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

2014

SPECIAL SPRINGS

What's new, changed or integrated Vs. catalog no. 9800C04600112

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⚠ Phasing out

OSAS (Over Stroke Active Safety)

Sicurezza Attiva Oltre Corsa

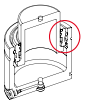
Cos'è?

La Sicurezza Attiva Oltre Corsa sono 3 soluzioni esclusive Special Springs per scaricare la pressione in modo controllato e completo quando il cilindro ha subito un oltre corsa.

Vantaggi OSAS

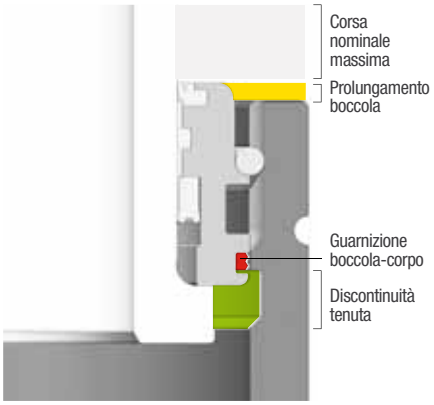
- Scarica in modo controllato e completo la pressione interna del cilindro quando ha subito un oltre corsa.
- Riduce il rischio di danni e pericoli dovuti alla proiezione di parti in pressione.
- Si attiva automaticamente senza intervento dell'operatore.
- Non aumenta il costo del cilindro.

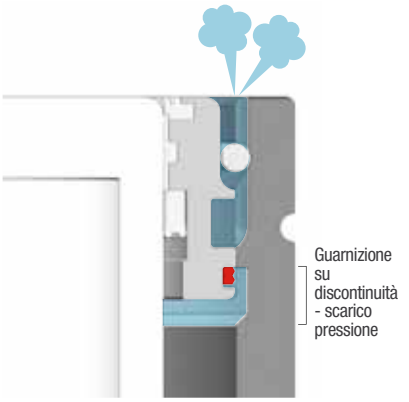
Come è realizzata?

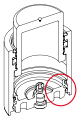


1. Design boccola - corpo

OSAS è la combinazione di un prolungamento verso l'esterno della boccola con delle discontinuità sulla parete di contatto della guarnizione boccola-corpo. OSAS si attiva senza deformazione del corpo, aumentando ulteriormente la sicurezza per l'utilizzatore.

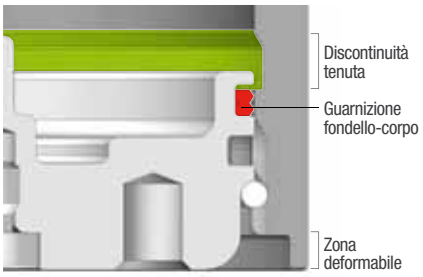


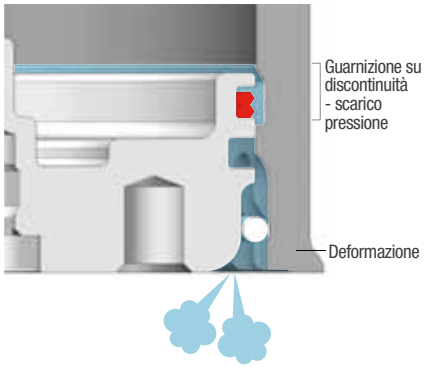


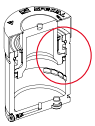


2. Design fondello - corpo

OSAS è la combinazione di una zona deformabile del corpo con delle discontinuità sulla parete di contatto della guarnizione fondello-corpo. OSAS si attiva senza pericolo strutturale per il cilindro, aumentando ulteriormente la sicurezza per l'utilizzatore.

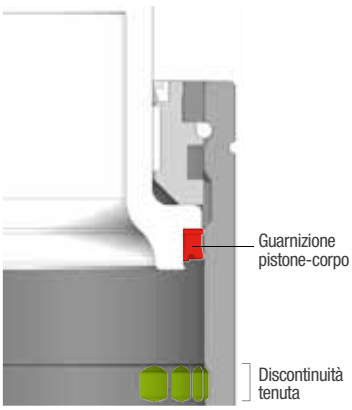


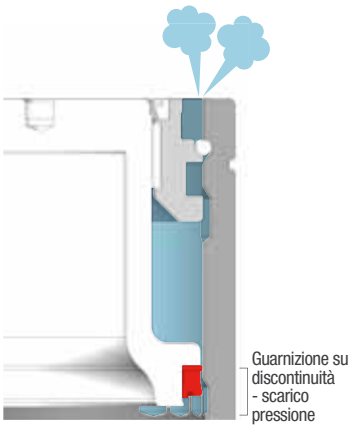




3. Design pistone - corpo

OSAS è realizzata con delle discontinuità sulla parete di contatto della guarnizione pistone.OSAS si attiva senza deformazione del corpo, aumentando ulteriormente la sicurezza per l'utilizzatore.





USAS (Uncontrolled Speed Active Safety)

Sicurezza Attiva Ritorno Incontrollato

Cos'è?

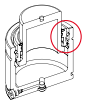
La Sicurezza Attiva Ritorno Incontrollato sono 3 soluzioni esclusive Special Springs per scaricare la pressione in modo controllato e completo senza eiezione di parti quando il cilindro ha subito dei ritorni incontrollati. Tipicamente ciò accade quando parti di stampo o pezzi stampati, inceppati o grippati, sottoposti alla spinta dei cilindri a gas, si svincolano in modo incontrollato.

Vantaggi USAS

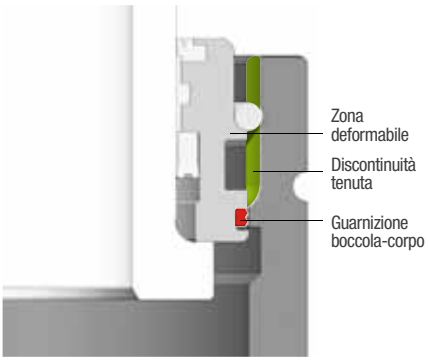
- Scarica in modo controllato e completo la pressione del cilindro quando soggetto a ritorni incontrollati.
- Riduce il rischio di danni e pericoli dovuti alla proiezione di parti in pressione.
- Si attiva automaticamente senza intervento dell'operatore.
- Non aumenta il costo del cilindro.

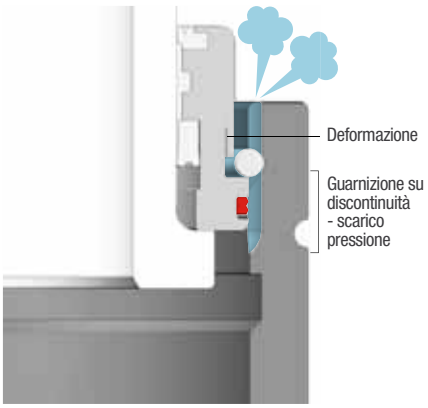
Come è realizzata?

1. Design boccola - corpo

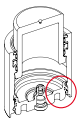


USAS è la combinazione di una zona deformabile della boccola in contatto con l'anello di ritegno a C e delle discontinuità sulla parete di contatto della guarnizione boccola-corpo. USAS si attiva senza pericolo strutturale per il cilindro, aumentando ulteriormente la sicurezza per l'utilizzatore.

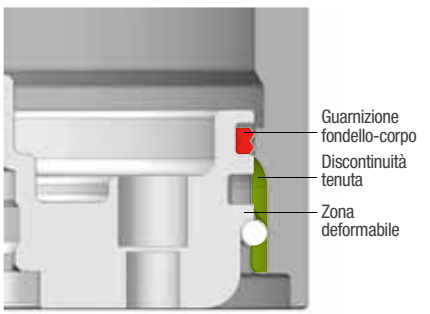


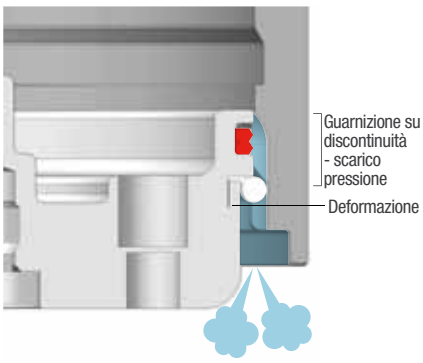


2. Design fondello - corpo

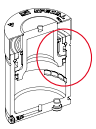


USAS è la combinazione di una zona deformabile del fondello in contatto con l'anello di ritengo a C e delle discontinuità sulla parete di contatto della guarnizione fondello-corpo. USAS si attiva senza pericolo strutturale per il cilindro, aumentando ulteriormente la sicurezza per l'utilizzatore.

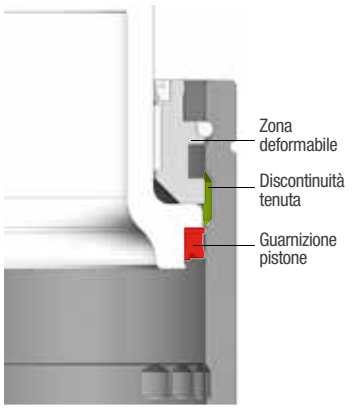


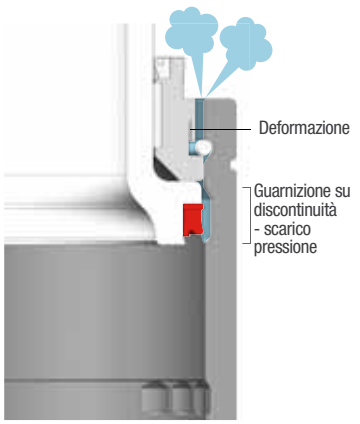


3. Design pistone - corpo



USAS è la combinazione di una zona deformabile della boccola in contatto con l'anello di ritegno a C e delle discontinuità sulla parete di contatto della guarnizione pistone. USAS si attiva senza pericolo strutturale per il cilindro, aumentando ulteriormente la sicurezza per l'utilizzatore.





OPAS (Over Pressure Active Safety)

Sicurezza Attiva Oltre Pressione

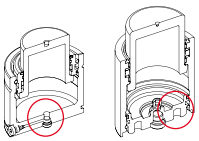
Cos'è?

La Sicurezza Attiva Oltre Pressione sono 2 soluzioni esclusive Special Springs per scaricare in modo controllato e completo la pressione quando viene superato il valore massimo consentito.Tipicamente ciò accade quando il volume della camera del gas si riduce per la presenza di liquidi e contaminanti di stampaggio.

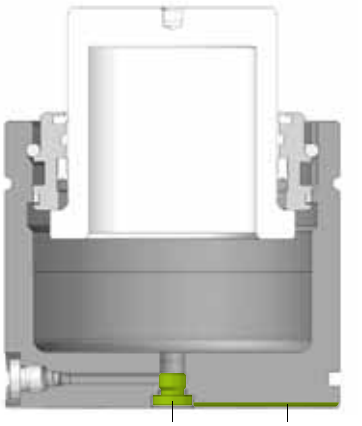
Vantaggi OPAS

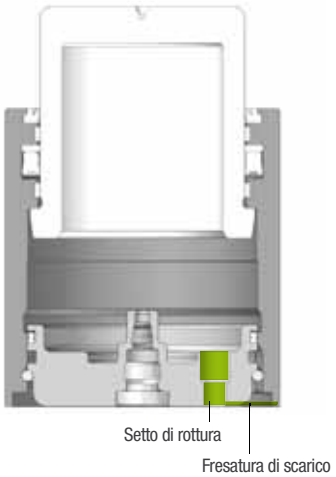
- Scarica in modo controllato e completo la pressione del cilindro quando viene superato il valore massimo consentito.
- Riduce il rischio di danni e pericoli dovuti alla proiezione di parti in pressione.
- Si attiva automaticamente senza intervento dell'operatore.
- Non aumenta il costo del cilindro.

Come è realizzata?



OPAS è la combinazione di un setto di rottura calibrato integrale sul fondello o un tappo di rottura montato sul corpo del cilindro, con una fresatura di scarico sulla base di appoggio.





SKUDO (Active Protection from Contaminants)

Protezione Attiva da Contaminanti

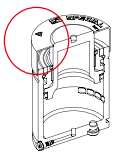
Cos'è?

La Protezione Attiva da Contaminanti è una soluzione esclusiva di Special Springs per proteggere i componenti di tenuta e guida da contaminanti liquidi e solidi ed eliminare situazioni di sovra pressione.

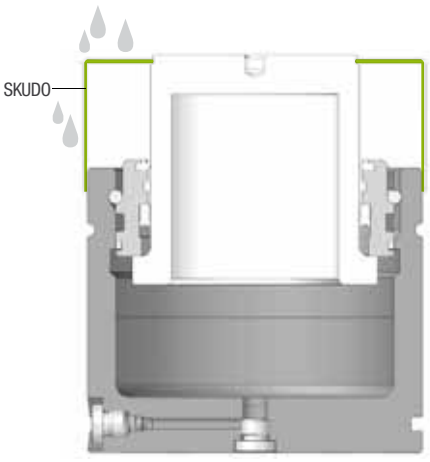
Vantaggi SKUDO

- Elimina qualsiasi danno da contaminanti ai componenti di guida e tenuta.
- Aumenta signifi cativamente la vita del cilindro in presenza di contaminanti liquidi e solidi.
- Non aumenta l'altezza del cilindro.
- È una protezione non soggetta ad usura alcuna.
- È disponibile per tutti i cilindri Special Springs.

Come è realizzata?



SKUDO è un cappuccio protettivo di materiale plastico agganciato direttamente e in modo solidale allo stelo senza modifi ca alcuna della superfi cie di contatto con la piastra premente.



AFFIDABILITÀ

PED 97/23/CE

La progettazione e la produzione dei cilindri a gas Special Springs sono realizzate nel pieno rispetto delle normative vigenti per i recipienti in pressione come stabilito dalla direttiva PED 97/23/CE.

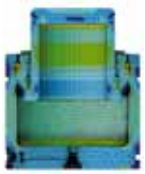
CE 0496

Vantaggi

- Maggiore garanzia per il cliente con prodotti e componenti più sicuri.

FEM - CAE

Tutti i prodotti Special Springs sono sviluppati e validati con l'utilizzo dei più avanzati sistemi di analisi FEM (finite element method) e CAE (computer aided engineering).



Vantaggi

- Maggiore garanzia per il cliente con prodotti e componenti più sicuri.

STRUTTURA DEL CILINDRO A GAS

Tutti i componenti strutturali delle molle a gas Special Springs sono progettati e costruiti per supportare minimo 2.000.000 di cicli completi alla massima pressione, temperatura e per ogni tipo di fissaggio.

> 2.000.000

Vantaggi

- Maggiore garanzia per il cliente con prodotti e componenti più sicuri.

PROVE DINAMICHE

Test di durata e prove fisiche sui prodotti finiti, con simulazione di condizioni di utilizzo gravose e pericolose, sono elemento essenziale per la completa validazione dei progetti e delle soluzioni tecniche
Per lo sviluppo delle sicurezze attive Special Springs ha realizzato macchine e impianti idonei per la verifica della reale efficacia dei dispositivi di sicurezza

Vantaggi

- Maggiore garanzia per il cliente con prodotti e componenti più sicuri e realmente testati.

FORMAZIONE & SUPPORTO TECNICO

CONOSCENZA

La conoscenza è un elemento fondamentale per azioni quotidiane di successo, più conosciamo meglio facciamo. Questo concetto è da sempre presente nella filosofia del lavoro di Special Springs. Da molti anni Special Springs è impegnata per aumentare la conoscenza dei prodotti e delle loro caratteristiche unitamente alle migliori tecniche di utilizzo attraverso formazioni teoriche e pratiche.

Vantaggi

- Maggiore conoscenza degli utilizzatori sui reali vantaggi offerti dai cilindri a gas Special Springs.
- Maggiore conoscenza degli utilizzatori sui più corretti metodi di utilizzo con vantaggi economici e di sicurezza.
- Maggiore sensibilità e coscienza sull'importanza delle sicurezze attive sui cilindri a gas.

SUPPORTO TECNICO

Special Springs, da sempre impegnata per migliorare il supporto tecnico agli utilizzatori, fornisce con ogni cilindro o suo componente un completo foglio di istruzioni multilingua.

Vantaggi

- Maggiore confidenza dell'utilizzatore verso i cilindri a gas.
- Maggiore sicurezza con riduzione di danni e rischi per errato utilizzo.
- Risparmio economico con produzioni più efficienti.

2D - 3D CAD FILES

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CAD ENASI

OSAS

Over Stroke Active Safety

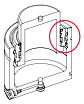
What's it?

OSAS are 3 unique Special Springs safety solution devices, which exhaust pressure in a controlled and complete mode, when working stroke exceeds the nominal value.

OSAS' Benefits

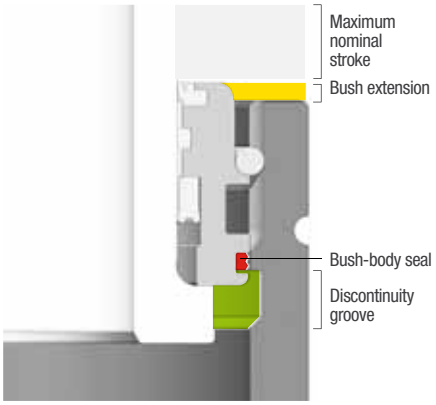
- Exhausts pressure in a controlled and complete mode, when the cylinder has been overstroked.
- Reduces the risk of tool damage or injury due to ejection of parts under pressure.
- Self activates automatically regardless of users' intervention.
- Does not increase the cost of the cylinders.

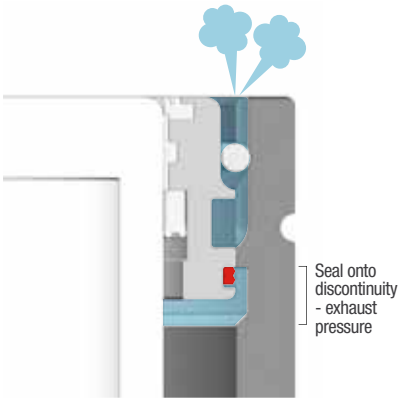
How is it made?

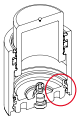


1. Bush-body design

OSAS is the combination of an outward extension of the bush with discontinuity groove on the body-bush sealing wall.
OSAS self activates without deforming the body of the cylinder, further improving safety for users.

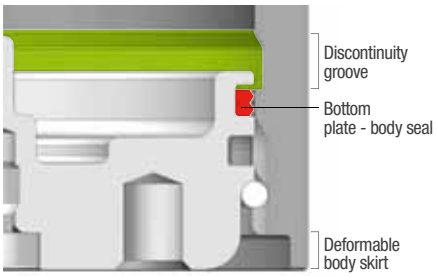


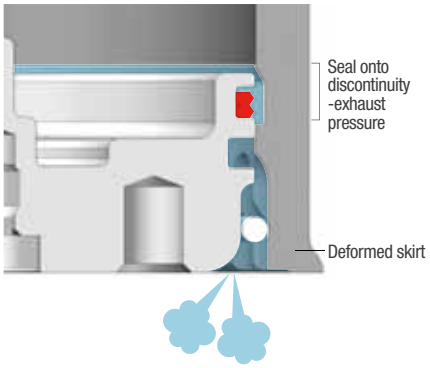


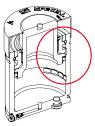


2. Bottom plate-body design

OSAS is the combination of a deformable body skirt with discontinuity groove on the body-bottom plate sealing wall.
OSAS self activates without causing structural damages to the cylinder, further improving safety for users.

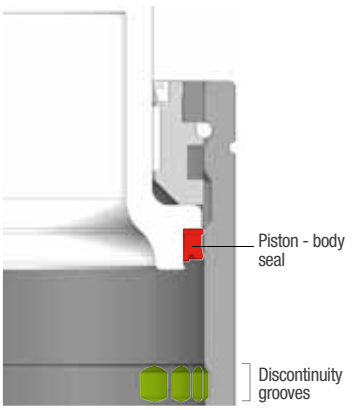


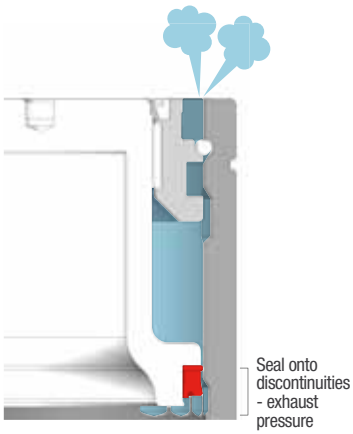




3. Piston-body design

OSAS are discontinuity grooves on the body-piston sealing wall.
OSAS self activates without deforming the body of the cylinder, further improving safety for users.





USAS

Uncontrolled Speed Active Safety

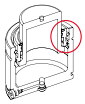
What's it?

USAS are 3 unique Special Springs safety solution devices, which exhaust pressure in a controlled and complete mode, without ejection of parts when the cylinder has been stressed by uncontrolled return of the piston rod.This is typically caused by the seizure and jam of the die plates or stamped parts that, subjected to pressure thrust, are released in an uncontrolled manner.

USAS' Benefits

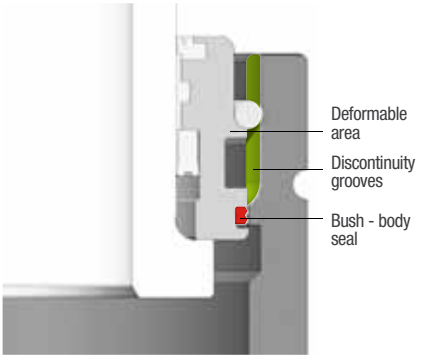
- Exhausts pressure in a controlled and complete manner when the cylinder has been stressed by uncontrolled returns.
- Reduces the risk of tool damage or injury due to ejection of parts under pressure.
- Self activates automatically regardless of users' intervention.
- Does not increase the cost of the cylinders.

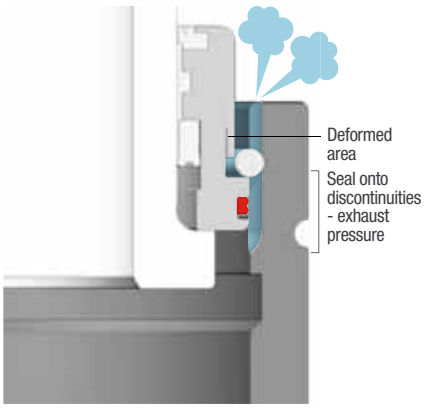
How is it made?

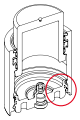


1. Bush-body design

USAS is the combination of a deformable part of the bushing in contact with the retaining C-ring and the discontinuities on the wall of contact of the body-bush seal.
USAS self activates without causing structural damages to the cylinder, further improving safety for users.

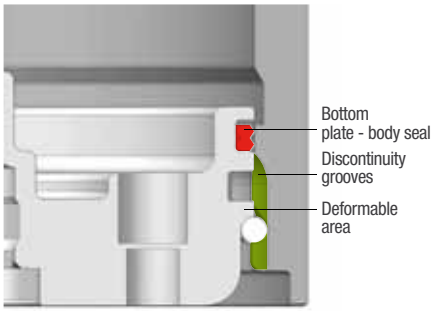


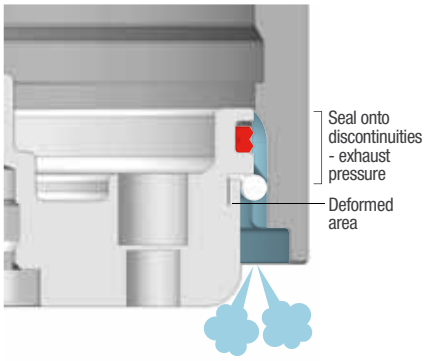


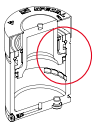


2. Bottom plate-body design

USAS is the combination of a deformable part of the bottom plate in contact with the retaining C-ring and the discontinuities on the wall of contact of the body-bottom plate.
USAS self activates without causing structural damages to the cylinder, further improving safety for users.

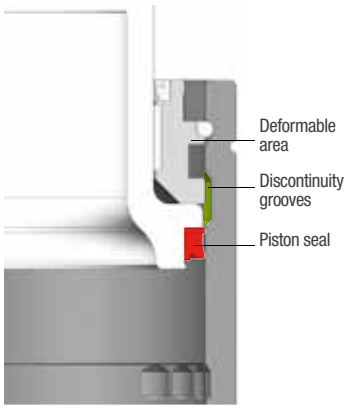


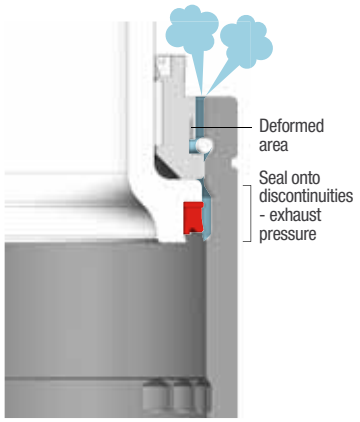




3. Piston-body design

USAS is the combination of a deformable part of the bushing in contact with the retaining C-ring and the discontinuities on the wall of contact of the piston seal.
USAS self activates without causing structural damages to the cylinder, further improving safety for users.





OPAS

Over Pressure Active Safety

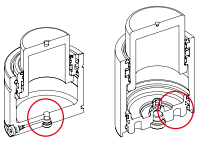
What's it?

OPAS are 2 unique Special Springs safety solution devices, built or mounted on the bottom of the cylinders, which exhaust pressure in a controlled and complete manner when the latter exceeds maximum allowed.This is typically caused when stamping contaminants get into the gas room reducing its volume.

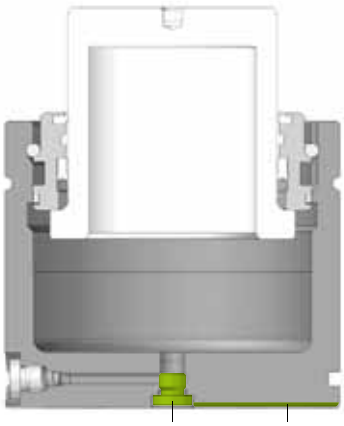
OPAS' Benefits

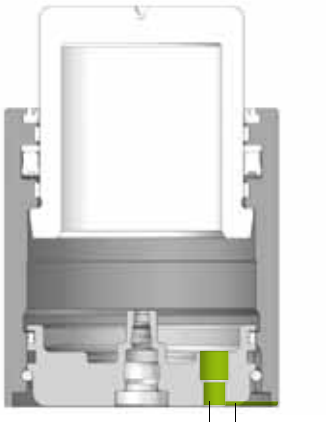
- Exhausts the pressure in a controlled and complete manner when it exceeds the maximum value allowed.
- Reduces the risk of tool damage or injury due to ejection of parts under pressure.
- Self activates automatically regardless of users' intervention.
- Does not increase the cost of the cylinders.

How is it made?



OPAS is either the combination of a rupture septum or a rupture plug positioned in the bottom of the cylinders, with an exhaust milling on the bottom contact surface.





SKUDO

Active Protection from Contaminants

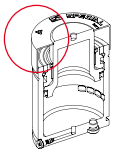
What's it?

SKUDO is a unique Special Springs solution, which protects the sealing and guiding components of the cylinder from liquid and solid contaminants and which eliminates situations of over pressure.

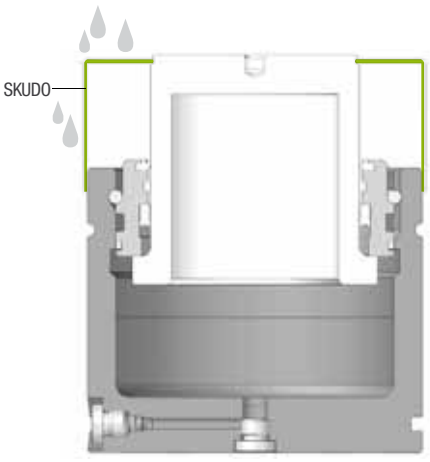
SKUDO' Benefits

- Eliminates damages to guiding and sealing components caused by contaminants.
- Signifi cantly increases the life of cylinders used in severe working environments.
- Does not alter the height of the cylinder.
- Does not wear out.
- Is available for all Special Springs cylinders.

How is it made?



SKUDO is a protective plastic cap securely fi xed on the top of the rod, with no alteration to the contact surface of the rod with the plate.



RELIABILITY

PED 97/23/CE

The design and manufacturing of SPECIAL SPRINGS gas cylinders are in full compliance with the European regulations for high pressure vessels, in accordance with directive PED 97/23/CE.

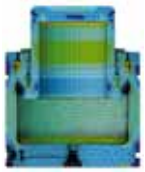
CE 0496

Benefits

- Greater assurance for customers of safer products and components.

FEM - CAE

All Special Springs products are developed and validated via the use of the most advanced FEM (fi nite element method) and CAE (computer aided engineering) analysis systems



Benefits

- Greater assurance for customers of safer products and components.

STRUCTURE OF A GAS CYLINDER

All structural components of Special Springs' gas springs are designed and built to withstand a minimum of 2,000,000 complete cycles at maximum pressure, temperature and for all types of fixings.

> 2.000.000

Benefits

- Greater assurance for customers of safer products and components.

DYNAMIC TESTS

Endurance and structural crash tests, with heavy and dangerous working conditions, are essential and continuously carried out on finished products, in order to attain complete validation of design and technical solutions.
To develop the active safety features, Special Springs has designed and built special custom machines and equipment, suitable to test the efficiency of the features at different working conditions.

Benefits

- Greater assurance for customers of tested safer products and components.

SUPPORT AND TRAINING

KNOWLEDGE

Knowledge is an essential element for successful daily actions;the more we know, the better we perform.
This concept has always been one of Special Springs' core values.
For many years the company has committed to increase knowledge of products along with their characteristics and their best utilisations techniques, through theoretical and practical training.

Benefits

- Increased knowledge of users, in regards to the real benefits given by Special Springs gas cylinders. (i.e.: reduction of tool damages and injury)
- Increased knowledge of users on how to appropriately use the products, hence benefit from cost and production efficiency.
- Increased knowledge of users on the importance of our gas cylinders safety features.

TECHNICAL SUPPORT

Special Springs has always been committed to provide technical support for users; we provide a thorough multilingual instruction sheet with each cylinder or component.

Benefits

- Increased confi dence of user in utilising gas cylinders.
- Increased safety with reduction of tool damanges and injuries due to inappropriate usage.
- Cost savings with increased production effi ciency.

2D - 3D CAD FILES

www.partserver.com

CAD ENASI

OSAS

Aktive Überhubsicherung

Was ist OSAS?

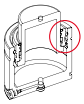
Die aktive Überhubsicherung OSAS besteht aus drei exklusiven Special Springs Lösungen zur kontrollierten und vollständigen Druckentladung bei Überhub der Gasdruckfeder.

OSAS Vorteile

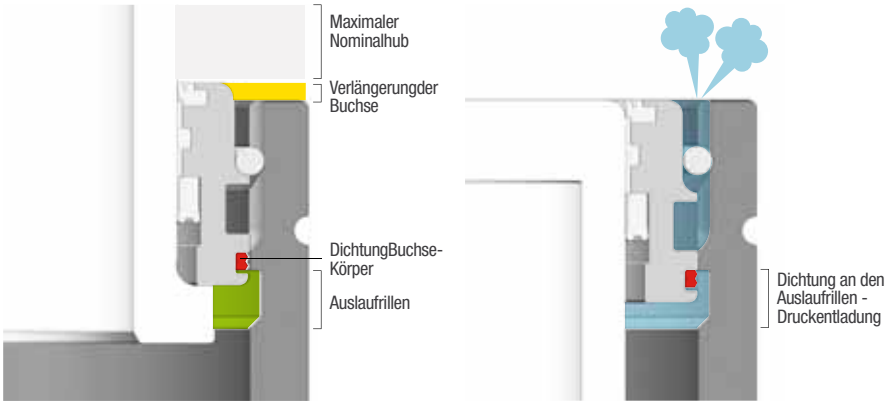
- ermöglicht das kontrollierte und komplette Entladen des Innendrucks der Gasdruckfeder bei Überhub.
- reduziert das Risiko von Schäden und Gefahren durch wegschleudernde, unter Druck stehende Teile.
- aktiviert sich automatisch bei einem Überhub.
- erhöht die Kosten der Gasdruckfeder nicht.

Wie ist OSAS aufgebaut?

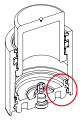
1. Ausführung Körper - Buchse



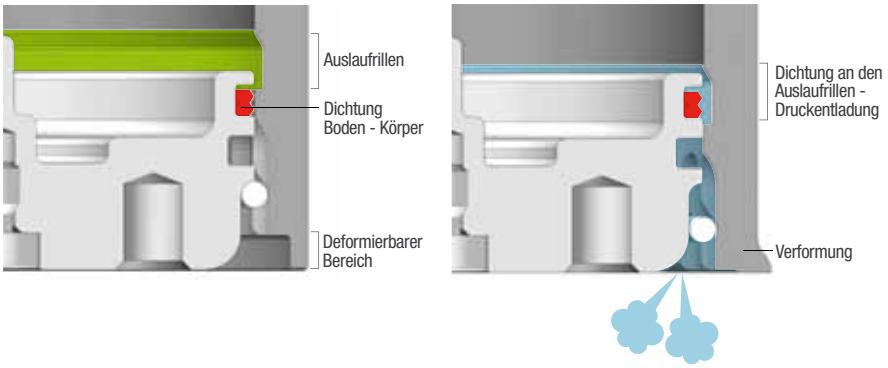
OSAS ist die Kombination einer Verlängerung der Buchse nach außen mit Auslaufrillen an der Kontaktwand der Dichtung Körper-Buchse.
OSAS aktiviert sich ohne Deformation des Körpers, wodurch die Sicherheit des Anwenders erhöht wird.



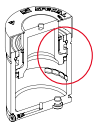
2. Ausführung Körper - Boden



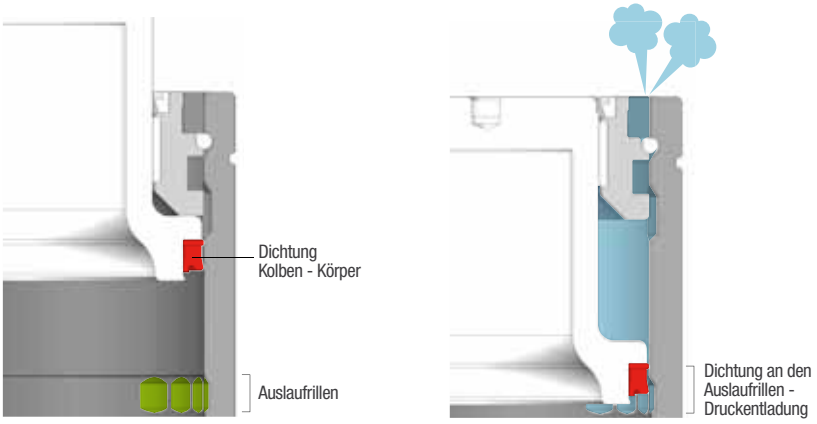
OSAS ist die Kombination einer deformierbaren Zone des Körpers mit Auslaufrillen an der Kontaktwand der Dichtung Körper-Boden.
OSAS aktiviert sich ohne Strukturschäden am Zylinder, wodurch die Sicherheit für den Anwender verbessert wird.



3. Ausführung Körper - Kolben



OSAS besteht aus Auslaufrillen an den Kontaktfl ächen der Kolbendichtung.
OSAS aktiviert sich ohne eine Verformung des Körpers, wodurch die Sicherheit für den Anwender verbessert wird.



USAS

Aktiver Schutz bei Unkontrolliertem Rückhub

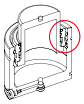
Was ist USAS?

Der aktive Schutz bei unkontrolliertem Rückhub USAS besteht aus drei exklusiven Lösungen von Special Springs zum kontrollierten und vollständigen Entladen des Drucks, ohne dass Teile herausgeschleudert werden, wenn die Kolbenstange einem unkontrollierten Rückhub ausgesetzt ist. Verursacht wird das normalerweise dadurch, dass sich Teile des Werkzeugs oder damit produzierte Teile unter der Kraft der Gasdruckfeder plötzlich bzw. unkontrolliert lösen, nachdem sie eingeklemmt oder festgefressen waren.

USAS Vorteile

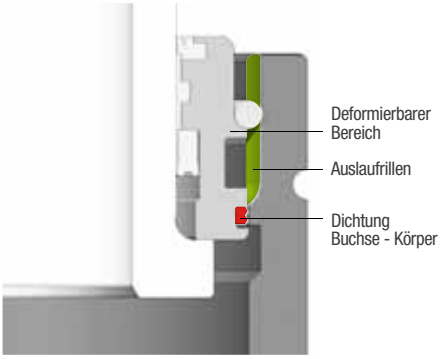
- ermöglicht das kontrollierte und komplette Entladen des Innendrucks der Gasdruckfeder bei unkontrolliertem Rückhub.
- reduziert das Risiko von Schäden und Gefahren durch wegschleudernde, unter Druck stehende Teile.
- aktiviert sich automatisch bei unkontrolliertem Rückhub.
- erhöht die Kosten der Gasdruckfeder nicht.

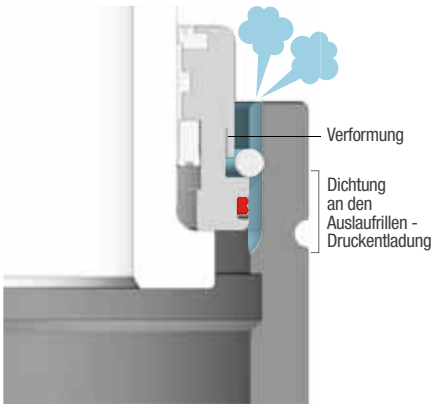
Wie ist USAS aufgebaut?

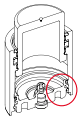


1. Ausführung Körper - Buchse

USAS besteht aus der Kombination eines verformbaren Bereichs der Buchse in Kontakt mit dem Sprengring und den Auslaufrillen auf der Kontaktwand der Dichtung Körper-Buchse.
USAS aktiviert sich ohne die Gefahr von Strukturschäden am Zylinder, wodurch die Sicherheit des Anwender verbessert wird.

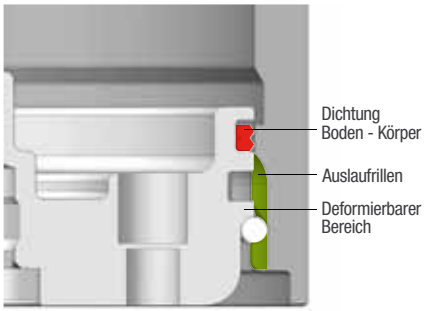


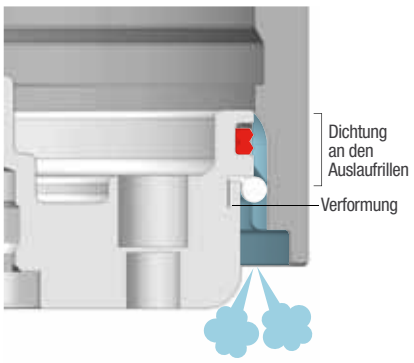


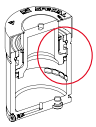


2. Ausführung Körper - Boden

USAS ist die Kombination eines deformierbaren Bereichs am Boden in Kontakt mit dem Sprengring und den Auslaufrillen an den Kontaktwänden der Dichtung Körper-Boden.
USAS aktiviert sich ohne die Gefahr von Strukturschäden am Zylinder, wodurch die Sicherheit des Anwenders verbessert wird.

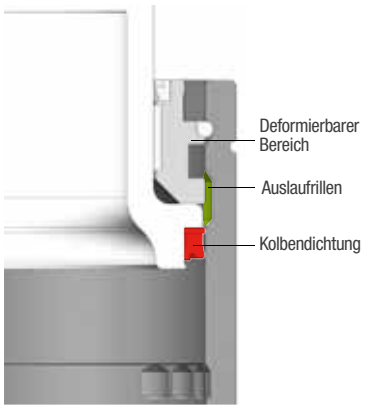


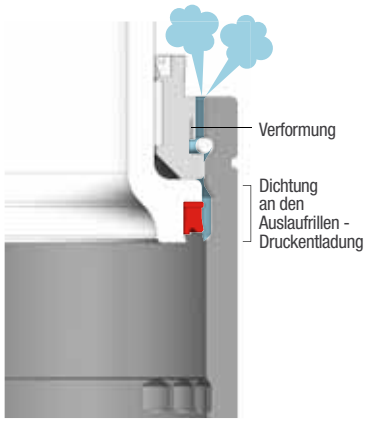




3. Ausführung Körper - Kolben

USAS besteht aus der Kombination eines deformierbaren Bereichs der Buchse in Kontakt mit dem Sprengring und den Auslaufrillen an den Kontaktfl ächen der Kolbendichtung.
USAS aktiviert sich ohne die Gefahr von Strukturschäden am Zylinder, wodurch die Sicherheit für den Anwender verbessert wird.





OPAS

Aktive Überdruck-Sicherheitsvorrichtung

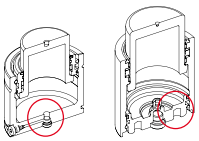
Was ist OPAS?

Die aktive Überdruck-Vorrichtung besteht aus zwei exklusiven Special Springs Lösungen zur kontrollierten und vollständigen Entladung des Innendrucks, wenn der maximal zulässige Wert überschritten wird. Das passiert normalerweise, wenn das für den Stickstoff verfügbare Volumen in der Gasdruckfeder sich aufgrund von Flüssigkeiten oder Verunreinigungen reduziert.

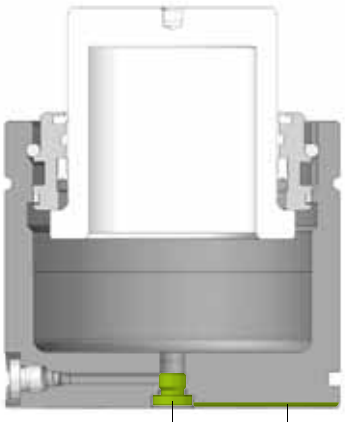
OPAS Vorteile

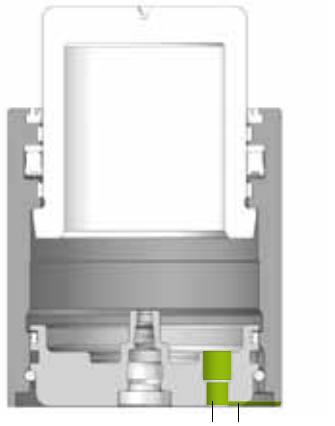
- kontrollierte und vollständige Entladung des Innendrucks des Zylinders bei Überschreiten des maximal zulässigen Werts.
- reduziert das Risiko von Schäden und Gefahren durch wegschleudernde, unter Druck stehende Teile.
- aktiviert sich automatisch ohne Eingriff des Anwenders.
- erhöht die Kosten der Gasdruckfeder nicht.

Wie ist OPAS aufgebaut?



Je nach Bauweise der Gasdruckfeder ist OPAS einer kalibrierten in den Boden integrierten Berstsicherung oder einem Berststopfen am Zylinderboden mit einer Auslaufrille auf der Aufl agefl äche.





SKUDO

Aktiver Schutz vor Verunreinigungen

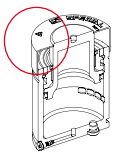
Was ist SKUDO?

Der aktive Schutz vor Verunreinigungen ist eine exklusive Lösung von Special Springs zum Schutz der Führungs- und Dichtungselemente vor fl üssigen und festen Verunreinigungen und zur Prävention vor Überdruck.

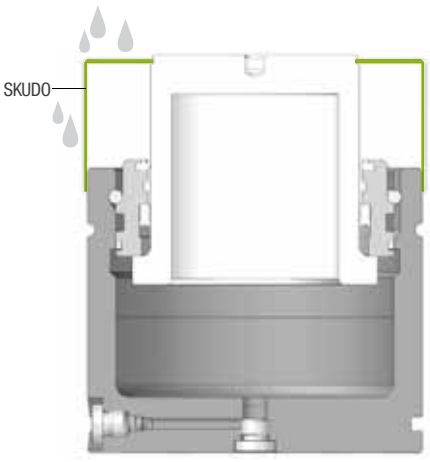
SKUDO Vorteile

- schützt vor Verunreinigungen, die Schäden an den Führungs- und Dichtungselementen hervorrufen.
- steigert erheblich die Lebenszeit der Gasdruckfeder bei erschwerten Arbeitsbedingungen.
- verändert die Gesamthöhe der Gasdruckfeder nicht.
- ist ein Schutz, der nicht verschleißt.
- ist für alle Gasdruckfedern von Special Springs lieferbar.

Wie ist SKUDO aufgebaut?



SKUDO ist eine Schutzkappe aus Kunststoff, die direkt und fest auf der Kolbenstange befestigt ist, wobei die Kontaktoberfl äche mit der Druckplatte nicht verändert wird.



ZUVERLÄSSIGKEIT

PED 97/23/EG

Die Konstruktion und Herstellung der Gasdruckfedern SPECIAL SPRINGS erfolgt in Übereinstimmung mit den geltenden Normen für Druckbehälter, wie in der PED Richtlinie 97/23/EG festgelegt.

Vorteile

- verbesserte Sicherheit für den Kunden durch sichere Produkte und Komponenten.

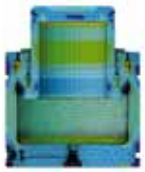
CE 0496

FEM - CAE

Alle Produkte von Special Springs werden durch die Verwendung der fortschrittlichsten Analysesysteme FEM (fi nite element method) und CAE (computer aided engineering) entwickelt und validiert.

Vorteile

- verbesserte Sicherheit für den Kunden durch sichere Produkte und Komponenten.



STRUKTUR DER GASDRUCKFEDERN

Alle Strukturkomponenten der Special Springs Gasdruckfedern sind konstruiert und hergestellt, um mindestens 2.000.000 komplette Zyklen bei maximalem Druck und Temperatur zu erreichen, unter Verwendung jeder für das jeweilige Modell empfohlener Befestigungsart.

Vorteile

- verbesserte Sicherheit für den Kunden durch sichere Produkte und Komponenten.

> 2.000.000

DYNAMISCHE TESTS

Lebensdauerprüfungen und Tests an den fertigen Produkten mit Simulation der erschwerenden und gefährlichen Anwendungsbedingungen sind ein wesentliches Element zur vollständigen Validierung der Projekte und der technischen Lösungen.Zur Entwicklung der aktiven Sicherheitselemente hat Special Springs geeignete Maschinen und Anlagen zur Prüfung der tatsächlichen Wirksamkeit der Sicherheitsvorrichtungen realisiert.

Vorteile

- verbesserte Sicherheit für den Kunden durch sichere, wirklich getestete Produkte und Komponenten

SCHULUNG &TECHNISCHER SUPPORT

FACHKENNTNIS

Fachkenntnis ist ein grundlegendes Element für tagtägliche Tätigkeiten mit Erfolg, je mehr wir wissen, desto besser können wir handeln. Dieses Konzept ist schon immer die Arbeitsphilosophie von Special Springs. Seit vielen Jahren ist Special Springs bestrebt, die Fachkenntnisse rund um die Produkte und ihre technischen Eigenschaften zusammen mit den neuesten Anwendungstechniken durch theoretische und praktische Schulungen zu vertiefen.

Vorteile

- größeres Wissen der Anwender über die effektiven Vorteile der Special Springs Gasdruckfedern.
- größeres Wissen der Anwender über die am besten geeigneten Anwendungsverfahren mit wirtschaftlichen und sicherheitsrelevanten Vorteilen.
- besseres Verständnis bzw. Bewusstsein der Wichtigkeit der aktiven Sicherheitselemente an Gasdruckfedern.

TECHNISCHER SUPPORT

Special Springs ist schon immer bestrebt, den technischen Support der Anwender zu verbessern, für jede Gasdruckfeder und deren Komponenten ist eine mehrsprachige Betriebsanleitung verfügbar.

Benefits

- größeres Vertrauen des Anwenders in den Einsatz von Gasdruckfedern.
- höhere Sicherheit durch Reduzierung von Schaden und Gefahr durch falsche Anwendung.
- Kostenersparnis durch verbesserte Produktivität.

2D - 3D CAD FILES

www.partserver.com

CAD ENASP

OSAS (Over Stroke Active Safety)

Sécurité Active Outré-Course

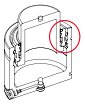
Qu'est-ce que c'est?

OSAS combine 3 dispositifs de sécurité, exclusifs de Special Springs, pour décharger la pression en mode contrôlé et complet lorsque la course admissible est dépassée.

OSAS avantages

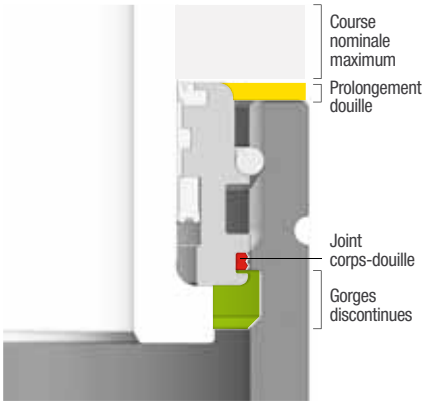
- Décharge la pression du ressort en mode contrôlé et complet, lorsque le vérin est sur-sollicité au niveau de la course.
- Réduit le risque d'endommagement de l'outil ou le risque de blessure en cas d'éjection de pièces ou composants mis sous pression.
- S'auto-active sans intervention de l'opérateur.
- N'augmente pas le coût du ressort.

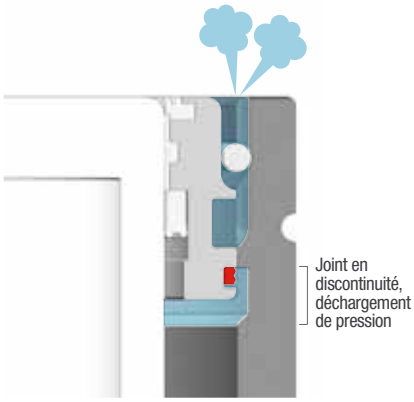
Comment cela fonctionne t-il ?

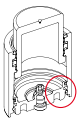


1. Design corps - douille

OSAS est la combinaison d'un prolongement vers l'extérieur de la douille avec gorges discontinues sur la paroi de contact du joint douille-corps.
OSAS s'auto-active sans déformer le corps du ressort, améliorant ainsi la sécurité des opérateurs.

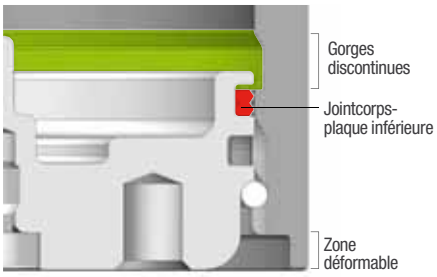


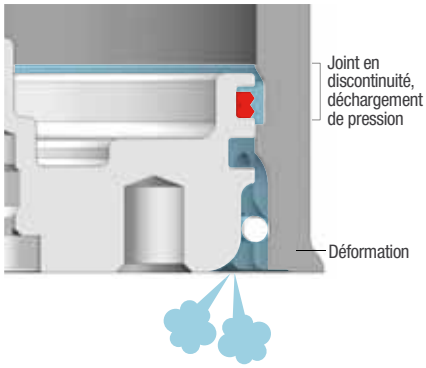


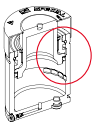


2. Design corps - plaque inférieure

OSAS est la combinaison d'une zone déformable du corps avec des gorges discontinues sur la paroi de contact du joint corps-plaque inférieure.
OSAS s'auto-active sans provoquer de détériorations structurelles du vérin, améliorant ainsi la sécurité des opérateurs.

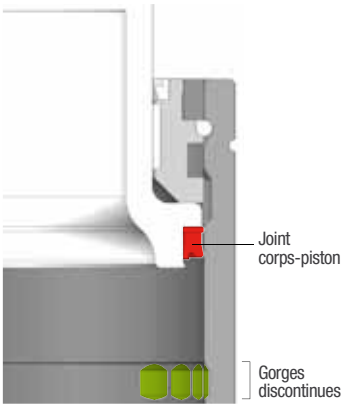


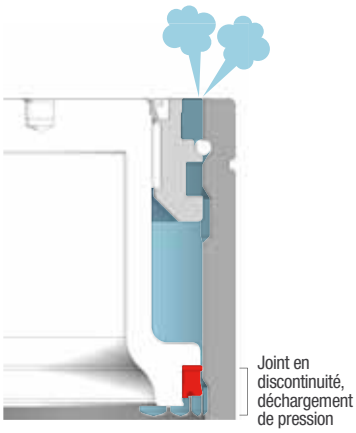




3. Design corps - piston

OSAS sont des gorges discontinues sur la paroi de contact du joint corps-piston.
OSAS s'auto-active sans provoquer de déformation du vérin, améliorant ainsi la sécurité des opérateurs.





USAS (Uncontrolled Speed Active Safety)

Sécurité Active pour Retour Incontrôlé

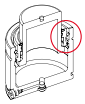
Qu'est-ce que c'est?

USAS combine 3 dispositifs de sécurité, exclusifs de Special Springs, pour décharger la pression en mode contrôlé et complet, sans éjection des pièces, lorsque la vitesse de retour de la tige est incontrolée. Cela peut se produire en cas de contrainte au niveau de l'outil ou des pièces découpées qui peuvent être éjectées de manière incontrôlée.

USAS avantages

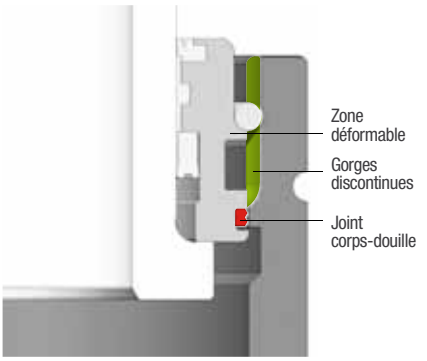
- Décharge la pression du ressort en mode contrôlé et complet, lorsque le vérin a été mis sous contrainte par des retours non contrôlés.
- Réduit le risque d'endommagement de l'outil ou le risque de blessure en cas d'éjection de pièces ou composants mis sous pression.
- S'auto-active sans intervention de l'opérateur.
- N'augmente pas le coût du ressort.

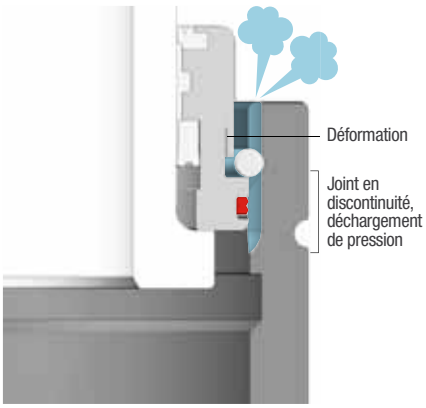
Comment cela fonctionne t-il ?

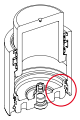


1. Design corps - douille

USAS est la combinaison d'une zone déformable de la douille en contact avec le joint de retenue à C et des gorges discontinues sur la paroi de contact du joint corps-douille.
USAS s'auto-active sans déformer le corps du vérin, améliorant ainsi la sécurité des opérateurs.

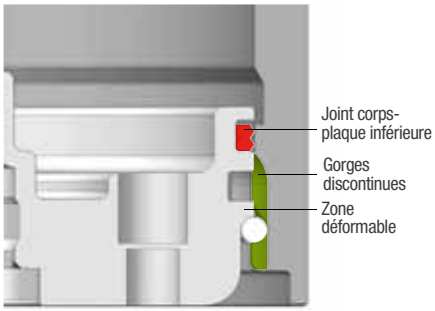


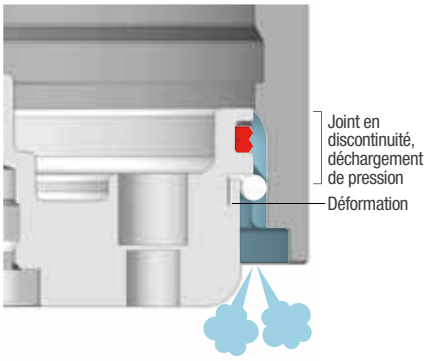


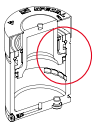


2. Design corps - plaque inférieure

USAS est la combinaison d'une zone déformable de la douille en contact avec la bague de retenue à C et des gorges discontinues sur la paroi de contact du joint corps-plaque inférieure.
USAS s'auto-active sans provoquer des détériorations structurelles du vérin, améliorant ainsi la sécurité des opérateurs.

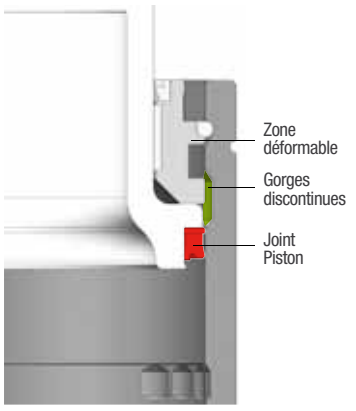


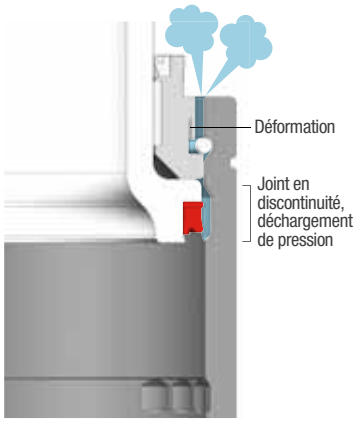




3. Design corps - piston

USAS est la combinaison d'une zone déformable de la douille en contact avec le joint de retenue à C et des gorges discontinues sur la paroi de contact du joint corps-piston.
USAS s'auto-active sans déformer le corps du vérin, améliorant ainsi la sécurité des opérateurs.



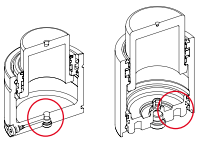


OPAS (Over Pressure Active Safety)
Sécurité Active Surpression

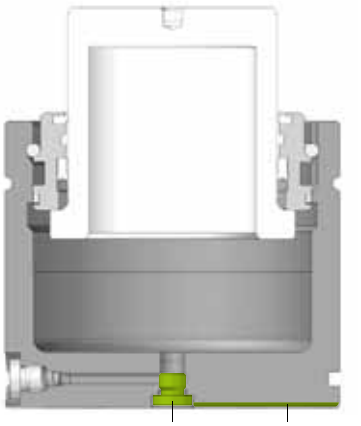
Qu'est-ce que c'est?
USAS sont 2 dispositifs de sécurité, exclusifs de Special Springs, pour déchargear la pression en mode contrôlé et complet, lorsque celle-ci dépasse la valeur admissible. Ce qui peut se produire lorsque des produits contaminants pénètrent dans le vérin, réduisant le volume de gaz.

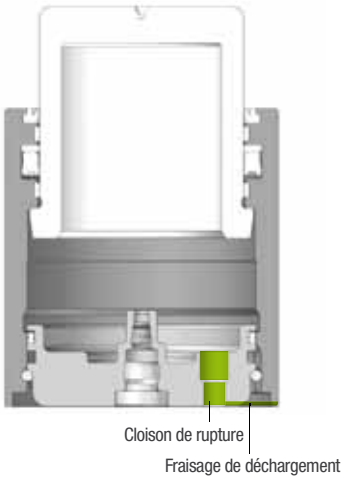
OPAS avantages
- Décharge la pression du ressort en mode contrôlé et complet lorsque la valeur maximale admissible est dépassée.
- Réduit le risque d'endommagement de l'outil ou le risque de blessure en cas d'éjection de pièces ou composants mis sous pression.
- S'auto-active sans intervention de l'opérateur.
- N'augmente pas le coût du ressort.

Comment cela fonctionne t-il ?



OPAS est un cloison de rupture calibré intégral sur la plaque inférieure ou un bouchon de rupture monté sur le plateau du cylindre, avec une fraisage de déchargement sur la base d'appui.



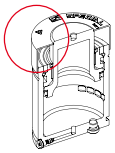


SKUDO (Active Protection from Contaminants)
Protection Active des Contaminants

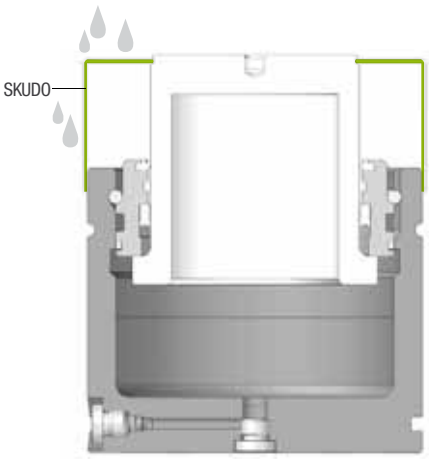
Qu'est-ce que c'est?
SKUDO est une solution exclusive de Special Springs pour protéger les joints et les éléments de guidage contre tous contaminants liquides et solides, et permet d'éliminer des phénomènes de surpression.

SKUDO avantages
- Élimine tout endommagement du joint et des éléments de guidage du fait de contaminants.
- Augmente de manière signifi cative la vie du ressort en présence de contaminants liquides et solides.
- Ne change pas la hauteur du vérin.
- Est une protection qui n'est pas soumise à aucune usure.
- Est disponible pour tous les ressorts Special Springs.

Comment cela fonctionne t-il ?



SKUDO est une capsule de protection en plastique fi xée solidairement sur la tige sans modifi cation de la surface de contact avec la plaque de réfoulement.



FIABILITÉ

PED 97/23/CE

La conception et la fabrication des ressorts à gaz Special Springs sont en totale conformité avec les législations européénnes en matière de composants caractérisés haute pression et notamment avec la directive PED 97/23/CE

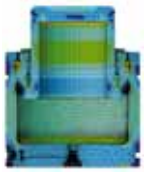
CE 0496

Avantages

• Sécurité accrue pour les clients et opérateurs.

FEM - CAE

Tous les produits Special Springs sont développés et certifi és selon les méthodes FEM (fi nite element method) et CAE (Computer aided engineering).



Avantages

• Sécurité accrue pour les clients et opérateurs.

STRUCTURE DES RESSORTS A GAZ

Tous les composants structuraux des ressorts gaz Special Springs sont conçus et construits pour supporter un minimum de 2 million des cycles complètes à la pression et température maximale pour chaque tipe de fi xation.

> 2.000.000

Avantages

• Sécurité accrue pour les clients et opérateurs.

ESSAIS DYNAMIQUES

Des essais de durée et des épreuves physiques sur les produits fi nis, avec simulation en condition d'usage lourdes et dangereuses, sont essentiels pour la complète validation des projets et des solutions techniques. Pour le développement de sécurités actives, Special Springs a réalisé des outils et des machines speciales pour la validation de l'effi cacité réelle des dispositifs de sécurité.

Avantages

• Sécurité accrue pour les clients et opérateurs.

FORMATION ET SUPPORT

CONNAISSANCE

La connaissance est un élément fondamental pour les actions quotidienne de succès, le plus on connaisse, le mieux on fait. Ce concept a été toujours présent dans la philosophie de travail de Special Spring. Depuis plusieurs années Special Spring s'est engagé à augmenter la connaissance des produits et de ses caractéristiques mais aussi aux meilleures techniques d'usage à travers formations théoriques et pratiques.

Avantages

• Majeure connaissance des utilisateurs sur les avantages réels offert par les ressorts à gaz Special Spring.
• Majeure connaissance des utilisateurs sur les méthodes de usage plus corrects avec avantages économiques et de sécurité.
• Majeure sensibilité et conscience sur l'importance des sécurités actives dans les ressorts à gaz.

SUPPORT TECHNIQUE

Special Springs s'est engagée depuis longtemps pour améliorer le support technique aux utilisateurs, elle fournit avec chaque ressort ou composant un papier d'instruction multilingue complet.

Avantages

• Majeure confi ance de l'utilisateur sur les ressorts à gaz.
• Majeure sécurité avec réduction des dommages et risques pour usage erroné.
• Epargne économique avec productions plus effi cientes.

2D - 3D CAD FILES

www.partserver.com

CAD ENASJ

OSAS (Over Stroke Active Safety)

Seguridad Activa de Fin de Carrera

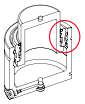
¿Qué es?

La Seguridad Activa de Fin de Carrera son 3 soluciones exclusivas de Special Springs para descargar la presión controlada y completamente en caso de que el cilindro sobrepase su carrera máxima.

OSAS Ventajas

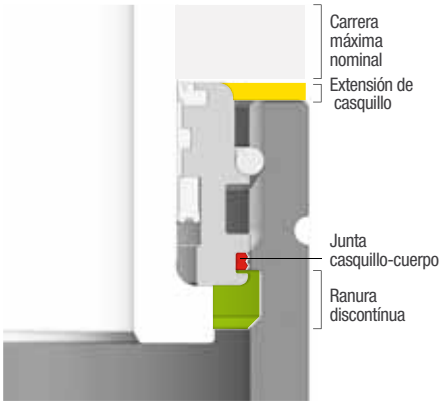
- Descarga la presión de manera controlada y completa en caso de que el cilindro sobrepase su carrera máxima.
- Reduce el riesgo de daños y peligros consecuencia de la proyección de partes bajo presión.
- Se activa automáticamente sin intervención del usuario.
- No aumenta el costo del cilindro.

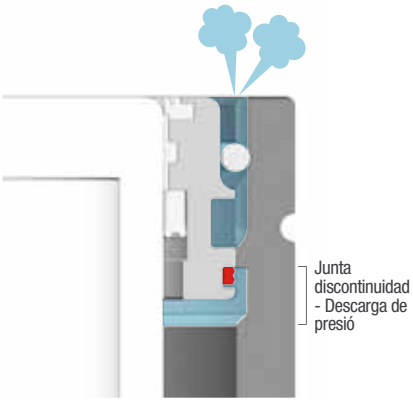
¿Cómo funciona?

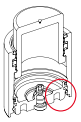


1. Diseño cuerpo - casquillo

OSAS es la combinación de una extensión del casquillo con ranuras discontínuas en la pared de contacto cuerpo-casquillo.
OSAS se activa sin deformaciones del cuerpo, aumentando de manera importante la seguridad para el usuario.

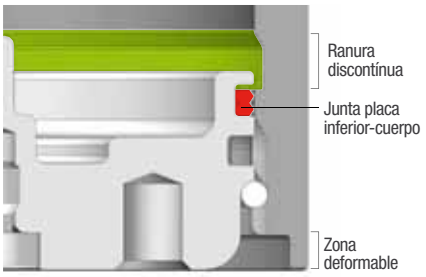


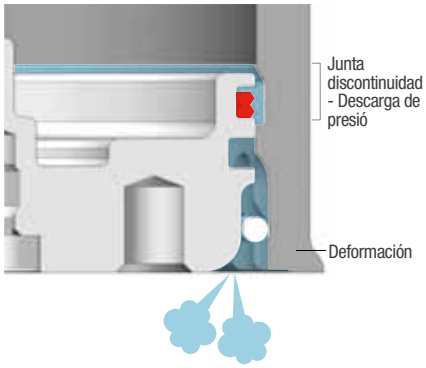


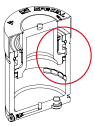


2. Diseño cuerpo - placa inferior

OSAS es la combinación de una zona deformable del cuerpo con ranuras discontínuas en la pared de contacto cuerpo-placa inferior.
OSAS se activa sin peligro estructural para el cilindro, aumentando de manera importante la seguridad para el usuario.

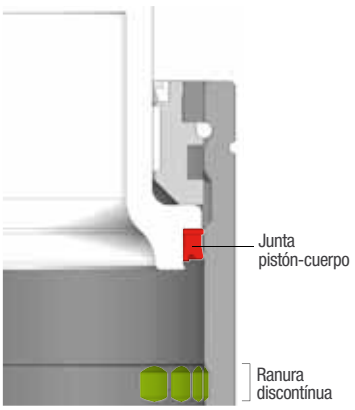


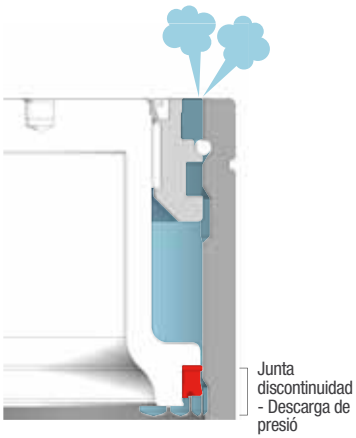




3. Diseño cuerpo - pistón

OSAS consiste en ranuras discontínuas en la pared de contacto cuerpo-pistón.
OSAS se activa sin deformaciones del cuerpo, aumentando de manera importante la seguridad para el usuario.





USAS (Uncontrolled Speed Active Safety)

Seguridad Activa de Retorno Incontrolado

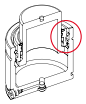
¿Qué es?

La Seguridad Activa de Retorno Incontrolado son 3 soluciones exclusivas de Special Springs para descargar la presión controlada y completamente sin eyección de piezas en caso de que el cilindro sufra un retorno incontrolado. Esto sucede cuando la placa o pieza estampada en el troquel son liberadas súbitamente y sin control.

USAS Ventajas

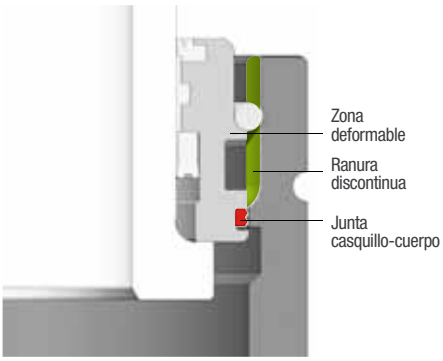
- Descarga la presión de manera controlada y completa en caso de que el cilindro sufra un retorno incontrolado.
- Reduce el riesgo de daños y peligros consecuencia de la proyección de partes bajo presión.
- Se activa automáticamente sin intervención del usuario.
- No aumenta el costo del cilindro.

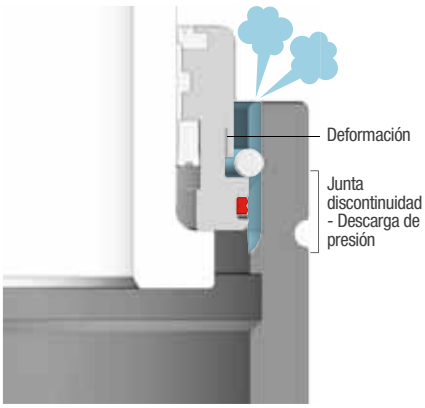
¿Cómo funciona?

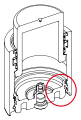


1. Diseño cuerpo - casquillo

USAS es la combinación de una zona deformable del casquillo en contacto con el anillo de sujeción y ranuras discontínuas en la pared cuerpo-casquillo.
USAS se activa sin deformaciones del cuerpo, aumentando de manera importante la seguridad para el usuario.

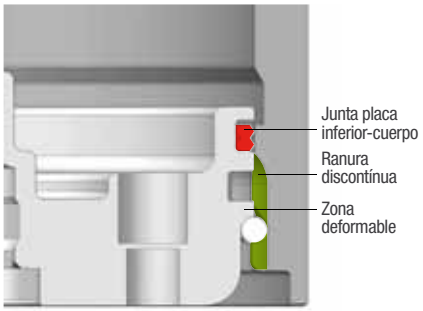


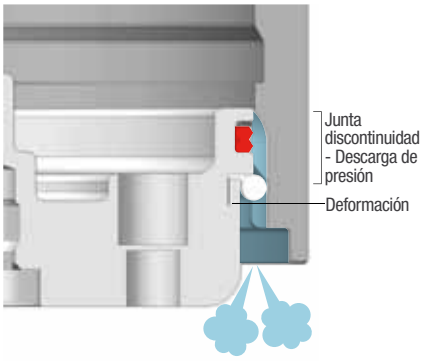


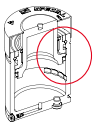


2. Diseño cuerpo - placa inferior

USAS es la combinación de una zona deformable de la placa inferior en contacto con el anillo de sujeción y ranuras discontínuas en la pared de contacto cuerpo-placa inferior.
USAS se activa sin peligro estructural para el cilindro, aumentando de manera importante la seguridad para el usuario.

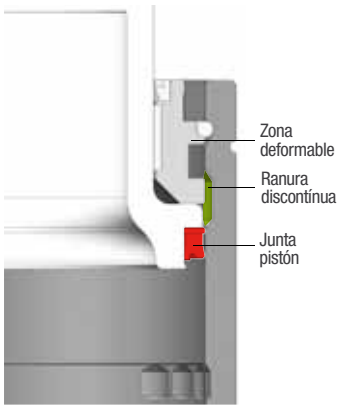


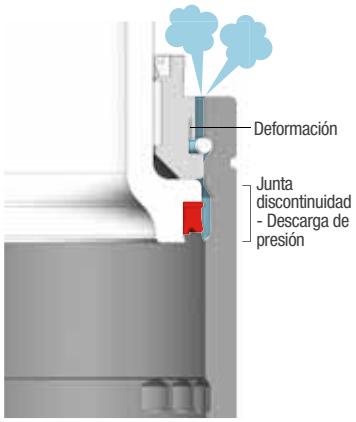




3. Diseño cuerpo - pistón

USAS consiste en la combinación de una zona deformable del casquillo en contacto con el anillo de sujeción y ranuras discontínuas en la pared de contacto cuerpo-pistón, aumentando de manera importante la seguridad para el usuario.





OPAS (Over Pressure Active Safety)

Seguridad Activa por Sobrepresión

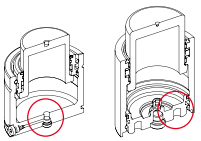
¿Qué es?

La Seguridad Activa por Sobrepresión son 2 soluciones exclusivas de Special Springs para descargar la presión controlada y completamente cuando se supera el valor máximo permitido. Esto sucede cuando el volumen de la cámara de gas se reduce por la presencia de líquidos y agentes contaminantes.

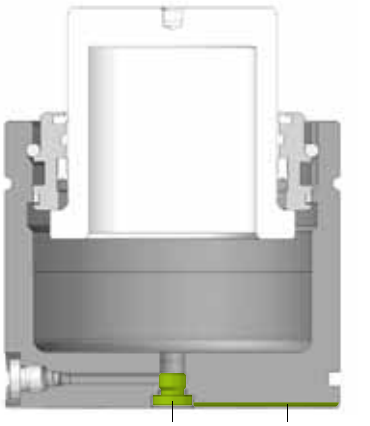
OPAS Ventajas

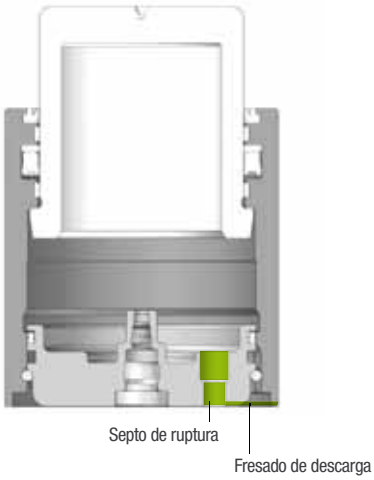
- Descarga la presión de manera controlada y completa cuando se supera el valor máximo permitido.
- Reduce el riesgo de daños y peligros consecuencia de la proyección de partes bajo presión.
- Se activa automáticamente sin intervención del usuario.
- No aumenta el costo del cilindro.

¿Cómo funciona?



OPAS es la combinación de un septo de rotura o bien de un tapón de rotura posicionados en la base del cilindro, con un fresado de descarga en la base de apoyo.





SKUDO (Active Protection from Contaminants)

Protección Activa contra Agentes Contaminantes

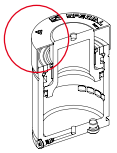
¿Qué es?

La Protección Activa contra Agentes Contaminantes es una solución exclusiva de Special Springs para proteger los componentes que garantizan la hermeticidad y guiado de contaminantes líquidos y sólidos y así eliminar situaciones de sobrepresión.

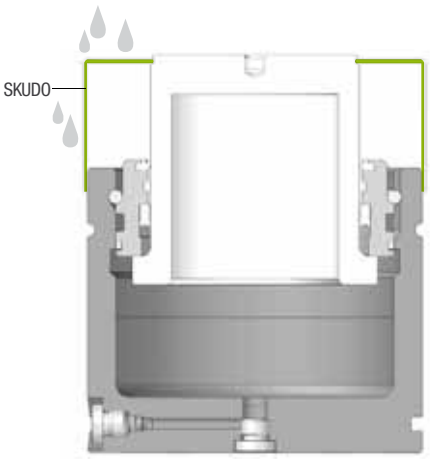
SKUDO Ventajas

- Elimina cualquier probabilidad de daño de contaminantes a los compo nentes que garantizan la estanqueidad y guiado.
- Aumenta signifi cativamente la vida del cilindro en presencia de contaminantes líquidos y sólidos.
- No aumenta la altura del cilindro.
- Es una protección que no sufre desgaste.
- Disponible para todos los cilindros Special Springs.

¿Cómo funciona?



SKUDO consiste en un tapón de plástico fi jado de forma solidaria directamente al vástago, sin alterar la superfi cie de contacto del mismo.



FIABILIDAD

PED 97/23/CE

La proyectación y producción de los cilindros de nitrógeno Special Springs se realizan con pleno respeto de las normativas vigentes para elementos de presión como establece la directiva PED 97/23/CE.

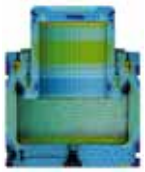
0496

Ventajas

• Mayor garantía para el cliente, productos y componentes más seguros.

FEM - CAE

Todos los productos Special Springs son desarrollados y validados con la utilización de los más avanzados sistemas de análisis FEM (fi nite element method) y CAE (computer aided engineering).



Venajas

• Mayor garantía para el cliente, productos y componentes más seguros

ESTRUCTURA DEL CILINDRO DE NITROGENO

Todos los componentes estructurales de los cilindros de nitrógeno Special Springs son proyectados y fabricados para soportar un mínimo de 2.000.000 de ciclos completos a la máxima presión y temperatura, y con todos los tipos de fi jación.

> 2.000.000

Ventajas

• Mayor garantía para el cliente, productos y componentes más seguros.

PRUEBAS DINAMICAS

Los tests de duración y pruebas físicas sobre producto terminado, con simulaciones en condiciones de uso difíciles y peligrosas, son elementos esenciales para la completa validación de los proyectos y soluciones técnicas.Para el desarrollo de la seguridad activa Special Springs ha diseñado y construido útiles y equipamientos especiales, para la verifi cación de la efi cacia real de los dispositivos de seguridad.

Avantages

• Sécurité accrue pour les clients et opérateurs.

FORMACIÓN Y SOPORTE TÉCNICO

CONOCIMIENTOS

El conocimiento es un elemento fundamental para acciones cotidianas que lleven al éxito, cuanto más se conoce mejor se hace. Este concepto ha estado siempre en la fi losofía de trabajo de Special Springs. Special Springs se dedica desde hace muchos años a aumentar su conocimiento sobre los productos y sus características, así como a mejorar las técnicas de uso a través de formaciones teóricas y prácticas.

