



General Catalogue 2009



Cilindri molla ad azoto
Nitrogen gas cylinders
Stickstoffgasdruckfedern
Cylindres-ressort à l'azote
Cilindros resorte de nitrógeno
Cilindros com mola ao azoto



WHAT'S NEW

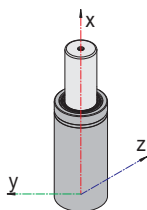
Novità - What's new - Neuigkeit - Novité - Novedad - Novidade



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RV series	New series	Pg. 22 - 31
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CERTIFICATIONS



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Comment lire le catalogue - Guía de lectura del catálogo - Como ler o catálogo

Tabella - Table - Tabelle
Tableau - Tabla - Vector

Espulsori a gas - Gas ejectors - Gas-ejektoren -
Èjecteurs de gaz - Eyectores de gas - Ejectores a gás

Mini cilindri - Mini cylinders - Minizylinder - Mini-ressorts - Mini cilindros - Mini-cilindros

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung -
Hauteur minimum, force maximum - Mínima altura, máxima fuerza - Altura mínima, força máxima

Minima altezza, massima forza, collegabili G1/8 - miniature height, maximum force, hose cylinders with G1/8 charging port - minimale höhe,
maximale leistung, zylinder mit G1/8 öffnung verbunden - hauteur minimum, force maximum, cylindres raccordés avec trou G1/8 gaz - míni-
ma altura, máxima fuerza, cilindros conectados con agujero G1/8 gas - altura mínima, força máxima, cilindros conectados com furo G1/8 gás

Minima altezza, massima forza - Miniature height, maximum force - Minimale höhe, maximale leistungshauteur -
Hauteur minimum, force maximum - mínima altura, máxima fuerza - altura mínima, força máxima

Minimo incremento di pressione - Low pressure increase - Minimale druckerhöhung -
Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão

Forze ISO, altezza ridotta - ISO forces, low profile - ISO kräfte, verminderung der höhe -
ISO forces, hauteur réduite - ISO fuerzas, altura reducida - ISO potência, altura reduzida

ISO 11901 standard - ISO 11901 standard - ISO 11901 standard -
Conforme ISO 11901 - ISO 11901 standard - Norma ISO 11901

ISO standard, forza potenziata - ISO standard, high force - standard ISO, erhöhte leistung -
standard ISO, force majorée - ISO standard, fuerza potenciada - norma ISO, força permitida

Forza iniziale nulla - Zero force on contact - Ausgangsleistung null -
Force initiale nulle - Fuerza inicial cero - Força inicial nula

Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale leistung, kolbenstange force - Maximum, tige étanche -
Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale leistung, kolbendichtung -
Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale leistung, kolbendichtung -
Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo

Easy manifold
Manifold System

Cilindri a ritorno controllato - Cylinders with controlled return - Zylinder mit kontrolliertem Rücklauf -
Cylindres a retour controle - Cilindros de retorno controlado. - Cilindros retorno controlado

Fissaggi - Fixings - Befestigungen - Fixé - Bridas - Fixação

Cilindri collegati a sistema - hosed system - an das system angeschlossene zylinder -
Ressorts gaz reliés - sistemas de cilindros conectados - cilindros ligados em sistema

Accessori - Accesories - Zubehörteile - Accessoires - Accesorios - Acessórios

Vantaggi - Benefits - Vorteile - Advantages - Ventajas - Vantagens

Informazioni generali - General information - Allgemeine informationen -
Information générales - Información general - Informações gerais

Life Plus concept SKUDO PATENT PENDING



UNMATCHED RELIABILITY

SKUDO

case history

NOSKUDO

Performance

**>1.000.000 strokes
and still working**

Model: HR 2400 - 125 AN

Quantity: 4 pcs

Working stroke: 120 mm

Stroke per minute: 27

Performance

**40 - 80.000 strokes
only!**

I

Vantaggi

- MASSIMA protezione del cilindro da contaminanti liquidi e solidi.
- Tenute e guide protette.
- Sovrapressione eliminata.
- Stop a liquidi dannosi.
- Costi di stampaggio ridotti.
- Value for money.

GB

Benefits

- SUPERLATIVE cylinder protection against contaminants solid and liquid.
- Seals and guides protected.
- Overpressure eliminated.
- Stop to corrosive liquids.
- Saving of stamping costs.
- Value for money.

D

Vorteile

- MAXIMALER Schutz des Zylinders vor verunreinigenden Flüssigkeiten und Festkörpern.
- Geschützte Dichtungen und Führungen.
- Eliminierung des Überdrucks.
- Stop für schädliche Flüssigkeiten.
- Reduzierte Druckkosten.
- Value for money.

F

Advantages

- LA PLUS GRANDE protection du cylindre contre les contaminants liquides et solides.
- Etanchéités et glissières protégées.
- Surpression éliminée.
- Stop aux liquides nocifs.
- Coûts d'étampage réduits.
- Value for money.

E

Ventajas

- MÁXIMA protección del cilindro contra contaminantes líquidos y sólidos.
- Hermeticidad y guías protegidas.
- Sobrepresión eliminada.
- Stop a líquidos dañinos.
- Costes de moldeo reducidos.
- Value for money.

P

Vantagens

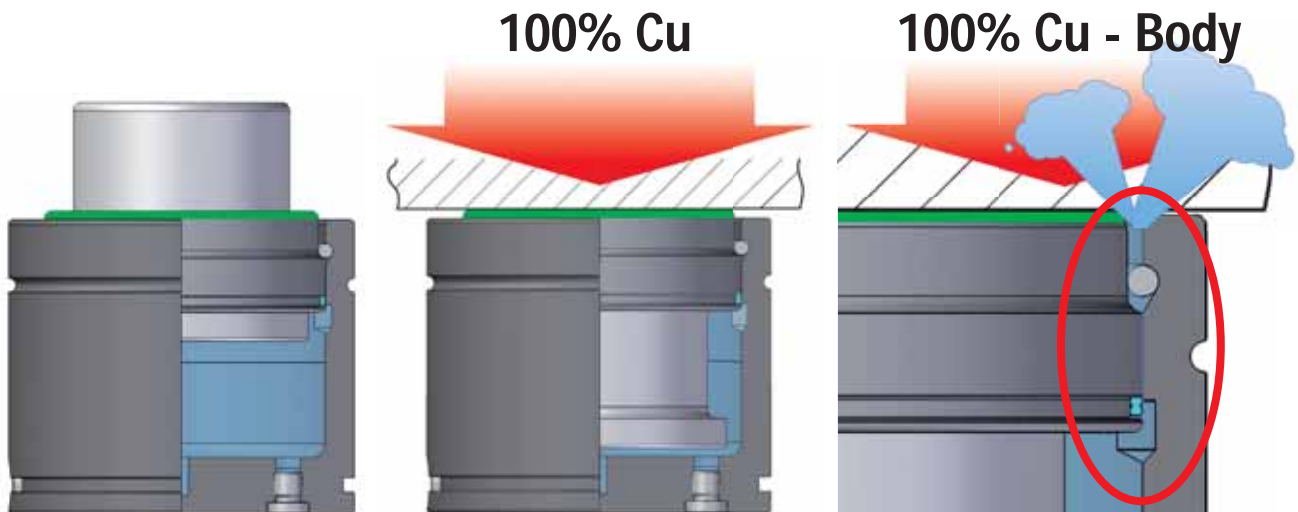
- MÁXIMA proteção do cilindro contra contaminadores líquidos e sólidos.
- Vedações e guias protegidas.
- Sobrepresão eliminada.
- Stop de líquidos danificadores.
- Custos de estampagem reduzidos.
- Value for money.

Oltre corsa - Over stroke - Überhub - Outre-course - Ultra carrera - Além curso

O
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- I** **Vantaggi**
Presenza esclusiva di SICUREZZA ATTIVA OLTRE CORSA per scaricare la pressione SEMPRE PRIMA della collisione con il corpo del cilindro in caso di superamento della corsa nominale massima.
- GB** **Benefits**
Exclusive built-in OVER STROKE ACTIVE SAFETY for discharging pressure completely ALWAYS BEFORE any impact to the body when the nominal stroke is overtaken.
- D** **Vorteile**
Vorhandensein einer AKTIVEN ÜBERHUBSICHERUNG, um den Druck IMMER VOR der Kollision mit dem Zylinderkörper abzubauen, falls der maximale Nominalhub überschritten wird.
- F** **Advantages**
Présence exclusive de SECURITE ACTIVE OUTRE-COURSE pour décharger la pression TOUJOURS AVANT la collision avec le corps du cylindre.
- E** **Ventajas**
Presencia exclusiva de la SEGURIDAD ACTIVA DE FIN DE CARRERA para descargar la presión SIEMPRE ANTES de la colisión con el cuerpo del cilindro en caso de superar la carrera nominal máxima.
- P** **Vantagens**
Presença exclusiva de SEGURANÇA ATIVA MECÂNICA para descarregar a pressão SEMPRE ANTES da colisão com o corpo do cilindro.

Rod seal cylinders



- I** Se attivata la sicurezza oltre-corsa il cilindro si presenterà scarico. Verificare se il corpo del cilindro presenta qualsiasi tipo di danno quindi, SOLO nel caso di totale assenza di danni, ricaricare il cilindro. Prima di riposizionare il cilindro rimuovere le cause dell'extra-corsa dallo stampo. Se il corpo del cilindro presenta danni, anche lievi, verificare che sia completamente scarico e SEMPRE SOSTITUIRLO con un cilindro nuovo.
- GB** If activated the over stroke safety devices the cylinder will be exhausted. Check always if the body of the cylinder is damaged and ONLY in case of total absence of damages the cylinder can be recharged. Before the reinstallation of the cylinder in the die, remove the cause of the over-stroke from the die. If the cylinder shows even a little damage verify it is completely exhausted and then replace it with a new one ALWAYS.
- D** Ist die Überhub-Sicherung aktiviert, so ist die Gasdruckfeder entladen. Prüfen, ob der Zylinderkörper einen Schaden aufweist und NUR wenn er in Ordnung ist neu befüllen. Vor dem erneuten Einbau der Gasdruckfeder die Ursachen des Überhubs im Werkzeug abstellen. Wenn die Gasdruckfeder auch nur leicht beschädigt ist, prüfen ob sie komplett entladen ist und sie IMMER mit einer neuen Gasdruckfeder AUSTAUSCHEN.
- F** Il convient de toujours vérifier que le fond du vérin n'est pas abîmé ; car le ressort gaz ne pourra être rechargé qu'en cas de parfait état du corps de vérin. Avant de remonter le ressort gaz dans l'outil, il convient de solutionner le problème ayant provoqué le dépassement de course. Si le ressort gaz présente le moindre endommagement, vérifier qu'il soit complètement déchargé et TOUJOURS le remplacer par un ressort gaz neuf.
- E** En caso de activarse el dispositivo de seguridad de fin de carrera el cilindro se descargará. Comprobar si el cuerpo del cilindro presenta algún tipo de daño, y recargarlo SOLO en el caso de que no se aprecie ningún daño. Antes de reposicionar el cilindro verificar y eliminar del troquel la causa de que el cilindro haya hecho tope. Si el cuerpo del cilindro presenta daños, incluso leves, verificar que esté totalmente descargado y SUSTITUIR SIEMPRE por uno nuevo.
- P** Se activado o curso de segurança, o cilindro apresenta-se descarregado. Verificar se o corpo do cilindro apresenta qualquer dano, SÓ no caso de total ausência de danos, regacarrregar o cilindro. Antes de voltar a posicionar o cilindro remover as causas originarias do extra-curso da Ferramenta. Se o corpo do cilindro apresentar danos, mesmo que leves, verificar se está completamente descarregado. Proceder com a substituição o cilindro.

Life Plus concept SAFETY PATENT PENDING



Oltre corsa - Over stroke - Überhub - Outre-course - Ultra carrera - Além curso

S
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Piston seal cylinders

I Vantaggi

Presenza esclusiva di SICUREZZA ATTIVA OLTRE CORSA per scaricare la pressione SEMPRE PRIMA della collisione con il corpo del cilindro in caso di superamento della corsa nominale massima.

GB Benefits

Exclusive built-in OVER STROKE ACTIVE SAFETY for discharging pressure completely ALWAYS BEFORE any impact to the body when the nominal stroke is overtaken.

D Vorteile

Vorhandensein einer AKTIVEN ÜBERHUBSICHERUNG, um den Druck IMMER VOR der Kollision mit dem Zylinderkörper abzubauen, falls der maximale Nominalhub überschritten wird.

F Avantages

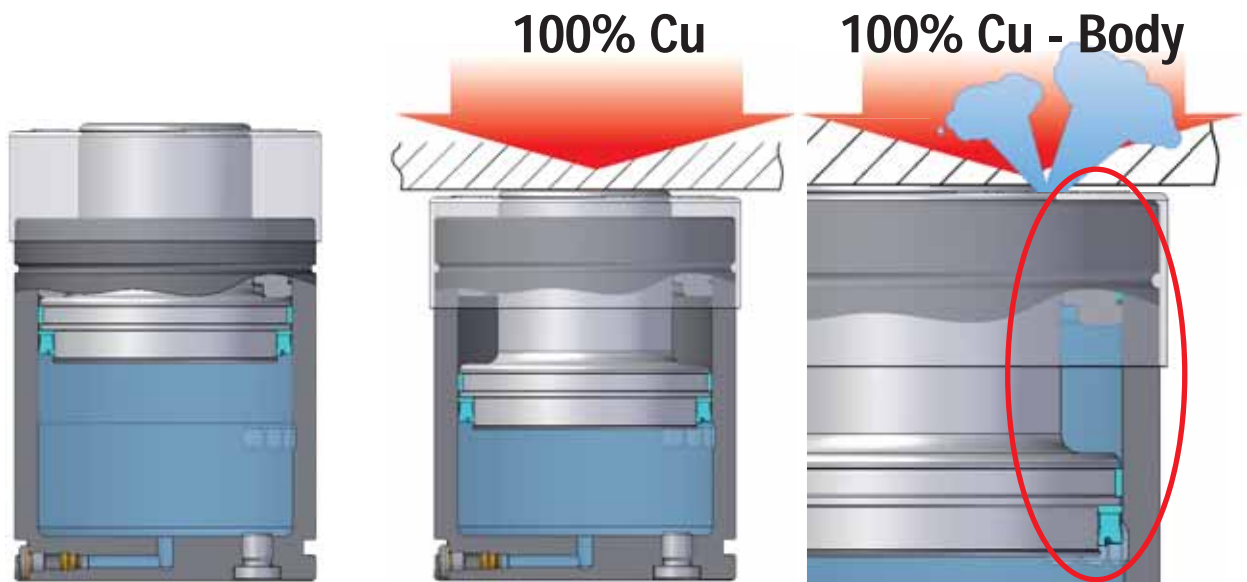
Système exclusif de sécurité : limitation de course avec déchargement de la pression en cas de dépassement de la course nominale.

E Ventajas

Presencia exclusiva de la SEGURIDAD ACTIVA DE FIN DE CARRERA para descargar la presión SIEMPRE ANTES de la colisión con el cuerpo del cilindro en caso de superar la carrera nominal máxima.

P Vantagens

Presença exclusiva de SEGURANÇA ATIVA MECÂNICA para descarregar a pressão SEMPRE ANTES da colisão com o corpo do cilindro.



I Se attivata la sicurezza oltre-corsa il cilindro si presenterà scarico. Verificare se il corpo del cilindro presenta qualsiasi tipo di danno quindi, SOLO nel caso di totale assenza di danni, ricaricare il cilindro. Prima di riposizionare il cilindro rimuovere le cause dell'extra-corsa dallo stampo. Se il corpo del cilindro presenta danni, anche lievi, verificare che sia completamente scarico e SEMPRE SOSTITUIRLO con un cilindro nuovo.

GB If activated the over stroke safety devices the cylinder will be exhausted. Check always if the body of the cylinder is damaged and ONLY in case of total absence of damages the cylinder can be recharged. Before the reinstallation of the cylinder in the die, remove the cause of the over-stroke from the die. If the cylinder shows even a little damage verify it is completely exhausted and then replace it with a new one ALWAYS.

D Ist die Überhub-Sicherung aktiviert, so ist die Gasdruckfeder entladen. Prüfen, ob der Zylinderkörper einen Schaden aufweist und NUR wenn er in Ordnung ist neu befüllen. Vor dem erneuten Einbau der Gasdruckfeder die Ursachen des Überhubs im Werkzeug abstellen. Wenn die Gasdruckfeder auch nur leicht beschädigt ist, prüfen ob sie komplett entladen ist und sie IMMER mit einer neuen Gasdruckfeder AUSTAUSCHEN.

F Il convient de toujours vérifier que le fond du vérin n'est pas abîmé ; car le ressort gaz ne pourra être rechargé qu'en cas de parfait état du corps de vérin. Avant de remonter le ressort gaz dans l'outil, il convient de solutionner le problème ayant provoqué le dépassement de course. Si le ressort gaz présente le moindre endommagement, vérifier qu'il soit complètement déchargé et TOUJOURS le remplacer par un ressort gaz neuf.

E En caso de activarse el dispositivo de seguridad de fin de carrera el cilindro se descargará. Comprobar si el cuerpo del cilindro presenta algún tipo de daño, y recargarlo SOLO en el caso de que no se aprecie ningún daño. Antes de reposicionar el cilindro verificar y eliminar del troquel la causa de que el cilindro haya hecho tope. Si el cuerpo del cilindro presenta daños, incluso leves, verificar que esté totalmente descargado y SUSTITUIR SIEMPRE por uno nuevo.

P Se activado o curso de segurança, o cilindro apresenta-se descarregado. Verificar se o corpo do cilindro apresenta qualquer dano, SÓ no caso de total ausência de danos, regacarregar o cilindro. Antes de voltar a posicionar o cilindro remover as causas originárias do extra-curso da Ferramenta. Se o corpo do cilindro apresentar danos, mesmo que leves, verificar se está completamente descarregado. Proceder com a substituição o cilindro.

Oltre pressione - Over pressure - Überdruck - Outre-pression - Ultra presión - Sobrepressão

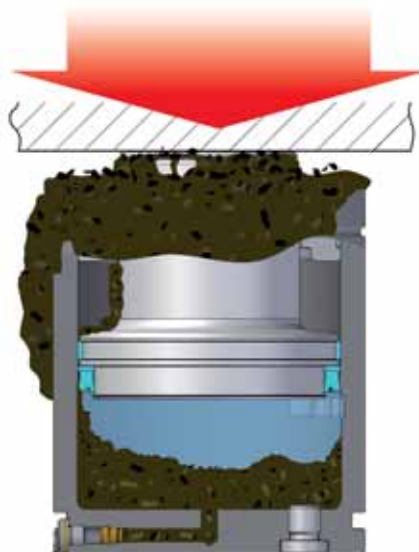
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- I** **Vantaggi**
Presenza esclusiva di SICUREZZA ATTIVA OLTRE PRESSIONE per scaricare la pressione interna quando superato il valore massimo definito da Special Springs.
- GB** **Benefits**
Exclusive built-in OVER PRESSURE ACTIVE SAFETY for discharging pressure completely when it exceeds the maximum allowed value as fixed by Special Springs.
- D** **Vorteile**
Exklusive AKTIVE ÜBERDRUCK-SICHERHEITSVORRICHTUNG, um den Innendruck abzulassen, wenn der von Special Springs festgelegte Höchstwert überschritten wird.
- F** **Advantages**
Présence exclusive de SECURITE ACTIVE OUTRE-PRESSION pour décharger la pression intérieure quand la valeur maximum établie par Special Springs est dépassée.
- E** **Ventajas**
Presencia exclusiva de SEGURIDAD ACTIVA ULTRA PRESIÓN para descargar la presión interna cuando se supera el valor máximo definido por Special Springs.
- P** **Vantagens**
Presença exclusiva de SEGURANÇA ATIVA SOBREPRESSÃO para descarregar a pressão interna quando for superado o valor máximo definido por Special Springs.

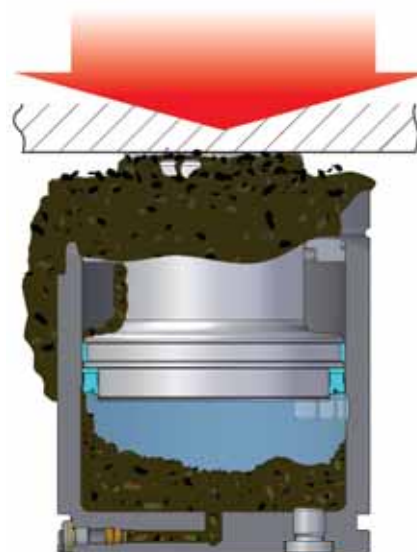
SKUDO



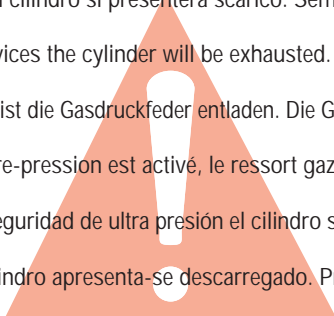
NO SKUDO



NO SKUDO



- I** Se attivata la sicurezza oltre pressione il cilindro si presenterà scarico. Sempre procedere con la sostituzione del cilindro.
- GB** If activated the over pressure safety devices the cylinder will be exhausted. Always replace it with a new one.
- D** Ist die Überdruck-Sicherung aktiviert, so ist die Gasdruckfeder entladen. Die Gasdruckfeder immer mit einer Neuen AUSTAUSCHEN.
- F** Lorsque le dispositif de sécurité de outre-pression est activé, le ressort gaz se décharge.
- E** En caso de activarse el dispositivo de seguridad de ultra presión el cilindro se descargará. Sustituir siempre por uno nuevo.
- P** Se activado o curso de segurança, o cilindro apresenta-se descarregado. Proceder com a substituição o cilindro.



Life Plus concept DESIGN - LIFE DURABILITY

I Vantaggi

- ESCLUSIVO ed INNOVATIVO DESIGN MONOLITICO di tutti i componenti meccanici con assenza di parti saldate e filettate.
- Resistenza A FATICA ILLIMITATA per i cilindri Special Springs con un minimo di 2.000.000 di cicli*.
- Calcoli strutturali secondo codici FKM, norma EN 13445 e complete analisi FEM.
- La progettazione e la produzione dei cilindri Special Springs sono eseguite in accordo alla Direttiva Europea PED 97/23/EC.
- La resistenza strutturale di ogni componente è validata da estensive prove a fatica accelerata.

GB Benefits

- EXCLUSIVE and INNOVATIVE MONOLITHIC DESIGN of all mechanical components and absence of welded and threaded parts.
- UNLIMITED FATIGUE DURABILITY is guaranteed for the Special Springs' cylinders with a minimum of 2.000.000 strokes*.
- All structural calculations have been made according to FKM codes, EN 13445 norm and complete FEM analysis.
- Design and production of Special Springs' cylinders are made according to the European Directive PED 97/23/EC.
- Extensive and accelerate fatigue tests on the structure of each components have validated the projects.

D Vorteile

- EXKLUSIVES und INNOVATIVES MONOLITHISCHES DESIGN aller mechanischen Komponenten, ohne geschweißte und verschraubte Teile.
- UNBEGRENZTER ERMÜDUNGSWIDERSTAND der Special Springs Gasdruckfedern mit einem Minimum von 2.000.000 Zyklen*.
- Strukturberechnungen gemäß der FKM-Norm, der Norm EN 13445 und komplette FEM-Analysen.
- Die Konstruktion und Herstellung der Gasdruckfedern Special Springs erfolgt in Übereinstimmung mit der europäischen Richtlinie PED 97/23/EC. - Die Strukturbeständigkeit aller Komponenten ist durch extensive beschleunigte Ermüdungsprüfungen nachgewiesen.

F Advantages

- CONSTRUCTION MONOBLOC de tous les composants mécaniques; absence de pièces soudées ou filetées.
- DUREE DE VIE ILLIMITEE : 2.000.000 courses minimum garanties à température ambiante*.
- Tous les calculs de structure ont été réalisés selon les codes FKM, la norme EN 13445 et les analyses complètes FEM.
- Les ressorts gaz Special Springs sont conçus et produits selon la norme européenne PED 97/23/EC.
- Cette gamme a été définitivement validée par des tests de fatigue exhaustifs et réalisés en accéléré au niveau de la structure.

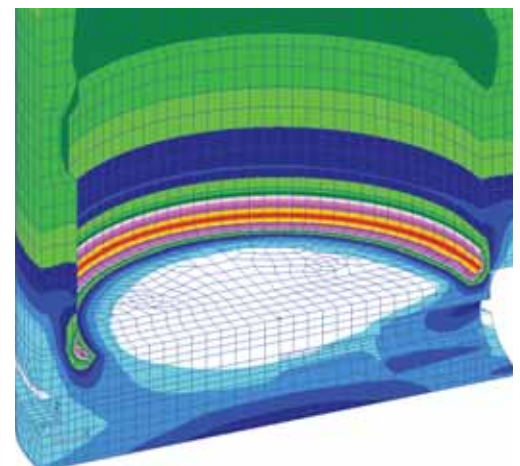
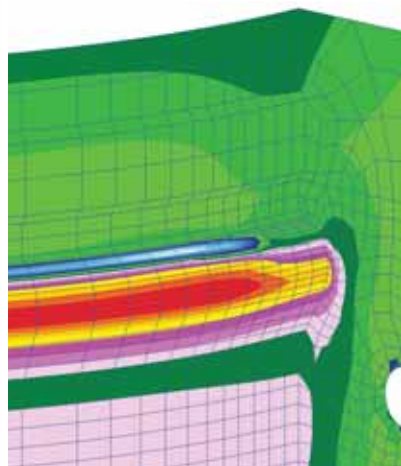
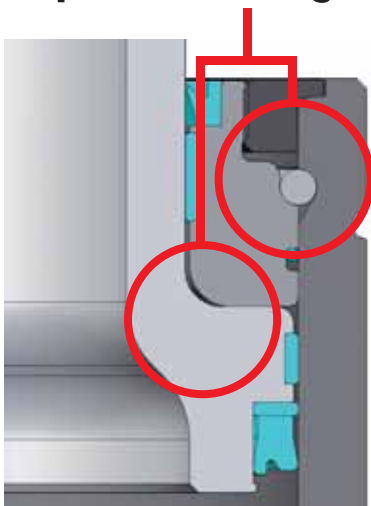
E Ventajas

- EXCLUSIVO E INNOVADOR DISEÑO MONOLÍTICO de todos los componentes mecánicos con ausencia de partes soldadas y roscadas.
- RESISTENCIA ILIMITADA A LA FATIGA en los cilindros Special Springs con un mínimo de 2.000.000 de ciclos.
- Cálculos estructurales según códigos FKM, norma EN 13445 y análisis completo FEM.
- La proyección y producción de los cilindros Special Springs se realizan de acuerdo a la Directiva Europea PED 97/23/EC.
- La resistencia estructural de cada componente está controlada con intensas pruebas de fatiga acelerada.

P Vantagens

- DESIGN MONO-BLOCO EXCLUSIVO e INNOVADOR.
- Resistência ILIMITADA.
- Cálculos estruturais conforme códigos FKM, norma EN 13445 e análises completas FEM.
- Projeto validado por exhaustivos testes a resistência estrutural de cada componente.

Long life improved design



FKM - FEM

Come leggere il catalogo - How to read the catalog - Hinweise zur katalogbenutzung
 Comment lire le catalogue - Guía de lectura del catálogo - Como ler o catálogo

- 1** Modello
Model
Modèle
Modelo
- 2** Pressione max di caricamento
Max charging pressure
Maximaler Ladedruck
Pression de chargement maximum
Pressão máxima de carga
- 3** Pressione min. di caricamento
Min charging pressure
Minimaler Ladedruck
Pression de chargement minimum
Pressão mínima de carga
- 4** Area di tenuta stelo/pistone
Rod/piston seal area
Dichtungsbereich Kolbenstange/Kolben
Zone d'étanchéité tige/piston
Area de estanqueidad vástago/pistón
Area de estanqueidade do embolo/pistão
- 5** Temperatura di esercizio
Working temperature
Betriebstemperatur
Température de fonctionnement
Temperatura de funcionamiento
- 6** Gas di caricamento
Pressure medium
Druckgas
Gaz de chargement
Gas de carga
Gas de carga
- 7** Direttiva 97/23/EC + Standard
Directive 97/23/EC + Standard
97/23/EC-Richtlinie + Standard
Directive 97/23/EC + Standard
Directiva 97/23/EC + Standard
- 8** Codice
Code
Bestell-Nummer
Référence
Código
Codigo
- 9** Forza iniziale a 20°C
Initial force at 20°C
Ausgangsleistung bei 20°C
Force initiale a 20°C
Força inicial a 20°C
- 10** Volume iniziale
Initial gas volume
Ausgangswert Gasvolumen
Volume initial de gaz
Volume de gaz initial
Volume de gaz initial
- 11** Codice cilindri collegabili e standard di collegamento
Connectable cylinders code and connection standard
Code der anschließbaren Zylinder und Anschlussstandard
Code cylindres raccordables et raccordement standard
Codigo cilindros conectables y estándar de conexión
Códigos dos cilindros acopláveis e standards de ligação
- 12** Diagramma di forza in funzione della corsa
Force increase by stroke
Kraftdiagramm Hub
Diagramme de la force en fonction de la course
Diagrama de fuerza en función del recorrido
Diagrama em função do curso
- 13** Indicazione di durata min. e cadenza max. consigliata
Min. estimated life and max. recommended speed
Empfohlene Mindestdauer und max. Hube maximum conseillé
Indicación de duración min. y cadencia máx. aconsejada
Indicação de duração mínima e cadência máxima aconselhadas
- 14** Fissaggi
Fixings
Befestigungen
Fixe
Bridas
Fixação

Tutte le dimensioni senza tolleranza si intendono nominali.
 All dimensions are nominal unless tolerance is stated.
 Alle Messungen ohne Toleranzen sind Nennmaße.
 Sauf specifications de tolérances, toutes les dimensions sont des valeurs nominales.
 Todas las dimensiones son nominales excepto cuando se indica la tolerancia.
 Todas as medidas são nominais excepto quando a tolerância é mencionada.

EXAMPLE PAGE

SC 1500

ISO 1901
VDI 3003
CINOMO E2454815N #7721E

ISO 11901 Standard - ISO 11901 Standard - ISO 11901 Standard - Norma ISO 11901

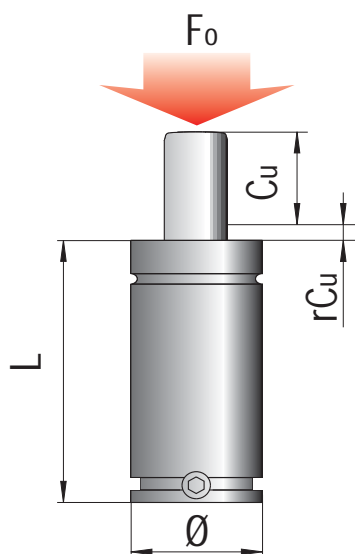
ORDER (10) SC 1500-050-B

Code	Cu	L	L min	P max	P min	S	Max. Speed	8	9	10	11
	mm	mm	mm	bar	bar	Drop-In	m/s	°F	at 150 bar/±20 °C	Vo	connecting hole M6
				217,5 psi	230 psi	FB 75 - FBA 75 - FSA 75	1,8	32	daN (±5%)	cm ³	Micro hose
SC 1500-025-B	25	160	135	1530	151	SC 1500-025-B-N		76	1530	151	SC 1500-025-B-N
SC 1500-038-B	38	186	148	1530	194	SC 1500-038-B-N		80	1530	194	SC 1500-038-B-N
SC 1500-050-B	50	210	160	1530	233	SC 1500-050-B-N		80	1530	233	SC 1500-050-B-N
SC 1500-063-B	63	237	173,5	1530	278	SC 1500-063-B-N		80	1530	278	SC 1500-063-B-N
SC 1500-080-B	80	270	190	1530	333	SC 1500-080-B-N		80	1530	333	SC 1500-080-B-N
SC 1500-100-B	100	310	210	1530	400	SC 1500-100-B-N		80	1530	400	SC 1500-100-B-N
SC 1500-125-B	125	360	235	1530	483	SC 1500-125-B-N		80	1530	483	SC 1500-125-B-N
SC 1500-160-B	160	430	270	1530	599	SC 1500-160-B-N		80	1530	599	SC 1500-160-B-N
SC 1500-200-B	200	510	310	1530	731	SC 1500-200-B-N		80	1530	731	SC 1500-200-B-N
SC 1500-250-B	250	610	360	1530	897	SC 1500-250-B-N		80	1530	897	SC 1500-250-B-N
SC 1500-300-B	300	710	410	1530	1063	SC 1500-300-B-N		80	1530	1063	SC 1500-300-B-N


Special Springs 9-4

Info pg. 187

SELECTION TAB



Body Ø mm	Model	initial force Fo daN	Cu mm	rCu mm	L mm	SKUDO	OSAS	OPAS
M 16 x 1,5	NE 16	2,8 - 42	10 - 100	-	80 - 260	-	-	-
19	M 90	5 - 90	7 - 125	1	56 - 295	-	-	✓
M24 x 1,5	NE 24	11 - 170	10 - 100	-	80 - 260	-	-	-
M24 x 1,5	M 90 TBM	5 - 90	7 - 125	-	56 - 295	-	-	✓
M24 x 1,5	M 90 TEM	5 - 90	7 - 125	-	56 - 295	-	-	✓
1" - 8 THD	M 90 TBI	5 - 90	7 - 125	-	56 - 295	-	-	✓
25	M 200	17 - 200	7 - 125	1	56 - 295	-	-	✓
25	HR 200	200	5 - 32	1	40 - 94	-	-	-
25	ML 300	310	10 - 80	2	75 - 220	-	-	-
25	KE 400	425	10 - 50	1	70 - 195	✓	-	-
32	SC 150	170	10 - 125	2	70 - 300	-	-	-
32	H 300	300	10 - 125	2	70 - 300	-	-	-
32	HR 300	300	5 - 125	1	40 - 280	-	-	-
32	RV 350	360	10 - 125	2	50 - 155	-	✓	-
32	ML 500	510	10 - 80	2	75 - 225	-	-	-
32	KE 750	740	10 - 50	1	75 - 195	✓	-	-
38	SC 250	260	10 - 125	2	70 - 300	-	-	-
38	H 500	470	10 - 125	2	70 - 300	-	-	-
38	HR 500	470	5 - 125	1	40 - 280	-	-	-
38	RV 500	470	10 - 125	2	50 - 280	-	✓	-
38	ML 1000	980	10 - 80	2	75 - 240	-	-	✓
38	KE 1000	1060	6 - 50	1	61 - 230	✓	✓	-
M 38 x 1,5	SCF 250	260	10 - 125	2	70 - 300	-	-	-
M 38 x 1,5	HF 500	470	10 - 125	2	70 - 300	-	-	-
M 38 x 1,5	HRF 500	470	5 - 125	1	40 - 280	-	-	-
45	LI 400	400	13 - 100	1	58 - 232	-	-	-
45	S 500	470	6 - 125	2	62 - 300	-	-	-
45	SC 500	470	13 - 160	2	110,4 - 405	-	-	-
45	H 700	680	13 - 160	2	110,4 - 405	-	-	-
45	HR 700	680	10 - 125	1	52 - 282	-	-	-
45	RV 750	740	13 - 125	2	52 - 282	-	✓	-
45	RF 750	740	10 - 125	2	62 - 292	-	✓	-
M45 X 1,5	SCF 500	470	13 - 160	2	110,4 - 405	-	-	-
M45 X 1,5	HF 700	680	13 - 160	2	110,4 - 405	-	-	-
M45 X 1,5	HRF 700	680	10 - 160	1	52 - 282	-	-	-

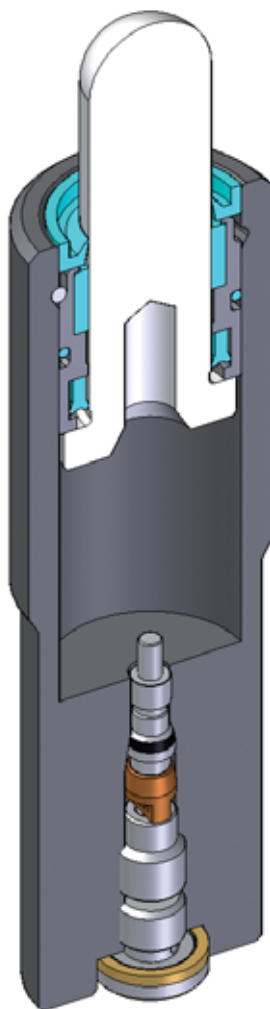
Body Ø mm	Model	initial force Fo daN	Cu mm	rCu mm	L mm			
						SKUDO	OSAS	OPAS
50	SC 750	740	13 - 300	3	120,4 - 695	-	-	-
50	S 750	740	6 - 125	3	62 - 300	-	-	-
50	RV 1000	920	13 - 125	3	64 - 288	-	✓	-
50	RF 1000	920	13 - 125	3	74 - 298	-	✓	-
50	H 1000	1060	13 - 300	3	120,4 - 695	-	-	-
50	HR 1000	1060	10 - 125	1	58 - 288	-	-	-
50	KE 1800	1885	6 - 50	1	66 - 220	✓	✓	✓
50	ML 1800	1925	15 - 80	3	95 - 245	-	-	✓
M50 X 1,5	SCF 750	740	13 - 300	3	120,4 - 695	-	-	-
M50 X 1,5	HF 1000	1060	13 - 300	3	120,4 - 695	-	-	-
63	LI 900	900	25 - 125	1	94 - 294	-	-	-
63	RV 1500	1530	13 - 125	3	70 - 294	-	✓	-
63	RF 1500	1530	13 - 125	3	80 - 304	-	✓	-
63	HR 1500	1530	10 - 125	1	64 - 294	-	-	-
63	KE 3000	2945	10 - 50	1	85 - 205	✓	✓	✓
75	LI 1400	1410	25 - 125	1	95 - 295	-	-	-
75	SC 1500	1530	25 - 300	3	160 - 710	-	-	-
75	S 1500	1530	25 - 100	3	110 - 260	-	-	✓
75	LS 1500	1590	25 - 300	3	160 - 710	-	-	-
75	H 2400	2385	25 - 300	3	160 - 710	-	-	-
75	LS 2400	2385	25 - 300	3	160 - 710	-	-	-
75	HR 2400	2385	10 - 125	1	65 - 295	-	-	-
75	RV 2400	2385	16 - 125	3	77 - 295	-	✓	✓
75	RF 2400	2385	16 - 125	3	87 - 305	-	✓	✓
75	KE 4700	4675	10 - 50	1	80 - 240	✓	✓	✓
75	ML 4700	4925	15 - 80	3	100 - 250	-	-	✓
95	LI 2000	2035	25 - 125	1	115 - 315	-	-	-
95	S 3000	2945	25 - 100	3	120 - 270	-	-	✓
95	SC 3000	2945	25 - 300	3	170 - 720	-	-	-
95	LS 3000	2830	25 - 300	3	170 - 720	-	-	-
95	RV 4200	4240	16 - 125	3	90 - 308	-	✓	✓
95	H 4200	4240	25 - 300	3	170 - 720	-	-	-
95	LS 4200	4240	25 - 300	3	170 - 720	-	-	-
95	HR 4200	4240	16 - 125	1	97 - 315	-	-	-
95	KE 7500	7540	10 - 50	1	90 - 255	✓	✓	✓
95	ML 7500	7700	15 - 80	3	115 - 260	-	-	✓
120	LI 3200	3180	25 - 125	1	125 - 325	-	-	-
120	SC 5000	4980	25 - 300	3	190 - 740	-	-	-
120	H 6600	6630	25 - 300	3	190 - 740	-	-	-
120	HR 6600	6630	16 - 125	1	107 - 325	-	-	-
120	RV 6600	6630	16 - 125	3	100 - 318	-	✓	✓
120	KE 12000	11780	10 - 50	1	90 - 210	✓	✓	✓
120	ML 12000	12720	15 - 80	3	115 - 265	-	-	✓
150	SC 7500	7540	25 - 300	3	205 - 755	-	-	-
150	RV 9500	9540	19 - 125	3	116 - 328	-	✓	✓
150	HR 11800	11780	19 - 125	3	116 - 328	-	-	-
150	KE 18500	18410	10 - 50	1	110 - 270	✓	✓	✓
195	SC 10000	10600	25 - 300	3	210 - 760	-	-	-
195	H 18500	18400	25 - 300	3	210 - 760	-	-	-

NE SERIES




VDI 3004

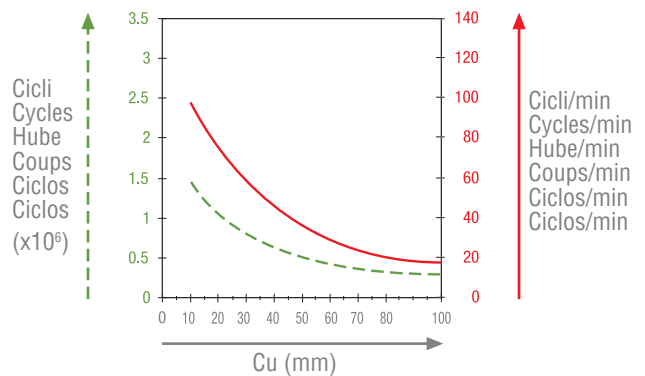
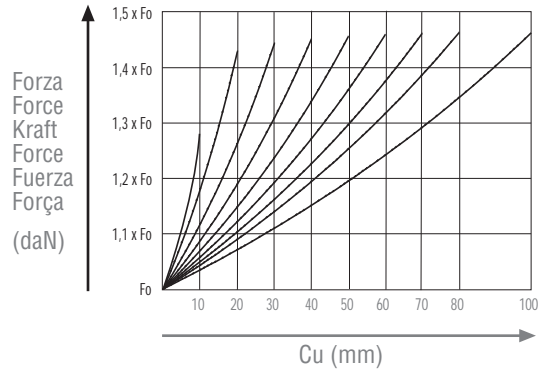
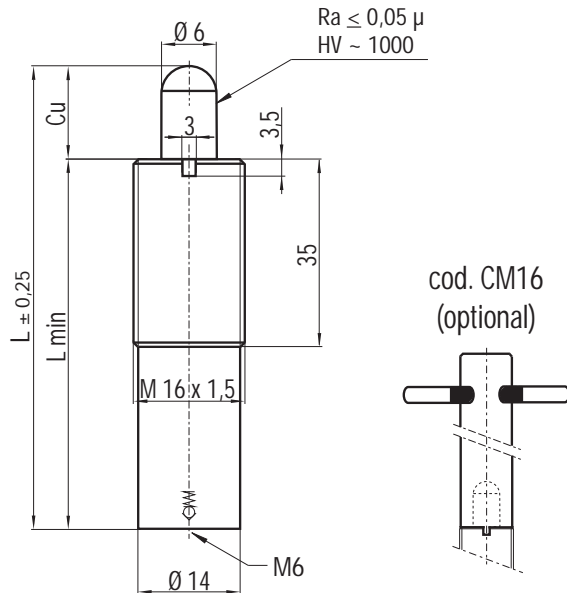
Espulsori a gas - Gas ejectors - Gas-Ejektoren -
Éjecteurs de gaz - Eyectores de gas - Eyectores a gás



Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
NE 16	M 16 x 1,5	10 - 100	2,8 - 42	-	-	-
NE 24	M 24 x 1,5	10 - 100	11 - 170	-	-	-

Espulsori a gas - Gas ejectors - Gas-Ejektoren - Éjecteurs de gaz - Eyectores de gas - Ejectores a gás

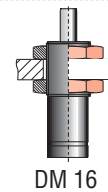


NE



(10) NE16-050-A + Fo required

Fixings



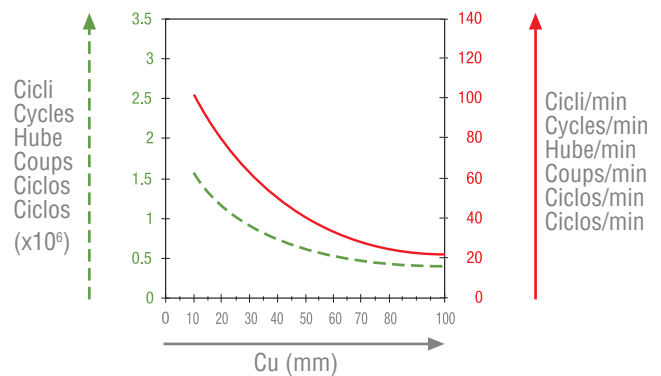
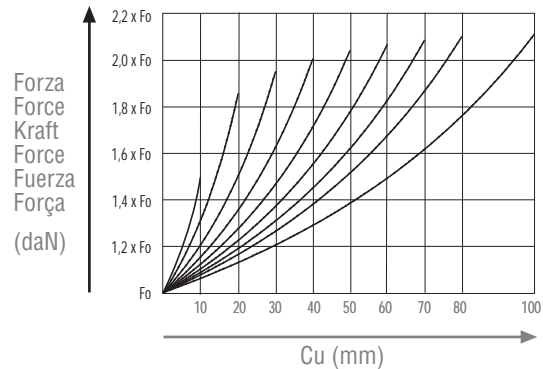
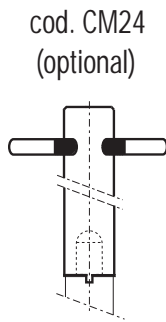
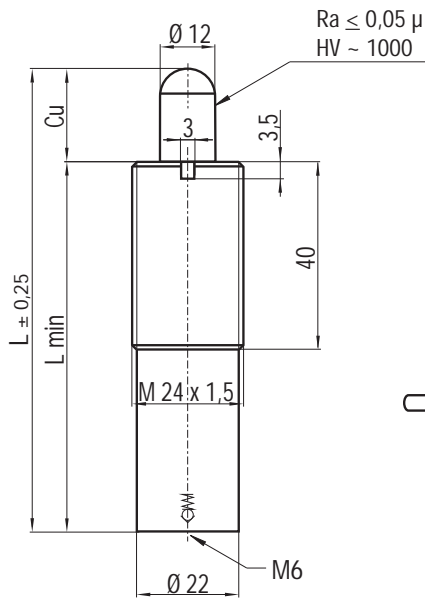
- I** I cilindri filettati NON hanno riserva corsa. Si raccomanda di NON superare il 90% della corsa nominale Cu.
- GB** Threaded cylinders have NO stroke extension. It is recommended NOT to exceed 90% of the nominal stroke Cu.
- D** Die Gewindezylinder haben KEINEN Reservelauf. Es wird empfohlen, 90% des Nennlaufs für Cu nicht zu überschreiten.
- F** Les cylindres filetés N'ONT PAS de réserve de course. Il est recommandé de NE PAS dépasser 90% de la course nominale Cu.
- E** Los cilindros roscados NO tienen reserva de carrera. Es importante NO superar el 90% de la carrera nominal Cu.
- P** Os cilindros rosqueados NÃO possuem reserva de curso. Aconselha-se NÃO ultrapassar os 90% do curso nominal Cu.

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 10 bar 145 psi	S 0,28 cm ²		Maintenance kit -
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Technical specifications

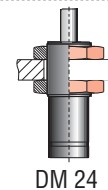
Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
NE 16 - 010 - A	10	80	70		-	-	~0,07
NE 16 - 020 - A	20	100	80		-	-	~0,08
NE 16 - 030 - A	30	120	90		-	-	~0,09
NE 16 - 040 - A	40	140	100	2,8 min.	-	-	~0,09
NE 16 - 050 - A	50	160	110	42 max.	-	-	~0,10
NE 16 - 060 - A	60	180	120		-	-	~0,10
NE 16 - 070 - A	70	200	130		-	-	~0,11
NE 16 - 080 - A	80	220	140		-	-	~0,12
NE 16 - 100 - A	100	260	160		-	-	~0,13

Espulsori a gas - Gas ejectors - Gas-Ejektoren - Éjecteurs de gaz - Eyectores de gas - Ejectores a gás



(10) NE24-050-A + Fo required

Fixings



- I** I cilindri filettati NON hanno riserva corsa. Si raccomanda di NON superare il 90% della corsa nominale Cu.
- GB** Threaded cylinders have NO stroke extension. It is recommended NOT to exceed 90% of the nominal stroke Cu.
- D** Die Gewindezylinder haben KEINEN Reservelauf. Es wird empfohlen, 90% des Nennlaufs für Cu nicht zu überschreiten.
- F** Les cylindres filetés N'ONT PAS de réserve de course. Il est recommandé de NE PAS dépasser 90% de la course nominale Cu.
- E** Los cilindros roscados NO tienen reserva de carrera. Es importante NO superar el 90% de la carrera nominal Cu.
- P** Os cilindros rosqueados NÃO possuem reserva de curso. Aconselha-se NÃO ultrapassar os 90% do curso nominal Cu.

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 10 bar 145 psi	S 1,13 cm ²		Maintenance kit -
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
NE 24 - 010 - A	10	80	70		-	-	~0,18
NE 24 - 020 - A	20	100	80		-	-	~0,20
NE 24 - 030 - A	30	120	90		-	-	~0,22
NE 24 - 040 - A	40	140	100	11 min.	-	-	~0,25
NE 24 - 050 - A	50	160	110	170 max.	-	-	~0,27
NE 24 - 060 - A	60	180	120		-	-	~0,29
NE 24 - 070 - A	70	200	130		-	-	~0,31
NE 24 - 080 - A	80	220	140		-	-	~0,32
NE 24 - 100 - A	100	260	160		-	-	~0,37



NE

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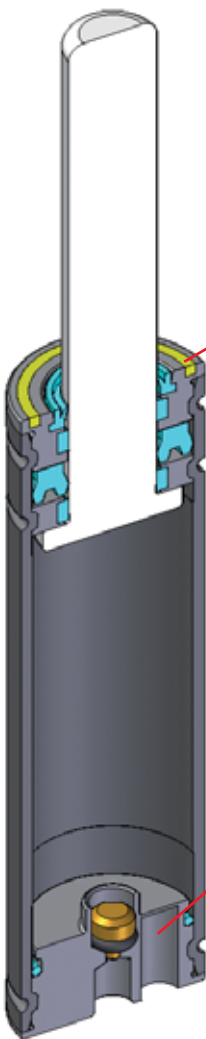
M SERIES



PED
97/23/EC

ISO 11901
VDI 3003

Mini cilindri - Mini cylinders - Minizylinder -
Mini-ressorts - Mini cilindros - Mini-cilindros




Color Code	P bar	Fo +20 °C daN (±5%)
OR	10	5
PR	20	10
GR	60	30
BU	100	50
RD	140	70
YW	180	90
BK	10÷180	5÷90

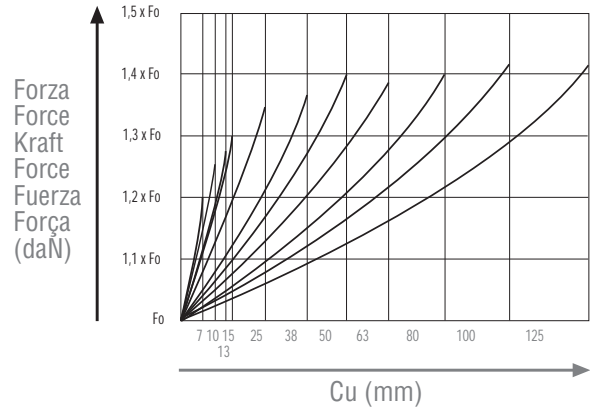
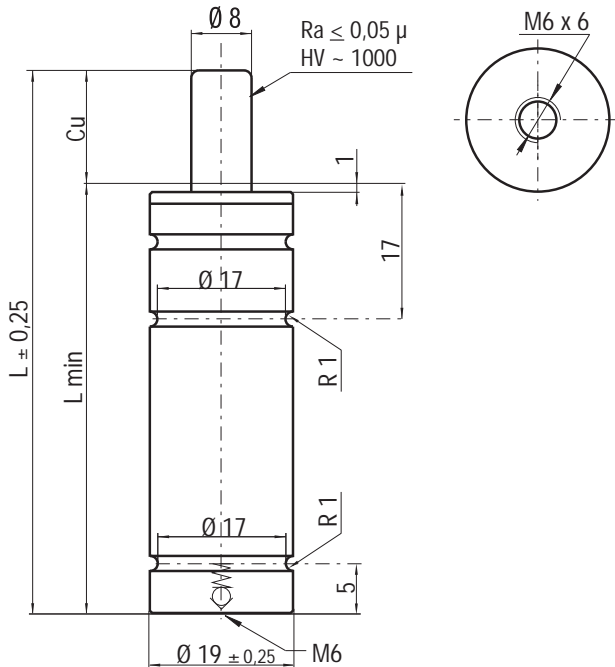
**Over
Pressure
Active
Safety**



Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
M90	19	7 - 125	5 - 90	-	-	✓
M90TBM	M24 x 1,5	7 - 125	5 - 90	-	-	✓
M90TEM	M24 x 1,5	7 - 125	5 - 90	-	-	✓
M90TBI	1"-8 THD	7 - 125	5 - 90	-	-	✓
M200	25	7 - 125	17 - 200	-	-	✓

Mini cilindri - Mini cylinders - Minizylinder -
Mini-ressorts - Mini cilindros - Mini-cilindros



M



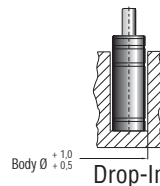
(10) M90-050-A-YW

ORDER

(10) M90-050-A-N-YW



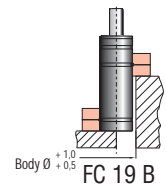
Fixings



Drop-In

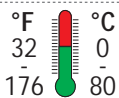


Bottom mount



FC 19 B

Max. Speed
1,8 m/s



P max
180 bar
2610 psi

P min
10 bar
145 psi

S
0,5
cm²



Maintenance kit



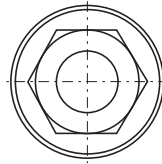
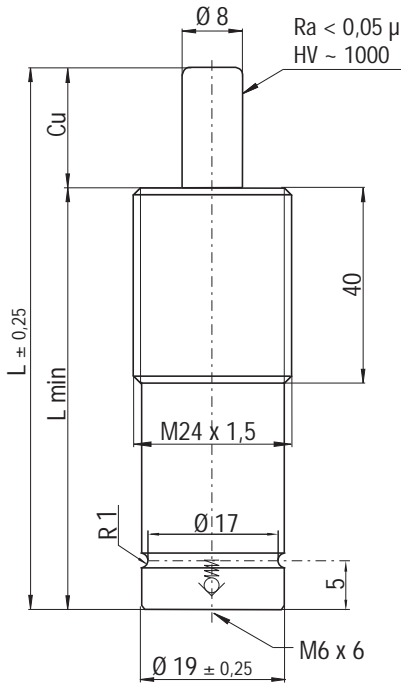
Technical specifications

Code	Cu mm	L mm	Lmin mm	connecting hole M6 Micro hose	Kg	Color Code	P bar	F ₀ +20 °C daN (±5%)
M90 - 007 - A - ...	7	56	49	M90 - 007 - A - N	0,07	OR	10	5
M90 - 010 - A - ...	10	62	52	M90 - 010 - A - N	0,07	PR	20	10
M90 - 013 - A - ...	13	67,4	54,7	M90 - 013 - A - N	0,08	GR	60	30
M90 - 015 - A - ...	15	72	57	M90 - 015 - A - N	0,08	BU	100	50
M90 - 025 - A - ...	25	92	67	M90 - 025 - A - N	0,09	RD	140	70
M90 - 038 - A - ...	38	118	80	M90 - 038 - A - N	0,11	YW	180	90
M90 - 050 - A - ...	50	142	92	M90 - 050 - A - N	0,12	BK	10 - 180	5 - 90
M90 - 063 - A - ...	63	172	109	M90 - 063 - A - N	0,14			
M90 - 080 - A - ...	80	205	125	M90 - 080 - A - N	0,15			
M90 - 100 - A - ...	100	245	145	M90 - 100 - A - N	0,17			
M90 - 125 - A - ...	125	295	170	M90 - 125 - A - N	0,20			

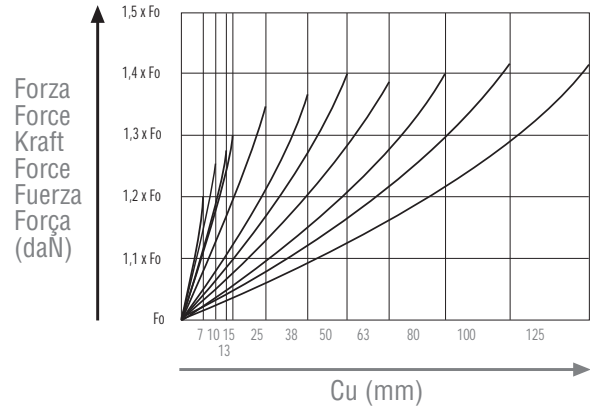
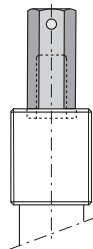
S = rod section area
P = nominal charging pressure
F₀ = nominal initial force

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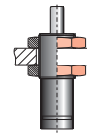
Mini cilindri - Mini cylinders - Minizylinder - Mini-ressorts - Mini cilindros - Mini-cilindros



cod. TBT
(optional)



Fixings



DM 24



(10) M90-050-A-YW-TBM

ORDER (10) M90-050-A-N-YW-TBM



- I** I cilindri filettati NON hanno riserva corsa. Si raccomanda di NON superare il 90% della corsa nominale Cu.
- GB** Threaded cylinders have NO stroke extension. It is recommended NOT to exceed 90% of the nominal stroke Cu.
- D** Die Gewindezylinder haben KEINEN Reservelauf. Es wird empfohlen, 90% des Nennlaufs für Cu nicht zu überschreiten.
- F** Les cylindres filetés N'ONT PAS de réserve de course. Il est recommandé de NE PAS dépasser 90% de la course nominale Cu.
- E** Los cilindros roscados NO tienen reserva de carrera. Es importante NO superar el 90% de la carrera nominal Cu.
- P** Os cilindros rosqueados NÃO possuem reserva de curso. Aconselha-se NÃO ultrapassar os 90% do curso nominal Cu.

Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 180 bar 2610 psi	P min 10 bar 145 psi	S 0,5 cm ²		Maintenance kit -	
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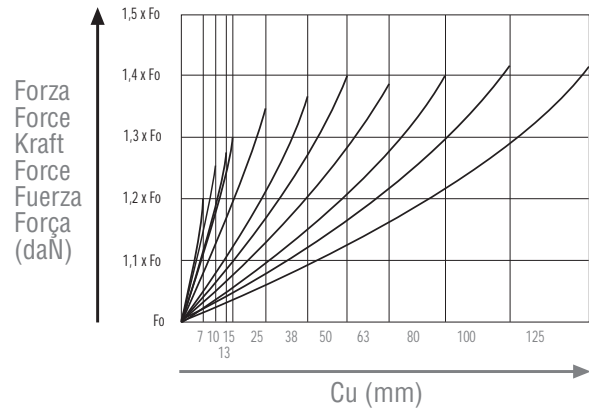
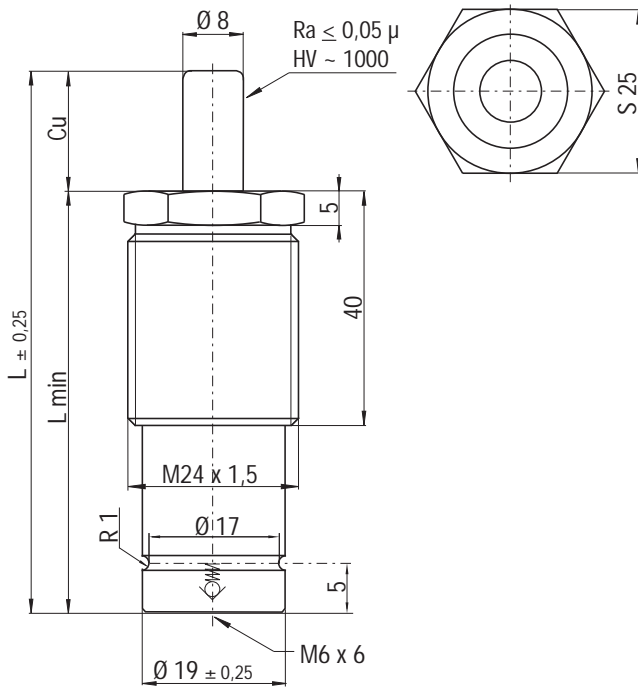
Technical specifications

Code	Cu mm	L mm	Lmin mm	connecting hole M6 Micro hose	Kg	Color Code	P bar	F ₀ +20 °C daN (±5%)
M90 - 007 - A - ...	7	56	49	M90 - 007 - A - N	0,07	OR	10	5
M90 - 010 - A - ...	10	62	52	M90 - 010 - A - N	0,07	PR	20	10
M90 - 013 - A - ...	13	67,4	54,7	M90 - 013 - A - N	0,08	GR	60	30
M90 - 015 - A - ...	15	72	57	M90 - 015 - A - N	0,08	BU	100	50
M90 - 025 - A - ...	25	92	67	M90 - 025 - A - N	0,09	RD	140	70
M90 - 038 - A - ...	38	118	80	M90 - 038 - A - N	0,11	YW	180	90
M90 - 050 - A - ...	50	142	92	M90 - 050 - A - N	0,12	BK	10 - 180	5 - 90
M90 - 063 - A - ...	63	172	109	M90 - 063 - A - N	0,14			
M90 - 080 - A - ...	80	205	125	M90 - 080 - A - N	0,15			
M90 - 100 - A - ...	100	245	145	M90 - 100 - A - N	0,17			
M90 - 125 - A - ...	125	295	170	M90 - 125 - A - N	0,20			

S = rod section area
P = nominal charging pressure
F₀ = nominal initial force

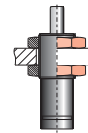
Info pg. 187

Mini cilindri - Mini cylinders - Minizylinder - Mini-ressorts - Mini cilindros - Mini-cilindros



M

Fixings



DM 24



(10) M90-050-A-YW-TEM

ORDER (10) M90-050-A-N-YW-TEM



- I** I cilindri filettati NON hanno riserva corsa. Si raccomanda di NON superare il 90% della corsa nominale Cu.
- GB** Threaded cylinders have NO stroke extension. It is recommended NOT to exceed 90% of the nominal stroke Cu.
- D** Die Gewindezylinder haben KEINEN Reservelauf. Es wird empfohlen, 90% des Nennlaufs für Cu nicht zu überschreiten.
- F** Les cylindres filetés N'ONT PAS de réserve de course. Il est recommandé de NE PAS dépasser 90% de la course nominale Cu.
- E** Los cilindros roscados NO tienen reserva de carrera. Es importante NO superar el 90% de la carrera nominal Cu.
- P** Os cilindros rosqueados NÃO possuem reserva de curso. Aconselha-se NÃO ultrapassar os 90% do curso nominal Cu.

Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 180 bar 2610 psi	P min 10 bar 145 psi	S 0,5 cm ²			Maintenance kit -	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	connecting hole M6 Micro hose	Kg	Color Code	P bar	F ₀ +20 °C daN (±5%)
M90 - 007 - A - ...	7	56	49	M90 - 007 - A - N	0,07	OR	10	5
M90 - 010 - A - ...	10	62	52	M90 - 010 - A - N	0,07	PR	20	10
M90 - 013 - A - ...	13	67,4	54,7	M90 - 013 - A - N	0,08	GR	60	30
M90 - 015 - A - ...	15	72	57	M90 - 015 - A - N	0,08	BU	100	50
M90 - 025 - A - ...	25	92	67	M90 - 025 - A - N	0,09	RD	140	70
M90 - 038 - A - ...	38	118	80	M90 - 038 - A - N	0,11	YW	180	90
M90 - 050 - A - ...	50	142	92	M90 - 050 - A - N	0,12	BK	10 - 180	5 - 90
M90 - 063 - A - ...	63	172	109	M90 - 063 - A - N	0,14			
M90 - 080 - A - ...	80	205	125	M90 - 080 - A - N	0,15			
M90 - 100 - A - ...	100	245	145	M90 - 100 - A - N	0,17			
M90 - 125 - A - ...	125	295	170	M90 - 125 - A - N	0,20			

S = rod section area
P = nominal charging pressure
F₀ = nominal initial force

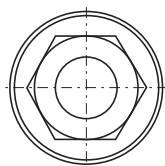
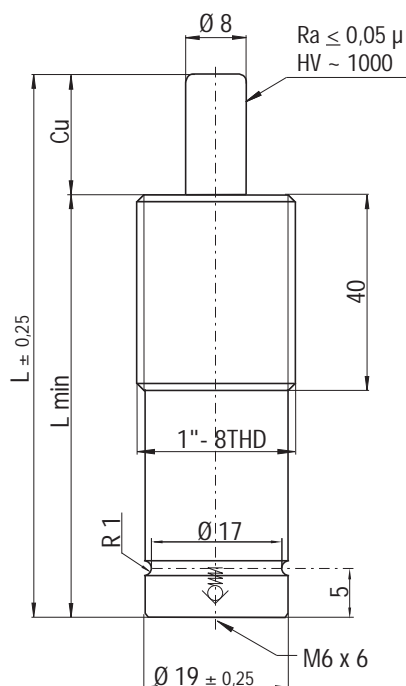
Info pg. 187

M90 TBI threaded

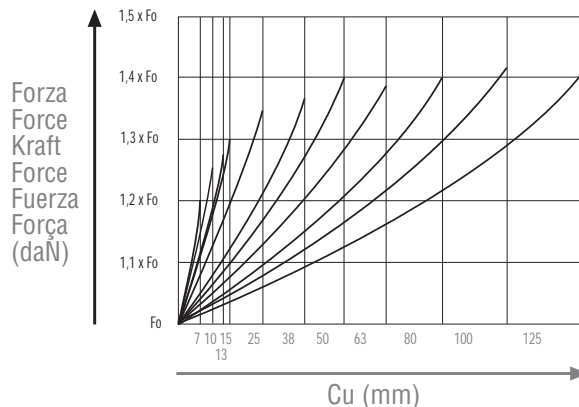
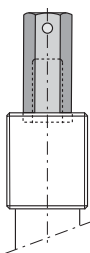
PED
97/23/EC



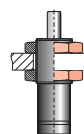
Mini cilindri - Mini cylinders - Minizylinder - Mini-ressorts - Mini cilindros - Mini-cilindros



cod. TBT
(optional)



Fixings



DM 1-8



(10) M90-050-A-YW-TBI

ORDER (10) M90-050-A-N-YW-TBI



- I** I cilindri filettati NON hanno riserva corsa. Si raccomanda di NON superare il 90% della corsa nominale Cu.
- GB** Threaded cylinders have NO stroke extension. It is recommended NOT to exceed 90% of the nominal stroke Cu.
- D** Die Gewindezylinder haben KEINEN Reservelauf. Es wird empfohlen, 90% des Nennlaufs für Cu nicht zu überschreiten.
- F** Les cylindres filetés N'ONT PAS de réserve de course. Il est recommandé de NE PAS dépasser 90% de la course nominale Cu.
- E** Los cilindros roscados NO tienen reserva de carrera. Es importante NO superar el 90% de la carrera nominal Cu.
- P** Os cilindros rosqueados NÃO possuem reserva de curso. Aconselha-se NÃO ultrapassar os 90% do curso nominal Cu.



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 180 bar 2610 psi	P min 10 bar 145 psi	S 0,5 cm ²			Maintenance kit -	
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Technical specifications

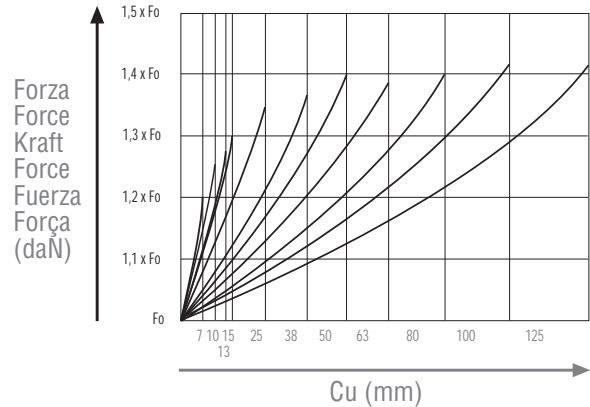
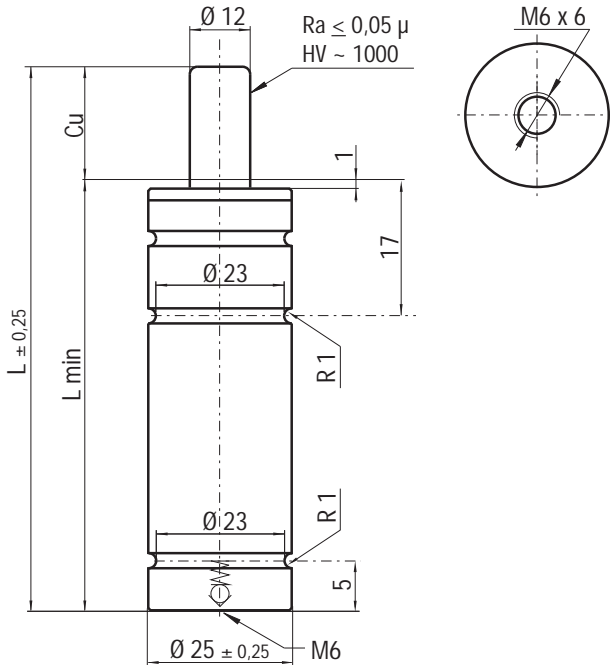
Code	Cu mm	L mm	Lmin mm	connecting hole M6 Micro hose	Kg	Color Code	P bar	F ₀ +20 °C daN (±5%)
M90 - 007 - A - ...	7	56	49	M90 - 007 - A - N	0,07	OR	10	5
M90 - 010 - A - ...	10	62	52	M90 - 010 - A - N	0,07	PR	20	10
M90 - 013 - A - ...	13	67,4	54,7	M90 - 013 - A - N	0,08	GR	60	30
M90 - 015 - A - ...	15	72	57	M90 - 015 - A - N	0,08	BU	100	50
M90 - 025 - A - ...	25	92	67	M90 - 025 - A - N	0,09	RD	140	70
M90 - 038 - A - ...	38	118	80	M90 - 038 - A - N	0,11	YW	180	90
M90 - 050 - A - ...	50	142	92	M90 - 050 - A - N	0,12	BK	10 - 180	5 - 90
M90 - 063 - A - ...	63	172	109	M90 - 063 - A - N	0,14			
M90 - 080 - A - ...	80	205	125	M90 - 080 - A - N	0,15			
M90 - 100 - A - ...	100	245	145	M90 - 100 - A - N	0,17			
M90 - 125 - A - ...	125	295	170	M90 - 125 - A - N	0,20			

S = rod section area
P = nominal charging pressure
F₀ = nominal initial force

Info pg. 187

Mini cilindri - Mini cylinders - Minizylinder -
Mini-ressorts - Mini cilindros - Mini-cilindros

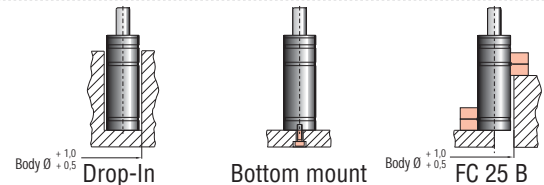
ISO 11901
97/23/EG VDI 3003



M

(10) M200-050-A-YW
ORDER (10) M200-050-A-N-YW

Fixings



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 180 bar 2610 psi	P min 10 bar 145 psi	S 1,13 cm ²			Maintenance kit -	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	connecting hole M6 Micro hose	Kg	Color Code	P bar	F ₀ +20 °C daN (±5%)
M200 - 007 - A - ...	7	56	49	M200 - 007 - A - N	0,12	OR	15	17
M200 - 010 - A - ...	10	62	52	M200 - 010 - A - N	0,13	PR	25	28
M200 - 013 - A - ...	13	67,4	54,7	M200 - 013 - A - N	0,13	GR	45	50
M200 - 015 - A - ...	15	72	57	M200 - 015 - A - N	0,14	BU	90	100
M200 - 025 - A - ...	25	92	67	M200 - 025 - A - N	0,16	RD	135	150
M200 - 038 - A - ...	38	118	80	M200 - 038 - A - N	0,19	YW	180	200
M200 - 050 - A - ...	50	142	92	M200 - 050 - A - N	0,20	BK	10 - 80	11 - 200
M200 - 063 - A - ...	63	172	109	M200 - 063 - A - N	0,23			
M200 - 080 - A - ...	80	205	125	M200 - 080 - A - N	0,26			
M200 - 100 - A - ...	100	245	145	M200 - 100 - A - N	0,30			
M200 - 125 - A - ...	125	295	170	M200 - 125 - A - N	0,34			

S = rod section area
P = nominal charging pressure
F₀ = nominal initial force

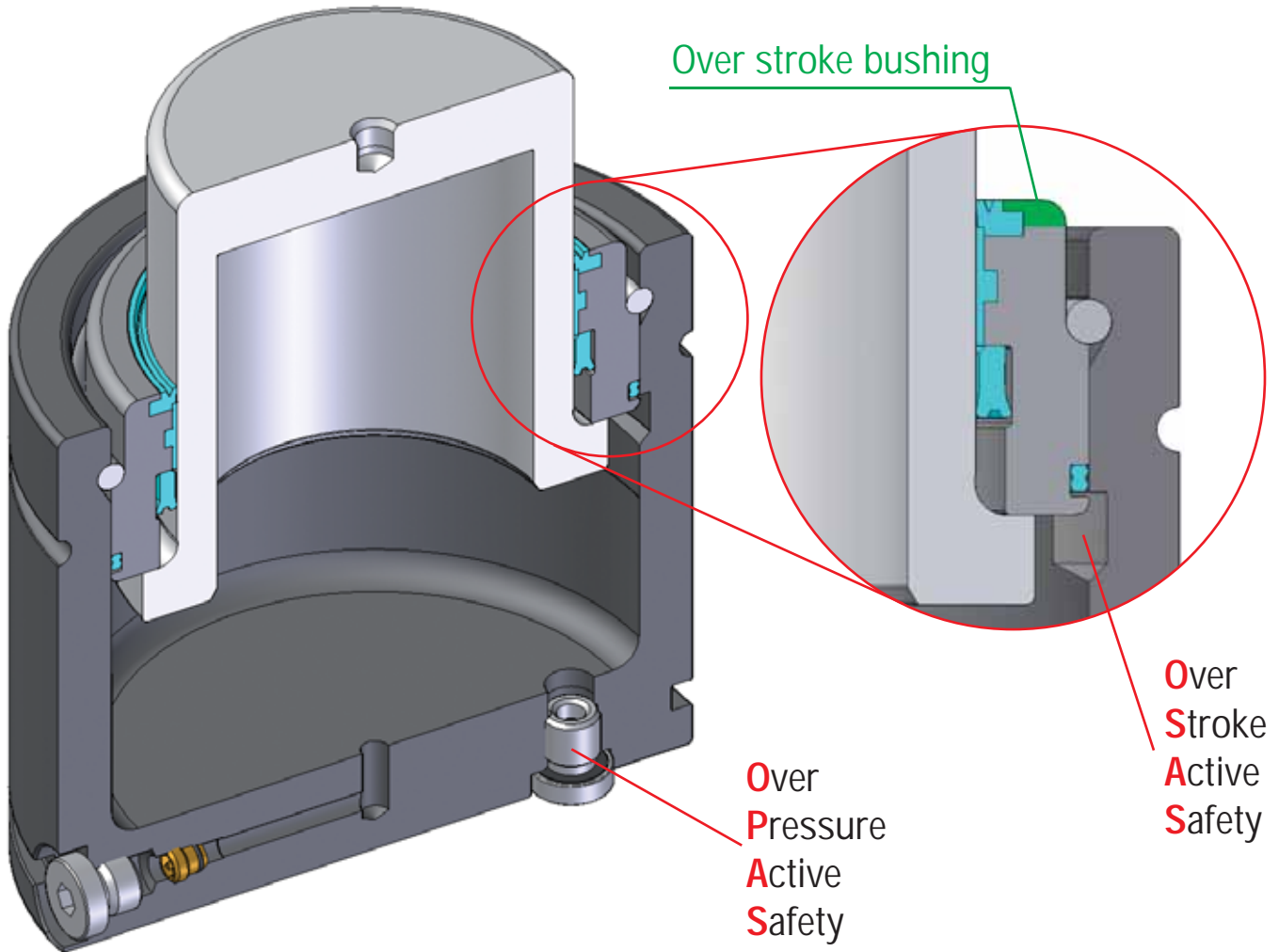
Info pg. 187

RV SERIES




B8318022000004 (Mercedes-Benz)
E24.54.815.G (PSA-Renault)
VDI D003

Minima altezza, massima forza - Miniature height, maximum force -
Minimale Höhe, maximale Leistung - Hauteur -
Mínima altura, máxima fuerza - Altura mínima, força máxima

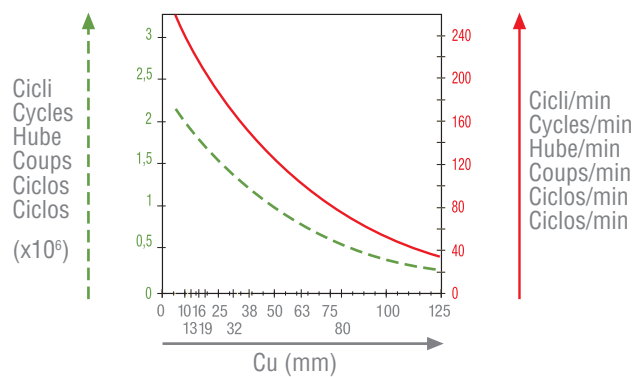
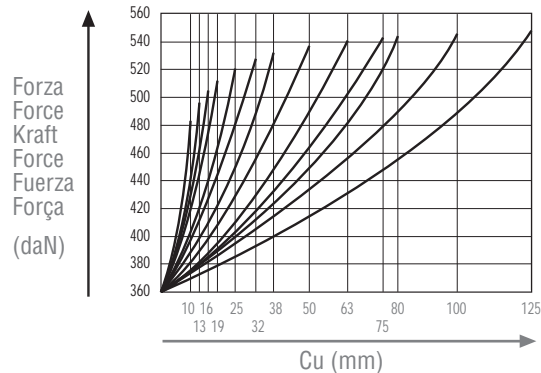
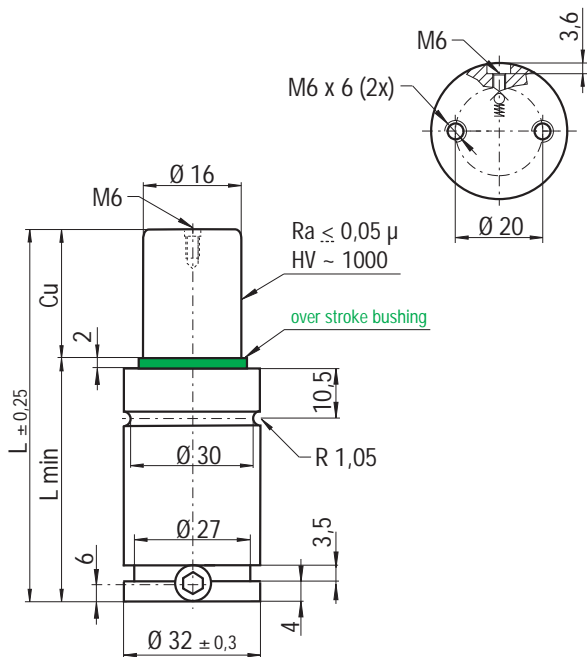


Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
RV 350	32	10 - 125	360	-	✓	-
RV 500	38	10 - 125	470	-	✓	-
RV 750	45	10 - 125	740	-	✓	-
RV 1000	50	13 - 125	920	-	✓	-
RV 1500	63	13 - 125	1530	-	✓	-
RV 2400	75	16 - 125	2385	-	✓	✓
RV 4200	95	16 - 125	4240	-	✓	✓
RV 6600	120	16 - 125	6630	-	✓	✓
RV 9500	150	19 - 125	9540	-	✓	✓

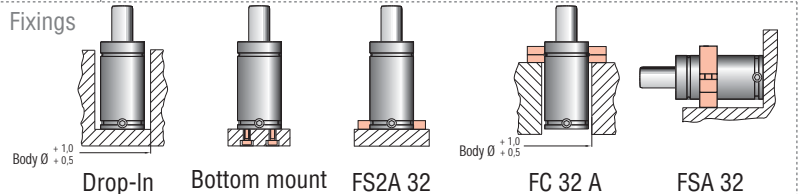
Minima altezza, massima forza - Miniature height, maximum force
 - Minimale Höhe, maximale Leistung - Hauteur -
 Mínima altura, máxima fuerza - Altura mínima, força máxima

B8318022000004 (Mercedes-Benz)
 E24.54.815.G (PSA-Renault)
 VDI D003



RV

(10) RV350-050-A
ORDER (10) RV350-050-A-N



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 180 bar 2610 psi	P min 20 bar 290 psi	S 2,01 cm ²		Maintenance kit 39BMRV00350A	
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Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	connecting hole M6 Micro hose	Kg
NEW	mm	mm	mm		cm ³		
RV 350 - 010 - A	10	50	40	360	7,8	RV 350 - 010 - A - N	-0,162
RV 350 - 013 - A	13	56	43	360	9,7	RV 350 - 013 - A - N	-0,173
RV 350 - 016 - A	16	62	46	360	11,6	RV 350 - 016 - A - N	-0,182
RV 350 - 019 - A	19	68	49	360	13,4	RV 350 - 019 - A - N	-0,191
RV 350 - 025 - A	25	80	55	360	17,2	RV 350 - 025 - A - N	-0,209
RV 350 - 032 - A	32	94	62	360	21,6	RV 350 - 032 - A - N	-0,230
RV 350 - 038 - A	38	106	68	360	25,3	RV 350 - 038 - A - N	-0,249
RV 350 - 050 - A	50	130	80	360	32,8	RV 350 - 050 - A - N	-0,285
RV 350 - 063 - A	63	156	93	360	41,0	RV 350 - 063 - A - N	-0,325
RV 350 - 075 - A	75	180	105	360	48,5	RV 350 - 075 - A - N	-0,361
RV 350 - 080 - A	80	190	110	360	51,6	RV 350 - 080 - A - N	-0,375
RV 350 - 100 - A	100	230	130	360	64,1	RV 350 - 100 - A - N	-0,437
RV 350 - 125 - A	125	280	155	360	79,8	RV 350 - 125 - A - N	-0,513

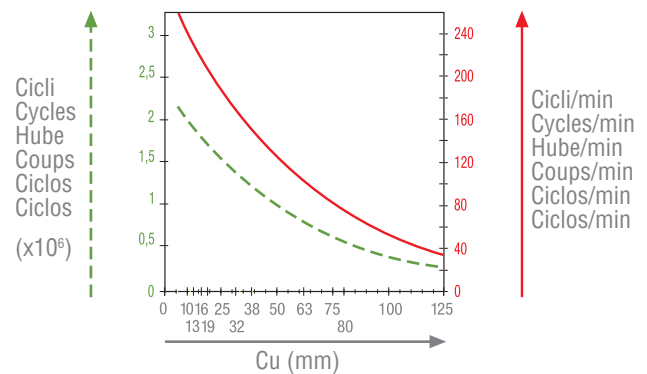
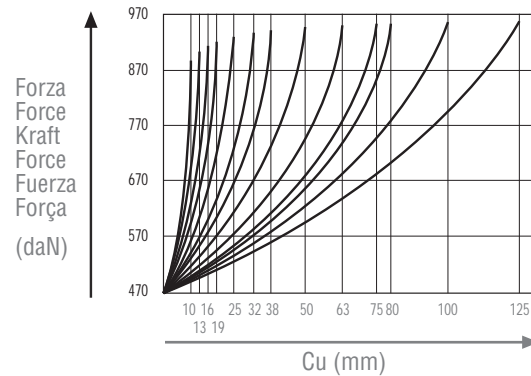
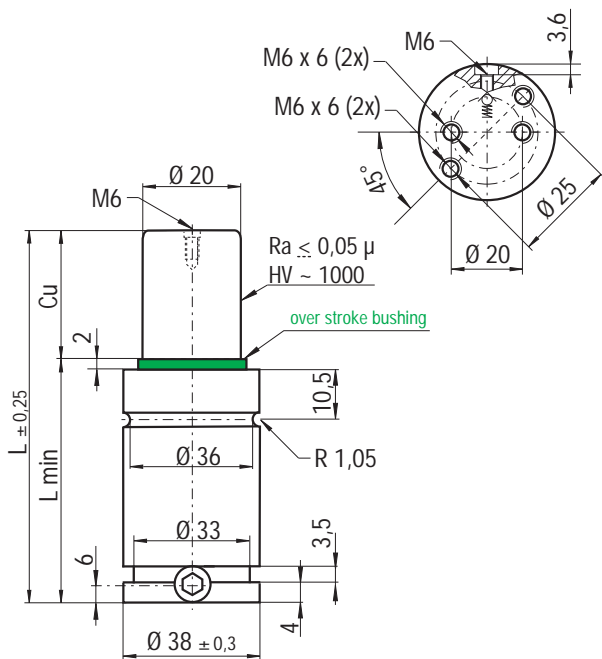
Info pg. 187

RV 500



B8318022000004 (Mercedes-Benz)
E24.54.815.G (PSA-Renault)
VDI D003

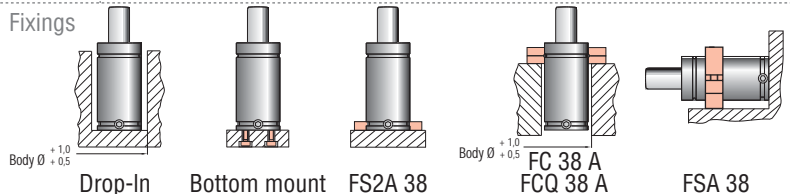
Minima altezza, massima forza - Miniature height, maximum force -
Minimale Höhe, maximale Leistung - Hauteur -
Mínima altura, máxima fuerza - Altura mínima, força máxima



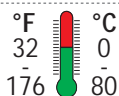
(10) RV500-050-A
ORDER (10) RV500-050-A-N



Fixings



Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
3,14
cm²



Maintenance kit
39BMRV00500A



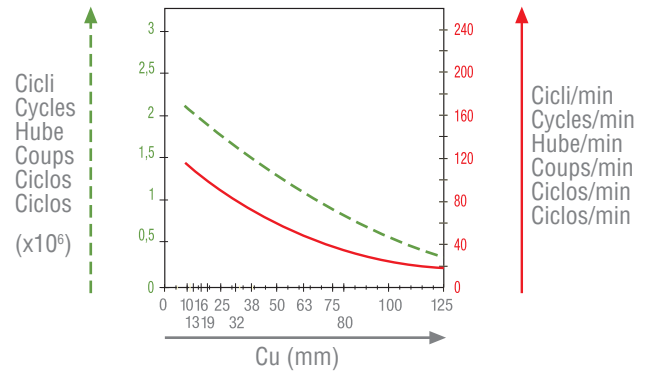
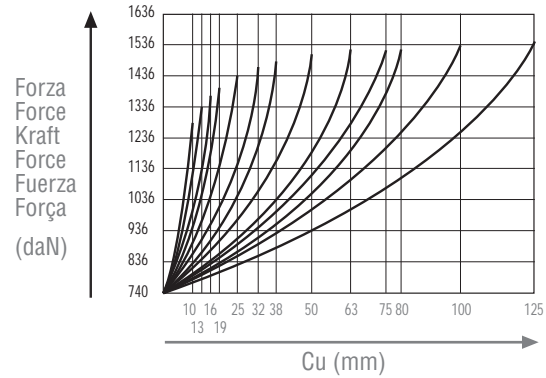
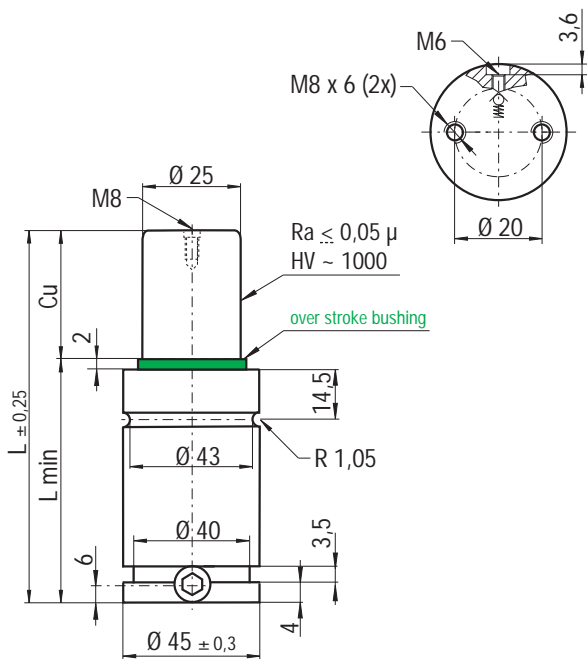
Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	connecting hole M6 Micro hose	Kg
NEW	mm	mm	mm		cm ³		
RV 500 - 010 - A	10	50	40	470	9,5	RV 500 - 010 - A - N	-0,24
RV 500 - 013 - A	13	56	43	470	12,1	RV 500 - 013 - A - N	-0,25
RV 500 - 016 - A	16	62	46	470	14,7	RV 500 - 016 - A - N	-0,26
RV 500 - 019 - A	19	68	49	470	17,3	RV 500 - 019 - A - N	-0,28
RV 500 - 025 - A	25	80	55	470	22,4	RV 500 - 025 - A - N	-0,31
RV 500 - 032 - A	32	94	62	470	28,5	RV 500 - 032 - A - N	-0,34
RV 500 - 038 - A	38	106	68	470	33,6	RV 500 - 038 - A - N	-0,37
RV 500 - 050 - A	50	130	80	470	44,0	RV 500 - 050 - A - N	-0,42
RV 500 - 063 - A	63	156	93	470	55,1	RV 500 - 063 - A - N	-0,48
RV 500 - 075 - A	75	180	105	470	65,5	RV 500 - 075 - A - N	-0,54
RV 500 - 080 - A	80	190	110	470	69,8	RV 500 - 080 - A - N	-0,56
RV 500 - 100 - A	100	230	130	470	87,0	RV 500 - 100 - A - N	-0,66
RV 500 - 125 - A	125	280	155	470	108,5	RV 500 - 125 - A - N	-0,77

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force
 - Minimale Höhe, maximale Leistung - Hauteur -
 Mínima altura, máxima fuerza - Altura mínima, força máxima

B8318022000004 (Mercedes-Benz)
 E24.54.815.G (PSA-Renault)
 VDI D003



RV

ORDER (10) RV750-050-A
 (10) RV750-050-A-N

Fixings: Drop-In, Bottom mount FB 45 - FBA 45, FS2 45 FS2A 45, FC 45 A FCQ 45 A, FSA 45

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 4,91 cm ²		Maintenance kit 39BMRV00750A	
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Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	connecting hole M6 Micro hose	Kg
NEW	mm	mm	mm		cm ³		
RV 750 - 010 - A	10	52	42	740	16,5	RV 750 - 010 - A - N	-0,36
RV 750 - 013 - A	13	58	45	740	20,4	RV 750 - 013 - A - N	-0,38
RV 750 - 016 - A	16	64	48	740	24,2	RV 750 - 016 - A - N	-0,39
RV 750 - 019 - A	19	70	51	740	28,0	RV 750 - 019 - A - N	-0,41
RV 750 - 025 - A	25	82	57	740	35,6	RV 750 - 025 - A - N	-0,45
RV 750 - 032 - A	32	96	64	740	44,5	RV 750 - 032 - A - N	-0,50
RV 750 - 038 - A	38	108	70	740	52,2	RV 750 - 038 - A - N	-0,54
RV 750 - 050 - A	50	132	82	740	67,4	RV 750 - 050 - A - N	-0,61
RV 750 - 063 - A	63	158	95	740	84,0	RV 750 - 063 - A - N	-0,70
RV 750 - 075 - A	75	182	107	740	100,3	RV 750 - 075 - A - N	-0,77
RV 750 - 080 - A	80	192	112	740	106,6	RV 750 - 080 - A - N	-0,81
RV 750 - 100 - A	100	232	132	740	132,1	RV 750 - 100 - A - N	-0,93
RV 750 - 125 - A	125	282	157	740	163,9	RV 750 - 125 - A - N	-1,10

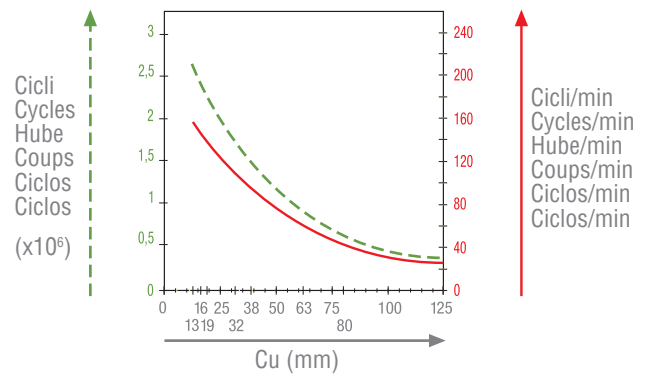
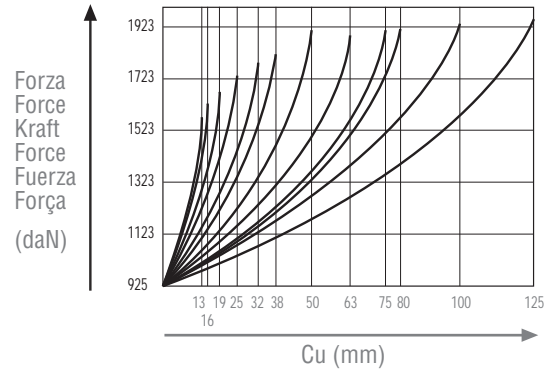
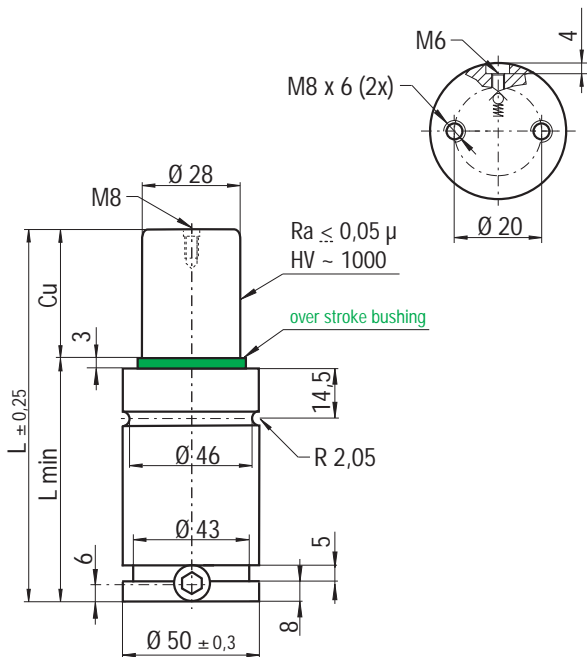
Info pg. 187


RV 1000



B8318022000004 (Mercedes-Benz)
E24.54.815.G (PSA-Renault)
VDI D003

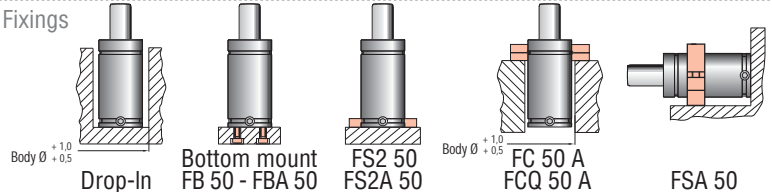
Minima altezza, massima forza - Miniature height, maximum force -
Minimale Höhe, maximale Leistung
Hauteur -
Mínima altura, máxima fuerza - Altura mínima, força máxima



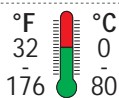
 (10) RV1000-050-A
ORDER (10) RV1000-050-A-N



Fixings



Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi



S
6,15
cm²




Maintenance kit
39BMRV01000A



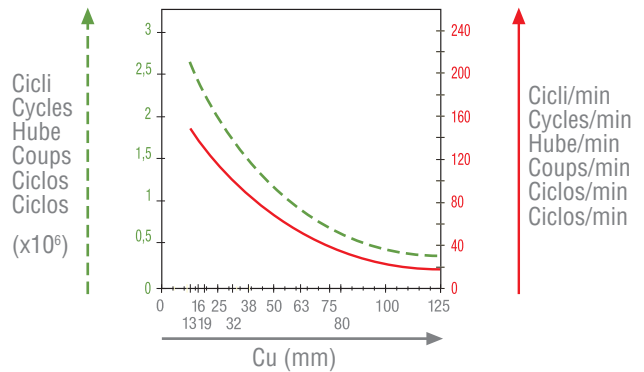
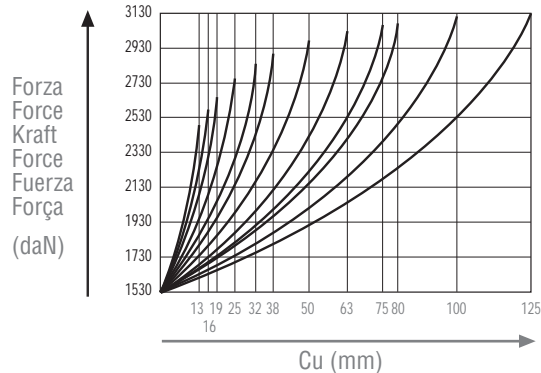
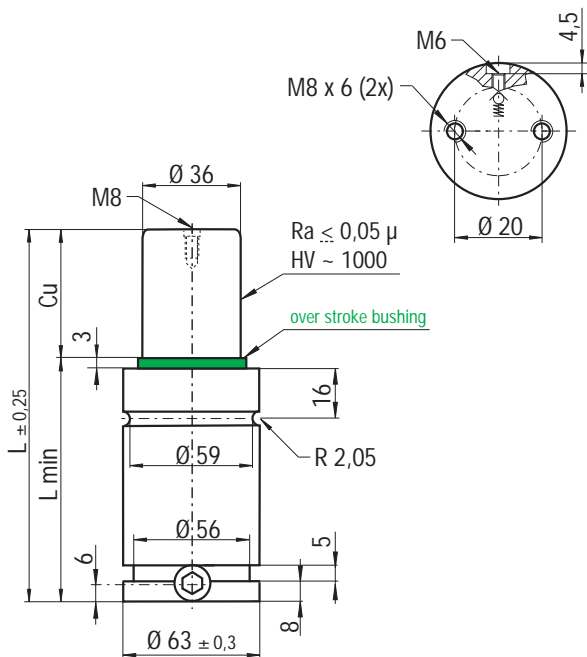
Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	 connecting hole M6 Micro hose	 Kg
NEW	mm	mm	mm		cm ³		
RV 1000 - 013 - A	13	64	51	925	28,0	RV 1000 - 013 - A - N	-0,51
RV 1000 - 016 - A	16	70	54	925	32,7	RV 1000 - 016 - A - N	-0,54
RV 1000 - 019 - A	19	76	57	925	37,4	RV 1000 - 019 - A - N	-0,56
RV 1000 - 025 - A	25	88	63	925	46,8	RV 1000 - 025 - A - N	-0,61
RV 1000 - 032 - A	32	102	70	925	57,8	RV 1000 - 032 - A - N	-0,67
RV 1000 - 038 - A	38	114	76	925	67,2	RV 1000 - 038 - A - N	-0,71
RV 1000 - 050 - A	50	138	88	925	83,6	RV 1000 - 050 - A - N	-0,81
RV 1000 - 063 - A	63	164	101	925	106,5	RV 1000 - 063 - A - N	-0,91
RV 1000 - 075 - A	75	188	113	925	125,3	RV 1000 - 075 - A - N	-1,05
RV 1000 - 080 - A	80	198	118	925	133,2	RV 1000 - 080 - A - N	-1,09
RV 1000 - 100 - A	100	238	138	925	164,6	RV 1000 - 100 - A - N	-1,21
RV 1000 - 125 - A	125	288	163	925	203,9	RV 1000 - 125 - A - N	-1,41

 Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force
 - Minimale Höhe, maximale Leistung - Hauteur -
 Mínima altura, máxima fuerza - Altura mínima, força máxima

B8318022000004 (Mercedes-Benz)
 E24.54.815.G (PSA-Renault)
 VDI D003



RV

(10) RV1500-050-A
ORDER (10) RV1500-050-A-N

Fixings

Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 10,18 cm ²		Maintenance kit 39BMRV01500A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN ($\pm 5\%$)	Vo cm ³	connecting hole M6 Micro hose	Kg
NEW							
RV 1500 - 013 - A	13	70	57	1530	49,8	RV 1500 - 013 - A - N	-0,92
RV 1500 - 016 - A	16	76	60	1530	57,8	RV 1500 - 016 - A - N	-0,96
RV 1500 - 019 - A	19	82	63	1530	65,8	RV 1500 - 019 - A - N	-0,99
RV 1500 - 025 - A	25	94	69	1530	81,7	RV 1500 - 025 - A - N	-1,06
RV 1500 - 032 - A	32	108	76	1530	100,2	RV 1500 - 032 - A - N	-1,14
RV 1500 - 038 - A	38	120	82	1530	116,2	RV 1500 - 038 - A - N	-1,21
RV 1500 - 050 - A	50	144	94	1530	148,0	RV 1500 - 050 - A - N	-1,35
RV 1500 - 063 - A	63	170	107	1530	182,5	RV 1500 - 063 - A - N	-1,51
RV 1500 - 075 - A	75	194	119	1530	214,4	RV 1500 - 075 - A - N	-1,65
RV 1500 - 080 - A	80	204	124	1530	227,7	RV 1500 - 080 - A - N	-1,71
RV 1500 - 100 - A	100	244	144	1530	280,8	RV 1500 - 100 - A - N	-1,94
RV 1500 - 125 - A	125	294	169	1530	347,1	RV 1500 - 125 - A - N	-2,23

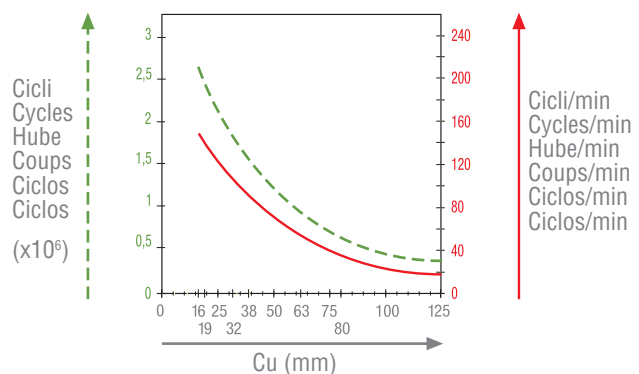
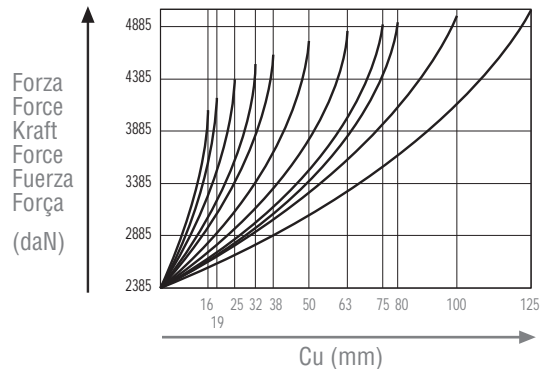
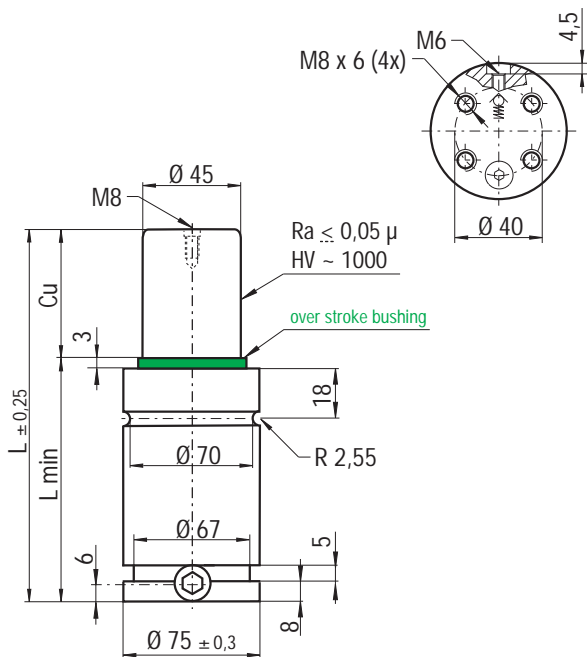
Info pg. 187

RV 2400



B8318022000004 (Mercedes-Benz)
E24.54.815.G (PSA-Renault)
VDI D003

Minima altezza, massima forza - Miniature height, maximum force -
Minimale Höhe, maximale Leistung
Hauteur -
Mínima altura, máxima fuerza - Altura mínima, força máxima

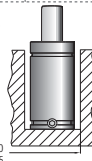


(10) RV2400-050-A

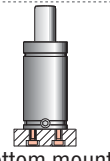
ORDER (10) RV2400-050-A-N



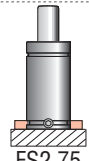
Fixings



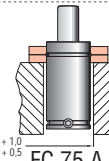
Drop-in



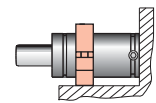
Bottom mount
FB 75 - FBA 75



FS2 75
FS2A 75

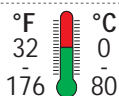


Body Ø +1.0
+0.5 FC 75 A
FCQ 75 A



FSA 75

Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
15,90
cm²



Maintenance kit
39BMRV02400A



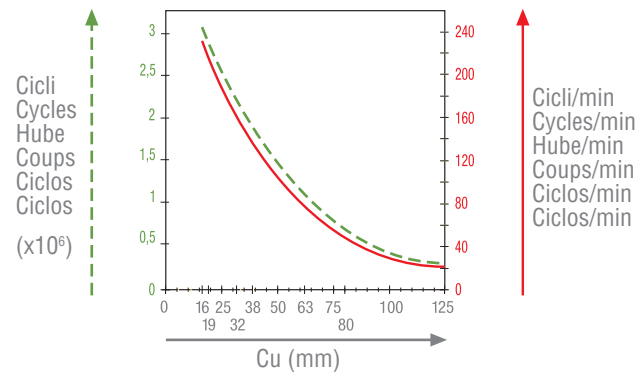
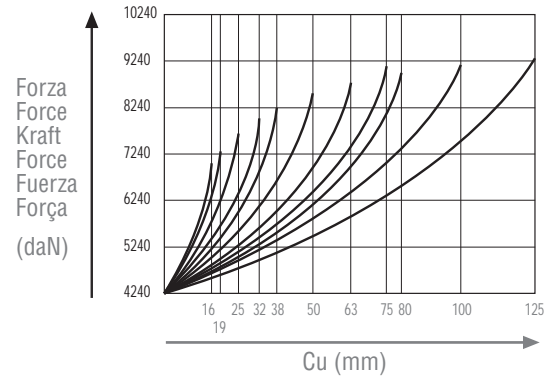
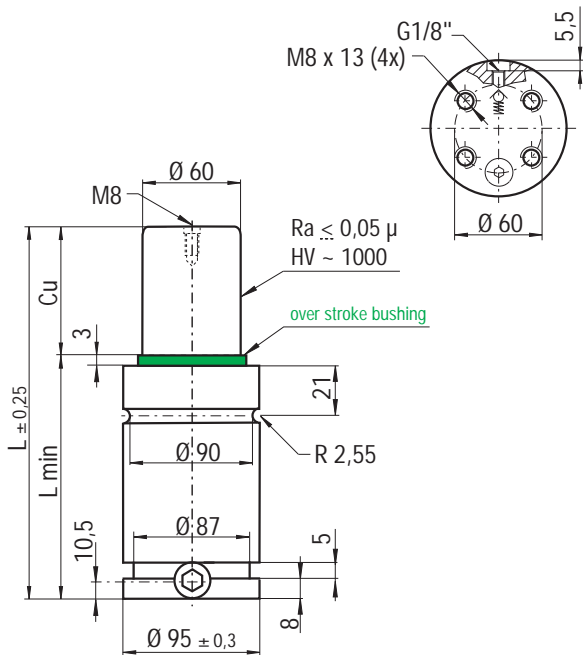
Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	connecting hole M6 Micro hose	Kg
NEW	mm	mm	mm		cm ³		
RV 2400 - 016 - A	16	77	61	2385	88,3	RV 2400 - 016 - A - N	-1,36
RV 2400 - 019 - A	19	83	64	2385	100,4	RV 2400 - 019 - A - N	-1,40
RV 2400 - 025 - A	25	95	70	2385	124,5	RV 2400 - 025 - A - N	-1,50
RV 2400 - 032 - A	32	109	77	2385	152,7	RV 2400 - 032 - A - N	-1,61
RV 2400 - 038 - A	38	121	83	2385	176,8	RV 2400 - 038 - A - N	-1,70
RV 2400 - 050 - A	50	145	95	2385	225,1	RV 2400 - 050 - A - N	-1,89
RV 2400 - 063 - A	63	171	108	2385	277,5	RV 2400 - 063 - A - N	-2,09
RV 2400 - 075 - A	75	195	120	2385	325,8	RV 2400 - 075 - A - N	-2,28
RV 2400 - 080 - A	80	205	125	2385	345,9	RV 2400 - 080 - A - N	-2,36
RV 2400 - 100 - A	100	245	145	2385	426,4	RV 2400 - 100 - A - N	-2,67
RV 2400 - 125 - A	125	295	170	2385	527,0	RV 2400 - 125 - A - N	-3,07

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force
 - Minimale Höhe, maximale Leistung - Hauteur - force maxima
 - Mínima altura, máxima fuerza - Altura mínima, força máxima

B8318022000004 (Mercedes-Benz)
 E24.54.815.G (PSA-Renault)
 VDI D003



RV

ORDER (10) RV4200-050-A

(10) RV4200-050-A-N

Fixings: Drop-In, Bottom mount FB 95 - FBA 95, FS2 95 FS2A 95, Body Ø +0.5 FC 95 A FCQ 95 A, FSA 95

Max. Speed: 1,8 m/s

Temperature: 32 °F / 0 °C to 176 °F / 80 °C

Gas: N₂

Pressure: P max 150 bar / 2175 psi, P min 20 bar / 290 psi

Area: S 28,27 cm²

Maintenance kit: 39BMRV04200A

lifeplus concept

Technical specifications

Code	Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimess hose	
RV 4200 - 016 - A	16	90	74	4240	164,7	RV 4200 - 016 - A - N	-2,76
RV 4200 - 019 - A	19	96	77	4240	185,0	RV 4200 - 019 - A - N	-2,83
RV 4200 - 025 - A	25	108	83	4240	225,6	RV 4200 - 025 - A - N	-2,98
RV 4200 - 032 - A	32	122	90	4240	272,9	RV 4200 - 032 - A - N	-3,16
RV 4200 - 038 - A	38	134	96	4240	313,5	RV 4200 - 038 - A - N	-3,30
RV 4200 - 050 - A	50	158	108	4240	394,6	RV 4200 - 050 - A - N	-3,60
RV 4200 - 063 - A	63	184	121	4240	482,5	RV 4200 - 063 - A - N	-3,93
RV 4200 - 075 - A	75	208	133	4240	551,5	RV 4200 - 075 - A - N	-4,20
RV 4200 - 080 - A	80	218	138	4240	597,5	RV 4200 - 080 - A - N	-4,35
RV 4200 - 100 - A	100	258	158	4240	732,7	RV 4200 - 100 - A - N	-4,85
RV 4200 - 125 - A	125	308	183	4240	901,7	RV 4200 - 125 - A - N	-5,47

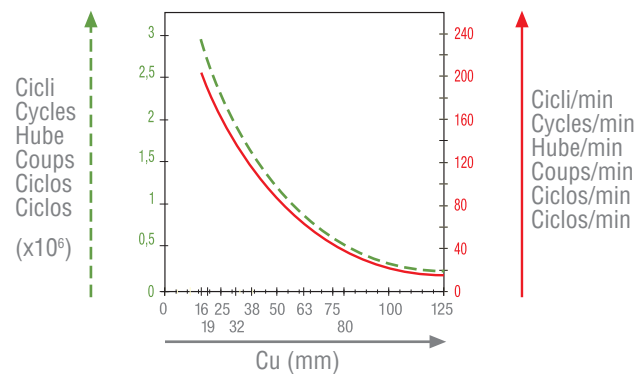
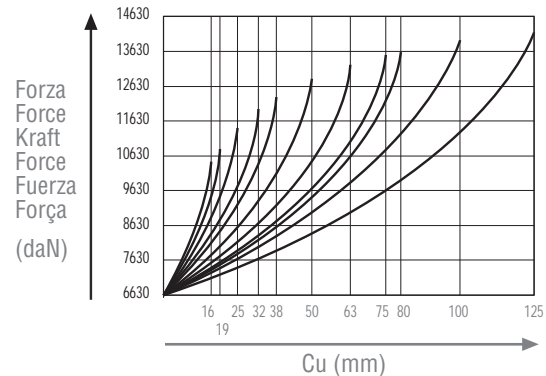
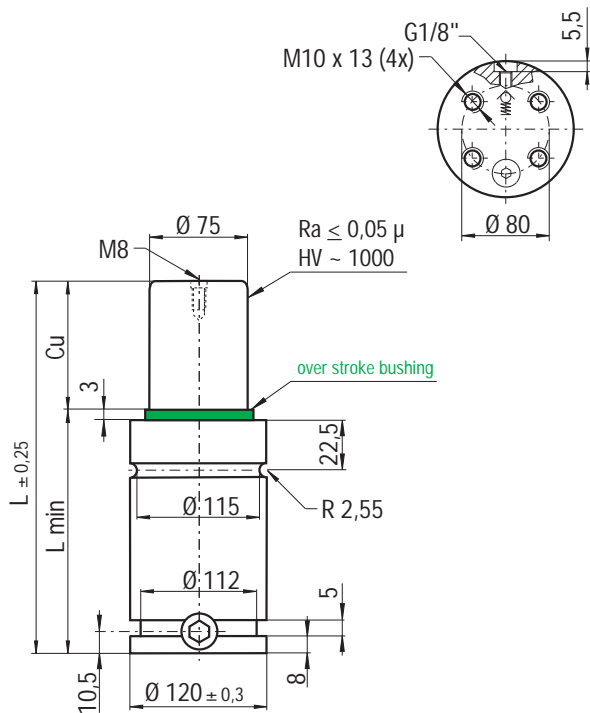
Info pg. 187

RV 6600

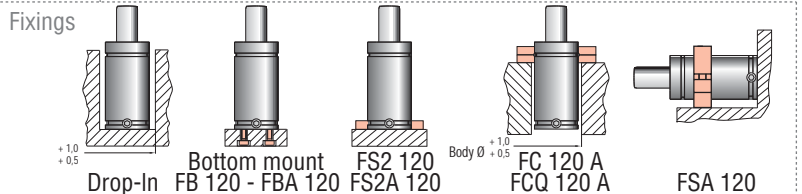


B8318022000004 (Mercedes-Benz)
E24.54.815.G (PSA-Renault)
VDI D003

Minima altezza, massima forza - Miniature height, maximum force -
Minimale Höhe, maximale Leistung - Hauteur -
Mínima altura, máxima fuerza - Altura mínima, força máxima



(10) RV6600-050-A
ORDER (10) RV6600-050-A-N



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 44,18 cm ²		Maintenance kit 39BMRV06600A	
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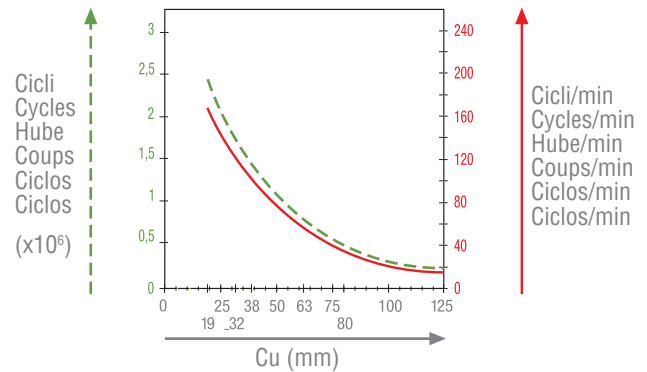
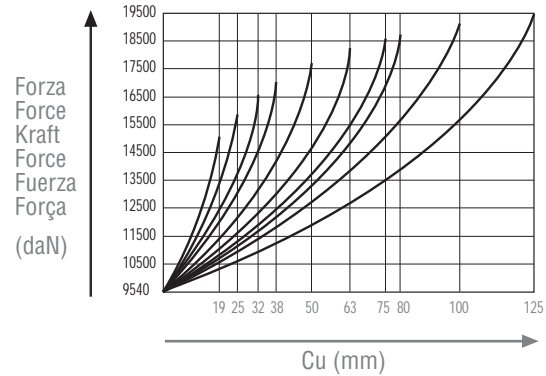
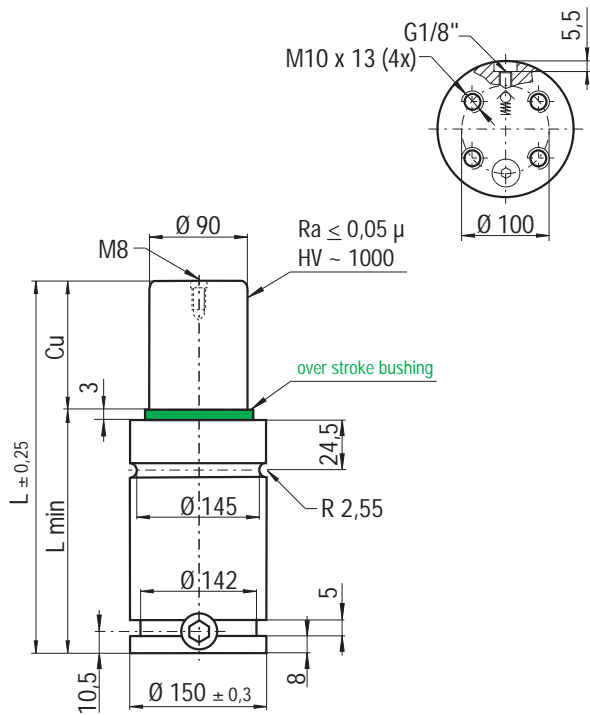
Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
NEW	mm	mm	mm				
RV 6600 - 016 - A	16	100	84	6630	282,1	RV 6600 - 016 - A - N	-5,06
RV 6600 - 019 - A	19	106	87	6630	314,2	RV 6600 - 019 - A - N	-5,17
RV 6600 - 025 - A	25	118	93	6630	378,2	RV 6600 - 025 - A - N	-5,42
RV 6600 - 032 - A	32	132	100	6630	453,0	RV 6600 - 032 - A - N	-5,69
RV 6600 - 038 - A	38	144	106	6630	517,1	RV 6600 - 038 - A - N	-5,93
RV 6600 - 050 - A	50	168	118	6630	645,3	RV 6600 - 050 - A - N	-6,40
RV 6600 - 063 - A	63	194	131	6630	784,1	RV 6600 - 063 - A - N	-6,90
RV 6600 - 075 - A	75	218	143	6630	912,3	RV 6600 - 075 - A - N	-7,40
RV 6600 - 080 - A	80	228	148	6630	965,7	RV 6600 - 080 - A - N	-7,60
RV 6600 - 100 - A	100	268	168	6630	1179,4	RV 6600 - 100 - A - N	-8,40
RV 6600 - 125 - A	125	318	193	6630	1446,4	RV 6600 - 125 - A - N	-9,40

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force
 - Minimale Höhe, maximale Leistung - Hauteur - Mínima altura, máxima fuerza - Altura mínima, força máxima

B8318022000004 (Mercedes-Benz)
 E24.54.815.G (PSA-Renault)
 VDI D003

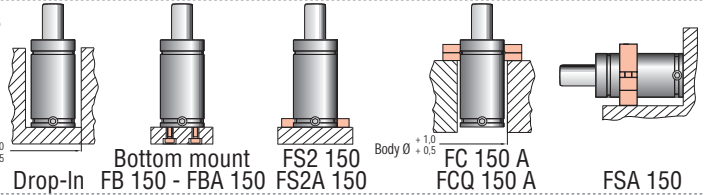


RV

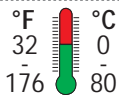
(10) RV9500-050-A
ORDER (10) RV9500-050-A-N



Fixings



Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
63,62
cm²



Maintenance kit
39BMRV09500A



Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
NEW	mm	mm	mm				
RV 9500 - 019 - A	19	116	97	9540	481,6	RV 9500 - 016 - A - N	-9,51
RV 9500 - 025 - A	25	128	103	9540	578,4	RV 9500 - 019 - A - N	-9,90
RV 9500 - 032 - A	32	142	110	9540	691,2	RV 9500 - 025 - A - N	-10,30
RV 9500 - 038 - A	38	154	116	9540	787,9	RV 9500 - 032 - A - N	-10,70
RV 9500 - 050 - A	50	178	128	9540	981,4	RV 9500 - 038 - A - N	-11,40
RV 9500 - 063 - A	63	204	141	9540	1190,9	RV 9500 - 050 - A - N	-12,20
RV 9500 - 075 - A	75	228	153	9540	1384,4	RV 9500 - 063 - A - N	-13,00
RV 9500 - 080 - A	80	238	158	9540	1465,0	RV 9500 - 075 - A - N	-13,30
RV 9500 - 100 - A	100	278	178	9540	1787,4	RV 9500 - 080 - A - N	-14,60
RV 9500 - 125 - A	125	328	203	9540	2190,4	RV 9500 - 100 - A - N	-16,10

Info pg. 187

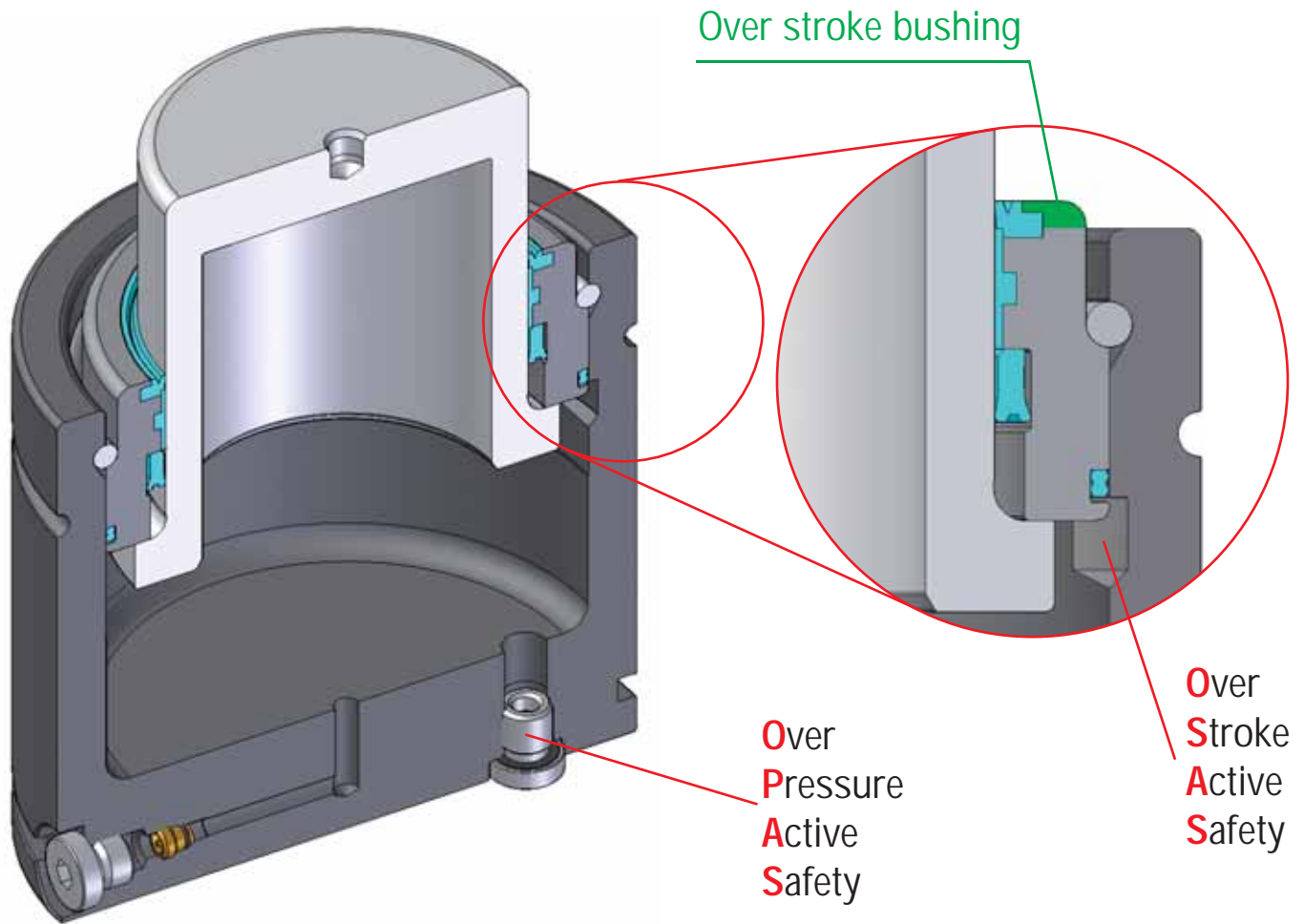
RF SERIES




PED
97/23/EC

FIAT spec.

Minima altezza, massima forza, collegabili 1/8 G - Miniature height, maximum force, hose cylinders with G 1/8 charging port - Minimale Höhe, maximale Leistung, Zylinder mit 1/8 Öffnung verbunden - Hauteur minimum, force maximum, cylindres raccordés avec trou 1/8 Gaz - Mínima altura, máxima fuerza, cilindros conectados con agujero G 1/8 Gas - Altura mínima, força máxima, cilindros conectados com furo 1/8 Gás

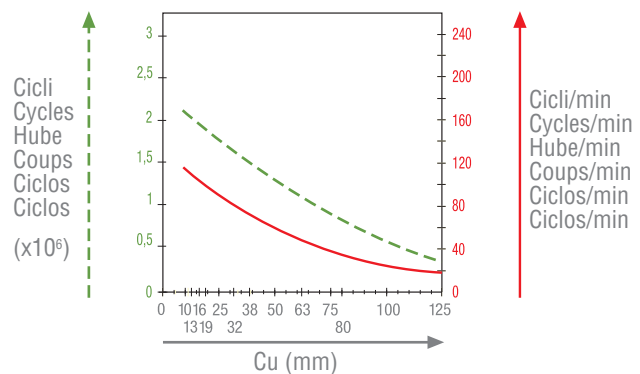
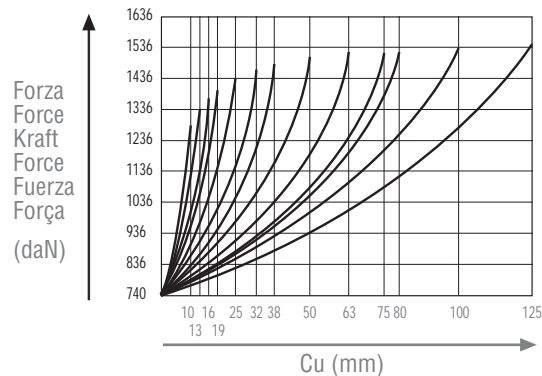
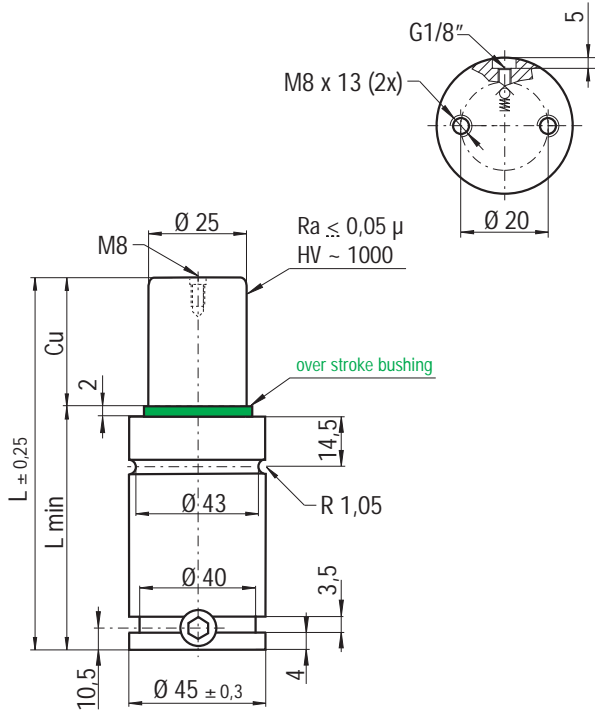


Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
RF 750	45	10 - 125	740	-	✓	-
RF 1000	50	13 - 125	925	-	✓	-
RF 1500	63	13 - 125	1530	-	✓	-
RF 2400	75	16 - 125	2385	-	✓	✓

Minima altezza, massima forza, collegabili 1/8 G - Miniature height, maximum force, hose cylinders with G 1/8 charging port - Minimale Höhe, maximale Leistung, Zylinder mit 1/8 Öffnung verbunden - Hauteur minimum, force maximum, cylindres raccordés avec trou 1/8 Gaz - Mínima altura, máxima fuerza, cilindros conectados con agujero G 1/8 Gas - Altura mínima, força máxima, cilindros conectados com furo 1/8 Gás

PED FIAT spec.
97/23/EG

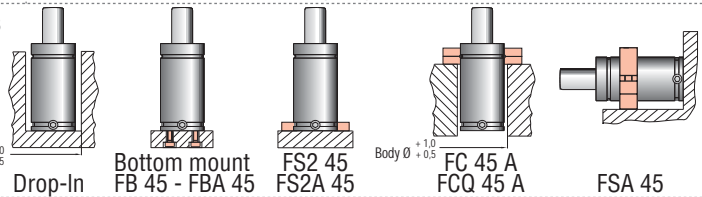


RF

(10) RF750-050-A
ORDER (10) RF750-050-A-N



Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
4,91
cm²



Maintenance kit
39BMRV00750A



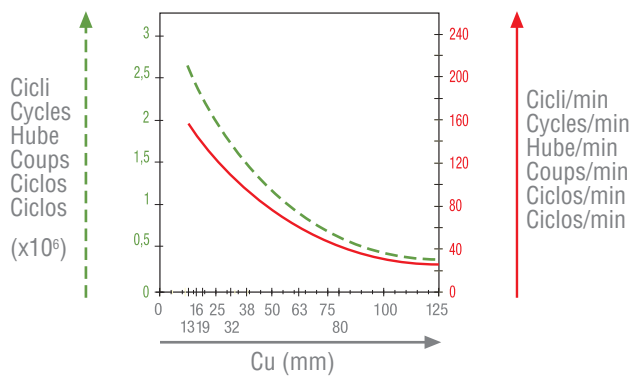
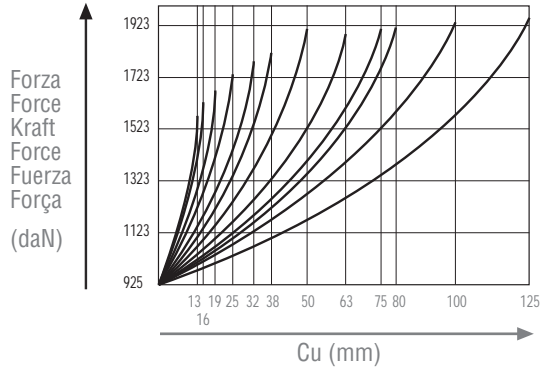
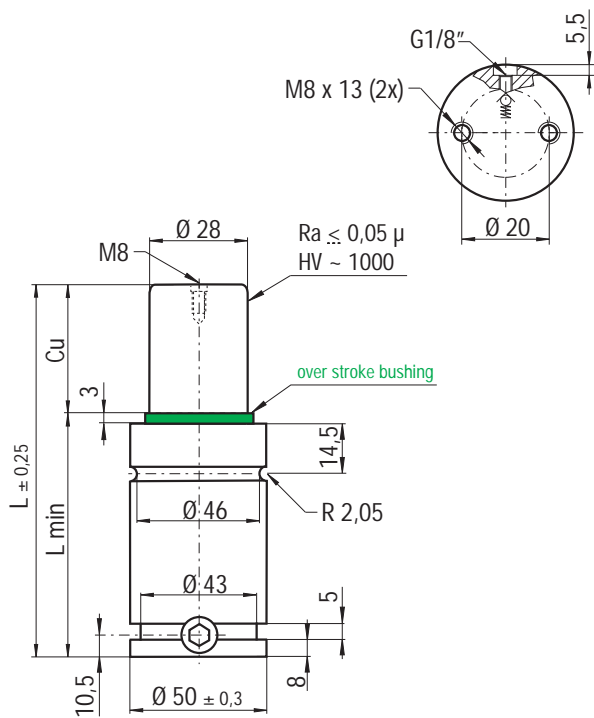
Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
NEW	mm	mm	mm		cm ³		
RF 750 - 010 - A	10	62	52	740	16,5	RF 750 - 010 - A - N	-0,46
RF 750 - 013 - A	13	68	55	740	20,4	RF 750 - 013 - A - N	-0,48
RF 750 - 016 - A	16	74	58	740	24,2	RF 750 - 016 - A - N	-0,50
RF 750 - 019 - A	19	80	61	740	28,0	RF 750 - 019 - A - N	-0,52
RF 750 - 025 - A	25	92	67	740	35,6	RF 750 - 025 - A - N	-0,56
RF 750 - 032 - A	32	106	74	740	44,5	RF 750 - 032 - A - N	-0,60
RF 750 - 038 - A	38	118	80	740	52,2	RF 750 - 038 - A - N	-0,64
RF 750 - 050 - A	50	142	92	740	67,4	RF 750 - 050 - A - N	-0,72
RF 750 - 063 - A	63	168	105	740	84,0	RF 750 - 063 - A - N	-0,80
RF 750 - 075 - A	75	192	117	740	100,3	RF 750 - 075 - A - N	-0,88
RF 750 - 080 - A	80	202	122	740	106,6	RF 750 - 080 - A - N	-0,91
RF 750 - 100 - A	100	242	142	740	132,1	RF 750 - 100 - A - N	-1,04
RF 750 - 125 - A	125	292	167	740	163,9	RF 750 - 125 - A - N	-1,20

Info pg. 187

FIAT spec. **PEO**
97/23/EC

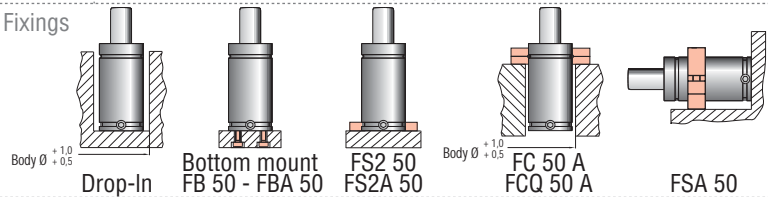
Minima altezza, massima forza, collegabili 1/8 G - Miniature height, maximum force, hose cylinders with G 1/8 charging port - Minimale Höhe, maximale Leistung, Zylinder mit 1/8 Öffnung verbunden - Hauteur minimum, force maximum, cylindres raccordés avec trou 1/8 Gaz - Mínima altura, máxima fuerza, cilindros conectados con agujero G 1/8 Gas - Altura mínima, força máxima, cilindros conectados com furo 1/8 Gás



(10) RF1000-050-A
ORDER (10) RF1000-050-A-N



Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
6,15
cm²



Maintenance kit
39BMRV01000A



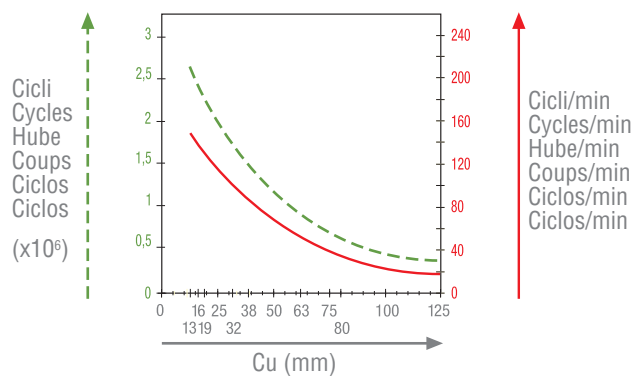
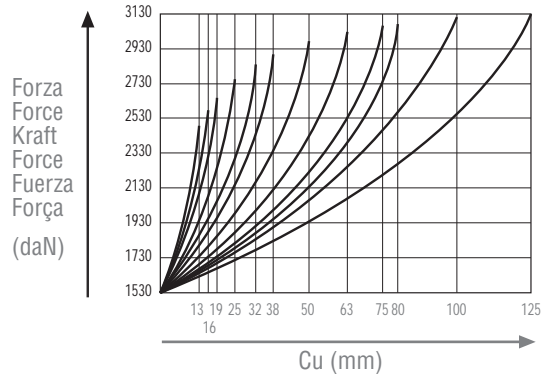
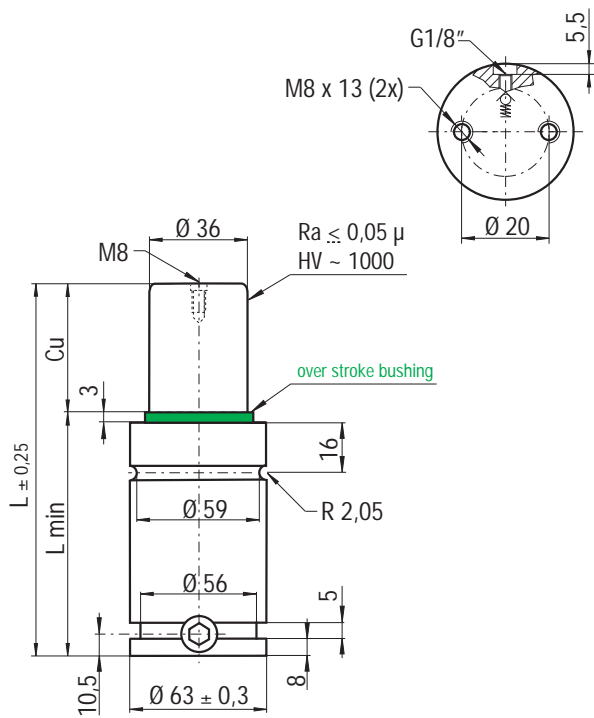
Technical specifications

Code	Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimess hose	
RF 1000 - 013 - A	13	74	61	925	28,0	RF 1000 - 013 - A - N	-0,64
RF 1000 - 016 - A	16	80	64	925	32,7	RF 1000 - 016 - A - N	-0,67
RF 1000 - 019 - A	19	86	67	925	37,4	RF 1000 - 019 - A - N	-0,70
RF 1000 - 025 - A	25	98	73	925	46,8	RF 1000 - 025 - A - N	-0,74
RF 1000 - 032 - A	32	112	80	925	57,8	RF 1000 - 032 - A - N	-0,79
RF 1000 - 038 - A	38	124	86	925	67,2	RF 1000 - 038 - A - N	-0,84
RF 1000 - 050 - A	50	148	98	925	83,6	RF 1000 - 050 - A - N	-0,94
RF 1000 - 063 - A	63	174	111	925	106,5	RF 1000 - 063 - A - N	-1,04
RF 1000 - 075 - A	75	198	123	925	125,3	RF 1000 - 075 - A - N	-1,14
RF 1000 - 080 - A	80	208	128	925	133,2	RF 1000 - 080 - A - N	-1,18
RF 1000 - 100 - A	100	248	148	925	164,6	RF 1000 - 100 - A - N	-1,34
RF 1000 - 125 - A	125	298	173	925	203,9	RF 1000 - 125 - A - N	-1,54

Info pg. 187

Minima altezza, massima forza, collegabili 1/8 G - Miniature height, maximum force, hose cylinders with G 1/8 charging port - Minimale Höhe, maximale Leistung, Zylinder mit 1/8 Öffnung verbunden - Hauteur minimum, force maximum, cylindres raccordés avec trou 1/8 Gaz - Mínima altura, máxima fuerza, cilindros conectados con agujero G 1/8 Gas - Altura mínima, força máxima, cilindros conectados com furo 1/8 Gás

PED FIAT spec.
97/23/EG



RF

(10) RF1500-050-A
ORDER (10) RF1500-050-A-N

Fixings

Max. Speed 1,8 m/s	°F 32 °C 0 176 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 10,18 cm ²		Maintenance kit 39BMRV01500A	
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Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
NEW	mm	mm	mm				
RF 1500 - 013 - A	13	80	67	1530	49,8	RF 1500 - 013 - A - N	-1,15
RF 1500 - 016 - A	16	86	70	1530	57,8	RF 1500 - 016 - A - N	-1,18
RF 1500 - 019 - A	19	92	73	1530	65,8	RF 1500 - 019 - A - N	-1,22
RF 1500 - 025 - A	25	104	79	1530	81,7	RF 1500 - 025 - A - N	-1,29
RF 1500 - 032 - A	32	118	86	1530	100,2	RF 1500 - 032 - A - N	-1,37
RF 1500 - 038 - A	38	130	92	1530	116,2	RF 1500 - 038 - A - N	-1,44
RF 1500 - 050 - A	50	154	104	1530	148,0	RF 1500 - 050 - A - N	-1,58
RF 1500 - 063 - A	63	180	117	1530	182,5	RF 1500 - 063 - A - N	-1,73
RF 1500 - 075 - A	75	204	129	1530	214,4	RF 1500 - 075 - A - N	-1,87
RF 1500 - 080 - A	80	214	134	1530	227,7	RF 1500 - 080 - A - N	-1,93
RF 1500 - 100 - A	100	254	154	1530	280,8	RF 1500 - 100 - A - N	-2,17
RF 1500 - 125 - A	125	304	179	1530	347,1	RF 1500 - 125 - A - N	-2,46

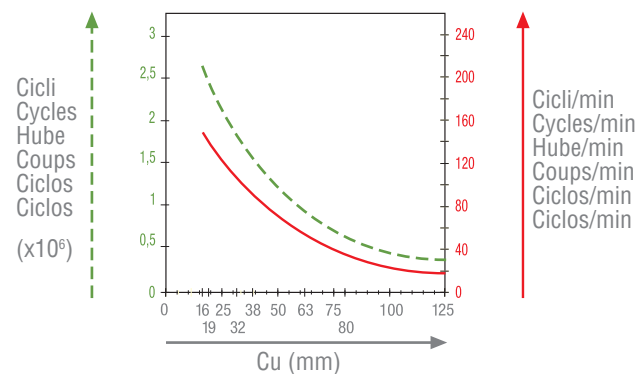
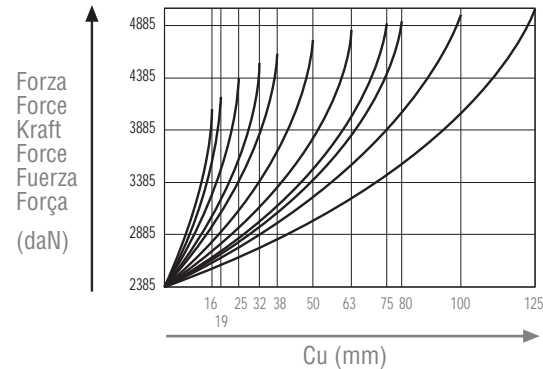
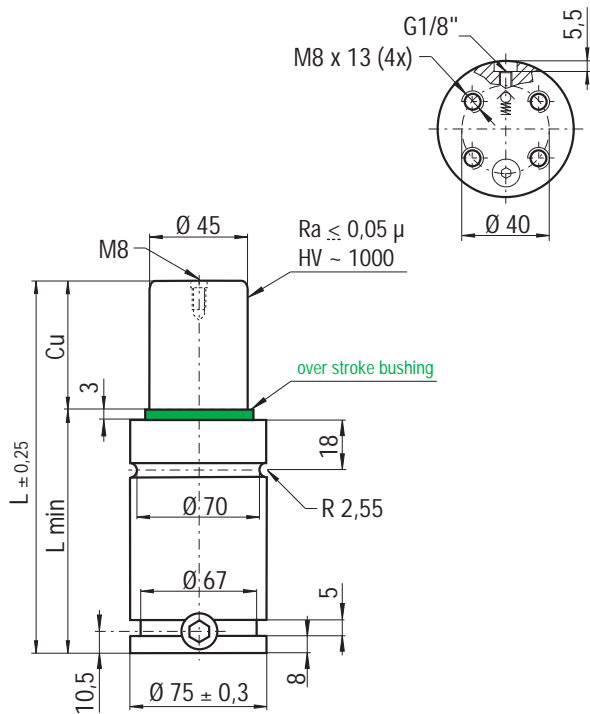
Info pg. 187

RF 2400



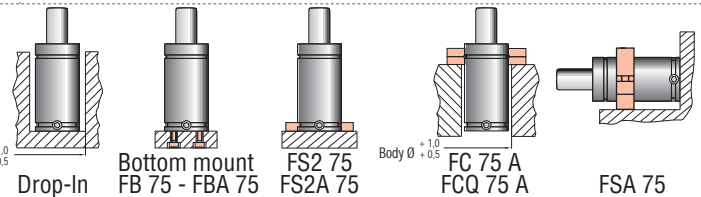
FIAT spec. **PEO**
97/23/EC

Minima altezza, massima forza, collegabili 1/8 G - Miniature height, maximum force, hose cylinders with G 1/8 charging port - Minimale Höhe, maximale Leistung, Zylinder mit 1/8 Öffnung verbunden - Hauteur minimum, force maximum, cylindres raccordés avec trou 1/8 Gaz - Mínima altura, máxima fuerza, cilindros conectados con agujero G 1/8 Gas - Altura mínima, força máxima, cilindros conectados com furo 1/8 Gás



(10) RF2400-050-A
ORDER (10) RF2400-050-A-N

Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
15,90
cm²



Maintenance kit
39BMRV02400A



Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
NEW	mm	mm	mm				
RF 2400 - 016 - A	16	87	71	2385	88,3	RF 2400 - 016 - A - N	-1,68
RF 2400 - 019 - A	19	93	74	2385	100,4	RF 2400 - 019 - A - N	-1,73
RF 2400 - 025 - A	25	105	80	2385	124,5	RF 2400 - 025 - A - N	-1,82
RF 2400 - 032 - A	32	119	87	2385	152,7	RF 2400 - 032 - A - N	-1,93
RF 2400 - 038 - A	38	131	93	2385	176,8	RF 2400 - 038 - A - N	-2,03
RF 2400 - 050 - A	50	155	105	2385	225,1	RF 2400 - 050 - A - N	-2,21
RF 2400 - 063 - A	63	181	118	2385	277,5	RF 2400 - 063 - A - N	-2,42
RF 2400 - 075 - A	75	205	130	2385	325,8	RF 2400 - 075 - A - N	-2,61
RF 2400 - 080 - A	80	215	135	2385	345,9	RF 2400 - 080 - A - N	-2,69
RF 2400 - 100 - A	100	255	155	2385	426,4	RF 2400 - 100 - A - N	-3,00
RF 2400 - 125 - A	125	305	180	2385	527,0	RF 2400 - 125 - A - N	-3,40

Info pg. 187



RF

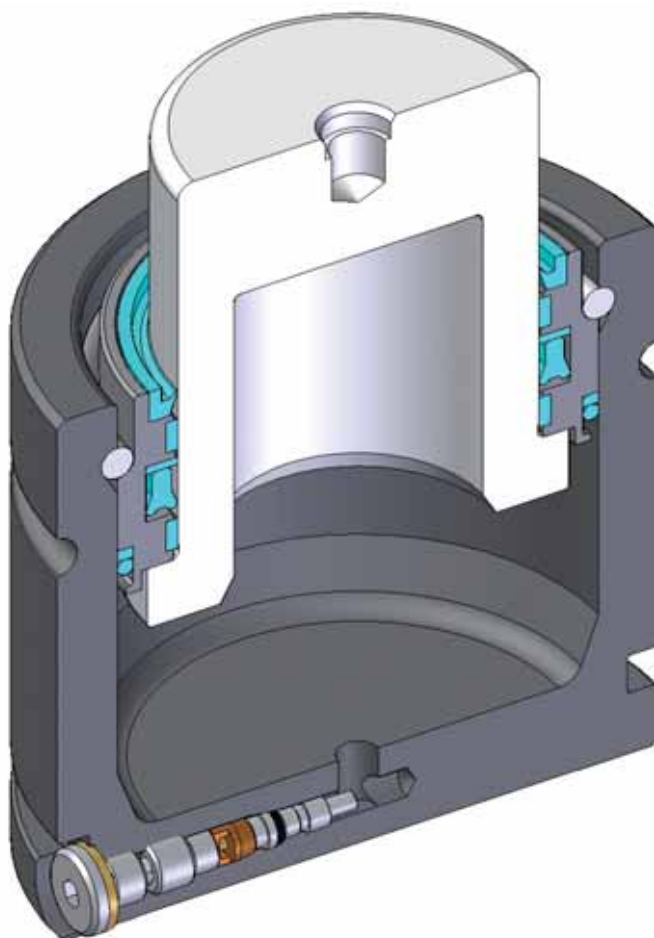
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HR SERIES




PED
97/23/EC

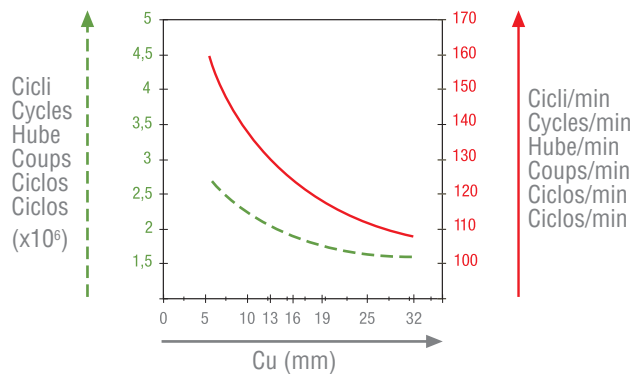
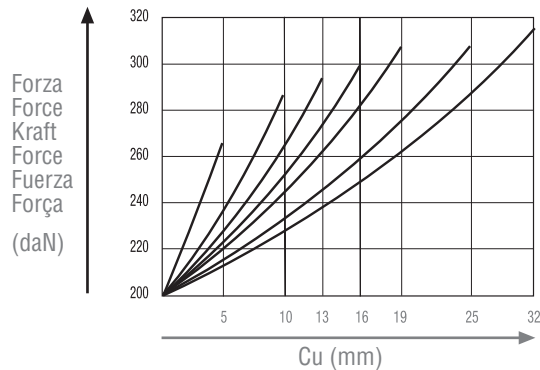
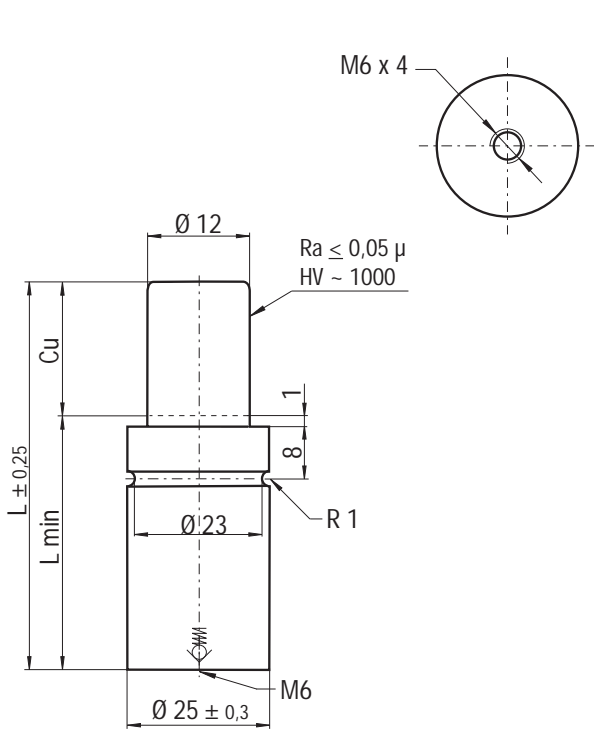
Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
Hauteur - Hauteur minimum, force maximum - Mínima altura, máxima fuerza - Altura mínima, força máxima



Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
HR 200	25	5 - 32	200	-	-	-
HR 300	32	5 - 125	300	-	-	-
HR 500	38	5 - 125	470	-	-	-
HRF 500	M 38 X 1,5	5 - 125	470	-	-	-
HR 700	45	10 - 125	680	-	-	-
HR 700 N	45	10 - 125	680	-	-	-
HRF 700	M 45 X 1,5	10 - 125	680	-	-	-
HR 1000	50	10 - 125	1060	-	-	-
HR 1000 N	50	10 - 125	1060	-	-	-
HRF 1000	M 50 X 1,5	10 - 125	1060	-	-	-
HR 1500	63	10 - 125	1530	-	-	-
HR 1500 N	63	10 - 125	1530	-	-	-
HR 2400	75	10 - 125	2385	-	-	-
HR 2400 N	75	10 - 125	2385	-	-	-
HR 4200	95	16 - 125	4240	-	-	-
HR 4200 N	95	16 - 125	4240	-	-	-
HR 6600	120	16 - 125	6630	-	-	-
HR 11800	150	19 - 125	11780	-	-	-

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



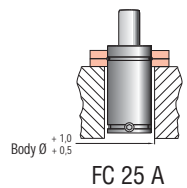
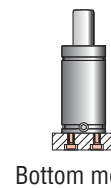
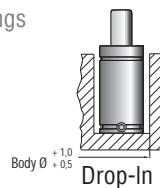
HR
HRF



(10) HR200-032-A

ORDER

Fixings



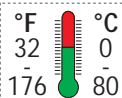
Body Ø ^{+1.0}/_{-0.5}

Bottom mount

Body Ø ^{+1.0}/_{-0.5}

FC 25 A

Max. Speed
1,8 m/s



P max
175 bar
2538 psi

P min
20 bar
290 psi

S
1,13
cm²



Maintenance kit

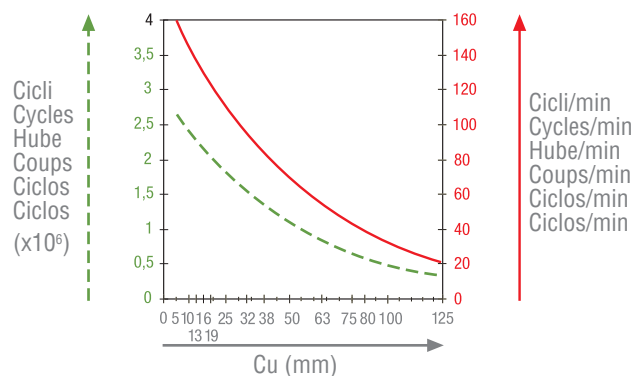
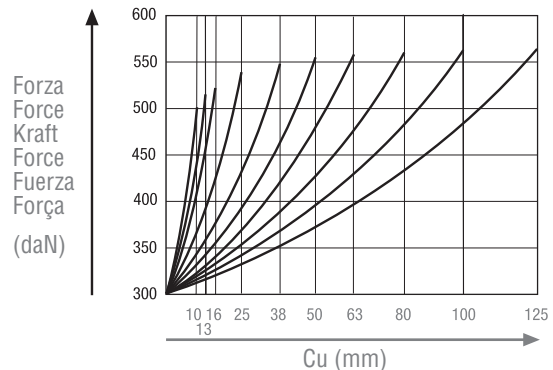
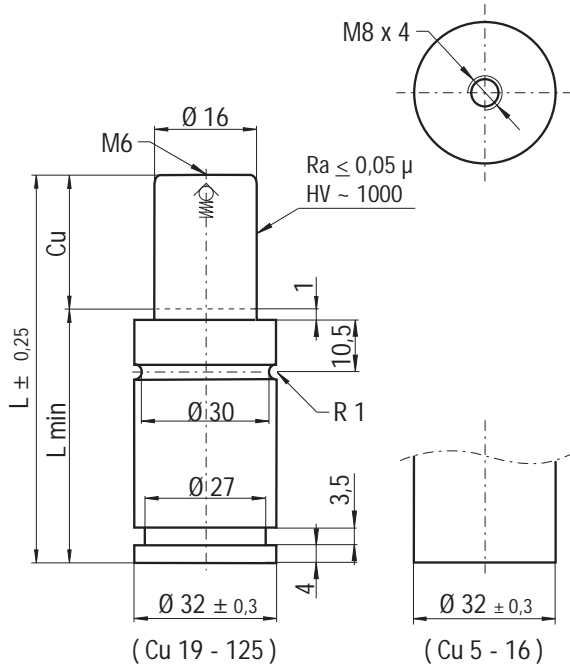
-

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		Kg
HR 200 - 005 - A	5	40	35	200	-	-	~0,09
HR 200 - 010 - A	10	50	40	200	-	-	~0,10
HR 200 - 013 - A	13	56	43	200	-	-	~0,10
HR 200 - 016 - A	16	62	46	200	-	-	~0,11
HR 200 - 019 - A	19	68	49	200	-	-	~0,12
HR 200 - 025 - A	25	80	55	200	-	-	~0,13
HR 200 - 032 - A	32	94	62	200	-	-	~0,16

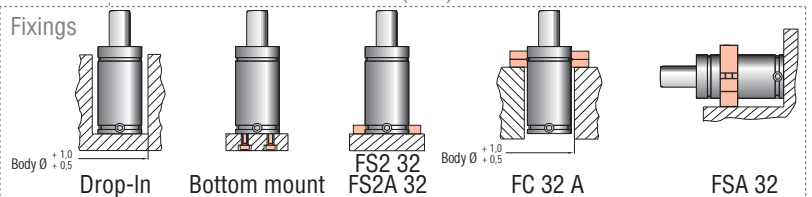


Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



(10) HR300-050-A

ORDER

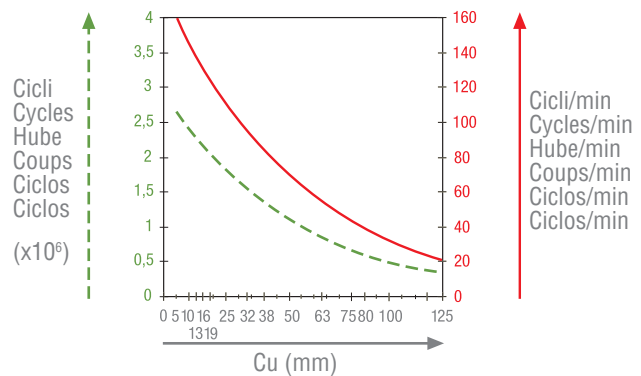
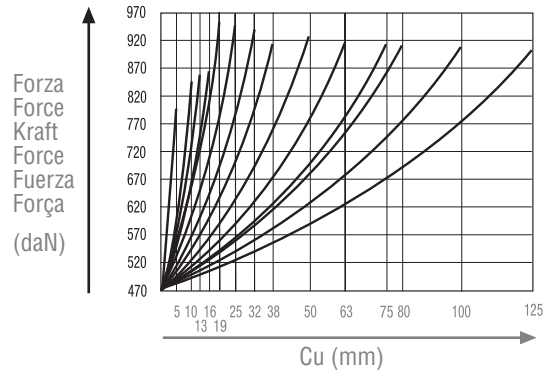
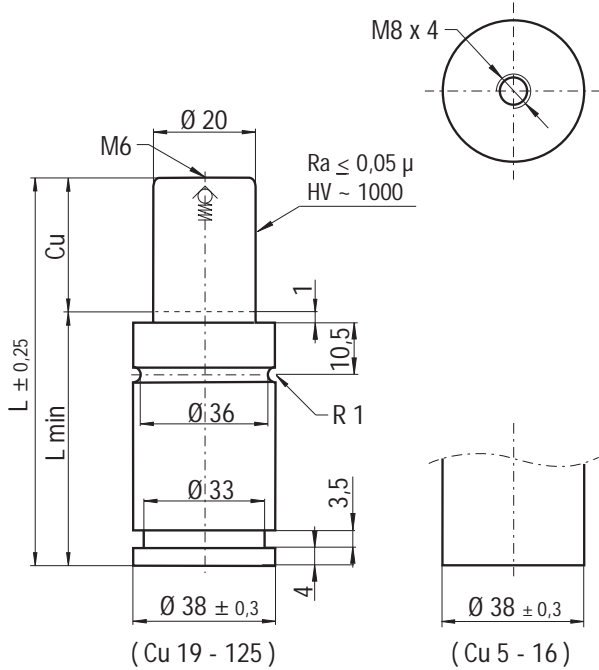


Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 2,01 cm ²		Maintenance kit 39BMHR00300A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	F ₀ at 150 bar/+20 °C daN (±5%)	V ₀ cm ³		 Kg
HR 300 - 005 - A	5	40	35	300	-	-	~0,17
HR 300 - 010 - A	10	50	40	300	-	-	~0,18
HR 300 - 013 - A	13	56	43	300	-	-	~0,19
HR 300 - 016 - A	16	62	46	300	-	-	~0,20
HR 300 - 019 - A	19	68	49	300	-	-	~0,22
HR 300 - 025 - A	25	80	55	300	-	-	~0,25
HR 300 - 032 - A	32	94	62	300	-	-	~0,27
HR 300 - 038 - A	38	106	68	300	-	-	~0,29
HR 300 - 050 - A	50	130	80	300	-	-	~0,34
HR 300 - 063 - A	63	156	93	300	-	-	~0,39
HR 300 - 075 - A	75	180	105	300	-	-	~0,42
HR 300 - 080 - A	80	190	110	300	-	-	~0,45
HR 300 - 100 - A	100	230	130	300	-	-	~0,53
HR 300 - 125 - A	125	280	155	300	-	-	~0,68

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima

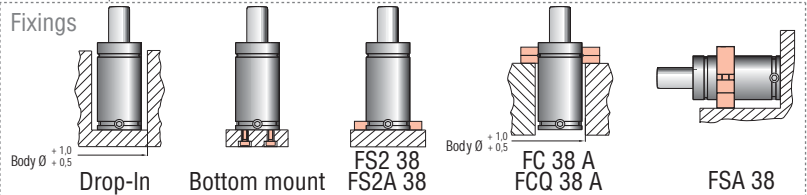


HR
HRF



(10) HR500-050-A

ORDER



Max. Speed
1,8 m/s

°F 32
176
°C 0
80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
3,14
cm²

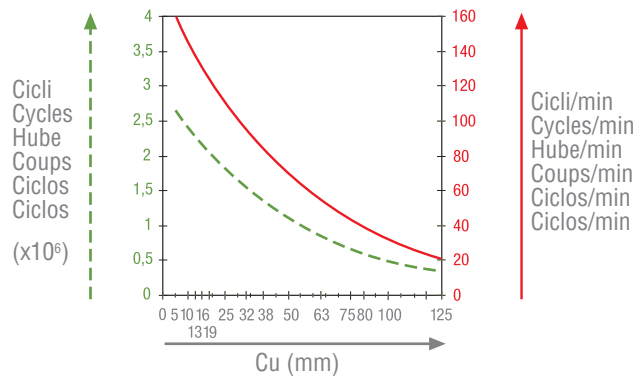
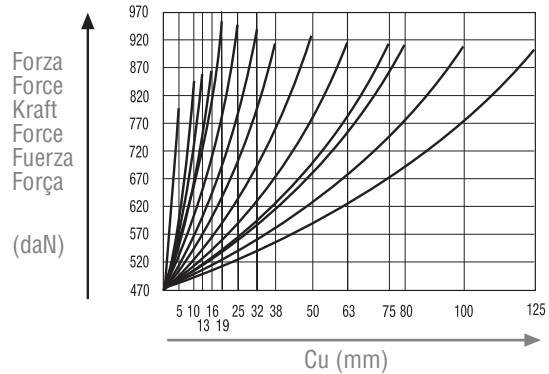
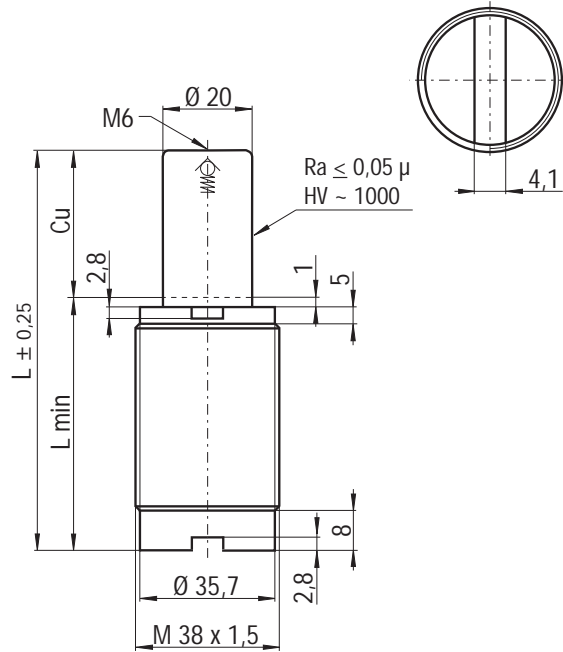


Maintenance kit
39BMHR00500A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
HR 500 - 005 - A	5	40	35	470	-	-	~0,25
HR 500 - 010 - A	10	50	40	470	-	-	~0,27
HR 500 - 013 - A	13	56	43	470	-	-	~0,29
HR 500 - 016 - A	16	62	46	470	-	-	~0,31
HR 500 - 019 - A	19	68	49	470	-	-	~0,33
HR 500 - 025 - A	25	80	55	470	-	-	~0,36
HR 500 - 032 - A	32	94	62	470	-	-	~0,40
HR 500 - 038 - A	38	106	68	470	-	-	~0,44
HR 500 - 050 - A	50	130	80	470	-	-	~0,50
HR 500 - 063 - A	63	156	93	470	-	-	~0,57
HR 500 - 075 - A	75	180	105	470	-	-	~0,61
HR 500 - 080 - A	80	190	110	470	-	-	~0,66
HR 500 - 100 - A	100	230	130	470	-	-	~0,77
HR 500 - 125 - A	125	280	155	470	-	-	~0,90

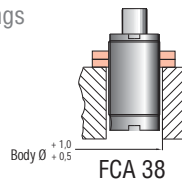
Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
Hauteur - Hauteur minimum, force maximum -
Mínima altura, máxima fuerza - Altura mínima, força máxima



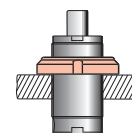
(10) HRF500-050-A

ORDER

Fixings



FCA 38



GM 38

Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
3,14
cm²

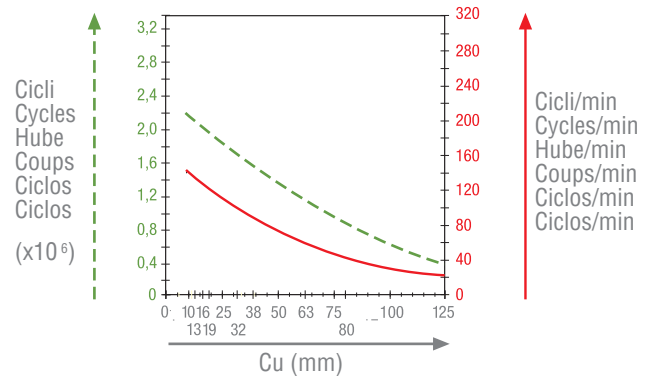
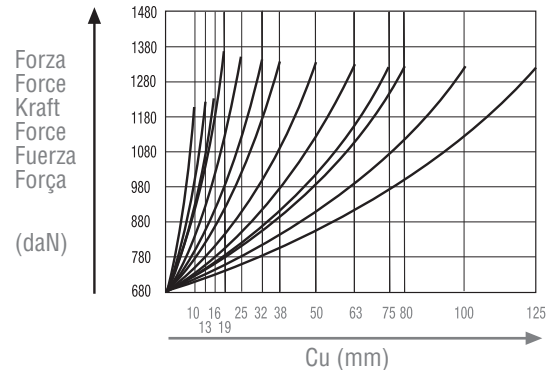
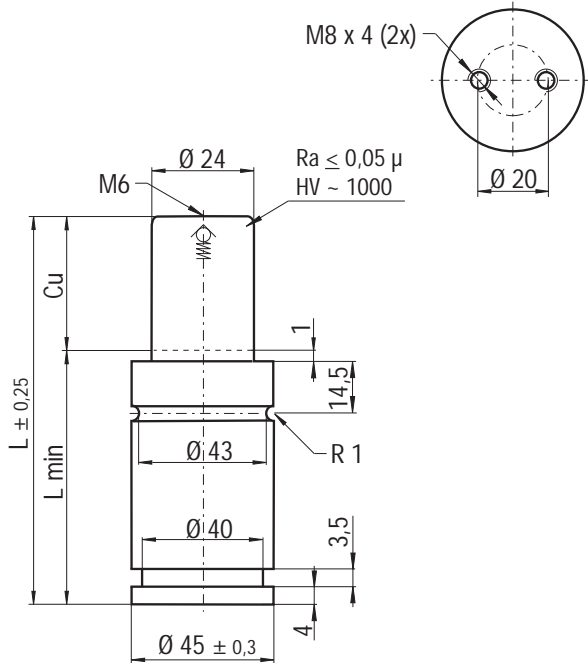


Maintenance kit
39BMHR00500A

Technical specifications

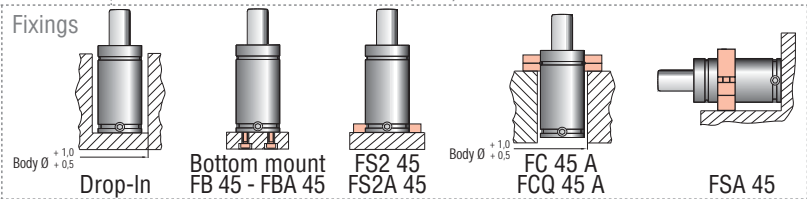
Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
HRF 500 - 005 - A	5	40	35	470	-	-	-0,22
HRF 500 - 010 - A	10	50	40	470	-	-	-0,25
HRF 500 - 013 - A	13	56	43	470	-	-	-0,27
HRF 500 - 016 - A	16	62	46	470	-	-	-0,29
HRF 500 - 019 - A	19	68	49	470	-	-	-0,31
HRF 500 - 025 - A	25	80	55	470	-	-	-0,33
HRF 500 - 032 - A	32	94	62	470	-	-	-0,37
HRF 500 - 038 - A	38	106	68	470	-	-	-0,40
HRF 500 - 050 - A	50	130	80	470	-	-	-0,47
HRF 500 - 063 - A	63	156	93	470	-	-	-0,54
HRF 500 - 075 - A	75	180	105	470	-	-	-0,59
HRF 500 - 080 - A	80	190	110	470	-	-	-0,63
HRF 500 - 100 - A	100	230	130	470	-	-	-0,75
HRF 500 - 125 - A	125	280	155	470	-	-	-0,88

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



HR
HRF

(10) HR700-050-A
ORDER

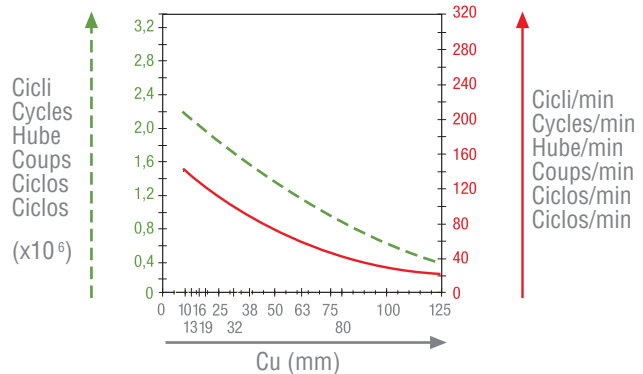
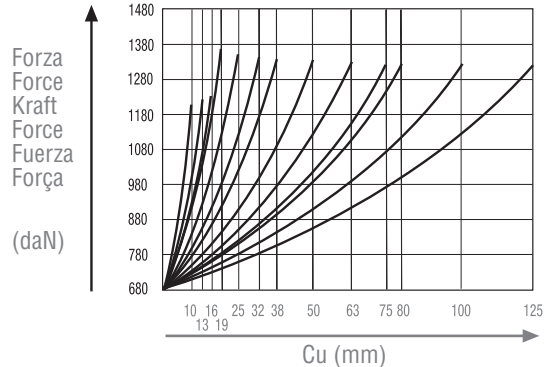
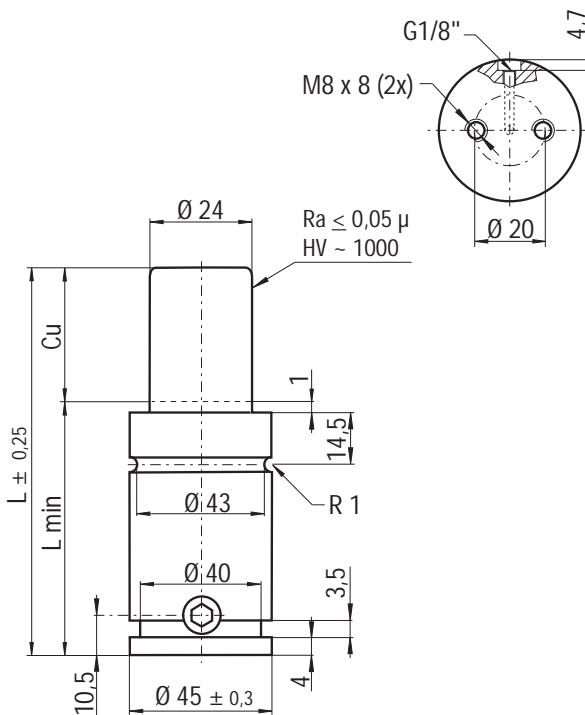


Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 4,52 cm ²		Maintenance kit 39BMHR00700A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
HR 700 - 010 - A	10	52	42	680	-	-	~0,39
HR 700 - 013 - A	13	58	45	680	-	-	~0,42
HR 700 - 016 - A	16	64	48	680	-	-	~0,45
HR 700 - 019 - A	19	70	51	680	-	-	~0,48
HR 700 - 025 - A	25	82	57	680	-	-	~0,53
HR 700 - 032 - A	32	96	64	680	-	-	~0,58
HR 700 - 038 - A	38	108	70	680	-	-	~0,62
HR 700 - 050 - A	50	132	82	680	-	-	~0,71
HR 700 - 063 - A	63	158	95	680	-	-	~0,81
HR 700 - 075 - A	75	182	107	680	-	-	~0,85
HR 700 - 080 - A	80	192	112	680	-	-	~0,93
HR 700 - 100 - A	100	232	132	680	-	-	~1,04
HR 700 - 125 - A	125	282	157	680	-	-	~1,28

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
Hauteur - Hauteur minimum, force maximum -
Mínima altura, máxima fuerza - Altura mínima, força máxima

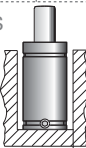


ORDER

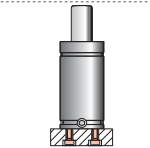
(10) HR700-050-A-N



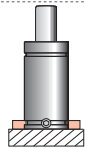
Fixings



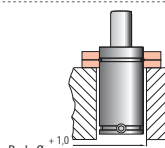
Drop-In



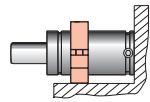
Bottom mount
FB 45 - FBA 45



FS2 45
FS2A 45



FC 45 A
FCQ 45 A



FSA 45

Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
4,52
cm²



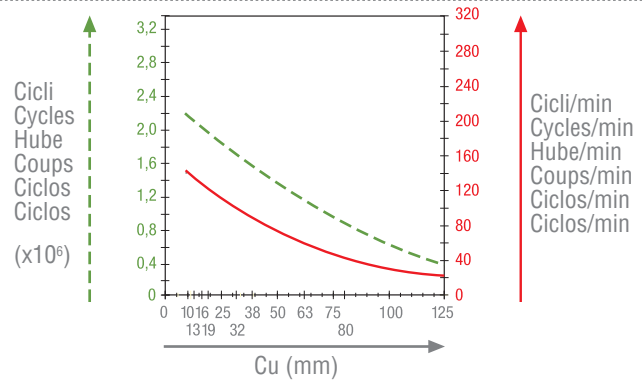
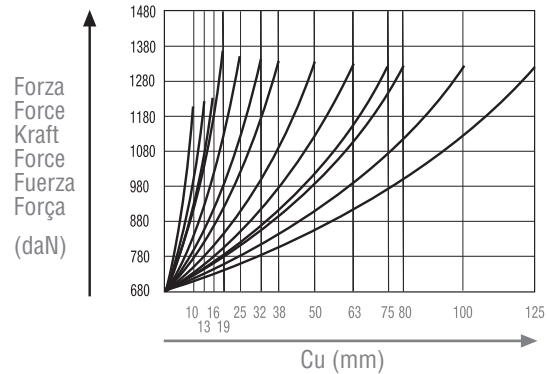
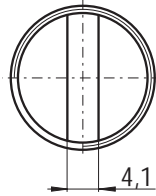
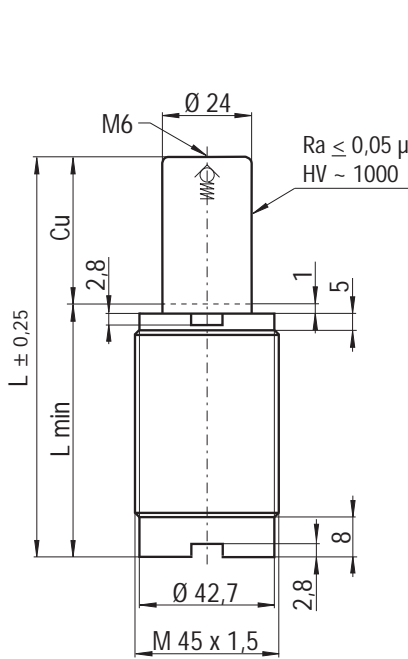
Maintenance kit
39BMHR00700A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimesh hose	Kg
HR 700 - 010 - A - N	10	62	52	680	13	HR 700 - 010 - A - N	-0,48
HR 700 - 013 - A - N	13	68	55	680	17	HR 700 - 013 - A - N	-0,52
HR 700 - 016 - A - N	16	74	58	680	20	HR 700 - 016 - A - N	-0,55
HR 700 - 019 - A - N	19	80	61	680	21	HR 700 - 019 - A - N	-0,58
HR 700 - 025 - A - N	25	92	67	680	28	HR 700 - 025 - A - N	-0,64
HR 700 - 032 - A - N	32	106	74	680	36	HR 700 - 032 - A - N	-0,68
HR 700 - 038 - A - N	38	118	80	680	44	HR 700 - 038 - A - N	-0,72
HR 700 - 050 - A - N	50	142	92	680	58	HR 700 - 050 - A - N	-0,85
HR 700 - 063 - A - N	63	168	105	680	73	HR 700 - 063 - A - N	-0,94
HR 700 - 075 - A - N	75	192	117	680	86	HR 700 - 075 - A - N	-0,98
HR 700 - 080 - A - N	80	202	122	680	93	HR 700 - 080 - A - N	-1,03
HR 700 - 100 - A - N	100	242	142	680	116	HR 700 - 100 - A - N	-1,16
HR 700 - 125 - A - N	125	292	167	680	145	HR 700 - 125 - A - N	-1,35

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



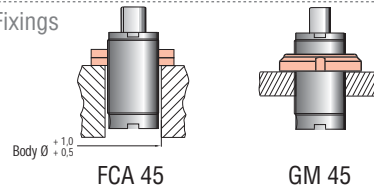
HR
HRF



(10) HRF700-050-A

ORDER

Fixings



FCA 45

GM 45

Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
4,52
cm²



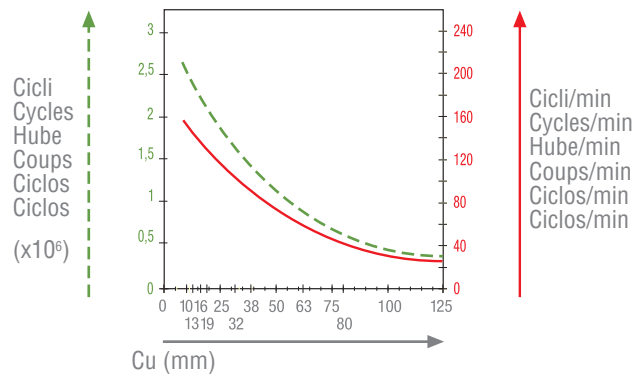
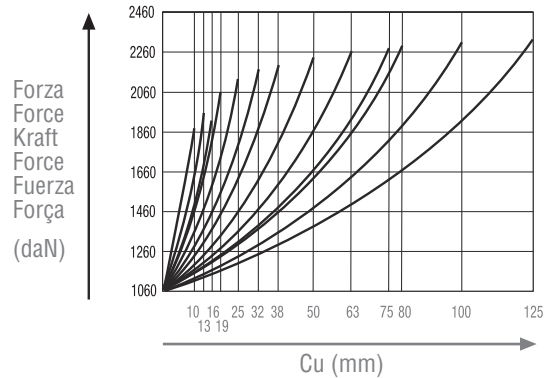
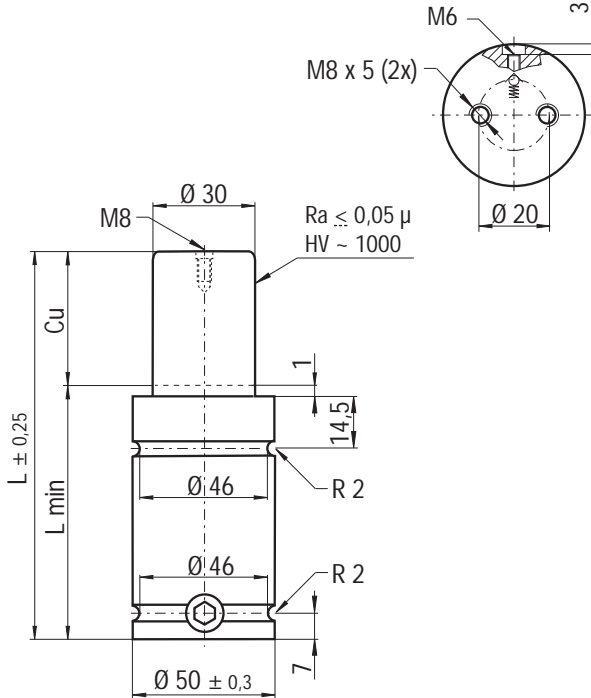
Maintenance kit
39BMHR00700A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		
							Kg
HRF 700 - 010 - A	10	52	42	680	-	-	~0,35
HRF 700 - 013 - A	13	58	45	680	-	-	~0,39
HRF 700 - 016 - A	16	64	48	680	-	-	~0,42
HRF 700 - 019 - A	19	70	51	680	-	-	~0,45
HRF 700 - 025 - A	25	82	57	680	-	-	~0,50
HRF 700 - 032 - A	32	96	64	680	-	-	~0,55
HRF 700 - 038 - A	38	108	70	680	-	-	~0,60
HRF 700 - 050 - A	50	132	82	680	-	-	~0,70
HRF 700 - 063 - A	63	158	95	680	-	-	~0,80
HRF 700 - 075 - A	75	182	107	680	-	-	~0,83
HRF 700 - 080 - A	80	192	112	680	-	-	~0,89
HRF 700 - 100 - A	100	232	132	680	-	-	~0,99
HRF 700 - 125 - A	125	282	157	680	-	-	~1,26

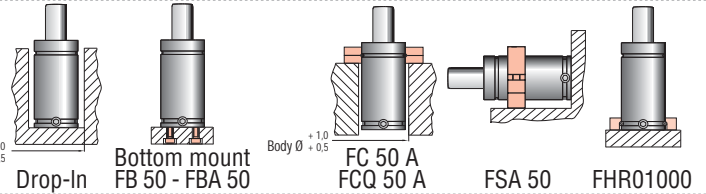


Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



(10) HR1000-050-A
ORDER (10) HR1000-050-A-NA

Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
7,07
cm²



Maintenance kit
39BMHR01000A

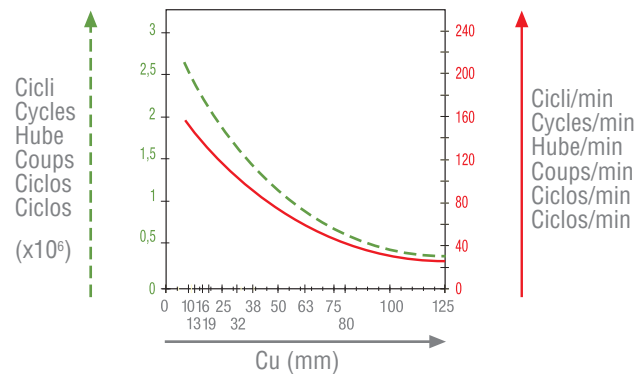
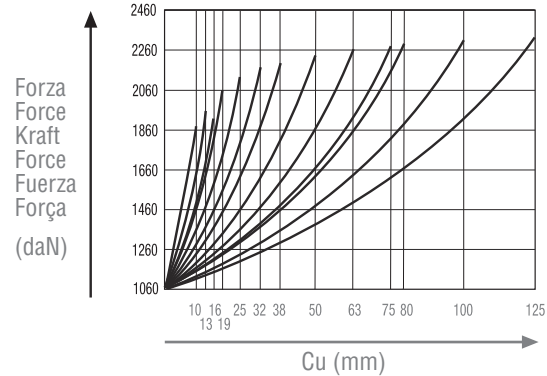
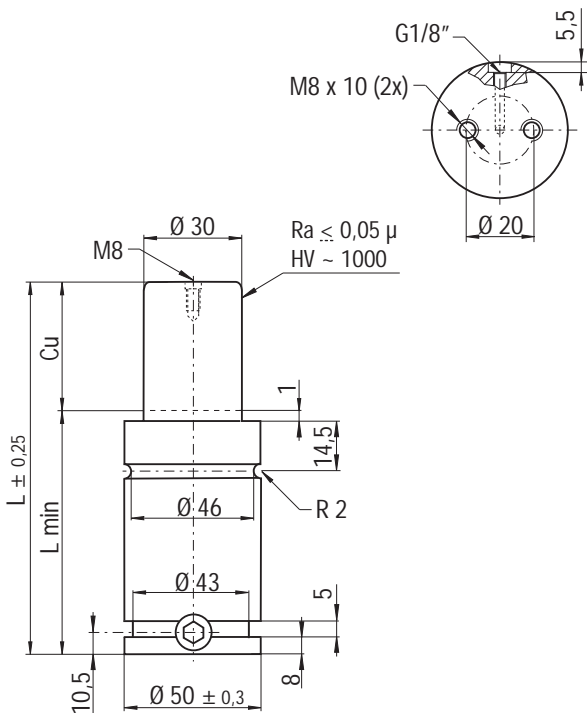
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
HR 1000 - 010 - A	10	58	48	1060	25	HR 1000 - 010 - A - NA	-0,57
HR 1000 - 013 - A	13	64	51	1060	30	HR 1000 - 013 - A - NA	-0,59
HR 1000 - 016 - A	16	70	54	1060	35	HR 1000 - 016 - A - NA	-0,62
HR 1000 - 019 - A	19	76	57	1060	40	HR 1000 - 019 - A - NA	-0,65
HR 1000 - 025 - A	25	88	63	1060	49	HR 1000 - 025 - A - NA	-0,70
HR 1000 - 032 - A	32	102	70	1060	60	HR 1000 - 032 - A - NA	-0,77
HR 1000 - 038 - A	38	114	76	1060	70	HR 1000 - 038 - A - NA	-0,83
HR 1000 - 050 - A	50	138	88	1060	88	HR 1000 - 050 - A - NA	-0,94
HR 1000 - 063 - A	63	164	101	1060	109	HR 1000 - 063 - A - NA	-1,07
HR 1000 - 075 - A	75	188	113	1060	128	HR 1000 - 075 - A - NA	-1,16
HR 1000 - 080 - A	80	198	118	1060	136	HR 1000 - 080 - A - NA	-1,21
HR 1000 - 100 - A	100	238	138	1060	167	HR 1000 - 100 - A - NA	-1,43
HR 1000 - 125 - A	125	288	163	1060	206	HR 1000 - 125 - A - NA	-1,70

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima

PED FIAT spec.
 97/23/EG



HR
 HRF

ORDER (10) HR1000-050-A-N

Fixings: Drop-In, Bottom mount FB 50 - FBA 50, FS2 50 FS2A 50, FC 50 A FCQ 50 A, FSA 50

Max. Speed: 1,8 m/s

Temperature: 32 °F / 0 °C to 176 °F / 80 °C

Gas: N₂

Pressure: P max 150 bar / 2175 psi, P min 20 bar / 290 psi

Stroke: S 7,07 cm²

Maintenance kit: 39BMHR01000A

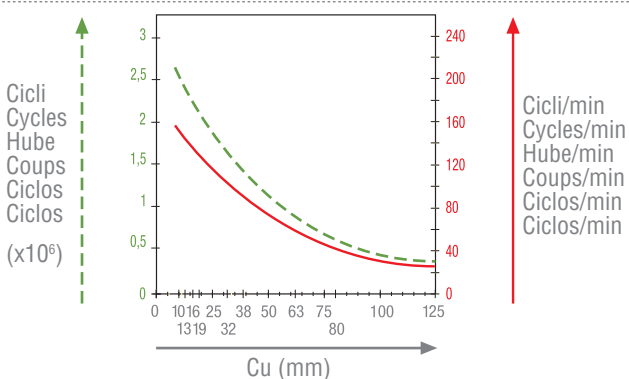
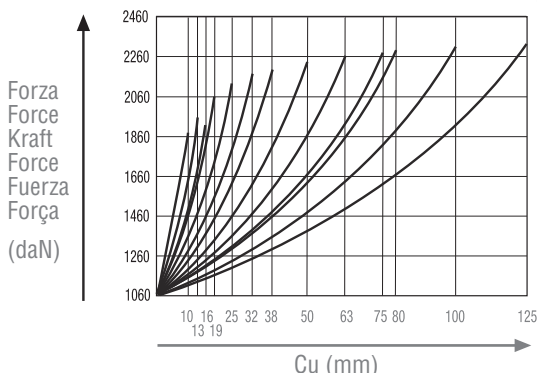
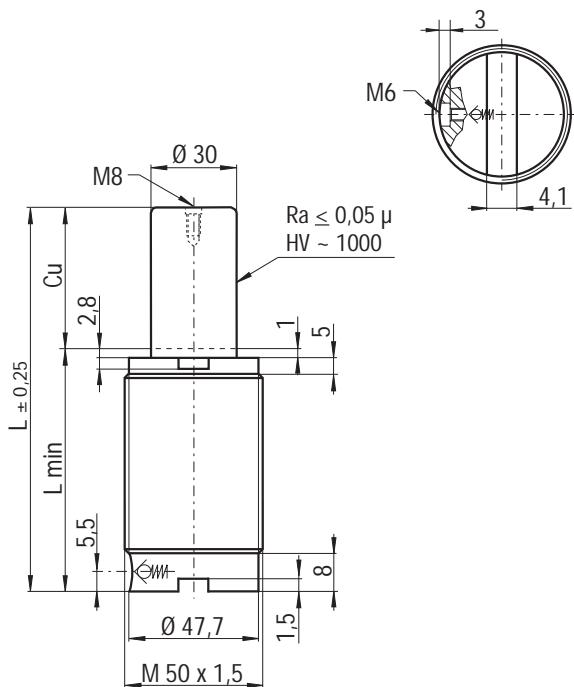
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
HR 1000 - 010 - A - N	10	68	58	1060	25	HR 1000 - 010 - A - N	-0,57
HR 1000 - 013 - A - N	13	74	61	1060	30	HR 1000 - 013 - A - N	-0,59
HR 1000 - 016 - A - N	16	80	64	1060	35	HR 1000 - 016 - A - N	-0,62
HR 1000 - 019 - A - N	19	86	67	1060	40	HR 1000 - 019 - A - N	-0,65
HR 1000 - 025 - A - N	25	98	73	1060	49	HR 1000 - 025 - A - N	-0,70
HR 1000 - 032 - A - N	32	112	80	1060	60	HR 1000 - 032 - A - N	-0,77
HR 1000 - 038 - A - N	38	124	86	1060	70	HR 1000 - 038 - A - N	-0,83
HR 1000 - 050 - A - N	50	148	98	1060	88	HR 1000 - 050 - A - N	-0,94
HR 1000 - 063 - A - N	63	174	111	1060	109	HR 1000 - 063 - A - N	-1,07
HR 1000 - 075 - A - N	75	198	123	1060	128	HR 1000 - 075 - A - N	-1,16
HR 1000 - 080 - A - N	80	208	128	1060	136	HR 1000 - 080 - A - N	-1,21
HR 1000 - 100 - A - N	100	248	148	1060	167	HR 1000 - 100 - A - N	-1,43
HR 1000 - 125 - A - N	125	298	173	1060	206	HR 1000 - 125 - A - N	-1,70

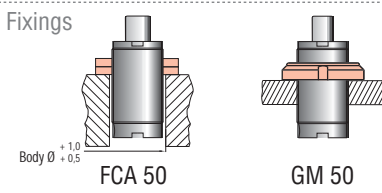
Info pg. 187



Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



(10) HRF1000-050-A
ORDER (10) HRF1000-050-A-NA



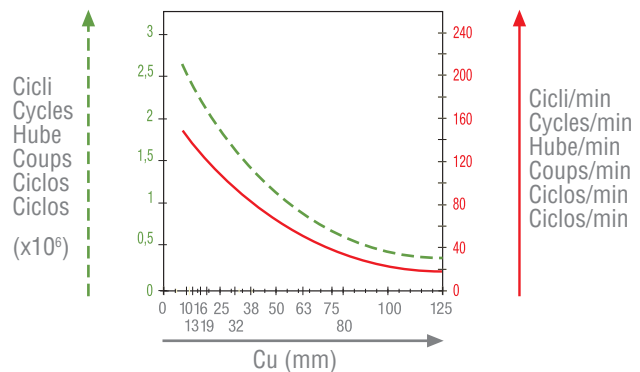
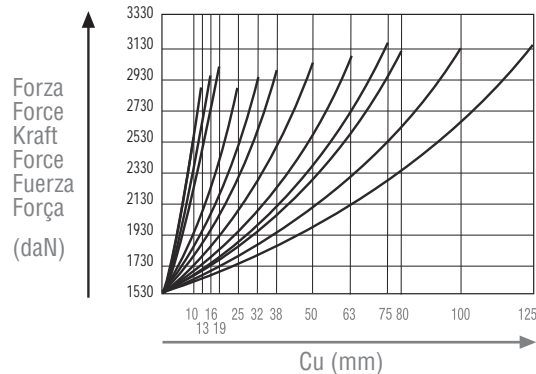
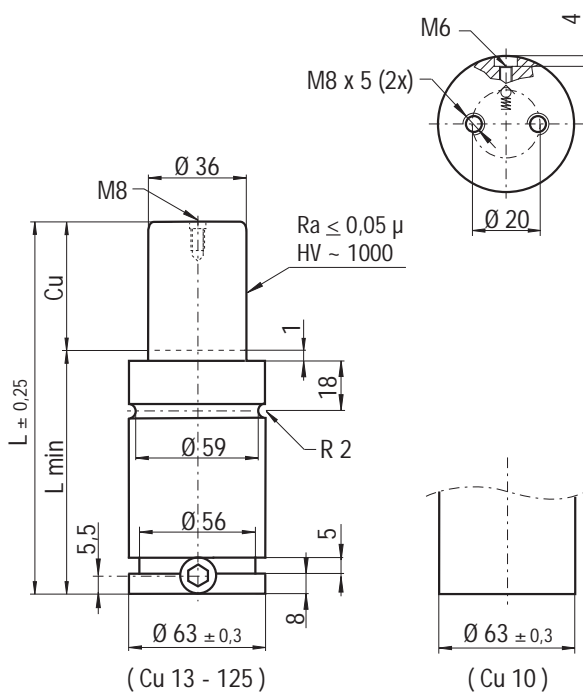
Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 7,07 cm ²			Maintenance kit 39BMHR01000A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
HRF 1000 - 010 - A	10	58	48	1060	25	HRF 1000 - 010 - A - NA	-0,53
HRF 1000 - 013 - A	13	64	51	1060	30	HRF 1000 - 013 - A - NA	-0,55
HRF 1000 - 016 - A	16	70	54	1060	35	HRF 1000 - 016 - A - NA	-0,57
HRF 1000 - 019 - A	19	76	57	1060	40	HRF 1000 - 019 - A - NA	-0,60
HRF 1000 - 025 - A	25	88	63	1060	49	HRF 1000 - 025 - A - NA	-0,66
HRF 1000 - 032 - A	32	102	70	1060	60	HRF 1000 - 032 - A - NA	-0,73
HRF 1000 - 038 - A	38	114	76	1060	70	HRF 1000 - 038 - A - NA	-0,79
HRF 1000 - 050 - A	50	138	88	1060	88	HRF 1000 - 050 - A - NA	-0,90
HRF 1000 - 063 - A	63	164	101	1060	109	HRF 1000 - 063 - A - NA	-1,03
HRF 1000 - 075 - A	75	188	113	1060	128	HRF 1000 - 075 - A - NA	-1,13
HRF 1000 - 080 - A	80	198	118	1060	136	HRF 1000 - 080 - A - NA	-1,18
HRF 1000 - 100 - A	100	238	138	1060	167	HRF 1000 - 100 - A - NA	-1,39
HRF 1000 - 125 - A	125	288	163	1060	206	HRF 1000 - 125 - A - NA	-1,66

