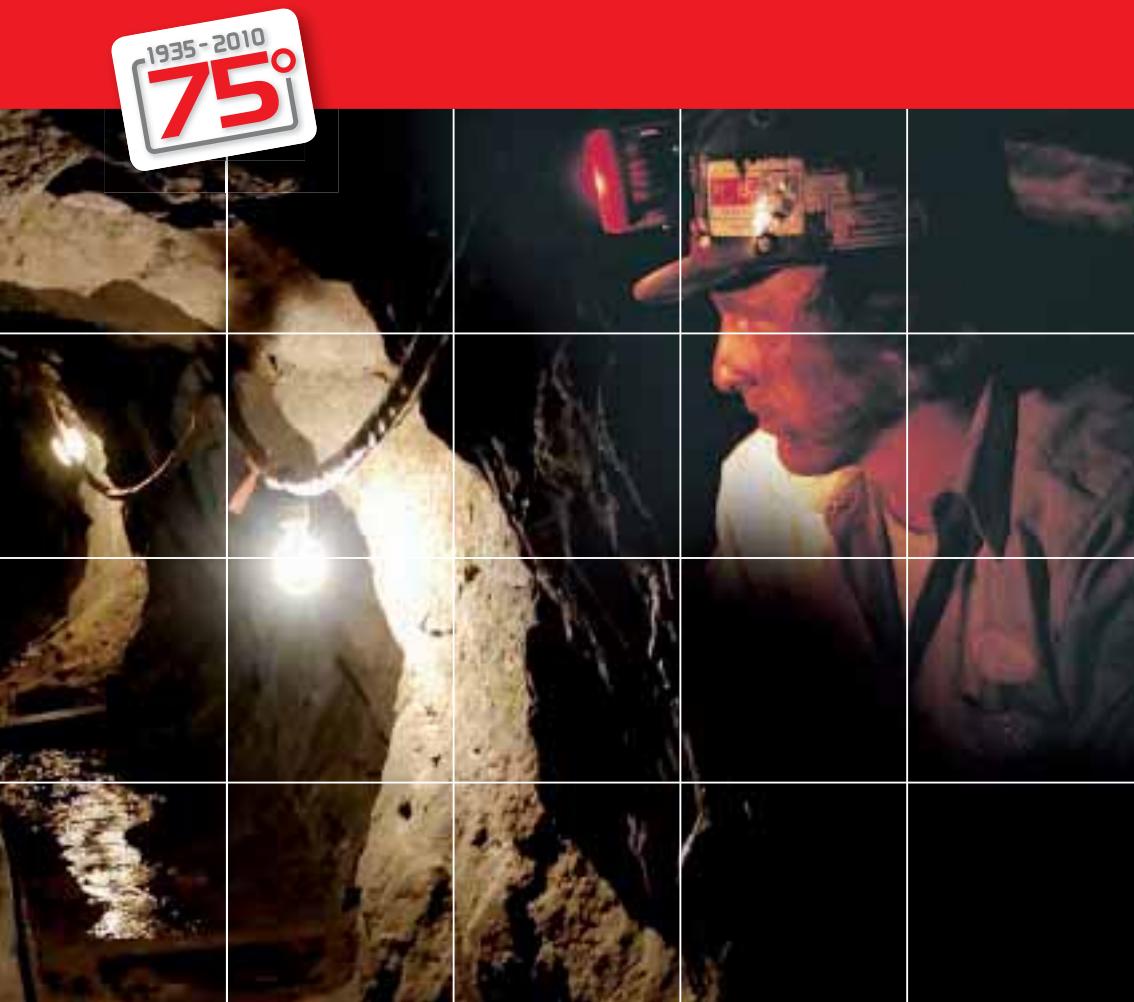


## MINING



Fluid connectors, solid solutions

**m** manuli®  
HYDRAULICS

# MINING

## INTRODUCTION



### HOSES

Manuli Hydraulics and MIP offer a complete package of hoses, inserts, staple-lock adaptors and ball valves specially designed for mining equipment and long walls installations (coal and soft rock mining), underground and open pit mines (soft-rock and hard-rock mines), high pressure and heavy duty hydraulic lines, medium pressure lines, return lines for mining applications.

The Manuli hose families specifically designed for mining applications are ROCKMASTER®, SHIELDMASTER®MINE, ETERNITY/2™, DIAMONDSPIR™ and new GOLDENMINE.

All of them feature high abrasion, ozone and ageing resistance (to temperatures), electrical anti-staticity property, flame retardant characteristic and low toxicity of smokes in case of fire.

In particular the ROCKMASTER® product range has been approved by mining safety Institutes all over the world, such as:

- MSHA (USA)
- FRAS (Australia)
- Polish Safety B (Poland)
- MA (China)
- DGMS (India)

Technical key-features of ROCKMASTER® and SHIELDMASTER®MINE families.

FEATURES	HOSE FAMILIES	
	ROCKMASTER®	SHIELDMASTER®MINE
ABRASION Resistance	Weight loss than 0,05 g with 25 N weight and 2000 cycles (method ISO 6945)	Weight loss negligible with 2000 cycles (method ISO 6945). Resistance up to 2 milion abrasion cycles (1000 times better than specifications requirement)
OZONE Resistance	More than 300 hours of dynamic ozone test ISO 10960 method	Higher performance is due to the external plastic material applied
ELECTRICAL ANTISTATIC property	Resistance lower than 1MOhm	Resistance lower than 1MOhm
FATIGUE Resistance	Excellent: more than 1 Million impulse test cycles for wire spiral structures. Heavy duty hoses tested with flexing impulse tests	Excellent: more than 1 Million impulse test cycles for wire spiral structures. Heavy duty hoses tested with flexing impulse tests

### FITTINGS

Manuli Hydraulics fittings are specifically indicated for soft-rock mining and consist of:

- STAPLE-LOCK
- SUPER STAPLE-LOCK
- FLUSHFIT (low pressure)
- The new FLUSHFIT High Pressure type

The product features for the whole range are mainly:

- Zinc plating treatment that ensures a corrosion resistance higher than 500 hours before red corrosion (tested according to ASTM B117 (ISO 9227) method) – higher than international specifications requirements, e.g. MDG41 with 200 hours before red corrosion.

(GB)

- **High mechanical robustness and fatigue resistance:** safety factor burst/working pressure is higher than 4:1.
- **High robust staples** with smaller connection "footprint" and "high" fatigue resistance, thanks to the staple design that permits quick and easy connection in constrained environments.
- **Excellent hydraulic sealing, leak free solutions.**

## ADAPTORS

Manuli Hydraulics and MIP offer for mining specific adaptors designed and manufactured for the soft-rock mining process.

In particular the adaptors range consists of: staple-lock, Super Staple-Lock, Flushfit connectors (standard and new very high pressure types).

STAPLE-LOCK adaptors are designed in favour of an easy connection in confined spaces. Available with male and female staple ends as well as threaded options.

These types of adaptors need to have a high corrosive protection surface finish to meet the requirements of a difficult environment. For this reason, staple adaptor in stainless steel are also available.

The standard staple-lock adaptors meet and exceed all international standards, including DIN 20043, SAE J1467 and NCB 638.

Manuli Hydraulics SUPER STAPLE-LOCK adaptors has been developed to satisfy high flow, high pressure system demands, necessary to achieve sensible cost saving.

FLUSH-FIT, low pressure style and the new high performance flushfit for large bore high pressure lines offers compact fittings for mining, with high mechanical robustness, snag free profile and easier handling. The type high performance is conceived to be used with DIAMONDSPIR hose in top level mining applications.

Thanks to the hexavalent chromium free zinc plating Manuli flushfit and staple range grant superior performance, far exceeding specifications requirements. Moreover, materials used are environmental friendly, in compliance with new European Directives (ELV 2000/53/EC, RoHS 2002/95/EC).

## BALL VALVES

Manuli Hydraulics and MIP ball valves are specifically designed for the soft-rock mining process and are designed to meet a variety of mining needs: from isolating sections of pipelines, to flow control.

Ball valves are available in:

- Staple-lock and Super Staple-lock versions (from DN6 (1/4") to DN63 (2 1/2"))
- Swivel female available also (together with fixed ones)
- 2-ways; 3-ways and 4-ways designs utilizing staple or threaded connections
- Provided with different handle styles (the lockable handle to be used with a padlock).

### HOSES

Manuli Hydraulics y MIP ofrecen un completo paquete de mangueras, terminales, adaptadores stape-lock y válvulas de bola especialmente diseñadas para equipos de minería y tunelación (carbón y piedra blanda para minas), subsuelo y minas abiertas (minas de piedra blanda y piedra dura), las líneas de alta presión y las líneas hidráulicas muy pesadas, media presión y líneas de retorno para aplicaciones de minería.

Las familias de mangueras Manuli especialmente diseñadas para la aplicación de minería son ROCKMASTER®, SHIELDMASTER®MINE, ETERNITY/2™, DIAMONDSPIR™ y GOLDENMINE.

Las características principales son la alta abrasión, la resistencia al envejecimiento (a las temperaturas), propiedades para la electricidad antiestática, característica del retardo a la llama y la baja toxicidad del humo en caso de fuego.

En particular la gama de productos ROCKMASTER® ha sido aceptada por los Institutos para la seguridad de todo el mundo, como:

- MSHA (USA)
- FRAS (Australia)
- Polish Safety B (Poland)
- MA (China)
- DGMS (India)

Las características técnicas de las familias ROCKMASTER® y SHIELDMASTER®MINE.

CARACTERÍSTICAS	FAMILIA DE MANGUERAS	
	ROCKMASTER®	SHIELDMASTER®MINE
Resistencia a la ABRASIÓN	Pérdida de peso menor que 0,05 gr con 25N de peso y 2000 ciclos (método ISO6945)	mínima pérdida de peso con 2000 ciclos (método ISO (6945)). Resistencia hasta 2 Millones de ciclos de Abrasión (1000 veces mejor que los requisitos de la especificación).
Resistencia al OZONO	Más de 300 horas de Prueba Dinámica al ozono (método ISO 10960)	Excelente resistencia gracias a la protección plástica externa.
Propiedades ELECTRICIDAD ANTIESTÁTICA	Resistencia menor que 1MOhm	Resistencia menor que 1MOhm
Resistencia a la FATIGA	Excelente: más de 1 Millón de ciclos de impulsos para estructuras con refuerzo espiral. Las mangueras pesadas probadas con pruebas de impulsos flexibles	Excelente: más de 1 Millón de ciclos de impulsos para estructuras con refuerzo Espiral. Las mangueras pesadas probadas con pruebas de impulsos flexibles.

### TERMINALES

Los racores Hidráulicos manuli están especialmente diseñados para la piedra blanda de mina y consisten en:

- STAPLE-LOCK
- SUPER STAPLE-LOCK
- FLUSHFIT (baja presión)
- El Nuevo FLUSHFIT Tipo alta presión

El producto ofrece para la gama completa:

- **Tratamiento cincado** que asegura una resistencia a la corrosión superior a 500 horas antes de la corrosión roja (prueba según el método ASTM B117 -ISO 9227-), mayor que el requerimiento internacional, ejemplo MDG41, con 200 horas antes que la corrosión roja.

(ES)

- Alta robustez mecánica y Resistencia a la fatiga: factor de seguridad rotura/presión de trabajo es mayor que 4:1.
- Grapas robustas con menor conexión "huella" y "alta" Resistencia a la fatiga, gracias al diseño principal que permite una fácil conexión en espacios reducidos.
- Excelente estanqueidad hidráulica, soluciones sin fugas.

## ADAPTADORES

Manuli Hydraulics y MIP ofrece para minería adaptadores específicos diseñados y fabricados para procesos de minería de piedra blanda.

En particular la gama de adaptadores consiste en: staple-lock, Super Staple-Lock, conectores Flushfit (estándar y el nuevo tipo de alta presión).

Los adaptadores STAPLE-LOCK están diseñados para facilitar la conexión en espacios confinados. Disponible con terminaciones macho y hembra como también en las roscas.

Estos tipos de adaptadores necesitan tener un acabado exterior que permita protegerlos de la alta corrosión en un difícil ambiente. Por esta razón, los adaptadores staple también están disponibles en acero inoxidable.

El adaptador estándar staple-lock cumple y excede el estándar internacional, incluyendo el DIN 20043, SAE J1467 y NCB 638. Los adaptadores SUPER STAPLE-LOCK de Manuli Hydraulics ha sido desarrollado para satisfacer un gran caudal, el sistema de alta presión, necesario para ahorrar un sensible ahorro de costos.

FLUSH-FIT, tipo baja presión y el Nuevo flushfit de alto rendimiento para tamaños grandes de líneas de alta presión ofrece rieles para minería compactos, con alta robustez mecánica, enganche libre del perfil y mejor manejo. El tipo de alto rendimiento está concebido para ser usado con la manguera DIAMONDSPR en aplicaciones de minería de alto nivel.

Gracias al cromo hexavalente libre de cinc la gama de adaptadores Manuli flushfit y staple, garantizan mejores características, excediendo los requisitos de las especificaciones. Es más, los materiales usados son aptos para el medioambiente, conforme a las nuevas Directivas Europeas (ELV 2000/53/EC, RoHS 202/95/EC).

## VALVULAS DE BOLA

Las válvulas de bola de Manuli Hydraulics y MIP están especialmente diseñadas para el proceso de minas de roca blanda y para las diferentes necesidades de la minería: aislar secciones de tubería, al control del fluido.

Las válvulas de bola están disponibles en:

- Versiones staple-lock y Super-lock (desde DN6 (1/4") a DN63 (2 ½"))
- También disponibles con hembra giratoria (junto con la fija)
- Diseños de 2 vías, 3 vías y 4 vías utilizando las conexiones staple o rosca
- Proporcionadas con diferentes estilos de manillas (manilla de seguridad para ser usada con un candado)

## INTRODUCTION

D

### SCHLÄUCHE

Manuli Hydraulics und MIP bieten eine komplette Palette an Schläuchen, Einsätzen, Kupplungsadaptersn und Kugelventilen, die speziell für die Geräteausstattung im Bergbau und für lange Wandinstallationen (Kohle- und Weichgesteinbergbau), geschlossene und offene Bergwerke (Weich- und Hartgesteinbergwerkmines), Hochdruck- und Hochleistungs-Druckleitungen, mittlere Druckleitungen, Minenrückflusseitungen.

Die speziell für den Bergbau entwickelten Schlauchproduktfamilien von Manuli sind ROCKMASTER® , SHIELDMASTER® MINE, ETERNITY/2™, DIAMONDSPIR™ und new GOLDENMINE.

Die wichtigsten Eigenschaften sind hohe Abrieb-, Ozon- und Alterungsbeständigkeit (gegen Temperaturen), antistatische Eigenschaften, verzögerte Flammenbildung und geringe Toxizität im Brandfall.

Insbesondere die Produktfamilie ROCKMASTER® wurde von Bergbau-Sicherheitsinstituten weltweit genehmigt, darunter:

- MSHA (USA)
- FRAS (Australia)
- Polish Safety B (Polen)
- MA (China)
- DGMS (Indien)

Technische Schlüsseleigenschaften der Produktfamilien ROCKMASTER® und SHIELDMASTER® MINE.

EIGENSCHAFTEN	SCHLAUCHFAMILIEN	
	ROCKMASTER®	SHIELDMASTER® MINE
Abriebbeständigkeit	Gewichtsverlust geringer als 0,05 g bei 25 N Gewicht und 2000 Zyklen (Methode ISO 6945)	Gewichtsverlust vernachlässigbar bei 2000 Zyklen (Methode ISO 6945) Beständigkeit bis zu 2 Millionen Abriebzyklen (1000 Mal besser als vorgegebene Anforderungen)
Ozonbeständigkeit	Mehr als 300 Stunden dynamischer Ozontest, Methode ISO 10960	Höhere Leistungen dank extern angebrachtem Kunststoffmaterial
Elektrische antistatische Eigenschaften	Widerstand geringer als 1MOhm	Widerstand geringer als 1MOhm
Ermüdungsbeständigkeit	Hervorragend: Mehr als 1 Million Impuls-Testzyklen für Drahtspiralstrukturen. Hochleistungsschläuche mit Biegeimpulstests geprüft	Hervorragend: Mehr als 1 Million Impuls-Testzyklen für Drahtspiralstrukturen. Hochleistungsschläuche mit Biegeimpulstests geprüft

### ANSCHLÜSSE

Manuli Hydraulikanschlüsse sind speziell für den Weichgesteinbergbau geeignet und setzen sich wie folgt zusammen:

- Staple-Lock Verbindungen
- Super Staple-Lock Verbindungen
- FLUSHFIT (niedriger Druck)
- Der neue FLUSHFIT-Hochdrucktyp

Die Produkteigenschaften für die gesamte Palette sind im wesentlichen:

- Verzinkung, sichert eine Korrosionsbeständigkeit von über 500-Stunden bis roter Korrosion zu (Test nach ASTM B117 (ISO 9227)-Methode) – höher als internationale Anforderungen, z.B. MDG41 mit 200 Stunden bis roter Korrosion.
- Hohe mechanische Widerstandsfähigkeit und Ermüdungsbeständigkeit: Sicherheitsfaktor Berst-/Betriebsdruck über 4:1.

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- Hochrobuste Klammern mit kleinerem Anschlussprofil und hoher Ermüdungsbeständigkeit dank speziellem Design dadurch schneller und einfacher Anschluss in enger Umgebung.
- **Hervorragende hydraulische Dichtung, leckfreie Lösungen.**

## ADAPTER

Manuli Hydraulics und MIP bieten spezifisch für den Weichgesteinbergbau entwickelte und hergestellte Adapter.

Die Produktpalette der Adapter umfasst insbesondere: Staple-lock verbindungen, Super staple-lock verbindungen, Flushfit-Anschlüsse (Standard und Hochdruck).

KUPPLUNGS-Adapter sind ausgelegt, um einen einfachen Anschluss in engen Bereichen zu ermöglichen. Verfügbar mit Steckern und muppen sowie Gewindeoptionen.

Diese Adaptertypen haben einen hohen Korrosionsschutz, um den Anforderungen in schwierigen Arbeitsumgebungen gerecht zu werden. Aus diesem Grund sind auch Edelstahl-Kupplungsadapter verfügbar.

Die Standard-Kupplungsadapter entsprechen und übersteigen alle internationalen Standards, einschließlich DIN 20043, SAE J1467 und NCB 638.

Manuli Hydraulics SUPER-KUPPLUNGS-Adapter wurden speziell entwickelt, um hohe Fließwerte und hohe Systemdruckanforderungen zu erfüllen, die für eine deutliche Kosteneinsparung notwendig sind.

FLUSH-FIT, Niedrigdrucktyp und neuer Hochleistungs-Flushfit für große Hochdruck-Bohrleitungen mit hoher mechanischer Robustheit, glattem Profil und einfacher Handhabung. Der Hochleistungstyp wurde speziell für die Verwendung mit DIAMOND-SPIRtm-Schläuchen für den Bergbaueinsatz auf höchster Ebene entwickelt.

Dank der Chromium-6-freien Verzinkung bieten die Flushfit-Anschlüsse und Kupplungen von Manuli eine hohe Leistungsfähigkeit, die weit über den Anforderungen der Vorschriften liegt. Darüber hinaus sind die verwendeten Materialien umweltfreundlich, in Übereinstimmung mit den neuen Europäischen Vorschriften (ELV 2000/53/EC, RoHS 2002/95/EC).

## KUGELVENTILE

Kugelventile von Manuli Hydraulics und MIP sind speziell für den Weichgesteinbergbau entwickelt und eignen sich für eine große Anzahl verschiedener Anwendungsbedürfnisse: Von der Isolierung von Rohrleitungen bis hin zur Fließkontrolle.

Kugelventile sind in folgenden Ausführungen verfügbar:

- Kupplungs- und Superkupplungsversionen (von DN6 (1/4") bis DN63 (2 1/2")
- Ebenfalls verfügbar einstellbare Kupplungsmuffe (sowie feste Kupplung)
- 2-Wege; 3-Wege und 4-Wege-Designs unter Verwendung von Kupplungs- oder Gewindeanschlüssen
- Mit unterschiedlichen Griffen (der verschließbare Griff kann mit einem Vorhängeschloss gesichert werden)

## INTRODUCTION

IT

### HOSES

Manuli Hydraulics e MIP offrono un pacchetto completo di tubi, raccordi, adattatori staple-lock, adattatori e valvole a sfera progettati appositamente per il settore miniera e le installazioni long walls (miniere di carbone e roccia friabile), miniere sotterranee e a cielo aperto (miniere di roccia friabile e roccia dura), applicazioni miniera con linee idrauliche ad alta pressione e servizio di lunga durata, linee di media pressione e linee di ritorno.

Le famiglie di tubi Manuli appositamente ideate per le applicazioni miniera sono ROCKMASTER®, SHIELDMaster®MINE, ETERNITY/2™, DIAMONDSPIR™ e il nuovo GOLDENMINE.

Ognuna offre alta resistenza all'abrasione, all'ozono e alle temperature, proprietà antistatiche, caratteristiche retardanti la propagazione delle fiamme, e una bassa tossicità di fumo in caso di incendio.

In particolare la famiglia ROCKMASTER® è stata approvata dagli istituti di sicurezza mineraria di tutto il mondo, come:

- MSHA (USA)
- FRAS (Australia)
- Polish Safety B (Polonia)
- MA (Cina)
- DGMS (India)

Caratteristiche tecniche di ROCKMASTER® e SHIELDMaster®MINE.

FEATURES	HOSE FAMILIES	
	ROCKMASTER®	SHIELDMaster®MINE
Resistenza all'abrasione	perdita perso inferiore ai 0,05 g con 25N peso e 2000 cicli (metodo ISO 6945)	perdita perso irrilevante con 2000 cicli (metodo ISO 6945). Resistenza fino a 2 milioni di cicli abrasivi (1000 volte meglio dei requisiti di norma).
resistenza all'ozono	più di 300 ore in ozono dinamico secondo metodo ISO 10960	performance superiore grazie a materiali plasticici applicati esternamente
proprietà antistatiche	resistenza inferiore a 1MOhm	resistenza inferiore a 1MOhm
resistenza alla fatica	Eccellente: più di un milione di impulsi per le strutture spiralate. I tubi per le applicazioni pesanti sono testati con test impulsi rotanti	Eccellente: più di un milione di impulsi per le strutture spiralate. I tubi per le applicazioni pesanti sono testati con test impulsi rotanti

### FITTINGS

I raccordi Manuli Hydraulics sono specificatamente indicati per miniere di roccia friabile e consistono in:

- STAPLE-LOCK
- SUPER STAPLE-LOCK
- FLUSHFIT (bassa pressione)
- Nuovo FLUSHFIT alta pressione.

Le caratteristiche di prodotto per l'intera gamma sono:

- **Zincatura** che assicura una resistenza alla corrosione maggiore di 500 ore prima della corrosione rossa (test secondo metodo ASTM B117 (ISO 9227)) – eccedente le norme internazionali, es. MSG41 con 200 ore prima della corrosione rossa).

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- **Elevate resistenza meccanica e resistenza alla fatica:** fattore di sicurezza di scoppio / pressione di esercizio più alte di 4:1.
- **Staple ad elevata resistenza** con ridotte improntature e alta resistenza alla fatica, grazie al design staple.
- **Eccellente tenuta idraulica (soluzione "leak free").**

## ADAPTORS

Manuli Hydraulics e MIP offrono specifici adattatori per la miniera, ideate e prodotti per le applicazioni miniera a roccia morbida.

In particolare la gamma adattatori consiste in: staple-lock, Super Staple-Lock, connettori Flushfit.

Gli adattatori STAPLE-LOCK sono progettate e realizzate per una facile connessione in spazi ristretti. Disponibili con terminali stampati maschio e femmina così come con opzioni "filettate"

Questo tipo di adattatori necessita di un'elevata superficie di protezione alla corrosione al fine di rispondere ai requisiti dettati da ambienti ostili. Per questo motivo, gli attori staple sono disponibili anche in acciaio inox.

Gli adattatori standard STAPLE-LOCK rispettano ed eccedono gli standard internazionali, incluse le norme DIN 20043, SAE J1467 e NCB 638.

Terminazioni FLUSHFIT standard e le nuove ad alta performance, adatte per linee ad alta pressione "large bore", offrono ricordi compatti per la miniera, con elevata resistenza meccanica, profilo "snag-free" e facile utilizzo. Sono concepite per essere usate con la linea DIAMONDSPR per le applicazioni miniera di alto livello.

Grazie alla zincatura esente da cromo esavalente, i flushfit Manuli e la gamma staple garantiscono performance, molto superiori a quelle previste dalle norme. Inoltre, i materiali usati rispettano l'ambiente, in linea con le nuove direttive europee (ELV 2000/53/EC, RoHS 2002/95/EC).

## VALVOLE A SFERA

Le valvole Manuli Hydraulics e MIP sono specificatamente progettate per i processi miniera di roccia friabile e sono progettate per rispondere a una varietà di esigenze: dall'isolamento delle sezioni pipelines, al controllo del flusso.

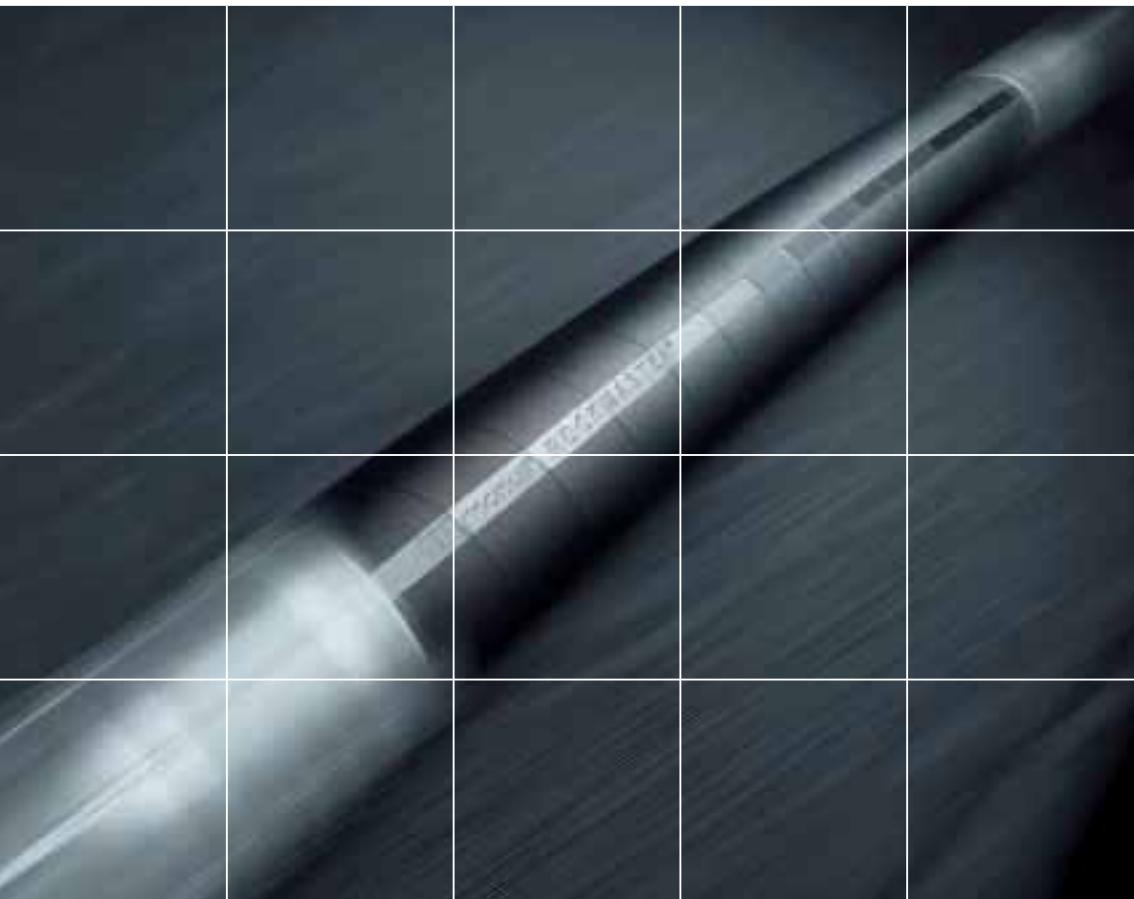
Le valvole a sfera sono disponibili in:

- Versione staple-lock e Super Staple-lock - dal DN6 (1/4") al DN63 (2 1/2")
- Disponibile anche femmina girevole (oltre che alla femmina fissa)
- Design a 2-vie; 3-vie e 4-vie , utilizzando connessioni staple o (filettate)



# MINING

## Hoses



Fluid connectors, solid solutions

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HYDRAULICS



RANGE	HOSE	HOSE STRUCTURE	MANULI® DESIGN EXCEEDS NORM	KEY PERFORMANCE	PAGE
EXTREME	TRADITIONAL	ROCKMASTER/1SN	Wire braided	EN 853, ISO 1436-1SN, SAE J517-100R1A1	Abrasion, weather and heat resistance
		ROCKMASTER/2SN	Wire braided	EN 853, ISO 1436-2SN, SAE J517-100R2AT	Abrasion, weather and heat resistance
		ROCKMASTER/2ST	Wire braided	EN 853, ISO 1436-2SN, SAE J517-100R2AT	Abrasion, weather and heat resistance
		ROCKMASTER/2 PLUS	Wire braided	EN 853, ISO 1436-2SN, SAE J517-100R2AT, perf. BCS174, ISO 6805-4	Abrasion, weather and heat resistance
		ROCKMASTER/1SC	Wire braided	EN 857, ISO 11237-1SC	Abrasion, weather and heat resistance
		ROCKMASTER/2SC	Wire braided	EN 857, ISO 11237-2SC, SAE J517-100R16S	Abrasion, weather and heat resistance
		ROCKMASTER/4SP	Wire spiralled	EN 856, ISO 3862-4SP	Abrasion, weather and heat resistance
		ROCKMASTER/4SH	Wire spiralled	EN 856, ISO 3862-4SH	Abrasion, weather and heat resistance
		ROCKMASTER/12	Wire spiralled	EN 856, ISO 3862-R12, SAE J517-100R12	Abrasion, weather and heat resistance
		ROCKMASTER/13	Wire spiralled	EN 856, ISO 3862-R13, SAE J517-100R13	Abrasion, weather and heat resistance
		ROCKMASTER/15	Wire spiralled	ISO 3862-R15, SAE J517-100R15	Abrasion, weather and heat resistance
EXTREME	SPECIAL APPLICATION	ETERNITY/2	Wire braided	EN 857, ISO 11237-2SC, SAE J517-100R16S	High service life and reliability
		DIAMONDSPIR	Wire spiralled	ISO 3862-R15, SAE J517-100R15	Very high pressure rating
		FIREND	Wire braided	EN 853, ISO 1436-1SN, SAE J517-100R1AT	Fire suppression systems
		GOLDENMINE	Wire spiralled	-	Extreme abrasion resistance
		SHIELDMASTER®/2 PLUS MINE	Wire braided	EN 853, ISO 1436-2SN, SAE J517-100R2AT, perf. BCS174, ISO 6805-4	Outstanding abrasion resistance MSHA approved
		SHIELDMASTER®/5000 MINE	Wire braided and spiralled	Isobaric line, perf. BCS174, ISO 6805	Outstanding abrasion resistance MSHA approved
		SHIELDMASTER®/6000 MINE	Wire spiralled	ISO 3862-R15, SAE J517-100R15, perf. BCS174, ISO 6805-6	Outstanding abrasion resistance MSHA approved
		CPH/2SC	Wire braided	-	Cable protection hose

# 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	
H01007006*	6	-04	1/4"	11,0	0,43	13,0	0,51	225	3260	1000	14500	100	3,94	215	0,14	MF+M03400-04
H01007008*	8	-05	5/16"	12,6	0,50	14,6	0,57	215	3110	950	13770	114	4,49	260	0,17	MF+M03400-05
H01007010*	10	-06	3/8"	15,0	0,59	17,0	0,67	180	2610	800	11600	127	5,00	320	0,22	MF+M03400-06
H01007012*	12	-08	1/2"	18,1	0,71	20,1	0,79	160	2320	680	9860	178	7,01	400	0,27	MF+M03400-08
H01007016*	16	-10	5/8"	21,3	0,84	23,3	0,92	130	1880	600	8700	200	7,87	480	0,32	MF+M03400-10
H01007019*	19	-12	3/4"	25,3	1,00	27,3	1,07	105	1520	500	7250	240	9,45	600	0,40	MF+M03400-12
H01007025*	25	-16	1"	33,1	1,30	35,1	1,38	90	1300	360	5220	300	11,81	910	0,61	MF+M03400-16
H01007032*	31	-20	1,1/4"	40,6	1,60	43,3	1,70	65	940	260	3770	419	16,50	1240	0,83	MF+M03400-20
H01007040*	38	-24	1,1/2"	47,0	1,85	49,7	1,96	50	720	260	3770	500	19,69	1450	0,97	MF+M03400-24
H01007051*	51	-32	2"	60,4	2,38	63,1	2,48	40	580	250	3620	630	24,80	2050	1,38	MF+ M03400-32
H01007060*	60	-38	2,3/8"	68,8	2,71	71,5	2,81	50	720	200	2900	650	25,59	2190	1,47	MF+M03400-38

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.