Ventajas

• Mayor conocimiento por parte del usuario de las ventajas ofrecidas por los cilindros Special Springs.
• Mayor conocimiento por parte del usuario de los métodos correctos para aumentar la seguridad de uso.
• Mayor sensibilidad y conciencia de la importancia de la seguridad activa en los cilindros de nitrógeno.

SOPORTE TÉCNICO

Es prioridad desde siempre para Special Springs la mejora del soporte técnico al usuario, para lo que entrega un completo manual en varios idiomas con el cilindro o componente.

Avantages

• Mayor confi anza del usuario en los cilindros de nitrógeno.
• Mayor seguridad, con reducción de daños y riesgos por un mal uso.
• Ahorro económico, con producciones más efi cientes.

2D - 3D CAD FILES

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OSAS (Over Stroke Active Safety)

Segurança para Sobre Curso

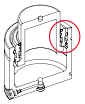
O que é?

OSAS são 3 tipos de dispositivos de segurança unicos nos cilindros Special Springs , que esvaziam a pressão do cilindro por completo, quando esta excede o curso nominal do cilindro.

OSAS Benefícios

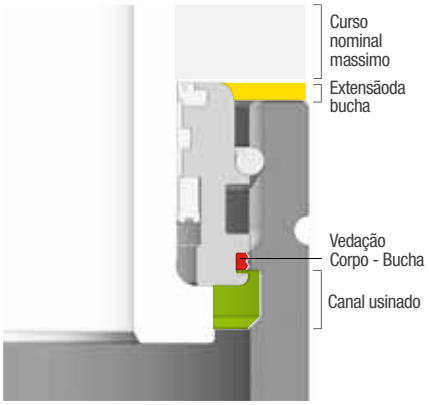
- Esvazia a pressão dos cilindros completamente quando os cilindros sofre sobre-curso.
- Reduz o risco de danos para a ferramenta e ferimentos para o operador por estilhaços.
- Ativa-se automaticamente independentemente de intervenção dos usuários.
- Não aumenta o custo dos cilindros.

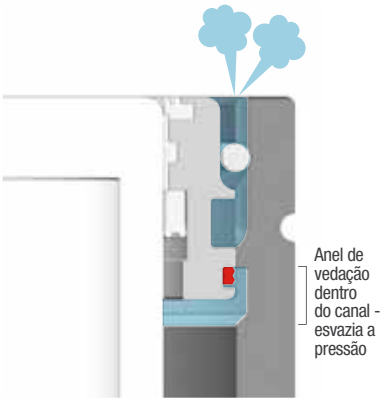
Como funciona?

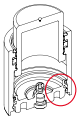


1. Design Corpo - bucha

OSAS é composto de dois pontos: uma extensão da bucha localizada para fora do corpo, e canais usinados na parte interna do corpo do cilindro onde acontece a vedação.
O sistema OSAS é ativado sem o contato com o corpo do cilindro, proporcionando mais segurança ao operador.

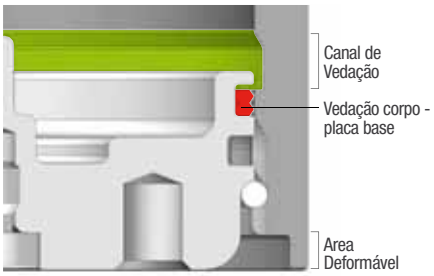


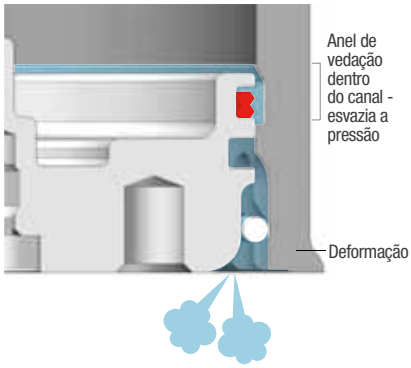


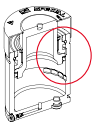


2. Design Corpo - placa base

OSAS é a combinação de uma área do corpo de-formável com ranhura na parede de vedação inferior corpo-placa.
OSAS ativa sem causar danos estruturais ao cilindro, melhorando ainda mais a segurança para os usuários.

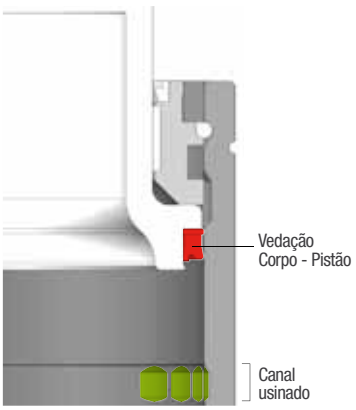


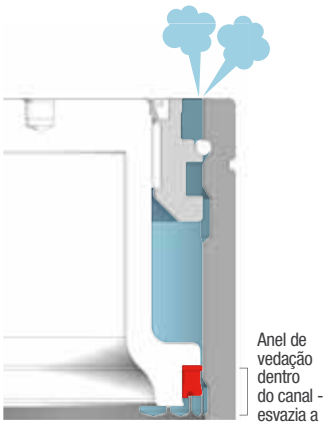




3. Design Corpo - pistão

OSAS é ativado com canais na parede de vedação do pistão.
A OSAS é ativada sem deformação do corpo, aumentando ainda mais a segurança do usuário.





USAS (Uncontrolled Speed Active Safety)

Segurança para Retorno Descontrolado

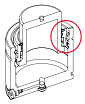
O que é?

USAS é o escape de pressão em um modo controlado e completo, provocado pelo retorno descontrolado da haste, evitando o risco da mesma se desprender do cilindro.

USAS Benefícios

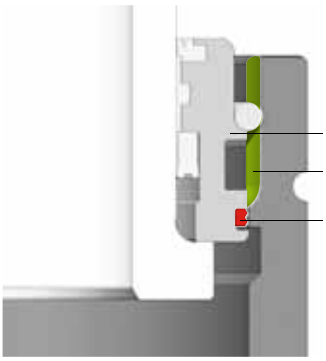
- Quando o cilindro sofrer retornos descontrolados, o mesmo se esvazia de uma maneira controlada e completa.
- Reduz o risco de danos a ferramenta ou ferimentos devido à estilhaços de peças sob pressão.
- Ativa-se automaticamente independentemente de intervenção dos usuários.
- Não aumenta o custo dos cilindros.

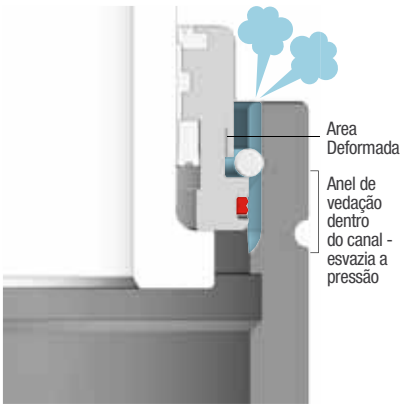
Como funciona?

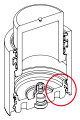


1. Design Corpo - bucha

USAS é a combinação de uma parte deformável da bucha em contato com o anel de retenção em C. Com o trabalho incorreto da haste sobre a buha rompe-se o selo liberando a pressão do cilindro. USAS é ativado, sem causar danos estruturais ao cilindro, melhorando ainda mais a segurança para os usuários.

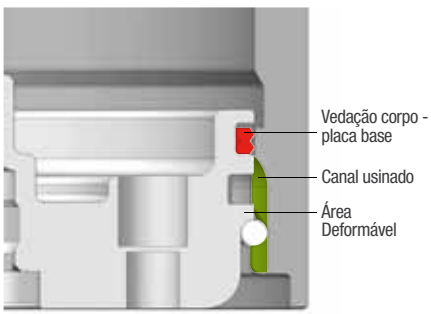


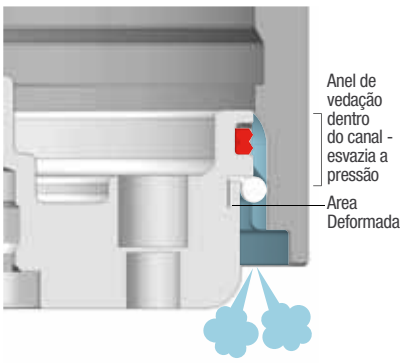


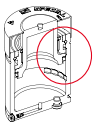


2. Design Corpo - placa base

USAS é a combinação de uma area deformável da placa base em contacto com o anel de retenção em C, e as ranhuras na parede de vedação corpo-placa base. USAS é ativado para não causar danos estruturais ao cilindro, e melhorar ainda mais a segurança para os usuários.

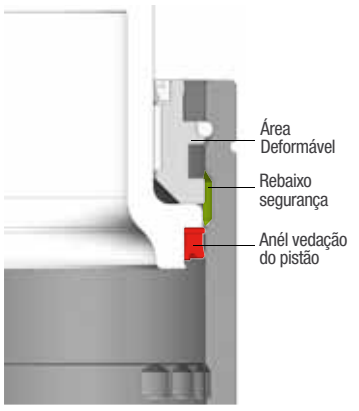


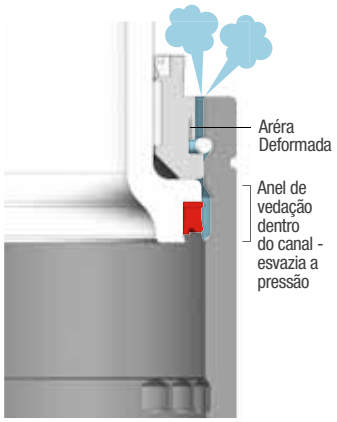




3. Design Corpo - pistão

USAS é a combinação de uma parte deformável da bucha em contato com o anel de retenção em C, ao se deformar o pistão entra em uma area rebaixada do corpo. USAS é ativada decarregando a pressão evitando danos estruturais ao cilindro, e prevenindo ainda mais a segurança para os usuários.





OPAS (Over Pressure Active Safety)

Segurança Sobre Pressão

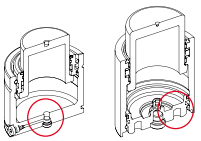
O que é?

OPAS são 2 tipos de dispositivos de segurança exclusivos da Special Springs, inseridos ou montados na parte inferior dos cilindros, Quando a pressão exede o seu limite dentro do cilindro por causa de impurezas reduzindo a área interna e aumentando a pressão, rompe-se a válvula liberando a pressão de forma controlada e completa.

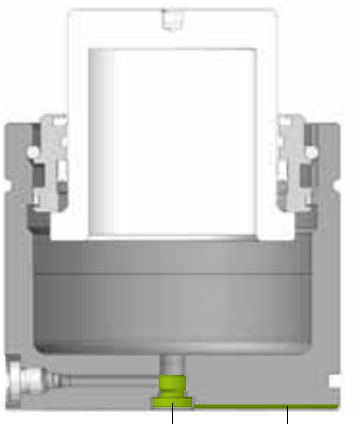
OPAS Benefícios

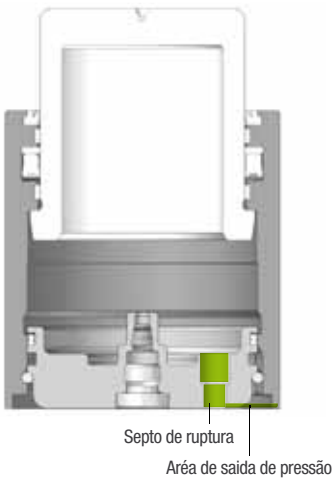
- Saida de pressão de forma controlada e completa quando ele excede o valor máximo permitido.
- Reduz o risco de danos ao cilindro e ferimentos aos usuarios devido à ejeção de estilhaços sob pressão.
- Ativa-se automaticamente independentemente de intervenção dos usuários.
- Não aumenta o custo dos cilindros.

Como funciona?



OPAS é a combinação de un septo calibrado ou uma plugue de ruptura posicionado na parte inferior dos cilindros, com uma saida de escape na superfície inferior de contacto.





SKUDO (Active Protection from Contaminants)

Capa Protetora Contra Resíduos

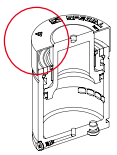
O que é?

SKUDO é uma solução exclusiva da Special Springs que protege os anéis de vedação contra restos de residuos sólidos e liquidos evitando o aumento da pressão.

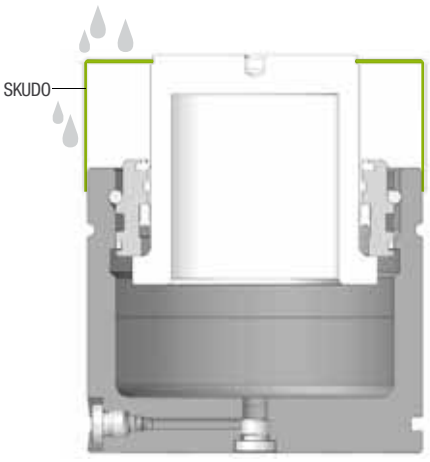
SKUDO Benefícios

- Elimina danos nos aneis de vedação causados por residuos.
- Aumenta signifi cativamente a vida dos cilindros usados em ambientes de trabalho com residuos.
- Não altera a altura do cilindro.
- Não espande durante o movimento .
- Está disponível para todos os cilindros da Special Springs.

Como funciona?



SKUDO é um plástico de proteção fi rmemente fi xado na parte superior da haste, com nenhuma alteração da superfi cie de contacto com a placa de pressão.



CONFIABILIDADE

PED 97/23/CE

O projeto e fabricação de cilindros de Nitrogênio Special Springs estão em total conformidade com as regras Europeias para Cilindros de alta pressão, em conformidade com a directiva PED 97/23/CE.

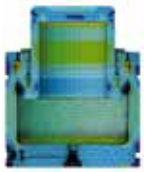
CE
0496

Benefícios

• Maior garantia para os clientes com produtos e componentes mais seguros.

FEM - CAE

Todos os produtos Special Springs são desenvolvidos e validados através da utilização das Técnicas mais avançadas FEM (método de elementos fi nitos) e sistemas de análise do CAE (Engenharia assistida por computador).



Benefícios

• Maior garantia para os clientes com produtos e componentes mais seguros.

COMPONENTES ESTRUTURAIS DE UM CILINDRO DE NITROGÊNIO

Todos os componentes estruturais dos cilindros Special Springs, são projetados e construídos para suportar no mínimo 2.000.000 ciclos com máxima pressão, temperatura e para todos os tipos de dispositivos de fi xação.

> 2.000.000

Benefícios

• Maior garantia para os clientes com produtos e componentes mais seguros.

ENSAIOS DINÃMICOS

Resistência e testes de impacto estrutural, com condições de trabalho pesado e perigoso, são essenciais e continuamente realizada em todos produtos a fi m de atingir a validação completa dos projetos e soluções técnicas. Para desenvolver as características de segurança a Special Springs desenhou e construiu máquinas especiais personalizadas e equipamentos, adequados para testar a efi ciência dos recursos em diferentes condições de trabalho.

Benefícios

• Maior garantia para o cliente com produtos e componentes mais seguros e realmente testado.

TREINAMENTO E SUPORTE

CONHECIMENTO

O conhecimento é um elemento essencial para o sucesso das ações diárias; Quanto mais soubermos, melhor nós executamos. Este conceito sempre foi um dos valores da Special Springs. Por muitos anos a empresa se comprometeu a aumentar os conhecimentos dos produtos juntamente com suas características e suas melhores técnicas de utilizações através de formação teórica e prática.

Benefícios

• Aumento do conhecimento dos usuários, no que diz respeito aos benefícios reais dados pelo Cilindro de Nitrogênio Special Springs. (ou seja: redução de danos a ferramenta)
• Aumento do conhecimento dos usuários sobre como usar adequadamente os produtos, portanto, aumentando a efi ciência de custo e produção.
• Aumento do conhecimento dos usuários sobre a importância de nossas características de segurança do cilindros de Nitrogênio.

SUPORTE TÉCNICO

A Special Springs é empenhada em fornecer suporte técnico para usuários; Nós fornecemos uma folha de instruções multilingue completa com cada cilindro ou componente.

Benefícios

• Aumento de confi ança do usuário na utilização dos cilindros de Nitrogênio.
• Segurança aumentada com redução de risco devido ao uso inadequado.
• Economia de custos com efi ciência de aumento da produção

2D - 3D CAD FILES

www.partserver.com

USER INFORMATION

I Caricare soltanto con GAS AZOTO (N2).

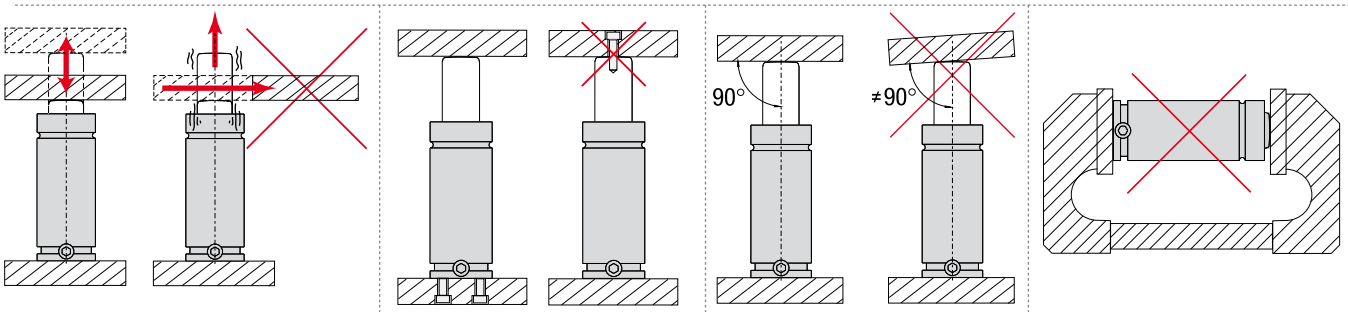
GB Charge only with NITROGEN GAS (N2).

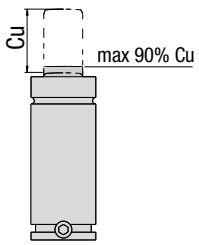
D Gasdruckfedern dürfen nur mit STICKSTOFF GAS (N2) gefüllt werden.

F Charge seulement avec du GAZ AZOTE (N2).

E Cargar únicamente con GAS NITROGENO (N2).

P Carregar somente com GÁS de NITROGÊNIO (N2).

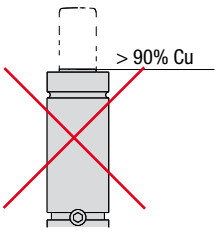




I Tutti i cilindri Special Springs sono dotati di riserva corsa da 1 a 3 mm (escluso M90/TBM-TBI-TEM). Quindi il valore nominale Cu è completamente utilizzabile. Si raccomanda comunque di non eccedere il 90% di Cu nell'uso pratico per prevenire eventuali extra-corse, causate da modifiche o errori sugli 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.

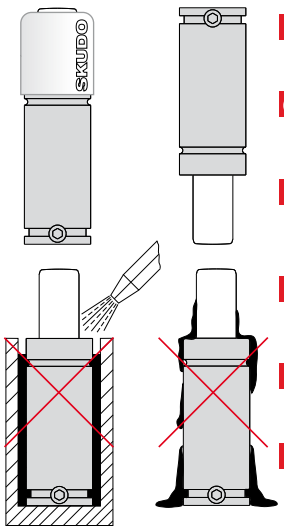
D Alle Zylindern Special Springs sind mit einer Hubreserve von 1 ÷ 3 mm ausgestattet (Ausnahme: M90/TBM-TBI-TEM). Daher kann der Nennwert Cu komplett verwendet werden. Wir empfehlen, die 90%-Grenze des Cu-Werts beim praktischen Einsatz zu überschreiten, um einen eventuellen Überlauf zu vermeiden, der durch Änderungen oder Fehler an den Pressformen verursacht werden und irreparabeln 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 M90/TBM-TBI-TEM). 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 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 sobre carreras, causadas por modificaciones o errores en los moldes, con daños irreparables a los cindros y graves riesgos de seguridad.

P Todos os cilindros Special Springs dispõem de reserva para pressões súbitas de 1 ÷ 3 mm (excluindo o 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 segurança.



I In presenza di contaminanti liquidi o solidi utilizzare cilindri con SKUDO.
In mancanza di cilindri con SKUDO, un miglioramento significativo si ottiene installando i cilindri capovolti.

GB In presence of liquid or solid contaminants, use cylinders with SKUDO. In absence of cylinders with SKUDO protection, a significant improvement could be obtained by mounting the cylinders in upside-down position.

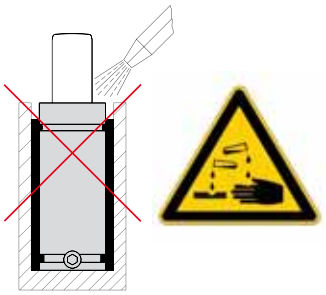
D Bei Aussehen vom Flüssikeiten und Festkörper, utilisieren Zylindern mit SKUDO. Bei fehlerender vom SKUDO, wird durch Montage der Zylinder in auf den Kopf gesteller Position eine bedeutende Verbesserung erzielt.

F En presence de contaminants liquides ou solides, utiliser les ressorts avec SKUDO. En absence de ressorts avec SKUDO, une amélioration importante peut s'obtenir en montant les cylinders renversés.

E En presencia de contaminantes líquidos o sólidos, utilize cilindros con SKUDO.
A falta de cilindros con SKUDO, una notable mejora se obtiene montando los cilindros volcados.

P Em presença de contaminadores líquidos o sólidos, usar cilindro com SKUDO. Na falta de cilindro com protecão SKUDO, obtém-de uma significativa melhoria montando os cilindros de cabeça para baixo.

USER INFORMATION



I Evitare il contatto di fluidi aggressivi (soda e cloruri) con i cilindri se utilizzati per la pulizia dello stampo si raccomanda di rimuovere dai cilindri ogni residuo.

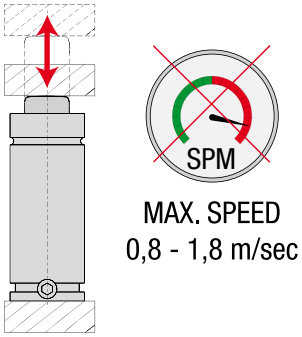
GB Avoid any contact with contaminant (soda or chlorites) on the cylinders. If used for cleaning the tools, we reccomend you to carefully remove any remaining liquid from the cylinders.

D Bitte um Kontakte die Gasdruckfedern mit Verunreiningen Flüssigkeiten (Soda oder Khloriten) zu vermeiden. Es wird empfohlen, die Pressformen gut zu versmutzen nach Jede versmuttzung aktivität mit diesen Flüssigkeiten

F Eviter le contact des liquides aggressifs (soda ou chlorites) avec le cylindres. Si utilisés pour le nettoyage des moules, il est préférable d'enléver tous les restes de liquides nettoyantes dans les cylindres

E Evite el contacto de productos contaminantes (sosa, cloruro) con los cilindros. Si se utilizan para la limpieza de herramientas, recomendamos elimine cuidadosamente cualquier resto de líquido de los cilindros

P Evitar qualquer contacto com contaminantes (soda ou cloretos) no cilindro. Se forem usados para limpar ferramentas, recomendamos a remoção de qualquer remanescente de liquido que fique nos cilindros



I Non confondere la velocità massima con la cadenza massima di cicli/min, come raccomandato in ogni modello.

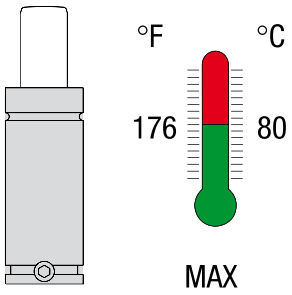
GB Do not confuse the maximum speed with the recommended maximum number cycles/min, as indicated in each family of product.

D Acten Sie di gemäß Empfehlung für jede Modell darauf, die Hochst-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 recommandé pour chaque modèle de ressort.

E No confundir la velocidad máxima con la cadencia máxima de ciclos/min, como se indica en cada modelo.

P Não confundir a velocidade máxima com a cadência ciclos/min como recomendado em cada modelo.



I Temperatura di funzionamento

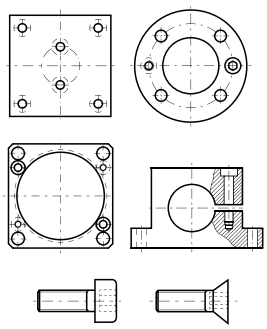
GB Operating temperature

D Arbeitstemperatur

F Température de fonctionnement

E Temperatura de funcionamiento

P Temperatura de funcionamiento



I Fissare sempre i cilindri attraverso gli elementi specifici 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 siempre os cilindros directamente através dos elementos de fixação específicos.

USER INFORMATION

I Utilizzare il foro filettato sullo stelo solo per il trasporto di cilindri.

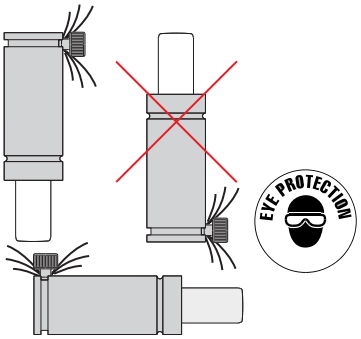
GB Use the threaded hole on the rod only for handling.

D Die Gewindebohrung an der Kolbenstange ist ausschließlich für den Transport der Gasdruckfedern zu verwenden.

F Utiliser le trou fileté sur la tige uniquement pour le trasport.

E Utilizar el orificio roscado en el vastago solo par trasporte.

P Utilizar o furo roscado na haste apenas para trasporte.



I Durante lo scaricamento con l'uso del dispositivo DDS, orientare il flusso del gas in direzione opposta all'operatore.

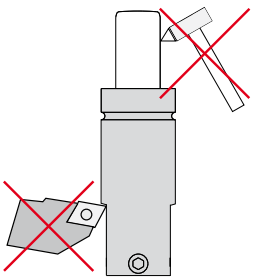
GB When discharging using a DDS device, direct the gas flow away from operator.

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 y en el vástago del cilindro.

P Evitar qualquer trabalho mecânico ou impacto sobre o corpo e haste.

I Se un cilindro ha la struttura danneggiata, prima di qualsiasi manipolazione,scaricare completamente la pressione.

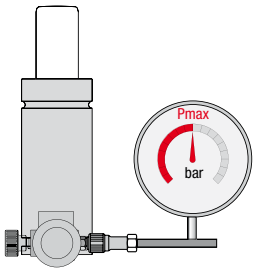
GB If a cylinder has structural damage, fully exhaust all pressure before any form of handling.

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 Durante il caricamento non eccedere la pressione massima raccomandata per ogni modello.

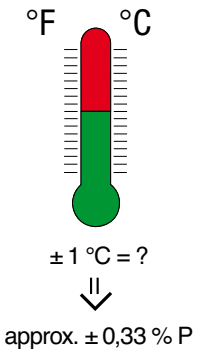
GB When charging do NOT exceed the maximum recommended pressure for each model.

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 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, respect to the nominal calculation value 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).

I Prima di gettare qualsiasi cilindro a gas scaricare completamente la pressione.

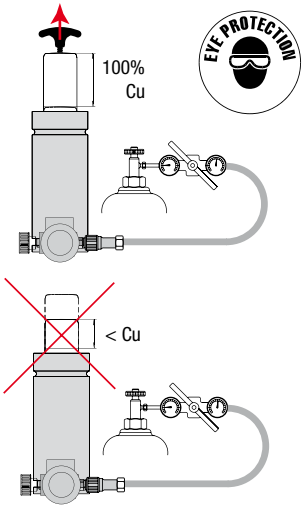
GB Before disposing of a gas spring ensure that all residual pressure is fully exhausted.

D Bevor 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 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 Kolbenstange ganz ausgefahren ist. Für Zylinder ohne Gewindebohrung am Kolbenstange laden Sie den Druck zu Beginn bei 5 Bar (75 psi), um den Kolbenstange ganzherauszuziehen. 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 haste esteja totalmente extraido. Para cilindros sem orifício roscado no haste, carregar inicialmente com 5 bar (75 psi) para extrair completamente haste, depois, proceder até à pressão desejada.

USER INFORMATION

$$F_o = ?$$
$$\Downarrow$$
$$P \cdot S$$

I Per calcolare la forza iniziale (Fo) di un cilindro a gas è sufficiente moltiplicare la pressione di caricamento massima (P) per l'area di tenuta, stelo o pistone, della guarnizione (S).

GB To calculate the initial force of each gas cylinder, multiply the maximum charging pressure (P) to the area of sealing, rod or piston, of the gasket seal.

D Zur berechnen der Anfangskraft (Fo) eines Gasdruckfedern, muss man die maximale Ladedruck (P) fur die Fuhrungsfläche vom Kolben oder kolbenstange(S) des Dichtungs, multiplizieren.

F Pour calculer la force initiale (Fo) d'un cylinder à gaz, il suffit de multiplier la pression maximum de chargement (P) pour la surface de retenue, 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) poe el área de junta, vástago o pistón, de la guarnición(S).

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 haste/pistão, da guarnição.

$$F_x = ?$$
$$\Downarrow$$
$$P \cdot S \cdot \left(\frac{1}{1 - \frac{S}{V_0} \cdot \frac{C_x}{10}} \right)^{1,58}$$

I Per calcolare la forza intermedia (Fx) di un cilindro a gas ad una determinata corsa di lavoro (Cx) basta applicare la formula sostituendo i relativi valori numerici .

GB To calculate the intermediate force (Fx) of a gas cylinder to a determinated working stroke (Cx), you only have to use the formula by replacing the relative numeric values.

D Um die Zwischenleistung (Fx) einem Gasdruckfedern, bei einem bestimmte Arbeitshub (Cx) Zuberechnen, Sie muessen diese Formel utilisieren, und die relativen Zahlen auszuwechseln.

F Pour calculer la force intermediaire (Fx) d'un ressort à gaz à une course de travail determineé (Cx), vous devez utilizer cette formule en substituant les chiffres rèlatives aux valeurs numériques.

E Para calcular la fuerza intermedia (Fx) de un cilindro de gas con una determinada carrera de trabajo (Cx) basta aplicar la fórmula indicada sustituyendo los valores numéricos relativos.

P Para calcular a força intermediária de um cilindro de gás a um determinado curso de trabalho, você apenas tem de utilizar a seguinte fórmula substituindo os valores numéricos relativos.

$$P_n = ?$$
$$\Downarrow$$
$$\frac{F_n}{S}$$

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 one (Fo), divide the required force (Fn) by the area of sealing, rod or piston, of the gasket seal .

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.

Max Speed

I Non eccedere la velocità massima dello stelo pistone indicata per ogni modello. Superare tali limiti può avere effetti sulla sicurezza e durata dei cilindri.

GB Do not exceed the maximum rod speed indicated for each model. Going beyond that limit could cause bad effects on safety and on the cylinders' duration

D Übersteigen Sie für jedes Model die maximaler angegebenen Geschwindigkeit des Kolbestange nicht. Diese Grenze zu überschreiten, meinst schlechte Effekten zum Sicherheit und Lebensdauer des Gassdruckfedern.

F Ne pas excéder la vitesse maximale de la tige indiquée pour chaque modèle . Dépasser ces limites peut avoir des effets négatifs sur la sécurité et la durée des cylindres-ressort.

E No exceder la velocidad máxima del vástago indicada para cada modelo. Superar dichos límites puede tener efectos sobre la duración y vida útil de los cilindros.

P Não exceda a velocidade máxima da haste indicada para cada modelo. Indo além desse limite pode causar efeitos negativos sobre a segurança e sobre a duração dos cilindros.

SPM ⇓ Stroke per Minute

I Il numero di cicli al minuto raccomandato per ogni modello è riferito all'utilizzo completo della corsa e si intende per "normali" utilizzi su stampi di tranciatura.Il valore minimo indicato è valido per la corsa più lunga, mentre il valore massimo è riferito alla corsa più corta.Per usi parziali della corsa il numero di cicli al minuto può essere aumentato. Si ricorda che cadenze di lavoro maggiori ai valori raccomandati possono avere effetti sulla durata di lavoro. Contattare Special Springs per maggiori informazioni.

GB The recommended number of cycles per minute for each model is referred to the complete use of the stroke and is intended for "normal" uses on cut moulds. The minimum amount indicated is to be considered for the longest stroke, while the maximum amount is referred to the shortest stroke. In cas of partial use of the stroke, the number of cycles per minute could increase. We remember you that higher working frequencies respect of the recommended ones may have negative effects on the work duration. Please contact Special Springs to have further details.

D Den empfohlen Hube/min Ziffer für jede Model bezieht sich auf die gesammte Nennhub und ist vereinbart für normalen Nutzungen im Schneiderung Pressformen. Der mindensten Richtwert ist gültig für die langerer Hub, während die maximaler Richtwert sich auf die kurzerer Hub bezieht. Für partielle Nutzungen, der Nummer des hube/min wurde vermehrt sein. Erinnern Sie dass höher Arbeitsperiode zu den empfohlen Wert, schlechte effekte zum Arbeitsdauer haben können. Bitte melden Sie an Special Springs für alle mehrere informationen.

F Le nombre de cycles par minute recommandés pour chaque modèle est référé à l'usage complet de la course et s'entend pour des usages «normaux» dans des moules de tranchage.La valeur minimale indiquée est valable pour la course plus longue, alors que la valeur maximale est référée à la course plus courte. Pour les usages partiels de la course le nombre des cycles par minute peut augmenter. On vous rappelle que des cadences de travails majeures respect aux valeurs recommandés peuvent avoir des effets négatifs sur la durée du travail. Contactez Special Springs pour tous renseignements complémentaires.

E El número de ciclos por minuto recomendado para cada modelo está basado en la utilización de la carrera completa y para un proceso de estampado "normal". El valor mínimo indicado es válido para carrera máxima, mientras que el valor máximo se refiere a carrera mínima. Para usos parciales de la carrera el número de golpes por minuto puede aumentar. Se recuerda que cadencias de trabajo superiores a los valores recomendados pueden tener efectos sobre la vida del cilindro. Contactar con Special Springs en caso de necesitar más información.

P Pancadas por minuto .A quantidade recomendada de ciclos por minuto para cada modelo é referida a utilização completa do curso e é destinada para uso "normal" em moldes de corte. A quantidade mínima indicada, deve ser considerado para o curso mais longo, enquanto que a quantidade máxima é referido a menor curso. No caso de utilização parcial do curso, o número de ciclos por minuto, poderiam aumentar. Nós lembramos que uma maior cadência de trabalho que as recomendadas pode ter efeitos negativos sobre a duração do trabalho. Entre em contacto com a Special Springs para obter mais detalhes.

LIFE WARRANTY

I Se correttamente installati e in normali condizioni di lavoro, i cilindri ad azoto Special Springs sono garantiti per una durata di ***200.000 metri lineari*** di corsa. Condizioni di lavoro critiche o cause esterne che provochino mal funzionamenti possono ridurre, anche significativamente, la durata. La garanzia è valida per la durata indicata entro ***2 anni*** dalla data di acquisto. Utilizzi difformi dalle prescrizioni e dalle linee guida specificate e fornite con i prodotti o danni meccanici saranno causa di immediata decadenza della garanzia.
Termini legali di garanzia su www.specialsprings.com

GB If correctly installed and in normal working conditions, the nitrogen cylinders Special Springs can guarantee a life of ***200.000 linear meters*** of stroke. Heavy working conditions or external causes that would cause malfunctioning may reduce the life significantly.
The warranty is valid for the indicated life within ***2 years*** from the purchase date. Either any different use respect of the prescriptions and guidelines provided and specified with the products, or mechanical damages would cause the immediate warranty decadence.
Warranty legal terms on www.specialsprings.com

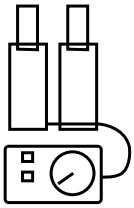
D Bei ein korrekte Einbau und optimale Arbeitsbedinungen, die Special Springs Stickstoffgasdruckfedern sind garantiert für eine Lebensdauer vom ***200.000 linear meters*** zum hub. Kritische arbeitsnutzungen oder äussere Grunden, die Mangelnde Funktionstüchtigkeit hervorrufen, können die lebensdauer zusehends verringern. Die Garantie ist wirksam für die angezeigte dauer und innerhalb ***2 Jahren*** vom Kaufsdatum. Verschiedene Nutzungen bei den Gebrauchsanweisungen geliefert mit dem Produkten, oder mechanische Beschädigungs, wird der Grund die sofortige Dekadenz der Garantie sein.
Die Rechtsausdrücke des Garantie auf www.specialsprings.com

F Si correctement installées et avec des normales conditions d'usage, les ressorts à l'azote Special Spring sont garantis pour une durée de ***200.000 mètres linéaires*** des course. Des conditions de travail critiques ou d'autres cause externes qui provoquent des mal fonctionnements pourraient réduire, même significativement, la durée. La garantie est valable pour la durée indiquée entre ***2 ans*** de la date d'achat. Des utilisations différentes des prescriptions e des lignes-guide spécifiées et fournies avec les produits, ou encore des endommagements mécaniques causeront l'immédiate décadence de la garantie.
Termes juridiques de garantie sur www.specialsprings.com

E Con una instalación correcta y en condiciones normales de trabajo, los cilindros resorte de nitrógeno de Special Springs están garantizados para una duración de ***200.000 metros lineales*** de carrera. Condiciones de trabajo críticas o causas externas che provoquen funcionamientos incorrectos pueden reducir, incluso de manera significativa, la vida útil. La garantía es válida para la duración indicada, máximo ***2 años*** desde fecha de compra. Usos diferentes a los prescritos y a las líneas guía especificadas y suministradas con el producto o daños mecánicos serán causa inmediata decadencia de la garantía.
Términos legales de garantía en www.specialsprings.com

P Se correctamente instalados e em condições normais de trabalho, os cilindros de nitrogênio Special Springs podem garantir uma duração de ***200.000 metros lineares*** de curso.Condições criticas ou causas externas que possam causar mau funcionamento de trabalho pode reduzir a duração de uma forma significativa.A garantia é válida durante o período indicado dentro de ***2 anos*** até a data de compra.Ou qualquer uso diferente respeito das prescrições e orientações fornecidas e especificada com os produtos, ou danos mecânicos causaria a decadência garantia imediata.
Termos legais de garantia em www.specialsprings.com

USER INFORMATION



NON SELF CONTAINED

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 M90, M200, RV170, RV320). 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.

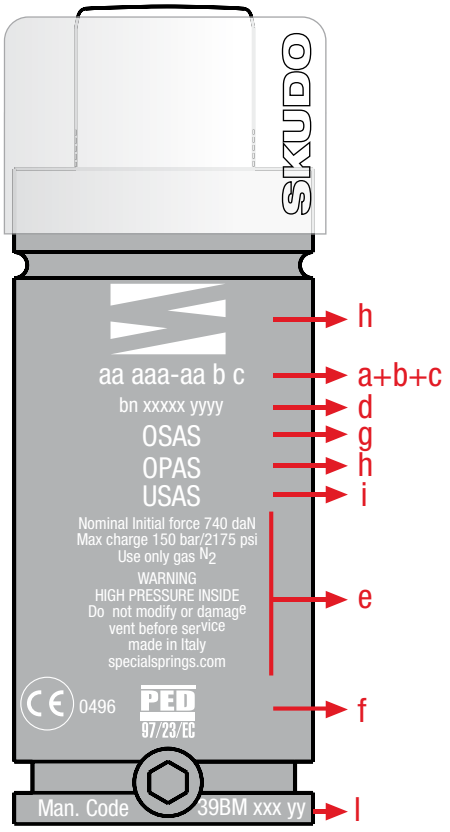
GB All cylinders which can be connected to the system and are specifically coded (_ _ - N / _ _- NA) are supplied without the one-way valve, without pressure and with only the closure plug of the connection hole (excluding M90, M200, RV170, RV320). If you wish to convert independent cylinders into system-connectable cylinders, order the necessary hoses and connections, and follow the specific instructions for every series published on site www.specialsprings.com.

D Alle in das System integrierbaren und speziell kodierten Zylinder (_ _ - N / _ _ - NA) werden ohne Rückschlagventil, ohne Druck und nur mit dem Verschlussdeckel der Anschlussöffnung geliefert (ausgenommen M90, M200, RV170, RV320). 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 M90, M200, RV170, RV320). 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 M90, M200, RV170, RV320). 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 M90, M200, RV170, RV320). 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.



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 oltre corsa
h) Sicurezza attiva oltre pressione
i) Sicurezza attiva ritorno incontrollato
l) kit manutenzione

GB
a) Model code
b) Revision indicator
c) Hosed-system version
d) Batch number
e) General info
f) Subject to OE/PED 97/23/EC
g) Over stroke active safety
h) Over pressure active safety
i) Uncontrolled speed active safety
l) Maintenance kit

D
a) Modellcode
b) Revisionsindex
c) Version kann an das System angeschlossen werden
d) Produktionsposten
e) Allgemeine Informationen
f) Unterliegt der OE/PED-Kennzeichnung gemäß Richtlinie 97/23/EG
g) Aktiven überhubsicherung
h) Aktive überdruck-sicherheitsvorrichtung
i) Aktiver Schutz bei Unkontrolliertem Rückhub
l) Wartung set

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) Securite active outre-course
h) Securite active outre-pression
i) Securité Active pour Rétour Incontrôlé.
l) Jeu entretien

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 de fin de carrera
h) Seguridad activa ultra presión
i) Securidad Activa de Retorno Incontrolado.
i) Set mantenimiento

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 OE/PED 97/23/EC
g) Segurança ativa mecânica
h) Segurança ativa sobrepressão
i) Segurança para Retorno da Haste.
l) Manutenção de conjunto

PED 97/23/EC

CE

I TUTTI i cilindri ad azoto SPECIAL SPRINGS soddisfano la Direttiva Europea sui recipienti in pressione 97/23/CE. La Direttiva Europea sui recipienti in pressione 97/23/CE, entrata in vigore per tutta la comunità europea il 29 Maggio 2002, regolamenta e definisce come attrezzature a pressione, i recipienti, le tubazioni ed accessori costruiti per contenere fluidi pressurizzati quando la pressione massima ammissibile PS del fluido è > di 0,5 bar. Più specificatamente, la Direttiva 97/23/CE prevede la classificazione in categorie (I, II, III), con marchiatura CE e numero identificativo del produttore (obbligatoria per II e III, facoltativa per I) per i recipienti il cui risultato della pressione P (bar) x il volume del fluido Vo (dm3) è =/> di 50. Tutti i cilindri a gas il cui prodotto P x Vo è < 50 rientrano nell'art. 3.3 della direttiva e la marchiatura CE non si applica.

GB ALL the nitrogen cylinders Special Springs totally satisfy the European Directive on pressure devices 97/23/EC. The European Directive on pressure equipments 97/23/CE, entered into force on 29yh May 2002 for all European Community, prescribes and defines as pressure equipments the receptacles, the tubes and accessories built to contain pressurized fluids when the maximum acceptable pressure PS of the fluid is > of 0.5 bar. In particular, the directive 97/23/CE foresees the classification into categories (I,II,III) with CE mark and identification number of producer (mandatory for II and III, discretionary for I) for containers by which result of pressure P(bar) X fluid volume Vo(dm^3) is =/> of 50. All the gas cylinders by which result of P x Vo is < 50 are subject to the article 3.3 of the same directive and the mark CE should not be applied.

D ALLE die Stiffstoffgasdruckenfedern SPECIAL SPRINGS befriedigen die Richtlinie über Druckgeräte 97/23/EG. Diese Richtline über Druckgeräte 97/23/EG, die der 29. Mai 2002 in kraft gewesen war, reglementiert und beschreibt als „druckausrüstungen“ die Behältern, leitungen und zubehören gebauten um unter Überdruck Flüssigkeiten zu enthalten, wenn die maximaler akzeptabel Druck des Flüssigkeit PS ist > vom 0.5 bar. Im einzelnen, Die richtlinie 97/23/EG vorraussieht eine klassifikation in kategorien (I,II,III) mit EG kennzeichnung und identifikations nummer vom dem Hersteller (obligatorish für II und III, fakultativ für I) für Behälter denen resultat vom Druck P (bar) X Volumen des Flüssigkeit Vo (dm^3) ist =/> vom 50. Alle Gasdruckfedern denen Ergebnis P X Vo ist < 50, folgen den artikel 3.3 der Gleiche Richtlinie und die EG kennzeichnung ist nicht aufzuerlegen.

F TOUS le cylinder-ressorts à l'azote SPECIAL SPRINGS satisfont la Directive Européenne sur les récipients en pression 97/23/CE.La Directive Européenne sur les récipients en pression 97/23/CE, entrée en vigueur pour toute la Communauté Européenne le 29 Mai 2002, réglemente et définit comme “Equipement en pression” les récipients, les tuyaux, les conditues et accessoires fabriqués pour contenir des fluids pressurisés quand la pression maximale ammissible PS du fluide est > de 0.5 bar.Plus spécifiquement, La Directive 97/23/CE prévoit la classification en categories (I,II,III), avec marquage CE et numéro identificatif du producteur (obligatoire pour II et III et facoltatif pourt I), pour les recipients dont le resultat de la pression P (bar) X le volume du fluide Vo (dm^3) est =/> de 50. Tous les cylindres à gaz dont le produit de P X Vo est < 50 sont réglementés par l'article 3.3 de la même directive et le marquage CE n'est pas à effectuer.

E TODOS los cilindros de nitrógeno SPECIAL SPRINGS son conformes a la Directiva Europea sobre recipientes de presión 97/23/CE. La Directiva Europea sobre recipientes de presión 97/23/CE, que entró en vigor en toda la Comunidad Europea el 29 de mayo de 2002, reglamenta y define como elementos de presión, los recipientes, tubos y accesorios construidos para contener fluidos presurizados cuando la presión máxima admisible PS del fuido es > a 0,5 bar. Más concretamente, la directiva 97/23/CE prevé la clasificación en categorías (I,II,III), con marcaje CE y número identificativo del fabricante (obligatoria para II y III, facultativa para I) para los recipientes cuyo resultado de la presión P (bar) x el volumen del fluido Vo (dm^3) sea =/> a 50. Todos los cilindros de gas con P x Vo < 50 entran en el artículo 3.3 de la directiva y el marcaje CE no se aplica.

P TODOS os cilindros de nitrogénio Special Springs satisfazem totalmente a Directiva Europeia para dispositivos de pressão 97/23/CE, que entraram em vigor em 29 de Maio de 2002 para toda a comunidade Europeia, prescreve e define os equipamentos receptáculos, os tubos e acessórios montados para conter a os fluidos pressurizados quando a pressão máxima aceitável PS de fluido > de 0.5 bar. Em particular, a directiva 97/23/ce prevê a classificação em categorias (I,II,III) com CE marcadas e com numero de identificação de produtor (obrigatório para II e III, discricionário para I) para recipientes cujo o resultado de pressão P (bar) X volume fluido Vo(dm^3) é =/> a 50.
Todos os cilindros de gás, através da qual resultam P x Vo é < 50 estão sujeitos ao artigo 3.3 da mesma directiva e da marca CE não deve ser aplicada.

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 contructores de ferramentas, entregar juntamente com a ferramenta a documentação e intruções de uso de cilindros, e respectivos acessorios fornecidos pela Special Springs.

USER INFORMATION

I Qualora, dopo un lungo funzionamento o per applicazioni particolarmente gravose, si verificassero delle perdite di pressione, significa che le tenute hanno iniziato ad usurarsi o sono state danneggiate. E' quindi possibile, con l' uso di appositi utensili e kits ed il supporto di specifici video e dettagliate istruzioni, ripristinare le condizioni originarie di tenuta e guida. 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 If pressure losses occur after extended use or particularly heavy applications, this indicates that the sealing gaskets are worn or damaged. Using special tools and kits, and with the support of videos and detailed instructions, it is possible to restore the original seal and guide conditions. 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 exhaust all pressure and ensure that the rod is fully retracted into the body.

D Wird nach langer Betriebstätigkeit oder besonders beanspruchender Verwendung ein Druckverlust festgestellt, bedeutet dies, dass die Dichtungen allmählich abgenutzt sind oder beschädigt wurden. Es ist mit Hilfe von zweckmäßigem Werkzeug oder Sets sowie spezifischen Videos und detaillierten Anweisungen möglich, die Ausgangsbedingungen von Dichtung und Führung wiederherzustellen. Die Wartung sollte nur von qualifiziertem Personal vorgenommen werden. Etwaige Fehler können schwerwiegende Sicherheitsrisiken hervorrufen oder die Lebensdauer der Zylinder einschränken.EntladenSiedenDruckundstellenSiesicher,dassderSchaftkomplettindenKörpereingeführtist,bevorSieEingriffevornehmen.

F Si des pertes de pression se produisent après un long fonctionnement ou avec des applications particulièrement lourdes, cela signifie que les joints de rétenue ont commencé à s'usurer ou qu'ils sont endommagés. L'utilisation d'outils et de kits appropriés, ainsi que le support de vidéos spécifiques et d'instructions détaillées permettront de rétablir les conditions d'origine de rétenue et de guidage. 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 Si, después de mucho tiempo funcionando, o en caso de aplicaciones muy pesadas, se produjesen pérdidas de presión, significa que las guarniciones han comenzado a desgastarse o han sufrido algún desperfecto. En esos casos es perfectamente posible restablecer las condiciones originales de la guarnición o la guía mediante kits de herramientas especiales y vídeos de instrucciones específicas. 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

P No caso em que, após um longo funcionamento ou por aplicações particularmente gravosas, se verifiquem perdas de pressão, isso significa que os vedantes começaram a desgastar-se ou foram danificadas. Portanto, com a utilização dos utensílios e dos conjuntos, com o apoio de vídeos específicos e de instruções detalhadas é possível restabelecer as condições originais de estanquidade e guidamento. 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.

Download video and step-by-step guide instructions at:
http://www.specialsprings.com/ita/download/fogli-manutenzione.html

I Come previsto dalle linee guida della direttiva PED 97/23/EC l'azienda che provvede alla manutenzione dei cilindri marchiati CE dal fabbricante (P x Vo =/> 50) si assume la completa responsabilità di far riesaminare gli stessi da un ente di certificazione accreditato. Diversamente tali manutenzioni potranno essere effettuate esclusivamente da Special Springs.

GB As the guidelines of the PED 97/23/EC instruction provide for, the company that arranges the maintenance of the cylinders laser etched CE by the producer (P x Vo =/> 50), takes charge of making them checked by a certified and qualified company. Otherwise, these maintenances could be carried out exclusively by Special Springs.

D Wie in der Richtlinie PED 97/23/EC vorgeschrieben übernimmt die Firma, die die Instandhaltung von Gasdruckfedern durchführt, die vom Hersteller mit CE-Kennzeichnung versehen worden sind (P x Vo =/> 50), die volle Verantwortung dafür, diese von einer zugelassenen Zertifizierungsanstalt nachprüfen zu lassen. Andernfalls können diese Instandhaltungsarbeiten ausschließlich von Special Springs durchgeführt werden.

F Selon le mode prévu par les indications de la directive PED 97/23/EC, l'entreprise qui s'occupe de l'entretien des cilindres marqués CE par le producteur (P x Vo =/> 50), assume la responsabilité de les faire réexaminer par un institut de certificatión qualifié. Autrement, les entretienes peuvent être effectuées exclusivement par Special Springs.

PED 97/23/EC

CE

E Como las indicaciones de la directiva PED 97/23/EC estipulan, la empresa que provee al mantenimiento de los cilindros grabado CE por el productor (P x Vo =/> 50), se hace cargo de que una empresa certificada y capacitada les controle. De otra manera los mantenimientos pueden ser llevado exclusivamente por Special Springs.

P De acordo com as directrizes PED 97/23/EC a fabrica que fornece a manutenção dos cilindros com a marca CE do fabricante (P x Vo =/> 50) assume a responsabilidade de reexaminar os mesmos por uma entidade de certificação creditada. De outra forma tais manutenções poderão ser efectuadas exclusivamente pela Special Springs.

How to Order

Maintenance kits

I Se il codice Man. Code non è riportato sul cilindro: 39BM + Codice modello + revisione.

GB If Man. Code is not indicated on the cylinder, order: 39BM + Model code + revision.

D Wenn Man. Code auf der Gasdruckfeder nicht vorhanden, bestellen Sie 39BM + Modellcode + revision.

F Si le Man. Code n'est pas indiqué en le cylindre, ordonnez 39BM + Référence modèle + révision.

E Si el Man. Codigo no está indicado en el cilindro, ordenar 39BM + Codigo de modelo + revisión.

P Se a referencia Man Code não estiver escrita no cilindro, favor solicitar 39BM + Codigo de modelo + revisão.

EXAMPLE: 39BMSC1500D

I Se presente nel cilindro, riportare il codice Man. Code in fase di ordinazione.

GB If Man. Code is indicated on the cylinder, specify it on the order.

D Wenn Man. Code auf der Gasdruckfeder vorhanden, bitte in der Bestellung angeben.

F Si le Man. Code est indiqué en le cylindre, précisez-le dans l'ordre.

E Si el Man. Code está indicado en el cilindro, especificarlo en el orden.

P Se indicado no cilindro, indique o Man. Code na ordem.

EXAMPLE: 39BMSC01500D

I Kit inclusivo di: Boccola assemblata, Valvola unidirezionale, Olio lubrificante e grasso, Istruzioni di montaggio.

GB Kit made of: Assembled bushing, one way valve, lubricant and grease, instructions sheet.

D Set beinhaltet: montierte Buchse, Rückschlagventil, Schmieröl und Schmierfett, Montageanleitung.

F Kit comprenant: Douille assemblée, Soupape à sens unique, Huile lubrifiante et graisse, Instructions pour le montage.

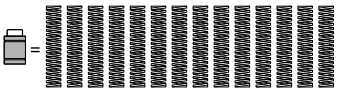
E El Kit incluye: casquillo ensamblado, Válvula unidireccional, Aceite lubricante y grasa, Instrucciones de montaje.

P Kit com: Bucha ensamblada, Válvula unidirecional, Óleo lubrificante e graxa, Instruções de montagem.

N_2 - BENEFITS

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. Considerable reduction of height.Considerable reduction of occupied volume. Considerable reduction of retaining and pre-load devices.
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.

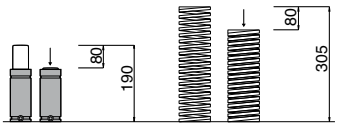
F ADVANTAGES Réduction importante de la surface occupée. Réduction importante de l'espace en hauteur. Réduction importante du volume total occupé. Réduction importante du nombre de dispositifs de précharge et guidage.
RESULTAT Épargne économique important.

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.Compacttool 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.

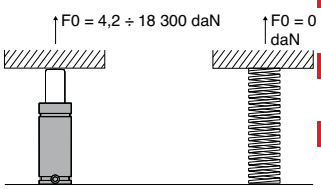
F ADVANTAGES Réduction importante des encombrements en hauteur avec une course et une force équivalente. Construction plus compacte de l'outillage.
RESULTAT Épargne économique important.

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 corsu. 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.

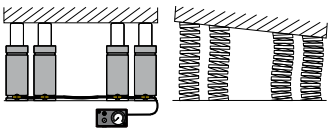
F ADAVANTAGES Elimination de la précharge. Application plus facile.
RESULTAT Épargne économique important.

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.

Less Space

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



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 Balanced force on each contact point. Forces may be positioned exactly where required. System may be constantly monitored for pressure.
RESULTS Constant production conditions of piece-parts. Longer life for punches and tools. Money saving.

D VORTEILE Stets ausgeglichene und gleichförmige Kraft an allen Kontaktpunkten. Exakt an dergewünschten Stelle des Gesenks anwendbare Kraft. Ständige Sichtanzeige des Betriebsdrucks.
ERGEBNIS Bessere und konstante Qualität der fertigen Werkstücke. Längere Haltbarkeit der Verschleisswerkzeuge. Wirtsschaftliche Einsparung.

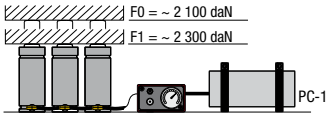
F ADVANTAGES Force toujours équilibrée et égale en tous points de contact. Force que l'on peut positionner exactement là où elle est exigée dans l'outil. Visualisation continue de la pression dans le système.
RESULTATS Qualité supérieure et constante des produits découpés ou emboutis. Longévité accrue des outils. Épargne économique.

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 posicionáve exactamente onde é necessária na Ferramenta. Visualização contínua da pressão I
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



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

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. Money saving.

D VORTEILE Bessere Kontrolle des Werkstücks während den Phasen des Formens und des Ziehens.
ERGEBNIS Bessere qualität der fertigen Werkstücke. Weniger Ausschuss. Wirtschaftliche Einsparung.

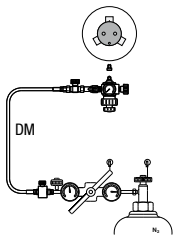
F ADVANTAGES Un meilleur contrôle de la pièce durant les phases de découpage ou d'emboutissage.
RESULTATS Une meilleure qualité des pièces découpées ou embouties. Une quantité moindre de rebuts en production. Épargne économique.

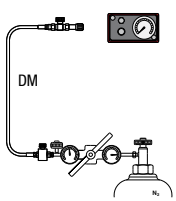
E VENTAJAS Mejor control del material durante las fases de moldeo y embutición.
RESULTADO Mejor calidad de las piezas moldeadas. Menores desechos de producción. Notable ahorro económico.

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.

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. Verwen dung 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. Utili sation d'un même ressort à gaz dans des travaux différents.
RESULTAT Flexibilité d'utilisation. Épargne 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 diferen tes trabalhos.
RESULTADO Flexibilidade de utilização. Poupança económica notável.

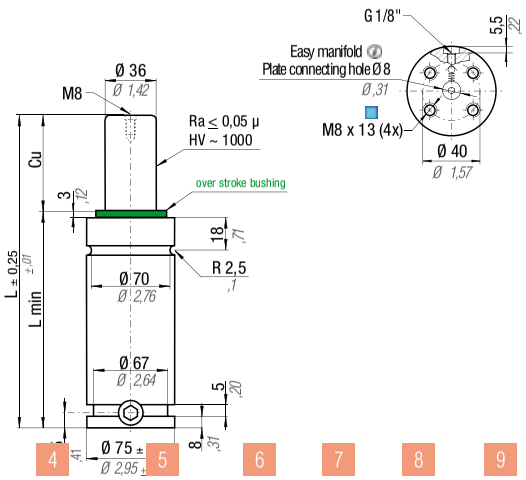
1 SC 1500

lifeplus concept PED 97/23/EC

ISO 11901	W-DX35-6203 (Ford)	EM24.54.700 (Renault)	2
VDI 3003	B8 3180 220 000 001(MB)	39D 878 (VW)	
B2 4006 (BMW)	E24.54.815.G (PSA)	K 32 S (Nissan)	

SPECIAL SPRINGS

3



Info

* 100% Cu - Polytropic end forces

page 210

Il nuovo codice sarà fornito solo ad esaurimento del vecchio

The new code will be supplied only when the old will be out of stock

Der neue Kode wird geliefert nur wenn der alte nicht mehr im Lager ist

Le nouveau code sera fourni uniquement lorsque le vieux stock sera ecoulé

El nuevo código será suministrado sólo cuando el viejo está fuera de stock

O novo código irá ser fornecido apenas quando o antigo esgotar stock

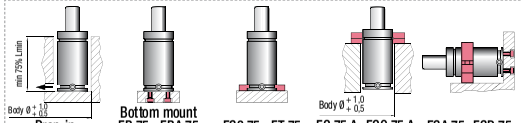
4 5 6 7 8 9 10

N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	10,18 cm² 1,578 in²	~ 15 - 50 (at 20°C)	1,8 m/s	39BMSC01500D

11 12 13 14 15

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
-	SC 1500 - 013 - D	13	0,51	135	5,31	122	4,80			2016	4532	84,0	5,12	3,26	7,19	-
SC 1500 - 025 - B	SC 1500 - 025 - D	25	0,98	160	6,30	135	5,31			2174	4887	118,0	7,20	3,47	7,65	-
SC 1500 - 038 - B	SC 1500 - 038 - D	38	1,50	186	7,32	148	5,83			2287	5141	152,0	9,27	3,66	8,07	-
SC 1500 - 050 - B	SC 1500 - 050 - D	50	1,97	210	8,27	160	6,30	1530	3440	2355	5294	183,0	11,16	3,84	8,47	-
SC 1500 - 063 - B	SC 1500 - 063 - D	63,5	2,50	237	9,33	173,5	6,83			2400	5395	218,0	13,30	4,05	8,93	-
SC 1500 - 080 - B	SC 1500 - 080 - D	80	3,15	270	10,63	190	7,48			2455	5519	261,0	15,92	4,30	9,48	-
SC 1500 - 100 - B	SC 1500 - 100 - D	100	3,94	310	12,20	210	8,27	150 bar	2175 psi	2495	5609	313,0	19,09	4,60	10,14	-
SC 1500 - 125 - B	SC 1500 - 125 - D	125	4,92	360	14,17	235	9,25			2529	5685	377,0	23,00	4,98	10,98	-
SC 1500 - 160 - B	SC 1500 - 160 - D	160	6,30	430	16,93	270	10,63	± 5%		2562	5760	468,0	28,55	5,51	12,15	-
SC 1500 - 200 - B	SC 1500 - 200 - D	200	7,87	510	20,08	310	12,20	+ 20 °C	+68 °F	2592	5827	568,0	34,65	6,14	13,54	-
SC 1500 - 250 - B	SC 1500 - 250 - D	250	9,84	610	24,02	360	14,17			2652	5962	673,0	41,05	7,10	15,65	-
SC 1500 - 300 - B	SC 1500 - 300 - D	300	11,81	710	27,95	410	16,14			2696	6061	778,0	47,46	8,05	17,75	I

16



HOW TO ORDER

(10 pcs) SC 1500-050-D
(10 pcs) SC 1500-050-D-N
(10 pcs) SC 1500-050-D-E

1 Modello / Model / Modell / Modèle / Modelo / Modelo / Modelo

2 Rif. standard (ISO, VDI, ecc.) / Standard ref. (ISO, VDI, ecc.) / Standard Ref. (ISO, VDI, ecc.) / Réf standard (ISO, VDI, ecc.) / Ref. standard (ISO, VDI, ecc.) / Ref. standard (ISO, VDI, ecc.)

3 Modifica rispetto al catalogo codice: xxxxxxxxx / Modification of catalogue code: xxxxxxxxxxxx / Änderung vom Katalog-Code: xxxxxxxxxxxxxx / Changement du catalogue-code: xxxxxxxxxxx / Cambio del catálogo-código: xxxxxxxxxxxxxx / Modificação do catálogo- código: xxxxxxxxxx

4 Gas di caricamento / Pressure medium / Druckgas / Gaz de chargement / Gas de carga / Gás de carga

5 Temperatura di esercizio / Working temperature / Betriebstemperatur / Température de fonctionnement / Temperatura de funcionamiento / Temperatura de funcionamento

6 ΔP / Δt

7 Pressione max di caricamento / Max charging pressure / Maximaler Ladedruck / Pression de chargement maximum / Presión máx de carga / Pressão máxima de carga

8 Pressione min. di caricamento / Min charging pressure / Minimaler Ladedruck / Pression de chargement minimum / Presión mín de carga / Pressão mínima de carga

9 Area di tenuta stelo/pistone / Rod/piston seal area / Dichtungsbereich Kolbenstange/Kolben / Zone d'étanchéité tige/piston / Área de estanqueidad vástago/pistón / Área de estanquidade do embolo/pistão

10 Cicli / minuto / Strokes / minute / Hube / Minute / Cycles / minute / Ciclos / minuto / Pancadas / minuto

11 Codice / Code / Bestell-Nummer / Référence / Código / Codigo

12 Forza iniziale a 20°C / Initial force at 20°C / Ausgangsleistung bei 20°C / Force initiale a 20°C / Fuerza inicial à 20°C / Força inicial a 20°C

13 Forza finale / Final force / Endfestigkeit / Force finale / Fuerza final / Força final

14 Volume iniziale / Initial gas volume / Ausgangswert Gasvolumen / Volumen inicial de gas / Volume de gaz initial / Volume de gás inicial

15 Classificazione PED / PED classification / PED Einteilung / Classification PED / Clasificación PED / Classificação PED

16 Fissaggi / Fixings / Befestigungen / Fixé / Bridas / Fixação

17 Indice di revisione pagina / Page review index / Index der Seiteüberprufung / Index de revue de page / Índice de revisión de página / Índice de revisão de página

Tutte le dimensioni senza tolleranza si intendono nominali.
All dimensions are nominal unless tolerance is stated.
Alle Massgangen ohne Toleranzen sind Nennmasse.
Sauf specifications de tolerances, totes le dimensions sont des valeurs nominales.
Todas las dimensiones son nominales excepto cuando se indica la tolerancia.
Todas as medidas são nominalis excepto quando la tolerancia é mencionada.

HOW TO READ THE CATALOG

EXAMPLE OF PAGE

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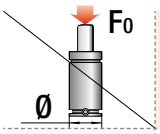
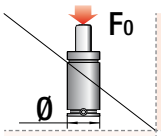
SELECTION TAB

	42	90	170 200	260 320	360 470	510 680	740	900 980	1060 1410	1530 1925
M 16 x 1,5	NE 16 x 1,5									
M 16 x 2	NE 16 x 2									
19		M 90 MS 90	RV 170 RS 170							
M 24 x 1,5		M 90 TBM M 90 TEM	NE 24 X 1,5							
1''- 8 THD		M 90 TBI								
25			M 200 MS 200 ⚠ HR 200	ML 300 RV 320 RS 320	KE 400					
32			SC 150	M 300 H 300 ⚠ HR 300	RV 350 RS 350 RT 350	ML 500	KE 750			
38				SC 250	H 500 ⚠ HR 500 RV 500 RS 500 RT 500			ML 1000	KE 1000	
M 38 x 1,5				SCF 250	HF 500 ⚠ HRF 500					
M 45 x 1,5						HF 700 ⚠ HRF 700				
45					⚠ LI 400 S 500 SC 500	⚠ HR 700	H 700 RV 750 RS 750 RF 750 RT 750			
M 50 x 1,5									HF 1000 ⚠ HRF 1000	
50							SC 750 S 750	H 1000 RV 1000 RS 1000 RF 1000 RT 1000	RV 1200 RS 1200 RF 1200 RT 1200 ⚠ HR 1000	KE 1800 ML 1800
63								⚠ LI 900		RV 1500 RS 1500 RF 1500 RT 1500 ⚠ HR 1500
75									⚠ LI 1400	S 1500 SC 1500 LS 1500



	2035 2385	2830 2945	3180	4240	4418 4980	6630	7540 7700	9540	10600 12720	18400 19910
63		KE 3000	ML 3000							
75	H 2400 ⚠ HR 2400 LS 2400 RV 2400 RS 2400 RF 2400 RT 2400				KE 4700 ML 4700					
95	⚠ LI 2000	LS 3000 S 3000 SC 3000		H 4200 ⚠ HR 4200 LS 4200 RV 4200 RS 4200 RT 4200			KE 7500 ML 7500			
120			⚠ LI 3200		LS 5000 SC 5000	H 6600 ⚠ HR 6600 LS 6600 RV 6600 RS 6600 RT 6600			KE 12000 ML 12000	
150							SC 7500 LS 7500	H 9500 LS 9500 RV 9500 RS 9500 RT 9500	⚠ HR 11800	KE 18500
195									SC 10000	RV 20000 H 18500

TAB

VDI	General Motors	
BMW	Volkswagen	
Ford		

PED 97/23/EC

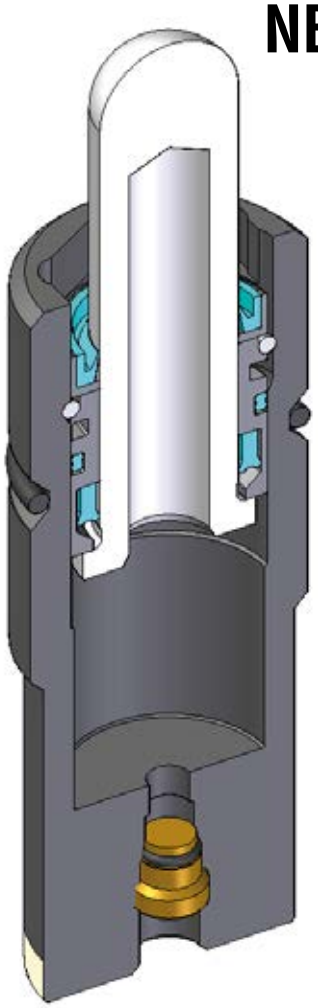
SPECIAL SPRINGS

OLD

PHASING OUT from May 1st 2011

Code : NE _ _ - _ _ - A

NEW



Code : NE _ _ x _ _ - _ _ _ - B

Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
NE 16 x 1,5	M 16 x 1,5	M 16 x 1,5	10 - 125	0,39 - 4,92	2,8 - 42	6,3 - 94,4	-	-	-	✓
NE 16 x 2	M 16 x 2	M 16 x 2	10 - 125	0,39 - 4,93	2,8 - 42	6,3 - 94,4	-	-	-	✓
NE 24 x 1,5	M 24 x 1,5	M 24 x 1,5	10 - 125	0,39 - 4,94	11 - 170	24,7 - 382,2	-	-	-	✓

How to Order

NE 16x1.5-050-B - RD

Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

Identificazione delle forze standard, se non specificata, si intende sempre forza massima YW. Per forze diverse BK + Fo richiesta

Identification of standard forces, if not specified, it is always intended as maximum force YW. For different forces BK + Fo required

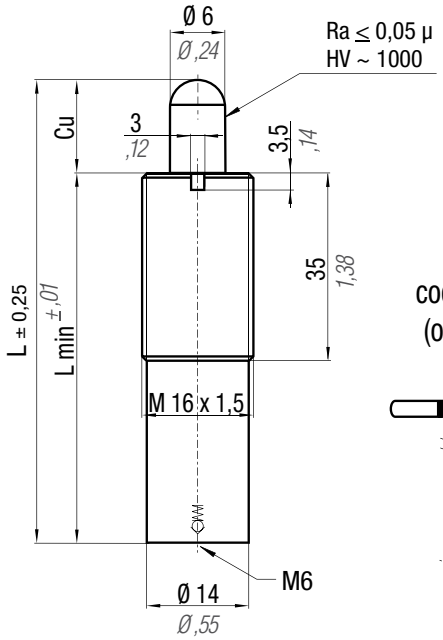
Identifikation des Standard Kraften, wenn nicht aufgestellt, es ist immer verstanden als maximaler kraft YW. Für verschiedenen Kraften, BK + Fo gebrauchte

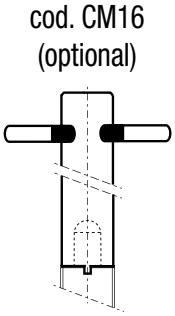
Identification des forces standard, si non specifié, on entend toujours force maximum YW. Pour forces différentes BK + Fo requise

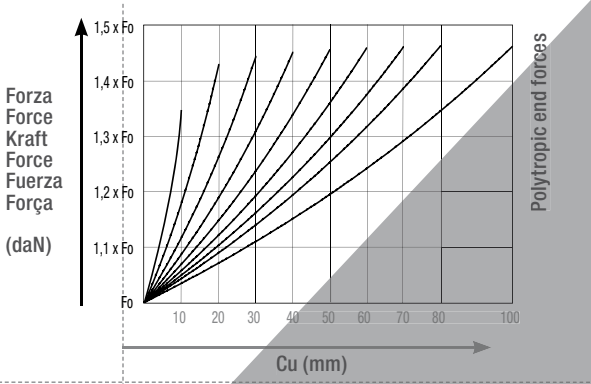
Identificación de las fuerzas convencionales, si no se especifica, se entiende siempre la maxima fuerza YW. Para fuerzas diferentes BK + Fo requerida

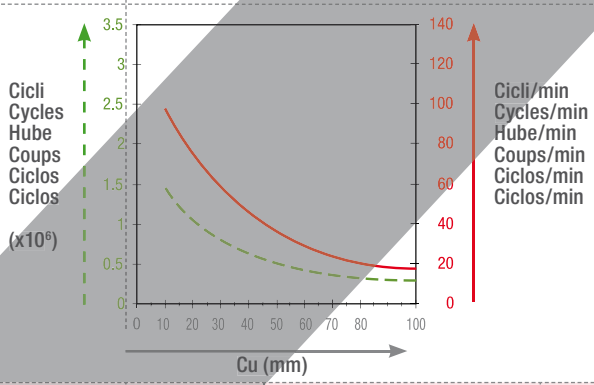
Identificação das forças normais, se não especificado, é sempre entendido a maxima força YW. Para forças diferentes BK + Fo inquérita

PED 97/23/EC









Max Speed	°F / °C		P max	P min	S		Maintenance kit	
1,8 m/s	32 - 176 / 0 - 80	N_2	150 bar *2175 psi*	10 bar *145psi*	0,28 cm² *0,043 inc²*		Disposable	

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
NE 16 - 010 - A	10	*0,39*	80	*3,15*	70	*2,76*	2,8 min 42 max *6,3 min* *94,4 max* 150 bar *2175 psi* ±5% +20°C *+68°F*		-	-	0,07	*0,15*	-
NE 16 - 020 - A	20	*0,79*	100	*3,94*	80	*3,15*			-	-	0,08	*0,18*	-
NE 16 - 030 - A	30	*1,18*	120	*4,72*	90	*3,54*			-	-	0,09	*0,20*	-
NE 16 - 040 - A	40	*1,57*	140	*5,51*	100	*3,94*			-	-	0,09	*0,20*	-
NE 16 - 050 - A	50	*1,97*	160	*6,30*	110	*4,33*			-	-	0,10	*0,22*	-
NE 16 - 060 - A	60	*2,36*	180	*7,09*	120	*4,72*			-	-	0,10	*0,22*	-
NE 16 - 070 - A	70	*2,76*	200	*7,87*	130	*5,12*			-	-	0,11	*0,24*	-
NE 16 - 080 - A	80	*3,15*	220	*8,66*	140	*5,51*			-	-	0,12	*0,26*	-
NE 16 - 100 - A	100	*3,94*	260	*10,24*	160	*6,30*			-	-	0,13	*0,29*	-

I I cilindri filettati NON hanno riserva corsa. Si raccomanda di NON superare il 90% della corsa nominale Cu.

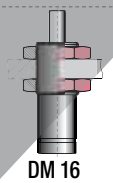
GB Threaded cylinders have NO stroke extension. It is recommended NOT to exceed 90% of the nominal stroke Cu.

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.