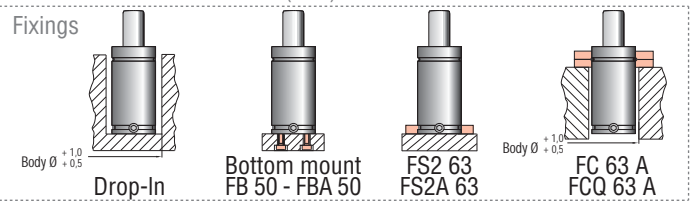
Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



HR
HRF

(10) HR1500-050-A
ORDER (10) HR1500-050-A-NA



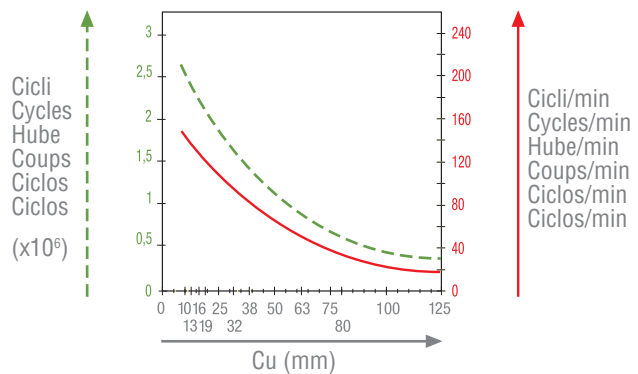
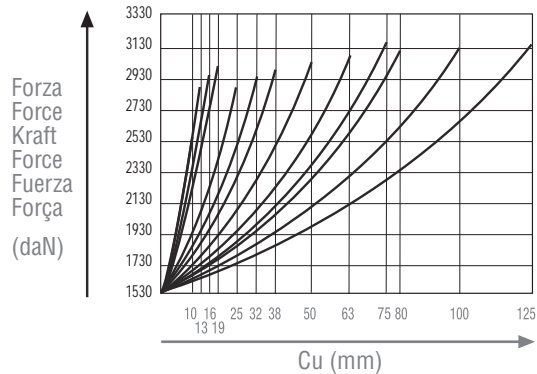
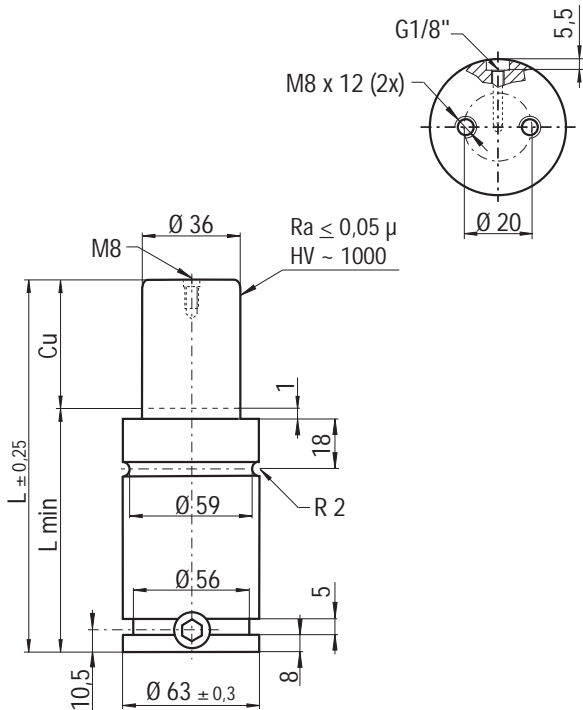
Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 10,18 cm ²		Maintenance kit 39BMHR01500A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
HR 1500 - 010 - A	10	64	54	1530	32	HR 1500 - 010 - A - NA	-1,02
HR 1500 - 013 - A	13	70	57	1530	39	HR 1500 - 013 - A - NA	-1,05
HR 1500 - 016 - A	16	76	60	1530	47	HR 1500 - 016 - A - NA	-1,10
HR 1500 - 019 - A	19	82	63	1530	54	HR 1500 - 019 - A - NA	-1,15
HR 1500 - 025 - A	25	94	69	1530	68	HR 1500 - 025 - A - NA	-1,25
HR 1500 - 032 - A	32	108	76	1530	85	HR 1500 - 032 - A - NA	-1,35
HR 1500 - 038 - A	38	120	82	1530	99	HR 1500 - 038 - A - NA	-1,44
HR 1500 - 050 - A	50	144	94	1530	128	HR 1500 - 050 - A - NA	-1,61
HR 1500 - 063 - A	63	170	107	1530	158	HR 1500 - 063 - A - NA	-1,81
HR 1500 - 075 - A	75	194	119	1530	187	HR 1500 - 075 - A - NA	-1,90
HR 1500 - 080 - A	80	204	124	1530	199	HR 1500 - 080 - A - NA	-2,06
HR 1500 - 100 - A	100	244	144	1530	246	HR 1500 - 100 - A - NA	-2,38
HR 1500 - 125 - A	125	294	169	1530	306	HR 1500 - 125 - A - NA	-2,86

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
Hauteur - Hauteur minimum, force maximum -
Mínima altura, máxima fuerza - Altura mínima, força máxima

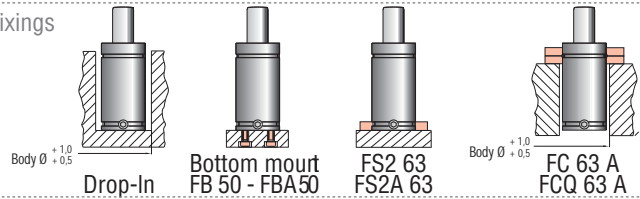


ORDER

(10) HR1500-050-A-N



Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
10,18
cm²



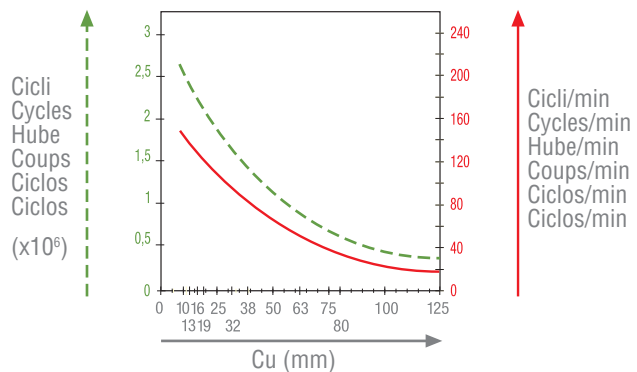
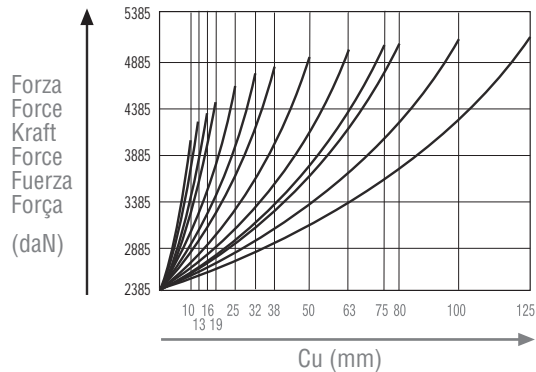
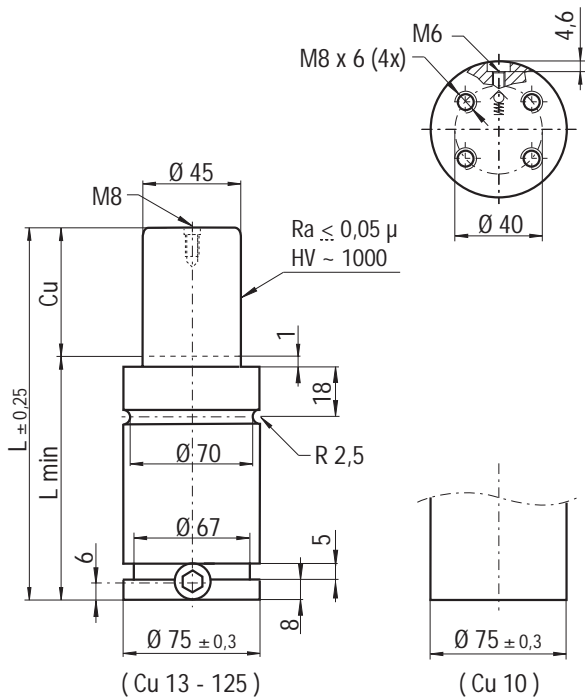
Maintenance kit
39BMHR01500A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
HR 1500 - 010 - A - N	10	74	64	1530	32	HR 1500 - 010 - A - N	-1,02
HR 1500 - 013 - A - N	13	80	67	1530	39	HR 1500 - 013 - A - N	-1,05
HR 1500 - 016 - A - N	16	86	70	1530	47	HR 1500 - 016 - A - N	-1,10
HR 1500 - 019 - A - N	19	92	73	1530	54	HR 1500 - 019 - A - N	-1,15
HR 1500 - 025 - A - N	25	104	79	1530	68	HR 1500 - 025 - A - N	-1,25
HR 1500 - 032 - A - N	32	118	86	1530	85	HR 1500 - 032 - A - N	-1,35
HR 1500 - 038 - A - N	38	130	92	1530	99	HR 1500 - 038 - A - N	-1,44
HR 1500 - 050 - A - N	50	154	104	1530	128	HR 1500 - 050 - A - N	-1,61
HR 1500 - 063 - A - N	63	180	117	1530	158	HR 1500 - 063 - A - N	-1,81
HR 1500 - 075 - A - N	75	204	129	1530	187	HR 1500 - 075 - A - N	-1,90
HR 1500 - 080 - A - N	80	214	134	1530	199	HR 1500 - 080 - A - N	-2,06
HR 1500 - 100 - A - N	100	254	154	1530	246	HR 1500 - 100 - A - N	-2,38
HR 1500 - 125 - A - N	125	304	179	1530	306	HR 1500 - 125 - A - N	-2,86

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



HR
HRF

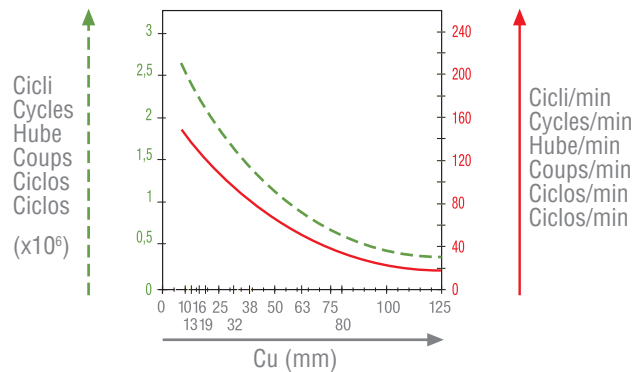
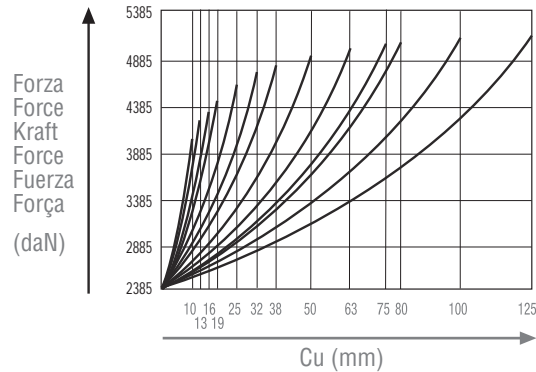
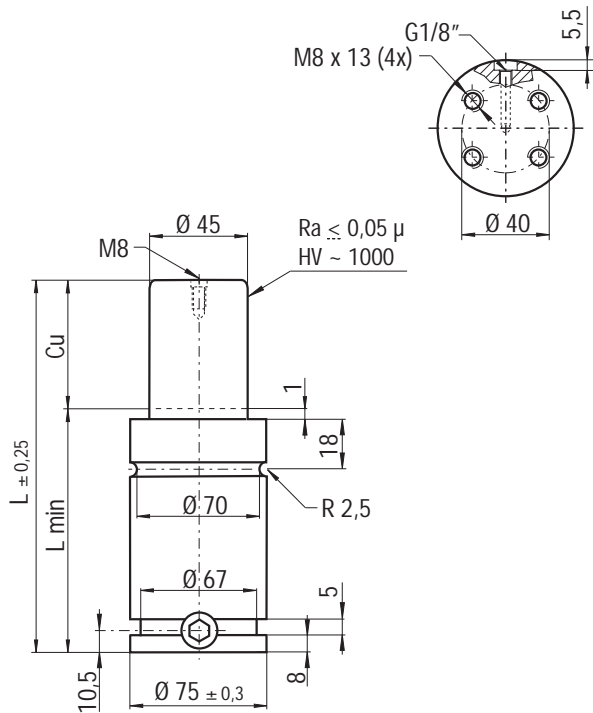
(10) HR2400-050-A ORDER (10) HR2400-050-A-NA		Fixings Drop-in Bottom mount FB 75 - FBA 75 FS2 75 FS2A 75 FC 75 A FCQ 75 A FSA 75					Maintenance kit 39BMHR02400A
		Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
HR 2400 - 010 - A	10	65	55	2385	50	HR 2400 - 010 - A - NA	-1,47
HR 2400 - 013 - A	13	71	58	2385	61	HR 2400 - 013 - A - NA	-1,52
HR 2400 - 016 - A	16	77	61	2385	72	HR 2400 - 016 - A - NA	-1,58
HR 2400 - 019 - A	19	83	64	2385	82	HR 2400 - 019 - A - NA	-1,65
HR 2400 - 025 - A	25	95	70	2385	104	HR 2400 - 025 - A - NA	-1,77
HR 2400 - 032 - A	32	109	77	2385	129	HR 2400 - 032 - A - NA	-1,93
HR 2400 - 038 - A	38	121	83	2385	150	HR 2400 - 038 - A - NA	-2,05
HR 2400 - 050 - A	50	145	95	2385	193	HR 2400 - 050 - A - NA	-2,30
HR 2400 - 063 - A	63	171	108	2385	240	HR 2400 - 063 - A - NA	-2,55
HR 2400 - 075 - A	75	195	120	2385	283	HR 2400 - 075 - A - NA	-2,75
HR 2400 - 080 - A	80	205	125	2385	301	HR 2400 - 080 - A - NA	-2,85
HR 2400 - 100 - A	100	245	145	2385	372	HR 2400 - 100 - A - NA	-3,28
HR 2400 - 125 - A	125	295	170	2385	462	HR 2400 - 125 - A - NA	-3,93

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
Hauteur - Hauteur minimum, force maximum -
Mínima altura, máxima fuerza - Altura mínima, força máxima

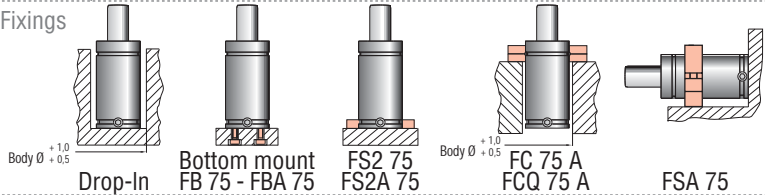


ORDER

(10) HR2400-050-A-N



Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
15,90
cm²



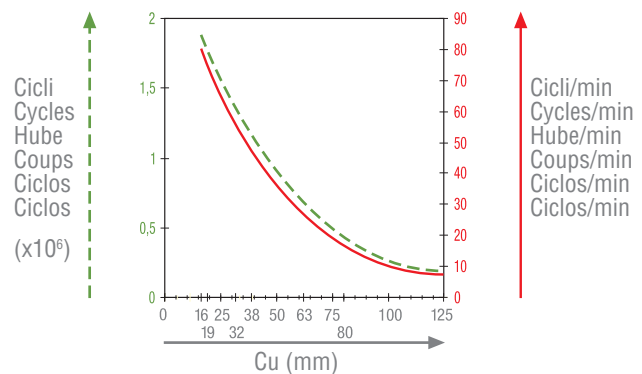
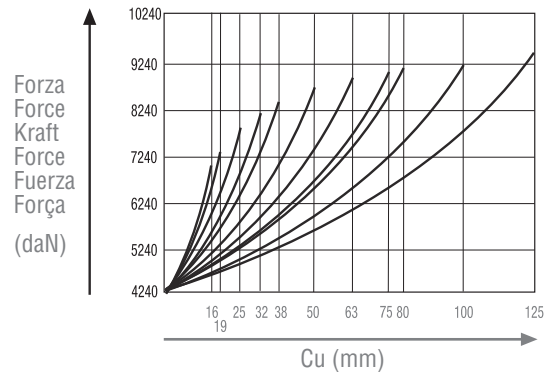
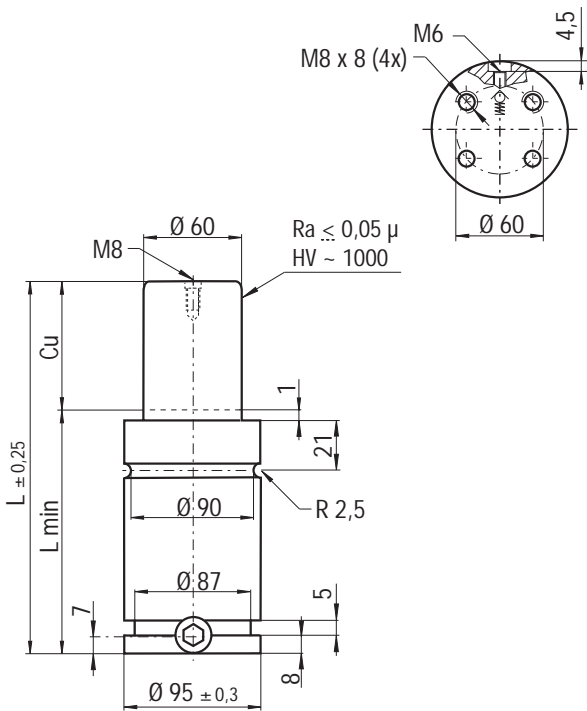
Maintenance kit
39BMHR02400A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
HR 2400 - 010 - A - N	10	75	65	2385	50	HR 2400 - 010 - A - N	-1,76
HR 2400 - 013 - A - N	13	81	68	2385	61	HR 2400 - 013 - A - N	-1,82
HR 2400 - 016 - A - N	16	87	71	2385	72	HR 2400 - 016 - A - N	-1,89
HR 2400 - 019 - A - N	19	93	74	2385	82	HR 2400 - 019 - A - N	-1,94
HR 2400 - 025 - A - N	25	105	80	2385	104	HR 2400 - 025 - A - N	-2,03
HR 2400 - 032 - A - N	32	119	87	2385	129	HR 2400 - 032 - A - N	-2,16
HR 2400 - 038 - A - N	38	131	93	2385	150	HR 2400 - 038 - A - N	-2,30
HR 2400 - 050 - A - N	50	155	105	2385	193	HR 2400 - 050 - A - N	-2,56
HR 2400 - 063 - A - N	63	181	118	2385	240	HR 2400 - 063 - A - N	-2,79
HR 2400 - 075 - A - N	75	205	130	2385	283	HR 2400 - 075 - A - N	-2,90
HR 2400 - 080 - A - N	80	215	135	2385	301	HR 2400 - 080 - A - N	-3,12
HR 2400 - 100 - A - N	100	255	155	2385	372	HR 2400 - 100 - A - N	-3,62
HR 2400 - 125 - A - N	125	305	180	2385	462	HR 2400 - 125 - A - N	-4,02

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



HR
HRF

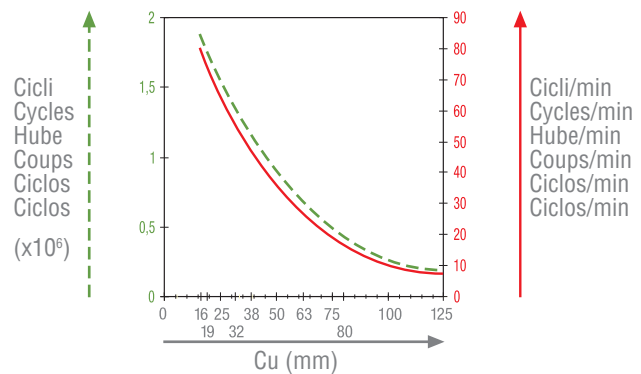
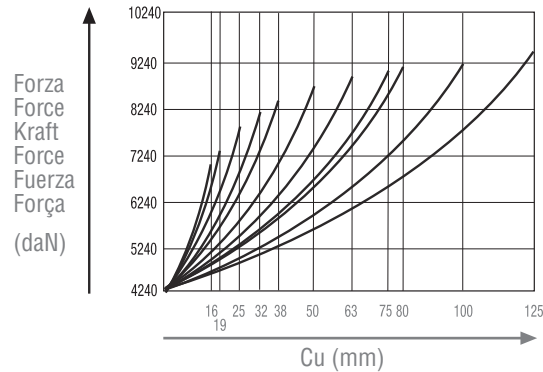
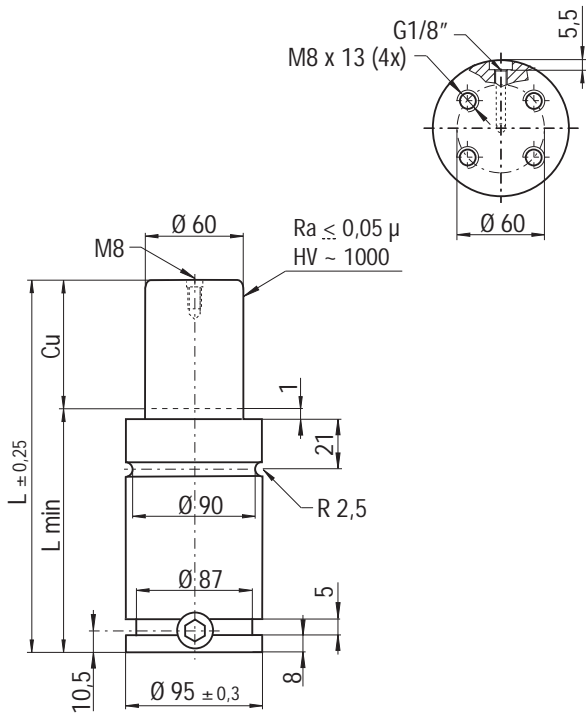
(10) HR4200-050-A ORDER (10) HR4200-050-A-NA			P max 150 bar 2175 psi	P min 20 bar 290 psi	S 28,27 cm ²		Maintenance kit 39BMHR04200A	
								Fixings
Drop-in		Bottom mount FB 95 - FBA 95		FS2 95 FS2A 95		FC 95 A FCQ 95 A		FSA 95

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
HR 4200 - 016 - A	16	97	81	4240	144	HR 4200 - 016 - A - NA	-3,40
HR 4200 - 019 - A	19	103	84	4240	162	HR 4200 - 019 - A - NA	-3,45
HR 4200 - 025 - A	25	115	90	4240	198	HR 4200 - 025 - A - NA	-3,65
HR 4200 - 032 - A	32	129	97	4240	240	HR 4200 - 032 - A - NA	-3,82
HR 4200 - 038 - A	38	141	103	4240	276	HR 4200 - 038 - A - NA	-4,00
HR 4200 - 050 - A	50	165	115	4240	348	HR 4200 - 050 - A - NA	-4,44
HR 4200 - 063 - A	63	191	128	4240	425	HR 4200 - 063 - A - NA	-4,95
HR 4200 - 075 - A	75	215	140	4240	497	HR 4200 - 075 - A - NA	-5,20
HR 4200 - 080 - A	80	225	145	4240	527	HR 4200 - 080 - A - NA	-5,41
HR 4200 - 100 - A	100	265	165	4240	647	HR 4200 - 100 - A - NA	-6,00
HR 4200 - 125 - A	125	315	190	4240	797	HR 4200 - 125 - A - NA	-6,70

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
Hauteur - Hauteur minimum, force maximum -
Mínima altura, máxima fuerza - Altura mínima, força máxima

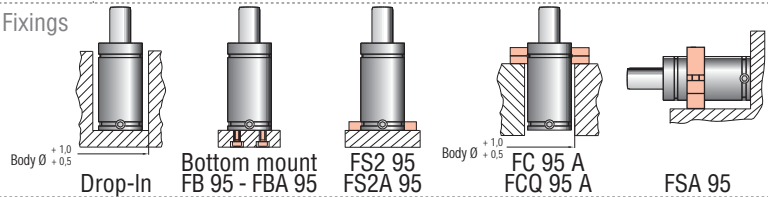


ORDER

(10) HR4200-050-A-N



Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
28,27
cm²



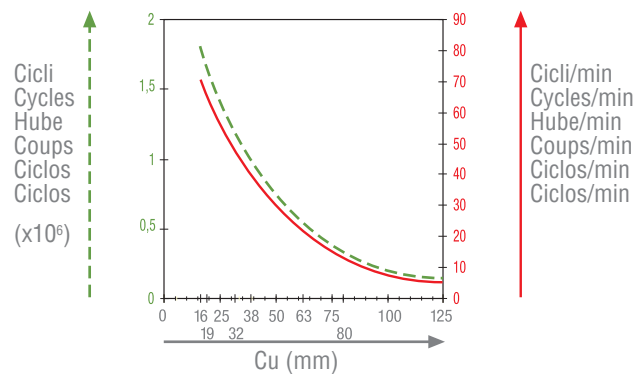
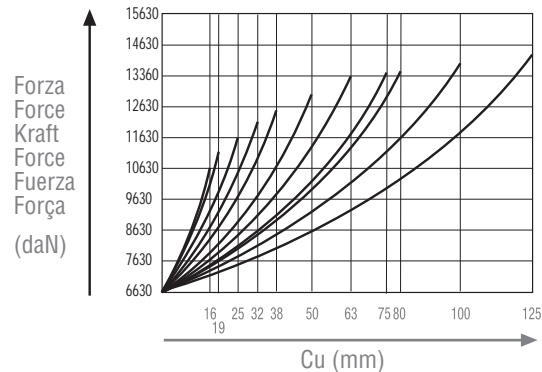
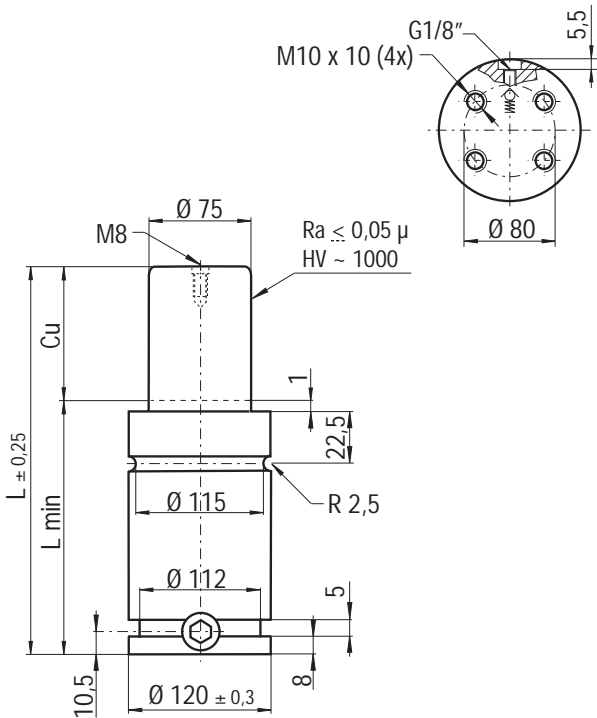
Maintenance kit
39BMHR04200A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
HR 4200 - 016 - A - N	16	107	91	4240	144	HR 4200 - 016 - A - N	-4,00
HR 4200 - 019 - A - N	19	113	94	4240	162	HR 4200 - 019 - A - N	-4,05
HR 4200 - 025 - A - N	25	125	100	4240	198	HR 4200 - 025 - A - N	-4,16
HR 4200 - 032 - A - N	32	139	107	4240	240	HR 4200 - 032 - A - N	-4,39
HR 4200 - 038 - A - N	38	151	113	4240	276	HR 4200 - 038 - A - N	-4,56
HR 4200 - 050 - A - N	50	175	125	4240	348	HR 4200 - 050 - A - N	-4,81
HR 4200 - 063 - A - N	63	201	138	4240	425	HR 4200 - 063 - A - N	-5,35
HR 4200 - 075 - A - N	75	225	150	4240	497	HR 4200 - 075 - A - N	-5,55
HR 4200 - 080 - A - N	80	235	155	4240	527	HR 4200 - 080 - A - N	-5,83
HR 4200 - 100 - A - N	100	275	175	4240	647	HR 4200 - 100 - A - N	-6,51
HR 4200 - 125 - A - N	125	325	200	4240	797	HR 4200 - 125 - A - N	-7,26

Info pg. 187

Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



HR
HRF

(10) HR6600-050-A ORDER (10) HR6600-050-A-N		Fixings Drop-in Bottom mount FB 120 - FBA 120 FS2 120 FS2A 120 FC 120 A FCQ 120 A FSA 120					Maintenance kit 39BMHR06600A
		Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	

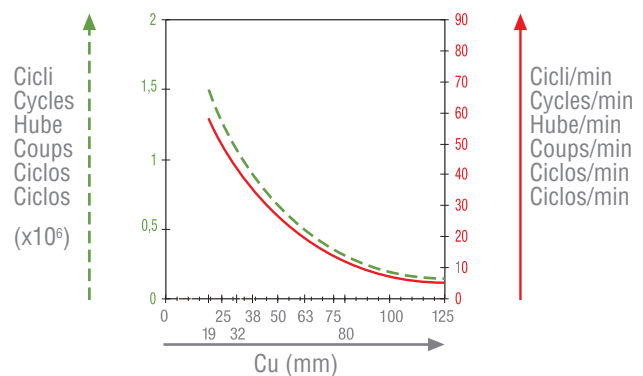
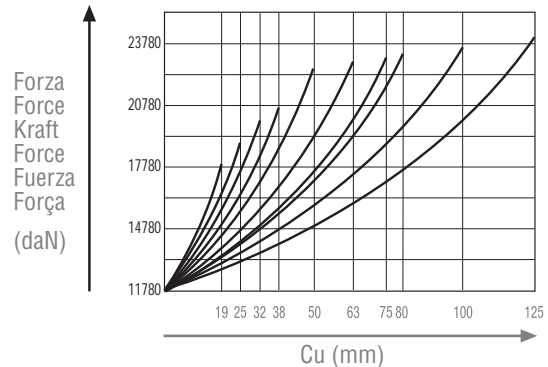
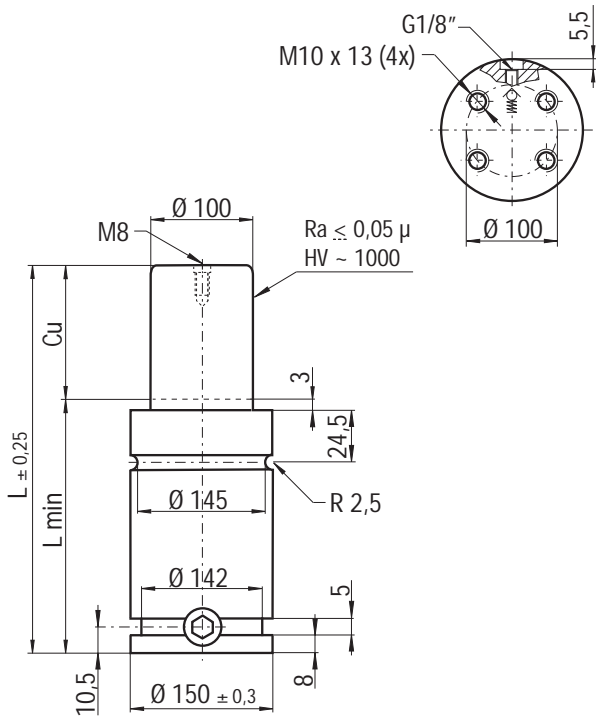
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Mininess hose	Kg
HR 6600 - 016 - A	16	107	91	6630	239	HR 6600 - 016 - A - N	-6,60
HR 6600 - 019 - A	19	113	94	6630	267	HR 6600 - 019 - A - N	-6,65
HR 6600 - 025 - A	25	125	100	6630	325	HR 6600 - 025 - A - N	-6,82
HR 6600 - 032 - A	32	139	107	6630	390	HR 6600 - 032 - A - N	-7,18
HR 6600 - 038 - A	38	151	113	6630	448	HR 6600 - 038 - A - N	-7,57
HR 6600 - 050 - A	50	175	125	6630	561	HR 6600 - 050 - A - N	-8,18
HR 6600 - 063 - A	63	201	138	6630	684	HR 6600 - 063 - A - N	-8,81
HR 6600 - 075 - A	75	225	150	6630	797	HR 6600 - 075 - A - N	-8,95
HR 6600 - 080 - A	80	235	155	6630	845	HR 6600 - 080 - A - N	-9,10
HR 6600 - 100 - A	100	275	175	6630	1034	HR 6600 - 100 - A - N	-10,7
HR 6600 - 125 - A	125	325	200	6630	1271	HR 6600 - 125 - A - N	-12,5

Info pg. 187



Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale Leistung
 Hauteur - Hauteur minimum, force maximum -
 Mínima altura, máxima fuerza - Altura mínima, força máxima



(10) HR11800-050-A ORDER (10) HR11800-050-A-N	Fixings 						
	Body Ø $+1.0$ / $+0.5$	Body Ø $+1.0$ / $+0.5$	Body Ø $+1.0$ / $+0.5$	Body Ø $+1.0$ / $+0.5$	Body Ø $+1.0$ / $+0.5$		
Max. Speed 1,8 m/s	°F 32 °C 0 176 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 78,54 cm ²		Maintenance kit 39BMHR11800A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	 Kg
HR 11800 - 019 - A	19	116	97	11780	559	HR 11800 - 019 - A - N	-9,57
HR 11800 - 025 - A	25	128	103	11780	663	HR 11800 - 025 - A - N	-9,96
HR 11800 - 032 - A	32	142	110	11780	784	HR 11800 - 032 - A - N	-10,41
HR 11800 - 038 - A	38	154	116	11780	887	HR 11800 - 038 - A - N	-10,81
HR 11800 - 050 - A	50	178	128	11780	1095	HR 11800 - 050 - A - N	-11,59
HR 11800 - 063 - A	63	204	141	11780	1320	HR 11800 - 063 - A - N	-11,88
HR 11800 - 075 - A	75	228	153	11780	1527	HR 11800 - 075 - A - N	-12,21
HR 11800 - 080 - A	80	238	158	11780	1614	HR 11800 - 080 - A - N	-12,43
HR 11800 - 100 - A	100	278	178	11780	1960	HR 11800 - 100 - A - N	-13,51
HR 11800 - 125 - A	125	328	203	11780	2392	HR 11800 - 125 - A - N	-15,14

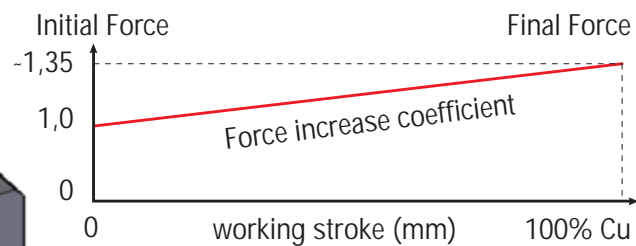
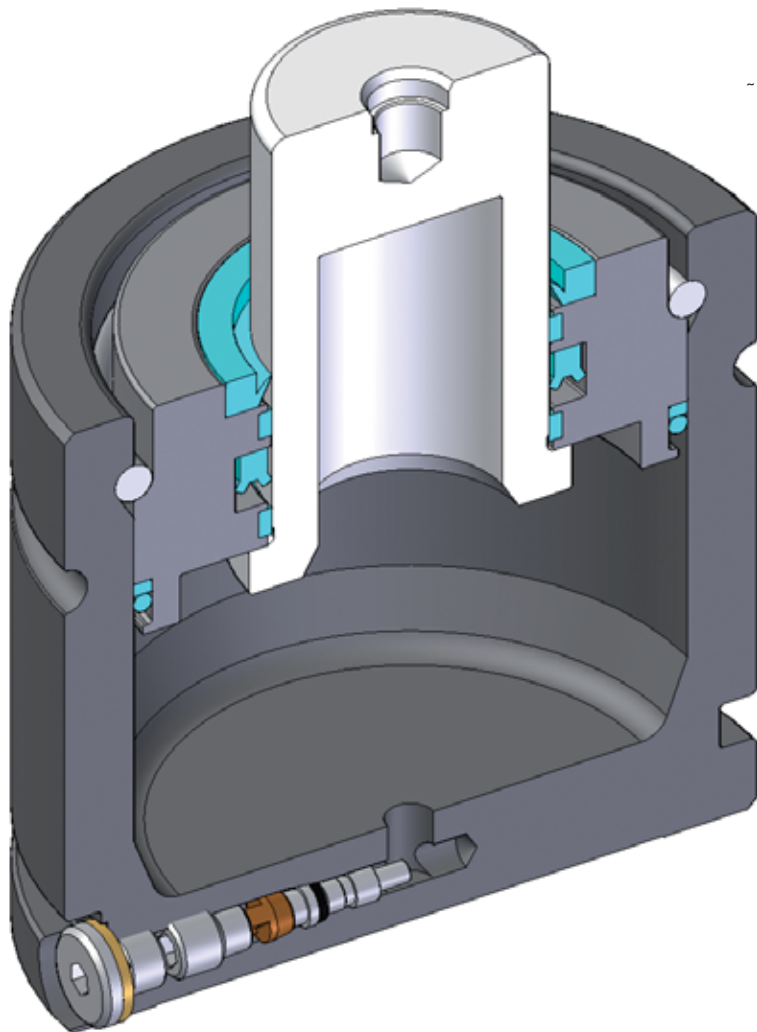
Info pg. 187




HR
HRF

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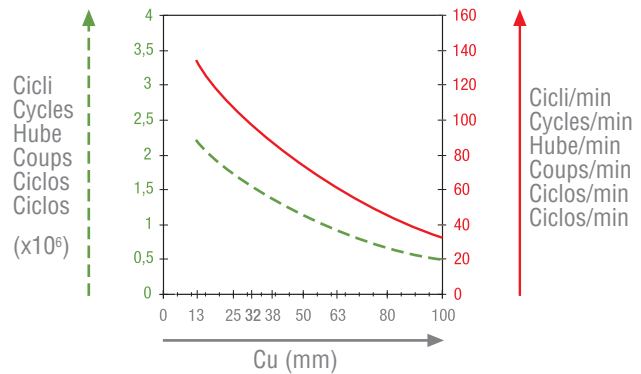
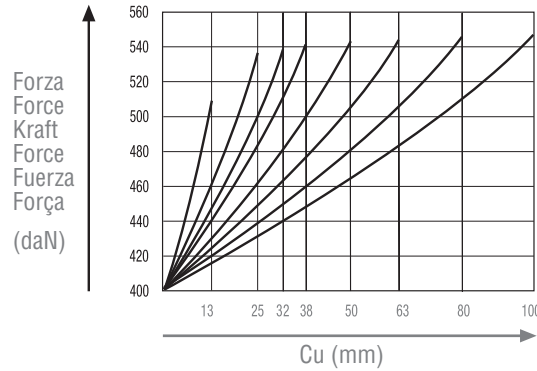
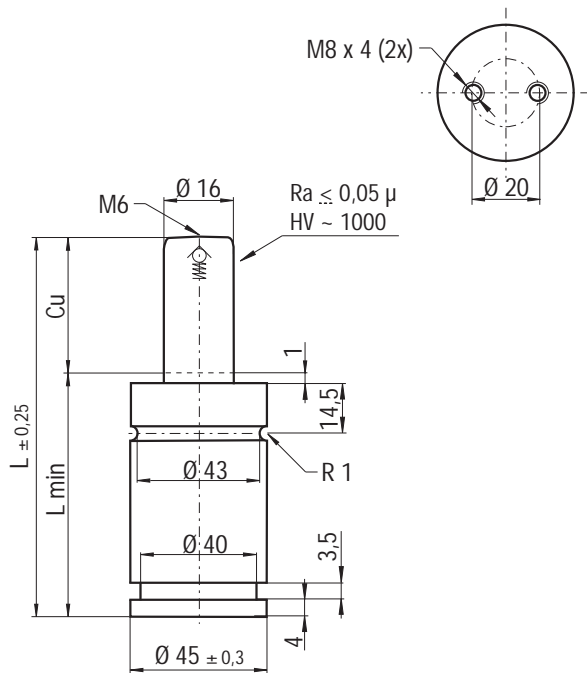
Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão



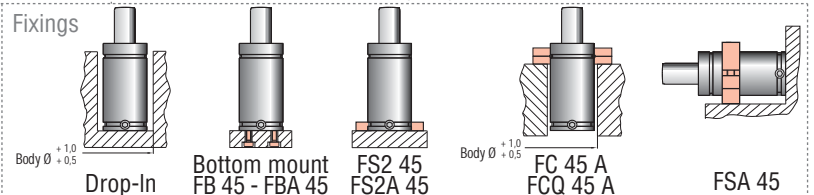
Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
LI 400	45	13 - 100	400	-	-	-
LI 400 N	45	13 - 100	400	-	-	-
LI 900	63	25 - 125	900	-	-	-
LI 900 N	63	25 - 125	900	-	-	-
LI 1400	75	25 - 125	1410	-	-	-
LI 1400 N	75	25 - 125	1410	-	-	-
LI 2000	95	25 - 125	2035	-	-	-
LI 2000 N	95	25 - 125	2035	-	-	-
LI 3200	120	25 - 125	3180	-	-	-

Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
 Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão



(10) LI400-050-A



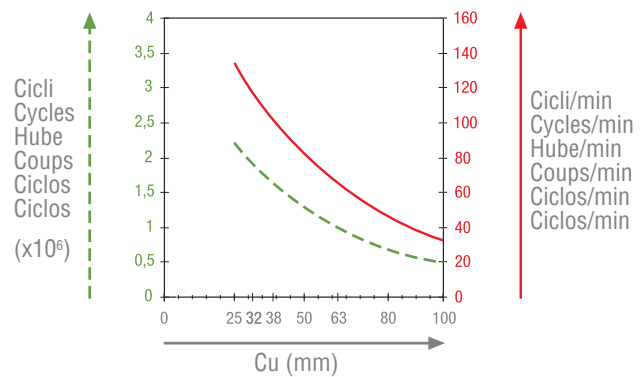
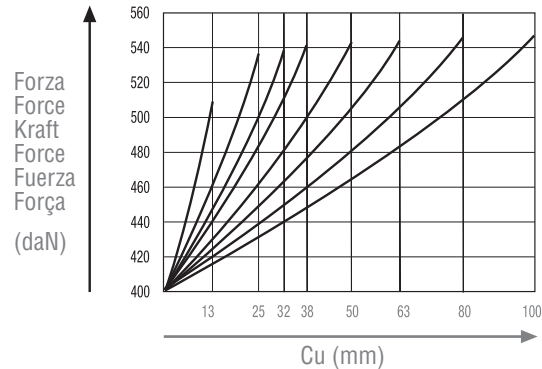
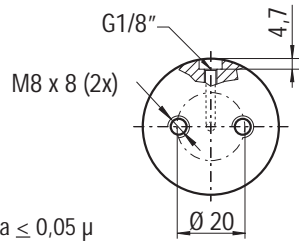
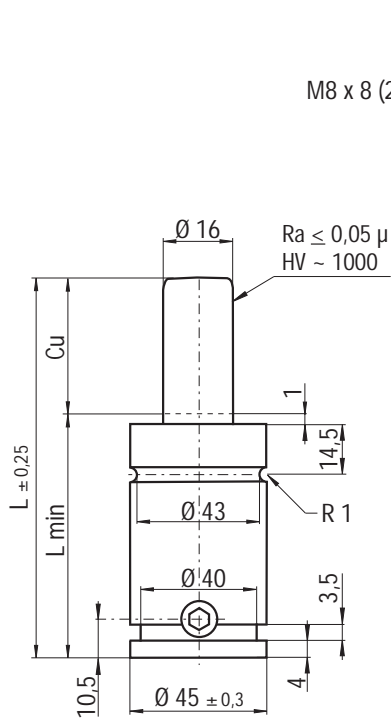
Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 200 bar 2900 psi	P min 20 bar 290 psi	S 2,01 cm ²		Maintenance kit 39BMLI00400A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
LI 400 - 013 - A	13	58	45	400	-	-	~0,43
LI 400 - 025 - A	25	82	57	400	-	-	~0,50
LI 400 - 032 - A	32	96	64	400	-	-	~0,55
LI 400 - 038 - A	38	108	70	400	-	-	~0,58
LI 400 - 050 - A	50	132	82	400	-	-	~0,65
LI 400 - 063 - A	63	158	95	400	-	-	~0,72
LI 400 - 080 - A	80	192	112	400	-	-	~0,83
LI 400 - 100 - A	100	232	132	400	-	-	~0,94

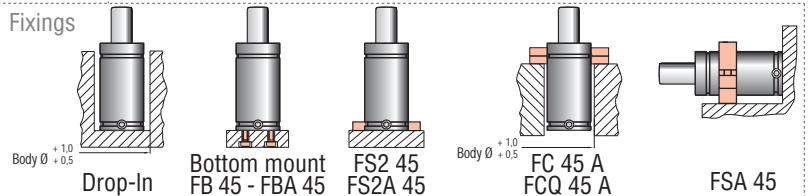


Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
 Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão



ORDER

(10) LI400-050-A-N



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
2,01
cm²



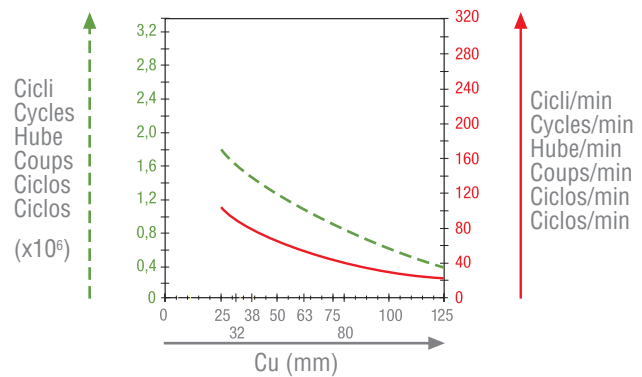
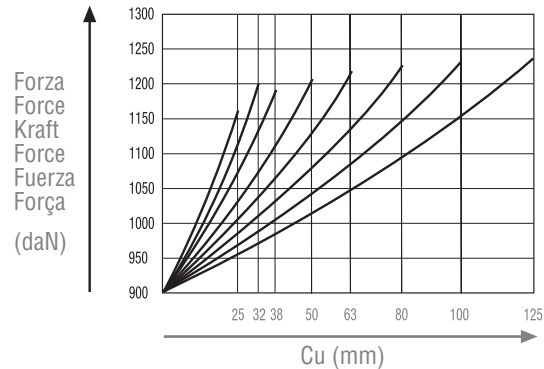
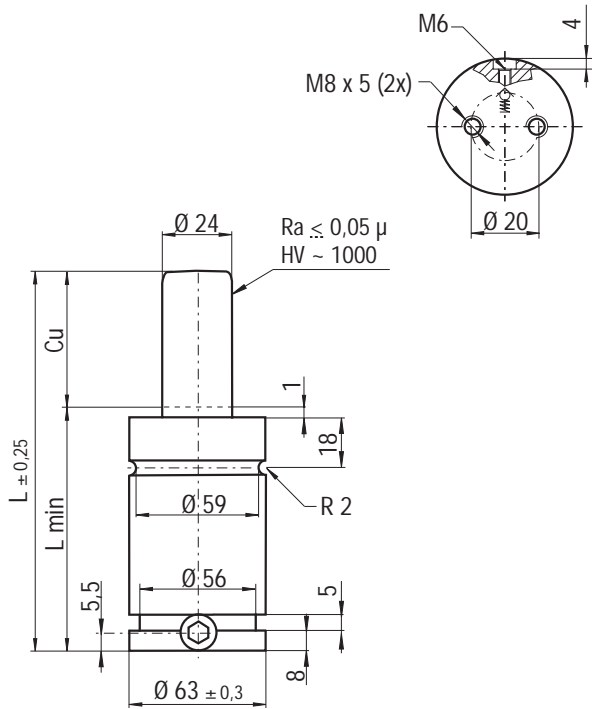
Maintenance kit
39BMLI00400A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LI 400 - 013 - A - N	13	68	55	400	16	LI 400 - 013 - A - N	-0,48
LI 400 - 025 - A - N	25	92	67	400	27	LI 400 - 025 - A - N	-0,55
LI 400 - 032 - A - N	32	106	74	400	34	LI 400 - 032 - A - N	-0,60
LI 400 - 038 - A - N	38	118	80	400	41	LI 400 - 038 - A - N	-0,63
LI 400 - 050 - A - N	50	142	92	400	54	LI 400 - 050 - A - N	-0,70
LI 400 - 063 - A - N	63	168	105	400	68	LI 400 - 063 - A - N	-0,77
LI 400 - 080 - A - N	80	202	122	400	86	LI 400 - 080 - A - N	-0,88
LI 400 - 100 - A - N	100	242	142	400	107	LI 400 - 100 - A - N	-0,99

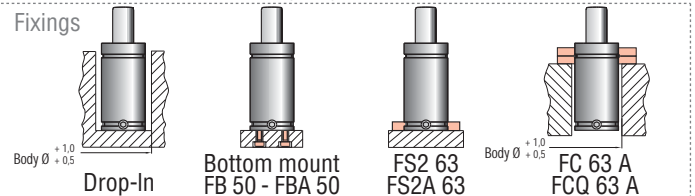
Info pg. 187

Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
 Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão



LI

(10) LI900-050-A
ORDER (10) LI900-050-A-NA



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 200 bar 2900 psi	P min 20 bar 290 psi	S 4,52 cm ²		Maintenance kit 39BMLI00900A
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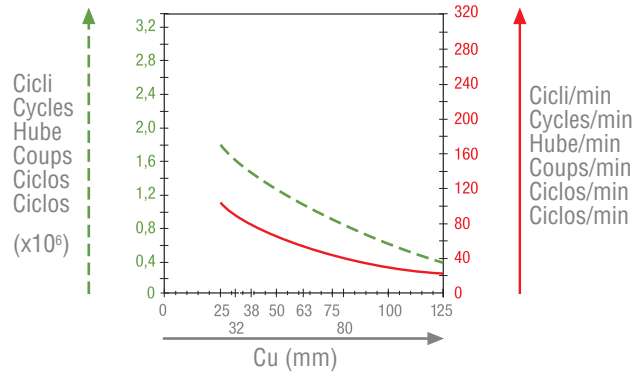
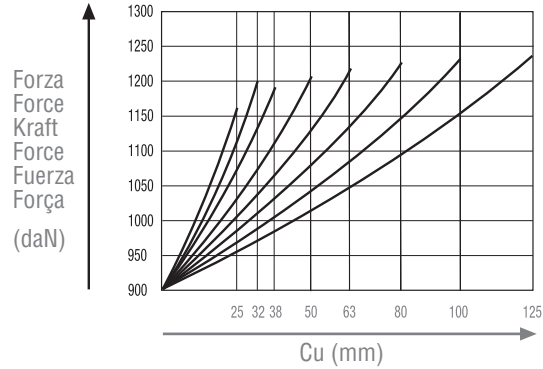
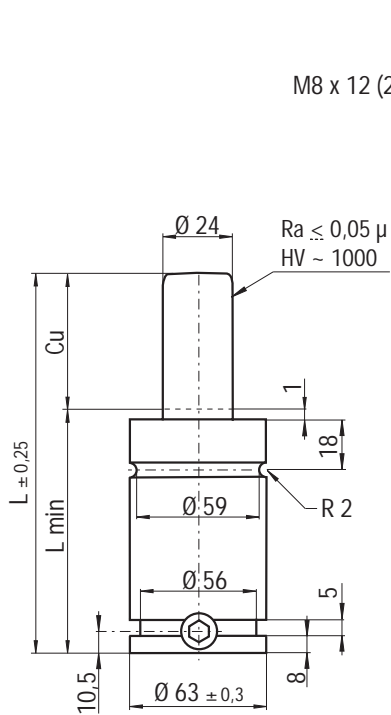
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
LI 900 - 025 - A	25	94	69	900	24	LI 900 - 025 - A - NA	-1,16
LI 900 - 032 - A	32	108	76	900	38	LI 900 - 032 - A - NA	-1,24
LI 900 - 038 - A	38	120	82	900	51	LI 900 - 038 - A - NA	-1,30
LI 900 - 050 - A	50	144	94	900	76	LI 900 - 050 - A - NA	-1,45
LI 900 - 063 - A	63	170	107	900	103	LI 900 - 063 - A - NA	-1,60
LI 900 - 080 - A	80	204	124	900	139	LI 900 - 080 - A - NA	-1,80
LI 900 - 100 - A	100	244	144	900	182	LI 900 - 100 - A - NA	-2,03
LI 900 - 125 - A	125	294	169	900	235	LI 900 - 125 - A - NA	-2,34

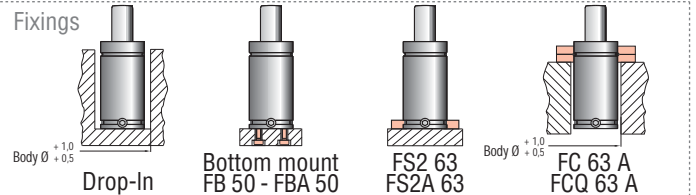
Info pg. 187



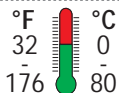
Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão



(10) LI900-050-A-N



Max. Speed
1,8 m/s



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
4,52
cm²



Maintenance kit
39BMLI00900A

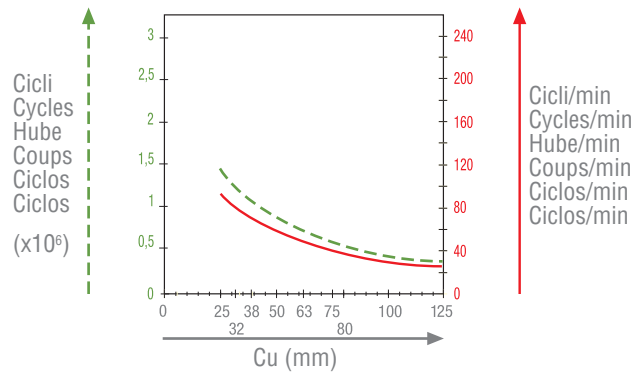
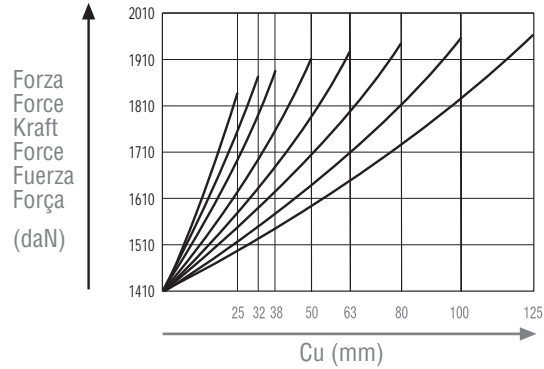
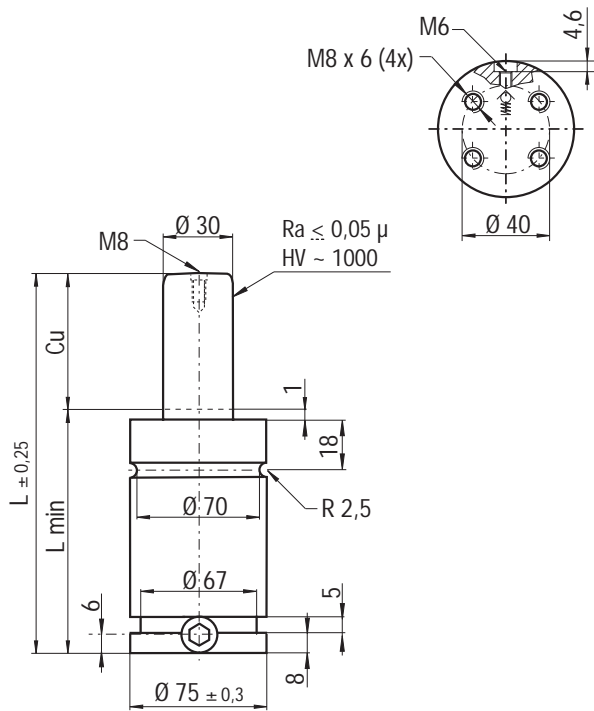
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LI 900 - 025 - A - N	25	104	79	900	24	LI 900 - 025 - A - N	-1,23
LI 900 - 032 - A - N	32	118	86	900	38	LI 900 - 032 - A - N	-1,30
LI 900 - 038 - A - N	38	130	92	900	51	LI 900 - 038 - A - N	-1,37
LI 900 - 050 - A - N	50	154	104	900	76	LI 900 - 050 - A - N	-1,52
LI 900 - 063 - A - N	63	180	117	900	103	LI 900 - 063 - A - N	-1,67
LI 900 - 080 - A - N	80	214	134	900	139	LI 900 - 080 - A - N	-1,87
LI 900 - 100 - A - N	100	254	154	900	182	LI 900 - 100 - A - N	-2,10
LI 900 - 125 - A - N	125	304	179	900	235	LI 900 - 125 - A - N	-2,41

⚠ Info pg. 187

Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
 Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão

PED
 97/23/EG



ORDER (10) LI1400-050-A
 (10) LI1400-050-A-NA

Fixings

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 200 bar 2900 psi	P min 20 bar 290 psi	S 7,07 cm ²		Maintenance kit 39BMLI01400A
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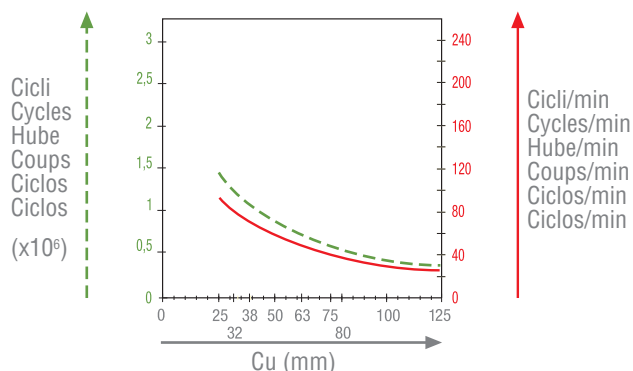
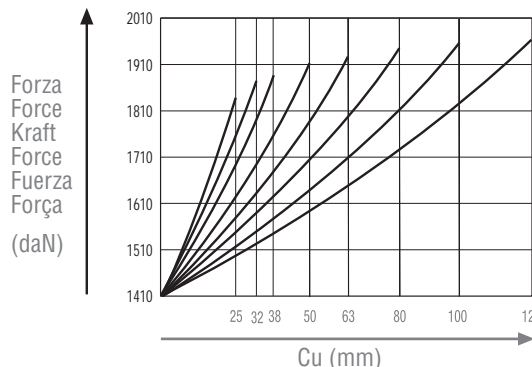
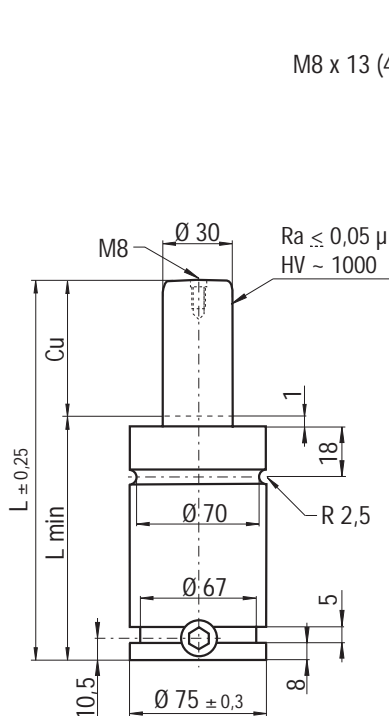
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
LI 1400 - 025 - A	25	95	70	1410	93	LI 1400 - 025 - A - NA	-1,62
LI 1400 - 032 - A	32	109	77	1410	115	LI 1400 - 032 - A - NA	-1,74
LI 1400 - 038 - A	38	121	83	1410	134	LI 1400 - 038 - A - NA	-1,83
LI 1400 - 050 - A	50	145	95	1410	172	LI 1400 - 050 - A - NA	-1,99
LI 1400 - 063 - A	63	171	108	1410	213	LI 1400 - 063 - A - NA	-2,20
LI 1400 - 080 - A	80	205	125	1410	266	LI 1400 - 080 - A - NA	-2,62
LI 1400 - 100 - A	100	245	145	1410	329	LI 1400 - 100 - A - NA	-2,77
LI 1400 - 125 - A	125	295	170	1410	408	LI 1400 - 125 - A - NA	-3,27

Info pg. 187

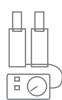


Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
 Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão

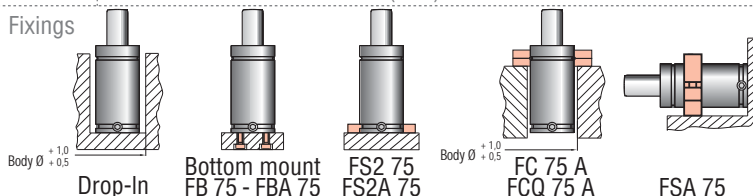


ORDER

(10) LI1400-050-A-N



Fixings



Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
7,07
cm²



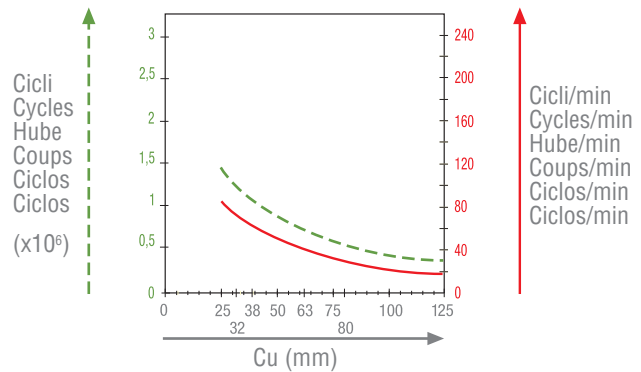
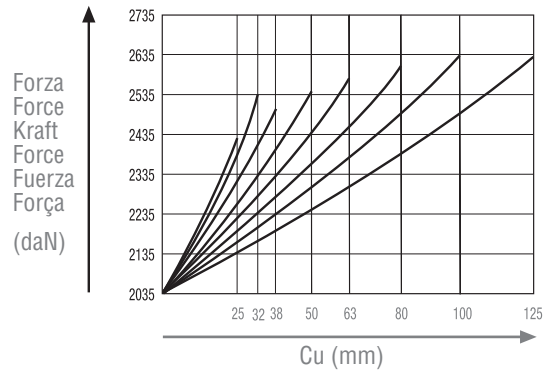
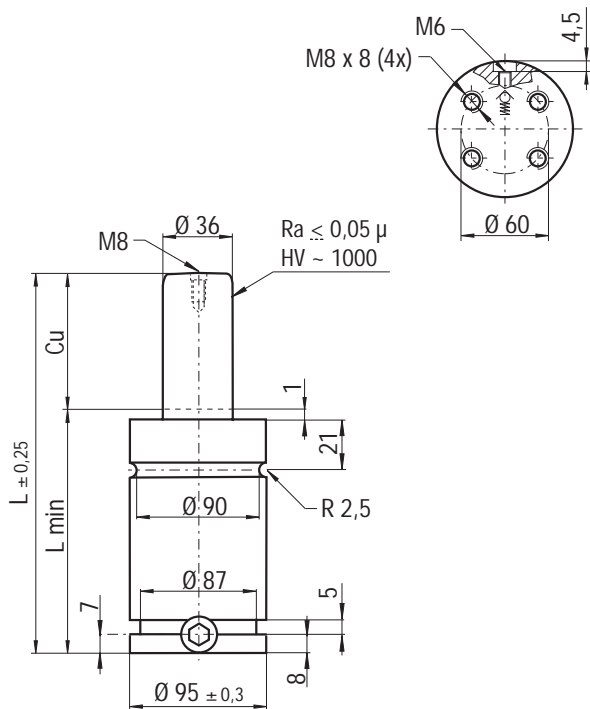
Maintenance kit
39BMLI01400A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LI 1400 - 025 - A - N	25	105	80	1410	93	LI 1400 - 025 - A - N	-1,70
LI 1400 - 032 - A - N	32	119	87	1410	115	LI 1400 - 032 - A - N	-1,80
LI 1400 - 038 - A - N	38	131	93	1410	134	LI 1400 - 038 - A - N	-1,91
LI 1400 - 050 - A - N	50	155	105	1410	172	LI 1400 - 050 - A - N	-2,07
LI 1400 - 063 - A - N	63	181	118	1410	213	LI 1400 - 063 - A - N	-2,27
LI 1400 - 080 - A - N	80	215	135	1410	266	LI 1400 - 080 - A - N	-2,70
LI 1400 - 100 - A - N	100	255	155	1410	329	LI 1400 - 100 - A - N	-2,85
LI 1400 - 125 - A - N	125	305	180	1410	408	LI 1400 - 125 - A - N	-3,35

Info pg. 187

Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
 Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão



LI

(10) LI2000-050-A
ORDER (10) LI2000-050-A-NA

Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 200 bar 2900 psi	P min 20 bar 290 psi	S 10,18 cm ²		Maintenance kit 39BMLI02000A
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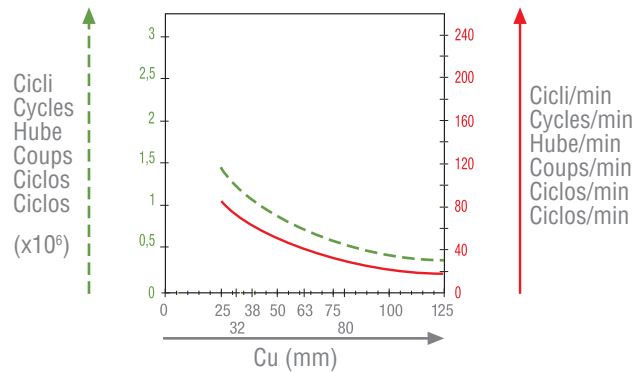
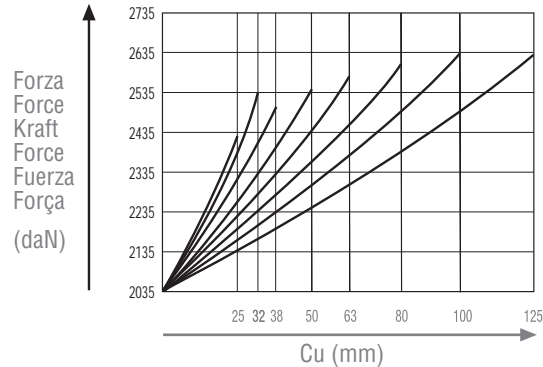
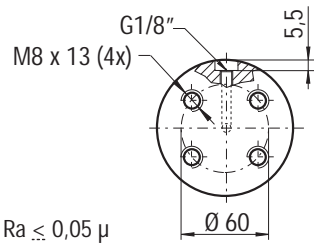
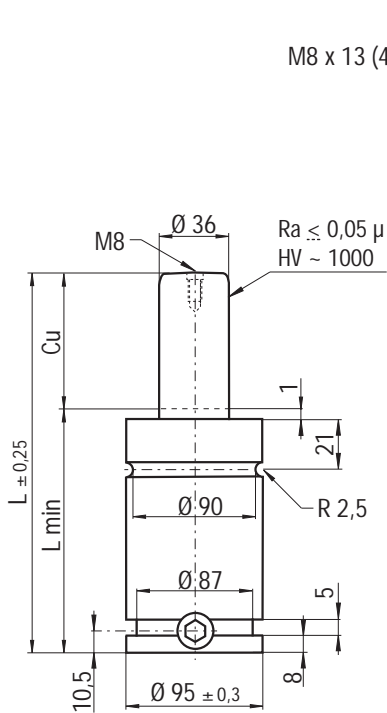
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
LI 2000 - 025 - A	25	115	90	2035	208	LI 2000 - 025 - A - NA	-3,29
LI 2000 - 032 - A	32	129	97	2035	242	LI 2000 - 032 - A - NA	-3,50
LI 2000 - 038 - A	38	141	103	2035	272	LI 2000 - 038 - A - NA	-3,62
LI 2000 - 050 - A	50	165	115	2035	332	LI 2000 - 050 - A - NA	-3,89
LI 2000 - 063 - A	63	191	128	2035	396	LI 2000 - 063 - A - NA	-4,24
LI 2000 - 080 - A	80	225	145	2035	480	LI 2000 - 080 - A - NA	-4,78
LI 2000 - 100 - A	100	265	165	2035	579	LI 2000 - 100 - A - NA	-5,16
LI 2000 - 125 - A	125	315	190	2035	703	LI 2000 - 125 - A - NA	-5,82

Info pg. 187



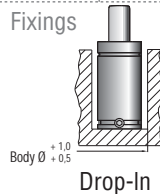
Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão



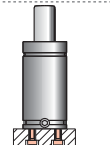
(10) LI2000-050-A-N



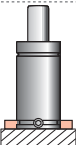
Fixings



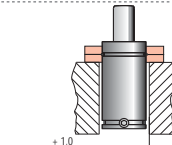
Drop-In



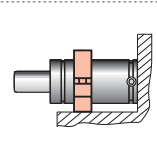
Bottom mount
FB 95 - FBA 95



FS2 95
FS2A 95



FC 95 A
FCQ 95 A



FSA 95

Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
10,18
cm²



Maintenance kit
39BMLI02000A

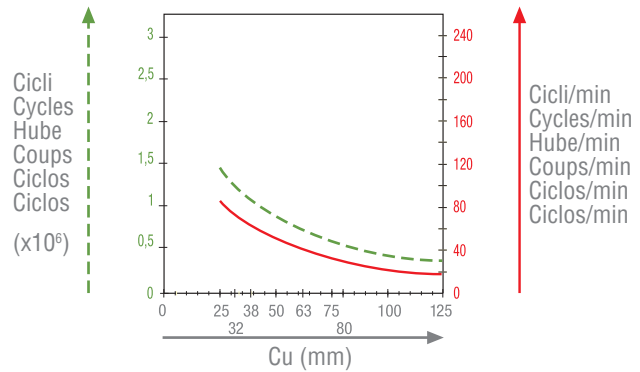
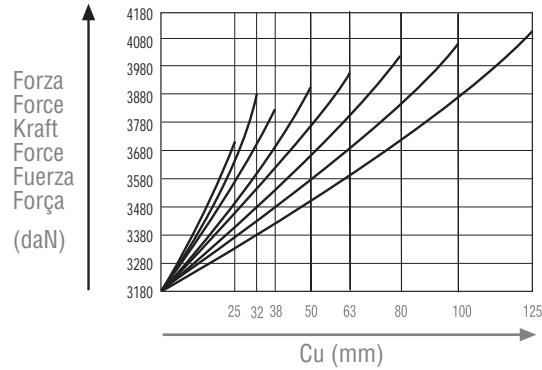
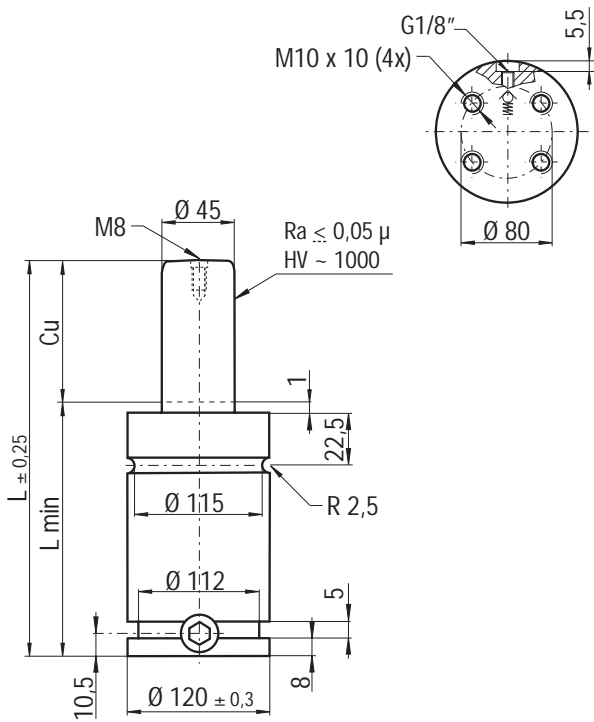
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LI 2000 - 025 - A - N	25	125	100	2035	208	LI 2000 - 025 - A - N	-3,40
LI 2000 - 032 - A - N	32	139	107	2035	242	LI 2000 - 032 - A - N	-3,57
LI 2000 - 038 - A - N	38	151	113	2035	272	LI 2000 - 038 - A - N	-3,73
LI 2000 - 050 - A - N	50	175	125	2035	332	LI 2000 - 050 - A - N	-4,00
LI 2000 - 063 - A - N	63	201	138	2035	396	LI 2000 - 063 - A - N	-4,35
LI 2000 - 080 - A - N	80	235	155	2035	480	LI 2000 - 080 - A - N	-4,89
LI 2000 - 100 - A - N	100	275	175	2035	579	LI 2000 - 100 - A - N	-5,57
LI 2000 - 125 - A - N	125	325	200	2035	703	LI 2000 - 125 - A - N	-5,93

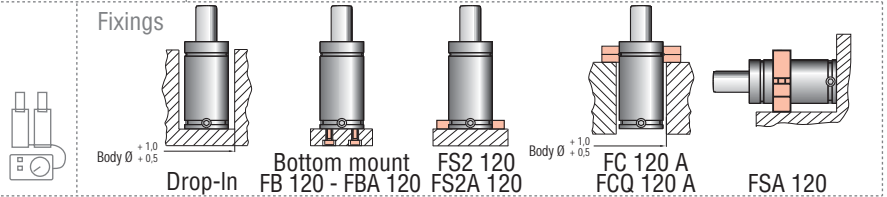
Info pg. 187

Minimo incremento di pressione - Low pressure increase - Minimale Druckerhöhung -
 Faible augmentation de pression - Mínimo aumento de presión - Aumento mínimo da pressão

PED
97/23/EG



(10) LI3200-050-A
ORDER (10) LI3200-050-A-N



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 200 bar 2900 psi	P min 20 bar 290 psi	S 15,9 cm ²		Maintenance kit 39BMLI03200A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LI 3200 - 025 - A	25	125	100	3180	343	LI 3200 - 025 - A - N	-4,74
LI 3200 - 032 - A	32	139	107	3180	398	LI 3200 - 032 - A - N	-5,61
LI 3200 - 038 - A	38	151	113	3180	445	LI 3200 - 038 - A - N	-6,48
LI 3200 - 050 - A	50	175	125	3180	539	LI 3200 - 050 - A - N	-6,97
LI 3200 - 063 - A	63	201	138	3180	641	LI 3200 - 063 - A - N	-7,46
LI 3200 - 080 - A	80	235	155	3180	774	LI 3200 - 080 - A - N	-8,21
LI 3200 - 100 - A	100	275	175	3180	932	LI 3200 - 100 - A - N	-8,94
LI 3200 - 125 - A	125	325	200	3180	1127	LI 3200 - 125 - A - N	-10,08

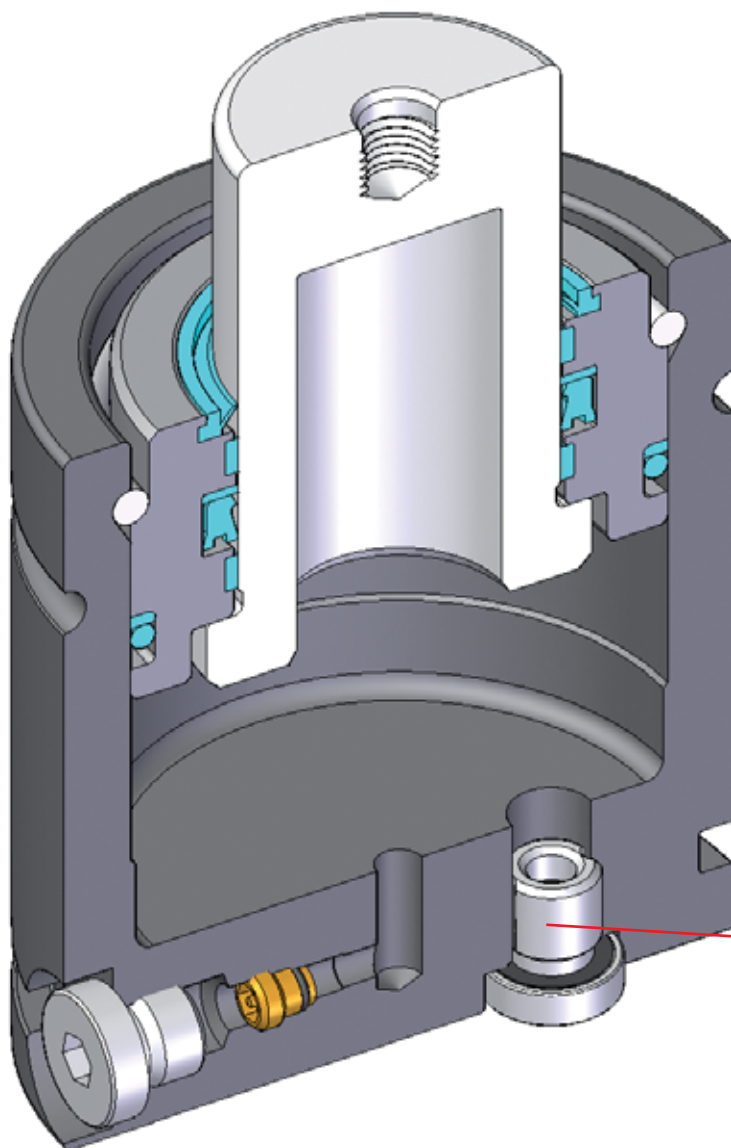
Info pg. 187

S

SERIES

**PED**
97/23/EC

Forze ISO, altezza ridotta - ISO forces, low profile - ISO Kräfte, Verminderung der Höhe -
 ISO forces, hauteur réduite - ISO fuerzas, altura reducida - ISO potência, altura reduzida

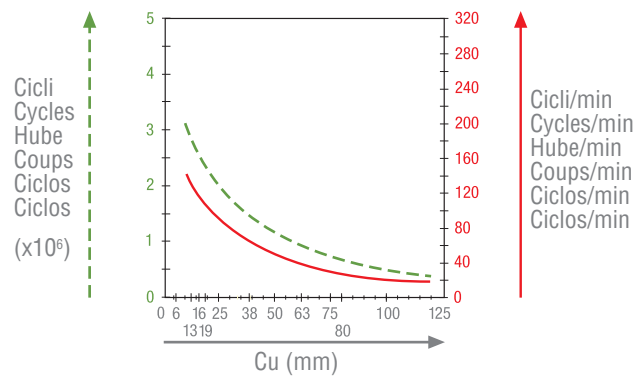
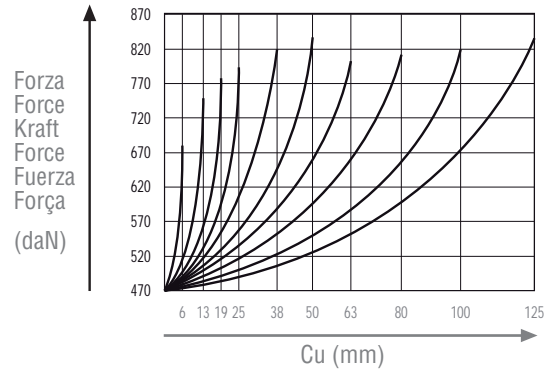
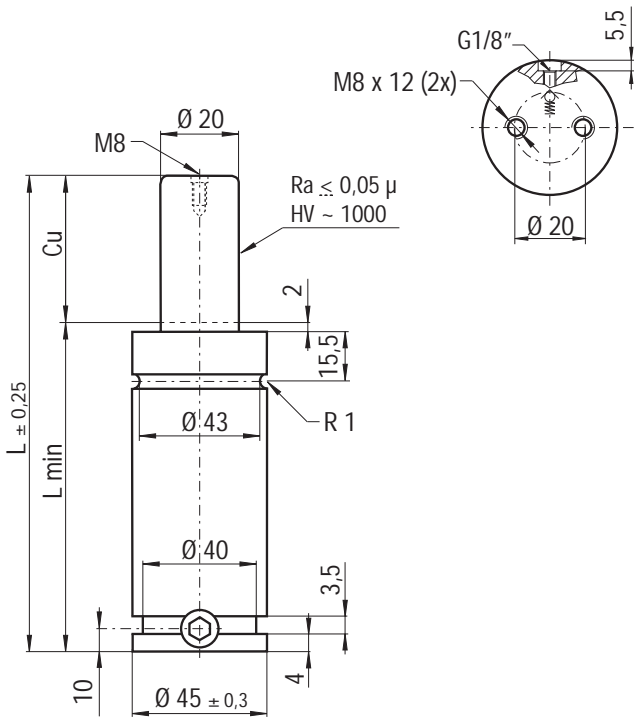


Over
Pressure
Active
Safety

Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN	lifeplus concept		
				SKUDO	OSAS	OPAS
S 500	45	6 - 125	470	-	-	-
S 750	50	6 - 125	740	-	-	-
S 1500	75	25 - 100	1530	-	-	✓
S 3000	95	25 - 100	2945	-	-	✓

Forze ISO, altezza ridotta - ISO forces, low profile - ISO Kräfte, Verminderung der Höhe - ISO forces, hauteur réduite - ISO fuerzas, altura reducida - ISO potência, altura reduzida



(10) S 500-050-A
ORDER (10) S 500-050-A-N

Fixings: Drop-In, Bottom mount (FB 45 - FBA 45), FS2 45 (FS2A 45), FC 45 A (FCQ 45 A), FSA 45.

Max. Speed 1,8 m/s
 °F 32 / °C 0
 °F 176 / °C 80
 N₂
 P max 150 bar / 2175 psi
 P min 20 bar / 290 psi
 S 3,14 cm²
 Maintenance kit 39BMS00500A

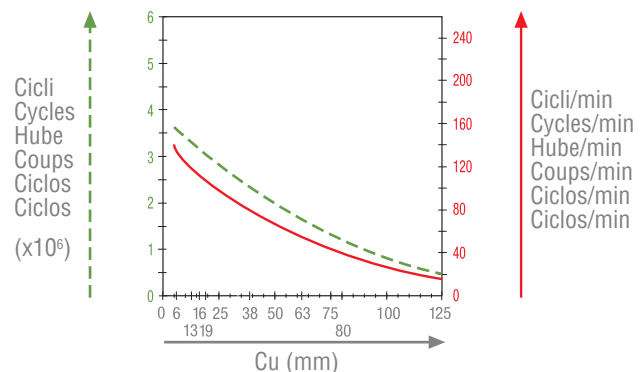
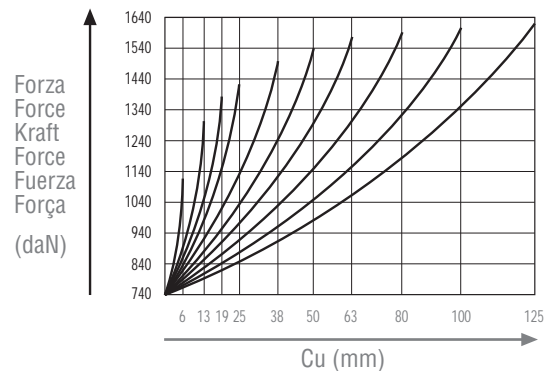
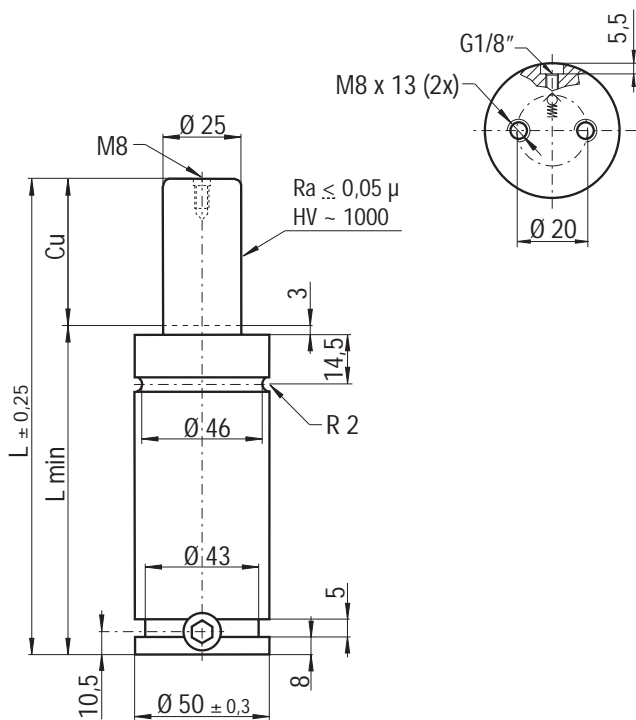
Technical specifications

Code	Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimess hose	
S500 - 006 - A	06	62	56	470	7,1	S500 - 006 - A - N	-0,51
S500 - 013 - A	13	76	63	470	14,4	S500 - 013 - A - N	-0,56
S500 - 019 - A	19	88	69	470	20,6	S500 - 019 - A - N	-0,60
S500 - 025 - A	25	100	75	470	26,9	S500 - 025 - A - N	-0,65
S500 - 038 - A	38	126	88	470	40,4	S500 - 038 - A - N	-0,74
S500 - 050 - A	50	150	100	470	52,9	S500 - 050 - A - N	-0,83
S500 - 063 - A	63	176	113	470	66,4	S500 - 063 - A - N	-0,96
S500 - 080 - A	80	210	130	470	84,1	S500 - 080 - A - N	-0,99
S500 - 100 - A	100	250	150	470	104,9	S500 - 100 - A - N	-1,14
S500 - 125 - A	125	300	175	470	130,7	S500 - 125 - A - N	-1,32

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Forze ISO, altezza ridotta - ISO forces, low profile - ISO Kräfte, Verminderung der Höhe - ISO forces, hauteur réduite - ISO fuerzas, altura reducida - ISO potência, altura reduzida



(10) S 750-050-A
ORDER (10) S 750-050-A-N

Fixings
 Drop-In, Bottom mount (FB 50 - FBA 50), FS2 50 (FS2A 50), FC 50 A (FCQ 50 A), FSA 50

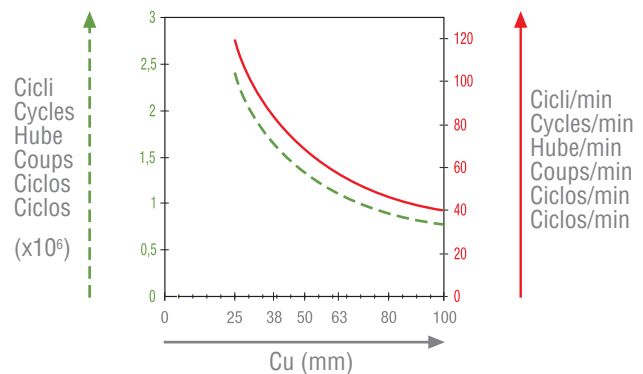
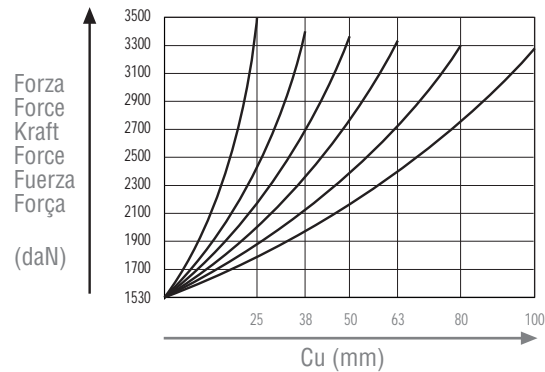
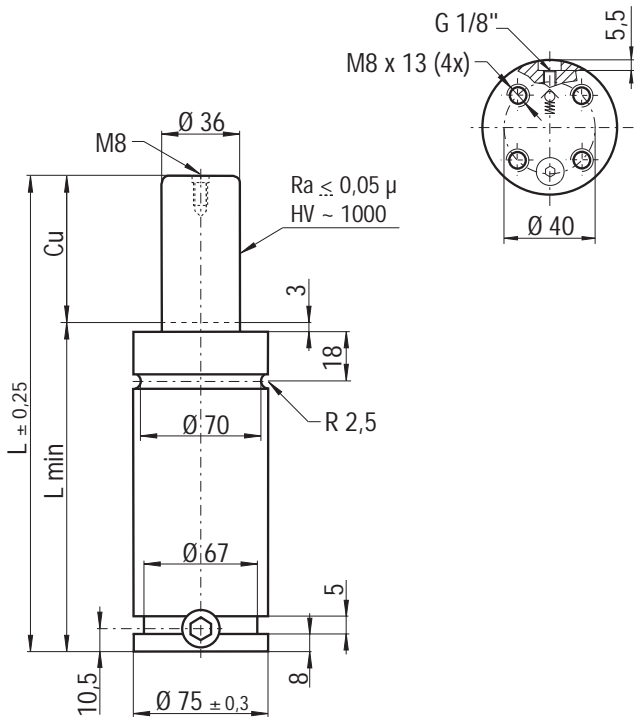
Max. Speed 1,8 m/s
Temperature 32 °F / 0 °C to 176 °F / 80 °C
Gas N₂
P max 150 bar / 2175 psi
P min 20 bar / 290 psi
S 4,91 cm²
Maintenance kit 39BMS00750A

Technical specifications

Code	Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimess hose	
S750 - 006 - A	6	62	56	740	39,5	S750 - 006 - A - N	-0,59
S750 - 013 - A	13	76	63	740	49,7	S750 - 013 - A - N	-0,65
S750 - 019 - A	19	88	69	740	58,5	S750 - 019 - A - N	-0,70
S750 - 025 - A	25	100	75	740	67,2	S750 - 025 - A - N	-0,76
S750 - 038 - A	38	126	88	740	86,2	S750 - 038 - A - N	-0,80
S750 - 050 - A	50	150	100	740	103,7	S750 - 050 - A - N	-1,00
S750 - 063 - A	63	176	113	740	122,6	S750 - 063 - A - N	-1,10
S750 - 080 - A	80	210	130	740	147,4	S750 - 080 - A - N	-1,70
S750 - 100 - A	100	250	150	740	176,6	S750 - 100 - A - N	-1,96
S750 - 125 - A	125	300	175	740	213	S750 - 125 - A - N	-2,07

Info pg. 187

Forze ISO, altezza ridotta - ISO forces, low profile - ISO Kräfte, Verminderung der Höhe - ISO forces, hauteur réduite - ISO fuerzas, altura reducida - ISO potência, altura reduzida



S

(10) S 1500-050-A
ORDER (10) S 1500-050-A-N

Fixings

Max. Speed 1,8 m/s	°F 32 °C 0 176 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 10,18 cm ²		Maintenance kit 39BMS01500A	
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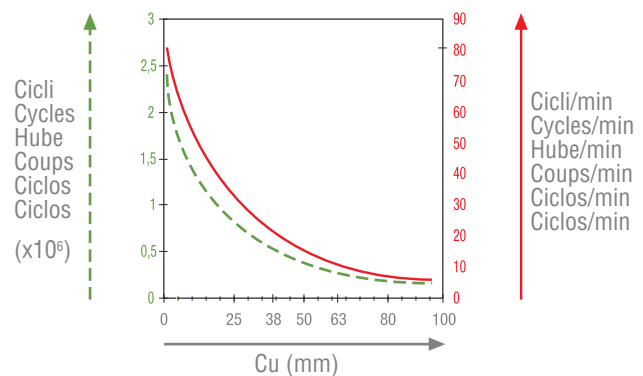
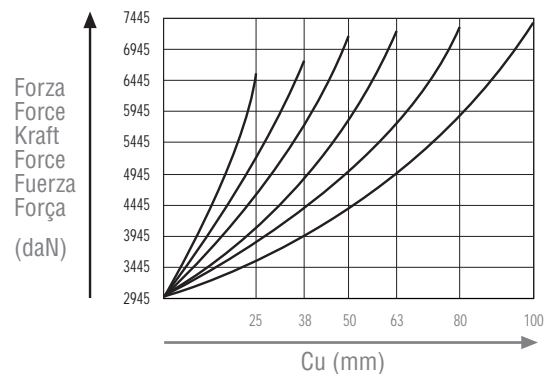
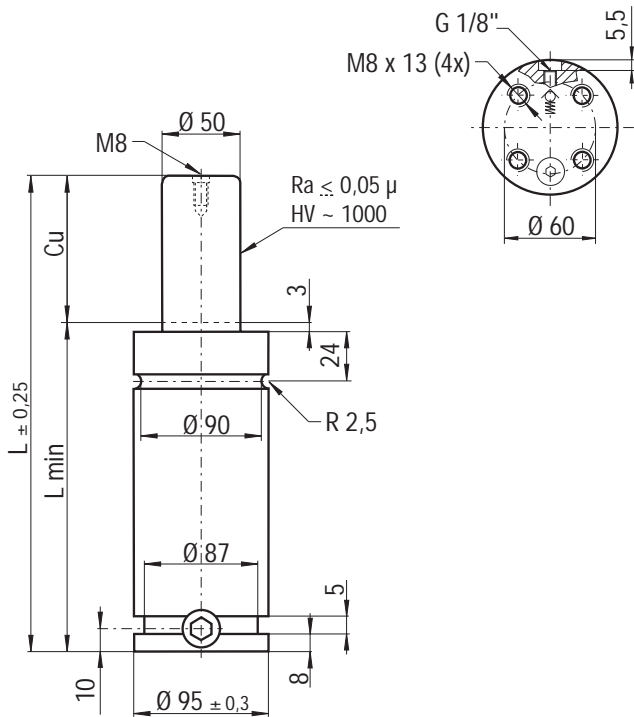
Technical specifications

Code	Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimesse hose	
S1500 - 025 - A	25	110	85	1530	81,3	S1500 - 025 - A - N	~1,93
S1500 - 038 - A	38	136	98	1530	123,5	S1500 - 038 - A - N	~2,18
S1500 - 050 - A	50	160	110	1530	162,4	S1500 - 050 - A - N	~3,64
S1500 - 063 - A	63	186	123	1530	204,5	S1500 - 063 - A - N	~3,91
S1500 - 080 - A	80	220	140	1530	259,7	S1500 - 080 - A - N	~4,28
S1500 - 100 - A	100	260	160	1530	324,5	S1500 - 100 - A - N	~4,72

Info pg. 187



Forze ISO, altezza ridotta - ISO forces, low profile - ISO Kräfte, Verminderung der Höhe - ISO forces, hauteur réduite - ISO fuerzas, altura reducida - ISO potência, altura reduzida



(10) S 3000-050-A
ORDER (10) S 3000-050-A-N

Fixings
 Drop-In, Bottom mount (FB 95 - FBA 95), FS2 95 (FS2A 95), FC 95 A (FCQ 95 A), FSA 95

Max. Speed 1,8 m/s
Temperature 32 °F / 0 °C to 176 °F / 80 °C
Gas N₂
P max 150 bar / 2175 psi
P min 20 bar / 290 psi
S 19,63 cm²
Maintenance kit 39BMS03000A

Technical specifications

Code	Cu mm	L mm	Lmin mm	F ₀ at 150 bar/+20 °C daN (±5%)	V ₀ cm ³	connecting hole M6 Micro hose	Kg
S3000 - 025 - A	25	120	95	2945	169,9	S3000 - 025 - A - N	~4,07
S3000 - 038 - A	38	146	108	2945	243,3	S3000 - 038 - A - N	~4,53
S3000 - 050 - A	50	170	120	2945	311	S3000 - 050 - A - N	~5,16
S3000 - 063 - A	63	196	133	2945	384,3	S3000 - 063 - A - N	~5,44
S3000 - 080 - A	80	230	150	2945	480,3	S3000 - 080 - A - N	~6,05
S3000 - 100 - A	100	270	170	2945	593,1	S3000 - 100 - A - N	~6,78

Info pg. 187



S

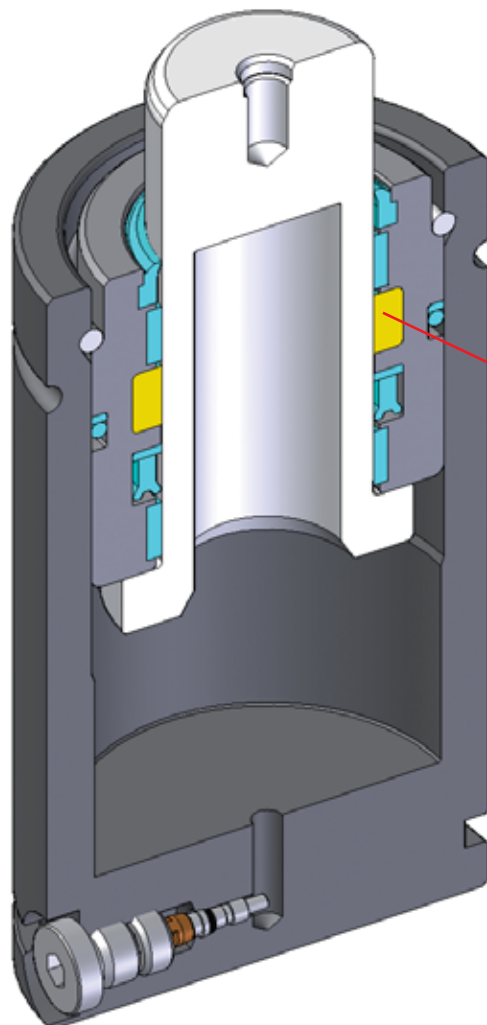
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SC SERIES




ISO 11901
VDI 3003
CNOMO E24.54815.N

ISO 11901 Standard - ISO 11901 Standard - ISO 11901 Standard -
Conforme ISO 11901 - ISO 11901 Standard - Norma ISO 11901