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

Übertragende Abriebbeständigkeit ■ Hohe Ozon und- Wetterbeständigkeit ■ Flammeständig nach vielen Normen ■ Antistatisch und antitoxische Decke

Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica

**(GB)**

### 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

### 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 1SN/R1AT

TYPE APPROVALS: BV, DNV, DNV MED (DN 5+16),

FRAS, GOST-R, LOBA, MSHA

**(ES)**

### PRINCIPALES APPLICACIONES

Líneas de baja y media presión, líneas de retorno, en condiciones ambientales de trabajo pesado, instalaciones específicas 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

### ESPICA: MF2000® - TIPO MULTIFIT

TUBO: Cauchó sintético resistente al aceite

REFUERZO: Un refuerzo trenzado de acero de alta resistencia

CUBIERTA: Cauchó sintético con alta resistencia al ozono, intemperie y calor

ESPECIFICACIONES APLICABLES: Excede EN 853 1SN -

SAE 100 R1AT - ISO 1436 1SN/R1AT

APROBACIONES: BV, DNV, DNV MED (DN 5+16), FRAS,

GOST-R, LOBA, MSHA

**(D)**

### HAUPT-ANWENDUNGSGEBIET

Niedriger und mittlerer Druckbereich, Rücklaufleitung, Installationen mit hohem Abrieb, Schiffbau, Bergbau und Tagebau

### DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

### MAX. BETRIEBSTEMPERATUR

+257°F +125°C

### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis, Wässer/Ölemulsion, Wasser

### NIPPEL: MF2000® - MULTIFIT

SEELE: Olbeständiges synthetisches Gummi

DRUCKTRÄGER: Ein hochzugfestes Stahldrahtgeflecht

DECKE: Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

ANGEWANDTE NORM: Übertrifft EN 853 1SN - SAE 100

R1AT - ISO 1436 1SN/R1AT

ZULASSUNGEN: BV, DNV, DNV MED (DN 5+16), FRAS,

GOST-R, LOBA, MSHA

**(IT)**

### PRINCIPALI APPLICAZIONI

Linee a medio-bassa pressione, linee di ritorno, applicazioni in severe condizioni ambientali e di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitente) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e di colza, oli a base di glicoli e poliglicoli, oli a base di esteri sintetici, oli in emulsione acuosa, acqua

### INSERTO: MF2000® - TIPO MULTIFIT

SOTTOSTRATO: Gomma sintetica resistente agli oli

RINFORZO: Una traccia di acciaio ad alto carico

COPERTURA: Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

SPECIFICHE: Eccede EN 853 1SN - SAE 100 R1AT -

ISO 1436 1SN/R1AT

OMOLOGAZIONI: BV, 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						
H01038006*	6 -04 1/4"	12,7	0,50	14,7	0,58	400	5800	1750	25580	50	1,97	365	0,25	MF+M03400-04
H01038008*	8 -05 5/16"	14,3	0,56	16,3	0,64	350	5070	1480	21460	60	2,36	405	0,27	MF+M03400-05
H01038010*	10 -06 3/8"	16,7	0,66	18,7	0,74	350	5070	1400	20300	70	2,76	530	0,36	MF+M03400-06
H01038012*	12 -08 1/2"	19,8	0,78	21,8	0,86	350	5070	1400	20300	89	3,50	650	0,44	MF+M03400-08
H01038016*	16 -10 5/8"	23,0	0,91	25,0	0,98	250	3620	1020	14790	100	3,94	720	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	930	0,62	MF+M03400-12
H01038025*	25 -16 1"	34,8	1,37	36,8	1,45	175	2530	670	9710	160	6,30	1290	0,87	MF+M03400-16
H01038032*	31 -20 1.1/4"	44,3	1,74	47,0	1,85	140	2030	600	8700	419	16,50	1930	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	2230	1,50	MF+M03400-24
H01038051*	51 -32 2"	63,5	2,50	66,2	2,61	90	1300	420	6090	630	24,80	2880	1,94	MF+M03400-32
H01038060*	60 -38 2.3/8"	68,8	2,71	71,5	2,81	90	1300	360	5220	650	25,59	2670	1,79	MF+M03400-38

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.

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

Überragende Abriebbeständigkeit ■ Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ Druckbeständigkeit über EN-Norm

Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ Resistenza a pressioni elevate

**(GB)**

### 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

### 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 2SN/R2AT

TYPE APPROVALS: BV, DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA, RINA (DN 38÷51), (B) (DN 6÷60), DGMS

**(ES)**

### PRINCIPALES APPLICACIONES

Líneas de media y alta presión 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 / +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

### ESPIGA: MF2000® - TIPO MULTIFIT

TUBO: Cauchó sintético resistente al aceite

REFUERZO: Dos trenzas de acero de alta resistencia

CUBIERTA: Cauchó sintético con alta resistencia al ozono, intemperie y calor

ESPECIFICACIONES APLICABLES: Excede EN 853 2SN -

SAE 100 R2AT - ISO 1436 2SN/R2AT

APROBACIONES: BV, DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA, RINA (DN 38÷51), (B) (DN 6÷60), DGMS

**(D)**

### HAUPT-ANWENDUNGSGEBIET

Mittlerer Hochdruckbereich mit eingeschränkten Installationsmöglichkeiten bei schwersten Einsatzbedingungen, Installationen mit hohem Abrieb, Schiffbau, Bergbau und Tagebau

### DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

### MAX. BETRIEBSTEMPERATUR

+257°F +125°C

### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis, Wasser/Ölemulsion, Wasser

### NIPPEL: MF2000® - MULTIFIT

SEELE: Ölbeständiges synthetisches Gummi

DRUCKTRÄGER: Zwei hochzugfeste Stahldrahtgeflechte

DECKE: Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

ANGEWANDTE NORM: Übertrifft EN 853 2SN - SAE 100 R2AT - ISO 1436 2SN/R2AT

ZULASSUNGEN: BV, DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA, RINA (DN 38÷51), (B) (DN 6÷60), DGMS

**(IT)**

### PRINCIPALI APPLICAZIONI

Linee a medio-alta pressione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitte) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e di colza, oli a base di glicoli e poliglicoli, oli a base di esteri sintetici, oli in emulsione acquosa, acqua

### INSERTO: MF2000® - TIPO MULTIFIT

SOTTOSTRATO: Gomma sintetica resistente agli oli

RINFORZO: Due trecce di acciaio ad alto carico

COPERTURA: Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

SPECIFICHE: Eccede EN 853 2SN - SAE 100 R2AT -

ISO 1436 2SN/R2AT

OMOLOGAZIONI: BV, DNV, DNV MED (DN 5÷16), FRAS, GOST-R, LOBA, MSHA, RINA (DN 38÷51), (B) (DN 6÷60), DGMS

# 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								
H01035005*	5	-03	3/16"	11,3	0,44	15,6	0,61	415	6010	2000	29000	89	3,50	385	0,26	MF+M00910-03
H01035006*	6	-04	1/4"	12,7	0,50	17,2	0,68	400	5800	1750	25380	100	3,94	450	0,30	MF+M00910-04
H01035008*	8	-05	5/16"	14,3	0,56	18,9	0,74	350	5070	1480	21460	114	4,49	500	0,34	MF+M00910-05
H01035010*	10	-06	3/8"	16,7	0,66	21,3	0,84	350	5070	1400	20300	127	5,00	640	0,43	MF+M00910-06
H01035012*	12	-08	1/2"	19,8	0,78	24,5	0,96	350	5070	1400	20300	178	7,01	790	0,53	MF+M00910-08
H01035016*	16	-10	5/8"	23,0	0,91	27,7	1,09	250	3620	1020	14790	200	7,87	870	0,58	MF+M00910-10
H01035019*	19	-12	3/4"	27,0	1,06	31,6	1,24	215	3110	900	13050	240	9,45	1100	0,74	MF+M00920-12
H01035025*	25	-16	1"	34,8	1,37	39,5	1,56	175	2530	670	9710	300	11,81	1510	1,01	MF+M00920-16
H01035032*	31	-20	1 1/4"	44,3	1,74	50,6	1,99	140	2030	600	8700	419	16,50	2310	1,55	MF+M00920-20
H01035040*	38	-24	1 1/2"	50,7	2,00	57,0	2,24	100	1450	500	7250	500	19,69	2650	1,78	MF+M00910-24
H01035051*	51	-32	2"	63,5	2,50	69,8	2,75	90	1300	420	6090	630	24,80	3410	2,29	MF+M00910-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.

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

Überragende Abriebbeständigkeit ■ Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ Druckbeständigkeit über EN-Norm

Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ Resistenza a pressioni superiori elevate

**(GB)**

### 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

### 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 2ST/R2A

TYPE APPROVALS: BV, GOST-R, LOBA, LR, (B) (DN 6÷51), MSHA, FRAS

**(ES)**

### PRINCIPALES APPLICACIONES

Líneas de media y alta presión 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 / +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

### ESPIGA: MF2000® - TIPO MULTIFIT

TUBO: Cauchó sintético resistente al aceite

REFUERZO: Dos trenzas de acero de alta resistencia

CUBIERTA: Cauchó sintético con alta resistencia al ozono, intemperie y calor

ESPECIFICACIONES APLICABLES: Excede EN 853 2ST -

SAE 100 R2A - ISO 1436 2ST/R2A

APROBACIONES: BV, FRAS, GOST-R, LOBA, LR, (B) (DN 6÷51), MSHA, FRAS

**(D)**

### HAUPT-ANWENDUNGSGEBIET

Mittlerer Hochdruckbereich, Rücklaufleitung, Installationen mit hohem Abrieb, Schiffbau, Bergbau und Tagebau

### DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

### MAX. BETRIEBSTEMPERATUR

+257°F +125°C

### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis, Wasser/Ölemulsion, Wasser

### NIPPEL: MF2000® - MULTIFIT

SEELE: Zwei hochzugfeste Stahldrahtgeflechte

DRUCKTRÄGER: Olbeständiges synthetisches Gummi

DECKE: Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

ANGEWANDTE NORM: Übertrifft EN 853 2ST - SAE 100 R2A - ISO 1436 2ST/R2A

ZULASSUNGEN: BV, GOST-R, LOBA, LR, (B) (DN 6÷51), MSHA, FRAS

**(IT)**

### PRINCIPALI APPLICAZIONI

Linee a medio-alta pressione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitte) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e di colza, oli a base di glicoli e poliglicoli, oli a base di esteri sintetici, oli in emulsione acquosa, acqua

### INSERTO: MF2000® - TIPO MULTIFIT

SOTTOSTRATO: Gomma sintetica resistente agli

RINFORZO: Due trecce di acciaio ad alto carico

COPERTURA: Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

SPECIFICHE: Eccede EN 853 2ST - SAE 100 R2A -

ISO 1436 2ST/R2A

OMOLOGAZIONI: BV, GOST-R, LOBA, LR, (B) (DN 6÷51), MSHA, FRAS

# 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								
H01101006*	6	-04	1/4"	11,3	0,44	13,1	0,52	450	6520	1800	26100	45	1,77	275	0,18	MF+M03400-04
H01101010*	10	-06	3/8"	16,7	0,66	18,5	0,73	400	5800	1600	23200	127	5,00	520	0,35	MF+M00910-06
H01101012*	12	-08	1/2"	20,1	0,79	22,1	0,87	362	5250	1450	21030	150	5,91	700	0,47	MF+M00910-08
H01101016*	16	-10	5/8"	23,2	0,91	25,2	0,99	340	4930	1360	19720	200	7,87	860	0,58	MF+M00910-10
H01101019*	19	-12	3/4"	27,1	1,07	29,3	1,15	310	4490	1240	17980	230	9,06	1060	0,71	MF+M00920-12
H01101025*	25	-16	1"	35,1	1,38	37,8	1,49	240	3480	960	13920	300	11,81	1570	1,06	MF+M00920-16
H01101032*	31	-20	1 1/4"	44,5	1,75	47,2	1,86	175	2530	700	10150	380	14,96	2120	1,42	MF+M00920-20
H01101038*	38	-24	1 1/2"	51,0	2,01	53,7	2,11	146	2110	584	8460	450	17,72	2460	1,65	MF+M00910-24
H01101051*	51	-32	2"	62,8	2,47	65,5	2,58	130	1880	530	7680	600	23,62	3090	2,08	MF+M00910-32
H01101076*	76	-48	3"	87,8	3,46	91,4	3,60	70	1010	280	4060	500	19,69	4030	2,71	MF+M03400-48 skive solution

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.

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

Überragende Abrieb-, und Temperaturbeständigkeit Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ Höherer Druckleistungsbereich ■ Einbindungslosung mit Schälfassung

Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ Ottime pressioni d'esercizio ■ Soluzione di raccordi con asportazione copertura

**GB**

### 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

### 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: BV, DNV, GOST-R, LR, MSHA, FRAS, MA, LOBA

**ES**

### PRINCIPALES APPLICACIONES

Líneas de alta presión 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 / +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

### 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: BV, DNV, GOST-R, LR, MSHA, FRAS, MA, LOBA

**D**

### HAUPT-ANWENDUNGSGEBIET

Hochdruckbereich mit eingeschränkten  
Installationsmöglichkeiten bei schwersten  
Einsatzbedingungen, Installationen mit hohem Abrieb,  
Schiffbau, Bergbau und Tagebau

### DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

### MAX. BETRIEBSTEMPERATUR

+257°F +125°C

### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis,  
Synthetik-Esterbasis, Wasser/Ölemulsion, Wasser

### NIPPEL: MF2000® - MULTIFIT

SEELE: Ölbeständiges synthetisches Gummi

DRUCKTRÄGER: Zwei hochzugfeste Stahldrahtgeflechte

DECKE: Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

### ANGEWANDTE NORM: MANULI® Design:

Übertrifft ISO 1436-2SN, EN 853-2SN, SAE J517 Typ 100 R2 AT. Performance BCS 174, ISO 6805 Typ 4

ZULASSUNGEN: BV, DNV, GOST-R, LR, MSHA, FRAS, MA, LOBA

**IT**

### PRINCIPALI APPLICAZIONI

Linee ad alta pressione con difficoltà di installazione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitte) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e di colza, oli a base di glicoli e poliglicoli, oli a base di esteri sintetici, oli in emulsione acquosa, acqua

### INSERTO: MF2000® - TIPO MULTIFIT

SOTTOSTRATO: Gomma sintetica resistente agli oli

RINFORZO: Due trecce di acciaio ad alto carico

COPERTURA: Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

### SPECIFICHE: MANULI® Design:

Eccede ISO 1436-2SN, EN 853-2SN, SAE J517 tipo 100 R2 AT. Performance BCS 174, ISO 6805 tipo 4

OMOLOGAZIONI: BV, DNV, GOST-R, LR, MSHA, FRAS, MA, LOBA

# 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						
H01108006*	6 -04 1/4"	10,2	0,40	12,0	0,47	260	3770	1050	15220	50	1,97	180	0,12	MF+M00120-04
H01108008*	8 -05 5/16"	11,5	0,45	13,6	0,54	250	3620	1000	14500	55	2,17	210	0,14	MF+M00120-05
H01108010*	10 -06 3/8"	13,6	0,54	15,5	0,61	225	3260	900	13050	60	2,36	255	0,17	MF+M00120-06
H01108012*	12 -08 1/2"	17,3	0,68	19,1	0,75	190	2750	760	11020	70	2,76	355	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	0,29	MF+M00820-10
H01108019*	19 -12 3/4"	23,9	0,94	25,9	1,02	150	2170	600	8700	100	3,94	520	0,35	MF+M00820-12
H01108025*	25 -16 1"	31,3	1,23	33,1	1,30	110	1590	440	6380	160	6,30	730	0,49	MF+M00820-16
H01108031*	31 -20 1,1/4"	38,4	1,51	40,9	1,61	75	1080	300	4350	210	8,27	1040	0,70	MF+M00820-20
H01108038*	38 -24 1,1/2"	45,0	1,77	47,5	1,87	50	720	200	2900	300	11,81	1170	0,79	MF+M00820-24
H01108051*	51 -32 2"	58,0	2,28	60,5	2,38	50	720	200	2900	400	15,75	1560	1,05	MF+M00820-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 vacío (SAE 100 R4) aprobada para los tamaños hasta DN 31

Neuer, kompakter 1-Draht Schlauch ■ Hohe Temperaturbeständigkeit erfüllt auch schwere Einsatzbedingungen und OEM Anforderungen ■ Betriebsdruck übertreift EN 857 1SC Standards um höheren Anforderungen gerecht zu werden ■ Bestmöglicher Schutz durch Rockmaster® Außen gummi ■ Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ Unterdruckbeständigkeit gemäß SAE 100 R4 geprüft und freigegeben für Nennweiten bis DN31

Gamma di tubi compatti a una treccia ■ Resistenza elevata alle alte temperature per le applicazioni OEM più severe ■ Pressione d'esercizio superiore alla norma EN 857 1SC ■ Ottima protezione grazie alla copertura Rockmaster® ■ Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica

**(GB)**

### 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

**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 1SC

**TYPE APPROVALS:** LR, GOST-R, MSHA, FRAS, LOBA

**(ES)**

### PRINCIPALES APPLICACIONES

Líneas de baja y media presión, líneas de retorno, en condiciones ambientales de trabajo pesado, instalaciones específicas 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

**ESPICA:** MF2000® - TIPO MULTIFIT

**TUBO:** Cauciúco sintético resistente al aceite

**REFUERZO:** Un refuerzo trenzado de acero de alta resistencia

**CUBIERTA:** Cauciúco sintético con alta resistencia al ozono, intemperie y calor

**ESPECIFICACIONES APLICABLES:** Exceed EN 857 1SC - ISO 11237 1SC

**APROBACIONES:** LR, GOST-R, MSHA, FRAS, LOBA

**(D)**

### HAUPT-ANWENDUNGSGEBIET

Niedriger und mittlerer Druckbereich mit eingeschränkten Installationsmöglichkeiten bei schwersten Einsatzbedingungen, Installationen mit hohem Abrieb, Schiffbau, Bergbau und Tagebau

### DAUERBETRIEB

-40°F / +250°F -40°C / +121°C

### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis, Wasser/Ölemulsion, Wasser

**NIPPEL:** MF2000® - MULTIFIT

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Ein hochzugfestes Stahldrahtgeflecht

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

**ANGEWANDTE NORM:** Übertrifft EN 857 1SC - ISO 11237-1 1SC

**ZULASSUNGEN:** LR, GOST-R, MSHA, FRAS, LOBA

**(IT)**

### PRINCIPALI APPLICAZIONI

Linee a medio-bassa pressione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +250°F -40°C / +121°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e di colza, oli a base di glicoli e poliglicoli, oli a base di esteri sintetici, oli in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO MULTIFIT

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Una treccia di acciaio ad alto carico

**COPERTURA:** Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

**SPECIFICHE:** Eccede EN 857 1SC - ISO 11237-1 1SC

**OMOLOGAZIONI:** LR, GOST-R, MSHA, FRAS, LOBA

# 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	
H01030005*	5 -03 3/16"	9,7	0,38	11,5	0,45	420	6090	2000 29000	40 1,57 220 0,15 MF+M03400-03
H01030006*	6 -04 1/4"	11,3	0,44	13,1	0,52	400	5800	1850 26830	45 1,77 275 0,18 MF+M03400-04
H01030008*	8 -05 5/16"	12,9	0,51	14,7	0,58	350	5070	1700 24650	55 2,17 325 0,22 MF+M03400-05
H01030010*	10 -06 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 -08 1/2"	18,5	0,73	20,3	0,80	275	3980	1220 17690	80 3,15 500 0,34 MF+M03400-08
H01030016*	16 -10 5/8"	21,8	0,86	23,6	0,93	250	3620	1050 15220	90 3,54 620 0,42 MF+M03400-10
H01030019*	19 -12 3/4"	25,6	1,01	27,6	1,09	245	3550	980 14210	120 4,72 790 0,53 MF+M03400-12
H01030025*	25 -16 1"	33,0	1,30	35,2	1,39	210	3040	840 12180	150 5,91 1180 0,79 MF+M03400-16
H01030031*	31 -20 1 1/4"	41,1	1,62	43,6	1,72	140	2030	560 8120	250 9,84 1550 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 1830 1,23 MF+M03400-24
H01030051*	51 -32 2"	60,4	2,38	63,4	2,50	90	1300	360 5220	400 15,75 2430 1,63 MF+M03400-32
H01030063*	63 -40 2 1/2"	73,0	2,87	76,0	2,99	70	1010	300 4350	760 29,92 2900 1,95 MFvM03400-40
H01030076*	76 -48 3"	87,8	3,46	90,5	3,56	45	650	180 2610	900 35,43 3120 2,10 MF+M03400-48

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 vacío (SAE 100 R4) aprobada para los tamaños hasta DN 76

Überragende Abriebbeständigkeit. Hohe Ozon- und Wetterbeständigkeit ■ Flammfestigkeit nach vielen Normen ■ Antistatische und antitoxische Decke ■ Verbesserung des Betriebsdruckes ■ Bis zur Nennweite DN 76 ■ Vakuumbeständig (SAE 100 R4) bis DN 76

Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ Pressioni d'esercizio migliorate ■ Estensione di gamma fino a DN 76 ■ Resistenza al vuoto (SAE 100 R4) fino a 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

**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), (DN 5+76), MA, FRAS



### PRINCIPALES APPLICACIONES

Líneas de presión de media y alta en espacios reducidos en condiciones ambientales de trabajo pesado, instalaciones específicas 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

**ESPICA:** MF2000® - TIPO MULTIFIT

**TUBO:** Cauchó sintético resistente al aceite

**REFUERZO:** Dos refuerzos trenzados de acero de alta resistencia

**CUBIERTA:** Cauchó 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), (DN 5+76), MA , FRAS



### HAUPT-ANWENDUNGSGEBIET

Mittlerer Hochdruckbereich mit eingeschränkten Installationsmöglichkeiten bei schwersten Einsatzbedingungen, Installationen mit hohem Abrieb, Schiffbau, Bergbau und Tagebau

#### DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

#### MAX. BETRIESTEMPERATUR

+257°F +125°C

#### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik- Esterbasis, Wasser/Ölemulsion, Wasser

**NIPPEL:** MF2000® - MULTIFIT

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Zwei hochzugfeste Stahldrahtgeflechte

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

**ANGEWANDTE NORM:** Übertrifft EN 857 2SC - ISO 11237-1 2SC, SAE 100 R 16S; und dazu: DN 25 SAE 100 R17, ISO 11237-1 R17

**ZULASSUNGEN:** GOST-R, LOBA, LR, MSHA, RINA (DN 6+31), (DN 5+76), MA, FRAS



### PRINCIPALI APPLICAZIONI

Linee a medio-alta pressione con difficoltà di installazione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

#### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

#### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitte) +257°F +125°C

#### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e di colza, oli a base di glicoli e poliglicoli, oli a base di esteri sintetici, oli in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO MULTIFIT

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Due trecce di acciaio ad alto carico

**COPERTURA:** Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

**SPECIFICHE:** Eccede EN 857 2SC - ISO 11237-1 2SC, SAE 100 R 16S; inoltre: DN 25 SAE 100 R17, ISO 11237-1 R17

**OMOLOGAZIONI:** GOST-R, LOBA, LR, MSHA, RINA (DN 6+31), (DN 5+76), MA , FRAS

# 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						
H10008006*	6 -04 1/4"	14,7	0,58	17,6	0,69	485	7030	2400	34800	125	4,92	590	0,40	MF+M00910-04
H10008010*	10 -06 3/8"	17,6	0,69	21,0	0,83	450	6520	2000	29000	125	4,92	740	0,50	MF+M00910-06
H10008012*	12 -08 1/2"	20,3	0,80	24,2	0,96	420	6090	1750	25380	175	6,89	880	0,59	MF+M00910-08
H10008016*	16 -10 5/8"	23,8	0,94	27,6	1,09	380	5510	1600	23200	200	7,87	1080	0,73	MF+M00910-10
H10008019*	19 -12 3/4"	28,2	1,11	31,7	1,25	380	5510	1600	23200	240	9,45	1450	0,97	MF+M00920-12
H10008025*	25 -16 1"	35,0	1,38	39,0	1,54	320	4640	1400	20300	340	13,39	1880	1,26	MF+M00920-16
H10008032*	31 -20 1.1/4"	46,1	1,81	49,7	1,96	210	3040	1250	18120	460	18,11	2990	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	5010	3,37	MF+M00910-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 ■ biological and mineral oils compatibility

Aprobada hasta 1.000.000 de ciclos de impulso ■ Mejora de la resistencia a la temperatura ■ 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 ■ compatible con aceites minerales y biológicos

Geprüft mit 1.000.000 Impulszyklen ■ Überragende Abriebfestigkeit-Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ Beständigkeit gegen Bio- und Mineralöle

Approvato a 1.000.000 di cicli ■ Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ Migliorata resistenza alle escursioni termiche ■ compatibilità con oli biologici e minerali

**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

**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 SPEC.: Exceed EN 856 4SP - ISO 3862 4SP DN16&19:** Thin cover style, exceeding performance EN 856 4SP and ISO 3862 4SP

**TYPE APPROVALS:** DNV, DNV (MED), FRAS, GOST-R, LOBA, MSHA, RINA (DN 6+16),  MA

If service temperature is lower than 100°C

 **ROCKMASTER/4SP can be used with reduced Min. Bend Radius (see Goldenspir/4SP)**

**HAUPT-ANWENDUNGSGEBIET**

Hochdruckbereich mit eingeschränkten

Installationsmöglichkeiten bei schweren

Einsatzbedingungen, Installationen mit hohem Abrieb, Schifffbau, Bergbau und Tagebau

**DAUERBETRIEB**

-40°F / +250°F -40°C / +121°C

**MAX. BETRIEBSSTEMPERATUR**

+257°F +125°C

**EMPFOHLENE MEDIEN**

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis (bis +212°F / +100°C)

Wasser/Ölemulsion, Wasser

**NIPPEL:** MF2000® - MULTIFIT

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Vier hochzugfeste Stahldrahtspiralen

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

**ANGEWANDTE NORM:** Übertrifft EN 856 4SP - ISO 3862 4SP

**DN16&19:** Übersteigt Anforderungen EN 856 4SP - ISO 3862 4SP DN16&19: Dünner Ummantelungstyp,

übersteigt Anforderungen EN 856 4SP und ISO 3862 4SP

**ZULASSUNGEN:** DNV, DNV (MED), FRAS, GOST-R, LOBA, MSHA, RINA (DN 6+16),  MA

 Bleibt die Betriebstemperatur unter 100°C kann ROCKMASTER/4SP mit reduziertem Mindestbiegeradius (siehe Goldenspir/4SP) eingesetzt werden

**PRINCIPALES APPLICACIONES**

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

**ESPIGA:** MF2000® - TIPO MULTIFIT

**TUBO:** Caucho sintético, resistente al aceite

**REFUERZO:** Cuatro 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 4SP

**DN16&19:** El estilo de cubierta delgada, excede las características de EN 856 4SP y ISO 3862 4SP.

**APROBACIONES:** DNV, DNV (MED), FRAS, GOST-R, LOBA, MSHA, RINA (DN 6+16),  MA

 Si la temperatura de servicio es menor de 100°

**ROCKMASTER/4SP** puede ser usada con menor radio de curvatura (ver Goldenspir/4SP).

**PRINCIPALI APPLICAZIONI**

Linee ad alta pressione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +250°F -40°C / +121°C

**PICCO DI TEMPERATURA MASSIMA**

(Servizio Intermitente) +257°F +125°C

**FLUIDI RACCOMANDATI**

Oli minerali, oli vegetali e oli a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO MULTIFIT

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Quattro spirali di acciaio ad alto carico

**COPERTURA:** Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

**SPECIFICHE:** Eccede EN 856 4SP - ISO 3862 4SP

**DN16&19:** Copertura sottile, eccede performance EN 856 4SP e ISO 3862 4SP

**OMOLOGAZIONI:** DNV, DNV (MED), FRAS, GOST-R, LOBA, MSHA, RINA (DN 6+16),  MA

 Se le temperature di esercizio è minore di 100°C,

**ROCKMASTER/4SP** può essere utilizzato con raggio di curvatura ridotto (vedi Goldenspir/4SP)

# 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								
H10044016*	16	-10	5/8"	25,5	1,00	28,5	1,12	450	6520	1850	26830	180	7,09	1290	0,87	IP+M01500-10
H10044019*	19	-12	3/4"	28,2	1,11	31,9	1,26	420	6090	1750	25380	210	8,27	1500	1,01	IP+M01500-12
H10044025*	25	-16	1"	35,1	1,38	38,1	1,50	385	5580	1750	25380	220	8,66	2040	1,37	IP+M01500-16
H10044032*	31	-20	1.1/4"	42,2	1,66	45,0	1,77	350	5070	1400	20300	420	16,54	2410	1,62	IP+M01500-20
H10044038*	38	-24	1.1/2"	49,1	1,93	53,1	2,09	300	4350	1250	18120	560	22,05	3170	2,13	IP+M01500-24
H10044051*	51	-32	2"	63,5	2,50	67,5	2,66	250	3620	1000	14500	700	27,56	4460	3,00	IP+M01500-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 ■ Mejora de la resistencia a la temperatura ■ 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

Geprüft mit 1.000.000 Flex Impulzyklen ■ Höhere Temperaturbeständigkeit ■ Überragende Abriebbeständigkeit-Hohe Ozon- und Wetterbeständigkeit ■ Flammfest nach vielen Normen ■ Antistatische und antitoxische Decke ■ Bio Beständigkeit gegen Bio- und Mineralöle

Approvato a 1.000.000 di cicli in condizioni rotanti ■ Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ Migliorata resistenza alle escursioni termiche ■ Bio compatibilità con oli biologici e minerali

**(GB)**

### 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

**INSERT:** MF2000® - INTERLOCK PLUS 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 4SH

**TYPE APPROVALS:** DNV, DNV (MED), FRAS, GOST-R, LOBA (DN 19-51), LR, MSHA, **(B)** (DN 16-51), RINA, MA, DGMS

**(ES)**

### PRINCIPALES APlicACIONES

Líneas de alta presión 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

**ESPIGA:** MF2000® - TIPO INTERLOCK PLUS

**TUBO:** Caucho sintético, resistente al aceite

**REFUERZO:** Cuatro 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 4SH

**APROBACIONES:** DNV, DNV (MED), FRAS, GOST-R, LOBA (DN 19-51), LR, MSHA, **(B)** (DN 16-51), RINA, MA, DGMS

**(D)**

### HAUPT-ANWENDUNGSGEBIET

Sehr hoher Druckbereich mit eingeschränkten Installationsmöglichkeiten bei schwersten Einsatzbedingungen, Installationen mit hohem Abrieb, Schiffbau, Bergbau und Tagebau

### DAUERBETRIEB

-40°F / +250°F -40°C / +121°C

### MAX. BETRIEBSTEMPERATUR

+257°F +125°C

### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis bis +212°F / +100°C  
Wasser/Olémulsion, Wasser

**NIPPEL:** MF2000® - INTERLOCK PLUS

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Vier hochzugfeste Stahldrahtspiralen

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

**ANGEWANDTE NORM:** Übertrifft EN 856 4SH - ISO 3862 4SH

**ZULASSUNGEN:** DNV, DNV (MED), FRAS, GOST-R, LOBA (DN 19-51), LR, MSHA, **(B)** (DN 16-51), RINA, MA, DGMS

**(IT)**

### PRINCIPALI APPLICAZIONI

Linee ad alta pressione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +250°F -40°C / +121°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitente) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e oli a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO INTERLOCK PLUS