DM 16

HOW TO ORDER

(10 pcs)NE16-050-A
+ Fo required

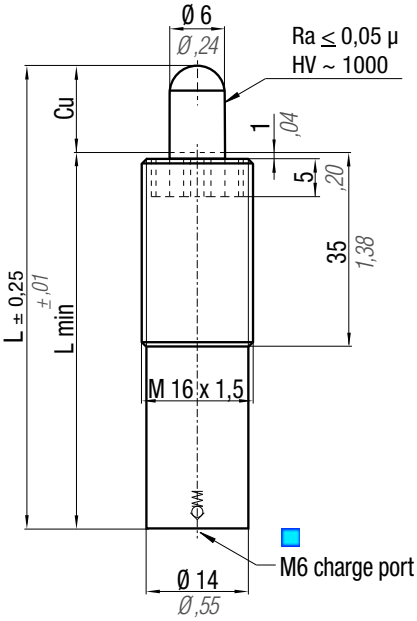
NE 16 x 1.5

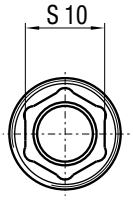
VDI 3004	90.25.97 (GM)		
B2 4036 (BMW)	90.25.98 (GM)		
W-DX35-60M (Ford)	39D 549 (VW)		

lifeplus concept

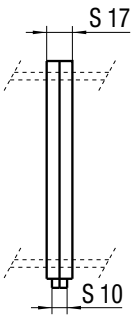
PED 97/23/EC

SPECIAL SPRINGS





cod. 39CM01A
(optional)



Info

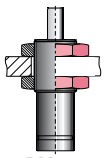
* 100% Cu - Polytropic end forces

N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	10 bar *145 psi*	0,28 cm² *0,043 in²*	~ 50 - 100 (at 20°C)	1,8 m/s	Disposable

CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	~Kg	~lb	CE Cat.
NE 16 x 1,5-010-B-...	10	*0,39*	65	*2,56*	55	*2,17*	0,05	*0,11*	-
NE 16 x 1,5-020-B-...	20	*0,79*	85	*3,35*	65	*2,56*	0,06	*0,13*	-
NE 16 x 1,5-030-B-...	30	*1,18*	105	*4,13*	75	*2,95*	0,07	*0,15*	-
NE 16 x 1,5-040-B-...	40	*1,57*	125	*4,92*	85	*3,35*	0,07	*0,15*	-
NE 16 x 1,5-050-B-...	50	*1,97*	145	*5,71*	95	*3,74*	0,08	*0,18*	-
NE 16 x 1,5-060-B-...	60	*2,36*	165	*6,50*	105	*4,13*	0,08	*0,18*	-
NE 16 x 1,5-070-B-...	70	*2,76*	185	*7,28*	115	*4,53*	0,09	*0,20*	-
NE 16 x 1,5-080-B-...	80	*3,15*	205	*8,07*	125	*4,92*	0,10	*0,22*	-
NE 16 x 1,5-100-B-...	100	*3,94*	245	*9,65*	145	*5,71*	0,11	*0,24*	-
NE 16 x 1,5-125-B-...	125	*4,92*	295	*11,61*	170	*6,69*	0,12	*0,26*	-

COLOR CODE	P bar	P *psi*	F0 Initial force ± 5% +20°C *+68°F* daN	F0 *lb*	F1 End force *
PR	12	*174*	4	*9*	1,9 x F0
GR	20	*290*	6	*14*	1,9 x F0
BU	40	*580*	11	*25*	1,9 x F0
RD	75	*1088*	21	*47*	1,9 x F0
YW	150	*2175*	42	*95*	1,9 x F0
BK	10-150	*145-2175*	3-42	*7-95*	1,9 x F0

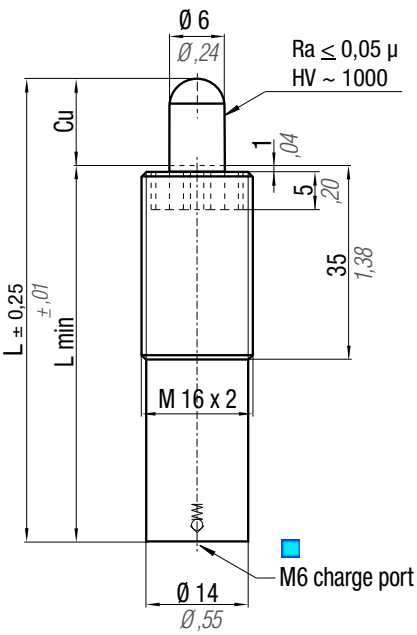
P = nominal charging pressure

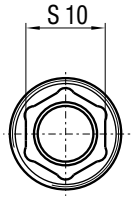


DM 16

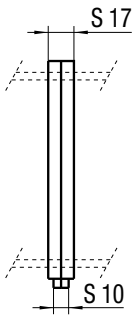
HOW TO ORDER

(10 pcs) NE16x1.5-050-B-YW





cod. 39CM01A
(optional)



Info

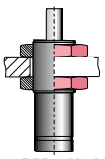
* 100% Cu - Polytropic end forces

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	10 bar *145 psi*	0,28 cm² *0,043 in²*	~ 50 - 100 (at 20°C)	1,8 m/s	Disposable

CODE	Cu		L		L min				CE
	mm	*inch*	mm	*inch*	mm	*inch*	~Kg	*~lb*	Cat.
NE 16 x 2-010-B-...	10	*0,39*	65	*2,56*	55	*2,17*	0,05	*0,11*	-
NE 16 x 2-020-B-...	20	*0,79*	85	*3,35*	65	*2,56*	0,06	*0,13*	-
NE 16 x 2-030-B-...	30	*1,18*	105	*4,13*	75	*2,95*	0,07	*0,15*	-
NE 16 x 2-040-B-...	40	*1,57*	125	*4,92*	85	*3,35*	0,07	*0,15*	-
NE 16 x 2-050-B-...	50	*1,97*	145	*5,71*	95	*3,74*	0,08	*0,18*	-
NE 16 x 2-060-B-...	60	*2,36*	165	*6,50*	105	*4,13*	0,08	*0,18*	-
NE 16 x 2-070-B-...	70	*2,76*	185	*7,28*	115	*4,53*	0,09	*0,20*	-
NE 16 x 2-080-B-...	80	*3,15*	205	*8,07*	125	*4,92*	0,10	*0,22*	-
NE 16 x 2-100-B-...	100	*3,94*	245	*9,65*	145	*5,71*	0,11	*0,24*	-
NE 16 x 2-125-B-...	125	*4,92*	295	*11,61*	170	*6,69*	0,12	*0,26*	-

COLOR CODE	P		F0 Initial force ± 5% +20°C *+68°F*		F1 End force *
	bar	*psi*	daN	*lb*	
PR	12	*174*	4	*9*	1,9 x F0
GR	20	*290*	6	*14*	1,9 x F0
BU	40	*580*	11	*25*	1,9 x F0
RD	75	*1088*	21	*47*	1,9 x F0
YW	150	*2175*	42	*95*	1,9 x F0
BK	10-150	*145-2175*	3-42	*7-95*	1,9 x F0

P = nominal charging pressure



39DM16X2A

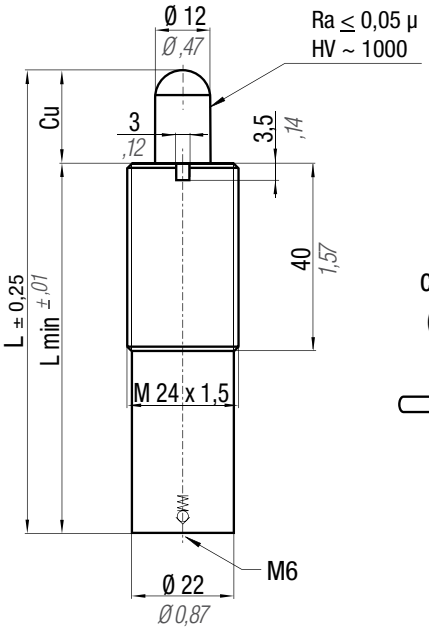
HOW TO ORDER

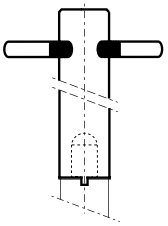
(10 pcs) NE16x2-050-B-YW

NE 24

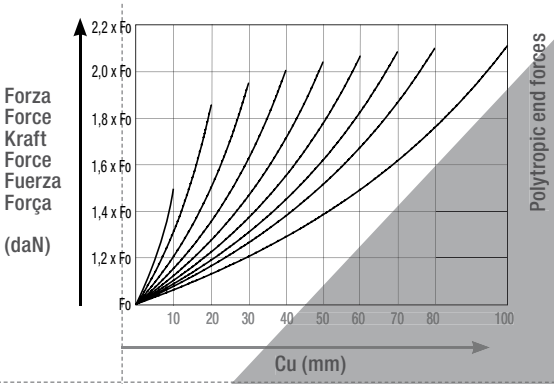
PHASING OUT from May 1st 2011

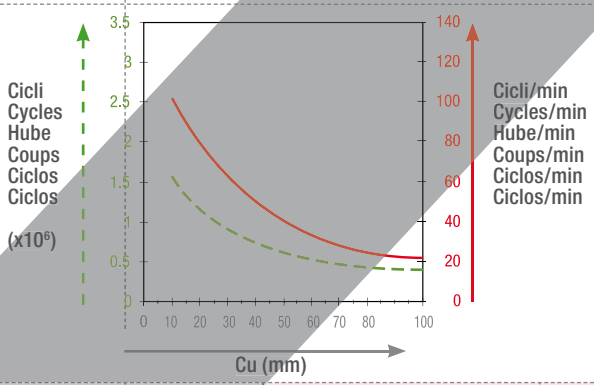
PED 97/23/EC





cod. CM24
(optional)





Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	10 bar *145 psi*	1,13 cm² *0,175 in²*		Disposable

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
NE 24 - 010 - A	10	*0,39*	80	*3,15*	70	*2,76*	11 min		-	-	0,18	*0,40*	-
NE 24 - 020 - A	20	*0,79*	100	*3,94*	80	*3,15*	170 max		-	-	0,20	*0,44*	-
NE 24 - 030 - A	30	*1,18*	120	*4,72*	90	*3,54*	*24,7 min*		-	-	0,22	*0,48*	-
NE 24 - 040 - A	40	*1,57*	140	*5,51*	100	*3,94*	*382,2 max*		-	-	0,25	*0,55*	-
NE 24 - 050 - A	50	*1,97*	160	*6,30*	110	*4,33*			-	-	0,27	*0,59*	-
NE 24 - 060 - A	60	*2,36*	180	*7,09*	120	*4,72*	150 bar		-	-	0,29	*0,64*	-
NE 24 - 070 - A	70	*2,76*	200	*7,87*	130	*5,12*	*2175 psi*		-	-	0,31	*0,68*	-
NE 24 - 080 - A	80	*3,15*	220	*8,66*	140	*5,51*	±5%		-	-	0,32	*0,70*	-
NE 24 - 100 - A	100	*3,94*	260	*10,24*	160	*6,30*	+20°C *+68°F*		-	-	0,37	*0,81*	-

I I cilindri filettati NON hanno riserva corsa. Si raccomanda di NON superare il 90% della corsa nominale Cu.

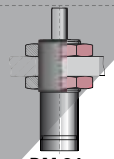
GB Threaded cylinders have NO stroke extension. It is recommended NOT to exceed 90% of the nominal stroke Cu.

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.



DM 24

HOW TO ORDER

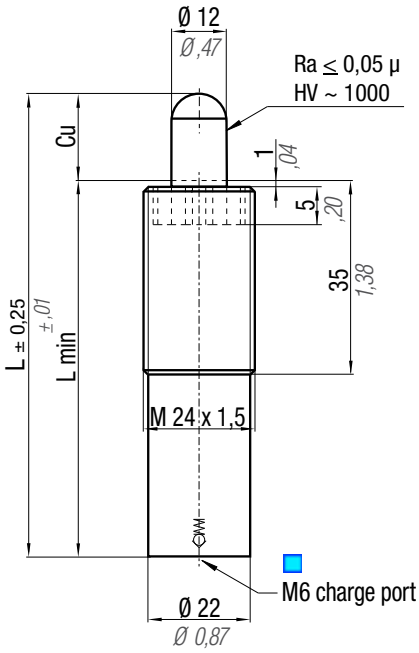
(10 pcs) NE24-050-A
+ Fo required

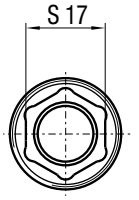
		39D 549 (VW)	VDI 3004
			W-DX35-60M (Ford)
			90.25.95 (GM)

NE 24 x 1.5

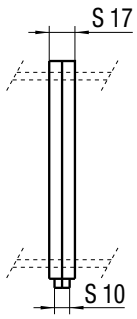
PED 97/23/EC

lifeplus concept





cod. 39CM01A
(optional)



Info

* 100% Cu - Polytropic end forces

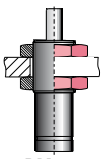
NE

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	10 bar *145 psi*	1,13 cm² *0,175 in²*	~ 50 - 100 (at 20°C)	1,8 m/s	Disposable

CODE	Cu		L		L min		~Kg	~lb	CE Cat.
	mm	*inch*	mm	*inch*	mm	*inch*		*lb*	
NE 24 x 1,5-010-B-...	10	*0,39*	65	*2,56*	55	*2,17*	0,16	*0,35*	-
NE 24 x 1,5-020-B-...	20	*0,79*	85	*3,35*	65	*2,56*	0,18	*0,40*	-
NE 24 x 1,5-030-B-...	30	*1,18*	105	*4,13*	75	*2,95*	0,20	*0,44*	-
NE 24 x 1,5-040-B-...	40	*1,57*	125	*4,92*	85	*3,35*	0,23	*0,51*	-
NE 24 x 1,5-050-B-...	50	*1,97*	145	*5,71*	95	*3,74*	0,25	*0,55*	-
NE 24 x 1,5-060-B-...	60	*2,36*	165	*6,50*	105	*4,13*	0,27	*0,59*	-
NE 24 x 1,5-070-B-...	70	*2,76*	185	*7,28*	115	*4,53*	0,29	*0,64*	-
NE 24 x 1,5-080-B-...	80	*3,15*	205	*8,07*	125	*4,92*	0,30	*0,66*	-
NE 24 x 1,5-100-B-...	100	*3,94*	245	*9,65*	145	*5,71*	0,33	*0,73*	-
NE 24 x 1,5-125-B-...	125	*4,92*	295	*11,61*	170	*6,69*	0,35	*0,77*	-

COLOR CODE	P		F0 Initial force ± 5% +20°C *+68°F*		F1 End force *
	bar	*psi*	daN	*lb*	
GR	20	*290*	23	*52*	2,2 x F0
BU	40	*580*	45	*101*	2,2 x F0
RD	75	*1088*	85	*191*	2,2 x F0
YW	150	*2175*	170	*382*	2,2 x F0
BK	10-150	*145-2175*	11-170	*25-382*	2,2 x F0

P = nominal charging pressure



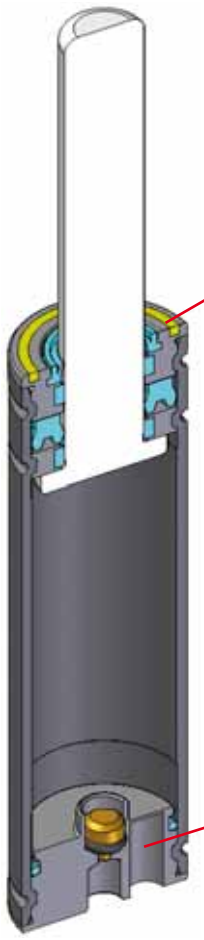
DM 24

HOW TO ORDER

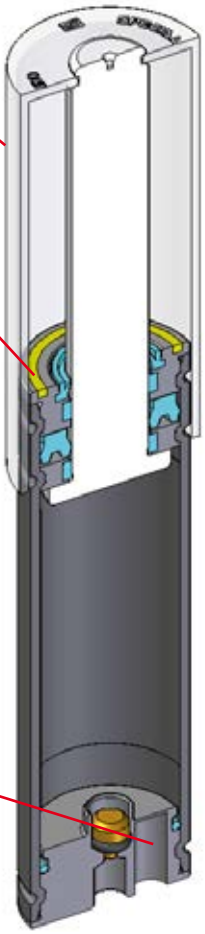
(10 pcs) NE24x1.5-050-B-YW

PED 97/23/EC

VDI	General Motors	
BMW	Volkswagen	
Ford		



SKUDO



COLOR CODE	P M90 bar	P M90 psi	P M 200 bar	P M 200 psi	Fo ±5% +20°C +68°F M90 daN	Fo ±5% +20°C +68°F M90 lb	Fo ±5% +20°C +68°F M 200 daN	Fo ±5% +20°C +68°F M 200 lb
OR	10	145	15	218	5	11	17	38
PR	20	290	25	363	10	22	28	63
GR	60	870	45	653	30	67	50	112
BU	100	1450	90	1305	50	112	100	225
RD	140	2030	135	1958	70	157	150	337
YW	180	2610	180	2610	90	202	200	450
BK	10÷180	145-2610	15÷180	218-2610	5÷90	11-202	17÷200	38-450

Over
Pressure
Active
Safety

Range chart

Model	Body Ø mm	Body Ø inch	Stroke Cu mm	Stroke Cu inch	Initial force daN	Initial force lb	OPAS	OSAS	SKUDO	USAS
M 90	19	0,75	7 - 125	0,28 - 4,92	5 - 90	11 - 202	✓	-	-	-
MS 90	19	0,75	7 - 122	0,28 - 4,80	5 - 90	11 - 202	✓	-	✓	-
M 90 TBM	M 24 X 1,5	M 24 X 1,5	7 - 125	0,28 - 4,92	5 - 90	11 - 202	✓	-	-	-
M 90 TEM	M 24 X 1,5	M 24 X 1,5	7 - 125	0,28 - 4,92	5 - 90	11 - 202	✓	-	-	-
M 90 TBI	1"-8 THD	1"-8 THD	7 - 125	0,28 - 4,92	5 - 90	11 - 202	✓	-	-	-
M 200	25	0,98	7 - 125	0,28 - 4,92	17 - 200	38 - 450	✓	-	-	-
MS 200	25	0,98	7 - 122	0,28 - 4,80	17 - 200	38 - 450	✓	-	✓	-
M 300	32	1,26	7 - 125	0,28 - 4,92	80 - 320	180 - 719	-	✓	-	✓

lifeplus concept

How to Order

M 90-050-A - RD

- Codice cilindro autonomo
- Self-contained cylinder code
- Kode des eingeständiges Zylinder
- Code du cylindre autonome
- Codigo del cilindro autónomo
- Codigo do cilindro autónomo

Identificazione delle forze standard, se non specificata, si intende sempre forza massima YW. Per forze diverse BK + Fo richiesta

Identification of standard forces, if not specified, it is always intended as maximum force YW. For different forces BK + Fo required

Identifikation des Standard Kraften, wenn nicht aufgestellt, es ist immer verstanden als maximaler kraft YW. Für verschiedenen Kraften, BK + Fo gebrauchte

Identification des forces standard, si non specifié, on entend toujours force maximum YW. Pour forces différentes BK + Fo requise

Identificación de las fuerzas convencionales, si no se especifica, se entiende siempre la maxima fuerza YW. Para fuerzas diferentes BK + Fo requerida

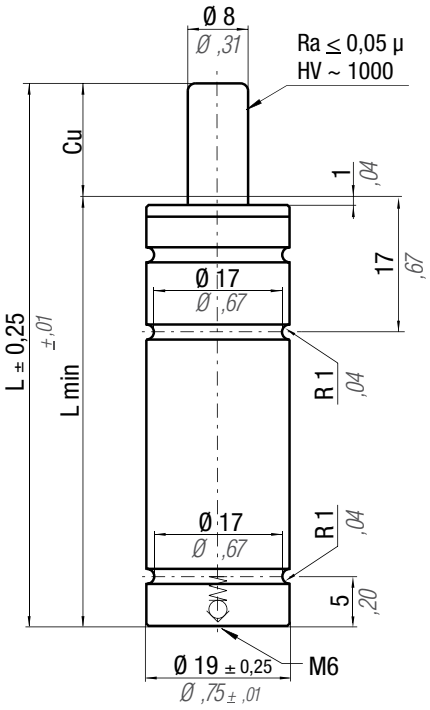
Identificação das forças normais, se não especificado, é sempre entendido a maxima força YW. Para forças diferentes BK + Fo inquérita

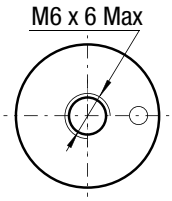
		B8 3180 220 000 002(MB)	ISO 119001
		39D 878 (VW)	VDI 3003
			B2 4006 (BMW)

M 90

PED 97/23/EC

lifeplus concept





Info

* 100% Cu - Polytropic end forces

Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

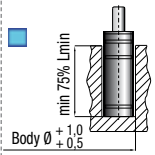
M
MS

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar *2610 psi*	10 bar *145 psi*	0,5 cm² *0,078 in²*	~ 100 - 150 (at 20°C)	1,8 m/s	Disposable

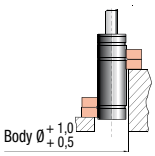
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	~Kg	~lb	Cat.
M90 - 007 - A - …	7	*0,28*	56	*2,20*	49	*1,93*	0,07	*0,15*	-
M90 - 010 - A - …	10	*0,39*	62	*2,44*	52	*2,05*	0,07	*0,15*	-
M90 - 013 - A - …	12,7	*0,50*	67,4	*2,65*	54,7	*2,15*	0,08	*0,18*	-
M90 - 015 - A - …	15	*0,59*	72	*2,83*	57	*2,24*	0,08	*0,18*	-
M90 - 025 - A - …	25	*0,98*	92	*3,62*	67	*2,64*	0,09	*0,20*	-
M90 - 038 - A - …	38,1	*1,50*	118,2	*4,65*	80,1	*3,15*	0,11	*0,24*	-
M90 - 050 - A - …	50	*1,97*	142	*5,59*	92	*3,62*	0,12	*0,26*	-
M90 - 063 - A - …	63,5	*2,50*	172	*6,77*	108,5	*4,27*	0,14	*0,31*	-
M90 - 080 - A - …	80	*3,15*	205	*8,07*	125	*4,92*	0,15	*0,33*	-
M90 - 100 - A - …	100	*3,94*	245	*9,65*	145	*5,71*	0,17	*0,37*	-
M90 - 125 - A - …	125	*4,92*	295	*11,61*	170	*6,69*	0,20	*0,44*	-

COLOR CODE	P bar	P psi	F0 Initial force ± 5% +20°C *+68°F* daN	F0 lb	F1 End force *
OR	10	*145*	5	*11*	1,3 x F0
PR	20	*290*	10	*22*	1,3 x F0
GR	60	*870*	30	*67*	1,3 x F0
BU	100	*1450*	50	*112*	1,3 x F0
RD	140	*2030*	70	*157*	1,3 x F0
YW	180	*2610*	90	*202*	1,3 x F0
BK	10-180	*145-2610*	5-90	*11-202*	1,3 x F0

P = nominal charging pressure



Drop-in



FC 19 B
FCC 19 A

Bottom mount

HOW TO ORDER

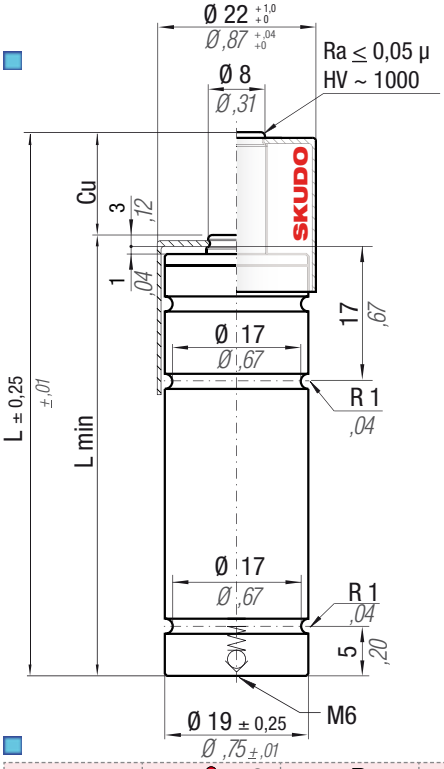
(10 pcs) M90-050-A-YW

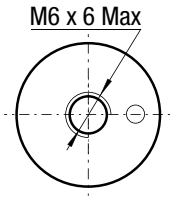
MS 90

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS





Info

* 100% Cu - Polytropic end forces

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar *2610 psi*	10 bar *145 psi*	0,5 cm² *0,078 in²*	~ 100 - 150 (at 20°C)	1,8 m/s	Disposable

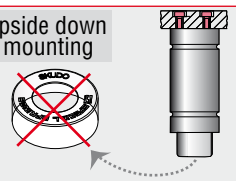
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	~Kg	~lb	CE Cat.
MS90 - 007 - A - …	7	*0,28*	62	*2,44*	55	*2,17*	0,07	*0,15*	-
MS90 - 010 - A - …	9,7	*0,38*	67,4	*2,65*	57,7	*2,27*	0,08	*0,18*	-
MS90 - 012 - A - …	12	*0,47*	72	*2,83*	60	*2,36*	0,08	*0,18*	-
MS90 - 022 - A - …	22	*0,87*	92	*3,62*	70	*2,76*	0,09	*0,20*	-
MS90 - 035 - A - …	35,1	*1,38*	118,2	*4,65*	83,1	*3,27*	0,11	*0,24*	-
MS90 - 047 - A - …	47	*1,85*	142	*5,59*	95	*3,74*	0,12	*0,26*	-
MS90 - 060 - A - …	60,5	*2,38*	172	*6,77*	111,5	*4,39*	0,14	*0,31*	-
MS90 - 077 - A - …	77	*3,03*	205	*8,07*	128	*5,04*	0,15	*0,33*	-
MS90 - 097 - A - …	97	*3,82*	245	*9,65*	148	*5,83*	0,17	*0,37*	-
MS90 - 122 - A - …	122	*4,80*	295	*11,61*	173	*6,81*	0,2	*0,44*	-

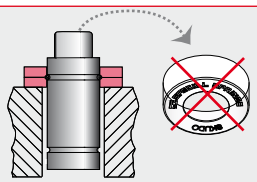
COLOR CODE	P bar	P psi	F0 Initial force ± 5% +20°C +68°F daN	F0 lb	F1 End force *
OR	10	*145*	5	*11*	1,3 x F0
PR	20	*290*	10	*22*	1,3 x F0
GR	60	*870*	30	*67*	1,3 x F0
BU	100	*1450*	50	*112*	1,3 x F0
RD	140	*2030*	70	*157*	1,3 x F0
YW	180	*2610*	90	*202*	1,3 x F0
BK	10-180	*145-2610*	5-90	*11-202*	1,3 x F0

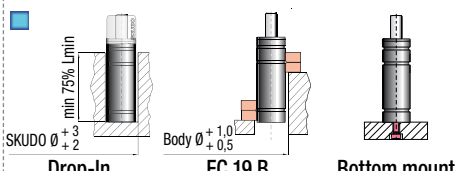
P = nominal charging pressure

WARNING
REMOVE SKUDO

Upside down mounting



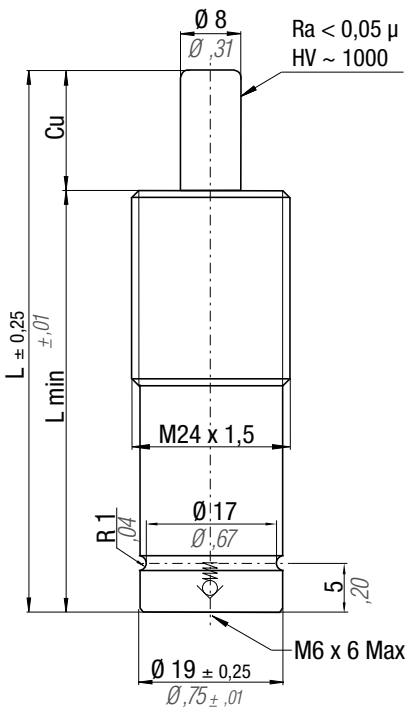


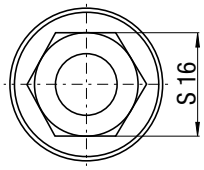


Drop-In | FC 19 B FCC 19 A | Bottom mount

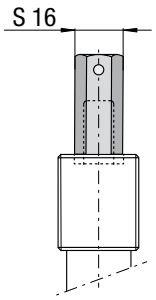
HOW TO ORDER

(10 pcs) MS90-047-A-YW





cod. 39 TBT
(optional)



Info

* 100% Cu - Polytropic end forces

Senza riserva corsa. NON superare 90% Cu
Without reserve of stroke. DO NOT exceed 90% Cu
Ohne Hubreserve. NICHT überschreiten die 90% Cu
Sans course de réserve. NE PAS dépasser 90% Cu
Sin margen de Carrera. NO superar el 90% Cu
Sem reserva de curso. NÃO se excedam os 90% Cu

M
MS

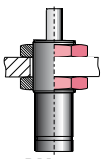
Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar *2610 psi*	10 bar *145 psi*	0,5 cm^2 *0,078 in^2*	~ 100 - 150 (at 20°C)	1,8 m/s	Disposable

CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	~Kg	~lb	Cat.
M90 - 007 - A - …	7	*0,28*	56	*2,20*	49	*1,93*	0,07	*0,15*	-
M90 - 010 - A - …	10	*0,39*	62	*2,44*	52	*2,05*	0,07	*0,15*	-
M90 - 013 - A - …	12,7	*0,50*	67,4	*2,65*	54,7	*2,15*	0,08	*0,18*	-
M90 - 015 - A - …	15	*0,59*	72	*2,83*	57	*2,24*	0,08	*0,18*	-
M90 - 025 - A - …	25	*0,98*	92	*3,62*	67	*2,64*	0,09	*0,20*	-
M90 - 038 - A - …	38,1	*1,50*	118,2	*4,65*	80,1	*3,15*	0,11	*0,24*	-
M90 - 050 - A - …	50	*1,97*	142	*5,59*	92	*3,62*	0,12	*0,26*	-
M90 - 063 - A - …	63,5	*2,50*	172	*6,77*	108,5	*4,27*	0,14	*0,31*	-
M90 - 080 - A - …	80	*3,15*	205	*8,07*	125	*4,92*	0,15	*0,33*	-
M90 - 100 - A - …	100	*3,94*	245	*9,65*	145	*5,71*	0,17	*0,37*	-
M90 - 125 - A - …	125	*4,92*	295	*11,61*	170	*6,69*	0,20	*0,44*	-

COLOR CODE	P bar	P *psi*	F0 Initial force ± 5% +20°C *+68°F* daN	F0 *lb*	F1 End force *
OR	10	*145*	5	*11*	1,3 x F0
PR	20	*290*	10	*22*	1,3 x F0
GR	60	*870*	30	*67*	1,3 x F0
BU	100	*1450*	50	*112*	1,3 x F0
RD	140	*2030*	70	*157*	1,3 x F0
YW	180	*2610*	90	*202*	1,3 x F0
BK	10-180	*145-2610*	5-90	*11-202*	1,3 x F0

P = nominal charging pressure



DM 24

HOW TO ORDER

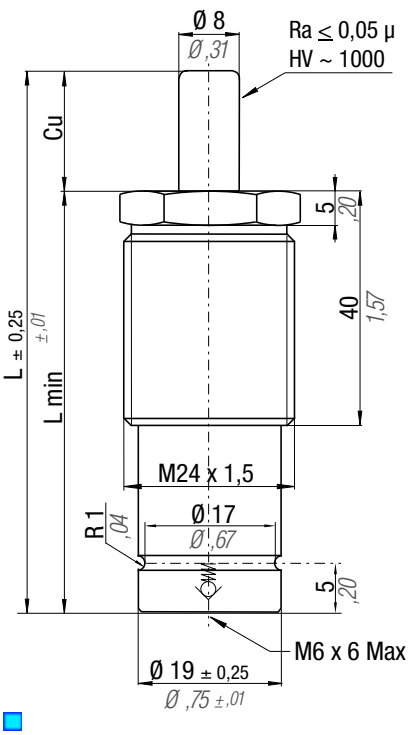
(10 pcs)
M90-050-A-YW-TBM

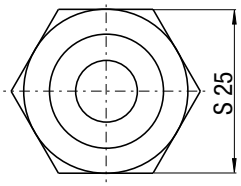
M 90 TEM threaded

lifeplus concept

PED 97/23/EC

W-DX35-80-40 (Ford)			





Info

* 100% Cu - Polytropic end forces

Senza riserva corsa. NON superare 90% Cu
Without reserve of stroke. DO NOT exceed 90% Cu
Ohne Hubreserve. NICHT überschreiten die 90% Cu
Sans course de réserve. NE PAS dépasser 90% Cu
Sin margen de Carrera. NO superar el 90% Cu
Sem reserva de curso. NÃO se excedam os 90% Cu

Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

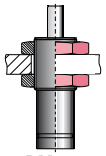
M
MS

N2	°F	°C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176	0 - 80	± 0,33 %/°C	180 bar 2610 psi	10 bar 145 psi	0,5 cm² 0,078 in²	~ 100 - 150 (at 20°C)	1,8 m/s	Disposable

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	~Kg	~lb	Cat.
M90 - 007 - A - …	7	0,28	56	2,20	49	1,93	0,07	0,15	-
M90 - 010 - A - …	10	0,39	62	2,44	52	2,05	0,07	0,15	-
M90 - 013 - A - …	12,7	0,50	67,4	2,65	54,7	2,15	0,08	0,18	-
M90 - 015 - A - …	15	0,59	72	2,83	57	2,24	0,08	0,18	-
M90 - 025 - A - …	25	0,98	92	3,62	67	2,64	0,09	0,20	-
M90 - 038 - A - …	38,1	1,50	118,2	4,65	80,1	3,15	0,11	0,24	-
M90 - 050 - A - …	50	1,97	142	5,59	92	3,62	0,12	0,26	-
M90 - 063 - A - …	63,5	2,50	172	6,77	108,5	4,27	0,14	0,31	-
M90 - 080 - A - …	80	3,15	205	8,07	125	4,92	0,15	0,33	-
M90 - 100 - A - …	100	3,94	245	9,65	145	5,71	0,17	0,37	-
M90 - 125 - A - …	125	4,92	295	11,61	170	6,69	0,20	0,44	-

COLOR CODE	P bar	P psi	F0 Initial force ± 5% +20°C +68°F daN	F0 lb	F1 End force *
OR	10	145	5	11	1,3 x F0
PR	20	290	10	22	1,3 x F0
GR	60	870	30	67	1,3 x F0
BU	100	1450	50	112	1,3 x F0
RD	140	2030	70	157	1,3 x F0
YW	180	2610	90	202	1,3 x F0
BK	10-180	145-2610	5-90	11-202	1,3 x F0

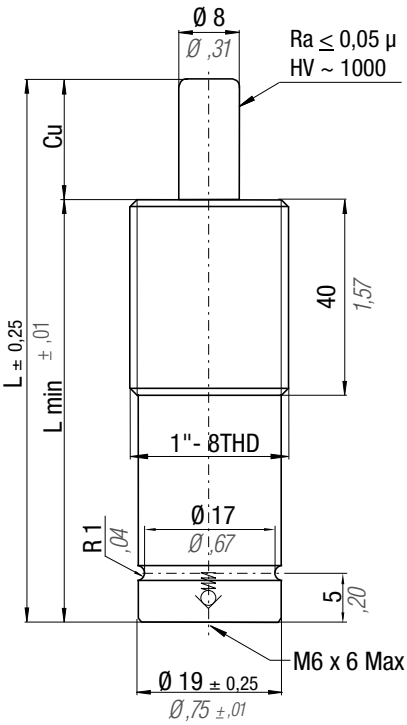
P = nominal charging pressure

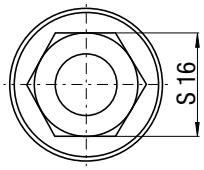


DM 24

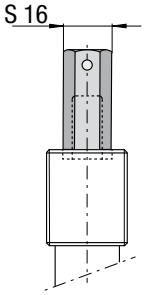
HOW TO ORDER

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





cod. 39 TBT (optional)



Info

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Ohne Hubreserve. NICHT überschreiten die 90% Cu
Sans course de réserve. NE PAS dépasser 90% Cu
Sin margen de Carrera. NO superar el 90% Cu
Sem reserva de curso. NÃO se excedam os 90% Cu

Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

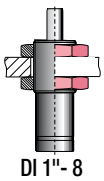
M
MS

N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar *2610 psi*	10 bar *145 psi*	0,5 cm^2 *0,078 in^2*	~ 100 - 150 (at 20°C)	1,8 m/s	Disposable

CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	~Kg	~lb	Cat.
M90 - 007 - A - …	7	*0,28*	56	*2,20*	49	*1,93*	0,07	*0,15*	-
M90 - 010 - A - …	10	*0,39*	62	*2,44*	52	*2,05*	0,07	*0,15*	-
M90 - 013 - A - …	12,7	*0,50*	67,4	*2,65*	54,7	*2,15*	0,08	*0,18*	-
M90 - 015 - A - …	15	*0,59*	72	*2,83*	57	*2,24*	0,08	*0,18*	-
M90 - 025 - A - …	25	*0,98*	92	*3,62*	67	*2,64*	0,09	*0,20*	-
M90 - 038 - A - …	38,1	*1,50*	118,2	*4,65*	80,1	*3,15*	0,11	*0,24*	-
M90 - 050 - A - …	50	*1,97*	142	*5,59*	92	*3,62*	0,12	*0,26*	-
M90 - 063 - A - …	63,5	*2,50*	172	*6,77*	108,5	*4,27*	0,14	*0,31*	-
M90 - 080 - A - …	80	*3,15*	205	*8,07*	125	*4,92*	0,15	*0,33*	-
M90 - 100 - A - …	100	*3,94*	245	*9,65*	145	*5,71*	0,17	*0,37*	-
M90 - 125 - A - …	125	*4,92*	295	*11,61*	170	*6,69*	0,20	*0,44*	-

COLOR CODE	P bar	P *psi*	F0 Initial force ± 5% +20°C *+68°F* daN	F0 *lb*	F1 End force *
OR	10	*145*	5	*11*	1,3 x F0
PR	20	*290*	10	*22*	1,3 x F0
GR	60	*870*	30	*67*	1,3 x F0
BU	100	*1450*	50	*112*	1,3 x F0
RD	140	*2030*	70	*157*	1,3 x F0
YW	180	*2610*	90	*202*	1,3 x F0
BK	10-180	*145-2610*	5-90	*11-202*	1,3 x F0

P = nominal charging pressure



DI 1"- 8

HOW TO ORDER

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

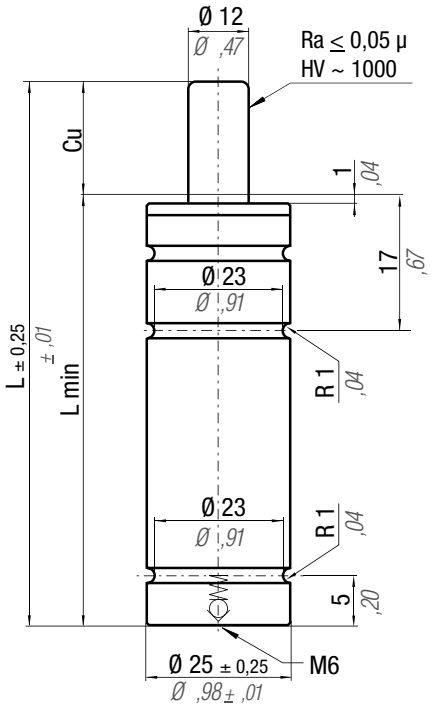
M 200

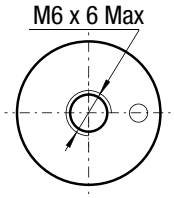
ISO 11901	B8 3180 220 000 002(MB)		
VDI 3003	E24.54.815.G (PSA)		
B2 4006 (BMW)	39D 878 (VW)		

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS





Info

* 100% Cu - Polytropic end forces

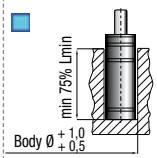
Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	180 bar / 2610 psi	10 bar / 145 psi	1,13 cm² / 0,175 in²	~ 50 - 80 (at 20°C)	1,8 m/s	Disposable

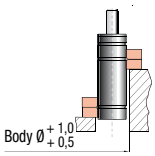
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	~Kg	~lb	Cat.
M200 - 007 - A - …	7	0,28	56	2,20	49	1,93	0,12	0,26	-
M200 - 010 - A - …	10	0,39	62	2,44	52	2,05	0,13	0,29	-
M200 - 013 - A - …	12,7	0,50	67,4	2,65	54,7	2,15	0,13	0,29	-
M200 - 015 - A - …	15	0,59	72	2,83	57	2,24	0,14	0,31	-
M200 - 025 - A - …	25	0,98	92	3,62	67	2,64	0,16	0,35	-
M200 - 038 - A - …	38,1	1,50	118,2	4,65	80,1	3,15	0,19	0,42	-
M200 - 050 - A - …	50	1,97	142	5,59	92	3,62	0,20	0,44	-
M200 - 063 - A - …	63,5	2,50	172	6,77	108,5	4,27	0,23	0,51	-
M200 - 080 - A - …	80	3,15	205	8,07	125	4,92	0,26	0,57	-
M200 - 100 - A - …	100	3,94	245	9,65	145	5,71	0,30	0,66	-
M200 - 125 - A - …	125	4,92	295	11,61	170	6,69	0,34	0,75	-

COLOR CODE	P bar	P psi	F0 Initial force ± 5% +20°C +68°F daN	F0 lb	F1 End force *
OR	15	218	17	38	1,4 x F0
PR	25	363	28	63	1,4 x F0
GR	45	653	50	112	1,4 x F0
BU	90	1305	100	225	1,4 x F0
RD	135	1958	150	337	1,4 x F0
YW	180	2610	200	450	1,4 x F0
BK	10-180	145-2610	11-200	25-450	1,4 x F0

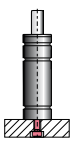
P = nominal charging pressure



Drop-In



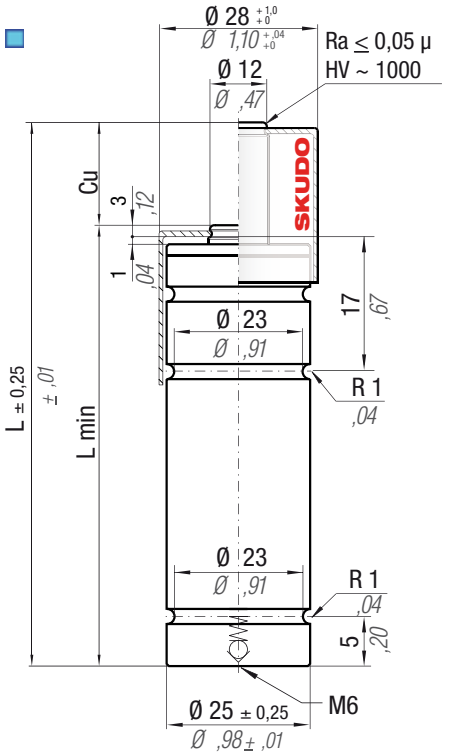
FC 25 B
FCC 25 A

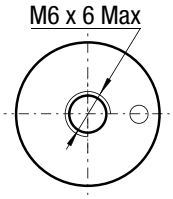


Bottom mount

HOW TO ORDER

(10 pcs) M200-050-A-YW





Info

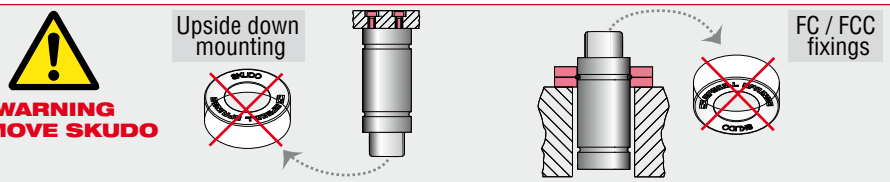
* 100% Cu - Polytropic end forces

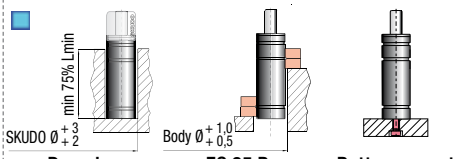
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	180 bar *2610 psi*	10 bar *145 psi*	1,13 cm² *0,175in²*	~ 50 - 80 (at 20°C)	1,8 m/s	Disposable

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	~Kg	~lb	CE Cat.
MS200 - 007 - A	7	*0,28*	62	*2,44*	55	*2,17*	0,13	*0,29*	-
MS200 - 010 - A	9,7	*0,38*	67,4	*2,65*	57,7	*2,27*	0,13	*0,29*	-
MS200 - 012 - A	12	*0,47*	72	*2,83*	60	*2,36*	0,14	*0,31*	-
MS200 - 022 - A	22	*0,87*	92	*3,62*	70	*2,76*	0,16	*0,35*	-
MS200 - 035 - A	35,1	*1,38*	118,2	*4,65*	83,1	*3,27*	0,19	*0,42*	-
MS200 - 047 - A	47	*1,85*	142	*5,59*	95	*3,74*	0,20	*0,44*	-
MS200 - 060 - A	60,5	*2,38*	172	*6,77*	111,5	*4,39*	0,23	*0,51*	-
MS200 - 077 - A	77	*3,03*	205	*8,07*	128	*5,04*	0,26	*0,57*	-
MS200 - 097 - A	97	*3,82*	245	*9,65*	148	*5,83*	0,30	*0,66*	-
MS200 - 122 - A	122	*4,80*	295	*11,61*	173	*6,81*	0,34	*0,75*	-

COLOR CODE	P bar	P psi	F0 Initial force ± 5% +20°C +68°F daN	F0 lb	F1 End force *
OR	15	*218*	17	*38*	1,4 x F0
PR	25	*363*	28	*63*	1,4 x F0
GR	45	*653*	50	*112*	1,4 x F0
BU	90	*1305*	100	*225*	1,4 x F0
RD	135	*1958*	150	*337*	1,4 x F0
YW	180	*2610*	200	*450*	1,4 x F0
BK	10-180	*145-2610*	11-200	*25-450*	1,4 x F0

P = nominal charging pressure





Drop-In | FC 25 B FCC 25 A | Bottom mount

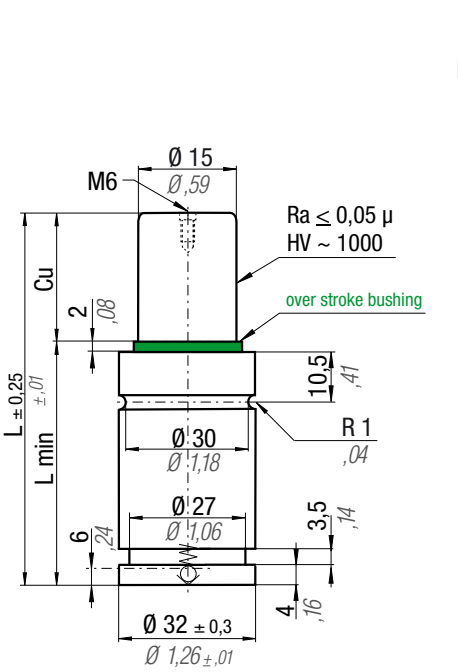
HOW TO ORDER

(10 pcs) MS200-047-A-YW

W-DX35-80-40 (Ford)			

lifeplus concept PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

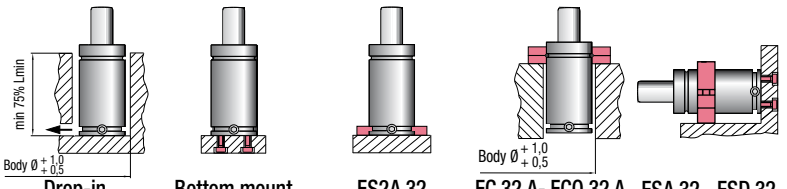
Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

N2	°F	°C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176	0 - 80	± 0,33 %/°C	180 bar *2610 psi*	10 bar *145 psi*	1,77 cm² *0,274 in²*	~ 50 - 80 (at 20°C)	1,8 m/s	39BMM0300A

CODE	Cu		L		L min		~Kg	~lb	CE
	mm	*inch*	mm	*inch*	mm	*inch*			Cat.
M300 - 007 - A - …	7	*0,28*	56	*2,20*	49	*1,93*	0,21	*0,01*	-
M300 - 010 - A - …	10	*0,39*	62	*2,44*	52	*2,05*	0,22	*0,01*	-
M300 - 013 - A - …	12,7	*0,50*	67,4	*2,65*	54,7	*2,15*	0,23	*0,01*	-
M300 - 015 - A - …	15	*0,59*	72	*2,83*	57	*2,24*	0,24	*0,01*	-
M300 - 025 - A - …	25	*0,98*	92	*3,62*	67	*2,64*	0,26	*0,01*	-
M300 - 038 - A - …	38	*1,50*	118	*4,65*	80	*3,15*	0,30	*0,01*	-
M300 - 050 - A - …	50	*1,97*	142	*5,59*	92	*3,62*	0,34	*0,01*	-
M300 - 063 - A - …	63,5	*2,50*	172	*6,77*	108,5	*4,27*	0,39	*0,02*	-
M300 - 080 - A - …	80	*3,15*	205	*8,07*	125	*4,92*	0,44	*0,02*	-
M300 - 100 - A - …	100	*3,94*	245	*9,65*	145	*5,71*	0,50	*0,02*	-
M300 - 125 - A - …	125	*4,92*	295	*11,61*	170	*6,69*	0,57	*0,02*	-

COLOR CODE	P		F0 Initial force ± 5% +20°C *+68°F*		F1 End force *
	bar	*psi*	daN	*lb*	
GR	45	*653*	80	*180*	1,45 x F0
BU	90	*1305*	160	*360*	1,45 x F0
RD	135	*1958*	240	*540*	1,45 x F0
YW	180	*2610*	320	*719*	1,45 x F0
BK	10-180	*145-2610*	18-320	*40-719*	1,45 x F0

P = nominal charging pressure



HOW TO ORDER

(10 pcs) M300-050-A-YW

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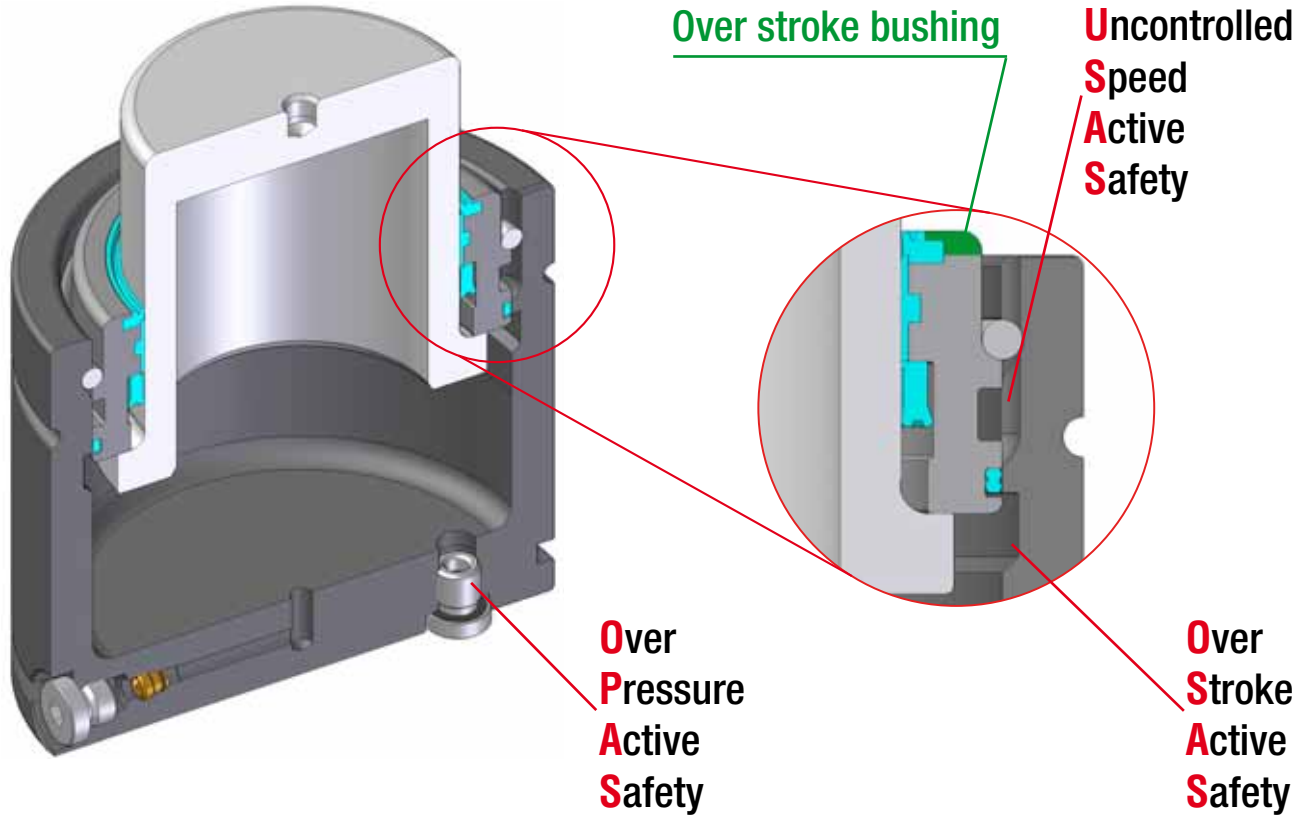
RV SERIES

VDI	Mercedes Benz	Nissan
BMW	Volkswagen	
Ford	PSA	

SPECIAL SPRINGS

PED 97/23/EC



Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
RV 170	19	0,75	7 - 125	0,28 - 4,92	170	382	✓	-	-	-
RV 320	25	0,98	7 - 125	0,28 - 4,92	320	719	✓	-	-	-
RV 350	32	1,26	10 - 125	0,39 - 4,92	360	809	✓	✓	-	✓
RV 500	38	1,50	10 - 125	0,39 - 4,92	470	1057	✓	✓	-	✓
RV 750	45	1,77	10 - 125	0,39 - 4,92	740	1664	✓	✓	-	✓
RV 1000	50	1,97	10 - 125	0,39 - 4,92	920	2068	✓	✓	-	✓
RV 1200	50	1,97	10 - 125	0,39 - 4,92	1060	2383	✓	✓	-	✓
RV 1500	63	2,48	10 - 125	0,39 - 4,92	1530	3440	✓	✓	-	✓
RV 2400	75	2,95	10 - 125	0,39 - 4,92	2385	5362	✓	✓	-	✓
RV 4200	95	3,74	16 - 125	0,63 - 4,92	4240	9532	✓	✓	-	✓
RV 6600	120	4,72	16 - 125	0,63 - 4,92	6630	14905	✓	✓	-	✓
RV 9500	150	5,91	19 - 125	0,75 - 4,92	9540	21447	✓	✓	-	✓
RV 12000	150	5,91	19 - 125	0,75 - 4,92	11780	26470	✓	✓	-	✓
RV 20000	195	7,68	19 - 125	0,75 - 4,92	19910	44738	✓	✓	-	✓

How to Order

RV 2400-050-A - N
RS - E
RF

Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

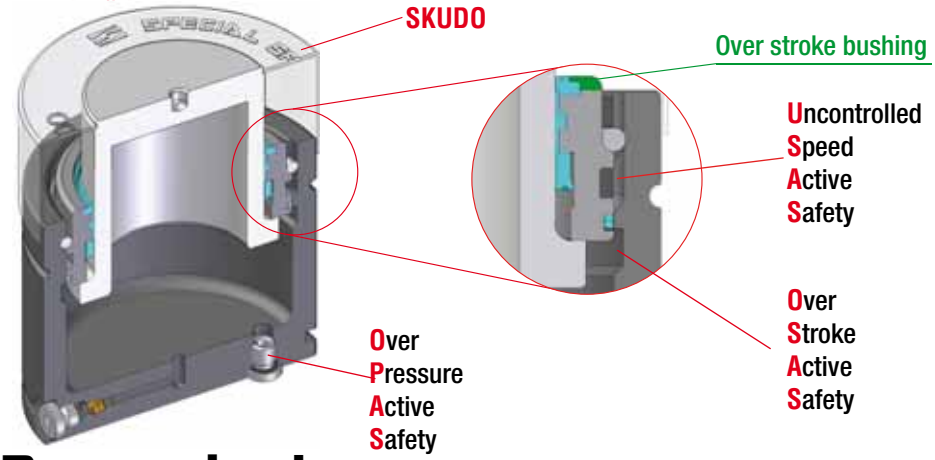
Collegabile con tubi, cilindro fornito scarico e senza valvola unidirezionale
Linkable with hoses, cylinder supplied without pressure and oneway valve
Anschlussfähig mit Leitungen, Zylinder geliefert ohne Druck und RückschlagVentil
Connectable avec tubes, ressort fourni sans pression ni valve unidirectionelle
Connectable con tubos, cilindro suministrado sin presión y sin válvula unidireccional
Acompláveis com tubos, cilindro fornecidos sem pressão e sem válvula unidireccional

Collegabile EASY MANIFOLD, fornito scarico + guarnizione di collegamento
Linkable EASY MANIFOLD, supplied without pressure + connecting seal
Anschlussfähig EASY MANIFOLD, geliefert ohne Druck + Verbindungsdichtung
Connectable EASY MANIFOLD, fourni sans pression + joint de connexion
Connectable EASY MANIFOLD, suministrado sin presión + junta de connexión
Acompláveis EASY MANIFOLD, fornecidos sem pressão + vedantes de conexão

RV SERIES + SKUDO

RS

PED 97/23/EC



Range chart

RV
RS-RF

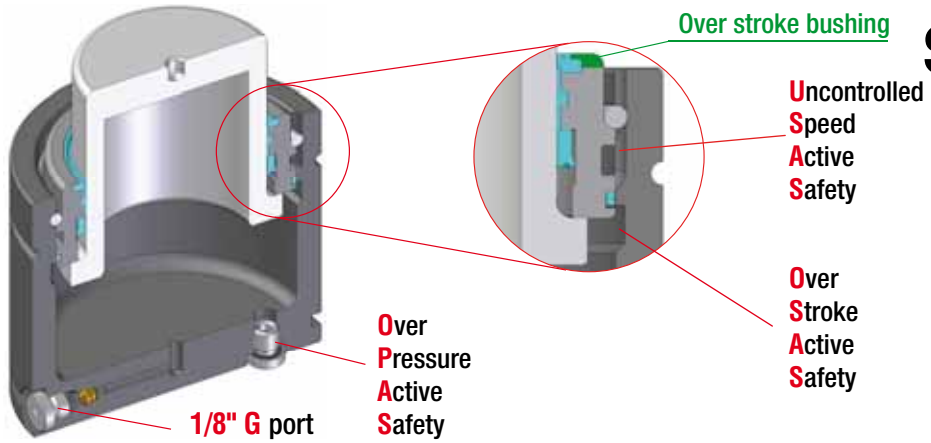
Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
RS 170	19	0,75	7 - 122	0,28 - 4,80	170	382	✓	-	✓	-
RS 320	25	0,98	7 - 122	0,28 - 4,80	320	719	✓	-	✓	-
RS 350	32	1,26	7 - 122	0,28 - 4,80	360	809	-	✓	✓	✓
RS 500	38	1,50	7 - 122	0,28 - 4,80	470	1057	-	✓	✓	✓
RS 750	45	1,77	7 - 122	0,28 - 4,80	740	1664	-	✓	✓	✓
RS 1000	50	1,97	10 - 122	0,39 - 4,80	920	2068	-	✓	✓	✓
RS 1200	50	1,97	10 - 122	0,39 - 4,80	1060	2383	-	✓	✓	✓
RS 1500	63	2,48	10 - 122	0,39 - 4,80	1530	3440	-	✓	✓	✓
RS 2400	75	2,95	13 - 122	0,51 - 4,80	2385	5362	-	✓	✓	✓
RS 4200	95	3,74	13 - 122	0,51 - 4,80	4240	9532	✓	✓	✓	✓
RS 6600	120	4,72	13 - 122	0,51 - 4,80	6630	14905	✓	✓	✓	✓
RS 9500	150	5,91	16 - 122	0,63 - 4,80	9540	21447	✓	✓	✓	✓

SERIES

RF - RV
1/8" G

FIAT
Specification

PED 97/23/EC



Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
RF 750	45	1,77	10 - 125	0,39 - 4,92	740	1664	✓	✓	-	✓
RF 1000	50	1,97	13 - 125	0,51 - 4,92	920	2068	✓	✓	-	✓
RF 1200	50	1,97	13 - 125	0,51 - 4,92	1060	2383	✓	✓	-	✓
RF 1500	63	2,48	13 - 125	0,51 - 4,92	1530	3440	✓	✓	-	✓
RF 2400	75	2,95	16 - 125	0,63 - 4,92	2385	5362	✓	✓	-	✓
RV 4200	95	3,74	16 - 125	0,63 - 4,92	4240	9532	✓	✓	-	✓
RV 6600	120	4,72	16 - 125	0,63 - 4,92	6630	14905	✓	✓	-	✓
RV 9500	150	5,91	19 - 125	0,75 - 4,92	9540	21447	✓	✓	-	✓
RV 12000	150	5,91	19 - 125	0,75 - 4,92	11780	26470	✓	✓	-	✓
RV 20000	195	7,68	19 - 125	0,75 - 4,92	19910	44738	✓	✓	-	✓

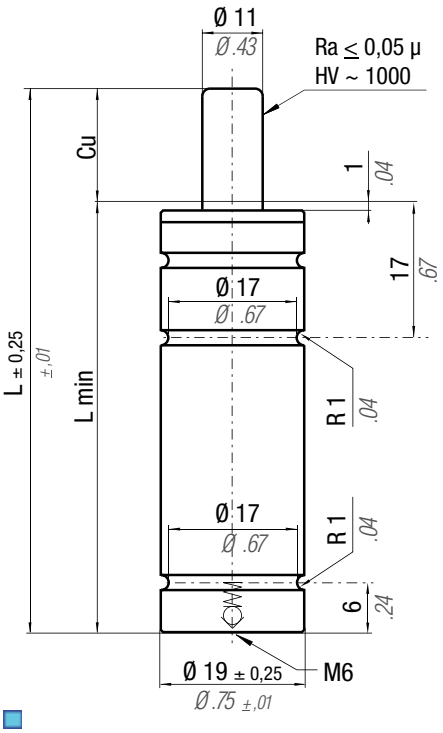
RV 170

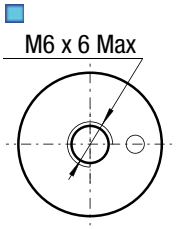
VDI 3003	39D 878 (VW)		
B2 4005 (BMW)			
B8 3180 220 000 004(MB)			

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS





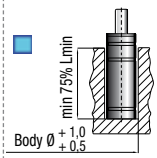
Info

* 100% Cu - Polytropic end forces

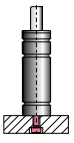
Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar 2610 psi	20 bar 290 psi	0,95 cm² 0,147 in²	~ 40 - 100 (at 20°C)	1,8 m/s	Disposable

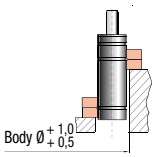
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RV 170 - 007 - A	RV 170 - 007 - B	7	0,28	44	1,73	37	1,46			292	656	3,1	0,19	0,057	0,13	-
RV 170 - 010 - A	RV 170 - 010 - B	10	0,39	50	1,97	40	1,57			311	699	4,0	0,24	0,061	0,13	-
RV 170 - 013 - A	RV 170 - 013 - B	13	0,51	56	2,20	43	1,69			324	728	5,0	0,31	0,065	0,14	-
RV 170 - 015 - A	RV 170 - 015 - B	15	0,59	60	2,36	45	1,77	170	382	331	744	5,6	0,34	0,066	0,15	-
RV 170 - 019 - A	RV 170 - 019 - B	19	0,75	68	2,68	49	1,93			341	766	6,9	0,42	0,071	0,16	-
RV 170 - 025 - A	RV 170 - 025 - B	25	0,98	80	3,15	55	2,17			352	791	8,8	0,54	0,078	0,17	-
RV 170 - 032 - A	RV 170 - 032 - B	32	1,26	94	3,70	62	2,44	180 bar		360	809	11,0	0,67	0,086	0,19	-
RV 170 - 038 - A	RV 170 - 038 - B	38	1,50	106	4,17	68	2,68	2610psi		365	821	12,9	0,79	0,093	0,21	-
RV 170 - 050 - A	RV 170 - 050 - B	50	1,97	130	5,12	80	3,15			371	834	16,7	1,02	0,107	0,24	-
RV 170 - 063 - A	RV 170 - 063 - B	63	2,48	156	6,14	93	3,66	± 5%		376	845	20,9	1,27	0,121	0,27	-
RV 170 - 075 - A	RV 170 - 075 - B	75	2,95	185	7,28	110	4,33	+ 20 °C +68 °F		361	812	24,7	1,51	0,139	0,31	-
RV 170 - 080 - A	RV 170 - 080 - B	80	3,15	195	7,68	115	4,53			363	816	26,3	1,60	0,145	0,32	-
RV 170 - 100 - A	RV 170 - 100 - B	100	3,94	235	9,25	135	5,31			368	827	29,8	1,82	0,166	0,37	-
RV 170 - 125 - A	RV 170 - 125 - B	125	4,92	285	11,22	160	6,30			340	764	37,8	2,31	0,194	0,43	-



Drop-in



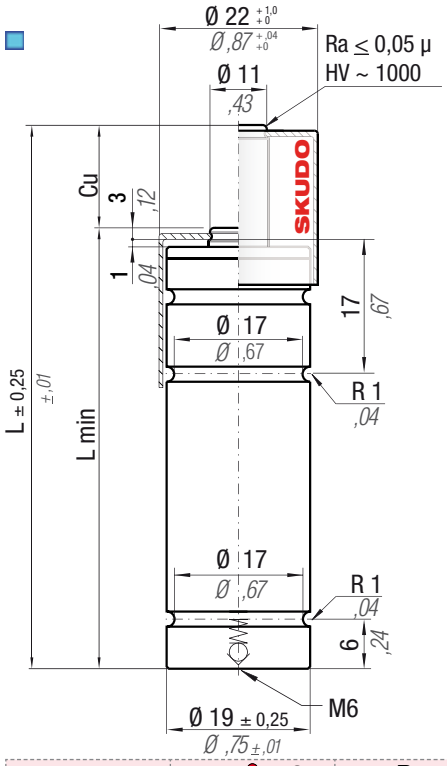
Bottom mount

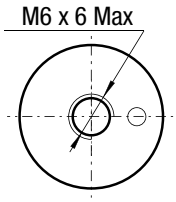


FC 19 B
FCC 19 A

HOW TO ORDER

(10 pcs) RV 170-050-A





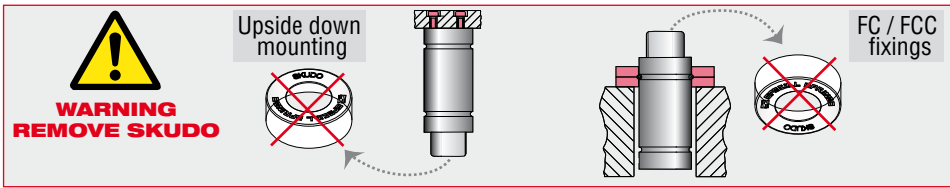
Info

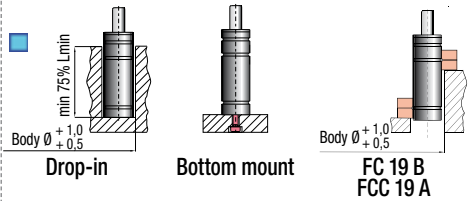
* 100% Cu - Polytropic end forces

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar 2610 psi	20 bar 290 psi	0,95 cm² 0,147 in²	~ 40 - 100 (at 20°C)	1,8 m/s	Disposable

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 170 - 007 - A	RS 170 - 007 - B	7	0,28	50	1,97	43	1,69			257	578	4,0	0,24	0,061	0,13	-
RS 170 - 010 - A	RS 170 - 010 - B	10	0,39	56	2,20	46	1,81			276	621	5,0	0,31	0,065	0,14	-
RS 170 - 012 - A	RS 170 - 012 - B	12	0,47	60	2,36	48	1,89			286	643	5,6	0,34	0,066	0,15	-
RS 170 - 016 - A	RS 170 - 016 - B	16	0,63	68	2,68	52	2,05	170	382	302	679	6,9	0,42	0,071	0,16	-
RS 170 - 022 - A	RS 170 - 022 - B	22	0,87	80	3,15	58	2,28			318	715	8,8	0,54	0,078	0,17	-
RS 170 - 029 - A	RS 170 - 029 - B	29	1,14	94	3,70	65	2,56			332	746	11,0	0,67	0,086	0,19	-
RS 170 - 035 - A	RS 170 - 035 - B	35	1,38	106	4,17	71	2,80	180 bar 2610psi		340	764	12,9	0,79	0,093	0,21	-
RS 170 - 047 - A	RS 170 - 047 - B	47	1,85	130	5,12	83	3,27			351	789	16,7	1,02	0,107	0,24	-
RS 170 - 060 - A	RS 170 - 060 - B	60	2,36	156	6,14	96	3,78			359	807	20,9	1,27	0,121	0,27	-
RS 170 - 072 - A	RS 170 - 072 - B	72	2,83	185	7,28	113	4,45	± 5% + 20 °C +68 °F		348	782	24,7	1,51	0,139	0,31	-
RS 170 - 077 - A	RS 170 - 077 - B	77	3,03	195	7,68	118	4,65			351	789	26,3	1,60	0,145	0,32	-
RS 170 - 097 - A	RS 170 - 097 - B	97	3,82	235	9,25	138	5,43			358	805	29,8	1,82	0,166	0,37	-
RS 170 - 122 - A	RS 170 - 122 - B	122	4,80	285	11,22	163	6,42			365	821	37,8	2,31	0,194	0,43	-





HOW TO ORDER

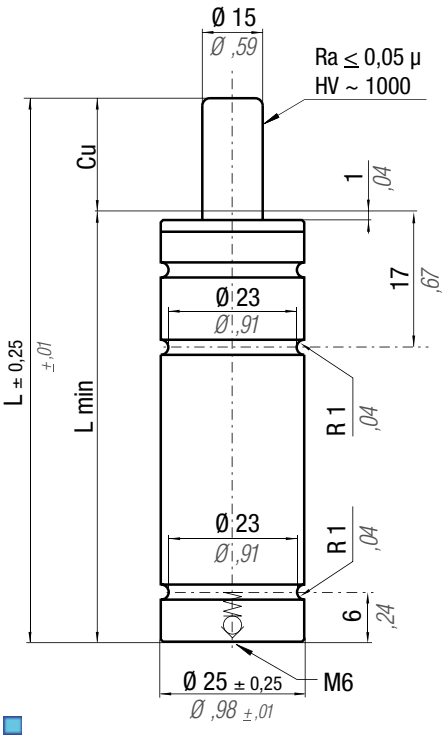
(10 pcs) RS 170-047-A

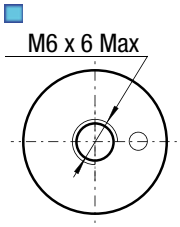
RV 320

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS





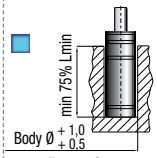
Info

* 100% Cu - Polytropic end forces

Collegabile con tubi, MICRO 32°
Linkable with hoses, MICRO 32°
Anschlussfähig mit Leitungen, MICRO 32°
Connectable avec tubes, MICRO 32°
Connectable con tubos, MICRO 32°
Acompláveis com tubos, MICRO 32°

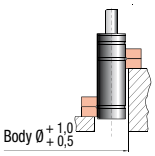
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar *2610 psi*	20 bar *290 psi*	1,77 cm² *0,27 in²*	~ 40 - 100 (at 20°C)	1,8 m/s	Disposable

CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
PHASING OUT	NEW	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 320 - 007 - A	RV 320 - 007 - B	7	*0,28*	44	*1,73*	37	*1,46*			531	*1194*	4,3	*0,26*	0,099	*0,22*	-
RV 320 - 010 - A	RV 320 - 010 - B	10	*0,39*	50	*1,97*	40	*1,57*			566	*1272*	5,6	*0,34*	0,104	*0,23*	-
RV 320 - 013 - A	RV 320 - 013 - B	13	*0,51*	56	*2,20*	43	*1,69*			590	*1326*	7,0	*0,43*	0,108	*0,24*	-
RV 320 - 015 - A	RV 320 - 015 - B	15	*0,59*	60	*2,36*	45	*1,77*	320	*719*	602	*1353*	7,9	*0,48*	0,112	*0,25*	-
RV 320 - 019 - A	RV 320 - 019 - B	19	*0,75*	68	*2,68*	49	*1,93*			620	*1394*	9,7	*0,59*	0,120	*0,26*	-
RV 320 - 025 - A	RV 320 - 025 - B	25	*0,98*	80	*3,15*	55	*2,17*			640	*1439*	12,4	*0,76*	0,130	*0,29*	-
RV 320 - 032 - A	RV 320 - 032 - B	32	*1,26*	94	*3,70*	62	*2,44*	180 bar		654	*1470*	15,6	*0,95*	0,140	*0,31*	-
RV 320 - 038 - A	RV 320 - 038 - B	38	*1,50*	106	*4,17*	68	*2,68*	*2610psi*		663	*1490*	18,3	*1,12*	0,151	*0,33*	-
RV 320 - 050 - A	RV 320 - 050 - B	50	*1,97*	130	*5,12*	80	*3,15*			676	*1520*	23,8	*1,45*	0,171	*0,38*	-
RV 320 - 063 - A	RV 320 - 063 - B	63	*2,48*	156	*6,14*	93	*3,66*	± 5%		684	*1538*	29,7	*1,81*	0,193	*0,43*	-
RV 320 - 075 - A	RV 320 - 075 - B	75	*2,95*	185	*7,28*	110	*4,33*	+ 20 °C	*+68 °F*	658	*1479*	35,1	*2,14*	0,217	*0,48*	-
RV 320 - 080 - A	RV 320 - 080 - B	80	*3,15*	195	*7,68*	115	*4,53*			662	*1488*	37,4	*2,28*	0,226	*0,50*	-
RV 320 - 100 - A	RV 320 - 100 - B	100	*3,94*	235	*9,25*	135	*5,31*			672	*1511*	42,7	*2,60*	0,260	*0,57*	-
RV 320 - 125 - A	RV 320 - 125 - B	125	*4,92*	285	*11,22*	160	*6,30*			623	*1401*	54,0	*3,29*	0,301	*0,66*	-



Drop-in

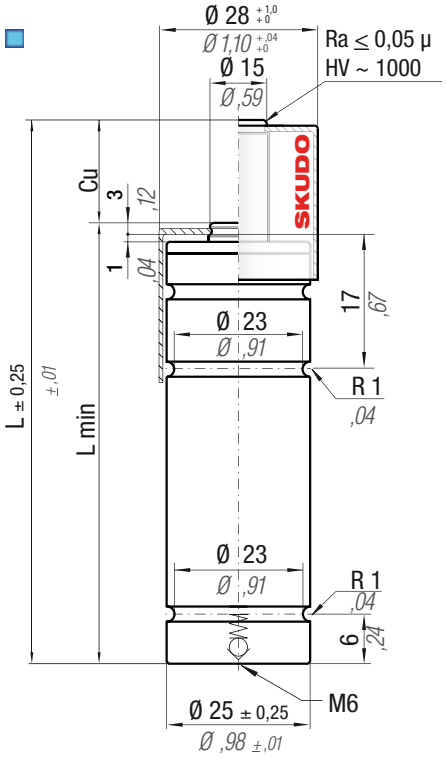
Bottom mount

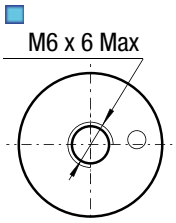


FC 25 B
FCC 25 A

HOW TO ORDER

(10 pcs) RV 320-050-A





Info

* 100% Cu - Polytropic end forces

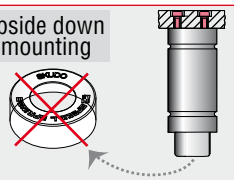
RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar 2610 psi	20 bar 290 psi	1,77 cm² 0,27 in²	~ 40 - 100 (at 20°C)	1,8 m/s	Disposable

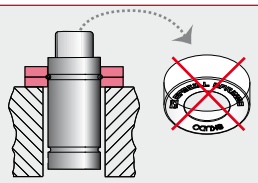
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 320 - 007 - A	RS 320 - 007 - B	7	0,28	50	1,97	43	1,69			472	1061	5,6	0,34	0,104	0,23	-
RS 320 - 010 - A	RS 320 - 010 - B	10	0,39	56	2,20	46	1,81			506	1138	7,0	0,43	0,108	0,24	-
RS 320 - 012 - A	RS 320 - 012 - B	12	0,47	60	2,36	48	1,89			523	1176	7,9	0,48	0,112	0,25	-
RS 320 - 016 - A	RS 320 - 016 - B	16	0,63	68	2,68	52	2,05	320	719	552	1241	9,7	0,59	0,120	0,26	-
RS 320 - 022 - A	RS 320 - 022 - B	22	0,87	80	3,15	58	2,28			581	1306	12,4	0,76	0,130	0,29	-
RS 320 - 029 - A	RS 320 - 029 - B	29	1,14	94	3,70	65	2,56			605	1360	15,6	0,95	0,140	0,31	-
RS 320 - 035 - A	RS 320 - 035 - B	35	1,38	106	4,17	71	2,80	180 bar 2610psi		620	1394	18,3	1,12	0,151	0,33	-
RS 320 - 047 - A	RS 320 - 047 - B	47	1,85	130	5,12	83	3,27			641	1441	23,8	1,45	0,171	0,38	-
RS 320 - 060 - A	RS 320 - 060 - B	60	2,36	156	6,14	96	3,78	± 5%		655	1473	29,7	1,81	0,193	0,43	-
RS 320 - 072 - A	RS 320 - 072 - B	72	2,83	185	7,28	113	4,45	+ 20 °C	+68 °F	636	1430	35,1	2,14	0,217	0,48	-
RS 320 - 077 - A	RS 320 - 077 - B	77	3,03	195	7,68	118	4,65			641	1441	37,4	2,28	0,226	0,50	-
RS 320 - 097 - A	RS 320 - 097 - B	97	3,82	235	9,25	138	5,43			655	1473	42,7	2,60	0,260	0,57	-
RS 320 - 122 - A	RS 320 - 122 - B	122	4,80	285	11,22	163	6,42			611	1374	54,0	3,29	0,301	0,66	-

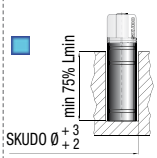
WARNING
REMOVE SKUDO

Upside down mounting

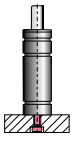


FC / FCC fixings

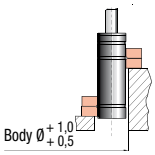




Drop-in



Bottom mount



FC 25 B
FCC 25 A

HOW TO ORDER

(10 pcs) RS 320-047-A

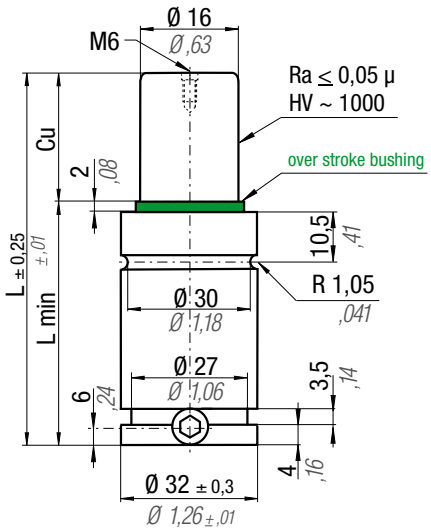
RV 350

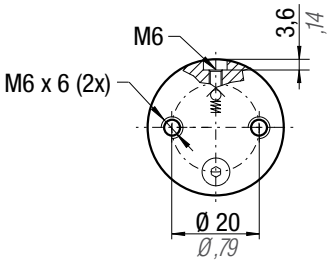
lifeplus concept

PED 97/23/EC

VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	39D 878 (VW)		
W-DX35-6204 (Ford)			

SPECIAL SPRINGS



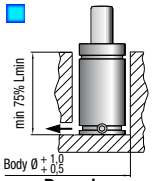


Info

* 100% Cu - Polytropic end forces

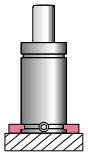
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	180 bar 2610 psi	20 bar 290 psi	2,01 cm² 0,312 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00350B

CODE	Cu		L		L min		Fo Initial force		F1 End force *		Vo				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RV 350 - 010 - A	10	0,39	50	1,97	40	1,57			491	1103	7,8	0,48	0,162	0,36	-
RV 350 - 013 - A	13	0,51	56	2,20	43	1,69			506	1137	9,7	0,59	0,173	0,38	-
RV 350 - 016 - A	16	0,63	62	2,44	46	1,81			517	1161	11,6	0,71	0,182	0,40	-
RV 350 - 019 - A	19	0,75	68	2,68	49	1,93	360	809	525	1180	13,4	0,82	0,191	0,42	-
RV 350 - 025 - A	25	0,98	80	3,15	55	2,17			536	1205	17,2	1,05	0,209	0,46	-
RV 350 - 032 - A	32	1,26	94	3,70	62	2,44			545	1225	21,6	1,32	0,230	0,51	-
RV 350 - 038 - A	38	1,50	106	4,17	68	2,68	180 bar 2610psi		550	1236	25,3	1,54	0,249	0,55	-
RV 350 - 050 - A	50	1,97	130	5,12	80	3,15			557	1252	32,8	2,00	0,285	0,63	-
RV 350 - 063 - A	63	2,48	156	6,14	93	3,66			562	1263	41,0	2,50	0,325	0,72	-
RV 350 - 075 - A	75	2,95	180	7,09	105	4,13	± 5%		565	1270	48,5	2,96	0,361	0,80	-
RV 350 - 080 - A	80	3,15	190	7,48	110	4,33	+ 20 °C +68 °F		566	1272	51,6	3,15	0,375	0,83	-
RV 350 - 100 - A	100	3,94	230	9,06	130	5,12			569	1279	64,1	3,91	0,437	0,96	-
RV 350 - 125 - A	125	4,92	280	11,02	155	6,10			572	1285	79,8	4,87	0,513	1,13	-