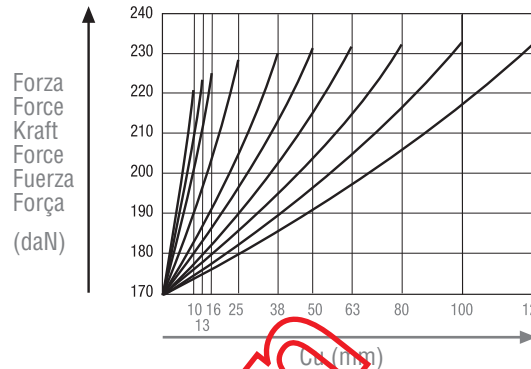
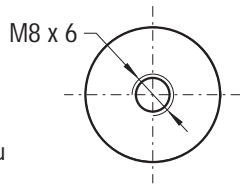
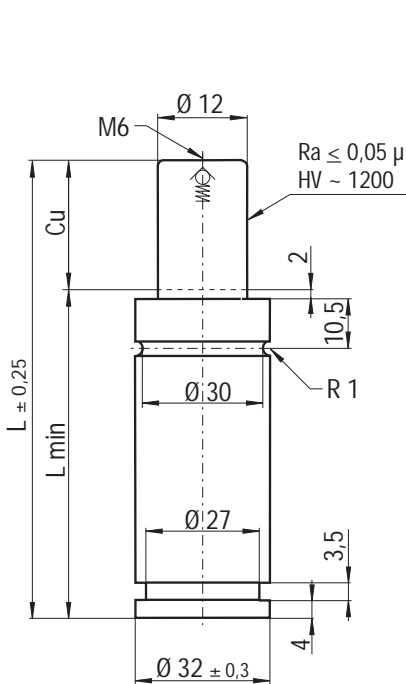
Permanent
Lubrication
on the
Rod

Range chart

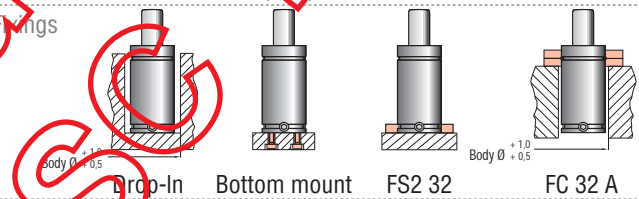
Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
SC 150	32	10 - 125	170	-	-	-
SC 250	38	10 - 125	260	-	-	-
SCF 250	M 38 x 1,5	10 - 125	260	-	-	-
SC 500	45	13 - 160	470	-	-	-
SCF 500	M 45 x 1,5	13 - 160	470	-	-	-
SC 750	50	13 - 300	740	-	-	-
SCF 750	M 50 x 1,5	13 - 300	740	-	-	-
SC 1500	75	25 - 300	1530	-	-	-
SC 3000	95	25 - 300	2945	-	-	-
SC 5000	120	25 - 300	4980	-	-	-
SC 7500	150	25 - 300	7540	-	-	-
SC 10000	195	25 - 300	10600	-	-	-

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PED ISO 11901
 97/23/EG



(10) SC 150-050-B



SC SCF

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 1,13 cm ²		Maintenance kit 39BMSC00150B
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Technical specifications

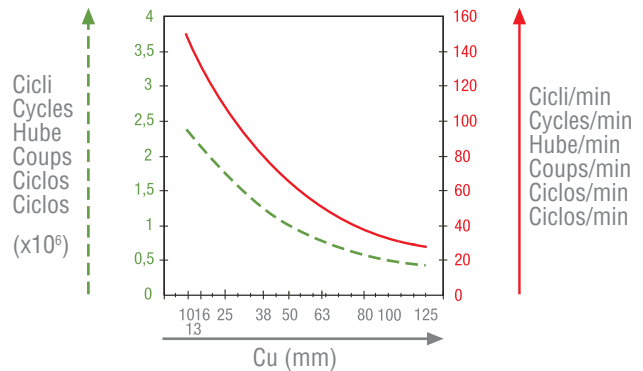
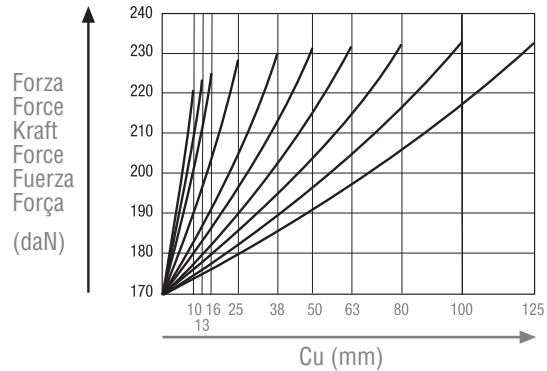
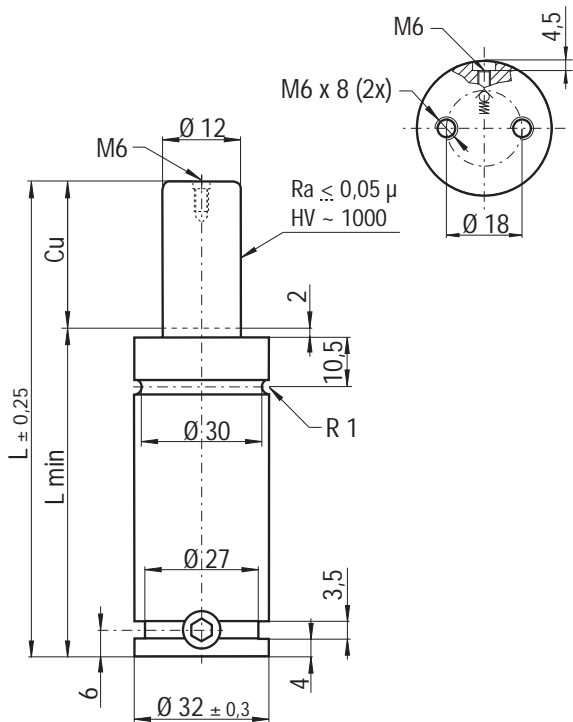
Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
SC 150 - 010 - B	10	74	60	170	-	-	-0,28
SC 150 - 013 - B	13	85,4	62,7	170	-	-	-0,29
SC 150 - 016 - B	16	96,8	66	170	-	-	-0,30
SC 150 - 025 - B	25	130	75	170	-	-	-0,33
SC 150 - 038 - B	38	174	88	170	-	-	-0,36
SC 150 - 050 - B	50	218	100	170	-	-	-0,40
SC 150 - 063 - B	63	262	113,5	170	-	-	-0,44
SC 150 - 080 - B	80	346	130	170	-	-	-0,49
SC 150 - 100 - B	100	430	150	170	-	-	-0,55
SC 150 - 125 - B	125	514	175	170	-	-	-0,64

SC 150



ISO 11901
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PED
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ORDER (10) SC 150-050-D-N

Fixings

Drop-In Bottom mount FS2A 32 FC 32 A FSA 32

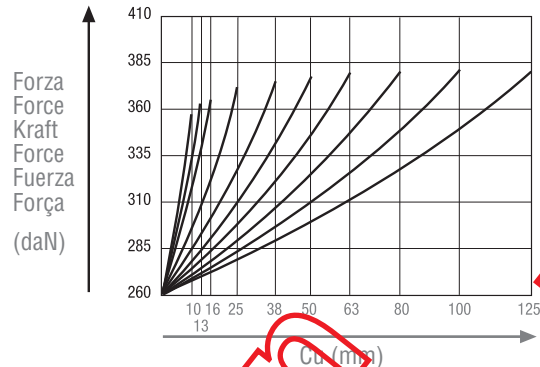
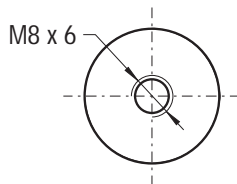
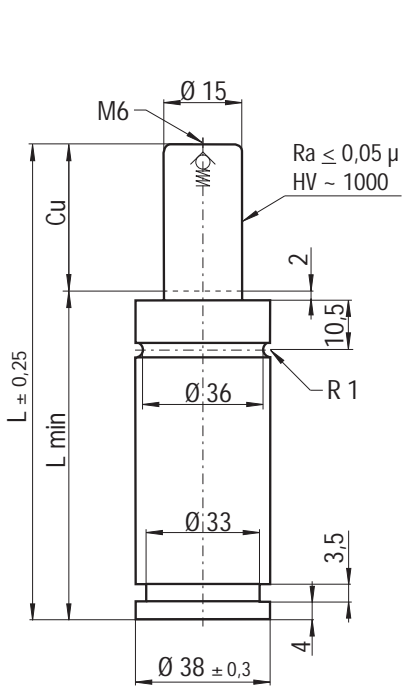
Max. Speed 1,8 m/s	°F 32 176	°C 0 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 1,13 cm ²		Maintenance kit 39BMSC00150D
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	 Kg
SC 150 - 010 - D	10	70	60	170	6,6	SC 150 - 010 - D - N	-0,28
SC 150 - 013 - D	13	75,4	62,7	170	8,2	SC 150 - 013 - D - N	-0,29
SC 150 - 016 - D	16	82	66	170	9,9	SC 150 - 016 - D - N	-0,30
SC 150 - 025 - D	25	100	75	170	15	SC 150 - 025 - D - N	-0,33
SC 150 - 038 - D	38	126	88	170	22,2	SC 150 - 038 - D - N	-0,36
SC 150 - 050 - D	50	150	100	170	28,9	SC 150 - 050 - D - N	-0,40
SC 150 - 063 - D	63	177	113,5	170	36,2	SC 150 - 063 - D - N	-0,44
SC 150 - 080 - D	80	210	130	170	45,7	SC 150 - 080 - D - N	-0,49
SC 150 - 100 - D	100	250	150	170	56,9	SC 150 - 100 - D - N	-0,55
SC 150 - 125 - D	125	300	175	170	70,9	SC 150 - 125 - D - N	-0,64

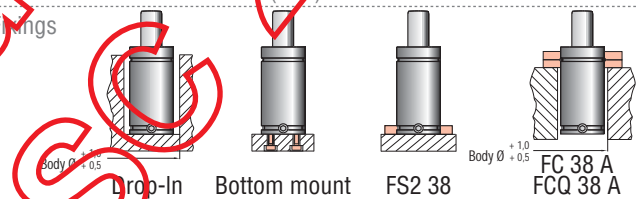
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 Conforme ISO 11901 - ISO 11901 Standard - Norma ISO 11901



(10) SC 250-050-B

ORDER



SC SCF

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 1,77 cm ²		Maintenance kit 39BMSC00250B
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Technical specifications

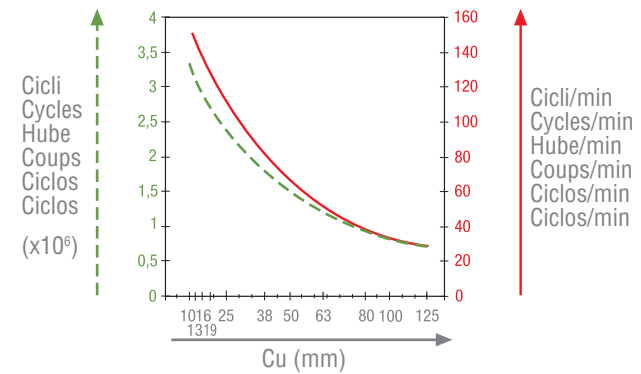
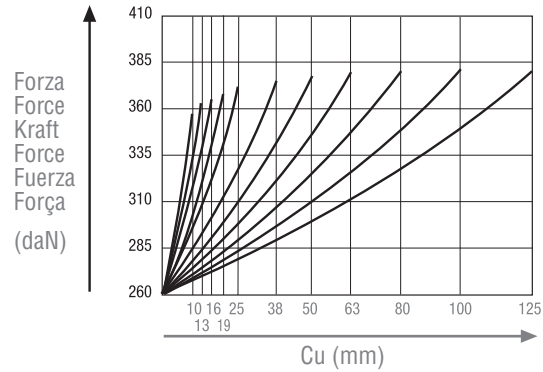
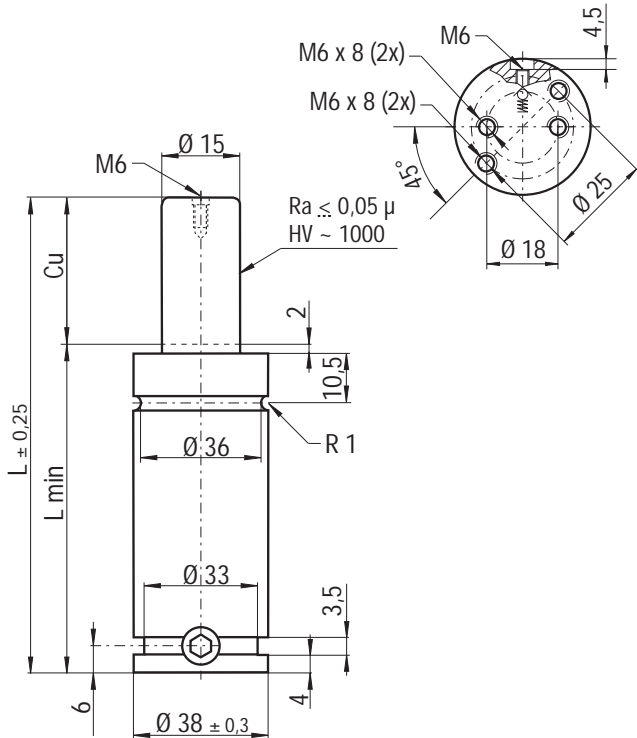
Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
SC 250 - 010 - B	10	60	60	260	-	-	~0,40
SC 250 - 013 - B	13	75,4	62,7	260	-	-	~0,41
SC 250 - 016 - B	16	82	66	260	-	-	~0,43
SC 250 - 025 - B	25	100	75	260	-	-	~0,48
SC 250 - 038 - B	38	126	88	260	-	-	~0,54
SC 250 - 050 - B	50	150	100	260	-	-	~0,60
SC 250 - 063 - B	63	177	113,5	260	-	-	~0,66
SC 250 - 080 - B	80	210	130	260	-	-	~0,74
SC 250 - 100 - B	100	250	150	260	-	-	~0,81
SC 250 - 125 - B	125	300	175	260	-	-	~0,98

SC 250



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ORDER (10) SC 250-050-D
(10) SC 250-050-D-N

Fixings

Max. Speed 1,8 m/s	°F 32 176	°C 0 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 1,77 cm ²		Maintenance kit 39BMSC00250D
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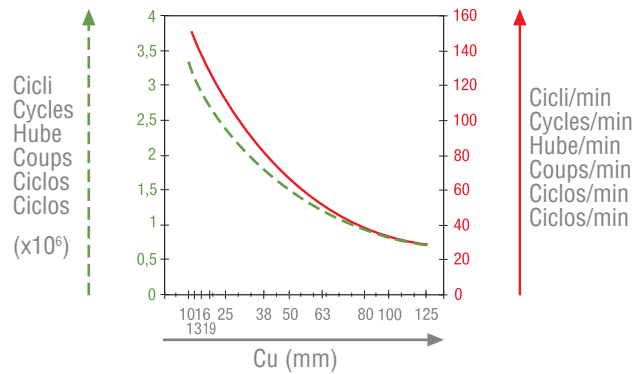
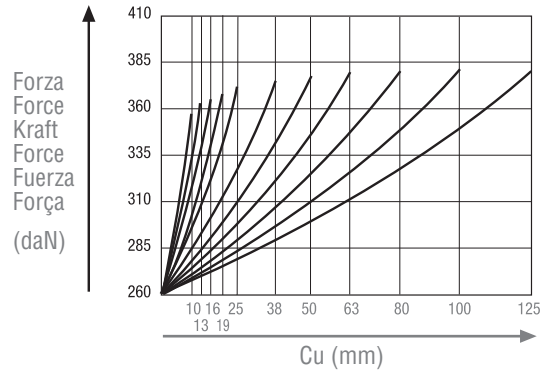
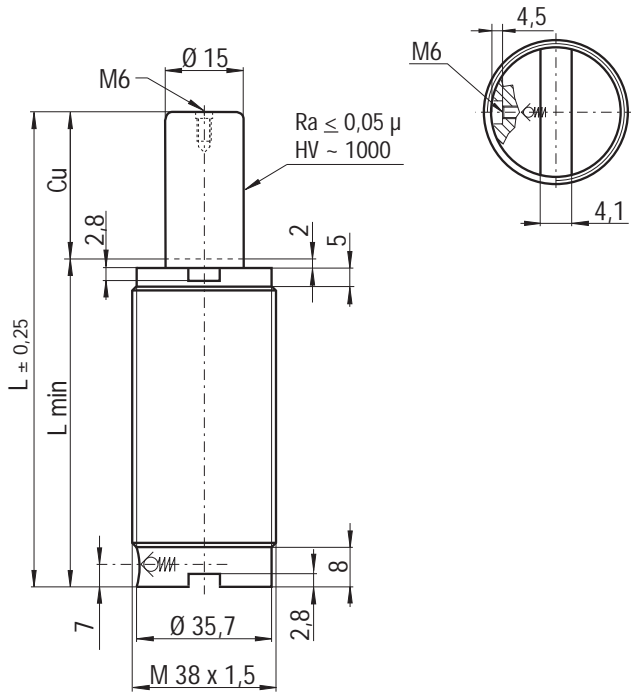
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	 Kg
SC 250 - 010 - D	10	70	60	260	8,7	SC 250 - 010 - D - N	-0,40
SC 250 - 013 - D	13	75,4	62,7	260	10,9	SC 250 - 013 - D - N	-0,41
SC 250 - 016 - D	16	82	66	260	13,1	SC 250 - 016 - D - N	-0,43
SC 250 - 019 - D	19	88	69	260	16,2	SC 250 - 019 - D - N	-0,45
SC 250 - 025 - D	25	100	75	260	19,7	SC 250 - 025 - D - N	-0,48
SC 250 - 038 - D	38	126	88	260	29,3	SC 250 - 038 - D - N	-0,54
SC 250 - 050 - D	50	150	100	260	38,1	SC 250 - 050 - D - N	-0,60
SC 250 - 063 - D	63	177	113,5	260	47,6	SC 250 - 063 - D - N	-0,66
SC 250 - 080 - D	80	210	130	260	60,1	SC 250 - 080 - D - N	-0,74
SC 250 - 100 - D	100	250	150	260	74,6	SC 250 - 100 - D - N	-0,81
SC 250 - 125 - D	125	300	175	260	93,2	SC 250 - 125 - D - N	-0,98

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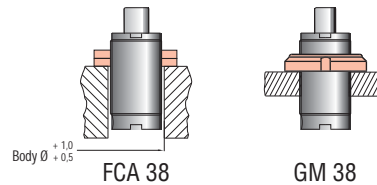
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VDI 3003
97/23/EG CNOMO E24.54815.N



(10) SCF 250-050-D
ORDER (10) SCF 250-050-D-N



Fixings



SC
SCF

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 1,77 cm ²		Maintenance kit 39BMS00250D
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Technical specifications

Code		Cu	L	Lmin	Fo	Vo		connecting hole M6	
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Micro hose		Kg
SCF 250 - 010 - A	SCF 250 - 010 - D	10	70	60	260	8,7	SCF 250 - 010 - D - N		-0,37
SCF 250 - 013 - A	SCF 250 - 013 - D	13	75,4	62,7	260	10,9	SCF 250 - 013 - D - N		-0,38
SCF 250 - 016 - A	SCF 250 - 016 - D	16	82	66	260	13,1	SCF 250 - 016 - D - N		-0,39
-	SCF 250 - 019 - D	19	88	69	260	16,2	SCF 250 - 019 - D - N		-0,42
SCF 250 - 025 - A	SCF 250 - 025 - D	25	100	75	260	19,7	SCF 250 - 025 - D - N		-0,44
SCF 250 - 038 - A	SCF 250 - 038 - D	38	126	88	260	29,3	SCF 250 - 038 - D - N		-0,50
SCF 250 - 050 - A	SCF 250 - 050 - D	50	150	100	260	38,1	SCF 250 - 050 - D - N		-0,55
SCF 250 - 063 - A	SCF 250 - 063 - D	63	177	113,5	260	47,6	SCF 250 - 063 - D - N		-0,63
SCF 250 - 080 - A	SCF 250 - 080 - D	80	210	130	260	60,1	SCF 250 - 080 - D - N		-0,70
SCF 250 - 100 - A	SCF 250 - 100 - D	100	250	150	260	74,6	SCF 250 - 100 - D - N		-0,75
SCF 250 - 125 - A	SCF 250 - 125 - D	125	300	175	260	93,2	SCF 250 - 125 - D - N		-0,93

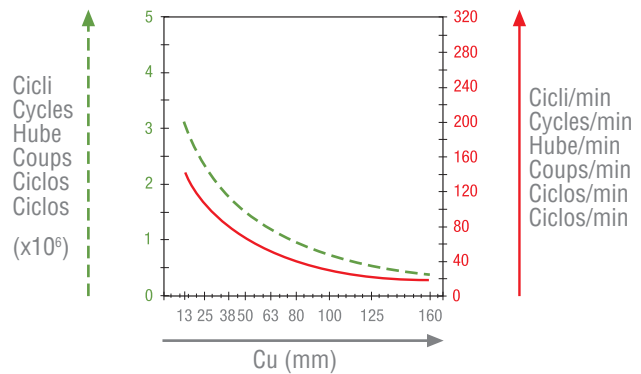
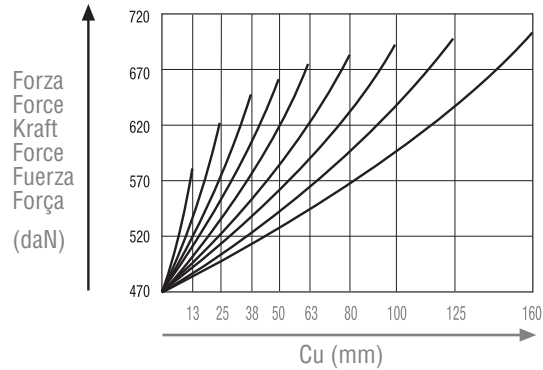
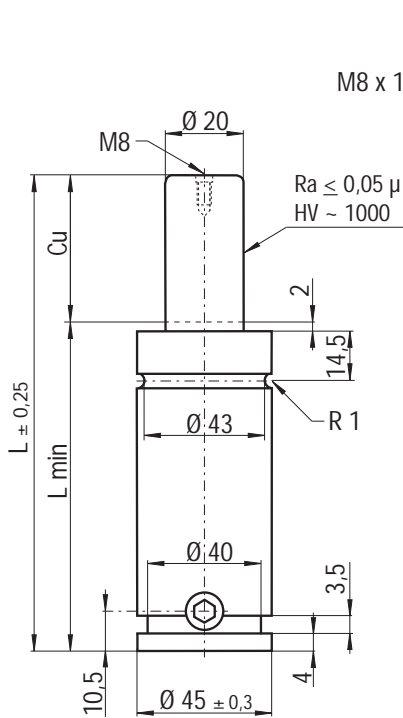
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SC 500



ISO 11901
VDI 3003
CNOMO E24.54815.N
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97/23/EC

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(10) SC 500-050-B
ORDER (10) SC 500-050-B-N

Fixings: Drop-in, Bottom mount FB 45 - FBA 45, FS2 45 FS2A 45, FC 45 A FCQ 45 A, FSA 45

Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 3,14 cm ²		Maintenance kit 39BMS00500B
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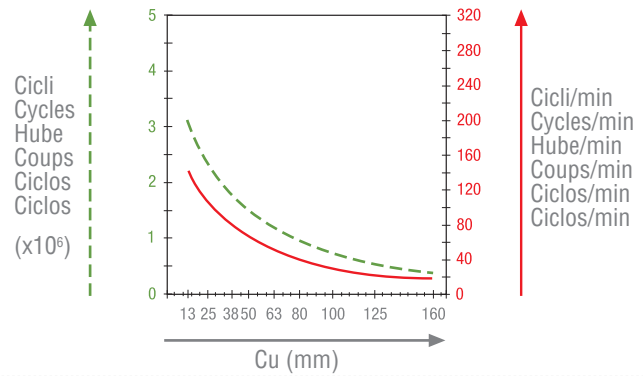
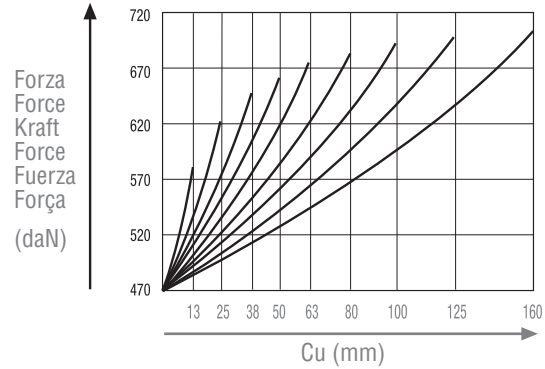
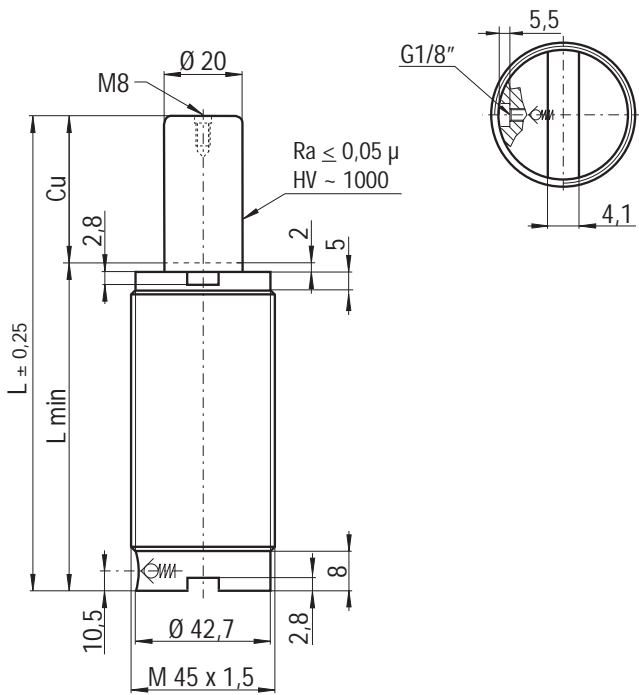
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
SC 500 - 013 - B	13	110,4	97,7	470	28	SC 500 - 013 - B - N	-0,90
SC 500 - 025 - B	25	135	110	470	42	SC 500 - 025 - B - N	-1,00
SC 500 - 038 - B	38	161	123	470	57	SC 500 - 038 - B - N	-1,10
SC 500 - 050 - B	50	185	135	470	71	SC 500 - 050 - B - N	-1,20
SC 500 - 063 - B	63	212	148,5	470	86	SC 500 - 063 - B - N	-1,30
SC 500 - 080 - B	80	245	165	470	105	SC 500 - 080 - B - N	-1,40
SC 500 - 100 - B	100	285	185	470	129	SC 500 - 100 - B - N	-1,60
SC 500 - 125 - B	125	335	210	470	157	SC 500 - 125 - B - N	-1,80
SC 500 - 160 - B	160	405	245	470	198	SC 500 - 160 - B - N	-2,10

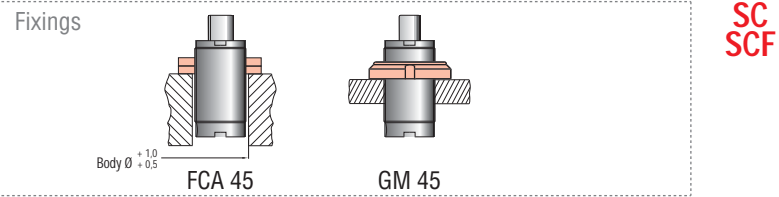
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PED ISO 11901
 VDI 3003
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(10) SCF 500-050-A
ORDER (10) SCF 500-050-A-N



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 3,14 cm ²		Maintenance kit 39BMSC00500B
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
SCF 500 - 013 - A	13	110,4	97,7	470	28	SCF 500 - 013 - A - N	-0,90
SCF 500 - 025 - A	25	135	110	470	42	SCF 500 - 025 - A - N	-0,93
SCF 500 - 038 - A	38	161	123	470	57	SCF 500 - 038 - A - N	-1,09
SCF 500 - 050 - A	50	185	135	470	71	SCF 500 - 050 - A - N	-1,17
SCF 500 - 063 - A	63	212	148,5	470	86	SCF 500 - 063 - A - N	-1,27
SCF 500 - 080 - A	80	245	165	470	105	SCF 500 - 080 - A - N	-1,39
SCF 500 - 100 - A	100	285	185	470	129	SCF 500 - 100 - A - N	-1,56
SCF 500 - 125 - A	125	335	210	470	157	SCF 500 - 125 - A - N	-1,70
SCF 500 - 160 - A	160	405	245	470	198	SCF 500 - 160 - A - N	-1,87

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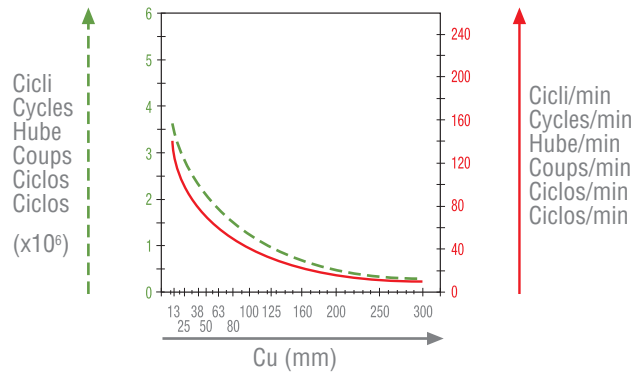
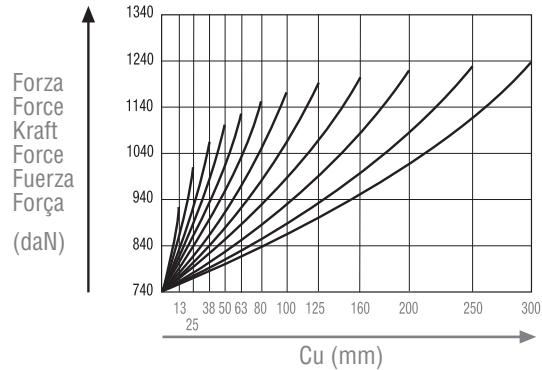
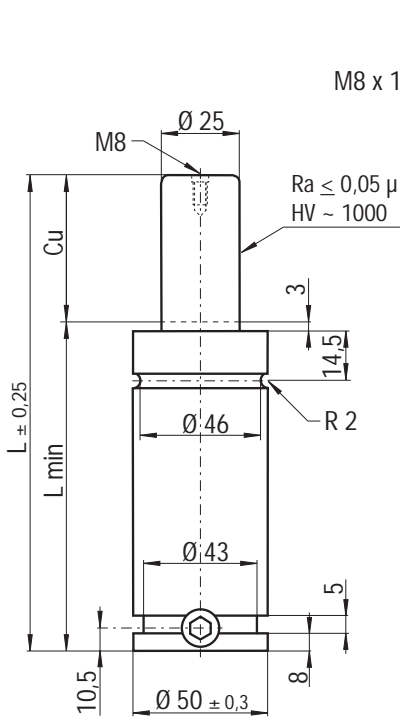
SC 750



ISO 11901
VDI 3003
CNOMO E24.54815.N



ISO 11901 Standard - ISO 11901 Standard - ISO 11901 Standard -
Conforme ISO 11901 - ISO 11901 Standard - Norma ISO 11901



(10) SC 750-050-B
ORDER (10) SC 750-050-B-N

Fixings
 Drop-In, Bottom mount FB 50 - FBA 50, FS2 50 FS2A 50, FC 50 A FCQ 50 A, FSA 50

Max. Speed 1,8 m/s	°F 32 °C 0 176 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 4,91 cm ²		Maintenance kit 39BMSC00750B
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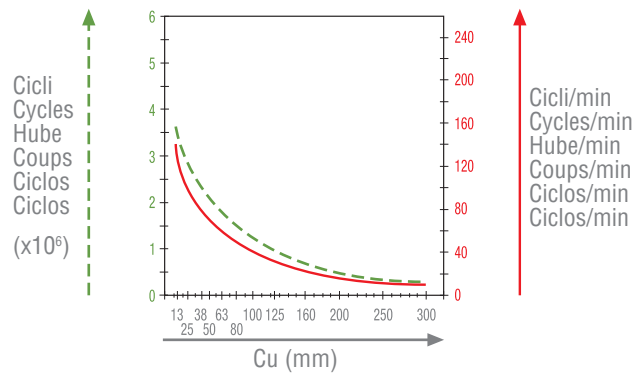
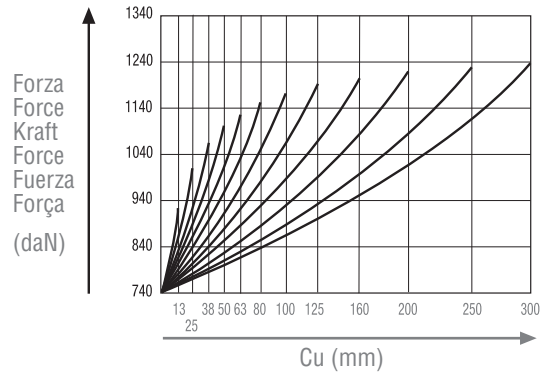
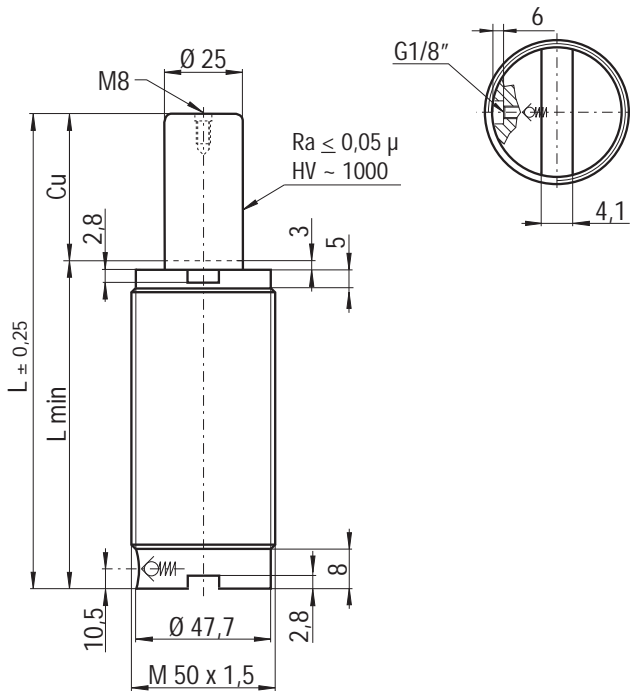
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
SC 750 - 013 - B	13	120,4	107,7	740	46	SC 750 - 013 - B - N	-1,25
SC 750 - 025 - B	25	145	120	740	64	SC 750 - 025 - B - N	-1,38
SC 750 - 038 - B	38	171	133	740	83	SC 750 - 038 - B - N	-1,53
SC 750 - 050 - B	50	195	145	740	101	SC 750 - 050 - B - N	-1,65
SC 750 - 063 - B	63	222	158,5	740	121	SC 750 - 063 - B - N	-1,80
SC 750 - 080 - B	80	255	175	740	145	SC 750 - 080 - B - N	-1,96
SC 750 - 100 - B	100	295	195	740	175	SC 750 - 100 - B - N	-2,09
SC 750 - 125 - B	125	345	220	740	212	SC 750 - 125 - B - N	-2,33
SC 750 - 160 - B	160	415	255	740	264	SC 750 - 160 - B - N	-2,68
SC 750 - 200 - B	200	495	295	740	323	SC 750 - 200 - B - N	-3,10
SC 750 - 250 - B	250	595	345	740	398	SC 750 - 250 - B - N	-3,60
SC 750 - 300 - B	300	695	395	740	472	SC 750 - 300 - B - N	-4,10

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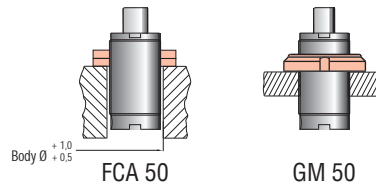
PED ISO 11901
VDI 3003
97/23/EG CNOMO E24.54815.N



(10) SCF 750-050-A
ORDER (10) SCF 750-050-A-N



Fixings



SC
SCF

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 4,91 cm ²		Maintenance kit 39BMSC00750B
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Technical specifications

Code	Cu mm	L mm	Lmin mm	F ₀ at 150 bar/+20 °C daN (±5%)	V ₀ cm ³	connecting hole M6 Micro hose	Kg
SCF 750 - 013 - A	13	120,4	107,7	740	46	SCF 750 - 013 - A - N	~1,20
SCF 750 - 025 - A	25	145	120	740	64	SCF 750 - 025 - A - N	~1,30
SCF 750 - 038 - A	38	171	133	740	83	SCF 750 - 038 - A - N	~1,39
SCF 750 - 050 - A	50	195	145	740	101	SCF 750 - 050 - A - N	~1,51
SCF 750 - 063 - A	63	222	158,5	740	121	SCF 750 - 063 - A - N	~1,60
SCF 750 - 080 - A	80	255	175	740	145	SCF 750 - 080 - A - N	~1,75
SCF 750 - 100 - A	100	295	195	740	175	SCF 750 - 100 - A - N	~1,97
SCF 750 - 125 - A	125	345	220	740	212	SCF 750 - 125 - A - N	~2,32
SCF 750 - 160 - A	160	415	255	740	264	SCF 750 - 160 - A - N	~2,56
SCF 750 - 200 - A	200	495	295	740	323	SCF 750 - 200 - A - N	~2,90
SCF 750 - 250 - A	250	595	345	740	398	SCF 750 - 250 - A - N	~3,49
SCF 750 - 300 - A	300	695	395	740	472	SCF 750 - 300 - A - N	~3,96

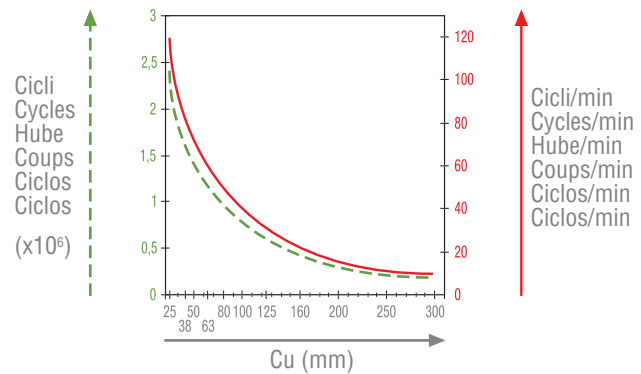
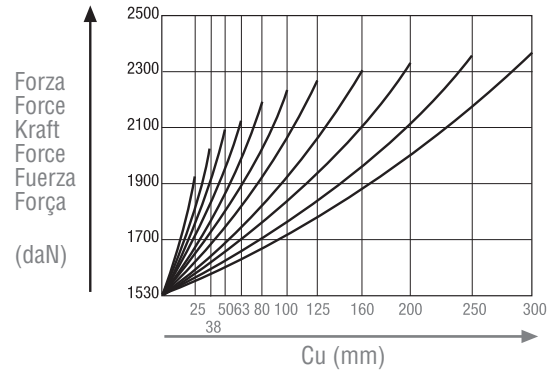
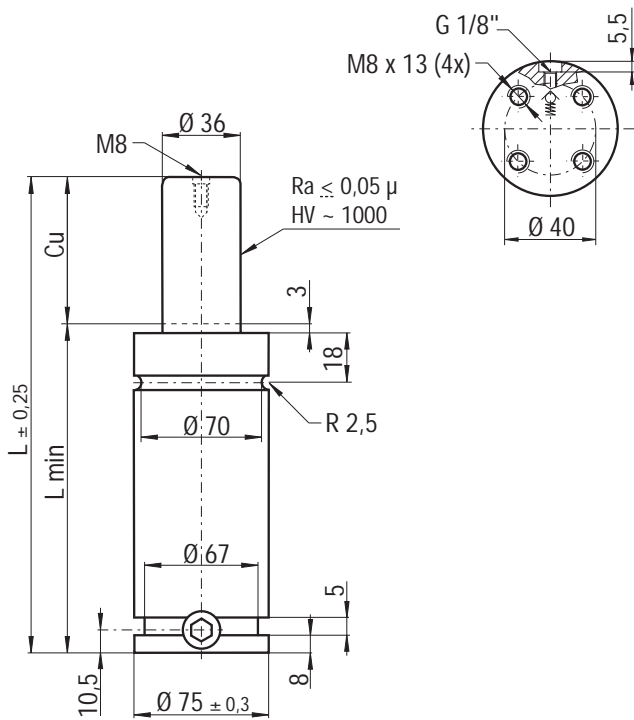
Info pg. 187

SC 1500



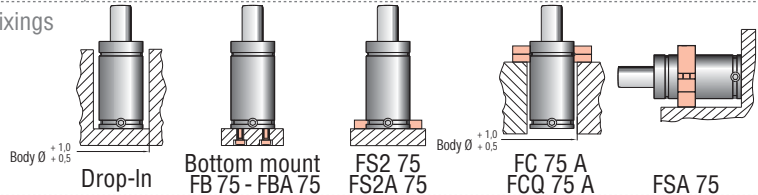
ISO 11901
VDI 3003
CNOMO E24.54815.N
PED
97/23/EC

ISO 11901 Standard - ISO 11901 Standard - ISO 11901 Standard -
Conforme ISO 11901 - ISO 11901 Standard - Norma ISO 11901



(10) SC 1500-050-B
ORDER (10) SC 1500-050-B-N

Fixings



Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 10,18 cm ²		Maintenance kit 39BMSC01500B
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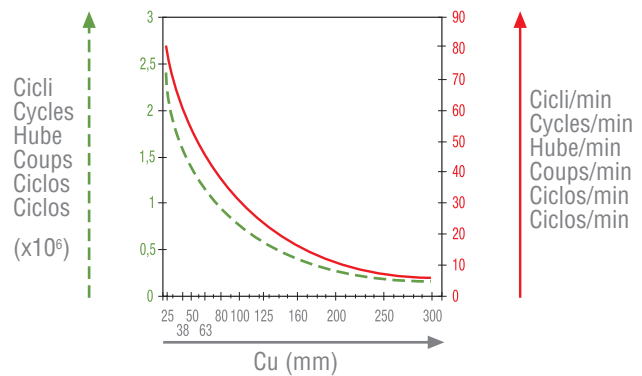
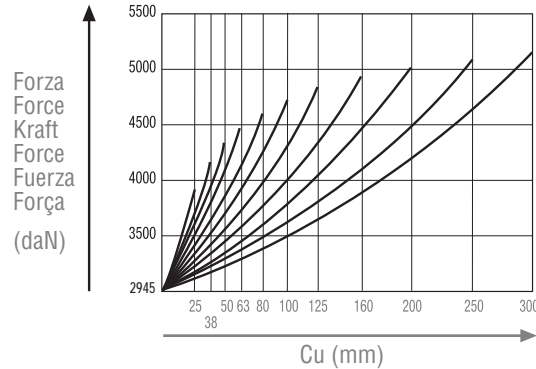
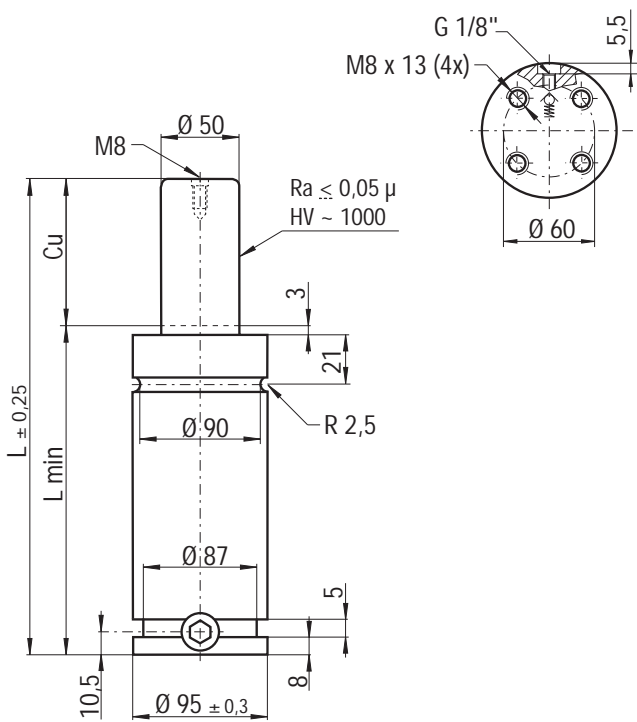
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
SC 1500 - 025 - B	25	160	135	1530	151	SC 1500 - 025 - B - N	-3,64
SC 1500 - 038 - B	38	186	148	1530	194	SC 1500 - 038 - B - N	-3,91
SC 1500 - 050 - B	50	210	160	1530	233	SC 1500 - 050 - B - N	-4,15
SC 1500 - 063 - B	63	237	173,5	1530	278	SC 1500 - 063 - B - N	-4,47
SC 1500 - 080 - B	80	270	190	1530	333	SC 1500 - 080 - B - N	-4,81
SC 1500 - 100 - B	100	310	210	1530	400	SC 1500 - 100 - B - N	-5,22
SC 1500 - 125 - B	125	360	235	1530	483	SC 1500 - 125 - B - N	-5,75
SC 1500 - 160 - B	160	430	270	1530	599	SC 1500 - 160 - B - N	-6,33
SC 1500 - 200 - B	200	510	310	1530	731	SC 1500 - 200 - B - N	-7,34
SC 1500 - 250 - B	250	610	360	1530	897	SC 1500 - 250 - B - N	-8,50
SC 1500 - 300 - B	300	710	410	1530	1063	SC 1500 - 300 - B - N	-9,60

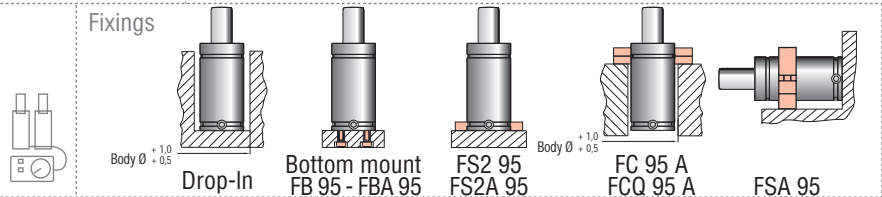
Info pg. 187

ISO 11901 Standard - ISO 11901 Standard - ISO 11901 Standard -
 Conforme ISO 11901 - ISO 11901 Standard - Norma ISO 11901

PED ISO 11901
 VDI 3003
 97/23/EG CNOMO E24.54815.N



(10) SC 3000-050-B
ORDER (10) SC 3000-050-B-N



SC
SCF

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 19,63 cm ²		Maintenance kit 39BMS03000B
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
SC 3000 - 025 - B	25	170	145	2945	274	SC 3000 - 025 - B - N	-6,36
SC 3000 - 038 - B	38	196	158	2945	346	SC 3000 - 038 - B - N	-6,75
SC 3000 - 050 - B	50	220	170	2945	413	SC 3000 - 050 - B - N	-7,35
SC 3000 - 063 - B	63	247	183,5	2945	488	SC 3000 - 063 - B - N	-7,87
SC 3000 - 080 - B	80	280	200	2945	579	SC 3000 - 080 - B - N	-8,44
SC 3000 - 100 - B	100	320	220	2945	691	SC 3000 - 100 - B - N	-9,03
SC 3000 - 125 - B	125	370	245	2945	829	SC 3000 - 125 - B - N	-10,1
SC 3000 - 160 - B	160	440	280	2945	1024	SC 3000 - 160 - B - N	-11,3
SC 3000 - 200 - B	200	520	320	2945	1246	SC 3000 - 200 - B - N	-12,8
SC 3000 - 250 - B	250	620	370	2945	1524	SC 3000 - 250 - B - N	-14,5
SC 3000 - 300 - B	300	720	420	2945	1801	SC 3000 - 300 - B - N	-16,2

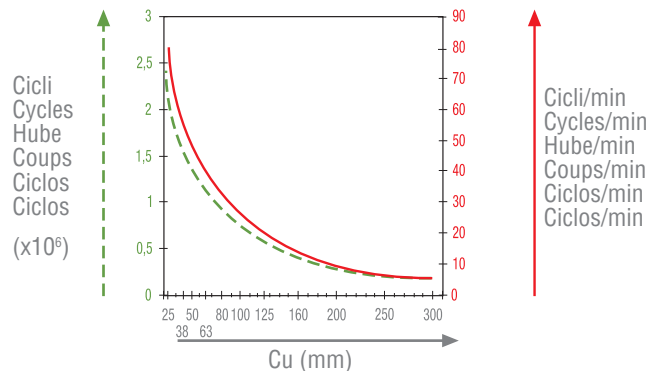
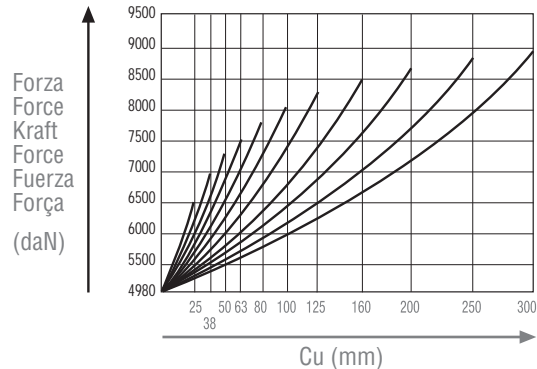
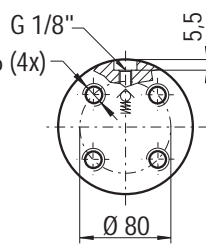
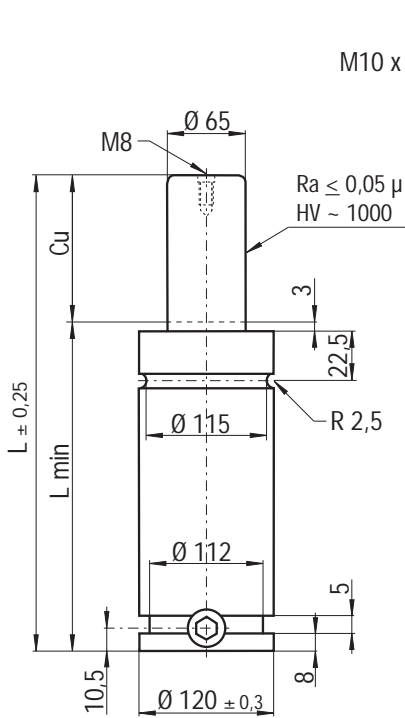
Info pg. 187

SC 5000

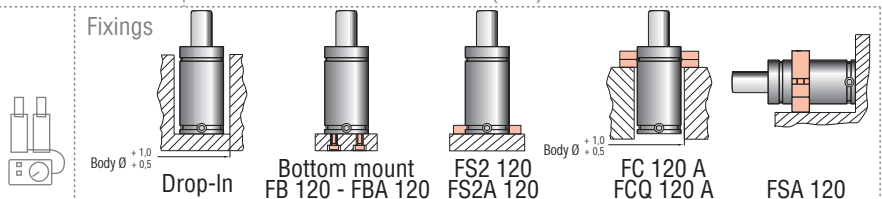


ISO 11901
VDI 3003
CNOMO E24.54815.N
PED
97/23/EC

ISO 11901 Standard - ISO 11901 Standard - ISO 11901 Standard -
Conforme ISO 11901 - ISO 11901 Standard - Norma ISO 11901



(10) SC 5000-050-B
ORDER (10) SC 5000-050-B-N



Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 33,18 cm ²		Maintenance kit 39BMS05000B
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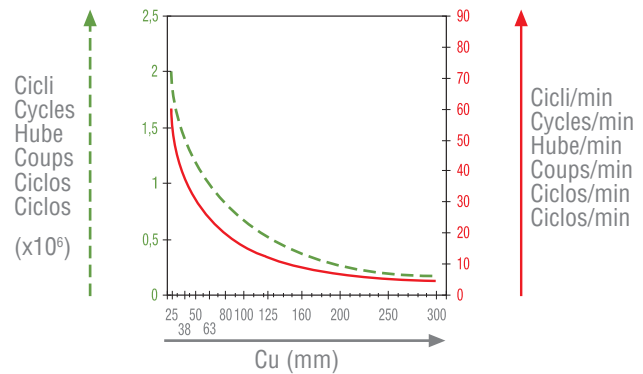
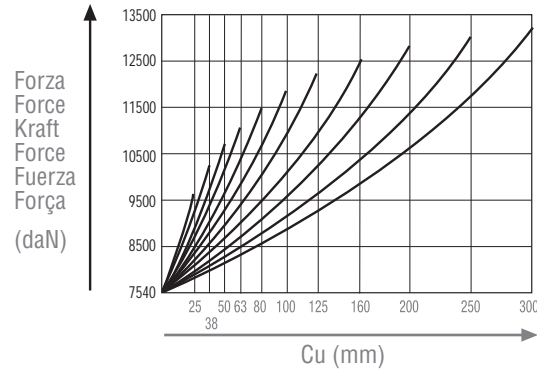
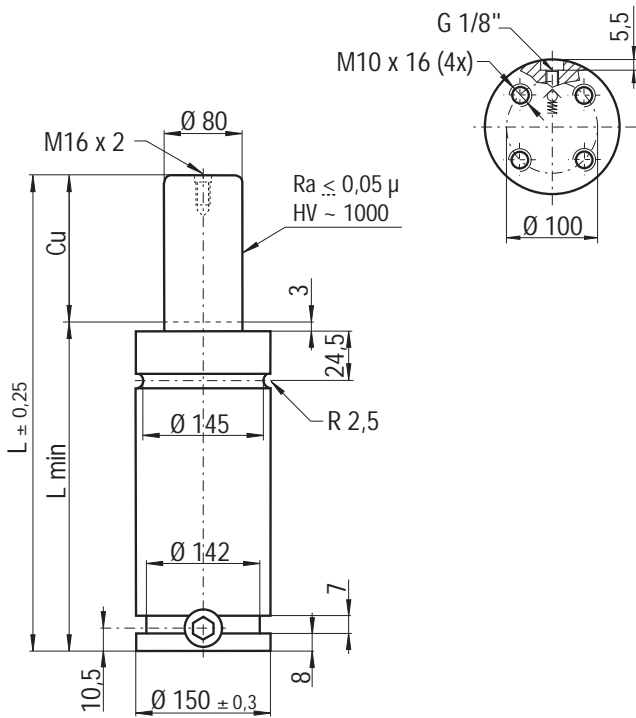
Technical specifications

Code	Cu mm	L mm	Lmin mm	F ₀ at 150 bar/+20 °C daN (±5%)	V ₀ cm ³	connecting hole M6 Micro hose	Kg
SC 5000 - 025 - B	25	190	165	4980	446	SC 5000 - 025 - B - N	-12,2
SC 5000 - 038 - B	38	216	178	4980	559	SC 5000 - 038 - B - N	-12,9
SC 5000 - 050 - B	50	240	190	4980	663	SC 5000 - 050 - B - N	-13,7
SC 5000 - 063 - B	63	267	203,5	4980	780	SC 5000 - 063 - B - N	-14,5
SC 5000 - 080 - B	80	300	220	4980	924	SC 5000 - 080 - B - N	-15,4
SC 5000 - 100 - B	100	340	240	4980	1097	SC 5000 - 100 - B - N	-16,7
SC 5000 - 125 - B	125	390	265	4980	1314	SC 5000 - 125 - B - N	-18,3
SC 5000 - 160 - B	160	460	300	4980	1618	SC 5000 - 160 - B - N	-20,1
SC 5000 - 200 - B	200	540	340	4980	1965	SC 5000 - 200 - B - N	-22,3
SC 5000 - 250 - B	250	640	390	4980	2399	SC 5000 - 250 - B - N	-24,8
SC 5000 - 300 - B	300	740	440	4980	2833	SC 5000 - 300 - B - N	-27,3

Info pg. 187

ISO 11901 Standard - ISO 11901 Standard - ISO 11901 Standard -
 Conforme ISO 11901 - ISO 11901 Standard - Norma ISO 11901

PEP ISO 11901
 VDI 3003
 97/23/EG CNOMO E24.54815.N



ORDER (10) SC 7500-050-B-N

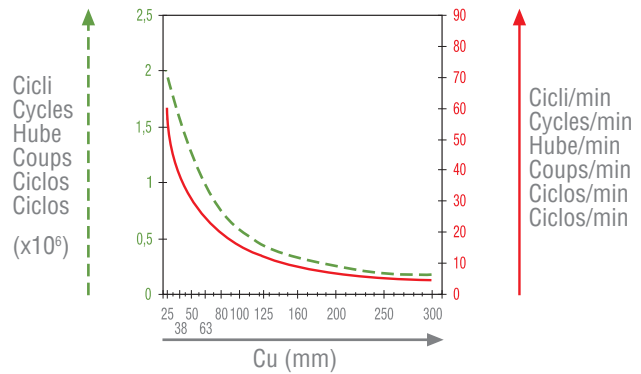
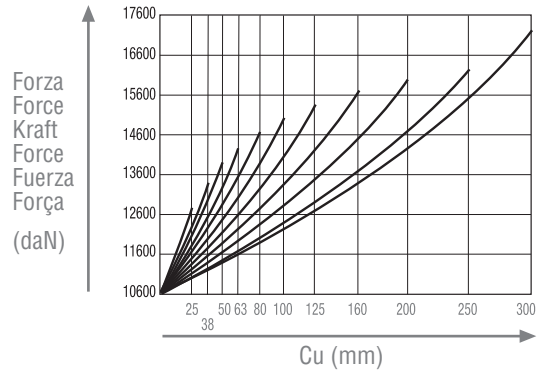
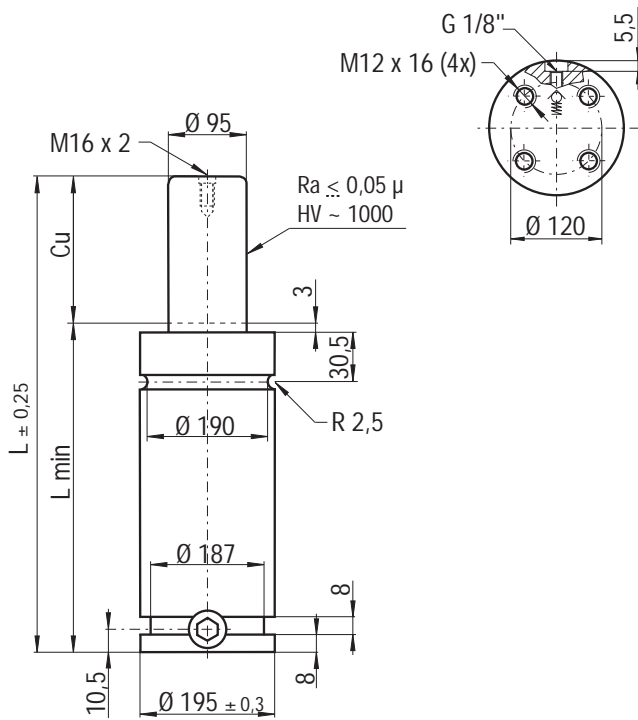
Fixings: Drop-In, Bottom mount (FB 150 - FBA 150), FS2 150 (FS2A 150), FC 150 A (FCQ 150 A), FSA 150

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 50,27 cm ²	Maintenance kit 39BMSC07500B
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
SC 7500 - 025 - B	25	205	180	7540	760	SC 7500 - 025 - B - N	-19,8
SC 7500 - 038 - B	38	231	193	7540	933	SC 7500 - 038 - B - N	-21,0
SC 7500 - 050 - B	50	255	205	7540	1093	SC 7500 - 050 - B - N	-21,8
SC 7500 - 063 - B	63	282	218,5	7540	1275	SC 7500 - 063 - B - N	-22,6
SC 7500 - 080 - B	80	315	235	7540	1493	SC 7500 - 080 - B - N	-24,4
SC 7500 - 100 - B	100	355	255	7540	1759	SC 7500 - 100 - B - N	-26,1
SC 7500 - 125 - B	125	405	280	7540	2091	SC 7500 - 125 - B - N	-28,0
SC 7500 - 160 - B	160	475	315	7540	2557	SC 7500 - 160 - B - N	-31,4
SC 7500 - 200 - B	200	555	355	7540	3090	SC 7500 - 200 - B - N	-35,0
SC 7500 - 250 - B	250	655	405	7540	3755	SC 7500 - 250 - B - N	-38,5
SC 7500 - 300 - B	300	755	455	7540	4421	SC 7500 - 300 - B - N	-42,4

Info pg. 187



(10) SC 10000-050-C
ORDER (10) SC 10000-050-C-N

Fixings
 Drop-In
 Bottom mount
 FS2 195
 FC 195 A

Max. Speed 1,8 m/s	°F 32 °C 0 176 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 70,88 cm ²		Maintenance kit 39BMS10000C
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
SC 10000 - 025 - C	25	210	185	10600	1009	SC 10000 - 025 - C - N	-34,8
SC 10000 - 038 - C	38	236	198	10600	1307	SC 10000 - 038 - C - N	-36,7
SC 10000 - 050 - C	50	260	210	10600	1582	SC 10000 - 050 - C - N	-38,5
SC 10000 - 063 - C	63	287	223,5	10600	1881	SC 10000 - 063 - C - N	-40,5
SC 10000 - 080 - C	80	320	240	10600	2270	SC 10000 - 080 - C - N	-43,0
SC 10000 - 100 - C	100	360	260	10600	2729	SC 10000 - 100 - C - N	-46,0
SC 10000 - 125 - C	125	410	285	10600	3302	SC 10000 - 125 - C - N	-49,8
SC 10000 - 160 - C	160	480	320	10600	4105	SC 10000 - 160 - C - N	-55,0
SC 10000 - 200 - C	200	560	360	10600	5022	SC 10000 - 200 - C - N	-61,0
SC 10000 - 250 - C	250	660	410	10600	6169	SC 10000 - 250 - C - N	-68,5
SC 10000 - 300 - C	300	760	460	10600	6657	SC 10000 - 300 - C - N	-76,0

Info pg. 187



SC
SCF

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H

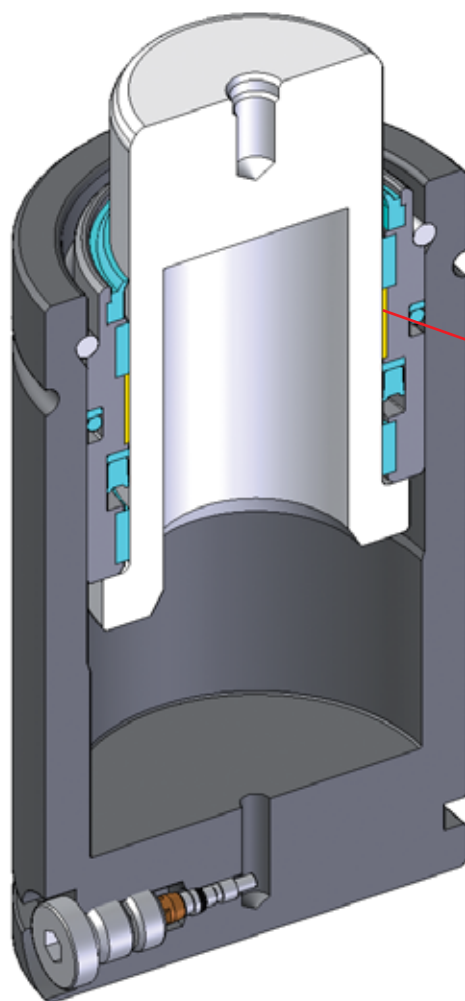
SERIES



SPECIAL SPRINGS


PED
97/23/EC

ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung
 Standard ISO, force majorée - ISO Standard, fuerza potenciada -
 Norma ISO, forța permitida

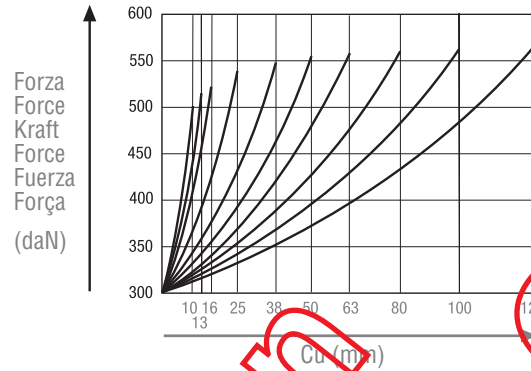
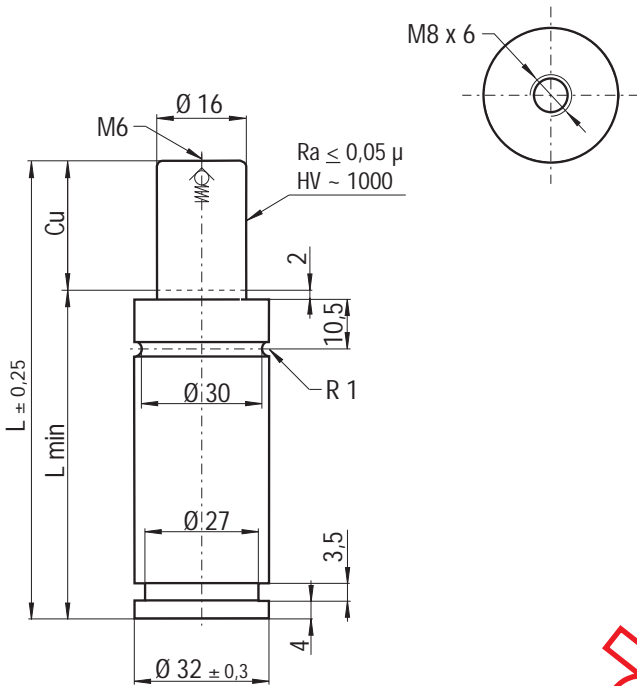


Permanent
Lubrication
 on the
Rod

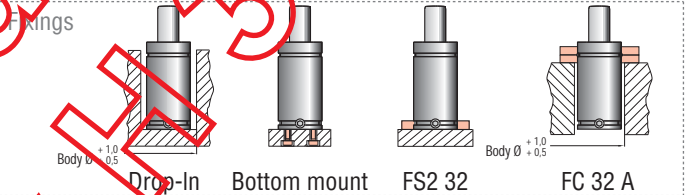
Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
H 300	32	10 - 125	300	-	-	-
H 500	38	10 - 125	470	-	-	-
HF 500	M 38 X 1,5	10 - 125	470	-	-	-
H 700	45	13 - 160	680	-	-	-
HF 700	M 45 X 1,5	13 - 160	680	-	-	-
H 1000	50	13 - 300	1060	-	-	-
HF 1000	M 50 X 1,5	13 - 300	1060	-	-	-
H 2400	75	25 - 300	2385	-	-	-
H 4200	95	25 - 300	4240	-	-	-
H 6600	120	25 - 300	6630	-	-	-
H 18500	195	25 - 300	18400	-	-	-

ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung
 Standard ISO, force majorée - ISO Standard, fuerza potenciada - Norma ISO, forța permitida



(10) H 300-050-B



H
HF

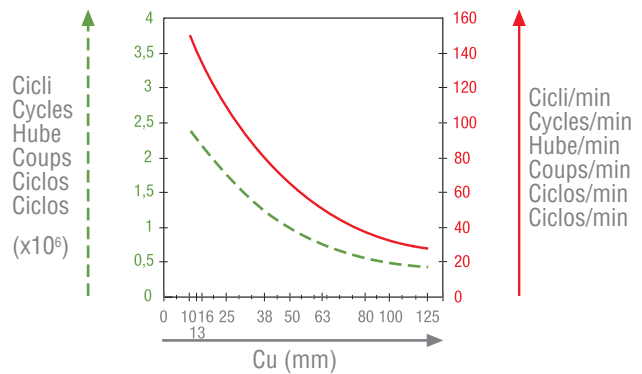
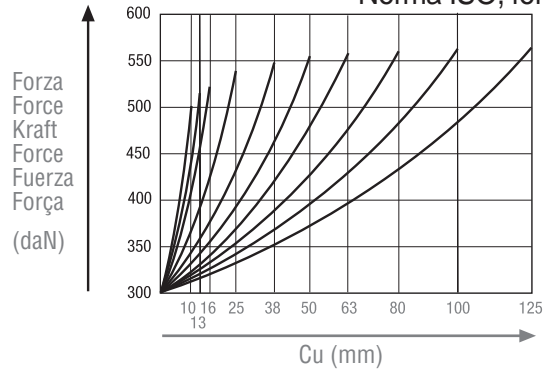
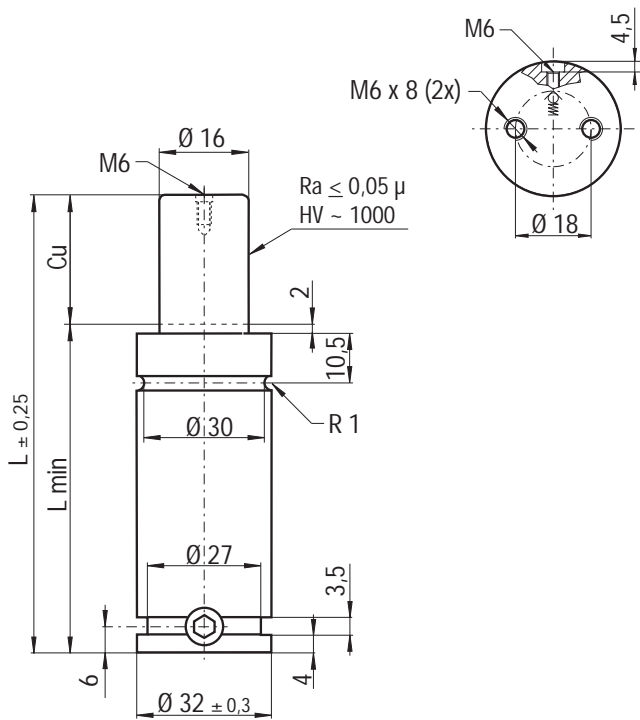
Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 2,01 cm		Maintenance kit 39BMH00300B
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
H 300 - 010 - B	10	70	60	300	-	-	~0,29
H 300 - 013 - B	13	85,4	62,7	300	-	-	~0,30
H 300 - 016 - B	16	102	66	300	-	-	~0,31
H 300 - 025 - B	25	130	75	300	-	-	~0,34
H 300 - 038 - B	38	168	88	300	-	-	~0,38
H 300 - 050 - B	50	200	100	300	-	-	~0,43
H 300 - 063 - B	63	237	113,5	300	-	-	~0,48
H 300 - 080 - B	80	280	130	300	-	-	~0,54
H 300 - 100 - B	100	350	150	300	-	-	~0,61
H 300 - 125 - B	125	425	175	300	-	-	~0,69



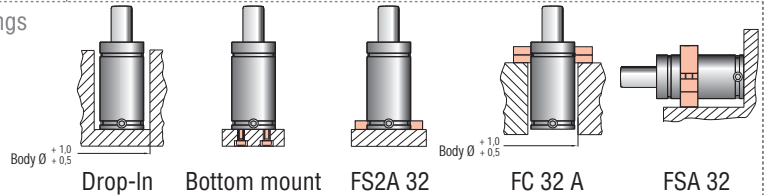
ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada - Norma ISO, força permitida



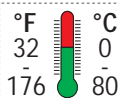
(10) H 300-050-C
ORDER (10) H 300-050-C-N



Fixings



Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
2,01
cm²



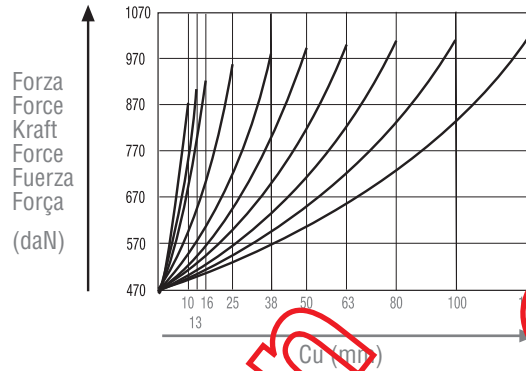
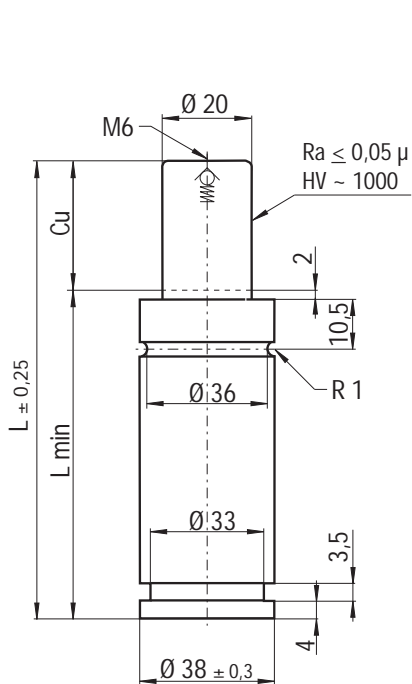
Maintenance kit
39BMH00300C

Technical specifications

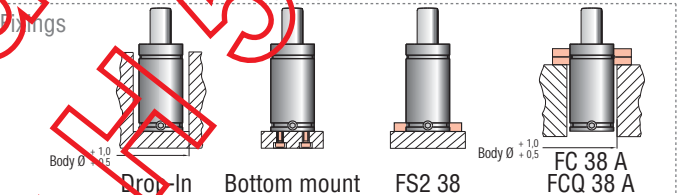
Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	connecting hole M6 Micro hose	Kg
NEW	mm	mm	mm		cm ³		
H 300 - 010 - C	10	70	60	300	6,6	H 300 - 010 - C - N	-0,29
H 300 - 013 - C	13	75,4	62,7	300	8,2	H 300 - 013 - C - N	-0,30
H 300 - 016 - C	16	82	66	300	9,9	H 300 - 016 - C - N	-0,31
H 300 - 025 - C	25	100	75	300	15	H 300 - 025 - C - N	-0,34
H 300 - 038 - C	38	126	88	300	22,2	H 300 - 038 - C - N	-0,38
H 300 - 050 - C	50	150	100	300	28,9	H 300 - 050 - C - N	-0,43
H 300 - 063 - C	63	177	113,5	300	36,2	H 300 - 063 - C - N	-0,48
H 300 - 080 - C	80	210	130	300	45,7	H 300 - 080 - C - N	-0,54
H 300 - 100 - C	100	250	150	300	56,9	H 300 - 100 - C - N	-0,61
H 300 - 125 - C	125	300	175	300	70,9	H 300 - 125 - C - N	-0,69

Info pg. 187

ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO,
 erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada -
 Norma ISO, força permitida

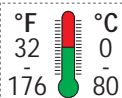


(10) H 500-050-B



H
HF

Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
3,14
cm



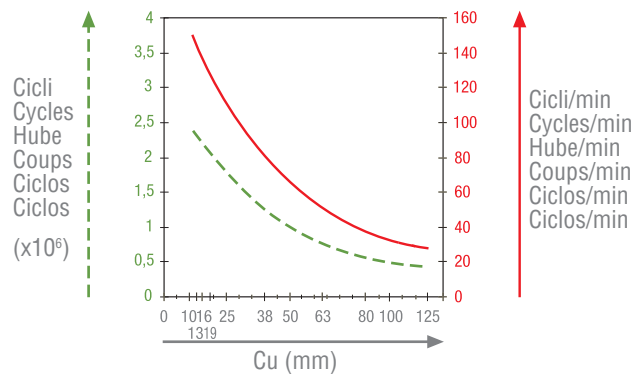
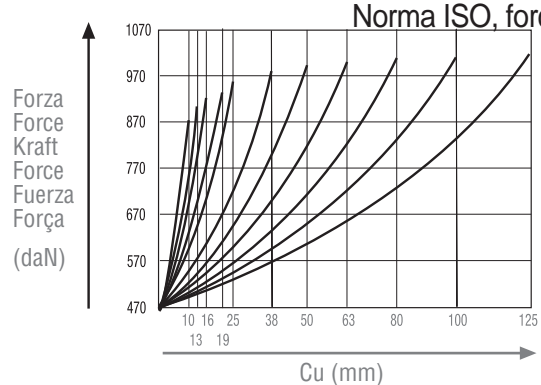
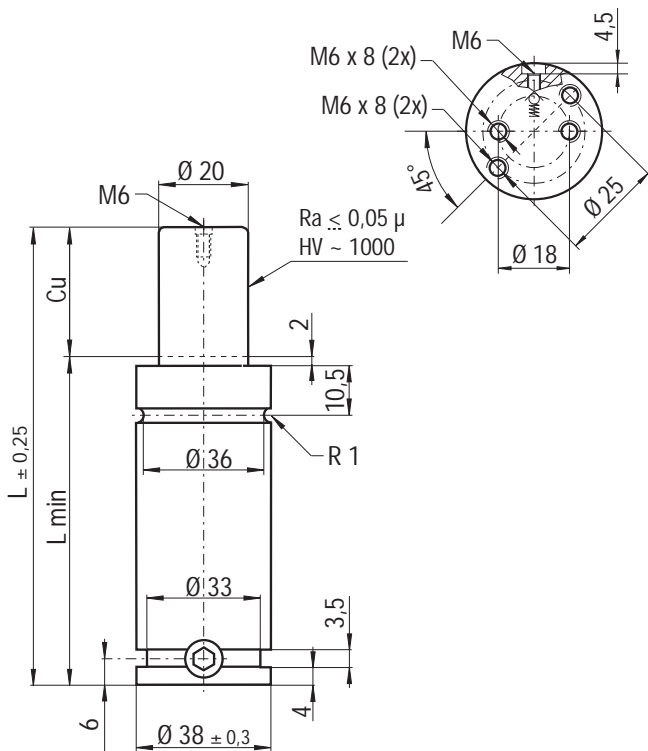
Maintenance kit
39BMH00500B

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³		 Kg
H 500 - 010 - B	10	70	60	470	-	-	-0,42
H 500 - 013 - B	13	85,4	62,7	470	-	-	-0,43
H 500 - 016 - B	16	102	66	470	-	-	-0,45
H 500 - 025 - B	25	130	75	470	-	-	-0,50
H 500 - 038 - B	38	166	88	470	-	-	-0,56
H 500 - 050 - B	50	200	100	470	-	-	-0,63
H 500 - 063 - B	63	240	113,5	470	-	-	-0,70
H 500 - 080 - B	80	290	130	470	-	-	-0,79
H 500 - 100 - B	100	350	150	470	-	-	-0,89
H 500 - 125 - B	125	425	175	470	-	-	-1,08



ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada - Norma ISO, força permitida



(10) H 500-050-C
ORDER (10) H 500-050-C - N

Fixings
 Drop-In, Bottom mount, FS2A 38, FC 38 A, FCQ 38 A, FSA 38

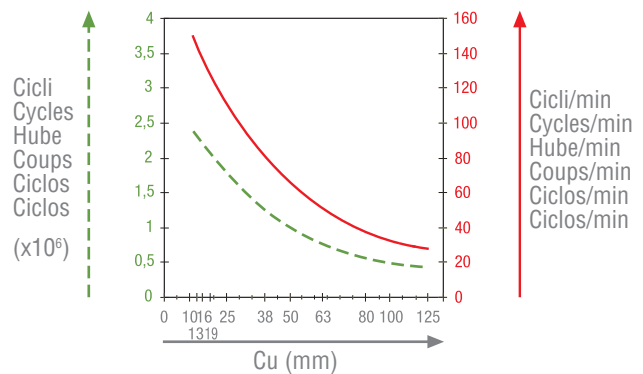
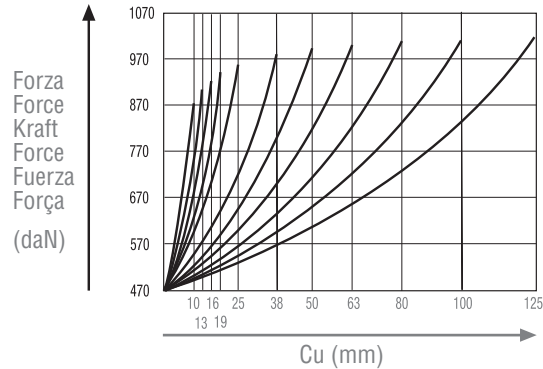
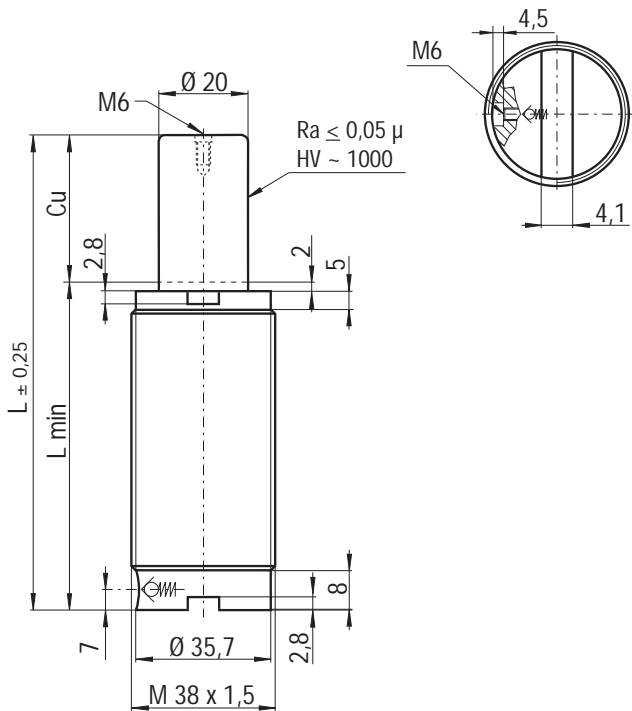
Max. Speed 1,8 m/s	°F 32 °C 0 176 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 3,14 cm ²		Maintenance kit 39BMH00500C
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Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo	connecting hole M6 Micro hose	Kg
NEW	mm	mm	mm		cm ³		
H 500 - 010 - C	10	70	60	470	8,7	H 500 - 010 - C - N	-0,42
H 500 - 013 - C	13	75,4	62,7	470	10,9	H 500 - 013 - C - N	-0,43
H 500 - 016 - C	16	82	66	470	13,1	H 500 - 016 - C - N	-0,45
H 500 - 019 - C	19	88	69	470	16,2	H 500 - 019 - C - N	-0,48
H 500 - 025 - C	25	100	75	470	19,7	H 500 - 025 - C - N	-0,50
H 500 - 038 - C	38	126	88	470	29,3	H 500 - 038 - C - N	-0,56
H 500 - 050 - C	50	150	100	470	38,1	H 500 - 050 - C - N	-0,63
H 500 - 063 - C	63	177	113,5	470	47,6	H 500 - 063 - C - N	-0,70
H 500 - 080 - C	80	210	130	470	60,1	H 500 - 080 - C - N	-0,79
H 500 - 100 - C	100	250	150	470	74,6	H 500 - 100 - C - N	-0,89
H 500 - 125 - C	125	300	175	470	93,2	H 500 - 125 - C - N	-1,08

Info pg. 187

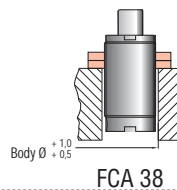
ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO,
erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada -
Norma ISO, força permitida



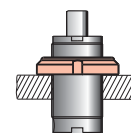
(10) HF 500-050-C
ORDER (10) HF 500-050-C-N



Fixings



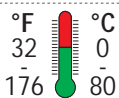
FCA 38



GM 38

H
HF

Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
3,14
cm²



Maintenance kit
39BMH00500C

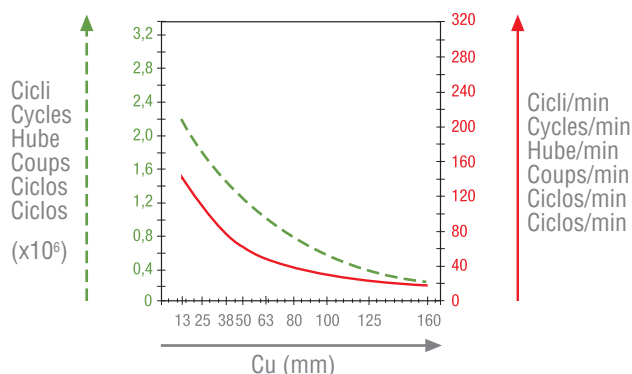
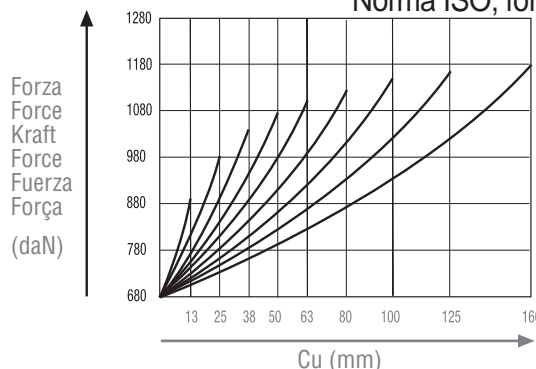
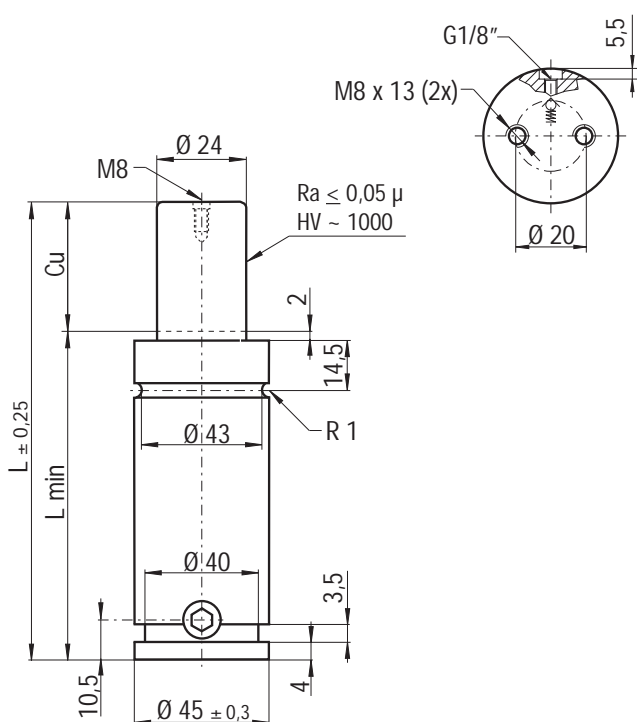
Technical specifications

Code		Cu	L	Lmin	Fo	Vo	connecting hole M6	kg
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Micro hose	
HF 500 - 010 - A	HF 500 - 010 - C	10	70	60	470	8,7	HF 500 - 010 - C - N	-0,39
HF 500 - 013 - A	HF 500 - 013 - C	13	75,4	62,7	470	10,9	HF 500 - 013 - C - N	-0,40
HF 500 - 016 - A	HF 500 - 016 - C	16	82	66	470	13,1	HF 500 - 016 - C - N	-0,42
-	HF 500 - 019 - C	19	88	69	470	16,2	HF 500 - 019 - C - N	-0,45
HF 500 - 025 - A	HF 500 - 025 - C	25	100	75	470	19,7	HF 500 - 025 - C - N	-0,48
HF 500 - 038 - A	HF 500 - 038 - C	38	126	88	470	29,3	HF 500 - 038 - C - N	-0,54
HF 500 - 050 - A	HF 500 - 050 - C	50	150	100	470	38,1	HF 500 - 050 - C - N	-0,59
HF 500 - 063 - A	HF 500 - 063 - C	63	177	113,5	470	47,6	HF 500 - 063 - C - N	-0,66
HF 500 - 080 - A	HF 500 - 080 - C	80	210	130	470	60,1	HF 500 - 080 - C - N	-0,76
HF 500 - 100 - A	HF 500 - 100 - C	100	250	150	470	74,6	HF 500 - 100 - C - N	-0,85
HF 500 - 125 - A	HF 500 - 125 - C	125	300	175	470	93,2	HF 500 - 125 - C - N	-1,05

Info pg. 187



ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada - Norma ISO, forța permitida



(10) H 700-050-A
ORDER (10) H 700-050-A-N

Drop-In

Bottom mount
 FB 45 - FBA 45

FS2 45
 FS2A 45

FC 45 A
 FCQ 45 A

FSA 45

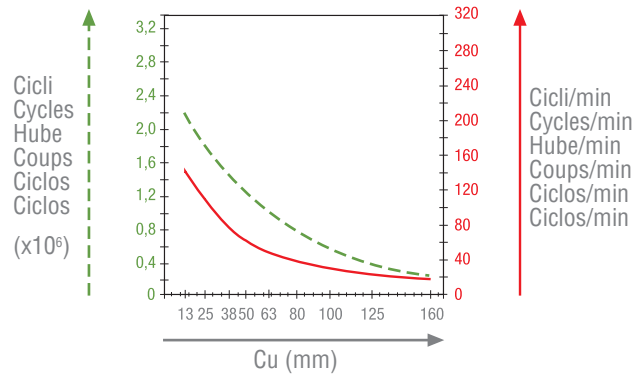
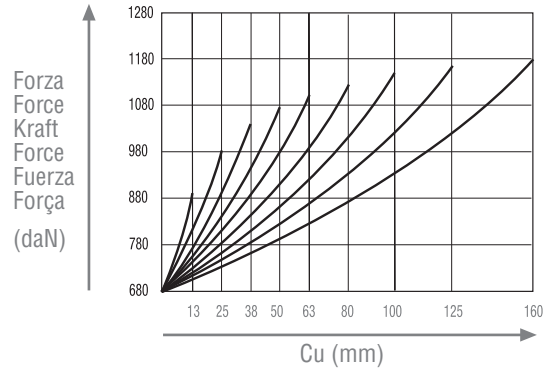
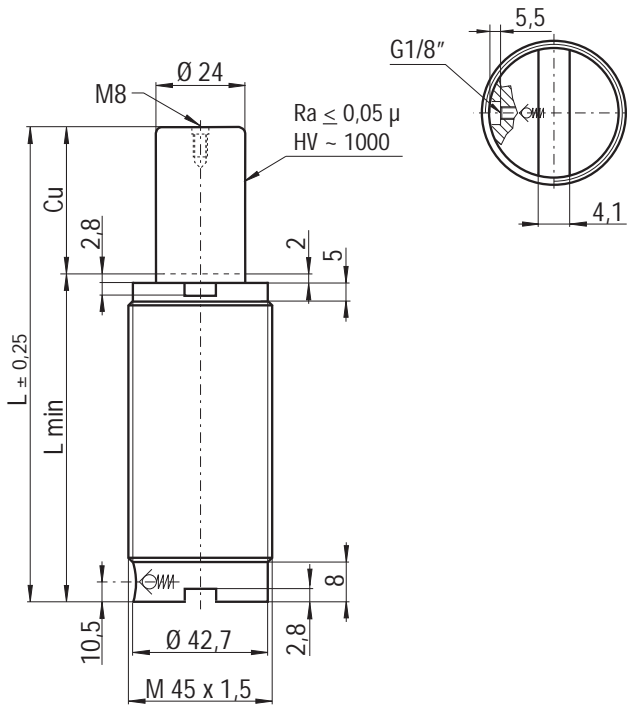
Max. Speed 1,8 m/s	<table style="display: inline-table; border: none;"> <tr> <td style="text-align: center;">°F</td> <td style="text-align: center;">°C</td> </tr> <tr> <td style="text-align: center;">32</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">176</td> <td style="text-align: center;">80</td> </tr> </table>	°F	°C	32	0	176	80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 4,52 cm ²		Maintenance kit 39BMH00700A
°F	°C												
32	0												
176	80												

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	 connecting hole M6 Micro hose	 Kg
H 700 - 013 - A	13	110,4	97,7	680	31	H 700 - 013 - A - N	-0,98
H 700 - 025 - A	25	135	110	680	46	H 700 - 025 - A - N	-1,07
H 700 - 038 - A	38	161	123	680	62	H 700 - 038 - A - N	-1,16
H 700 - 050 - A	50	185	135	680	76	H 700 - 050 - A - N	-1,25
H 700 - 063 - A	63	212	148,5	680	93	H 700 - 063 - A - N	-1,35
H 700 - 080 - A	80	245	165	680	113	H 700 - 080 - A - N	-1,47
H 700 - 100 - A	100	285	185	680	137	H 700 - 100 - A - N	-1,72
H 700 - 125 - A	125	335	210	680	167	H 700 - 125 - A - N	-1,80
H 700 - 160 - A	125	405	245	680	210	H 700 - 160 - A - N	-2,05

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ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO,
erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada -
Norma ISO, força permitida



(10) HF 700-050-A
ORDER (10) HF 700-050-A-N

Fixings
 FCA 45
 GM 45

H
HF

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 4,52 cm ²		Maintenance kit 39BMH00700A
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Technical specifications

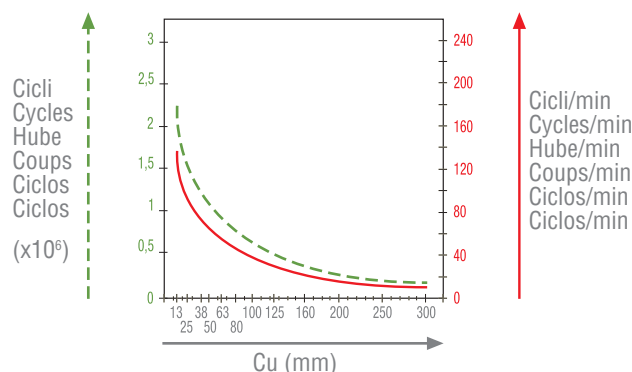
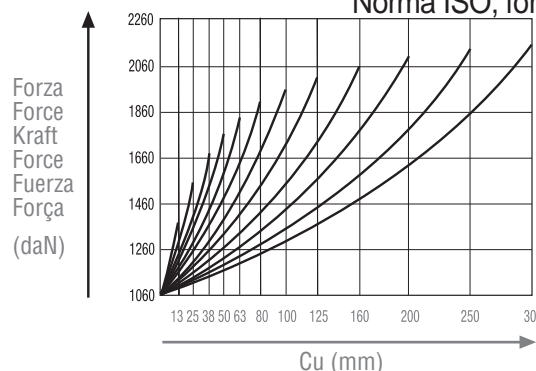
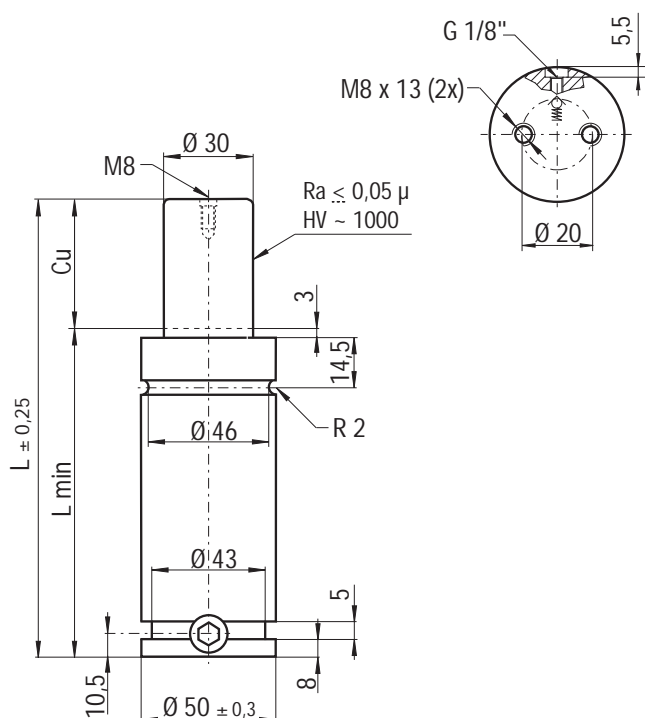
Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
HF 700 - 013 - A	13	110,4	97,7	680	31	HF 700 - 013 - A - N	-0,92
HF 700 - 025 - A	25	135	110	680	46	HF 700 - 025 - A - N	-1,03
HF 700 - 038 - A	38	161	123	680	62	HF 700 - 038 - A - N	-1,13
HF 700 - 050 - A	50	185	135	680	76	HF 700 - 050 - A - N	-1,24
HF 700 - 063 - A	63	212	148,5	680	93	HF 700 - 063 - A - N	-1,33
HF 700 - 080 - A	80	245	165	680	113	HF 700 - 080 - A - N	-1,46
HF 700 - 100 - A	100	285	185	680	137	HF 700 - 100 - A - N	-1,70
HF 700 - 125 - A	125	335	210	680	167	HF 700 - 125 - A - N	-1,78
HF 700 - 160 - A	125	405	245	680	210	HF 700 - 160 - A - N	-1,92

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H 1000



ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada - Norma ISO, forța permitida

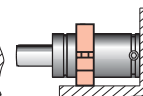
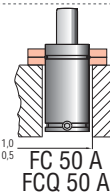
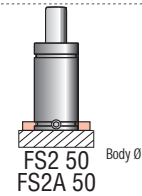
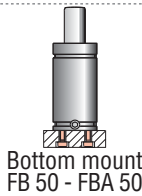
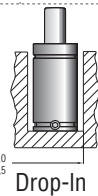