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Quattro spirali di acciaio ad alto carico

**COPERTURA:** Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

**SPECIFICHE:** Eccede EN 856 4SH -ISO 3862 4SH

**OMOLOGAZIONI:** DNV, DNV (MED), FRAS, GOST-R, LOBA (DN 19-51), LR, MSHA, **(B)** (DN 16-51), RINA, MA, DGMS

# 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								
H10031010*	10	-06	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	-08	1/2"	20,4	0,80	23,5	0,93	280	4060	1350	19580	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	0,67	MF+M00910-10
H10031019*	19	-12	3/4"	27,4	1,08	30,4	1,20	280	4060	1300	18850	150	5,91	1160	0,78	MF+M00920-12
H10031025*	25	-16	1"	35,0	1,38	37,6	1,48	280	4060	1150	16670	225	8,86	1740	1,17	MF+M00920-16
H10031A32*	31	-20	1 1/4"	43,1	1,70	45,9	1,81	210	3040	1000	14500	250	9,84	2280	1,53	MF+M00920-20
H10031040*	38	-24	1 1/2"	50,0	1,97	53,3	2,10	175	2530	1000	14500	500	19,69	3130	2,10	MF+M00910-24
H10031051*	51	-32	2"	63,6	2,50	66,7	2,63	175	2530	800	11600	630	24,80	4440	2,98	MF+M00910-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 ■ **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

Geprüft mit 1.000.000 Impulszyklen ■ Überragende Abriebbeständigkeit ■ Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ **Bio** Beständigkeit gegen Bio- und Mineralöle

Approvato a 1.000.000 di cicli ■ Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ **Bio** compatibilità con oli biologici e minerali

(GB)

**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

**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 R12

**TYPE APPROVALS:** ABS, BV, BV (MED), FRAS, GOST-R, LR, MSHA, MA, LOBA

(ES)

**PRINCIPALES APPLICACIONES**

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

**ESPICA:** MF2000® - TIPO MULTIFIT

**TUBO:** Cauchó sintético, resistente al aceite

**REFUERZO:** Cuatro refuerzos de acero en espiral de alta resistencia

**CUBIERTA:** Cauchó sintético con alta resistencia al ozono, intemperie y calor

**ESPECIFICACIONES APLICABLES:** Excede EN 856 R12 - SAE 100 R12 - ISO 3862 R12

**APROBACIONES:** ABS, BV, BV (MED), FRAS, GOST-R, LR, MSHA, MA, LOBA

(D)

**HAUPT-ANWENDUNGSGEBIET**

Hoher Druckbereich mit eingeschränkten Installationsmöglichkeiten bei schwersten Einsatzbedingungen, Installationen mit hohem Abrieb, Schiffbau, Bergbau und Tagebau

**DAUERBETRIEB**

-40°F / +250°F -40°C / +121°C

**MAX. BETRIEBSTEMPERATUR**

+257°F +125°C

**EMPFÖHLENE MEDIEN**

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis bis +212°F / +100°C  
Wasser/Olémulsion, Wasser

**NIPPEL:** MF2000® - MULTIFIT

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Vier hochzugfeste Stahldrahtspiralen

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

**ANGEWANDTE NORM:** Übertrifft EN 856 R12 - SAE 100 R12 - ISO 3862 R12

**ZULASSUNGEN:** ABS, BV, BV (MED), FRAS, GOST-R, LR, MSHA, MA, LOBA

(IT)

**PRINCIPALI APPLICAZIONI**

Linee ad alta pressione in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +250°F -40°C / +121°C

**PICCO DI TEMPERATURA MASSIMA**

(Servizio Intermitente) +257°F +125°C

**FLUIDI RACCOMANDATI**

Oli minerali, oli vegetali e oli a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO MULTIFIT

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Quattro spirali di acciaio ad alto carico

**COPERTURA:** Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici al calore

**SPECIFICHE:** Eccede EN 856 R12 - SAE 100 R12 - ISO 3862 R12

**OMOLOGAZIONI:** ABS, BV, BV (MED), FRAS, GOST-R, LR, MSHA, MA, LOBA

# 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						
H10035A06*	6 -04 1/4"	14,6	0,57	17,6	0,69	690	10000	3250	47130	120	4,72	660	0,44	*
H10035A10*	10 -06 3/8"	17,4	0,69	20,4	0,80	690	10000	2900	42060	150	5,91	830	0,56	*
H10035A12*	12 -08 1/2"	21,5	0,85	24,5	0,96	620	8990	2500	36250	200	7,87	1140	0,77	*
H10035019*	19 -12 3/4"	29,0	1,14	31,8	1,25	350	5070	1950	28280	240	9,45	1630	1,10	IP+M01500-12
H10035025*	25 -16 1"	36,0	1,42	39,2	1,54	350	5070	1650	23930	300	11,81	2190	1,47	IP+M01500-16
H10035032*	31 -20 1,1/4"	47,0	1,85	50,0	1,97	350	5070	1500	21750	420	16,54	3600	2,42	IP+M01600-20
H10035040*	38 -24 1,1/2"	54,6	2,15	57,5	2,26	350	5070	1600	23200	500	19,69	4700	3,16	IP+M01600-24
H10035051*	51 -32 2"	68,4	2,69	72,0	2,83	350	5070	1500	21750	630	24,80	6800	4,57	IP+M01800-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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

Geprüft mit 1.000.000 Impulszyklen ■ Überragende Abriebbeständigkeit ■ Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ **Bio** Beständigkeit gegen Bio- und Mineralöle

Approvato a 1.000.000 di cicli ■ Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ **Bio** compatibilità con oli biologici e minerali

(GB)

**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

**INSERT:** MF2000® - INTERLOCK PLUS TYPE

**TUBE:** Oil resistant synthetic rubber

**REINFORCEMENT:** Four high tensile steel spirals (DN 6+25).

Six high tensile steel spirals (DN 31+51)

**COVER:** Synthetic rubber with high ozone, weather and heat resistance

**APPLICABLE SPECS.:** Exceed EN 856 R13 - SAE 100 R13 - ISO 3862 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 19+51), MSHA

(ES)

**PRINCIPALES APPLICACIONES**

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

**ESPICA:** MF2000® - TIPO INTERLOCK PLUS

**TUBO:** Cauchó sintético, resistente al aceite

**REFUERZO:** Cuatro refuerzos de acero en espiral de alta resistencia (DN 6+25). Seis refuerzos de acero en espiral de alta resistencia (DN 31+51)

**CUBIERTA:** Cauchó sintético con alta resistencia al ozono, intemperie y calor

**ESPECIFICACIONES APLICABLES:** Excede EN 856 R13 - SAE 100 R13 - ISO 3862 R13

**APROBACIONES:** ABS (DN 19+51), BV (DN 19+51), BV MED (DN 19+51), FRAS, GOST-R, LÓBA, RINA (DN 38+51), (B) (DN 19+51), MSHA

(D)

**HAUPT-ANWENDUNGSGEBIET**

Hochdruck Kreisläufe, Hydrostatische Getriebe mit hoher Belastung, Installationen mit Abriebproblemen, Schiffbau, Bergbau und Tagebau

**DAUERBETRIEB**

-40°F / +250°F -40°C / +121°C

**MAX. BETRIEBSTEMPERATUR**

+257°F +125°C

**EMPFOHLENE MEDIEN**

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis bis +212°F / +100°C  
Wasser/Ölemulsion, Wasser

**NIPPEL:** MF2000® - INTERLOCK PLUS

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Vier hochzugfeste Stahldrahtspiralen (DN 6+25).

Sieben hochzugfeste Stahldrahtspiralen (DN 31+51)

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Wetter-und Temperaturbeständigkeits

**ANGEWANDTE NORM:** Übertrifft EN 856 R13 - SAE 100 R13 - ISO 3862 R13

**ZULASSUNGEN:** ABS (DN 19+51), BV (DN 19+51), BV MED (DN 19+51), FRAS, GOST-R, LOBA, RINA (DN 38+51), (B) (DN 19+51), MSHA

(IT)

**PRINCIPALI APPLICAZIONI**

Ideale per applicazioni severe, trasmissioni idrostatiche, per applicazioni in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +250°F -40°C / +121°C

**PICCO DI TEMPERATURA MASSIMA**

(Servizio Intermitte) +257°F +125°C

**FLUIDI RACCOMANDATI**

Oli minerali, oli vegetali e oli a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO INTERLOCK PLUS

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Quattro spiral di acciaio ad alto carico (DN 6+25). Sei spiral di acciaio ad alto carico (DN 31+51)

**COPERTURA:** Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

**SPECIFICHE:** Eccede EN 856 R13 - SAE 100 R13 - ISO 3862 R13

**OMOLOGAZIONI:** ABS (DN 19+51), BV (DN 19+51), BV MED (DN 19+51), FRAS, GOST-R, LOBA, RINA (DN 38+51), (B) (DN 19+51), MSHA

# 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								
H10049019*	19	-12	3/4"	28,2	1,11	31,0	1,22	420	6090	1750	25580	265	10,43	1440	0,97	IP+M01500-12
H10049025*	25	-16	1"	35,1	1,38	38,1	1,50	420	6090	1750	25380	267	10,51	2040	1,37	IP+M01500-16
H10049A32*	31	-20	1 1/4"	46,3	1,82	49,5	1,95	420	6090	1680	24360	267	10,51	3660	2,46	IP+M01600-20
H10049040*	38	-24	1 1/2"	54,6	2,15	57,5	2,26	420	6090	1680	24360	315	12,40	4700	3,16	IP+M01600-24

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 ■ 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 ■ compatible con aceites minerales y biológicos

Geprüft mit 1.000.000 Flex Impulszyklen ■ Überragende Abriebbeständigkeit ■ Hohe Ozon- und Wetterbeständigkeit ■ Flammbeständig nach vielen Normen ■ Antistatische und antitoxische Decke ■ Beständigkeit gegen Bio- und Mineralöle

Approvato a 1.000.000 di cicli in condizioni rotanti ■ Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono e agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ compatibilità con oli biologici e minerali

(GB)

**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

**INSERT:** MF2000® - INTERLOCK PLUS 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 R15

**TYPE APPROVALS:** ABS, BV, BV (MED), DNV, FRAS, GL, GOST-R, LOBA, LR, MSHA, , MA

(ES)

**PRINCIPALES APPLICACIONES**

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

**ESPICA:** MF2000® - TIPO INTERLOCK PLUS

**TUBO:** Cauchó sintético, resistente al aceite

**REFUERZO:** Cuatro refuerzos de acero en espiral de alta resistencia (DN 19+25). Seis refuerzos de acero en espiral de alta resistencia(DN 31+38)

**CUBIERTA:** Cauchó sintético con alta resistencia al ozono, intemperie y calor

**ESPECIFICACIONES APLICABLES:** Excede SAE 100 R15 - ISO 3862 R15

**APROBACIONES:** ABS, BV, BV (MED), DNV, FRAS, GL, GOST-R, LOBA, LR, MSHA, , MA

(D)

**HAUPT-ANWENDUNGSGEBIET**

Hochdruck Kreisläufe, Hydrostatische Getriebe mit hoher Belastung, Installationen mit Abriebproblemen, Schiffbau, Bergbau und Tagebau

**DAÜRBETRIEB**

-40°F / +250°F -40°C / +121°C

**MAX. BETRIEBSTEMPERATUR**

+257°F +125°C

**EMPFOHLENE MEDIEN**

Mineralöl, Pflanzenöl, Rapsöl, Glykol, Öl auf Polyglykolbasis, Synthetik-Esterbasis bis +212°F / +100°C  
Wasser/Ölemulsion, Wasser

**NIPPEL:** MF2000® - INTERLOCK PLUS

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Vier hochzugfeste Stahldrahtspiralen (DN 19+25).

Siechs hochzugfeste Stahldrahtspiralen (DN 31+38)

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Wetter- und Temperaturbeständigkeit

**ANGEWANDTE NORM:** Übertrifft SAE 100 R15 - ISO 3862 R15

**ZULASSUNGEN:** ABS, BV, BV (MED), DNV, FRAS, GL, GOST-R, LOBA, LR, MSHA, , MA

(IT)

**PRINCIPALI APPLICAZIONI**

Ideale per applicazioni severe, trasmissioni idrostatiche, per applicazioni in severe condizioni ambientali, applicazioni specifiche in severe condizioni di abrasione, applicazioni marine, miniere sotterranee e a cielo aperto

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +250°F -40°C / +121°C

**PICCO DI TEMPERATURA MASSIMA**

(Servizio Intermitte) +257°F +125°C

**FLUIDI RACCOMANDATI**

Oli minerali, oli vegetali e oli a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO INTERLOCK PLUS

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Quattro spiral di acciaio ad alto carico (DN 19+25).

Sei spiral di acciaio ad alto carico (DN 31+38)

**COPERTURA:** Gomma sintetica con alta resistenza all'ozono, agli agenti atmosferici e al calore

**SPECIFICHE:** Eccede SAE 100 R15 - ISO 3862 R15

**OMOLOGAZIONI:** ABS, BV, BV (MED), DNV, FRAS, GL, GOST-R, LOBA, LR, MSHA, , MA

# 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						
H01102006*	6 -04 1/4"	11,3	0,44	13,1	0,52	450	6520	1800	26100	45	1,77	275	0,18	MF+M00120-04
H01102008*	8 -05 5/16"	12,9	0,50	14,7	0,58	400	5800	1600	23200	55	2,17	325	0,22	MF+M00120-05
H01102010*	10 -06 3/8"	15,0	0,59	16,8	0,66	365	5290	1460	21170	65	2,56	390	0,26	MF+M00120-06
H01102A12*	12 -08 1/2"	18,6	0,73	20,4	0,80	350	5070	1400	20300	80	3,15	560	0,38	MF+M00120-08
H01102016*	16 -10 5/8"	22,7	0,89	24,7	0,97	300	4350	1200	17400	90	3,54	730	0,49	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

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 flexibilidad para asegurar una buena resistencia a impulsos con casquillo M00120 para pelado

Die Hi-Performance Lösung für härteste OEM-Spezifikationen ■ Übertrifft die EN 857 2SC bei weitem ■ Verbesserte Lebensdauer und Impulfestigkeit ■ Hohe Resistenz gegen Umwelteinflüsse und hohe Temperaturen ■ Erhöhte Beständigkeit gegen Fleximpulse mit spezieller Schälfassung (M00120)

Soluzione ad alta performance adatta per le specifiche OEM più difficili ■ Performance che eccedono di gran lunga le normative EN 857 2SC  
■ Migliore resistenza agli impulsi e maggior durata ■ Resistenza ad elevate temperature e a situazioni ambientali sfavorevoli ■ Resistenza migliorata al testi di impulsi rotanti con ghiera con pelatura (M00120)

(GB)

**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

**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 EN 857 2SC,

SAE 100 R16S and ISO 11237 2SC

**TYPE APPROVALS:** DNV, DNV (MED), GOST-R, MSHA, LOBA

(ES)

**PRINCIPALES APPLICACIONES**

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 +135°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

**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 EN 857 2SC, SAE 100 R16S y ISO 11237 2SC**APROBACIONES:** DNV, DNV (MED), GOST-R, MSHA, LOBA

(D)

**HAUPT-ANWENDUNGSGEBIET**

Hochdruckleitungen in schwierigen Einbausituationen und schweren OEM Anwendungen

**DAUERBETRIEB**

-40°F / +250°F -40°C / +121°C

**MAX. BETRIEBSSTEMPERATUR:**

+275°F +135°C

**EMPFOLHENE MEDIEN**

Mineralöle, Pflanzenöle, Öle auf Basis synthetischer Ester (bis +212°F / +100°C), Glykole und Polyglykole, Wasser/Mineralöl emulsion, Wasser

**NIPPEL:** MF2000® - MULTIFIT**SEELE:** Olbeständiges synthetisches Gummi**DRUCKTRÄGER:** Zwei hochzugfeste Stahldrahtgeflechte**DECKE:** Synthetisches Gummi mit hoher Ozon-, Abrieb- und Wetterbeständigkeit**ANGEWANDTE NORM:** Übertrifft EN 857 2SC, SAE 100 R16S und ISO 11237 2SC**ZULASSUNGEN:** DNV, DNV (MED), GOST-R, MSHA, LOBA

(IT)

**PRINCIPALI APPLICAZIONI**

Linee ad alta pressione con difficoltà di installazione in applicazioni OEM molto severe

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +250°F -40°C / +121°C

**PICCO DI TEMPERATURA MASSIMA:**

+275°F +135°C

**FLUIDI RACCOMANDATI**

Oli minerali, oli vegetali e oli a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO MULTIFIT**SOTTOSTRATO:** Gomma sintetica resistente agli oli**RINFORZO:** Due trecce di acciaio ad alto carico**COPERTURA:** Gomma sintetica con elevata resistenza all'ozono, all'abrasione ed agli agenti atmosferici**SPECIFICHE:** Eccede EN 857 2SC, SAE 100 R16S e ISO 11237 2SC**OMOLOGAZIONI:** DNV, DNV (MED), GOST-R, MSHA, LOBA

# DIAMONDSPIR™

VERY HIGH PRESSURE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING								
H10018019*	19	-12	3/4"	29,1	1,15	32,1	1,26	560	8120	2240	32480	280	11,02	1660	1,12	XL+M01750-12
H10018025*	25	-16	1"	38,2	1,50	41,2	1,62	560	8120	2240	32480	350	13,78	2910	1,96	XL+M01800-16
H10018032*	31	-20	1 1/4"	47,7	1,88	50,9	2,00	525	7610	2100	30450	420	16,54	4210	2,83	XL+M01800-20
H10018038*	38	-24	1 1/2"	55,2	2,17	58,7	2,31	475	6880	1900	27550	500	19,69	5230	3,51	XL+M01800-24
H10018051*	51	-32	2"	68,4	2,69	71,9	2,83	420	6090	1680	24360	600	23,62	6680	4,49	XL+M01800-32
H10018A63*	63	-40	2 1/2"	80,6	3,17	84,8	3,34	350	5070	1400	20300	800	31,50	8110	5,45	XL+M01800-40
H10018076*	76	-48	3"	90,8	3,57	94,6	3,72	210	3040	870	12610	900	35,43	7910	5,32	XL+M01800-48

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.

NEW



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 ■ 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 ■ compatible con aceite mineral y biológico

Für extreme Drücke ■ Erfolgreich unter extremen Bedingungen getestet ■ Hervorragende Abriebbeständigkeit ■ Hohe Ozon- und Wetterbeständigkeit ■ Erfüllt Flammtests nach verschiedenen Spezifikationen ■ Decke antistatisch und antitoxisch ■ Beständigkeit gegen Bio- und Mineralöle

Elevatissima resistenza alla pressione ■ Approvato con severi test a fatica ■ Superiore resistenza all'abrasione ■ Elevata resistenza all'ozono ed agli agenti atmosferici ■ Resistenza alla propagazione di fiamma in accordo a molteplici norme ■ Copertura antistatica e atossica ■ compatibilità con oli biologici e minerali

(GB)

**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

**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, LOBA, FRAS

(ES)

**PRINCIPALES APPLICACIONES**

Líneas de muy extrema presión en condiciones ambientales de trabajo pesado, transmisión hidrostática, 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

**ESPICA:** MF2000® - TIPO XTRALOCK

**TUBO:** Caucho sintético, resistente al aceite

**REFUERZO:** Seis refuerzos de acero en espiral de alta resistencia al ozono (DN 25+76), Cuatro 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, LOBA, FRAS

(D)

**HAUPT-ANWENDUNGSGEBIET**

Höchstdruckleitungen unter erschwerten Umweltbedingungen, hydrostatische Getriebe, spezifische Einbausituationen mit starkem Abrieb, Offshoreanwendungen, Tage- und Untertagebau

**DAUERBETRIEB**

-40°F / +250°F -40°C / +121°C

**MAX. BETRIEBSTEMPERATUR**

+257°F +125°C

**EMPFÖHLENE MEDIEN**

Mineralöle, Pflanzenöle, Öle auf Basis synthetischer Ester (bis +212°F / +100°C), Glykole und Polyglykole, Wasser/Mineralölemulsion, Wasser

**NIPPEL:** MF2000® - XTRALOCK

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Sechs hochzugfeste Stahldrahtgeflechte (DN 25+76), vier hochzugfeste Stahldrahtgeflechte (DN 19)

**DECKE:** Synthetisches Gummi mit hoher Ozon-, Abrieb- und Wetterbeständigkeit

**ANGEWANDTE NORM:** MANULI® Design - ISO 6807-D (DN 76), Überschreiten ISO 3862 R15

**ZULASSUNGEN:** ABS (DN 25+76), GOST-R, MSHA, LOBA, FRAS

(IT)

**PRINCIPALI APPLICAZIONI**

Linee di pressione estremamente severe, trasmissioni idrostatiche in condizioni ambientali difficili, installazioni specifiche in condizioni severe di abrasione, applicazioni marine, miniere sotterranee ed a cielo aperto, ecc.

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +250°F -40°C / +121°C

**PICCO DI TEMPERATURA MASSIMA**

(Servizio Intermitte) +257°F +125°C

**FLUIDI RACCOMANDATI**

Oli minerali, oli vegetali e oli a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO XTRALOCK

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Sei spirali di acciaio ad alto carico (DN 25+76), quattro spirali di acciaio ad alto carico (DN 19)

**COPERTURA:** Gomma sintetica con elevata resistenza all'ozono, all'abrasione ed agli agenti atmosferici

**SPECIFICHE:** MANULI® Design - ISO 6807-D (DN 76), excede ISO 3862 R15

**OMOLOGAZIONI:** ABS (DN 25+76), GOST-R, MSHA, LOBA, FRAS



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING								
H01124006*	6	-04	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	-06	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	-08	1/2"	18,1	0,71	20,1	0,79	160	2320	640	9280	178	7,01	410	0,28	MF+M03400-08
H01124019*	19	-12	3/4"	25,3	1,00	27,9	1,10	105	1520	420	6090	240	9,45	660	0,44	MF+M03400-12
<b>NEW</b> H01124025*	25	-16	1"	33,1	1,30	35,7	1,41	88	1270	350	5070	300	11,81	980	0,66	MF+M03400-16

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.

SAE 100R15 and ISO 1SN rated working pressure ■ Flame retardant red cover ■ Excellent performance for standard hydraulic applications ■ Embossed indelible branding ■ No skive MF2000 (two-pieces)

Resistencia a la presión según SAE 100R15 y ISO 1SN ■ Cubierta roja con retardante a la llama ■ Excelentes características para aplicaciones hidráulicas estándar ■ Marcada en relieve ■ Racores para No pelar MF2000 (dos piezas)

Extrem hohe Druckbeständigkeit gemäß SAE 100R15 und ISO 1SN ■ Feuerhemmende rote Außenhülle ■ Ausgezeichnete Leistung bei allen hydraulischen Standardanwendungen ■ Nicht entfernbar eingeprägte Kennzeichnung ■ MF2000 (zweiteilig) Nichtschäl-Fassungen und Armaturen

Resistenza alla pressione secondo le norme SAE 100R15 e ISO 1SN ■ Copertura rossa ritardante di infiammabilità ■ Eccellenti performance per tutte le comuni applicazioni idrauliche ■ Marcatura in rilievo indelebile ■ Raccordi senza pelatura esterna MF2000 (due pezzi)

(GB)

**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°F / +212°F -40°C / +100°C

**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

**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, GOST-R

(ES)

**PRINCIPALES APPLICACIONES**

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

**TEMPERATURA CONTINUA DE SERVICIO**

-40°F / +212°F -40°C / +100°C

**FLUIDOS RECOMENDADOS**

Aceites minerales, aceites vegetales y sintéticos con base ester, glicoles y poliglicoles, aceites minerales en emulsión de agua, agua, agua basada en agentes que extinguen el fuego

**ESPIGA:** MF2000® (no-skive) – MULTIFIT TYPE

**TUBO:** Cauciúco sintético resistente al aceite

**REFUERZO:** Una malla de acero reforzado

**CUBIERTA:** Cauciúco sintético Rojo, resistente al ozono, abrasión y ambiente

**ESPECIFICACIONES APLICABLES:** ISO 1436-1SN, SAE

J517 tipo 100R1S y R1AT, EN 853 1SN

**APROBACIONES:** MSHA, GOST-R

(D)

**HAUPT-ANWENDUNGSGEBIET**

Ideal für Brandschutzsysteme in Offroad-Fahrzeugen, Bergbaugeräten und stationären Generatoren. Der Schlauch ist mit einer roten Außenhülle versehen, dadurch ist er in den Brandschutzsystemen einfach und schnell erkennbar

**DAUERBETRIEB**

-40°F / +212°F -40°C / +100°C

**EMPFOLHENE MEDIEN**

Mineralöl, Pflanzenöl und Öl auf Synthetik-Esterbasis, Öl auf Glykol- und Polyglykolbasis, Mineralöl-/Wasseremulsionen, Wasser, flammenhemmende Substanzen auf Wasserbasis

**NIPPEL:** MF2000® (no-skive) – MULTIFIT TYPE

**SEELE:** Ölbeständiges synthetisches Elastomer

**DRUCKTRÄGER:** Ein hochzugfestes Stahldrahtgeflecht

**DECKE:** Rotes synthetisches Elastomer mit hoher Ozon,

Abrieb- und Wetterbeständigkeit

**ANGEWANDTE NORM:** ISO 1436-1SN, SAE J517 typ

100R1S und R1AT, EN 853 1SN

**ZULASSUNGEN:** MSHA, GOST-R

(IT)

**PRINCIPALI APPLICAZIONI**

Sistemi anti-incendio nei veicoli fuori-strada, macchinari per miniera, motori generatori stazionari. Il tubo ha una copertura di colore rosso per essere identificato facilmente all'interno dei sistemi anti-incendio

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +212°F -40°C / +100°C

**FLUIDI RACCOMANDATI**

Oli minerali, oli vegetali e oli a base di esteri sintetici, oli a base di glicoli e poliglicoli, oli minerali in emulsione acquosa, acqua, agenti anti-infiammabili di natura acquosa

**INSERTO:** MF2000® (no-skive) – MULTIFIT TYPE

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Una treccia di acciaio ad alto carico

**COPERTURA:** gomma sintetica rossa resistente a ozono,

abrasione e agenti atmosferici

**SPECIFICHE:** ISO 1436-1SN, SAE J517 tipo 100R1S e

R1AT, EN 853 1SN

**OMOLOGAZIONI:** MSHA, GOST-R

# GOLDENMINE *NEW*

OUTSTANDING ABRASION RESISTANCE



PART. REF.	HOSE SIZE	R.O.D.	O.D.	MAX W.P.	BURST PRESSURE	MIN. BEND RADIUS	WEIGHT	FITTING
H10091063*	DN 63 dash -40 inch 2-1/2"	mm 77,5 inch 3,05	mm 81,5 inch 3,21	bar 200 psi 2900	bar 800 psi 11600	mm 700 inch 27,56	g/m 5890 lb/ft 3,96	IP+M01500-40
H10091076*	DN 76 dash -48 inch 3"	mm 87,8 inch 3,46	mm 92,2 inch 3,63	bar 140 psi 2030	bar 560 psi 8120	mm 700 inch 27,56	g/m 5900 lb/ft 3,96	IP+M01500-48

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



Extreme abrasion resistance ■ High ozone and weather resistance ■ Flame retardant and antistatic cover ■ Superior pressure rating  
■ Structure robustness for tough handling

Extrema resistencia a la abrasión ■ Alta resistencia al ozono y a la intemperie ■ Cubierta con retardante a llama y electricidad antiestática ■ Alta presión de trabajo ■ Estructura robusta y resistente

Extreme Abriebbeständigkeit ■ Hohe Ozon- und Wetterbeständigkeit ■ Antistatische Decke ■ Exzellente Druckbeständigkeit ■ Robuste Struktur für widrige Verarbeitungs- und Handlungsbedingungen

Estrema resistenza all'abrasione ■ Elevata resistenza all'ozono ed agli agenti atmosferici ■ Copertura resistente alla propagazione di fiamma e antistatica ■ Pressioni di esercizio superiori ■ Struttura robusta per severe manipolazioni

GB

**MAIN APPLICATIONS**

Mine hydraulic return lines, medium pressure hydraulic lines with high flow rates, long walls water lines

**CONTINUOUS SERVICE TEMPERATURE RANGE**

-40°F / +212°F -40°C / +100°C

**RECOMMENDED FLUIDS**

Mineral oils, vegetable oils and synthetic ester based oils, glycols and polyglycols, mineral oils in aqueous emulsion, water

**INSERT:** MF2000® - INTERLOCK PLUS

**TUBE:** Oil resistant synthetic rubber

**REINFORCEMENT:** Four high tensile steel spirals

**COVER:** Synthetic rubber with high abrasion, ozone and weather resistance

**APPLICABLE SPECS.:** MANULI® design

**TYPE APPROVALS:** MSHA, GOST-R

ES

**PRINCIPALES APPLICACIONES**

Líneas de retorno hidráulico en Minería, líneas de media presión hidráulica con gran caudal, líneas de refrigeración de agua

**TEMPERATURA CONTINUA DE SERVICIO**

-40°F / +212°F -40°C / +100°C

**FLUIDOS RECOMENDADOS**

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

**ESPIGA:** MF2000® - INTERLOCK PLUS

**TUBO:** Cauchó sintético, resistente al aceite

**REFUERZO:** Cuatro refuerzos en espiral de acero de alta resistencia

**CUBIERTA:** Cauchó sintético con alta resistencia al ozono, a la abrasión y a la intemperie

**ESPECIFICACIONES APLICABLES:** Diseño MANULI®

**APROBACIONES:** MSHA, GOST-R

D

**ANWENDUNGSBEREICH**

Rücklaufleitungen in Bergbau, Hydraulikleitungen mit durchschnittlichem Druck und hohen Volumenströmen, Longwall Wasserleitungen

**KONTINUERLICHER BETRIEBSTEMPERATURBEREICH**

-40°F / +212°F -40°C / +100°C

**EMPFOLHENE FLÜSSIGKEITEN**

Mineralöle, pflanzliche und synthetische esterbasierende Öle, Glykole und Polyglykole, Mineralöle in wässriger Emulsion, Wasser

**EINSATZ:** MF2000® - INTERLOCK PLUS

**SCHLAUCH:** Ölbeständiges Synthetikgummi

**DRUCKTRÄGER:** Vier hochzugfeste Drahtspiralen

**DECKE:** Synthetikgummi mit hoher Abrieb-, Ozon- und Wetterbeständigkeit

**ANGEWANDTE NORMEN:** MANULI® design

**ZULASSUNGEN:** MSHA, GOST-R

IT

**MAIN APPLICATIONS**

Linee di ritorno idrauliche in applicazione miniera, linee idrauliche di media pressione con alto flusso - Linee acqua in applicazioni "long wall"

**CONTINUOUS SERVICE TEMPERATURE RANGE**

-40°F / +212°F -40°C / +100°C

**RECOMMENDED FLUIDS**

Oli minerali, vegetali e sintetici a base di esteri, glicoli e poliglicoli, oli minerali in emulsione aquosa, acqua

**INSERT:** MF2000® - INTERLOCK PLUS

**TUBE:** Gomma sintetica resistente all'olio

**REINFORCEMENT:** Quattro spiralati in acciaio ad alto carico

**COVER:** Gomma sintetica con alta resistenza all'ozono, all'abrasione ed agli agenti atmosferici

**APPLICABLE SPECS.:** MANULI® design

**TYPE APPROVALS:** MSHA, 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								
H01122006*	6	-04	1/4"	11,3	0,44	13,1	0,52	450	6520	1800	26100	45	1,77	285	0,19	MF+M03400-04
H01122008*	8	-05	5/16"	12,9	0,51	14,7	0,58	400	5800	1600	23200	85	3,35	330	0,22	MF+M00120-05
H01122010*	10	-06	3/8"	16,7	0,66	18,5	0,73	400	5800	1600	23200	127	5,00	530	0,36	MF+M00910-06
H01122012*	12	-08	1/2"	20,1	0,79	22,1	0,87	362	5250	1450	21030	150	5,91	710	0,48	MF+M00910-08
H01122019*	19	-12	3/4"	27,1	1,07	29,3	1,15	310	4490	1240	17980	230	9,06	1090	0,73	MF+M00920-12
H01122025*	25	-16	1"	35,1	1,38	37,8	1,49	240	3480	960	13920	300	11,81	1610	1,08	MF+M00920-16
H01122031*	31	-20	1 1/4"	44,5	1,75	47,2	1,86	175	2530	700	10150	380	14,96	2170	1,46	MF+M00920-20
H01122038*	38	-24	1 1/2"	51,0	2,01	53,7	2,11	146	2110	584	8470	450	17,72	2520	1,69	MF+M00910-24
H01122051*	51	-32	2"	62,8	2,47	65,5	2,58	130	1880	520	7540	600	23,62	3170	2,13	MF+M00910-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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