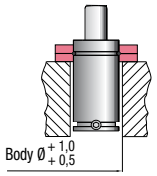


Drop-in

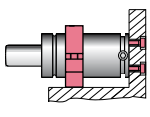
Bottom mount



FS2A 32
FS2B 32



FC 32 A- FCQ 32 A

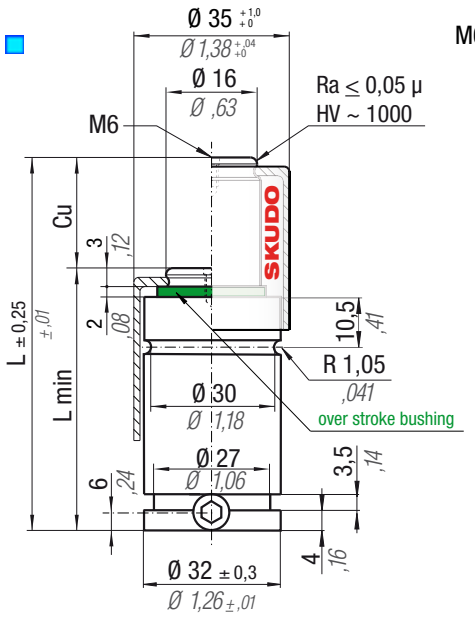


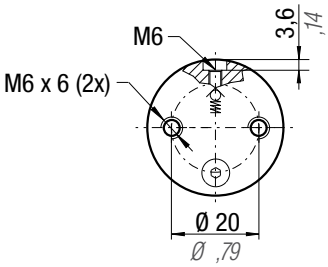
FSA 32 - FSD 32

HOW TO ORDER

(10 pcs) RV 350-050-A

(10 pcs) RV 350-050-A-N





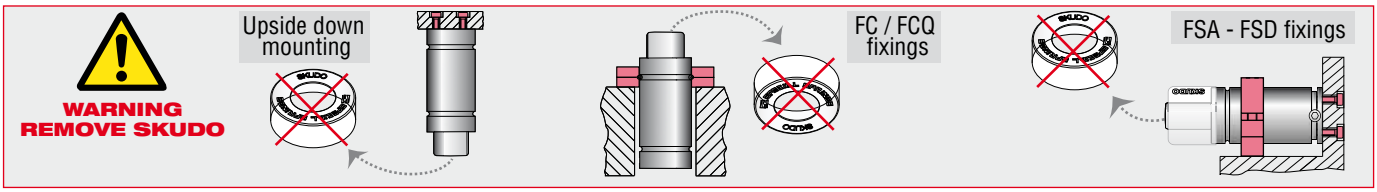
Info

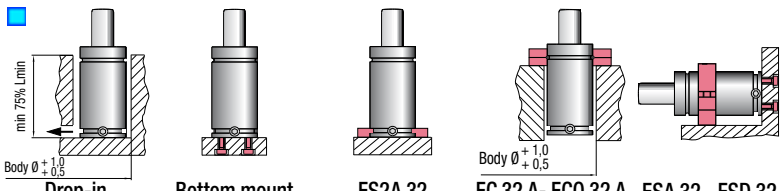
* 100% Cu - Polytropic end forces

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar 2610 psi	20 bar 290 psi	2,01 cm² 0,312 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00350B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RS 350 - 007 - A	7	0,28	50	1,97	43	1,69			424	953	7,8	0,48	0,162	0,36	-
RS 350 - 010 - A	10	0,39	56	2,20	46	1,81			448	1007	9,7	0,59	0,173	0,38	-
RS 350 - 013 - A	13	0,51	62	2,44	49	1,93			465	1045	11,6	0,71	0,182	0,40	-
RS 350 - 016 - A	16	0,63	68	2,68	52	2,05	360	809	479	1077	13,4	0,82	0,191	0,42	-
RS 350 - 022 - A	22	0,87	80	3,15	58	2,28			498	1120	17,2	1,05	0,209	0,46	-
RS 350 - 029 - A	29	1,14	94	3,70	65	2,56			513	1153	21,6	1,32	0,230	0,51	-
RS 350 - 035 - A	35	1,38	106	4,17	71	2,80	180 bar 2610 psi		522	1174	25,3	1,54	0,249	0,55	-
RS 350 - 047 - A	47	1,85	130	5,12	83	3,27			535	1203	32,8	2,00	0,285	0,63	-
RS 350 - 060 - A	60	2,36	156	6,14	96	3,78			544	1223	41,0	2,50	0,325	0,72	-
RS 350 - 072 - A	72	2,83	180	7,09	108	4,25	± 5% + 20 °C +68 °F		549	1234	48,5	2,96	0,361	0,80	-
RS 350 - 077 - A	77	3,03	190	7,48	113	4,45			551	1239	51,6	3,15	0,375	0,83	-
RS 350 - 097 - A	97	3,82	230	9,06	133	5,24			557	1252	64,1	3,91	0,437	0,96	-
RS 350 - 122 - A	122	4,80	280	11,02	158	6,22			562	1263	79,8	4,87	0,513	1,13	-





HOW TO ORDER

(10 pcs) RS 350-047-A

(10 pcs) RS 350-047-A-N

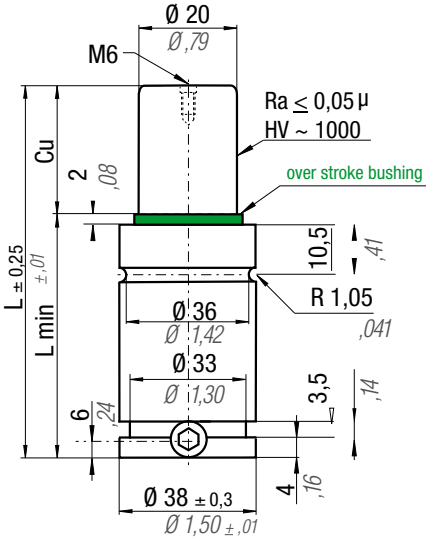
RV 500

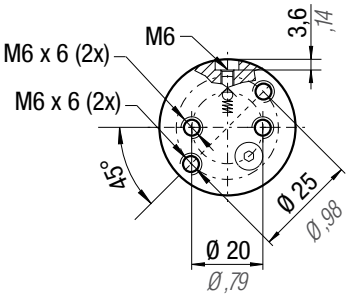
lifeplus concept

PED 97/23/EC

VDI 3003	B8 3180 220 000 004(MB)	K 32 H (Nissan)	
B2 4005 (BMW)	E24.54.815.G (PSA)		
W-DX35-6204 (Ford)	39D 878 (VW)		

SPECIAL SPRINGS



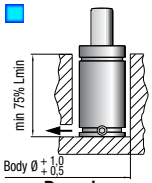


Info

* 100% Cu - Polytropic end forces

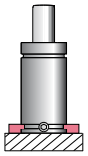
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00500B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 500 - 010 - A	10	*0,39*	50	*1,97*	40	*1,57*			824	*1852*	9,5	*0,58*	0,24	*0,53*	-
RV 500 - 013 - A	13	*0,51*	56	*2,20*	43	*1,69*			854	*1920*	12,1	*0,74*	0,25	*0,55*	-
RV 500 - 016 - A	16	*0,63*	62	*2,44*	46	*1,81*			876	*1969*	14,7	*0,90*	0,26	*0,57*	-
RV 500 - 019 - A	19	*0,75*	68	*2,68*	49	*1,93*	470	*1057*	892	*2006*	17,3	*1,06*	0,28	*0,62*	-
RV 500 - 025 - A	25	*0,98*	80	*3,15*	55	*2,17*			916	*2058*	22,4	*1,37*	0,31	*0,68*	-
RV 500 - 032 - A	32	*1,26*	94	*3,70*	62	*2,44*			933	*2098*	28,5	*1,74*	0,34	*0,75*	-
RV 500 - 038 - A	38	*1,50*	106	*4,17*	68	*2,68*	150 bar	*2175psi*	944	*2122*	33,6	*2,05*	0,37	*0,82*	-
RV 500 - 050 - A	50	*1,97*	130	*5,12*	80	*3,15*			958	*2155*	44,0	*2,68*	0,42	*0,93*	-
RV 500 - 063 - A	63	*2,48*	156	*6,14*	93	*3,66*	± 5%		968	*2177*	55,1	*3,36*	0,48	*1,06*	-
RV 500 - 075 - A	75	*2,95*	180	*7,09*	105	*4,13*	+ 20 °C	*+68 °F*	975	*2191*	65,5	*4,00*	0,54	*1,19*	-
RV 500 - 080 - A	80	*3,15*	190	*7,48*	110	*4,33*			977	*2196*	69,8	*4,26*	0,56	*1,23*	-
RV 500 - 100 - A	100	*3,94*	230	*9,06*	130	*5,12*			983	*2210*	87,0	*5,31*	0,66	*1,46*	-
RV 500 - 125 - A	125	*4,92*	280	*11,02*	155	*6,10*			988	*2222*	108,5	*6,62*	0,77	*1,70*	-

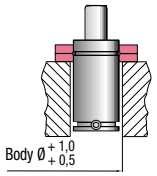


Drop-in

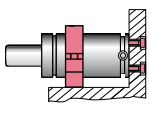
Bottom mount



FS2A 38 - FT 38
FS2B 38 - FTP 38



FC 38 A- FCQ 38 A

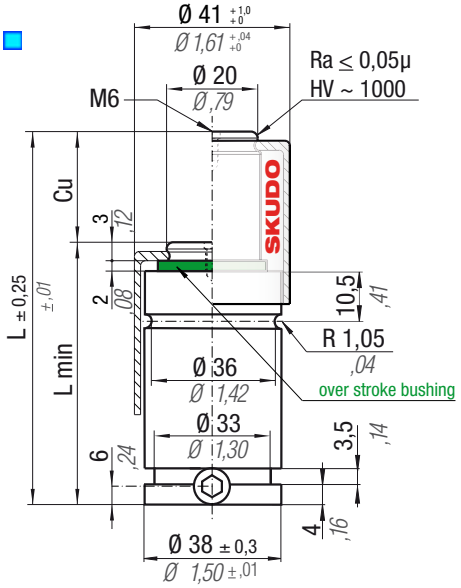


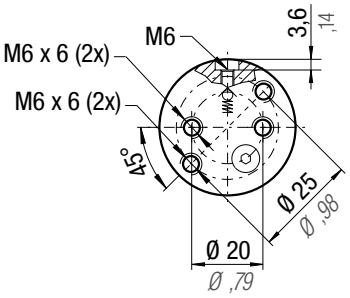
FSA 38 - FSD 38

HOW TO ORDER

(10 pcs) RV 500-050-A

(10 pcs) RV 500-050-A-N





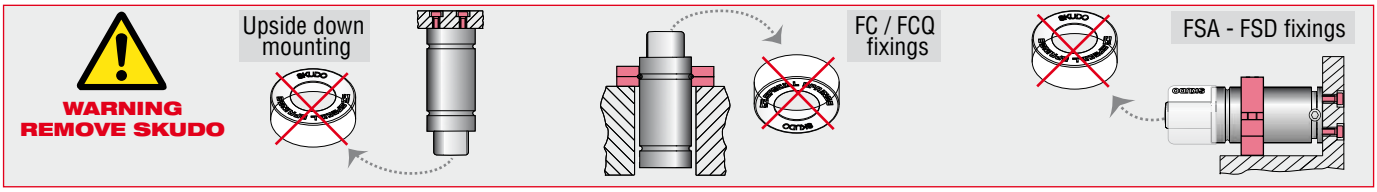
Info

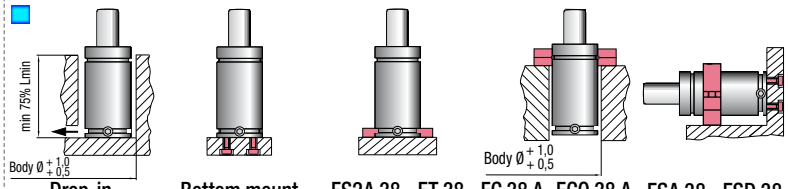
* 100% Cu - Polytropic end forces

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00500B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	Cat.
RS 500 - 007 - A	7	0,28	50	1,97	43	1,69			694	1560	9,5	0,58	0,24	0,53	-
RS 500 - 010 - A	10	0,39	56	2,20	46	1,81			739	1661	12,1	0,74	0,25	0,55	-
RS 500 - 013 - A	13	0,51	62	2,44	49	1,93			773	1737	14,7	0,90	0,26	0,57	-
RS 500 - 016 - A	16	0,63	68	2,68	52	2,05	470	1057	800	1798	17,3	1,06	0,28	0,62	-
RS 500 - 022 - A	22	0,87	80	3,15	58	2,28			838	1883	22,4	1,37	0,31	0,68	-
RS 500 - 029 - A	29	1,14	94	3,70	65	2,56			869	1954	28,5	1,74	0,34	0,75	-
RS 500 - 035 - A	35	1,38	106	4,17	71	2,80	150 bar *2175psi*		887	1994	33,6	2,05	0,37	0,82	-
RS 500 - 047 - A	47	1,85	130	5,12	83	3,27			913	2053	44,0	2,68	0,42	0,93	-
RS 500 - 060 - A	60	2,36	156	6,14	96	3,78	± 5%		931	2093	55,1	3,36	0,48	1,06	-
RS 500 - 072 - A	72	2,83	180	7,09	108	4,25	+ 20 °C *+68 °F*		942	2118	65,5	4,00	0,54	1,19	-
RS 500 - 077 - A	77	3,03	190	7,48	113	4,45			946	2127	69,8	4,26	0,56	1,23	-
RS 500 - 097 - A	97	3,82	230	9,06	133	5,24			958	2154	87,0	5,31	0,66	1,46	-
RS 500 - 122 - A	122	4,80	280	11,02	158	6,22			968	2176	108,5	6,62	0,77	1,70	-





HOW TO ORDER

(10 pcs) RS 500-047-A

(10 pcs) RS 500-047-A-N

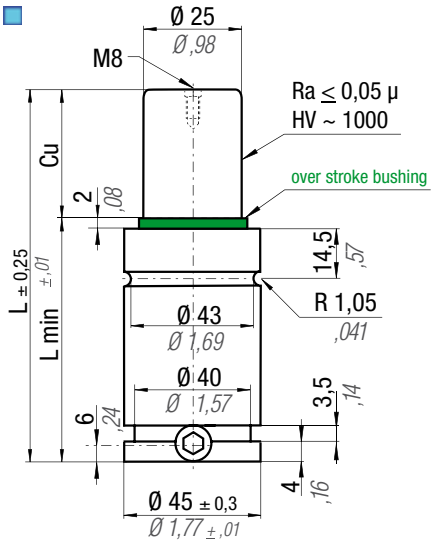
RV 750

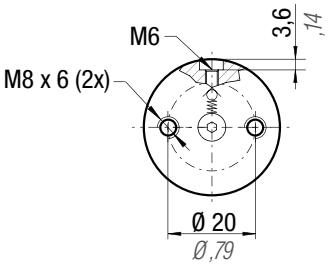
VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	E24.54.815.G (PSA)		
W-DX35-6204 (Ford)	39D 878 (VW)		

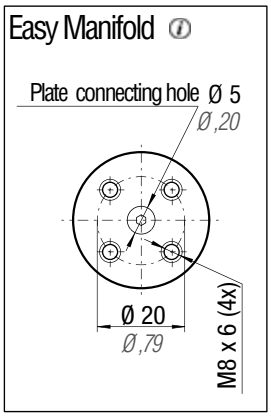
lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS







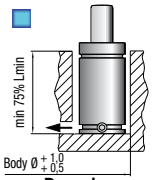
Info

* 100% Cu - Polytropic end forces

page 210

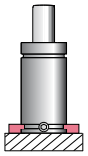
N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	4,91 cm² 0,761 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00750B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RV 750 - 010 - A	10	0,39	52	2,05	42	1,65			1298	2919	16,5	1,01	0,36	0,79	-
RV 750 - 013 - A	13	0,51	58	2,28	45	1,77			1354	3043	20,4	1,24	0,38	0,84	-
RV 750 - 016 - A	16	0,63	64	2,52	48	1,89			1395	3135	24,2	1,48	0,39	0,86	-
RV 750 - 019 - A	19	0,75	70	2,76	51	2,01	740	1664	1426	3206	28,0	1,71	0,41	0,90	-
RV 750 - 025 - A	25	0,98	82	3,23	57	2,24			1471	3307	35,6	2,17	0,45	0,99	-
RV 750 - 032 - A	32	1,26	96	3,78	64	2,52			1506	3386	44,5	2,71	0,50	1,10	-
RV 750 - 038 - A	38	1,50	108	4,25	70	2,76	150 bar 2175psi		1527	3433	52,2	3,18	0,54	1,19	-
RV 750 - 050 - A	50	1,97	132	5,20	82	3,23			1556	3499	67,4	4,11	0,61	1,34	-
RV 750 - 063 - A	63	2,48	158	6,22	95	3,74	± 5%		1577	3544	84,0	5,12	0,70	1,54	-
RV 750 - 075 - A	75	2,95	182	7,17	107	4,21	+ 20 °C	+68 °F	1575	3541	100,3	6,12	0,77	1,70	-
RV 750 - 080 - A	80	3,15	192	7,56	112	4,41			1580	3552	106,6	6,50	0,81	1,79	-
RV 750 - 100 - A	100	3,94	232	9,13	132	5,20			1596	3587	132,1	8,06	0,93	2,05	-
RV 750 - 125 - A	125	4,92	282	11,10	157	6,18			1609	3616	163,9	10,00	1,10	2,43	-

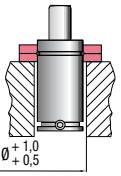


Drop-in

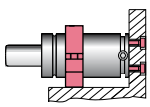
Bottom mount
FB 45 - FBA 45
FBB 45



FS2 45 - FT 45
FS2A 45 - FTP 45



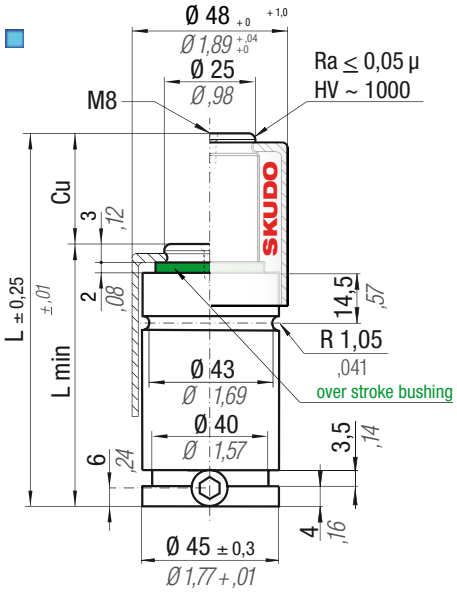
FC 45 A- FCQ 45 A

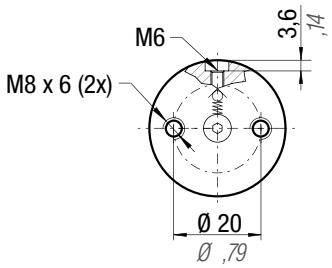


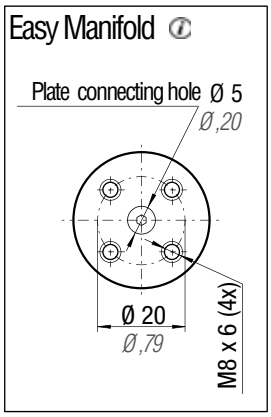
FSA 45 - FSD 45

HOW TO ORDER

(10 pcs) RV 750-050-A
(10 pcs) RV 750-050-A-N
(10 pcs) RV 750-050-A-E







Info

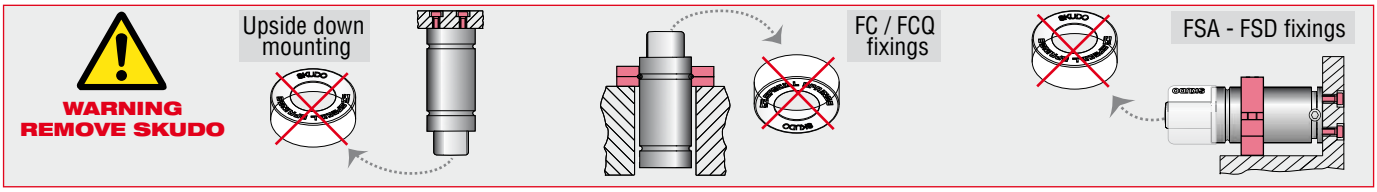
* 100% Cu - Polytropic end forces

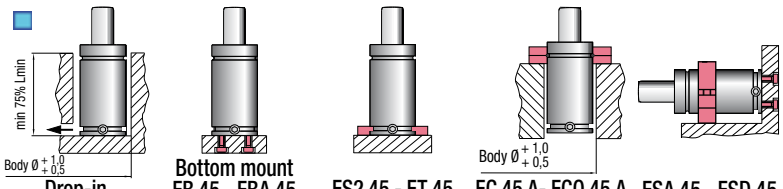
page 210

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	4,91 cm² 0,761 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00750B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 750 - 007 - A	7	0,28	52	2,05	45	1,77	740	1664	1090	2450	16,5	1,01	0,36	0,79	-
RS 750 - 010 - A	10	0,39	58	2,28	48	1,89			1166	2621	20,4	1,24	0,38	0,84	-
RS 750 - 013 - A	13	0,51	64	2,52	51	2,01			1225	2754	24,2	1,48	0,39	0,86	-
RS 750 - 016 - A	16	0,63	70	2,76	54	2,13			1272	2860	28,0	1,71	0,41	0,90	-
RS 750 - 022 - A	22	0,87	82	3,23	60	2,36	150 bar 2175psi		1340	3012	35,6	2,17	0,45	0,99	-
RS 750 - 029 - A	29	1,14	96	3,78	67	2,64			1395	3136	44,5	2,71	0,50	1,10	-
RS 750 - 035 - A	35	1,38	108	4,25	73	2,87			1430	3214	52,2	3,18	0,54	1,19	-
RS 750 - 047 - A	47	1,85	132	5,20	85	3,35	± 5%		1477	3320	67,4	4,11	0,61	1,34	-
RS 750 - 060 - A	60	2,36	158	6,22	98	3,86	+ 20 °C +68 °F		1511	3397	84,0	5,12	0,70	1,54	-
RS 750 - 072 - A	72	2,83	182	7,17	110	4,33			1520	3417	100,3	6,12	0,77	1,70	-
RS 750 - 077 - A	77	3,03	192	7,56	115	4,53			1528	3435	106,6	6,50	0,81	1,79	-
RS 750 - 097 - A	97	3,82	232	9,13	135	5,31			1552	3489	132,1	8,06	0,93	2,05	-
RS 750 - 122 - A	122	4,80	282	11,10	160	6,30			1573	3536	163,9	10,00	1,10	2,43	-





HOW TO ORDER

(10 pcs) RS 750-047-A
(10 pcs) RS 750-047-A-N
(10 pcs) RS 750-047-A-E

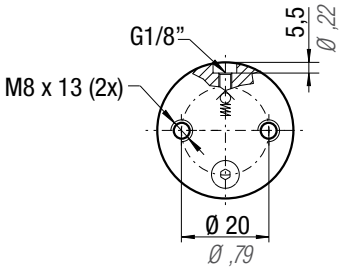
RF 750
linkable G1/8”

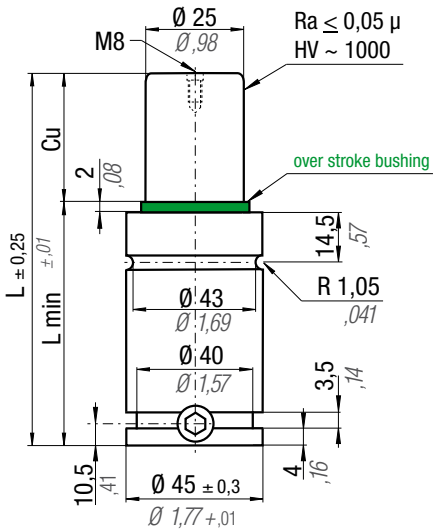
lifeplus concept

PED 97/23/EC

FIAT Specification

SPECIAL SPRINGS



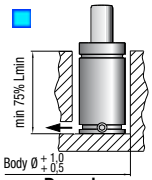


Info

* 100% Cu - Polytropic end forces

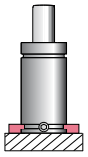
N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	4,91 cm² 0,761 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00750B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RF 750 - 010 - A	10	0,39	62	2,44	52	2,05			1298	2919	16,5	1,01	0,46	1,01	-
RF 750 - 013 - A	13	0,51	68	2,68	55	2,17			1354	3043	20,4	1,24	0,48	1,06	-
RF 750 - 016 - A	16	0,63	74	2,91	58	2,28			1395	3135	24,2	1,48	0,50	1,10	-
RF 750 - 019 - A	19	0,75	80	3,15	61	2,40	740	1664	1426	3206	28,0	1,71	0,52	1,15	-
RF 750 - 025 - A	25	0,98	92	3,62	67	2,64			1471	3307	35,6	2,17	0,56	1,23	-
RF 750 - 032 - A	32	1,26	106	4,17	74	2,91			1506	3386	44,5	2,71	0,60	1,32	-
RF 750 - 038 - A	38	1,50	118	4,65	80	3,15	150 bar 2175psi		1527	3433	52,2	3,18	0,64	1,41	-
RF 750 - 050 - A	50	1,97	142	5,59	92	3,62			1556	3499	67,4	4,11	0,72	1,59	-
RF 750 - 063 - A	63	2,48	168	6,61	105	4,13	± 5%		1577	3544	84,0	5,12	0,80	1,76	-
RF 750 - 075 - A	75	2,95	192	7,56	117	4,61	+ 20 °C	+68 °F	1575	3541	100,3	6,12	0,88	1,94	-
RF 750 - 080 - A	80	3,15	202	7,95	122	4,80			1580	3552	106,6	6,50	0,91	2,01	-
RF 750 - 100 - A	100	3,94	242	9,53	142	5,59			1596	3587	132,1	8,06	1,04	2,29	-
RF 750 - 125 - A	125	4,92	292	11,50	167	6,57			1609	3616	163,9	10,00	1,20	2,65	-

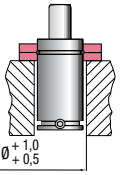


Drop-in

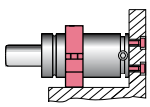
Bottom mount
FB 45 - FBA 45
FBB 45



FS2 45 - FT 45
FS2A 45 - FTP 45



FC 45 A- FCQ 45 A



FSA 45 - FSD 45

HOW TO ORDER

(10 pcs) RF 750-050-A

(10 pcs) RF 750-050-A-N

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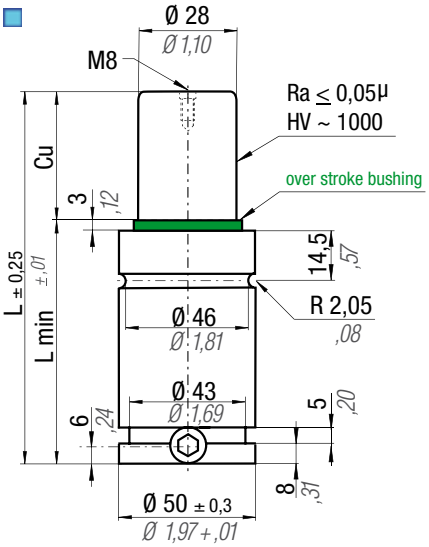
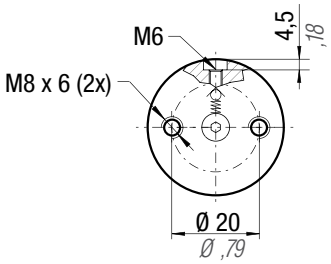
lifeplus concept

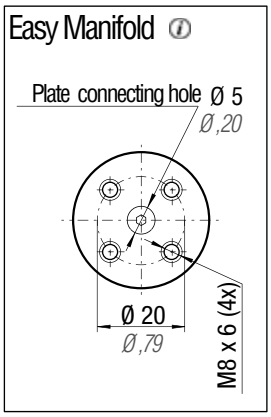
PED 97/23/EC

VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	E24.54.815.G (PSA)		
W-DX35-6204 (Ford)	39D 878 (VW)		

SPECIAL SPRINGS







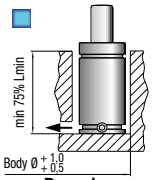
Info

* 100% Cu - Polytropic end forces

page 210

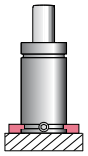
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	6,15 cm² *0,953 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 1000 - 010 - A	10	*0,39*	58	*2,28*	48	*1,89*			1523	*3423*	23,0	*1,40*	0,49	*1,08*	-
RV 1000 - 013 - A	13	*0,51*	64	*2,52*	51	*2,01*			1599	*3594*	28,0	*1,71*	0,51	*1,12*	-
RV 1000 - 016 - A	16	*0,63*	70	*2,76*	54	*2,13*	920	*2068*	1658	*3727*	32,7	*1,99*	0,54	*1,19*	-
RV 1000 - 019 - A	19	*0,75*	76	*2,99*	57	*2,24*			1705	*3833*	37,4	*2,28*	0,56	*1,23*	-
RV 1000 - 025 - A	25	*0,98*	88	*3,46*	63	*2,48*			1775	*3991*	46,8	*2,85*	0,61	*1,34*	-
RV 1000 - 032 - A	32	*1,26*	102	*4,02*	70	*2,76*	150 bar *2175 psi*		1832	*4119*	57,8	*3,53*	0,67	*1,48*	-
RV 1000 - 038 - A	38	1,50	114	4,49	76	2,99			1868	*4200*	67,2	*4,10*	0,71	*1,57*	-
RV 1000 - 050 - A	50	1,97	138	5,43	88	3,46			1968	*4425*	83,6	*5,10*	0,81	*1,79*	-
RV 1000 - 063 - A	63	2,48	164	6,46	101	3,98	± 5% + 20 °C *+68 °F*		1955	*4394*	106,5	*6,50*	0,91	*2,01*	-
RV 1000 - 075 - A	75	2,95	188	7,40	113	4,45			1978	*4447*	125,3	*7,64*	1,05	*2,31*	-
RV 1000 - 080 - A	80	3,15	198	7,80	118	4,65			1986	*4465*	133,2	*8,13*	1,09	*2,40*	-
RV 1000 - 100 - A	100	3,94	238	9,37	138	5,43			2011	*4520*	164,6	*10,04*	1,21	*2,67*	-
RV 1000 - 125 - A	125	4,92	288	11,34	163	6,42			2031	*4566*	203,9	*12,44*	1,41	*3,11*	-

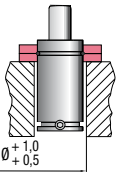


Drop-in

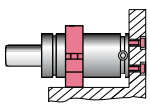
Bottom mount
FB 50 - FBA 50
FBB 50



FS2 50 - FT 50
FS2A 50 - FTP 50



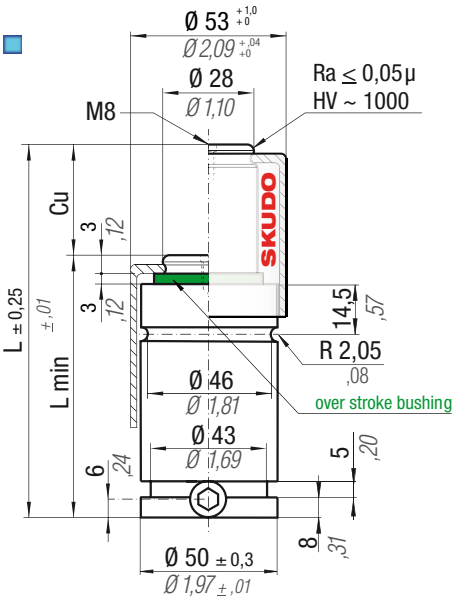
FC 50 A- FCQ 50 A

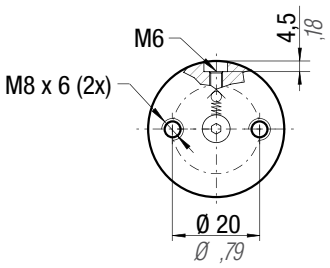


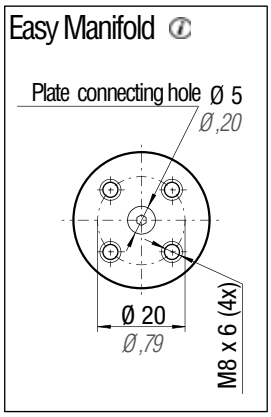
FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) RV 1000-050-A
(10 pcs) RV 1000-050-A-N
(10 pcs) RV 1000-050-A-E







Info

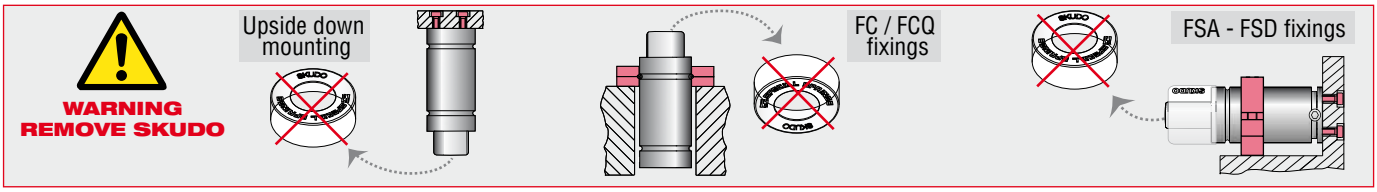
* 100% Cu - Polytropic end forces

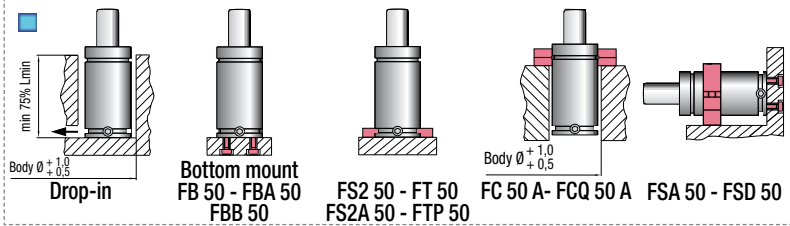
page 210

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	6,15 cm² 0,953 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 1000 - 010 - A	10	0,39	64	2,52	54	2,13	920	2068	1402	3152	28,0	1,71	0,51	1,12	-
RS 1000 - 013 - A	13	0,51	70	2,76	57	2,24			1476	3318	32,7	1,99	0,54	1,19	-
RS 1000 - 016 - A	16	0,63	76	2,99	60	2,36			1536	3453	37,4	2,28	0,56	1,23	-
RS 1000 - 022 - A	22	0,87	88	3,46	66	2,60			1628	3660	46,8	2,85	0,61	1,34	-
RS 1000 - 029 - A	29	1,14	102	4,02	73	2,87	150 bar 2175 psi		1705	3833	57,8	3,53	0,67	1,48	-
RS 1000 - 035 - A	35	1,38	114	4,49	79	3,11			1754	3943	67,2	4,10	0,71	1,57	-
RS 1000 - 047 - A	47	1,85	138	5,43	91	3,58			1867	4197	83,6	5,10	0,81	1,79	-
RS 1000 - 060 - A	60	2,36	164	6,46	104	4,09	± 5% + 20 °C +68 °F		1875	4215	106,5	6,50	0,91	2,01	-
RS 1000 - 072 - A	72	2,83	188	7,40	116	4,57			1909	4292	125,3	7,64	1,05	2,31	-
RS 1000 - 077 - A	77	3,03	198	7,80	121	4,76			1920	4316	133,2	8,13	1,09	2,40	-
RS 1000 - 097 - A	97	3,82	238	9,37	141	5,55			1656	3723	164,6	10,04	1,21	2,67	-
RS 1000 - 122 - A	122	4,80	288	11,34	166	6,54			1986	4465	203,9	12,44	1,41	3,11	-





HOW TO ORDER

(10 pcs) RS 1000-047-A
(10 pcs) RS 1000-047-A-N
(10 pcs) RS 1000-047-A-E

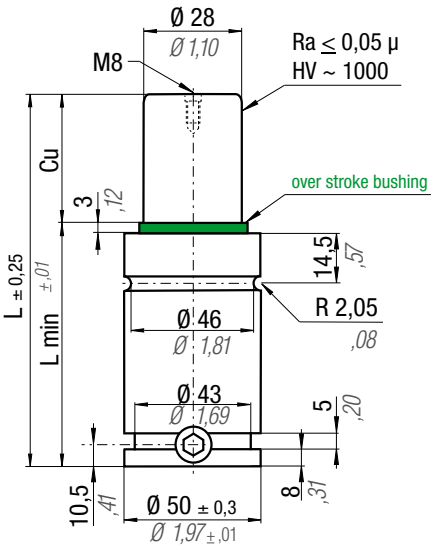
RF 1000
linkable G1/8”

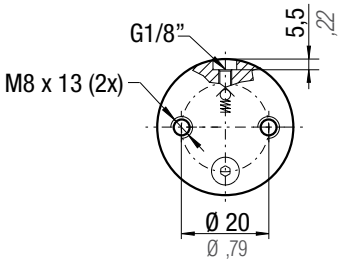
lifeplus concept

PED 97/23/EC

FIAT Specification

SPECIAL SPRINGS



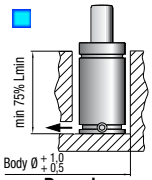


Info

* 100% Cu - Polytropic end forces

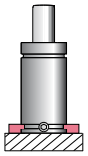
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	6,15 cm² *0,953 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RF 1000 - 013 - A	13	*0,51*	74	*2,91*	61	*2,40*			1599	*3595*	28,0	*1,71*	0,64	*1,41*	-
RF 1000 - 016 - A	16	*0,63*	80	*3,15*	64	*2,52*			1658	*3727*	32,7	*1,99*	0,67	*1,48*	-
RF 1000 - 019 - A	19	*0,75*	86	*3,39*	67	*2,64*	920	*2068*	1705	*3833*	37,4	*2,28*	0,70	*1,54*	-
RF 1000 - 025 - A	25	*0,98*	98	*3,86*	73	*2,87*			1775	*3990*	46,8	*2,85*	0,74	*1,63*	-
RF 1000 - 032 - A	32	*1,26*	112	*4,41*	80	*3,15*	150 bar *2175 psi*		1832	*4118*	57,8	*3,53*	0,79	*1,74*	-
RF 1000 - 038 - A	38	*1,50*	124	*4,88*	86	*3,39*			1868	*4199*	67,2	*4,10*	0,84	*1,85*	-
RF 1000 - 050 - A	50	*1,97*	148	*5,83*	98	*3,86*			1968	*4424*	83,6	*5,10*	0,94	*2,07*	-
RF 1000 - 063 - A	63	*2,48*	174	*6,85*	111	*4,37*	± 5%		1955	*4395*	106,5	*6,50*	1,04	*2,29*	-
RF 1000 - 075 - A	75	*2,95*	198	*7,80*	123	*4,84*	+ 20 °C *+68 °F*		1978	*4447*	125,3	*7,64*	1,14	*2,51*	-
RF 1000 - 080 - A	80	*3,15*	208	*8,19*	128	*5,04*			1986	*4465*	133,2	*8,13*	1,18	*2,60*	-
RF 1000 - 100 - A	100	*3,94*	248	*9,76*	148	*5,83*			2011	*4521*	164,6	*10,04*	1,34	*2,95*	-
RF 1000 - 125 - A	125	*4,92*	298	*11,73*	173	*6,81*			2031	*4566*	203,9	*12,44*	1,54	*3,40*	-

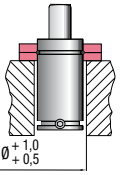


Drop-in

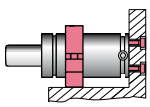
Bottom mount
FB 50 - FBA 50
FBB 50



FS2 50 - FT 50
FS2A 50 - FTP 50



FC 50 A- FCQ 50 A



FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) RF 1000-050-A

(10 pcs) RF 1000-050-A-N

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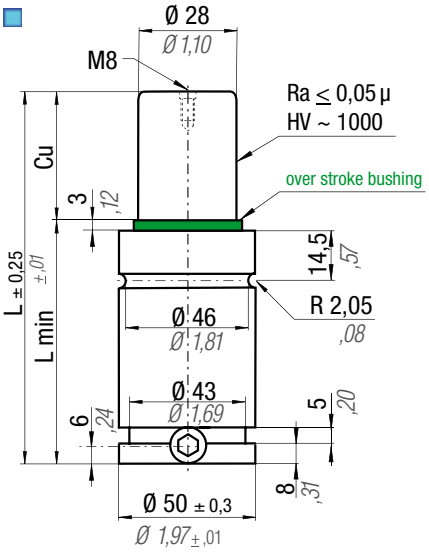
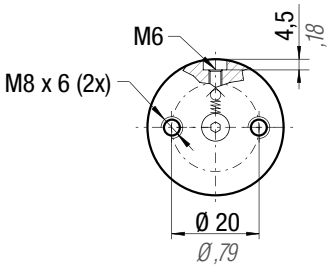
RV 1200

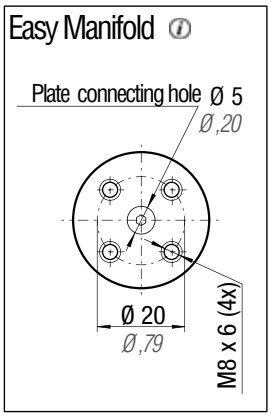
lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS







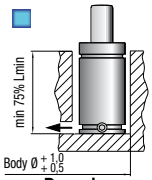
Info

* 100% Cu - Polytropic end forces

page 210

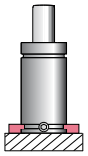
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	170 bar 2465 psi	20 bar 290 psi	6,15 cm² 0,953 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RV 1200 - 010 - A	10	0,39	58	2,28	48	1,89			1726	3881	23,0	1,40	0,49	1,08	-
RV 1200 - 013 - A	13	0,51	64	2,52	51	2,01			1813	4075	28,0	1,71	0,51	1,12	-
RV 1200 - 016 - A	16	0,63	70	2,76	54	2,13			1880	4225	32,7	1,99	0,54	1,19	-
RV 1200 - 019 - A	19	0,75	76	2,99	57	2,24	1060	2383	1933	4345	37,4	2,28	0,56	1,23	-
RV 1200 - 025 - A	25	0,98	88	3,46	63	2,48	170 bar 2465 psi		2013	4525	46,8	2,85	0,61	1,34	-
RV 1200 - 032 - A	32	1,26	102	4,02	70	2,76			2077	4670	57,8	3,53	0,67	1,48	-
RV 1200 - 038 - A	38	1,50	114	4,49	76	2,99			2118	4762	67,2	4,10	0,71	1,57	-
RV 1200 - 050 - A	50	1,97	138	5,43	88	3,46	± 5%		2232	5017	83,6	5,10	0,81	1,79	-
RV 1200 - 063 - A	63	2,48	164	6,46	101	3,98	+ 20 °C	+68 °F	2216	4982	106,5	6,50	0,91	2,01	-
RV 1200 - 075 - A	75	2,95	188	7,40	113	4,45			2243	5042	125,3	7,64	1,05	2,31	-
RV 1200 - 080 - A	80	3,15	198	7,80	118	4,65			2252	5062	133,2	8,13	1,09	2,40	-
RV 1200 - 100 - A	100	3,94	238	9,37	138	5,43			2280	5125	164,6	10,04	1,21	2,67	-
RV 1200 - 125 - A	125	4,92	288	11,34	163	6,42			2303	5177	203,9	12,44	1,41	3,11	-

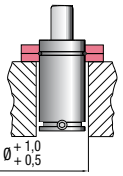


Drop-in

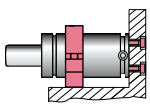
Bottom mount
FB 50 - FBA 50
FBB 50



FS2 50 - FT 50
FS2A 50 - FTP 50



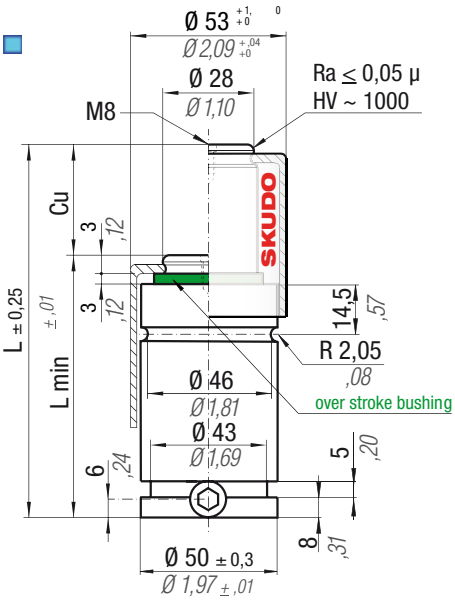
FC 50 A- FCQ 50 A

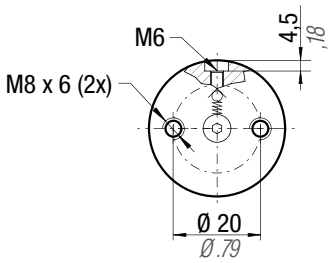


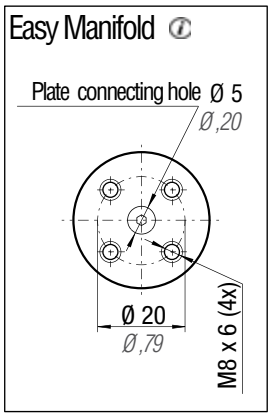
FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) RV 1200-050-A
(10 pcs) RV 1200-050-A-N
(10 pcs) RV 1200-050-A-E







Info

* 100% Cu - Polytropic end forces

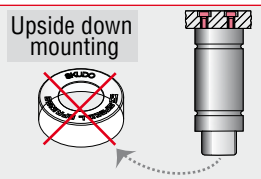
page 210

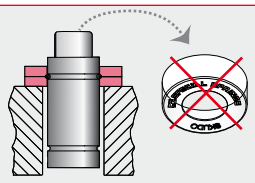
RV
RS-RF

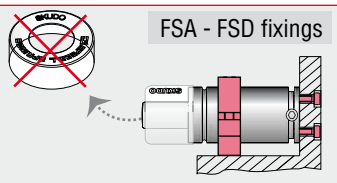
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	170 bar 2465 psi	20 bar 290 psi	6,15 cm² 0,953 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

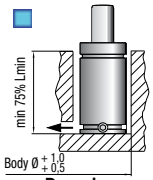
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 1200 - 010 - A	10	0,39	64	2,52	54	2,13			1590	3574	28,0	1,71	0,51	1,12	-
RS 1200 - 013 - A	13	0,51	70	2,76	57	2,24			1674	3763	32,7	1,99	0,54	1,19	-
RS 1200 - 016 - A	16	0,63	76	2,99	60	2,36			1742	3916	37,4	2,28	0,56	1,23	-
RS 1200 - 022 - A	22	0,87	88	3,46	66	2,60	1060	2383	1846	4150	46,8	2,85	0,61	1,34	-
RS 1200 - 029 - A	29	1,14	102	4,02	73	2,87			1933	4346	57,8	3,53	0,67	1,48	-
RS 1200 - 035 - A	35	1,38	114	4,49	79	3,11	170 bar 2465 psi		1988	4469	67,2	4,10	0,71	1,57	-
RS 1200 - 047 - A	47	1,85	138	5,43	91	3,58			2116	4757	83,6	5,10	0,81	1,79	-
RS 1200 - 060 - A	60	2,36	164	6,46	104	4,09			2126	4779	106,5	6,50	0,91	2,01	-
RS 1200 - 072 - A	72	2,83	188	7,40	116	4,57	± 5% + 20 °C +68 °F		2164	4865	125,3	7,64	1,05	2,31	-
RS 1200 - 077 - A	77	3,03	198	7,80	121	4,76			2177	4894	133,2	8,13	1,09	2,40	-
RS 1200 - 097 - A	97	3,82	238	9,37	141	5,55			2217	4984	164,6	10,04	1,21	2,67	-
RS 1200 - 122 - A	122	4,80	288	11,34	166	6,54			2251	5060	203,9	12,44	1,41	3,11	-

WARNING
REMOVE SKUDO



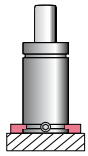




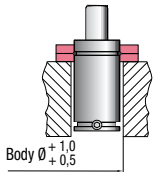


Drop-in

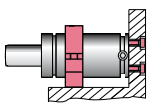
Bottom mount
FB 50 - FBA 50
FBB 50



FS2 50 - FT 50
FS2A 50 - FTP 50



FC 50 A- FCQ 50 A



FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) RS 1200-047-A
(10 pcs) RS 1200-047-A-N
(10 pcs) RS 1200-047-A-E

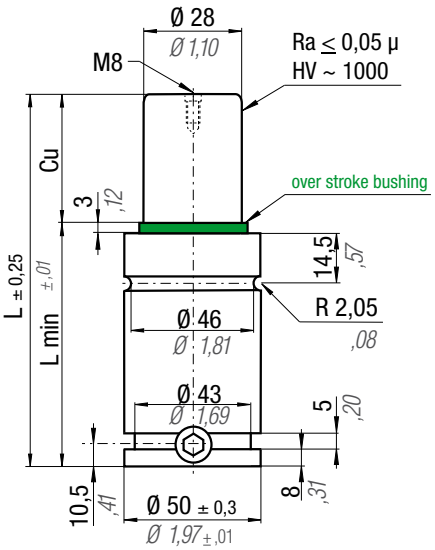
RF 1200
linkable G1/8”

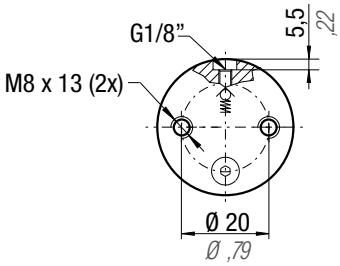
lifeplus concept

PED 97/23/EC

FIAT Specification

SPECIAL SPRINGS



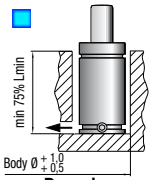


Info

* 100% Cu - Polytropic end forces

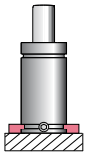
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	170 bar 2465 psi	20 bar 290 psi	6,15 cm² 0,953 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RF 1200 - 013 - A	13	0,51	74	2,91	61	2,40			1813	4075	28,0	1,71	0,64	1,41	-
RF 1200 - 016 - A	16	0,63	80	3,15	64	2,52			1880	4225	32,7	1,99	0,67	1,48	-
RF 1200 - 019 - A	19	0,75	86	3,39	67	2,64			1933	4345	37,4	2,28	0,70	1,54	-
RF 1200 - 025 - A	25	0,98	98	3,86	73	2,87	1060	2383	2013	4525	46,8	2,85	0,74	1,63	-
RF 1200 - 032 - A	32	1,26	112	4,41	80	3,15	170 bar		2077	4670	57,8	3,53	0,79	1,74	-
RF 1200 - 038 - A	38	1,50	124	4,88	86	3,39	2465 psi		2118	4762	67,2	4,10	0,84	1,85	-
RF 1200 - 050 - A	50	1,97	148	5,83	98	3,86			2232	5017	83,6	5,10	0,94	2,07	-
RF 1200 - 063 - A	63	2,48	174	6,85	111	4,37	± 5%		2216	4982	106,5	6,50	1,04	2,29	-
RF 1200 - 075 - A	75	2,95	198	7,80	123	4,84	+ 20 °C	+68 °F	2243	5042	125,3	7,64	1,14	2,51	-
RF 1200 - 080 - A	80	3,15	208	8,19	128	5,04			2252	5062	133,2	8,13	1,18	2,60	-
RF 1200 - 100 - A	100	3,94	248	9,76	148	5,83			2280	5125	164,6	10,04	1,34	2,95	-
RF 1200 - 125 - A	125	4,92	298	11,73	173	6,81			2303	5177	203,9	12,44	1,54	3,40	-

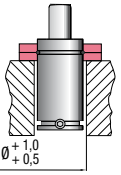


Drop-in

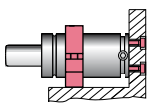
Bottom mount
FB 50 - FBA 50
FBB 50



FS2 50 - FT 50
FS2A 50 - FTP 50



FC 50 A- FCQ 50 A



FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) RF 1200-050-A

(10 pcs) RF 1200-050-A-N

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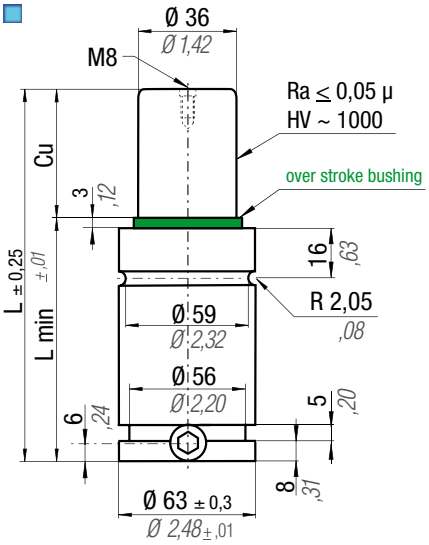
RV 1500

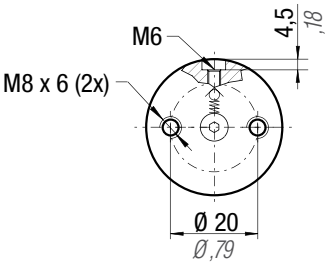
lifeplus concept

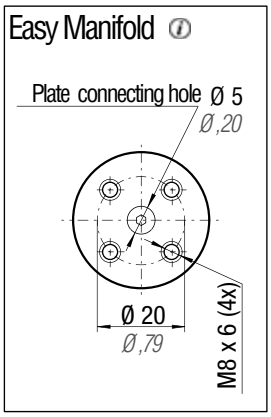
PED 97/23/EC

VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	39D 878 (VW)		
W-DX35-6204 (Ford)			

SPECIAL SPRINGS







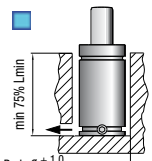
Info

* 100% Cu - Polytropic end forces

page 210

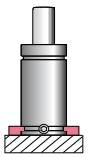
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	10,18 cm² *1,578 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01500B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 1500 - 010 - A	10	*0,39*	64	*2,52*	54	*2,13*			2400	*5395*	41,8	*2,55*	0,90	*1,98*	-
RV 1500 - 013 - A	13	*0,51*	70	*2,76*	57	*2,24*			2520	*5666*	49,8	*3,04*	0,92	*2,03*	-
RV 1500 - 016 - A	16	*0,63*	76	*2,99*	60	*2,36*			2616	*5881*	57,8	*3,53*	0,96	*2,12*	-
RV 1500 - 019 - A	19	*0,75*	82	*3,23*	63	*2,48*			2692	*6052*	65,8	*4,01*	0,99	*2,18*	-
RV 1500 - 025 - A	25	*0,98*	94	*3,70*	69	*2,72*	1530	*3440*	2811	*6319*	81,7	*4,98*	1,06	*2,34*	-
RV 1500 - 032 - A	32	*1,26*	108	*4,25*	76	*2,99*			2908	*6538*	100,2	*6,11*	1,14	*2,51*	-
RV 1500 - 038 - A	38	*1,50*	120	*4,72*	82	*3,23*	150 bar	*2175 psi*	2970	*6678*	116,2	*7,09*	1,21	*2,67*	-
RV 1500 - 050 - A	50	*1,97*	144	*5,67*	94	*3,70*			3059	*6877*	148,0	*9,03*	1,35	*2,98*	-
RV 1500 - 063 - A	63	*2,48*	170	*6,69*	107	*4,21*	± 5%		3123	*7021*	182,5	*11,13*	1,51	*3,33*	-
RV 1500 - 075 - A	75	*2,95*	194	*7,64*	119	*4,69*	+ 20 °C	*+68 °F*	3165	*7116*	214,4	*13,08*	1,65	*3,64*	-
RV 1500 - 080 - A	80	*3,15*	204	*8,03*	124	*4,88*			3180	*7148*	227,7	*13,89*	1,71	*3,77*	-
RV 1500 - 100 - A	100	*3,94*	244	*9,61*	144	*5,67*			3224	*7248*	280,8	*17,13*	1,94	*4,28*	-
RV 1500 - 125 - A	125	*4,92*	294	*11,57*	169	*6,65*			3262	*7333*	347,1	*21,17*	2,23	*4,92*	-

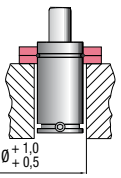


Drop-in

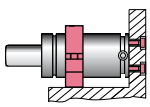
Bottom mount
FB 50 - FBA 50
FBB 63



FS2 63 - FS2A 63
FS2B 63 - FT 63
FTP 63



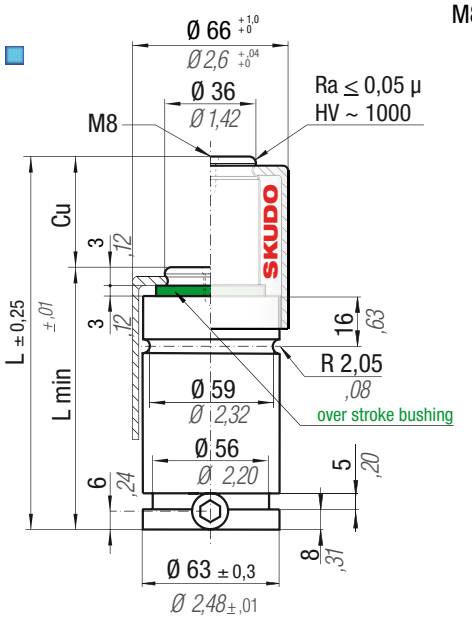
FC 63 A- FCQ 63 A

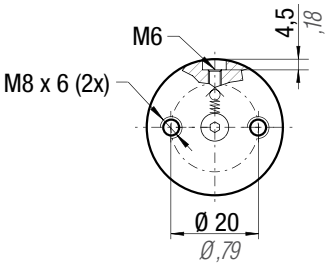


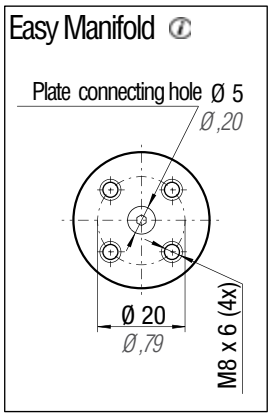
FSC 63 - FSD 63

HOW TO ORDER

(10 pcs) RV 1500-050-A
(10 pcs) RV 1500-050-A-N
(10 pcs) RV 1500-050-A-E







Info

* 100% Cu - Polytropic end forces

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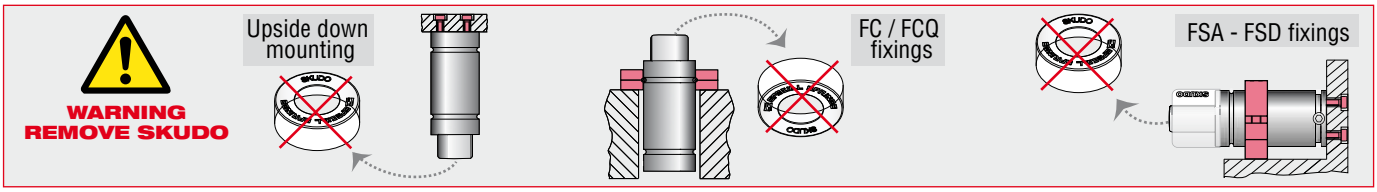
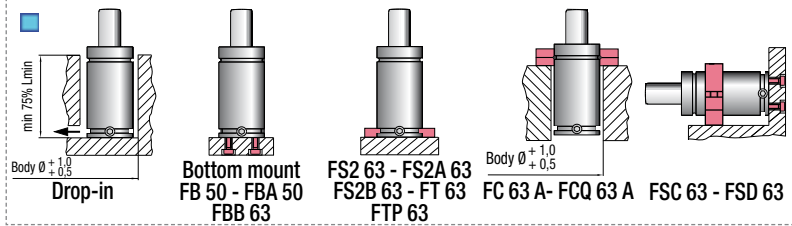
RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	10,18 cm² 1,578 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01500B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 1500 - 010 - A	10	0,39	70	2,76	60	2,36			2241	5038	49,8	3,04	0,92	2,03	-
RS 1500 - 013 - A	13	0,51	76	2,99	63	2,48			2355	5294	57,8	3,53	0,96	2,12	-
RS 1500 - 016 - A	16	0,63	82	3,23	66	2,60			2448	5503	65,8	4,01	0,99	2,18	-
RS 1500 - 022 - A	22	0,87	94	3,70	72	2,83	1530	3440	2596	5836	81,7	4,98	1,06	2,34	-
RS 1500 - 029 - A	29	1,14	108	4,25	79	3,11			2720	6115	100,2	6,11	1,14	2,51	-
RS 1500 - 035 - A	35	1,38	120	4,72	85	3,35	150 bar 2175 psi		2801	6297	116,2	7,09	1,21	2,67	-
RS 1500 - 047 - A	47	1,85	144	5,67	97	3,82			2917	6558	148,0	9,03	1,35	2,98	-
RS 1500 - 060 - A	60	2,36	170	6,69	110	4,33	± 5%		3003	6751	182,5	11,13	1,51	3,33	-
RS 1500 - 072 - A	72	2,83	194	7,64	122	4,80	+ 20 °C +68 °F		3060	6879	214,4	13,08	1,65	3,64	-
RS 1500 - 077 - A	77	3,03	204	8,03	127	5,00			3079	6922	227,7	13,89	1,71	3,77	-
RS 1500 - 097 - A	97	3,82	244	9,61	147	5,79			3141	7061	280,8	17,13	1,94	4,28	-
RS 1500 - 122 - A	122	4,80	294	11,57	172	6,77			3193	7178	347,1	21,17	2,23	4,92	-





HOW TO ORDER

(10 pcs) RS 1500-047-A
(10 pcs) RS 1500-047-A-N
(10 pcs) RS 1500-047-A-E

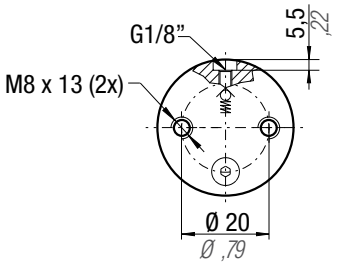
RF 1500
linkable G1/8”

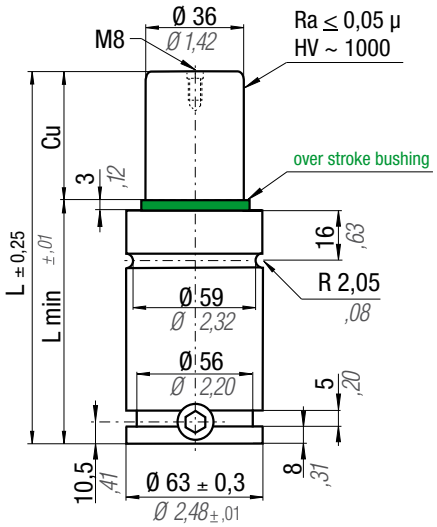
lifeplus concept

PED 97/23/EC

FIAT Specification

SPECIAL SPRINGS





Info

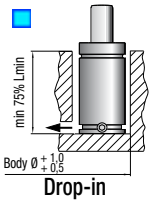
* 100% Cu - Polytropic end forces

N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	10,18 cm² 1,578 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01500B

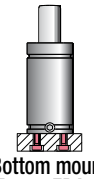
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RF 1500 - 013 - A	13	0,51	80	3,15	67	2,64	1530	3440	2520	5666	49,8	3,04	1,15	2,54	-
RF 1500 - 016 - A	16	0,63	86	3,39	70	2,76			2616	5881	57,8	3,53	1,18	2,60	-
RF 1500 - 019 - A	19	0,75	92	3,62	73	2,87			2692	6052	65,8	4,01	1,22	2,69	-
RF 1500 - 025 - A	25	0,98	104	4,09	79	3,11			2811	6319	81,7	4,98	1,29	2,84	-
RF 1500 - 032 - A	32	1,26	118	4,65	86	3,39			2908	6538	100,2	6,11	1,37	3,02	-
RF 1500 - 038 - A	38	1,50	130	5,12	92	3,62			2970	6678	116,2	7,09	1,44	3,17	-
RF 1500 - 050 - A	50	1,97	154	6,06	104	4,09			3059	6877	148,0	9,03	1,58	3,48	-
RF 1500 - 063 - A	63	2,48	180	7,09	117	4,61			3123	7021	182,5	11,13	1,73	3,81	-
RF 1500 - 075 - A	75	2,95	204	8,03	129	5,08			3165	7116	214,4	13,08	1,87	4,12	-
RF 1500 - 080 - A	80	3,15	214	8,43	134	5,28			3180	7148	227,7	13,89	1,93	4,25	-
RF 1500 - 100 - A	100	3,94	254	10,00	154	6,06			3224	7248	280,8	17,13	2,17	4,78	-
RF 1500 - 125 - A	125	4,92	304	11,97	179	7,05			3262	7333	347,1	21,17	2,46	5,42	-

150 bar 2175 psi

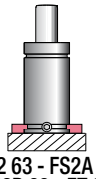
± 5% + 20 °C +68 °F



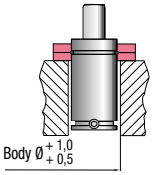
Drop-in



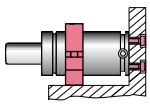
Bottom mount
FB 50 - FBA 50
FBB 63



FS2 63 - FS2A 63
FS2B 63 - FT 63
FTP 63



FC 63 A- FCQ 63 A



FSC 63 - FSD 63

HOW TO ORDER

(10 pcs) RF 1500-050-A

(10 pcs) RF 1500-050-A-N

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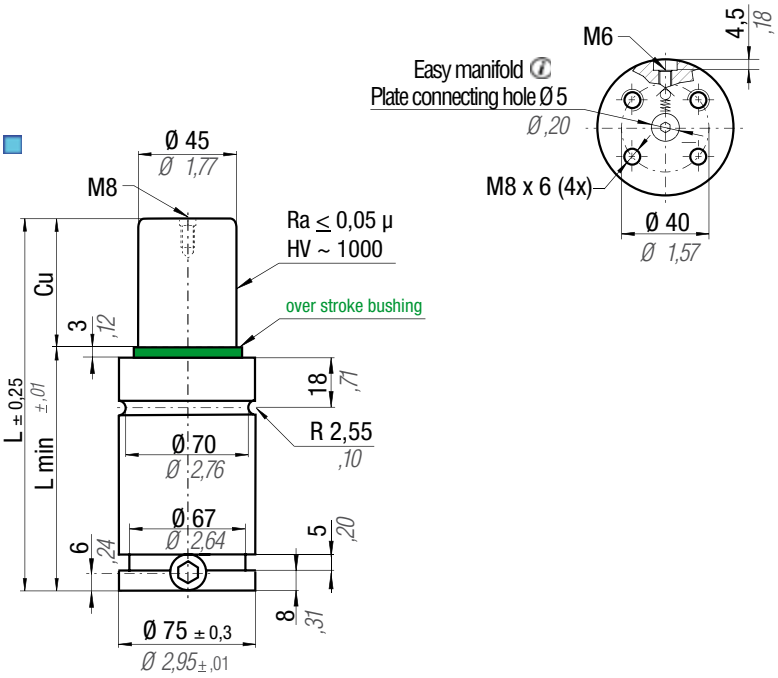
RV 2400

lifeplus concept

PED 97/23/EC

VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	E24.54.815.G (PSA)		
W-DX35-6204 (Ford)	39D 878 (VW)		

SPECIAL SPRINGS



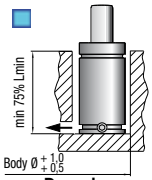
Info

* 100% Cu - Polytropic end forces

page 210

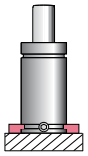
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	15,90 cm² *2,465 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV02400B

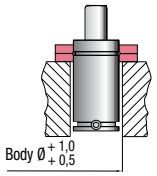
CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 2400 - 010 - A	10	*0,39*	65	*2,56*	55	*2,17*			3786	*8511*	64,0	*3,91*	1,27	*2,80*	-
RV 2400 - 013 - A	13	*0,51*	71	*2,80*	58	*2,28*			3984	*8957*	76,2	*4,65*	1,36	*3,00*	-
RV 2400 - 016 - A	16	*0,63*	77	*3,03*	61	*2,40*			4142	*9312*	88,3	*5,39*	1,36	*3,00*	-
RV 2400 - 019 - A	19	*0,75*	83	*3,27*	64	*2,52*	2385	*5362*	4271	*9602*	100,4	*6,13*	1,40	*3,09*	-
RV 2400 - 025 - A	25	*0,98*	95	*3,74*	70	*2,76*			4468	*10045*	124,5	*7,60*	1,50	*3,31*	-
RV 2400 - 032 - A	32	*1,26*	109	*4,29*	77	*3,03*	150 bar *2175 psi*		4632	*10413*	152,7	*9,32*	1,61	*3,55*	-
RV 2400 - 038 - A	38	*1,50*	121	*4,76*	83	*3,27*			4737	*10649*	176,8	*10,79*	1,70	*3,75*	-
RV 2400 - 050 - A	50	*1,97*	145	*5,71*	95	*3,74*	± 5%		4887	*10986*	225,1	*13,74*	1,89	*4,17*	-
RV 2400 - 063 - A	63	*2,48*	171	*6,73*	108	*4,25*	+ 20 °C *+68 °F*		4996	*11231*	277,5	*16,93*	2,09	*4,61*	-
RV 2400 - 075 - A	75	*2,95*	195	*7,68*	120	*4,72*			5068	*11394*	325,8	*19,88*	2,28	*5,03*	-
RV 2400 - 080 - A	80	*3,15*	205	*8,07*	125	*4,92*			5093	*11449*	345,9	*21,11*	2,36	*5,20*	-
RV 2400 - 100 - A	100	*3,94*	245	*9,65*	145	*5,71*			5169	*11621*	426,4	*26,02*	2,67	*5,89*	-
RV 2400 - 125 - A	125	*4,92*	295	*11,61*	170	*6,69*			5234	*11766*	527,0	*32,16*	3,07	*6,77*	-



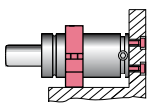
Drop-in


Bottom mount
FB 75 - FBA 75
FBB 75


FS2 75 - FT 75
FS2A 75 - FTP 75

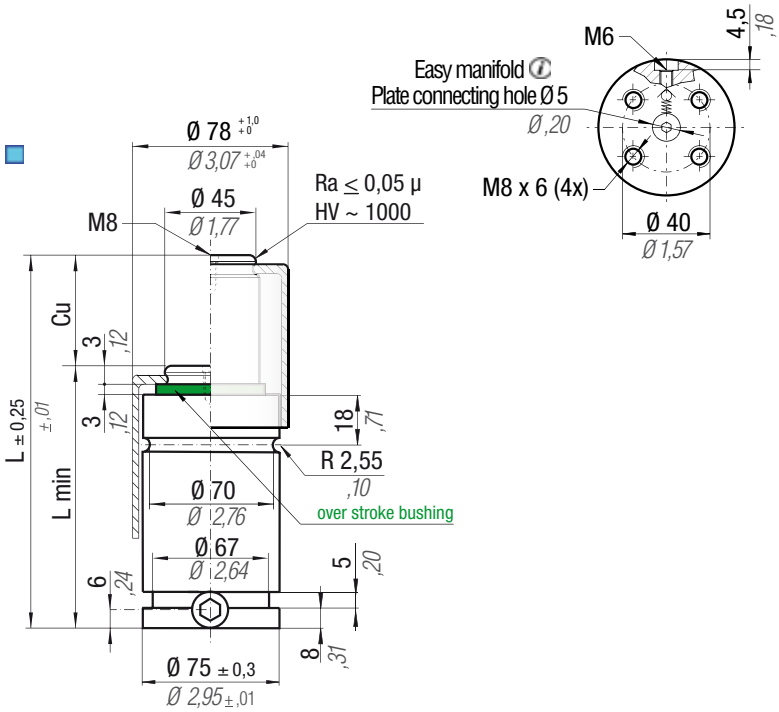


FC 75 A- FCQ 75 A


FSA 75 -FSD 75

HOW TO ORDER

(10 pcs) RV 2400-050-A
(10 pcs) RV 2400-050-A-N
(10 pcs) RV 2400-050-A-E



Info

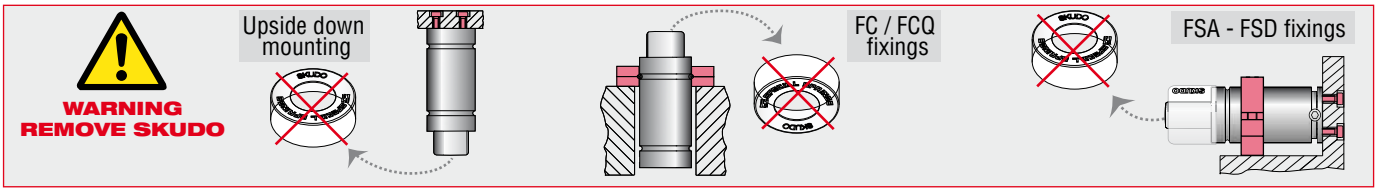
* 100% Cu - Polytropic end forces

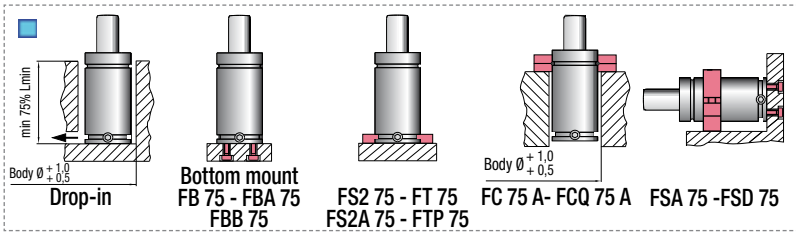
page 210

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	15,90 cm² 2,465 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV02400B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	Cat.
RS 2400 - 013 - A	13	0,51	77	3,03	64	2,52	2385	5362	3718	8358	88,3	5,39	1,36	3,00	-
RS 2400 - 016 - A	16	0,63	83	3,27	67	2,64	150 bar 2175 psi		3873	8707	100,4	6,12	1,40	3,09	-
RS 2400 - 022 - A	22	0,87	95	3,74	73	2,87	± 5% + 20 °C +68 °F		4115	9251	124,5	7,59	1,50	3,31	-
RS 2400 - 029 - A	29	1,14	109	4,29	80	3,15			4322	9716	152,7	9,31	1,61	3,55	-
RS 2400 - 035 - A	35	1,38	121	4,76	86	3,39			4456	10017	176,8	10,78	1,70	3,75	-
RS 2400 - 047 - A	47	1,85	145	5,71	98	3,86			4651	10456	225,1	13,73	1,89	4,17	-
RS 2400 - 060 - A	60	2,36	171	6,73	111	4,37			4796	10782	277,5	16,93	2,09	4,61	-
RS 2400 - 072 - A	72	2,83	195	7,68	123	4,84			4892	10998	325,8	19,87	2,28	5,03	-
RS 2400 - 077 - A	77	3,03	205	8,07	128	5,04			4925	11072	345,9	21,10	2,36	5,20	-
RS 2400 - 097 - A	97	3,82	245	9,65	148	5,83			5029	11306	426,4	26,01	2,67	5,89	-
RS 2400 - 122 - A	122	4,80	295	11,61	173	6,81			5117	11503	527,0	32,15	3,07	6,77	-





HOW TO ORDER

(10 pcs) RS 2400-047-A
(10 pcs) RS 2400-047-A-N
(10 pcs) RS 2400-047-A-E

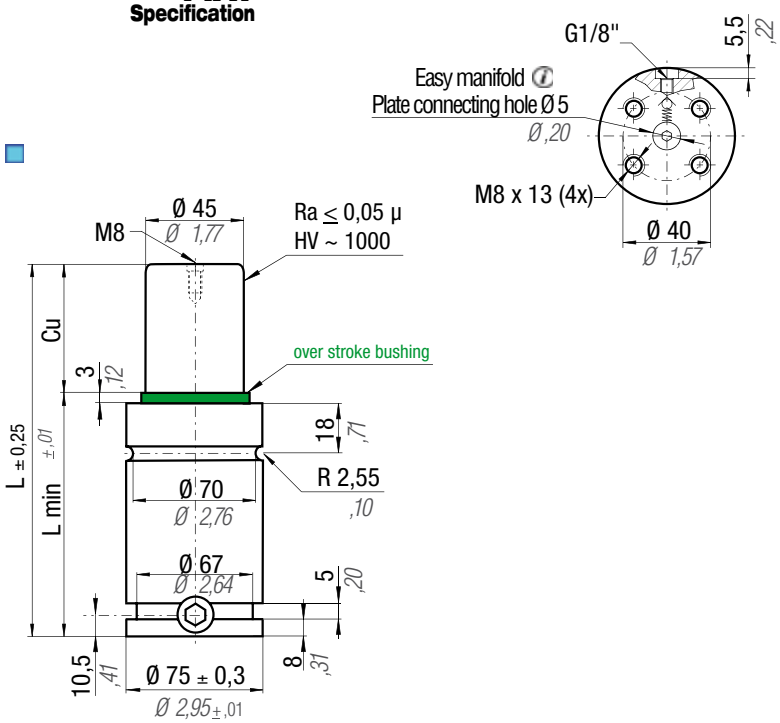
RF 2400
linkable G1/8”

lifeplus concept

PED 97/23/EC

FIAT Specification

SPECIAL SPRINGS



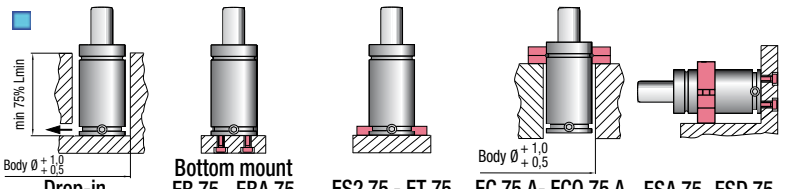
Info

* 100% Cu - Polytropic end forces

page 210

N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	15,90 cm² 2,465 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV02400B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RF 2400 - 016 - A	16	0,63	87	3,43	71	2,80			4142	9312	88,3	5,39	1,68	3,70	-
RF 2400 - 019 - A	19	0,75	93	3,66	74	2,91			4271	9602	100,4	6,12	1,73	3,81	-
RF 2400 - 025 - A	25	0,98	105	4,13	80	3,15			4468	10044	124,5	7,59	1,82	4,01	-
RF 2400 - 032 - A	32	1,26	119	4,69	87	3,43	2385	5362	4632	10413	152,7	9,31	1,93	4,25	-
RF 2400 - 038 - A	38	1,50	131	5,16	93	3,66			4737	10649	176,8	10,78	2,03	4,48	-
RF 2400 - 050 - A	50	1,97	155	6,10	105	4,13	150 bar 2175 psi		4887	10986	225,1	13,73	2,21	4,87	-
RF 2400 - 063 - A	63	2,48	181	7,13	118	4,65			4996	11231	277,5	16,93	2,42	5,34	-
RF 2400 - 075 - A	75	2,95	205	8,07	130	5,12	± 5%		5068	11393	325,8	19,87	2,61	5,75	-
RF 2400 - 080 - A	80	3,15	215	8,46	135	5,31	+ 20 °C +68 °F		5093	11450	345,9	21,10	2,69	5,93	-
RF 2400 - 100 - A	100	3,94	255	10,04	155	6,10			5169	11620	426,4	26,01	3,00	6,61	-
RF 2400 - 125 - A	125	4,92	305	12,01	180	7,09			5234	11767	527,0	32,15	3,40	7,50	-