(10) H 1000-050-A

ORDER (10) H 1000-050-A-N



Fixings



Body Ø +1,0 / -0,5

Drop-In

Bottom mount
FB 50 - FBA 50

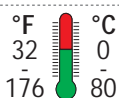
FS2 50
FS2A 50

Body Ø +1,0 / -0,5
FC 50 A
FCQ 50 A

FSA 50

Max. Speed

1,8 m/s



P max

150 bar
2175 psi

P min

20 bar
290 psi

S

7,07
cm²



Maintenance kit

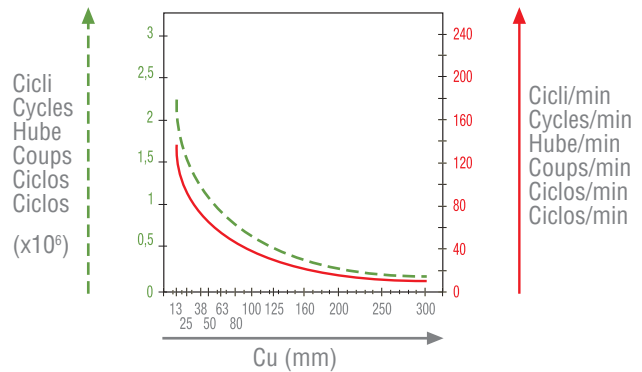
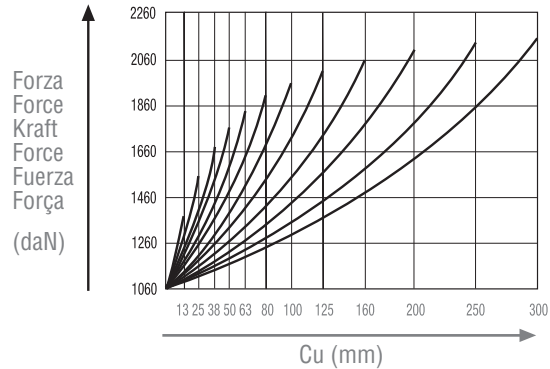
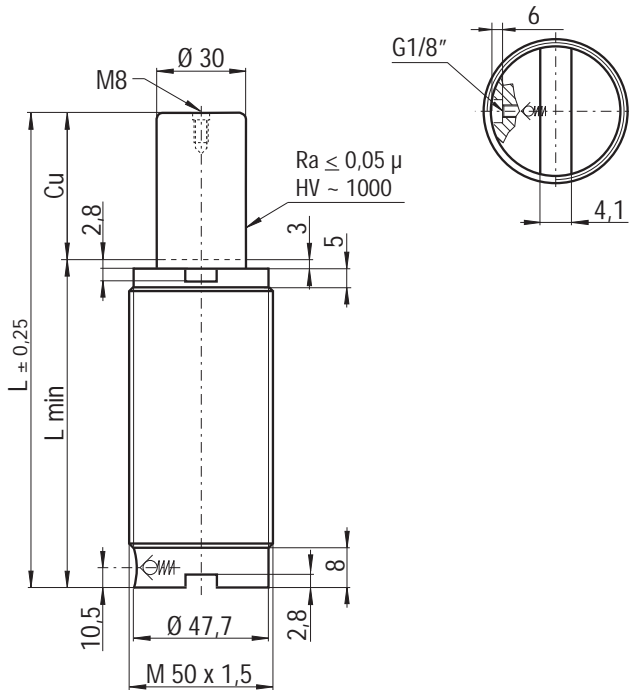
39BMH01000A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
H 1000 - 013 - A	13	120,4	107,7	1060	52	H 1000 - 013 - A - N	-1,35
H 1000 - 025 - A	25	145	120	1060	72	H 1000 - 025 - A - N	-1,44
H 1000 - 038 - A	38	171	133	1060	93	H 1000 - 038 - A - N	-1,59
H 1000 - 050 - A	50	195	145	1060	113	H 1000 - 050 - A - N	-1,68
H 1000 - 063 - A	63	222	158,5	1060	135	H 1000 - 063 - A - N	-1,83
H 1000 - 080 - A	80	255	175	1060	162	H 1000 - 080 - A - N	-1,99
H 1000 - 100 - A	100	295	195	1060	195	H 1000 - 100 - A - N	-2,19
H 1000 - 125 - A	125	345	220	1060	236	H 1000 - 125 - A - N	-2,43
H 1000 - 160 - A	160	415	255	1060	293	H 1000 - 160 - A - N	-2,77
H 1000 - 200 - A	200	495	295	1060	359	H 1000 - 200 - A - N	-3,16
H 1000 - 250 - A	250	595	345	1060	440	H 1000 - 250 - A - N	-3,64
H 1000 - 300 - A	300	695	395	1060	522	H 1000 - 300 - A - N	-4,13

Info pg. 187

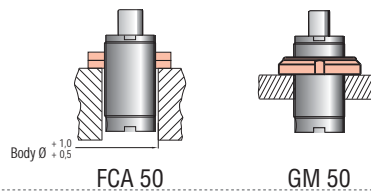
ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO,
erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada -
Norma ISO, força permitida



(10) HF 1000-050-A
ORDER (10) HF 1000-050-A-N



Fixings



H
HF

Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 7,07 cm ²		Maintenance kit 39BMH01000A
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Technical specifications

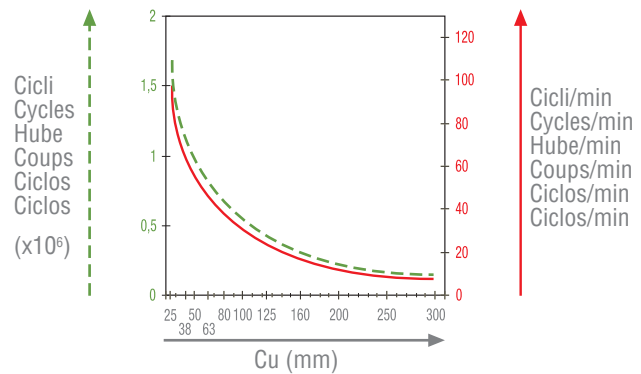
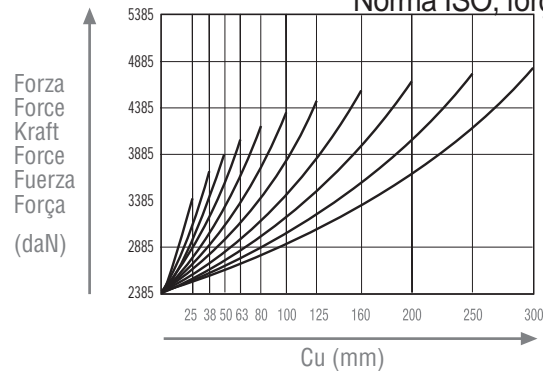
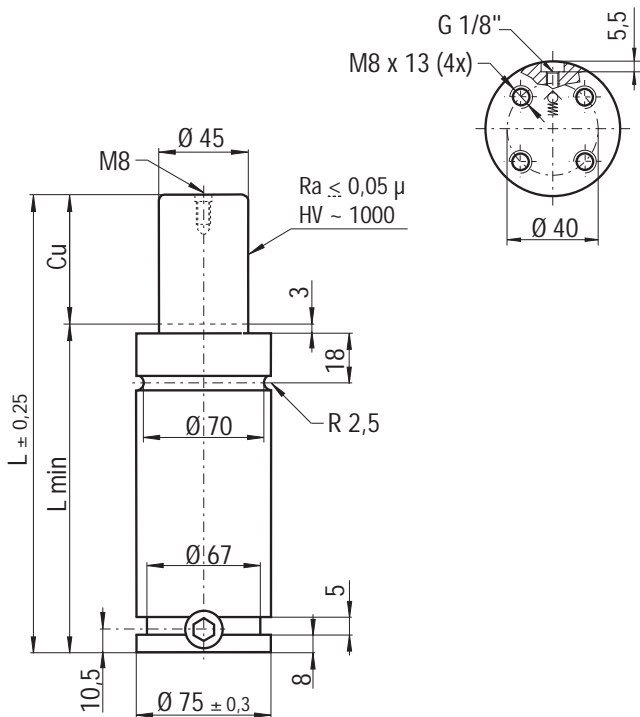
Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
HF 1000 - 013 - A	13	120,4	107,7	1060	52	HF 1000 - 013 - A - N	-1,24
HF 1000 - 025 - A	25	145	120	1060	72	HF 1000 - 025 - A - N	-1,35
HF 1000 - 038 - A	38	171	133	1060	93	HF 1000 - 038 - A - N	-1,41
HF 1000 - 050 - A	50	195	145	1060	113	HF 1000 - 050 - A - N	-1,59
HF 1000 - 063 - A	63	222	158,5	1060	135	HF 1000 - 063 - A - N	-1,72
HF 1000 - 080 - A	80	255	175	1060	162	HF 1000 - 080 - A - N	-1,89
HF 1000 - 100 - A	100	295	195	1060	195	HF 1000 - 100 - A - N	-2,15
HF 1000 - 125 - A	125	345	220	1060	236	HF 1000 - 125 - A - N	-2,40
HF 1000 - 160 - A	160	415	255	1060	293	HF 1000 - 160 - A - N	-2,63
HF 1000 - 200 - A	200	495	295	1060	359	HF 1000 - 200 - A - N	-3,09
HF 1000 - 250 - A	250	595	345	1060	440	HF 1000 - 250 - A - N	-3,60
HF 1000 - 300 - A	300	695	395	1060	522	HF 1000 - 300 - A - N	-4,08


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H 2400



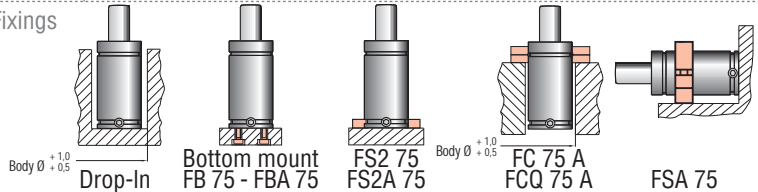
ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada - Norma ISO, forța permitida



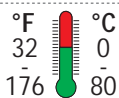
 (10) H 2400-050-A
ORDER (10) H 2400-050-A-N



Fixings



Max. Speed
1,8 m/s



P max
150 bar
2175 psi



P min
20 bar
290 psi

S
15,9
cm²



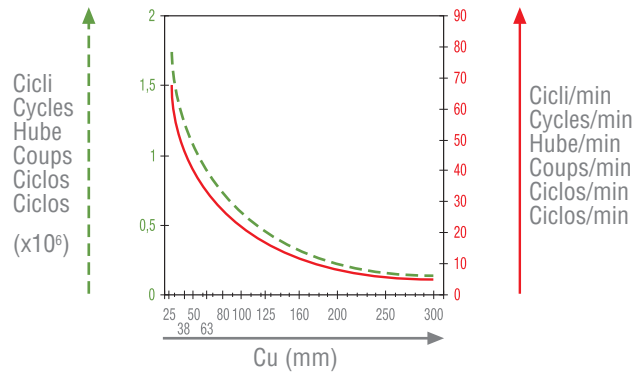
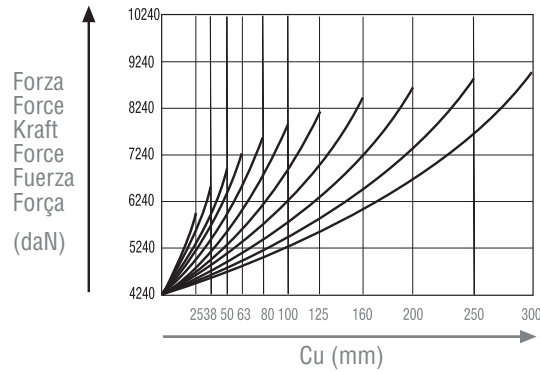
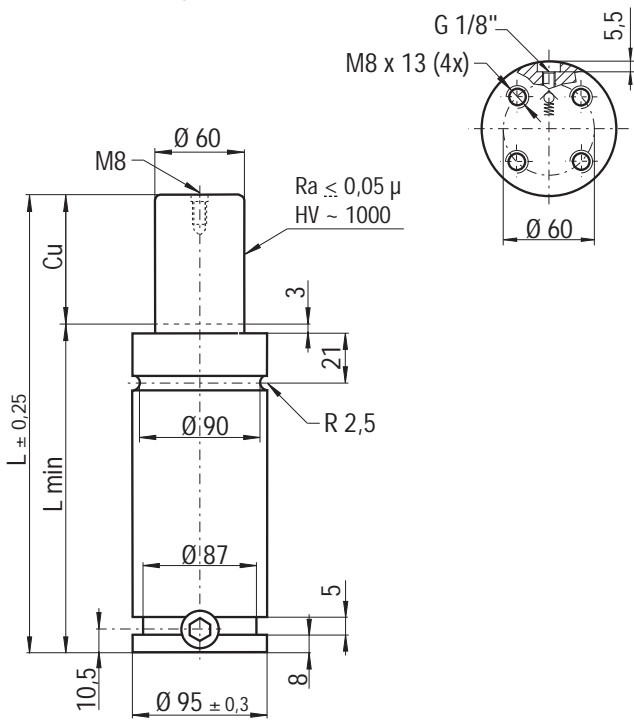
Maintenance kit
39BMH02400A

Technical specifications

Code	Cu mm	L mm	Lmin mm	F ₀ at 150 bar/+20 °C daN (±5%)	V ₀ cm ³	 connecting hole M6 Micro hose	 Kg
H 2400 - 025 - A	25	160	135	2385	174	H 2400 - 025 - A - N	~3,70
H 2400 - 038 - A	38	186	148	2385	222	H 2400 - 038 - A - N	~3,96
H 2400 - 050 - A	50	210	160	2385	266	H 2400 - 050 - A - N	~4,21
H 2400 - 063 - A	63	237	173,5	2385	316	H 2400 - 063 - A - N	~4,50
H 2400 - 080 - A	80	270	190	2385	377	H 2400 - 080 - A - N	~4,81
H 2400 - 100 - A	100	310	210	2385	451	H 2400 - 100 - A - N	~5,23
H 2400 - 125 - A	125	360	235	2385	543	H 2400 - 125 - A - N	~5,67
H 2400 - 160 - A	160	430	270	2385	672	H 2400 - 160 - A - N	~6,48
H 2400 - 200 - A	200	510	310	2385	819	H 2400 - 200 - A - N	~7,49
H 2400 - 250 - A	250	610	360	2385	1003	H 2400 - 250 - A - N	~9,39
H 2400 - 300 - A	300	710	410	2385	1187	H 2400 - 300 - A - N	~11,23

 Info pg. 187

ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO,
 erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada -
 Norma ISO, forța permitida



ORDER (10) H 4200-050-A
 (10) H 4200-050-A-N

Fixings

- Drop-In
- Bottom mount FB 95 - FBA 95
- FS2 95 FS2A 95
- FC 95 A FCQ 95 A
- FSA 95

Max. Speed 1,8 m/s	°F 32 176	°C 0 80		P max 150 bar 2175 psi	P min 20 bar 290 psi	S 28,27 cm ²		Maintenance kit 39BMH04200A
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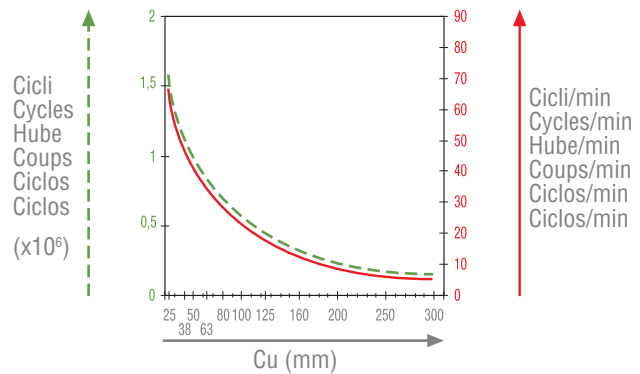
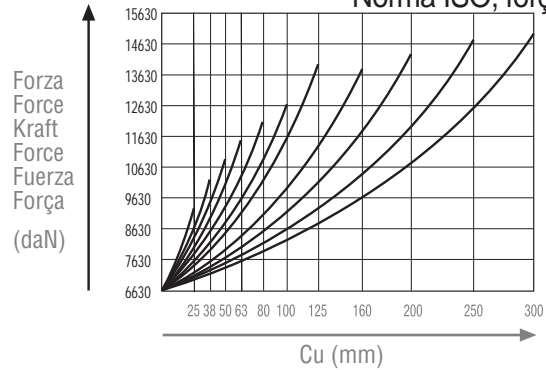
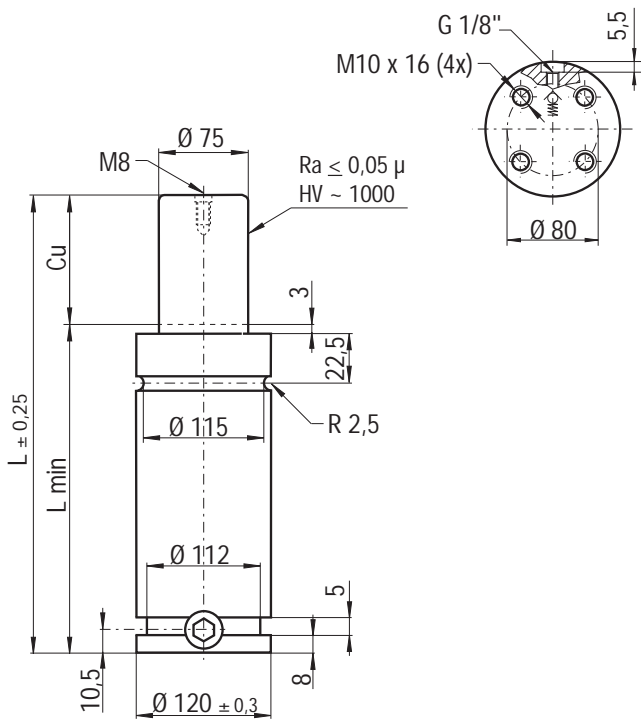
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
H 4200 - 025 - A	25	170	145	4240	310	H 4200 - 025 - A - N	-6,54
H 4200 - 038 - A	38	196	158	4240	389	H 4200 - 038 - A - N	-7,00
H 4200 - 050 - A	50	220	170	4240	462	H 4200 - 050 - A - N	-7,37
H 4200 - 063 - A	63	247	183,5	4240	544	H 4200 - 063 - A - N	-7,84
H 4200 - 080 - A	80	280	200	4240	644	H 4200 - 080 - A - N	-8,35
H 4200 - 100 - A	100	320	220	4240	765	H 4200 - 100 - A - N	-9,30
H 4200 - 125 - A	125	370	245	4240	916	H 4200 - 125 - A - N	-9,80
H 4200 - 160 - A	160	440	280	4240	1128	H 4200 - 160 - A - N	-10,5
H 4200 - 200 - A	200	520	320	4240	1371	H 4200 - 200 - A - N	-11,3
H 4200 - 250 - A	250	620	370	4240	1674	H 4200 - 250 - A - N	-12,3
H 4200 - 300 - A	300	720	420	4240	1974	H 4200 - 300 - A - N	-13,3

Info pg. 187



ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO, erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada - Norma ISO, forța permitida

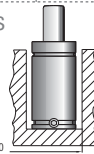


(10) H 6600-050-A

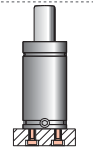
ORDER (10) H 6600-050-A-N



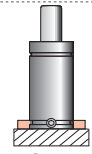
Fixings



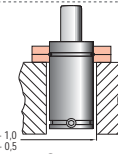
Drop-In



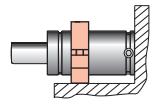
Bottom mount
FB 120 - FBA 120



FS2 120
FS2A 120

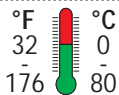


FC 120 A
FCQ 120 A



FSA 120

Max. Speed
1,8 m/s



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
44,18
cm²



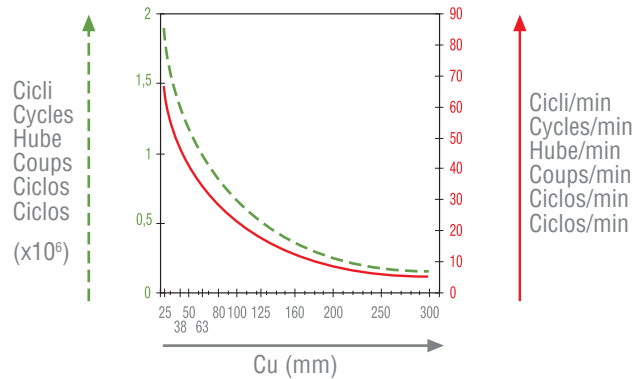
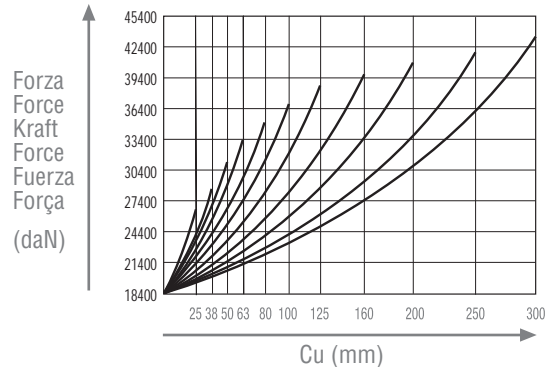
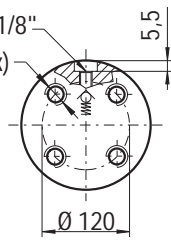
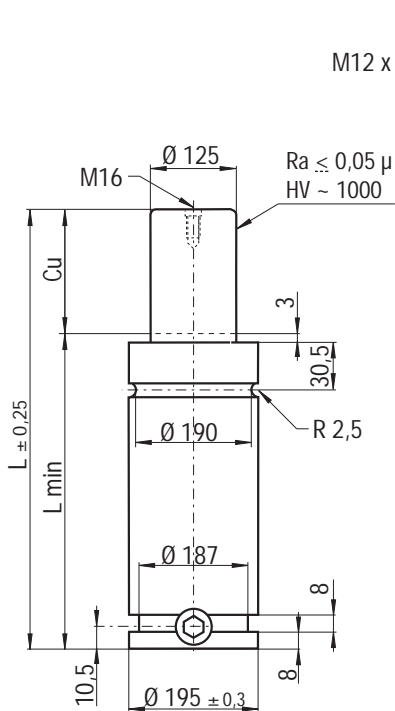
Maintenance kit
39BMH06600A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
H 6600 - 025 - A	25	190	165	6630	476	H 6600 - 025 - A - N	-12,1
H 6600 - 038 - A	38	216	178	6630	593	H 6600 - 038 - A - N	-13,7
H 6600 - 050 - A	50	240	190	6630	702	H 6600 - 050 - A - N	-15,1
H 6600 - 063 - A	63	267	203,5	6630	824	H 6600 - 063 - A - N	-15,5
H 6600 - 080 - A	80	300	220	6630	974	H 6600 - 080 - A - N	-16,1
H 6600 - 100 - A	100	340	240	6630	1155	H 6600 - 100 - A - N	-17,5
H 6600 - 125 - A	125	390	265	6630	1381	H 6600 - 125 - A - N	-19,3
H 6600 - 160 - A	160	460	300	6630	1698	H 6600 - 160 - A - N	-21,8
H 6600 - 200 - A	200	540	340	6630	2060	H 6600 - 200 - A - N	-24,7
H 6600 - 250 - A	250	640	390	6630	2512	H 6600 - 250 - A - N	-28,3
H 6600 - 300 - A	300	740	440	6630	2969	H 6600 - 300 - A - N	-31,9

Info pg. 187

ISO Standard, forza potenziata - ISO Standard, high force - Standard ISO,
 erhöhte Leistung - Standard ISO, force majorée - ISO Standard, fuerza potenciada -
 Norma ISO, forța permitida

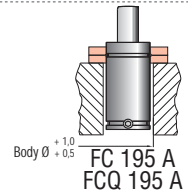
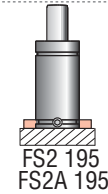
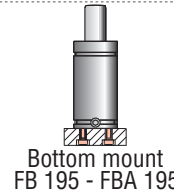
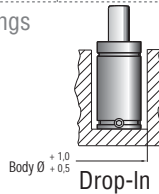


ORDER (10) H 18500-050-A-N

(10) H 18500-050-A



Fixings



H
HF

Max. Speed
1,8 m/s

°F 32
176
°C 0
80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
122,7
cm²



Maintenance kit
39BMH18500A

Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
H 18500 - 025 - A	25	210	185	18400	1658	H 18500 - 025 - A - N	-32,9
H 18500 - 038 - A	38	236	198	18400	2018	H 18500 - 038 - A - N	-34,4
H 18500 - 050 - A	50	260	210	18400	2351	H 18500 - 050 - A - N	-35,8
H 18500 - 063 - A	63	287	223,5	18400	2725	H 18500 - 063 - A - N	-37,3
H 18500 - 080 - A	80	320	240	18400	3182	H 18500 - 080 - A - N	-38,8
H 18500 - 100 - A	100	360	260	18400	3736	H 18500 - 100 - A - N	-41,5
H 18500 - 125 - A	125	410	285	18400	4429	H 18500 - 125 - A - N	-45,1
H 18500 - 160 - A	160	480	320	18400	5399	H 18500 - 160 - A - N	-48,3
H 18500 - 200 - A	200	560	360	18400	6507	H 18500 - 200 - A - N	-52,9
H 18500 - 250 - A	250	660	410	18400	7893	H 18500 - 250 - A - N	-57,7
H 18500 - 300 - A	300	760	460	18400	9278	H 18500 - 300 - A - N	-63,8

! Info pg. 187

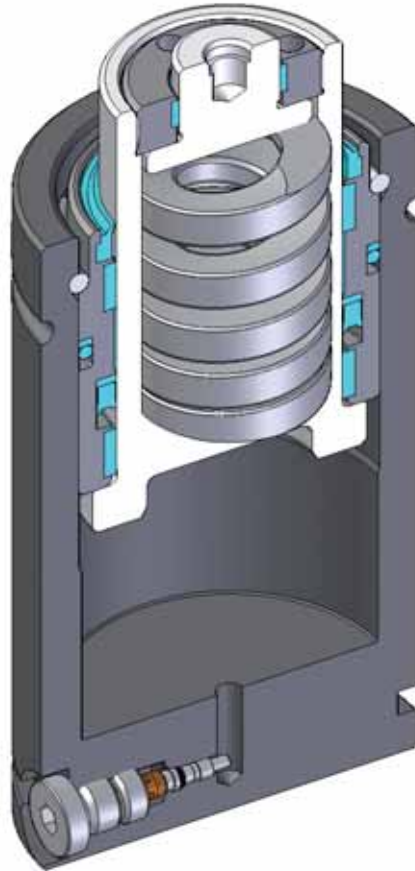
LS SERIES



PED
97/23/EC

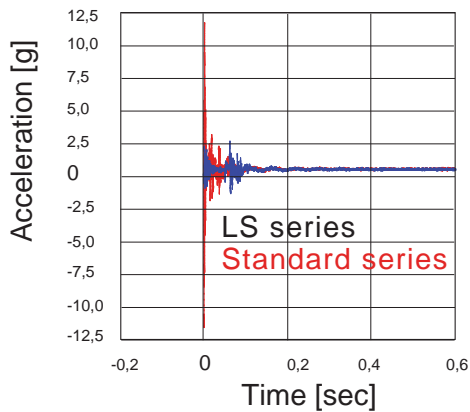
Forza iniziale nulla - Zero force on contact - Ausgangsleistung Null -
Force initiale nulle - Fuerza inicial cero - Força inicial nula

- 50 %
vibrations

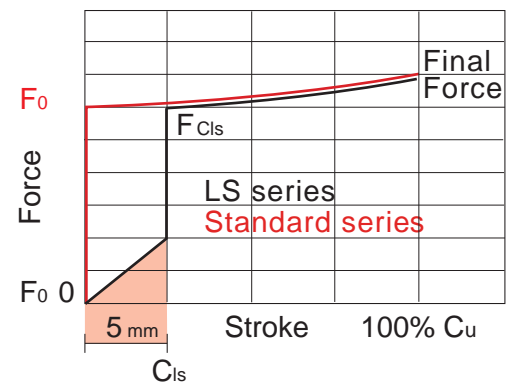


- 55 %
noise

INITIAL IMPACT VIBRATIONS



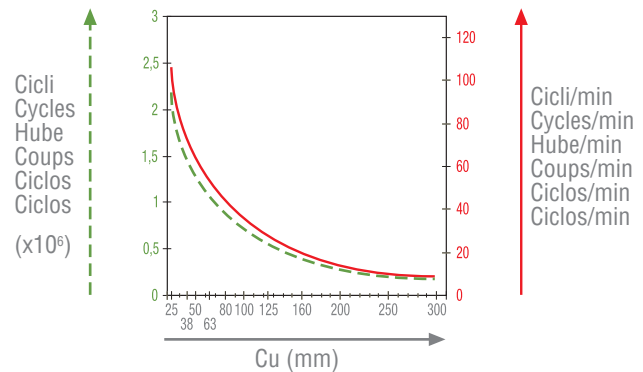
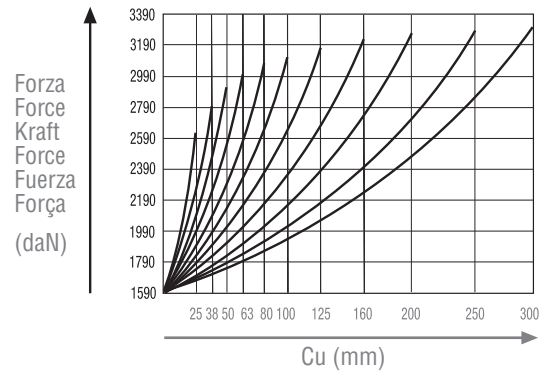
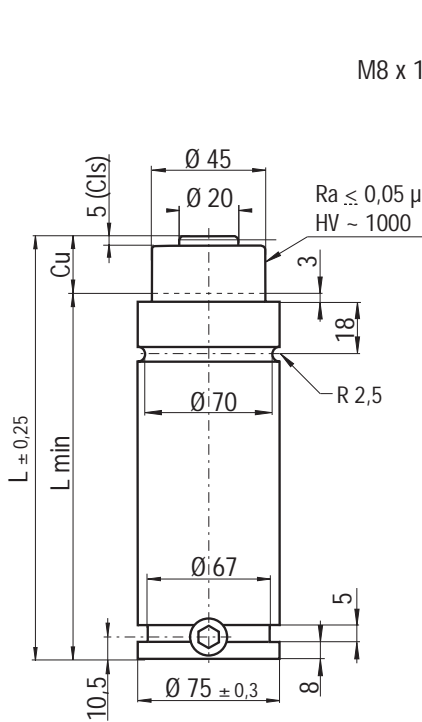
FORCE CURVE



Range chart

Model	Body Ø mm	Stroke C_u mm	Initial force daN	lifeplus concept		
				SKUDO	OSAS	OPAS
LS 1500	75	25 - 300	1590	-	-	-
LS 2400	75	25 - 300	2385	-	-	-
LS 3000	95	25 - 300	2830	-	-	-
LS 4200	95	25 - 300	4240	-	-	-

Forza iniziale nulla - Zero force on contact - Ausgangsleistung Null -
Force initiale nulle - Fuerza inicial cero - Força inicial nula



ORDER (10) LS 1500-050-A
(10) LS 1500-050-A-N

LS

Max. Speed 1,8 m/s	°F 32 176	°C 0 80	N ₂	P max 100 bar 1450 psi	P min 20 bar 290 psi	S 15,9 cm ²		Maintenance kit 39BMLS01500A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	F 0 at 150 bar/+20 °C daN	F Cls at 150 bar/+20 °C daN (±5%)	V ₀ cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LS 1500 - 025 - A	25	160	135	0	1590	126	LS 1500 - 025 - A - N	-3,71
LS 1500 - 038 - A	38	186	148	0	1590	174	LS 1500 - 038 - A - N	-3,79
LS 1500 - 050 - A	50	210	160	0	1590	218	LS 1500 - 050 - A - N	-3,89
LS 1500 - 063 - A	63	237	173,5	0	1590	268	LS 1500 - 063 - A - N	-4,48
LS 1500 - 080 - A	80	270	190	0	1590	329	LS 1500 - 080 - A - N	-4,73
LS 1500 - 100 - A	100	310	210	0	1590	403	LS 1500 - 100 - A - N	-4,89
LS 1500 - 125 - A	125	360	235	0	1590	495	LS 1500 - 125 - A - N	-5,57
LS 1500 - 160 - A	160	430	270	0	1590	624	LS 1500 - 160 - A - N	-6,33
LS 1500 - 200 - A	200	510	310	0	1590	771	LS 1500 - 200 - A - N	-7,19
LS 1500 - 250 - A	250	610	360	0	1590	955	LS 1500 - 250 - A - N	-9,19
LS 1500 - 300 - A	300	710	410	0	1590	1139	LS 1500 - 300 - A - N	-11,04

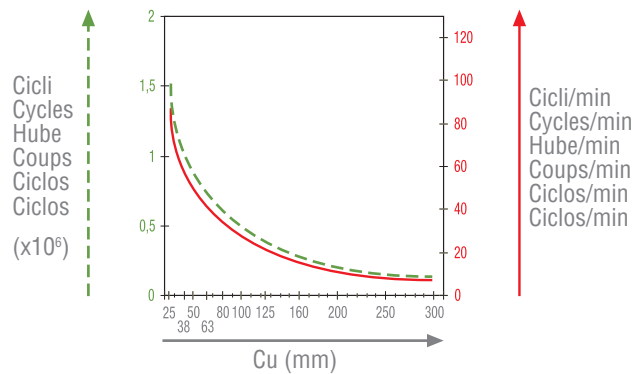
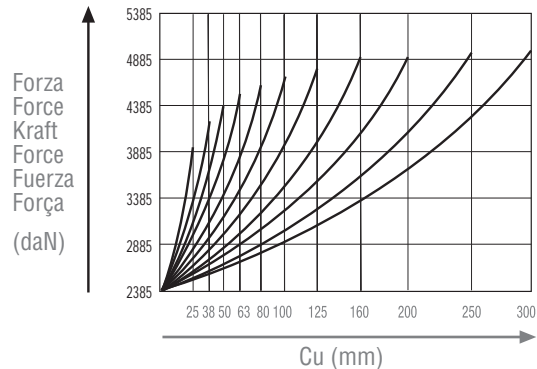
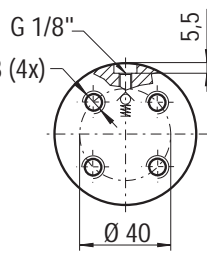
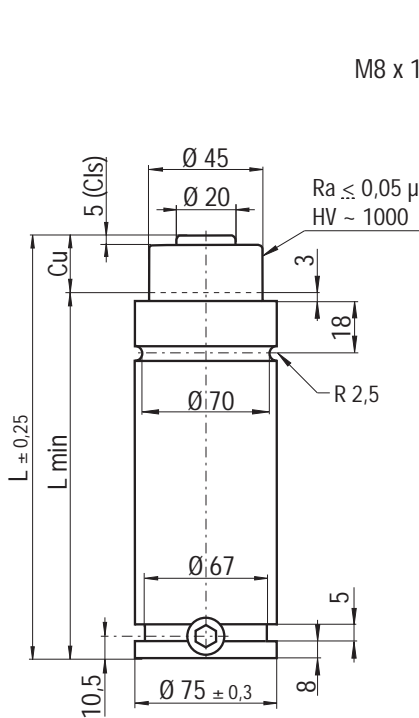
Info pg. 187

LS 2400

- 50% VIBRATIONS
- 55% NOISE



Forza iniziale nulla - Zero force on contact - Ausgangsleistung Null -
Force initiale nulle - Fuerza inicial cero - Força inicial nula

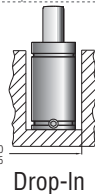


(10) LS 2400-050-A

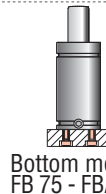
ORDER (10) LS 2400-050-A-N



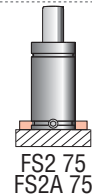
Fixings



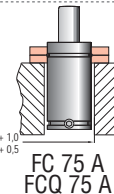
Drop-in



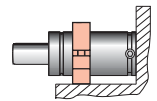
Bottom mount
FB 75 - FBA 75



FS2 75
FS2A 75



FC 75 A
FCQ 75 A



FSA 75

Max. Speed
1,8 m/s

°F 32
°C 0
176 80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
15,9
cm²



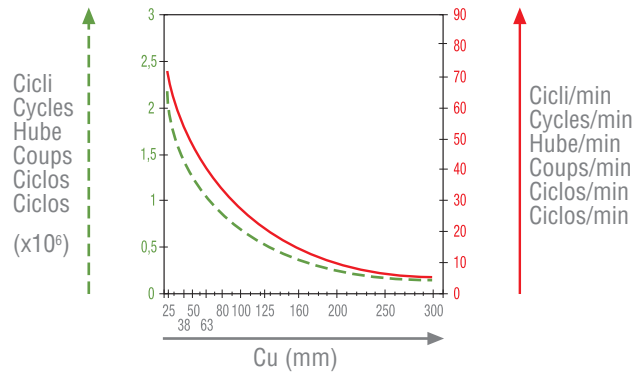
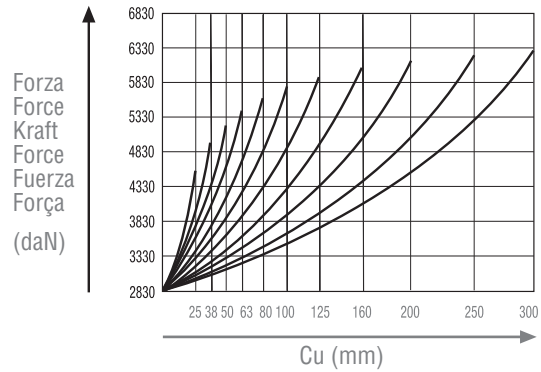
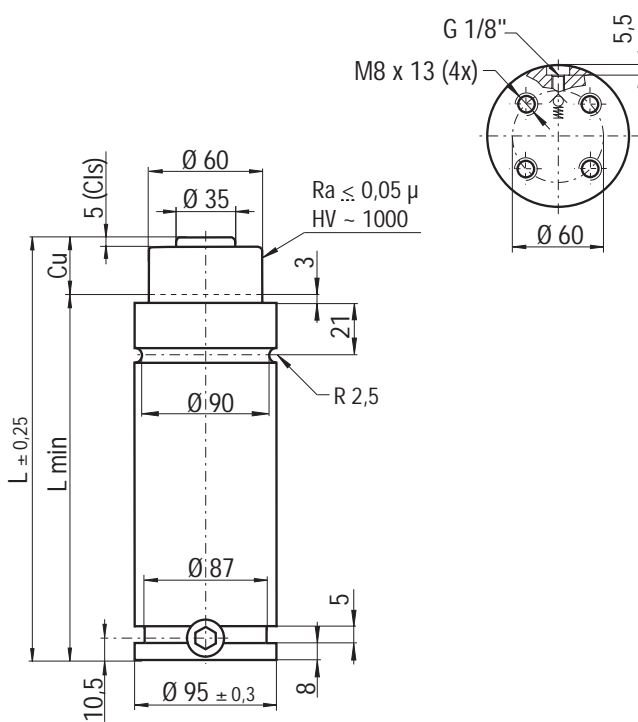
Maintenance kit
39BMLS01500A

Technical specifications

Code	Cu mm	L mm	Lmin mm	F 0 at 150 bar/+20 °C daN	F Cls at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LS 2400 - 025 - A	25	160	135	0	2385	126	LS 2400 - 025 - A - N	-3,71
LS 2400 - 038 - A	38	186	148	0	2385	174	LS 2400 - 038 - A - N	-3,79
LS 2400 - 050 - A	50	210	160	0	2385	218	LS 2400 - 050 - A - N	-3,89
LS 2400 - 063 - A	63	237	173,5	0	2385	268	LS 2400 - 063 - A - N	-4,48
LS 2400 - 080 - A	80	270	190	0	2385	329	LS 2400 - 080 - A - N	-4,73
LS 2400 - 100 - A	100	310	210	0	2385	403	LS 2400 - 100 - A - N	-4,89
LS 2400 - 125 - A	125	360	235	0	2385	495	LS 2400 - 125 - A - N	-5,57
LS 2400 - 160 - A	160	430	270	0	2385	624	LS 2400 - 160 - A - N	-6,33
LS 2400 - 200 - A	200	510	310	0	2385	771	LS 2400 - 200 - A - N	-7,19
LS 2400 - 250 - A	250	610	360	0	2385	955	LS 2400 - 250 - A - N	-9,19
LS 2400 - 300 - A	300	710	410	0	2385	1139	LS 2400 - 300 - A - N	-11,04

Info pg. 187

Forza iniziale nulla - Zero force on contact - Ausgangsleistung Null -
Force initiale nulle - Fuerza inicial cero - Força inicial nula



ORDER (10) LS 3000-050-A

Fixings: Drop-In, Bottom mount (FB 95 - FBA 95), FS2 95, FS2A 95, FC 95 A, FCQ 95 A, FSA 95

Max. Speed 1,8 m/s	°F 32 °C 0	°F 176 °C 80	N ₂	P max 100 bar 1450 psi	P min 20 bar 290 psi	S 28,27 cm ²		Maintenance kit 39BMLS03000A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	F 0 at 150 bar/+20 °C daN	F Cls at 150 bar/+20 °C daN (±5%)	V ₀ cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LS 3000 - 025 - A	25	170	145	0	2830	195	LS 3000 - 025 - A - N	-5,69
LS 3000 - 038 - A	38	196	158	0	2830	274	LS 3000 - 038 - A - N	-6,48
LS 3000 - 050 - A	50	220	170	0	2830	347	LS 3000 - 050 - A - N	-6,77
LS 3000 - 063 - A	63	247	183,5	0	2830	429	LS 3000 - 063 - A - N	-6,84
LS 3000 - 080 - A	80	280	200	0	2830	529	LS 3000 - 080 - A - N	-7,23
LS 3000 - 100 - A	100	320	220	0	2830	650	LS 3000 - 100 - A - N	-7,95
LS 3000 - 125 - A	125	370	245	0	2830	801	LS 3000 - 125 - A - N	-9,58
LS 3000 - 160 - A	160	440	280	0	2830	1013	LS 3000 - 160 - A - N	-10,89
LS 3000 - 200 - A	200	520	320	0	2830	1256	LS 3000 - 200 - A - N	-11,03
LS 3000 - 250 - A	250	620	370	0	2830	1559	LS 3000 - 250 - A - N	-12,06
LS 3000 - 300 - A	300	720	420	0	2830	1859	LS 3000 - 300 - A - N	-13,02

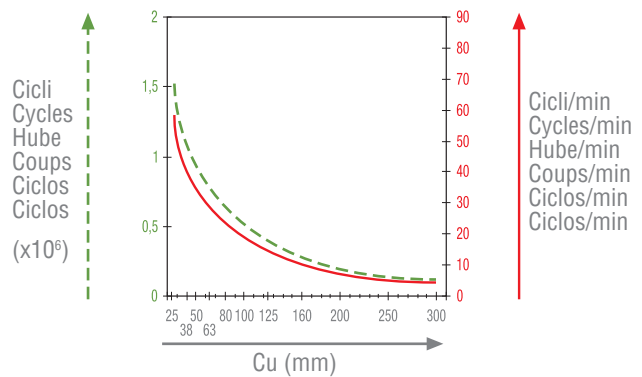
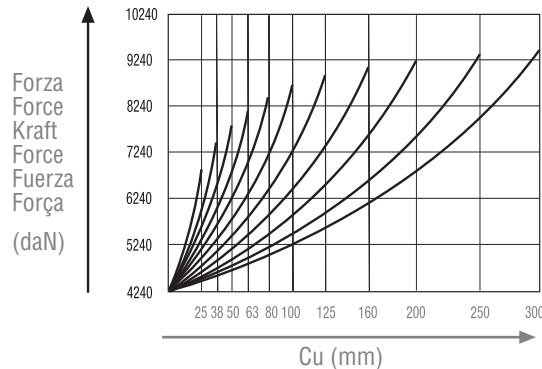
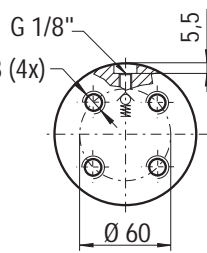
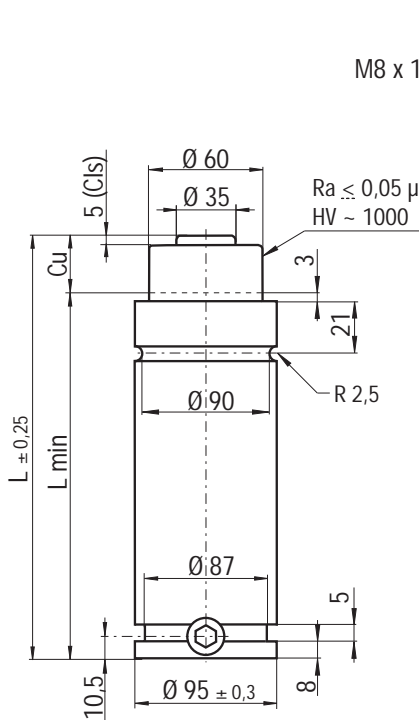
Info pg. 187

LS 4200

- 50% VIBRATIONS
- 55% NOISE



Forza iniziale nulla - Zero force on contact - Ausgangsleistung Null -
Force initiale nulle - Fuerza inicial cero - Força inicial nula



ORDER (10) LS 4200-050-A
ORDER (10) LS 4200-050-A-N

Fixings: Drop-in, Bottom mount (FB 95 - FBA 95), FS2 95 (FS2A 95), FC 95 A (FCQ 95 A), FSA 95

Max. Speed 1,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 28,27 cm ²		Maintenance kit 39BMLS03000A
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Technical specifications

Code	Cu mm	L mm	Lmin mm	F 0 at 150 bar/+20 °C daN	F Cls at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
LS 4200 - 025 - A	25	170	145	0	4240	195	LS 4200 - 025 - A - N	-5,69
LS 4200 - 038 - A	38	196	158	0	4240	274	LS 4200 - 038 - A - N	-6,48
LS 4200 - 050 - A	50	220	170	0	4240	347	LS 4200 - 050 - A - N	-6,77
LS 4200 - 063 - A	63	247	183,5	0	4240	429	LS 4200 - 063 - A - N	-6,84
LS 4200 - 080 - A	80	280	200	0	4240	529	LS 4200 - 080 - A - N	-7,23
LS 4200 - 100 - A	100	320	220	0	4240	650	LS 4200 - 100 - A - N	-7,95
LS 4200 - 125 - A	125	370	245	0	4240	801	LS 4200 - 125 - A - N	-9,58
LS 4200 - 160 - A	160	440	280	0	4240	1013	LS 4200 - 160 - A - N	-10,89
LS 4200 - 200 - A	200	520	320	0	4240	1256	LS 4200 - 200 - A - N	-11,03
LS 4200 - 250 - A	250	620	370	0	4240	1559	LS 4200 - 250 - A - N	-12,06
LS 4200 - 300 - A	300	720	420	0	4240	1859	LS 4200 - 300 - A - N	-13,02

Info pg. 187



LS

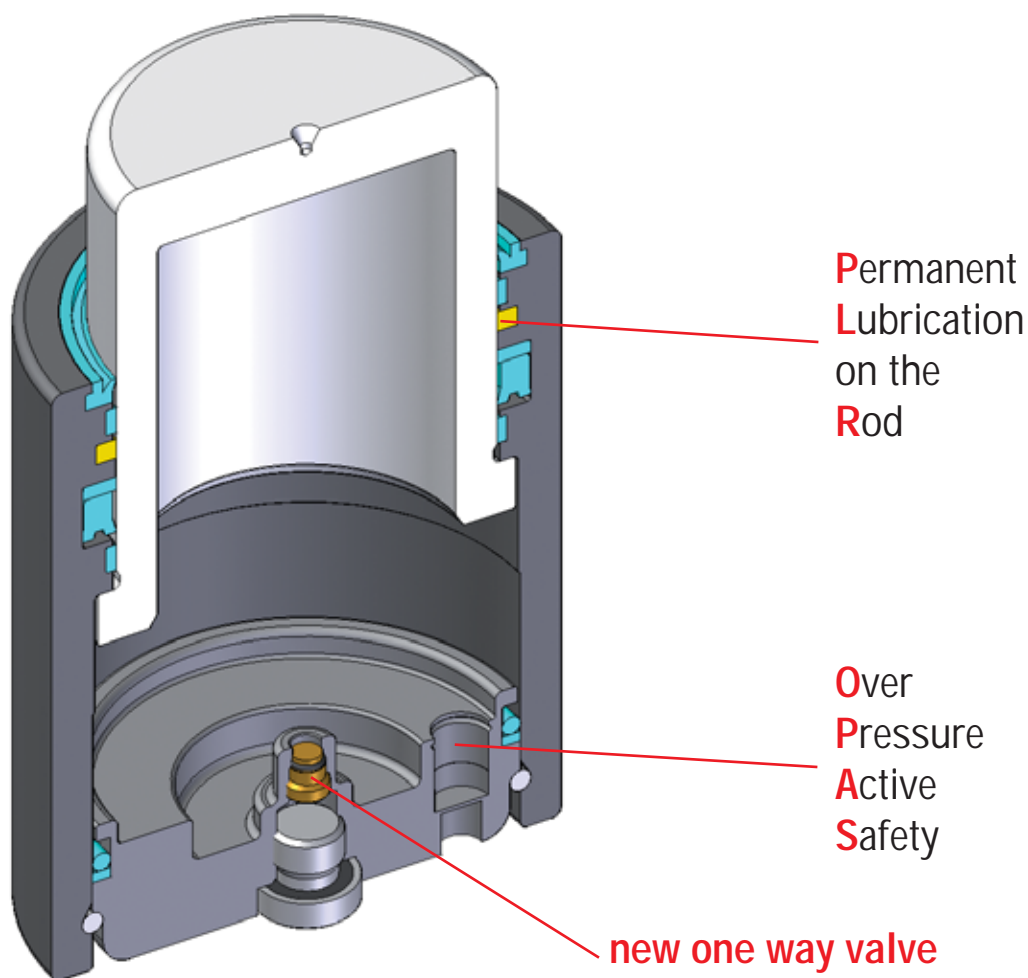
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ML SERIES




PED
97/23/EC

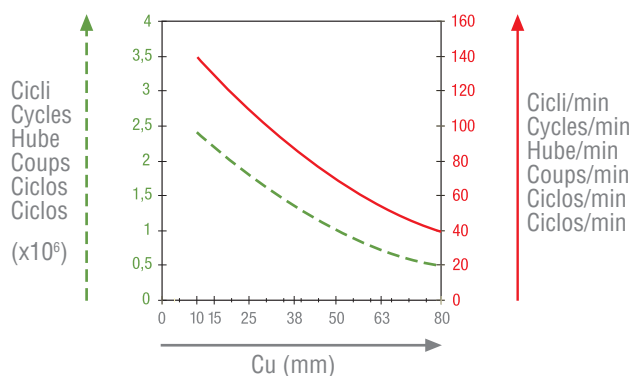
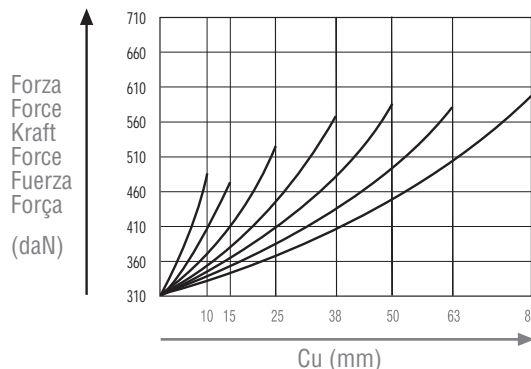
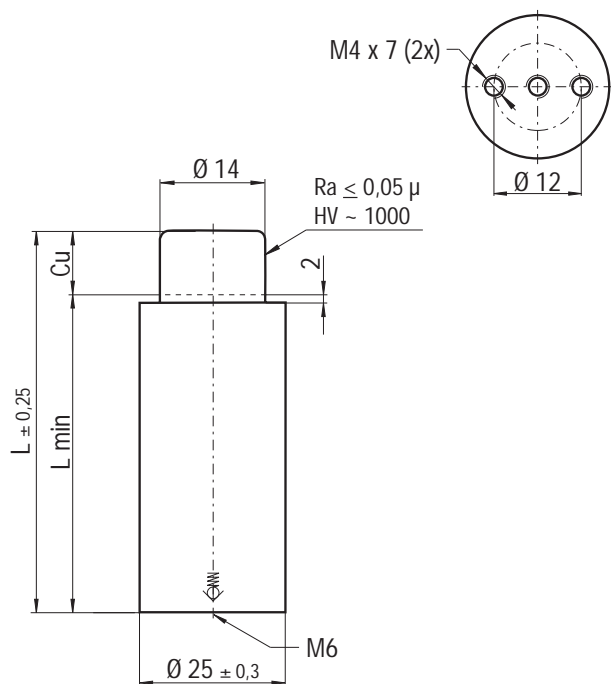
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
ML 300	25	10 - 80	310	-	-	-
ML 500	32	10 - 80	510	-	-	-
ML 1000	38	10 - 80	980	-	-	✓
ML 1000 N	38	10 - 80	980	-	-	✓
ML 1800	50	15 - 80	1925	-	-	✓
ML 1800 N	50	15 - 80	1925	-	-	✓
ML 4700	75	15 - 80	4925	-	-	✓
ML 4700 N	75	15 - 80	4925	-	-	✓
ML 7500	95	15 - 80	7700	-	-	✓
ML 7500 N	95	15 - 80	7700	-	-	✓
ML 12000	120	15 - 80	12720	-	-	✓
ML 12000 N	120	15 - 80	12720	-	-	✓

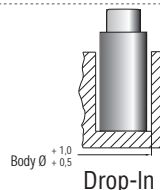
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



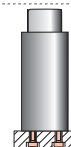
(10) ML300-050-B

ORDER

Fixings

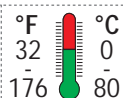


Drop-In



Bottom mount

Max. Speed
1,6 m/s



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
1,54
cm²



Maintenance kit

-

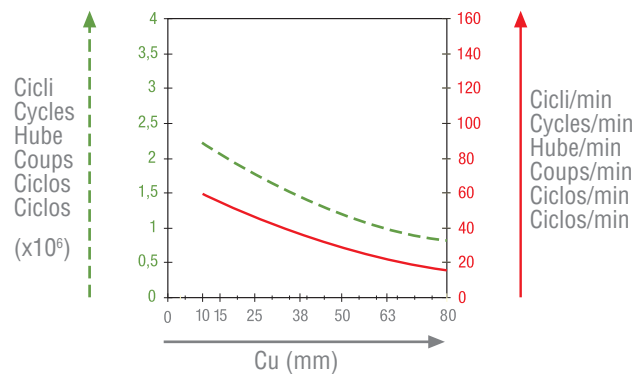
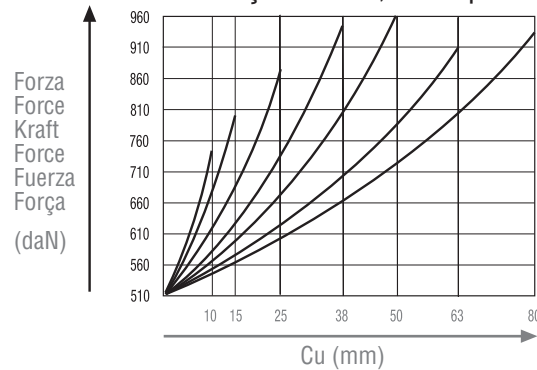
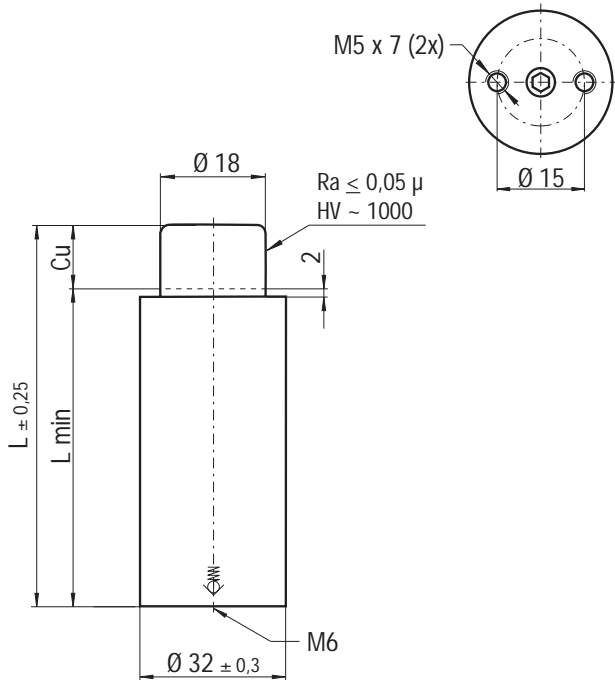
ML

Technical specifications

Code		Cu	L	Lmin	Fo	Vo		
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³		
ML 300 - 010 - A	ML 300 - 010 - B	10	75	65	310	-	-	-0,18
ML 300 - 015 - A	ML 300 - 015 - B	15	85	70	310	-	-	-0,19
ML 300 - 025 - A	ML 300 - 025 - B	25	105	80	310	-	-	-0,22
ML 300 - 038 - A	ML 300 - 038 - B	38	130	92	310	-	-	-0,25
ML 300 - 050 - A	ML 300 - 050 - B	50	155	105	310	-	-	-0,28
ML 300 - 063 - A	ML 300 - 063 - B	63	185	122	310	-	-	-0,33
ML 300 - 080 - A	ML 300 - 080 - B	80	220	140	310	-	-	-0,38



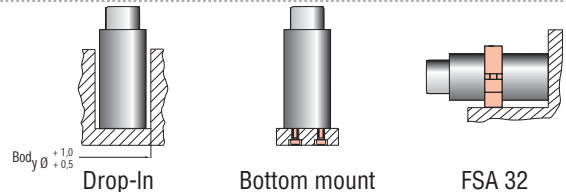
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



(10) ML500-050-B

ORDER

Fixings



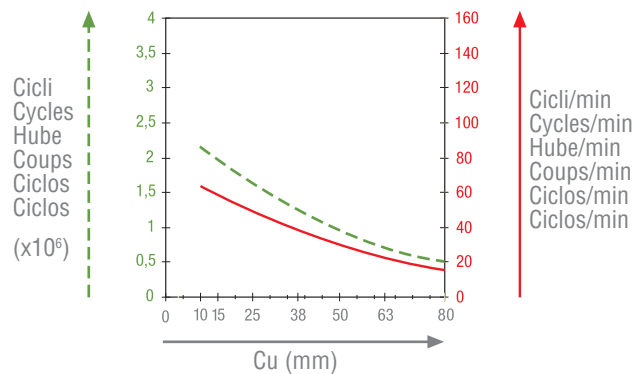
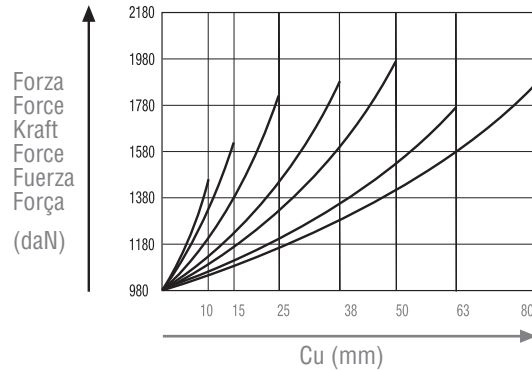
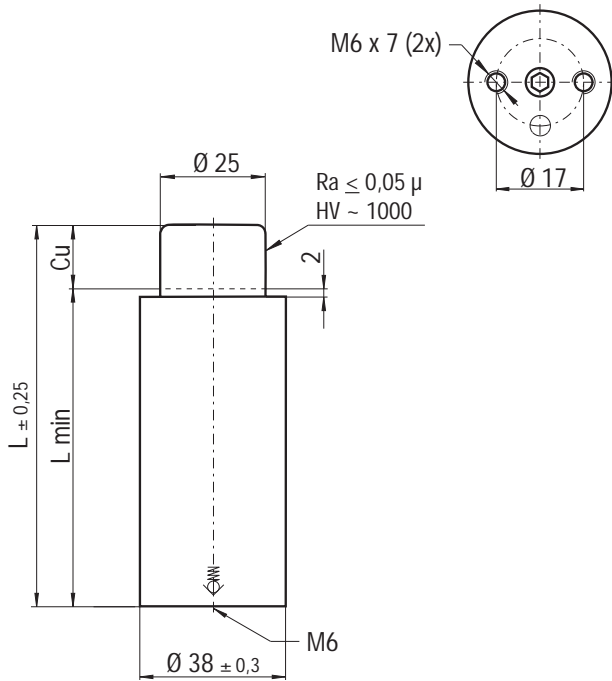
Max. Speed 1,6 m/s	°F 32 176	°C 0 80	N ₂	P max 200 bar 2900 psi	P min 20 bar 290 psi	S 2,54 cm ²		Maintenance kit -
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Technical specifications

Code		Cu	L	Lmin	Fo	Vo		
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³		Kg
ML 500 - 010 - A	ML 500 - 010 - B	10	75	65	510	-	-	-0,30
ML 500 - 015 - A	ML 500 - 015 - B	15	85	70	510	-	-	-0,33
ML 500 - 025 - A	ML 500 - 025 - B	25	105	80	510	-	-	-0,36
ML 500 - 038 - A	ML 500 - 038 - B	38	130	92	510	-	-	-0,42
ML 500 - 050 - A	ML 500 - 050 - B	50	155	105	510	-	-	-0,46
ML 500 - 063 - A	ML 500 - 063 - B	63	190	127	510	-	-	-0,54
ML 500 - 080 - A	ML 500 - 080 - B	80	225	145	510	-	-	-0,63

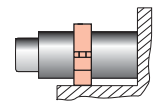
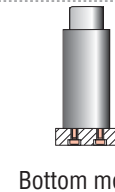
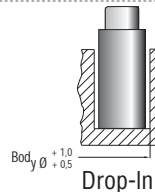
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo

PED
97/23/EG



(10) ML1000-050-B

Fixings



Drop-In

Bottom mount

FSA 38

Max. Speed
1,6 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
4,91
cm²



Maintenance kit
39BMML01000B



ML

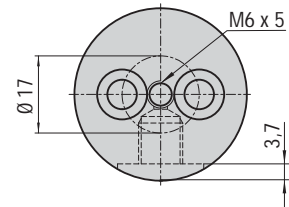
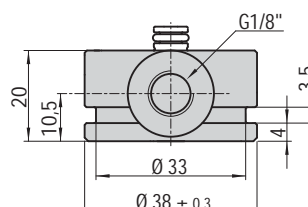
Technical specifications

Code		Cu	L	Lmin	Fo	Vo		
		mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³		Kg
PHASING OUT	NEW							
ML 1000 - 010 - A	ML 1000 - 010 - B	10	75	65	980	-	-	-0,40
ML 1000 - 015 - A	ML 1000 - 015 - B	15	85	70	980	-	-	-0,43
ML 1000 - 025 - A	ML 1000 - 025 - B	25	105	80	980	-	-	-0,49
ML 1000 - 038 - A	ML 1000 - 038 - B	38	135	97	980	-	-	-0,58
ML 1000 - 050 - A	ML 1000 - 050 - B	50	160	110	980	-	-	-0,66
ML 1000 - 063 - A	ML 1000 - 063 - B	63	205	142	980	-	-	-0,80
ML 1000 - 080 - A	ML 1000 - 080 - B	80	240	160	980	-	-	-0,87

FML 1000

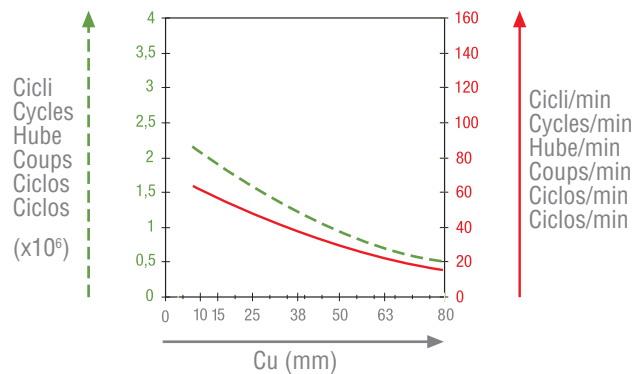
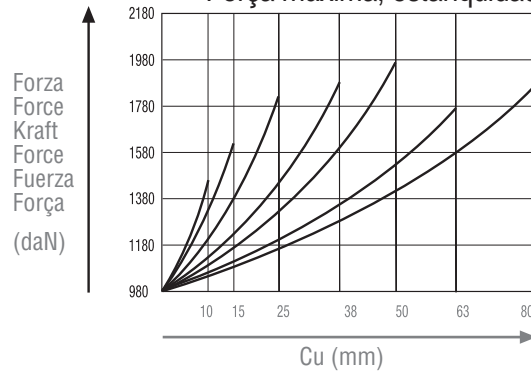
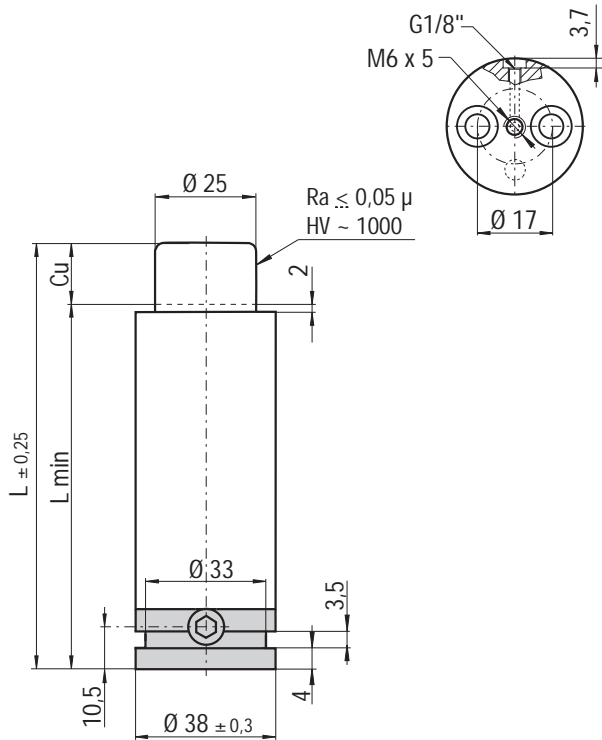
new code: 39FML01000A

Kit speciale per trasformare cilindri autonomi
Special kit to convert self-contained cylinders
Spezial-Set zum Umbau eigenständiger Zylinder
Kit spécial pour transformer les cylindres autonomes
Kit especial para transformar cilindros autónomos
Kit especial para transformar cilindros autónomos





Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo

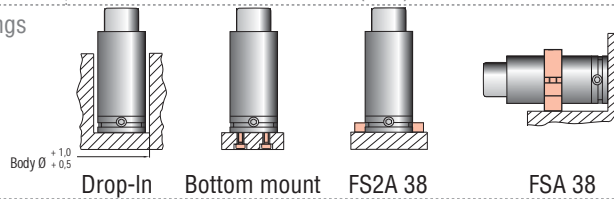


ORDER

(10) ML1000-050-B-N



Fixings



Max. Speed
1,6 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
4,91
cm²



Maintenance kit
39BMML01000B

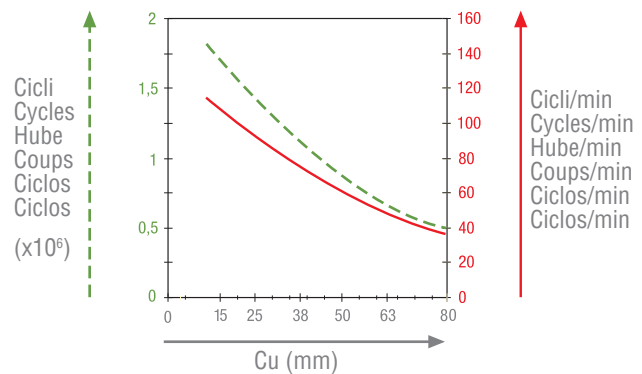
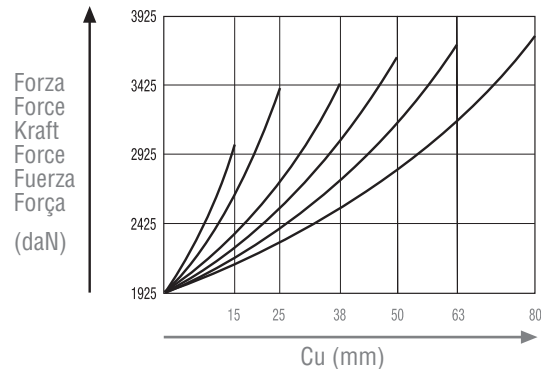
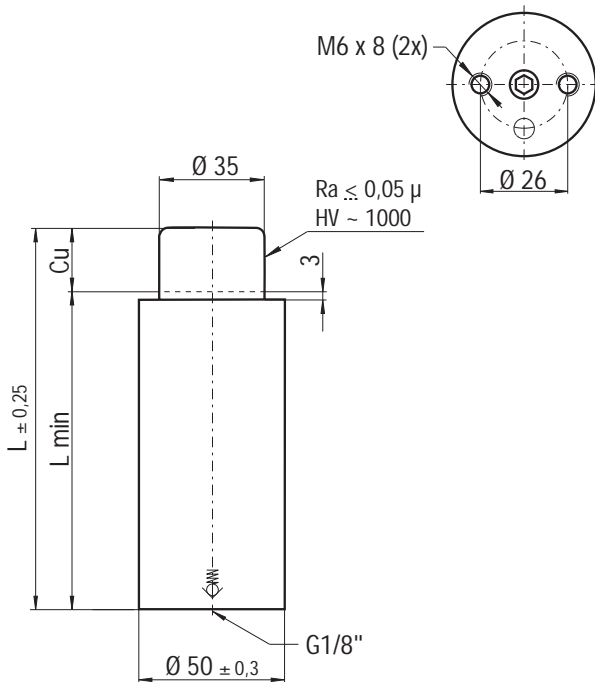


Technical specifications

Code		Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimesse hose	
ML 1000 - 010 - A - N	ML 1000 - 010 - B - N	10	95	85	980	18	ML 1000 - 010 - B - N	-0,56
ML 1000 - 015 - A - N	ML 1000 - 015 - B - N	15	105	90	980	23	ML 1000 - 015 - B - N	-0,59
ML 1000 - 025 - A - N	ML 1000 - 025 - B - N	25	125	100	980	33	ML 1000 - 025 - B - N	-0,65
ML 1000 - 038 - A - N	ML 1000 - 038 - B - N	38	155	117	980	48	ML 1000 - 038 - B - N	-0,74
ML 1000 - 050 - A - N	ML 1000 - 050 - B - N	50	180	130	980	60	ML 1000 - 050 - B - N	-0,82
ML 1000 - 063 - A - N	ML 1000 - 063 - B - N	63	225	162	980	86	ML 1000 - 063 - B - N	-0,96
ML 1000 - 080 - A - N	ML 1000 - 080 - B - N	80	260	180	980	103	ML 1000 - 080 - B - N	-1,03

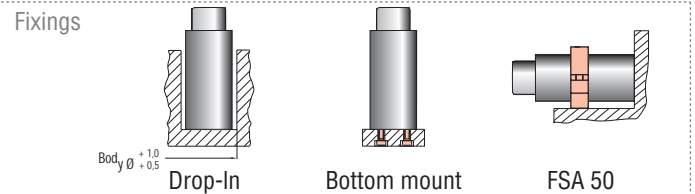
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Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



(10) ML1800-050-B

ORDER



Max. Speed 1,6 m/s	°F 32 176	°C 0 80	N ₂	P max 200 bar 2900 psi	P min 20 bar 290 psi	S 9,62 cm ²		Maintenance kit 39BMML01800B	
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ML

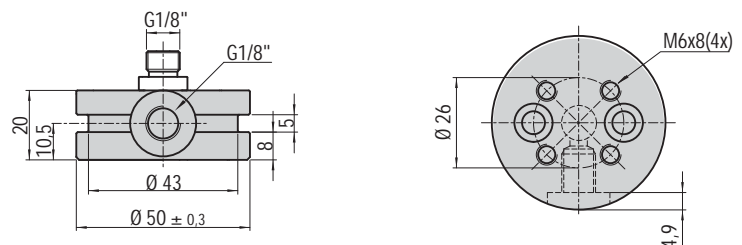
Technical specifications

Code		Cu	L	Lmin	Fo	Vo		
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³		Kg
ML 1800 - 015 - A	ML 1800 - 015 - B	15	95	80	1925	-	-	-0,84
ML 1800 - 025 - A	ML 1800 - 025 - B	25	115	90	1925	-	-	-0,92
ML 1800 - 038 - A	ML 1800 - 038 - B	38	150	112	1925	-	-	-1,11
ML 1800 - 050 - A	ML 1800 - 050 - B	50	175	125	1925	-	-	-1,22
ML 1800 - 063 - A	ML 1800 - 063 - B	63	205	142	1925	-	-	-1,38
ML 1800 - 080 - A	ML 1800 - 080 - B	80	245	165	1925	-	-	-1,57

FML 1800

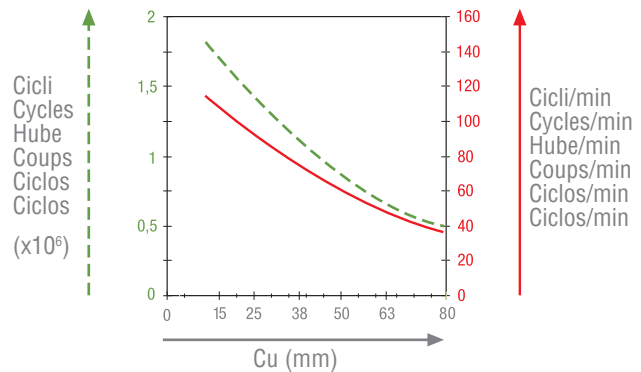
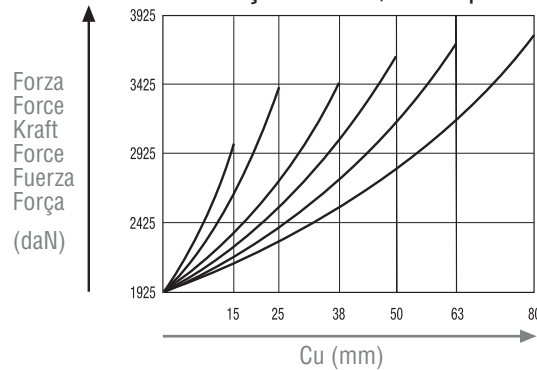
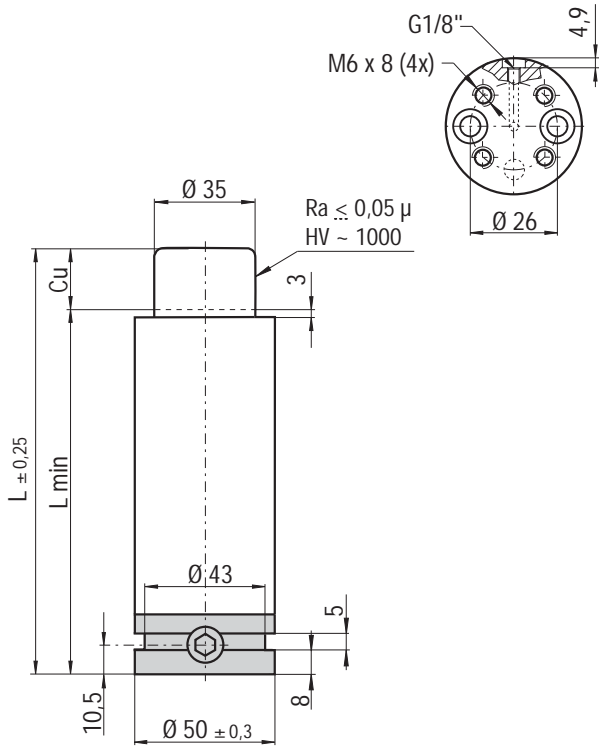
new code: 39FML01800A

Kit speciale per trasformare cilindri autonomi
Special kit to convert self-contained cylinders
Spezial-Set zum Umbau eigenständiger Zylinder
Kit spécial pour transformer les cylindres autonomes
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Kit especial para transformar cilindros autónomos



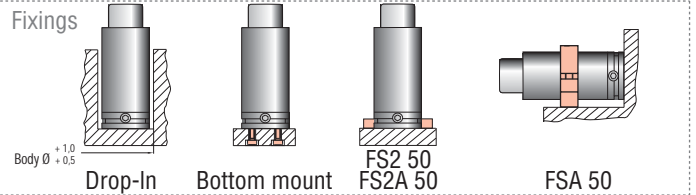


Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo

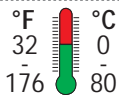


ORDER

(10) ML1800-050-B-N



Max. Speed
1,6 m/s



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
9,62
cm²



Maintenance kit
39BMML01800B

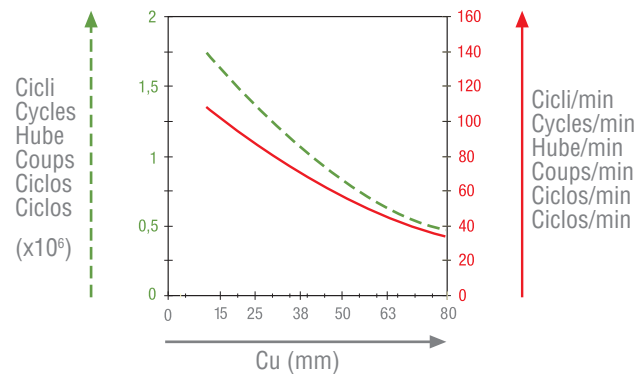
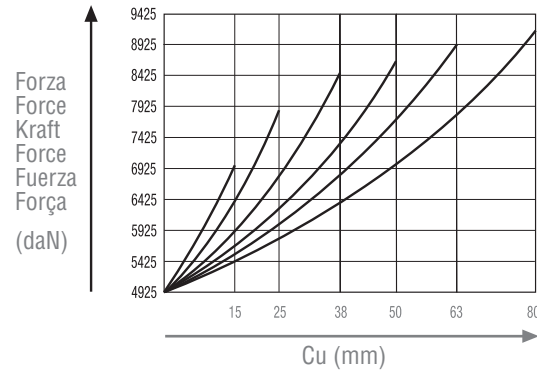
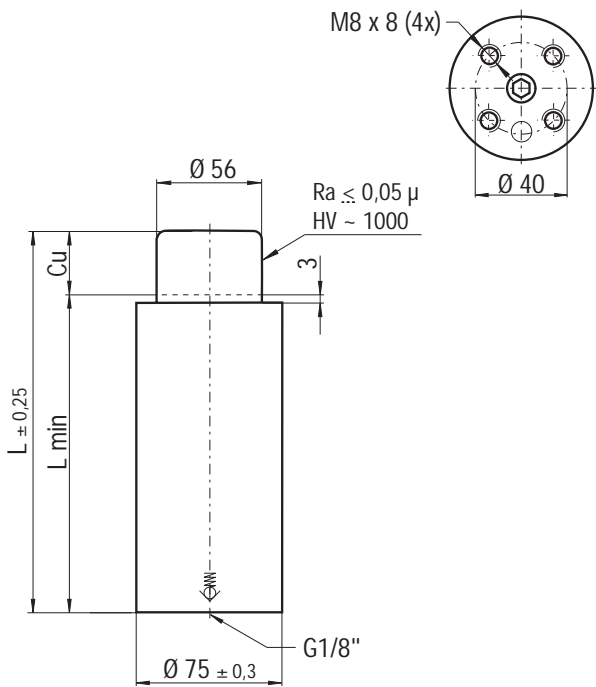


Technical specifications

Code		Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimesse hose	
ML 1800 - 015 - A - N	ML 1800 - 015 - B - N	15	115	100	1925	49	ML 1800 - 015 - B - N	~1,14
ML 1800 - 025 - A - N	ML 1800 - 025 - B - N	25	135	110	1925	67	ML 1800 - 025 - B - N	~1,22
ML 1800 - 038 - A - N	ML 1800 - 038 - B - N	38	170	132	1925	102	ML 1800 - 038 - B - N	~1,41
ML 1800 - 050 - A - N	ML 1800 - 050 - B - N	50	195	145	1925	125	ML 1800 - 050 - B - N	~1,52
ML 1800 - 063 - A - N	ML 1800 - 063 - B - N	63	225	162	1925	154	ML 1800 - 063 - B - N	~1,68
ML 1800 - 080 - A - N	ML 1800 - 080 - B - N	80	265	185	1925	193	ML 1800 - 080 - B - N	~1,87

Info pg. 187

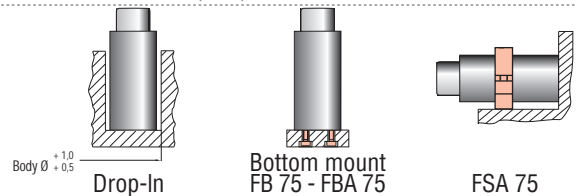
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



(10) ML4700-050-B

ORDER

Fixings



Max. Speed
1,6 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
24,63
cm²



Maintenance kit
39BMML04700B



ML

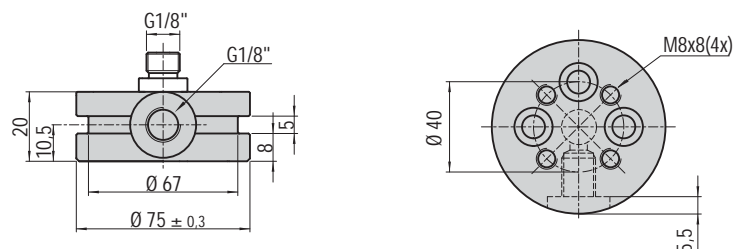
Technical specifications

Code		Cu	L	Lmin	Fo	Vo		
		mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³		Kg
PHASING OUT	NEW							
ML 4700 - 015 - A	ML 4700 - 015 - B	15	100	85	4925	-	-	~1,88
ML 4700 - 025 - A	ML 4700 - 025 - B	25	120	95	4925	-	-	~2,08
ML 4700 - 038 - A	ML 4700 - 038 - B	38	150	112	4925	-	-	~2,36
ML 4700 - 050 - A	ML 4700 - 050 - B	50	180	130	4925	-	-	~2,65
ML 4700 - 063 - A	ML 4700 - 063 - B	63	210	147	4925	-	-	~2,92
ML 4700 - 080 - A	ML 4700 - 080 - B	80	250	170	4925	-	-	~3,24

FML 4700

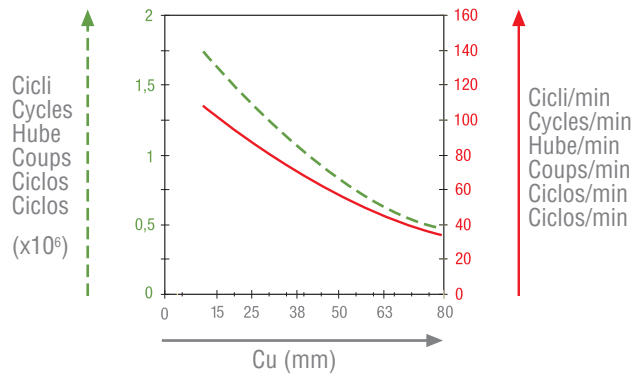
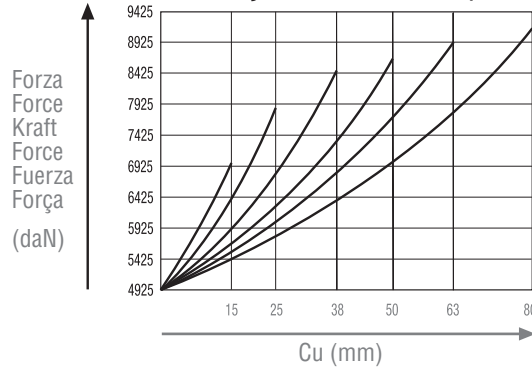
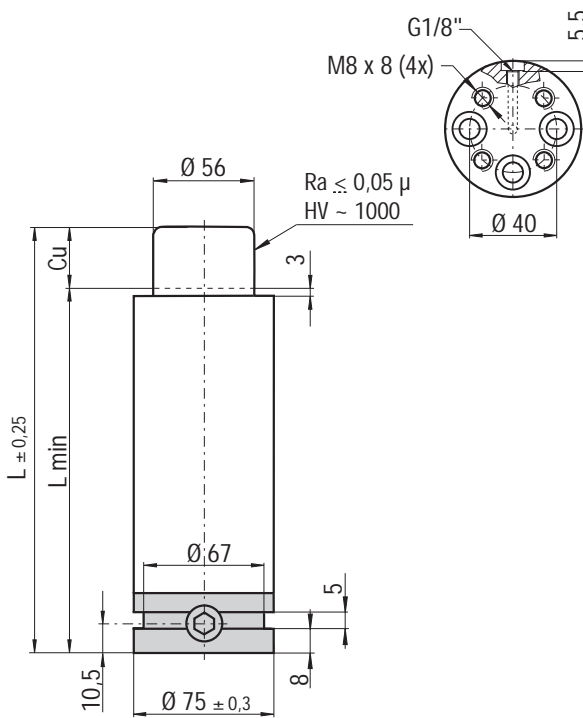
new code: 39FML04700A

Kit speciale per trasformare cilindri autonomi
Special kit to convert self-contained cylinders
Spezial-Set zum Umbau eigenständiger Zylinder
Kit spécial pour transformer les cylindres autonomes
Kit especial para transformar cilindros autónomos
Kit especial para transformar cilindros autónomos

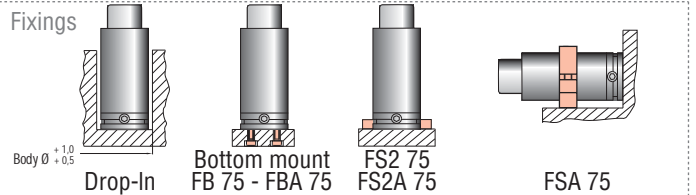




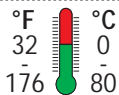
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



(10) ML4700-050-B-N



Max. Speed
1,6 m/s



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
24,63
cm²



Maintenance kit
39BMML04700B

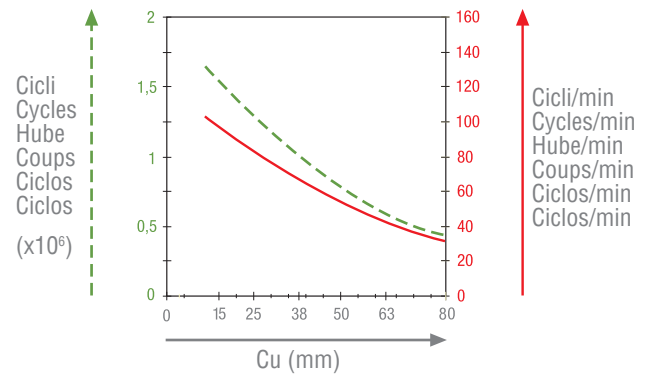
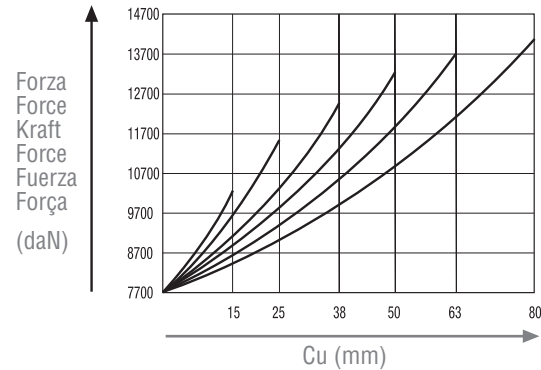
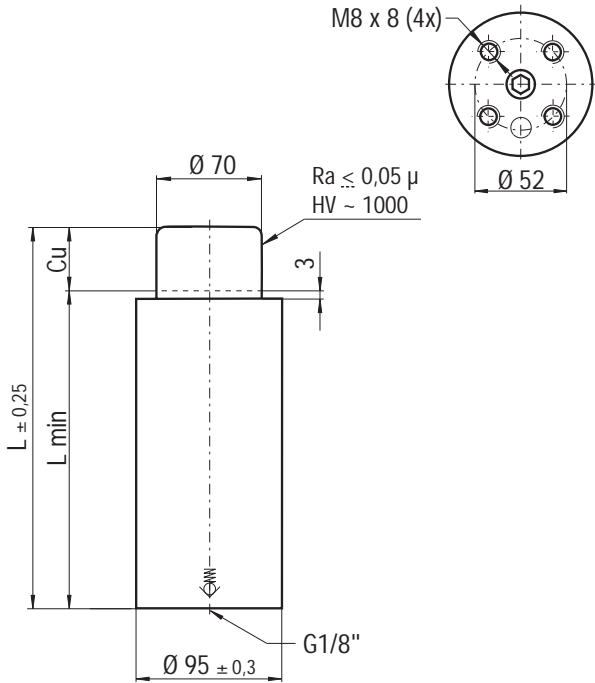


Technical specifications

Code		Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimesse hose	
ML 4700 - 015 - A - N	ML 4700 - 015 - B - N	15	120	105	4925	129	ML 4700 - 015 - B - N	~2,56
ML 4700 - 025 - A - N	ML 4700 - 025 - B - N	25	140	115	4925	177	ML 4700 - 025 - B - N	~2,76
ML 4700 - 038 - A - N	ML 4700 - 038 - B - N	38	170	132	4925	251	ML 4700 - 038 - B - N	~3,04
ML 4700 - 050 - A - N	ML 4700 - 050 - B - N	50	200	150	4925	327	ML 4700 - 050 - B - N	~3,33
ML 4700 - 063 - A - N	ML 4700 - 063 - B - N	63	230	167	4925	402	ML 4700 - 063 - B - N	~3,60
ML 4700 - 080 - A - N	ML 4700 - 080 - B - N	80	270	190	4925	502	ML 4700 - 080 - B - N	~3,92

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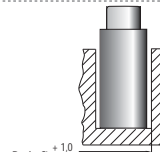
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



(10) ML7500-050-B

ORDER

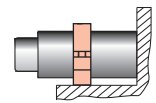
Fixings



Drop-in



Bottom mount



FSA 95

Max. Speed
1,6 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
38,48
cm²



Maintenance kit
39BMML07500B



ML

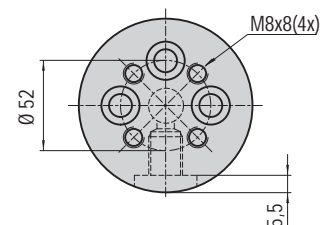
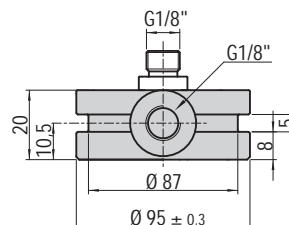
Technical specifications

Code		Cu	L	Lmin	Fo	Vo		
		mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³		Kg
PHASING OUT	NEW							
ML 7500 - 015 - A	ML 7500 - 015 - B	15	115	100	7700	-	-	-3,53
ML 7500 - 025 - A	ML 7500 - 025 - B	25	135	110	7700	-	-	-3,84
ML 7500 - 038 - A	ML 7500 - 038 - B	38	165	127	7700	-	-	-4,40
ML 7500 - 050 - A	ML 7500 - 050 - B	50	190	140	7700	-	-	-4,67
ML 7500 - 063 - A	ML 7500 - 063 - B	63	220	157	7700	-	-	-5,15
ML 7500 - 080 - A	ML 7500 - 080 - B	80	260	180	7700	-	-	-5,76

FML 7500

new code: 39FML07500A

Kit speciale per trasformare cilindri autonomi
Special kit to convert self-contained cylinders
Spezial-Set zum Umbau eigenständiger Zylinder
Kit spécial pour transformer les cylindres autonomes
Kit especial para transformar cilindros autónomos
Kit especial para transformar cilindros autónomos

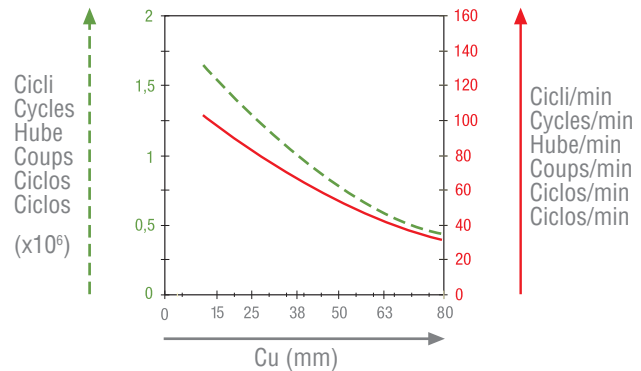
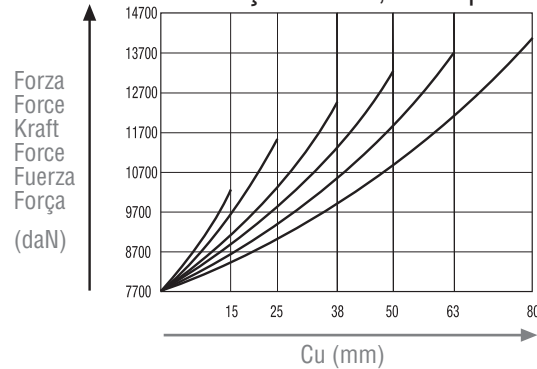
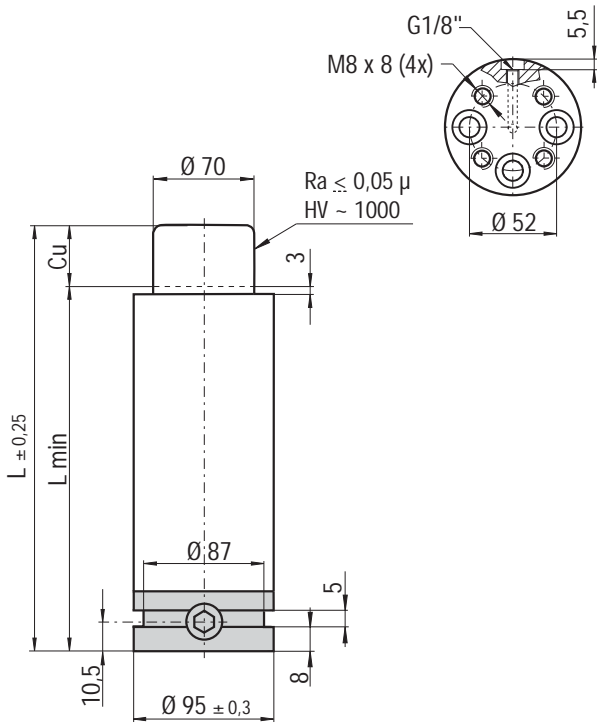


ML 7500N

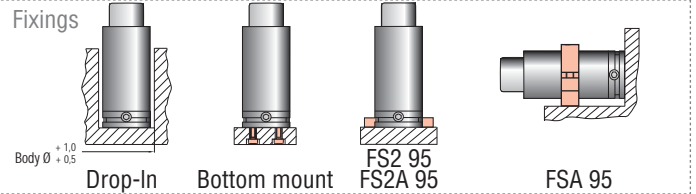
linkable G1/8"



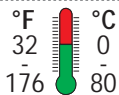
Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



(10) ML7500-050-B-N



Max. Speed
1,6 m/s



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
38,48
cm²



Maintenance kit
39BMML07500B



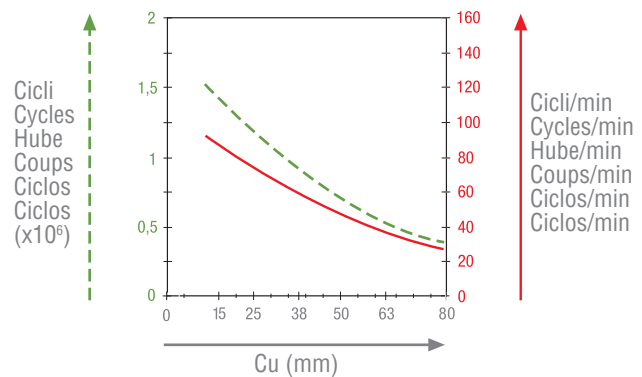
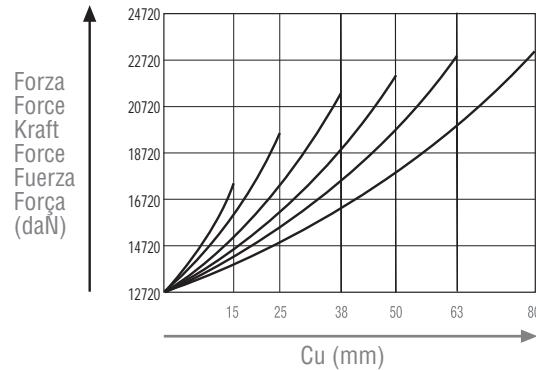
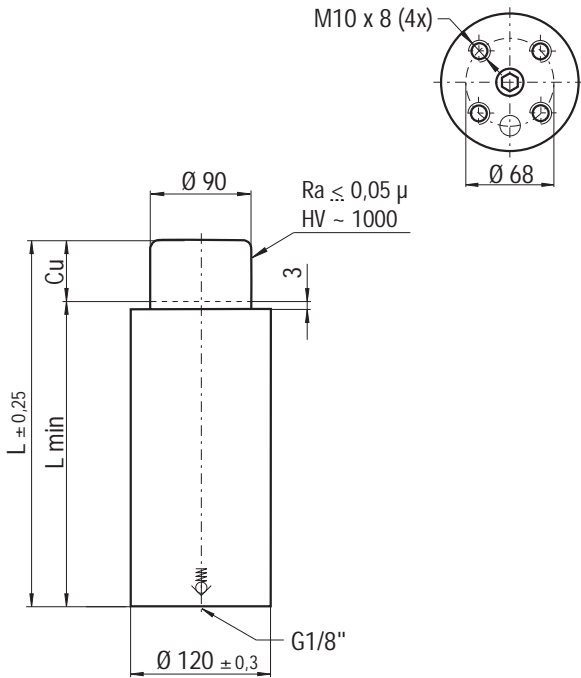
Technical specifications

Code		Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimesse hose	
ML 7500 - 015 - A - N	ML 7500 - 015 - B - N	15	135	120	7700	239	ML 7500 - 015 - B - N	~4,63
ML 7500 - 025 - A - N	ML 7500 - 025 - B - N	25	155	130	7700	313	ML 7500 - 025 - B - N	~4,94
ML 7500 - 038 - A - N	ML 7500 - 038 - B - N	38	185	147	7700	429	ML 7500 - 038 - B - N	~5,50
ML 7500 - 050 - A - N	ML 7500 - 050 - B - N	50	210	160	7700	523	ML 7500 - 050 - B - N	~5,77
ML 7500 - 063 - A - N	ML 7500 - 063 - B - N	63	240	177	7700	640	ML 7500 - 063 - B - N	~6,25
ML 7500 - 080 - A - N	ML 7500 - 080 - B - N	80	280	200	7700	796	ML 7500 - 080 - B - N	~6,86

Info pg. 187

Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo

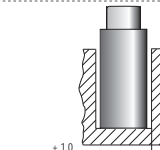
PED
97/23/EG



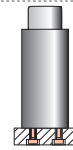
(10) ML12000-050-B

ORDER

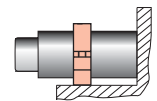
Fixings



Drop-in

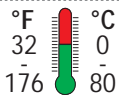


Bottom mount



FSA 120

Max. Speed
1,6 m/s



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
63,62
cm²



Maintenance kit
39BMML12000B



ML

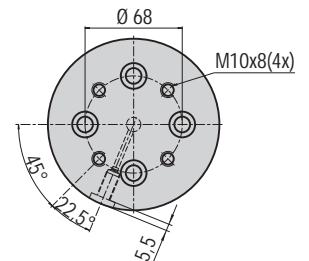
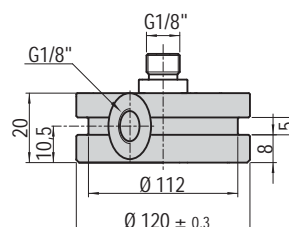
Technical specifications

Code		Cu	L	Lmin	Fo	Vo		
		mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³		Kg
PHASING OUT	NEW							
ML 12000 - 015 - A	ML 12000 - 015 - B	15	115	100	12720	-	-	-5,84
ML 12000 - 025 - A	ML 12000 - 025 - B	25	135	110	12720	-	-	-6,55
ML 12000 - 038 - A	ML 12000 - 038 - B	38	165	127	12720	-	-	-7,25
ML 12000 - 050 - A	ML 12000 - 050 - B	50	195	145	12720	-	-	-8,06
ML 12000 - 063 - A	ML 12000 - 063 - B	63	225	162	12720	-	-	-9,14
ML 12000 - 080 - A	ML 12000 - 080 - B	80	265	185	12720	-	-	-9,84

FML 12000

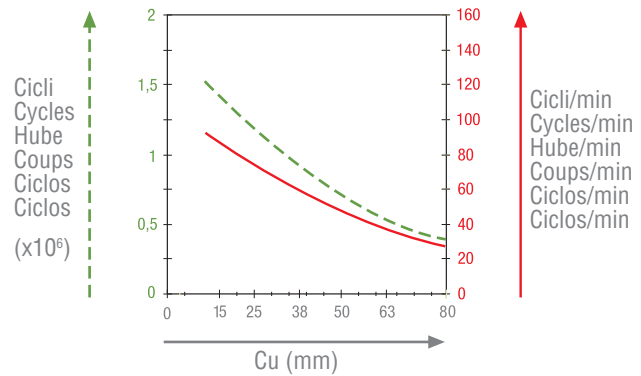
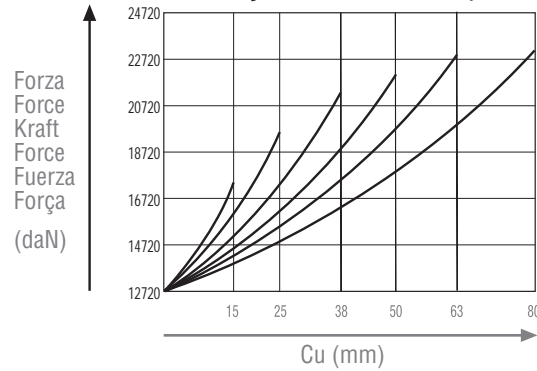
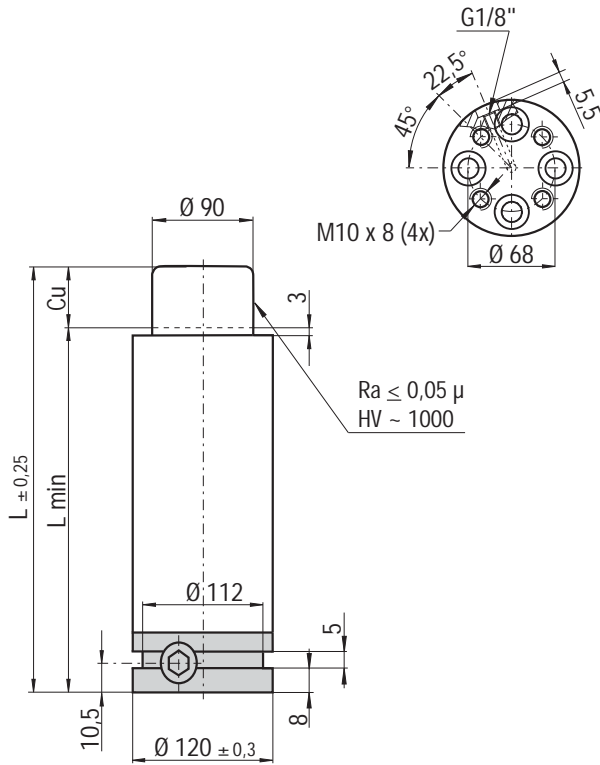
new code: 39FML12000A

Kit speciale per trasformare cilindri autonomi
Special kit to convert self-contained cylinders
Spezial-Set zum Umbau eigenständiger Zylinder
Kit spécial pour transformer les cylindres autonomes
Kit especial para transformar cilindros autónomos
Kit especial para transformar cilindros autónomos



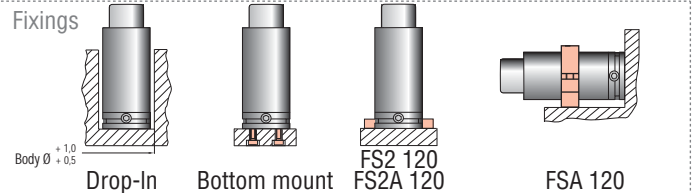


Massima forza, tenuta stelo - Maximum force, rod sealed - Maximale Leistung, Kolbenstange - Force maximum, tige étanche - Máxima fuerza, estanqueidad vástago - Força máxima, estanquidade no embolo



ORDER

(10) ML12000-050-B-N



Max. Speed
1,6 m/s

°F 32
°C 0
176 80



P max
200 bar
2900 psi

P min
20 bar
290 psi

S
63,62
cm²



Maintenance kit
39BMML12000B



Technical specifications

Code		Cu	L	Lmin	Fo	Vo	connecting hole G1/8"	Kg
PHASING OUT	NEW	mm	mm	mm	at 150 bar/+20 °C daN (±5%)	cm ³	Jic 37° hose Minimesse hose	
ML 12000 - 015 - A - N	ML 12000 - 015 - B - N	15	135	120	12720	350	ML 12000 - 015 - B - N	~7,60
ML 12000 - 025 - A - N	ML 12000 - 025 - B - N	25	155	130	12720	467	ML 12000 - 025 - B - N	~8,31
ML 12000 - 038 - A - N	ML 12000 - 038 - B - N	38	185	147	12720	650	ML 12000 - 038 - B - N	~9,01
ML 12000 - 050 - A - N	ML 12000 - 050 - B - N	50	215	165	12720	838	ML 12000 - 050 - B - N	~9,82
ML 12000 - 063 - A - N	ML 12000 - 063 - B - N	63	245	182	12720	1021	ML 12000 - 063 - B - N	~10,90
ML 12000 - 080 - A - N	ML 12000 - 080 - B - N	80	285	205	12720	1267	ML 12000 - 080 - B - N	~11,60

Info pg. 187



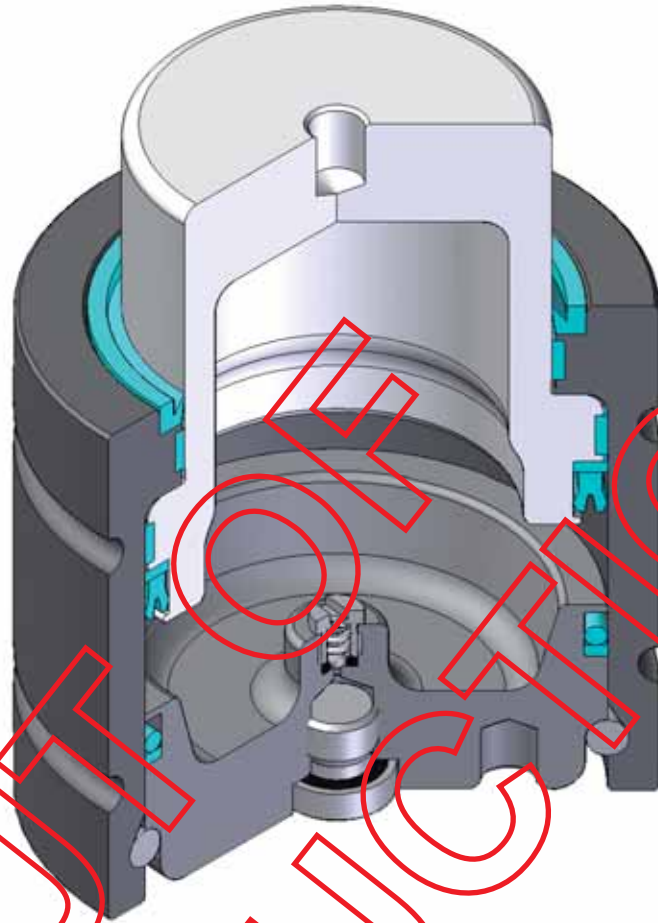
ML

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K

SERIES


PED
 97/23/EC

 Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung
 Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo


Range chart

Model	Body Ø mm	Stroke C/L mm	Initial force daN			
				SKUDO	OSAS	OPAS
K 40	25	10 - 50	425	-	-	-
K 75	32	10 - 50	740	-	-	-
K 100	38	6 - 50	1060	-	-	-
K 100 N	38	6 - 50	1060	-	-	-
K 180	50	6 - 50	1885	-	-	-
K 180 N	50	6 - 50	1885	-	-	-
K 470	75	10 - 50	4675	-	-	-
K 470 N	75	10 - 50	4675	-	-	-
K 750	95	10 - 50	7540	-	-	-
K 750 N	95	10 - 50	7540	-	-	-
K 1200	120	10 - 50	11780	-	-	-
K 1200 N	120	10 - 50	11780	-	-	-
K 1830	150	10 - 50	18410	-	-	-
K 1830 N	150	10 - 50	18410	-	-	-

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung
Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo

I SOSTITUITA DA SERIE KE

La serie di cilindri K con tenuta pistone è stata sostituita dalla nuova serie KE.