Aprobación 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 relieve indeleble ■ Radio de curvatura reducido para instalaciones difíciles ■ Cubierta con retardante a la llama y electricidad antiestática

Außenhülle mit MSHA-Zertifikat, ideal für Bergbauanwendungen geeignet ■ Übertragende Ozon- und Abriebbeständigkeit ■ Einfache Montage und leichter Einbau (es sind keine Schutzhandschuhe erforderlich) ■ Nicht entfernbar eingeprägte Kennzeichnung ■ Verringter Biegeradius, optimal für schwer zugängliche Einsatzbereiche ■ Antistatische Außenhülle mit flammenhemmenden Eigenschaften

Copertura esterna approvata MSHA, ideale per applicazioni miniera ■ Eccellente resistenza ad abrasione ed ozono ■ Semplicità di assemblaggio e montaggio (non sono necessarie guaine di protezione esterne) ■ Marcatura a rilievo indeleibile ■ Raggio di curvatura ridotto, ottimale in caso di installazioni difficoltose ■ Copertura con proprietà ritardanti la propagazione delle fiamme e antistaticità elettrica

# SHIELDMASTER®/2 PLUS MINE

## TECHNICAL INFO

(GB)

### 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°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

**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, LOBA, GOST-R (FRAS, MA requested)

(ES)

### PRINCIPALES APPLICACIONES

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°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 con base en éster sintético (hasta +212°F / +100°C), glicoles y poliglicoles, aceite en emulsión acuosa, agua

**TUBO:** Caucho sintético, resistente al aceite

**REFUERZO:** Dos trenzas de acero de alta resistencia

**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, LOBA, GOST-R (FRAS, MA requerido)

(D)

### HAUPTANWENDUNGSGEBAEDE

Hochdruckleitungen in schwer zugänglichen Bereichen, die extremen Umweltbedingungen ausgesetzt sind, Anwendungsbereiche mit übermäßigem Abrieb, Über Tage- und Untertagebergbau

### TEMPERATURBEREICH FÜR DEN DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

### MAXIMALE BETRIEBSTEMPERATUR

(Intermittenter Betrieb) +257°F +125°C

### EMPFOLHENE MEDIEN

Mineralöl, Pflanzenöl und Öl auf Synthetik-Esterbasis (bis zu +212°F / +100°C), Glykol und Polyglykol, Mineralöl-/Wasseremulsionen, Wasser

**SEELE:** Ölbeständiges synthetisches Elastomer

**DRUCKTRÄGER:** Zwei hochzugfeste Streifen aus Stahl drahtgeflecht

**DECKE:** Zweischichtige Struktur mit ausgezeichneter Abrieb- und Ozonbeständigkeit

**SPEZIFIZIERUNG:** EN 853 2SN - ISO 1436-1 2SN - SAE J517 100R2AT

Übertrifft die Anforderungen der folgenden Normen:

- BCS 174 (British Coal Specification 1992)

- ISO 6805 Typ 4 (Gummischläuche und -schläuchleinlagen für den untertägigen Bergbau - Hydraulikschläuche mit Stahlrauteinlagen für den Kohlebergbau)

**ZULASSUNGEN:** MSHA, LOBA, GOST-R (FRAS, MA requested)

(IT)

### PRINCIPALI APPLICAZIONI

Linee ad alta pressione con difficoltà di installazione e condizioni ambientali estreme, installazioni con condizioni di abrasione estreme, miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitte) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, minerali in emulsione acquosa, acqua

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Due treccie di acciaio ad alto carico

**COPERTURA:** Struttura bi-strato con eccellente resistenza all'abrasione e all'ozono

**SPECIFICHE:** EN 853 2SN - ISO 1436-1 2SN - SAE J517 100R2AT

Eccede:

- BCS 174 (British Coal Specification 1992)

- ISO 6805 tipo 4 (tubi in gomma e tubi assemblati per miniere sotterranee - modelli idraulici in acciaio rinforzato per estrazioni di carbone)

**OMOLOGAZIONI:** MSHA, LOBA, GOST-R (FRAS, MA richiesto)

# 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								
H01104006*	6	-04	1/4"	11,6	0,46	13,6	0,54	345	5000	1380	20010	50	1,97	280	0,19	MF+M00120-04
H01104008*	8	-05	5/16"	12,9	0,51	15,1	0,59	345	5000	1380	20010	55	2,17	350	0,24	MF+M00120-05
H01104010*	10	-06	3/8"	15,0	0,59	17,2	0,68	345	5000	1380	20010	65	2,56	410	0,28	MF+M00120-06
H01104012*	12	-08	1/2"	19,8	0,78	22,2	0,87	345	5000	1380	20010	120	4,72	670	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	1030	0,69	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	IP+M01500-12
H01104025*	25	-16	1"	35,1	1,38	38,1	1,50	345	5000	1380	20010	267	10,51	1990	1,34	IP+M01500-16
H01104031*	31	-20	1 1/4"	42,2	1,66	45,2	1,78	345	5000	1380	20010	350	13,78	2500	1,68	IP+M01500-20

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 ensamblaje y montaje (no se requiere protección externa) ■ Marcado en relieve

Decke mit MSHA Zulassung für den Bergbau ■ Außerordentliche Abrieb- und Ozonbeständigkeit ■ Standardmaße ■ Leichte Montage (Keine Scheuerschutzwendel nötig) ■ Isobarische Druck-Reihe ■ Nicht entfernbare, eingravierte Kennzeichnung

Copertura composita esterna approvata MSHA ideale per applicazioni miniera ■ Eccellente resistenza all'abrasione e all'ozono ■ Struttura compatta ■ Semplicità di assemblaggio e montaggio (non sono necessarie guaine di protezione esterne) ■ Pressioni di esercizio isobariche ■ Marcatura a rilievo indeleibile

# SHIELDMASTER®/5000 MINE

## TECHNICAL INFO

GB

### MAIN APPLICATIONS

High pressure lines with installation contraints in heavy duty environmental conditions, specific installations with severe abrasion conditions, 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 oils and synthetic ester based oils (up to +212°F / +100°C), glycols and polyglycols, mineral oils in aqueous emulsion, water

**INSERT:** MF2000® - MULTIFIT TYPE (DN 6+16)

MF2000® - INTERLOCK PLUS 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 outstanding abrasion resistance

**APPLICABLE SPECS.:** MANULI® Design, ISO 3862-R13

**TYPE APPROVALS:** GOST-R, MSHA, LOBA

ES

### PRINCIPALES APPLICACIONES

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

**ESPIGA:** MF2000® - TIPO MULTIFIT (DN 6+16)

MF2000® - TIPO INTERLOCK PLUS (DN 19+31)

**TUBO:** Cauchó 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®, ISO 3862-R13

**APROBACIONES:** GOST-R, MSHA, LOBA

D

### HAUPT-ANWENDUNGSGEBIET

Hoch belastbare Leitung mit hoher Abriebbeständigkeit (gebündelte Schlauchleitungen, lokalisierte Kontakte mit scharfen Kanten und Fremdkörper Partikel, Verschleiß durch am Boden schleifen, alternativ zu Scheuerschutzwendel)

### DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

### MAX. BETRIEBSTEMPERATUR

(Intermittierender Betrieb) +257°F +125°C

### EMPFOHLENE MEDIEN

Mineralöl, Pflanzenöl, Glykol, Öl auf Polyglykolbasis, Wasser/Mineralölemulsion, Synthetik-Esterbasis bis +212°F / +100°C Wasser

**NIPPEL:** MF2000® - MULTIFIT (DN 6+16)

MF2000® - INTERLOCK PLUS (DN 19+31)

**SEELE:** Ölbeständiges synthetisches Gummi

**DRUCKTRÄGER:** Zwei hochzugfeste Stahldrahtgeflechte (DN 6+12). Vier hochzugfeste Stahldrahtspiralen (DN 16+31)

**DECKE:** Gemischte Doppel-Lagen Struktur mit außerordentlicher Abriebbeständigkeit

**ANGEWANDTE NORM:** MANULI® Design, ISO 3862-R13

**ZULASSUNGEN:** GOST-R, MSHA, LOBA

IT

### PRINCIPALI APPLICAZIONI

Ideale per applicazioni severe in condizioni di abrasione estreme (ad es. fasci di tubi, contatti con spiglii vivi e corpi/particelle esterne, usura dovuta a contatto continuo con il terreno, alternativa a molle/guaine di protezione)

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitente) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e di colza, glicoli e poliglicoli, oli a base di esteri sintetici (fino a +212°F / +100°C), oli in emulsione acquosa, acqua

**INSERTO:** MF2000® - TIPO MULTIFIT (DN 6+16)

MF2000® - TIPO INTERLOCK PLUS (DN 19+31)

**SOTTOSTRATO:** Gomma sintetica resistente agli oli

**RINFORZO:** Due treccie di acciaio ad alto carico (DN 6+12). Quattro spirali di acciaio ad alto carico (DN 16+31)

**COPERTURA:** Struttura composita bi-strato con eccellente resistenza all'abrasione

**SPECIFICHE:** MANULI® Design, ISO 3862-R13

**OMOLOGAZIONI:** GOST-R, MSHA, LOBA

# 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								
H10086031*	31	-20	1.1/4"	46,3	1,82	49,5	1,95	420	6090	1680	24360	260	10,24	3760	2,53	IP+M01600-20
H10086038*	38	-24	1.1/2"	54,6	2,15	57,8	2,28	420	6090	1680	24360	310	12,20	4850	3,26	IP+M01600-24
H10086051*	51	-32	2"	68,4	2,69	72,0	2,83	420	6090	1680	24360	600	23,62	6860	4,61	XL+M01800-32

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 antistatic cover properties

Aprobación 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 relieve indeleble ■ Radio de curvatura reducido para instalaciones difíciles ■ Cubierta con retardante a la llama y electricidad antiestática

Außenhülle mit MSHA-Zertifikat, ideal für den Einsatz in Bergbauanwendungen ■ Überragende Ozon- und Abriebbeständigkeit ■ Einfache Montage und leichter Einbau (es sind keine Schutzhandschuhe erforderlich) ■ Nicht entfernbare eingravierte Kennzeichnung ■ Verringelter Biegeradius, optimal für schwer zugängliche Einsatzbereiche ■ Antistatische Außenhülle mit flammenhemmenden Eigenschaften

Copertura esterna approvata MSHA, ideale per applicazioni miniera ■ Eccellente resistenza ad abrasione ed ozono ■ Semplicità di assemblaggio e montaggio (non sono necessarie guaine di protezione esterne) ■ Marcatura a rilievo indeleibile ■ Raggio di curvatura ridotto, ottimale in caso di installazioni difficoltose ■ Copertura con proprietà ritardanti la propagazione delle fiamme e antistatica elettrica

**(GB)**

### 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°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

**INSERT:** MF2000® - INTERLOCK PLUS TYPE (DN 31+38)

MF2000® - XTRALOCK (DN 51)

**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, LOBA, GOST-R (FRAS, , MA requested)

**(D)**

### HAUPTANWENDUNGSBEREICHE

Ideal für hochbeanspruchte Anwendungen unter extremen Abriebbedingungen (z.B. Schlaubündel, Kontakt mit scharfen Kanten und äußeren Einflüssen/Partikeln, Verschleiß durch kontinuierlichen Schleifkontakt mit dem Boden, Alternativen zu Schutzfedern), Untertage- und Über Tagebergbau

### TEMPERATURBEREICH FÜR DEN DAUERBETRIEB

-40°F / +212°F -40°C / +100°C

### MÄXIMALE BETRIEBSTEMPERATUR

(Intermittenter Betrieb) +257°F +125°C

### EMPFOHLENE MEDIEN

Mineralöl, Pflanzenöl und Öl auf Synthetik-Esterbasis (bis zu +212°F / +100°C), Glykol und Polyglykol, Mineralöl-/Wasseremulsionen, Wasser

**NIPPEL:** MF2000® - INTERLOCK PLUS TYPE (DN 31+38)

MF2000® - XTRALOCK (DN 51)

**SEELE:** Ölbeständiges synthetisches Elastomer

**DRUCKTRÄGER:** Sechs hochzugfeste Streifen aus Stahl drahtgeflecht

**DECKE:** Zweischichtiger Kompositaufbau mit ausgezeichneter Abrieb- und Ozonbeständigkeit.

**SPEZIFIZIERUNG:** ISO 3862-1R15 - SAE J517 100R16

Übertrifft die Anforderungen der folgenden Normen:

- BCS 174 (British Coal Specification 1992)
- ISO 6805 Typ 6 (Gummischläuche und - schlauchleitungen für den untertägigen Bergbau - Hydraulikschläuche mit Stahl draht einglagen für den Kohlebergbau)

**ZULASSUNGEN:** MSHA, LOBA, GOST-R (FRAS, , MA requested)

Hoses

**(ES)**

### PRINCIPALES APPLICACIONES

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°F / +212°F -40°C / +100°C

### 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

**ESPUMA:** MF2000® - TIPO INTERLOCK PLUS (DN 31+38)

MF2000® - XTRALOCK (DN 51)

**TUBO:** Cauchó 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 6 (Mangueras de caucho y ensamblajes para minas - malla de acero reforzada tipo hidráulico para minas de carbón)

**APROBACIONES:** MSHA, LOBA, GOST-R (FRAS, , MA requerido

**(IT)**

### PRINCIPALI APPLICAZIONI

Ideale per applicazioni severe in condizioni di abrasione estreme (ad es. fasci di tubi, contatti con spigli vivi e corpi/particelle esterne, usura dovuta a contatto continuo con il terreno, alternativa a molle/guaine di protezione) Miniere sotterranee e a cielo aperto

### RANGE DI TEMPERATURA IN SERVIZIO CONTINUO

-40°F / +212°F -40°C / +100°C

### PICCO DI TEMPERATURA MASSIMA

(Servizio Intermitente) +257°F +125°C

### FLUIDI RACCOMANDATI

Oli minerali, oli vegetali e a base di esteri sintetici (fino a +212°F / +100°C), glicoli e poliglicoli, minerali in emulsione aquosa, acqua

**INSERTO:** MF2000® - TIPO INTERLOCK PLUS (DN 31+38)

MF2000® - XTRALOCK (DN 51)

**SOTTOSTRAUTO:** Gomma sintetica resistente agli oli

**RINFORZO:** 6 treccce di acciaio ad alto carico

**COPERTURA:** Struttura composita bi-strato con eccellente resistenza all'abrasione e all'ozono.

**SPECIFICHE:** ISO 3862-1R15 - SAE J517 100R16

Eccede:

- BCS 174 (British Coal Specification 1992)
- ISO 6805 6 ((tubi in gomma e tubi assemblati per miniere sotterranee - modelli idraulici in acciaio rinforzato per estrazioni di carbone))

**OMOLOGAZIONI:** MSHA, LOBA, GOST-R (FRAS, , MA richiesto)

# 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	0,27	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

\* See appendix, page 938 / Ver nota en apéndice, página 938 / Siehe Anhang, Seite 938 / Vedi appendice, pagina 938.



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 ■ aprobación MSHA

Extrem hohe Flexibilität ■ Reduziertes Gewicht ■ High-tech Produktionsprozess ■ Einfache Installation ■ Blaue flammenhemmende Außenhülle, MSHA-zertifiziert

Alta flessibilità ■ Peso ridotto ■ Processo produttivo high-tech ■ Semplicità di installazione ■ Copertura blu resistente alla propagazione di fiamma ■ Omologazione MSHA

GB

**MAIN APPLICATIONS**

Cable protection hose for mining applications.

**CONTINUOUS SERVICE TEMPERATURE RANGE**

-40°F / +212°F -40°C / +100°C

**INSERT:** MF2000® - MULTIFIT TYPE**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, GOST-R

ES

**PRINCIPALES APPLICACIONES**

Cable de protección de manguera para aplicaciones mineras.

**TEMPERATURA CONTINUA DE SERVICIO**

-40°F / +212°F -40°C / +100°C

**ESPICA:** MF2000® - TIPO MULTIFIT**TUBO:** Cauciú sintético, resistente al aceite**REFUERZO:** Dos trenzas de acero de alta resistencia**CUBIERTA:** Cauciú sintético azul con alta resistencia al ozono y a la intemperie**ESPECIFICACIONES APLICABLES:** diseño Manuli**APROBACIONES:** LOBA, MSHA, GOST-R

D

**HAUPT-ANWENDUNGSGEBIET**

Kabelschutzschläuche für Bergbauanwendungen

**DAUERBETRIEB**

-40°F / +212°F -40°C / +100°C

**NIPPEL:** MF2000® - MULTIFIT**SEELE:** Ölbeständiges synthetisches Elastomer**DRUCKTRÄGER:** Zwei hochzugfeste Streifen aus Stahl drahtgeflecht**DECKE:** Blaues synthetisches Elastomer mit hoher Ozon- und Wetterbeständigkeits**ANGEWANDTE NORM:** MANULI® Design**ZULASSUNGEN:** LOBA, MSHA, GOST-R

IT

**PRINCIPALI APPLICAZIONI**

Tubo protettivo per cavi per applicazioni miniera.

**RANGE DI TEMPERATURA IN SERVIZIO CONTINUO**

-40°F / +212°F -40°C / +100°C

**INSERTO:** MF2000® - TIPO MULTIFIT**SOTTOSTRATO:** Gomma sintetica resistente agli oli**RINFORZO:** Due treccce di acciaio ad alto carico**COPERTURA:** Gomma sintetica blu resistente a ozono e agenti atmosferici**SPECIFICHE:** MANULI® Design**OMOLOGAZIONI:** LOBA, MSHA, GOST-R



# MINING

## Fittings



Fluid connectors, solid solutions

**m** manuli<sup>®</sup>  
HYDRAULICS

# MULTIFIT INSERT



## VISUAL INDEX

REFERENCE	DESCRIPTION	PAGE
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### MF2000® MULTIFIT TYPE FERRULE

<b>M03400</b> 	NO-SKIVE FERRULE FOR WIRE BRAID HOSES CASQUILLO SIN PELADO PARA MANGUERAS CON TRENZA DE ACERO NICKTSCHÄLFASSUNG FÜR DRAHTGEFLECHTSCHLÄUCHE GHIERA PER TUBI TRECCIATI SENZA PELATURA	<b>716</b>
<b>M00820/M00830</b> 	NO-SKIVE FERRULE FOR COMPACT HOSES CASQUILLO SIN PELADO PARA MANGUERAS COMPACTAS NICKTSCHÄLFASSUNG FÜR KOMPAKTSCHLÄUCHE GHIERA PER TUBI COMPATTI SENZA PELATURA	<b>717</b>
<b>M00110/M00120</b> 	SKIVE FERRULE FOR WIRE BRAID HOSES CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO SCHALFASSUNG FÜR DRAHTGEFLECHTSCHLÄUCHE GHIERA PER TUBI TRECCIATI CON PELATURA	<b>718</b>
<b>M00910/M00920</b> 	SKIVE FERRULE FOR WIRE BRAID AND SPIRAL HOSES CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA Y ESPIRAL DE ACERO SCHALFASSUNG FÜR DRAHTGEFLECHT UND SPIRAL SCHLÄUCHE GHIERA PER TUBI TRECCIATI E SPIRALATI CON PELATURA	<b>718</b>

### MF2000® MULTIFIT TYPE INSERT

<b>M14810</b> 	STAPLE-LOCK MALE SAE J1467 MACHO STAPLE-LOCK SAE J1467 STAPLE-LOCK STECKVERBINDUNGEN SAE J1467 STAPLE-LOCK MASCHIO SAE J1467	<b>719</b>
<b>M14610</b> 	SUPER STAPLE-LOCK MALE MACHO SUPER STAPLE-LOCK SUPER STAPLE-LOCK STECKVERBINDUNGEN SUPER STAPLE-LOCK MASCHIO	<b>719</b>
<b>M15910</b> 	LOW PRESSURE FLUSHFIT MALE MACHO FLUSHFIT BAJA PRESIÓN NIEDRIGDRUCK F-FLUSHFIT STECKER FLUSHFIT MASCHIO BASSA PRESSIONE	<b>720</b>
<b>M25910</b> 	LOW PRESSURE FLUSHFIT FEMALE Hembra FLUSHFIT BAJA PRESIÓN NIEDRIGDRUCK M-FLUSHFIT BUCHSE FLUSHFIT FEMMINA BASSA PRESSIONE	<b>720</b>

### MF2000® INTERLOCK PLUS TYPE FERRULE

<b>M01500</b> 	DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (4 PLY) CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL TRABAJO PESADO (4 ESPIRALES) PRESSFASSUNG INNEN- UND AUSSENSCHÄLUNG FÜR HÖCHSTDURKSCHLÄUCHE (4-LAGIG) GHIERA PER TUBI SPIRALATI CON DOPPIA PELATURA (4 SPIRALI)	<b>721</b>
<b>M01600</b> 	DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (6 PLY) CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL TRABAJO PESADO (6 ESPIRALES) PRESSFASSUNG INNEN- UND AUSSENSCHÄLUNG FÜR HÖCHSTDURKSCHLÄUCHE (6-LAGIG) GHIERA PER TUBI SPIRALATI CON DOPPIA PELATURA (6 SPIRALI)	<b>721</b>

REFERENCE	DESCRIPTION	PAGE
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<b>M01800</b> 	DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY) CASQUILLO DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL (6 ESPIRALES) - TRABAJO PESADO FASSUNG FÜR INNEN/AUBENSCHÄLUNG FÜR HOCHLEISTUNGS-SPIRAL SCHLÄUCHE (6-LAGIG) GHIERA A PELATURA INTERNA/ESTERNA PER TUBI SPIRALATI PER APPLICAZIONI ESTREMAMENTE SEVERE (6 SPIRALI)	<b>721</b>
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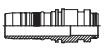
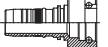
## MF2000® INTERLOCK PLUS TYPE INSERT

<b>M34710</b> 	SUPER STAPLE-LOCK MALE MACHO SUPER STAPLE-LOCK SUPER STAPLE-LOCK STECKVERBINDUNGEN ADATTATORE MACHIO SUPER STAPLE-LOCK	<b>722</b>
<b>M36110</b> 	HIGH PRESSURE FLUSHFIT MALE MACHO ALTA PRESIÓN FLUSHFIT FLUSHFIT HOCHDRUCKSTECKVERBINDUNG MASCHIO FLUSHFIT ALTA PRESSIONE	<b>722</b>
<b>M46110</b> 	HIGH PRESSURE FLUSHFIT FEMALE HEMBRA ALTA PRESIÓN FLUSHFIT FLUSHFIT HOCHDRUCKSTECKVERBINDUNG BUCHSE FLUSHFIT FEMMINA ALTA PRESSIONE	<b>722</b>

## MF2000® XTRALOCK TYPE FERRULE

<b>M01800</b> 	DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY) CASQUILLO DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL (6 ESPIRALES) - TRABAJO PESADO FASSUNG FÜR INNEN/AUBENSCHÄLUNG FÜR HOCHLEISTUNGS-SPIRAL SCHLÄUCHE (6-LAGIG) GHIERA A PELATURA INTERNA/ESTERNA PER TUBI SPIRALATI PER APPLICAZIONI ESTREMAMENTE SEVERE (6 SPIRALI)	<b>723</b>
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## MF2000® XTRALOCK TYPE INSERT

<b>M54610</b> 	SUPER STAPLE-LOCK MALE MACHO SUPER STAPLE-LOCK SUPER STAPLE-LOCK STECKVERBINDUNGEN SUPER STAPLE-LOCK MASCHIO	<b>724</b>
<b>M56110</b> 	HIGH PRESSURE FLUSHFIT MALE MACHO ALTA PRESIÓN FLUSHFIT FLUSHFIT HOCHDRUCKSTECKVERBINDUNG MASCHIO FLUSHFIT ALTA PRESSIONE	<b>724</b>
<b>M66110</b> 	HIGH PRESSURE FLUSHFIT FEMALE HEMBRA ALTA PRESIÓN FLUSHFIT FLUSHFIT HOCHDRUCKSTECKVERBINDUNG BUCHSE FLUSHFIT FEMMINA ALTA PRESSIONE	<b>724</b>

# MULTIFIT INSERT

**mF**2000®

## FERRULE

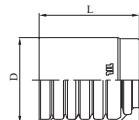
### M03400

NO-SKIVE FERRULE FOR WIRE BRAID HOSES

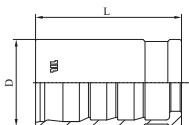
CASQUILLO SIN PELADO PARA MANGUERAS CON TRENZA DE ACERO

NICHTSCHÄLFASSUNG FÜR DRAHTGEFLECHTSCHLÄUCHE

GHIERA PER TUBI TRECCIATI SENZA PELATURA



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	57,2
M03400-24	38	1 1/2"	- 24	67,0	64,8
M03400-32	51	2"	- 32	80,0	68,3
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	105,0	75,0



### M00820/M00830

NO-SKIVE FERRULE FOR COMPACT HOSES  
CASQUILLO SIN PELADO PARA MANGUERAS COMPACTAS  
NICHTSCHÄLFASSUNG FÜR KOMPAKTSCHLÄUCHE  
GHIERA PER TUBI COMPATTI SENZA PELATURA

PART. REF.	HOSE BORE			DIMENSIONS mm		
	DN	inch	Size	D	L	
M00820-03	5	3/16"	- 03	14,0	26,4	
M00830-04	6	1/4"	- 04	18,0	29,6	
M00830-05	8	5/16"	- 05	19,0	31,9	
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	

NEW  
NEW

# MULTIFIT INSERT



## FERRULE

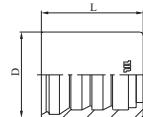
### M00110

SKIVE FERRULE FOR WIRE BRAID HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO

SCHÄLFASSUNG FÜR DRAHTGEFLECHTSCHLÄUCHE

GHIERA PER TUBI TRECCIATI CON PELATURA



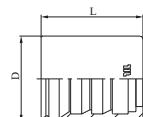
### M00120

SKIVE FERRULE FOR WIRE BRAID HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA DE ACERO

SCHÄLFASSUNG FÜR DRAHTGEFLECHTSCHLÄUCHE

GHIERA PER TUBI TRECCIATI CON PELATURA



PART. REF.	HOSE BORE			DIMENSIONS mm		
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	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				

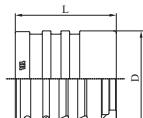
### M00910/M00920

SKIVE FERRULE FOR WIRE BRAID AND SPIRAL HOSES

CASQUILLO CON PELADO PARA MANGUERAS CON TRENZA Y ESPIRAL DE ACERO

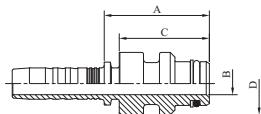
SCHÄLFASSUNG FÜR DRAHTGEFLECHT UND SPIRAL SCHLÄUCHE

GHIERA PER TUBI TRECCIATI E SPIRALATI CON PELATURA



PART. REF.	HOSE BORE			DIMENSIONS mm		
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	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				

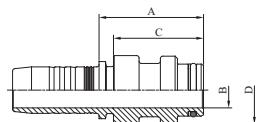


### M14810

**STAPLE-LOCK MALE SAE J1467**  
**MACHO STAPLE-LOCK SAE J1467**  
**STAPLE-LOCK STECKVERBINDUNGEN SAE J1467**  
**STAPLE-LOCK MASCHIO SAE J1467**

PART. REF.	HOSE BORE			DIMENSIONS mm			
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	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	43,8	36,6	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	43,5	55,0	
M14810-32-32	51	2"	- 32	42,0	48,9	40,0	64,0	
M14810-40-40	63	2 1/2"	- 40	60,0	89,0	73,0	81,0	
M14810-48-48	76	3"	- 48	66,0	102,0	90,0	91,0	



### M14610

**SUPER STAPLE-LOCK MALE**  
**MACHO SUPER STAPLE-LOCK**  
**SUPER STAPLE-LOCK STECKVERBINDUNGEN**  
**SUPER STAPLE-LOCK MASCHIO**

PART. REF.	HOSE BORE			DIMENSIONS mm			
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	DN	inch	Size	B	A	C	D	
M14610-12-12	19	3/4"	- 12	15,0	44,1	38,0	28,6	
M14610-16-16	25	1"	- 16	22,0	62,2	55,0	38,4	
M14610-20-20	31	1 1/4"	- 20	26,0	67,9	60,0	45,4	

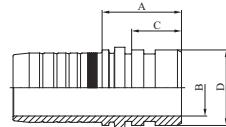
# MULTIFIT TYPE

**mF**2000®

## INSERT

### M15910

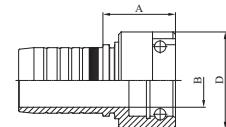
LOW PRESSURE FLUSHFIT MALE  
MACHO FLUSHFIT BAJA PRESIÓN  
NIEDRIGDRUCK F-FLUSHFIT STECKER  
FLUSHFIT MASCHIO BASSA PRESSIONE



PART. REF.	HOSE BORE			DIMENSIONS mm			
	DN	inch	Size	B	A	C	D
M15910-24-24	38	1.1/2"	- 24	32,0	65,0	27,0	42,0
M15910-32-32	51	2"	- 32	42,0	59,0	37,0	56,0
M15910-40-40	63	2.1/2"	- 40	60,0	79,0	51,0	76,0

### M25910

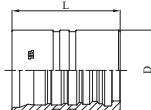
LOW PRESSURE FLUSHFIT FEMALE  
HEMBRA FLUSHFIT BAJA PRESIÓN  
NIEDRIGDRUCK M-FLUSHFIT BUCHSE  
FLUSHFIT FEMMINA BASSA PRESSIONE



PART. REF.	HOSE BORE			DIMENSIONS mm			
	DN	inch	Size	B	A	D	
M25910-24-24	38	1.1/2"	- 24	32,0	67,0	70,0	
M25910-32-32	51	2"	- 32	42,0	57,0	76,0	
M25910-40-40	63	2.1/2"	- 40	60,0	72,0	106,0	

## FERRULE

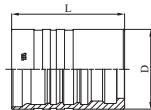
### M01500



DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (4 PLY)  
 CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL  
 TRABAJO PESADO (4 ESPIRALES)  
 PRESSFASSUNG INNEN- UND AUSSENSCHÄLUNG FÜR HÖCHSTDRECKSCHLÄUFE (4-LAGIG)  
 GHIERA PER TUBI SPIRALATI CON DOPPIA PELATURA (4 SPIRALI)

PART. REF.	HOSE BORE			DIMENSIONS mm				
	DN	inch	Size	D	L			
M01500-12	19	3/4"	- 12	40,0	51,4			
M01500-16	25	1"	- 16	48,0	64,5			
M01500-20	31	1 1/4"	- 20	57,0	84,0			
M01500-24	38	1 1/2"	- 24	64,3	94,0			
M01500-32	51	2"	- 32	83,5	107,0			

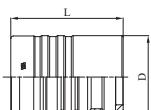
### M01600



DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (6 PLY)  
 CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL  
 TRABAJO PESADO (6 ESPIRALES)  
 PRESSFASSUNG INNEN- UND AUSSENSCHÄLUNG FÜR HÖCHSTDRECKSCHLÄUFE (6-LAGIG)  
 GHIERA PER TUBI SPIRALATI CON DOPPIA PELATURA (6 SPIRALI)

PART. REF.	HOSE BORE			DIMENSIONS mm				
	DN	inch	Size	D	L			
M01600-20	31	1 1/4"	- 20	60,0	85,0			
M01600-24	38	1 1/2"	- 24	69,0	96,0			