Drop-in

Bottom mount
FB 75 - FBA 75
FBB 75

FS2 75 - FT 75
FS2A 75 - FTP 75

Body Ø + 1,0 + 0,5
FC 75 A- FCQ 75 A

FSA 75 -FSD 75

HOW TO ORDER

(10 pcs) RF 2400-050-A
(10 pcs) RF 2400-050-A-N
(10 pcs) RF 2400-050-A-E

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RV 4200

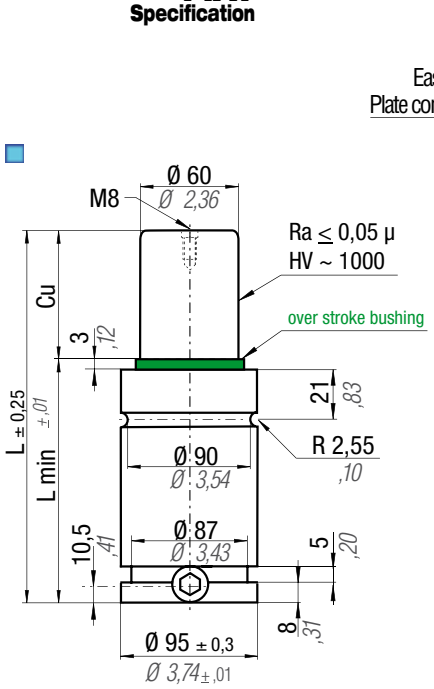
VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	E24.54.815.G (PSA)		
W-DX35-6204 (Ford)	39D 878 (VW)		

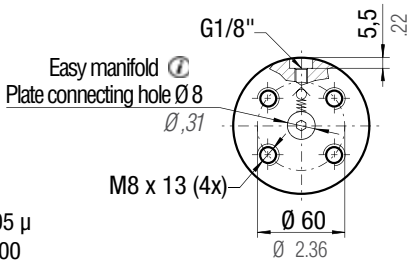
lifeplus concept

PED 97/23/EC

FIAT Specification

SPECIAL SPRINGS





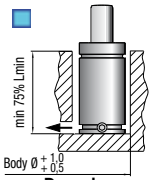
Info

* 100% Cu - Polytropic end forces

page 210

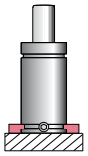
N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	28,27 cm² 4,382 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV04200B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RV 4200 - 016 - A	16	0,63	90	3,54	74	2,91			7162	16100	164,7	10,05	2,76	6,08	-
RV 4200 - 019 - A	19	0,75	96	3,78	77	3,03			7421	16683	185,0	11,29	2,83	6,24	-
RV 4200 - 025 - A	25	0,98	108	4,25	83	3,27			7834	17612	225,6	13,76	2,98	6,57	-
RV 4200 - 032 - A	32	1,26	122	4,80	90	3,54	4240	9532	8194	18421	272,9	16,65	3,16	6,97	-
RV 4200 - 038 - A	38	1,50	134	5,28	96	3,78			8432	18955	313,5	19,12	3,30	7,28	-
RV 4200 - 050 - A	50	1,97	158	6,22	108	4,25	150 bar 2175 psi		8783	19745	394,6	24,07	3,60	7,94	-
RV 4200 - 063 - A	63	2,48	184	7,24	121	4,76			9048	20340	482,5	29,43	3,93	8,66	-
RV 4200 - 075 - A	75	2,95	208	8,19	133	5,24	± 5%		9416	21168	551,5	33,64	4,20	9,26	-
RV 4200 - 080 - A	80	3,15	218	8,58	138	5,43	+ 20 °C	+68 °F	9288	20881	597,5	36,46	4,35	9,59	-
RV 4200 - 100 - A	100	3,94	258	10,16	158	6,22			9483	21319	732,7	44,69	4,85	10,69	-
RV 4200 - 125 - A	125	4,92	308	12,13	183	7,20			9651	21696	901,7	55,00	5,47	12,06	-

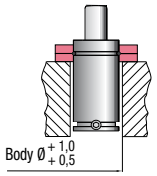


Drop-in

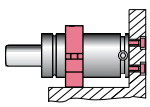
Bottom mount
FB 95 - FBA 95
FBB 95



FS2 95 - FT 95
FS2A 95 - FTP 95



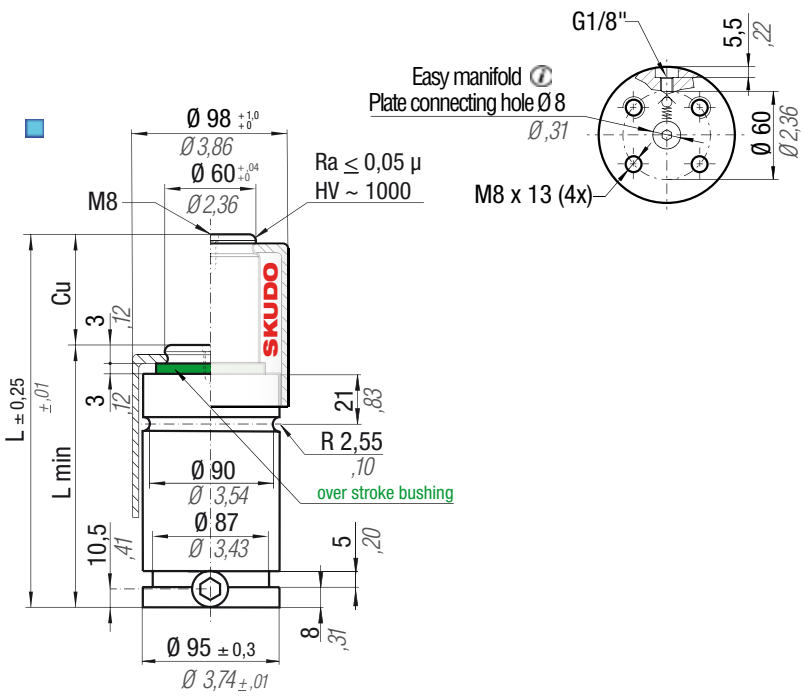
FC 95 A- FCQ 95 A



FSA 95 -FSD 95

HOW TO ORDER

(10 pcs) RV 4200-050-A
(10 pcs) RV 4200-050-A-N
(10 pcs) RV 4200-050-A-E



Info

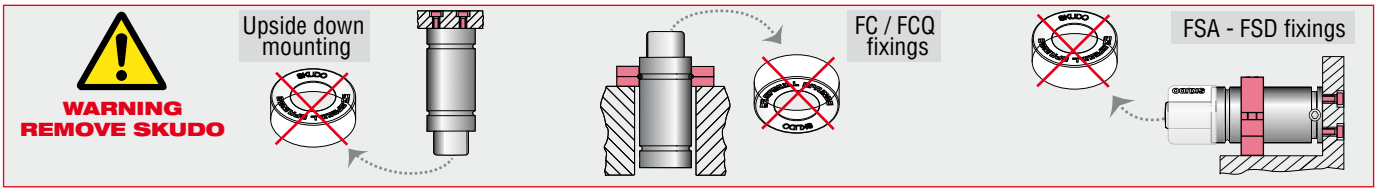
* 100% Cu - Polytropic end forces

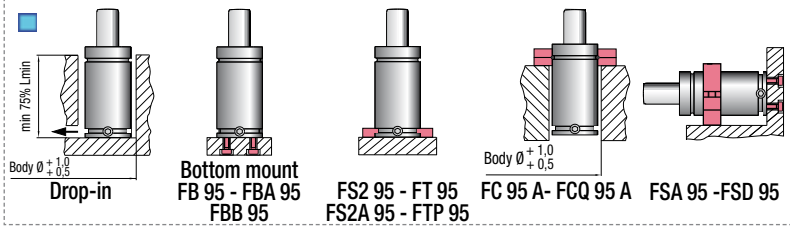
page 210

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	28,27 cm² 4,382 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV04200B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 4200 - 013 - A	13	0,51	90	3,54	77	3,03			6471	14547	164,7	10,05	2,76	6,08	-
RS 4200 - 016 - A	16	0,63	96	3,78	80	3,15			6762	15202	185,0	11,29	2,83	6,24	-
RS 4200 - 022 - A	22	0,87	108	4,25	86	3,39			7232	16258	225,6	13,76	2,98	6,57	-
RS 4200 - 029 - A	29	1,14	122	4,80	93	3,66	4240	9532	7650	17198	272,9	16,65	3,16	6,97	-
RS 4200 - 035 - A	35	1,38	134	5,28	99	3,90			7931	17830	313,5	19,12	3,30	7,28	-
RS 4200 - 047 - A	47	1,85	158	6,22	111	4,37	150 bar 2175 psi		8351	18774	394,6	24,07	3,60	7,94	-
RS 4200 - 060 - A	60	2,36	184	7,24	124	4,88			8673	19498	482,5	29,43	3,93	8,66	-
RS 4200 - 072 - A	72	2,83	208	8,19	136	5,35	± 5%		9064	20377	551,5	33,64	4,20	9,26	-
RS 4200 - 077 - A	77	3,03	218	8,58	141	5,55	+ 20 °C +68 °F		8970	20165	597,5	36,45	4,35	9,59	-
RS 4200 - 097 - A	97	3,82	258	10,16	161	6,34			9213	20712	732,7	44,69	4,85	10,69	-
RS 4200 - 122 - A	122	4,80	308	12,13	186	7,32			9423	21184	901,7	55,00	5,47	12,06	-





HOW TO ORDER

(10 pcs) RS 4200-047-A
(10 pcs) RS 4200-047-A-N
(10 pcs) RS 4200-047-A-E

RV 6600

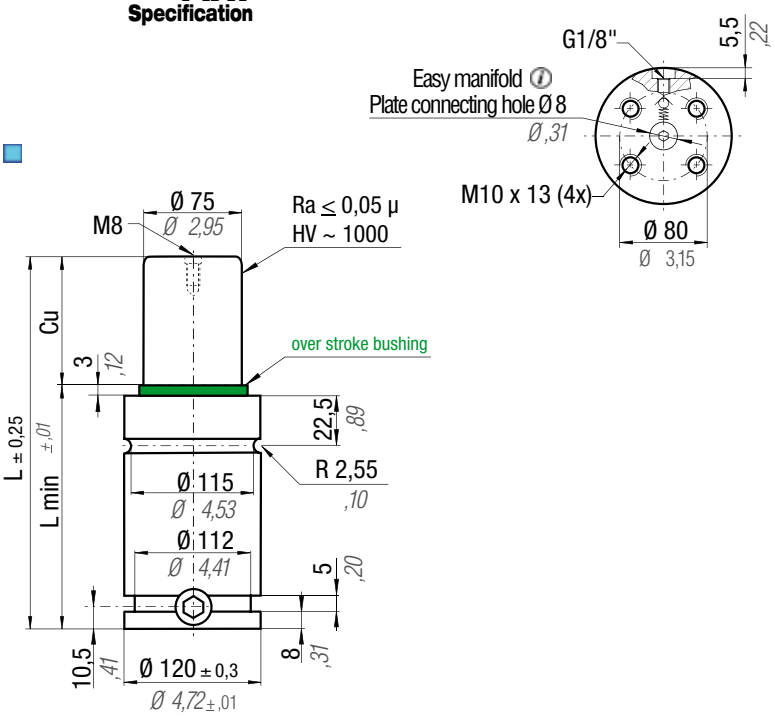
lifeplus concept

PED 97/23/EC

FIAT Specification

VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	39D 878 (VW)		
W-DX35-6204 (Ford)			

SPECIAL SPRINGS



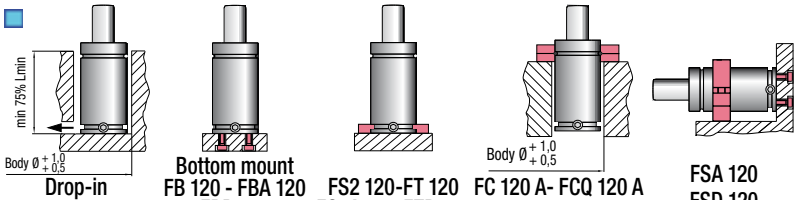
Info

* 100% Cu - Polytropic end forces

page 210

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	44,18 cm² 6,848 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV06600B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RV 6600 - 016 - A	16	0,63	100	3,94	84	3,31	6630	14904	10607	23846	282,1	17,21	5,06	11,16	-
RV 6600 - 019 - A	19	0,75	106	4,17	87	3,43	150 bar 2175 psi		10995	24718	314,2	19,17	5,17	11,40	-
RV 6600 - 025 - A	25	0,98	118	4,65	93	3,66			11628	26141	378,2	23,07	5,42	11,95	-
RV 6600 - 032 - A	32	1,26	132	5,20	100	3,94			12195	27415	453,0	27,63	5,69	12,54	-
RV 6600 - 038 - A	38	1,50	144	5,67	106	4,17			12578	28277	517,1	31,54	5,93	13,07	-
RV 6600 - 050 - A	50	1,97	168	6,61	118	4,65			13157	29579	645,3	39,36	6,40	14,11	-
RV 6600 - 063 - A	63	2,48	194	7,64	131	5,16			13604	30582	784,1	47,83	6,90	15,21	-
RV 6600 - 075 - A	75	2,95	218	8,58	143	5,63	± 5%		13911	31273	912,3	55,65	7,40	16,31	-
RV 6600 - 080 - A	80	3,15	228	8,98	148	5,83	+ 20 °C +68 °F		14018	31513	965,7	58,91	7,60	16,76	-
RV 6600 - 100 - A	100	3,94	268	10,55	168	6,61			14359	32280	1179,4	71,94	8,40	18,52	I
RV 6600 - 125 - A	125	4,92	318	12,52	193	7,60			14656	32948	1446,4	88,23	9,40	20,72	II



Drop-in

Bottom mount
FB 120 - FBA 120
FBB 120

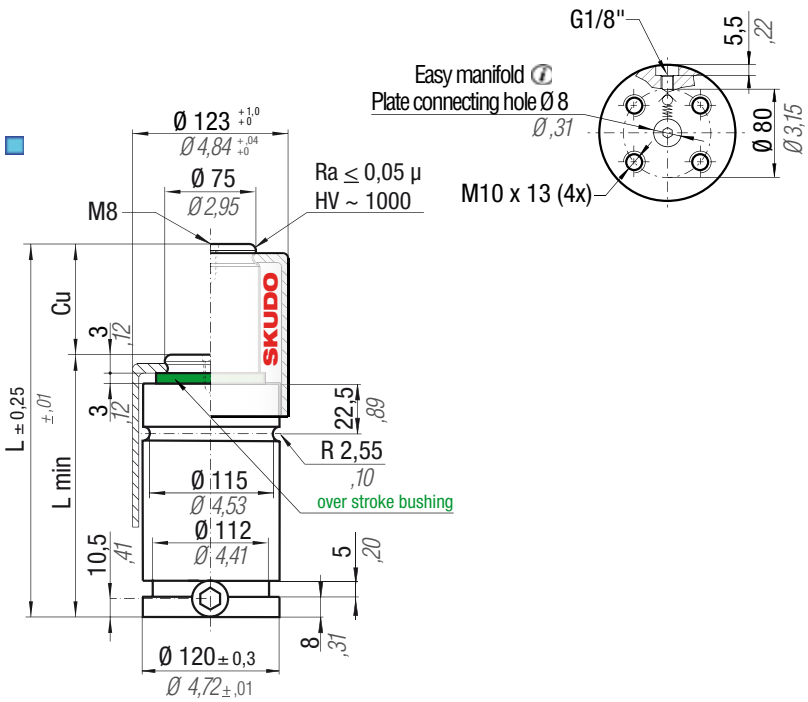
FS2 120-FT 120
FS2A 120-FTP 120

FC 120 A- FCQ 120 A

FSA 120
FSD 120

HOW TO ORDER

(10 pcs) RV 6600-050-A
(10 pcs) RV 6600-050-A-N
(10 pcs) RV 6600-050-A-E



Info

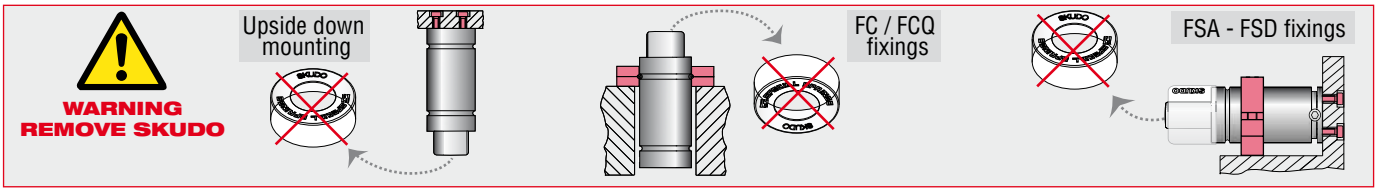
* 100% Cu - Polytropic end forces

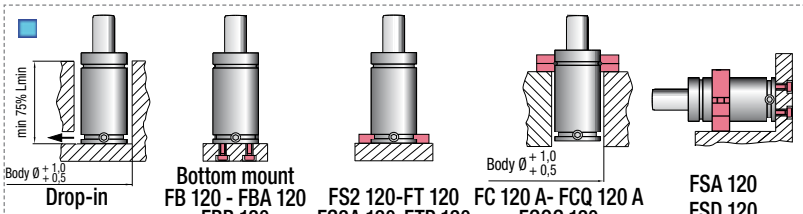
page 210

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	44,18 cm² 6,848 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV06600B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 6600 - 013 - A	13	0,51	100	3,94	87	3,43			9706	21820	282,1	17,21	5,06	11,16	-
RS 6600 - 016 - A	16	0,63	106	4,17	90	3,54			10127	22766	314,2	19,17	5,17	11,40	-
RS 6600 - 022 - A	22	0,87	118	4,65	96	3,78			10824	24333	378,2	23,07	5,42	11,95	-
RS 6600 - 029 - A	29	1,14	132	5,20	103	4,06	6630	14904	11458	25759	453,0	27,63	5,69	12,54	-
RS 6600 - 035 - A	35	1,38	144	5,67	109	4,29			11892	26734	517,1	31,54	5,93	13,07	-
RS 6600 - 047 - A	47	1,85	168	6,61	121	4,76	150 bar 2175 psi		12557	28229	645,3	39,36	6,40	14,11	-
RS 6600 - 060 - A	60	2,36	194	7,64	134	5,28			13077	29398	784,1	47,83	6,90	15,21	-
RS 6600 - 072 - A	72	2,83	218	8,58	146	5,75			13438	30209	912,3	55,65	7,40	16,31	-
RS 6600 - 077 - A	77	3,03	228	8,98	151	5,94	± 5% + 20 °C +68 °F		13564	30493	965,7	58,91	7,60	16,76	-
RS 6600 - 097 - A	97	3,82	268	10,55	171	6,73			13970	31406	1179,4	71,94	8,40	18,52	I
RS 6600 - 122 - A	122	4,80	318	12,52	196	7,72			14326	32206	1446,4	88,23	9,40	20,72	II





HOW TO ORDER

(10 pcs) RS 6600-047-A
(10 pcs) RS 6600-047-A-N
(10 pcs) RS 6600-047-A-E

RV 9500

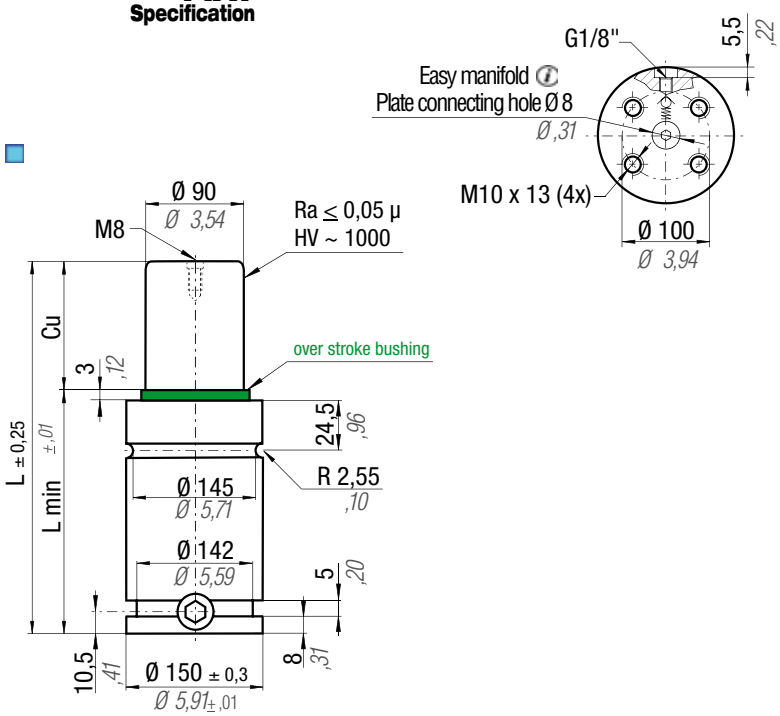
lifeplus concept

PED 97/23/EC

FIAT Specification

VDI 3003	B8 3180 220 000 004(MB)		
B2 4005 (BMW)	39D 878 (VW)		
W-DX35-6204 (Ford)			

SPECIAL SPRINGS



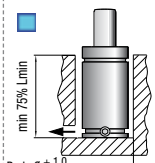
Info

* 100% Cu - Polytropic end forces

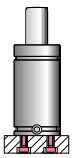
page 210

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	63,62 cm² *9,864 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV09500B

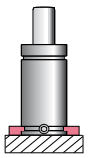
CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 9500 - 019 - A	19	*0,75*	116	*4,57*	97	*3,82*			15214	*34202*	481,6	*29,38*	9,51	*20,97*	-
RV 9500 - 025 - A	25	*0,98*	128	*5,04*	103	*4,06*			16044	*36069*	578,4	*35,28*	9,90	*21,83*	-
RV 9500 - 032 - A	32	*1,26*	142	*5,59*	110	*4,33*	9540	*21446*	16792	*37749*	691,2	*42,17*	10,30	*22,71*	-
RV 9500 - 038 - A	38	*1,50*	154	*6,06*	116	*4,57*			17299	*38891*	787,9	*48,06*	10,70	*23,59*	-
RV 9500 - 050 - A	50	*1,97*	178	*7,01*	128	*5,04*	150 bar *2175 psi*		18070	*40623*	981,4	*59,87*	11,40	*25,13*	I
RV 9500 - 063 - A	63	*2,48*	204	*8,03*	141	*5,55*			18666	*41963*	1190,9	*72,64*	12,20	*26,90*	I
RV 9500 - 075 - A	75	*2,95*	228	*8,98*	153	*6,02*	± 5%		19078	*42889*	1384,4	*84,45*	13,00	*28,66*	II
RV 9500 - 080 - A	80	*3,15*	238	*9,37*	158	*6,22*	+ 20 °C *+68 °F*		19222	*43213*	1465,0	*89,37*	13,30	*29,32*	II
RV 9500 - 100 - A	100	*3,94*	278	*10,94*	178	*7,01*			19681	*44245*	1787,4	*109,03*	14,60	*32,19*	II
RV 9500 - 125 - A	125	*4,92*	328	*12,91*	203	*7,99*			20082	*45147*	2190,4	*133,61*	16,10	*35,49*	II



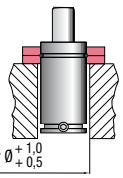
Drop-in



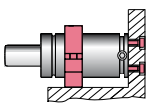
Bottom mount
FB 150 - FBA 150
FBB 150



FS2 150-FT 150
FS2A 150-FTP 150



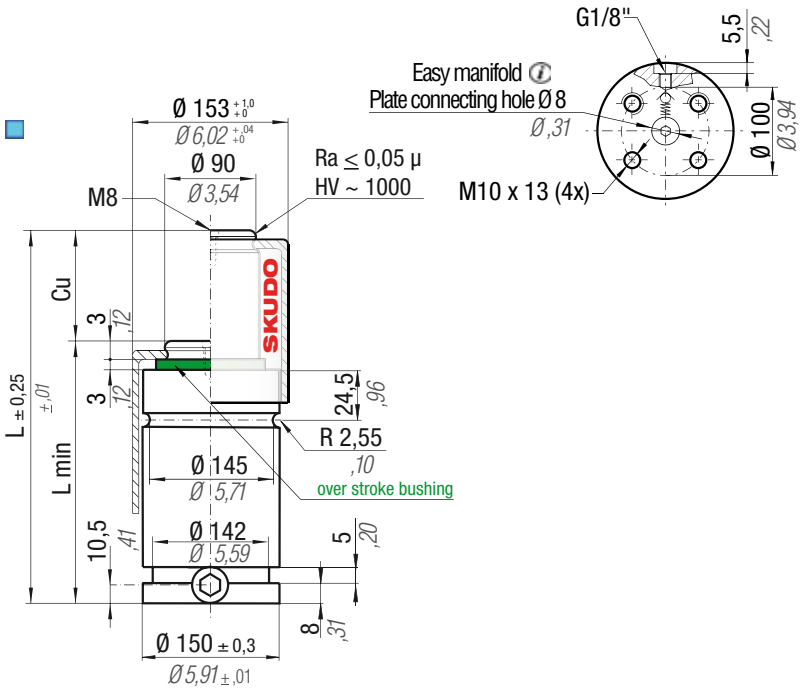
FC 150 A- FCQ 150 A



FSA 150
FSD 150

HOW TO ORDER

(10 pcs) RV 9500-050-A
(10 pcs) RV 9500-050-A-N
(10 pcs) RV 9500-050-A-E



Info

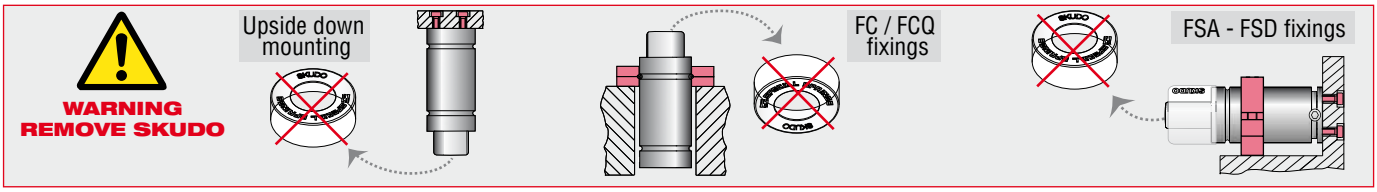
* 100% Cu - Polytropic end forces

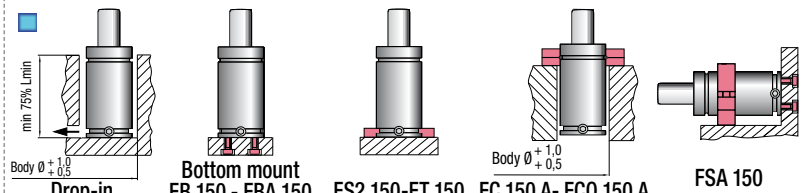
page 210

RV
RS-RF

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	63,62 cm² 9,861 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV09500B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RS 9500 - 016 - A	16	0,63	116	4,57	100	3,94			14124	31752	481,6	29,38	9,51	20,97	-
RS 9500 - 022 - A	22	0,87	128	5,04	106	4,17			15035	33800	578,4	35,28	9,90	21,83	-
RS 9500 - 029 - A	29	1,14	142	5,59	113	4,45	9540	21446	15867	35670	691,2	42,16	10,30	22,71	-
RS 9500 - 035 - A	35	1,38	154	6,06	119	4,69			16439	36956	787,9	48,06	10,70	23,59	-
RS 9500 - 047 - A	47	1,85	178	7,01	131	5,16	150 bar 2175 psi		17317	38930	981,4	59,87	11,40	25,13	I
RS 9500 - 060 - A	60	2,36	204	8,03	144	5,67			18004	40474	1190,9	72,64	12,20	26,90	I
RS 9500 - 072 - A	72	2,83	228	8,98	156	6,14			18483	41551	1384,4	84,48	13,00	28,66	II
RS 9500 - 077 - A	77	3,03	238	9,37	161	6,34	± 5% + 20 °C +68 °F		18651	41929	1465,0	89,37	13,30	29,32	II
RS 9500 - 097 - A	97	3,82	278	10,94	181	7,13			19191	43143	1787,4	109,03	14,60	32,19	II
RS 9500 - 122 - A	122	4,80	328	12,91	206	8,11			19666	44210	2190,4	133,61	16,10	35,49	II





HOW TO ORDER

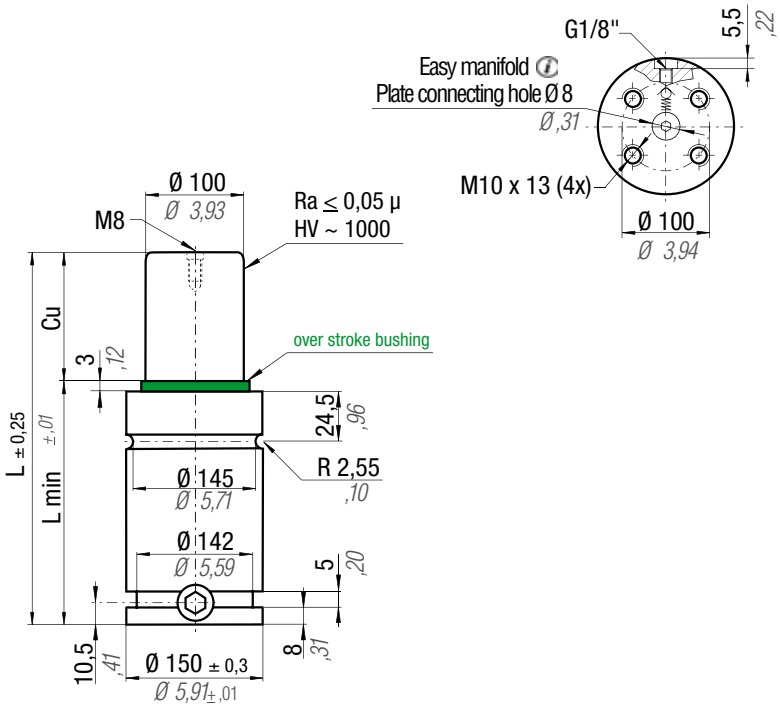
(10 pcs) RS 9500-047-A
(10 pcs) RS 9500-047-A-N
(10 pcs) RS 9500-047-A-E

RV 12000

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



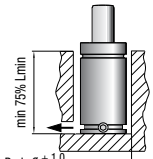
Info

* 100% Cu - Polytropic end forces

page 210

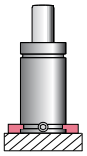
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	63,62 cm² *9,864 in²*	~ 20 - 80 (at 20°C)	1,8 m/s	39BMRV012000A

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 12000 - 019 - A	19	*0,75*	116	*4,57*	97	*3,82*			19560	*43973*	590,0	*35,99*	9,57	*21,10*	-
RV 12000 - 025 - A	25	*0,98*	128	*5,04*	103	*4,06*			20870	*46918*	680,0	*41,48*	9,96	*21,96*	-
RV 12000 - 032 - A	32	*1,26*	142	*5,59*	110	*4,33*	11780	*26470*	22100	*49683*	810,0	*49,41*	10,41	*22,95*	-
RV 12000 - 038 - A	38	*1,50*	154	*6,06*	116	*4,57*			22950	*51594*	920,0	*56,12*	10,81	*23,83*	-
RV 12000 - 050 - A	50	*1,97*	178	*7,01*	128	*5,04*	150 bar *2175 psi*		24290	*54606*	1130,0	*68,93*	11,59	*25,55*	I
RV 12000 - 063 - A	63	*2,48*	204	*8,03*	141	*5,55*			25270	*56809*	1360,0	*82,96*	11,88	*26,19*	II
RV 12000 - 075 - A	75	*2,95*	228	*8,98*	153	*6,02*	± 5%		26100	*58675*	1560,0	*95,16*	12,21	*26,92*	II
RV 12000 - 080 - A	80	*3,15*	238	*9,37*	158	*6,22*	+ 20 °C *+68 °F*		26380	*59305*	1640,0	*100,04*	12,43	*27,40*	II
RV 12000 - 100 - A	100	*3,94*	278	*10,94*	178	*7,01*			27250	*61260*	1990,0	*121,39*	13,51	*29,78*	II
RV 12000 - 125 - A	125	*4,92*	328	*12,91*	203	*7,99*			28020	*62991*	2420,0	*147,62*	15,14	*33,38*	II

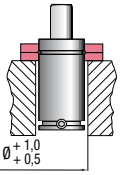


Drop-in

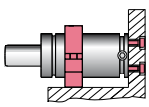
Bottom mount
FB 150 - FBA 150
FBB 150



FS2 150-FT 150
FS2A 150-FTP 150



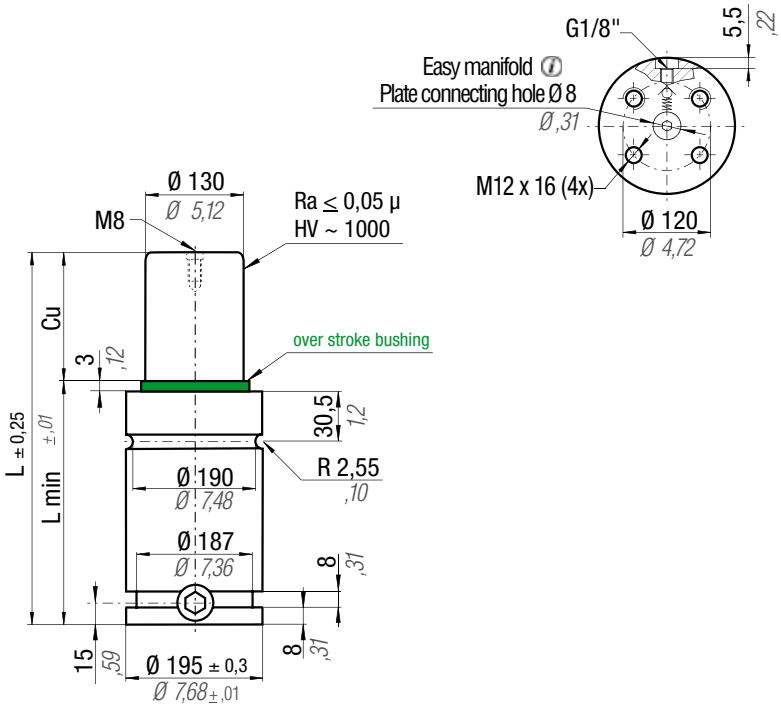
FC 150 A- FCQ 150 A



FSA 150
FSD 150

HOW TO ORDER

(10 pcs) RV 12000-050-A
(10 pcs) RV 12000-050-A-N
(10 pcs) RV 12000-050-A-E



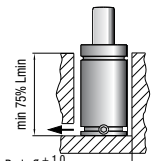
Info

* 100% Cu - Polytropic end forces

page 210

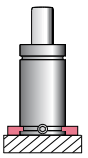
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	132,73 cm² *20,573 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV20000A

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RV 20000 - 019 - A	19	*0,75*	148	*5,83*	129	*5,08*			31207	*70156*	1118,2	*68,21*	21,60	*47,62*	I
RV 20000 - 025 - A	25	*0,98*	160	*6,30*	135	*5,32*			32565	*73209*	1348,2	*82,24*	22,30	*49,19*	II
RV 20000 - 032 - A	32	*1,26*	174	*6,85*	142	*5,59*	19910	*44759*	34616	*77820*	1546,1	*94,31*	23,10	*51,01*	II
RV 20000 - 038 - A	38	*1,50*	186	*7,32*	148	*5,83*			36119	*81199*	1715,8	*104,66*	23,90	*52,58*	II
RV 20000 - 050 - A	50	*1,97*	210	*8,27*	160	*6,30*	150 bar *2175 psi*		38590	*86754*	2055,1	*125,36*	25,30	*55,73*	II
RV 20000 - 063 - A	63	*2,48*	236	*9,29*	173	*6,81*			40680	*91452*	2422,7	*147,78*	26,80	*59,13*	II
RV 20000 - 075 - A	75	*2,95*	260	*10,24*	185	*7,28*	± 5%		42224	*94923*	2762,0	*168,48*	28,40	*62,66*	II
RV 20000 - 080 - A	80	*3,15*	270	*10,63*	190	*7,48*	+ 20 °C *+68 °F*		42784	*96182*	2903,4	*177,11*	28,80	*63,56*	II
RV 20000 - 100 - A	100	*3,94*	310	*12,21*	210	*8,27*			44649	*100375*	3469,0	*211,61*	31,20	*68,78*	II
RV 20000 - 125 - A	125	*4,92*	360	*14,17*	235	*9,25*			46380	*104266*	4175,9	*254,73*	34,20	*75,33*	II

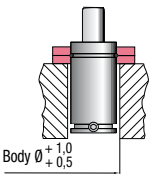


Drop-in

Bottom mount
FB 195 - FBA 195
FBB 195



FS2 195-FT 195
FS2A 195



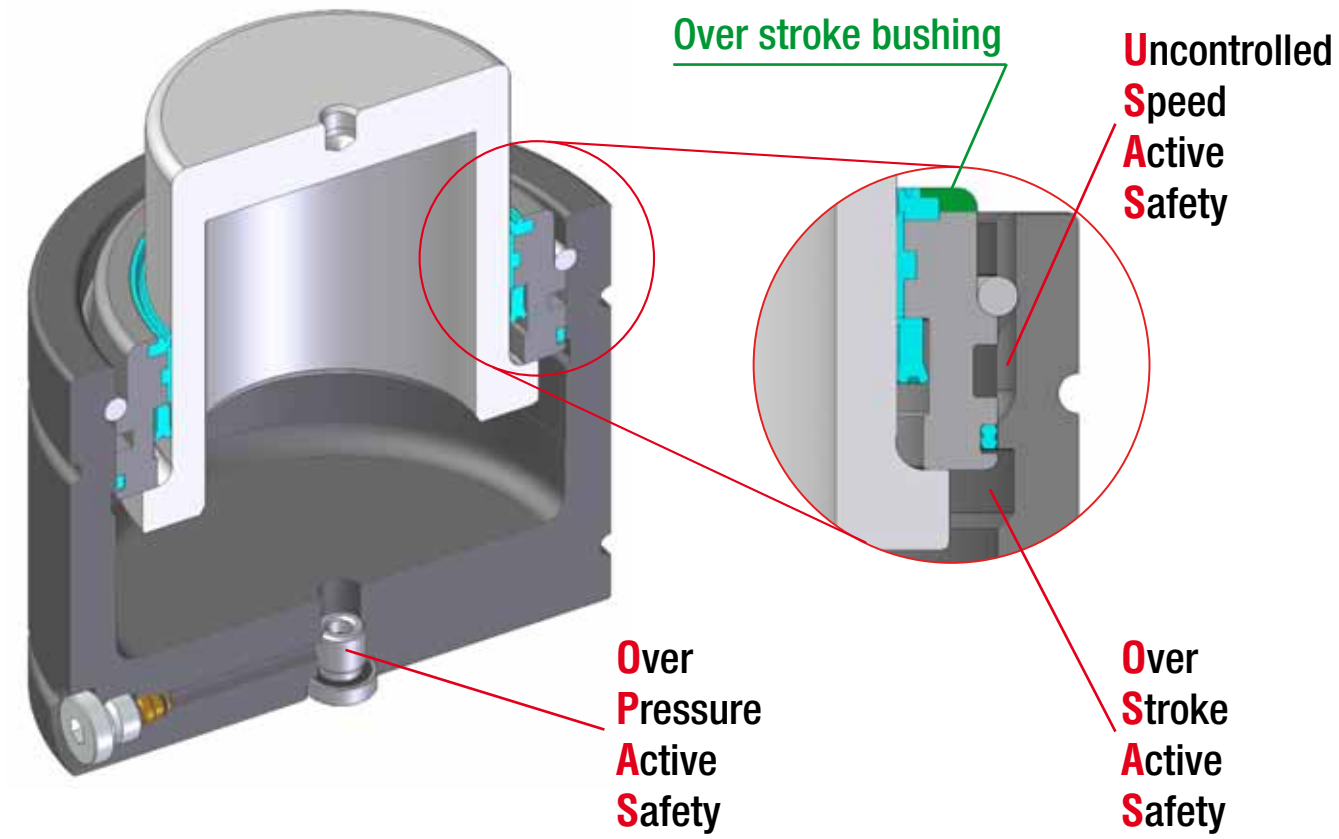
FC 195 A- FCQ 195 A

HOW TO ORDER

(10 pcs) RV 20000-050-A
(10 pcs) RV 20000-050-A-N
(10 pcs) RV 20000-050-A-E

Toyota		
Nissan		

PED 97/23/EC



Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
RT 350	32	1,26	10 - 125	0,39 - 4,92	360	809	✓	✓	-	✓
RT 500	38	1,50	10 - 125	0,39 - 4,92	470	1057	✓	✓	-	✓
RT 750	45	1,77	10 - 125	0,39 - 4,92	740	1664	✓	✓	-	✓
RT 1000	50	1,97	10 - 125	0,39 - 4,92	920	2068	✓	✓	-	✓
RT 1200	50	1,97	10 - 125	0,39 - 4,92	1060	2383	✓	✓	-	✓
RT 1500	63	2,48	10 - 125	0,39 - 4,92	1530	3440	✓	✓	-	✓
RT 2400	75	2,95	10 - 125	0,39 - 4,92	2385	5362	✓	✓	-	✓
RT 4200	95	3,74	16 - 125	0,63 - 4,92	4240	9532	✓	✓	-	✓
RT 6600	120	4,72	16 - 125	0,63 - 4,92	6630	14905	✓	✓	-	✓
RT 9500	150	5,91	19 - 125	0,75 - 4,92	9540	21447	✓	✓	-	✓

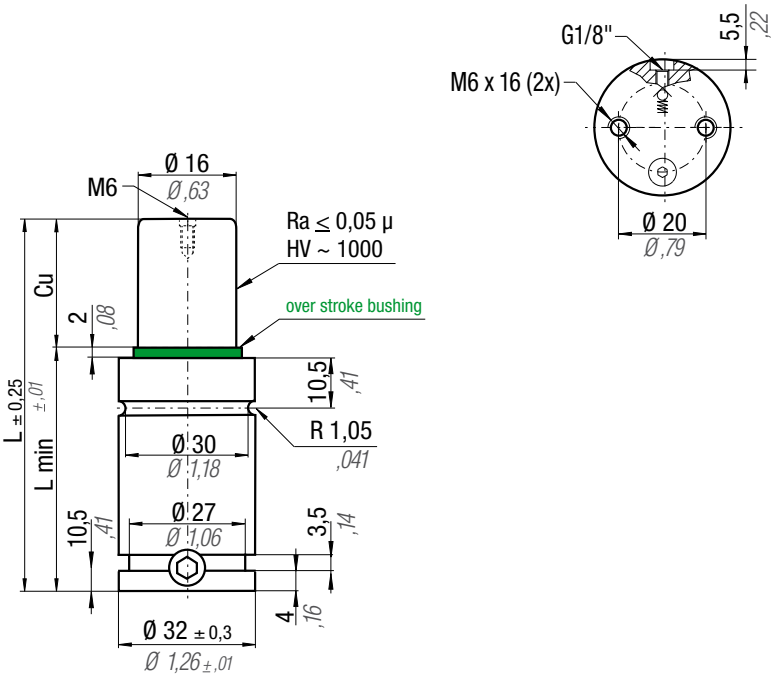
How to Order

RT 2400-050-A - N - E

Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

Collegabile con tubi, cilindro fornito scarico e senza valvola unidirezionale
Linkable with hoses, cylinder supplied without pressure and oneway valve
Anschlussfähig mit Leitungen, Zylinder geliefert ohne Druck und RückschlagVentil
Connectable avec tubes, ressort fourni sans pression ni valve unidirectionelle
Connectable con tubos, cilindro suministrado sin presión y sin válvula unidireccional
Acompláveis com tubos, cilindro fornecidos sem pressão e sem válvula unidireccional

Collegabile EASY MANIFOLD, fornito scarico + guarnizione di collegamento
Linkable EASY MANIFOLD, supplied without pressure + connecting seal
Anschlussfähig EASY MANIFOLD, geliefert ohne Druck + Verbindungsdichtung
Connectable EASY MANIFOLD, fourni sans pression + joint de connexion
Connectable EASY MANIFOLD, suministrado sin presión + junta de connexión
Acompláveis EASY MANIFOLD, fornecidos sem pressão + vedantes de conexão



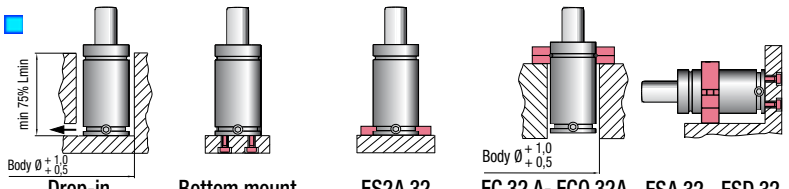
Info

* 100% Cu - Polytropic end forces

RT

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	180 bar *2610 psi*	20 bar *290 psi*	2,01 cm² *0,312 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00350B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RT 350 - 010 - A	10	*0,39*	60	*2,36*	50	*1,97*			491	*1103*	7,8	*0,48*	0,22	*0,48*	-
RT 350 - 013 - A	13	*0,51*	66	*2,60*	53	*2,09*			506	*1137*	9,7	*0,59*	0,23	*0,50*	-
RT 350 - 016 - A	16	*0,63*	72	*2,83*	56	*2,20*			517	*1161*	11,6	*0,71*	0,24	*0,52*	-
RT 350 - 019 - A	19	*0,75*	78	*3,07*	59	*2,32*	360	*809*	525	*1180*	13,4	*0,82*	0,25	*0,54*	-
RT 350 - 025 - A	25	*0,98*	90	*3,54*	65	*2,56*			536	*1205*	17,2	*1,05*	0,26	*0,58*	-
RT 350 - 032 - A	32	*1,26*	104	*4,09*	72	*2,83*			545	*1225*	21,6	*1,32*	0,29	*0,63*	-
RT 350 - 038 - A	38	*1,50*	116	*4,57*	78	*3,07*	180 bar *2610psi*		550	*1236*	25,3	*1,54*	0,30	*0,67*	-
RT 350 - 050 - A	50	*1,97*	140	*5,51*	90	*3,54*			557	*1252*	32,8	*2,00*	0,34	*0,75*	-
RT 350 - 063 - A	63	*2,48*	166	*6,54*	103	*4,06*	± 5%		562	*1263*	41,0	*2,50*	0,38	*0,84*	-
RT 350 - 075 - A	75	*2,95*	190	*7,48*	115	*4,53*	+ 20 °C *+68 °F*		565	*1270*	48,5	*2,96*	0,42	*0,91*	-
RT 350 - 080 - A	80	*3,15*	200	*7,87*	120	*4,72*			566	*1272*	51,6	*3,15*	0,43	*0,95*	-
RT 350 - 100 - A	100	*3,94*	240	*9,45*	140	*5,51*			569	*1279*	64,1	*3,91*	0,49	*1,08*	-
RT 350 - 125 - A	125	*4,92*	290	*11,42*	165	*6,50*			572	*1285*	79,8	*4,87*	0,57	*1,25*	-



HOW TO ORDER

(10 pcs) RT 350-050-A

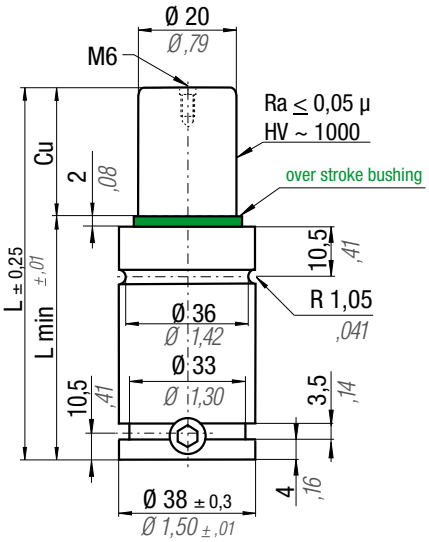
(10 pcs) RT 350-050-A-N

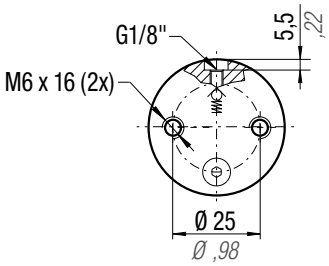
RT 500

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



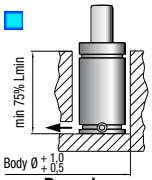


Info

* 100% Cu - Polytropic end forces

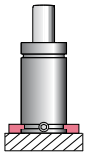
4,8 m/s N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00500B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RT 500 - 010 - A	10	*0,39*	60	*2,36*	50	*1,97*			824	*1852*	9,5	*0,58*	0,33	*0,73*	-
RT 500 - 013 - A	13	*0,51*	66	*2,60*	53	*2,09*			854	*1920*	12,1	*0,74*	0,34	*0,75*	-
RT 500 - 016 - A	16	*0,63*	72	*2,83*	56	*2,20*			876	*1969*	14,7	*0,90*	0,36	*0,79*	-
RT 500 - 019 - A	19	*0,75*	78	*3,07*	59	*2,32*	470	*1057*	892	*2006*	17,3	*1,06*	0,37	*0,82*	-
RT 500 - 025 - A	25	*0,98*	90	*3,54*	65	*2,56*			916	*2058*	22,4	*1,37*	0,40	*0,88*	-
RT 500 - 032 - A	32	*1,26*	104	*4,09*	72	*2,83*			933	*2098*	28,5	*1,74*	0,43	*0,95*	-
RT 500 - 038 - A	38	*1,50*	116	*4,57*	78	*3,07*	150 bar *2175psi*		944	*2122*	33,6	*2,05*	0,46	*1,01*	-
RT 500 - 050 - A	50	*1,97*	140	*5,51*	90	*3,54*			958	*2155*	44,0	*2,68*	0,52	*1,15*	-
RT 500 - 063 - A	63	*2,48*	166	*6,54*	103	*4,06*	± 5%		968	*2177*	55,1	*3,36*	0,58	*1,28*	-
RT 500 - 075 - A	75	*2,95*	190	*7,48*	115	*4,53*	+ 20 °C *+68 °F*		975	*2191*	65,5	*4,00*	0,63	*1,39*	-
RT 500 - 080 - A	80	*3,15*	200	*7,87*	120	*4,72*			977	*2196*	69,8	*4,26*	0,66	*1,46*	-
RT 500 - 100 - A	100	*3,94*	240	*9,45*	140	*5,51*			983	*2210*	87,0	*5,31*	0,75	*1,65*	-
RT 500 - 125 - A	125	*4,92*	290	*11,42*	165	*6,50*			988	*2222*	108,5	*6,62*	0,87	*1,92*	-

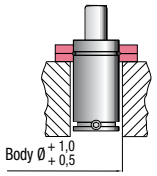


Drop-in

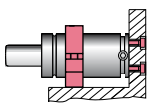
Bottom mount



FS2A 38 - FT 38
FS2B 38 - FTP 38



FC 38 A- FCQ 38 A

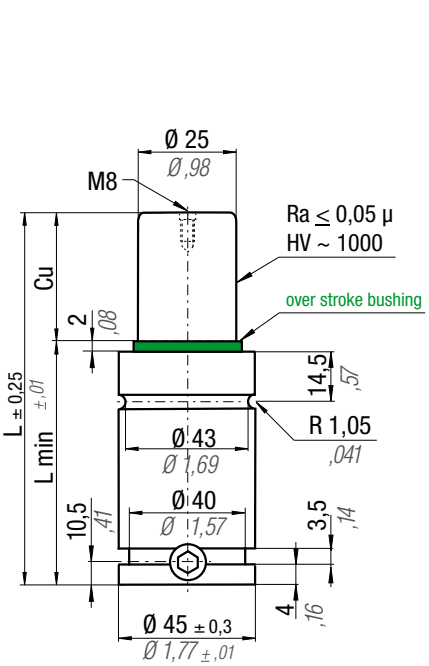


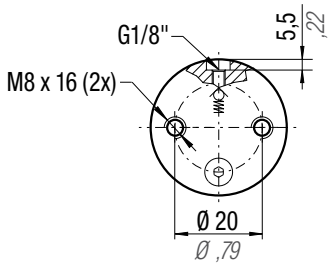
FSA 38 - FSD 38

HOW TO ORDER

(10 pcs) RT 500-050-A

(10 pcs) RT 500-050-A-N





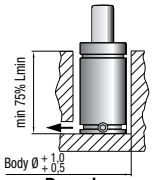
Info

* 100% Cu - Polytropic end forces

RT

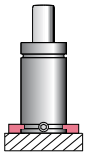
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	4,91 cm² 0,761 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV00750B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	Cat.
RT 750 - 010 -A	10	0,39	67	2,64	57	2,24	740	1664	1187	2669	20,5	1,25	0,50	1,10	-
RT 750 - 013 -A	13	0,51	73	2,87	60	2,36			1246	2802	24,3	1,48	0,52	1,15	-
RT 750 - 016 -A	16	0,63	79	3,11	63	2,48			1292	2905	28,1	1,71	0,54	1,19	-
RT 750 - 019 -A	19	0,75	85	3,35	66	2,60			1329	2988	32,0	1,95	0,56	1,23	-
RT 750 - 025 -A	25	0,98	97	3,82	72	2,83			1385	3113	39,6	2,42	0,60	1,32	-
RT 750 - 032 -A	32	1,26	111	4,37	79	3,11	150 bar 2175psi		1430	3215	48,5	2,96	0,64	1,41	-
RT 750 - 038 -A	38	1,50	123	4,84	85	3,35			1459	3279	56,1	3,42	0,68	1,50	-
RT 750 - 050 -A	50	1,97	147	5,79	97	3,82			1499	3370	71,4	4,36	0,76	1,68	-
RT 750 - 063 -A	63	2,48	173	6,81	110	4,33	± 5%		1528	3436	87,9	5,36	0,84	1,85	-
RT 750 - 075 -A	75	2,95	197	7,76	122	4,80	+ 20 °C +68 °F		1547	3478	103,2	6,30	0,92	2,03	-
RT 750 - 080 -A	80	3,15	207	8,15	127	5,00			1554	3493	109,6	6,69	0,95	2,09	-
RT 750 - 100 -A	100	3,94	247	9,72	147	5,79			1574	3538	135,0	8,24	1,08	2,38	-
RT 750 - 125 -A	125	4,92	297	11,69	172	6,77			1590	3575	166,8	10,18	1,24	2,73	-

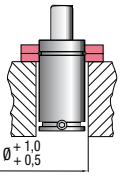


Drop-in

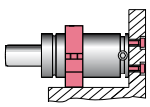
Bottom mount
FB 45 - FBA 45
FBB 45



FS2 45 - FT 45
FS2A 45 - FTP 45



FC 45 A- FCQ 45 A



FSA 45 - FSD 45

HOW TO ORDER

(10 pcs) RT 750-050-A

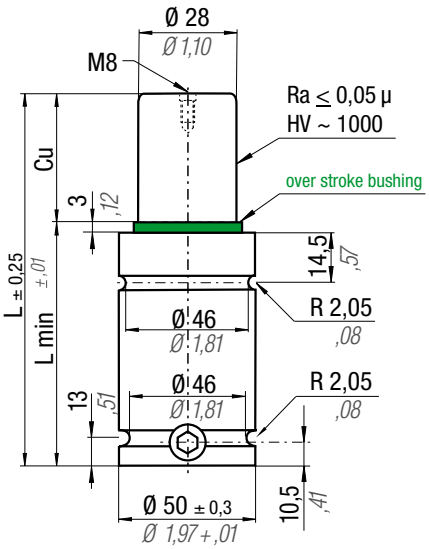
(10 pcs) RT 750-050-A-N

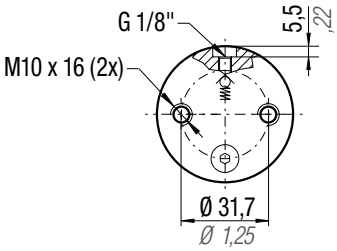
RT 1000

SMS DNN 3203h Rev.3 (TOYOTA)		
K 32 R (Nissan)		

lifeplus concept

PED 97/23/EC



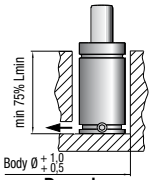


Info

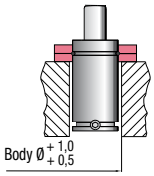
* 100% Cu - Polytropic end forces

N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	6,15 cm² *0,953 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

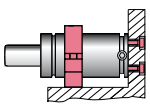
CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RT 1000 - 010 - A	10	*0,39*	72	*2,83*	62	*2,44*			1485	*3337*	26,0	*1,59*	0,72	*1,59*	-
RT 1000 - 013 - A	13	*0,51*	78	*3,07*	65	*2,56*			1561	*3508*	31,0	*1,89*	0,75	*1,65*	-
RT 1000 - 016 - A	16	*0,63*	84	*3,31*	68	*2,68*	920	*2068*	1621	*3643*	35,0	*2,14*	0,77	*1,70*	-
RT 1000 - 019 - A	19	*0,75*	90	*3,54*	71	*2,80*			1669	*3752*	40,0	*2,44*	0,82	*1,81*	-
RT 1000 - 025 - A	25	*0,98*	102	*4,02*	77	*3,03*			1742	*3917*	49,0	*2,99*	0,86	*1,90*	-
RT 1000 - 032 - A	32	*1,26*	116	*4,57*	84	*3,31*	150 bar *2175 psi*		1803	*4053*	60,0	*3,66*	0,92	*2,03*	-
RT 1000 - 038 - A	38	*1,50*	128	*5,04*	90	*3,54*			1841	*4139*	70,0	*4,27*	0,97	*2,14*	-
RT 1000 - 050 - A	50	*1,97*	152	*5,98*	102	*4,02*	± 5%		1895	*4261*	82,0	*5,00*	1,08	*2,38*	-
RT 1000 - 063 - A	63	*2,48*	178	*7,01*	115	*4,53*	+ 20 °C *+68 °F*		1935	*4350*	109,0	*6,65*	1,18	*2,60*	-
RT 1000 - 075 - A	75	*2,95*	202	*7,95*	127	*5,00*			1961	*4408*	128,0	*7,81*	1,28	*2,82*	-
RT 1000 - 080 - A	80	*3,15*	212	*8,35*	132	*5,20*			1969	*4427*	136,0	*8,30*	1,35	*2,98*	-
RT 1000 - 100 - A	100	*3,94*	252	*9,92*	152	*5,98*			1997	*4489*	167,0	*10,19*	1,51	*3,33*	-
RT 1000 - 125 - A	125	*4,92*	302	*11,89*	177	*6,97*			2020	*4540*	207,0	*12,63*	1,71	*3,77*	-



Drop-in



FC 50 A- FCQ 50 A

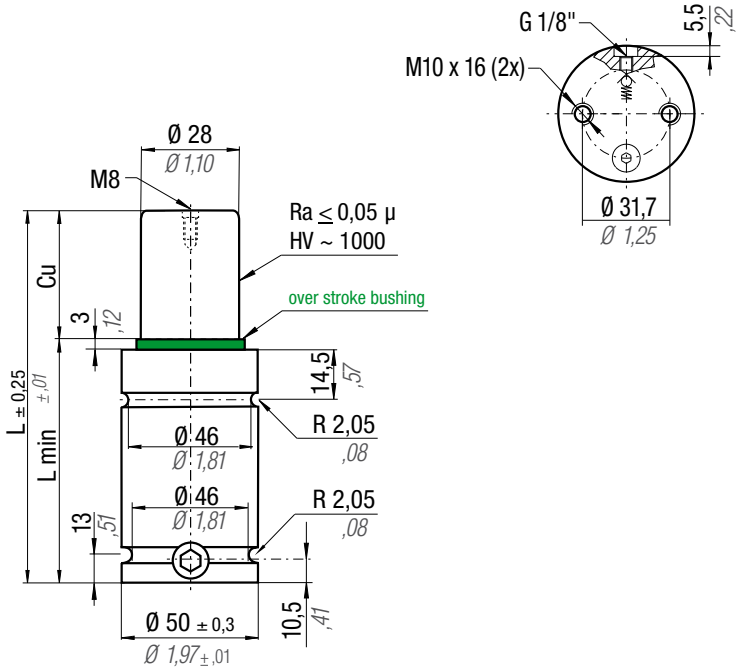


FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) RT 1000-050-A

(10 pcs) RT 1000-050-A-N



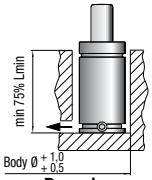
Info

* 100% Cu - Polytropic end forces

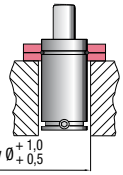
RT

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	170 bar *2465 psi*	20 bar *290 psi*	6,15 cm² *0,953 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01000B

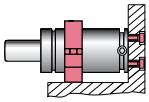
CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RT 1200 - 010 - A	10	*0,39*	72	*2,83*	62	*2,44*			1683	*3784*	26,0	*1,59*	0,72	*1,59*	-
RT 1200 - 013 - A	13	*0,51*	78	*3,07*	65	*2,56*			1769	*3978*	31,0	*1,89*	0,75	*1,65*	-
RT 1200 - 016 - A	16	*0,63*	84	*3,31*	68	*2,68*			1837	*4131*	35,0	*2,14*	0,77	*1,70*	-
RT 1200 - 019 - A	19	*0,75*	90	*3,54*	71	*2,80*	1060	*2383*	1892	*4254*	40,0	*2,44*	0,82	*1,81*	-
RT 1200 - 025 - A	25	*0,98*	102	*4,02*	77	*3,03*			1975	*4441*	49,0	*2,99*	0,86	*1,90*	-
RT 1200 - 032 - A	32	*1,26*	116	*4,57*	84	*3,31*	170 bar *2465 psi*		2044	*4595*	60,0	*3,66*	0,92	*2,03*	-
RT 1200 - 038 - A	38	*1,50*	128	*5,04*	90	*3,54*			2087	*4693*	70,0	*4,27*	0,97	*2,14*	-
RT 1200 - 050 - A	50	*1,97*	152	*5,98*	102	*4,02*	± 5%		2149	*4831*	82,0	*5,00*	1,08	*2,38*	-
RT 1200 - 063 - A	63	*2,48*	178	*7,01*	115	*4,53*	+ 20 °C *+68 °F*		2194	*4931*	109,0	*6,65*	1,18	*2,60*	-
RT 1200 - 075 - A	75	*2,95*	202	*7,95*	127	*5,00*			2223	*4997*	128,0	*7,81*	1,28	*2,82*	-
RT 1200 - 080 - A	80	*3,15*	212	*8,35*	132	*5,20*			2233	*5020*	136,0	*8,30*	1,35	*2,98*	-
RT 1200 - 100 - A	100	*3,94*	252	*9,92*	152	*5,98*			2264	*5089*	167,0	*10,19*	1,51	*3,33*	-
RT 1200 - 125 - A	125	*4,92*	302	*11,89*	177	*6,97*			2290	*5147*	207,0	*12,63*	1,71	*3,77*	-



Drop-in



FC 50 A- FCQ 50 A


FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) RT 1200-050-A

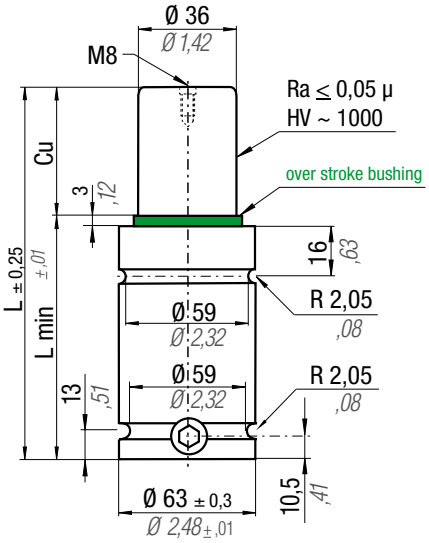
(10 pcs) RT 1200-050-A-N

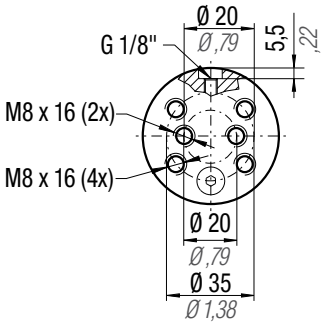
RT 1500

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



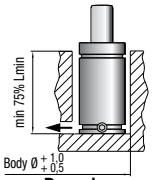


Info

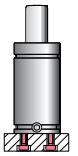
* 100% Cu - Polytropic end forces

N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	10,18 cm² *1,578 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV01500B

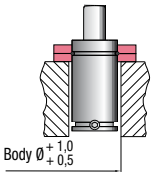
CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RT 1500 - 010 - A	10	*0,39*	72	*2,83*	62	*2,44*			2400	*5395*	41,8	*2,55*	1,10	*2,43*	-
RT 1500 - 013 - A	13	*0,51*	78	*3,07*	65	*2,56*			2520	*5666*	49,8	*3,04*	1,12	*2,47*	-
RT 1500 - 016 - A	16	*0,63*	84	*3,31*	68	*2,68*			2616	*5881*	57,8	*3,53*	1,16	*2,56*	-
RT 1500 - 019 - A	19	*0,75*	90	*3,54*	71	*2,80*			2692	*6052*	65,8	*4,01*	1,20	*2,65*	-
RT 1500 - 025 - A	25	*0,98*	102	*4,02*	77	*3,03*	1530	*3440*	2811	*6319*	81,7	*4,98*	1,27	*2,80*	-
RT 1500 - 032 - A	32	*1,26*	116	*4,57*	84	*3,31*			2908	*6538*	100,2	*6,11*	1,35	*2,98*	-
RT 1500 - 038 - A	38	*1,50*	128	*5,04*	90	*3,54*	150 bar *2175 psi*		2970	*6678*	116,2	*7,09*	1,42	*3,13*	-
RT 1500 - 050 - A	50	*1,97*	152	*5,98*	102	*4,02*			3059	*6877*	148,0	*9,03*	1,56	*3,44*	-
RT 1500 - 063 - A	63	*2,48*	178	*7,01*	115	*4,53*	± 5%		3123	*7021*	182,5	*11,13*	1,71	*3,77*	-
RT 1500 - 075 - A	75	*2,95*	202	*7,95*	127	*5,00*	+ 20 °C *+68 °F*		3165	*7116*	214,4	*13,08*	1,85	*4,08*	-
RT 1500 - 080 - A	80	*3,15*	212	*8,35*	132	*5,20*			3180	*7148*	227,7	*13,89*	1,91	*4,21*	-
RT 1500 - 100 - A	100	*3,94*	252	*9,92*	152	*5,98*			3224	*7248*	280,8	*17,13*	2,15	*4,74*	-
RT 1500 - 125 - A	125	*4,92*	302	*11,89*	177	6,97			3262	*7333*	347,1	*21,17*	2,44	*5,38*	-



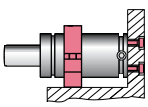
Drop-in



Bottom mount
FB 50 - FBA 50
FBB 63



FC 63 A- FCQ 63 A

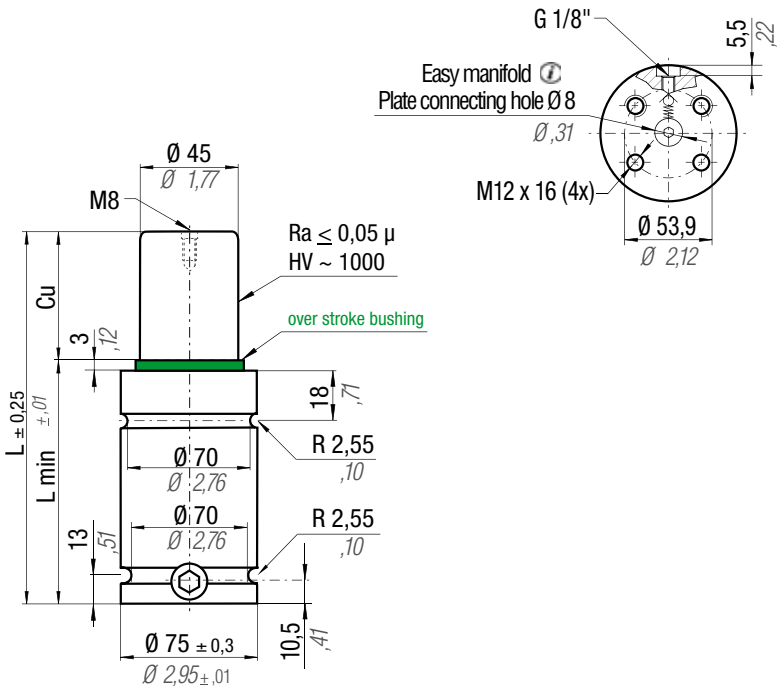


FSC 63 - FSD 63

HOW TO ORDER

(10 pcs) RT 1500-050-A

(10 pcs) RT 1500-050-A-N



Info

* 100% Cu - Polytropic end forces

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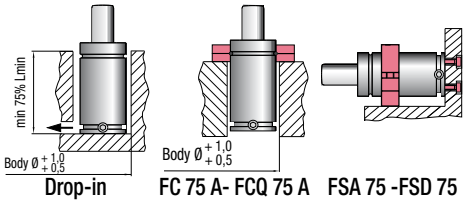
RT

N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	15,90 cm² *2,465 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRT02400B

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RT 2400 - 010 - A	10	0,39	79	3,11	69	2,72			3579	8047	78,0	4,76	1,73	3,81	-
RT 2400 - 013 - A	13	0,51	85	3,35	72	2,83			3769	8474	90,0	5,49	1,77	3,90	-
RT 2400 - 016 - A	16	0,63	91	3,58	75	2,95			3926	8826	102,0	6,22	1,82	4,01	-
RT 2400 - 019 - A	19	0,75	97	3,82	78	3,07	2385	5362	4057	9120	114,0	6,96	1,87	4,12	-
RT 2400 - 025 - A	25	0,98	109	4,29	84	3,31			4264	9585	138,0	8,42	1,96	4,32	-
RT 2400 - 032 - A	32	1,26	123	4,84	91	3,58	150 bar *2175 psi*		4442	9986	167,0	10,19	2,08	4,59	-
RT 2400 - 038 - A	38	1,50	135	5,31	97	3,82			4559	10250	191,0	11,66	2,18	4,81	-
RT 2400 - 050 - A	50	1,97	159	6,26	109	4,29	± 5%		4731	10636	239,0	14,58	2,37	5,22	-
RT 2400 - 063 - A	63	2,48	185	7,28	122	4,80	+ 20 °C *+68 °F*		4859	10925	291,0	17,76	2,58	5,69	-
RT 2400 - 075 - A	75	2,95	209	8,23	134	5,28			4946	11119	340,0	20,75	2,83	6,24	-
RT 2400 - 080 - A	80	3,15	219	8,62	139	5,47			4976	11186	360,0	21,97	2,91	6,42	-
RT 2400 - 100 - A	100	3,94	259	10,20	159	6,26			5069	11397	440,0	26,85	3,22	7,10	-
RT 2400 - 125 - A	125	4,92	309	12,17	184	7,24			5150	11577	541,0	33,01	3,63	8,00	-



HOW TO ORDER

(10 pcs) RT 2400-050-A
(10 pcs) RT 2400-050-A-N
(10 pcs) RT 2400-050-A-E

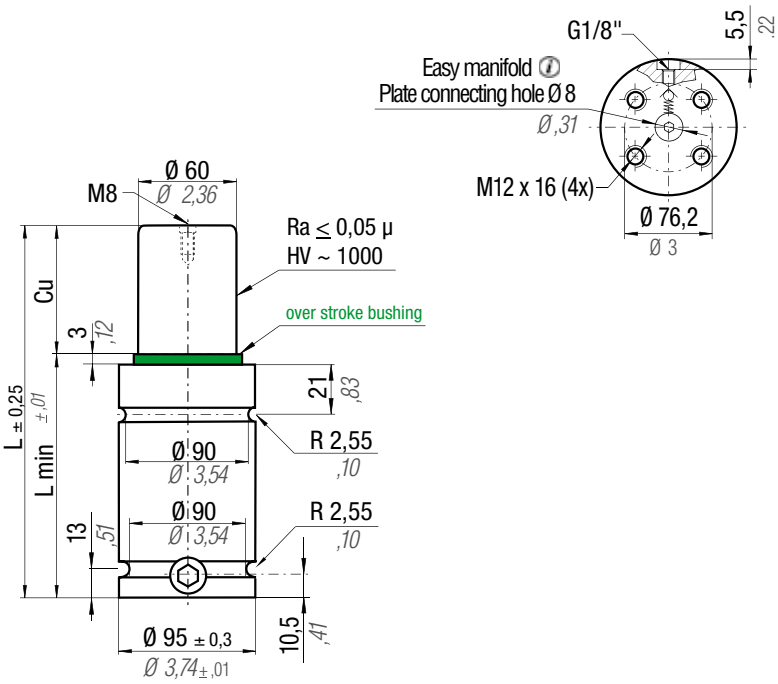
RT 4200

SMS DNN 3203h Rev.3 (TOYOTA)		
K 32 R (Nissan)		

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

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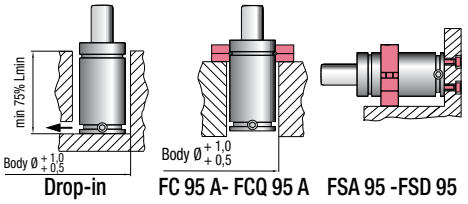
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	28,27 cm² *4,382 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV04200B

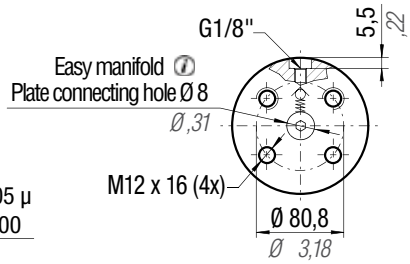
CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
RT 4200 - 016 - A	16	*0,63*	94	*3,70*	78	*3,07*			7283	*16373*	164,7	*10,05*	3,18	*7,01*	-
RT 4200 - 019 - A	19	*0,75*	100	*3,94*	81	*3,19*			7543	*16957*	185,0	*11,29*	3,27	*7,21*	-
RT 4200 - 025 - A	25	*0,98*	112	*4,41*	87	*3,43*			7953	*17880*	225,6	*13,76*	3,47	*7,65*	-
RT 4200 - 032 - A	32	*1,26*	126	*4,96*	94	*3,70*	4240	*9532*	8307	*18674*	272,9	*16,65*	3,64	*8,02*	-
RT 4200 - 038 - A	38	*1,50*	138	*5,43*	100	*3,94*			8539	*19196*	313,5	*19,12*	3,79	*8,36*	-
RT 4200 - 050 - A	50	*1,97*	162	*6,38*	112	*4,41*	150 bar *2175 psi*		8879	*19960*	394,6	*24,07*	4,25	*9,37*	-
RT 4200 - 063 - A	63	*2,48*	188	*7,40*	125	*4,92*			9132	*20530*	482,5	*29,43*	4,47	*9,85*	-
RT 4200 - 075 - A	75	*2,95*	212	*8,35*	137	*5,39*	± 5%		9499	*21354*	551,5	*33,64*	4,77	*10,52*	-
RT 4200 - 080 - A	80	*3,15*	222	*8,74*	142	*5,59*	+ 20 °C *+68 °F*		9362	*21046*	597,5	*36,46*	4,96	*10,93*	-
RT 4200 - 100 - A	100	*3,94*	262	*10,31*	162	*6,38*			9547	*21462*	732,7	*44,69*	5,45	*12,02*	-
RT 4200 - 125 - A	125	*4,92*	312	*12,28*	187	*7,36*			9705	*21817*	901,7	*55,00*	6,07	*13,38*	-

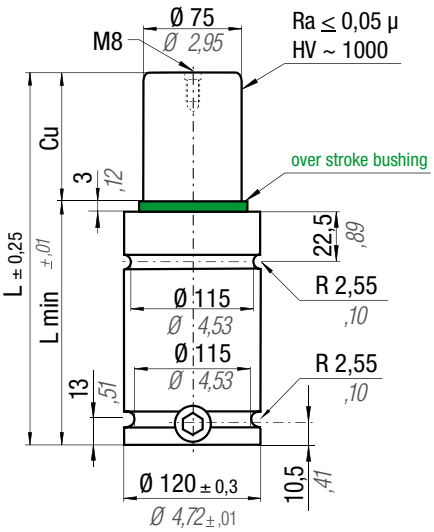


Drop-in FC 95 A- FCQ 95 A FSA 95 -FSD 95

HOW TO ORDER

(10 pcs) RT 4200-050-A
(10 pcs) RT 4200-050-A-N
(10 pcs) RT 4200-050-A-E





Info

* 100% Cu - Polytropic end forces

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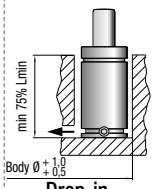
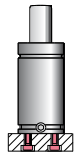
RT

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	44,18 cm² *6,848 in²*	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV06600B

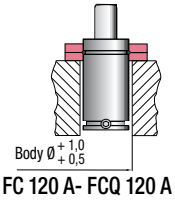
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
RT 6600 - 016 - A	16	0,63	104	4,09	88	3,46			10477	23552	308,0	18,80	5,55	12,24	-
RT 6600 - 019 - A	19	0,75	110	4,33	91	3,58			10860	24415	340,0	20,75	5,67	12,50	-
RT 6600 - 025 - A	25	0,98	122	4,80	97	3,82			11491	25833	404,0	24,65	5,91	13,03	-
RT 6600 - 032 - A	32	1,26	136	5,35	104	4,09	6630	14904	12060	27112	479,0	29,23	6,18	13,62	-
RT 6600 - 038 - A	38	1,50	148	5,83	110	4,33			12448	27983	543,0	33,14	6,43	14,18	-
RT 6600 - 050 - A	50	1,97	172	6,77	122	4,80	150 bar *2175 psi*		13037	29308	671,0	40,95	6,90	15,21	-
RT 6600 - 063 - A	63	2,48	198	7,80	135	5,31			13494	30335	810,0	49,43	7,42	16,36	-
RT 6600 - 075 - A	75	2,95	222	8,74	147	5,79	± 5%		13810	31045	938,0	57,24	7,90	17,42	-
RT 6600 - 080 - A	80	3,15	232	9,13	152	5,98	+ 20 °C *+68 °F*		13920	31293	991,0	60,47	8,01	17,66	-
RT 6600 - 100 - A	100	3,94	272	10,71	172	6,77			14273	32087	1205,0	73,53	8,89	19,60	I
RT 6600 - 125 - A	125	4,92	322	12,68	197	7,76			14582	32781	1472,0	89,83	9,89	21,80	II