Per eventuali riferimenti tecnici invitiamo a consultare:

www.specialsprings.com > download > cataloghi obsoleti.

oppure:

www.specialsprings.com > news > KE/K tabelle comparative.

GB REPLACED BY KE SERIES

The K series of nitrogen cylinders with piston seal has been replaced by the new KE series.

For any need about K series please go to:

www.specialsprings.com > download > obsolete catalogues.

or:

www.specialsprings.com > news > KE/K comparative chart.

D ERSETZT DURCH KE-SERIE

Die Gasdruckfedern der K-Serie mit Kolbendichtung wurden durch die neue KE-Serie ersetzt.

Technische Informationen hierzu erhalten Sie auf unserer Internetseite unter:

www.specialsprings.com > download > cataloghi obsoleti.

oder unter:

www.specialsprings.com > news > cylinders model K and KE comparison chart.

F REMPLACÉE POUR LA NOUVELLE SÉRIE KE

La série K avec piston étanche a été remplacée pour la nouvelle série KE.

Pour éventuelles références techniques, nous vous invitons à consulter:

www.specialsprings.com > download > catalogues obsolètes.

ou:

www.specialsprings.com > news > KE/K tableaux comparatifs.

E SUSTITUIDA POR LA NUEVA SERIE KE

La serie de cilindros K con guarnición en el pistón ha sido sustituida por

la nueva serie KE. En caso de dudas técnicas rogamos consulten

www.specialsprings.com > download > catálogos obsoletos.

o:

www.specialsprings.com > noticias > tabla comparativa KE/K.

P SUBSTITUÍDA PELA NOVA SERIE KE

A serie de cilindros K foi substituída pela nova serie KE.

Para eventuais esclarecimentos técnicos aconselhamos a consultar:

www.specialsprings.com > download > catálogos obsoletos.

Ou:

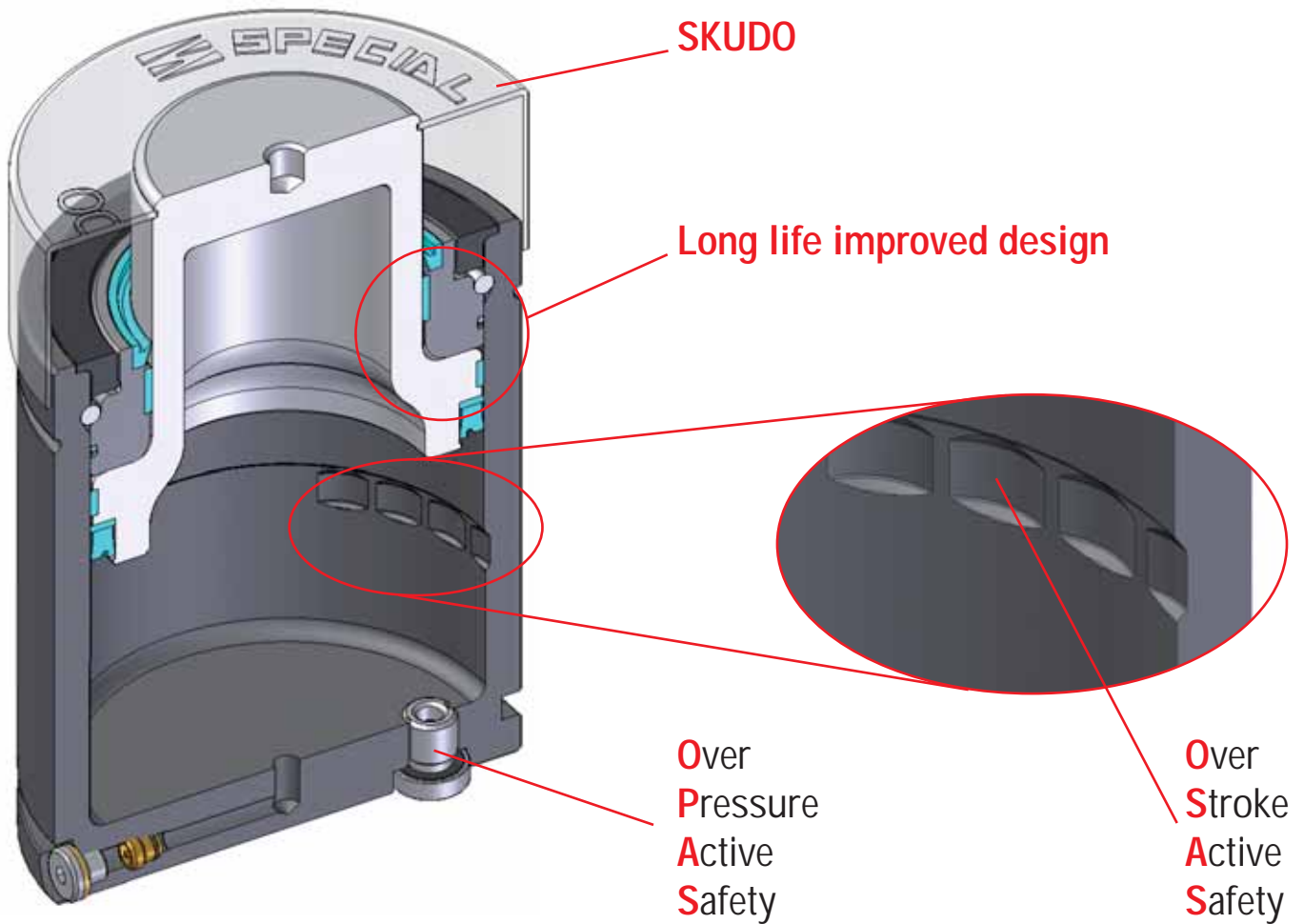
www.specialsprings.com > news > KE/K tabelas comparativas.

KE SERIES




PED
97/23/EC

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo

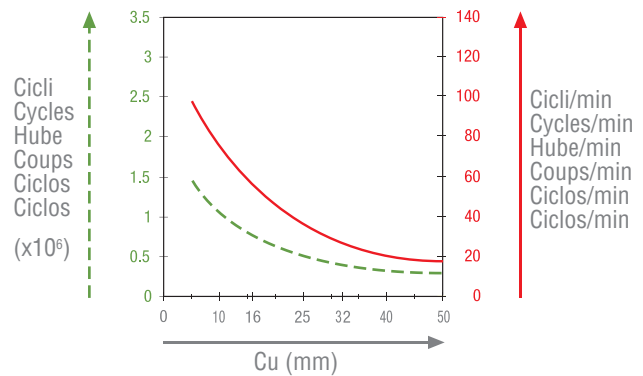
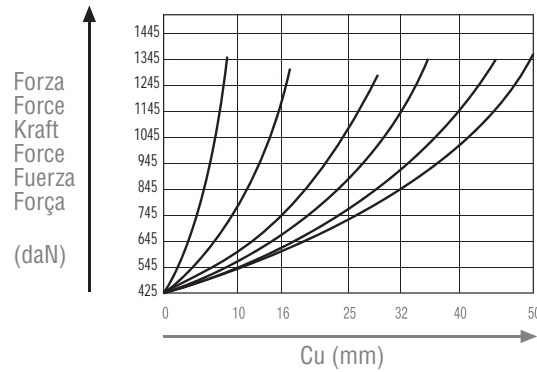
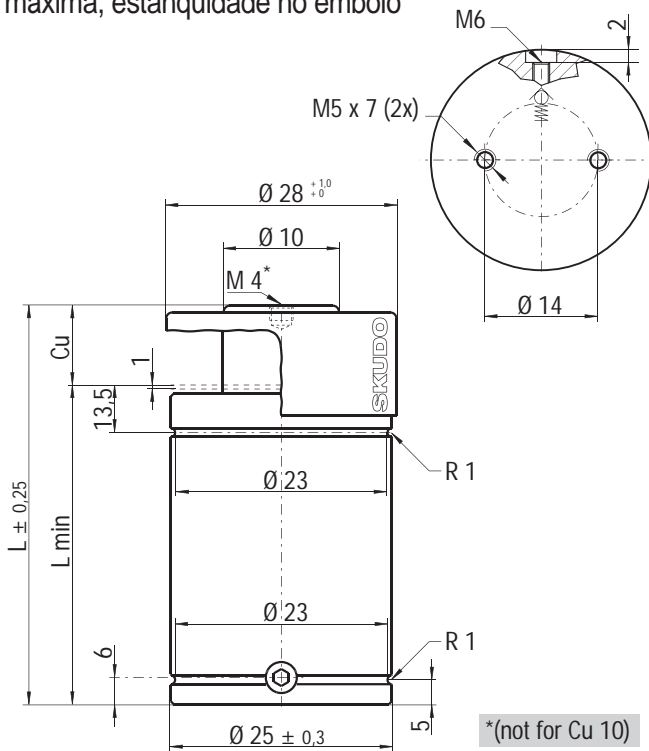


Range chart

Model	Body Ø mm	Stroke Cu mm	Initial force daN			
				SKUDO	OSAS	OPAS
KE 400	25	10 - 50	425	✓	-	-
KE 750	32	10 - 50	740	✓	-	-
KE 1000	38	6 - 50	1060	✓	✓	-
KE 1800	50	6 - 50	1885	✓	✓	✓
KE 3000	63	10 - 50	2945	✓	✓	✓
KE 4700	75	10 - 50	4675	✓	✓	✓
KE 7500	95	10 - 50	7540	✓	✓	✓
KE 12000	120	10 - 50	11780	✓	✓	✓
KE 18500	150	10 - 50	18410	✓	✓	✓

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo

PED
97/23/EG

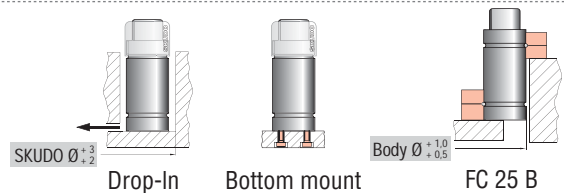


(10) KE 400-050-A

ORDER (10) KE 400-050-A-N



Fixings



Max. Speed
0,8 m/s

°F 32
176
°C 0
80



P max
150 bar
2175 psi

P min
20 bar
290 psi

S
2,84
cm²



Maintenance kit



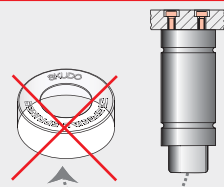
Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
KE 400 - 010 - A	10	70	60	425	6,1	KE 400 - 010 - A - N	-0,16
KE 400 - 016 - A	16	91	75	425	10	KE 400 - 016 - A - N	-0,19
KE 400 - 025 - A	25	120	95	425	15,9	KE 400 - 025 - A - N	-0,23
KE 400 - 032 - A	32	140	108	425	19,6	KE 400 - 032 - A - N	-0,25
KE 400 - 040 - A	40	165	125	425	24,6	KE 400 - 040 - A - N	-0,28
KE 400 - 050 - A	50	195	145	425	30,4	KE 400 - 050 - A - N	-0,32

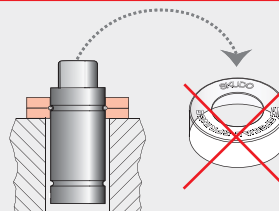
Info pg. 187

WARNING
REMOVE SKUDO

ONLY FOR:



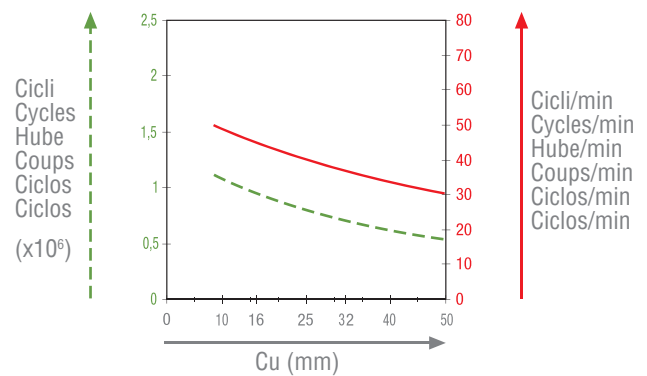
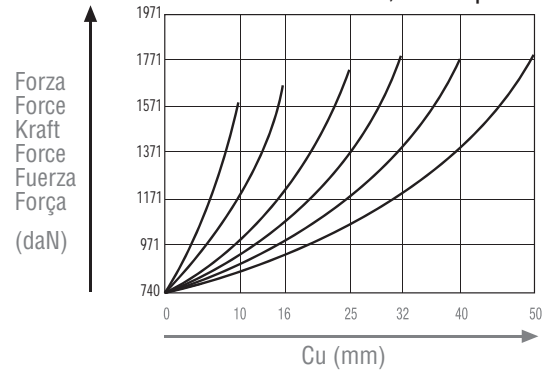
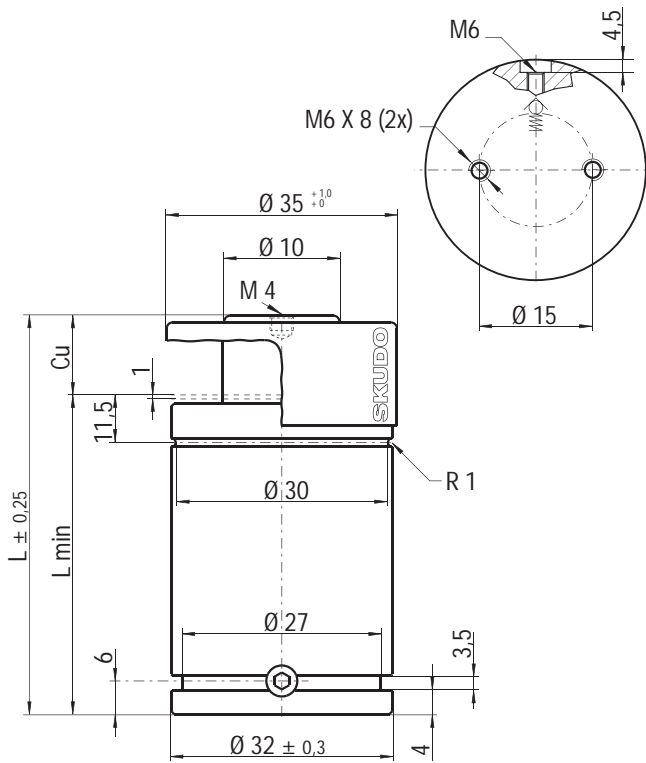
Upside down mounting



FC / FCQ fixings



Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo



ORDER (10) KE 750-050-A
 (10) KE 750-050-A-N

Fixings: SKUDO Ø ± 0.3, Drop-In, Bottom mount, FS2A 32, Body Ø +1.0 / -0.5, FC 32A, FSA 32

Max. Speed 0,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 4,91 cm ²		Maintenance kit 39BMKE00750A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
KE 750 - 010 - A	10	75	65	740	11,5	KE 750 - 010 - A - N	-0,27
KE 750 - 016 - A	16	93	77	740	17,6	KE 750 - 016 - A - N	-0,30
KE 750 - 025 - A	25	120	95	740	26,6	KE 750 - 025 - A - N	-0,35
KE 750 - 032 - A	32	140	108	740	33,1	KE 750 - 032 - A - N	-0,39
KE 750 - 040 - A	40	165	125	740	41,6	KE 750 - 040 - A - N	-0,43
KE 750 - 050 - A	50	195	145	740	51,6	KE 750 - 050 - A - N	-0,49

Info pg. 187

WARNING REMOVE SKUDO

ONLY FOR:

- Upside down mounting
- FC / FCQ fixings

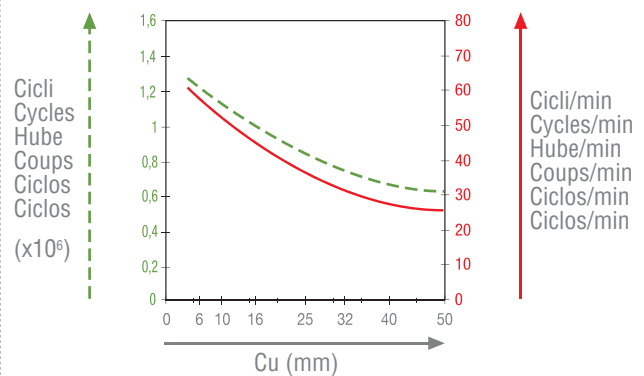
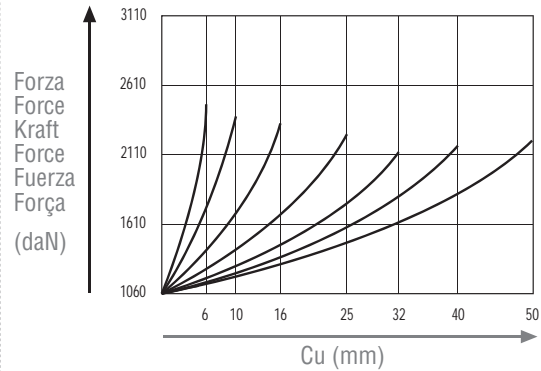
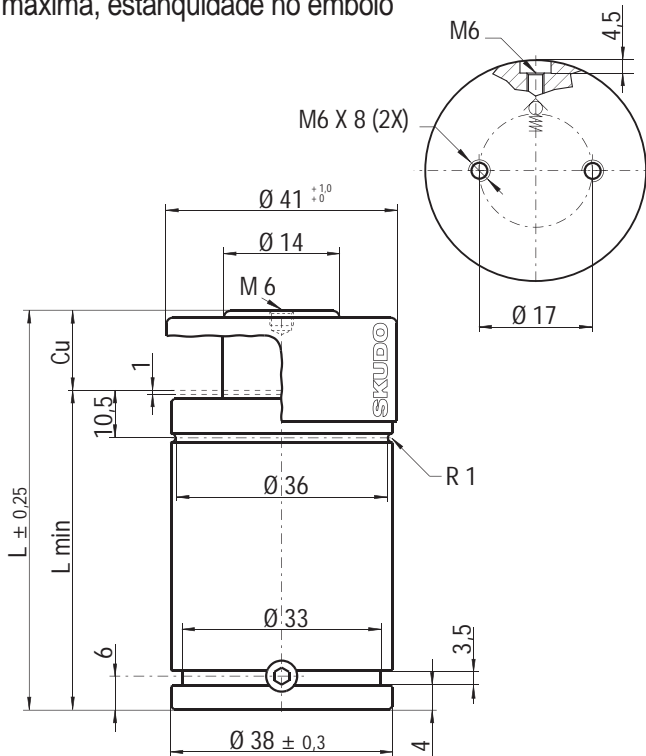
WARNING REMOVE SKUDO ONLY FOR: Cu = 010

FSA fixings

X min = Cu + 5 mm

X min

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo



ORDER (10) KE 1000-050-A-N

Fixings: Drop-In, Bottom mount, FS2A 38, FC 38A, FCQ 38A, FSA 38

Max. Speed 0,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 7,07 cm ²		Maintenance kit 39BMKE01000A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	 Kg
KE 1000 - 006 - A	6	61	55	1060	10,7	KE 1000 - 006 - A - N	-0,34
KE 1000 - 010 - A	10	78	68	1060	18,5	KE 1000 - 010 - A - N	-0,40
KE 1000 - 016 - A	16	100	84	1060	30,1	KE 1000 - 016 - A - N	-0,45
KE 1000 - 025 - A	25	135	110	1060	48,9	KE 1000 - 025 - A - N	-0,54
KE 1000 - 032 - A	32	167	135	1060	66,9	KE 1000 - 032 - A - N	-0,63
KE 1000 - 040 - A	40	195	155	1060	81,5	KE 1000 - 040 - A - N	-0,70
KE 1000 - 050 - A	50	230	180	1060	99,7	KE 1000 - 050 - A - N	-0,79

Info pg. 187

WARNING REMOVE SKUDO

ONLY FOR:

- Upside down mounting
- FC / FCQ fixings

WARNING REMOVE SKUDO ONLY FOR:

Cu = 006
010

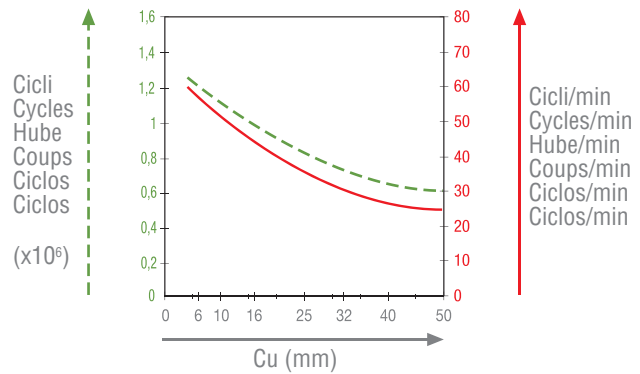
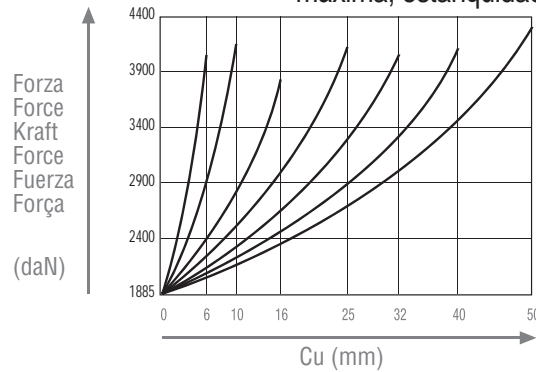
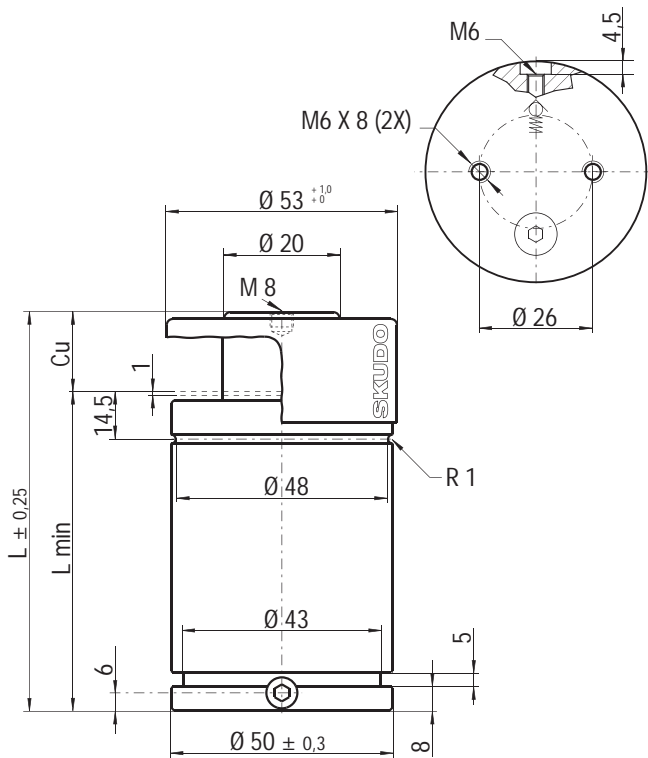
X min = Cu + 5 mm

X min

FSA fixings



Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo



ORDER (10) KE 1800-050-A

Fixings: SKUDO Ø +3,2, Drop-In, Bottom mount, FS2 50 / FS2A 50, Body Ø: 1,0 / 0,5, FCB 50 / FCQB 50, FSA 50

Max. Speed 0,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 12,57 cm ²		Maintenance kit 39BMKE01800A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
KE 1800 - 006 - A	6	66	60	1885	20,5	KE 1800 - 006 - A - N	-0,64
KE 1800 - 010 - A	10	80	70	1885	33,6	KE 1800 - 010 - A - N	-0,71
KE 1800 - 016 - A	16	106	90	1885	58,6	KE 1800 - 016 - A - N	-0,83
KE 1800 - 025 - A	25	135	110	1885	84,3	KE 1800 - 025 - A - N	-0,95
KE 1800 - 032 - A	32	162	130	1885	109,8	KE 1800 - 032 - A - N	-1,07
KE 1800 - 040 - A	40	190	150	1885	135,4	KE 1800 - 040 - A - N	-1,20
KE 1800 - 050 - A	50	220	170	1885	161,3	KE 1800 - 050 - A - N	-1,32

Info pg. 187

WARNING REMOVE SKUDO

ONLY FOR:

- Upside down mounting
- FC / FCQ fixings

WARNING REMOVE SKUDO ONLY FOR:

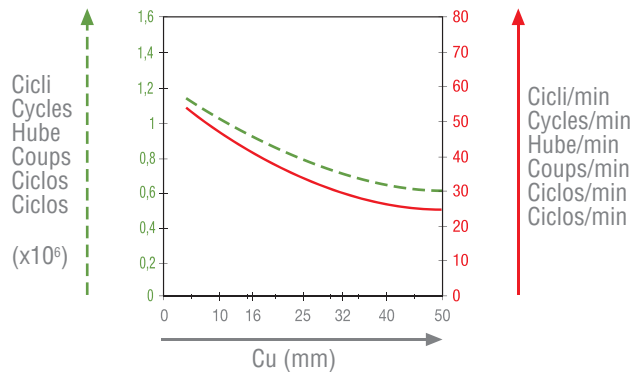
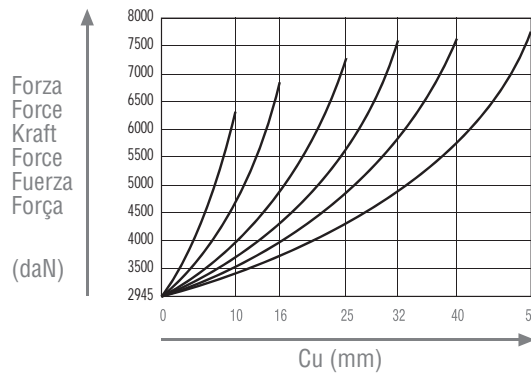
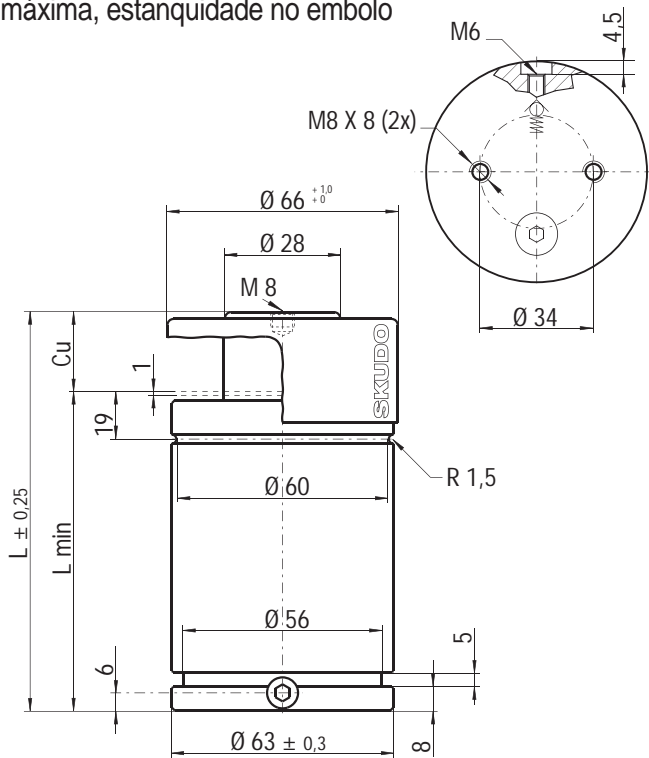
Cu = 006
010

X min = Cu + 5 mm

X min

FSA fixings

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo



ORDER (10) KE 3000-050-A

Fixings: SKUDO $\begin{smallmatrix} +3 \\ +2 \end{smallmatrix}$ Drop-In, Bottom mount, FS2 63 FS2A 63, Body $\begin{smallmatrix} +1,0 \\ +0,5 \end{smallmatrix}$ FCB 63 FCQB 63

Max. Speed 0,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 19,63 cm ²		Maintenance kit 39BMKE03000A	
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Technical specifications

Code	Cu	L	Lmin	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
KE 3000 - 010 - A	10	85	75	2945	53,8	KE 3000 - 010 - A - N	-1,24
KE 3000 - 016 - A	16	103	87	2945	79,2	KE 3000 - 016 - A - N	-1,37
KE 3000 - 025 - A	25	130	105	2945	117	KE 3000 - 025 - A - N	-1,55
KE 3000 - 032 - A	32	150	118	2945	144,4	KE 3000 - 032 - A - N	-1,69
KE 3000 - 040 - A	40	175	135	2945	180	KE 3000 - 040 - A - N	-1,86
KE 3000 - 050 - A	50	205	155	2945	222	KE 3000 - 050 - A - N	-2,07

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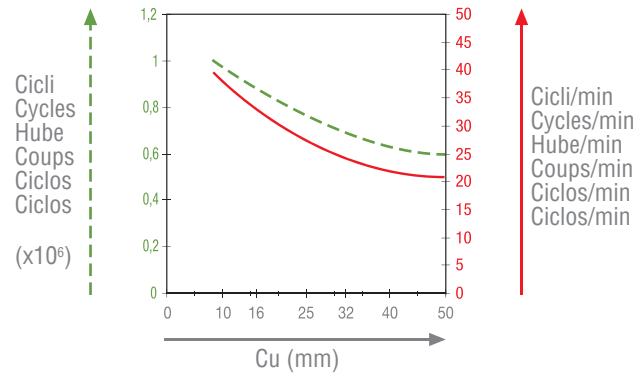
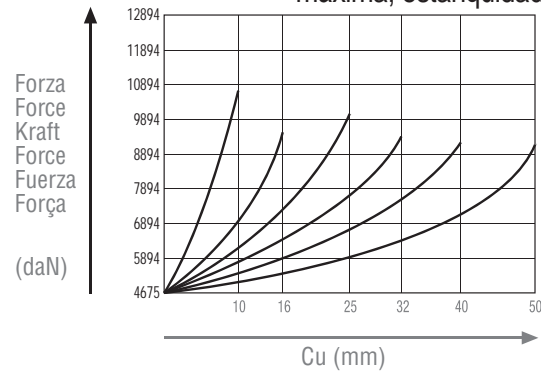
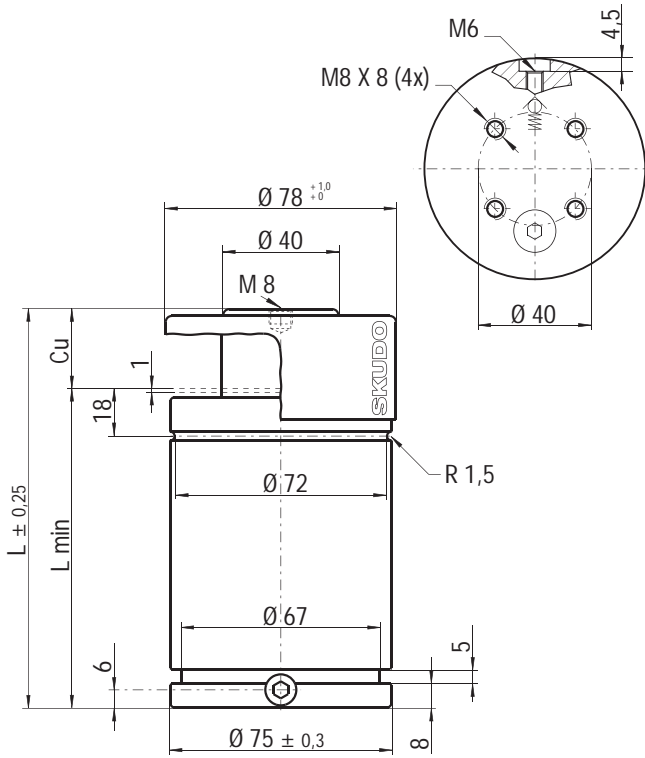
WARNING REMOVE SKUDO

ONLY FOR:

- Upside down mounting
- FC / FCQ fixings



Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo



ORDER (10) KE 4700-050-A

Fixings

- Drop-In
- Bottom mount FB 75 - FBA 75
- FS2 75 FS2A 75
- Body Ø: 1.0 / 0.5
- FCB 75 FCQB 75
- FSA 75

Max. Speed 0,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 31,17 cm ²		Maintenance kit 39BMKE04700A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
KE 4700 - 010 - A	10	80	70	4675	79,7	KE 4700 - 010 - A - N	-1,63
KE 4700 - 016 - A	16	106	90	4675	145,3	KE 4700 - 016 - A - N	-1,85
KE 4700 - 025 - A	25	135	110	4675	212,9	KE 4700 - 025 - A - N	-2,10
KE 4700 - 032 - A	32	167	135	4675	294,6	KE 4700 - 032 - A - N	-2,39
KE 4700 - 040 - A	40	200	160	4675	377	KE 4700 - 040 - A - N	-2,67
KE 4700 - 050 - A	50	240	190	4675	476,1	KE 4700 - 050 - A - N	-3,04

Info pg. 187

WARNING
REMOVE SKUDO

ONLY FOR:

- Upside down mounting
- FC / FCQ fixings

WARNING
REMOVE SKUDO
ONLY FOR:
Cu = 010

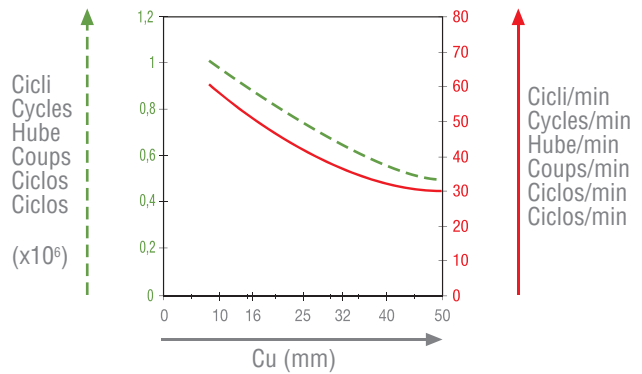
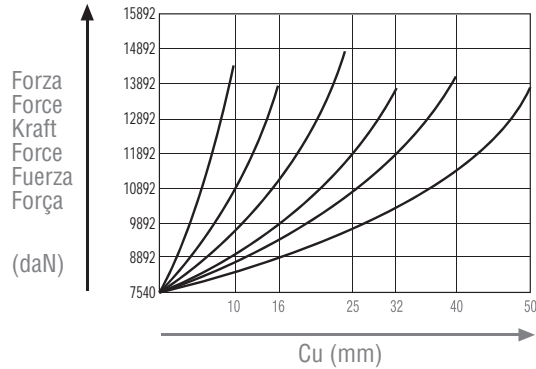
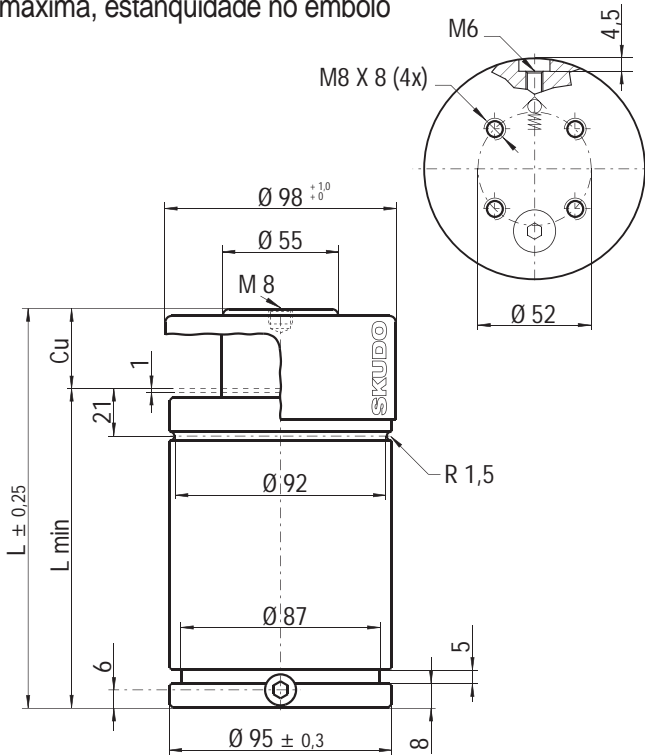
- FSA fixings

X min = Cu + 5 mm

X min

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo

PED
97/23/EG



ORDER (10) KE 7500-050-A

Fixings: SKUDO Ø⁺³, Drop-In, Bottom mount, FS2 95 / FS2A 95, Body Ø: 1.0 / 0.5, FCB 95 / FCQB 95, FSA 95

Max. Speed 0,8 m/s	°F 32 °C 0 176 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 50,27 cm ²		Maintenance kit 39BMKE07500A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole M6 Micro hose	Kg
KE 7500 - 010 - A	10	90	80	7540	158,6	KE 7500 - 010 - A - N	-2,99
KE 7500 - 016 - A	16	116	100	7540	268,6	KE 7500 - 016 - A - N	-3,34
KE 7500 - 025 - A	25	145	120	7540	381,8	KE 7500 - 025 - A - N	-3,74
KE 7500 - 032 - A	32	182	150	7540	542,6	KE 7500 - 032 - A - N	-4,27
KE 7500 - 040 - A	40	210	170	7540	654,3	KE 7500 - 040 - A - N	-4,65
KE 7500 - 050 - A	50	255	205	7540	844,4	KE 7500 - 050 - A - N	-5,29

Info pg. 187

WARNING REMOVE SKUDO

ONLY FOR:

- Upside down mounting
- FC / FCQ fixings

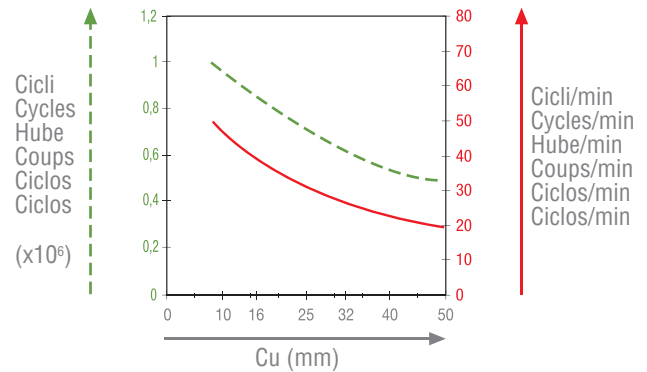
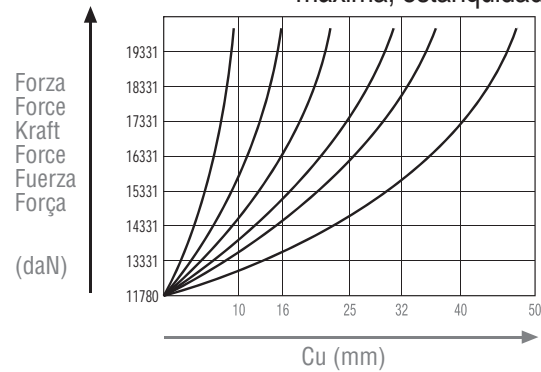
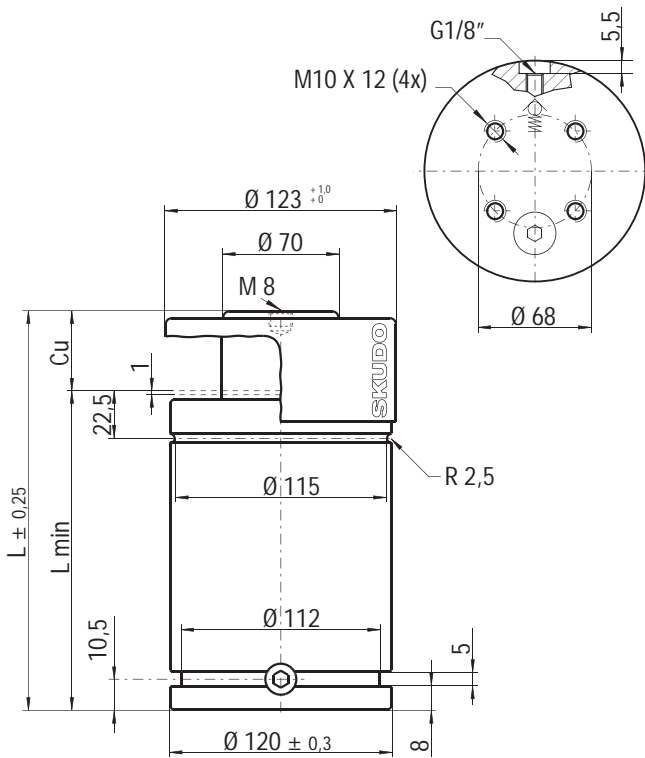
WARNING REMOVE SKUDO ONLY FOR: Cu = 010

FSA fixings

X min = Cu + 5 mm



Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo



ORDER (10) KE 12000-050-A-N

Fixings: SKUDO Ø +3, Drop-In, Bottom mount, FS2 120 / FS2A 120, FC 120 A / FCQ 120 A, FSA 120

Max. Speed 0,8 m/s	°F 32 176	°C 0 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 78,54 cm ²		Maintenance kit 39BMKE12000A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
KE 12000 - 010 - A	10	100	90	11780	282,4	KE 12000 - 010 - A - N	-5,45
KE 12000 - 016 - A	16	126	110	11780	453	KE 12000 - 016 - A - N	-6,06
KE 12000 - 025 - A	25	155	130	11780	630,9	KE 12000 - 025 - A - N	-6,70
KE 12000 - 032 - A	32	187	155	11780	843	KE 12000 - 032 - A - N	-7,45
KE 12000 - 040 - A	40	220	180	11780	1057,5	KE 12000 - 040 - A - N	-8,22
KE 12000 - 050 - A	50	260	210	11780	1315,9	KE 12000 - 050 - A - N	-9,14

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WARNING REMOVE SKUDO

ONLY FOR:

Upside down mounting

FC / FCQ fixings

WARNING

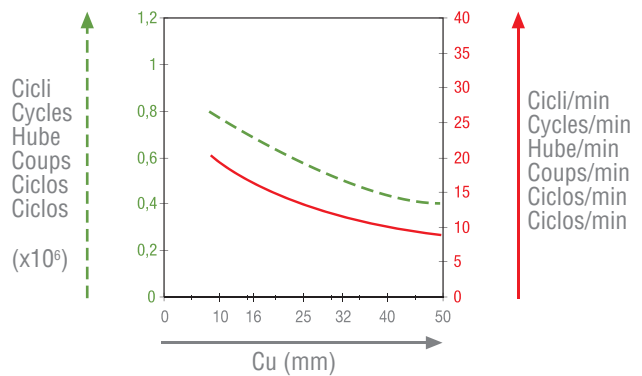
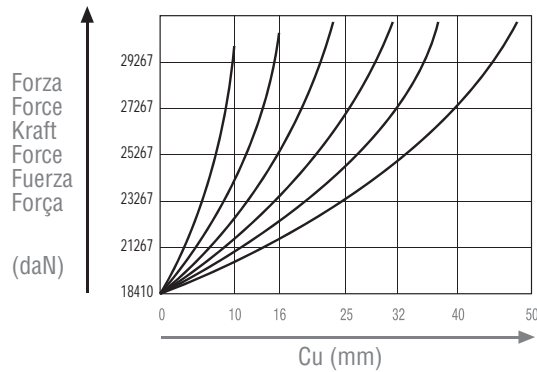
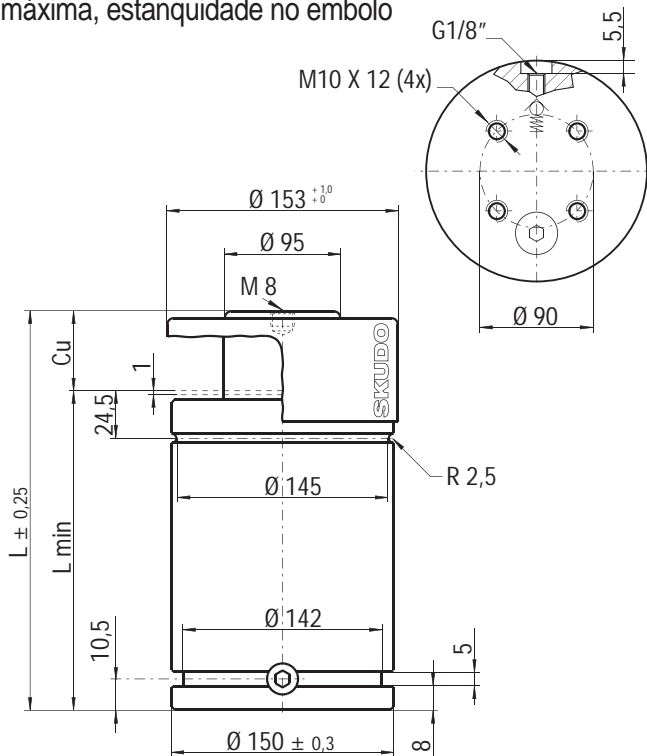
X min = Cu + 5 mm

X min

FSA fixings

Massima forza, tenuta pistone - Maximum force, piston sealed - Maximale Leistung, Kolbendichtung - Force maximum, piston étanche - Máxima fuerza, estanqueidad pistón - Força máxima, estanquidade no embolo

PED
97/23/EG



ORDER (10) KE 18500-050-A

Fixings: SKUDO Ø $^{+3}$, Drop-In, Bottom mount, FS2 150 / FS2A 150, FC 150 A / FCQ 150 A, FSA 150

Max. Speed 0,8 m/s	°F 32 / 176 °C 0 / 80	N ₂	P max 150 bar 2175 psi	P min 20 bar 290 psi	S 122,72 cm ²		Maintenance kit 39BMKE18500A	
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Technical specifications

Code	Cu mm	L mm	Lmin mm	Fo at 150 bar/+20 °C daN (±5%)	Vo cm ³	connecting hole G1/8" Jic 37° hose Minimess hose	Kg
KE 18500 - 010 - A	10	110	100	18410	502,4	KE 18500 - 010 - A - N	-9,47
KE 18500 - 016 - A	16	136	120	18410	776	KE 18500 - 016 - A - N	-10,43
KE 18500 - 025 - A	25	165	140	18410	1061,7	KE 18500 - 025 - A - N	-11,46
KE 18500 - 032 - A	32	197	165	18410	1400,3	KE 18500 - 032 - A - N	-12,52
KE 18500 - 040 - A	40	235	195	18410	1804,9	KE 18500 - 040 - A - N	-14,09
KE 18500 - 050 - A	50	270	220	18410	2156,6	KE 18500 - 050 - A - N	-15,35

Info pg. 187

WARNING
REMOVE SKUDO

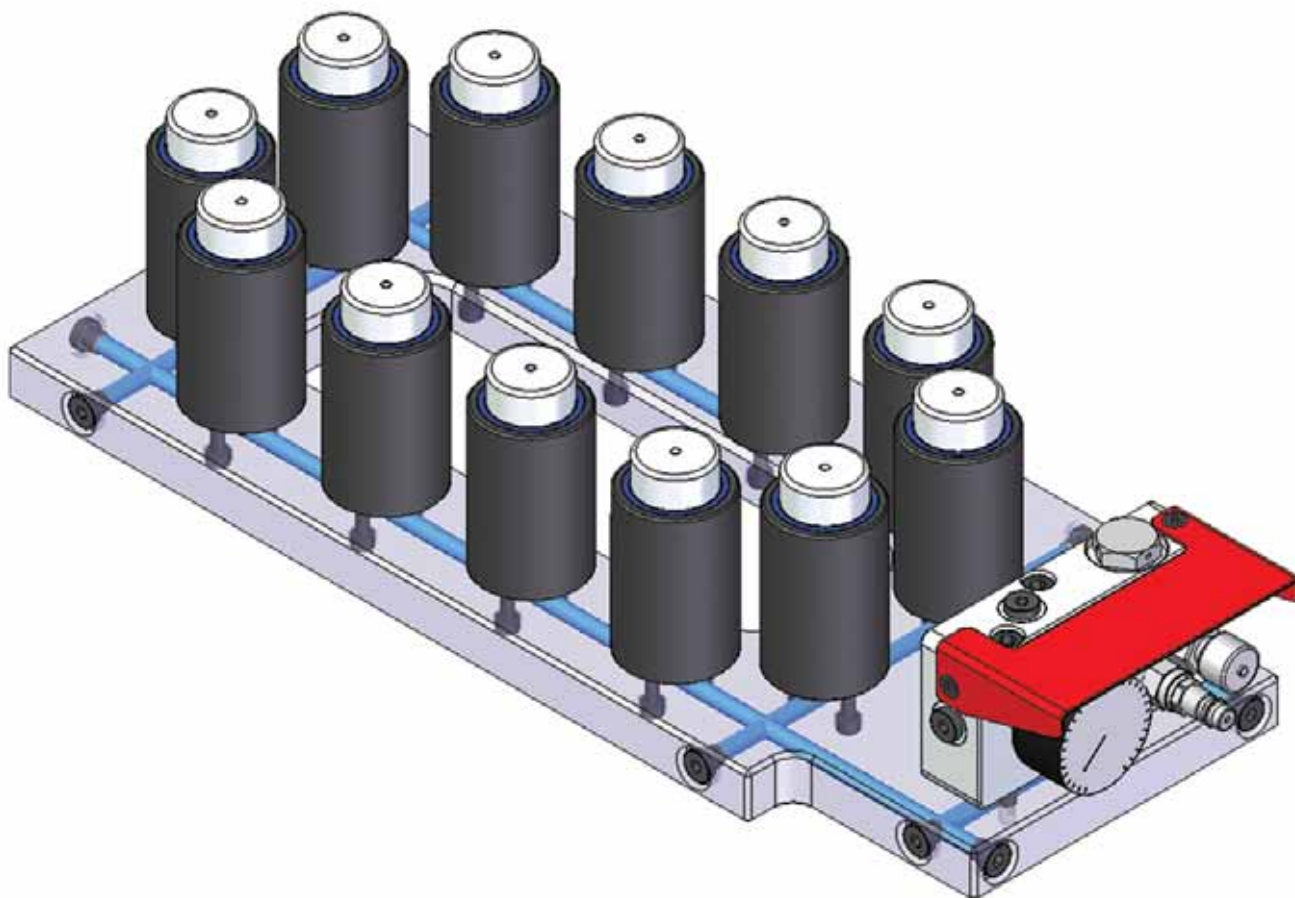
ONLY FOR:

Upside down mounting

FC / FCQ fixings

FSA fixings

X min = Cu + 5 mm



I CARATTERISTICHE:

- Vantaggiosa alternativa ai tradizionali e costosi cilindri Manifold.
- Grande varietà di combinazioni con l'uso di cilindri (autonomi) standard.
- Totale eliminazione di tubi e raccordi.
- Massima economicità di realizzo e costi simili agli impianti con tubi e raccordi.
- Facile manutenzione, uguale ai cilindri (autonomi) standard.
- Piastre di collegamento realizzabili direttamente dagli utilizzatori.
- Massima flessibilità di realizzazione degli impianti.
- Nessuna richiesta di utensili speciali per l'installazione.

ULTERIORI SERVIZI:

- Special Springs è in grado di fornire le piastre/cuscino su specifiche del cliente, collaudate e pronte per l'installazione.

GB CHARACTERISTICS:

- An advantageous alternative to conventional and costly Manifold cylinders.
- Large variety of combinations with the use of standard cylinders (independent).
- Total elimination of pipes and fittings.
- Maximum economy in execution and costs similar to systems with pipes and fittings.
- Easy maintenance, the same as standard cylinders (independent).
- Connection plates can be made directly by users.
- Maximum flexibility in creation of systems.
- No special tools required for installation.

ADDITIONAL SERVICES:

- Special Springs can supply the plates/cushion to customer specifications, tested and ready for installation.

D MERKMALE:

- Preisgünstigere Alternative zu den teuren herkömmlichen Tankplattenzylindern.
- Große Auswahl an Einsatzkombinationen mit (autonomen) Standardzylindern.
- Komplette Abschaffung von Schläuchen und Anschlüssen.
- Höchstwirtschaftliche Bauweise. Die Kosten sind mit denen einer mit Schläuchen und Anschlüssen ausgestatteten Anlage vergleichbar.
- Ebenso wartungsfreundlich wie ein (autonomer) Standardzylinder.
- Die Anschlussplatten können von den Benutzern selbst gebaut werden.
- Höchste Flexibilität bei der Auslegung des Werkzeugs.
- Montage ohne Sonderwerkzeuge.

ZUSÄTZLICHE DIENSTLEISTUNGEN:

- Auf Anfrage werden Platten/Ziehkissen nach den Anweisungen des Kunden von der Fa. Special Springs hergestellt, getestet und montagefertig geliefert.

F CARACTERISTIQUES:

- Une alternative avantageuse aux traditionnels et coûteux cylindres Manifold.
- Une grande variété de combinaisons avec l'emploi de cylindres (autonomes) standard.
- L'élimination totale de tuyaux et raccords.
- Grande économie de réalisation et coûts semblables aux installations avec tuyaux et raccords.
- Entretien facile, comme celui des cylindres (autonomes) standard.
- Plaques de liaison réalisables directement par les utilisateurs.
- Très grande souplesse de réalisation des installations.
- Aucun besoin d'outils spéciaux pour l'installation.

AUTRES SERVICES:

- Special Springs est en mesure de fournir les plaques/coussin sur spécifications du client, testées et prêtes à être installées.

E CARACTERÍSTICAS:

- Ventajosa alternativa a los tradicionales y costosos cilindros Manifold.
- Gran variedad de combinaciones con el uso de cilindros (autónomos) estándar.
- Total eliminación de tubos y racores.
- Máxima economía de realización y costes similares a los de las instalaciones con tubos y racores.
- Fácil manutención, igual a la de los cilindros (autónomos) estándar.
- Placas de conexión realizables directamente por los usuarios.
- Máxima flexibilidad de realización de los equipos.
- No se requiere ninguna herramienta especial para la instalación.

ULTERIORES SERVICIOS:

- Special Springs es en grado de proporcionar las placas/cojín sobre especificaciones del cliente, Comprobadas y listas para la instalación.

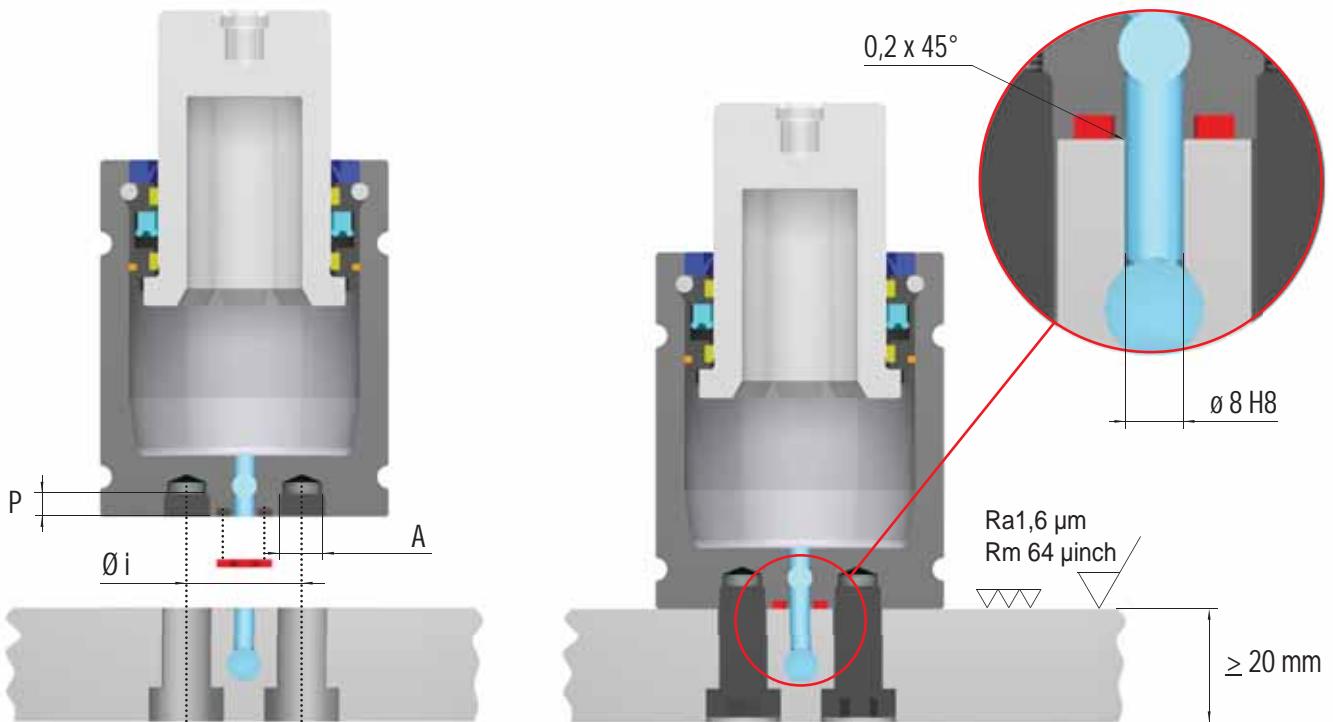
P CARACTERÍSTICAS:

- Vantajosa alternativa aos tradicionais e caros cilindros Manifold.
- Grande variedade de combinações com uso de cilindros (autónomos) standard.
- Total eliminação de tubos e junções.
- Máxima economia de fabricação e custos similares aos das instalações com tubos e junções.
- Fácil manutenção, igual a dos cilindros (autónomos) standard.
- Chapas de conexão que podem ser realizadas diretamente pelos usuários.
- Máxima flexibilidade de realização das instalações.
- Não é necessário utilizar nenhum tipo de utensílio especial para a instalação.

DEMAIS SERVIÇOS:

- Special Springs pode fornecer chapas/coxim conforme exigência do cliente, testadas e verificadas prontas para a instalação.

ED system



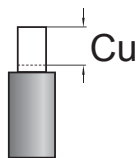
Model	A	Ø i	P
HR700, RV750, RF750	2 X M8	26 mm	see catalogue
SC500, S500	2 X M8	26 mm	see catalogue
H 700	2 X M8	26 mm	see catalogue
HR1000, RV1000, RF1000	2 X M8	34 mm	see catalogue
SC750, S750	2 X M8	34 mm	see catalogue
H1000	2 X M8	34 mm	see catalogue
HR1500, RV1500, RF1500	2 X M8	34 mm	see catalogue
For body Ø ≥ 75	see catalogue	see catalogue	see catalogue



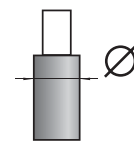
Series RV, RF, SC, H, HR,
LS, LI, KE, S,



General catalogue
www.specialsprings.com
www.partserver.com



All



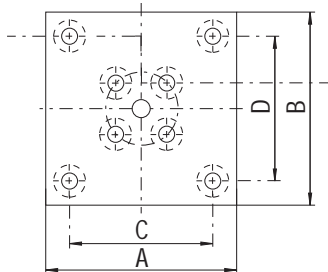
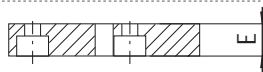
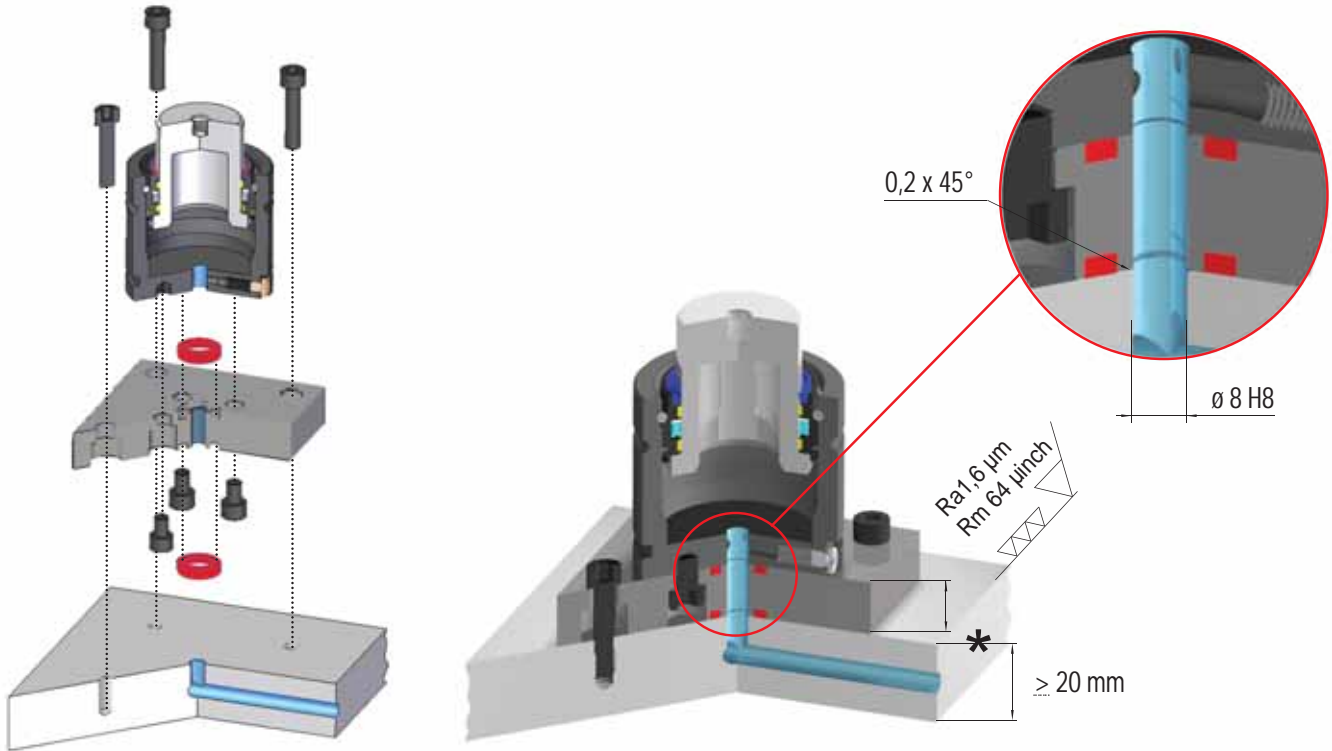
≥ 45 mm




ORDER

- I** Codice cilindro standard + ED : quantità+codice (es. 8 SC1500-100D-ED)
- GB** Standard cylinder part no. + ED: quantity+part no. (ex. 8 SC1500-100D-ED)
- D** Artikel-Nr. Standardzylinder + ED: Stückzahl+Artikel-Nr. (z. B. 8 SC1500-100D-ED)
- F** Code cylindre standard + ED: quantité+code (ex. 8 SC1500-100D-ED)
- E** Código cilindro estándar + ED: cantidad+código (ej. 8 SC1500-100D-ED)
- P** Código cilindro standard + ED: quantidade+código (ex. 8 SC1500-100D-ED)

EF system



* Manifold fixings

A	B	C	D	E	
mm	mm	mm	mm	mm	mm
100	100	73,5	73,5	20	75
120	120	92	92	20	95
140	140	109,5	109,5	20	120
190	190	138	138	25	150
210	210	170	170	25	195

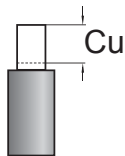


Series RV, RF, SC, H, HR,
LS, LI, KE, S

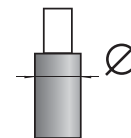


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MANI
FOLD



All

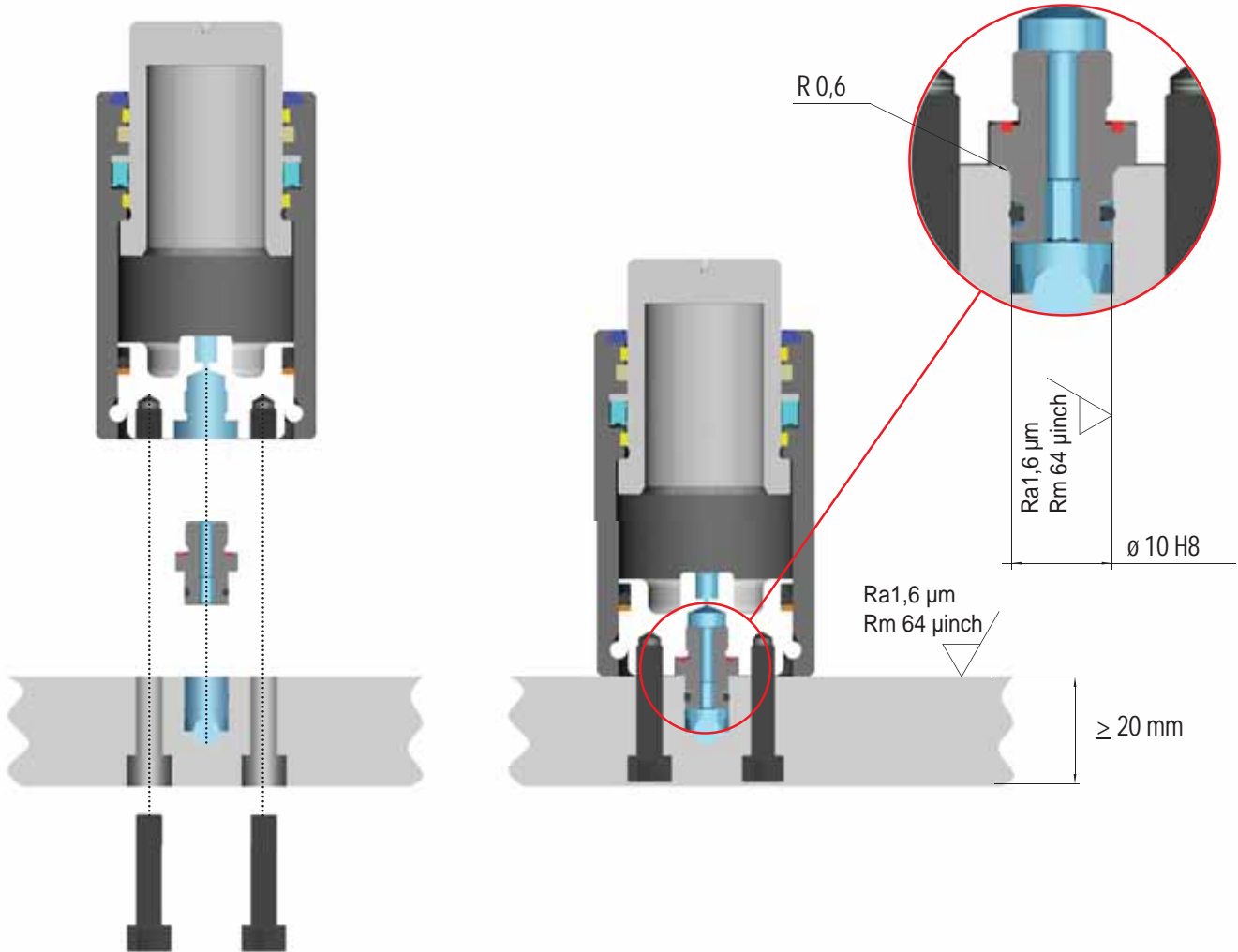


≥ 75 mm



- I** Codice cilindro standard + EF : quantità+codice (es. 8 SC1500-100D-EF)
- GB** Standard cylinder part no. + EF: quantity+part no. (ex. 8 SC1500-100D-EF)
- D** Artikel-Nr. Standardzylinder + EF: Stückzahl+Artikel-Nr. (z. B. 8 SC1500-100D-EF)
- F** Code cylindre standard + EF: quantité+code (ex. 8 SC1500-100D-EF)
- E** Código cilindro estándar + EF: cantidad+código (ej. 8 SC1500-100D-EF)
- P** Código cilindro standard + EF: quantidade+código (ex. 8 SC1500-100D-EF)

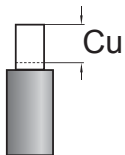
EN system



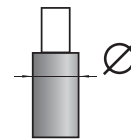
Series ML



General catalogue
www.specialsprings.com
www.partserver.com



All



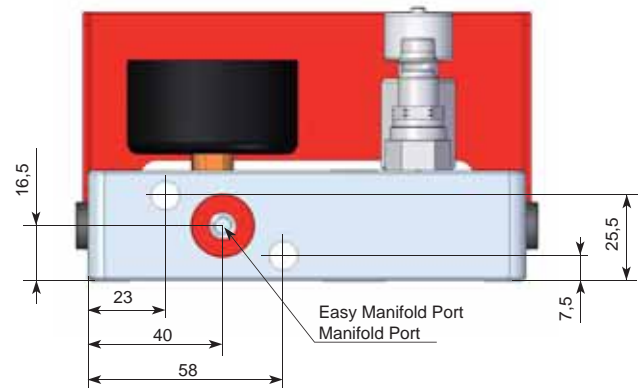
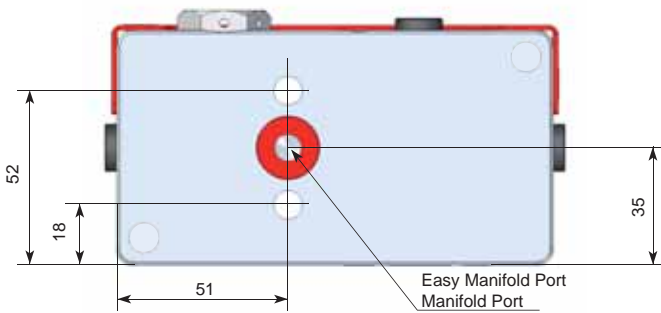
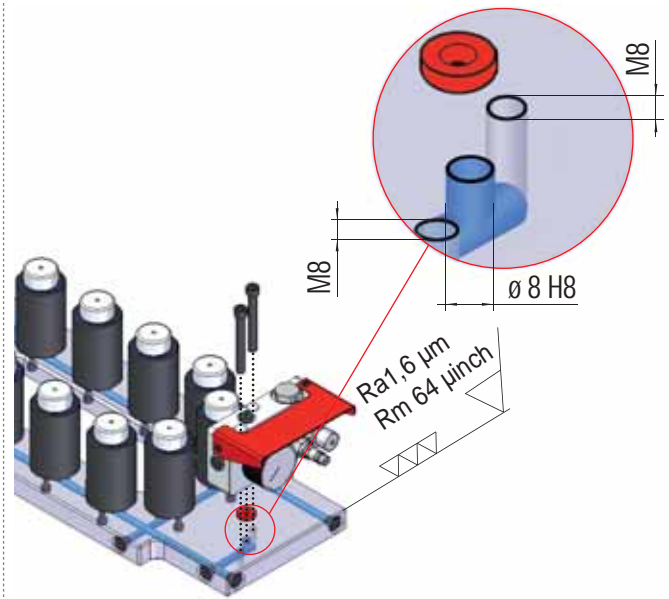
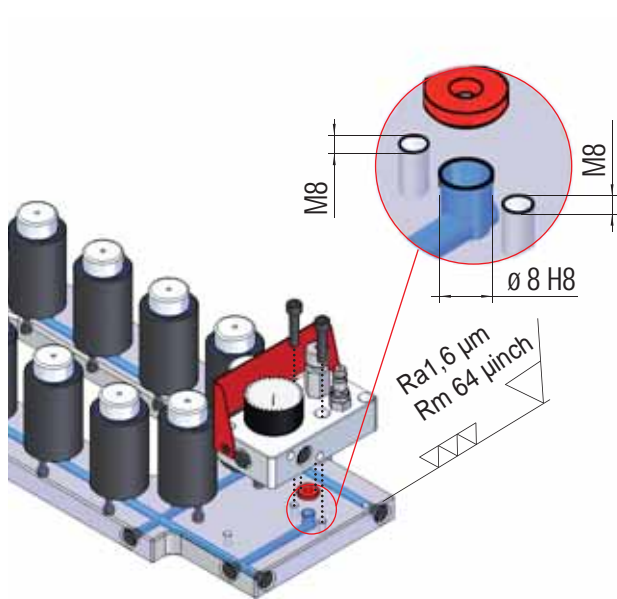
≥ 50 mm



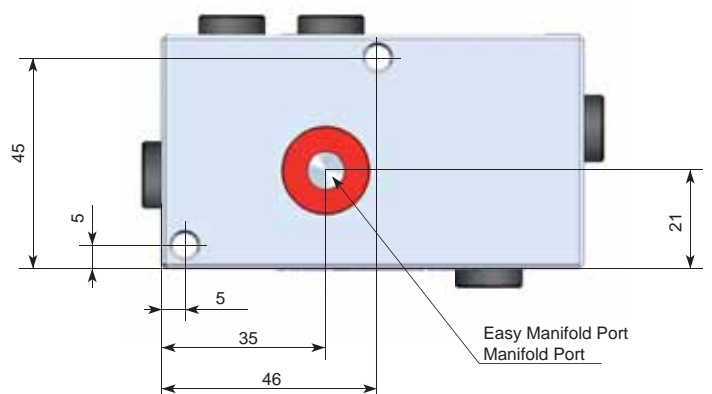
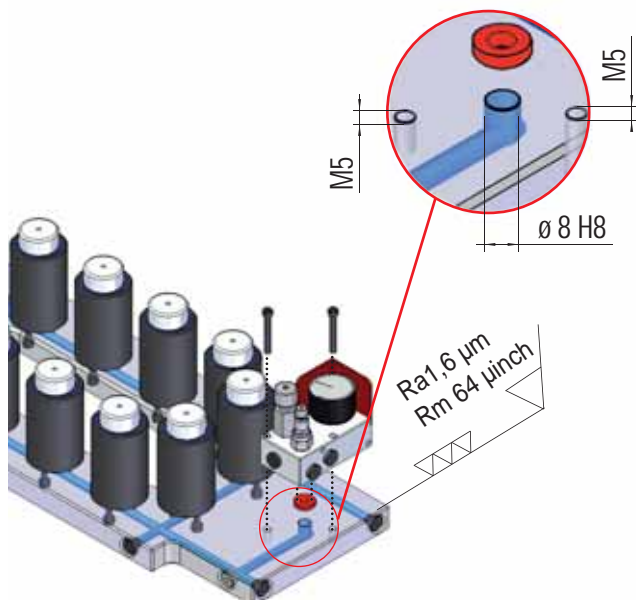
ORDER

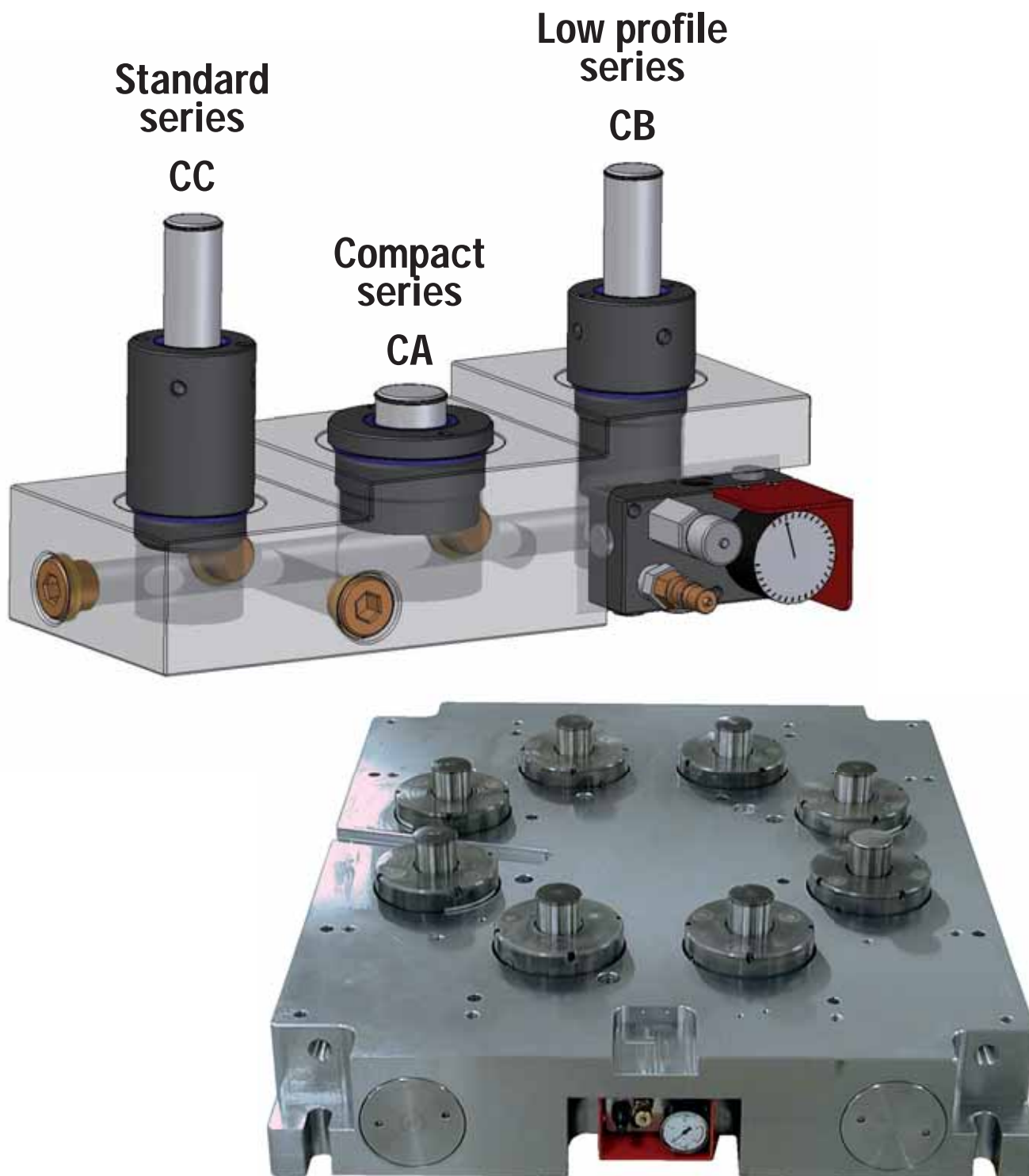
- I** Codice cilindro standard + EN : quantità+codice (es. 8 ML 1800-50B-EN)
- GB** Standard cylinder part no. + EN: quantity+part no. (ex. 8 ML 1800-50B-EN)
- D** Artikel-Nr. Standardzylinder + EN: Stückzahl+Artikel-Nr. (z. B. 8 ML 1800-50B-EN)
- F** Code cylindre standard + EN: quantité+code (ex. 8 ML 1800-50B-EN)
- E** Código cilindro estándar + EN: cantidad+código (ej. 8 ML 1800-50B-EN)
- P** Código cilindro standard + EN: quantidade+código (ex. 8 ML 1800-50B-EN)

39CPVC - CONTROL PANEL



39MCPA - CONTROL PANEL





SISTEMA MANIFOLD

- Alternativa ai cilindri autonomi collegati
- Minimo incremento di pressione e forza
- Minimo ingombro
- Assenza di tubi e raccordi
- Grandi forze concentrate
- Monitoraggio e modifica della pressione facilitati attraverso il pannello di controllo
- Facilità di montaggio
- Facilità di manutenzione
- Lunga durata

CARATTERISTICHE TECNICHE

- Cilindri con tenuta pistone
- Raschiatore di protezione da contaminanti
- Doppia guida autolubrificata
- Corpo cilindro nitrurato con durezza ~ Hv 700
- Corpo cilindro lappato con rugosità ~ $Ra \leq 0,05 \mu$
- Stelo pistone nitrurato con durezza ~ Hv 700
- Stelo pistone lappato con rugosità ~ $Ra \leq 0,05 \mu$
- Pressione massima di caricamento 110 bar a 20°C
- Pressione minima di caricamento 30 bar a 20°C
- Velocità massima 0,6 m/sec
- Progettati in conformità alla Direttiva PED 97/23 EC

GB MANIFOLD SYSTEM

- Alternative choice to hose system
- Low increase of force and pressure
- Minimal heights
- No hoses and/or fittings
- Highest force in the minimum space
- Easy check and charge of pressure through the panel
- Easy mounting
- Easy maintenance
- Long lasting

D TANK PLATTENSYSTEM

- Alternativ zu Gasdruckfedern in Verbundanordnung
- Sehr geringer Druck- bzw. Kraftanstieg
- Kleine Einbauabmessungen
- Keine Schlauchverbindungen nötig
- Hohe Kräfte auf engstem Raum
- Einfache Überwachung und Druckänderung über Kontrollarmatur
- Leichte Montage
- Einfache Wartung
- Lange Lebensdauer

F SYSTÈME MULTIPLE

- Solution alternative au système interconnecté par tuyaux
- Faible augmentation de la force et de la pression
- Hauteurs minimales
- Utilisation d'aucun tuyau ni adaptateur
- Force maximale pour un encombrement minimum
- Vérification aisée de la pression et rechargement facilité grâce au dispositif de gonflage
- Montage facile
- Maintenance facilitée
- Longévité optimale

E SISTEMA MANIFOLD

- Alternativa a los cilindros autónomos conectados
- Incremento mínimo de presión y fuerza
- Dimensiones mínimas
- Ausencia de tubos y conectores
- Concentración de grandes fuerzas
- Monitorización y modificación de la presión asignada a través del panel de control
- Facilidad de montaje
- Facilidad de mantenimiento
- Larga vida útil

P SISTEMA MANIFOLD

- Alternativa aos cilindros autónomos interligados
- Incremento mínimo de pressão e força
- Mínimo espaço
- Ausência de tubos e "racords"
- Grande força concentrada
- Monitorização e modificação da pressão facilitada através do painel de controlo
- De fácil montagem
- De fácil manutenção
- Longa duração

TECHNICAL FEATURES

- Piston sealed cylinders
- Rod wiper against contaminants
- Double self lubricating guiding elements
- Nitred body with hardness of ~ Hv 700
- Lapped body with roughness of ~ Ra ≤ 0,05 μ
- Nitred piston rod with hardness of ~ Hv 700
- Lapped piston rod with roughness of ~ Ra ≤ 0,05 μ
- Maximum charging pressure 110 bar a 20°C
- Minimum charging pressure 30 bar a 20°C
- Maximum speed 0,6 m/sec
- In compliance with PED 97/23 EC Directive

TECHNISCHE DATEN

- Gasdruckfedern mit Kolbendichtung
- Schmutzabstreifer
- Doppelte selbstschmierende Führung
- Nitrierter Zylinderkörper, Härte ~ Hv 700
- Geläppter Zylinderkörper, Rauigkeit ~ Ra ≤ 0,05 μ
- Kolbenstange nitriert, Härte ~ Hv 700
- Geläppte Kolbenstange, Rauigkeit ~ Ra ≤ 0,05 μ
- Max. Fülldruck 110 bar bei 20 °C
- Min. Fülldruck 30 bar bei 20 °C
- Max. Kolbengeschwindigkeit 0,6 m/s
- Konstruktion nach Druckgeräterichtlinie PED 97/23 EC

CARACTÉRISTIQUES TECHNIQUES

- Vérins avec joint de piston
- Dévêtisseur protégeant de la poussière et de tous contaminants
- Doubles éléments de guidage auto-lubrifiants
- Corps trempé à ~Hv 700
- Corps rodé avec rugosité de ~Ra ≤ 0,05μ
- Piston nituré, dureté de ~Hv 700
- Piston rodé avec rugosité de ~Ra ≤ 0,05μ
- Pression de charge maximale 110 bar à 20°C
- Pression de charge minimale 30 bar à 20°C
- Vitesse maximale 0.6 m/sec conformément à la directive PED97/23

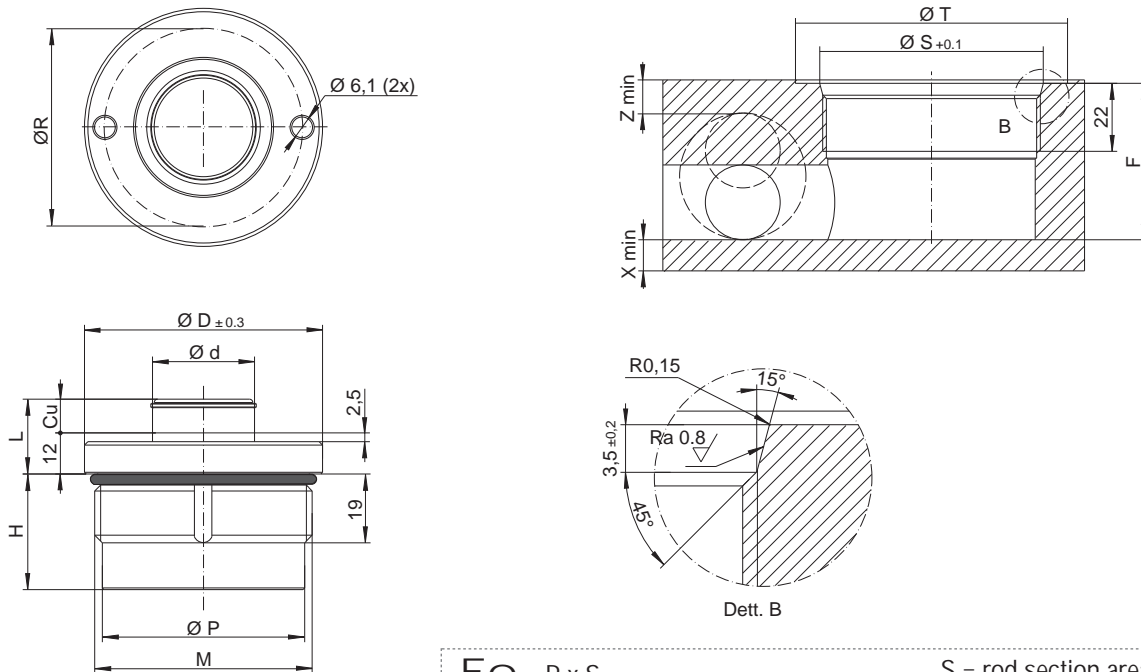
CARACTERÍSTICAS TÉCNICAS

- Cilindros con garnición en el pistón
- Escudo protector de agentes externos contaminantes
- Doble guía autolubrificada
- Cuerpo del cilindro nitruado con dureza ~ Hv 700
- Cuerpo del cilindro lapeado con rugosidad ~ Ra ≤ 0,05μ
- Vástago nitruado con dureza ~ Hv 700
- Vástago lapeado con rugosidad ~ Ra ≤ 0,05μ
- Presión máxima de carga 110 bar a 20°C
- Presión mínima de carga 30 bar a 20°C
- Velocidad máxima 0,6m/s
- Diseñados de acuerdo a la Directiva PED 97/23 EC

CARACTERÍSTICAS TÉCNICAS

- Cilindros com estanquidade do êmbolo
- Raspador para protecção contra contaminantes
- Duplo guiamento autolubrificado
- Corpo do cilindro nitruado com dureza - Hv 700
- Corpo do cilindro polido com rugosidade -Ra ≤ 0,05 μ
- Êmbolo nitruado com dureza - Hv 700
- Êmbolo polido com rugosidade -Ra ≤ 0,05 μ
- Pressão máxima de carregamento 110 bar a 20°C
- Pressão mínima de carregamento 30 bar a 20°C
- Velocidade máxima 0,6 m/s
- Projectados em conformidade com a Directiva PED 97/23 CE

Serie Compatta - Compact Series - Flachbauweise -
Compact Série - Serie compacta - Série comptacta



$$F_0 = P \times S$$

$$S \text{ (CA.2500)} = 22,9 \text{ cm}^2$$

S = rod section area

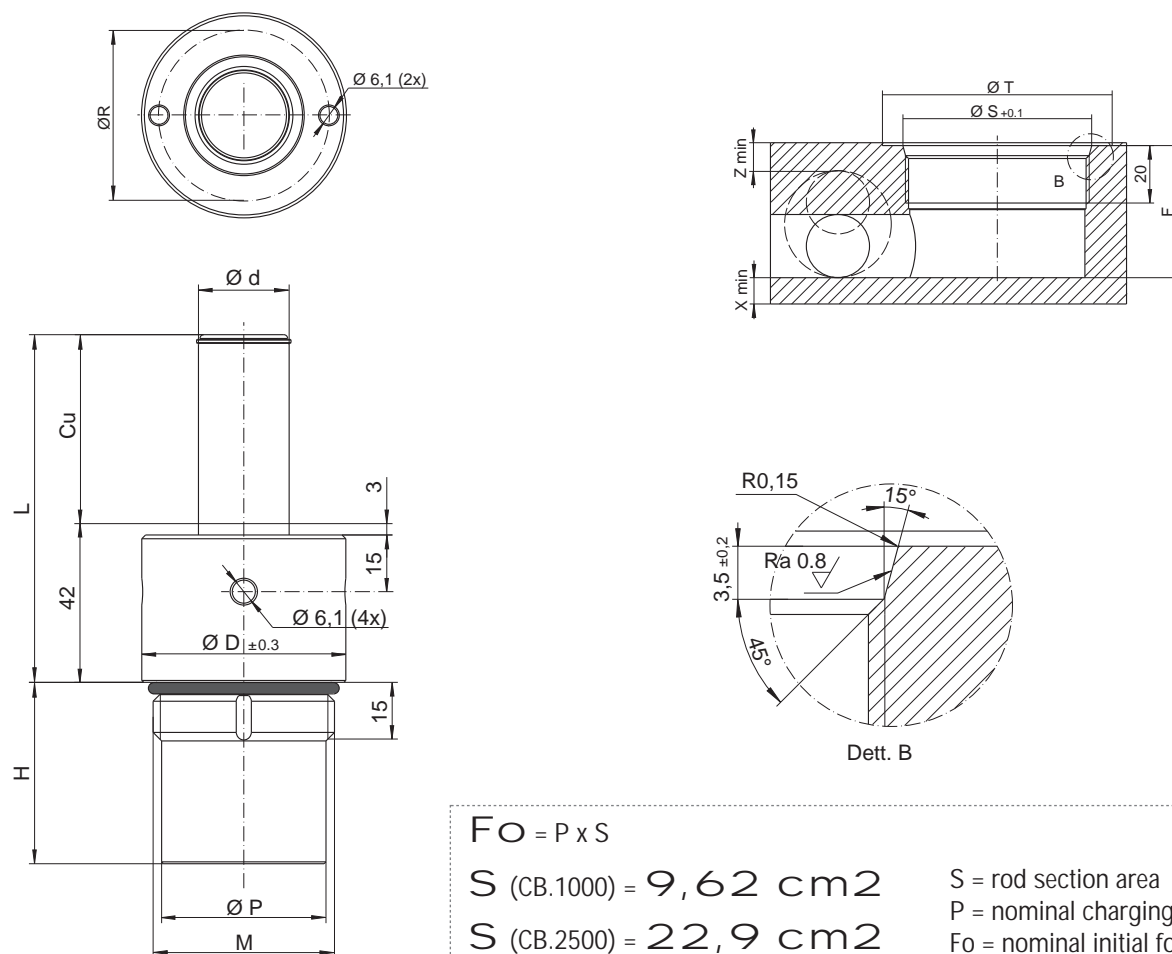
P = nominal charging pressure

F₀ = nominal initial force

Technical specifications

Code	F ₀ daN	M	Cu mm	L mm	H mm	ØD mm	Ød mm	ØP mm	ØR mm	ØT mm	ØS mm	F mm	Xmin mm	Zmin mm
CA 2500 - 006 - A	2520	M 64 x 2	06	18	30	70	30	59,5	58	80	65,9	33	10	8
CA 2500 - 010 - A	2520	M 64 x 2	10	22	34	70	30	59,5	58	80	65,9	37	10	8
CA 2500 - 015 - A	2520	M 64 x 2	15	27	39	70	30	59,5	58	80	65,9	42	10	8
CA 2500 - 020 - A	2520	M 64 x 2	20	32	44	70	30	59,5	58	80	65,9	47	10	8

Serie Ridotta - Low Profile Series - Niedrige Bauhöhe -
Série réduite - Serie reducida - Série reduzida

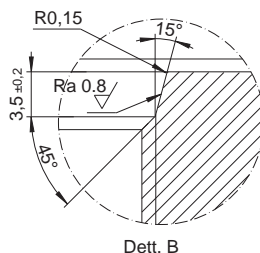
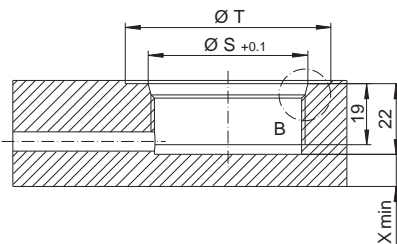
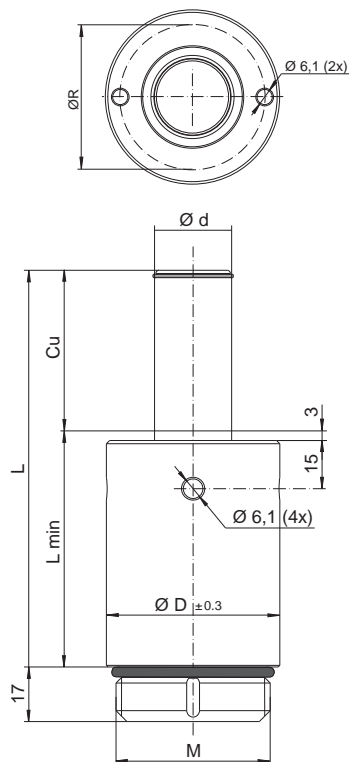


Technical specifications

Code	Fo daN	M -	Cu mm	L mm	H mm	ØD mm	Ød mm	ØP mm	ØR mm	ØT mm	ØS mm	F mm	Xmin mm	Zmin mm
CB 1000 - 025 - A	1060	M 48 x 2	25	67	23	54	24	43,5	44	64	49,9	26	10	8
CB 1000 - 038 - A	1060	M 48 x 2	38	80	36	54	24	43,5	44	64	49,9	39	10	8
CB 1000 - 050 - A	1060	M 48 x 2	50	92	48	54	24	43,5	44	64	49,9	51	10	8
CB 1000 - 075 - A	1060	M 48 x 2	75	117	73	54	24	43,5	44	64	49,9	76	10	8
CB 1000 - 100 - A	1060	M 48 x 2	100	142	98	54	24	43,5	44	64	49,9	101	10	8
CB 1000 - 150 - A	1060	M 48 x 2	150	192	148	54	24	43,5	44	64	49,9	151	10	8
CB 2500 - 025 - A	2520	M 64 x 2	25	67	23	70	30	59,5	58	80	65,9	26	10	8
CB 2500 - 038 - A	2520	M 64 x 2	38	80	36	70	30	59,5	58	80	65,9	39	10	8
CB 2500 - 050 - A	2520	M 64 x 2	50	92	48	70	30	59,5	58	80	65,9	51	10	8
CB 2500 - 075 - A	2520	M 64 x 2	75	117	73	70	30	59,5	58	80	65,9	76	10	8
CB 2500 - 100 - A	2520	M 64 x 2	100	142	98	70	30	59,5	58	80	65,9	101	10	8
CB 2500 - 150 - A	2520	M 64 x 2	150	192	148	70	30	59,5	58	80	65,9	151	10	8

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Serie Standard - Standard Series - Standard -
Série Standard - Serie estándar - Série standard



$$F_o = P \times S$$

$$S \text{ (CC.0500)} = 4,90 \text{ cm}^2$$

$$S \text{ (CC.1000)} = 9,62 \text{ cm}^2$$

$$S \text{ (CC.2500)} = 22,90 \text{ cm}^2$$

S = rod section area

P = nominal charging pressure

F_o = nominal initial force

Technical specifications

Code	F _o daN	M	Cu mm	L mm	L _{min} mm	ØD mm	Ød mm	ØR mm	ØT mm	ØS mm	X min mm
CC 0500 - 012 - A	540	M 36 x 2	12,5	45,5	33	42	12	32	52	37,9	6
CC 0500 - 025 - A	540	M 36 x 2	25	70,5	45,5	42	12	32	52	37,9	6
CC 0500 - 038 - A	540	M 36 x 2	38	96,5	58,5	42	12	32	52	37,9	6
CC 0500 - 050 - A	540	M 36 x 2	50	120,5	70,5	42	12	32	52	37,9	6
CC 0500 - 075 - A	540	M 36 x 2	75	170,5	95,5	42	12	32	52	37,9	6
CC 0500 - 100 - A	540	M 36 x 2	100	220,5	120,5	42	12	32	52	37,9	6
CC 1000 - 025 - A	1060	M 48 x 2	25	73,5	48,5	54	24	44	64	49,9	10
CC 1000 - 038 - A	1060	M 48 x 2	38	99,5	61,5	54	24	44	64	49,9	10
CC 1000 - 050 - A	1060	M 48 x 2	50	123,5	73,5	54	24	44	64	49,9	10
CC 1000 - 075 - A	1060	M 48 x 2	75	173,5	98,5	54	24	44	64	49,9	10
CC 1000 - 100 - A	1060	M 48 x 2	100	223,5	123,5	54	24	44	64	49,9	10
CC 1000 - 150 - A	1060	M 48 x 2	150	323,5	173,5	54	24	44	64	49,9	10
CC 2500 - 025 - A	2520	M 64 x 2	25	73,5	48,5	70	30	58	80	65,9	10
CC 2500 - 038 - A	2520	M 64 x 2	38	99,5	61,5	70	30	58	80	65,9	10
CC 2500 - 050 - A	2520	M 64 x 2	50	123,5	73,5	70	30	58	80	65,9	10
CC 2500 - 075 - A	2520	M 64 x 2	75	173,5	98,5	70	30	58	80	65,9	10
CC 2500 - 100 - A	2520	M 64 x 2	100	223,5	123,5	70	30	58	80	65,9	10
CC 2500 - 150 - A	2520	M 64 x 2	150	323,5	173,5	70	30	58	80	65,9	10



AC

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CYLINDERS WITH CONTROLLED RETURN



I VANTAGGI DEL SISTEMA SPECIAL SPRINGS

- Ritorno degli steli dei cilindri indipendente dal ciclo pressa.
- Velocità di ritorno degli steli dei cilindri indipendente dalla velocità della pressa.
- Velocità di ritorno degli steli dei cilindri costante e regolabile.
- Forza di contrasto dei cilindri costante, crescente o decrescente da inizio a fine ciclo di lavoro.
- Utilizzo parziale della corsa di lavoro dei cilindri sempre possibile senza apportare modifiche al sistema.
- Rapido e continuo smaltimento del calore prodotto durante il ciclo di lavoro dei cilindri grazie alla presenza di scambiatori di calore sull'unità di comando.
- Massima affidabilità del sistema garantita dal fluido idraulico continuamente rigenerato.

