Ubi Avenue 3 - #01-36 Frontier - 408867 Singapore
Ph +65 6241 6822 - Fax +65 6241 2231
info@manuli-singapore.com.sg

(AUS) **MANULI FLUICONNECTO Pty Ltd.**
HQ & Distribution Centre
68-70 Cyber Loop - Dandenong, Victoria 3175 - Australia
Ph +61 3 8768 7770 - Fax +61 3 8768 7771
info@manuli-hydraulics.com.au

NSW (Mining Operations) Branch
38 Shipley Drive - Rutherford, NSW 2323 - Australia
Ph +61 2 4932 1066 - Fax +61 2 4932 1060
info@manuli-hydraulics.com.au

Western Australia Branch
Unit 2/14 Moriarty Road - Welshpool, 6106 Western Australia
Ph +61 8 9356 2311 - Fax +61 8 9356 2125
info@manuli-hydraulics.com.au

(ZA) **MANULI FLUICONNECTO (Pty) Ltd.**
Nexia Levitt Kirson - 4th Floor Aloe Grove, 196 Louis Botha Avenue,
Houghton Estate 2198 - South Africa
Ph +27 (11) 806 5000 - Fax +27 (11) 806 2003



MANULI RUBBER INDUSTRIES S.p.A.
Registered Office ▪ Headquarters:
Piazza della Repubblica, 14/16 ▪ 20124 Milano, Italy
Tel +39 02 62713.1 ▪ Fax +39 02 62713.382
info@manulirubber.com
www.manuli-hydraulics.com

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MANULI RUBBER INDUSTRIES **S.p.A.**
Registered Office ▪ Headquarters
Piazza della Repubblica, 14/16 ▪ 20124 Milano, Italy
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info@manulirubber.com ▪ www.manuli-hydraulics.com