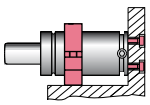
Drop-in



Bottom mount
FB 120 - FBA 120
FBB 120



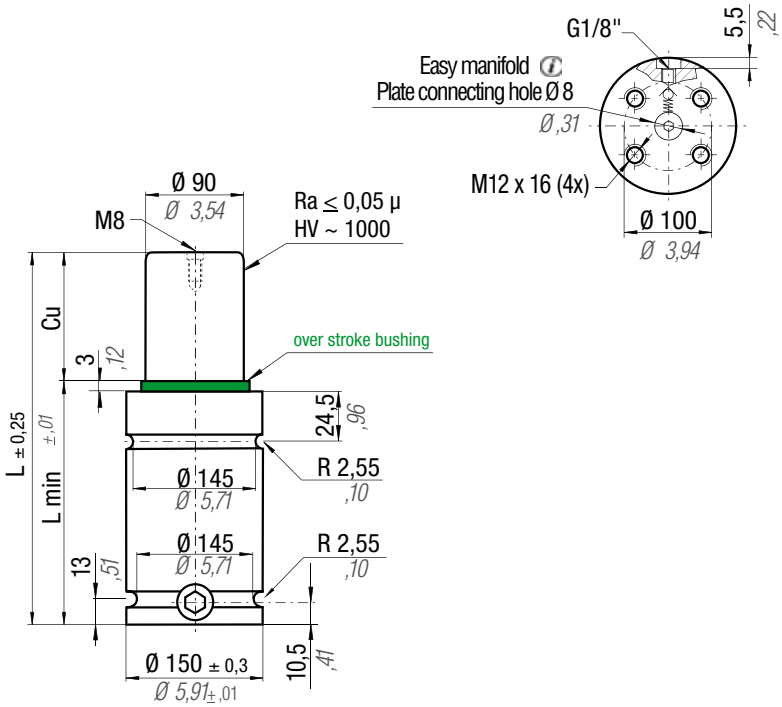
FC 120 A- FCQ 120 A



FSA 120
FSD 120

HOW TO ORDER

(10 pcs) RT 6600-050-A
(10 pcs) RT 6600-050-A-N
(10 pcs) RT 6600-050-A-E



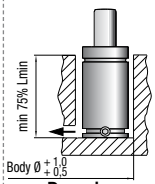
Info

* 100% Cu - Polytropic end forces

page 210

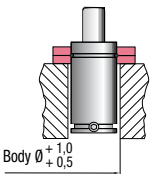
N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	63,62 cm² 9,864 in²	~ 20 - 100 (at 20°C)	1,8 m/s	39BMRV09500B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
RT 9500 - 019 - A	19	0,75	116	4,57	97	3,82			15214	34202	517,0	31,55	9,79	21,58	-
RT 9500 - 025 - A	25	0,98	128	5,04	103	4,06			16044	36069	614,0	37,47	10,16	22,40	-
RT 9500 - 032 - A	32	1,26	142	5,59	110	4,33	9540	21446	16792	37749	726,0	44,30	10,60	23,37	-
RT 9500 - 038 - A	38	1,50	154	6,06	116	4,57			17299	38891	823,0	50,22	10,97	24,18	-
RT 9500 - 050 - A	50	1,97	178	7,01	128	5,04	150 bar 2175 psi		18070	40623	1017,0	62,06	11,72	25,84	I
RT 9500 - 063 - A	63	2,48	204	8,03	141	5,55			18666	41963	1226,0	74,81	12,53	27,62	I
RT 9500 - 075 - A	75	2,95	228	8,98	153	6,02	± 5%		19078	42889	1420,0	86,65	13,28	29,28	II
RT 9500 - 080 - A	80	3,15	238	9,37	158	6,22	+ 20 °C +68 °F		19222	43213	1500,0	91,53	13,59	29,96	II
RT 9500 - 100 - A	100	3,94	278	10,94	178	7,01			19681	44245	1823,0	111,24	14,84	32,72	II
RT 9500 - 125 - A	125	4,92	328	12,91	203	7,99			20082	45147	2226,0	135,84	16,39	36,13	II

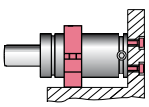


Drop-in

Bottom mount
FB 150 - FBA 150
FBB 150



FC 150 A- FCQ 150 A



FSA 150
FSD 150

HOW TO ORDER

(10 pcs) RT 9500-050-A
(10 pcs) RT 9500-050-A-N
(10 pcs) RT 9500-050-A-E

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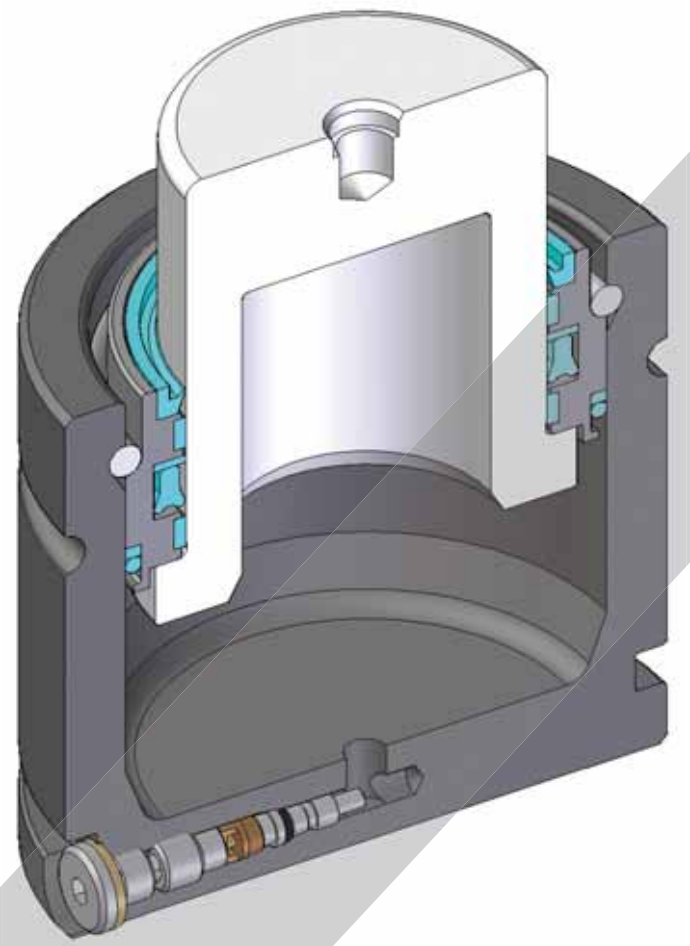
PHASING OUT

PED 97/23/EC

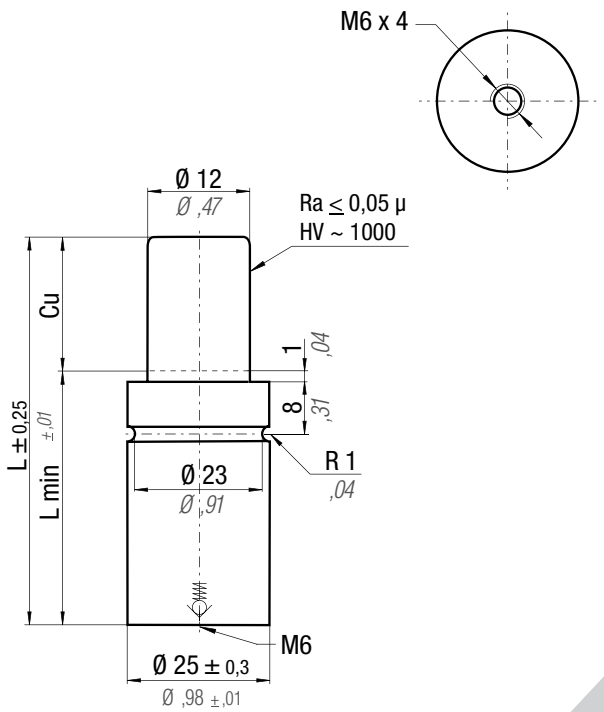
Minima altezza, massima forza - Miniature height, maximum force - Minimale Höhe, maximale LeistungHauteur - Hauteur minimum, force maximum - Mínima altura, máxima fuerza - Altura mínima, força máxima

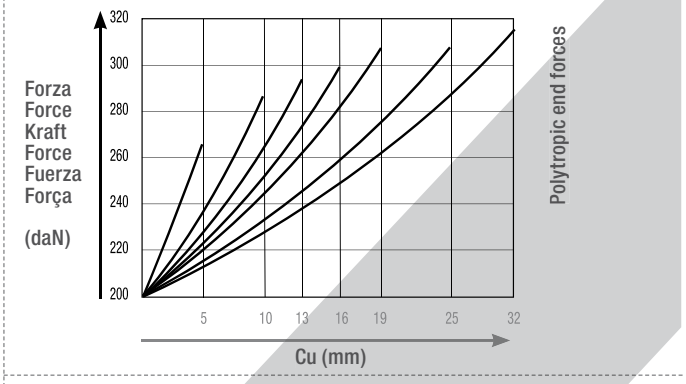


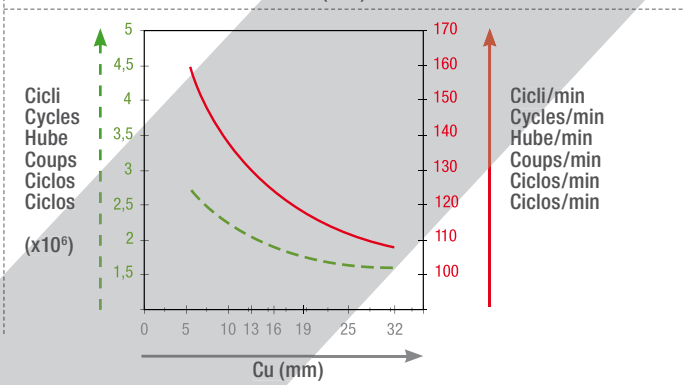
Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept		
	mm	inch	mm	inch	daN	lb	SKUDO	OSAS	OPAS
HR 200	25	0,98	5 - 32	0,20 - 1,26	200	450	-	-	-
HR 300	32	1,26	5 - 125	0,20 - 4,92	300	674	-	-	-
HR 500	38	1,50	5 - 125	0,20 - 4,92	470	1057	-	-	-
HRF 500	M 38 X 1,5	M 38 X 1,5	5 - 125	0,20 - 4,92	470	1057	-	-	-
HR 700	45	1,77	10 - 125	0,39 - 4,92	680	1529	-	-	-
HR 700 N	45	1,77	10 - 125	0,39 - 4,92	680	1529	-	-	-
HRF 700	M 45 X 1,5	M 45 X 1,5	10 - 125	0,39 - 4,92	680	1529	-	-	-
HR 1000	50	1,97	10 - 125	0,39 - 4,92	1060	2383	-	-	-
HR 1000 N	50	1,97	10 - 125	0,39 - 4,92	1060	2383	-	-	-
HRF 1000	M 50 X 1,5	M 50 X 1,5	10 - 125	0,39 - 4,92	1060	2383	-	-	-
HR 1500	63	2,48	10 - 125	0,39 - 4,92	1530	3440	-	-	-
HR 1500 N	63	2,48	10 - 125	0,39 - 4,92	1530	3440	-	-	-
HR 2400	75	2,95	10 - 125	0,39 - 4,92	2385	5362	-	-	-
HR 2400 N	75	2,95	10 - 125	0,39 - 4,92	2385	5362	-	-	-
HR 4200	95	3,74	16 - 125	0,63 - 4,92	4240	9532	-	-	-
HR 4200 N	95	3,74	16 - 125	0,63 - 4,92	4240	9532	-	-	-
HR 6600	120	4,72	16 - 125	0,63 - 4,92	6630	14905	-	-	-
HR 11800	150	5,91	16 - 125	0,63 - 4,92	11780	26482	-	-	-

PED 97/23/EC



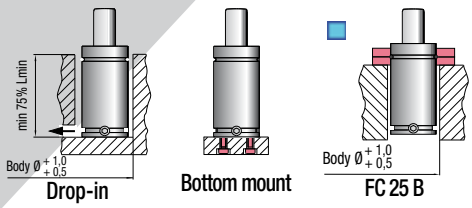




HR
HRF

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	175 bar *2538 psi*	20 bar *290 psi*	1,13 cm² *0,175 in²*		Disposable

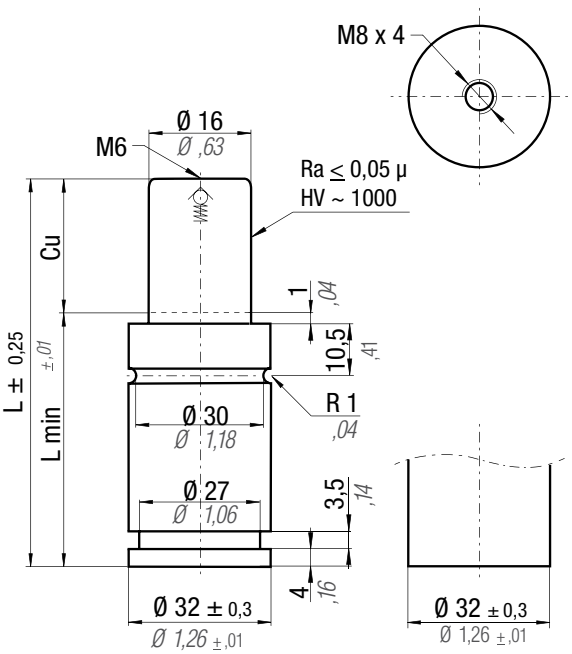
CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	Fo daN	Fo *lb*	Vo cm³	Vo *in³*	~Kg	~lb	CODE
HR 200 - 005 - A	5	*0,20*	40	*1,57*	35	*1,38*			-	-	0,09	*0,20*	-
HR 200 - 010 - A	10	*0,39*	50	*1,97*	40	*1,57*	200	*450*	-	-	0,10	*0,22*	-
HR 200 - 013 - A	13	*0,51*	56	*2,20*	43	*1,69*			-	-	0,10	*0,22*	-
HR 200 - 016 - A	16	*0,63*	62	*2,44*	46	*1,81*	150 bar	*2175 psi*	-	-	0,11	*0,24*	-
HR 200 - 019 - A	19	*0,75*	68	*2,68*	49	*1,93*			-	-	0,12	*0,26*	-
HR 200 - 025 - A	25	*0,98*	80	*3,15*	55	*2,17*	± 5%		-	-	0,13	*0,29*	-
HR 200 - 032 - A	32	*1,26*	94	*3,70*	62	*2,44*	+ 20 °C	*+68 °F*	-	-	0,16	*0,35*	-



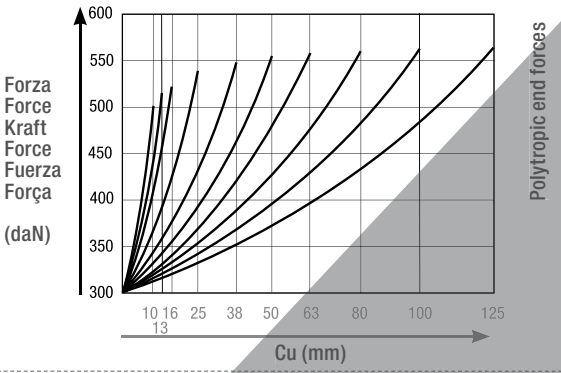
HOW TO ORDER

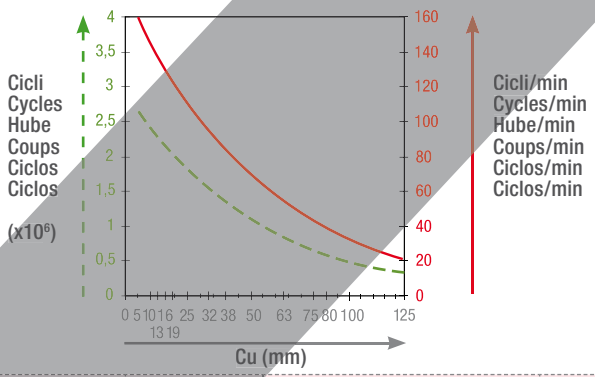
(10 pcs) HR200-032-A

PED 97/23/EC



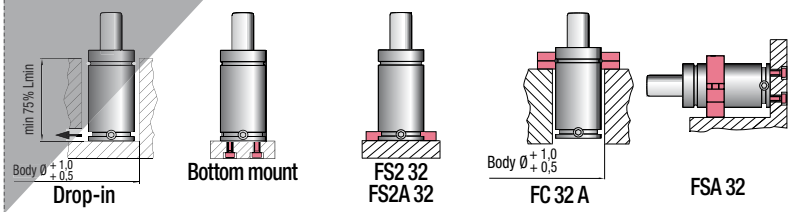
(Cu 19 - 125) (Cu 5 - 16)





Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	2,01 cm² *0,312 in²*		39BMHR00300A

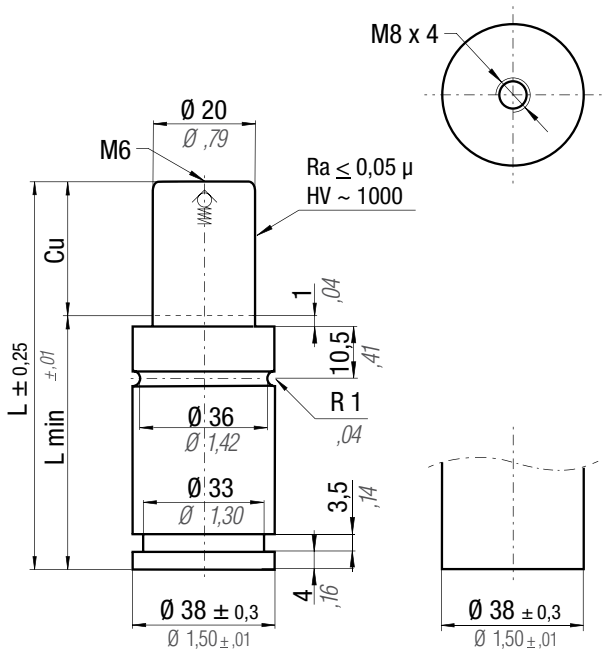
CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
HR 300 - 005 - A	5	*0,20*	40	*1,57*	35	*1,38*			-	-	0,17	*0,37*	-
HR 300 - 010 - A	10	*0,39*	50	*1,97*	40	*1,57*			-	-	0,18	*0,40*	-
HR 300 - 013 - A	13	*0,51*	56	*2,20*	43	*1,69*			-	-	0,19	*0,42*	-
HR 300 - 016 - A	16	*0,63*	62	*2,44*	46	*1,81*	300	*674*	-	-	0,20	*0,44*	-
HR 300 - 019 - A	19	*0,75*	68	*2,68*	49	*1,93*			-	-	0,22	*0,48*	-
HR 300 - 025 - A	25	*0,98*	80	*3,15*	55	*2,17*			-	-	0,25	*0,55*	-
HR 300 - 032 - A	32	*1,26*	94	*3,70*	62	*2,44*	150 bar		-	-	0,27	*0,59*	-
HR 300 - 038 - A	38	*1,50*	106	*4,17*	68	*2,68*	*2175 psi*		-	-	0,29	*0,64*	-
HR 300 - 050 - A	50	*1,97*	130	*5,12*	80	*3,15*	± 5%		-	-	0,34	*0,75*	-
HR 300 - 063 - A	63	*2,48*	156	*6,14*	93	*3,66*	+ 20 °C	*+68 °F*	-	-	0,39	*0,86*	-
HR 300 - 075 - A	75	*2,95*	180	*7,09*	105	*4,13*			-	-	0,42	*0,92*	-
HR 300 - 080 - A	80	*3,15*	190	*7,48*	110	*4,33*			-	-	0,45	*0,99*	-
HR 300 - 100 - A	100	*3,94*	230	*9,06*	130	*5,12*			-	-	0,53	*1,17*	-
HR 300 - 125 - A	125	*4,92*	280	*11,02*	155	*6,10*			-	-	0,68	*1,50*	-



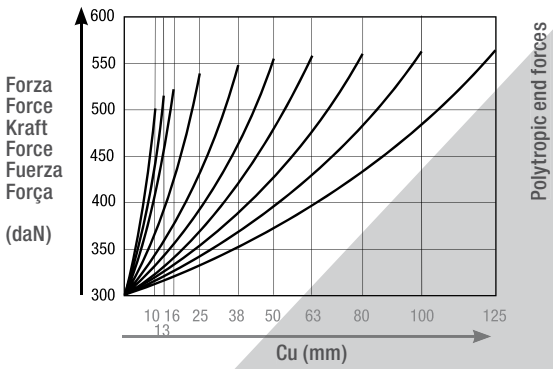
HOW TO ORDER

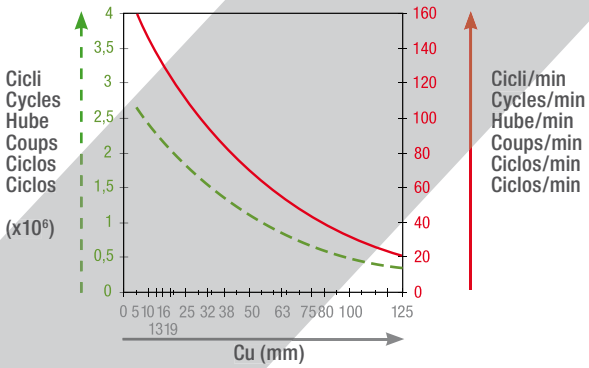
(10 pcs) HR300-050-A

PED 97/23/EC



(Cu 19 - 125) (Cu 5 - 16)

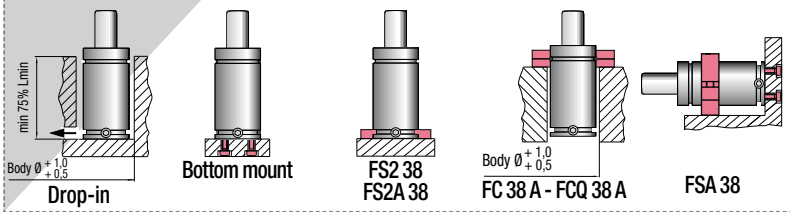




HR
HRF

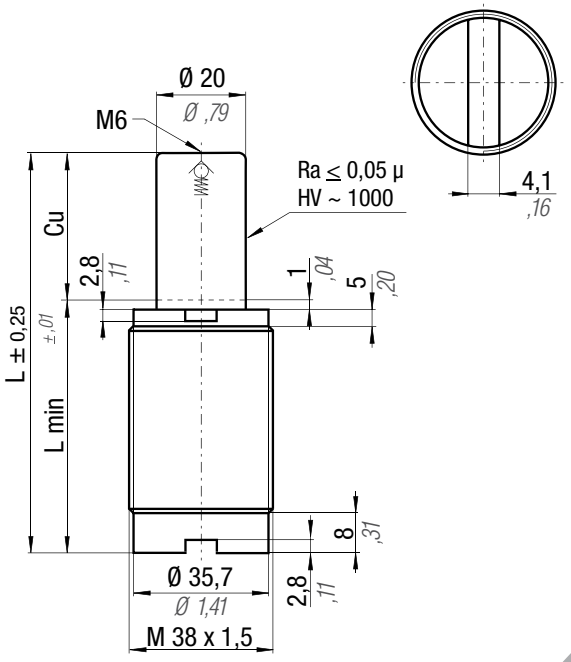
Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*		39MBHR00500A

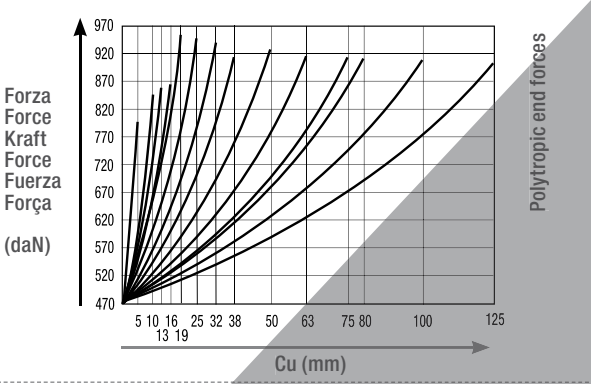
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 500 - 005 - A	5	0,20	40	1,57	35	1,38			-	-	0,25	0,55	-
HR 500 - 010 - A	10	0,39	50	1,97	40	1,57			-	-	0,27	0,60	-
HR 500 - 013 - A	13	0,51	56	2,20	43	1,69			-	-	0,29	0,64	-
HR 500 - 016 - A	16	0,63	62	2,44	46	1,81	470	1057	-	-	0,31	0,68	-
HR 500 - 019 - A	19	0,75	68	2,68	49	1,93			-	-	0,33	0,73	-
HR 500 - 025 - A	25	0,98	80	3,15	55	2,17			-	-	0,36	0,79	-
HR 500 - 032 - A	32	1,26	94	3,70	62	2,44	150 bar *2175 psi*		-	-	0,40	0,88	-
HR 500 - 038 - A	38	1,50	106	4,17	68	2,68			-	-	0,44	0,97	-
HR 500 - 050 - A	50	1,97	130	5,12	80	3,15	± 5%		-	-	0,50	1,10	-
HR 500 - 063 - A	63	2,48	156	6,14	93	3,66	+ 20 °C *+68 °F*		-	-	0,57	1,26	-
HR 500 - 075 - A	75	2,95	180	7,09	105	4,13			-	-	0,61	1,34	-
HR 500 - 080 - A	80	3,15	190	7,48	110	4,33			-	-	0,66	1,46	-
HR 500 - 100 - A	100	3,94	230	9,06	130	5,12			-	-	0,77	1,70	-
HR 500 - 125 - A	125	4,92	280	11,02	155	6,10			-	-	0,90	1,98	-

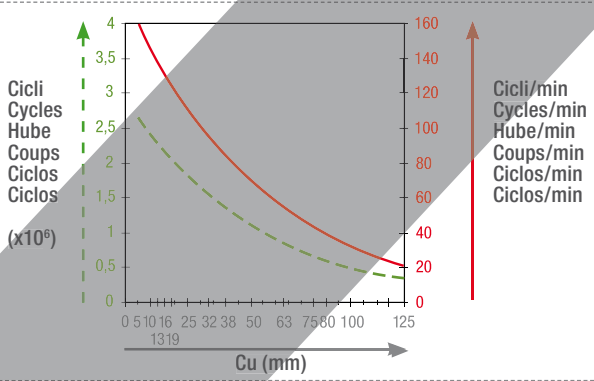


HOW TO ORDER

(10 pcs) HR500-050-A

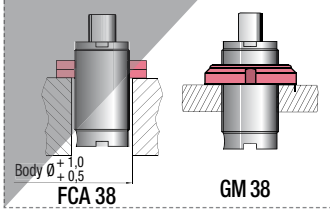






Max Speed	°F	°C		P max	P min	S		Maintenance kit	
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm^2 *0,487 in^2*		39BMHR00500A	

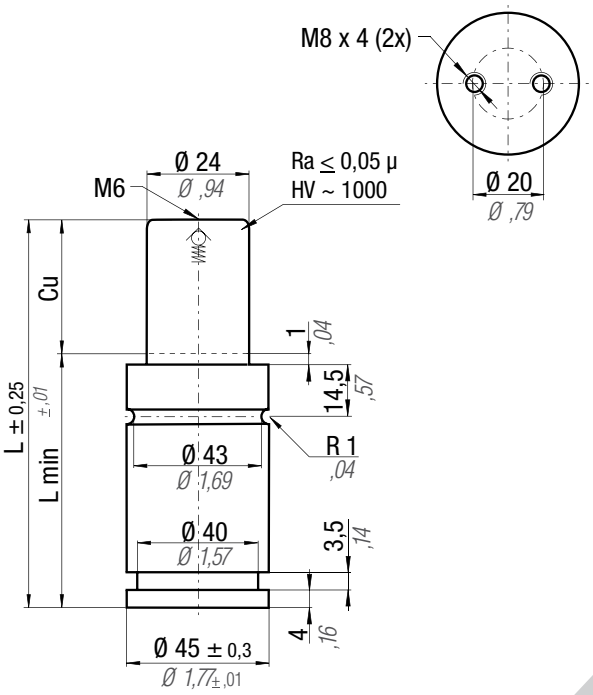
CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm^3	*in^3*	~Kg	*~lb*	
HRF 500 - 005 - A	5	*0,20*	40	*1,57*	35	*1,38*			-	-	0,22	*0,49*	-
HRF 500 - 010 - A	10	*0,39*	50	*1,97*	40	*1,57*			-	-	0,25	*0,55*	-
HRF 500 - 013 - A	13	*0,51*	56	*2,20*	43	*1,69*			-	-	0,27	*0,60*	-
HRF 500 - 016 - A	16	*0,63*	62	*2,44*	46	*1,81*	470	1057	-	-	0,29	*0,64*	-
HRF 500 - 019 - A	19	*0,75*	68	*2,68*	49	*1,93*			-	-	0,31	*0,68*	-
HRF 500 - 025 - A	25	*0,98*	80	*3,15*	55	*2,17*	150 bar *2175 psi*		-	-	0,33	*0,73*	-
HRF 500 - 032 - A	32	*1,26*	94	*3,70*	62	*2,44*			-	-	0,37	*0,82*	-
HRF 500 - 038 - A	38	*1,50*	106	*4,17*	68	*2,68*			-	-	0,40	*0,88*	-
HRF 500 - 050 - A	50	*1,97*	130	*5,12*	80	*3,15*	± 5%		-	-	0,47	*1,04*	-
HRF 500 - 063 - A	63	*2,48*	156	*6,14*	93	*3,66*	+ 20 °C *+68 °F*		-	-	0,54	*1,19*	-
HRF 500 - 075 - A	75	*2,95*	180	*7,09*	105	*4,13*			-	-	0,59	*1,30*	-
HRF 500 - 080 - A	80	*3,15*	190	*7,48*	110	*4,33*			-	-	0,63	*1,39*	-
HRF 500 - 100 - A	100	*3,94*	230	*9,06*	130	*5,12*			-	-	0,75	*1,65*	-
HRF 500 - 125 - A	125	*4,92*	280	*11,02*	155	*6,10*			-	-	0,88	*1,94*	-

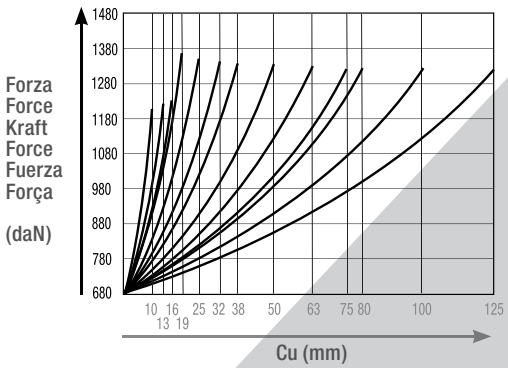


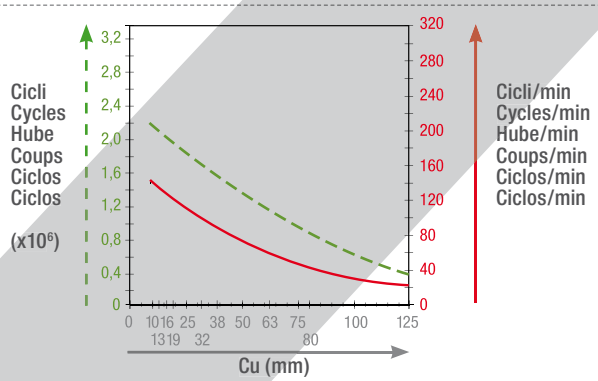
HOW TO ORDER

(10 pcs) HRF500-050-A

PED 97/23/EC



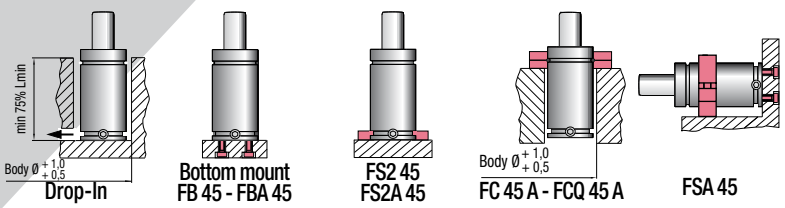




HR
HRF

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	4,52 cm² *0,701 in²*		39MHR00700A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 700 - 010 - A	10	*0,39*	52	*2,05*	42	*1,65*			-	-	0,39	*0,86*	-
HR 700 - 013 - A	13	*0,51*	58	*2,28*	45	*1,77*			-	-	0,42	*0,93*	-
HR 700 - 016 - A	16	*0,63*	64	*2,52*	48	*1,89*			-	-	0,45	*0,99*	-
HR 700 - 019 - A	19	*0,75*	70	*2,76*	51	*2,01*	680	1529	-	-	0,48	*1,06*	-
HR 700 - 025 - A	25	*0,98*	82	*3,23*	57	*2,24*			-	-	0,53	*1,17*	-
HR 700 - 032 - A	32	*1,26*	96	*3,78*	64	*2,52*	150 bar *2175 psi*		-	-	0,58	*1,28*	-
HR 700 - 038 - A	38	*1,50*	108	*4,25*	70	*2,76*			-	-	0,62	*1,37*	-
HR 700 - 050 - A	50	*1,97*	132	*5,20*	82	*3,23*			-	-	0,71	*1,57*	-
HR 700 - 063 - A	63	*2,48*	158	*6,22*	95	*3,74*	± 5%		-	-	0,81	*1,79*	-
HR 700 - 075 - A	75	*2,95*	182	*7,17*	107	*4,21*	+ 20 °C *+68 °F*		-	-	0,85	*1,87*	-
HR 700 - 080 - A	80	*3,15*	192	*7,56*	112	*4,41*			-	-	0,93	*2,05*	-
HR 700 - 100 - A	100	*3,94*	232	*9,13*	132	*5,20*			-	-	1,04	*2,29*	-
HR 700 - 125 - A	125	*4,92*	282	*11,10*	157	*6,18*			-	-	1,28	*2,82*	-



HOW TO ORDER

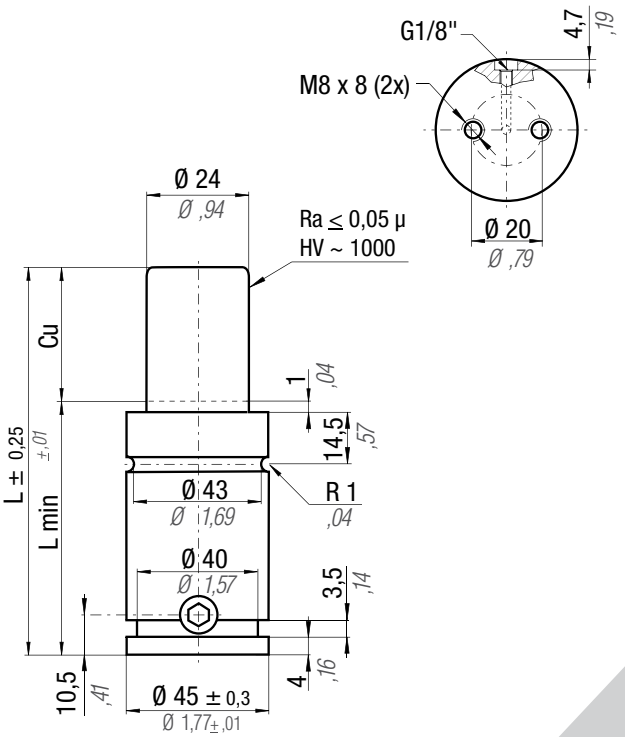
(10 pcs) HR700-050-A

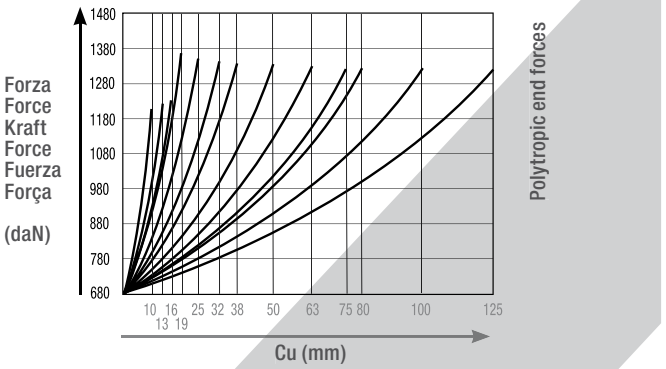
HR 700N
linkable G1/8”

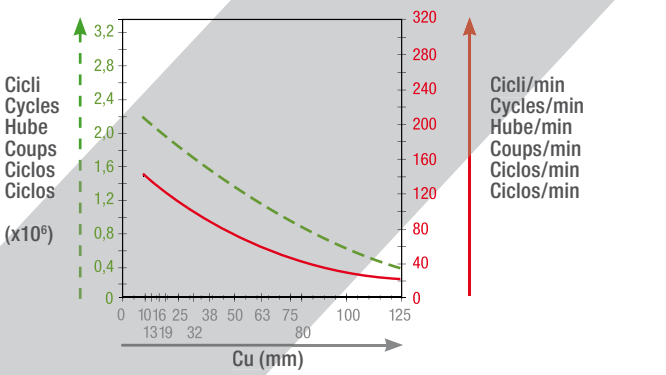
PHASING OUT see RV 750

SPECIAL SPRINGS

FIAT PED
Specification 97/23/EC







Max Speed	°F	°C	N_2	P max	P min	S	Maintenance kit
1,8 m/s	32 - 176	0 - 80		150 bar *2175 psi*	20 bar *290 psi*	4,52 cm² *0,701 in²*	39MHR00700A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 700 - 010 - A - N	10	0,39	62	2,44	52	2,05			13,0	0,79	0,48	1,06	HR 700 - 010 - A - N
HR 700 - 013 - A - N	13	0,51	68	2,68	55	2,17			17,0	1,04	0,52	1,15	HR 700 - 013 - A - N
HR 700 - 016 - A - N	16	0,63	74	2,91	58	2,28			20,0	1,22	0,55	1,21	HR 700 - 016 - A - N
HR 700 - 019 - A - N	19	0,75	80	3,15	61	2,40	680	1529	21,0	1,28	0,58	1,28	HR 700 - 019 - A - N
HR 700 - 025 - A - N	25	0,98	92	3,62	67	2,64			28,0	1,71	0,64	1,41	HR 700 - 025 - A - N
HR 700 - 032 - A - N	32	1,26	106	4,17	74	2,91	150 bar		36,0	2,20	0,68	1,50	HR 700 - 032 - A - N
HR 700 - 038 - A - N	38	1,50	118	4,65	80	3,15	*2175 psi*		44,0	2,68	0,72	1,59	HR 700 - 038 - A - N
HR 700 - 050 - A - N	50	1,97	142	5,59	92	3,62			58,0	3,54	0,85	1,87	HR 700 - 050 - A - N
HR 700 - 063 - A - N	63	2,48	168	6,61	105	4,13	± 5%		73,0	4,45	0,94	2,07	HR 700 - 063 - A - N
HR 700 - 075 - A - N	75	2,95	192	7,56	117	4,61	+ 20 °C *+68 °F*		86,0	5,25	0,98	2,16	HR 700 - 075 - A - N
HR 700 - 080 - A - N	80	3,15	202	7,95	122	4,80			93,0	5,67	1,03	2,27	HR 700 - 080 - A - N
HR 700 - 100 - A - N	100	3,94	242	9,53	142	5,59			116,0	7,08	1,16	2,56	HR 700 - 100 - A - N
HR 700 - 125 - A - N	125	4,92	292	11,50	167	6,57			145,0	8,85	1,35	2,98	HR 700 - 125 - A - N

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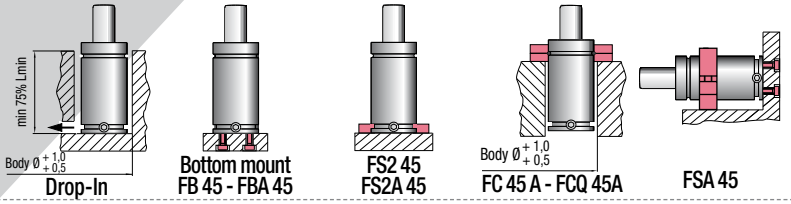
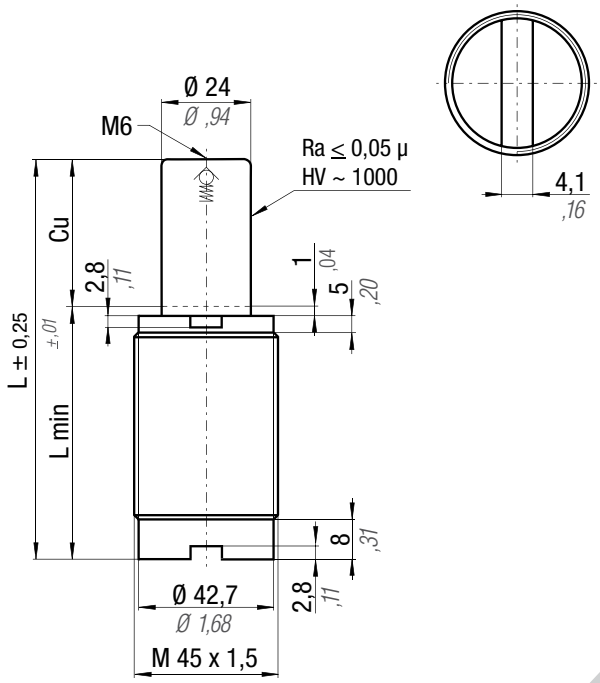
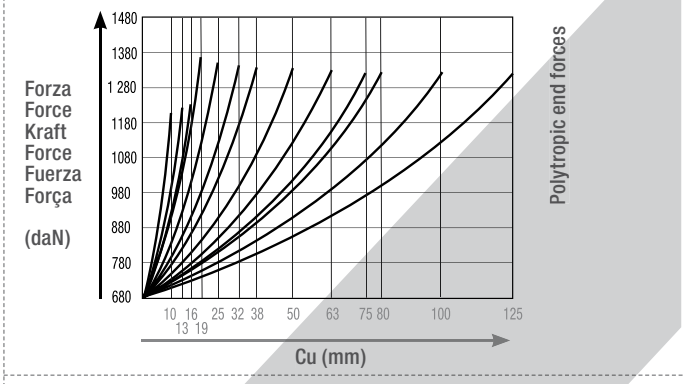


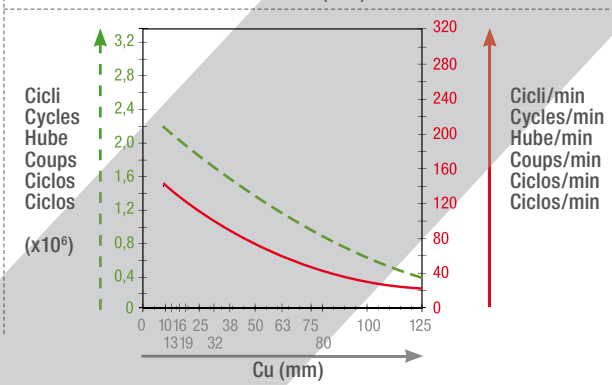
HOW TO ORDER

(10 pcs) HR700-050-A-N

PED 97/23/EC



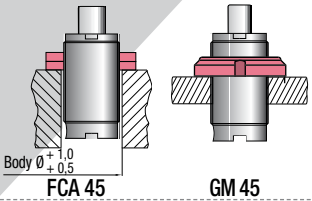




HR
HRF

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N2	150 bar *2175 psi*	20 bar *290 psi*	4,52 cm² *0,701 in²*		39MHR00700A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HRF 700 - 010 - A	10	*0,39*	52	*2,05*	42	*1,65*			-	-	0,35	*0,77*	-
HRF 700 - 013 - A	13	*0,51*	58	*2,28*	45	*1,77*			-	-	0,39	*0,86*	-
HRF 700 - 016 - A	16	*0,63*	64	*2,52*	48	*1,89*			-	-	0,42	*0,93*	-
HRF 700 - 019 - A	19	*0,75*	70	*2,76*	51	*2,01*	680	*1529*	-	-	0,45	*0,99*	-
HRF 700 - 025 - A	25	*0,98*	82	*3,23*	57	*2,24*			-	-	0,50	*1,10*	-
HRF 700 - 032 - A	32	*1,26*	96	*3,78*	64	*2,52*	150 bar	*2175 psi*	-	-	0,55	*1,21*	-
HRF 700 - 038 - A	38	*1,50*	108	*4,25*	70	*2,76*			-	-	0,60	*1,32*	-
HRF 700 - 050 - A	50	*1,97*	132	*5,20*	82	*3,23*			-	-	0,70	*1,54*	-
HRF 700 - 063 - A	63	*2,48*	158	*6,22*	95	*3,74*	± 5%		-	-	0,80	*1,76*	-
HRF 700 - 075 - A	75	*2,95*	182	*7,17*	107	*4,21*	+ 20 °C	*+68 °F*	-	-	0,83	*1,83*	-
HRF 700 - 080 - A	80	*3,15*	192	*7,56*	112	*4,41*			-	-	0,89	*1,96*	-
HRF 700 - 100 - A	100	*3,94*	232	*9,13*	132	*5,20*			-	-	0,99	*2,18*	-
HRF 700 - 125 - A	125	*4,92*	282	*11,10*	157	*6,18*			-	-	1,26	*2,78*	-



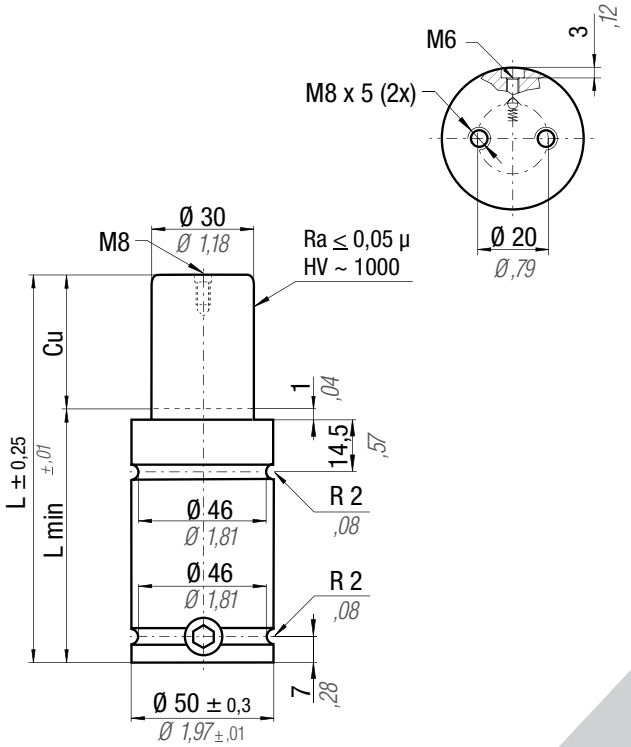
HOW TO ORDER

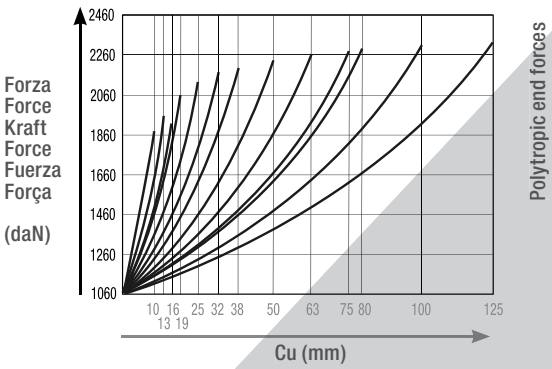
(10 pcs) HRF700-050-A

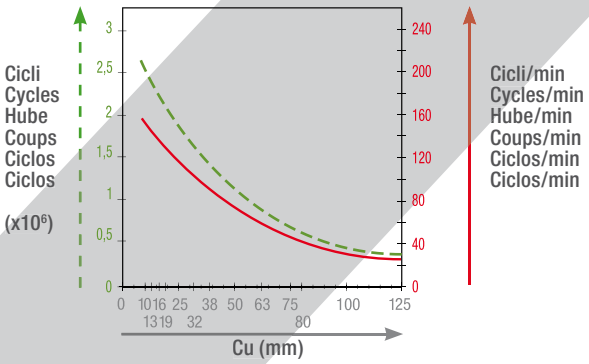
HR 1000

PHASING OUT see **RV 1200 RV 1000**

PED 97/23/EC



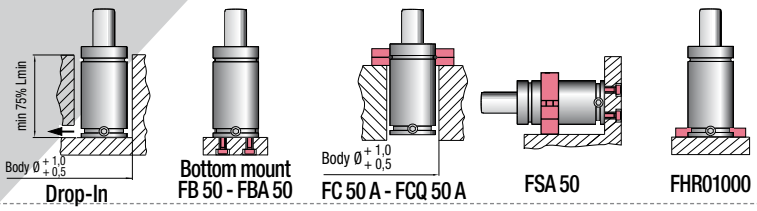




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	7,07 cm² *1,096 in²*		39MHR01000A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
HR 1000 - 010 - A	10	*0,39*	58	*2,28*	48	*1,89*			25,0	*1,53*	0,57	*1,26*	HR 1000 - 010 - A - NA
HR 1000 - 013 - A	13	*0,51*	64	*2,52*	51	*2,01*			30,0	*1,83*	0,59	*1,30*	HR 1000 - 013 - A - NA
HR 1000 - 016 - A	16	*0,63*	70	*2,76*	54	*2,13*			35,0	*2,14*	0,62	*1,37*	HR 1000 - 016 - A - NA
HR 1000 - 019 - A	19	*0,75*	76	*2,99*	57	*2,24*	1060	*2383*	40,0	*2,44*	0,65	*1,43*	HR 1000 - 019 - A - NA
HR 1000 - 025 - A	25	*0,98*	88	*3,46*	63	*2,48*			49,0	*2,99*	0,70	*1,54*	HR 1000 - 025 - A - NA
HR 1000 - 032 - A	32	*1,26*	102	*4,02*	70	*2,76*	150 bar	*2175 psi*	60,0	*3,66*	0,77	*1,70*	HR 1000 - 032 - A - NA
HR 1000 - 038 - A	38	*1,50*	114	*4,49*	76	*2,99*			70,0	*4,27*	0,83	*1,83*	HR 1000 - 038 - A - NA
HR 1000 - 050 - A	50	*1,97*	138	*5,43*	88	*3,46*			88,0	*5,37*	0,94	*2,07*	HR 1000 - 050 - A - NA
HR 1000 - 063 - A	63	*2,48*	164	*6,46*	101	*3,98*	± 5%		109,0	*6,65*	1,07	*2,36*	HR 1000 - 063 - A - NA
HR 1000 - 075 - A	75	*2,95*	188	*7,40*	113	*4,45*	+ 20 °C	*+68 °F*	128,0	*7,81*	1,16	*2,56*	HR 1000 - 075 - A - NA
HR 1000 - 080 - A	80	*3,15*	198	*7,80*	118	*4,65*			136,0	*8,30*	1,21	*2,67*	HR 1000 - 080 - A - NA
HR 1000 - 100 - A	100	*3,94*	238	*9,37*	138	*5,43*			167,0	*10,19*	1,43	*3,15*	HR 1000 - 100 - A - NA
HR 1000 - 125 - A	125	*4,92*	288	*11,34*	163	*6,42*			206,0	*12,57*	1,70	*3,75*	HR 1000 - 125 - A - NA

info pg. 34

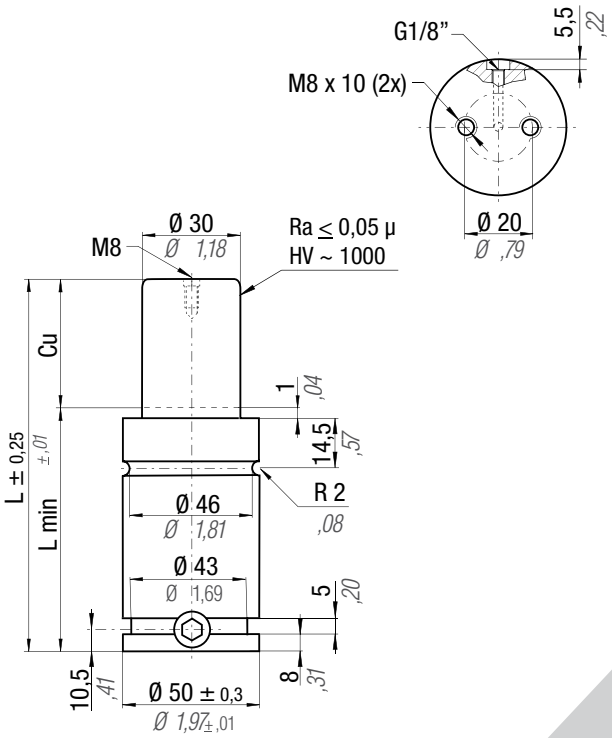


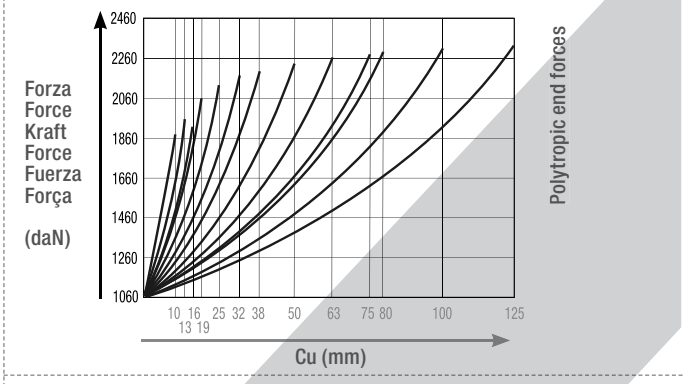
HOW TO ORDER

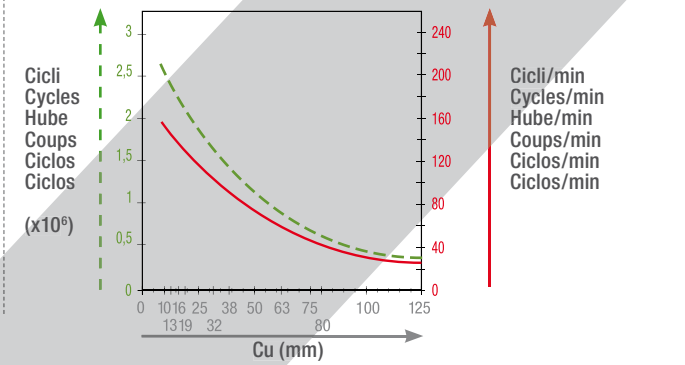
(10 pcs) HR1000-050-A

(10 pcs) HR1000-050-A-NA

PED 97/23/EC FIAT Specification





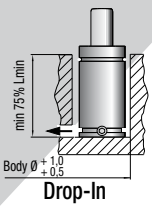


HR
HRF

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	150 bar 2175 psi	20 bar 290 psi	7,07 cm² 1,096 in²		39MHR01000A

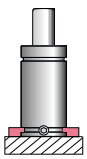
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 1000 - 010 - A - N	10	0,39	68	2,68	58	2,28			25,0	1,53	0,70	1,54	HR 1000 - 010 - A - N
HR 1000 - 013 - A - N	13	0,51	74	2,91	61	2,40			30,0	1,83	0,72	1,58	HR 1000 - 013 - A - N
HR 1000 - 016 - A - N	16	0,63	80	3,15	64	2,52			35,0	2,14	0,75	1,65	HR 1000 - 016 - A - N
HR 1000 - 019 - A - N	19	0,75	86	3,39	67	2,64			40,0	2,44	0,78	1,72	HR 1000 - 019 - A - N
HR 1000 - 025 - A - N	25	0,98	98	3,86	73	2,87	1060	2383	49,0	2,99	0,83	1,83	HR 1000 - 025 - A - N
HR 1000 - 032 - A - N	32	1,26	112	4,41	80	3,15			60,0	3,66	0,90	1,98	HR 1000 - 032 - A - N
HR 1000 - 038 - A - N	38	1,50	124	4,88	86	3,39	150 bar 2175 psi		70,0	4,27	0,96	2,11	HR 1000 - 038 - A - N
HR 1000 - 050 - A - N	50	1,97	148	5,83	98	3,86			88,0	5,37	1,07	2,35	HR 1000 - 050 - A - N
HR 1000 - 063 - A - N	63	2,48	174	6,85	111	4,37	± 5%		109,0	6,65	1,20	2,64	HR 1000 - 063 - A - N
HR 1000 - 075 - A - N	75	2,95	198	7,80	123	4,84	+ 20 °C +68 °F		128,0	7,81	1,29	2,84	HR 1000 - 075 - A - N
HR 1000 - 080 - A - N	80	3,15	208	8,19	128	5,04			136,0	8,30	1,34	2,95	HR 1000 - 080 - A - N
HR 1000 - 100 - A - N	100	3,94	248	9,76	148	5,83			167,0	10,19	1,56	3,43	HR 1000 - 100 - A - N
HR 1000 - 125 - A - N	125	4,92	298	11,73	173	6,81			206,0	12,57	1,83	4,03	HR 1000 - 125 - A - N

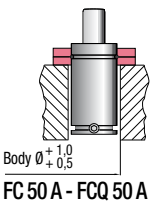
info pg. 34



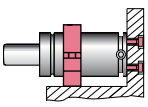
Drop-In


Bottom mount
FB 50 - FBA 50


FS2 50
FS2A 50



FC 50 A - FCQ 50 A

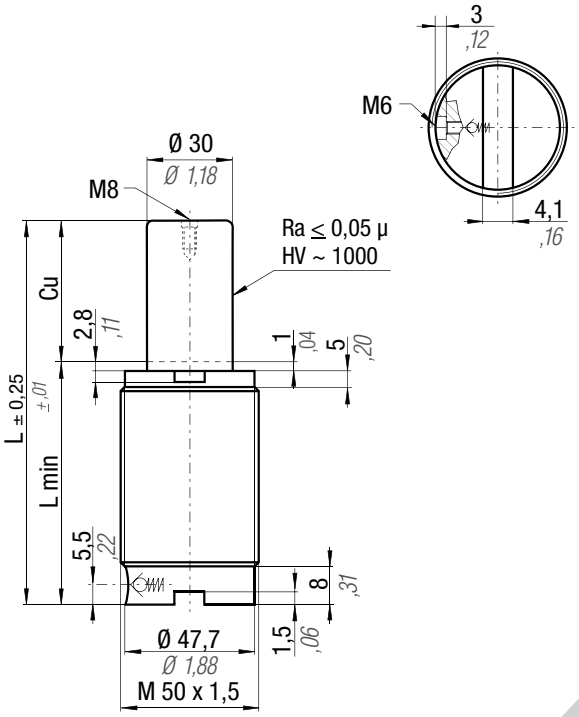

FSA 50

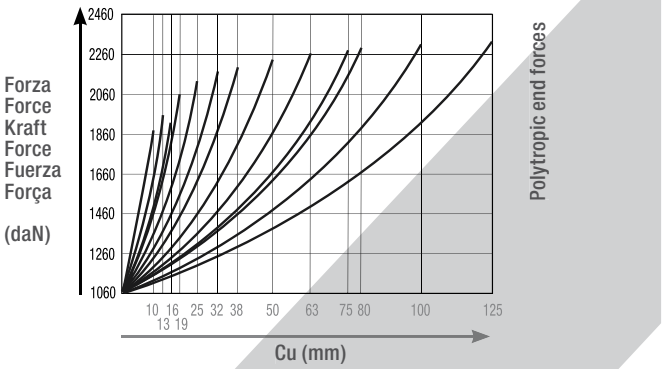
HOW TO ORDER

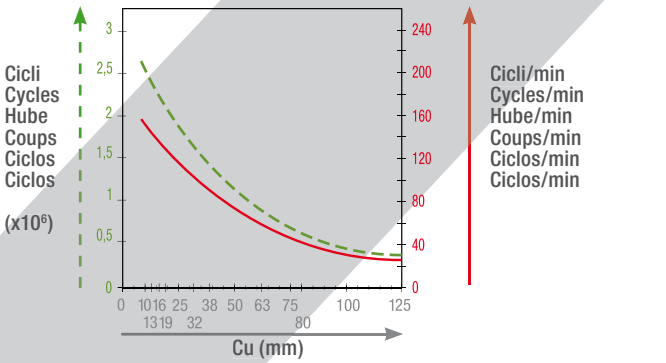
(10 pcs) HR1000-050-A-N

PHASING OUT

PED 97/23/EC



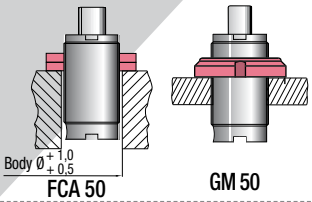




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	7,07 cm² *1,096 in²*		39MHR01000A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
HRF 1000 - 010 - A	10	*0,39*	58	*2,28*	48	*1,89*			25,0	*1,53*	0,53	*1,17*	HRF 1000 - 010 - A - NA
HRF 1000 - 013 - A	13	*0,51*	64	*2,52*	51	*2,01*			30,0	*1,83*	0,55	*1,21*	HRF 1000 - 013 - A - NA
HRF 1000 - 016 - A	16	*0,63*	70	*2,76*	54	*2,13*			35,0	*2,14*	0,57	*1,26*	HRF 1000 - 016 - A - NA
HRF 1000 - 019 - A	19	*0,75*	76	*2,99*	57	*2,24*	1060	*2383*	40,0	*2,44*	0,60	*1,32*	HRF 1000 - 019 - A - NA
HRF 1000 - 025 - A	25	*0,98*	88	*3,46*	63	*2,48*			49,0	*2,99*	0,66	*1,46*	HRF 1000 - 025 - A - NA
HRF 1000 - 032 - A	32	*1,26*	102	*4,02*	70	*2,76*			60,0	*3,66*	0,73	*1,61*	HRF 1000 - 032 - A - NA
HRF 1000 - 038 - A	38	*1,50*	114	*4,49*	76	*2,99*	150 bar	*2175 psi*	70,0	*4,27*	0,79	*1,74*	HRF 1000 - 038 - A - NA
HRF 1000 - 050 - A	50	*1,97*	138	*5,43*	88	*3,46*			88,0	*5,37*	0,90	*1,98*	HRF 1000 - 050 - A - NA
HRF 1000 - 063 - A	63	*2,48*	164	*6,46*	101	*3,98*	± 5%		109,0	*6,65*	1,03	*2,27*	HRF 1000 - 063 - A - NA
HRF 1000 - 075 - A	75	*2,95*	188	*7,40*	113	*4,45*	+ 20 °C	*+68 °F*	128,0	*7,81*	1,13	*2,49*	HRF 1000 - 075 - A - NA
HRF 1000 - 080 - A	80	*3,15*	198	*7,80*	118	*4,65*			136,0	*8,30*	1,18	*2,60*	HRF 1000 - 080 - A - NA
HRF 1000 - 100 - A	100	*3,94*	238	*9,37*	138	*5,43*			167,0	*10,19*	1,39	*3,06*	HRF 1000 - 100 - A - NA
HRF 1000 - 125 - A	125	*4,92*	288	*11,34*	163	*6,42*			206,0	*12,57*	1,66	*3,66*	HRF 1000 - 125 - A - NA

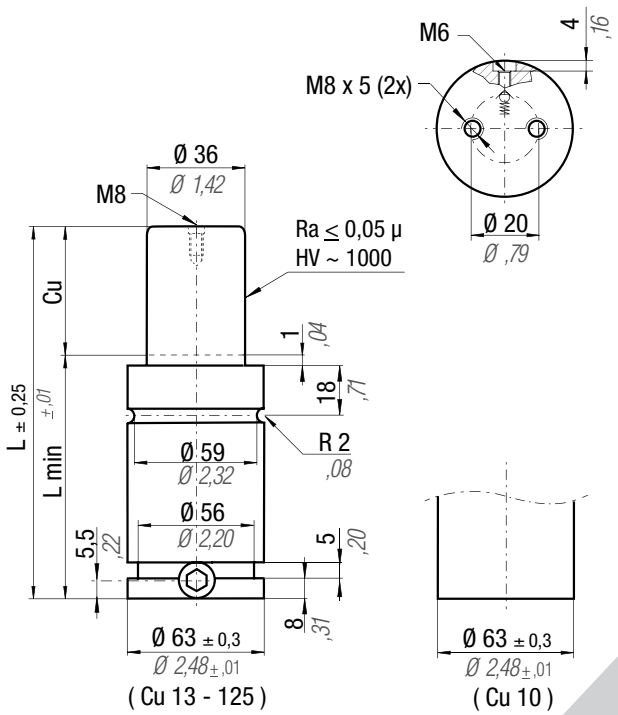
info pg. 34

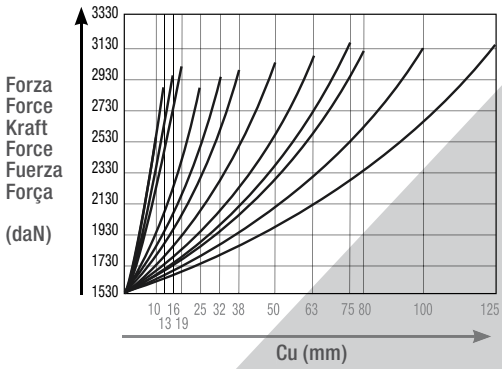


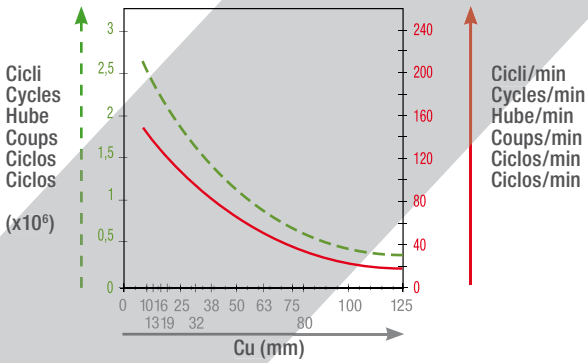
HOW TO ORDER

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

PED 97/23/EC





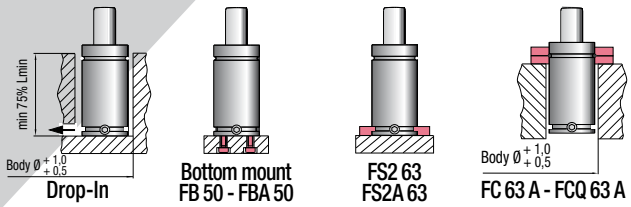


HR
HRF

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	10,18 cm² *1,578 in²*		39BMHR01500A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 1500 - 010 - A	10	0,39	64	2,52	54	2,13			32,0	1,95	1,02	2,25	HR 1500 - 010 - A - NA
HR 1500 - 013 - A	13	0,51	70	2,76	57	2,24			39,0	2,38	1,05	2,31	HR 1500 - 013 - A - NA
HR 1500 - 016 - A	16	0,63	76	2,99	60	2,36			47,0	2,87	1,10	2,43	HR 1500 - 016 - A - NA
HR 1500 - 019 - A	19	0,75	82	3,23	63	2,48	1530	3440	54,0	3,29	1,15	2,54	HR 1500 - 019 - A - NA
HR 1500 - 025 - A	25	0,98	94	3,70	69	2,72			68,0	4,15	1,25	2,76	HR 1500 - 025 - A - NA
HR 1500 - 032 - A	32	1,26	108	4,25	76	2,99			85,0	5,19	1,35	2,98	HR 1500 - 032 - A - NA
HR 1500 - 038 - A	38	1,50	120	4,72	82	3,23	150 bar	*2175 psi*	99,0	6,04	1,44	3,17	HR 1500 - 038 - A - NA
HR 1500 - 050 - A	50	1,97	144	5,67	94	3,70			128,0	7,81	1,61	3,55	HR 1500 - 050 - A - NA
HR 1500 - 063 - A	63	2,48	170	6,69	107	4,21	± 5%		158,0	9,64	1,81	3,99	HR 1500 - 063 - A - NA
HR 1500 - 075 - A	75	2,95	194	7,64	119	4,69	+ 20 °C	*+68 °F*	187,0	11,41	1,90	4,19	HR 1500 - 075 - A - NA
HR 1500 - 080 - A	80	3,15	204	8,03	124	4,88			199,0	12,14	2,06	4,54	HR 1500 - 080 - A - NA
HR 1500 - 100 - A	100	3,94	244	9,61	144	5,67			246,0	15,01	2,38	5,25	HR 1500 - 100 - A - NA
HR 1500 - 125 - A	125	4,92	294	11,57	169	6,65			306,0	18,67	2,86	6,31	HR 1500 - 125 - A - NA

info pg. 34



HOW TO ORDER

(10 pcs) HR1500-050-A

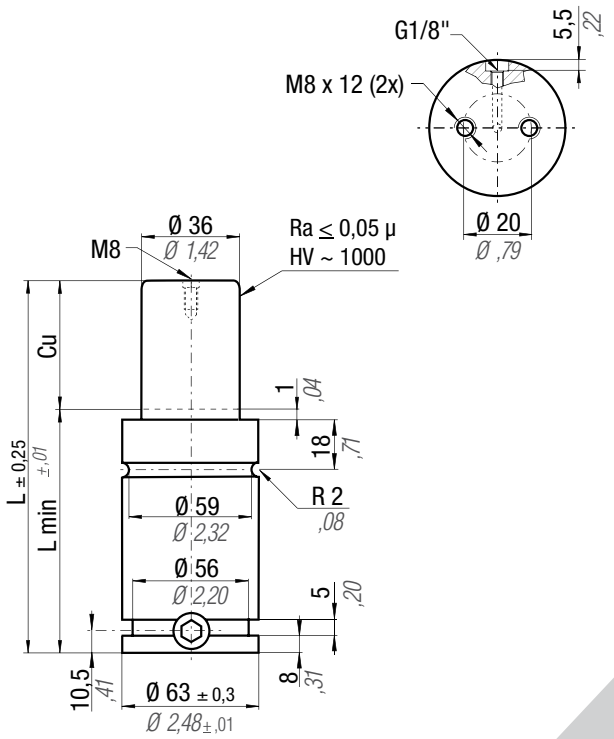
(10 pcs) HR1500-050-A-NA

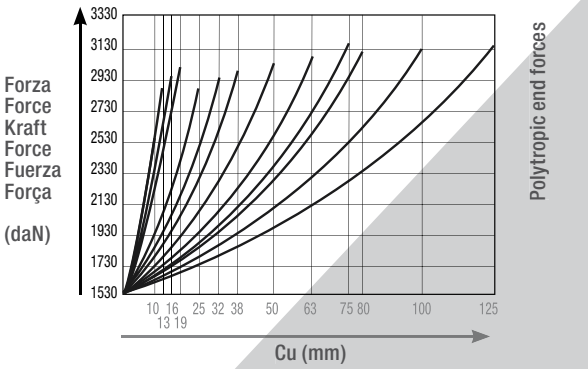
HR 1500N
linkable G1/8”

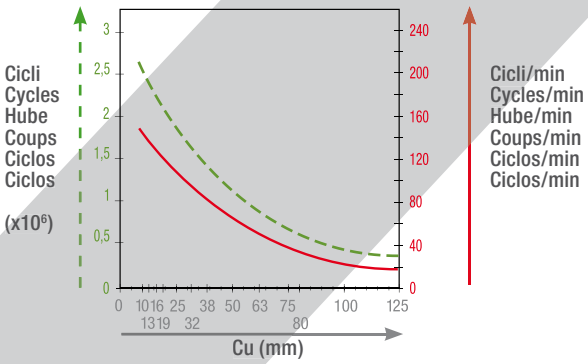
FIAT Specification PED 97/23/EC

PHASING OUT see RF 1500

SPECIAL SPRINGS



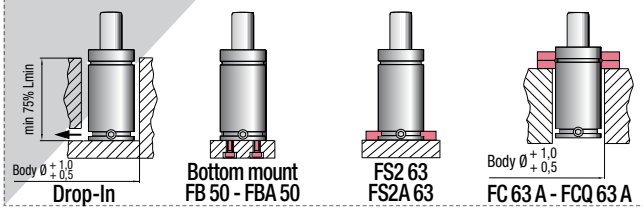




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	10,18 cm² *1,578 in²*		39BMHR01500A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 1500 - 010 - A - N	10	0,39	74	2,91	64	2,52			32,0	1,95	1,02	2,25	HR 1500 - 010 - A - N
HR 1500 - 013 - A - N	13	0,51	80	3,15	67	2,64			39,0	2,38	1,05	2,31	HR 1500 - 013 - A - N
HR 1500 - 016 - A - N	16	0,63	86	3,39	70	2,76			47,0	2,87	1,10	2,43	HR 1500 - 016 - A - N
HR 1500 - 019 - A - N	19	0,75	92	3,62	73	2,87			54,0	3,29	1,15	2,54	HR 1500 - 019 - A - N
HR 1500 - 025 - A - N	25	0,98	104	4,09	79	3,11	1530	3440	68,0	4,15	1,25	2,76	HR 1500 - 025 - A - N
HR 1500 - 032 - A - N	32	1,26	118	4,65	86	3,39			85,0	5,19	1,35	2,98	HR 1500 - 032 - A - N
HR 1500 - 038 - A - N	38	1,50	130	5,12	92	3,62	150 bar *2175 psi*		99,0	6,04	1,44	3,17	HR 1500 - 038 - A - N
HR 1500 - 050 - A - N	50	1,97	154	6,06	104	4,09			128,0	7,81	1,61	3,55	HR 1500 - 050 - A - N
HR 1500 - 063 - A - N	63	2,48	180	7,09	117	4,61	± 5%		158,0	9,64	1,81	3,99	HR 1500 - 063 - A - N
HR 1500 - 075 - A - N	75	2,95	204	8,03	129	5,08	+ 20 °C *+68 °F*		187,0	11,41	1,90	4,19	HR 1500 - 075 - A - N
HR 1500 - 080 - A - N	80	3,15	214	8,43	134	5,28			199,0	12,14	2,06	4,54	HR 1500 - 080 - A - N
HR 1500 - 100 - A - N	100	3,94	254	10,00	154	6,06			246,0	15,01	2,38	5,25	HR 1500 - 100 - A - N
HR 1500 - 125 - A - N	125	4,92	304	11,97	179	7,05			306,0	18,67	2,86	6,31	HR 1500 - 125 - A - N

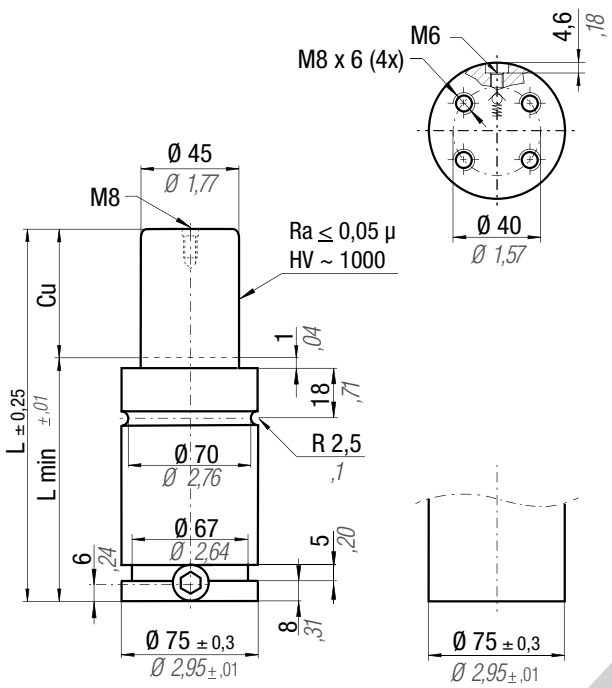
info pg. 34

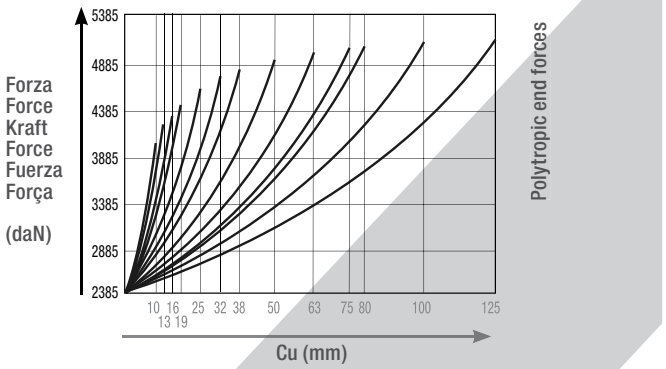


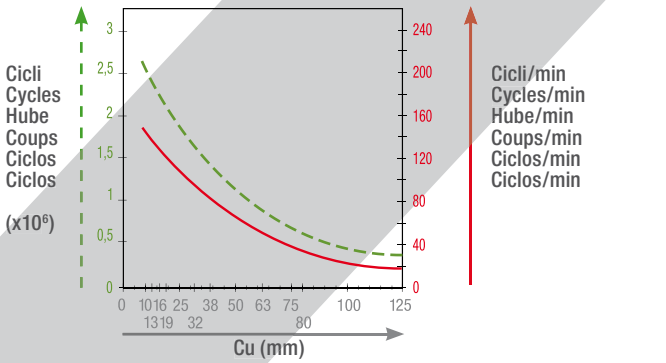
HOW TO ORDER

(10 pcs) HR1500-050-A-N

PED 97/23/EC





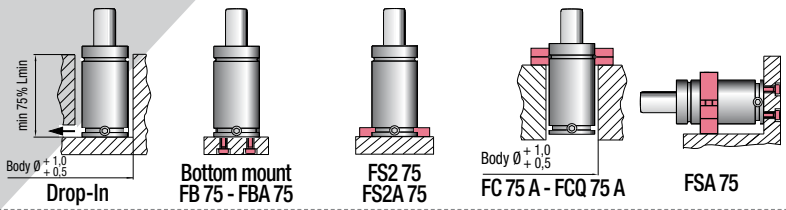


HR
HRF

Max Speed	°F / °C	N2	P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80		150 bar 2175 psi	20 bar 290 psi	15,90 cm² 2,465 in²		39BMHR02400A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 2400 - 010 - A	10	0,39	65	2,56	55	2,17			50,0	3,05	1,47	3,24	HR 2400 - 010 - A - NA
HR 2400 - 013 - A	13	0,51	71	2,80	58	2,28			61,0	3,72	1,52	3,35	HR 2400 - 013 - A - NA
HR 2400 - 016 - A	16	0,63	77	3,03	61	2,40			72,0	4,39	1,58	3,48	HR 2400 - 016 - A - NA
HR 2400 - 019 - A	19	0,75	83	3,27	64	2,52			82,0	5,00	1,65	3,64	HR 2400 - 019 - A - NA
HR 2400 - 025 - A	25	0,98	95	3,74	70	2,76	2385	5362	104,0	6,34	1,77	3,90	HR 2400 - 025 - A - NA
HR 2400 - 032 - A	32	1,26	109	4,29	77	3,03			129,0	7,87	1,93	4,25	HR 2400 - 032 - A - NA
HR 2400 - 038 - A	38	1,50	121	4,76	83	3,27	150 bar 2175 psi		150,0	9,15	2,05	4,52	HR 2400 - 038 - A - NA
HR 2400 - 050 - A	50	1,97	145	5,71	95	3,74			193,0	11,77	2,30	5,07	HR 2400 - 050 - A - NA
HR 2400 - 063 - A	63	2,48	171	6,73	108	4,25	± 5%		240,0	14,64	2,55	5,62	HR 2400 - 063 - A - NA
HR 2400 - 075 - A	75	2,95	195	7,68	120	4,72	+ 20 °C +68 °F		283,0	17,26	2,75	6,06	HR 2400 - 075 - A - NA
HR 2400 - 080 - A	80	3,15	205	8,07	125	4,92			301,0	18,36	2,85	6,28	HR 2400 - 080 - A - NA
HR 2400 - 100 - A	100	3,94	245	9,65	145	5,71			372,0	22,69	3,28	7,23	HR 2400 - 100 - A - NA
HR 2400 - 125 - A	125	4,92	295	11,61	170	6,69			462,0	28,18	3,93	8,66	HR 2400 - 125 - A - NA

info pg. 34



HOW TO ORDER

(10 pcs) HR2400-050-A

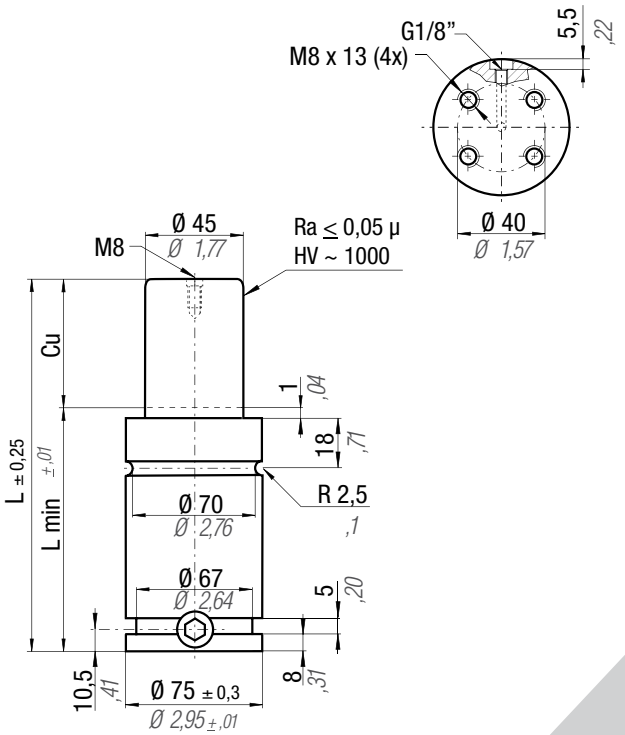
(10 pcs) HR2400-050-A-NA

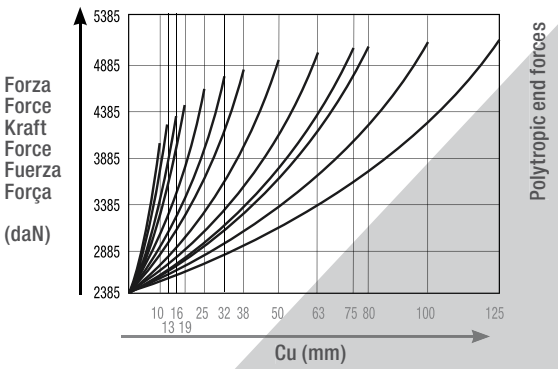
HR 2400N
linkable G1/8”