GB ADVANTAGES OF THE SPECIAL SPRINGS SYSTEM

- Return stroke of the cylinder rods independent from press cycle.
- Return speed of cylinder rods independent from press speed.
- Return speed of cylinder rods constant and adjustable.
- Cylinder contrasting force: constant, increasing or decreasing from beginning to end of working cycle.
- Partial use of cylinder stroke possible at any time without system modifications.
- Quick and continuous dispersal of the heat produced during the cylinder working cycle, thanks to the presence of heat exchanger on the command unit.
- Maximum system reliability guaranteed by the constant renewal of the hydraulic fluid.

D DIE VORTEILE DES SYSTEMS VON SPECIAL SPRINGS

- Rücklauf der Kolbenstangen unabhängig vom Pressenzklus.
- Rücklaufgeschwindigkeit der Kolbenstangen unabhängig von der Pressengeschwindigkeit.
- Rücklaufgeschwindigkeit der Kolbenstangen konstant und einstellbar.
- Gegenkraft der Zylinder konstant, zunehmend oder abnehmend von Anfang bis Ende des Arbeitszyklus.
- Teilnutzung vom Arbeitshub der Zylinder jederzeit möglich, ohne dass dazu Systemänderungen erforderlich sind.
- Schnelle und kontinuierliche Ableitung der Wärme, die bei der Arbeit der Zylinder entsteht, durch einen Wärmeaustauscher im Hydraulikaggregat.
- Maximale Zuverlässigkeit des Systems, garantiert durch eine kontinuierliche Filtrierung und Temperierung des Hydrauliköls.

F LES AVANTAGES DE SPECIAL SPRINGS SYSTÈME

- Course de retour des pistons indépendante du cycle de la presse.
- Vitesse de remontée des pistons indépendante de la vitesse de la presse.
- Vitesse de remontée des pistons constante et réglable.
- Force d'opposition du vérin : constante, croissante ou décroissante du début à la fin du cycle de travail.
- Utilisation partielle de la course possible à n'importe quel moment sans modification du système.
- Dispersion rapide et continue de la chaleur induite pendant le cycle de travail du vérin grâce à la présence d'un échangeur thermique sur l'unité de commande.
- Fiabilité maximale du système garantie par le renouvellement permanent du fluide hydraulique.

E VENTAJAS DEL SISTEMA SPECIAL SPRINGS

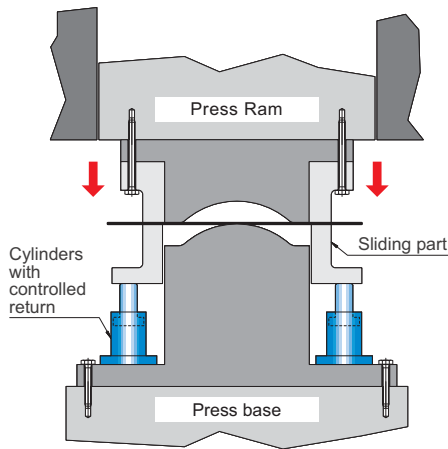
- Retorno del cilindro independiente del ciclo de la prensa.
- Velocidad de retorno del vástago independiente del ciclo de la prensa.
- Velocidad de retorno del vástago constante a regulable.
- Fuerza de contraste del cilindro: constante, aumentable o disminuíble de principio a fin del ciclo de trabajo.
- Posibilidad de utilizar en cualquier momento incluso parcialmente la carrera del vástago sin necesidad de modificar el sistema.
- Veloz y continua dispersión del calor producido durante la operación gracias a la presencia de un intercambiador de calor en la unidad de control.
- Fiabilidad máxima del troquel garantizada por la constante renovación del fluido en el sistema.

P VANTAGENS DO SISTEMA SPECIAL SPRINGS

- Curso de retorno do cilindro independente do ciclo da prensa.
- Velocidade de retorno do êmbolo independente do ciclo da prensa.
- Velocidade de retorno do êmbolo constante ou regulável.
- Força do cilindro: constante ou variável (maior ou menor força) do início ao fim do ciclo de trabalho.
- Possibilidade de se usar em qualquer momento também parcialmente o curso do êmbolo sem ter necessidade de modificar o sistema.
- Rápida e contínua dissipação do calor produzido durante o ciclo de trabalho graças à presença de um permutador de calor na unidade de comando.
- Máxima fiabilidade da ferramenta garantida pela renovação constante do fluido no sistema.

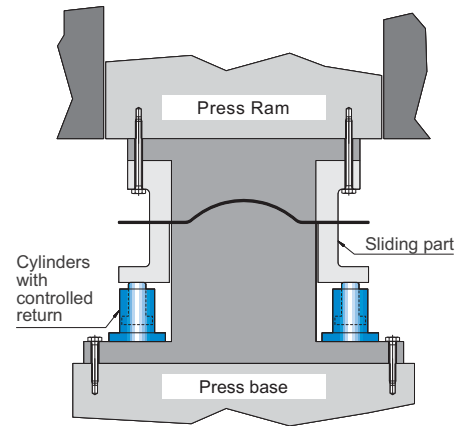
CYLINDERS WITH CONTROLLED RETURN

Practical example



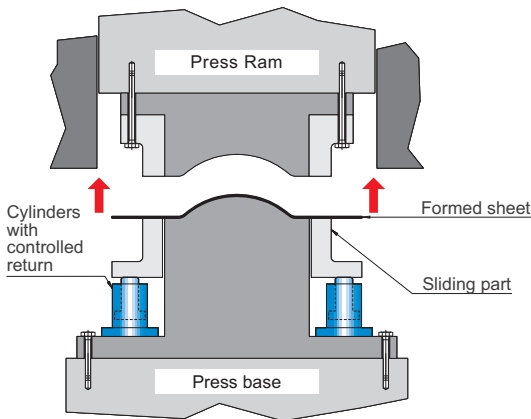
START OF WORKING CYCLE

- the press run is going down;
- the blank holder is opened and the cylinders are extended.



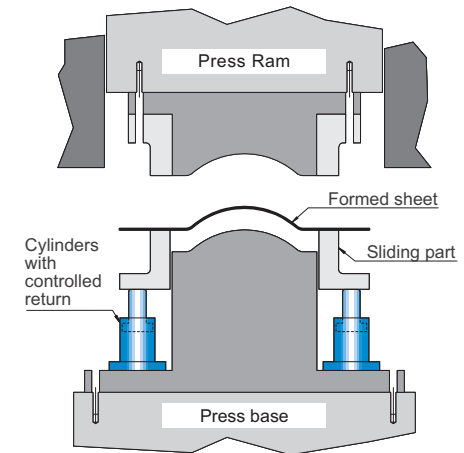
END OF WORKING CYCLE

- the press run is going down;
- the blank holder is closed and the cylinders are compressed.



PRESS SLIDE RETURN WITH CYLINDER RETENTION

- the press run is going up;
- the blank holder remains temporarily closed, with the cylinders still being compressed and blocked.



BLANK HOLDER RETURN WITH CYLINDER EXTENSION AND PRESS AT TDC

- the press run has gone up;
- the blank holder is going up and extracting the workpiece.



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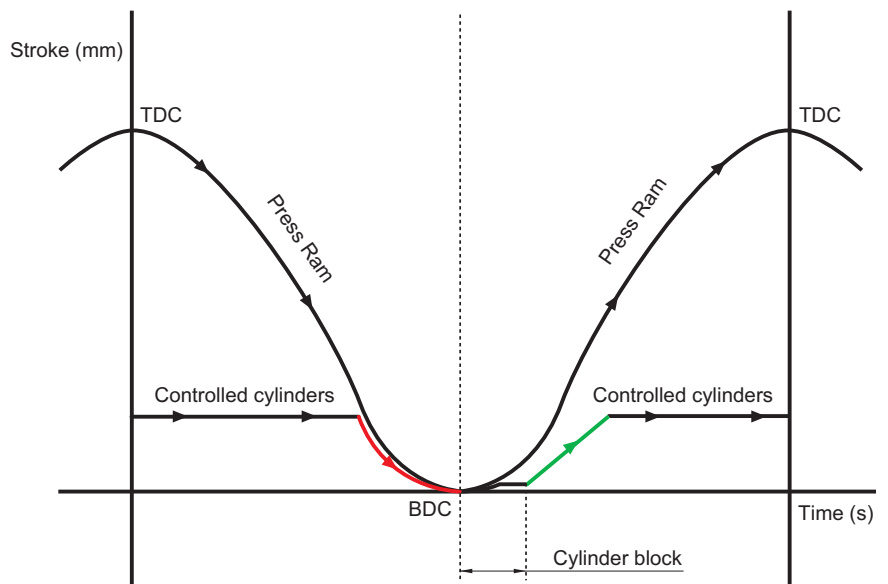
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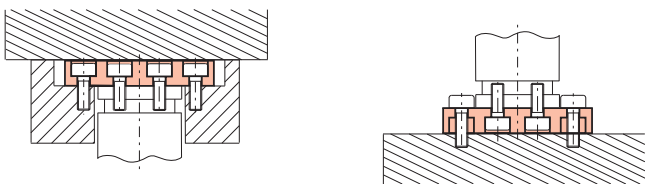
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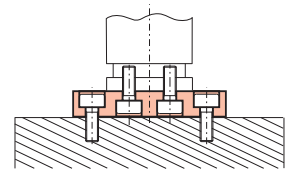
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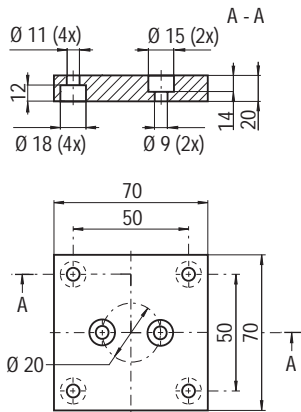
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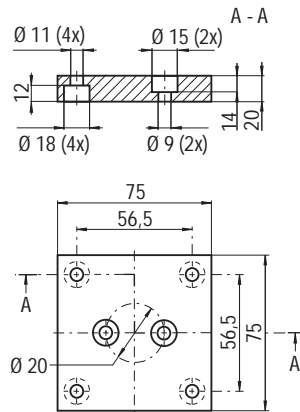
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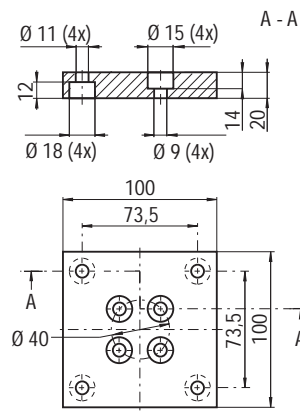
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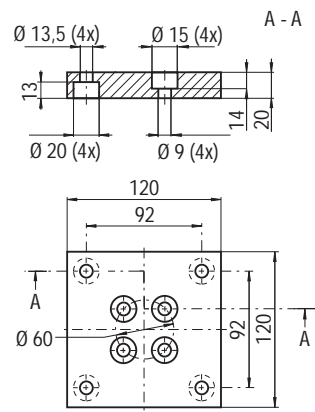
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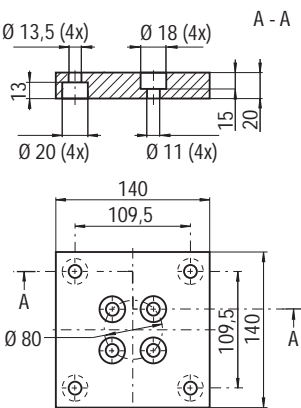
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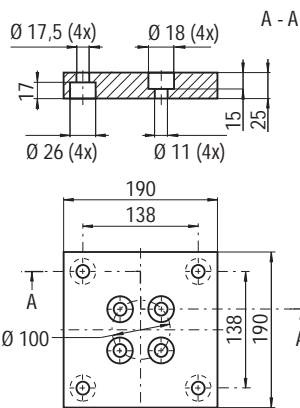
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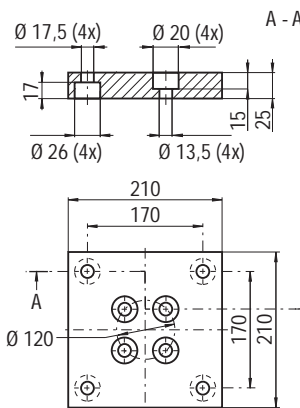
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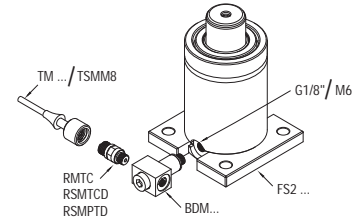
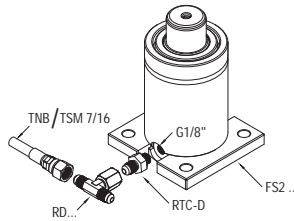
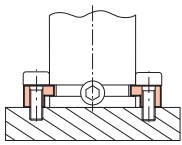


FBA 195



FS 2

Fissaggi - Fixings - Befestigungen - Fixé - Bridas - Fixação



FS2 32

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VDI 3003
CNOMO E24.54815.N

FS2 38

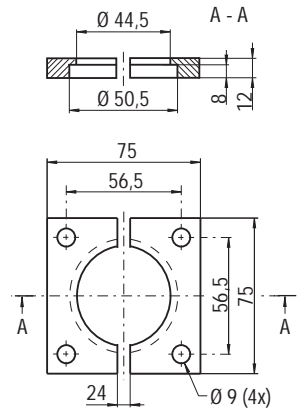
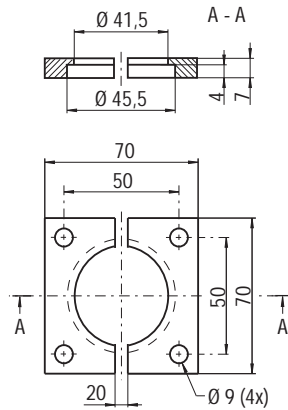
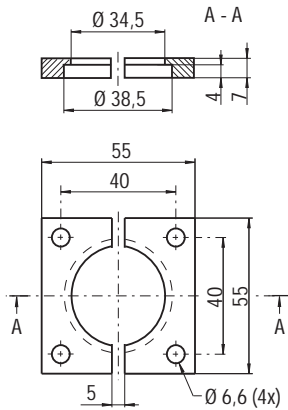
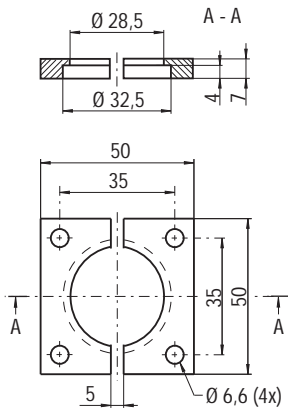
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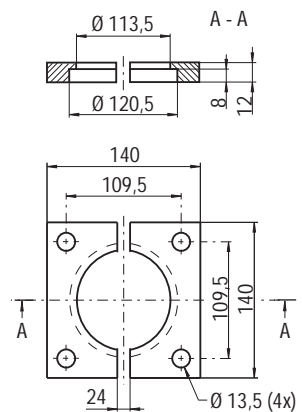
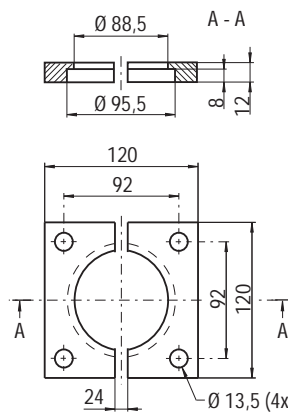
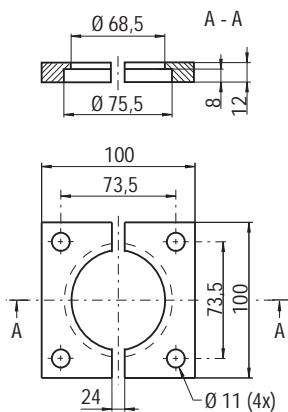
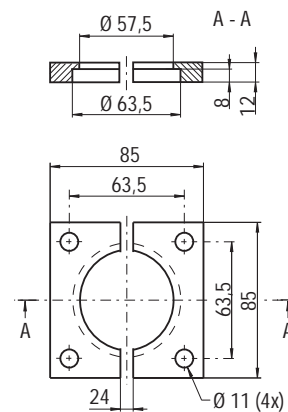
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CNOMO E24.54815.N

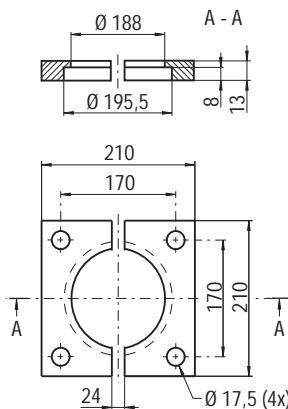
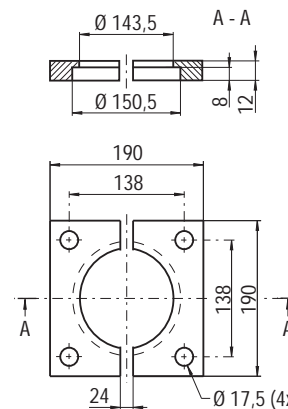


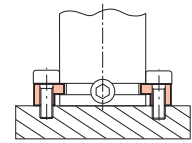
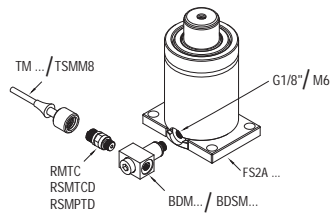
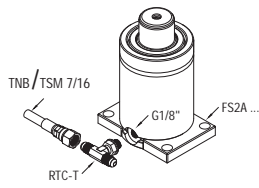
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ISO 11901-2
VDI 3003
CNOMO E24.54815.N

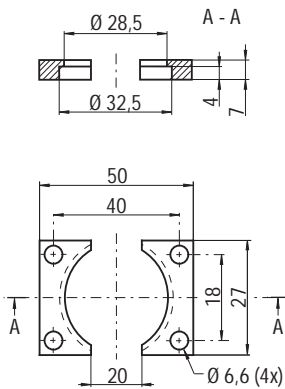
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ISO 11901-2
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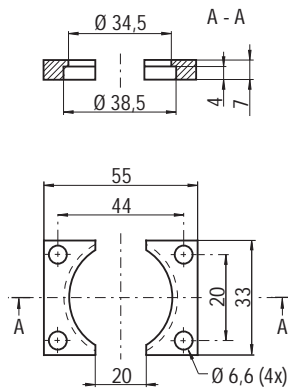




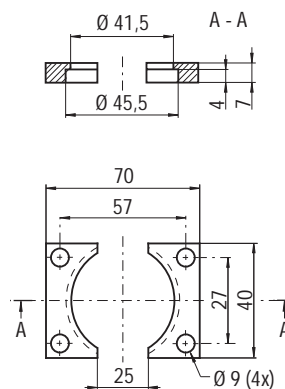
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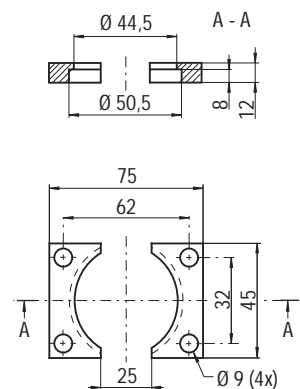
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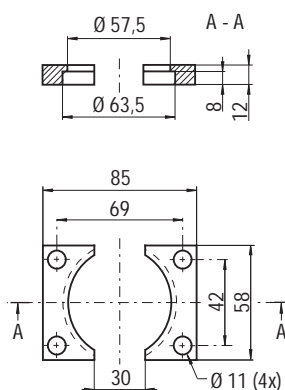
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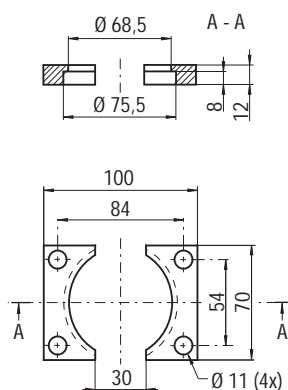
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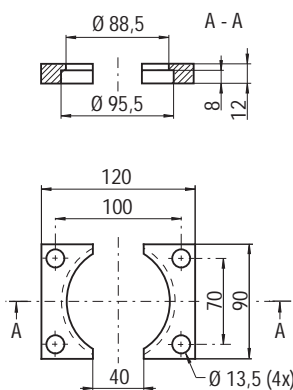
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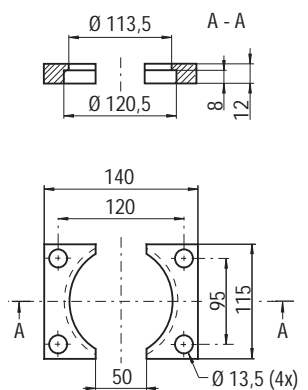
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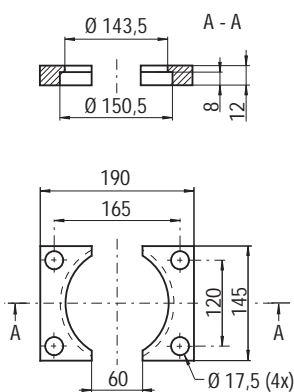
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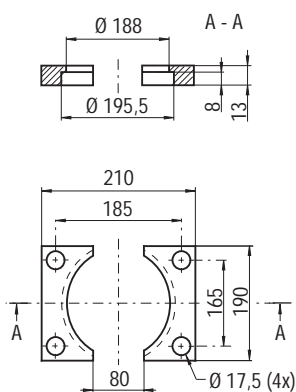
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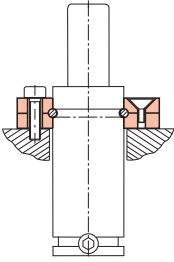


FS2A 150



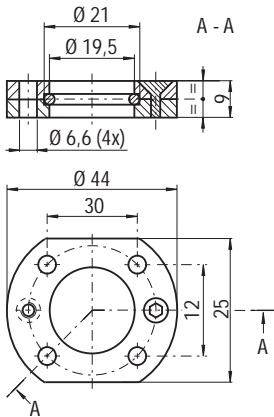
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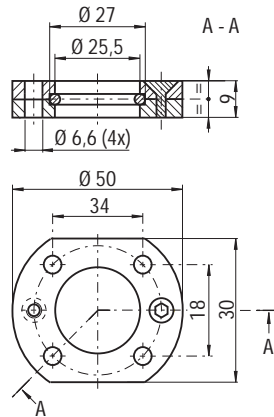
FC 19B

ISO 11901-2
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CNOMO E24.54815.N



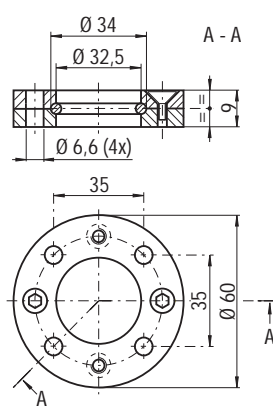
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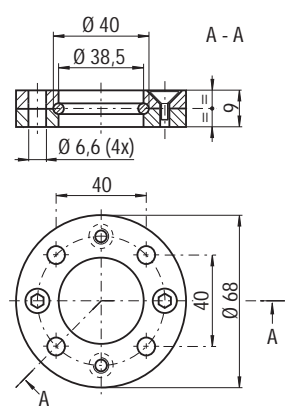
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ISO 11901-2
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CNOMO E24.54815.N



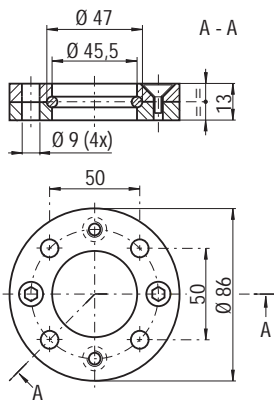
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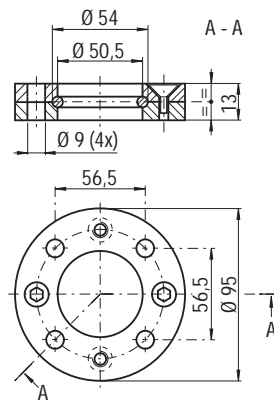
FC 45A

ISO 11901-2
VDI 3003
CNOMO E24.54815.N



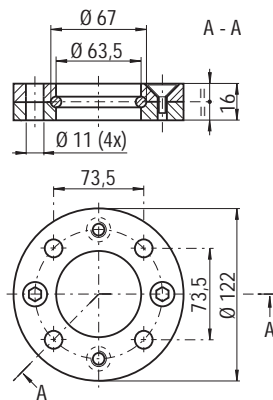
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ISO 11901-2
VDI 3003
CNOMO E24.54815.N



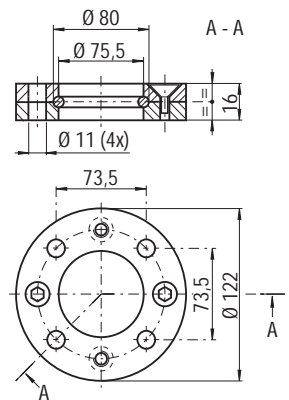
FC 63A

ISO 11901-2
VDI 3003
CNOMO E24.54815.N



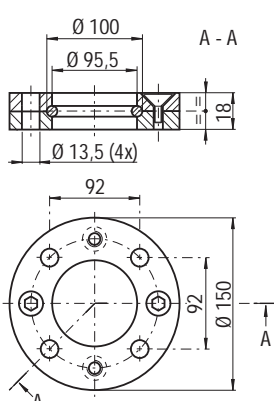
FC 75A

ISO 11901-2
VDI 3003
CNOMO E24.54815.N



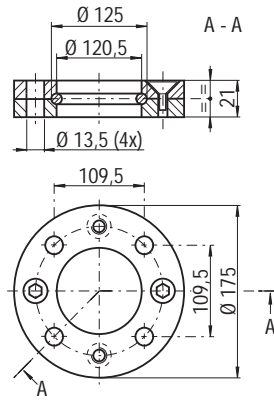
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ISO 11901-2
VDI 3003
CNOMO E24.54815.N



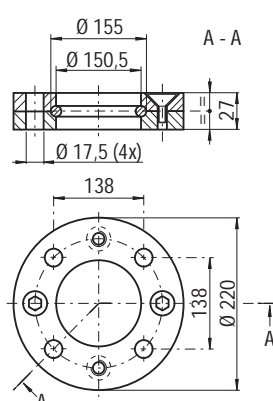
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ISO 11901-2
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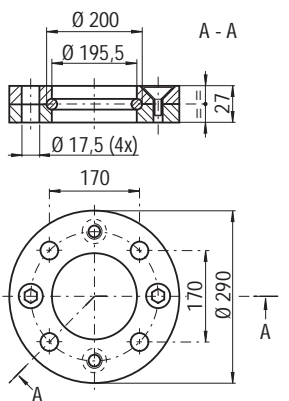
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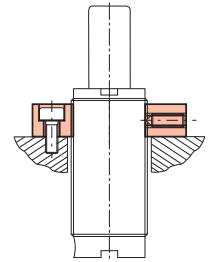
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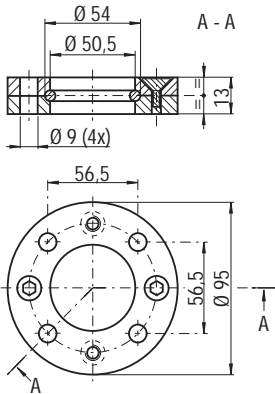
FC 195A

ISO 11901-2
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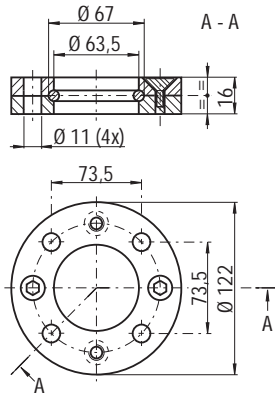




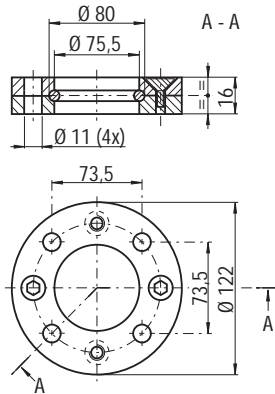
FCB 50



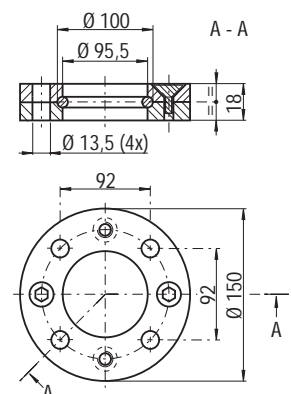
FCB 63



FCB 75

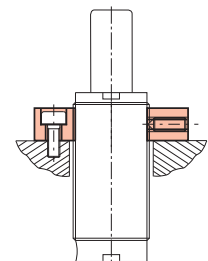


FCB 95

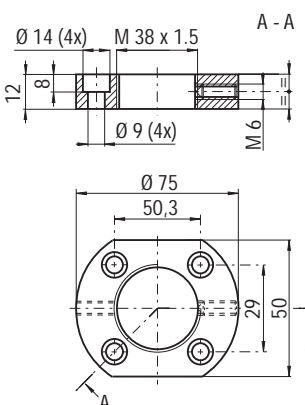


FCA

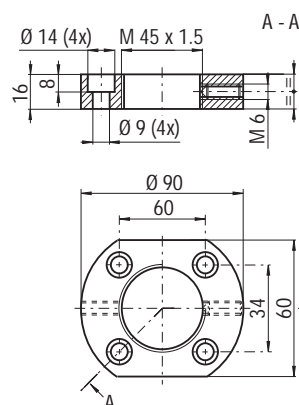
Fissaggi - Fixings - Befestigungen - Fixé - Bidas - Fixação



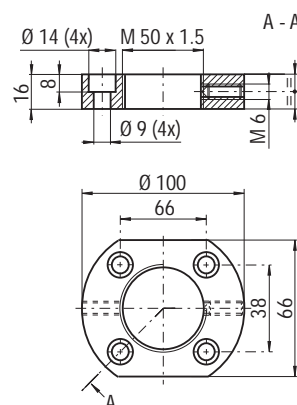
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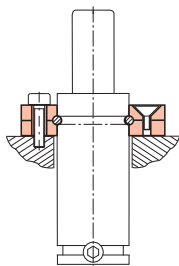


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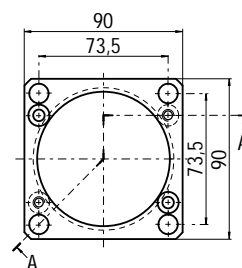
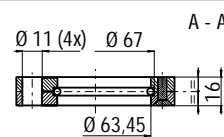
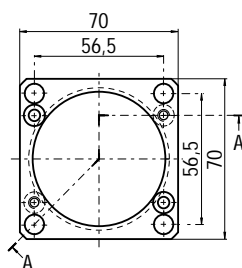
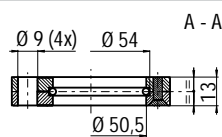
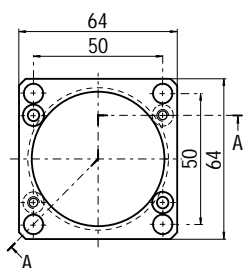
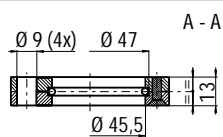
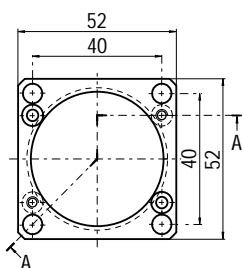
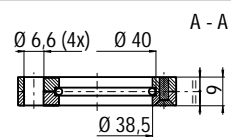


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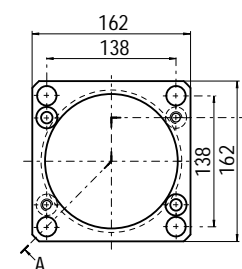
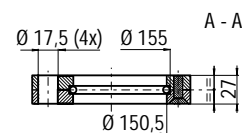
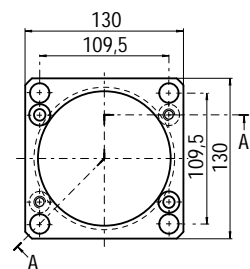
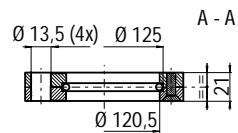
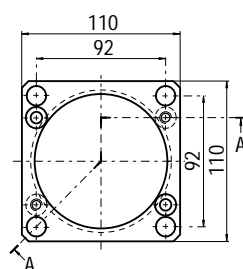
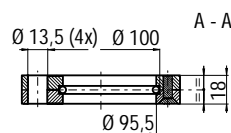
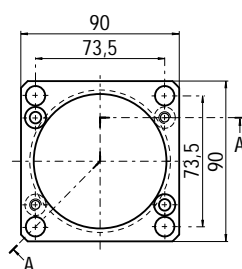
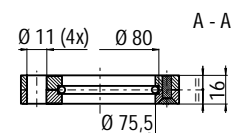




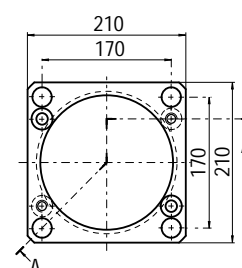
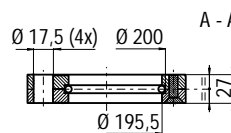
FCQ 38A ISO 11901-2 **FCQ 45A** ISO 11901-2 **FCQ 50A** ISO 11901-2 **FCQ 63A** ISO 11901-2

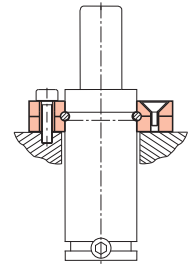


FCQ 75A ISO 11901-2 **FCQ 95A** ISO 11901-2 **FCQ 120A** ISO 11901-2 **FCQ 150A** ISO 11901-2

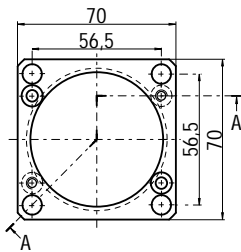
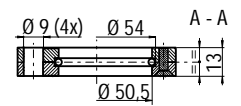


FCQ 195A ISO 11901-2

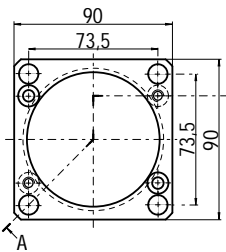
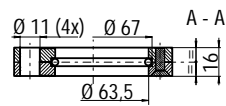




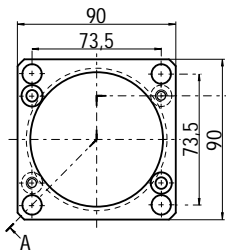
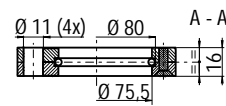
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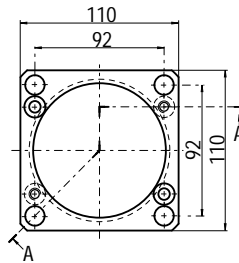
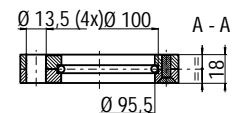
FCQB 63

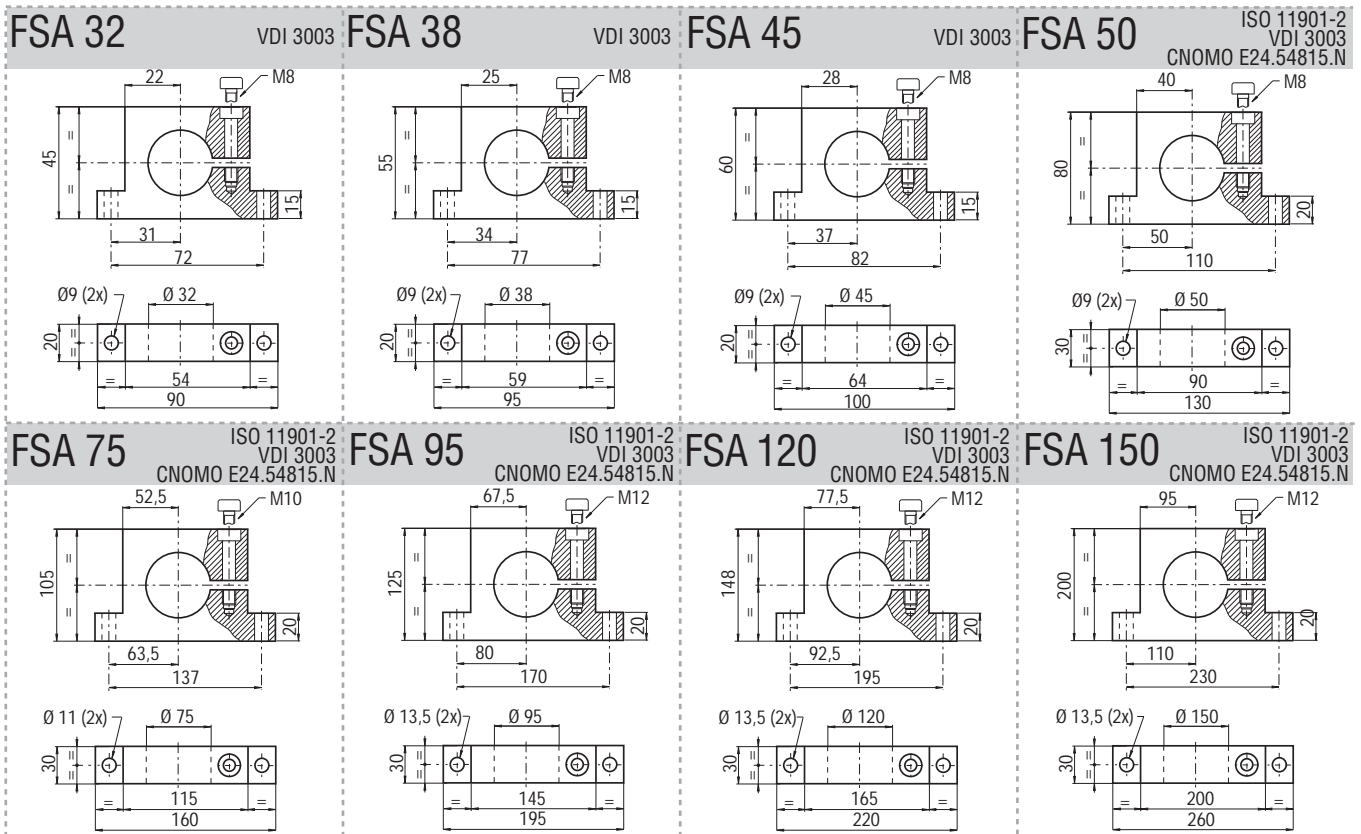
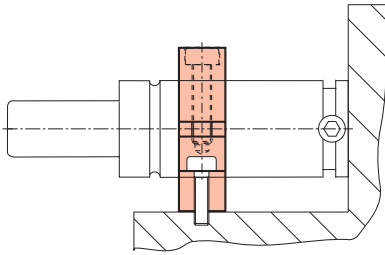


FCQB 75



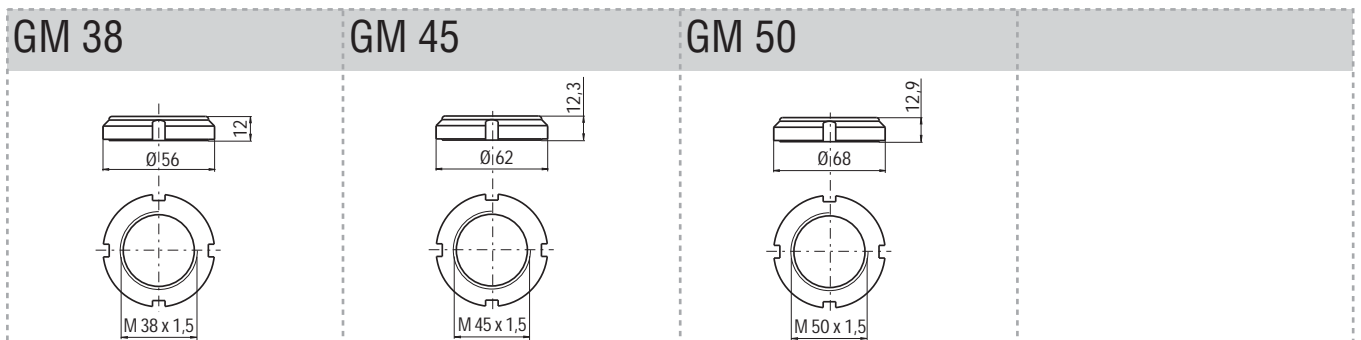
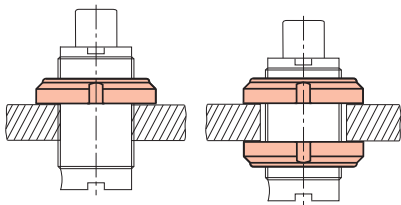
FCQB 95

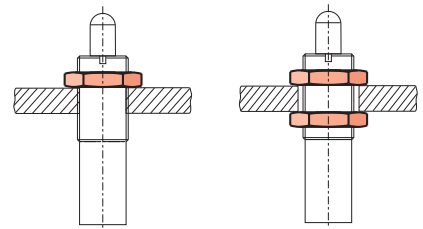




GM

Fissaggi - Fixings - Befestigungen - Fixé - Bidas - Fixação

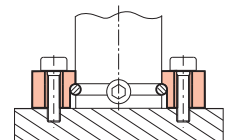




DM 16	DM 24	DI 1"-8

Special Fixings

Fissaggi - Fixings - Befestigungen - Fixé - Bidas - Fixação



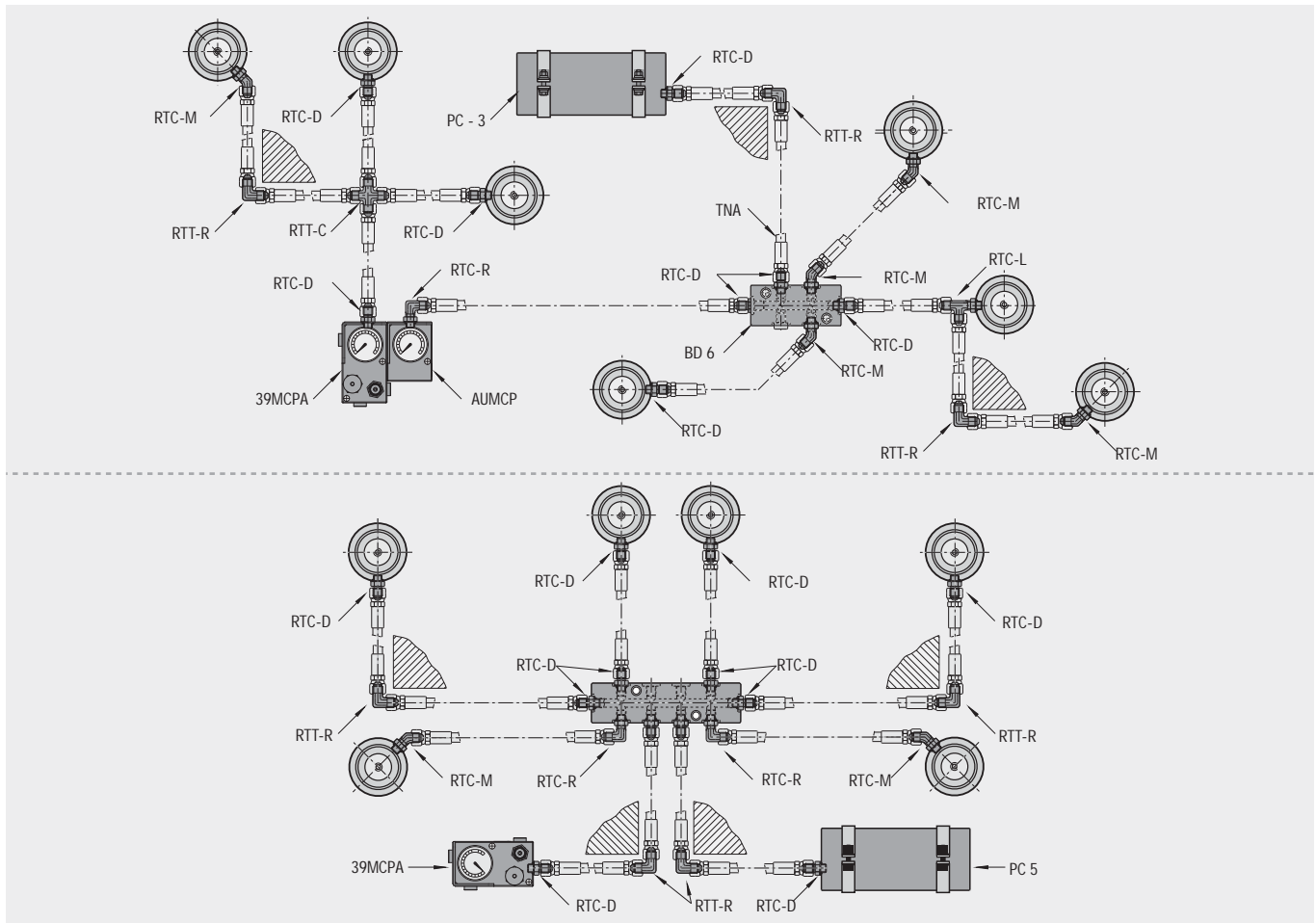
FHR01000



HOSED SYSTEM



Cilindri collegati a sistema - Hosed system - An das system angeschlossene Zylinder -
 Ressorts reliés à un système - Sistemas de cilindros conectados - Cilindros ligados em sistema



VANTAGGI

- Pressione uguale in tutti i cilindri
- Controllo della pressione = controllo della forza
- Aumento/riduzione della pressione = aumento/riduzione della forza attraverso il pannello di controllo anche durante lo stampaggio senza intervento diretto sui cilindri
- Utilizzo di polmoni di compensazione per un ridotto incremento della pressione a fine compressione
- Gestione di impianti e forze diverse nello stesso stampo (uso multipannello MCP+AUMCP)
- Stop di sicurezza con uso pressostato
- Utilizzo tappo di sicurezza con disco di rottura CE
- Flessibilità di collegamento con tubi e raccordi JIC 37°, Minimesse o Micro standard

⚠ I cilindri collegabili a sistema (codice modello + N/NA) sono forniti privi di valvola unidirezionale e con corpo/fondello speciale dove previsto. Per le serie SC/H/HR/LI/LS è possibile trasformare i cilindri autonomi in cilindri collegabili a sistema semplicemente rimuovendo i dispositivi di tenuta dal foro di caricamento. Scaricare completamente la pressione prima di questa operazione. Qualora si rendesse necessario rimuovere uno qualsiasi dei componenti installati, scaricare completamente la pressione attraverso il pannello

GB BENEFITS

- Same pressure in all cylinders
- Pressure control = force control
- Increase/decrease of pressure = increase/decrease of force by control panel even during stamping operation without direct acting to the cylinders.
- Lower pressure increase by using compensation tank
- Possibility to manage pressure and forces different in the same tool by using the multipanel MCP+AUMCP.
- Safety stop of production by using pressure switch.
- Use of the safety plug with rupture disc CE
- Flexibility by using hose and connection JIC 37°, minimesse or micro hoses and couplings and many useful accessories.

⚠ The hosed system cylinders (model code + N/NA) are supplied without charging valve and with special body/end plate when specified. However SC/H/HR/LI/LS series can be converted from self-contained to hose system simply removing the charging valve. Assure all pressure is exhausted and rod fully retracted into the body before starting this operation. In case would be necessary to remove any of the installed components, assure all pressure is exhausted by acting through the control panel.

D VORTEILE

- Identischer Druck in allen Zylindern
- Druckkontrolle = Kraftkontrolle
- Steigerung/Minderung des Drucks = Erhöhung/Verringerung der Kraft über die Steuerung, auch während der Formung ohne direkten Eingriff an den Zylindern
- Einsatz von Ausgleichbehältern zur Reduzierung von Druckerhöhungen nach dem Drucktank
- Verwaltung verschiedenartiger Anlagen und Leistungen desselben Formprozesses über die Multisteuerung MCP+AUMCP
- Sicherheitsstopp per Druckwächter
- Verwendung eines Sicherheitsverschlusses mit Berstscheibe (CE-Kennzeichnung)
- Flexibilität bei der Verbindung mit Rohren und Anschlüssen JIC 37°, Minimes oder Micro Standard Komponenten.

⚠ Zylinder für den Systemanschluss (Modellcode + N/NA) werden ohne Einwegventile und, sofern vorgesehen, mit speziellem Gehäuse/Boden geliefert. Für die Serien SC/H/HR/LI/LS können die autonom arbeitenden Zylinder in Zylinder mit Systemanschluss abgeändert werden, indem die Dichtungsrichtungen an der Luftzufuhröffnung entfernt werden. Lassen Sie die Druckluft vor diesem Arbeitsschritt komplett ab. Falls es sich als notwendig erweisen sollte, einen der installierten Komponenten zu entfernen, muss vorher die Druckluft mittels der Steuerung vollständig abgelassen werden.

F AVANTAGES

- La même pression dans tous les ressorts
- Contrôle de la pression = contrôle de la force
- Augmentation/réduction de la pression = augmentation/réduction de la force par l'intermédiaire du panneau de contrôle, même durant le moulage, sans aucune intervention directe sur les ressorts
- Utilisation de réservoirs de compensation produisant une petite augmentation de la pression à la fin de la compression
- Gestion d'installations et de forces différentes sur le même outil (utilisation multi-panneaux MCP + AUMCP)
- Arrêt de sécurité à l'aide d'un pressostat
- Utilisation d'un bouchon de sécurité avec disque de rupture CE
- Souplesse du raccordement à l'aide de tubes et de raccords JIC 37°, Minimes ou micro standard

⚠ Les ressorts pouvant être reliés à un système (référence modèle + N/NA) sont livrés sans la vanne unidirectionnelle et avec corps/fond spécial si prévu. Pour les séries SC/H/HR/LI/LS, il est possible de transformer les ressorts autonomes en cylindres pouvant être reliés à un système en ôtant simplement les dispositifs d'étanchéité du trou de chargement. Décharger complètement la pression avant d'effectuer cette opération. S'il est nécessaire de démonter un des composants installés, décharger complètement la pression par l'intermédiaire du panneau de contrôle.

E VENTAJAS

- La misma presión en todos los cilindros
- Control de la presión = control de la fuerza
- Aumento/reducción de la presión = aumento/reducción de la fuerza mediante el panel de control incluso en operaciones de estampación sin actuación directa sobre los cilindros
- Pueden emplearse pulmones de compensación para reducir el aumento de la presión al final de la compresión
- Gestión de equipos y fuerzas distintas sobre el mismo molde (uso multipanel MCP+AUMCP)
- Parada de emergencia con presostato
- Tapón de seguridad con disco de ruptura CE
- Flexibilidad de conexión con tubos y acoplamientos JIC 37°, Minimes o micro standard

⚠ Los cilindros para su conexión en sistema (código modelo + N/NA) se sirven sin válvula unidireccional y con cuerpo/base especiales en los casos en que se requieran. En las series SC/H/HR/LI/LS, los cilindros autónomos pueden transformarse en cilindros para su conexión en sistema con sólo quitar los dispositivos de estanqueidad del orificio de carga. Antes de realizar esta operación, vaciar completamente la presión. Si fuera necesario quitar alguno de los componentes instalados, vaciar completamente la presión mediante el panel de control.

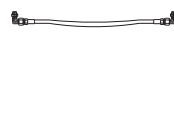
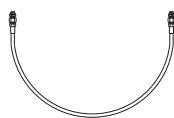
P VANTAGENS

- Pressão igual em todos os cilindros
- Controlo da pressão = controlo da força
- Aumento/redução da pressão = aumento/redução da força através do painel de controlo também durante a estampagem sem intervenção directa sobre os cilindros
- Utilização dos tanques de compensação para redução do aumento da pressão no final da compressão
- Gestão de instalações e de várias forças na mesma Ferramenta (uso do multi-painel MCP+AUMCP)
- Stop de segurança com utilização do pressostato
- Utilização de Bujão de segurança com disco de rotura CE
- Flexibilidade de ligação com tubos e ligações JIC 37°, Minimes ou micro standard

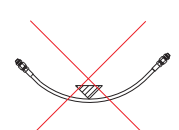
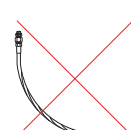
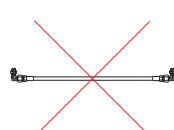
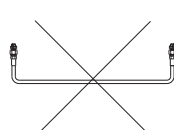
⚠ Os cilindros ligáveis em sistema (código do modelo + N/NA) são fornecidos sem válvula unidireccional e com corpo/extremidade especial. Para a série SC/H/HR/LI/LS, é possível transformar os cilindros autónomos em cilindros ligáveis em sistema, bastando remover os dispositivos de retenção do orifício de carga. Descarregar completamente a pressão antes desta operação. No caso de ser necessário remover um dos componentes instalados, descarregar completamente a pressão através do painel de controlo.

Criteria per la corretta installazione dei tubi
Criteria for the correct installation of hoses
Kriterien zur richtigen Installation des Schlauchs
Critères pour l'installation correcte des tuyaux
Criterios para instalar correctamente los tubos
Critérios para a instalação correcta de tubos

Corretto
Right
Richtig
Correct
Correcto
Correcto



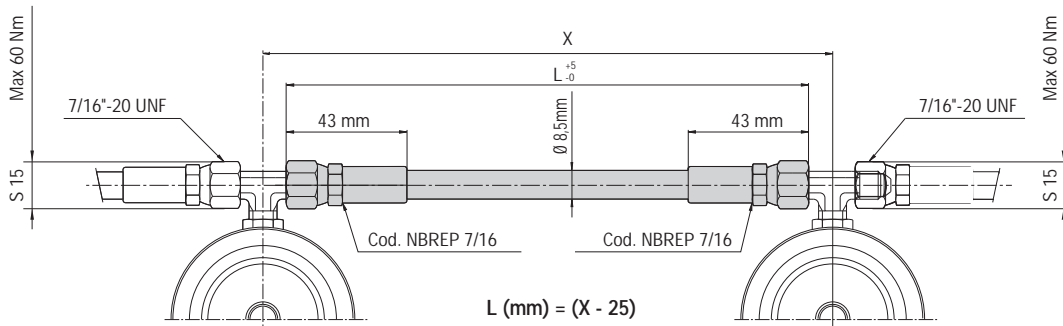
Errato
Wrong
Falsch
Faux
Errado
Errado



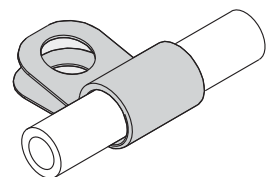
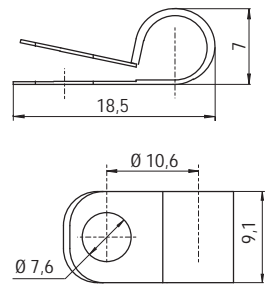
JIC 37° - HOSE Ø 8,5 mm



new code: TNB 7/16...



new code: 36FF09A



All dimensions in mm.



Lunghezze standard (mm) inclusive di n.2 raccordi NBREP 7/16
Standard lengths available (mm) inclusive of no. 2 connections NBREP 7/16
Standard-Länge (mm) einsch. 2 NBREP 7/16 -Anschlüssen

Longueur standard (mm) comprenant 2 raccords NBREP 7/16
Longitud estándar (mm) con 2 racores incluidos NBREP 7/16
Comprimento standard (mm) incluído nas 2 ligações NBREP 7/16

min. 140 mm upword increase of 5 mm

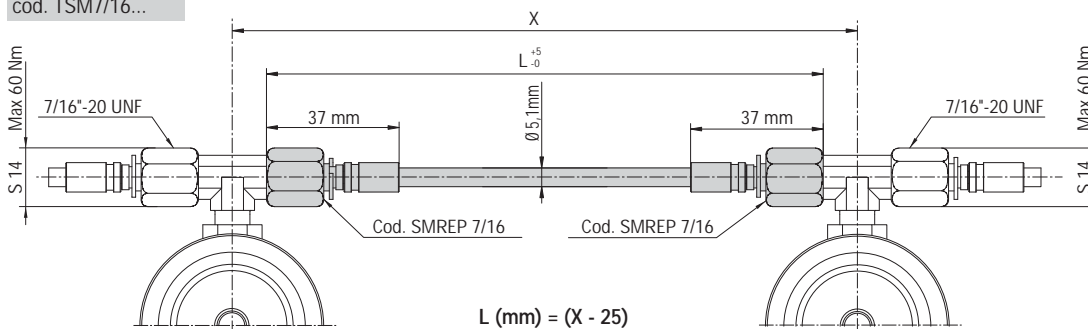
standard **L** =

Example (TNB 7/16 140 mm; TNB 7/16 145 mm; TNB 7/16 150 mm; ...)

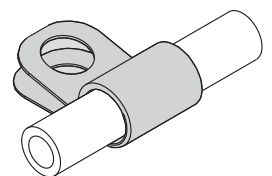
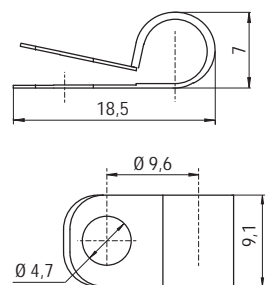
- I** Lunghezza minima: 140mm - Pressione di esercizio: 415 bar max. - Pressione di rottura: 1655 bar - R (raggio di curvatura): 13 mm min. Temperatura di esercizio: -40 ÷ +100 °C.
- GB** Minimum length: 140mm - Operation pressure: 415 bar max. - Burst pressure: 1655 bar - R (bending radius): 13 mm min. Operation temperature: -40 ÷ +100 °C.
- D** Mindestlänge: 140mm - Höchstdruckbetrieb: 415 bar max.- Berst Druck: 1655 bar - R (Krümmungsradien): 13 mm min. Arbeitstemperatur: -40 ÷ +100 °C.
- F** Longueur minimale: 140mm - Pression de fonctionnement: 415 bar max. - Pression de rupture: 1655 bar - R (rayon de courbure): 13 mm min. Température de fonctionnement: -40 ÷ +100 °C.
- E** Longitud mínima: 140mm - Presión de ejercicio: 415 bar max. - Presión de rotura: 1655 bar - R (radio de curvatura): 13 mm min. Temperatura de funcionamiento: -40 ÷ +100 °C.
- P** Comprimento mínimo: 140mm - Pressão de funcionamento: 415 bar max. - Pressão de ruptura: 1655 bar - R (raio de curvatura): 13 mm min. Temperatura de funcionamento: -40 ÷ +100 °C.

JIC 37° - HOSE Ø 5,1 mm

cod. TSM7/16...



new code: 36FF06A



All dimensions in mm.



Lunghezze standard (mm) inclusive di n.2 raccordi SMREP 7/16
Standard lengths available (mm) inclusive of no. 2 connections SMREP 7/16
Standard-Länge (mm) einsch. 2 SMREP 7/16 -Anschlüssen

Longueur standard (mm) comprenant 2 raccords SMREP 7/16
Longitud estándar (mm) con 2 racores incluidos SMREP 7/16
Comprimento standard (mm) incluído nas 2 ligações SMREP 7/16

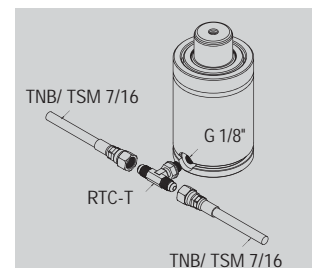
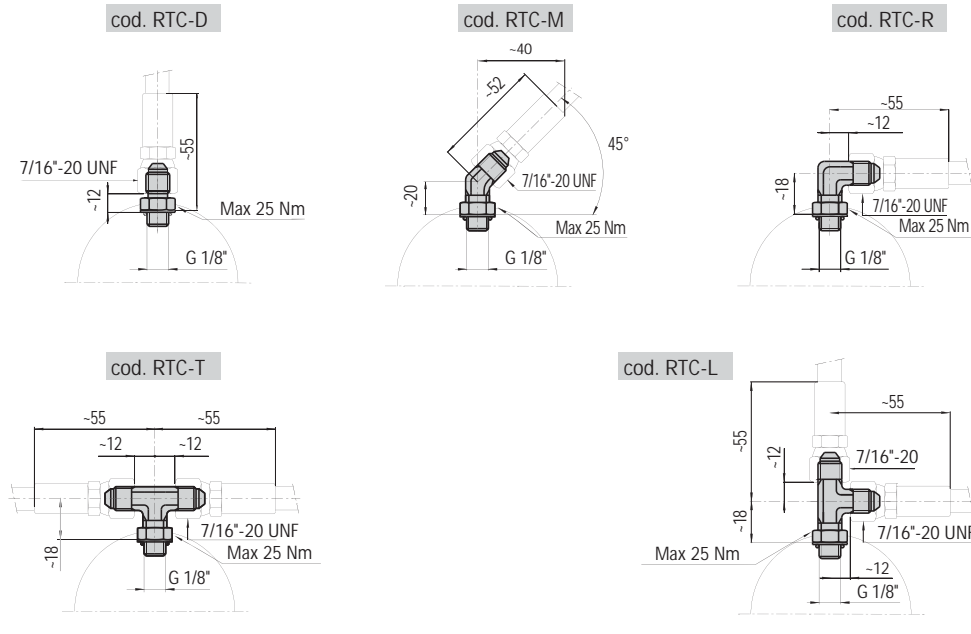
min. 90 mm upword increase of 10 mm

standard **L** =

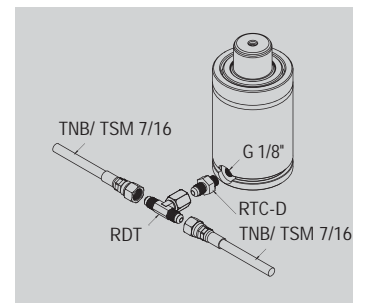
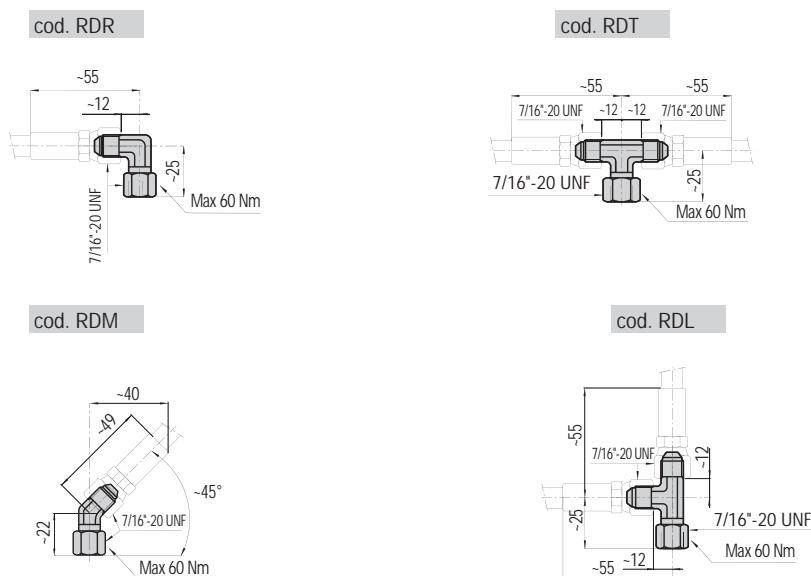
Example (TSM 7/16 90 mm; TSM 7/16 100 mm; TSM 7/16 110 mm; ...)

- I** Lunghezza minima: 90mm - Pressione di esercizio: 630 bar max. - Pressione di rottura: 1890 bar - R (raggio di curvatura): 20 mm min. - Temperatura di esercizio: -40 ÷ +100 °C.
- GB** Minimum length: 90mm - Operation pressure: 630 bar max. - Burst pressure: 1890 bar - R (bending radius): 20 mm min. Operation temperature: -40 ÷ +100 °C.
- D** Mindestlänge: 90mm - Höchstdruckbetrieb: 630 bar max. - Berst Druck: 1890 bar - R (Krümmungsradien): 20 mm min. Arbeitstemperatur: -40 ÷ +100 °C.
- F** Longueur minimale: 90mm - Pression de fonctionnement: 630 bar max. - Pression de rupture: 1890 bar - R (rayon de courbure): 20 mm min. Température de fonctionnement: -40 ÷ +100 °C.
- E** Longitud mínima: 90mm - Presión de ejercicio: 630 bar max. - Presión de rotura: 1890 bar - R (radio de curvatura): 20 mm min. Temperatura de funcionamiento: -40 ÷ +100 °C.
- P** Comprimento mínimo: 90mm - Pressão de funcionamento: 630 bar max. - Pressão de ruptura: 1890 bar - R (raio de curvatura): 20 mm min. Temperatura de funcionamento: -40 ÷ +100 °C.

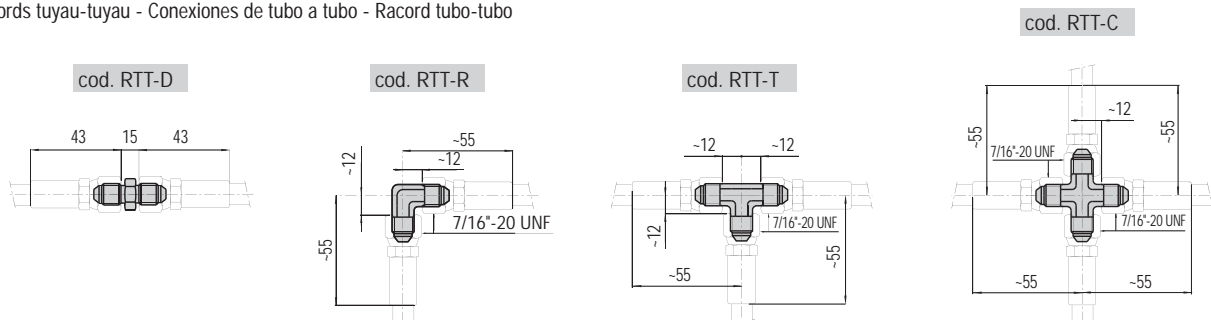
Raccordi tubo-cilindro/pannello - Hose-cylinder/panel connections - Anschlüsse zwischen schlauch und Zylinder/Kontrollarmatur - Raccords tuyau-cylindre/tableau - Conexiones sistema de cilindros/panel - Racord tubo-cilindro/panel



Raccordi di derivazione - Offtake connections - Anschlußstutzen - Raccords de dérivation - Racores - Racord de derivação



Raccordi tubo-tubo - Hose-hose connections - Anschlüsse zwischen Schlauch und Schlauch - Raccords tuyau-tuyau - Conexiones de tubo a tubo - Racord tubo-tubo



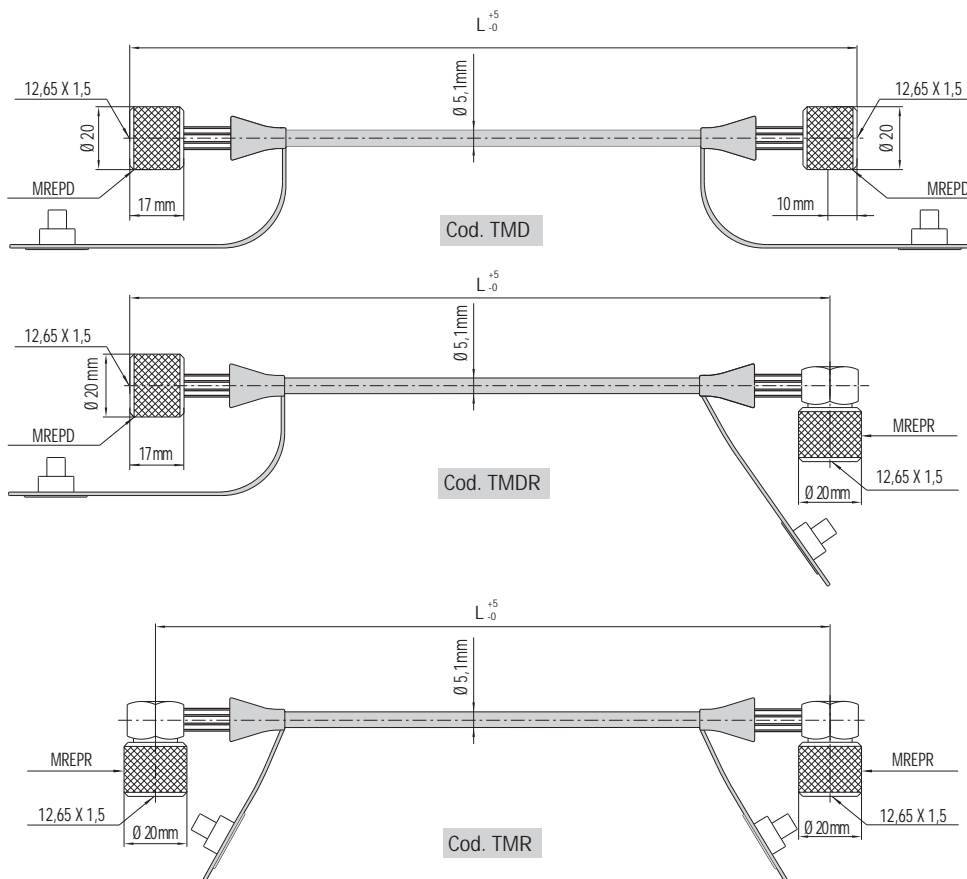
All dimensions in mm.



MINIMESS - HOSE \varnothing 5,1 mm



cod. TM...



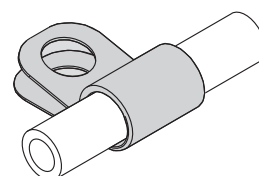
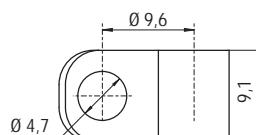
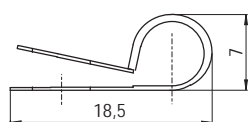
Lunghezze standard (mm) inclusive di n.2 raccordi MREP D / R
Standard lengths available (mm) inclusive of no. 2 connections MREP D / R
Standard-Länge (mm) einsch. 2 MREP D / R-Anschlüssen

Longueur standard (mm) comprenant 2 raccords MREP D / R
Longitud estándar (mm) con 2 racores incluidos MREP D / R
Comprimento standard (mm) incluindo nas 2 ligações MREP D / R

min. 90 mm upword increase of 10 mm
standard $L =$
Example (TM... 090 mm; TM... 100 mm; TM... 110 mm; ...)

- I** Lunghezza minima: 90mm (MREPD), 105mm (MREPR) - Pressione di esercizio: 650 bar max. - Pressione di rottura: 1950 bar - R (raggio di curvatura): 20 mm min. - Temperatura di esercizio: -20 ÷ +100 °C.
- GB** Minimum length: 90mm (MREPD), 105mm (MREPR) - Operation pressure: 650 bar max. - Burst pressure: 1650 bar - R (bending radius): 20 mm min. - Operation temperature: -20 ÷ +100 °C.
- D** Mindestlänge: 90mm (MREPD), 105mm (MREPR) - Höchstdruckbetrieb: 650 bar max. - Berst Druck: 1650 bar - R (Krümmungsradien): 20 mm min. - Arbeitstemperatur: -20 ÷ +100 °C.
- F** Longueur minimale: 90mm (MREPD), 105mm (MREPR) - Pression de fonctionnement: 650 bar max. - Pression de rupture: 1650 bar - R (rayon de courbure): 20 mm min. - Température de fonctionnement: -20 ÷ +100°C.
- E** Longitud mínima: 90mm (MREPD), 105mm (MREPR) - Presión de ejercicio: 650 bar max. - Presión de rotura: 1650 bar - R (radio de curvatura): 20 mm min. - Temperatura de funcionamiento: -20 ÷ +100°C.
- P** Comprimento mínimo: 90mm (MREPD), 105mm (MREPR) - Pressão de funcionamento: 650 bar max. - Pressão de ruptura: 1650 bar - R (raio de curvatura): 20 mm min. - Temperatura de funcionamento: -20 ÷ + 100°C.

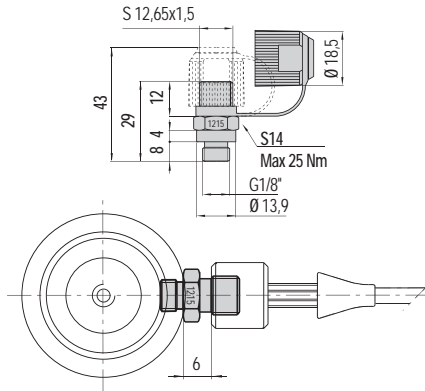
cod. 36FF06A



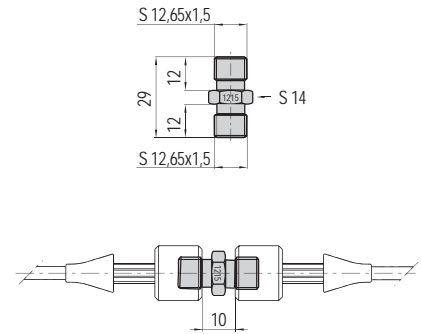
All dimensions in mm.

Con valvola unidirezionale
With one-way valve
Mit Rückschlagventil
Avec valve unidirectionnelle
Con valvula unidireccional
Com válvula unidireccional

cod. RMTC



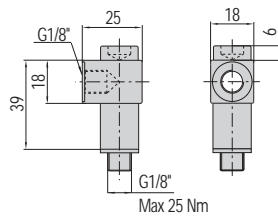
cod. RMTT



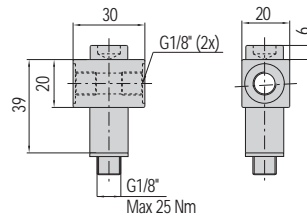
All dimensions in mm.

Blocchetto di distribuzione
Distribution block
Gasverteilstück
Plot de distribution
Bloque de distribución
Bloco de distribuição

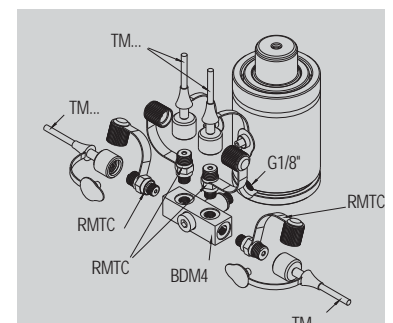
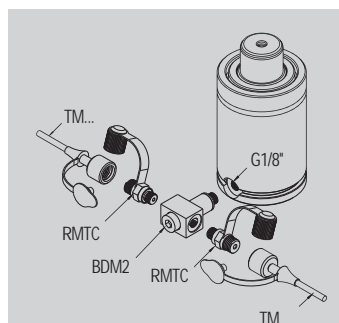
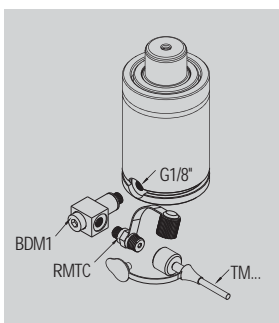
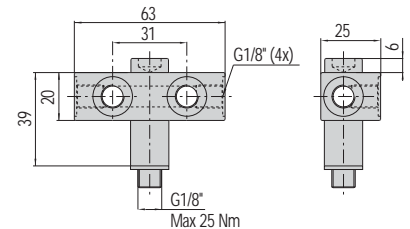
cod. BDM1



cod. BDM2



cod. BDM4



All dimensions in mm.



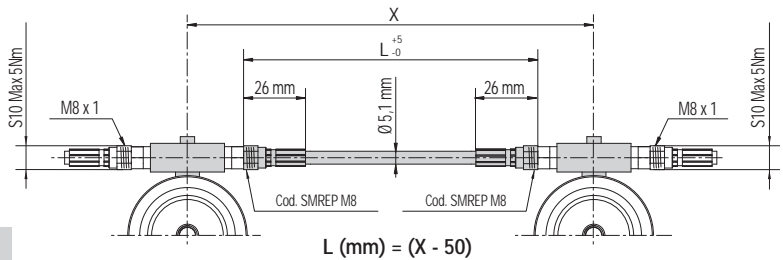
MICRO - HOSE \varnothing 5,1 mm



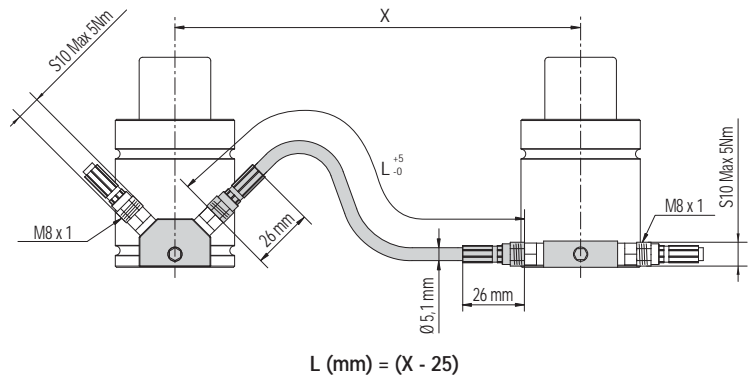
cod. TSMM8...



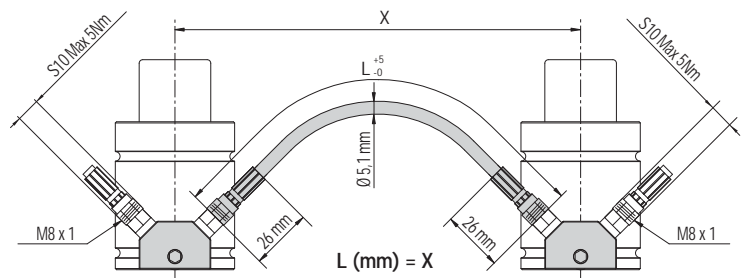
Lunghezze standard (mm) inclusive di n.2 raccordi SMREP M8
 Standard lengths available (mm) inclusive of no. 2 connections SMREP M8
 Standard-Länge (mm) einsch. 2 SMREP-Anschlüssen M8
 Longueur standard (mm) comprenant 2 raccords SMREP M8
 Longitud estándar (mm) con 2 racores incluidos SMREP M8
 Comprimento standard (mm) incluído nas 2 ligações SMREP M8



min. 90 mm upward increase of 10 mm
 standard $L =$
 Example (TSMM8 090 mm; TSMM8 100 mm; TSMM8 110 mm; ...)



min. 170 mm upward increase of 10 mm
 standard $L =$
 Example (TSMM8 170 mm; TSMM8 180 mm; TSMM8 190 mm; ...)



min. 190 mm upward increase of 10 mm
 standard $L =$
 Example (TSMM8 190 mm; TSMM8 200 mm; TSMM8 210 mm; ...)

I Pressione di esercizio: 630 bar max. - Pressione di rottura: 1890 bar - R (raggio di curvatura): 20 mm min.
 Temperatura di esercizio: -40 +100°C.

GB Operation pressure: 630 bar max. - Burst pressure: 1890 bar - R (bending radius): 20 mm min.
 Operation temperature: -40 +100°C.

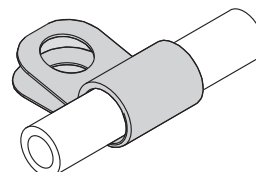
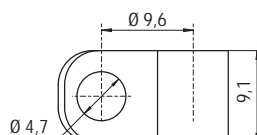
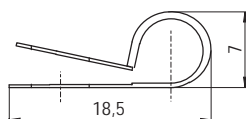
D Höchstdruckbetrieb: 630 bar max. - Berst Druck: 1890 bar - R (Krümmungsradien): 20 mm min.
 Arbeitstemperatur: -40 +100°C.

F Pression de fonctionnement: 630 bar max. - Pression de rupture: 1890 bar - R (rayon de courbure): 20 mm min.
 Température de fonctionnement: -40 + 100°C.

E Presión de ejercicio: 630 bar max. - Presión de rotura: 1890 bar - R (radio de curvatura): 20 mm min.
 Temperatura de funcionamiento: -40 + 100°C.

P Pressão de funcionamento: 630 bar max. - Pressão de ruptura: 1890 bar - R (raio de curvatura): 20 mm min.
 Temperatura de funcionamento: -40 + 100°C.

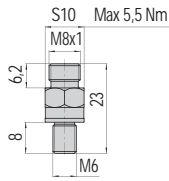
cod. 36FF06A



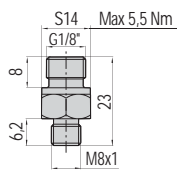
All dimensions in mm.

Nippli
Nipples
Stützen
Tétens
Niple
Nipples

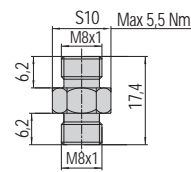
cod. RSMTCD



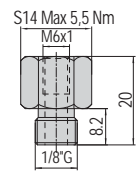
cod. RSMPTD



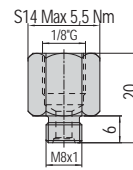
new code: 36MTTD



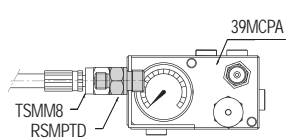
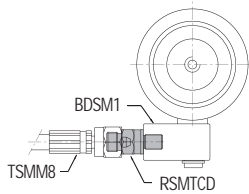
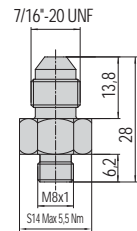
new code: 36MTC



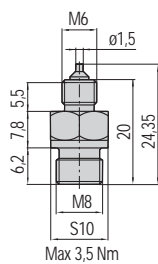
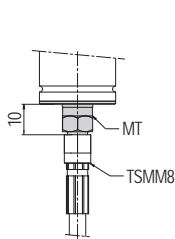
new code: 36MTR



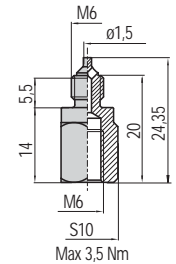
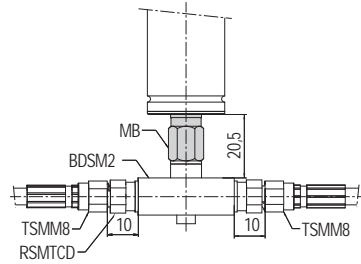
new code: 36RTTJM



cod. MT

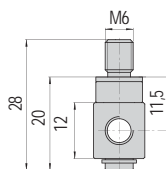
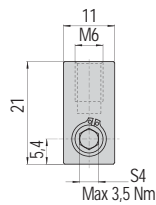


cod. MB

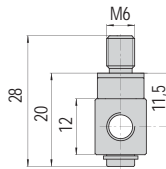
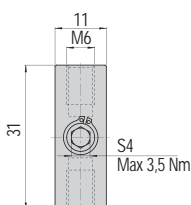


All dimensions in mm.

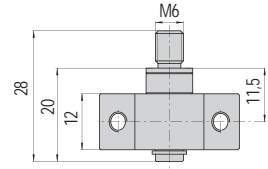
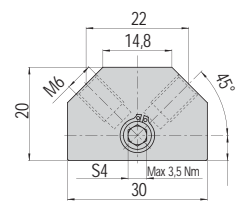
cod. BDSM1



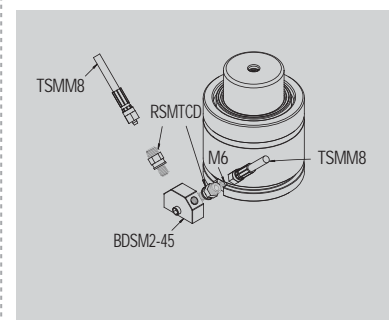
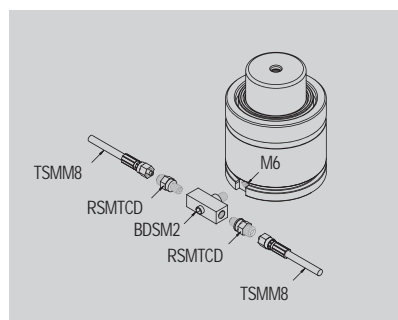
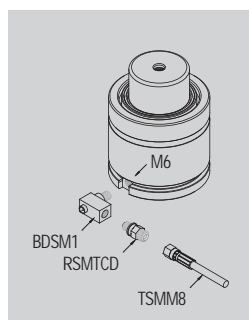
cod. BDSM2



cod. BDSM2-45



Blocchetto tubo-cilindro
Hose-cylinder block
Block, bestehend aus Schlauch-Zylinder
Bloc tube- cylindre
Bloque tubo-cilindro
Bloqueio do tubo-cilindro



All dimensions in mm.

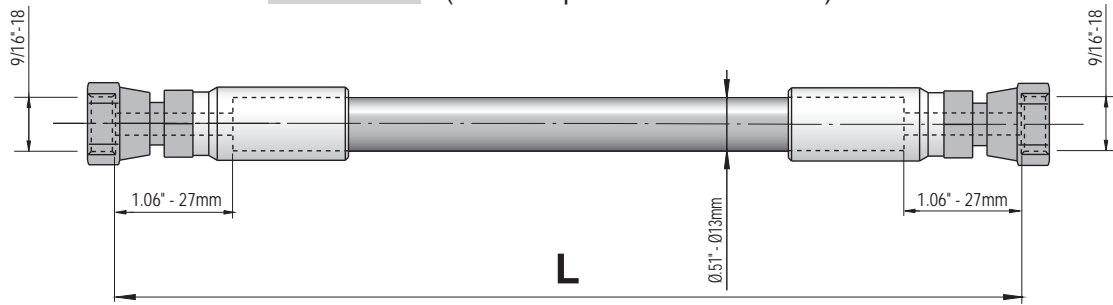


US STANDARD HOSE

(available in the North America market only)



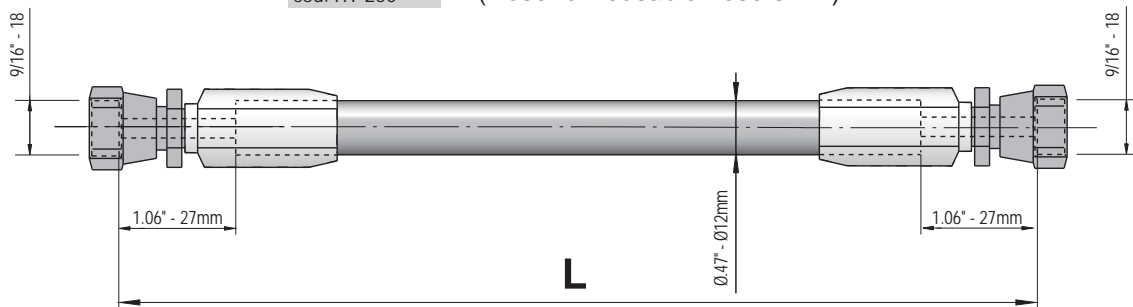
cod. HY 400 (Hose for permanent hose swvl.)



Length upon request including end hose fittings

Minimum length "L" :	10" min.	(254 mm min.)
Operation pressure:	5.000 psi max.	(345 bar max.)
Burst pressure:	20.000 psi	(1.380 bar)
R (bending radius):	2" min.	(51 mm min.)
Operation temperature:	-40 ÷ +212 °F	(-40 ÷ +100 °C)

cod. HY 250 (Hose for reusable hose swvl.)