### M01800



DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY)  
 CASQUILLOS DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL  
 PRESSFASSUNG FÜR INNEN- UND AUSSENSCHÄLUNG FÜR SPEZIAL-SPIRAL SCHLÄUFE (6-LAGIG)  
 GHIERA A PELATURA INTERNA/ESTERNA PER TUBI SPIRALATI (6 SPIRALI) PER APPLICAZIONI ESTREMAMENTE SEVERE

PART. REF.	HOSE BORE			DIMENSIONS mm				
	DN	inch	Size	D	L			
M01800-32	51	2"	- 32	86,5	108,0			

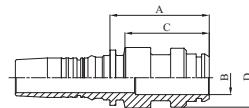
# INTERLOCK PLUS TYPE



## INSERT

### M34710

SUPER STAPLE-LOCK MALE  
MACHO SUPER STAPLE-LOCK  
SUPER STAPLE-LOCK STECKVERBINDUNGEN  
ADATTATORE MACHIO SUPER STAPLE-LOCK

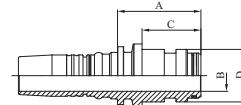


PART. REF.	HOSE BORE			DIMENSIONS mm			
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	DN	inch	Size	B	A	C	D	
M34710-12-12	19	3/4"	- 12	15,0	46,3	38,5	28,6	
M34710-16-16	25	1"	- 16	22,0	68,8	55,0	38,4	
M34710-20-20	31	1 1/4"	- 20	26,0	72,0	60,0	45,4	
M34710-24-24	38	1 1/2"	- 24	30,5	73,8	61,5	54,4	
M34710-32-32	51	2"	- 32	38,0	84,4	72,0	63,4	

### M36110

HIGH PRESSURE FLUSHFIT MALE  
MACHO ALTA PRESIÓN FLUSHFIT  
FLUSHFIT HOCHDRUCKSTECKVERBINDUNG  
MASCHIO FLUSHFIT ALTA PRESSIONE

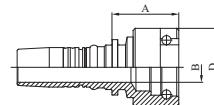


PART. REF.	HOSE BORE			DIMENSIONS mm			
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	DN	inch	Size	B	A	C	D	
M36110-24-24	38	1 1/2"	- 24	31,0	80,0	61,5	54,5	
M36110-32-32	51	2"	- 32	38,2	90,5	68,0	54,5	

### M46110

HIGH PRESSURE FLUSHFIT FEMALE  
HEMBRA ALTA PRESIÓN FLUSHFIT  
FLUSHFIT HOCHDRUCKSTECKVERBINDUNG BUCHSE  
FLUSHFIT FEMMINA ALTA PRESSIONE



PART. REF.	HOSE BORE			DIMENSIONS mm			
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	DN	inch	Size	B	A	D		
M46110-24-24	38	1 1/2"	- 24	31,0	90,0	88,9		
M46110-32-32	51	2"	- 32	41,0	90,0	95,3		

### M01800

DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY)

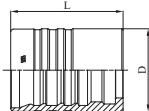
CASQUILLO DE PELADO INTERNO Y EXTERNO PARA MANGUERAS CON REFUERZO EN ESPIRAL

(6 ESPIRALES) - TRABAJO PESADO

FASSUNG FÜR INNEN/AUBENSCHÄLUNG FÜR HOCHLEISTUNGS-SPIRAL SCHLAÜCHE (6-LAGIG)

GHIERA A PELATURA INTERNA/ESTERNA PER TUBI SPIRALATI (6 SPIRALI)

PER APPLICAZIONI ESTREMAMENTE SEVERE



PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	inch	Size	D	L				
M01800-32	51	2"	- 32	86,5	108,0				
M01800-40	63	2 1/2"	- 40	103,0	135,0				

# XTRALOCK TYPE



## INSERT

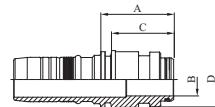
### M54610

SUPER STAPLE-LOCK MALE

MACHO SUPER STAPLE-LOCK

SUPER STAPLE-LOCK STECKVERBINDUNGEN

SUPER STAPLE-LOCK MASCHIO



PART. REF.	HOSE BORE			DIMENSIONS mm			
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M54610-32-32	51	2"	- 32	38,0	54,4	72,0	63,4
M54610-40-40	63	2.1/2"	- 40	51,0	93,0	77,5	76,4

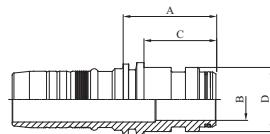
### M56110

HIGH PRESSURE FLUSHFIT MALE

MACHO ALTA PRESIÓN FLUSHFIT

FLUSHFIT HOCHDRUCKSTECKVERBINDUNG

MASCHIO FLUSHFIT ALTA PRESSIONE



PART. REF.	HOSE BORE			DIMENSIONS mm			
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M56110-32-32	51	2"	- 32	38,2	90,5	68,0	54,5
M56110-40-40	63	2.1/2"	- 40	49,7	112,5	79,0	77,5

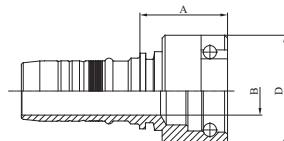
### M66110

HIGH PRESSURE FLUSHFIT FEMALE

HEMBA ALTA PRESIÓN FLUSHFIT

FLUSHFIT HOCHDRUCKSTECKVERBINDUNG BUCHSE

FLUSHFIT FEMMINA ALTA PRESSIONE



PART. REF.	HOSE BORE			DIMENSIONS mm			
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M66110-32-32	51	2"	- 32	41,0	90,0	95,3	
M66110-40-40	63	2.1/2"	- 40	51,5	100,0	112,0	

## MINING

### Adaptors and valves



Fluid connectors, solid solutions

**m manuli®**  
HYDRAULICS

# ADAPTORS & VALVES

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<b>A798282</b> 	BRANCH TEE SWIVEL STAPLE-LOCK FEMALE TE HEMBRA GIRATORIA STAPLE-LOCK STAPLE-LOCK DREHBARE T-STÜCKVERBINDUNG ADATTATORE STAPLE-LOCK "T" LATERALE FEMMINA GIREVOLE	<b>744</b>
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<b>A510382</b> 	SWIVEL STAPLE-LOCK FEMALE - BSP BANJO ADAPTOR HEMBRA GIRATORIA STAPLE-LOCK - ADAPTADOR BANJO BSP DREHBARE STAPLE-LOCK - BSP ADAPTERBUCHSE ADATTATORE STAPLE-LOCK FEMMINA GIREVOLE - OCCHIELLO BSP	<b>745</b>
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# ADAPTORS & VALVES

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A522846	773	A574848	738	AV72AB2N	783

# ADAPTORS & VALVES

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REFERENCE	PAGE
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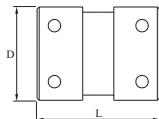
AV72AF2N	<b>783</b>
JL4610DS	<b>766</b>
JL4610FS	<b>765</b>
JL4801SS	<b>741</b>
JL4810DS	<b>742</b>
JL4810SS	<b>742</b>
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JO12	<b>746</b>
JO15	<b>747/767</b>
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080211	<b>745</b>

# STAPLE-LOCK

## ADAPTORS

### A514848

STRAIGHT STAPLE-LOCK FEMALE ADAPTOR  
ADAPTADOR HEMBRA STAPLE-LOCK RECTO  
GERADE STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK DRTTO FEMMINA

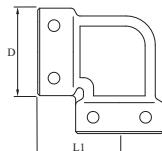


PART. REF.	NOMINAL BORE			DIMENSIONS mm		
------------	--------------	--	--	---------------	--	--

	DN	inch	Size	L	D			
A514848-04-04	6	1/4"	- 04	58	25			
A514848-06-06	10	3/8"	- 06	58	32			
A514848-08-08	12	1/2"	- 08	59	35			
A514848-12-12	19	3/4"	- 12	59	45			
A514848-16-16	25	1"	- 16	67	55			
A514848-20-20	31	1.1/4"	- 20	67	60			
A514848-24-24	38	1.1/2"	- 24	75	76			
A514848-32-32	51	2"	- 32	75	85			
A514848-40-40	63	2.1/2"	- 40	136	100			
A514848-48-48	76	3"	- 48	190	120			

### A574848

90° STAPLE-LOCK FEMALE ADAPTOR  
ADAPTADOR HEMBRA STAPLE-LOCK A 90°  
90° STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK 90° FEMMINA

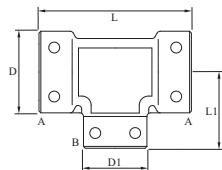


PART. REF.	NOMINAL BORE			DIMENSIONS mm		
------------	--------------	--	--	---------------	--	--

	DN	inch	Size	L <sub>1</sub>	D			
A574848-04-04	6	1/4"	- 04	38	32			
A574848-06-06	10	3/8"	- 06	38	32			
A574848-08-08	12	1/2"	- 08	40	35			
A574848-12-12	19	3/4"	- 12	42	45			
A574848-16-16	25	1"	- 16	50	55			
A574848-20-20	31	1.1/4"	- 20	54	62			
A574848-24-24	38	1.1/2"	- 24	68	72			
A574848-32-32	51	2"	- 32	71	85			

# STAPLE-LOCK

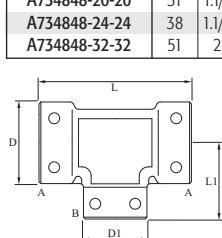
## ADAPTORS



**A734848**

UNION TEE STAPLE-LOCK FEMALE  
TE HEMBRA STAPLE-LOCK  
T-STÜCK STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK "T" CENTRALE FEMMINA

PART. REF.	NOMINAL BORE			DIMENSIONS mm					
	SIDE "A"		SIDE "B"	L	L1	D	D1		
A734848-04-04	6	1/4"	- 04	6	1/4"	- 04	76	38	25
A734848-06-06	10	3/8"	- 06	10	3/8"	- 06	76	38	32
A734848-08-08	12	1/2"	- 08	12	1/2"	- 08	80	40	35
A734848-12-12	19	3/4"	- 12	19	3/4"	- 12	84	42	45
A734848-16-16	25	1"	- 16	25	1"	- 16	100	50	55
A734848-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	108	54	60
A734848-24-24	38	1.1/2"	- 24	38	1.1/2"	- 24	136	68	72
A734848-32-32	51	2"	- 32	51	2"	- 32	142	71	85



**A794848**

BRANCH TEE STAPLE-LOCK FEMALE  
TE HEMBRA REDUCCION CENTRAL STAPLE-LOCK  
T-STÜCK STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK "T" LATERALE FEMMINA

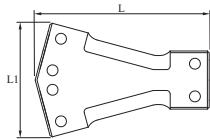
PART. REF.	NOMINAL BORE			DIMENSIONS mm					
	SIDE "A"		SIDE "B"	L	L1	D	D1		
A794848-08-06	12	1/2"	- 08	10	3/8"	- 06	80	40	35
A794848-12-06	19	3/4"	- 12	10	3/8"	- 06	86	43	45
A794848-12-08	19	3/4"	- 12	12	1/2"	- 08	86	43	45
A794848-16-06	25	1"	- 16	10	3/8"	- 06	100	50	55
A794848-16-08	25	1"	- 16	12	1/2"	- 08	100	50	55
A794848-16-12	25	1"	- 16	19	3/4"	- 12	100	50	55
A794848-20-06	31	1.1/4"	- 20	10	3/8"	- 06	108	54	60
A794848-20-08	31	1.1/4"	- 20	12	1/2"	- 08	108	54	60
A794848-20-12	31	1.1/4"	- 20	19	3/4"	- 12	108	54	60
A794848-20-16	31	1.1/4"	- 20	25	1"	- 16	108	54	60
A794848-24-16	38	1.1/2"	- 24	25	1"	- 16	136	68	72
A794848-24-20	38	1.1/2"	- 24	31	1.1/4"	- 20	136	68	72
A794848-32-20	51	2"	- 32	31	1.1/4"	- 20	140	70	85
A794848-32-24	51	2"	- 32	38	1.1/2"	- 24	140	70	85

# STAPLE-LOCK

## ADAPTORS

### A7Y4848

Y ADAPTOR STAPLE-LOCK FEMALE  
ADAPTADOR HEMBRA EN Y STAPLE-LOCK  
Y-STÜCK STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK "Y" FEMMINA

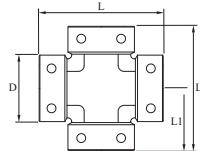


PART. REF.	NOMINAL BORE			DIMENSIONS mm			
------------	--------------	--	--	---------------	--	--	--

A7Y4848-06-06	10	3/8"	- 6	83	62		
A7Y4848-08-08	12	1/2"	- 8	95	70		
A7Y4848-12-12	19	3/4"	- 12	107	80		

### A964848

CROSS ADAPTOR STAPLE-LOCK FEMALE  
ADAPTADOR EN CRUZ HEMBRA STAPLE-LOCK  
KREUZADAPTER STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE A CROCE STAPLE-LOCK FEMMINA

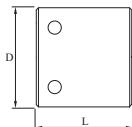


PART. REF.	NOMINAL BORE			DIMENSIONS mm			
------------	--------------	--	--	---------------	--	--	--

A964848-04-04	6	1/2"	- 4	76	38	25	
A964848-06-06	10	3/8"	- 6	76	38	32	
A964848-08-08	12	1/2"	- 8	80	40	35	
A964848-12-12	19	3/4"	- 12	84	42	45	
A964848-16-16	25	1"	- 16	100	50	55	
A964848-20-20	31	1.3/4"	- 20	108	54	60	

# STAPLE-LOCK

## ADAPTORS

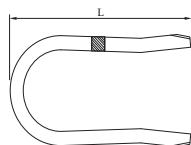


### A414800

STAPLE-LOCK FEMALE END CAP  
TAPON HEMBRA STAPLE-LOCK  
STAPLE-LOCK VERSCHLUßSTÜCK ALS BUCHSE  
TAPPO PER STAPLE-LOCK FEMMINA

PART. REF.	NOMINAL BORE			DIMENSIONS mm		
------------	--------------	--	--	------------------	--	--

PART. REF.	DN	inch	Size	L	D			
A414800-04	6	1/4"	- 4	39	25			
A414800-06	10	3/8"	- 6	40	32			
A414800-08	12	1/2"	- 8	43	35			
A414800-12	19	3/4"	- 12	44	45			
A414800-16	25	1"	- 16	52	55			
A414800-20	31	1.1/4"	- 20	55	60			
A414800-24	38	1.1/2"	- 24	65	76			
A414800-32	51	2"	- 32	70	85			
A414800-40	63	2.1/2"	- 40	112	106			
A414800-48	76	3"	- 48	138	120			



### JL4801SS

STANDARD STAPLE ZINC PLATED  
GRAPA STANDARD ZINCADA  
STECKKLAMMER VERZINKT  
STAPLE CON ZINCATURA STANDARD

PART. REF.	NOMINAL BORE			DIMENSIONS mm		
------------	--------------	--	--	------------------	--	--

PART. REF.	DN	inch	Size	L				
JL4801SS-04	6	1/4"	- 4	38				
JL4801SS-06	10	3/8"	- 6	42				
JL4801SS-08	12	1/2"	- 8	48				
JL4801SS-12	19	3/4"	- 12	55				
JL4801SS-16	25	1"	- 16	74				
JL4801SS-20	31	1.1/4"	- 20	83				
JL4801TS-24*	38	1.1/2"	- 24	85				
JL4801TS-32*	51	2"	- 32	95				

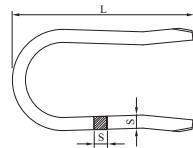
\* Staple has a flat top / Grapa tiene un biselado plano en la punta / Klammer abgeflacht / Staple con dorso piatto

# STAPLE-LOCK

## ADAPTORS

### JL4810SS

STAINLESS STAPLE  
GRAPA INOXIDABLE  
EDELSTAHLKLAMMER  
STANDARD STAPLE IN ACCIAIO INOX

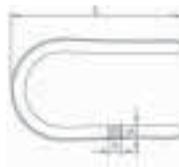


PART. REF.	NOMINAL BORE		DIMENSIONS mm					
	DN	inch	Size	S	L			
JL4810SS-04	6	1/4"	- 4	4	38			
JL4810SS-06	10	3/8"	- 6	4	42			
JL4810SS-08	12	1/2"	- 8	4	48			
JL4810SS-12	19	3/4"	- 12	4	55			
JL4810SS-16	25	1"	- 16	6	74			
JL4810SS-20	31	1.1/4"	- 20	6	83			
JL4810TS-24*	38	1.1/4"	- 24	6	85			
JL4810TS-32*	51	2"	- 32	6	95			
JL4810SS-40	63	2.1/2"	- 40	8	100			
JL4810SS-48	76	3"	- 48	8	122			

\* Staple has a flat top / Grapa tiene un biselado plano en la punta / Flachkopfkrampe / Staple con dorso piatto

### JL4810DS *NEW*

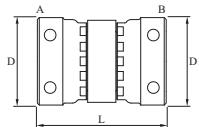
STAINLESS "D" STAPLE  
GRAPA INOXIDABLE "D"  
EDELSTAHLKLAMMER HALBRUNDPROFIL  
STAPLE "D" IN ACCIAIO INOX



PART. REF.	NOMINAL BORE		DIMENSIONS mm					
	DN	inch	Size	b	s	L		
JL4810DS-04	4	1/4"	6	4.55	4.45	38,0		
JL4810DS-06	6	3/8"	10	4.55	4.45	43,5		
JL4810DS-08	8	1/2"	12	4.55	4.45	48,5		
JL4810DS-12	12	3/4"	20	4.55	4.45	55,5		
JL4810DS-16	16	1"	25	6.55	6.45	74,2		
JL4810DS-20	20	1.1/4"	32	6.55	6.45	83,2		
JL4810DS-24	24	1.1/2"	40	6.55	6.45	85,0		
JL4810DS-32	32	2"	50	6.55	6.45	95,0		
JL4810DS-40	40	2.1/2"	63	6.55	6.45	110,0		
JL4810DS-48	48	3"	76	6.55	6.45	120,0		

# STAPLE-LOCK

## ADAPTORS

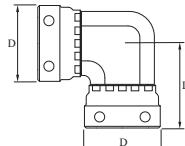


**A518282**

STRAIGHT ADAPTOR SWIVEL STAPLE-LOCK FEMALE  
ADAPTADOR HEMBRA RECTO GIRATORIO STAPLE-LOCK  
GERADE DREHBARE STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK DRITTO FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	SIDE "A"		SIDE "B"	L	D	D <sub>1</sub>		

	DN	inch	Size	DN	inch	Size	L	D	D <sub>1</sub>		
A518282-04-04	6	1/4"	- 4	6	1/4"	- 4	62	25	25		
A518282-04-06	10	3/8"	- 6	6	1/4"	- 4	62	32	25		
A518282-04-08	12	1/2"	- 8	6	1/4"	- 4	65	35	25		
A518282-06-06	10	3/8"	- 6	10	3/8"	- 6	62	32	32		
A518282-06-08	12	1/2"	- 8	10	3/8"	- 6	65	35	32		
A518282-06-12	19	3/4"	- 12	10	3/8"	- 6	65	45	32		
A518282-06-16	25	1"	- 16	10	3/8"	- 6	76	60	32		
A518282-08-08	12	1/2"	- 8	12	1/2"	- 8	63	35	35		
A518282-08-12	19	3/4"	- 12	12	1/2"	- 8	65	45	35		
A518282-08-16	25	1"	- 16	12	1/2"	- 8	76	60	35		
A518282-08-20	31	1 1/4"	- 20	12	1/2"	- 8	76	60	35		
A518282-12-12	19	3/4"	- 12	19	3/4"	- 12	63	45	45		
A518282-12-16	25	1"	- 16	19	3/4"	- 12	77	60	45		
A518282-12-20	31	1 1/4"	- 20	19	3/4"	- 12	76	60	45		
A518282-16-16	25	1"	- 16	25	1"	- 16	83	60	60		
A518282-16-20	31	1 1/4"	- 20	25	1"	- 16	83	60	60		
A518282-20-20	31	1 1/4"	- 20	31	1"	- 20	83	60	60		



**A578282**

90° ADAPTOR SWIVEL STAPLE-LOCK FEMALE  
ADAPTADOR HEMBRA GIRATORIO STAPLE-LOCK A 90°  
90° DREHBARE STAPLE-LOCK VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK 90° FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	DN	inch	Size	L	D			

	DN	inch	Size	L	D				
A578282-04-04	6	1/4"	- 4	44	25				
A578282-06-06	10	3/8"	- 6	44	32				
A578282-08-08	12	1/2"	- 8	48	35				
A578282-12-12	19	3/4"	- 12	57	45				
A578282-16-16	25	1"	- 16	68	60				
A578282-20-20	31	1 1/4"	- 20	68	60				

# STAPLE-LOCK

## ADAPTORS

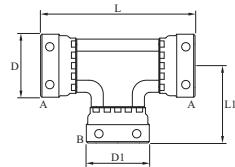
### A738282

UNION TEE SWIVEL STAPLE-LOCK FEMALE

TE HEMBRA GIRATORIA STAPLE-LOCK

T-STÜCK STAPLE-LOCK VERBINDUNGSBUCHSE DREHBAR

ADATTATORE STAPLE-LOCK "T" FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L1	D	D1		
A738282-04-04	6	1/4"	- 4	6	1/4"	- 4	88	44	25	25
A738282-06-06	10	3/8"	- 6	10	3/8"	- 6	88	44	32	32
A738282-08-08	12	1/2"	- 8	12	1/2"	- 8	96	48	35	35
A738282-12-12	19	3/4"	- 12	19	3/4"	- 12	114	57	45	45
A738282-16-16	25	1"	- 16	25	1"	- 16	134	68	60	60
A738282-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	136	68	60	60

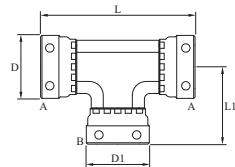
### A798282

BRANCH TEE SWIVEL STAPLE-LOCK FEMALE

TE HEMBRA GIRATORIA STAPLE-LOCK

STAPLE-LOCK DREHBARE T-STÜCKVERBINDUNG

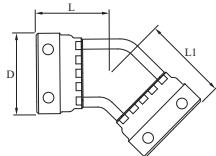
ADATTATORE STAPLE-LOCK "T" LATERALE FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L1	D	D1		
A798282-08-06	12	1/2"	- 8	10	3/8"	- 6	96	48	35	32
A798282-08-12	12	1/2"	- 8	19	3/4"	- 12	96	57	35	45
A798282-12-06	19	3/4"	- 12	10	3/8"	- 6	114	57	55	32
A798282-12-08	19	3/4"	- 12	12	1/2"	- 8	114	57	55	35
A798282-16-16	25	1"	- 16	10	3/8"	- 6	134	60	60	32
A798282-16-08	25	1"	- 16	12	1/2"	- 8	134	60	60	35
A798282-16-12	25	1"	- 16	19	3/4"	- 12	136	64	60	45
A798282-20-06	31	1.1/4"	- 20	10	3/8"	- 6	134	68	60	32
A798282-20-08	31	1.1/4"	- 20	12	1/2"	- 8	134	68	60	35
A798282-20-12	31	1.1/4"	- 20	19	3/4"	- 12	134	68	60	45
A798282-20-16	31	1.1/4"	- 20	25	1"	- 16	134	72	60	60

# STAPLE-LOCK

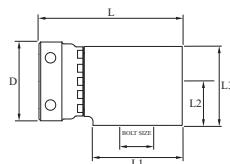
## ADAPTORS



### A548282

45° ADAPTOR SWIVEL STAPLE-LOCK FEMALE  
ADAPTADOR HEMBRA GIRATORIO STAPLE-LOCK A 45°  
45° DREHBARE VERBINDUNGSBUCHSE  
ADATTATORE STAPLE-LOCK 45° FEMMINA GIREVOLE

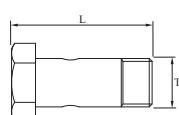
PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	L	L <sub>1</sub>	D	
A548282-04-04	6	1/4"	- 4	39	39	25	
A548282-06-06	10	3/8"	- 6	39	39	32	
A548282-08-08	12	1/2"	- 8	40	40	35	
A548282-12-12	19	3/4"	- 12	48	48	45	
A548282-16-16	25	1"	- 16	54	54	60	
A548282-20-20	31	1 1/4"	- 20	54	54	60	



### A510382

SWIVEL STAPLE-LOCK FEMALE - BSP BANJO ADAPTOR  
HEMBRA GIRATORIA STAPLE-LOCK - ADAPTADOR BANJO BSP  
DREHBARE STAPLE-LOCK - BSP ADAPTERBUCHSE  
ADATTATORE STAPLE-LOCK FEMMINA GIREVOLE - OCCHIELLO BSP

PART. REF.	BOLT SIZE	NOMINAL BORE			DIMENSIONS mm				
		DN	inch	Size	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	D
A510382-04-04	1/4" BSP	6	1/4"	- 4	37	26	14	22	25
A510382-06-04	1/4" BSP	10	3/8"	- 6	37	25	16.5	29	32
A510382-06-06	3/8" BSP	10	3/8"	- 6	45	34	16.5	29	32
A510382-08-06	3/8" BSP	12	1/2"	- 8	45	33	17.5	29	35
A510382-06-08	1/2" BSP	10	3/8"	- 6	51	40	16.5	32	32
A510382-08-08	1/2" BSP	12	1/2"	- 8	51	40	17.5	32	35



### O80211

BANJO BOLT FOR STAPLE-LOCK  
PASADOR BANJO PARA STAPLE-LOCK  
HOHLSCHRAUBE FÜR STAPLE-LOCK  
VITE FORATA PER OCCHIELLO (GAMMA STAPLE-LOCK)

PART. REF.	THREAD	DIMENSIONS mm	
		L	ACROSS FLATS (AF)
O80211-04	1/4" BSP	36	18
O80211-06	3/8" BSP	40	23.5
O80211-08	1/2" BSP	50	25.5

# STAPLE-LOCK

## ADAPTORS

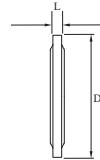
### JO12

BSP BONDED WASHER

ARANDELA SOLIDA BSP

BSP VERBUND-UNTERLAGSCHEIBE

RONDELLA-GUARNIZIONE SALDATA BSP (BONDED WASHER)



PART. REF.	BOLT SIZE	DIMENSIONS mm	
		L	D
JO12211421	1/4" BSP	2.1	20.6
JO12241721	3/8" BSP	2.1	23.8
JO12292225	1/2" BSP	2.5	28.6
JO12352725	3/4" BSP	2.5	34.9
JO12433433	1" BSP	3.3	42.8
JO12524333	1 1/4" BSP	3.3	52.4
JO12594833	1 1/2" BSP	3.3	58.6
JO12736133	2" BSP	3.3	73.0

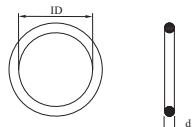
### JO04

STAPLE-LOCK MALE END O-RING

O-RING PARA TERMINAL MACHO DE STAPLE-LOCK

STAPLE-LOCK O-RING FÜR STECKKUPPLUNG

O-RING PER STAPLE-LOCK MASCHIO



PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	ID	d		
JO04100620	6	1/4"	- 4	6	2		
JO04141020	10	3/8"	- 6	10	2		
JO04181325	12	1/2"	- 8	13	2.5		
JO04241925	19	3/4"	- 12	19	2.5		
JO04302525	25	1"	- 16	25	2.5		
JO04383325	31	1.1/4"	- 20	33	2.5		
JO04464030	38	1.1/2"	- 24	40	3		
JO04554930	51	2"	- 32	49	3		
JO04787230	63	2.1/2"	- 40	72	3		
JO04868030	76	3"	- 48	80	3		

# STAPLE-LOCK

## ADAPTORS

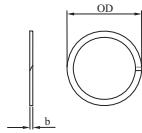
**JO15**

STAPLE-LOCK MALE END BACK-UP RING

BACK-UP RING PARA TERMINAL MACHO DE STAPLE-LOCK

STÜTZRING FÜR STAPLE-LOCK STECKER

ANELLO BACK-UP PER STAPLE-LOCK MASCHIO



PART. REF.	NOMINAL BORE		DIMENSIONS mm			
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	DN	inch	Size	OD	b				
JO15100708	6	1/4"	- 4	10	0.8				
JO15141108	10	3/8"	- 6	14	0.8				
JO15181408	12	1/2"	- 8	18	0.8				
JO15242008	19	3/4"	- 12	24	0.8				
JO15312708	25	1"	- 16	31	0.8				
JO15383408	31	1 1/4"	- 20	38	0.8				
JO15474215	38	1 1/2"	- 24	47	1.5				
JO15565115	51	2"	- 32	56	1.5				

# STAPLE-LOCK

## ADAPTORS

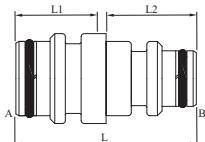
### A504848

STRAIGHT ADAPTOR STAPLE-LOCK MALE

ADAPTADOR MACHO RECTO STAPLE-LOCK

ADAPTER STECKKUPPLUNG

ADATTATORE DIRETTO MASCHIO STAPLE-LOCK

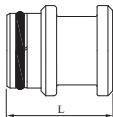


PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L <sub>1</sub>	L <sub>2</sub>		

A504848-04-04	6	1/4"	- 4	6	1/4"	- 4	58	26	26
A504848-04-06	10	3/8"	- 6	6	1/4"	- 4	58	26	26
A504848-04-08	12	1/2"	- 8	6	1/4"	- 4	58	26	26
A504848-06-06	10	3/8"	- 6	10	3/8"	- 6	58	26	26
A504848-06-08	12	1/2"	- 8	10	3/8"	- 6	58	26	26
A504848-06-12	19	3/4"	- 12	10	3/8"	- 6	58	26	26
A504848-06-16	25	1"	- 16	10	3/8"	- 6	64	32	26
A504848-06-20	31	1.1/4"	- 20	10	3/8"	- 6	64	32	26
A504848-08-08	12	1/2"	- 8	12	1/2"	- 8	58	26	26
A504848-08-12	19	3/4"	- 12	12	1/2"	- 8	58	26	26
A504848-08-16	25	1"	- 16	12	1/2"	- 8	64	32	26
A504848-08-20	31	1.1/4"	- 20	12	1/2"	- 8	64	32	26
A504848-08-24	38	1.1/2"	- 24	12	1/2"	- 8	70	36	26
A504848-08-32	51	2"	- 32	12	1/2"	- 8	76	36	26
A504848-12-12	19	3/4"	- 12	19	3/4"	- 12	58	26	26
A504848-12-16	25	1"	- 16	19	3/4"	- 12	64	32	26
A504848-12-20	31	1.1/4"	- 20	19	3/4"	- 12	64	32	26
A504848-12-24	38	1.1/2"	- 24	19	3/4"	- 12	70	36	26
A504848-12-32	51	2"	- 32	19	3/4"	- 12	76	36	26
A504848-16-16	25	1"	- 16	25	1"	- 16	69	32	32
A504848-16-20	31	1.1/4"	- 20	25	1"	- 16	70	32	32
A504848-16-24	38	1.1/2"	- 24	25	1"	- 16	76	36	32
A504848-16-32	51	2"	- 32	25	1"	- 16	76	36	32
A504848-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	69	32	32
A504848-20-24	38	1.1/2"	- 24	31	1.1/4"	- 20	76	36	32
A504848-20-32	51	2"	- 32	31	1.1/4"	- 20	76	36	32
A504848-24-24	38	1.1/2"	- 24	38	1.1/2"	- 24	80	36	36
A504848-24-32	51	2"	- 32	38	1.1/2"	- 24	80	36	32
A504848-32-32	51	2"	- 32	51	2"	- 32	80	36	36
A504848-40-40	63	2.1/2"	- 40	63	2.1/2"	- 40	140	65	65
A504848-48-48	76	3"	- 48	76	3"	- 48	150	70	70

# STAPLE-LOCK

## ADAPTORS

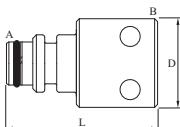


### A404800

STAPLE-LOCK MALE END PLUG  
TAPON MACHO STAPLE-LOCK  
STAPLE-LOCK BLIND-STECKER  
TAPPO STAPLE-LOCK MASCHIO

PART. REF.	NOMINAL BORE			DIMENSIONS mm		
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	DN	inch	Size	L				
A404800-04	6	1/4"	- 4	34				
A404800-06	10	3/8"	- 6	34				
A404800-08	12	1/2"	- 8	34				
A404800-12	19	3/4"	- 12	34				
A404800-16	25	1"	- 16	41				
A404800-20	31	1 1/4"	- 20	41				
A404800-24	38	1 1/2"	- 24	47				
A404800-32	51	2"	- 32	47				
A404800-40	63	2 1/2"	- 40	80				
A404800-48	76	3"	- 48	110				