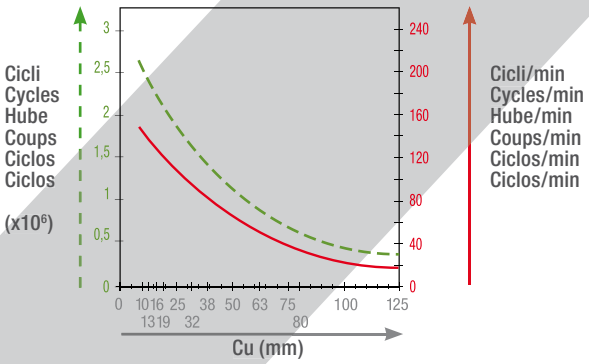
FIAT Specification PED 97/23/EC

PHASING OUT see RF 2400

SPECIAL SPRINGS



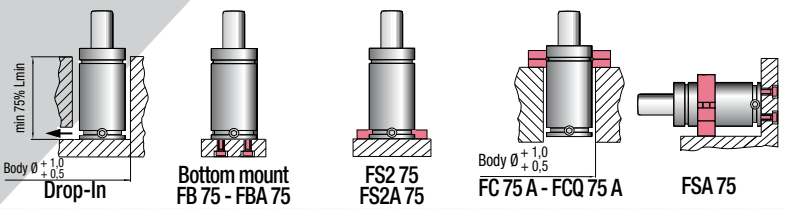




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	15,90 cm² *2,465 in²*		39BMHR02400A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
HR 2400 - 010 - A - N	10	*0,39*	75	*2,95*	65	*2,56*			50,0	*3,05*	1,76	*3,88*	HR 2400 - 010 - A - N
HR 2400 - 013 - A - N	13	*0,51*	81	*3,19*	68	*2,68*			61,0	*3,72*	1,82	*4,01*	HR 2400 - 013 - A - N
HR 2400 - 016 - A - N	16	*0,63*	87	*3,43*	71	*2,80*			72,0	*4,39*	1,89	*4,17*	HR 2400 - 016 - A - N
HR 2400 - 019 - A - N	19	*0,75*	93	*3,66*	74	*2,91*			82,0	*5,00*	1,94	*4,28*	HR 2400 - 019 - A - N
HR 2400 - 025 - A - N	25	*0,98*	105	*4,13*	80	*3,15*	2385	*5362*	104,0	*6,34*	2,03	*4,48*	HR 2400 - 025 - A - N
HR 2400 - 032 - A - N	32	*1,26*	119	*4,69*	87	*3,43*			129,0	*7,87*	2,16	*4,76*	HR 2400 - 032 - A - N
HR 2400 - 038 - A - N	38	*1,50*	131	*5,16*	93	*3,66*	150 bar *2175 psi*		150,0	*9,15*	2,30	*5,07*	HR 2400 - 038 - A - N
HR 2400 - 050 - A - N	50	*1,97*	155	*6,10*	105	*4,13*			193,0	*11,77*	2,56	*5,64*	HR 2400 - 050 - A - N
HR 2400 - 063 - A - N	63	*2,48*	181	*7,13*	118	*4,65*	± 5%		240,0	*14,64*	2,79	*6,15*	HR 2400 - 063 - A - N
HR 2400 - 075 - A - N	75	*2,95*	205	*8,07*	130	*5,12*	+ 20 °C *+68 °F*		283,0	*17,26*	2,90	*6,39*	HR 2400 - 075 - A - N
HR 2400 - 080 - A - N	80	*3,15*	215	*8,46*	135	*5,31*			301,0	*18,36*	3,12	*6,88*	HR 2400 - 080 - A - N
HR 2400 - 100 - A - N	100	*3,94*	255	*10,04*	155	*6,10*			372,0	*22,69*	3,62	*7,98*	HR 2400 - 100 - A - N
HR 2400 - 125 - A - N	125	*4,92*	305	*12,01*	180	*7,09*			462,0	*28,18*	4,02	*8,86*	HR 2400 - 125 - A - N

info pg. 34



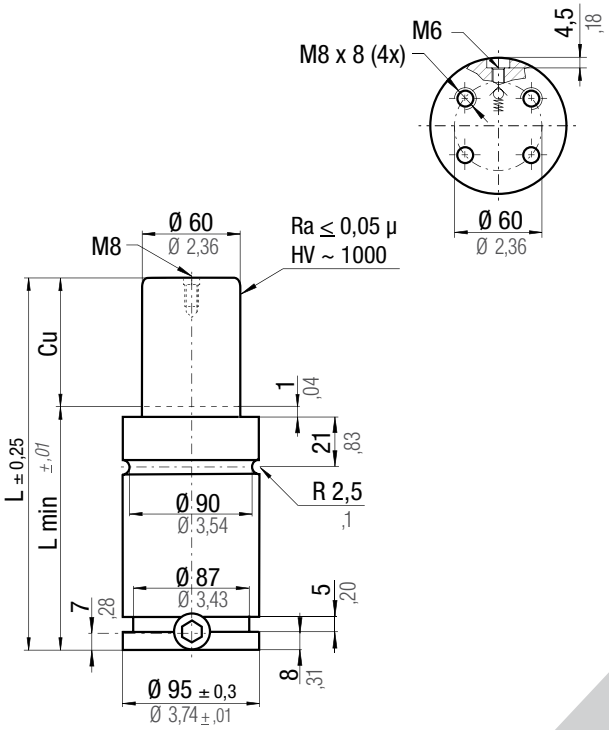
HOW TO ORDER

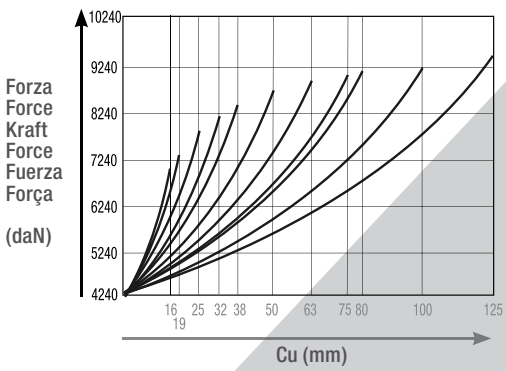
(10 pcs) HR2400-050-A-N

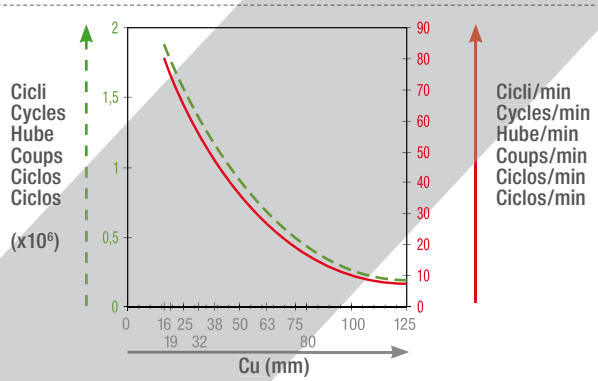
PHASING OUT from March 1st 2012 see RV 4200

HR 4200

PED 97/23/EC





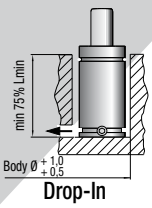


HR
HRF

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N2	150 bar 2175 psi	20 bar 290 psi	28,27 cm² 4,382 in²		39BMHR04200A

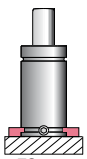
CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 4200 - 016 - A	16	0,63	97	3,82	81	3,19			144,0	8,78	3,40	7,50	HR 4200 - 016 - A - NA
HR 4200 - 019 - A	19	0,75	103	4,06	84	3,31			162,0	9,88	3,45	7,61	HR 4200 - 019 - A - NA
HR 4200 - 025 - A	25	0,98	115	4,53	90	3,54	4240	9532	198,0	12,08	3,65	8,05	HR 4200 - 025 - A - NA
HR 4200 - 032 - A	32	1,26	129	5,08	97	3,82			240,0	14,64	3,82	8,42	HR 4200 - 032 - A - NA
HR 4200 - 038 - A	38	1,50	141	5,55	103	4,06			276,0	16,84	4,00	8,82	HR 4200 - 038 - A - NA
HR 4200 - 050 - A	50	1,97	165	6,50	115	4,53	150 bar	2175 psi	348,0	21,23	4,44	9,79	HR 4200 - 050 - A - NA
HR 4200 - 063 - A	63	2,48	191	7,52	128	5,04			425,0	25,93	4,95	10,91	HR 4200 - 063 - A - NA
HR 4200 - 075 - A	75	2,95	215	8,46	140	5,51	± 5%		497,0	30,32	5,20	11,46	HR 4200 - 075 - A - NA
HR 4200 - 080 - A	80	3,15	225	8,86	145	5,71	+ 20 °C	+68 °F	527,0	32,15	5,41	11,93	HR 4200 - 080 - A - NA
HR 4200 - 100 - A	100	3,94	265	10,43	165	6,50			647,0	39,47	6,00	13,23	HR 4200 - 100 - A - NA
HR 4200 - 125 - A	125	4,92	315	12,40	190	7,48			797,0	48,62	6,70	14,77	HR 4200 - 125 - A - NA

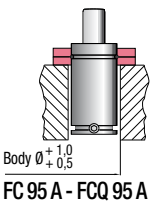
info pg. 34



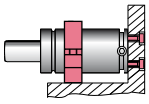
Drop-In


Bottom mount
FB 95 - FBA 95


FS2 95
FS2A 95



FC 95 A - FCQ 95 A


FSA 95

HOW TO ORDER

(10 pcs) HR4200-050-A

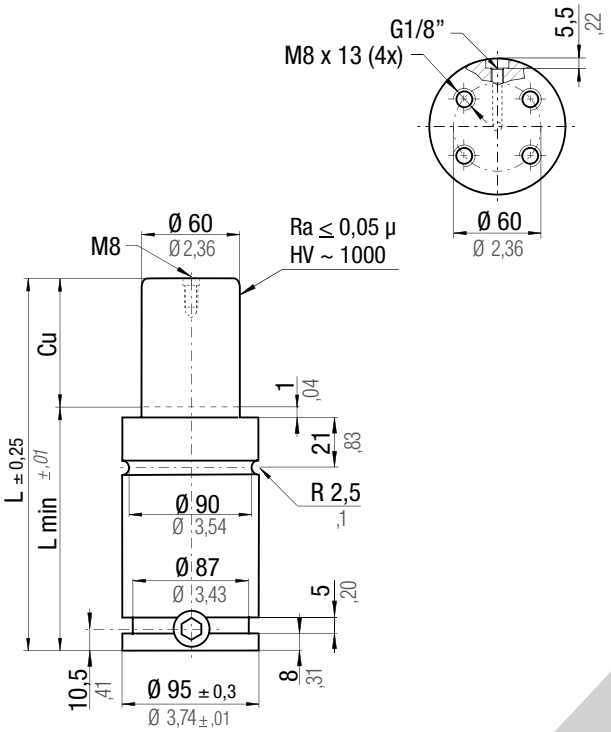
(10 pcs) HR4200-050-A-NA

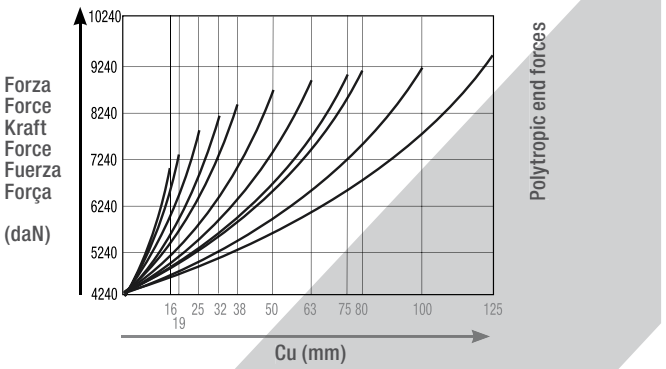
HR 4200N linkable G1/8”

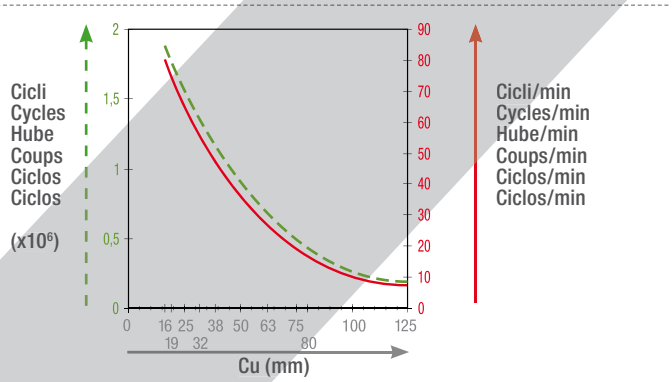
PHASING OUT from March 1st 2012 see **RV 4200**

SPECIAL SPRINGS

FIAT Specification PED 97/23/EC



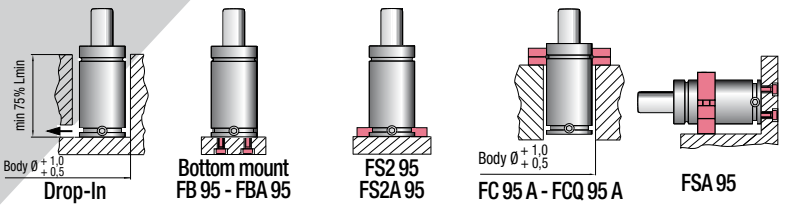




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	28,27 cm² *4,382 in²*		39BMHR04200A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
HR 4200 - 016 - A - N	16	*0,63*	107	*4,21*	91	*3,58*			144,0	*8,78*	4,00	*8,82*	HR 4200 - 016 - A - N
HR 4200 - 019 - A - N	19	*0,75*	113	*4,45*	94	*3,70*			162,0	*9,88*	4,05	*8,93*	HR 4200 - 019 - A - N
HR 4200 - 025 - A - N	25	*0,98*	125	*4,92*	100	*3,94*			198,0	*12,08*	4,16	*9,17*	HR 4200 - 025 - A - N
HR 4200 - 032 - A - N	32	*1,26*	139	*5,47*	107	*4,21*	4240	*9532*	240,0	*14,64*	4,39	*9,68*	HR 4200 - 032 - A - N
HR 4200 - 038 - A - N	38	*1,50*	151	*5,94*	113	*4,45*			276,0	*16,84*	4,56	*10,05*	HR 4200 - 038 - A - N
HR 4200 - 050 - A - N	50	*1,97*	175	*6,89*	125	*4,92*	150 bar *2175 psi*		348,0	*21,23*	4,81	*10,60*	HR 4200 - 050 - A - N
HR 4200 - 063 - A - N	63	*2,48*	201	*7,91*	138	*5,43*			425,0	*25,93*	5,35	*11,79*	HR 4200 - 063 - A - N
HR 4200 - 075 - A - N	75	*2,95*	225	*8,86*	150	*5,91*	± 5%		497,0	*30,32*	5,55	*12,24*	HR 4200 - 075 - A - N
HR 4200 - 080 - A - N	80	*3,15*	235	*9,25*	155	*6,10*	+ 20 °C *+68 °F*		527,0	*32,15*	5,83	*12,85*	HR 4200 - 080 - A - N
HR 4200 - 100 - A - N	100	*3,94*	275	*10,83*	175	*6,89*			647,0	*39,47*	6,51	*14,35*	HR 4200 - 100 - A - N
HR 4200 - 125 - A - N	125	*4,92*	325	*12,80*	200	*7,87*			797,0	*48,62*	7,26	*16,01*	HR 4200 - 125 - A - N

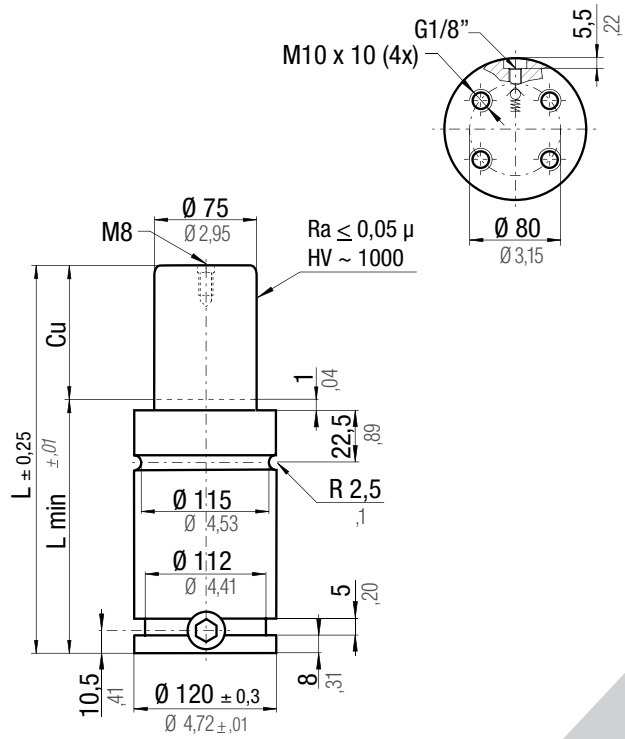
info pg. 34

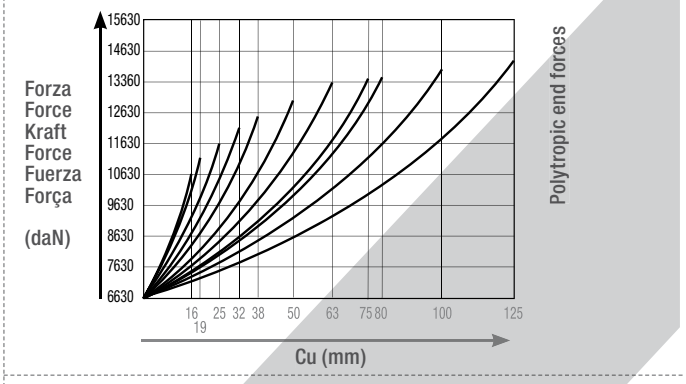


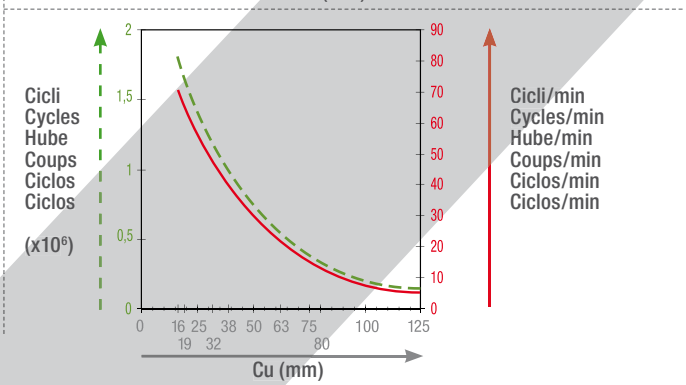
HOW TO ORDER

(10 pcs) HR4200-050-A-N

PED 97/23/EC





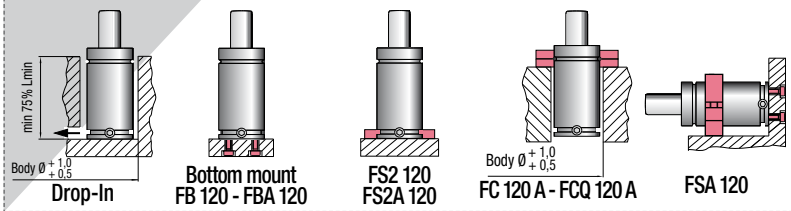


HR
HRF

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N2	150 bar 2175 psi	20 bar 290 psi	44,18 cm² 6,848 in²		39BMHR06600A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
HR 6600 - 016 - A	16	0,63	107	4,21	91	3,58			239,0	14,58	6,60	14,55	HR 6600 - 016 - A - N
HR 6600 - 019 - A	19	0,75	113	4,45	94	3,70			267,0	16,29	6,65	14,66	HR 6600 - 019 - A - N
HR 6600 - 025 - A	25	0,98	125	4,92	100	3,94	6630	14905	325,0	19,83	6,82	15,04	HR 6600 - 025 - A - N
HR 6600 - 032 - A	32	1,26	139	5,47	107	4,21			390,0	23,80	7,18	15,83	HR 6600 - 032 - A - N
HR 6600 - 038 - A	38	1,50	151	5,94	113	4,45			448,0	27,34	7,57	16,69	HR 6600 - 038 - A - N
HR 6600 - 050 - A	50	1,97	175	6,89	125	4,92	150 bar 2175 psi		561,0	34,23	8,18	18,03	HR 6600 - 050 - A - N
HR 6600 - 063 - A	63	2,48	201	7,91	138	5,43			684,0	41,74	8,81	19,42	HR 6600 - 063 - A - N
HR 6600 - 075 - A	75	2,95	225	8,86	150	5,91			797,0	48,64	8,95	19,73	HR 6600 - 075 - A - N
HR 6600 - 080 - A	80	3,15	235	9,25	155	6,10	± 5% + 20 °C +68 °F		845,0	51,56	9,10	20,06	HR 6600 - 080 - A - N
HR 6600 - 100 - A	100	3,94	275	10,83	175	6,89			1034,0	63,10	10,70	23,59	HR 6600 - 100 - A - N
HR 6600 - 125 - A	125	4,92	325	12,80	200	7,87			1271,0	77,56	12,50	27,56	HR 6600 - 125 - A - N

info pg. 34



HOW TO ORDER

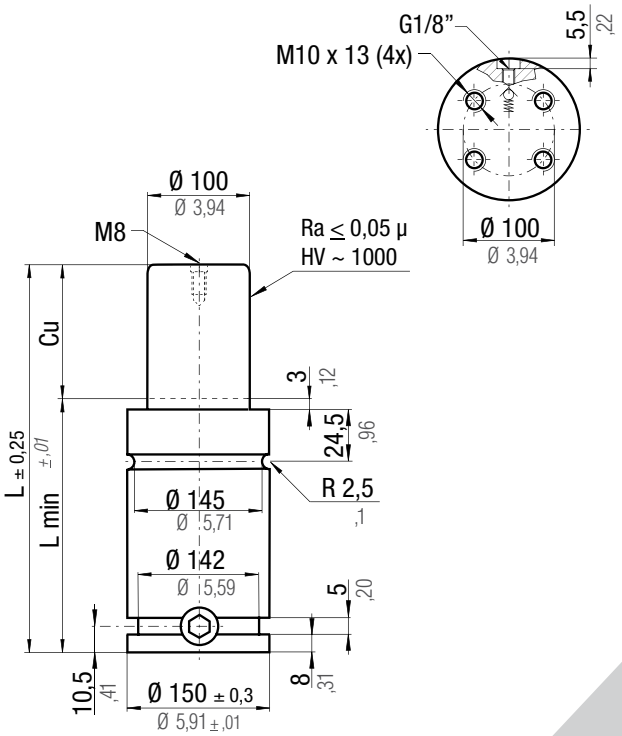
(10 pcs) HR6600-050-A

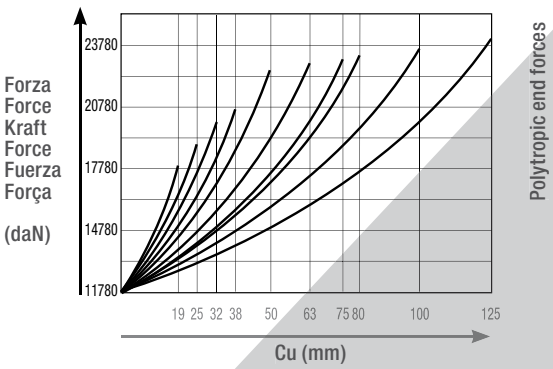
(10 pcs) HR6600-050-A-N

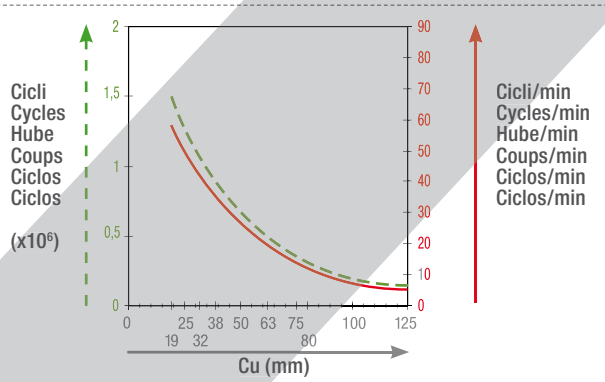
HR 11800 PHASING OUT from March 1st 2012 see RV 12000

SPECIAL SPRINGS

PED 97/23/EC



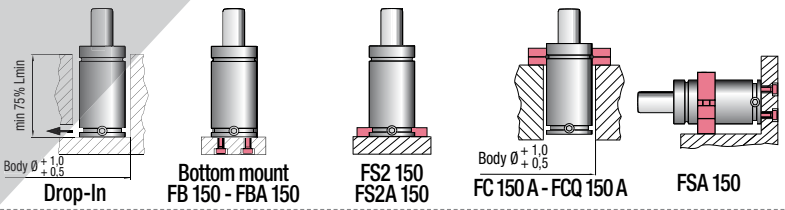




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	78,54 cm² *12,173in²*		39BMHR11800A

CODE	Cu		L		L min		Fo		Vo		~Kg	~lb	CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
HR 11800 - 019 - A	19	*0,75*	116	*4,57*	97	*3,82*			559,0	*34,11*	9,57	*21,10*	HR 11800 - 019 - A - N
HR 11800 - 025 - A	25	*0,98*	128	*5,04*	103	*4,06*			663,0	*40,46*	9,96	*21,96*	HR 11800 - 025 - A - N
HR 11800 - 032 - A	32	*1,26*	142	*5,59*	110	*4,33*	11780	*26481*	784,0	*47,84*	10,41	*22,95*	HR 11800 - 032 - A - N
HR 11800 - 038 - A	38	*1,50*	154	*6,06*	116	*4,57*			887,0	*54,13*	10,81	*23,83*	HR 11800 - 038 - A - N
HR 11800 - 050 - A	50	*1,97*	178	*7,01*	128	*5,04*	150 bar		1095,0	*66,82*	11,59	*25,55*	HR 11800 - 050 - A - N
HR 11800 - 063 - A	63	*2,48*	204	*8,03*	141	*5,55*	*2175 psi*		1320,0	*80,55*	11,88	*26,19*	HR 11800 - 063 - A - N
HR 11800 - 075 - A	75	*2,95*	228	*8,98*	153	*6,02*	± 5%		1527,0	*93,18*	12,21	*26,92*	HR 11800 - 075 - A - N
HR 11800 - 080 - A	80	*3,15*	238	*9,37*	158	*6,22*	+ 20 °C *+68 °F*		1614,0	*98,49*	12,43	*27,40*	HR 11800 - 080 - A - N
HR 11800 - 100 - A	100	*3,94*	278	*10,94*	178	*7,01*			1960,0	*119,61*	13,51	*29,78*	HR 11800 - 100 - A - N
HR 11800 - 125 - A	125	*4,92*	328	*12,91*	203	*7,99*			2392,0	*145,97*	15,14	*33,38*	HR 11800 - 125 - A - N

info pg. 34



HOW TO ORDER

(10 pcs) HR11800-050-A

(10 pcs) HR11800-050-A-N

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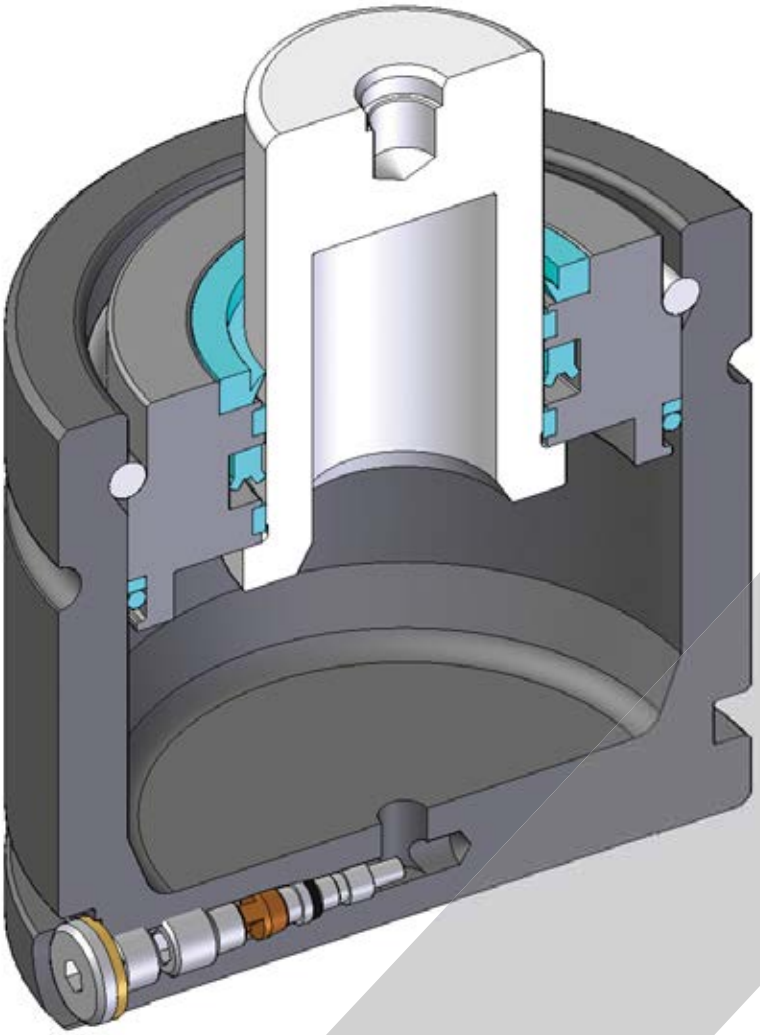
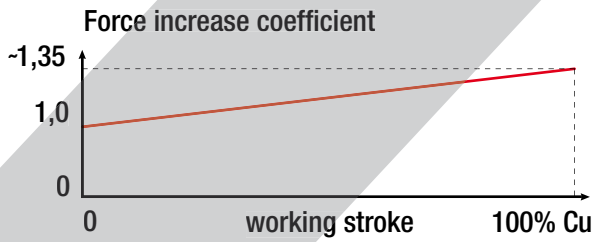
PHASING OUT

PED 97/23/EC

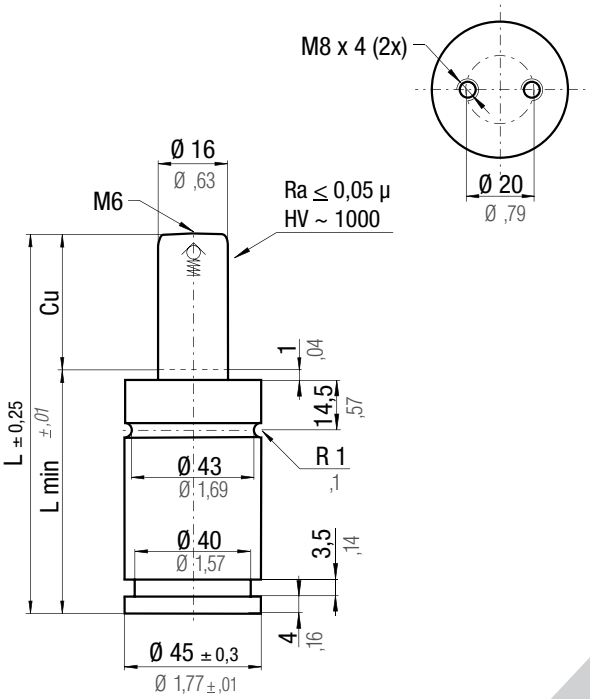


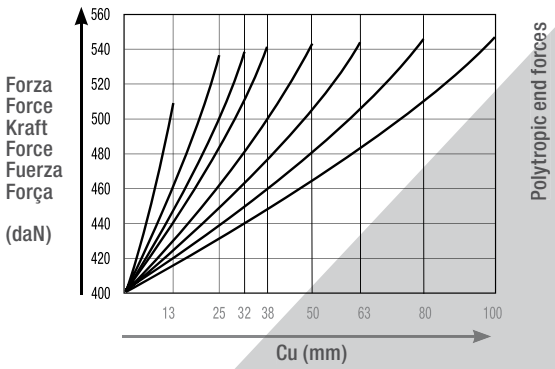


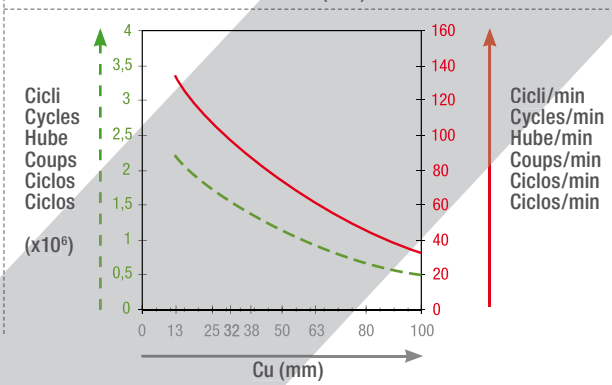
Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept		
	mm	inch	mm	inch	daN	lb	SKUDO	OSAS	OPAS
LI 400	45	1,77	13 - 100	0,51 - 3,94	400	899	-	-	-
LI 400 N	45	1,77	13 - 100	0,51 - 3,94	400	899	-	-	-
LI 900	63	2,48	25 - 125	0,98 - 4,92	900	2023	-	-	-
LI 900 N	63	2,48	25 - 125	0,98 - 4,92	900	2023	-	-	-
LI 1400	75	2,95	25 - 125	0,98 - 4,92	1410	3170	-	-	-
LI 1400 N	75	2,95	25 - 125	0,98 - 4,92	1410	3170	-	-	-
LI 2000	95	3,74	25 - 125	0,98 - 4,92	2035	4575	-	-	-
LI 2000 N	95	3,74	25 - 125	0,98 - 4,92	2035	4575	-	-	-
LI 3200	120	4,72	25 - 125	0,98 - 4,92	3180	7149	-	-	-

PED 97/23/EC



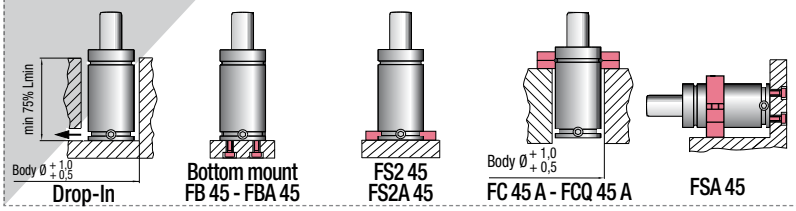




LI

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N2	200 bar *2900 psi*	20 bar *290 psi*	2,01 cm² *0,312 in²*		39BMLI00400A

CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	Fo daN	Fo *lb*	Vo cm³	Vo *in³*	~Kg	*~lb*	CODE
LI 400 - 013 - A	13	*0,51*	58	*2,28*	45	*1,77*			-	-	0,43	*0,95*	-
LI 400 - 025 - A	25	*0,98*	82	*3,23*	57	*2,24*	400	*899*	-	-	0,50	*1,10*	-
LI 400 - 032 - A	32	*1,26*	96	*3,78*	64	*2,52*			-	-	0,55	*1,21*	-
LI 400 - 038 - A	38	*1,50*	108	*4,25*	70	*2,76*			-	-	0,58	*1,28*	-
LI 400 - 050 - A	50	*1,97*	132	*5,20*	82	*3,23*	200 bar	*2900 psi*	-	-	0,65	*1,43*	-
LI 400 - 063 - A	63	*2,48*	158	*6,22*	95	*3,74*			-	-	0,72	*1,59*	-
LI 400 - 080 - A	80	*3,15*	192	*7,56*	112	*4,41*	± 5%		-	-	0,83	*1,83*	-
LI 400 - 100 - A	100	*3,94*	232	*9,13*	132	*5,20*	+ 20 °C	*+68 °F*	-	-	0,94	*2,07*	-

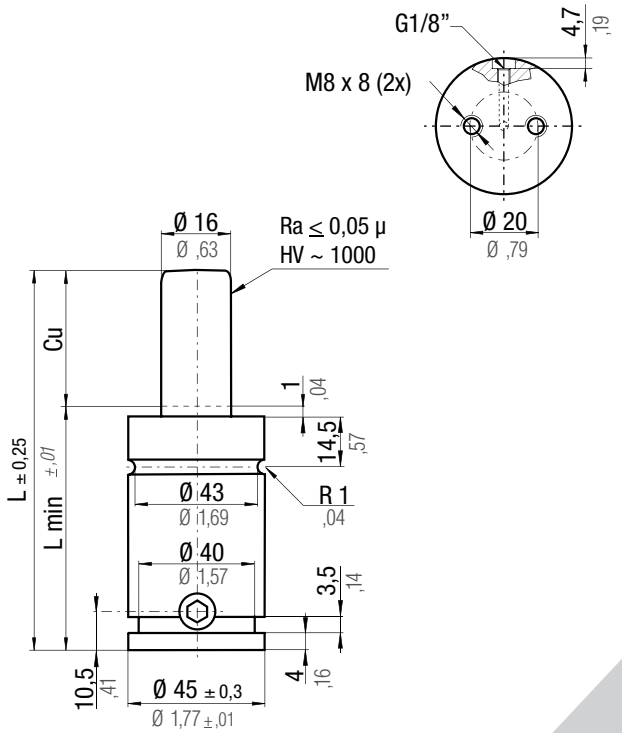


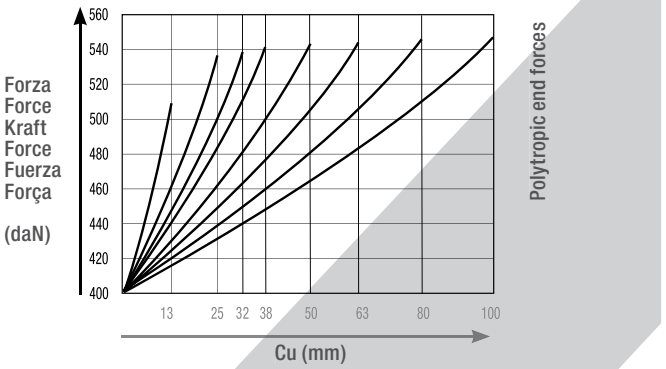
HOW TO ORDER

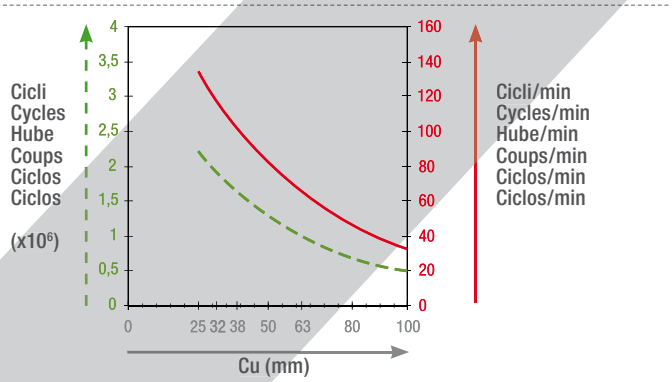
(10 pcs) LI400-050-A

PHASING OUT

PED 97/23/EC



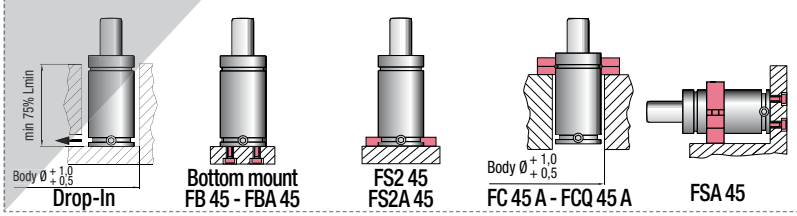




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	200 bar *2900 psi*	20 bar *290 psi*	2,01 cm² *0,312 in²*		39BMLI00400A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
LI 400 - 013 - A - N	13	*0,51*	68	*2,68*	55	*2,17*	400	*899*	16,0	*0,98*	0,48	*1,06*	LI 400 - 013 - A - N
LI 400 - 025 - A - N	25	*0,98*	92	*3,62*	67	*2,64*			27,0	*1,65*	0,55	*1,21*	LI 400 - 025 - A - N
LI 400 - 032 - A - N	32	*1,26*	106	*4,17*	74	*2,91*			34,0	*2,07*	0,60	*1,32*	LI 400 - 032 - A - N
LI 400 - 038 - A - N	38	*1,50*	118	*4,65*	80	*3,15*			41,0	*2,50*	0,63	*1,39*	LI 400 - 038 - A - N
LI 400 - 050 - A - N	50	*1,97*	142	*5,59*	92	*3,62*	200 bar *2900 psi*		54,0	*3,29*	0,70	*1,54*	LI 400 - 050 - A - N
LI 400 - 063 - A - N	63	*2,48*	168	*6,61*	105	*4,13*			68,0	*4,15*	0,77	*1,70*	LI 400 - 063 - A - N
LI 400 - 080 - A - N	80	*3,15*	202	*7,95*	122	*4,80*	± 5% + 20 °C *+68 °F*		86,0	*5,25*	0,88	*1,94*	LI 400 - 080 - A - N
LI 400 - 100 - A - N	100	*3,94*	242	*9,53*	142	*5,59*			107,0	*6,53*	0,99	*2,18*	LI 400 - 100 - A - N

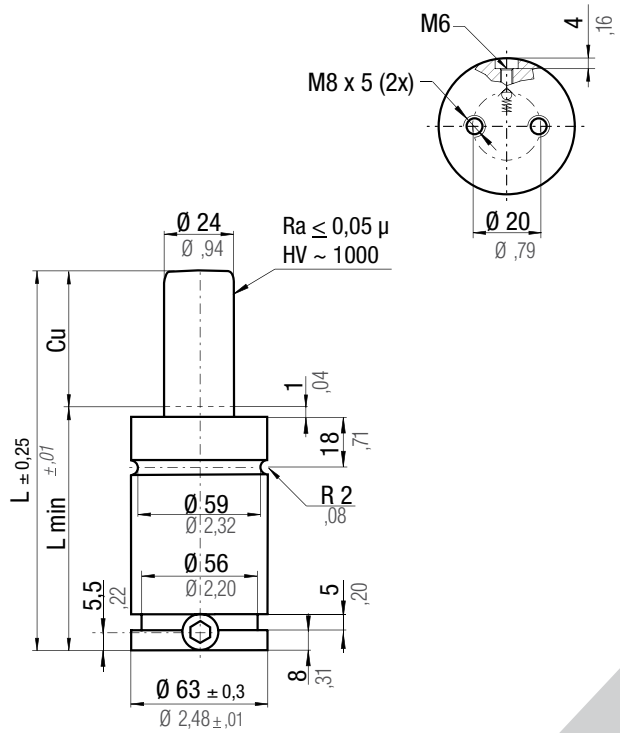
info pg. 34

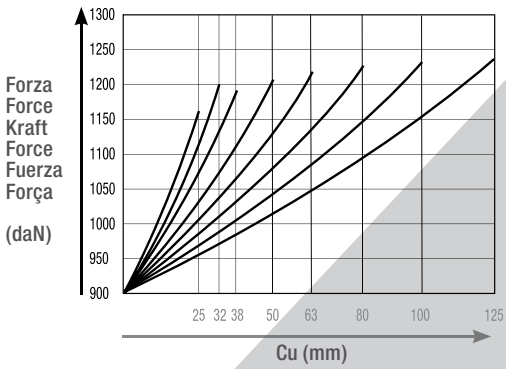


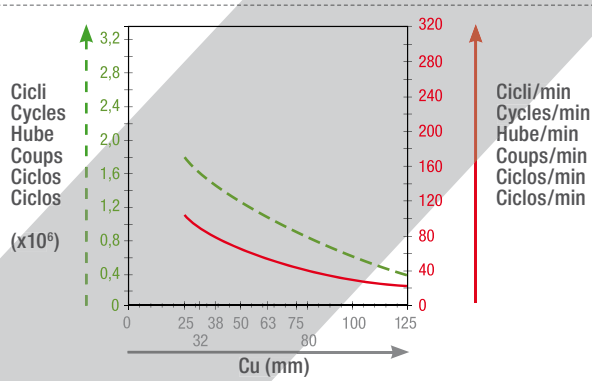
HOW TO ORDER

(10 pcs) LI400-050-A-N

PED 97/23/EC





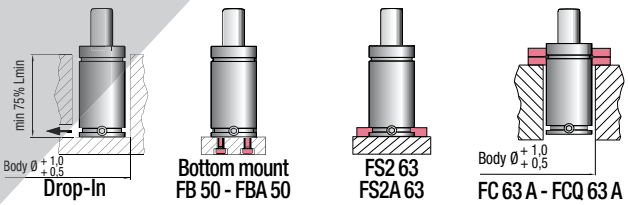


LI

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	200 bar *2900 psi*	20 bar *290 psi*	4,52 cm² *0,701 in²*		39BMLI00900A

CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 daN	F0 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CODE
LI 900 - 025 - A	25	*0,98*	94	*3,70*	69	*2,72*			24,0	*1,46*	1,16	*2,56*	LI 900 - 025 - A - NA
LI 900 - 032 - A	32	*1,26*	108	*4,25*	76	*2,99*	900	*2023*	38,0	*2,32*	1,24	*2,73*	LI 900 - 032 - A - NA
LI 900 - 038 - A	38	*1,50*	120	*4,72*	82	*3,23*			51,0	*3,11*	1,30	*2,87*	LI 900 - 038 - A - NA
LI 900 - 050 - A	50	*1,97*	144	*5,67*	94	*3,70*			76,0	*4,64*	1,45	*3,20*	LI 900 - 050 - A - NA
LI 900 - 063 - A	63	*2,48*	170	*6,69*	107	*4,21*	200 bar	*2900 psi*	103,0	*6,28*	1,60	*3,53*	LI 900 - 063 - A - NA
LI 900 - 080 - A	80	*3,15*	204	*8,03*	124	*4,88*			139,0	*8,48*	1,80	*3,97*	LI 900 - 080 - A - NA
LI 900 - 100 - A	100	*3,94*	244	*9,61*	144	*5,67*	± 5%		182,0	*11,10*	2,03	*4,48*	LI 900 - 100 - A - NA
LI 900 - 125 - A	125	*4,92*	294	*11,57*	169	*6,65*	+ 20 °C *+68 °F*		235,0	*14,34*	2,34	*5,16*	LI 900 - 125 - A - NA

info pg. 34



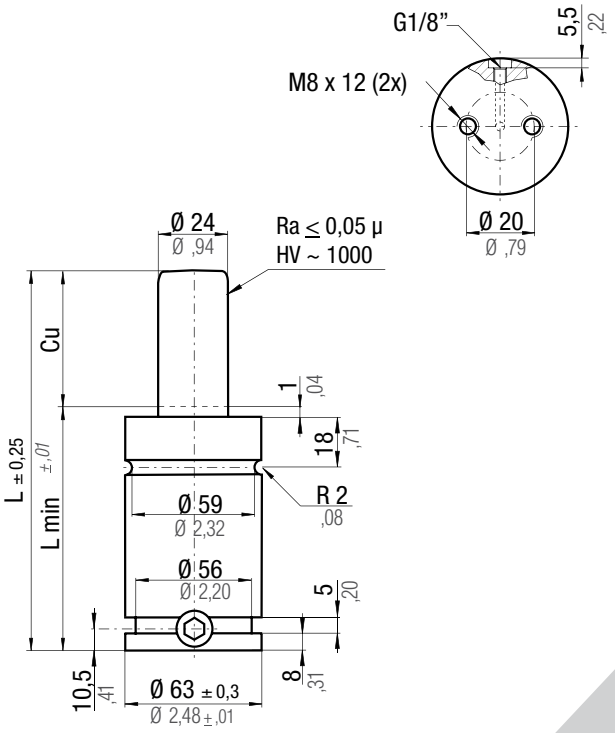
HOW TO ORDER

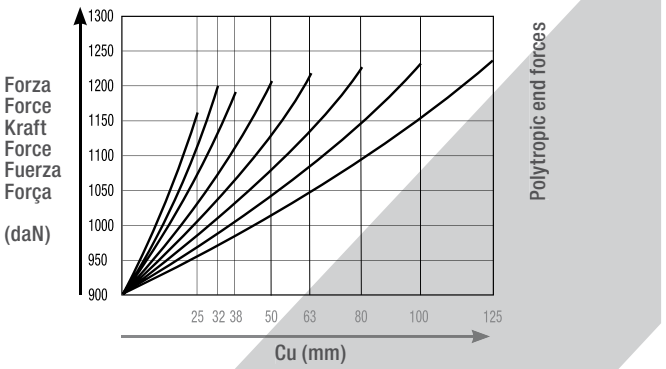
(10 pcs) LI900-050-A

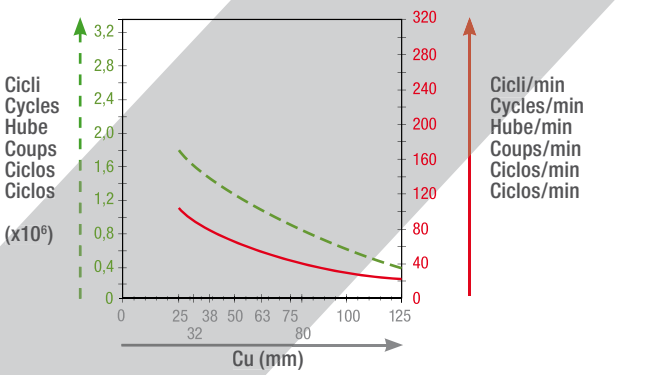
(10 pcs) LI900-050-A-NA

PHASING OUT

PED 97/23/EC



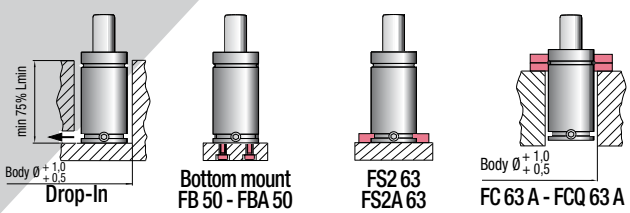




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N2	200 bar *2900 psi*	20 bar *290 psi*	4,52 cm² *0,701 in²*		39BMLI00900A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
LI 900 - 025 - A - N	25	*0,98*	104	*4,09*	79	*3,11*			24,0	*1,46*	1,23	*2,71*	LI 900 - 025 - A - N
LI 900 - 032 - A - N	32	*1,26*	118	*4,65*	86	*3,39*	900	*2023*	38,0	*2,32*	1,30	*2,87*	LI 900 - 032 - A - N
LI 900 - 038 - A - N	38	*1,50*	130	*5,12*	92	*3,62*			51,0	*3,11*	1,37	*3,02*	LI 900 - 038 - A - N
LI 900 - 050 - A - N	50	*1,97*	154	*6,06*	104	*4,09*			76,0	*4,64*	1,52	*3,35*	LI 900 - 050 - A - N
LI 900 - 063 - A - N	63	*2,48*	180	*7,09*	117	*4,61*	200 bar	*2900 psi*	103,0	*6,28*	1,67	*3,68*	LI 900 - 063 - A - N
LI 900 - 080 - A - N	80	*3,15*	214	*8,43*	134	*5,28*			139,0	*8,48*	1,87	*4,12*	LI 900 - 080 - A - N
LI 900 - 100 - A - N	100	*3,94*	254	*10,00*	154	*6,06*	± 5%		182,0	*11,10*	2,10	*4,63*	LI 900 - 100 - A - N
LI 900 - 125 - A - N	125	*4,92*	304	*11,97*	179	*7,05*	+ 20 °C	*+68 °F*	235,0	*14,34*	2,41	*5,31*	LI 900 - 125 - A - N

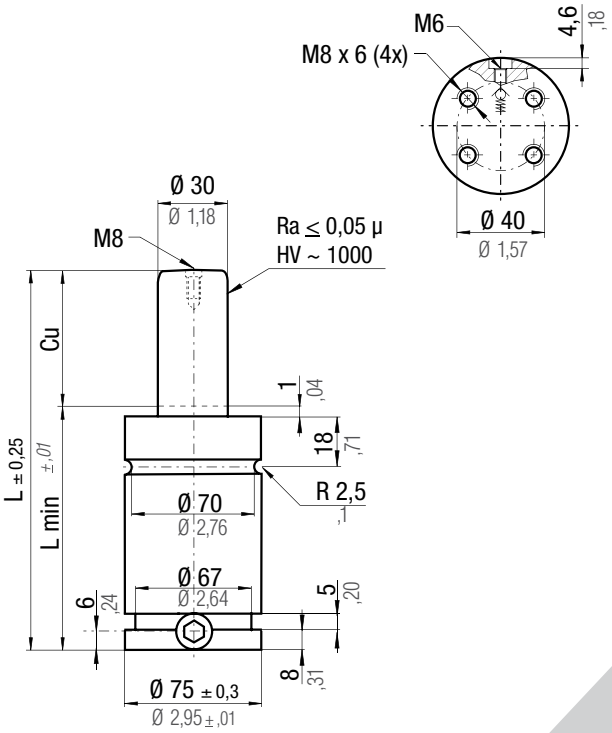
info pg. 34

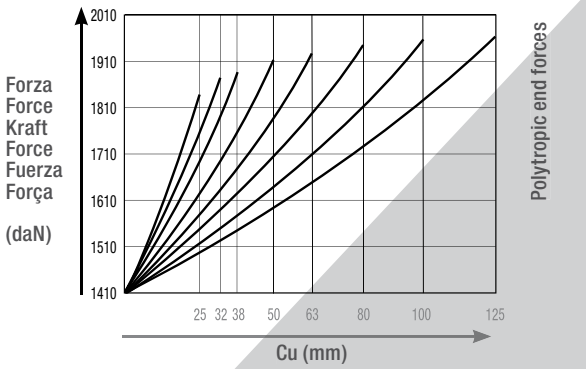


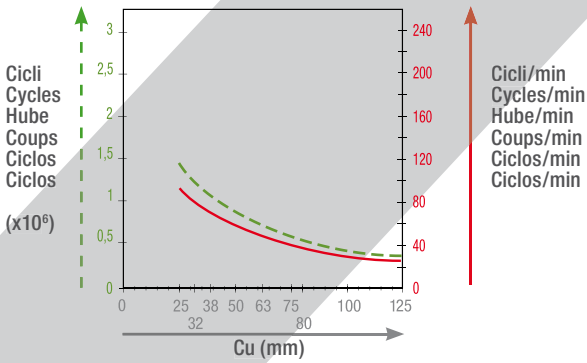
HOW TO ORDER

(10 pcs) LI900-050-A-N

PED 97/23/EC





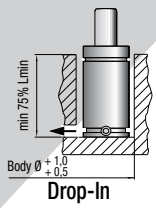


LI

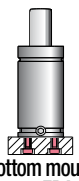
Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	200 bar *2900 psi*	20 bar *290 psi*	7,07 cm² *1,096 in²*		39BMLI01400A

CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	Fo daN	Fo *lb*	Vo cm³	Vo *in³*	~Kg	*~lb*	CODE
LI 1400 - 025 - A	25	*0,98*	95	*3,74*	70	*2,76*			93,0	*5,67*	1,62	*3,57*	LI 1400 - 025 - A - NA
LI 1400 - 032 - A	32	*1,26*	109	*4,29*	77	*3,03*	1410	*3170*	115,0	*7,02*	1,74	*3,84*	LI 1400 - 032 - A - NA
LI 1400 - 038 - A	38	*1,50*	121	*4,76*	83	*3,27*			134,0	*8,18*	1,83	*4,03*	LI 1400 - 038 - A - NA
LI 1400 - 050 - A	50	*1,97*	145	*5,71*	95	*3,74*			172,0	*10,49*	1,99	*4,39*	LI 1400 - 050 - A - NA
LI 1400 - 063 - A	63	*2,48*	171	*6,73*	108	*4,25*	200 bar	*2900 psi*	213,0	*12,99*	2,20	*4,85*	LI 1400 - 063 - A - NA
LI 1400 - 080 - A	80	*3,15*	205	*8,07*	125	*4,92*			266,0	*16,23*	2,62	*5,78*	LI 1400 - 080 - A - NA
LI 1400 - 100 - A	100	*3,94*	245	*9,65*	145	*5,71*	± 5%		329,0	*20,07*	2,77	*6,11*	LI 1400 - 100 - A - NA
LI 1400 - 125 - A	125	*4,92*	295	*11,61*	170	*6,69*	+ 20 °C *+68 °F*		408,0	*24,89*	3,27	*7,21*	LI 1400 - 125 - A - NA

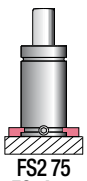
info pg. 34



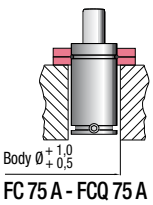
Drop-In



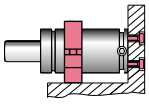
Bottom mount
FB 75 - FBA 75



FS2 75
FS2A 75



FC 75 A - FCQ 75 A



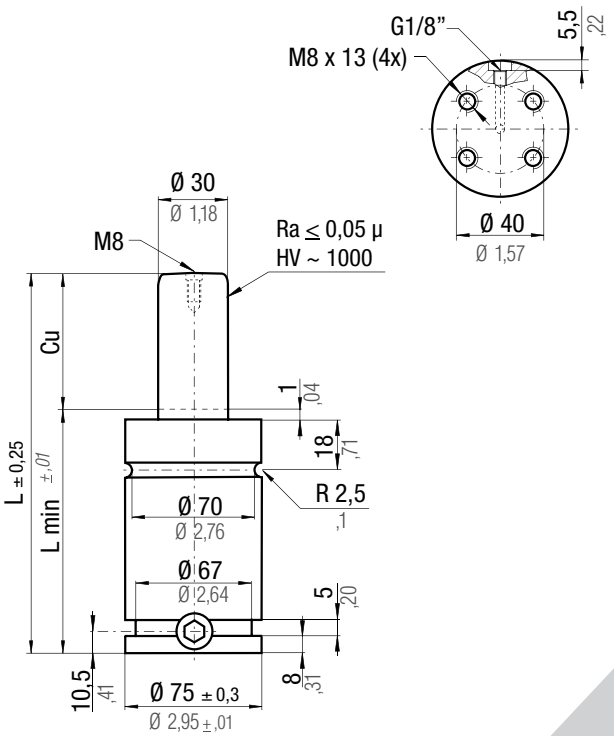
FSA 75

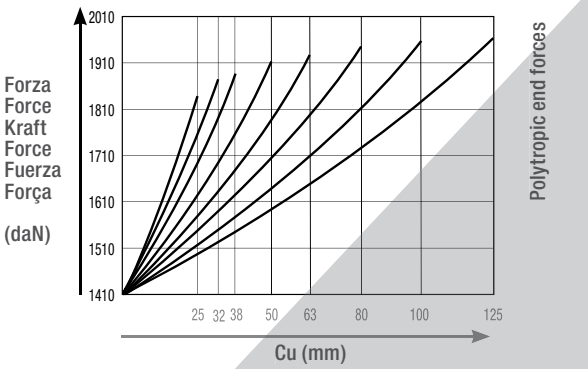
HOW TO ORDER

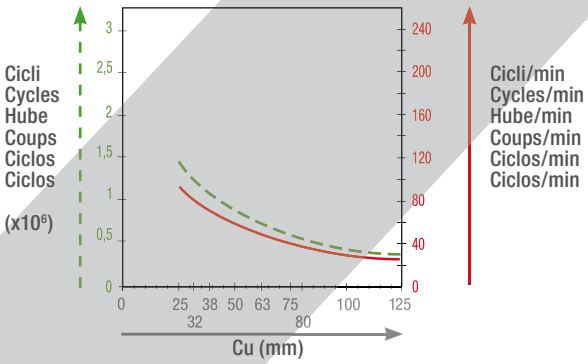
(10 pcs) LI1400-050-A
(10 pcs) LI1400-050-A-NA

PHASING OUT

PED 97/23/EC



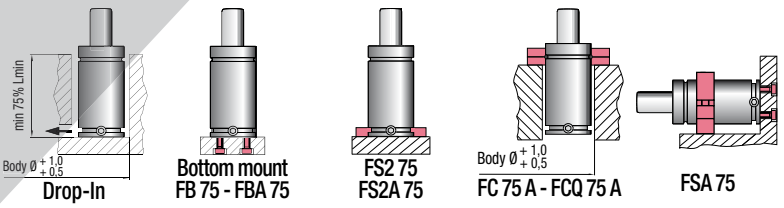




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N2	200 bar *2900 psi*	20 bar *290 psi*	7,07 cm² *1,096 in²*		39BMLI01400A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
LI 1400 - 025 - A - N	25	*0,98*	105	*4,13*	80	*3,15*			93,0	*5,67*	1,70	*3,75*	LI 1400 - 025 - A - N
LI 1400 - 032 - A - N	32	*1,26*	119	*4,69*	87	*3,43*	1410	*3170*	115,0	*7,02*	1,80	*3,97*	LI 1400 - 032 - A - N
LI 1400 - 038 - A - N	38	*1,50*	131	*5,16*	93	*3,66*			134,0	*8,18*	1,91	*4,21*	LI 1400 - 038 - A - N
LI 1400 - 050 - A - N	50	*1,97*	155	*6,10*	105	*4,13*			172,0	*10,49*	2,07	*4,56*	LI 1400 - 050 - A - N
LI 1400 - 063 - A - N	63	*2,48*	181	*7,13*	118	*4,65*	200 bar	*2900 psi*	213,0	*12,99*	2,27	*5,00*	LI 1400 - 063 - A - N
LI 1400 - 080 - A - N	80	*3,15*	215	*8,46*	135	*5,31*			266,0	*16,23*	2,70	*5,95*	LI 1400 - 080 - A - N
LI 1400 - 100 - A - N	100	*3,94*	255	*10,04*	155	*6,10*	± 5%		329,0	*20,07*	2,85	*6,28*	LI 1400 - 100 - A - N
LI 1400 - 125 - A - N	125	*4,92*	305	*12,01*	180	*7,09*	+ 20 °C	*+68 °F*	408,0	*24,89*	3,35	*7,39*	LI 1400 - 125 - A - N

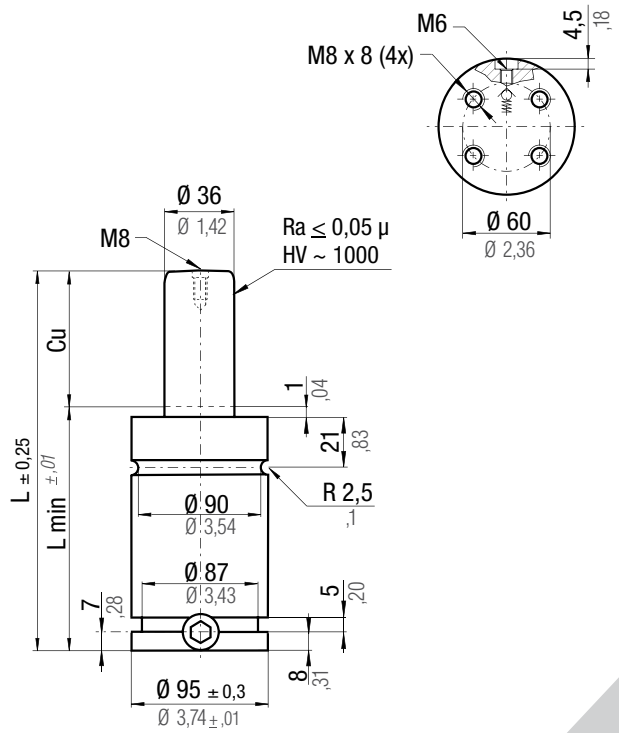
info pg. 34

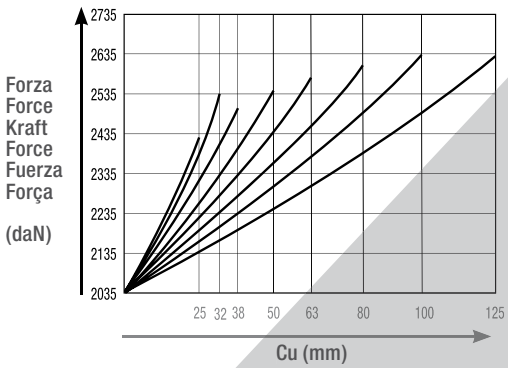


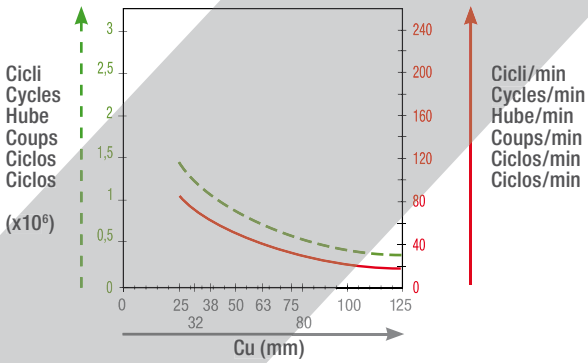
HOW TO ORDER

(10 pcs) LI1400-050-A-N

PED 97/23/EC





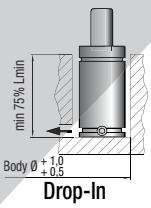


LI

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N_2	200 bar *2900 psi*	20 bar *290 psi*	10,18 cm^2 *1,578 in^2*		39BMLI02000A

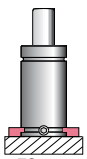
CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	Fo daN	Fo *lb*	Vo cm^3	Vo *in^3*	~Kg	~lb	CODE
LI 2000 - 025 - A	25	*0,98*	115	*4,53*	90	*3,54*	2035	*4575*	208,0	*12,69*	3,29	*7,25*	LI 2000 - 025 - A - NA
LI 2000 - 032 - A	32	*1,26*	129	*5,08*	97	*3,82*			242,0	*14,77*	3,50	*7,72*	LI 2000 - 032 - A - NA
LI 2000 - 038 - A	38	*1,50*	141	*5,55*	103	*4,06*			272,0	*16,60*	3,62	*7,98*	LI 2000 - 038 - A - NA
LI 2000 - 050 - A	50	*1,97*	165	*6,50*	115	*4,53*	200 bar	*2900 psi*	332,0	*20,26*	3,89	*8,58*	LI 2000 - 050 - A - NA
LI 2000 - 063 - A	63	*2,48*	191	*7,52*	128	*5,04*			396,0	*24,17*	4,24	*9,35*	LI 2000 - 063 - A - NA
LI 2000 - 080 - A	80	*3,15*	225	*8,86*	145	*5,71*			480,0	*29,29*	4,78	*10,54*	LI 2000 - 080 - A - NA
LI 2000 - 100 - A	100	*3,94*	265	*10,43*	165	*6,50*	± 5% + 20 °C *+68 °F*		579,0	*35,33*	5,16	*11,38*	LI 2000 - 100 - A - NA
LI 2000 - 125 - A	125	*4,92*	315	*12,40*	190	*7,48*			703,0	*42,90*	5,82	*12,83*	LI 2000 - 125 - A - NA

info pg. 34

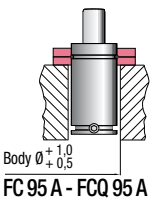


Drop-In

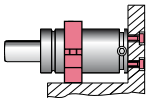
Bottom mount
FB 95 - FBA 95



FS2 95
FS2A 95



FC 95 A - FCQ 95 A



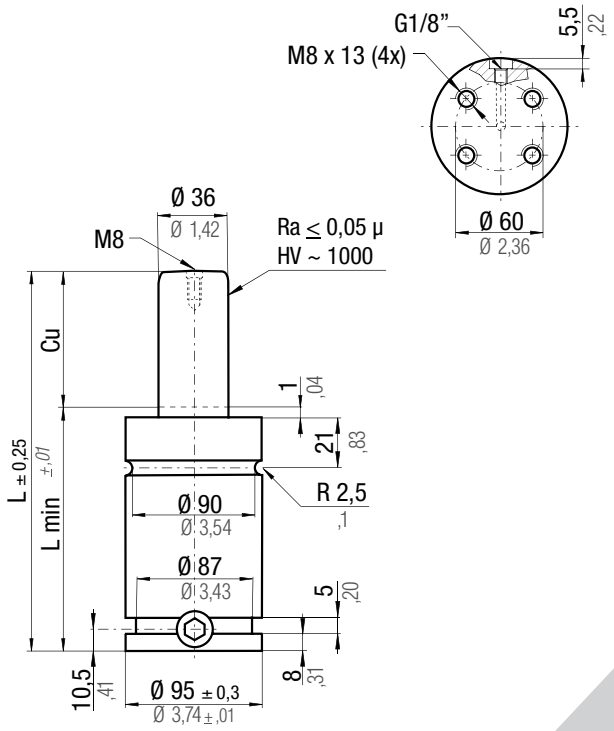
FSA 95

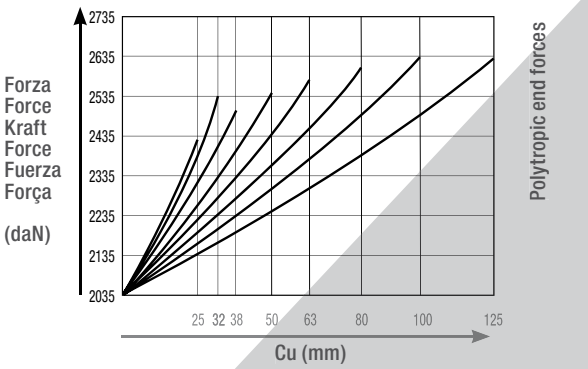
HOW TO ORDER

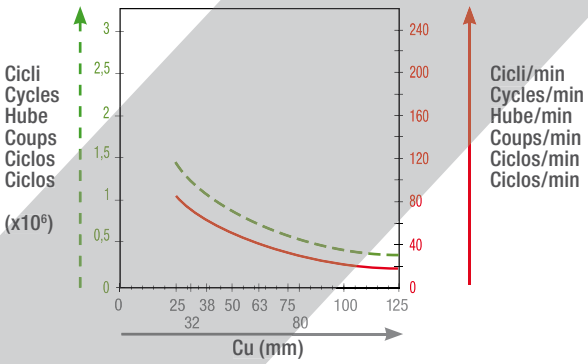
(10 pcs) LI2000-050-A
(10 pcs) LI2000-050-A-N

PHASING OUT

PED 97/23/EC



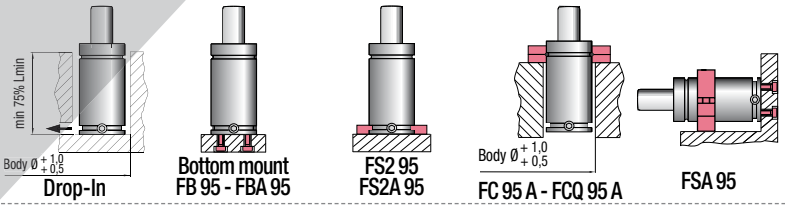




Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	200 bar *2900 psi*	20 bar *290 psi*	10,18 cm² *1,578 in²*		39BMLI02000A

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
LI 2000 - 025 - A - N	25	*0,98*	125	*4,92*	100	*3,94*			208,0	*12,69*	3,40	*7,50*	LI 2000 - 025 - A - N
LI 2000 - 032 - A - N	32	*1,26*	139	*5,47*	107	*4,21*	2035	*4575*	242,0	*14,77*	3,57	*7,87*	LI 2000 - 032 - A - N
LI 2000 - 038 - A - N	38	*1,50*	151	*5,94*	113	*4,45*			272,0	*16,60*	3,73	*8,22*	LI 2000 - 038 - A - N
LI 2000 - 050 - A - N	50	*1,97*	175	*6,89*	125	*4,92*			332,0	*20,26*	4,00	*8,82*	LI 2000 - 050 - A - N
LI 2000 - 063 - A - N	63	*2,48*	201	*7,91*	138	*5,43*	200 bar	*2900 psi*	396,0	*24,17*	4,35	*9,59*	LI 2000 - 063 - A - N
LI 2000 - 080 - A - N	80	*3,15*	235	*9,25*	155	*6,10*			480,0	*29,29*	4,89	*10,78*	LI 2000 - 080 - A - N
LI 2000 - 100 - A - N	100	*3,94*	275	*10,83*	175	*6,89*	± 5%		579,0	*35,33*	5,57	*12,28*	LI 2000 - 100 - A - N
LI 2000 - 125 - A - N	125	*4,92*	325	*12,80*	200	*7,87*	+ 20 °C	*+68 °F*	703,0	*42,90*	5,93	*13,07*	LI 2000 - 125 - A - N

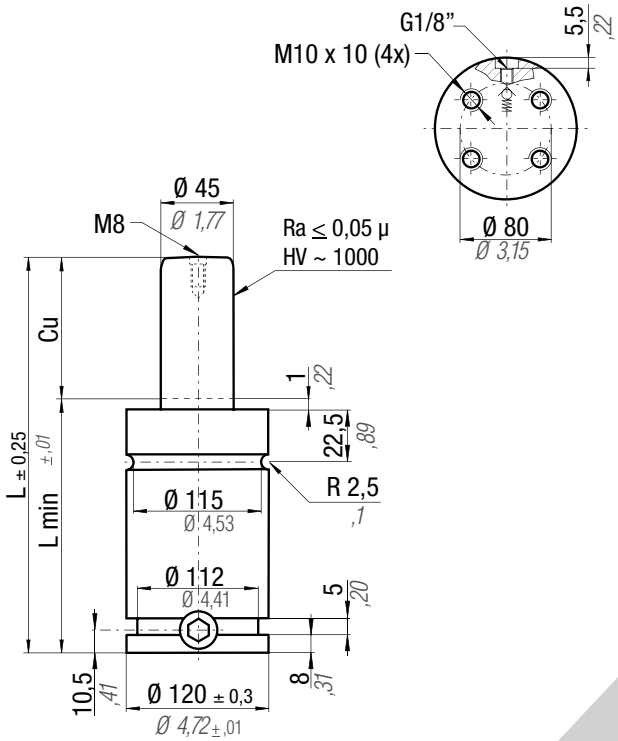
info pg. 34

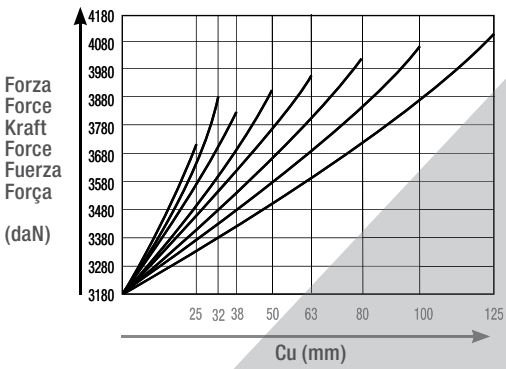


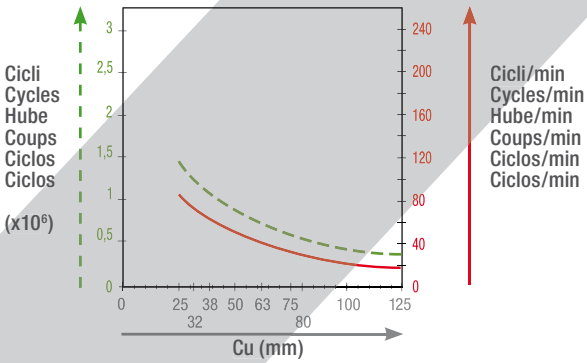
HOW TO ORDER

(10 pcs) LI2000-050-A-N

PED 97/23/EC





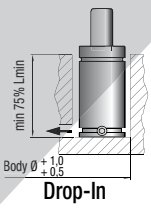


LI

Max Speed	°F / °C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176 / 0 - 80	N2	200 bar *2900 psi*	20 bar *290 psi*	15,90 cm² *2,465 in²*		39BMLI03200A