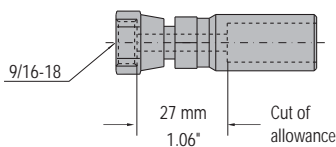


Length upon request including end hose fittings

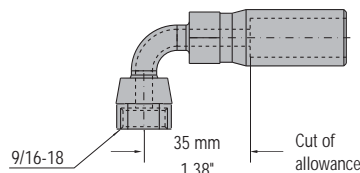
Minimum length "L" :	10" min.	(254 mm min.)
Operation pressure:	2.750 psi max.	(190 bar max.)
Burst pressure:	11.000 psi	(758 bar)
R (bending radius):	2.50" min.	(63.5 mm min.)
Operation temperature:	-40 ÷ +212 °F	(-40 ÷ +100 °C)

Ordering example: (3) HY 400 - 12" (305mm)

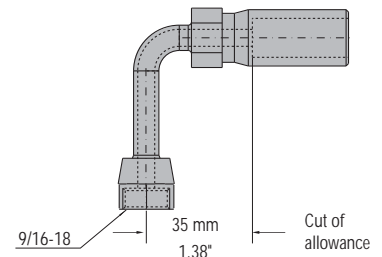
PERMANENT HOSE SWIVELS



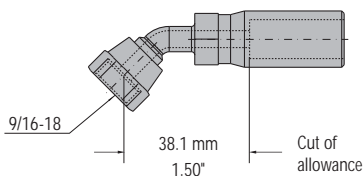
cod. S-F
Straight Swivel



cod. S-F
90° Swivel



cod. H-F90L
90° Long Swivel



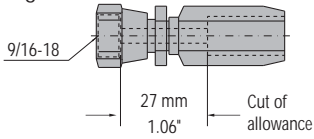
cod. H-F45
45° Swivel

US STANDARD HOSE SWIVELS O-RING FACE SEAL

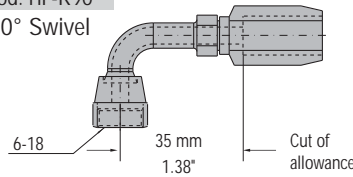
(available in the North America market only)

REUSABLE HOSE SWIVELS

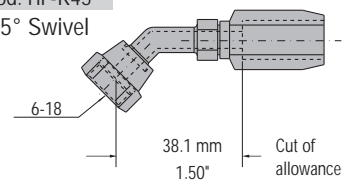
cod. SHF-R
Straight Swivel



cod. HF-R90
90° Swivel

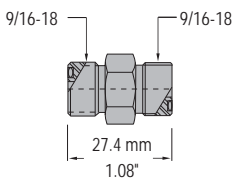


cod. HF-R45
45° Swivel

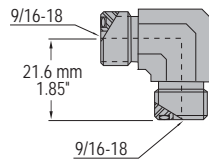


HOSE-HOSE FITTINGS

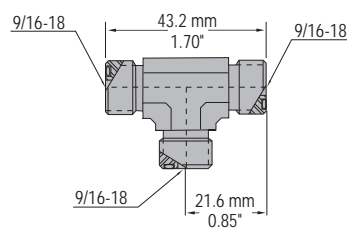
cod. F-U
Fitting-Union



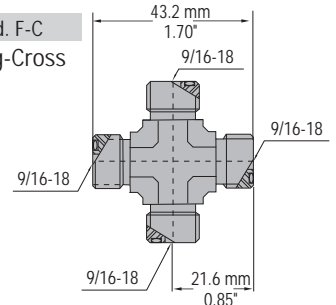
cod. F-E
Fitting-Elbow



cod. F-T
Fitting-Tee

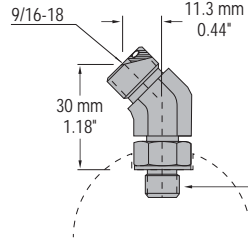
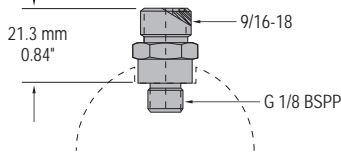


cod. F-C
Fitting-Cross

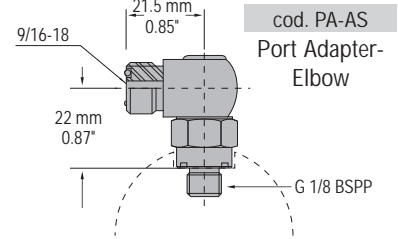


US STANDARD HOSE-CYLINDER FITTINGS O-RING FACE SEAL HOSE-CYLINDER FITTINGS

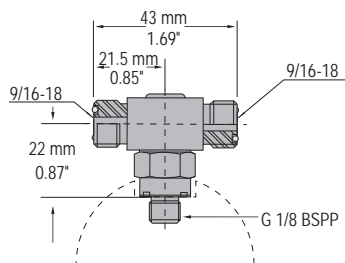
cod. PA-S
Port Adapter-Straight



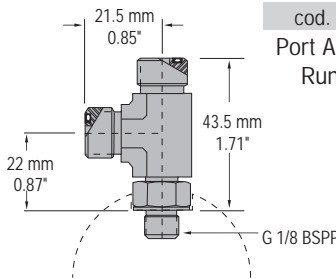
cod. PA-E
Port Adapter-Angle Swivel



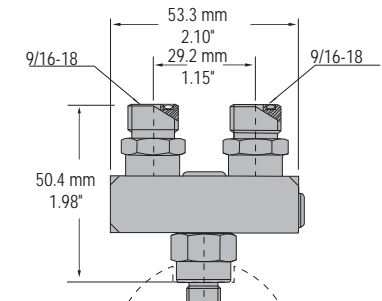
cod. PA-AS
Port Adapter-Elbow



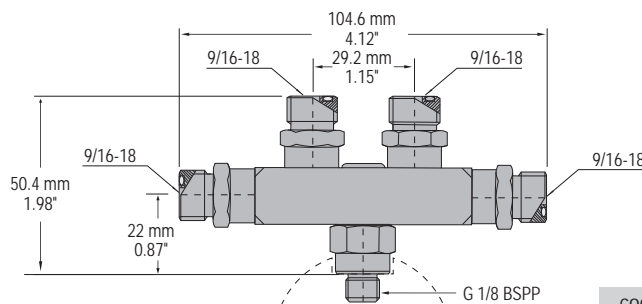
cod. PA-BTS
Port Adapter-Branch Tee Swivel



cod. PA-RT
Port Adapter-Run Tee

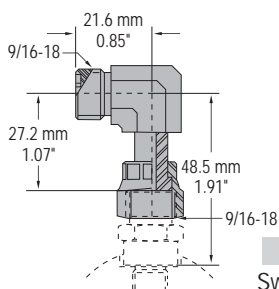


cod. PA-TWS
Port Adapter-Two Way Swivel

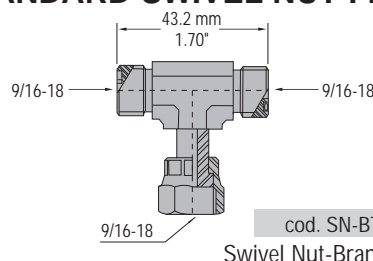


cod. PA-MWS
Port Adapter-Multi Way Swivel

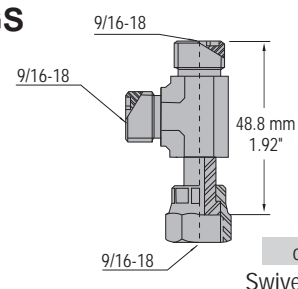
STANDARD SWIVEL NUT FITTINGS



cod. SN-A
Swivel Nut-Angle



cod. SN-BT
Swivel Nut-Branch Tee



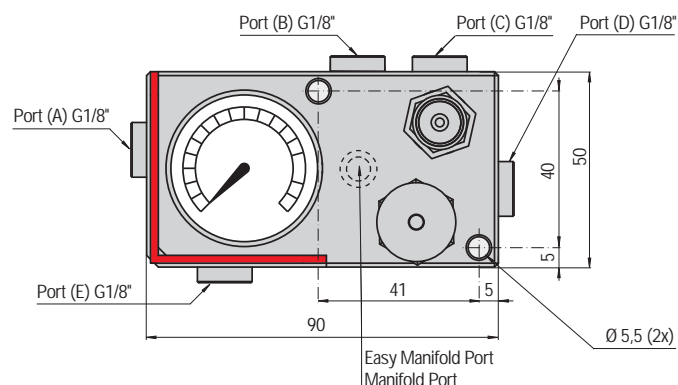
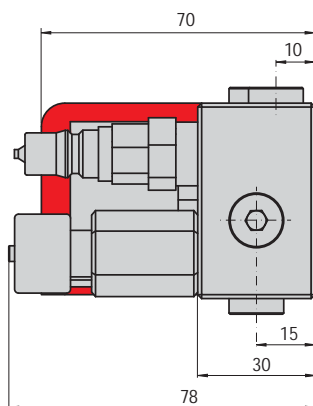
cod. SN-RT
Swivel Nut-Run Tee

CONTROL PANEL MCPA

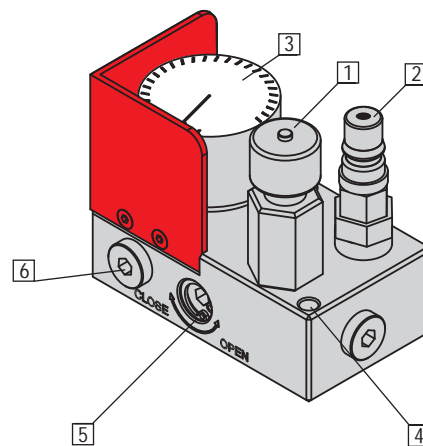


- I** Il mini pannello di controllo Special Springs, grazie a un design miniaturizzato e unico, offre una grande flessibilità d'uso che aumenta con le unità aggiuntive AUMCP. Consiste in un blocchetto di acciaio provvisto di manometro, valvola di caricamento e scaricamento, 5 uscite e valvola di intercettazione.
- GB** The Special Springs mini control panel, thanks to its unique miniaturized design, offers wide flexibility of use, increased when combined with additional AUMCP units. It consists of a steel block with pressure gauge, charging and discharging valve, 5 outlets and one on-off valve.
- D** Die Mini-Steuerung Special Springs bietet dank ihres miniaturisierten und einzigartigen Designs größte Benutzungsflexibilität, die mit den zusätzlichen AUMCP-Einheiten noch erhöht wird. Bestehend aus einem Stahlblock mit Manometer, Lade- und Entladeventil, 5 Ausgängen sowie Sperrventil.
- F** Grâce à une conception miniaturisée et unique, le mini-panneau de contrôle Special Springs offre une grande souplesse d'utilisation qui augmente avec les unités supplémentaires AUMCP. Il est formé par une embase en acier équipée de manomètre, vanne de chargement et déchargement, 5 sorties, vanne d'arrêt.
- E** El mini-panel de control Special Springs, gracias a su exclusivo diseño miniaturizado, ofrece una gran flexibilidad, que aumenta con las unidades adicionales AUMCP. Consiste en una placa de acero con manómetro, válvula de carga y descarga, 5 salidas y válvula de interceptación.
- P** O mini-painel de controlo Special Springs, graças a um design miniaturizado e exclusivo, oferece uma grande flexibilidade de utilização que aumenta com as unidades adicionais AUMCP. É composto por um bloco em aço com manómetro, válvula de carga e de descarga, 5 saídas e válvula de interceptação.

new code: 39MCPA



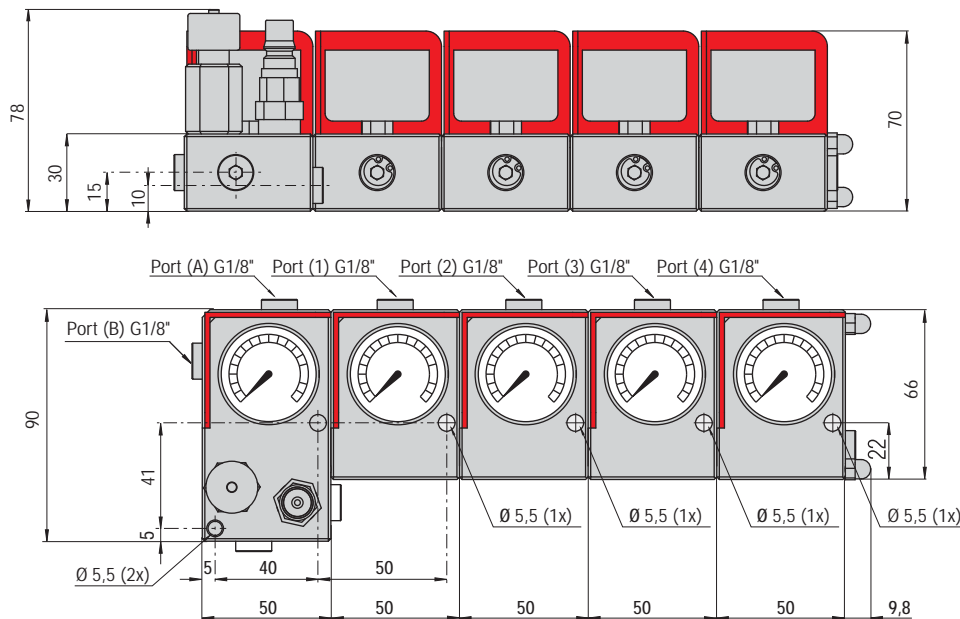
- | | |
|--|---|
| <p>1- Valvola di scarico
Discharging valve
Auslaßventil
Vanne de déchargement
Válvula de desahogo
Válvula de descarga</p> <p>2- Innesto rapido di caricamento Cejn
Quick coupling for charging Cejn
Steckkegel Cejn
Accouplement rapide mâle Cejn
Acoplamiento rápido para carga Cejn
União rápida para carregamento Cejn</p> <p>3- Manometro 0 - 620 bar
Pressure gauge 0 - 620 bar
Manometer 0 - 620 bar
Manomètre 0 - 620 bar
Manómetro 0 - 620 bar
Manómetro 0 - 620 bar</p> | <p>4- Fori di fissaggio Ø 5,5 (2x)
Ø 5,5 (2x) fixings holes
Ø 5,5 (2x) Befestigungslöcher
Trous de fixation Ø 5,5 (2x)
Ø 5,5 (2x) orificios de sujeción
Orifícios de fixação de Ø 5,5 (2x)</p> <p>5- Valvola di intercettazione
Interception valve
Absperventil
Soupape d'arrêt
Válvula de interceptación
Válvula de interceção</p> <p>6- Fori di collegamento 1/8G (5x)
1/8G connecting ports (5x)
Anschlussöffnung 1/8G (5x)
Trous de raccordement 1/8G (5x)
Agujeros de conexión 1/8G (5x)
Furo de conexão 1/8G (5x)</p> |
|--|---|



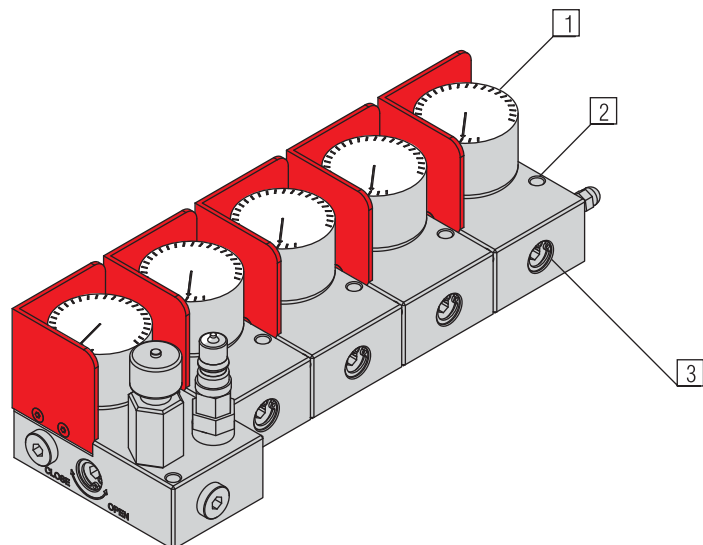
All dimensions in mm.

- I** Unità aggiuntive per minipannello MCPA. Ideali per gestire impianti o cilindri singoli con pressioni diverse nello stesso stampo. Ogni unità include un manometro, una valvola di intercettazione e 1 uscita. Combinazione massima prevista 1 MCPA + 4 AUMCP.
- GB** Additional units for the mini control panel MCPA. Ideal for operating hoses systems or single cylinders with different pressures in the same mould. Each unit includes pressure gauge, on-off valve and 1 outlet. Designed for a maximum combination of 1 MCPA + 4 AUMCP.
- D** Zusätzliche Einheiten für die Ministeuerung MCPA. Ideal zur Verwaltung von Anlagen oder einzelnen Zylindern, die beim selben Formprozess verschiedene Druckwerte aufweisen. Jede Einheit ist mit einem Manometer, einem Sperrventil und einem Ausgang ausgestattet. Maximal mögliche Kombination: 1 MCPA + 4 AUMCP.
- F** Unités supplémentaires pour le mini-panneau MCPA. L'idéal pour gérer des installations ou des cylindres seuls sous des pressions différentes dans le même moule. Chaque unité inclut un manomètre, une vanne d'arrêt et 1 sortie. Combinaison maximum prévue: 1 MCPA + 4 AUMCP.
- E** Unidades adicionales para mini-panel MCPA. Ideales para la gestión de sistemas o de cilindros aislados con presiones distintas en un mismo molde. Cada unidad incluye un manómetro, una válvula de interceptación y 1 salida. Combinación máxima prevista 1 MCPA + 4 AUMCP.
- P** Unidade adicional para mini-painel MCPA. Ideais para gerir instalações ou cilindros individuais com pressões diferentes na mesma ferramenta. Cada unidade inclui um manómetro, uma válvula de intercepção e 1 saída. Combinação máxima prevista 1 MCPA + 4 AUMCP.

cod. AUMCP



- 1- Manometro 0 - 620 bar
Pressure gauge 0 - 620 bar
Manometer 0 - 620 bar
Manomètre 0 - 620 bar
Manómetro 0 - 620 bar
Manómetro 0 - 620 bar
- 2- Foro di fissaggio Ø 5,5 (1x)
Ø 5,5 (1x) fixing hole
Ø 5,5 (1x) Befestigungsloch
Trou de fixation Ø 5,5 (1x)
Ø 5,5 (1x) orificio de sujeción
Orificio de fixação de Ø 5,5 (1x)
- 3- Valvola di intercettazione
Interception valve
Absperrventil
Soupape d'arrêt
Válvula de interceptación
Válvula de intercepção



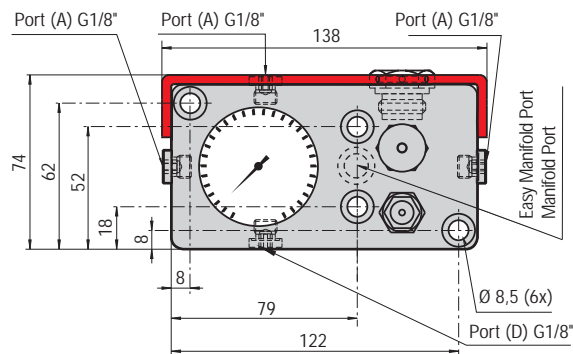
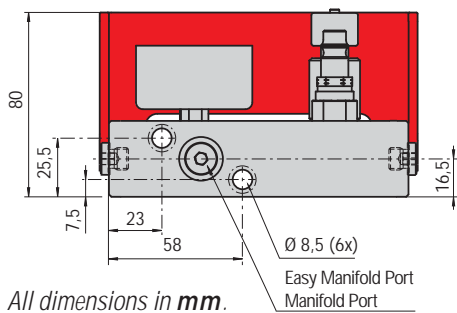
All dimensions in mm.

CONTROL PANEL CPVC

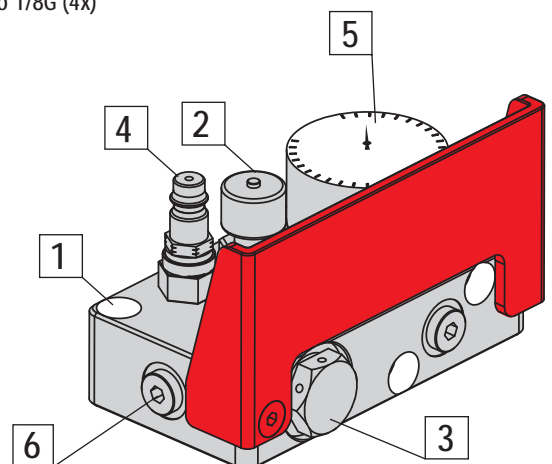


- I** Pannello standard per caricamento, regolazione, scaricamento e controllo della pressione nel sistema collegato. Consiste in una base provvista di manometro, valvola di caricamento e scaricamento, 3 uscite, protezione in acciaio. Può essere equipaggiato con disco di rottura (opzionale).
- GB** Standard control panel to charge, adjust and check the pressure in the connected system. It consists of a plate with pressure gauge, charging and discharging valve, 3 outlets, steel case and can be equipped with a rupture disc (optional).
- D** Standard-Schalttafel zur Ladung, Regulierung, Entladung und Kontrolle des Drucks im angeschlossenen System. Bestehend aus einer Basis mit Manometer, Lade- und Entladeventil, 3 Ausgängen sowie Schutz aus Stahl. Kann mit einer Berstscheibe ergänzt werden (Zubehör).
- F** Panneau standard pour le chargement, le réglage, le déchargement et le contrôle de la pression dans le système relié. Il est formé par une embase équipée de manomètre, vanne de chargement et déchargement, 3 sorties, protection en acier. Il peut être équipé d'un disque de rupture (option).
- E** Panel standard para la carga, regulación, descarga y control de la presión en sistemas de cilindros conectados. Consiste en una base con un manómetro Válvula de carga y descarga, 3 salidas, protección en acero. Puede equiparse con disco de ruptura (opcional).
- P** Painel standard para carga, regulação, descarga e controlo da pressão no sistema ligado. É composto por uma base com manómetro. Válvula de carga e de descarga, 3 saídas, protecção em aço. Pode ser equipado com disco de rotura (opcional).

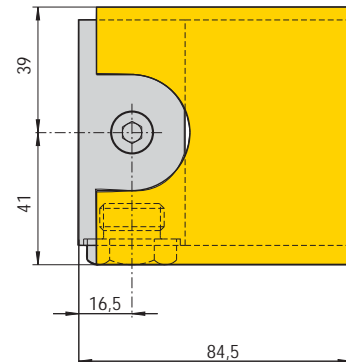
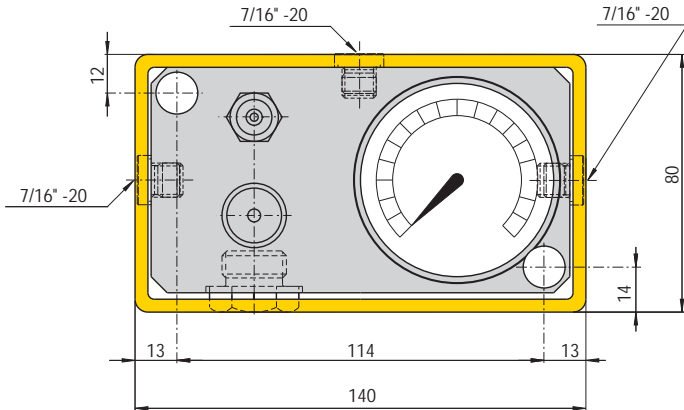
new code: 39CPVC



- 1- Fori di fissaggio $\varnothing 8,5$ (6x)
 $\varnothing 8,5$ (6x) fixing holes
 $\varnothing 8,5$ (6x) Befestigungslöcher
 Trous de fixation $\varnothing 8,5$ (6 x)
 $\varnothing 8,5$ (6x) orificio de sujeción
 Orifícios de fixação de $\varnothing 8,5$ (6x)
- 2- Valvola di scarico
 Discharging valve
 Auslaßventil
 Valve de déchargement
 Válvula de desahogo
 Válvula de descarga
- 3- Cod. TS-460 (Optional) - 460 bar
 Tappo di sicurezza con disco di rottura CE (OPZIONALE)
 Safety plug with CE rupture disc (OPTIONAL)
 Sicherheitsstecker mit Berstscheibe CE (OPTIONAL)
 Bouchon de sécurité avec disque de rupture CE (OPTIONAL)
 Enchufe de seguridad con disco de rotura CE (OPCIONAL)
 Bujão de segurança com disco de rotura CE (OPCIONAL)
- 4- Inneso rapido per caricamento Cejn
 Quick coupling for charging Cejn
 Steckegel Cejn
 Accouplement rapide mâle Cejn
 Acoplamiento rápido para carga Cejn
 União rápida para carregamento Cejn
- 5- Manometro 0 - 620 bar
 Pressure gauge 0 - 620 bar
 Manometer 0 - 620 bar
 Manomètre 0 - 620 bar
 Manómetro 0 - 620 bar
 Manómetro 0 - 620 bar
- 6- Fori di collegamento 1/8G (4x)
 1/8G connecting ports (4x)
 Anschlussöffnung 1/8G (4x)
 Trous de raccordement 1/8G (4x)
 Agujeros de conexión 1/8G (4x)
 Furo de conexão 1/8G (4x)



new code: 39CPVD (FIAT standard)



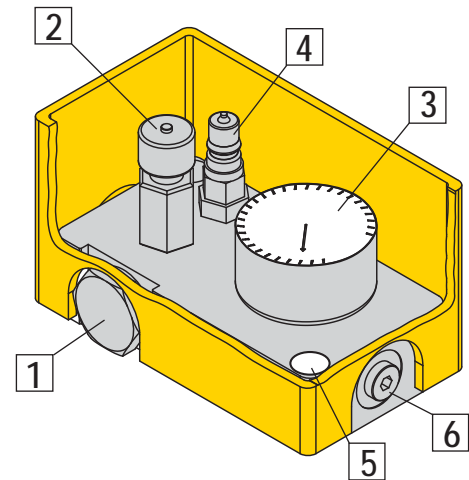
- 1- Cod. TS-460 (Optional) - 460 bar
Tappo di sicurezza con disco di rottura CE (OPZIONALE)
Safety plug with CE rupture disc (OPTIONAL)
Sicherheitsstecker mit Berstscheibe CE (OPTIONAL)
Bouchon de sécurité avec disque de rupture CE (OPTIONAL)
Enchufe de seguridad con disco de rotura CE (OPCIONAL)
Bujão de segurança com disco de rotura CE (OPCIONAL)

- 2- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga
- 3- Manometro 0 - 620 bar
Pressure gauge 0 - 620 bar
Manometer 0 - 620 bar
Manomètre 0 - 620 bar
Manómetro 0 - 620 bar
Manómetro 0 - 620 bar

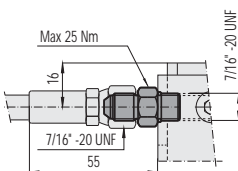
- 4- Inneso rapido per caricamento ISO 7241-1 Series B
Quick coupling for charging ISO 7241-1 Series B
Steckkegel ISO 7241-1 Series B
Accouplement rapide mâle ISO 7241-1 Series B
Acoplamiento rápido para carga ISO 7241-1 Series B
União rápida para carregamento ISO 7241-1 Series B

- 5- Fori di fissaggio $\varnothing 9$ (2x)
 $\varnothing 9$ (2x) fixing holes
 $\varnothing 9$ (2x) Befestigungslöcher
Trous de fixation $\varnothing 5,5$ (2 x)
 $\varnothing 9$ (2x) orificio de sujeción
Orifícios de fixação de $\varnothing 9$ (2x)

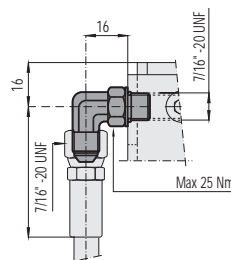
- 6- Fori di collegamento 7/16-20 UNF (3x)
7/16-20 UNF connecting ports (3x)
Anschlussöffnung 7/16-20 UNF (3x)
Trous de raccordement 7/16-20 UNF (3x)
Agujeros de conexión 7/16-20 UNF (3x)
Furo de conexão 7/16-20 UNF (3x)



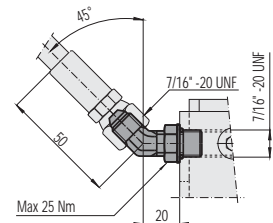
CONTROL PANEL CPVD (FIAT standard) - Hose connections



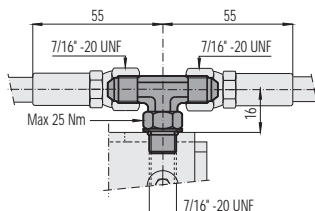
cod. RPT-D



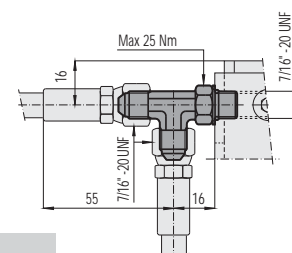
cod. RPT-R



cod. RPT-M



cod. RPT-T



cod. RPT-L

All dimensions in mm.

COMPENSATION TANKS



Polmoni di compensazione - Compensation tanks - Drucktank - Reservoir de compensation
- Pulmones de compensación - Depósitos de compensação

I Nel modo di funzionamento non autonomo i cilindri possono essere collegati ad un polmone di compensazione esterno. Lo scopo principale è contenere l'aumento di pressione nel sistema entro limiti prefissati e minori rispetto al normale incremento dato dalla compressione degli steli-pistoni. La determinazione del volume di compensazione richiesto è facilmente calcolabile applicando la seguente formula:

$$V_p = n \cdot \{[S \cdot x \cdot R / (R-1)] - V_0\}$$

V_p = volume del polmone [cm³]

n = numero di cilindri componenti il sistema

S = sezione dello stelo (pistone per serie KE) di ogni singolo cilindro [cm²]

x = corsa effettiva di lavoro [cm]

R = rapporto tra pressione finale ed iniziale del sistema

V_0 = volume iniziale di ogni singolo cilindro [cm³]

Esempio:

Forza richiesta ~6000 daN ed R=1,1 (10%). Si scelgono n. 4 SC1500-50 (oppure n. 2 SC3000-50) Il volume richiesto è di circa 1300 cm³ e quindi la scelta sarà per il polmone tipo PC-3. Un eventuale maggior volume del polmone non è un problema. Inoltre possono essere collegati tra loro più polmoni di compensazione per ottenere volumi più prossimi a quelli richiesti

GB Gas cylinders operating in non self-contained mode may be connected to a compensation tank. The principal aim is to limit the pressure within the system to a lower figure than would normally be obtained with standard compression rates. The compensation tank volume may be easily found using the following formula:

$$V_p = n \cdot \{[S \cdot x \cdot R / (R-1)] - V_0\}$$

V_p = compensation volume [cm³]

n = no. of gas cylinders required.

S = Area of rod (piston for series KE) in [cm²]

x = effective working stroke in [cm]

R = Ratio between final required pressure and initial pressure of the system.

V_0 = Initial volume of each cylinder in [cm³]

Example:

Force required ~6000 daN and R = 1,1 (10%). No. of cylinders = 4 Type SC1500-50 (or 2 Type SC3000-50). The compensation volume required is approximately 1300 cm³. Therefore, the compensation tank required will be type PC-3. Extra volume in the tank is generally not a problem, and to obtain more accurate volume, extra tanks may be connected in the system

D Im gesteuerten Funktionsmodus können die Zylinder an einen Ausgleichspeicher angeschlossen werden. Hauptzweck ist es, den Druckaufbau im System innerhalb der vorgegebenen Grezwerte und unter der zulässigen Zunahme durch den Druck der Kolbenstangen zu halten. Die Bestimmung des notwendigen Ausgleichsvolumens kann mit folgender Formel leicht errechnet werden:

$$V_p = n \cdot \{[S \cdot x \cdot R / (R-1)] - V_0\}$$

V_p = Speichervolumen [cm³]

n = Anzahl der Zylinder im System

S = Stangenquerschnitt (Kolben für Serie KE) jedes einzelnen Zylinders [cm²]

x = tatsächlicher Arbeitshub [cm]

R = Verhältnis zwischen Anfangs- und Enddruck des Systems

V_0 = Anfangsvolumen jedes einzelnen Zylinders [cm³]

Beispiel:

Benötigte Kraft ca. 6000 daN, R = 1,1 (10%) Nr. 4 SC1500-50 (oder Nr. 2 SC3000-50) Das benötigte Volumen beträgt ca. 1300 cm³, die Wahl des Speichers fällt daher auf den Typ PC-3. Auch ein eventuell höheres Speichervolumen stellt kein Problem dar. Außerdem können mehrere Ausgleichspeicher aneinander geschlossen werden, um die benötigten Volumina zu erhalten

F Dans le mode de fonctionnement non autonome, les vérins peuvent être reliés à un réservoir de compensation. L'objectif principal est de contenir l'élévation de la pression, dans le système, dans les limites préétablies et inférieures par rapport à l'augmentation normale provoquée par la compression des tiges-pistons. La détermination du volume de compensation requis se calcule facilement en utilisant la formule suivante:

$$V_p = n \cdot \{[S \cdot x \cdot R / (R-1)] - V_0\}$$

V_p = volume du réservoir [cm³]

n = nombre de vérins composant le système

S = section de la tige (piston pour série KE) de chaque vérin [cm²]

x = course réelle de travail [cm]

R = rapport entre pression finale et initiale du système

V_0 = volume initial de chaque vérin [cm³]

Exemple:

Force requise env. 6000 daN et R = 1,1 (10%) 4 SC1500-50 (ou bien 2 SC3000-50) Le volume requis est d'environ 1300 cm³ et le choix se portera donc sur le réservoir de type PC-3. A noter qu'un plus grand volume éventuel du réservoir ne représente pas un problème. De plus, les réservoirs peuvent être couplés pour obtenir les volumes voisinant ceux requis.

E Los cilindros de gas en funcionamiento no autónomo pueden conectarse a un pulmón de compensación. El objetivo principal es limitar la presión del sistema, reduciéndola a un valor menor que el que normalmente se obtendría con tasas de compresión standard. El volumen del pulmón de compensación puede calcularse fácilmente mediante la siguiente fórmula:

$$V_p = n \cdot \{[S \cdot x \cdot R / (R-1)] - V_0\}$$

V_p = volumen de compensación [cm³]

n = nº de cilindros de gas necesarios.

S = Área del vástago (pistón en la serie KE) en [cm²]

x = carrera efectiva en [cm]

R = Cociente entre la presión final necesaria y la presión inicial del sistema.

V_0 = Volumen inicial de cada cilindro en [cm³]

Ejemplo:

Fuerza necesaria ~6000 daN y $R = 1,1$ (10%).

Nº de cilindros = 4 Tipo SC1500-50 (ó 2 Tipo SC3000-50). El volumen de compensación necesario es de aproximadamente 1300 cm³.

Por lo tanto, el pulmón de compensación será del tipo PC-3. Por lo general, un pulmón con volumen extra no constituye problema. Para obtener un volumen más exacto, puede ser necesario conectar más pulmones al sistema

P Os cilindros de gás que operam em modo não autónomo podem ser ligados a um depósito de compensação. O principal objectivo é limitar o aumento de pressão dentro do sistema a um valor inferior ao que se obteria normalmente com taxas de compressão normalizadas. O volume do depósito de compensação pode ser facilmente determinado utilizando a fórmula seguinte:

$$V_p = n \cdot \{[S \cdot x \cdot R / (R-1)] - V_0\}_3$$

V_p = volume de compensação [cm³]

n = nº de cilindros de gás necessários.

S = Área do embolo (pistão para a série KE) em [cm²]

x = curso de trabalho efectivo em [cm]

R = Relação entre a pressão final requerida e a pressão inicial do sistema.

V_0 = Volume inicial de cada cilindro em [cm³]

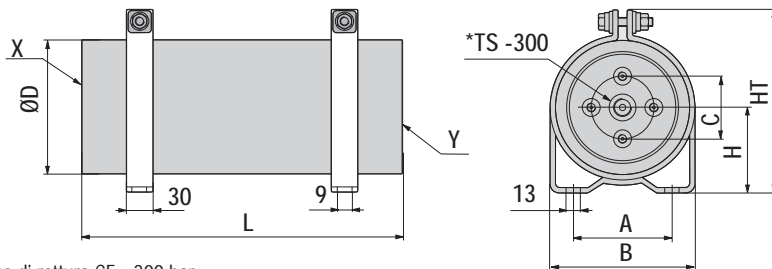
Exemplo:

Força requerida ~6000 daN e $R = 1,1$ (10%).

Nº de cilindros = 4 Tipo SC1500-50 (ou 2 Tipo SC3000-50). O volume de compensação requerido é de aproximadamente 1300 cm³. Logo,

o depósito de compensação requerido é do tipo PC-3. O volume suplementar no depósito não é geralmente um problema e, para obter um volume mais preciso, podem ser ligados ao sistema depósitos suplementares

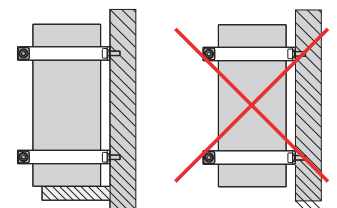
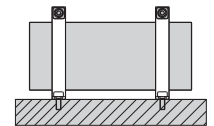
Codice Code Bestallnr. Code Codigo Código	ØD mm	L mm	A mm	H mm	HT mm	B mm	Faccia X X Side Seite X Face X Cara X Face X	Faccia Y Y Side Seite Y Face Y Cara Y Face Y	C mm	Raccordi Fittings Anschlüsse Raccords Racores Ligações	Volume Volume Volumen Volume Volumen
PC - 1	100	290	90	58	140	125	G1/8"(3x)	G1/8"(4x)	40	RTC RMTC RSMPTD	1000 cm ³
PC - 3	150	310	136	83	190	172	G1/8"(4x)	G1/8"(4x)	70		3000 cm ³
PC - 5	150	475	136	83	190	172	G1/8"(4x)	G1/8"(4x)	70		5000 cm ³
PC - 8	200	415	212	108	242	252	G1/8"(6x)	G1/8"(6x)	97		8000 cm ³
PC - 10	200	505	212	108	242	252	G1/8"(6x)	G1/8"(6x)	97		9960 cm ³



*TS -300

Taplo di sicurezza con disco di rottura CE - 300 bar
 Safety plug with CE rupture disc - 300 bar
 Sicherheitsstecker mit Berstscheibe CE - 300 bar
 Bouchon de sécurité avec disque de rupture CE - 300 bar
 Enchufe de seguridad con disco de rotura CE - 300 bar
 Bujão de segurança com disco de rotura CE - 300 bar

Esempio:
 Example:
 Beispiel:
 Exemple:
 Ejemplo:
 Exemplo:



I Pressione massima di caricamento: P= 150 bar

GB Maximum charging pressure: P= 150 bar

D Max. Fülldruck: P= 150 bar

F Pression maximale: P= 150 bar

E Presión máxima de carga P = 150 bar

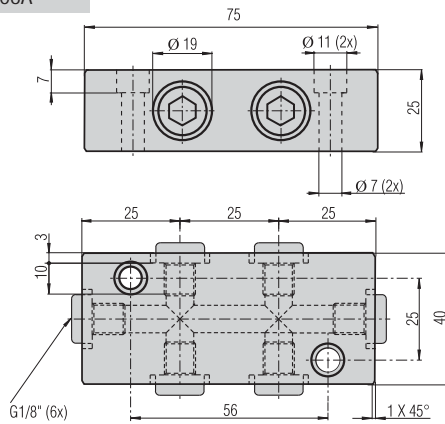
P Pressão máxima de carregamento: P= 150 bar

DISTRIBUTION BLOCKS

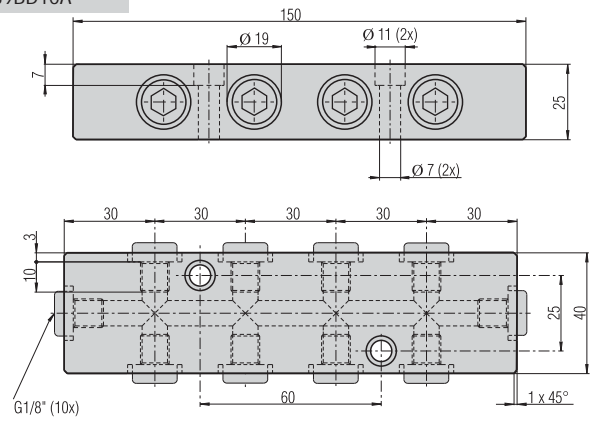
Blocchetto di distribuzione - Distribution block - Gasverteilstück - Plot de distribution - Bloque de distribución - Bloco de distribuição



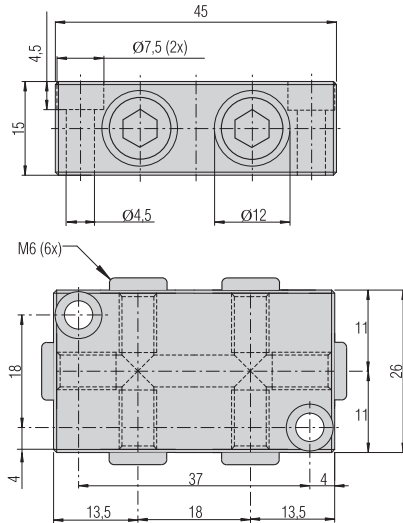
new code: 39BD06A



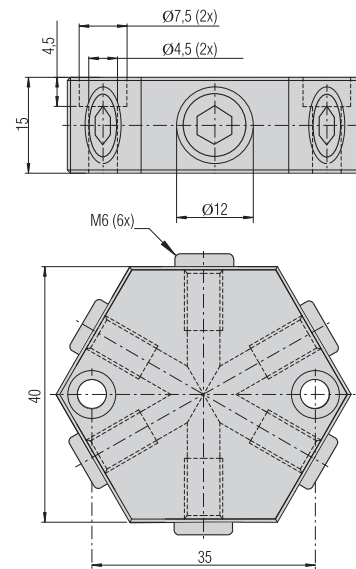
new code: 39BD10A



cod. BD6/1

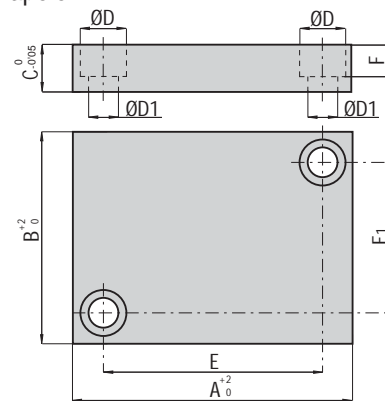
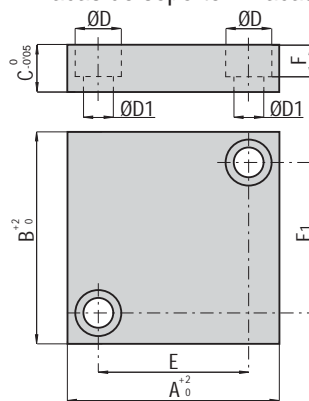
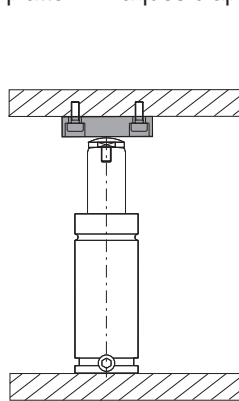


cod. BD6/2



ACCESSORIES

Piastra - Plate - Stellplatten - Plaques d'appui - Placas de soporte - Placas de apoio



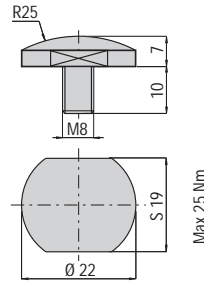
Temperato
Hardened
Gehärtet
Tempré
Templado
Temperado

* VDI 3003

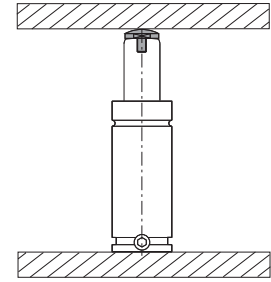
Code	A	B	C	ØD	ØD1	E	E1	F	Model
PS040040	40	40	15	15	9	21	21	10	SC150÷500, SCF500, H300÷500, HR300÷500, HRF500, K40÷100, LI400, ML300÷500, RV350÷500, S500
PS056056	56	56	20	18	11	32	32	13	SC750÷1500, SCF750, H700÷1000, HR700÷1500, HRF700, HRF1000, HF700÷1000, K180, LI900÷1400, ML1000, RV750÷1500, RF750÷1500, S750÷1500
PS071071	71	71	20	18	11	48	48	13	SC3000÷5000, H2400÷4200, HR2400÷4200, K470÷750, ML1800÷4700, LS1500÷2400, RV2400÷4200, RF2400, S3000
PS050025*	50	25	12	11	7	32	8	8	SC250, H300, HR300, ML300÷500, LI400, RV350
PS055030*	55	30	12	11	7	40	14	8	SC500, H500, HR500, K40÷100, RV 500, S500
PS070035*	70	35	15	15	9	48	14	10	SC750, H700, HR700, ML1000, LI900, RV 750, RF750, S750
PS075050*	75	50	15	15	9	56	30	10	SC1500, H1000, HR1000÷1500, K180, ML1800, LI1400÷2000, RV1000÷1500, RF1000÷1500, S1500
PS085060*	85	60	15	15	9	66	40	10	SC3000, H2400, HR2400, K470, ML4700, LI3200, LS1500÷2400, LS1500÷2400, RV2400, RF2400, S3000
PS100080*	100	80	20	18	11	72	56	12	SC5000, H4200, HR4200, K750, ML7500, LS3000÷4200, RV4200
PS110100*	110	100	20	18	11	85	75	12	SC7500÷10000, H6600, HR6600÷11800, K1200÷K1830, ML12000, RV6600÷9500

- I** Calotta
- GB** Thrust plates
- D** Schaftkappe
- F** Calotte pour tiges
- E** Casquillo para vástagos
- P** Calote para embolo

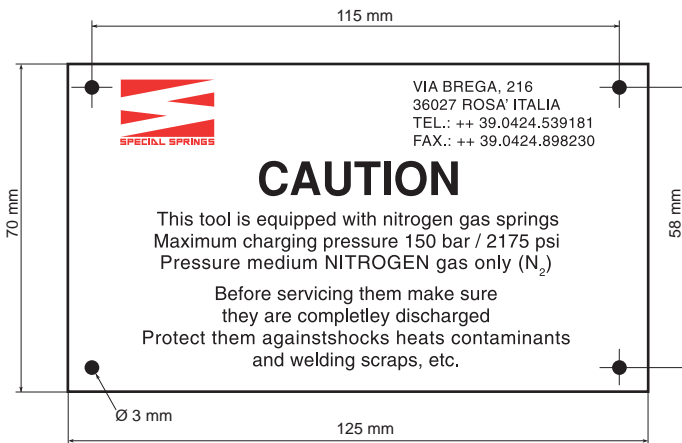
Temperato
Hardened
Gehärtet
Tempré
Templado
Temperado



cod. FA 022



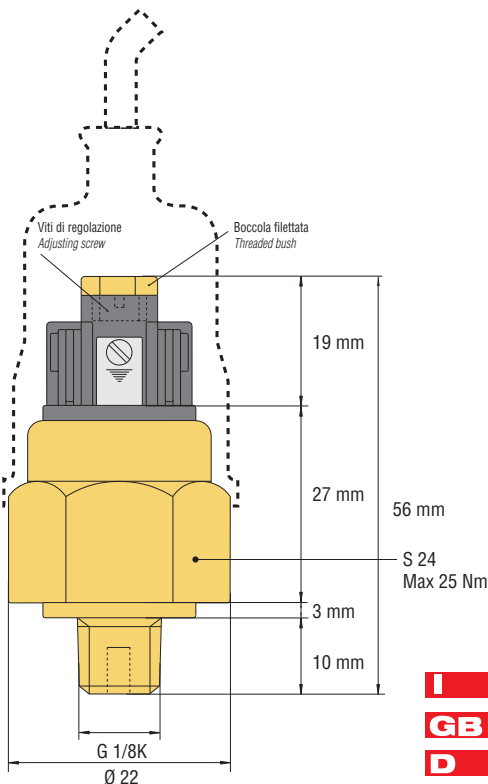
ADVICE PLATE



- I** Targhetta
- GB** Advice plate
- D** Schilder
- F** Plaquettes
- E** Placas
- P** Etiquetas

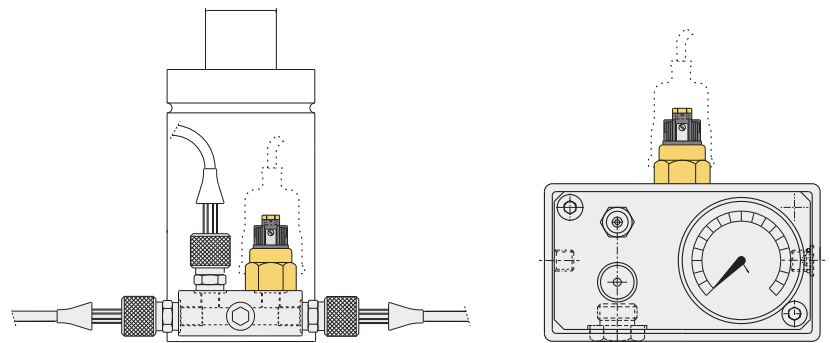
Codice	TAR-I
Code	TAR-GB
Bestell-nummer	TAR-D
Référence	TAR-F
Codigo	TAR-E
Codigo	TAR-P

PRESSURE SWITCH



cod. PMM150A (50 : 150 bar)

cod. PMM300A (50 : 300 bar)



- I** Pressostato
- GB** Pressure switch
- D** Druckwächter
- F** Pressostat
- E** Presostato
- P** Pressostato

Tensione di lavoro 48 V AC max	Normalmente aperto
Operating voltage 48 V AC max	Normally opened
Arbeitsspannung 48 V AC max	Normalerweise offen
Tension d'utilisation 48 V AC max	Normalement ouvert
Tensión de trabajo 48 V AC max	Normalmente abierto
Tensão de trabalho 48 V AC max	Normalmente aberto

ACCESSORIES

Accessori - Accessories - Zubehörteile - Accessories - Accesorios - Acessórios



cod. 39DMA



- I** Dispositivo completo per facilitare le operazioni di controllo, riduzione/aumento della pressione o caricamento di cilindri autonomi e sistemi collegati.
- GB** The DM multi-device is designed and built to facilitate checking, decreasing/increasing pressure or pressurising self-contained cylinders or hoses systems.
- D** Komplette Vorrichtung zur Erleichterung der Arbeitsvorgänge Kontrolle, Verminderung/Erhöhung des Drucks oder Laden von autonomen Zylindern und verbundenen Systemen.
- F** Dispositif complet pour faciliter les opérations de contrôle, réduction/augmentation de la pression ou chargement de cylindres autonomes et systèmes reliés.
- E** Dispositivo completo para agilizar las operaciones de control, reducción/aumento de la presión o carga de cilindros autónomos y sistemas conectados.
- P** Dispositivo completo para facilitar as operações de controle, redução/aumento da pressão ou carregamento dos cilindros autónomos e sistemas conectados.

cod. 39DMCILA



- I** Manometro 0 - 315 bar - 2 manopole - valvola di riduzione/scarico pressione - adattatore fisso G1/8" - attacco rapido maschio Cejn - Incluso nel set cod. 39DMA.
- GB** 0 - 315 bar gauge - 2 hand grips - discharging valve - G1/8" built in adapter - quick fit male Cejn - included in the cod. 39DMA set.
- D** Manometer 0 - 315 bar - 2 Drehregler - Druckreduzier-/Druckablassventil - fester Adapter G1/8" - Schnellkupplung Cejn - im Set cod. 39DMA eingeschlossen.
- F** Manomètre 0 - 315 bar - 2 poignées - soupape de réduction/déchargement pression - Adaptateur fixe G1/8" - enclenchement instantané mâle Cejn - joint en le jeu cod. 39DMA.
- E** Manómetro 0 - 315 bar - 2 botones - válvula de reducción/descarga presión - adaptador fijo G1/8" - enganche rápido macho Cejn. incluido en el set cod. 39DMA.
- P** Manômetro 0 - 315 bar/psi - 2 manoplas - válvula de redução/descarga pressão - adaptador fixo G1/8" - engate rápido macho Cejn - incluido em conjunto cod. 39DMA.

cod. 39DMCPVA



1/4" BSP

- I** 3 mt di tubo - attacco rapido femmina Cejn - valvola ON/OFF - valvola di scarico tubo - 1 raccordo per riduttore/bombola da 1 1/2 - 20 UNF + 1 innesto rapido supplementare (SOLO PER CPVB - CPVD) - Incluso nel set cod. 39DMA.
- GB** 3 m high pressure hose - female Cejn quick-fit - ON/OFF valve - hose release valve - 1 1/2 - 20 UNF coupling for pressure regulator/tank + additional quick coupling (ONLY FOR CPVB - CPVD) - included in the cod. 39DMA set.
- D** 3 m Schlauch - Schnellkupplungsbuchse Cejn - Ventil ON/OFF - Ablassrohrventil - 1 Anschlusssteil für Reduzierer/Flasche 1 1/2 - 20 UNF + 1 zusätzliche Schnellkupplung (NUR FÜR CPVB - CPVD) - im Set cod. 39DMA eingeschlossen.
- F** 3 m de tuyau - enclenchement instantané femelle Cejn - soupape ON/OFF - soupape de déchargement tuyau - un raccord pour réducteur/bouteille de 1 1/2 - 20 UNF + 1 enclenchement instantané supplémentaire (UNIQUEMENT POUR CPVB - CPVD) - joint en le jeu cod. 39DMA.
- E** 3 mt de tubo - enganche rápido hembra Cejn - válvula ON/OFF - válvula de descarga tubo - 1 racor para reductor/bombona de 1 1/2 - 20 UNF + 1 inserción rápida suplementaria (SÓLO PARA CPVB - CPVD) - incluido en el set cod. 39DMA.
- P** 3 mt de tubo - engate rápido fêmea Cejn - válvula ON/OFF - válvula de descarga tubo - 1 junção redutora/garrafa de 1 1/2 - 20 UNF + 1 engate rápido suplementar (SOMENTE PARA CPVB - CPVD) - incluido em conjunto cod. 39DMA.

cod. 39IRFA



- I** Innesto rapido femmina Cejn (NON USARE CON CPVB - CPVD).
- GB** Quick female Cejn coupling (NOT FOR CPVB - CPVD).
- D** Schnellkupplung Cejn (NICHT MIT CPVB VERWENDEN - CPVD).
- F** Enclenchement instantané femelle Cejn (NE PAS L'UTILISER AVEC CPVB - CPVD).
- E** Inserción rápida hembra Cejn (NO USAR CON CPVB - CPVD).
- P** Engate rápido fêmea Cejn (NÃO USE COM CPVB - CPVD).

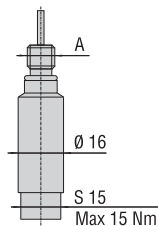
cod. 39QDFV01 for 1/8G thread
cod. 39QDFV02 for M6 thread
cod. 39QDFV03 for M6 thread



- I** Adattatore per caricamento diretto con innesto rapido maschio Cejn.
- GB** Cejn male quick fit adapter for direct charging.
- D** Direkt Laden Adapter mit Schnellkupplung Cejn.
- F** Adaptateur direct pour le chargement avec enclenchement instantané mâle Cejn.
- E** Adaptador directo para la carga con enganche rápido macho Cejn.
- P** Adaptador direto para la carga con engate rápido macho Cejn.

⚠ >>> see tab pag. 179 for combination

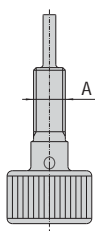
cod. ADM...



- I** Adattatori per caricamento - Incluso nel set cod. 39DMA.
- GB** Charging adapters. - included in the cod. 39DMA set.
- D** Adapter. - im Set cod. 39DMA eingeschlossen.
- F** Adapteurs pour chargement. - joint en le jeu cod. 39DMA.
- E** Adaptadores de carga. - incluido en el set cod. 39DMA.
- P** Adaptadores de carga. - incluido em conjunto cod. 39DMA.

Codice Code Bestallnr. Code Codigo Codigo	ADM01	ADM02	ADM03	ADM04	ADM05	ADM06	ADM08	Direttamente con 39DMA (senza adattatore) Directly with 39DMA (without adapter) Direkt mit 39DMA (ohne Adapter) Directement avec 39DMA (sans adaptateur) Directamente con 39DMA (sin adaptador) Directamente com 39DMA (sem adaptador)
A	G1/8"	M6	M6	M6	M6	M6	M6	G 1/8"
Modello Model Modell Model Modelo Modelo	K180-1830 ML1800-12000	K75, K100 HR300 Cu 5-16 HR500 Cu 5-16 HR700 Cu 10-16 HRF300 Cu 5-16 HRF500 Cu 5-16 HRF700 Cu 10-16 ML500 ML1000 LI400 Cu 13	NE16, NE24 HR1000-4200 HRF1000 LI900-2000	SC150, SC250 SCF250, H300 H500, HF500 HR300 Cu 25-125 HR500 Cu 25-125 HR700 Cu 19-125 HRF300 Cu 25-125 HRF500 Cu 25-125 HRF700 Cu 19-125 LI400 Cu 25-100 ML1000 (rev.B)	K40 ML300	HR200 MCS19 MCS19-TBM MCS19-TBI MCS19-TEM MCS25	M90 M90 TBM M90 TBI M90 TEM M200 KE400-7500 RV350-2400 ML300-ML500 (revB) SC (revD) H (revC)	SC500-10000, SCF500-750 H700-6600 HF700-1000 HR6600-11800 LI3200 LS1500-4200 KE12000-18500 S500-S3000 RV4200-RV9500 RF750-RF2400 ML1800-ML12000(revB)
	QDFV01	QDFV03	QDFV02	QDFV03	QDFV02	QDFV02	QDFV02	QDFV01

cod. DDS...



- I** Dispositivo di scaricamento.
- GB** Discharging adapters.
- D** Abblasvorrichtung.
- F** Dispositif de déchargement.
- E** Dispositivo de descarga.
- P** Dispositivo de descarga.

Code	DDS-M6/1	DDS-M6/2	DDS-M6/3	DDS-1/8G1	DDS-1/8G
A	M6	M6	M6	1/8G	1/8G
Model	MCS, K, ML (rev. A), HR, LI	NE, SC, H, HR, LI	M90, M200, KE, ML (rev. B), RV, RF, SC (revD), H (revC)	K, ML (rev. A)	SC, H, HR, LI, LS, KE, ML (rev. B), S, RV, RF



Catalogo manutenzione e accessori.
Maintenance & accessories catalogue.
Katalog Wartung und Zubehör
Catalogue entretien et accessoires
Catálogo manutención y accesorios.
Catálogo manutenção e acessórios



- I** Richiedere o scaricare dal sito www.specialsprings.com il catalogo manutenzione e accessori.
- GB** Ask for or download maintenance and accessories catalogue from our web site www.specialsprings.com.
- D** Den Katalog "Instandhaltung und Zubehörteile" anfordern oder von unserer Internetseite www.specialsprings.com herunterladen.
- F** Demandez ou téléchargez notre catalogue d'accessoires et de maintenance à partir de notre site web www.specialsprings.com.
- E** Solicitar o descargar de la web www.specialsprings.com el catálogo de mantenimiento y accesorios.
- P** Requerer ou descarregar no site www.specialsprings.com o catálogo manutenção e acessórios.



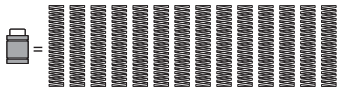
BENEFITS

Vantaggi - Benefits - Vorteile - Advantages - Ventajas - Vantagens



Less Space

Minore spazio - Less Space - Weniger Platz - Moins d'espace - Menos espacio - Menos espaço



I **VANTAGGI** Notevole riduzione della superficie occupata. Notevole riduzione dello spazio in altezza. Notevole riduzione del volume occupato. Eliminazione dei dispositivi di precarico e guidaggio.
RISULTATO Notevole risparmio economico.

GB **BENEFITS** Considerable reduction of required surface area. Considerable reduction of height. Considerable reduction of volume occupied. Considerable reduction of retaining devices to pre-load.
RESULT Great saving of money.

D **VORTEILE** Beträchtliche Verminderung der eingenommenen Fläche. Beträchtliche Verminderung der Höhe. Bemerkenswerte Verminderung der eingenommen Gesamtfläche. Bemerkenswerte Verminderung der Zahl der Vorrichtungen für Vorspannen, Führung und Aufnahme.
ERGEBNIS Wesentliche Einsparung.

F **ADVANTAGES** Réduction importante de la surface occupée. Réduction importante de l'espace en hauteur. Réduction importante du volume total occupé. Réduction importante du nombre de dispositifs de précharge et guidage.
RESULTAT Gain économique important.

E **VENTAJAS** Notable reducción de la superficie ocupada. Notable reducción de espacio en altura. Notable reducción del volumen ocupado. Eliminación de dispositivos de precarga y guía.
RESULTADO Notable ahorro económico.

P **VANTAGENS** Redução notável da superfície ocupada. Redução notável do espaço em altura. Redução notável do volume ocupado. Eliminação de dispositivos de pré-carga e guidamento.
RESULTADO Poupança económica notável.

Less Height

Minore altezza - Less Height - Weniger Höhe - Moins de hauteur - Menos altura - Menos altura



I **VANTAGGI** Notevole riduzione degli ingombri in altezza a parità di forza e corsa. Costruzione dello stampo più compatta.
RISULTATO Notevole risparmio economico.

GB **BENEFITS** Considerable height reduction for the same working deflection and force. Compact tool construction.
RESULT Great saving of money.

D **VORTEILE** Im allgemeinen beträchtliche Verminderung der Höhe, bei gleichem Hub und gleicher Kraft. Kompaktere Gesenk konstruktion.
ERGEBNIS Wirtschaftliche Einsparung.

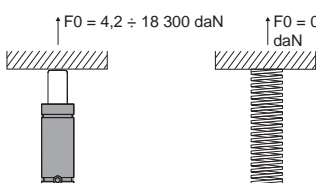
F **ADVANTAGES** Réduction importante des encombrements en hauteur avec une course et une force équivalente. Construction plus compacte de l'outillage.
RESULTAT Gain économique important.

E **VENTAJAS** Notable reducción de la altura de los volúmenes con igual fuerza y recorrido. Construcción más compacta del molde.
RESULTADO Notable ahorro económico.

P **VANTAGENS** Redução notável em altura com igual força e curso. Construção mais compacta da Ferramenta.
RESULTADO Poupança económica notável.

Large Forces

Maggiore forza - Large Forces - Große Kräfte - Grandes forces - Grandes fuerzas - Grande Potência



I **VANTAGGI** Eliminazione precarico. Maggiore facilità di applicazione.
RISULTATO Notevole risparmio economico.

GB **BENEFITS** No pre-load. Easier and quicker fitting.
RESULT Great saving of money.

D **VORTEILE** Beseitigung der Vorspannung. Einfachere Anwendung.
ERGEBNIS Wirtschaftliche Einsparung.

F **ADVANTAGES** Elimination de la précharge. Application plus facile.
RESULTAT Gain économique important.

E **VENTAJAS** Eliminación de la precarga. Mayor facilidad de aplicación.
RESULTADO Notable ahorro económico.

P **VANTAGENS** Eliminação da pré-carga. Maior facilidade de aplicação.
RESULTADO Poupança económica notável.

Controlled Forces

Forza controllata - Controlled Forces - Kontrollierte Kräfte - Forces contrôlées - Fuerzas controladas - Potência Controlada

I **VANTAGGI** Forza sempre bilanciata in tutti i punti di contatto. Forza posizionabile esattamente dove richiesto nello stampo. Visualizzazione continua della pressione.

RISULTATO Migliore e costante qualità dei pezzi stampati. Maggiore durata utensili. Risparmio economico.

GB **BENEFITS** Always the same force on each contact point. Forces may be positioned to exactly where required. System may be continually monitored for pressure.

RESULTS Constant production conditions of piece-parts. Longer life for punches and tools. Saving of money.

D **VORTEILE** Stets ausgeglichene und gleichförmige Kraft an allen Kontaktpunkten. Exakt an der gewünschten Stelle des Gesenks anwendbare Kraft. Ständige Sichtanzeige des Betriebsdrucks.

ERGEBNIS Bessere und konstante Qualität der fertigen Werkstücke. Längere Haltbarkeit der Verschleisswerkzeuge. Wirtschaftliche Einsparung.

F **ADVANTAGES** Force toujours équilibrée et égale en tous points de contact. Force que l'on peut positionner exactement là où elle est exigée dans l'outil. Visualisation continue de la pression dans le système.

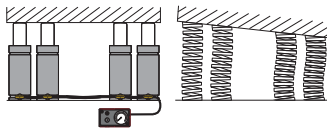
RESULTATS Qualité supérieure et constante des produits découpés ou emboutis. Longévité accrue des

E **VENTAJAS** Fuerza siempre equilibrada en todos los puntos de contacto. Fuerza posicionable exactamente donde se precisa en el molde. Visualización continua de la presión

RESULTADO Mejor calidad y constante de las piezas moldeadas. Mayor duración de las herramientas. Notable ahorro económico.

P **VANTAGENS** Força sempre equilibrada em todos os pontos de contacto. Força posicionável exactamente onde é necessária na Ferramenta. Visualização contínua da pressão

RESULTADO Melhor e constante qualidade das peças estampadas. Maior duração das ferramentas. Poupança económica notável.



Almost Constant

Quasi costante - Almost Constant - Fast konstant - Pratiquement constantes - Prácticamente constante - Quase Constante

I **VANTAGGI** Migliore controllo del materiale durante le fasi di formatura e imbutitura.

RISULTATO Migliore qualità dei pezzi stampati. Minori scarti di produzione. Risparmio economico.

GB **BENEFITS** Maximum control of piece-parts during forming and drawing operations.

RESULTS Controlled production conditions on piece-parts. Less rejection of piece-parts. Saving of money.

D **VORTEILE** Bessere Kontrolle des Werkstücks während den Phasen des Formens und des Ziehens.

ERGEBNIS Bessere Qualität der fertigen Werkstücke. Weniger Ausschuss. Wirtschaftliche Einsparung.

F **ADVANTAGES** Un meilleur contrôle de la pièce durant les phases de découpage ou d'emboutissage.

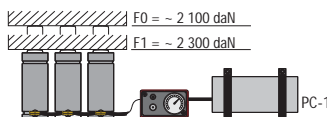
RESULTATS Une meilleure qualité des pièces découpées ou embouties. Une quantité moindre de rebuts en production. Gain économique.

E **VENTAJAS** Mejor control del material durante las fases de moldeo y embutición.

RESULTADO Mejor calidad de las piezas moldeadas. Menores desechos de producción. Notable ahorro económico.

P **VANTAGENS** Melhor controlo dos materiais durante a fase de formação e de cunhagem.

RESULTADO Melhor qualidade das peças estampadas. Menores desperdícios na produção. Poupança económica notável.



es.:
n.3 H1000 - 50
(F0 ~ 700 daN)
P = 100 bar

Adjustable Forces

Forza aggiustabile - Adjustable Forces - Korrigierbare Kräfte - Forces réglables - Fuerzas regulables - Potência Ajustável

I **VANTAGGI** Adeguamento dei cilindri alle forze realmente richieste. Utilizzo di uno stesso cilindro in lavori diversi.

RISULTATO Flessibilità di utilizzo. Risparmio economico.

GB **BENEFITS** Cylinders applied to provide the real forces required. Assurance of defined forces.

The same cylinder may be re-used for different power application.

RESULTS Flexible usage. Saving of money.

D **VORTEILE** Anpassung der Zylinder an die effektiv erforderliche Kraft. Gewissheit der definierten Kräfte. Verwendung desselben Zylinders für unterschiedliche Arbeiten.

ERGEBNIS Flexibler Einsatz. Wirtschaftliche Einsparung.

F **ADVANTAGES** Adaptation des ressorts à gaz aux forces réellement requises. Certitude des forces définies. Utilisation d'un même ressort à gaz dans des travaux différents.

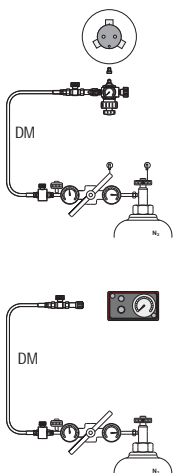
RESULTAT Flexibilité d'utilisation. Gain économique.

E **VENTAJAS** Adecuación de los cilindros a las fuerzas realmente necesarias. Utilización de un mismo cilindro en trabajos distintos.

RESULTADO Flexibilidad de utilización. Notable ahorro económico.

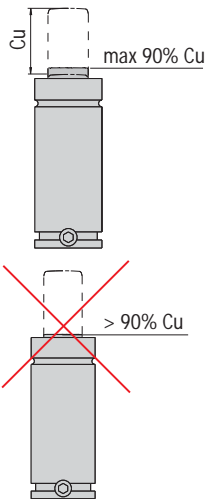
P **VANTAGENS** Adaptação dos cilindros às forças realmente necessárias. Utilização do mesmo cilindro em diferentes trabalhos.

RESULTADO Flexibilidade de utilização. Poupança económica notável.

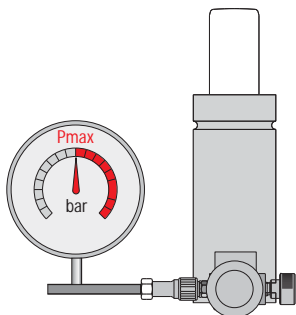
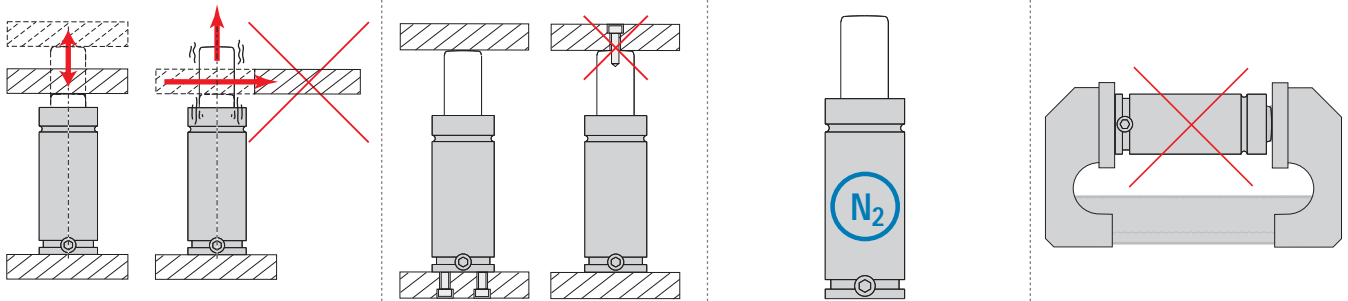


SAFETY

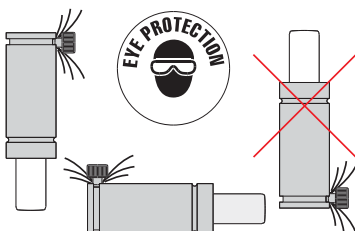
Sicurezza - Safety - Sicherheit - Sécurité - Seguridad - Segurança



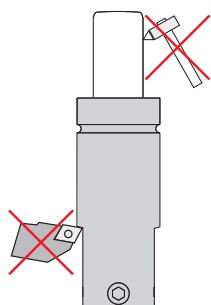
- I** Tutti i cilindri Special Springs sono dotati di riserva corsa da 1 a 3 mm (escluso NE, M90/TBM-TBI-TEM). Quindi il valore nominale Cu è completamente utilizzabile. Si raccomanda comunque di non eccedere il 90% di Cu nell'uso pratico per prevenire eventuali extra-corse, causate da modifiche o errori sugli stampi, con danni irreparabili ai cilindri e gravi rischi per la sicurezza.
- GB** All Special Springs nitrogen cylinders are designed with a stroke reserve from 1 to 3 mm (except M90/TBM-TBI-TEM). Therefore the nominal value (Cu) is fully applicable. However, it is recommended not to exceed 90% of Cu in practical use in order to avoid the risk of any extra stroke caused by changes or errors in tools. This would result in irreparable damages to the cylinders and serious danger to personnel.
- D** Alle Zylinder Special Springs sind mit einer Hubreserve von 1÷3 mm ausgestattet (Ausnahme: NE, M90/TBM-TBI-TEM). Daher kann der Nennwert Cu komplett verwendet werden. Wir empfehlen, die 90%-Grenze des Cu-Werts beim praktischen Einsatz nicht zu überschreiten, um einen eventuellen Überlauf zu vermeiden, der durch Änderungen oder Fehler an den Pressformen verursacht werden und irreparable Schäden an den Zylindern sowie schwerwiegende Sicherheitsrisikos hervorrufen könnte.
- F** Tous les cylindres Special Springs sont munis d'une course de réserve de 1÷3 mm (sauf NE, M90/TBM-TBI-TEM). Ainsi donc la valeur nominale Cu peut être utilisée complètement. Il est en tout cas conseillé de ne pas dépasser 90% de Cu lors de l'utilisation normale, pour éviter toute course supplémentaire engendrée par des modifications ou des erreurs sur les moules; ce qui entraînerait des dommages irréparables aux cylindres et de graves risques pour la sécurité.
- E** Todos los cilindros Special Springs están dotados de un margen adicional de carrera de 1÷3 mm (excepto NE, M90/TBM-TBI-TEM). Esto significa que el valor nominal Cu es completamente utilizable. De todos modos, no deja de ser aconsejable no superar el 90% de Cu en el uso práctico, para así prevenir posibles sobrecargas, causadas por modificaciones o errores en los moldes, con daños irreparables a los cilindros y graves riesgos de seguridad.
- P** Todos os cilindros Special Springs dispõem de reserva para pressões súbitas de 1÷3 mm (excluindo o NE, M90/TBM-TBI-TEM). Assim, o valor nominal Cu é completamente utilizável. Recomenda-se no entanto que não se excedam os 90% de Cu na utilização prática para prevenir eventuais pressões súbitas mais fortes, causadas por modificações ou erros nas estampagens, com danos irreparáveis nos cilindros e graves riscos para a



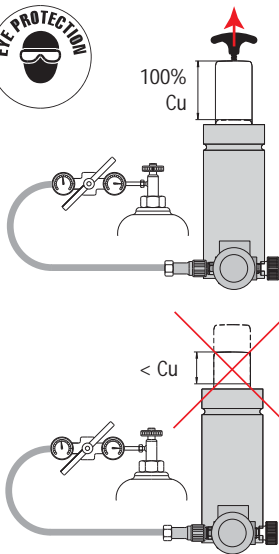
- I** Durante il caricamento non eccedere la pressione massima raccomandata per ogni modello.
- GB** When charging do NOT exceed the maximum recommended pressure for each model.
- D** Überschreiten Sie während der Ladung den für jedes Modell angegebenen Druckwert nicht.
- F** Durant le chargement, il est conseillé de ne pas dépasser la pression maximum recommandée pour chaque modèle.
- E** Durante la carga, no superar nunca la presión máxima aconsejada para cada modelo.
- P** Durante a carga, não exceder a pressão máxima recomendada para cada modelo.



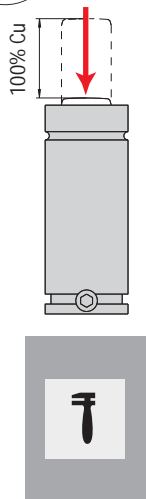
- I** Durante lo scaricamento con l'uso del dispositivo DDS, orientare il flusso del gas in direzione opposta all'operatore.
- GB** When discharging using a DDS device, point the gas flow away from operator.
- D** Richten Sie den Gasfluss während der Entladung mit Hilfe der DDS-Vorrichtung in die dem Bediener entgegengesetzte Richtung.
- F** Durant le déchargement à l'aide du dispositif DDS, orienter le flux du gaz dans la direction opposée à l'opérateur.
- E** Durante la descarga mediante el dispositivo DDS, orientar el flujo del gas en dirección contraria al operador.
- P** Durante a descarga com a utilização do dispositivo DDS, orientar o fluxo de gás na direcção oposta à do operador.



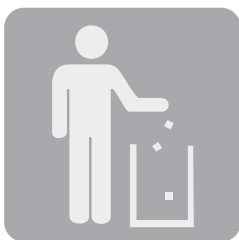
- I** Evitare qualsiasi lavorazione meccanica o impatto su corpo e stelo.
- GB** Avoid any mechanical tooling or impact on the body and the rod.
- D** Vermeiden Sie mechanische Bearbeitungen jeder Art oder sonstige Einwirkungen auf Körper und Kolbenstange.
- F** Éviter toute opération mécanique ou impact sur le corps et la tige.
- E** Evitar toda clase de elaboraciones mecánicas o de impactos en el cuerpo o en el vástago del cilindro.
- P** Evitar qualquer trabalho mecânico ou impacto sobre o corpo e embolo



- I** Durante il caricamento assicurarsi che lo stelo sia estratto al 100%. Per cilindri privi di foro filettato sullo stelo, caricare inizialmente con 5 bar (75 psi) per estrarre completamente lo stelo, quindi procedere fino alla pressione desiderata.
- GB** Ensure that the rod is 100% extracted when charging. For cylinders without a threaded hole on the rod, initially charge to 5 bar (75 psi) to extract the rod completely, then charge to the required.
- D** Stellen Sie während der Ladung sicher, dass der Schaft ganz ausgefahren ist. Für Zylinder ohne Gewindebohrung am Schaft laden Sie den Druck zu Beginn bei 5 Bar (75 psi), um den Schaft ganz herauszuziehen. Steigern Sie den Druck danach auf den gewünschten Wert.
- F** Durant le chargement, s'assurer que la tige soit complètement sortie. Les cylindres sans trou fileté sur la tige doivent être chargés initialement sous 5 bars (75 psi) pour extraire complètement la tige; procéder ensuite jusqu'à la pression désirée.
- E** Durante la carga, asegurarse de que el vástago sea extraído al 100%. En cilindros con vástago sin orificio roscado, comenzar con una carga de 5 bar (75 psi) a fin de extraer completamente el vástago. Sólo entonces proseguir cargando hasta alcanzar la presión deseada.
- P** Durante a carga, assegure-se de que o embolo esteja totalmente extraído. Para cilindros sem orifício roscado no embolo, carregar inicialmente com 5 bar (75 psi) para extrair completamente o embolo, depois, proceder até à pressão desejada.



- I** Solo personale qualificato dovrebbe eseguire la manutenzione. Eventuali errori possono essere causa di gravi rischi per la sicurezza o limitare la durata dei cilindri. Prima di eseguire qualsiasi intervento scaricare completamente la pressione e assicurare che lo stelo sia completamente compresso nel corpo.
- GB** Maintenance must only be conducted by qualified personnel. Errors would cause serious injury or reduce the working life of the cylinders. Before carrying out any work on the system, fully release all pressure and ensure that the rod is fully retracted into the body.
- D** Die Wartung sollte nur von qualifiziertem Personal vorgenommen werden. Etwaige Fehler können schwerwiegende Sicherheitsrisiken hervorrufen oder die Lebensdauer der Zylinder einschränken. Entladen Sie den Druck und stellen Sie sicher, dass der Schaft komplett in den Körper eingeführt ist, bevor Sie Eingriffe vornehmen.
- F** La maintenance doit être effectuée uniquement par du personnel qualifié. Les éventuelles erreurs peuvent engendrer de graves risques pour la sécurité ou limiter la durée de vie des cylindres. Avant d'effectuer toute opération, décharger complètement la pression et s'assurer que la tige soit complètement comprimée dans le corps.
- E** El mantenimiento debe ser efectuado única y exclusivamente por personal cualificado. Cualquier error podría causar graves riesgos de seguridad o limitar la vida útil de los cilindros. Antes de cualquier reparación, descargar completamente la presión y asegurarse de que el vástago quede completamente retraído dentro del cuerpo.
- P** A manutenção só deve ser executada por pessoal qualificado. Erros eventuais podem ser a causa de riscos graves para a segurança ou limitar a duração dos cilindros. Antes de executar qualquer intervenção, descarregar completamente a pressão e assegurar-se de que o embolo recolhido.

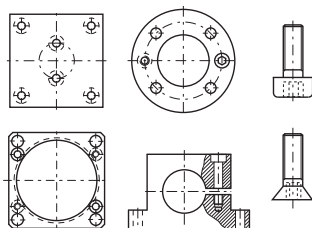
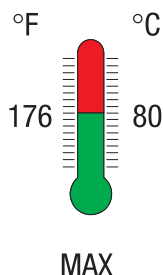
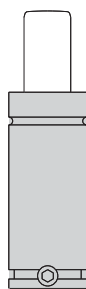
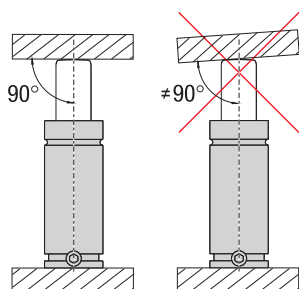


- I** Prima di gettare qualsiasi cilindro a gas scaricare completamente la pressione.
- GB** Before disposing of a gas spring ensure that all residual pressure is fully exhausted.
- D** Vor der Entsorgung eines Gaszylinders muss der Druck komplett abgelassen werden.
- F** Décharger complètement la pression, avant de jeter tout cylindre à gaz.
- E** Nunca tirar un cilindro de gas sin antes haber descargado por completo la presión.
- P** Antes de deitar fora qualquer cilindro a gás, descarregar completamente a pressão.

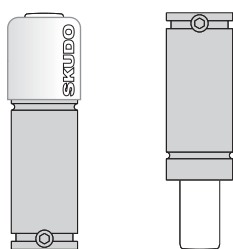


- I** Se un cilindro ha la struttura danneggiata, prima di qualsiasi manipolazione, scaricare completamente la pressione.
- GB** If a cylinder has structural damage, fully exhaust all pressure before any form of handling.
- D** Weist die Struktur eines Zylinders Beschädigungen auf, muss vor jedem Eingriff der Druck komplett abgelassen werden.
- F** Si la structure d'un cylindre est endommagée, décharger complètement la pression, avant d'effectuer toute opération.
- E** Si un cilindro presenta desperfectos en su estructura, descargar completamente la presión antes de proceder a revisarlo.
- P** Se um cilindro tiver a estrutura danificada, antes de qualquer manipulação, descarregar completamente a pressão.

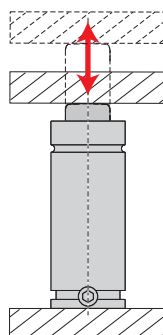
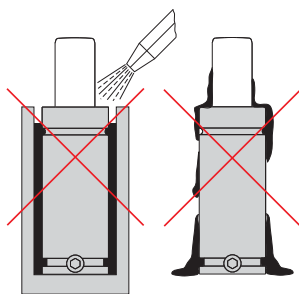




- I** Fissare sempre i cilindri direttamente attraverso gli specifici elementi di fissaggio.
- GB** Always fix the gas springs directly through the threaded holes on the bottom or with the fixing elements provided
- D** Fixieren Sie die Zylinder direkt mit den spezifischen Befestigungselementen.
- F** Fixer toujours les cylindres à l'aide des éléments spécifiques de fixation.
- E** Fijar siempre los cilindros directamente mediante los elementos de sujeción específicos.
- P** Fixar sempre os cilindros directamente através dos elementos de fixação específicos.



- I** In mancanza della protezione attiva SKUDO proteggere adeguatamente i cilindri da contaminanti: liquidi e solidi. In mancanza della protezione attiva SKUDO, un significativo miglioramento si ottiene montando i cilindri capovolti.
- GB** When the cylinder active protection SKUDO is missing or has been removed, adequately protect all gas springs from contaminants:solid or liquid. When the cylinder active protection SKUDO is missing or has been removed, a significant improvement can be obtained with the cylinders mounted upside-down.
- D** Bei fehlender aktiver Schutzvorrichtung SKUDO die Zylinder entsprechend vor Verunreinigungen schützen: Flüssigkeiten und Festkörper. Bei fehlender aktiver Schutzvorrichtung SKUDO wird durch Montage der Zylinder in auf den Kopf gestellter Position eine bedeutende Verbesserung erzielt.
- F** En absence de la protection active SKUDO il faut protéger adéquatement les cylindres contre les contaminants liquides et solides. En absence de la protection active SKUDO, une amélioration significative s'obtient en montant les cylindres renversés.
- E** A falta de la protección activa SKUDO proteger adecuadamente los cilindros contra contaminantes: líquidos y sólidos. A falta de la protección activa SKUDO, una notable mejora se obtiene montando los cilindros volcados.
- P** Na falta da proteção ativa SKUDO proteja adequadamente os cilindros contra contaminadores: líquidos e sólidos. Na falta da proteção ativa SKUDO, obtém-se uma significativa melhoria montando os cilindros de cabeça para baixo.



MAX. SPEED
0,8 - 1,8 m/sec

- I** Non confondere la velocità massima con la cadenza massima di cicli/min, come raccomandato nei grafici di ogni modello.
- GB** Do not confuse the maximum speed with the recommended maximum number of cycles/min, as indicated in the diagrams for each family of product.
- D** Acten Sie gemäß Empfehlung der Grafik für jedes Modell darauf, die Höchst-geschwindigkeit nicht mit dem maximalen Hübe/min zu verwechseln.
- F** Ne pas confondre la vitesse maximum avec la cadence maximum de cycles/min, ainsi qu'il est recommandédans les graphiques accompagnant tout modèle.
- E** No confundir la velocidad máxima con la cadencia máxima de ciclos/min, como se indica en los gráficos de cada modelo.
- P** Não confundir a velocidade máxima com a cadência de ciclos/min, como recomendado nos gráficos de cada modelo.

$$F_0 = ?$$



$$F_0 = P \cdot S$$

daN bar/psi cm²

- I** Per calcolare la forza iniziale (Fo) di un cilindro a gas è sufficiente moltiplicare la pressione di caricamento massima (P) per l'areadi tenuta, stelo o pistone, della guarnizione (S).
- GB** To calculate the initial force of each gas cylinder, simply multiply the maximum pressurization (P) by the area of seal, rod or piston, of the sealing gasket (S).
- D** Zur Berechnung der Ausgangsleistung (Fo) eines Gaszylinders muss der max. Ladedruck (P) mit der von der Dichtung abgedichteten Fläche am Schaft oder Kolben (S) multipliziert werden.
- F** Pour calculer la force initiale (Fo) d'un cylindre à gaz, il suffit de multiplier la pression maximum de chargement (P) par la surface d'étanchéité (tige ou piston) du joint (S).
- E** Para calcular la fuerza inicial (Fo) de un cilindro de gas, se multiplica la presión máxima de carga (P) por el área de estanqueidad, vástago o pistón, de la guarnición.
- P** Para calcular a força inicial (Fo) de um cilindro a gás, basta multiplicar a pressão de carga máxima (P) pela área de estanquidade do embolo/pistão, da guarnição.

bar/psi

$$P_n = ?$$

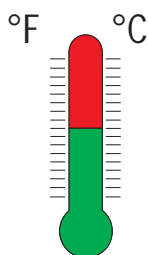


$$\frac{F_n}{S}$$

daN

cm²

- I** Per determinare la pressione di caricamento necessaria per ottenere una forza (Fn) diversa dalla nominale (Fo) è sufficiente dividere la forza richiesta (Fn) per l'area di tenuta, stelo o pistone, della guarnizione.
- GB** To determine the pressure level required to achieve a force (Fn) different from the nominal (Fo), simply divide the required force (Fn) by the area of seal, rod or piston, of the sealing gasket .
- D** Zur Bestimmung des für eine spezifische Leistung (Fn) benötigten Ladedrucks, der vom Nenndruck (Fo) abweicht, muss die benötigte Leistung (Fn) durch die von der Dichtung abgedichteten Fläche an der Kolbenstange oder dem Kolben dividiert werden.
- F** Pour calculer la pression de chargement nécessaire pour obtenir une force (Fn) différente de la force nominale (Fo) il suffit de diviser la force requise (Fn) par la surface d'étanchéité (tige ou piston) du joint.
- E** Para calcular la presión de carga necesaria a fin de obtener una fuerza (Fn) distinta de la nominal (Fo), se divide la fuerza pedida (Fn) por el área de estanqueidad, vástago o pistón, de la guarnición.
- P** Para determinar a pressão de carga necessária para obter uma força (Fn) diferente da nominal (Fo), basta dividir a força necessária (Fn) pela área de estanquidade do embolo/pistão, da guarnição.



±1 °C = approx. ±0,33% P

- I** Ogni variazione della temperatura, rispetto al valore nominale di calcolo di 20°C, determina una variazione della pressione del gas (P).
- GB** Any variation in temperature in relation to the nominal calculation figure of 20°C, causes a change in gas pressure (P).
- D** Jede Temperatur, die vom berechneten Nennwert (20°C) abweicht, bewirkt eine Änderung des Gasdrucks (P).
- F** Chaque modification de la température, par rapport à la valeur nominale de calcul de 20°C, détermine une modification de la pression du gaz (P)
- E** Toda variación de la temperatura con respecto al valor nominal de cálculo de 20°C, determina una variación de la presión del gas (P).
- P** Qualquer variação da temperatura, no que respeita ao valor nominal de cálculo de 20°C, determina uma variação da pressão do gás (P).



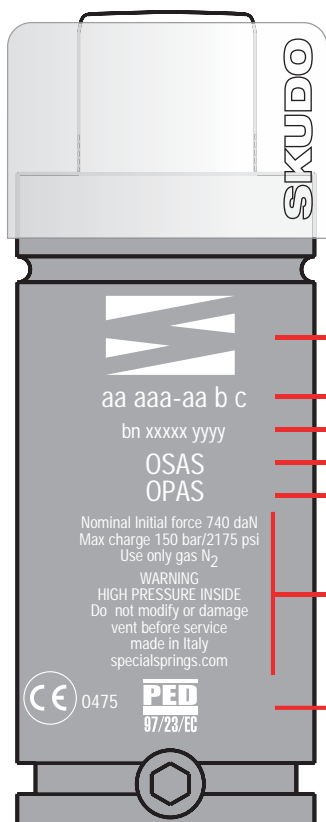
ORDER

- I** Per cilindri, flange e ogni accessorio/dispositivo: **quantità + codice** (es. 8 SC 1500-80-B).
- GB** For cylinders, fixings and any accessories/device: **quantity + code** (e.g. 8 SC 1500-80-B).
- D** Für Zylinder, Befestigungen und weiteres Zubehör oder Vorrichtungen: **Menge + Code** (z. B. 8 SC 1500-80-B).
- F** Pour les cylindres, brides et tout autre accessoire ou dispositif: **quantité + référence** (par ex. 8 SC 1500-80-B).
- E** Para los cilindros, bridas y cualquier otro accesorio/dispositivo: **cantidad + código** (p.ej. 8 SC 1500-80-B).
- P** Para os cilindros, falange e outros acessórios/dispositivos: **quantidade+ código** (ex. 8 SC 1500-80-B).



GENERAL INFORMATION

Informazioni generali - General Information - Allgemeine Informationen
Information Générales - Información general - Informações gerais



I

- a) codice modello
- b) indice revisione
- c) versione collegabile a sistema
- d) lotto di produzione
- e) info generali
- f) soggetto a marchiatura CE/PED 97/23/EC
- g) sicurezza attiva stelo
- h) sicurezza attiva oltre corsa e pressione

F

- a) Référence modèle
- b) N° de révision
- c) Version pouvant être reliée à un système
- d) Lot de production
- e) Information générales
- f) Peut être marqué CE/PED 97/23/EC
- g) Sécurité active tige
- h) Sécurité active outre-course et pression

GB

- a) Model code
- b) Revision indicator
- c) Hosed-system version
- d) Batch number
- e) General info
- f) Subject to CE/PED 97/23/EC
- g) Rod Active Safety
- h) Over stroke-pressure active safety

E

- a) Código de modelo
- b) Indicador de revisión
- c) Versión conectable a sistema
- d) Lote de producción
- e) Información general
- f) Sujeto a marcado CE/PED 97/23/EC
- g) seguridad activa vástago
- h) seguridad activa ultra carrera y presión

D

- a) Modellcode
- b) Revisionsindex
- c) Version kann an das System angeschlossen werden
- d) Produktionsposten
- e) Allgemeine Informationen
- f) Unterliegt der CE/PED-Kennzeichnung gemäß Richtlinie 97/23/EG
- g) Aktive Sicherheitsvorrichtung Schaft
- h) Aktive Sicherheitsvorrichtung Überhub und -druck

P

- a) Código do modelo
- b) Índice de revisão
- c) Versão que pode ser ligada em sistema
- d) Lote de produção
- e) Informações gerais
- f) Sujeito a marcação CE/PED 97/23/EC
- g) Segurança ativa haste
- h) Segurança ativa além curso e pressão

I

I valori di durata minima (106) rappresentati sono sempre indicativi e sono il risultato di esperienze pratiche e calcoli tecnici. Un uso corretto e condizioni di lavoro ottimali garantiscono durate molto superiori ai valori indicati.

GB

The minimum estimated life figures (106) are always approximate and are the fruit of practical experience and theoretical calculation. Correct use and optimum working conditions will ensure a much longer operating life than indicated.

D

Die jeweils angegebene Mindestlebensdauer (106) ist immer als Richtwert zu verstehen. Dieser ist das Ergebnis praktischer Erfahrungen und theoretischer Berechnungen. Der korrekte Einsatz und optimale Arbeitsbedingungen gewährleisten eine erhebliche Erhöhung der angegebenen Werte.

F

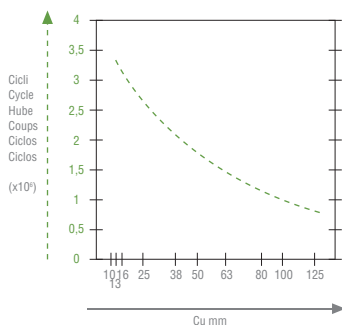
Les valeurs indiquées de la durée de vie minimum (106) sont toujours indicatives; elles sont le résultat d'expériences pratiques et de calculs théoriques. Une utilisation correcte et des conditions de travail optimales garantissent des durées de vie supérieures aux valeurs indiquées.

E

Los valores de duración mínima (106) representados son siempre orientativos, resultado de experimentos prácticos y de cálculos teóricos. Un uso correcto y unas condiciones de trabajo idóneas garantizan una vida útil muy superior a los valores indicados.

P

Os valores de duração mínima (106) representados são sempre indicativos e são o resultado de experiências práticas e de cálculos teóricos. Uma utilização correcta e condições de trabalho óptimas garantem durações muito superiores aos valores indicados.



I

La cadenza massima consigliata (cicli/min) è indicativa per una lunga durata di funzionamento.

GB

The recommended maximum speed (cycles/min) is intended for an extended working life. Faster speeds, even though possible and compliant with correct use, will reduce the working life.

D

Die Beachtung des empfohlenen maximalen Hubtaktes (Hube/min.) ist für eine lange Lebensdauer maßgebend.

F

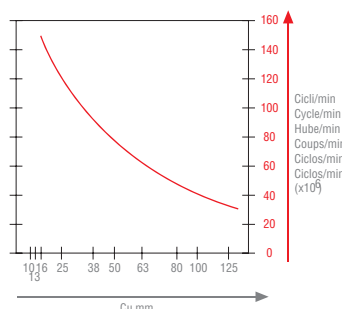
La cadence maximum conseillée (cycles/min) indicative pour une longue durée de fonctionnement.

E

La cadencia máxima aconsejada (ciclos/min) es indicativa para una larga vida útil.

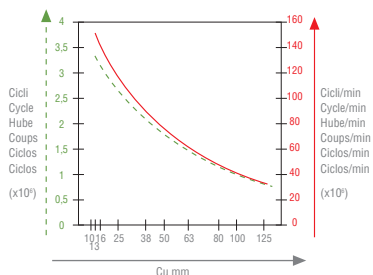
P

A cadência máxima aconselhada (ciclos/min) indicativa para uma duração de funcionamento longa.



GENERAL INFORMATION

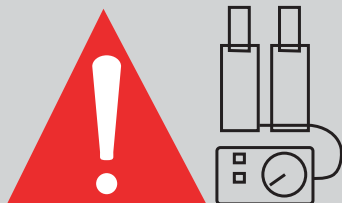
Informazioni generali - General Information - Allgemeine Informationen
Information Générales - Información general - Informações gerais



- I** La durata minima e il numero di cicli/min. sono riferiti all'utilizzo di tutta la corsa nominale (Cu). Un uso parziale determinerà un aumento dei valori indica.
- GB** The minimum estimated life and the number of cycles/min are referred to the full use of the nominal stroke (Cu). Partial use will result in an increase in these figures.
- D** Die Mindestlebensdauer und Anzahl Hube/min. beziehen sich auf den gesamten Nennhub (Cu). Die partielle Nutzung bewirkt eine Erhöhung der angegebenen Werte.
- F** La durée minimum et le nombre de cycles/min se rapportent à l'utilisation de toute la course nominale (Cu). Une utilisation partielle déterminera l'augmentation des valeurs indiquées.
- E** La vida útil mínima y el número de ciclos/min implican el uso de toda la carrera nominal (Cu). Un uso parcial determinará un aumento de los valores indicados.
- P** A duração mínima e o número de ciclos/min referem-se à utilização da totalidade do curso (Cu). Uma utilização parcial determinará um aumento dos valores indicados.



- I** Si raccomanda ai costruttori di stampi di consegnare con le attrezzature i fogli di istruzione e uso allegati ai cilindri e agli accessori forniti da Special Springs.
- GB** We recommend all die-makers to deliver all tools with the instructions sheets provided with cylinders and accessories supplied by Special Springs
- D** Werkzeugbauern wird empfohlen, zusammen mit dem Werkzeug die Gebrauchsanweisung, die den Gasdruckfedern und Zubehörteilen von Special Springs beiliegt, mitzuliefern
- F** Nous conseillons à tous les outilleurs de fournir leurs outils accompagnés de la fiche d'instruction sur les ressorts gaz et accessoires établie par Special Springs.
- E** Se recomienda a los troquelistas acompañar los troqueles con las instrucciones de los cilindros y accesorios Special Springs.
- P** Recomenda-se aos construtores de ferramentas, entregar juntamente com a ferramenta a documentação e intruções de uso de cilindros, e respectivos acessórios fornecidos pela Special Springs.



- I** Tutti i cilindri collegabili a sistema e specificatamente codificati (_ _ - N / _ _ - NA) sono forniti senza valvola unidirezionale, senza pressione e con il solo tappo di chiusura del foro di collegamento (escluso serie M). Nel caso si desideri trasformare dei cilindri autonomi in cilindri collegabili a sistema è sufficiente ordinare i raccordi e i tubi necessari e seguire le istruzioni specifiche per ogni serie pubblicate nel sito www.specialsprings.com.
- GB** All cylinders which can be connected to the system and are specifically coded (_ _ - N / _ _ - NA) are supplied without the one-way valve, without pressure and with only the closure plug of the connection hole (excluding series M). If you wish to convert independent cylinders into system-connectable cylinders, order the necessary unions and pipes, and follow the specific instructions for every series published on site www.specialsprings.com.
- D** Alle in das System integrierbaren und speziell kodierte Zylinder (_ _ - N / _ _ - NA) werden ohne Rückschlagventil, ohne Druck und nur mit dem Verschlussdeckel der Anschlussöffnung geliefert (ausgenommen Serie M). Sollten eigenständige Zylinder in an das System anschlussfähige Zylinder umgebaut werden sollen, genügt es, die erforderlichen Anschlüsse und Leitungen zu bestellen sowie die für die jeweilige Serie auf der Internetseite www.specialsprings.com veröffentlichten Hinweise zu beachten.
- F** Tous les cylindres qui peuvent être raccordés au système et qui possèdent un code d'identification spécifique (_ _ - N / _ _ - NA) sont fournis sans valve unidirectionnelle ni pression. Seul le bouchon de fermeture de l'orifice de raccordement est fourni (sauf série M). Au cas où l'on souhaiterait transformer des cylindres autonomes en cylindres à système raccordables, il suffira de commander les raccords et les tubes nécessaires puis de suivre les instructions spécifiques de chaque série, publiées sur le site www.specialsprings.com.
- E** Todos los cilindros que se pueden conectar al sistema, específicamente codificados (_ _ - N / _ _ - NA), se suministran sin válvula unidireccional y sin presión, sólo con el tapón de cierre del orificio de conexión (menos serie M). Si se desea transformar cilindros autónomos en cilindros conectables a sistema, es suficiente pedir los empalmes y los tubos necesarios y seguir las instrucciones específicas para cada serie publicadas en el sitio www.specialsprings.com.
- P** Todos os cilindros que podem ser ligados ao sistema e especificamente codificados (_ _ - N / _ _ - NA) são fornecidos sem válvula unidireccional, sem pressão e somente com a tampa de fechamento do furo de ligação (Não incluída série M). Caso queira-se transformar cilindros autónomos em cilindros acopláveis ao sistema, basta encomendar as conexões e tubos necessários e seguir as instruções específicas para cada série, publicadas no site www.specialsprings.com.



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