### A524848

STRAIGHT ADAPTOR STAPLE-LOCK MALE - FEMALE  
ADAPTADOR RECTO MACHO - HEMBRA STAPLE-LOCK  
GERADER STECKER - BUCHSE ADAPTER  
ADATTATORE STAPLE-LOCK DIRTTO MASCHIO - FEMMINA

PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"						

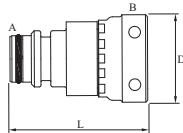
	DN	inch	Size	DN	inch	Size	L	D			
A524848-06-06	10	3/8"	- 6	10	3/8"	- 6	62	32			
A524848-08-06	12	1/2"	- 8	10	3/8"	- 6	57	32			
A524848-08-12	12	1/2"	- 8	19	3/4"	- 12	66	45			
A524848-12-08	19	3/4"	- 12	12	1/2"	- 8	59	35			
A524848-16-12	25	1"	- 16	19	3/4"	- 12	68	45			

# STAPLE-LOCK

## ADAPTORS

### A524882

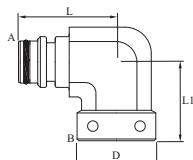
STRAIGHT ADAPTOR STAPLE-LOCK MALE - SWIVEL FEMALE  
 ADAPTADOR RECTO MACHO - HEMBRA GIRATORIA STAPLE-LOCK  
 GERADER STECKER - DREHBARE BUCHSE ADAPTER  
 ADATTATORE STAPLE-LOCK DRTTO MASCHIO - FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	D			
A524882-04-04	6	1/4"	- 4	6	1/4"	- 4	69	25	
A524882-04-06	6	1/4"	- 4	10	3/8"	- 6	69	32	
A524882-04-08	6	1/4"	- 4	12	1/2"	- 8	69	35	
A524882-06-04	10	3/8"	- 6	6	1/4"	- 4	69	25	
A524882-06-06	10	3/8"	- 6	10	3/8"	- 6	69	32	
A524882-06-08	10	3/8"	- 6	12	1/2"	- 8	69	35	
A524882-06-12	10	3/8"	- 6	19	3/4"	- 12	69	45	
A524882-08-04	12	1/2"	- 8	6	1/4"	- 4	69	25	
A524882-08-06	12	1/2"	- 8	10	3/8"	- 6	63	32	
A524882-08-08	12	1/2"	- 8	12	1/2"	- 8	64	35	
A524882-08-12	12	1/2"	- 8	19	3/4"	- 12	69	45	
A524882-12-06	19	3/4"	- 12	10	3/8"	- 6	69	32	
A524882-12-08	19	3/4"	- 12	12	1/2"	- 8	69	36	
A524882-12-12	19	3/4"	- 12	19	3/4"	- 12	69	45	
A524882-12-16	19	3/4"	- 12	25	1"	- 16	81	60	
A524882-12-20	19	3/4"	- 12	31	1 1/4"	- 20	83	60	
A524882-16-06	25	1"	- 16	10	3/8"	- 6	76	32	
A524882-16-08	25	1"	- 16	12	1/2"	- 8	76	35	
A524882-16-12	25	1"	- 16	19	3/4"	- 12	76	45	
A524882-16-16	25	1"	- 16	25	1	- 16	83	60	
A524882-16-20	25	1"	- 16	31	1 1/4"	- 20	83	60	
A524882-20-06	31	1 1/4"	- 20	10	3/8"	- 6	76	32	
A524882-20-08	31	1 1/4"	- 20	12	1/2"	- 8	76	35	
A524882-20-12	31	1 1/4"	- 20	19	3/4"	- 12	79	45	
A524882-20-16	31	1 1/4"	- 20	25	1"	- 16	81	60	
A524882-20-20	31	1 1/4"	- 20	31	1 1/4"	- 20	83	60	

# STAPLE-LOCK

## ADAPTORS

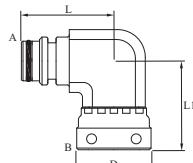


**A584848**

90° ADAPTOR STAPLE-LOCK MALE - FEMALE  
ADAPTADOR MACHO - HEMBRA A 90° STAPLE-LOCK  
90° STAPLE-LOCK STECKER - BUCHSE ADAPTER  
ADATTATORE STAPLE-LOCK 90° MASCHIO - FEMMINA

PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	SIDE "A"	SIDE "B"		L	L1	D		

	DN	inch	Size	DN	inch	Size	L	L1	D		
A584848-06-06	10	3/8"	- 6	10	3/8"	- 6	46	32	32		
A584848-08-08	12	1/2"	- 8	12	1/2"	- 8	51	35	35		
A584848-12-12	19	3/4"	- 12	19	3/4"	- 12	56	40	45		
A584848-16-16	25	1"	- 16	25	1"	- 16	66	48	55		
A584848-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	68	55	60		



**A584882**

90° ADAPTOR STAPLE-LOCK MALE - SWIVEL FEMALE  
ADAPTADOR MACHO - HEMBRA GIRATORIA A 90° STAPLE-LOCK  
90° STAPLE-LOCK STECKER - DREHBARE BUCHSE ADAPTER  
ADATTATORE STAPLE-LOCK 90° MASCHIO - FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	SIDE "A"	SIDE "B"		L	L1	D		

	DN	inch	Size	DN	inch	Size	L	L1	D		
A584882-04-04	6	1/4"	- 4	6	1/4"	- 4	46	44	25		
A584882-06-06	10	3/8"	- 6	10	3/8"	- 6	46	44	32		
A584882-06-08	10	3/8"	- 6	12	1/2"	- 8	51	48	35		
A584882-08-06	12	1/2"	- 8	10	3/8"	- 6	51	48	32		
A584882-08-08	12	1/2"	- 8	12	1/2"	- 8	51	48	35		
A584882-12-12	19	3/4"	- 12	19	3/4"	- 12	56	57	45		
A584882-16-16	25	1"	- 16	25	1"	- 16	66	68	60		
A584882-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	68	68	60		

# STAPLE-LOCK

## ADAPTORS

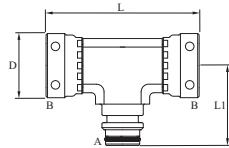
### A744882

BRANCH TEE STAPLE-LOCK SWIVEL FEMALE - MALE

STAPLE-LOCK EN TE CON HEMBRA GIRATORIALES CENTRAL Y MACHO

T-STÜCK DREHBARE BUCHSEN - STECKER

ADATTATORE STAPLE-LOCK "T" CENTRALE A VITE FEMMINA GIREVOLE - MASCHIO



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L1	D		
A744882-04-04	6	1/4"	- 4	6	1/4"	- 4	88	46	25
A744882-06-06	10	3/8"	- 6	10	3/8"	- 6	88	46	32
A744882-08-08	12	1/2"	- 8	12	1/2"	- 8	96	52	35
A744882-12-12	19	3/4"	- 12	19	3/4"	- 12	107	57	45

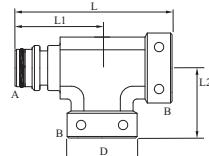
### A754848

RUN TEE STAPLE-LOCK MALE - FEMALE

STAPLE-LOCK EN T CON HEMBRA LATERAL Y MACHO

T-STÜCK DREHBARE BUCHSEN - STECKER

ADATTATORE STAPLE-LOCK "T" LATERALE MASCHIO - FEMMINA



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L1	L2	D	
A754848-06-06	10	3/8"	- 6	10	3/8"	- 6	85	48	32
A754848-08-08	12	1/2"	- 8	12	1/2"	- 8	93	51	35
A754848-12-12	19	3/4"	- 12	19	3/4"	- 12	96	53	40
A754848-16-16	25	1"	- 16	25	1"	- 16	119	66	45

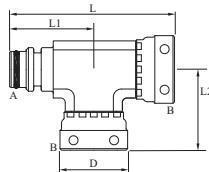
### A754882

RUN TEE STAPLE-LOCK MALE - SWIVEL FEMALE

STAPLE-LOCK EN T CON HEMBRA GIRATORIALES LATERAL Y MACHO

DREHBARE BUCHSEN - STECKER

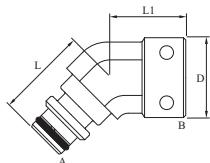
ADATTATORE STAPLE-LOCK "T" LATERALE MASCHIO - FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L1	L2	D	
A754882-04-04	6	1/4"	- 4	6	1/4"	- 4	90	46	44
A754882-06-06	10	3/8"	- 6	10	3/8"	- 6	90	46	44
A754882-08-08	12	1/2"	- 8	12	1/2"	- 8	100	52	48
A754882-12-12	19	3/4"	- 12	19	3/4"	- 12	114	57	57
A754882-16-16	25	1"	- 16	25	1"	- 16	139	71	60

# STAPLE-LOCK

## ADAPTORS

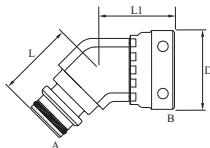


### A554848

45° ADAPTOR STAPLE-LOCK MALE - FEMALE  
 ADAPTADOR STAPLE-LOCK MACHO - HEMBRA A 45°  
 45° F-M-STECKKUPPLUNGADAPTER  
 ADATTATORE STAPLE-LOCK 45° MASCHIO - FEMMINA

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L1	D			

	DN	inch	Size	DN	inch	Size	L	L1	D	
A554848-06-06	10	3/8"	- 6	10	3/8"	- 6	39	31	32	
A554848-08-08	12	1/2"	- 8	12	1/2"	- 8	39	34	35	
A554848-12-12	19	3/4"	- 12	19	3/4"	- 12	43	34	45	



### A554882

45° ADAPTOR STAPLE-LOCK MALE - SWIVEL FEMALE  
 ADAPTADOR STAPLE-LOCK MACHO - HEMBRA GIRATORIA A 45°  
 45° F-STECKKUPPLUNGADAPTER - M-GELENK  
 ADATTATORE STAPLE-LOCK 45° MASCHIO - FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L1	D			

	DN	inch	Size	DN	inch	Size	L	L1	D	
A554882-04-04	6	1/4"	- 4	6	1/4"	- 4	40	39	25	
A554882-06-06	10	3/8"	- 6	10	3/8"	- 6	40	39	32	
A554882-08-08	12	1/2"	- 8	12	1/2"	- 8	40	40	35	
A554882-12-12	19	3/4"	- 12	19	3/4"	- 12	43	47	45	
A554882-16-16	25	1"	- 16	25	1"	- 16	52	54	60	
A554882-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	52	54	60	

# STAPLE-LOCK

## ADAPTORS

### A524448

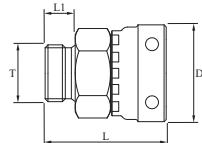
BSP MALE FLAT FACE FOR BONDED WASHER - STAPLE-LOCK FEMALE ADAPTOR

ADAPTADOR STAPLE-LOCK MACHO BSP CARA PLANA PARA ARANDELA SOLIDA Y HEMBRA

BSP FLACHDICHTENDER STECKER FÜR VERBUNDUNTERLAGSCHEIBE - BUCHSE

M-STECKKUPPLUNGADAPTER

BSP MASCHIO FACCIA PIANA PER BONDED WASHER - STAPLE-LOCK FEMMINA



### A524482

BSP MALE FLAT FACE FOR BONDED WASHER - STAPLE-LOCK SWIVEL FEMALE ADAPTOR

ADAPTADOR STAPLE-LOCK MACHO CARA PLANA BSP PARA ARANDELA SOLIDA Y HEMBRA GIRATORIA

BSP FLACHDICHTENDER STECKER FÜR VERBUNDUNTERLAGSCHEIBE - BUCHSE M-STECKKUPPLUNGADAPTER

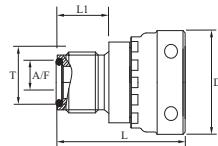
BSP MASCHIO FACCIA PIANA PER BONDED WASHER - STAPLE-LOCK FEMMINA GIREVOLE

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm				
A524482-04-04*	1/4" BSP	6	3/8"	- 4	47	10	32	22	
A524482-04-06*	1/4" BSP	10	3/8"	- 6	47	10	32	22	
A524482-06-04*	3/8" BSP	6	1/4"	- 4	47	9	25	22	
A524482-06-06*	3/8" BSP	10	3/8"	- 6	48	10	32	22	
A524482-06-08*	3/8" BSP	12	1/2"	- 8	53	10	35	27	
A524482-08-06*	1/2" BSP	10	3/8"	- 6	54	13	32	27	
A524482-08-08*	1/2" BSP	12	1/2"	- 8	56	13	35	27	
A524482-08-12*	1/2" BSP	19	3/4"	- 12	59	13	45	36	
A524482-12-08*	3/4" BSP	12	1/2"	- 8	59	14	35	36	
A524482-12-12*	3/4" BSP	19	3/4"	- 12	59	14	45	36	
A524482-12-06*	3/4" BSP	25	1"	- 16	63	14	60	46	
A524482-16-08*	1" BSP	12	1/2"	- 8	60	17	35	41	
A524482-16-12*	1" BSP	19	3/4"	- 12	62	17	45	46	
A524482-16-16*	1" BSP	25	1"	- 16	73	17	60	46	
A524482-16-20*	1" BSP	31	1.1/4"	- 20	80	17	60	50	
A524482-20-12*	1.1/4" BSP	19	3/4	- 12	63	20	60	50	
A524482-20-16*	1.1/4" BSP	25	1"	- 16	77	19	60	50	
A524482-20-20*	1.1/4" BSP	31	1.1/4"	- 20	74	19	60	50	
A524482-24-20*	1.1/2" BSP	31	1.1/4"	- 20	72	20	60	55	
A524448-24-24	1.1/2" BSP	38	1.1/2"	- 24	76	20	70	70	
A524448-32-32	2" BSP	51	2"	- 32	80	23	80	80	

\* Swivel / Giratoria / Gelenk / Girevole

# STAPLE-LOCK

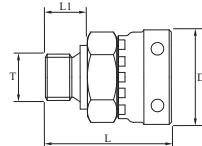
## ADAPTORS



### A526482E

BSP MALE FRONT SEAL HEX. SOCKET HEAD - STAPLE-LOCK SWIVEL FEMALE ADAPTOR  
 ADAPTADOR MACHO BSP "HEXAGONO ENCAJADO" Y HEMBRA GIRATORIA STAPLE-LOCK  
 BSP F- FRONDICHTUNG SECHSKANT-INBUSSCHRAUBE - DREHBARE BUCHSE ADAPTER  
 ADATTATORE BSP MASCHIO "ESAGONO INCASSATO" - STAPLE-LOCK FEMMINA GIREVOLE

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm				
		DN	inch	Size	L	L <sub>1</sub>	D	AF	
A526482E-12-06	3/4" BSP	10	3/8"	- 6	33	15	32	10	
A526482E-12-08	3/4" BSP	12	1/2"	- 8	68	24	35	10	
A526482E-12-12	3/4" BSP	19	3/4"	- 12	67	24	45	14	



### A520682

BSP MALE FLAT FACE DIN 3852-2 FORM A - STAPLE-LOCK SWIVEL FEMALE ADAPTOR  
 ADAPTADOR MACHO BSP CARA PLANA DIN 3852-2  
 FORMA A - HEMBRA GIRATORIA STAPLE-LOCK  
 BSP FLACHDICHTENDER EINSCHRAUBZAPFEN DIN 3852-2  
 FORM A - DREHBARE BUCHSE ADAPTER  
 ADATTATORE BSP MASCHIO FACCIA PIANA DIN 3852-2  
 FORMA A - STAPLE-LOCK FEMMINA GIREVOLE

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm				
		DN	inch	Size	L	L <sub>1</sub>	D	AF	
A520682-04-04	1/4" BSP	6	1/4"	- 4	52	12	25	22	
A520682-06-04	3/8" BSP	6	1/4"	- 4	52	12	25	22	
A520682-06-06	3/8" BSP	10	3/8"	- 6	52	12	32	24	
A520682-06-08	3/8" BSP	12	1/2"	- 8	57	12	35	30	
A520682-08-06	1/2" BSP	10	3/8"	- 6	57	14	32	27	
A520682-08-08	1/2" BSP	12	1/2"	- 8	57	14	35	30	
A520682-08-12	1/2" BSP	19	3/4"	- 12	57	14	45	36	
A520682-12-08	3/4" BSP	12	1/2"	- 8	59	16	35	32	
A520682-12-12	3/4" BSP	19	3/4"	- 12	59	16	45	36	
A520682-12-16	3/4" BSP	25	1"	- 16	66	16	60	46	
A520682-16-08	1" BSP	12	1/2"	- 8	61	18	35	41	
A520682-16-12	1" BSP	19	3/4"	- 12	63	18	45	41	
A520682-16-16	1" BSP	25	1"	- 16	68	18	60	46	
A520682-16-20	1" BSP	31	1 1/4"	- 20	68	18	60	50	
A520682-20-16	1 1/4" BSP	25	1"	- 16	70	20	60	50	
A520682-20-20	1 1/4" BSP	31	1 1/4"	- 20	70	20	60	50	
A520682-24-20	1 1/2" BSP	31	1 1/4"	- 20	72	22	60	55	

# STAPLE-LOCK

## ADAPTORS

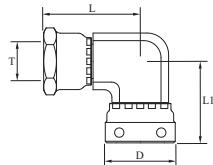
### A570582

90° ADAPTOR BSP FEMALE 60° CONE - STAPLE-LOCK SWIVEL FEMALE

ADAPTADOR A 90° BSP HEMBRA ASIENTO A 60° - HEMBRA GIRATORIA STAPLE-LOCK

90° M-BSP-ADAPTER 60° KONUS - STAPLE-LOCK DREHBARE BUCHSE

ADATTATORE BSP 90° FEMMINA CONO 60° - STAPLE-LOCK FEMMINA GIREVOLE



PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
A570582-04-04	1/4" BSP	6	1/4"	- 4	43	44	25	
A570582-06-06	3/8" BSP	10	3/8"	- 6	42	48	32	
A570582-08-08	1/2" BSP	12	1/2"	- 8	45	48	35	

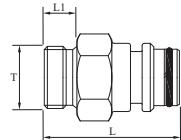
### A504448

BSP MALE FLAT FACE FOR BONDED WASHER - STAPLE-LOCK MALE ADAPTOR

ADAPTADOR BSP MACHO CARA PLANA - MACHO STAPLE-LOCK

BSP FLACHDICHTENDE S-EINSCHRANBGEWINDE FÜR VERBUNDUNTERLAGSACHEIBE

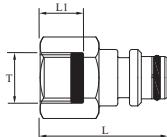
ADATTATORE MASCHIO BSP FACCIA PIANA PER BONDED WASHER - STAPLE-LOCK MASCHIO



PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
A504448-04-04	1/4" BSP	6	1/4"	- 4	51	9	19	
A504448-04-06	1/4" BSP	10	3/8"	- 6	51	9	22	
A504448-06-04	3/8" BSP	6	1/4"	- 4	51	10	22	
A504448-06-06	3/8" BSP	10	3/8"	- 6	51	10	22	
A504448-06-08	3/8" BSP	12	1/2"	- 8	50	10	27	
A504448-08-06	1/2" BSP	10	3/8"	- 6	50	13	27	
A504448-08-08	1/2" BSP	12	1/2"	- 8	55	13	27	
A504448-12-08	3/4" BSP	12	1/2"	- 8	58	14	32	
A504448-12-12	3/4" BSP	19	3/4"	- 12	58	14	32	
A504448-12-16	3/4" BSP	25	1"	- 16	72	14	46	
A504448-16-08	1" BSP	12	1/2"	- 8	62	17	41	
A504448-16-16	1" BSP	25	1"	- 16	72	17	46	
A504448-20-16	1.1/4" BSP	25	1"	- 16	79	19	50	
A504448-20-20	1.1/4" BSP	31	1.1/4"	- 20	79	19	50	
A504448-24-24	1.1/2" BSP	38	1.1/2"	- 24	82	23	65	
A504448-32-32	2" BSP	51	2"	- 32	82	23	70	

# STAPLE-LOCK

## ADAPTORS



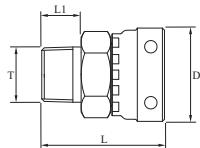
### A524804

STAPLE-LOCK MALE - BSP FIXED FEMALE ADAPTOR  
ADAPTADOR STAPLE-LOCK MACHO - HEMBRA BSP FIJA  
STAPLE-LOCK STECKER - BSP MUTTER EINTEILIGENT ADAPTER  
ADATTATORE STAPLE-LOCK MASCHIO - BSP FEMMINA FISSA

PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm					
		DN	inch	Size	L	L <sub>1</sub>	AF		
A524804-04-04	1/4" BSP	6	1/4"	- 4	51	13	21		
A524804-06-06	3/8" BSP	10	3/8"	- 6	54	13	24		
A524804-08-06	1/2" BSP	10	3/8"	- 6	55	17	30		
A524804-08-08	1/2" BSP	12	1/2"	- 8	54	17	30		

### A522848

NPTF MALE - STAPLE-LOCK FEMALE ADAPTOR  
ADAPTADOR MACHO NPTF - HEMBRA STAPLE-LOCK  
NPTF EINSCHRAMBGEWINDE - STAPLE-LOCK BUCHSE ADAPTER  
ADATTATORE MASCHIO NPTF - FEMMINA STAPLE-LOCK



### A522882

NPTF MALE - STAPLE-LOCK SWIVEL FEMALE ADAPTOR  
ADAPTADOR MACHO NPTF - HEMBRA GIRATORIA STAPLE-LOCK  
NPTF EINSCHRAMBGEWINDE - DREHBARE STAPLE-LOCK BUCHSE ADAPTER  
ADATTATORE MASCHIO NPTF - FEMMINA STAPLE-LOCK GIREVOLE

PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm					
		DN	inch	Size	L	L <sub>1</sub>	D	AF	
A522882-02-04*	1/8" NPTF	6	1/4"	- 4	47	10	25	19	
A522882-04-04*	1/4" NPTF	6	1/4"	- 4	52	15	25	19	
A522882-04-06*	1/4" NPTF	10	3/8"	- 6	52	15	32	22	
A522882-06-04*	3/8" NPTF	6	1/4"	- 4	55	15	25	19	
A522882-06-06*	3/8" NPTF	10	3/8"	- 6	52	15	32	22	
A522882-06-08*	3/8" NPTF	12	1/2"	- 8	56	15	35	27	
A522882-08-06*	1/2" NPTF	10	3/8"	- 6	57	19	32	22	
A522882-08-08*	1/2" NPTF	12	1/2"	- 8	60	19	35	27	
A522882-08-12*	1/2" NPTF	19	3/4"	- 12	62	19	45	36	
A522882-12-08*	3/4" NPTF	12	1/2"	- 8	60	19	35	30	
A522882-12-12*	3/4" NPTF	19	3/4"	- 12	63	19	45	36	
A522882-12-06*	3/4" NPTF	25	1"	- 16	76	19	60	46	
A522882-16-12*	1" NPTF	19	3/4"	- 12	65	24	45	36	
A522882-16-16*	1" NPTF	25	1"	- 16	81	24	60	46	
A522882-16-20*	1" NPTF	31	1.1/4"	- 20	81	24	60	50	
A522882-20-16*	1.1/4" NPTF	25	1"	- 16	82	25	60	46	
A522882-20-20*	1.1/4" NPTF	31	1.1/4"	- 20	82	25	60	50	
A522848-24-24	1.1/2" NPTF	38	1.1/2"	- 24	80	26	80	70	
A522848-32-32	2" NPTF	51	2"	- 32	80	26	85	75	

\* Swivel / Giratoria / Gelenk / Girevole

# STAPLE-LOCK

## ADAPTORS

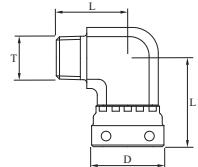
### A582848

90° ADAPTOR NPTF MALE - STAPLE-LOCK FEMALE

ADAPTADOR MACHO NPTF A 90° - HEMBRA STAPLE-LOCK

90° ADAPTER F-NPTF - STAPLE-LOCK BUCHSE

ADATTATORE 90° MASCHIO NPTF - FEMMINA STAPLE-LOCK



### A582882

90° ADAPTOR NPTF MALE - STAPLE-LOCK SWIVEL FEMALE

ADAPTADOR MACHO NPTF A 90° - HEMBRA GIRATORIA STAPLE-LOCK

90° ADAPTER F-NPTF - STAPLE-LOCK DREHBARE BUCHSE

ADATTATORE 90° MASCHIO NPTF - FEMMINA STAPLE-LOCK GIREVOLE

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
		DN	inch	Size	L	L <sub>1</sub>	D	
A582882-02-04*	1/8" NPTF	6	1/4"	- 4	31	44	25	
A582882-04-04*	1/4" NPTF	6	1/4"	- 4	31	44	25	
A582882-04-06*	1/4" NPTF	10	3/8"	- 6	34	44	32	
A582882-06-04*	3/8" NPTF	6	1/4"	- 4	31	44	25	
A582882-06-06*	3/8" NPTF	10	3/8"	- 6	34	44	32	
A582882-06-08*	3/8" NPTF	12	1/2"	- 8	34	48	35	
A582882-08-06*	1/2" NPTF	10	3/8"	- 6	36	44	32	
A582882-08-08*	1/2" NPTF	12	1/2"	- 8	40	48	35	
A582882-08-12*	1/2" NPTF	19	3/4"	- 12	44	57	45	
A582882-12-08*	3/4" NPTF	12	1/2"	- 8	40	48	35	
A582882-12-12*	3/4" NPTF	19	3/4"	- 12	44	57	45	
A582882-12-16*	3/4" NPTF	25	1"	- 16	46	67	60	
A582882-16-12*	1" NPTF	19	3/4"	- 12	48	58	45	
A582882-16-16*	1" NPTF	25	1"	- 16	58	67	60	
A582882-20-20*	1.1/4" NPTF	31	1.1/4"	- 20	66	67	60	
A582848-24-24	1.1/2" NPTF	38	1.1/2"	- 24	80	81	80	
A582848-32-32	2" NPTF	51	2"	- 32	102	102	100	

\* Swivel / Giratoria / Gelenk / Girevole

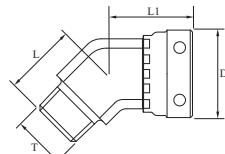
### A552882

45° ADAPTOR NPTF MALE - STAPLE-LOCK SWIVEL FEMALE

ADAPTADOR MACHO NPTF A 45° - HEMBRA GIRATORIA STAPLE-LOCK

45° ADAPTER F-NPTF - STAPLE-LOCK BUCHSE

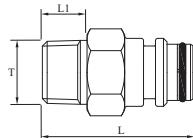
ADATTATORE 45° MASCHIO NPTF - FEMMINA STAPLE-LOCK GIREVOLE



PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
		DN	inch	Size	L	L <sub>1</sub>	D	
A552882-04-04	1/4" NPTF	6	1/4"	- 4	28	39	25	
A552882-06-06	3/8" NPTF	10	3/8"	- 6	29	39	32	
A552882-08-08	1/2" NPTF	12	1/2"	- 8	31	40	35	
A552882-12-12	3/4" NPTF	19	3/4"	- 12	38	48	45	
A552882-16-16	1" NPTF	25	1"	- 16	49	54	60	
A552882-20-20	1.1/4" NPTF	31	1.1/4"	- 20	50	48	69	

# STAPLE-LOCK

## ADAPTORS

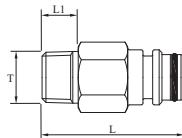


**A502848**

NPTF MALE - STAPLE-LOCK MALE ADAPTOR  
ADAPTADOR MACHO NPTF - MACHO STAPLE LOCK  
F-NPTF - F-STECKKUPPLUNGADAPTER  
ADATTATORE MASCHIO NPTF - MASCHIO STAPLE-LOCK

PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm				
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		DN	inch	Size	L	L1	AF	
A502848-02-04	1/8" NPTF	6	1/4"	- 4	53	10	19	
A502848-04-04	1/4" NPTF	6	1/4"	- 4	53	14	19	
A502848-04-06	1/4" NPTF	10	3/8"	- 6	53	14	22	
A502848-06-04	3/8" NPTF	6	1/4"	- 4	53	14	19	
A502848-06-06	3/8" NPTF	10	3/8"	- 6	53	14	22	
A502848-06-08	3/8" NPTF	12	1/2"	- 8	53	14	27	
A502848-08-06	1/2" NPTF	10	3/8"	- 6	58	19	22	
A502848-08-08	1/2" NPTF	12	1/2"	- 8	58	19	27	
A502848-08-12	1/2" NPTF	19	3/4"	- 12	60	19	32	
A502848-12-08	3/4" NPTF	12	1/2"	- 8	60	19	30	
A502848-12-12	3/4" NPTF	19	3/4"	- 12	60	19	32	
A502848-12-16	3/4" NPTF	25	1"	- 16	74	19	41	
A502848-16-12	1" NPTF	19	3/4"	- 12	68	24	36	
A502848-16-16	1" NPTF	25	1"	- 16	78	24	41	
A502848-20-20	1.1/4" NPTF	31	1.1/4"	- 20	79	25	50	
A502848-24-24	1.1/2" NPTF	38	1.1/2"	- 24	82	27	60	
A502848-32-32	2" NPTF	51	2"	- 32	82	27	70	



**A502848...L**

NPTF MALE - STAPLE-LOCK MALE ADAPTOR LONG BODY  
ADAPTADOR LARGO MACHO NPTF - MACHO STAPLE-LOCK  
F-NPTF - F-STECKKUPPLUNGADAPTER LANGER KORPUS  
ADATTATORE MASCHIO NPTF - MASCHIO STAPLE-LOCK LUNGO

PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm				
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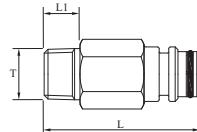
		DN	inch	Size	L	L1	AF	
A502848-02-04L	1/8" NPTF	6	1/4"	- 4	90	10	19	
A502848-04-04L	1/4" NPTF	6	1/4"	- 4	88	14	19	
A502848-04-06L	1/4" NPTF	10	3/8"	- 6	98	14	22	
A502848-06-06L	3/8" NPTF	10	3/8"	- 6	100	15	22	
A502848-06-08L	3/8" NPTF	12	1/2"	- 8	102	15	27	
A502848-08-06L	1/2" NPTF	10	3/8"	- 6	98	19	22	
A502848-08-08L	1/2" NPTF	12	1/2"	- 8	100	19	27	
A502848-12-12L	3/4" NPTF	19	3/4"	- 12	105	19	32	
A502848-16-16L	1" NPTF	25	1"	- 16	133	24	41	

# STAPLE-LOCK

## ADAPTORS

### A502848...XL

NPTF MALE - STAPLE-LOCK MALE ADAPTOR EXTRA LONG BODY  
 ADAPTADOR EXTRALARGO MACHO NPTF - MACHO STAPLE-LOCK  
 F-NPTF - F-STECKKUPPLUNGADAPTER EXTRALANGER KORPUS  
 ADATTATORE MASCHIO NPTF - MASCHIO STAPLE-LOCK EXTRA LUNGO

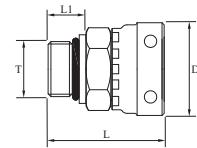


PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
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A502848-04-04XL	1/4" NPTF	6	1/4"	- 4	125	14	19	
A502848-06-06XL	3/8" NPTF	10	3/8"	- 6	125	14	22	
A502848-06-08XL	3/8" NPTF	12	1/2"	- 8	145	14	27	
A502848-08-06XL	1/2" NPTF	10	3/8"	- 6	125	19	22	
A502848-08-08XL	1/2" NPTF	12	1/2"	- 8	144	19	27	
A502848-12-12XL	3/4" NPTF	19	3/4"	- 12	152	19	32	
A502848-16-16XL	1" NPTF	25	1"	- 16	198	24	41	
A502848-20-20XL	1.1/4" NPTF	31	1.1/4"	- 20	212	25	50	

### A523082

SAE MALE O-RING BOSS TYPE - STAPLE-LOCK SWIVEL FEMALE ADAPTOR  
 ADAPTADOR MACHO SAE TIPO O-RING BOSS - HEMBRA GIRATORIA STAPLE-LOCK  
 SAE EINSCHRAUBGEWINDE - O-RINGNUT - DREHBORE - STAPLE-LOCK BUCHSE ADAPTER  
 ADATTATORE SAE MASCHIO TENUTA O-RING BOSS - FEMMINA GIREVOLE STAPLE-LOCK

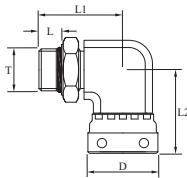


PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
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A523082-04-04	7/16" 20 UNF	6	1/4"	- 4	50	11	25	19
A523082-04-06	7/16" 20 UNF	10	3/8"	- 6	50	11	32	22
A523082-05-04	1/2" 20 UNF	6	1/4"	- 4	50	11	25	19
A523082-06-04	9/16" 18 UNF	6	1/4"	- 4	50	12	25	19
A523082-06-06	9/16" 18 UNF	10	3/8"	- 6	50	12	32	22
A523082-06-08	9/16" 18 UNF	12	1/2"	- 8	54	12	35	27
A523082-08-06	3/4" 16 UNF	10	3/8"	- 6	55	14	32	27
A523082-08-08	3/4" 16 UNF	12	1/2"	- 8	56	14	35	27
A523082-08-12	3/4" 16 UNF	19	3/4"	- 12	59	14	45	36
A523082-10-08	7/8" 14 UNF	12	1/2"	- 8	59	16	35	27
A523082-10-12	7/8" 14 UNF	19	3/4"	- 12	59	16	45	36
A523082-12-08	1.1/16" 12 UNF	12	1/2"	- 8	59	18	35	36
A523082-12-12	1.1/16" 12 UNF	19	3/4"	- 12	59	18	45	36
A523082-12-06	1.1/16" 12 UNF	25	1"	- 16	76	18	60	46
A523082-16-12	1.5/16" 12 UNF	19	3/4"	- 12	59	19	45	41
A523082-16-16	1.5/16" 12 UNF	25	1"	- 16	76	19	60	46
A523082-16-20	1.5/16" 12 UNF	31	1.1/4"	- 20	73	19	60	46
A523082-20-12	1.5/8" 12 UNF	19	3/4"	- 12	59	19	45	50
A523082-20-20	1.5/8" 12 UNF	31	1.1/4"	- 20	73	19	60	50

# STAPLE-LOCK

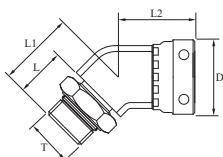
## ADAPTORS



**A583182**

**90° ADJUSTABLE SAE MALE O-RING BOSS TYPE - STAPLE-LOCK SWIVEL FEMALE ADAPTOR**  
**ADAPTADOR AJUSTABLE MACHO SAE TIPO O-RING BOSS A 90° - HEMBRA GIRATORIA STAPLE-LOCK**  
**90° EINSTELLBAR SAE EINSCHRANBGEWINDE MIT O-RING - DREHBARE STAPLE-LOCK BUCHSE**  
**ADATTATORE SAE 90° ORIENTABILE MASCHIO TENUTA O-RING BOSS - FEMMINA GIREVOLE STAPLE-LOCK**

PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm					
A583182-04-04	7/16" 20 UNF	6	1/4"	- 4	10	32	44	25	
A583182-04-06	7/16" 20 UNF	10	3/8"	- 6	10	37	44	32	
A583182-06-04	9/16" 18 UNF	6	1/4"	- 4	12	38	44	25	
A583182-06-06	9/16" 18 UNF	10	3/8"	- 6	12	38	44	32	
A583182-06-08	9/16" 18 UNF	12	1/2"	- 8	12	45	48	35	
A583182-08-06	3/4" 16 UNF	10	3/8"	- 6	13	45	48	32	
A583182-08-08	3/4" 16 UNF	12	1/2"	- 8	13	46	48	35	
A583182-10-08	7/8" 14 UNF	12	1/2"	- 8	15	45	51	35	
A583182-10-12	7/8" 14 UNF	19	3/4"	- 12	15	54	57	45	
A583182-12-08	1 1/16" 12 UNF	12	1/2"	- 8	18	54	57	35	
A583182-12-12	1 1/16" 12 UNF	19	3/4"	- 12	18	54	57	45	
A583182-16-16	1 5/16" 12 UNF	25	1"	- 16	18	65	68	60	
A583182-20-20	1 5/8" 12 UNF	31	1 1/4"	- 20	18	65	68	60	



**A553182**

**45° ADJUSTABLE SAE MALE O-RING BOSS TYPE - STAPLE-LOCK SWIVEL FEMALE ADAPTOR**  
**ADAPTADOR AJUSTABLE MACHO SAE TIPO O-RING BOSS A 45° - HEMBRA GIRATORIA STAPLE-LOCK**  
**45° EINSTELLBAR EINSCHRANBGEWINDE MIT O-RING - DREHBARE STAPLE-LOCK BUCHSE**  
**ADATTATORE SAE 45° ORIENTABILE MASCHIO TENUTA O-RING BOSS - FEMMINA GIREVOLE STAPLE-LOCK**

PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm					
A553182-04-04	7/16" 20 UNF	6	1/4"	- 4	10	32	40	25	
A553182-04-06	7/16" 20 UNF	10	3/8"	- 6	10	34	40	32	
A553182-06-04	9/16" 18 UNF	6	1/4"	- 4	12	34	40	25	
A553182-06-06	9/16" 18 UNF	10	3/8"	- 6	12	34	40	32	
A553182-06-08	9/16" 18 UNF	12	1/2"	- 8	12	45	40	35	
A553182-08-06	3/4" 16 UNF	10	3/8"	- 6	13	46	40	32	
A553182-08-08	3/4" 16 UNF	12	1/2"	- 8	13	46	40	35	
A553182-10-08	7/8" 14 UNF	12	1/2"	- 8	15	41	40	35	
A553182-12-08	1 1/16" 12 UNF	12	1/2"	- 8	18	45	40	35	
A553182-12-12	1 1/16" 12 UNF	19	3/4"	- 12	18	45	40	45	
A553182-16-16	1 5/16" 12 UNF	25	1"	- 16	18	51	51	60	
A553182-20-20	1 5/8" 12 UNF	31	1 1/4"	- 20	18	51	51	60	

# STAPLE-LOCK

## ADAPTORS

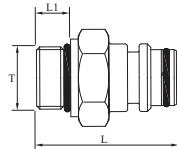
### A503048

SAE MALE O-RING BOSS TYPE - STAPLE-LOCK MALE ADAPTOR

ADAPTADOR MACHO SAE TIPO O-RING BOSS - MACHO STAPLE-LOCK

SAE EINSCHRAUBGEWINDE MIT O-RING - STAPLE-LOCK STECKER

ADATTATORE SAE MASCHIO TENUTA O-RING BOSS - MASCHIO STAPLE-LOCK



PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm				
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		DN	inch	Size	L	L1	AF	
A503048-04-04	7/16" 20 UNF	6	1/4"	- 4	50	14	19	
A503048-04-06	7/16" 20 UNF	10	3/8"	- 6	50	14	22	
A503048-05-04	1/2" 20 UNF	6	1/4"	- 4	52	14	19	
A503048-06-04	9/16" 18 UNF	6	1/4"	- 4	52	14	19	
A503048-06-06	9/16" 18 UNF	10	3/8"	- 6	52	14	22	
A503048-06-08	9/16" 18 UNF	12	1/2"	- 8	56	14	27	
A503048-08-06	3/4" 16 UNF	10	3/8"	- 6	53	15	22	
A503048-08-08	3/4" 16 UNF	12	1/2"	- 8	53	15	27	
A503048-08-12	3/4" 16 UNF	19	3/4"	- 12	55	15	32	
A503048-10-06	7/8" 14 UNF	10	3/8"	- 6	55	17	27	
A503048-10-08	7/8" 14 UNF	12	1/2"	- 8	56	17	27	
A503048-10-12	7/8" 14 UNF	19	3/4"	- 12	55	17	32	
A503048-12-08	11/16" 12 UNF	12	1/2"	- 8	57	19	36	
A503048-12-12	11/16" 12 UNF	19	3/4"	- 12	57	19	36	
A503048-16-12	1.5/16" 12 UNF	19	3/4"	- 12	60	20	41	
A503048-16-16	1.5/16" 12 UNF	25	1"	- 16	73	20	41	
A503048-20-20	1.5/16" 12 UNF	31	1.1/4"	- 20	73	20	50	

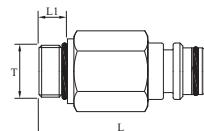
### A503048...L

SAE MALE O-RING BOSS TYPE - STAPLE-LOCK MALE ADAPTOR LONG BODY

ADAPTADOR LARGO MACHO SAE TIPO O-RING BOSS - MACHO STAPLE-LOCK

SAE EINSCHRAUBGEWINDE MIT O-RING - STAPLE-LOCK STECKER

ADATTATORE SAE MASCHIO TENUTA O-RING BOSS - MASCHIO STAPLE-LOCK LUNGO



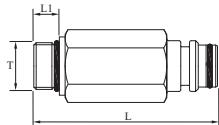
PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm				
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		DN	inch	Size	L	L1	AF	
A503048-04-04L	7/16" 20 UNF	6	1/4"	- 4	85	14	19	
A503048-06-04L	9/16" 18 UNF	6	1/4"	- 4	85	14	19	
A503048-06-06L	9/16" 18 UNF	10	3/8"	- 6	95	14	22	
A503048-08-06L	3/4" 16 UNF	10	3/8"	- 6	95	15	22	
A503048-08-08L	3/4" 16 UNF	12	1/2"	- 8	95	15	27	
A503048-10-08L	7/8" 14 UNF	12	1/2"	- 8	95	17	27	
A503048-12-08L	11/16" 12 UNF	12	1/2"	- 8	95	19	27	
A503048-12-12L	11/16" 12 UNF	19	3/4"	- 12	100	19	36	
A503048-16-16L	1.5/16" 12 UNF	25	1"	- 16	130	21	41	
A503048-20-20L	1.5/8" 12 UNF	31	1.1/4"	- 20	140	21	50	

# STAPLE-LOCK

## ADAPTORS

### A503048...XL



SAE MALE O-RING BOSS TYPE - STAPLE-LOCK MALE ADAPTOR EXTRA LONG BODY  
ADAPTADOR EXTRALARGO MACHO SAE TIPO O-RING BOSS - MACHO STAPLE-LOCK  
SAE EINSCHRAUBGEWINDE MIT O-RING - STAPLE-LOCK STECKER EXTRALANGER KORPUS  
SUPER STECKKUPPLUNGADAPTER  
ADATTATORE SAE MASCHIO TENUTA O-RING BOSS - MASCHIO STAPLE-LOCK EXTRA LUNGO

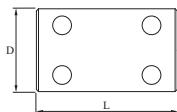
PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
A503048-04-04XL	7/16" 20 UNF	6	1/4"	- 4	122	14	19	
A503048-06-04XL	9/16" 18 UNF	6	1/4"	- 4	122	14	19	
A503048-06-06XL	9/16" 18 UNF	10	3/8"	- 6	122	14	22	
A503048-08-06XL	3/4" 16 UNF	10	3/8"	- 6	122	15	22	
A503048-08-08XL	3/4" 16 UNF	12	1/2"	- 8	140	15	27	
A503048-10-08XL	7/8" 14 UNF	12	1/2"	- 8	140	17	27	
A503048-12-12XL	1 1/16" 12 UNF	19	3/4"	- 12	150	19	36	

# SUPER STAPLE-LOCK

## ADAPTORS

### A514646

STRAIGHT SUPER STAPLE-LOCK FEMALE ADAPTOR  
 ADAPTADOR HEMBRA SUPER STAPLE-LOCK RECTO  
 GERADE SUPER STAPLE-LOCK VERBINDUNGSBUCHSE  
 ADATTATORE SUPER STAPLE-LOCK DRTTO FEMMINA

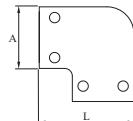


PART. REF.	NOMINAL BORE			DIMENSIONS mm		
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	DN	inch	Size	L	D			
A514646-12-12	19	3/4"	- 12	74	45			
A514646-16-16	25	1"	- 16	104	60			
A514646-20-20	31	1.1/4"	- 20	106	70			
A514646-24-24	38	1.1/2"	- 24	117	80			
A514646-32-32	51	2"	- 32	117	90			
A514646-40-40	63	2.1/2"	- 40	141	106			

### A574646

90° ADAPTOR SUPER STAPLE-LOCK FEMALE  
 ADAPTADOR HEMBRA SUPER STAPLE - LOCK A 90°  
 90° SUPER STAPLE-LOCK VERBINDUNGSBUCHSE  
 ADATTATORE SUPER STAPLE-LOCK 90° FEMMINA

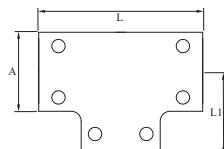


PART. REF.	NOMINAL BORE			DIMENSIONS mm		
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	DN	inch	Size	L	D			
A574646-16-16	25	1"	- 16	70	60			
A574646-20-20	31	1.1/4"	- 20	78	70			
A574646-24-24	38	1.1/2"	- 24	83	80			
A574646-32-32	51	2"	- 32	88	90			
A574646-40-40	63	2.1/2"	- 40	160	110			

### A734646

UNION TEE SUPER STAPLE-LOCK FEMALE  
 TE HEMBRA SUPER STAPLE-LOCK  
 T-STÜCK SUPER STAPLE-LOCK VERBINDUNGSBUCHSE  
 ADATTATORE SUPER STAPLE-LOCK "T" CENTRALE FEMMINA



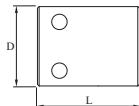
PART. REF.	NOMINAL BORE			DIMENSIONS mm		
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	DN	inch	Size	L	L1	A		
A734646-16-16	25	1"	- 16	140	70	60		
A734646-20-20	31	1.1/4"	- 20	156	78	70		
A734646-24-24	38	1.1/2"	- 24	166	83	80		
A734646-32-32	51	2"	- 32	176	88	90		
A734646-40-40	63	2.1/2"	- 40	210	105	110		

# SUPER STAPLE-LOCK

## ADAPTORS

### A414600



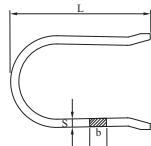
SUPER STAPLE-LOCK FEMALE END CAP

TAPON HEMBRA SUPER STAPLE-LOCK

SUPER STAPLE-LOCK ABSCHLUSSKAPPE BUCHSE

TAPPO FEMMINA SUPER STAPLE-LOCK

PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	L	D		
A414600-12	19	3/4"	- 12	70	45		
A414600-16	25	1"	- 16	90	60		
A414600-20	31	1.1/4"	- 20	90	70		
A414600-24	38	1.1/2"	- 24	100	80		
A414600-32	51	2"	- 32	112	90		



### JL4610FS

STAINLESS STEEL SUPER STAPLE

ACERO INOXIDABLE SUPER GRAPA

SUPER STAPLE-LOCK EDELSTAHLKLAMMER

SUPER STAPLE IN ACCIAIO INOX

PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	s	b	L	
JL4610FS-12	19	3/4"	- 12	4	8	56	
JL4610FS-16	25	1"	- 16	6	12	78	
JL4610FS-20	31	1.1/4"	- 20	6	12	84	
JL4610FS-24	38	1.1/2"	- 24	6	12	99	
JL4610FL-24*	38	1.1/2"	- 24	6	12	112	
JL4610FS-32	51	2"	- 32	6	12	105	
JL4610FL-32*	51	2"	- 32	6	12	129	

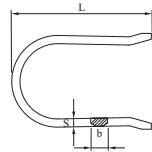
\* Long / largo / lang / lungo

# SUPER STAPLE-LOCK

## ADAPTORS

### JL4610DS

STAINLESS STEEL SUPER STAPLE-LOCK FORM "D"  
 ACERO INOXIDABLE SUPER GRAPA FORMA "D"  
 SUPER STAPLE-LOCK EDELSTAHLKLAMMER HALBRUND  
 SUPER STAPLE IN ACCIAO INOX FORMA "D"

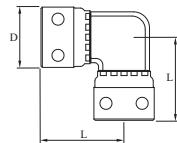


PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	s	b	L	
JL4610DS-08	12	1/2"	- 08	6,4	7,9	53	
JL4610DS-12	19	3/4"	- 12	6,4	7,9	60	
JL4610DS-16	25	1"	- 16	9,3	11,9	75	
JL4610DS-20	31	1 1/4"	- 20	9,3	11,9	85	
JL4610DS-24	38	1 1/2"	- 24	9,3	11,9	92	
JL4610DL-24*	38	1 1/2"	- 24	9,3	11,9	112	
JL4610DS-32	51	2"	- 32	9,3	11,9	103	
JL4610DL-32*	51	2"	- 32	9,3	11,9	129	
JL4610DL-40*	63	2 1/2"	- 32	10	14	140	

\* Long / largo / lang / lungo

### A577272

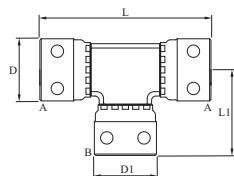
90° ADAPTOR SUPER STAPLE-LOCK SWIVEL FEMALE  
 ADAPTADOR SUPER-STAPLE A 90° HEMBRA GIRATORIA  
 SUPER STAPLE-LOCK DREHBARE VERBINDUNGSBUCHSE  
 ADATTATORE SUPER STAPLE-LOCK 90° FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	L	D		
A577272-12-12	19	3/4"	- 12	66	45		

### A737272

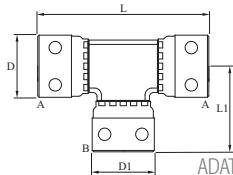
UNION TEE SUPER STAPLE-LOCK SWIVEL FEMALE  
 TE SUPER STAPLE-LOCK HEMBRA GIRATORIA  
 SUPER STAPLE-LOCK DREHBARE VERBINDUNGSBUCHSE  
 ADATTATORE SUPER STAPLE-LOCK "T" CENTRALE FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L1	D	D1		
A737272-12-12	19	3/4"	- 12	19	3/4"	- 12	132	66	45	45

# SUPER STAPLE-LOCK

## ADAPTORS

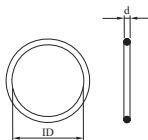


**A797282**

BRANCH TEE SUPER STAPLE-LOCK SWIVEL FEMALE - STAPLE-LOCK SWIVEL FEMALE  
TE SUPER STAPLE-LOCK HEMBRA GIRATORIA ALINEADA - HEMBRA GIRATORIA STAPLE-LOCK  
T-STÜCK SUPER STAPLE-LOCK DREHBARE BUCHSENADAPTER A/B  
ADATTATORE SUPER STAPLE-LOCK "T" LATERALE FEMMINA GIREVOLE - STAPLE-LOCK FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L1	D	D1		

A797282-08-12	DN 19	inch 3/4"	Size - 12	DN 12	inch 1/2"	Size - 8	L 132	L1 56	D 45	D1 35
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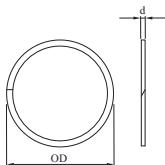


**JO23**

SUPER STAPLE-LOCK MALE END O-RING  
O-RING DE TERMINAL MACHO SUPER STAPLE-LOCK  
O-RING FÜR SUPER STAPLE-LOCK STECKER  
O-RING PER MASCHIO SUPER STAPLE-LOCK

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	DN	inch	Size	ID	d					

JO23231825	DN 19	inch 3/4"	Size - 12	ID 18	d 2.5					
JO23302525	25	1"	- 16	25	2.5					
JO23383325	31	1.1/4"	- 20	33	2.5					
JO23443830	38	1.1/2"	- 24	38	3.0					
JO23504430	51	2"	- 32	44	3.0					
JO23665935	63	2.1/2"	- 40	59	3.5					



**JO15**

SUPER STAPLE-LOCK MALE END BACK-UP RING  
BACK UP RING PARA TERMINAL MACHO DE SUPER STAPLE-LOCK  
STÜTZRING FÜR SUPER STAPLE-LOCK STECKER  
ANELLO BACK-UP PER MASCHIO SUPER STAPLE-LOCK

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	DN	inch	Size	OD	d					

JO15221808	DN 19	inch 3/4"	Size - 12	OD 22	d 0.8					
JO15312708	25	1"	- 16	31	0.8					
JO15383408	31	1.1/4"	- 20	38	0.8					
JO15443915	38	1.1/2"	- 24	44	1.5					
JO15504515	51	2"	- 32	50	1.5					
JO15656015	63	2.1/2"	- 40	65	1.5					

# SUPER STAPLE-LOCK

## ADAPTORS

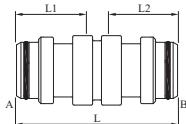
### A504646

STRAIGHT ADAPTOR SUPER STAPLE-LOCK MALE

ADAPTADOR RECTO MACHO SUPER STAPLE-LOCK

GERADER SUPER STAPLE-LOCK STECKKUPPLUNGADAPTER GLEICHE ENDEN

ADATTATORE MASCHIO SUPER STAPLE-LOCK DITTO



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L <sub>1</sub>	L <sub>2</sub>		
A504646-12-12	19	3/4"	- 12	19	3/4"	- 12	81	36	36
A504646-12-16	25	1"	- 16	19	3/4"	- 12	91	51	36
A504646-16-16	25	1"	- 16	25	1"	- 16	110	51	51
A504646-16-20	31	1 1/4"	- 20	25	1"	- 16	112	52	51
A504646-20-20	31	1 1/4"	- 20	31	1 1/4"	- 20	110	52	52
A504646-20-24	38	1 1/2"	- 24	31	1 1/4"	- 20	110	56	52
A504646-24-24	38	1 1/2"	- 24	38	1 1/2"	- 24	124	56	56
A504646-20-32	51	2"	- 32	31	1 1/4"	- 20	110	58	52
A504646-32-24	51	2"	- 32	38	1 1/2"	- 24	124	58	56
A504646-32-32	51	2"	- 32	51	2"	- 32	124	58	58
A504646-40-40	63	2 1/2"	- 40	63	2 1/2"	- 40	212	69	69

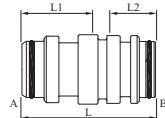
### A504846

STRAIGHT ADAPTOR STAPLE-LOCK MALE - SUPER STAPLE-LOCK MALE

ADAPTADOR RECTO MACHO STAPLE-LOCK - MACHO SUPER STAPLE-LOCK

GERADER SUPER STAPLE-LOCK STECKKUPPLUNGADAPTER A/B

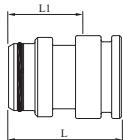
ADATTATORE MASCHIO STAPLE-LOCK DITTO - MASCHIO SUPER STAPLE-LOCK



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L <sub>1</sub>	L <sub>2</sub>		
A504846-08-12	19	3/4"	- 12	12	1 1/2"	- 8	67	36	28
A504846-12-12	19	3/4"	- 12	19	3/4"	- 12	73	36	28
A504846-12-16	25	1"	- 16	19	3/4"	- 12	82	51	28
A504846-16-16	25	1"	- 16	25	1"	- 16	93	51	32
A504846-08-20	31	1 1/4"	- 20	12	1 1/2"	- 8	82	52	28
A504846-12-20	31	1 1/4"	- 20	19	3/4"	- 12	82	52	28
A504846-16-20	31	1 1/4"	- 20	25	1"	- 16	88	52	32
A504846-20-20	31	1 1/4"	- 20	31	1 1/4"	- 20	94	52	32
A504846-12-24	38	1 1/2"	- 24	19	3/4"	- 12	88	57	28
A504846-16-24	38	1 1/2"	- 24	25	1"	- 16	92	57	32
A504846-20-24	38	1 1/2"	- 24	31	1 1/4"	- 20	92	57	32
A504846-12-32	51	2"	- 32	19	3/4"	- 12	87	57	28
A504846-16-32	51	2"	- 32	25	1"	- 16	92	57	32
A504846-20-32	51	2"	- 32	31	1 1/4"	- 20	92	57	32

# SUPER STAPLE-LOCK

## ADAPTORS



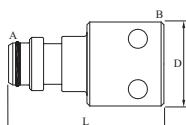
### A404600

SUPER STAPLE-LOCK MALE END PLUG  
TAPON MACHO SUPER STAPLE-LOCK  
SUPER STAPLE-LOCK VERSCHLUSSKAPPE STECKER  
TAPPO SUPER STAPLE-LOCK MASCHIO

PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	DN	inch	Size	L	L1			
A404600-12	19	3/4"	- 12	45	36			
A404600-16	25	1"	- 16	61	51			
A404600-20	31	1.1/4"	- 20	64	52			
A404600-24	38	1.1/2"	- 24	71	57			
A404600-32	51	2"	- 32	71	58			
A404600-40	63	2.1/2"	- 40	121	69			

### A524646

STRAIGHT ADAPTOR SUPER STAPLE-LOCK MALE - FEMALE  
ADAPTADOR RECTO SUPER STAPLE-LOCK MACHO - HEMBRA  
SUPER STAPLE-LOCK GERADER STECKER-BUCHSE ADAPTER  
ADATTATORE DIRETTO STAPLE-LOCK MASCHIO - FEMMINA



### A524672

STRAIGHT ADAPTOR SUPER STAPLE-LOCK MALE - SWIVEL FEMALE  
ADAPTADOR RECTO SUPER STAPLE-LOCK MACHO - HEMBRA GIRATORIA  
SUPER STAPLE-LOCK GERADER STECKER - DREHBARE BUCHSE ADAPTER  
ADATTATORE SUPER STAPLE-LOCK DIRETTO MASCHIO - FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	SIDE "A"		SIDE "B"					
A524672-16-12*	25	1"	- 16	19	3/4"	- 12	84	45
A524672-20-12*	31	1.1/4"	- 20	19	3/4"	- 12	85	55
A524672-20-16*	31	1.1/4"	- 20	25	1"	- 16	110	60
A524672-24-12*	38	1.1/2"	- 24	19	3/4"	- 12	84	60
A524672-24-16*	38	1.1/2"	- 24	25	1"	- 16	100	60
A524646-24-20	38	1.1/2"	- 24	31	1.1/4"	- 20	100	70
A524672-32-12*	51	2"	- 32	19	3/4"	- 12	80	70
A524672-32-16*	51	2"	- 32	25	1"	- 16	95	70
A524646-32-20	51	2"	- 32	31	1.1/4"	- 20	95	70
A524646-32-24	51	2"	- 32	38	1.1/2"	- 24	108	80

\* Swivel female / Hembra giratoria / M-Gelenk / Femmina girevole

# SUPER STAPLE-LOCK

## ADAPTORS

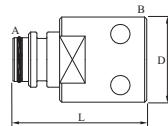
### A524872

STRAIGHT ADAPTOR STAPLE-LOCK MALE - SUPER STAPLE-LOCK SWIVEL FEMALE

ADAPTADOR RECTO MACHO STAPLE-LOCK - HEMBRA SUPER STAPLE-LOCK

GERADER ADAPTER STAPLE-LOCK STECKER - SUPER STAPLE-LOCK BUCHSE DREHBARE

ADATTATORE STAPLE-LOCK DRTTO MASCHIO - SUPER STAPLE-LOCK FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	D			
A524872-16-12	25	1"	- 16	19	3/4"	- 12	68	45	
A524872-16-16	25	1"	- 16	25	1"	- 16	85	60	
A524872-20-12	31	1.1/4"	- 20	19	3/4"	- 12	68	60	
A524872-20-16	31	1.1/4"	- 20	25	1"	- 16	85	60	
A524872-24-16	38	1.1/2"	- 24	25	1"	- 16	88	70	
A524872-32-16	51	2"	- 32	25	1"	- 16	88	70	

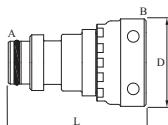
### A524682

STRAIGHT ADAPTOR SUPER STAPLE-LOCK MALE - STAPLE-LOCK SWIVEL FEMALE

ADAPTADOR RECTO MACHO SUPER STAPLE-LOCK - HEMBRA GIRATORIA STAPLE-LOCK

GERADER ADAPTER SUPER STAPLE-LOCK STECKER - STAPLE-LOCK DREHBARE BUCHSE

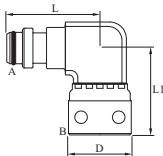
ADATTATORE SUPER STAPLE-LOCK DRTTO MASCHIO - STAPLE-LOCK FEMMINA GIREVOLE



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	D			
A524682-12-08	19	3/4"	- 12	12	1/2"	- 8	82	35	
A524682-12-12	19	3/4"	- 12	19	3/4"	- 12	77	45	
A524682-16-12	25	1"	- 16	19	3/4"	- 12	82	45	
A524682-16-16	25	1"	- 16	25	1"	- 16	99	55	
A524682-20-08	31	1.1/4"	- 20	12	1/2"	- 8	82	35	
A524682-20-12	31	1.1/4"	- 20	19	3/4"	- 12	97	45	
A524682-20-16	31	1.1/4"	- 20	25	1"	- 16	103	55	
A524682-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	101	60	
A524682-24-16	38	1.1/2"	- 24	25	1"	- 16	95	55	
A524682-24-20	38	1.1/2"	- 24	31	1.1/4"	- 20	108	60	
A524682-32-16	51	2"	- 32	25	1"	- 16	111	55	
A524682-32-20	51	2"	- 32	31	1.1/4"	- 20	92	60	

# SUPER STAPLE-LOCK

## ADAPTORS

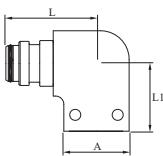


**A584672**

90° ADAPTOR SUPER STAPLE-LOCK MALE - SWIVEL FEMALE  
 ADAPTADOR A 90° SUPER STAPLE-LOCK MACHO - HEMBRA GIRATORIA  
 90° ADAPTER SUPER STAPLE-LOCK STECKER - DREHBARE BUCHSE  
 ADATTATORE 90° SUPER STAPLE-LOCK MASCHIO - FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L1	D		

A584672-12-12	DN 19	inch 3/4"	Size - 12	DN 19	inch 3/4"	Size - 12	L 61	L1 65	D 45
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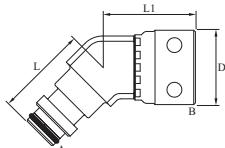


**A584646**

90° ADAPTOR SUPER STAPLE-LOCK MALE - FEMALE  
 ADAPTADOR A 90° SUPER STAPLE-LOCK MACHO - HEMBRA  
 90° SUPER STAPLE-LOCK STECKER - BUCHSE ADAPTER  
 ADATTATORE 90° SUPER STAPLE-LOCK MASCHIO - FEMMINA

PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	DN	inch	Size	L	L1	A			

A584646-12-12	19	3/4"	- 12	61	66	45			
A584646-16-16	25	1"	- 16	83	85	60			
A584646-20-20	31	1 1/4"	- 20	101	78	70			
A584646-24-24	38	1 1/2"	- 24	114	83	82			
A584646-32-32	51	2"	- 32	114	90	90			



**A554672**

45° ADAPTOR SUPER STAPLE-LOCK MALE - SWIVEL FEMALE  
 ADAPTADOR A 45° SUPER STAPLE-LOCK MACHO - HEMBRA GIRATORIA  
 45° SUPER STAPLE-LOCK STECKER - DREHBARE BUCHSE  
 ADATTATORE 45° SUPER STAPLE-LOCK MASCHIO - FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L1	D		

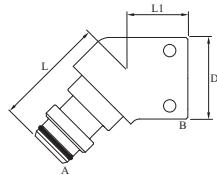
A554672-12-12	DN 19	inch 3/4"	Size - 12	DN 19	inch 3/4"	Size - 12	L 51	L1 57	D 45
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# SUPER STAPLE-LOCK

## ADAPTORS

### A554646

45° ADAPTOR SUPER STAPLE-LOCK MALE - FEMALE  
 ADAPTADOR A 45° SUPER STAPLE-LOCK MACHO - HEMBRA  
 45° SUPER STAPLE-LOCK STECKER - BUCHSE ADAPTER  
 ADATTATORE 45° SUPER STAPLE-LOCK MASCHIO - FEMMINA



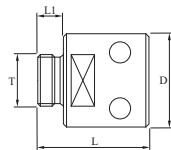
PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L <sub>1</sub>	D		
A554646-16-32	25	1"	- 16	51	2"	- 32	78	76	76
A554646-16-16	25	1"	- 16	25	1"	- 16	70	71	60
A554646-20-20	31	1.1/4"	- 20	31	1.1/4"	- 20	70	64	70
A554646-24-24	38	1.1/2"	- 24	38	1.1/2"	- 24	78	64	80
A554646-32-32	51	2"	- 32	51	2"	- 32	98	76	90

### A524446

BSP MALE FLAT FACE FOR BONDED WASHER - SUPER STAPLE-LOCK FEMALE ADAPTOR  
 ADAPTADOR MACHO BSP CARA PLANA - HEMBRA SUPER STAPLE-LOCK  
 BSP FLACHDICHTENDES EINSCHRAUBGEWINDE FUR VERBUNDSCHEIBE - SUPER STAPLE-LOCK BUCHSE  
 ADATTATORE BSP MASCHIO FACCIA PIANA PER BONDED WASHER - FEMMINA SUPER STAPLE-LOCK

### A524472

BSP MALE FLAT FACE FOR BONDED WASHER - SUPER STAPLE-LOCK SWIVEL FEMALE ADAPTOR  
 ADAPTADOR MACHO BSP CARA PLANA - HEMBRA GIRATORIA SUPER STAPLE-LOCK  
 BSP FLACHDICHTENDES EINSCHRAUBGEWINDE FUR VERBUNDSCHEIBE  
 SUPER STAPLE-LOCK BUCHSE DREHBAR  
 ADATTATORE BSP MASCHIO FACCIA PIANA PER BONDED WASHER  
 FEMMINA SUPER STAPLE-LOCK GIREVOLE

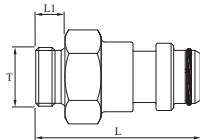


PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm				
		DN	inch	Size	L	L <sub>1</sub>	D	AF	
A524472-12-12*	3/4" BSP	19	3/4"	- 12	70	13	45	36	
A524472-16-16*	1" BSP	25	1"	- 16	90	17	60	50	
A524446-20-20	1.1/4" BSP	31	1.1/4"	- 20	90	19	70	60	
A524446-24-24	1.1/2" BSP	38	1.1/2"	- 24	100	19	80	70	
A524446-32-32	2" BSP	51	2"	- 32	100	23	90	80	

\* Swivel female / Hembra giratoria / M-Gelenk / Femmina girevole

# SUPER STAPLE-LOCK

## ADAPTORS



**A504446**

BSP MALE FLAT FACE FOR BONDED WASHER - SUPER STAPLE-LOCK MALE ADAPTOR

ADAPTADOR MACHO BSP CARA PLANA - MACHO SUPER STAPLE-LOCK

BSP FLACHDICHTENDES EINSCHRAUBGEWINDE FÜR VERBUNDSCHEIBE - SUPER STAPLE-LOCK STECKER

ADATTATORE BSP MASCHIO FACCIA PIANA PER BONDED WASHER - MASCHIO SUPER STAPLE-LOCK

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
A504446-12-12	3/4" BSP	19	3/4"	- 12	68	14	46	
A504446-16-16	1" BSP	25	1"	- 16	86	17	46	
A504446-20-20	1.1/4" BSP	31	1.1/4"	- 20	94	19	50	
A504446-24-24	1.1/2" BSP	38	1.1/2"	- 24	100	19	60	
A504446-32-32	2" BSP	51	2"	- 32	104	23	70	

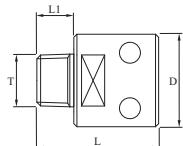
**A522846**

STRAIGHT ADAPTOR NPTF MALE - SUPER STAPLE-LOCK FEMALE

ADAPTADOR MACHO RECTO NPTF - HEMBRA SUPER STAPLE-LOCK

GERADER NPTF GEWINDE - SUPER STAPLE-LOCK BUCHSE

ADATTATORE DIRETTO MASCHIO NPTF - FEMMINA SUPER STAPLE-LOCK



**A522872**

STRAIGHT ADAPTOR NPTF MALE - SUPER STAPLE-LOCK SWIVEL FEMALE

ADAPTADOR MACHO RECTO NPTF - HEMBRA GIRATORIA SUPER STAPLE-LOCK

GERADER NPTF GEWINDE - SUPER STAPLE-LOCK BUCHSE DREHBAR

ADATTATORE DIRETTO MASCHIO NPTF - FEMMINA SUPER STAPLE-LOCK GIREVOLE

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm				
A522872-12-12*	3/4" NPTF	19	3/4"	- 12	70	19	45	36	
A522872-16-16*	1" NPTF	25	1"	- 16	95	24	60	50	
A522846-20-20	1.1/4" NPTF	31	1.1/4"	- 20	95	24	70	60	
A522846-24-24	1.1/2" NPTF	38	1.1/2"	- 24	95	26	80	70	
A522846-32-32	2" NPTF	51	2"	- 32	95	26	90	85	

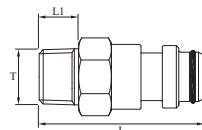
\* Swivel female / Hembra giratoria / Buchse drehbar / Femmina girevole

# SUPER STAPLE-LOCK

## ADAPTORS

### A502846

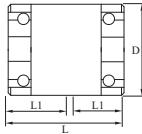
STRAIGHT ADAPTOR NPTF MALE - SUPER STAPLE-LOCK MALE  
ADAPTADOR MACHO NPTF RECTO - MACHO SUPER STAPLE-LOCK  
NPTF EINSCHRAUBGEWINDE - SUPER STAPLE-LOCK STECKER  
ADATTATORE DRTTO MASCHIO NPTF - MASCHIO SUPER STAPLE-LOCK



PART. REF.	THREAD	NOMINAL BORE		DIMENSIONS mm				
A502846-12-12	3/4" NPTF	19	3/4"	- 12	73	19	32	
A502846-16-16	1" NPTF	25	1"	- 16	93	24	46	
A502846-20-20	1.1/4" NPTF	31	1.1/4"	- 20	97	25	50	
A502846-24-24	1.1/2" NPTF	38	1.1/2"	- 24	106	26	60	
A502846-32-32	2" NPTF	51	2"	- 32	106	26	70	

# FLUSHFIT ADAPTORS

## ADAPTORS

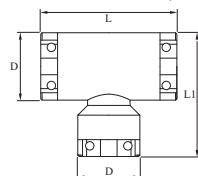


**A515959**

STRAIGHT FLUSHFIT FEMALE ADAPTOR  
ADAPTADOR HEMBRA FLUSHFIT RECTO  
GERADER FLUSHFIT VERBINDER BUCHSE  
ADATTATORE FLUSHFIT DRITTO FEMMINA

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L <sub>1</sub>	D			
A515959-24-24*	38	1.1/2"	- 24	38	1.1/2"	- 24	95	46	70	
A515959-32-32	51	2"	- 32	51	2"	- 32	78	37	76	
A515959-40-40	63	2.1/2"	- 40	63	2.1/2"	- 40	106	50	106	

\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio

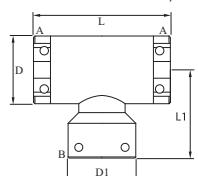


**A735959**

UNION TEE FLUSHFIT FEMALE  
FLUSHFIT HEMBRAS EN TE  
FLUSHFIT T-STÜCK BUCHSEN  
ADATTATORE FLUSHFIT "T" CENTRALE FEMMINA

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	DN	inch	Size	L	L <sub>1</sub>	D				
A735959-24-24*	38	1.1/2"	- 24	154	101	76				
A735959-32-32	51	2"	- 32	170	125	98				
A735959-40-40	63	2.1/2"	- 40	200	132	106				

\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio



**A795948**

BRANCH TEE FLUSHFIT FEMALE - STAPLE-LOCK FEMALE  
TE FLUSHFIT HEMBRA ALINEADA - HEMBRA STAPLE-LOCK  
FLUSHFIT - STAPLE-LOCK ADAPTER  
ADATTATORE FLUSHFIT "T" LATERALE FEMMINA - STAPLE-LOCK FEMMINA

PART. REF.	NOMINAL BORE				DIMENSIONS mm					
	SIDE "A"		SIDE "B"		L	L <sub>1</sub>	D	D <sub>1</sub>		
A795948-24-24*	38	1.1/2"	- 24	38	1.1/2"	- 24	154	99	76	76
A795948-32-32	51	2"	- 32	51	2"	- 32	185	90	76	85
A795948-40-32	63	2.1/2"	- 40	51	2.1/2"	- 32	185	90	106	85

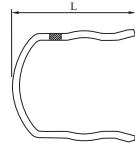
\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio

# FLUSHFIT ADAPTORS

## ADAPTORS

### JL5910FS

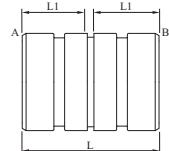
STAINLESS STEEL FLUSHFIT STAPLE  
ACERO INOXIDABLE GRAPA FLUSHFIT  
EDELSTAHL FLUSHFIT KLAMMER  
STAPLE FLUSHFIT ACCIAIO INOX



PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	DN	inch	Size	Section	L			
JL5910FS-24	38	1.1/2"	- 24	8 x 4	59			
JL5910FS-32	51	2"	- 32	8 x 4	63			
JL5910FS-40	63	2.1/2"	- 40	8 x 5	85			

### A505959

STRAIGHT FLUSHFIT MALE ADAPTOR  
ADAPTADOR MACHO FLUSHFIT RECTO  
GERADER FLUSHFIT STECKER VERBINDER  
ADATTATORE FLUSHFIT DITTO MASCHIO

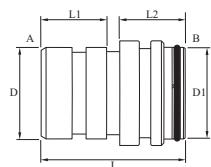


PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	SIDE "A"	SIDE "B"						
A505959-24-24*	38	1.1/2"	- 24	38	1.1/2"	- 24	100	46
A505959-32-32	51	2"	- 32	51	2"	- 32	89	37
A505959-40-40	63	2.1/2"	- 40	63	2.1/2"	- 40	107	51

\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio

### A504859

STRAIGHT STAPLE-LOCK MALE - FLUSHFIT MALE ADAPTOR  
ADAPTADOR RECTO MACHO STAPLE-LOCK - MACHO FLUSHFIT  
STAPLE-LOCK STECKER - FLUSHFIT STECKER VERBINDER  
ADATTATORE STAPLE-LOCK DITTO MASCHIO - FLUSHFIT MASCHIO

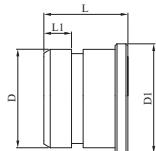


PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	SIDE "A"	SIDE "B"						
A504859-24-24*	38	1.1/2"	- 24	38	1.1/2"	- 24	92	46
A504859-32-32	51	2"	- 32	51	2"	- 32	82	37
A504859-32-40	63	2.1/2"	- 40	51	2"	- 32	91	51
A504859-40-40	63	2.1/2"	- 40	63	2.1/2"	- 40	139	76

\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio

# FLUSHFIT ADAPTORS

## ADAPTORS

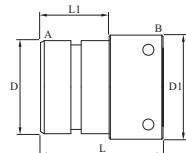


**NEW A405900**

FLUSHFIT MALE END PLUG  
TAPÓN MACHO FLUSHFIT  
FLUSHFIT VERSCHLUSSKAPPE STECKER  
TAPPO FLUSHFIT MASCHIO

PART. REF.	NOMINAL BORE			DIMENSIONS mm				
------------	--------------	--	--	---------------	--	--	--	--

	DN	inch	Size	L	L1	D	D1	
A405900-24	38	1.1/2"	- 24	44	28	46	56	
A405900-32	51	2"	- 32	48	28	56	65	
A405900-40	63	2.1/2"	- 40	67	25	76	85	

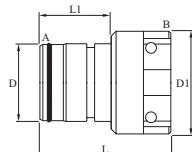


**A525948**

STRAIGHT FLUSHFIT MALE - STAPLE-LOCK FEMALE ADAPTOR  
ADAPTADOR RECTO MACHO FLUSHFIT - HEMBRA STAPLE-LOCK  
GERADER FLUSHFIT STECKER - STAPLE-LOCK BUCHSE ADAPTER  
ADATTATORE STAPLE-LOCK DRTTO MASCHIO - FEMMINA STAPLE-LOCK

PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"						

	DN	inch	Size	DN	inch	Size	L	L1	D	D1	
A525948-24-24	38	1.1/2"	- 24	38	1.1/2"	- 24	101	52	42	76	
A525948-32-32	51	2"	- 32	51	2"	- 32	89	37	56	85	
A525948-40-32	63	2.1/2"	- 40	51	2"	- 32	100	56	76	85	
A525948-40-40	63	2.1/2"	- 40	63	2.1/2"	- 40	134	56	76	106	



**A524859**

STRAIGHT STAPLE-LOCK MALE - FLUSHFIT FEMALE ADAPTOR  
ADAPTADOR RECTO MACHO STAPLE-LOCK - HEMBRA FLUSHFIT  
GERADE STAPLE-LOCK STECKER - FLUSHFIT BUCHSE  
ADATTATORE STAPLE-LOCK DRTTO MASCHIO - FEMMINA FLUSHFIT

PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"						

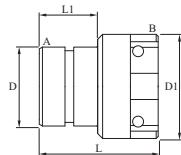
	DN	inch	Size	DN	inch	Size	L	L1	D	D1	
A524859-24-24	38	1.1/2"	- 24	38	1.1/2"	- 32	94	40	47	70	
A524859-32-32	51	2"	- 32	51	2"	- 32	82	40	56	76	
A524859-32-40	51	2"	- 32	63	2.1/2"	- 40	101	40	56	106	
A524859-40-40	63	2.1/2"	- 40	63	2.1/2"	- 40	134	73	79	106	

# FLUSHFIT ADAPTORS

## ADAPTORS

### A525959

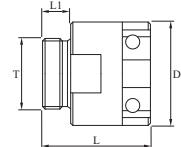
STRAIGHT FLUSHFIT MALE - FEMALE ADAPTOR  
 ADAPTADOR RECTO FLUSHFIT MACHO - HEMBRA  
 GERADER FLUSHFIT STECKER - BUCHSE ADAPTER  
 ADATTATORE FLUSHFIT DRTTO MASCHIO - FEMMINA



PART. REF.	NOMINAL BORE				DIMENSIONS mm				
	SIDE "A"		SIDE "B"		L	L1	D	D1	
A525959-24-32	38	1.1/2"	- 24	51	2"	- 32	96	47	42
A525959-32-40	51	2"	- 32	63	2.1/2"	- 40	98	37	56
A525959-40-32	63	2.1/2"	- 40	51	2"	- 32	96	56	76
A525959-40-40	63	2.1/2"	- 40	63	2.1/2"	- 40	118	56	76
									106

### A524459

BSP MALE FLAT FACE FOR BONDED WASHER - FLUSHFIT FEMALE ADAPTOR  
 ADAPTADOR MACHO BSP CARA PLANA - HEMBRA FLUSHFIT  
 BSP FLACHDICHTENDES EINSCHRAUBGEWINDE FÜR VERBUNDSCHEIBE - FLUSHFIT BUCHSE  
 ADATTATORE BSP MASCHIO FACCIA PIANA PER BONDED WASHER - FEMMINA FLUSHFIT

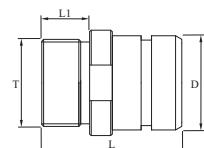


PART. REF.	THREAD	NOMINAL BORE				DIMENSIONS mm				
A524459-24-24*	1.1/2" BSP	38	1.1/2"	- 24		77	20	70		
A524459-32-32	2" BSP	51	2"	- 32		70	23	76		
A524459-40-40	2.1/2" BSP	63	2.1/2"	- 40		87	27	106		

\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio

### A504459

BSP MALE FLAT FACE FOR BONDED WASHER - FLUSHFIT MALE ADAPTOR  
 ADAPTADOR MACHO BSP CARA PLANA - MACHO FLUSHFIT  
 BSP FLACHDICHTENDES EINSCHRAUBGEWINDE FÜR VERBUNDSCHEIBE - FLUSHFIT STECKER  
 ADATTATORE BSP MASCHIO FACCIA PIANA PER BONDED WASHER - MASCHIO FLUSHFIT

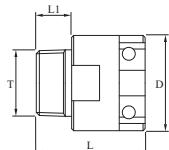


PART. REF.	THREAD	NOMINAL BORE				DIMENSIONS mm				
A504459-24-24*	1.1/2" BSP	38	1.1/2"	- 24		80	26	70		
A504459-32-32	2" BSP	51	2"	- 32		75	26	76		
A504459-40-40	2.1/2" BSP	63	2.1/2"	- 40		88	29	106		

\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio

# FLUSHFIT ADAPTORS

## ADAPTORS

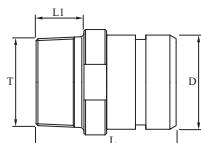


**A522859**

STRAIGHT NPTF MALE - FLUSHFIT FEMALE ADAPTOR  
ADAPTADOR RECTO MACHO NPTF - HEMBRA FLUSHFIT  
GERADES NPTF EINSCHRAUBGEWINDE - FLUSHFIT BUCHSE  
ADATTATORE DRTTO MASCHIO NPTF - FEMMINA FLUSHFIT

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
A522859-24-24*	1.1/2" NPTF	38	1.1/2"	- 24	80	26	70	
A522859-32-32	2" NPTF	51	2"	- 32	75	26	76	
A522859-40-40	2.1/2" NPTF	63	2.1/2"	- 40	88	29	106	

\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio



**A502859**

STRAIGHT NPTF MALE - FLUSHFIT MALE ADAPTOR  
ADAPTADOR RECTO MACHO NPTF - MACHO FLUSHFIT  
GERADES NPTF EG - FLUSHFIT STECKER  
ADATTATORE DRTTO MASCHIO NPTF - MASCHIO FLUSHFIT

PART. REF.	THREAD	NOMINAL BORE			DIMENSIONS mm			
A502859-24-24*	1.1/2" NPTF	38	1.1/2"	- 24	87	26	42	
A502859-32-32	2" NPTF	51	2"	- 32	82	26	56	
A502859-40-40	2.1/2" NPTF	63	2.1/2"	- 40	113	39	76	

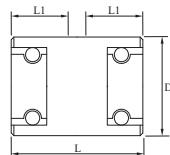
\* Seal fitted to male end / Sellado a terminal macho / Dichtung auf Stecker / Tenuta montata sulla terminazione maschio

# HP FLUSHFIT ADAPTORS

## ADAPTORS

### A516161 **NEW**

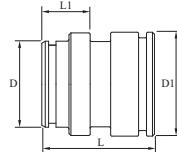
STRAIGHT HP FLUSHFIT FEMALE  
HEMBRA RECTA FLUSHFIT AP  
GERADER HP - FLUSHFIT BUCHSE  
FEMMINA DRITTA HP FLUSHFIT



PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	DN	inch	Size	L	L <sub>1</sub>	D		
A516161-24-24	38	1.1/2"	- 24	120	58	89		
A516161-32-32	51	2"	- 32	120	41	95		
A516161-40-40	63	2.1/2"	- 40	141	48	108		

### A406100

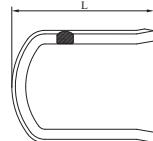
HP FLUSHFIT MALE END PLUG  
TAPÓN MACHO FLUSHFIT AP  
HP FLUSHFIT STECKER VERSCHLUSSTOPFEN  
TAPPO MASCHIO HP FLUSHFIT



PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	DN	inch	Size	L	L <sub>1</sub>	D	D <sub>1</sub>	
A406100-24	38	1.1/2"	- 24	71	30	55	56	
A406100-32	51	2"	- 32	71	32	55	56	
A406100-40	63	2.1/2"	- 40	85	37	77	78	

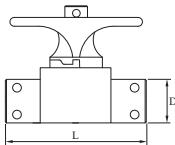
### JL6110DS

STAINLESS STEEL HP FLUSH-FIT "D" FORM STAPLE  
ACERO INOXIDABLE AP FLUSH-FIT FORMA "D"  
EDELSTAHL KLAMMER HP FORM  
STAPLE HP FLUSH-FIT IN ACCIAIO INOX PROFILO A "D"



PART. REF.	NOMINAL BORE			DIMENSIONS mm				
	DN	inch	Size	Section	L			
JL6110DS-24	38	1.1/2"	- 24	12 x 9.5	86			
JL6110DS-32	51	2"	- 32	12 x 9.5	94			
JL6110DS-40	63	2.1/2"	- 40	14 x 10.5	107			

# BALL VALVES



## AV48AF6R

STAPLE LOCK CUBIC SHAPED VALVE FIXED FEMALE

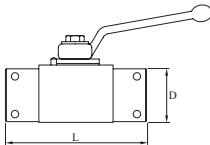
VALVULA CUBICA HEMBRA FIJA STAPLE-LOCK

KUGELHAHN VIERECKIG - STAPLE-LOCK - BUCHSEN

VALVOLA STAPLE LOCK A FORMA CUBICA FEMMINA FISSA

PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV48AF6R-06	10	3/8"	- 6	500	7220	100	30
AV48AF6R-08	12	1/2"	- 8	500	7220	100	35
AV48AF6R-12	19	3/4"	- 12	500	7220	130	40

Handle options: 1, 2, 5 / Opciones de manilla: 1, 2, 5 / Griffoptionen: 1, 2, 5 / Opzioni maniglia: 1, 2, 5



## AV48AF1N

STAPLE LOCK CUBIC SHAPED VALVE FIXED FEMALE

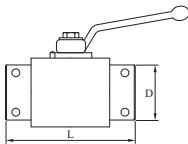
CUBICA HEMBRA STAPLE-LOCK- HEMBRA

KUGELHAHN SECHSKANTFORM - STAPLE-LOCK - BUCHSE

STAPLE LOCK FORMA CUBICA FEMMINA - FEMMINA

PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV48AF1N-16	25	1"	- 16	400	5770	164	55
AV48AF1N-20	31	1 1/4"	- 20	300	4330	164	60

Handle options: 3, 5, 6 / Opciones de manilla: 3, 5, 6 / Griffoptionen: 3, 5, 6 / Opzioni maniglia: 3, 5, 6



## AV48AF1N

STAPLE LOCK CUBIC SHAPED VALVE FIXED FEMALE

VALVULA CUBICA HEMBRA STAPLE-LOCK

KUGELHAHN ZYLINDRISCH STAPLE-LOCK BUCHSEN

VALVOLA STAPLE LOCK A FORMA CUBICA FEMMINA

PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV48AF1N-24	38	1 1/2"	- 24	250	3625	190	75
AV48AF1N-32	51	2"	- 32	200	2900	195	85

Handle options: P / Opciones de manilla: P / Griffoptionen: P / Opzioni maniglia: P

# BALL VALVES

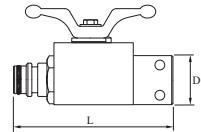
## AV48AB2N

STAPLE LOCK CUBIC SHAPED VALVE MALE - FIXED FEMALE

VALVULA CUBICA MACHO STAPLE-LOCK - HEMBRA FIJA

KUGELHAHN VIERECKIG STAPLE-LOCK STECKER - KOMPAKT BUCHSE

VALVOLA STAPLE LOCK A FORMA CUBICA MASCHIO - FEMMINA FISSA



PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV48AB2N-06	10	3/8"	- 6	500	7220	100	30
AV48AB2N-08	12	1/2"	- 8	500	7220	100	35
AV48AB2N-12	19	3/4"	- 12	500	7220	130	40

Handle options: 1, 5, 6 / Opciones de manilla: 1, 5, 6 / Griffoptionen: 1, 5, 6 / Opzioni maniglia: 1, 5, 6

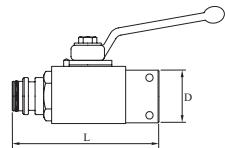
## AV48AB1N

STAPLE LOCK CUBIC SHAPED VALVE MALE - FIXED FEMALE

VALVULA CUBICA MACHO STAPLE-LOCK - HEMBRA FIJA

KUGELHAHN VIERECKIG STAPLE-LOCK STECKER - KOMPAKT BUCHSE

VALVOLA STAPLE LOCK A FORMA CUBICA MASCHIO - FEMMINA FISSA



PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV48AB1N-16	25	1"	- 16	400	5770	164	55
AV48AB1N-20	31	1.1/4"	- 20	300	4330	164	60

Handle options: 3, 5, 6 / Opciones de manilla: 3, 5, 6 / Griffoptionen: 3, 5, 6 / Opzioni maniglia: 3, 5, 6

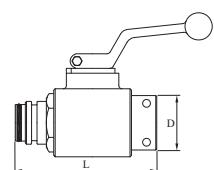
## AV48AB1N

STAPLE LOCK CUBIC SHAPED VALVE MALE - FIXED FEMALE

VALVULA CUBICA MACHO STAPLE-LOCK - HEMBRA FIJA

KUGELHAHN VIERECKIG STAPLE-LOCK STECKER - KOMPAKT BUCHSE

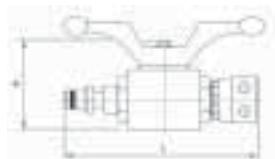
VALVOLA STAPLE LOCK A FORMA CUBICA MASCHIO - FEMMINA FISSA



PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV48AB1N-24	38	1.1/2"	- 24	250	3625	195	75
AV48AB1N-32	51	2"	- 32	200	2900	195	85

Handle options: P / Opciones de manilla: P / Griffoptionen: P / Opzioni maniglia: P

# BALL VALVES

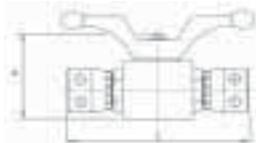


## AV72AB2N

STAPLE LOCK CUBIC SHAPED VALVE MALE - SWIVEL FEMALE  
VÁLVULA CÚBICA MACHO STAPLE-LOCK - HEMBRA GIRATORIA  
KUGELHAHN VIERECKIG STAPLE-LOCK STECKER - DREHBARE BUCHSE  
VALVOLA MASCHIO STAPLE LOCK A FORMA CUBICA - FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	A
AV72AB2N-04	06	1/4"	- 04	500	7220	90	50
AV72AB2N-06	10	3/8"	- 06	500	7220	108	56
AV72AB2N-08	12	1/2"	- 08	500	7220	111	56
AV72AB2N-12	19	3/4"	- 12	500	7220	116	66
AV72AB2N-16	25	1"	- 16	400	5770	151	88
AV72AB2N-20	31	1.1/4"	- 20	300	4330	149	88

Handle options: 1,6 / Opciones de manilla: 1,6 / Griffoptionen: 1,6 / Opzioni maniglia: 1,6

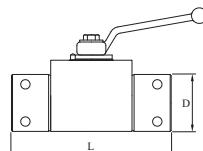


## AV72AF2N

STAPLE LOCK CUBIC SHAPED VALVE SWIVEL FEMALE  
VÁLVULA CÚBICA MACHO STAPLE-LOCK - HEMBRA GIRATORIA  
KUGELHAHN VIERECKIG STAPLE-LOCK DREHBARE BUCHSEN  
VALVOLA STAPLE LOCK A FORMA CUBICA - FEMMINA GIREVOLE

PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	A
AV72AF2N-04	06	1/4"	- 04	500	7220	104	50
AV72AF2N-06	10	3/8"	- 06	500	7220	105	56
AV72AF2N-08	12	1/2"	- 08	500	7220	117	56
AV72AF2N-12	19	3/4"	- 12	500	7220	114	66
AV72AF2N-16	25	1"	- 16	400	5770	152	88
AV72AF2N-20	31	1.1/4"	- 20	300	4330	145	88

Handle options: 1,6 / Opciones de manilla: 1,6 / Griffoptionen: 1,6 / Opzioni maniglia: 1,6



## AV46AF1N

SUPER STAPLE LOCK CUBIC SHAPED VALVE FIXED FEMALE  
VALVOLA CÚBICA HEMBRAS FIJA SUPER STAPLE-LOCK  
KUGELHAHN VIERECKIG SUPER STAPLE-LOCK BUCHSEN  
VALVOLA SUPER STAPLE-LOCK A FORMA CUBICA FEMMINA FISSA

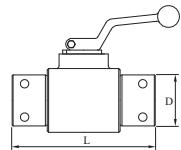
PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV46AF1N-12	19	3/4"	- 12	500	7220	150	45
AV46AF1N-16	25	1"	- 16	400	5770	195	60
AV46AF1N-20	31	1.1/4"	- 20	350	5070	195	70

Handle options: 3, 5, 6 / Opciones de manilla: 3, 5, 6 / Griffoptionen: 3, 5, 6 / Opzioni maniglia: 3, 5, 6

# BALL VALVES

## AV46DF1N

SUPER STAPLE LOCK CYLINDRICAL SHAPED VALVE FIXED FEMALE  
VALVULA CILINDRICA HEMBRA FIJA SUPER STAPLE-LOCK  
KUGELHAHN SECHSKANTFORM SUPER STAPLE-LOCK BUCHSEN  
VALVOLA SUPER STAPLE-LOCK CILINDRICA FEMMINA FISSA

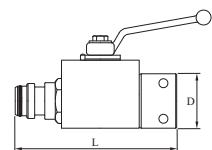


PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV46DF1N-24	38	1.1/2"	- 24	350	5050	230	82
AV46DF1N-32	51	2"	- 32	350	5050	260	95

Handle options: P / Opciones de manilla: P / Griffoptionen: P / Opzioni maniglia: P

## AV46AB1N

SUPER STAPLE LOCK CUBIC SHAPED VALVE MALE – FIXED FEMALE  
VALVULA CUBICA MACHO - HEMBRA FIJA SUPER STAPLE-LOCK  
KUGELHAHN VIERECKIG SUPER STAPLE-LOCK - BUCHSE  
VALVOLA SUPER STAPLE-LOCK A FORMA CUBICA MASCHIO - FEMMINA FISSA

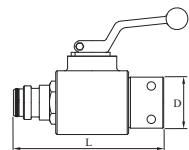


PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	A
AV46AB1N-12	19	3/4"	- 12	500	7220	160	45
AV46AB1N-16	25	1"	- 16	400	5770	205	60
AV46AB1N-20	31	1.1/4"	- 20	350	5050	205	70

Handle options: 3, 5, 6 / Opciones de manilla: 3, 5, 6 / Griffoptionen: 3, 5, 6 / Opzioni maniglia: 3, 5, 6

## AV46DB1N

SUPER STAPLE LOCK CYLINDRICAL SHAPED VALVE MALE FIXED FEMALE  
VALVULA CILINDRICA MACHO - HEMBRA FIJA SUPER STAPLE-LOCK  
KUGELHAHN ZYLINDRISCH SUPER STAPLE-LOCK STECKER - BUCHSE  
VALVOLA SUPER STAPLE-LOCK CILINDRICA MASCHIO - FEMMINA FISSA



PART. REF.	NOMINAL BORE			DIMENSIONS mm			
	DN	inch	Size	bar	psi	L	D
AV46DB1N-24	38	1.1/2"	- 24	350	5050	235	82
AV46DB1N-32	51	2"	- 32	350	5050	260	95

Handle options: P / Opciones de manilla: P / Griffoptionen: P / Opzioni maniglia: P

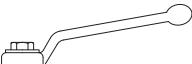
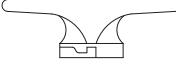
# HANDLE OPTIONS SUMMARY

All the ball valves mentioned in this catalogue are proposed with standard handle solutions. See the following summary for alternative options.

Todas las valvulas de bola mencionadas en este catalogo son propuestas con manillas est ndar. Veamos un resumen que nos muestra las diversas alternativas.

Alle im Katalog aufgeführten Kugelhähne werden mit Standardgriffen geliefert. Untenstehende Tabelle zeigt weitere verfügbare Alternativen.

Tutte le valvole a sfera menzionate in questo catalogo sono proposte con soluzioni di maniglia standard. Vedere il sommario seguente per le alternative.

DRAWING	DESCRIPTION	DIGIT "6" PART. REF
	SINGLE HANDLE SINGLE LONG HANDLE SINGLE EXTRA LONG HANDLE SINGLE PAD LOCK HANDLE	1 L X P
	DOUBLE HANDLE	2
	HEXAGON HANDLE	3
	SAFETY HANDLE	5
	SAFETY PAD LOCK HANDLE	6

Coloured handles are available on request / Manillas coloreadas estan disponibles bajo pedido / Farbige Griffe sind auf Anfrage verf gbar / Maniglie colorate disponibili su richiesta