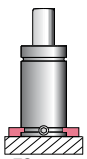
CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	Fo daN	Fo *lb*	Vo cm³	Vo *in³*	~Kg	*~lb*	CODE
LI 3200 - 025 - A	25	*0,98*	125	*4,92*	100	*3,94*			343,0	*20,93*	4,74	*10,45*	LI 3200 - 025 - A - N
LI 3200 - 032 - A	32	*1,26*	139	*5,47*	107	*4,21*	3180	*7149*	398,0	*24,29*	5,61	*12,37*	LI 3200 - 032 - A - N
LI 3200 - 038 - A	38	*1,50*	151	*5,94*	113	*4,45*			445,0	*27,16*	6,48	*14,29*	LI 3200 - 038 - A - N
LI 3200 - 050 - A	50	*1,97*	175	*6,89*	125	*4,92*			539,0	*32,89*	6,97	*15,37*	LI 3200 - 050 - A - N
LI 3200 - 063 - A	63	*2,48*	201	*7,91*	138	*5,43*	200 bar	*2900 psi*	641,0	*39,12*	7,46	*16,45*	LI 3200 - 063 - A - N
LI 3200 - 080 - A	80	*3,15*	235	*9,25*	155	*6,10*			774,0	*47,23*	8,21	*18,10*	LI 3200 - 080 - A - N
LI 3200 - 100 - A	100	*3,94*	275	*10,83*	175	*6,89*	± 5%		932,0	*56,87*	8,94	*19,71*	LI 3200 - 100 - A - N
LI 3200 - 125 - A	125	*4,92*	325	*12,80*	200	*7,87*	+ 20 °C *+68 °F*		1127,0	*68,77*	10,08	*22,22*	LI 3200 - 125 - A - N

info pg. 34

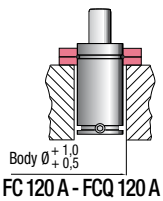


Drop-In

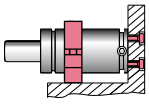
Bottom mount
FB 120 - FBA 120



FS2 120
FS2A 120



FC 120 A - FCQ 120 A



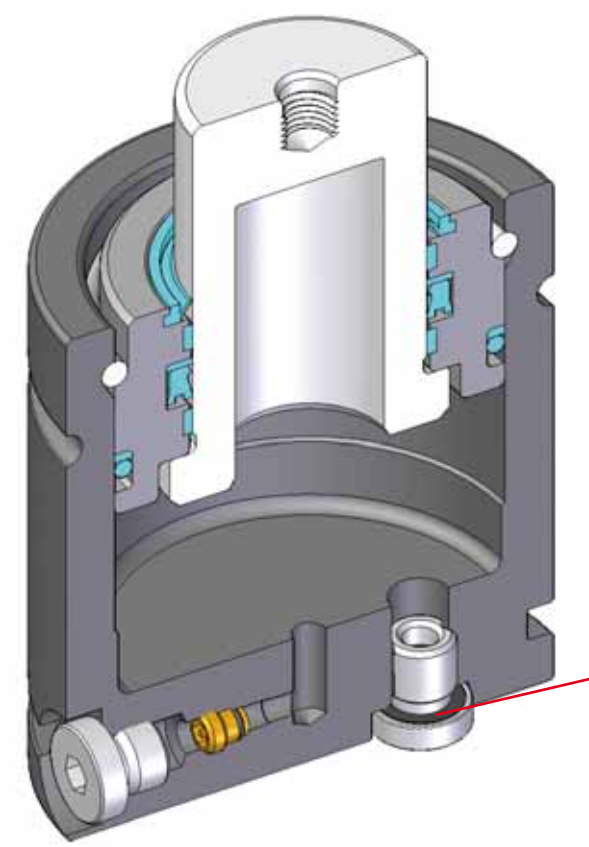
FSA 120

HOW TO ORDER

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

Renault		
Mercedes Benz		

PED 97/23/EC



Over
Pressure
Active
Safety

Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
S 500	45	1,77	6 - 125	0,24 - 4,92	470	1057	-	-	-	-
S 750	50	1,97	6 - 125	0,24 - 4,92	740	1664	-	-	-	-
S 1500	75	2,95	25 - 100	0,98 - 3,94	1530	3440	✓	-	-	-
S 3000	95	3,74	25 - 100	0,98 - 3,94	2945	6621	✓	-	-	-

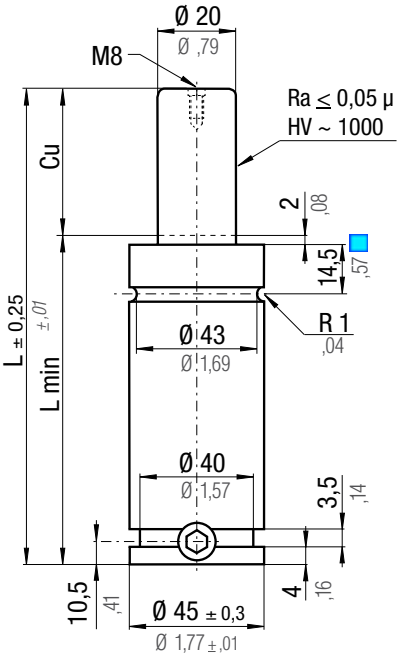
How to Order

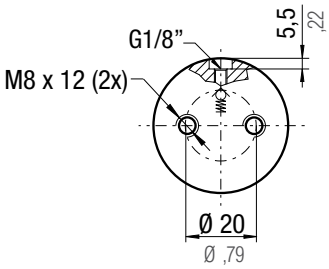
S 1500-050-A - N - E

Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

Collegabile con tubi, cilindro fornito scarico e senza valvola unidirezionale
Linkable with hoses, cylinder supplied without pressure and oneway valve
Anschlussfähig mit Leitungen, Zylinder geliefert ohne Druck und RückschlagVentil
Connectable avec tubes, ressort fourni sans pression ni valve unidirectionelle
Connectable con tubos, cilindro suministrado sin presión y sin válvula unidireccional
Acompláveis com tubos, cilindro fornecidos sem pressão e sem válvula unidireccional

Collegabile EASY MANIFOLD, fornito scarico + guarnizione di collegamento
Linkable EASY MANIFOLD, supplied without pressure + connecting seal
Anschlussfähig EASY MANIFOLD, geliefert ohne Druck + Verbindungsdichtung
Connectable EASY MANIFOLD, fourni sans pression + joint de connexion
Connectable EASY MANIFOLD, suministrado sin presión + junta de connexión
Acompláveis EASY MANIFOLD, fornecidos sem pressão + vedantes de conexão



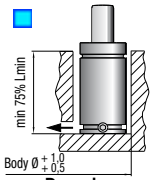


Info

* 100% Cu - Polytropic end forces

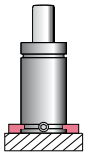
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*	~ 40 - 100 (at 20°C)	1,8 m/s	39BMS00500A

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
S 500 - 006 - A	6	*0,24*	62	*2,44*	56	*2,20*	470	*1057*	648	*1457*	7,1	*0,43*	0,51	*1,12*	-
S 500 - 013 - A	13	*0,51*	76	*2,99*	63	*2,48*			714	*1604*	14,4	*0,88*	0,56	*1,23*	-
S 500 - 019 - A	19	*0,75*	88	*3,46*	69	*2,72*			749	*1683*	20,6	*1,26*	0,60	*1,32*	-
S 500 - 025 - A	25	*0,98*	100	*3,94*	75	*2,95*			772	*1736*	26,9	*1,64*	0,65	*1,43*	-
S 500 - 038 - A	38	*1,50*	126	*4,96*	88	*3,46*	150 bar *2175 psi*		802	*1804*	40,4	*2,46*	0,74	*1,63*	-
S 500 - 050 - A	50	*1,97*	150	*5,91*	100	*3,94*			819	*1840*	52,9	*3,23*	0,83	*1,83*	-
S 500 - 063 - A	63	*2,48*	176	*6,93*	113	*4,45*			786	*1767*	66,4	*4,05*	0,96	*2,12*	-
S 500 - 080 - A	80	*3,15*	210	*8,27*	130	*5,12*	± 5% + 20 °C *+68 °F*		799	*1797*	84,1	*5,13*	0,99	*2,18*	-
S 500 - 100 - A	100	*3,94*	250	*9,84*	150	*5,91*			813	*1828*	104,9	*6,40*	1,14	*2,51*	-
S 500 - 125 - A	125	*4,92*	300	*11,81*	175	*6,89*			825	*1855*	130,7	*7,97*	1,32	*2,91*	-

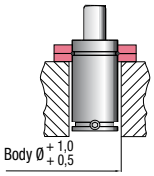


Drop-in

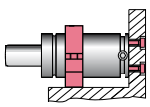
Bottom mount
FB 45 - FBA 45
FBB 45



FS2 45 - FT 45
FS2A 45 - FTP 45



FC 45 A- FCQ 45 A



FSA 45 - FSD 45

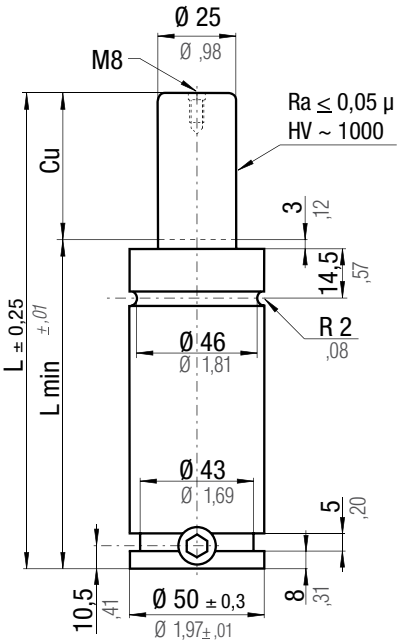
HOW TO ORDER

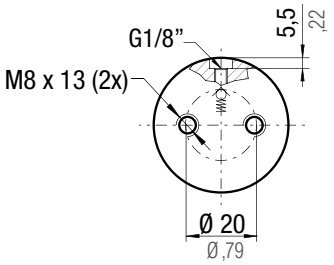
(10 pcs) S 500-050-A

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

B8 3180 220 000 003(MB)			
EM24.54.700 (Renault)			

PED 97/23/EC





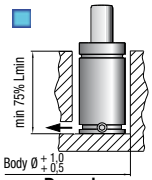
Info

* 100% Cu - Polytropic end forces

page 210

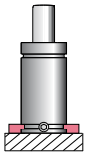
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	4,91 cm² *0,761 in²*	~ 30 - 80 (at 20°C)	1,8 m/s	39BMS00750A

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0		~Kg	~lb	CE Cat.
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*			
S 750 - 006 - A	6	*0,24*	62	*2,44*	56	*2,20*			1078	*2424*	39,5	*2,41*	0,59	*1,30*	-
S 750 - 013 - A	13	*0,51*	76	*2,99*	63	*2,48*			1245	*2798*	49,7	*3,03*	0,65	*1,43*	-
S 750 - 019 - A	19	*0,75*	88	*3,46*	69	*2,72*	740	*1664*	1330	*2991*	58,5	*3,57*	0,70	*1,54*	-
S 750 - 025 - A	25	*0,98*	100	*3,94*	75	*2,95*			1388	*3121*	67,2	*4,10*	0,76	*1,68*	-
S 750 - 038 - A	38	*1,50*	126	*4,96*	88	*3,46*	150 bar		1466	*3295*	86,2	*5,26*	0,80	*1,76*	-
S 750 - 050 - A	50	*1,97*	150	*5,91*	100	*3,94*	*2175 psi*		1509	*3391*	103,7	*6,33*	1,00	*2,20*	-
S 750 - 063 - A	63	*2,48*	176	*6,93*	113	*4,45*			1539	*3461*	122,6	*7,48*	1,10	*2,43*	-
S 750 - 080 - A	80	*3,15*	210	*8,27*	130	*5,12*	± 5%		1566	*3521*	147,4	*8,99*	1,70	*3,75*	-
S 750 - 100 - A	100	*3,94*	250	*9,84*	150	*5,91*	+ 20 °C	*+68 °F*	1588	*3569*	176,6	*10,77*	1,96	*4,32*	-
S 750 - 125 - A	125	*4,92*	300	*11,81*	175	*6,89*			1606	*3610*	213,0	*12,99*	2,07	*4,56*	-

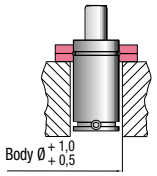


Drop-in

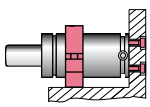
Bottom mount
FB 50 - FBA 50
FBB 50



FS2 50 - FT 50
FS2A 50 - FTP 50



FC 50 A- FCQ 50 A

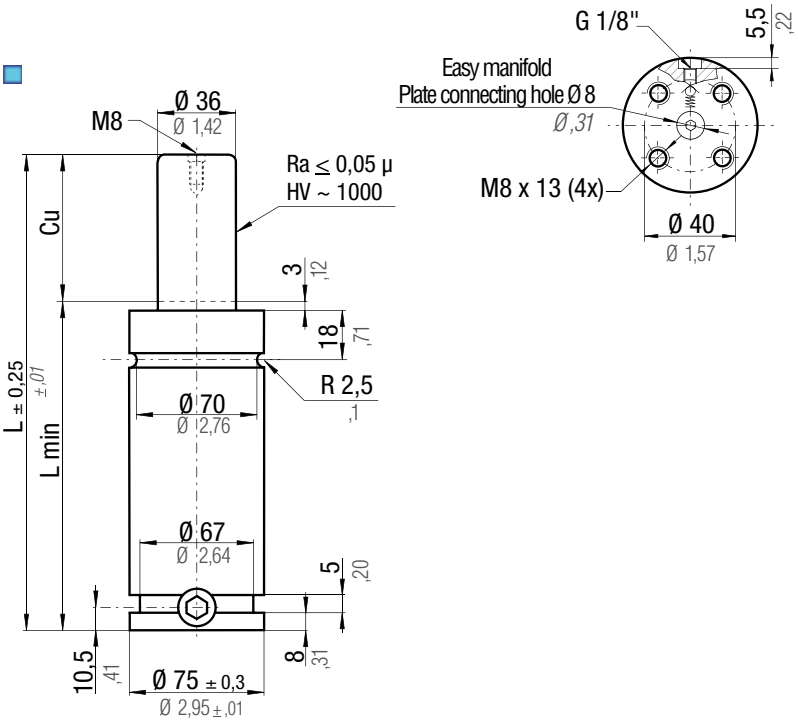


FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) S 750-050-A

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



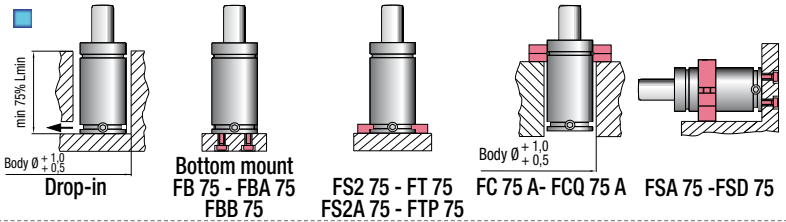
Info

* 100% Cu - Polytropic end forces

page 210

N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	10,18 cm² *1,578 in²*	~ 20 - 80 (at 20°C)	1,8 m/s	39BMS01500A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
S 1500 - 025 - A	25	*0,98*	110	*4,33*	85	*3,35*	1530	*3440*	2651	*5960*	81,3	*4,96*	1,93	*4,25*	-
S 1500 - 038 - A	38	*1,50*	136	*5,35*	98	*3,86*			2798	*6290*	123,5	*7,53*	2,18	*4,81*	-
S 1500 - 050 - A	50	*1,97*	160	*6,30*	110	*4,33*	150 bar *2175 psi*		2880	*6476*	162,4	*9,91*	3,64	*8,02*	-
S 1500 - 063 - A	63	*2,48*	186	*7,32*	123	*4,84*			2941	*6611*	204,5	*12,47*	3,91	*8,62*	-
S 1500 - 080 - A	80	*3,15*	220	*8,66*	140	*5,51*	± 5%		2994	*6731*	259,7	*15,84*	4,28	*9,44*	-
S 1500 - 100 - A	100	*3,94*	260	*10,24*	160	*6,30*	+ 20 °C *+68 °F*		3036	*6826*	324,5	*19,79*	4,72	*10,41*	-



Drop-in

Bottom mount
FB 75 - FBA 75
FBB 75

FS2 75 - FT 75
FS2A 75 - FTP 75

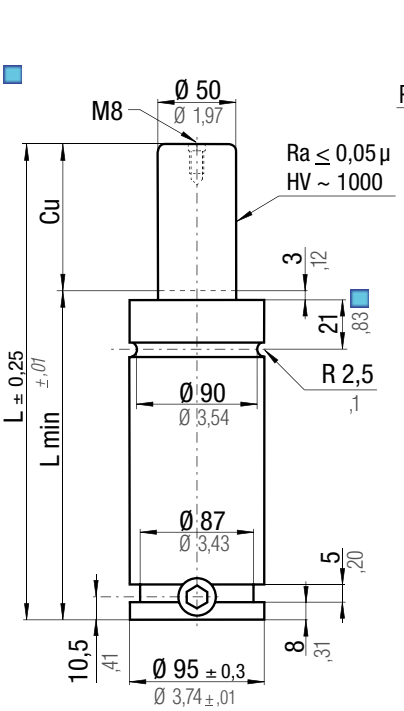
FC 75 A- FCQ 75 A

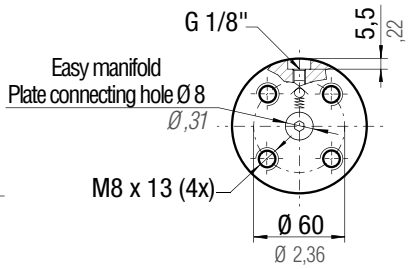
FSA 75 -FSD 75

HOW TO ORDER

(10 pcs) S 1500-050-A
(10 pcs) S 1500-050-A-N
(10 pcs) S 1500-050-A-E

B8 3180 220 000 003(MB)			
EM24.54.700 (Renault)			





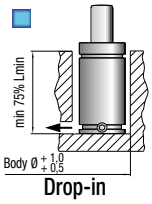
Info

* 100% Cu - Polytropic end forces

page 210

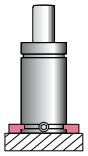
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	19,63 cm² *3,043 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMS03000A

CODE	Cu		L		L min		Fo Initial force		F1 End force *		Vo				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
S 3000 - 025 - A	25	*0,98*	120	*4,72*	95	*3,74*	2945	*6621*	5995	*13477*	169,9	*10,36*	4,07	*8,97*	-
S 3000 - 038 - A	38	*1,50*	146	*5,75*	108	*4,25*			6391	*14368*	243,3	*14,84*	4,53	*9,99*	-
S 3000 - 050 - A	50	*1,97*	170	*6,69*	120	*4,72*	150 bar *2175 psi*		6612	*14865*	311,0	*18,97*	5,16	*11,38*	-
S 3000 - 063 - A	63	*2,48*	196	*7,72*	133	*5,24*			6773	*15227*	384,3	*23,44*	5,44	*11,99*	-
S 3000 - 080 - A	80	*3,15*	230	*9,06*	150	*5,91*	± 5%		6916	*15547*	480,3	*29,30*	6,05	*13,34*	-
S 3000 - 100 - A	100	*3,94*	270	*10,63*	170	*6,69*	+ 20 °C *+68 °F*		7028	*15800*	593,1	*36,18*	6,78	*14,95*	-

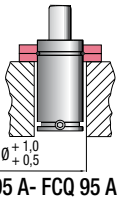


Drop-in

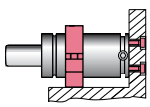
Bottom mount
FB 95 - FBA 95
FBB 95



FS2 95 - FT 95
FS2A 95 - FTP 95



FC 95 A- FCQ 95 A



FSA 95 -FSD 95

HOW TO ORDER

(10 pcs) S 3000-050-A
(10 pcs) S 3000-050-A-N
(10 pcs) S 3000-050-A-E

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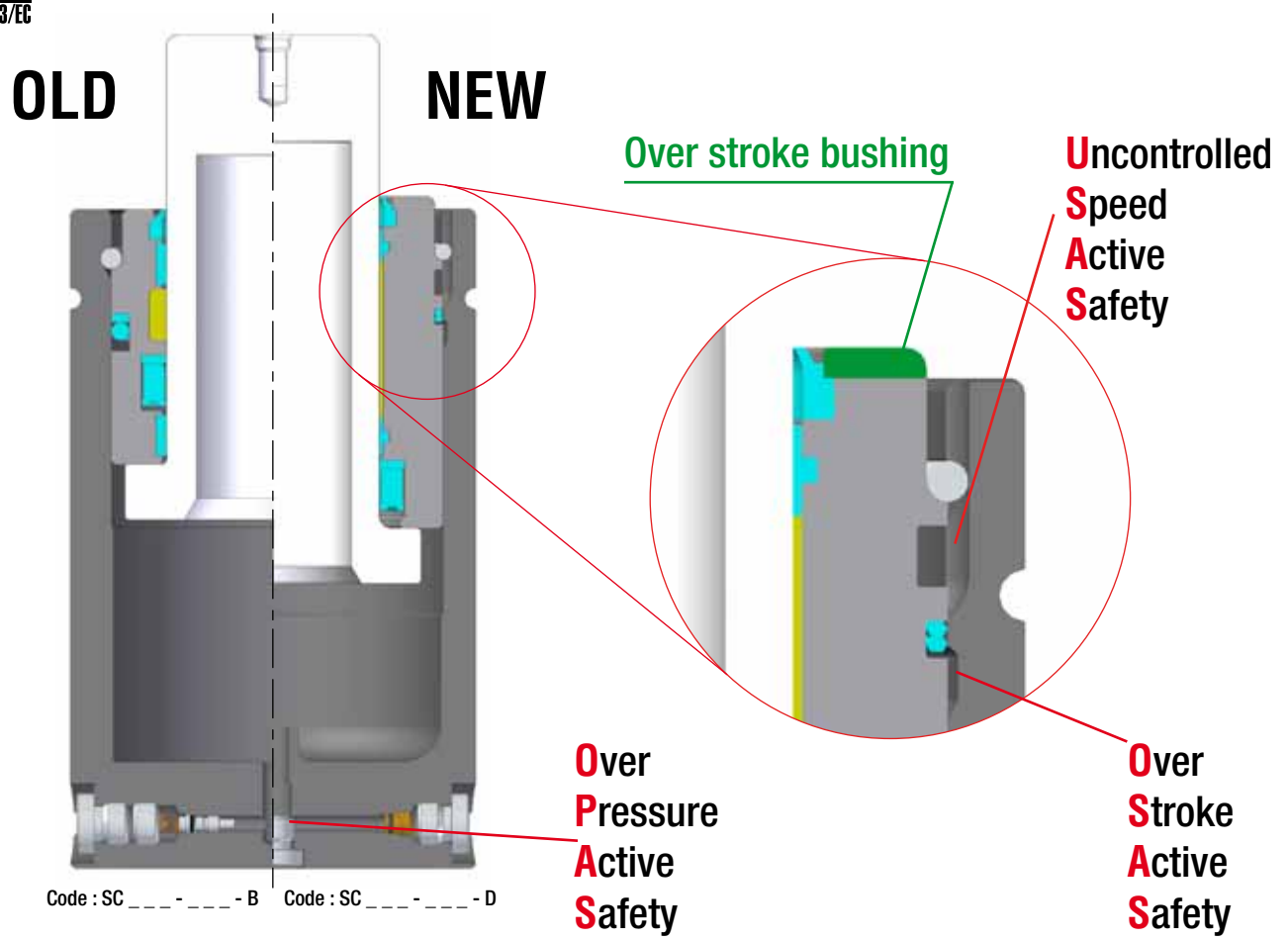
PED 97/23/EC



Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
SC 150	32	1,26	10 - 125	0,39 - 4,92	170	382	✓	✓	-	✓
SC 250	38	1,50	10 - 125	0,39 - 4,92	260	585	✓	✓	-	✓
SCF 250	M 38 X 1,5	M 38 X 1,5	10 - 125	0,39 - 4,92	260	585	✓	✓	-	✓
SC 500	45	1,77	13 - 160	0,51 - 6,30	470	1057	✓	✓	-	✓
SC 750	50	1,97	13 - 300	0,51 - 11,81	740	1664	✓	✓	-	✓
SC 1500	75	2,95	25 - 300	0,98 - 11,81	1530	3440	✓	✓	-	✓
SC 3000	95	3,74	25 - 300	0,98 - 11,81	2945	6621	✓	✓	-	✓
SC 5000	120	4,72	25 - 300	0,98 - 11,81	4980	11195	✓	✓	-	✓
SC 7500	150	5,91	25 - 300	0,98 - 11,81	7540	16950	✓	✓	-	✓
SC 10000	195	7,68	25 - 300	0,98 - 11,81	10600	23830	✓	✓	-	✓

How to Order

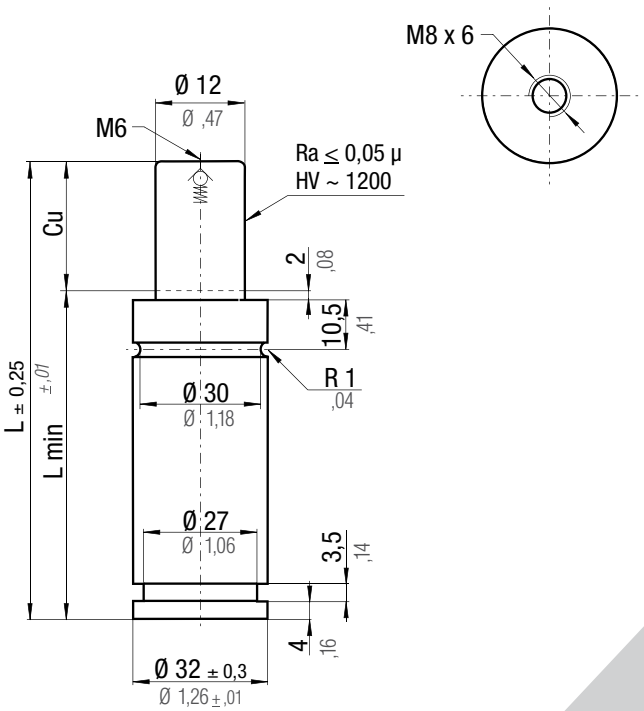
SC 1500-050-D - N - E

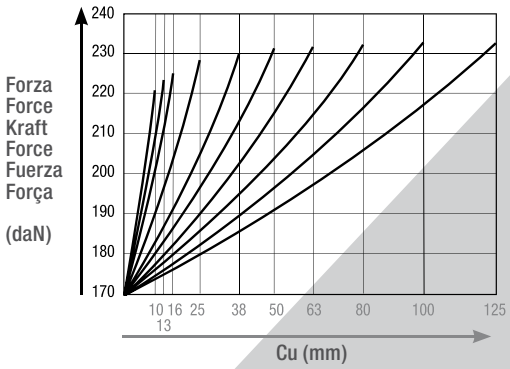
Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

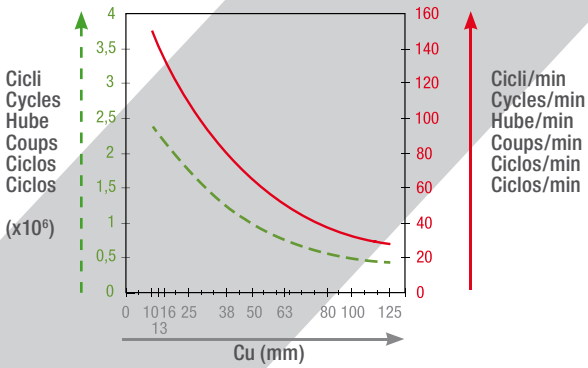
Collegabile con tubi, cilindro fornito scarico e senza valvola unidirezionale
Linkable with hoses, cylinder supplied without pressure and oneway valve
Anschlussfähig mit Leitungen, Zylinder geliefert ohne Druck und RückschlagVentil
Connectable avec tubes, ressort fourni sans pression ni valve unidirectionelle
Connectable con tubos, cilindro suministrado sin presión y sin válvula unidireccional
Acompláveis com tubos, cilindro fornecidos sem pressão e sem válvula unidireccional

Collegabile EASY MANIFOLD, fornito scarico + guarnizione di collegamento
Linkable EASY MANIFOLD, supplied without pressure + connecting seal
Anschlussfähig EASY MANIFOLD, geliefert ohne Druck + Verbindungsdichtung
Connectable EASY MANIFOLD, fourni sans pression + joint de connexion
Connectable EASY MANIFOLD, suministrado sin presión + junta de connexión
Acompláveis EASY MANIFOLD, fornecidos sem pressão + vedantes de conexão

ISO 11901 PED 97/23/EC

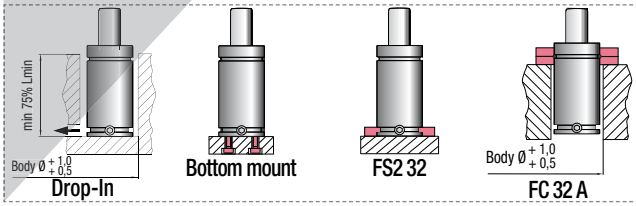






Max Speed	°F / °C		P max	P min	S		Maintenance kit	
1,8 m/s	32 - 176 / 0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	1,13 cm² *0,175 in²*		39BMSC00150B	

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
SC 150 - 010 - B	10	*0,39*	70	*2,76*	60	*2,36*			-	-	0,28	*0,62*	-
SC 150 - 013 - B	13	*0,51*	75,4	*2,97*	62,7	*2,47*			-	-	0,29	*0,64*	-
SC 150 - 016 - B	16	*0,63*	82	*3,23*	66	*2,60*	170	*382*	-	-	0,30	*0,66*	-
SC 150 - 025 - B	25	*0,98*	100	*3,94*	75	*2,95*			-	-	0,33	*0,73*	-
SC 150 - 038 - B	38	*1,50*	126	*4,96*	88	*3,46*	150 bar *2175 psi*		-	-	0,36	*0,79*	-
SC 150 - 050 - B	50	*1,97*	150	*5,91*	100	*3,94*			-	-	0,40	*0,88*	-
SC 150 - 063 - B	63	*2,48*	177	*6,97*	113,5	*4,47*	± 5% + 20 °C *+68 °F*		-	-	0,44	*0,97*	-
SC 150 - 080 - B	80	*3,15*	210	*8,27*	130	*5,12*			-	-	0,49	*1,08*	-
SC 150 - 100 - B	100	*3,94*	250	*9,84*	150	*5,91*			-	-	0,55	*1,21*	-
SC 150 - 125 - B	125	*4,92*	300	*11,81*	175	*6,89*			-	-	0,64	*1,41*	-



HOW TO ORDER

(10 pcs) SC150-050-B

SC
SCF

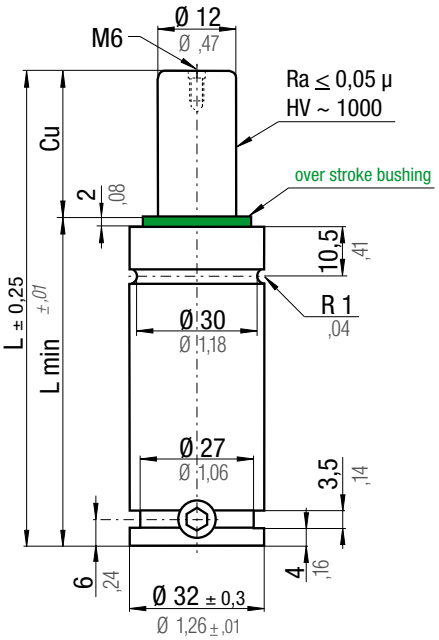
SC 150

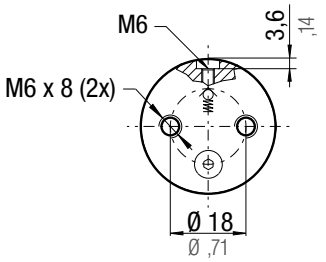
lifeplus concept

PED 97/23/EC

ISO 11901	B8 3180 220 000 001(MB)	39D 878 (VW)	
VDI 3003	E24.54.815.G (PSA)		
B2 4006 (BMW)	EM24.54.700 (Renault)		

SPECIAL SPRINGS



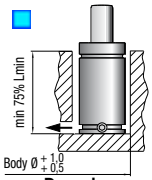


Info

* 100% Cu - Polytropic end forces

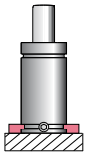
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	1,13 cm² *0,175 in²*	~ 80 - 100 (at 20°C)	1,8 m/s	39BMSC00150E

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
SC 150 - 010 - D	10	*0,39*	70	*2,76*	60	*2,36*			209	*470*	11,6	*0,71*	0,28	*0,62*	-
SC 150 - 013 - D	12,7	*0,51*	75,4	*2,97*	62,7	*2,47*			214	*481*	13,0	*0,79*	0,29	*0,64*	-
SC 150 - 016 - D	16	*0,63*	82	*3,23*	66	*2,60*	170	*382*	217	*488*	15,0	*0,92*	0,30	*0,66*	-
SC 150 - 025 - D	25	*0,98*	100	*3,94*	75	*2,95*	150 bar *2175 psi*		225	*506*	20,2	*1,23*	0,33	*0,73*	-
SC 150 - 038 - D	38	*1,50*	126	*4,96*	88	*3,46*			232	*522*	27,6	*1,68*	0,36	*0,79*	-
SC 150 - 050 - D	50	*1,97*	150	*5,91*	100	*3,94*			236	*531*	34,4	*2,10*	0,40	*0,88*	-
SC 150 - 063 - D	63,5	*2,48*	177	*6,97*	113,5	*4,47*	± 5% + 20 °C *+68 °F*		238	*535*	47,1	*2,87*	0,44	*0,97*	-
SC 150 - 080 - D	80	*3,15*	210	*8,27*	130	*5,12*			241	*542*	51,5	*3,14*	0,49	*1,08*	-
SC 150 - 100 - D	100	*3,94*	250	*9,84*	150	*5,91*			243	*546*	62,9	*3,84*	0,55	*1,21*	-
SC 150 - 125 - D	125	*4,92*	300	*11,81*	175	*6,89*			245	*551*	77,1	*4,70*	0,64	*1,41*	-

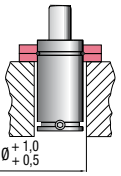


Drop-in

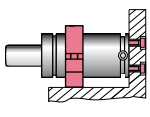
Bottom mount



FS2A 32
FS2B 32



FC 32 A- FCQ 32 A

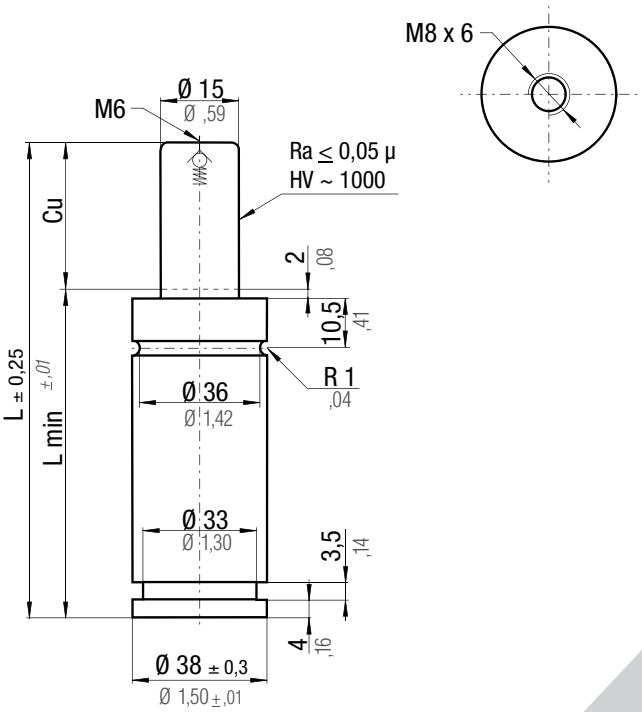


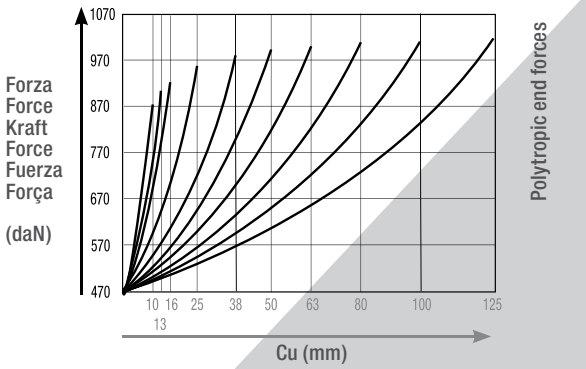
FSA 32 - FSD 32

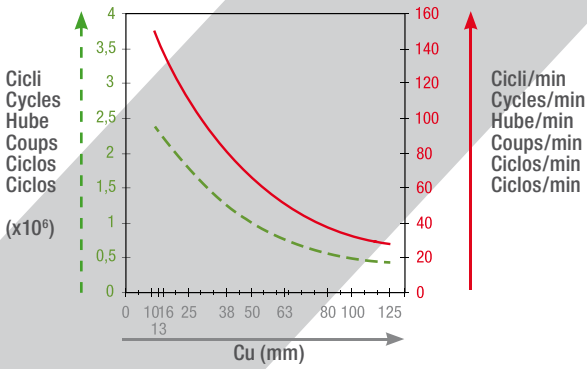
HOW TO ORDER

(10 pcs) SC 150-050-D
(10 pcs) SC 150-050-D-N

ISO 11901 PED 97/23/EC



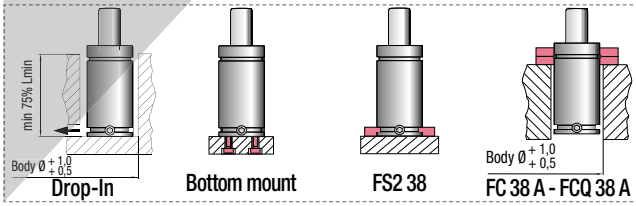




Max Speed	°F / °C		P max	P min	S		Maintenance kit	
1,8 m/s	32 - 176 / 0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	1,77 cm² *0,274 in²*		39BMSC00250B	

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo daN	Fo lb	Vo cm³	Vo in³	~Kg	~lb	CODE
SC 250 - 010 - B	10	*0,39*	70	*2,76*	60	*2,36*			-	-	0,40	*0,88*	-
SC 250 - 013 - B	13	*0,51*	75,4	*2,97*	62,7	*2,47*			-	-	0,41	*0,90*	-
SC 250 - 016 - B	16	*0,63*	82	*3,23*	66	*2,60*	260	*585*	-	-	0,43	*0,95*	-
SC 250 - 025 - B	25	*0,98*	100	*3,94*	75	*2,95*			-	-	0,48	*1,06*	-
SC 250 - 038 - B	38	*1,50*	126	*4,96*	88	*3,46*	150 bar	*2175 psi*	-	-	0,54	*1,19*	-
SC 250 - 050 - B	50	*1,97*	150	*5,91*	100	*3,94*			-	-	0,60	*1,32*	-
SC 250 - 063 - B	63	*2,48*	177	*6,97*	113,5	*4,47*	± 5%		-	-	0,66	*1,46*	-
SC 250 - 080 - B	80	*3,15*	210	*8,27*	130	*5,12*	+ 20 °C	*+68 °F*	-	-	0,74	*1,63*	-
SC 250 - 100 - B	100	*3,94*	250	*9,84*	150	*5,91*			-	-	0,81	*1,79*	-
SC 250 - 125 - B	125	*4,92*	300	*11,81*	175	*6,89*			-	-	0,98	*2,16*	-

SC
SCF



HOW TO ORDER

(10 pcs) SC250-050-B

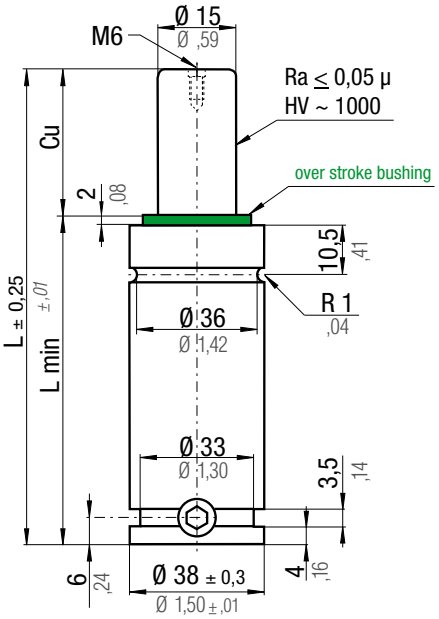
SC 250

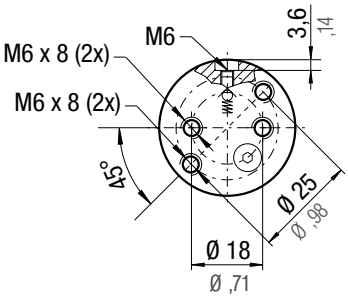
lifeplus concept

PED 97/23/EC

ISO 11901	B8 3180 220 000 001(MB)	39D 878 (VW)	
VDI 3003	E24.54.815.G (PSA)	K 32 S (Nissan)	
B2 4006 (BMW)	EM24.54.700 (Renault)		

SPECIAL SPRINGS



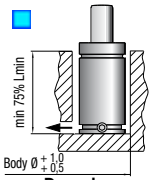


Info

* 100% Cu - Polytropic end forces

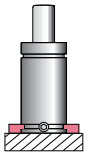
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	1,77 cm² *0,274 in²*	~ 80 - 100 (at 20°C)	1,8 m/s	39BMSC00250E

CODE	Cu		L		L min		Fo Initial force		F1 End force *		Vo				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
SC 250 - 010 - D	10	*0,39*	70	*2,76*	60	*2,36*			341	*767*	14,5	*0,88*	0,40	*0,88*	-
SC 250 - 013 - D	12,7	*0,50*	75,4	*2,97*	62,7	*2,47*			345	*776*	17,9	*1,09*	0,41	*0,90*	-
SC 250 - 016 - D	16	*0,63*	82	*3,23*	66	*2,60*	260	585	351	*789*	20,4	*1,24*	0,43	*0,95*	-
SC 250 - 019 - D	19	*0,75*	88	*3,46*	69	*2,72*			357	*803*	22,7	*1,38*	0,45	*0,99*	-
SC 250 - 025 - D	25	*0,98*	100	*3,94*	75	*2,95*	150 bar		366	*823*	27,3	*1,67*	0,48	*1,06*	-
SC 250 - 038 - D	38	*1,50*	126	*4,96*	88	*3,46*	*2175 psi*		379	*852*	37,4	*2,28*	0,54	*1,19*	-
SC 250 - 050 - D	50	*1,97*	150	*5,91*	100	*3,94*			387	*870*	46,6	*2,84*	0,60	*1,32*	-
SC 250 - 063 - D	63,5	*2,50*	177	*6,97*	113,5	*4,47*	± 5%		391	*879*	57,0	*3,48*	0,66	*1,46*	-
SC 250 - 080 - D	80	*3,15*	210	*8,27*	130	*5,12*	+ 20 °C *+68 °F*		397	*892*	69,3	*4,23*	0,74	*1,63*	-
SC 250 - 100 - D	100	*3,94*	250	*9,84*	150	*5,91*			401	*901*	85,1	*5,19*	0,81	*1,79*	-
SC 250 - 125 - D	125	*4,92*	300	*11,81*	175	*6,89*			404	*908*	104,4	*6,37*	0,98	*2,16*	-

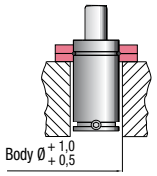


Drop-in

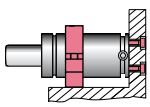
Bottom mount



FS2A 38 - FT 38
FS2B 38 - FTP 38



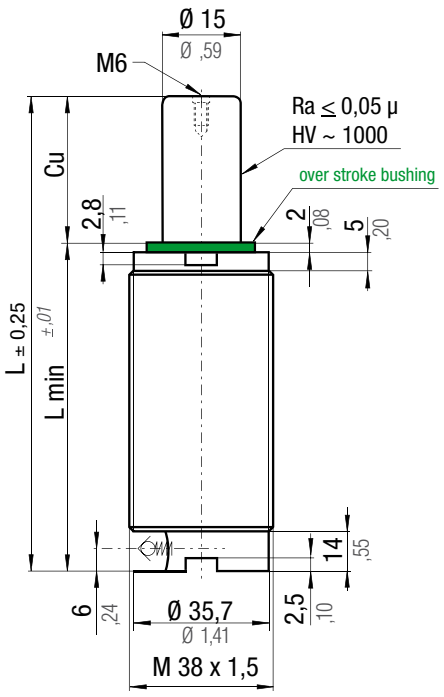
FC 38 A- FCQ 38 A

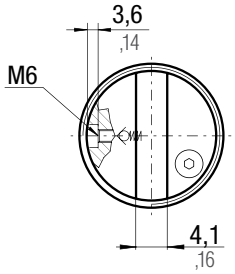


FSA 38 - FSD 38

HOW TO ORDER

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





Info

* 100% Cu - Polytropic end forces

Il nuovo codice sarà fornito solo ad esaurimento del vecchio

The new code will be supplied only when the old will be out of stock

Der neue Kode wird geliefert nur wenn der alte nicht mehr im Lager ist

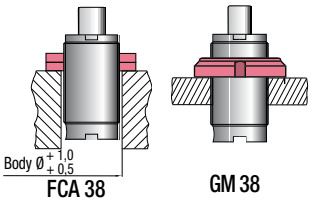
Le nouveau code sera fourni uniquement lorsque le vieux stock sera ecoulé

El nuevo código será suministrado sólo cuando el viejo está fuera de stock

O novo código irá ser fornecido apenas quando o antigo esgotar stock

N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	1,77 cm² *0,274 in²*	~ 80 - 100 (at 20°C)	1,8 m/s	39BMSC00250E

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	Cat.
SCF 250 - 010 - A	SCF 250 - 010 - D	10	*0,39*	70	*2,76*	60	*2,36*	260	*585*	341	*767*	14,5	*0,88*	0,37	*0,81*	-
SCF 250 - 013 - A	SCF 250 - 013 - D	12,7	*0,50*	75,4	*2,97*	62,7	*2,47*			345	*776*	17,9	*1,09*	0,38	*0,84*	-
SCF 250 - 016 - A	SCF 250 - 016 - D	16	*0,63*	82	*3,23*	66	*2,60*			351	*789*	20,4	*1,24*	0,39	*0,86*	-
-	SCF 250 - 019 - D	19	*0,75*	88	*3,46*	69	*2,72*			357	*803*	22,7	*1,38*	0,42	*0,92*	-
SCF 250 - 025 - A	SCF 250 - 025 - D	25	*0,98*	100	*3,94*	75	*2,95*	150 bar *2175 psi*		366	*823*	27,3	*1,67*	0,44	*0,97*	-
SCF 250 - 038 - A	SCF 250 - 038 - D	38	*1,50*	126	*4,96*	88	*3,46*			379	*852*	37,4	*2,28*	0,50	*1,10*	-
SCF 250 - 050 - A	SCF 250 - 050 - D	50	*1,97*	150	*5,91*	100	*3,94*			387	*870*	46,6	*2,84*	0,55	*1,21*	-
SCF 250 - 063 - A	SCF 250 - 063 - D	63,5	*2,50*	177	*6,97*	113,5	*4,47*	± 5% + 20 °C	*+68 °F*	391	*879*	57,0	*3,48*	0,63	*1,39*	-
SCF 250 - 080 - A	SCF 250 - 080 - D	80	*3,15*	210	*8,27*	130	*5,12*			397	*892*	69,3	*4,23*	0,70	*1,54*	-
SCF 250 - 100 - A	SCF 250 - 100 - D	100	*3,94*	250	*9,84*	150	*5,91*			401	*901*	85,1	*5,19*	0,75	*1,65*	-
SCF 250 - 125 - A	SCF 250 - 125 - D	125	*4,92*	300	*11,81*	175	*6,89*			404	*908*	104,4	*6,37*	0,93	*2,05*	-



FCA 38

GM 38

HOW TO ORDER

(10 pcs) SCF250-050-D

(10 pcs) SCF250-050-D-N

SC SCF

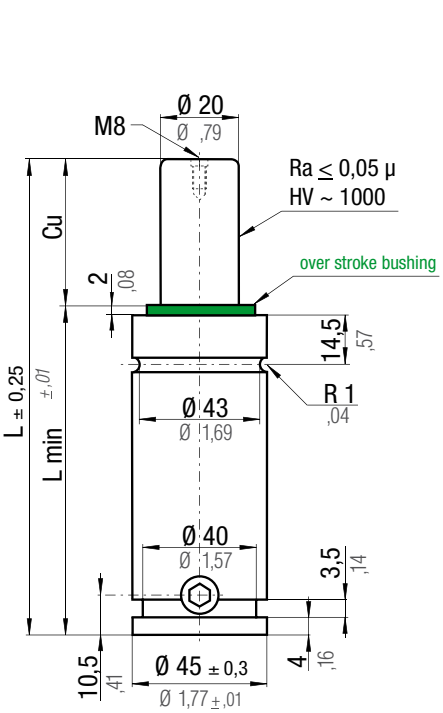
SC 500

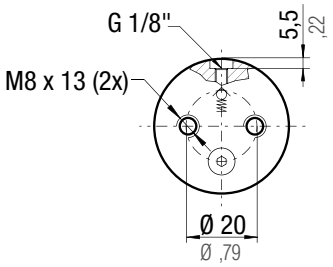
ISO 11901	B8 3180 220 000 001(MB)	39D 878 (VW)	
VDI 3003	E24.54.815.G (PSA)	K 32 S (Nissan)	
B2 4006 (BMW)	EM24.54.700 (Renault)		

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS





Info

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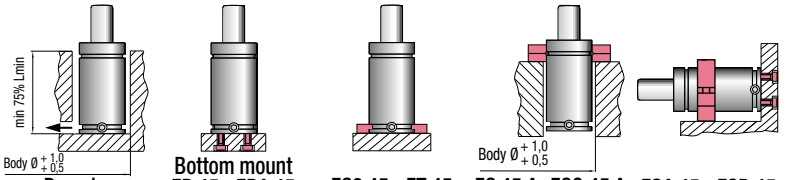
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*	~ 40 - 80 (at 20°C)	1,8 m/s	39BMSC00500D

CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
PHASING OUT	NEW	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
-	SC 500 - 010 - D	10	*0,39*	105	*4,13*	95	*3,74*			673	*1513*	18,0	*1,10*	0,90	*1,98*	-
SC 500 - 013 - B	SC 500 - 013 - D	12,7	*0,50*	110,4	*4,35*	97,7	*3,85*			702	*1578*	20,0	*1,22*	1,00	*2,20*	-
SC 500 - 025 - B	SC 500 - 025 - D	25	*0,98*	135	*5,31*	110	*4,33*	470	*1057*	759	*1706*	33,0	*2,01*	1,09	*2,40*	-
SC 500 - 038 - B	SC 500 - 038 - D	38	*1,50*	161	*6,34*	123	*4,84*	150 bar *2175 psi*		792	*1780*	46,0	*2,81*	1,20	*2,65*	-
SC 500 - 050 - B	SC 500 - 050 - D	50	*1,97*	185	*7,28*	135	*5,31*			810	*1821*	58,0	*3,54*	1,29	*2,84*	-
SC 500 - 063 - B	SC 500 - 063 - D	63,5	*2,50*	212	*8,35*	148,5	*5,85*			819	*1841*	72,0	*4,39*	1,38	*3,04*	-
SC 500 - 080 - B	SC 500 - 080 - D	80	*3,15*	245	*9,65*	165	*6,50*	± 5% + 20 °C *+68 °F*		834	*1875*	89,0	*5,43*	1,50	*3,31*	-
SC 500 - 100 - B	SC 500 - 100 - D	100	*3,94*	285	*11,22*	185	*7,28*			843	*1895*	109,0	*6,65*	1,64	*3,62*	-
SC 500 - 125 - B	SC 500 - 125 - D	125	*4,92*	335	*13,19*	210	*8,27*			850	*1911*	135,0	*8,24*	1,85	*4,08*	-
SC 500 - 160 - B	SC 500 - 160 - D	160	*6,30*	405	*15,94*	245	*9,65*			857	*1927*	170,0	*10,37*	2,10	*4,63*	-



Drop-in

Bottom mount
FB 45 - FBA 45
FBB 45

FS2 45 - FT 45
FS2A 45 - FTP 45

Body Ø + 1,0 + 0,5
FC 45 A- FCQ 45 A

FSA 45 - FSD 45

HOW TO ORDER

(10 pcs) SC 500-050-D

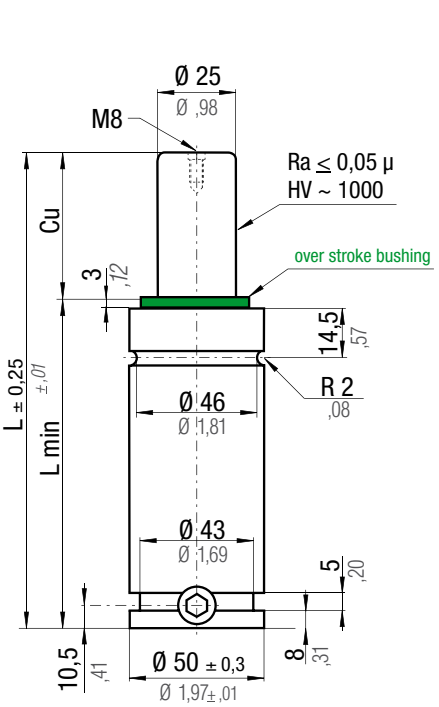
(10 pcs) SC 500-050-D-N

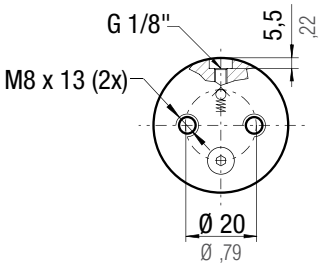
ISO 11901	W-DX35-6203 (Ford)	EM24.54.700 (Renault)	
VDI 3003	B8 3180 220 000 001(MB)	39D 878 (VW)	
B2 4006 (BMW)	E24.54.815.G (PSA)	K 32 S (Nissan)	

SC 750

PED 97/23/EC

lifeplus concept





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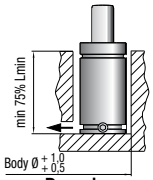
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	4,91 cm² *0,761 in²*	~ 15 - 50 (at 20°C)	1,8 m/s	39BMSC00750D

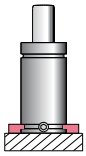
SC
SCF

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	Cat.
SC 750 - 013 - B	SC 750 - 013 - D	12,7	*0,50*	120,4	*4,74*	107,7	*4,24*			1016	*2284*	40,0	*2,44*	1,28	*2,82*	-
SC 750 - 025 - B	SC 750 - 025 - D	25	*0,98*	145	*5,71*	120	*4,72*			1122	*2522*	58,0	*3,54*	1,38	*3,04*	-
SC 750 - 038 - B	SC 750 - 038 - D	38	*1,50*	171	*6,73*	133	*5,24*	740	*1664*	1192	*2680*	77,0	*4,70*	1,48	*3,26*	-
SC 750 - 050 - B	SC 750 - 050 - D	50	*1,97*	195	*7,68*	145	*5,71*			1235	*2776*	95,0	*5,80*	1,58	*3,48*	-
SC 750 - 063 - B	SC 750 - 063 - D	63,5	*2,50*	222	*8,74*	158,5	*6,24*	150 bar		1263	*2839*	115,0	*7,02*	1,69	*3,73*	-
SC 750 - 080 - B	SC 750 - 080 - D	80	*3,15*	255	*10,04*	175	*6,89*	*2175 psi*		1299	*2920*	140,0	*8,54*	1,82	*4,00*	-
SC 750 - 100 - B	SC 750 - 100 - D	100	*3,94*	295	*11,61*	195	*7,68*	± 5%		1324	*2976*	169,0	*10,31*	1,99	*4,39*	-
SC 750 - 125 - B	SC 750 - 125 - D	125	*4,92*	345	*13,58*	220	*8,66*	+ 20 °C	*+68 °F*	1346	*3026*	206,0	*12,57*	2,19	*4,83*	-
SC 750 - 160 - B	SC 750 - 160 - D	160	*6,30*	415	*16,34*	255	*10,04*			1391	*3127*	252,0	*15,37*	2,52	*5,56*	-
SC 750 - 200 - B	SC 750 - 200 - D	200	*7,87*	495	*19,49*	295	*11,61*			1434	*3224*	302,0	*18,42*	2,92	*6,44*	-
SC 750 - 250 - B	SC 750 - 250 - D	250	*9,84*	595	*23,43*	345	*13,58*			1472	*3309*	365,0	*22,27*	3,40	*7,50*	-
SC 750 - 300 - B	SC 750 - 300 - D	300	*11,81*	695	*27,36*	395	*15,55*			1501	*3374*	428,0	*26,11*	3,90	*8,60*	-

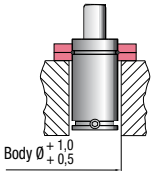


Drop-in

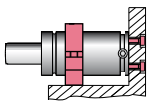
Bottom mount
FB 50 - FBA 50
FBB 50



FS2 50 - FT 50
FS2A 50 - FTP 50



FC 50 A- FCQ 50 A



FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) SC 750-050-D

(10 pcs) SC 750-050-D-N

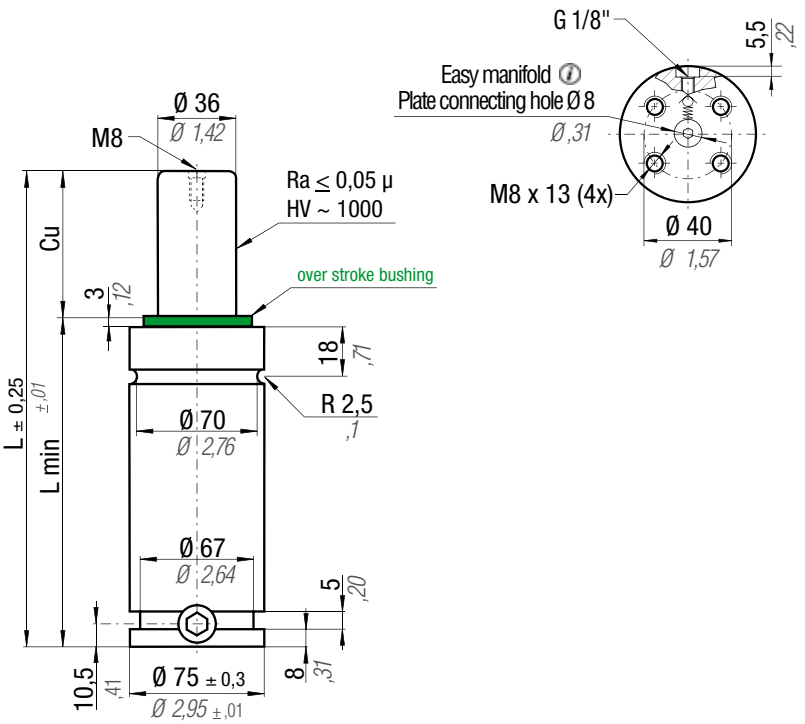
SC 1500

ISO 11901	W-DX35-6203 (Ford)	EM24.54.700 (Renault)	
VDI 3003	B8 3180 220 000 001(MB)	39D 878 (VW)	
B2 4006 (BMW)	E24.54.815.G (PSA)	K 32 S (Nissan)	

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

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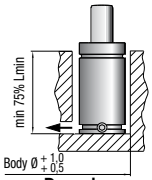
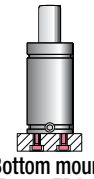
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	10,18 cm² 1,578 in²	~ 15 - 50 (at 20°C)	1,8 m/s	39BMSC01500D

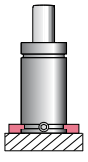
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
-	SC 1500 - 013 - D	13	0,51	135	5,31	122	4,80	1530	3440	2016	4532	84,0	5,12	3,26	7,19	-
SC 1500 - 025 - B	SC 1500 - 025 - D	25	0,98	160	6,30	135	5,31			2174	4887	118,0	7,20	3,47	7,65	-
SC 1500 - 038 - B	SC 1500 - 038 - D	38	1,50	186	7,32	148	5,83			2287	5141	152,0	9,27	3,66	8,07	-
SC 1500 - 050 - B	SC 1500 - 050 - D	50	1,97	210	8,27	160	6,30			2355	5294	183,0	11,16	3,84	8,47	-
SC 1500 - 063 - B	SC 1500 - 063 - D	63,5	2,50	237	9,33	173,5	6,83			2400	5395	218,0	13,30	4,05	8,93	-
SC 1500 - 080 - B	SC 1500 - 080 - D	80	3,15	270	10,63	190	7,48	150 bar 2175 psi		2455	5519	261,0	15,92	4,30	9,48	-
SC 1500 - 100 - B	SC 1500 - 100 - D	100	3,94	310	12,20	210	8,27			2495	5609	313,0	19,09	4,60	10,14	-
SC 1500 - 125 - B	SC 1500 - 125 - D	125	4,92	360	14,17	235	9,25			2529	5685	377,0	23,00	4,98	10,98	-
SC 1500 - 160 - B	SC 1500 - 160 - D	160	6,30	430	16,93	270	10,63	± 5% + 20 °C +68 °F		2562	5760	468,0	28,55	5,51	12,15	-
SC 1500 - 200 - B	SC 1500 - 200 - D	200	7,87	510	20,08	310	12,20			2592	5827	568,0	34,65	6,14	13,54	-
SC 1500 - 250 - B	SC 1500 - 250 - D	250	9,84	610	24,02	360	14,17			2652	5962	673,0	41,05	7,10	15,65	-
SC 1500 - 300 - B	SC 1500 - 300 - D	300	11,81	710	27,95	410	16,14			2696	6061	778,0	47,46	8,05	17,75	I



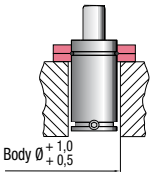
Drop-in



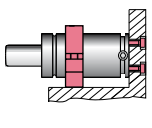
Bottom mount
FB 75 - FBA 75
FBB 75



FS2 75 - FT 75
FS2A 75 - FTP 75



FC 75 A- FCQ 75 A



FSA 75 -FSD 75

HOW TO ORDER

(10 pcs) SC 1500-050-D

(10 pcs) SC 1500-050-D-N

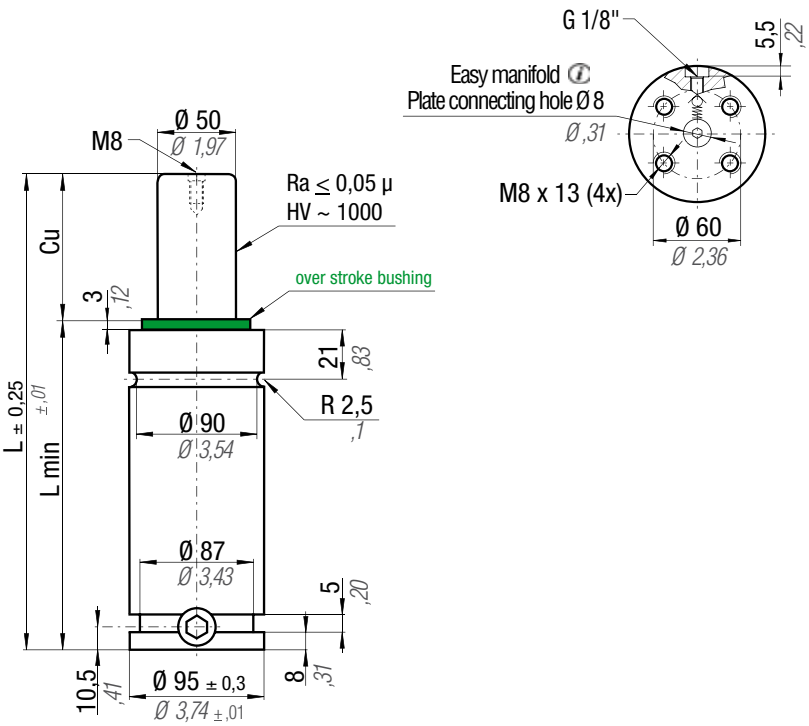
(10 pcs) SC 1500-050-D-E

ISO 11901	W-DX35-6203 (Ford)	EM24.54.700 (Renault)	
VDI 3003	B8 3180 220 000 001(MB)	39D 878 (VW)	
B2 4006 (BMW)	E24.54.815.G (PSA)	K 32 S (Nissan)	

SC 3000

PED 97/23/EC

lifeplus concept



Info

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page 210

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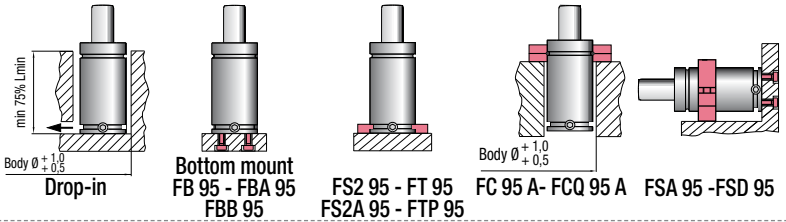
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	19,63 cm² 3,043 in²	~ 15 - 50 (at 20°C)	1,8 m/s	39BMSC03000D

SC
SCF

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
-	SC 3000 - 013 - D	13	0,51	145	5,71	132	5,20			3917	8806	156,0	9,52	5,65	12,46	-
SC 3000 - 025 - B	SC 3000 - 025 - D	25	0,98	170	6,69	145	5,71			4286	9635	212,0	12,93	6,00	13,23	-
SC 3000 - 038 - B	SC 3000 - 038 - D	38	1,50	196	7,72	158	6,22			4559	10249	265,0	16,17	6,29	13,87	-
SC 3000 - 050 - B	SC 3000 - 050 - D	50	1,97	220	8,66	170	6,69	2945	6621	4732	10638	315,0	19,22	6,57	14,48	-
SC 3000 - 063 - B	SC 3000 - 063 - D	63,5	2,50	247	9,72	183,5	7,22			4852	10908	372,0	22,69	6,90	15,21	-
SC 3000 - 080 - B	SC 3000 - 080 - D	80	3,15	280	11,02	200	7,87	150 bar 2175 psi		4997	11234	439,0	26,78	7,30	16,09	-
SC 3000 - 100 - B	SC 3000 - 100 - D	100	3,94	320	12,60	220	8,66			5105	11476	522,0	31,84	7,78	17,15	-
SC 3000 - 125 - B	SC 3000 - 125 - D	125	4,92	370	14,57	245	9,65	± 5% + 20 °C +68 °F		5200	11690	625,0	38,13	8,38	18,47	-
SC 3000 - 160 - B	SC 3000 - 160 - D	160	6,30	440	17,32	280	11,02			5292	11897	770,0	46,97	9,22	20,33	I
SC 3000 - 200 - B	SC 3000 - 200 - D	200	7,87	520	20,47	320	12,60			5362	12054	936,0	57,10	10,19	22,47	II
SC 3000 - 250 - B	SC 3000 - 250 - D	250	9,84	620	24,41	370	14,57			5424	12194	1142,0	69,66	11,40	25,13	II
SC 3000 - 300 - B	SC 3000 - 300 - D	300	11,81	720	28,35	420	16,54			5525	12421	1318,0	80,40	12,84	28,31	II



Drop-in | Bottom mount FB 95 - FBA 95 FBB 95 | FS2 95 - FT 95 FS2A 95 - FTP 95 | FC 95 A- FCQ 95 A | FSA 95 -FSD 95

HOW TO ORDER

(10 pcs) SC 3000-050-D

(10 pcs) SC 3000-050-D-N

(10 pcs) SC 3000-050-D-E

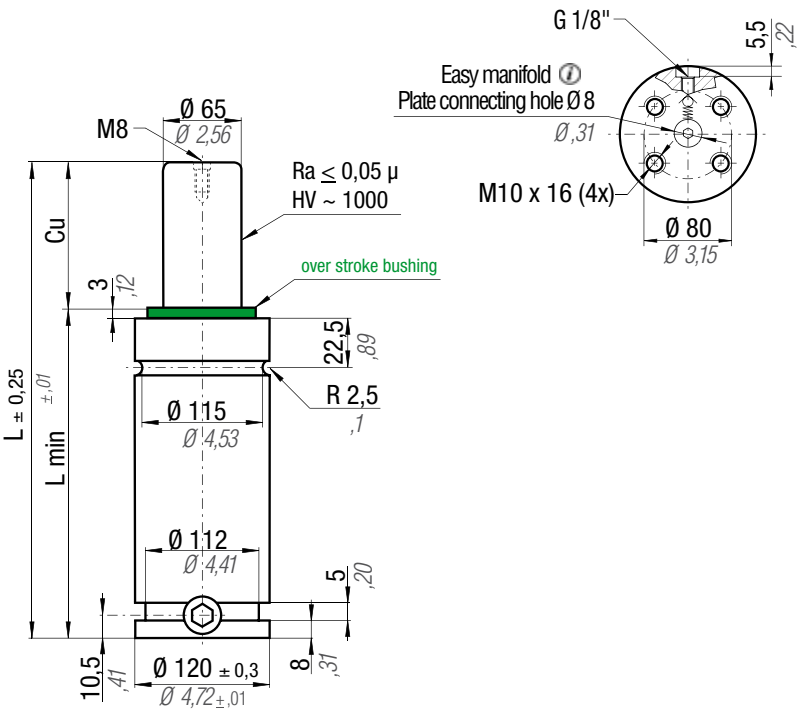
SC 5000

ISO 11901	W-DX35-6203 (Ford)	EM24.54.700 (Renault)	
VDI 3003	B8 3180 220 000 001(MB)	39D 878 (VW)	
B2 4006 (BMW)	E24.54.815.G (PSA)	K 32 S (Nissan)	

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

page 210

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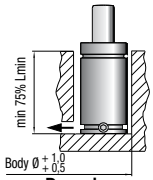
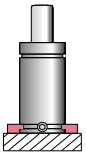
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	33,18 cm² 5,143 in²	~ 15 - 50 (at 20°C)	1,8 m/s	39BMSC05000D

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	Fo Initial force daN	Fo lb	F1 End force * daN	F1 lb	Vo cm³	Vo in³	~Kg	~lb	CE Cat.
SC 5000 - 025 - B	SC 5000 - 025 - D	25	0,98	190	7,48	165	6,50			7148	16069	370,0	22,57	11,07	24,41	-
SC 5000 - 038 - B	SC 5000 - 038 - D	38	1,50	216	8,50	178	7,01			7657	17214	460,0	28,06	11,60	25,57	-
SC 5000 - 050 - B	SC 5000 - 050 - D	50	1,97	240	9,45	190	7,48			7994	17971	530,0	32,33	12,08	26,63	-
SC 5000 - 063 - B	SC 5000 - 063 - D	63,5	2,50	267	10,51	203,5	8,01	4980	11195	8277	18607	610,0	37,21	12,70	28,00	-
SC 5000 - 080 - B	SC 5000 - 080 - D	80	3,15	300	11,81	220	8,66	150 bar 2175 psi		8537	19192	720,0	43,92	13,28	29,28	-
SC 5000 - 100 - B	SC 5000 - 100 - D	100	3,94	340	13,39	240	9,45	± 5%		8768	19711	850,0	51,85	14,08	31,04	I
SC 5000 - 125 - B	SC 5000 - 125 - D	125	4,92	390	15,35	265	10,43	+ 20 °C +68 °F		8977	20181	1010,0	61,61	15,10	33,29	II
SC 5000 - 160 - B	SC 5000 - 160 - D	160	6,30	460	18,11	300	11,81			9181	20640	1230,0	75,03	16,50	36,38	II
SC 5000 - 200 - B	SC 5000 - 200 - D	200	7,87	540	21,26	340	13,39			9340	20997	1480,0	90,28	18,10	39,90	II
SC 5000 - 250 - B	SC 5000 - 250 - D	250	9,84	640	25,20	390	15,35			9477	21305	1800,0	109,80	20,10	44,31	II
SC 5000 - 300 - B	SC 5000 - 300 - D	300	11,81	740	29,13	440	17,32			9573	21521	2120,0	129,32	22,12	48,77	II

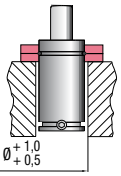


Drop-in

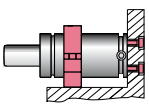
Bottom mount
FB 120 - FBA 120
FBB 120



FS2 120-FT 120
FS2A 120-FTP 120



FC 120 A- FCQ 120 A



FSA 120
FSD 120

HOW TO ORDER

(10 pcs) SC 5000-050-D

(10 pcs) SC 5000-050-D-N

(10 pcs) SC 5000-050-D-E

ISO 11901	W-DX35-6203 (Ford)	EM24.54.700 (Renault)	
VDI 3003	B8 3180 220 000 001(MB)	39D 878 (VW)	
B2 4006 (BMW)	E24.54.815.G (PSA)		

SC 7500

PED 97/23/EC

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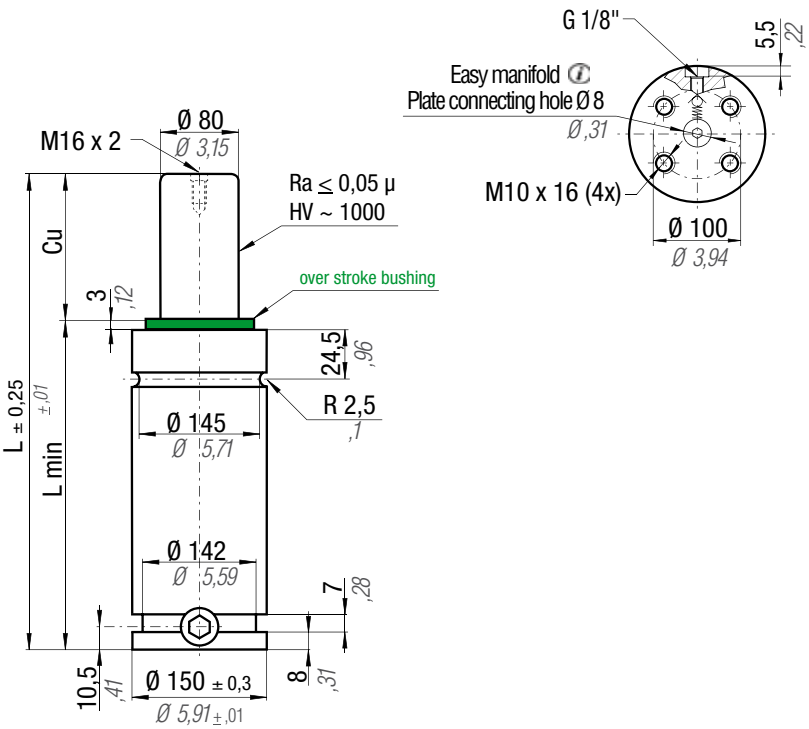

Info

* 100% Cu - Polytropic end forces

page 210

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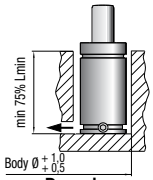
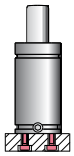
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	50,27 cm² 7,792 in²	~ 15 - 50 (at 20°C)	1,8 m/s	39BMSC07500D

SC SCF

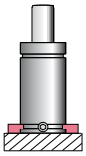
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
SC 7500 - 025 - B	SC 7500 - 025 - D	25	0,98	205	8,07	180	7,09			10470	23537	770,0	46,97	19,10	42,11	-
SC 7500 - 038 - B	SC 7500 - 038 - D	38	1,50	231	9,09	193	7,60			11190	25156	960,0	58,56	19,95	43,98	-
SC 7500 - 050 - B	SC 7500 - 050 - D	50	1,97	255	10,04	205	8,07			11680	26258	1140,0	69,54	20,70	45,64	I
SC 7500 - 063 - B	SC 7500 - 063 - D	63,5	2,50	282	11,10	218,5	8,60	7540	16950	12050	27089	1350,0	82,35	21,50	47,40	II
SC 7500 - 080 - B	SC 7500 - 080 - D	80	3,15	315	12,40	235	9,25	150 bar		12480	28056	1600,0	97,60	22,50	49,60	II
SC 7500 - 100 - B	SC 7500 - 100 - D	100	3,94	355	13,98	255	10,04	2175 psi		12830	28843	1900,0	115,90	23,70	52,25	II
SC 7500 - 125 - B	SC 7500 - 125 - D	125	4,92	405	15,94	280	11,02			13145	29551	2280,0	139,08	25,20	55,56	II
SC 7500 - 160 - B	SC 7500 - 160 - D	160	6,30	475	18,70	315	12,40	± 5%		13460	30259	2800,0	170,80	27,40	60,41	II
SC 7500 - 200 - B	SC 7500 - 200 - D	200	7,87	555	21,85	355	13,98	+ 20 °C	+68 °F	13700	30799	3410,0	208,01	29,80	65,70	II
SC 7500 - 250 - B	SC 7500 - 250 - D	250	9,84	655	25,79	405	15,94			13920	31293	4160,0	253,76	32,90	72,53	II
SC 7500 - 300 - B	SC 7500 - 300 - D	300	11,81	755	29,72	455	17,91			14070	31631	4920,0	300,12	35,90	79,15	II



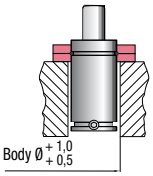
Drop-in



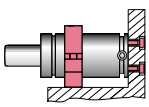
Bottom mount
FB 150 - FBA 150
FBB 150



FS2 150-FT 150
FS2A 150-FTP 150



FC 150 A- FCQ 150 A



FSA 150
FSD 150

HOW TO ORDER

(10 pcs) SC 7500-050-D
(10 pcs) SC 7500-050-D-N
(10 pcs) SC 7500-050-D-E

SC 10000

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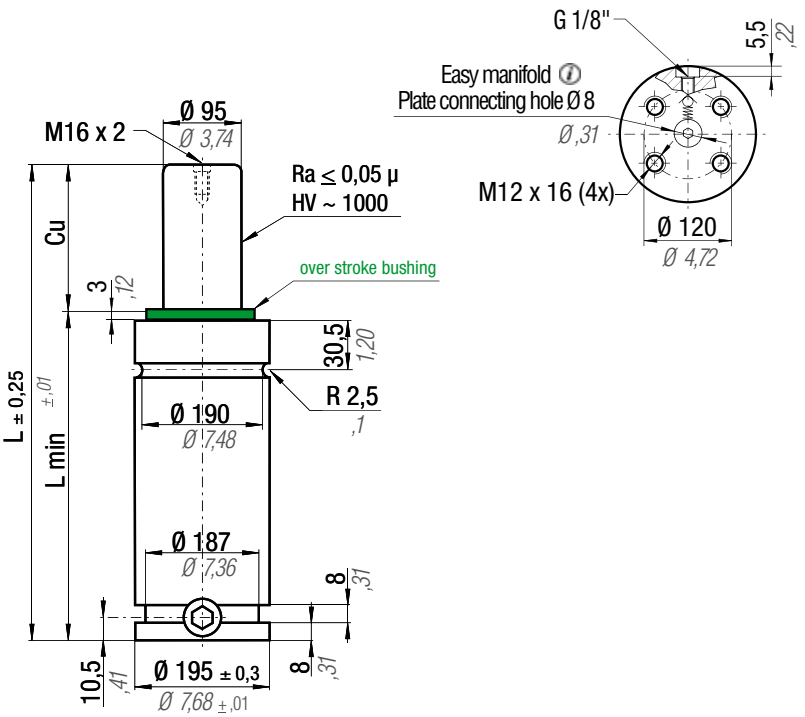
ISO 11901	EM24.54.700 (Renault)		
VDI 3003	39D 878 (VW)		
B8 3180 220 000 001(MB)			

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

page 210

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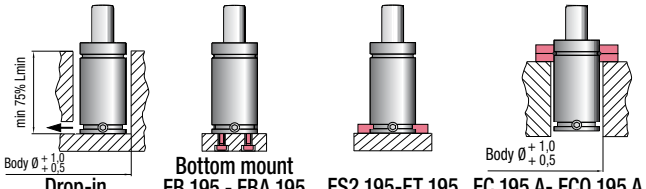
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	70,88 cm² *10,986 in²*	~ 15 - 50 (at 20°C)	1,8 m/s	39BMSC10000D

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CE Cat.
SC 10000 - 025 - C	SC 10000 - 025 - D	25	*0,98*	210	*8,27*	185	*7,28*	10600	*23830*	14820	*33317*	1307,0	*79,73*	35,09	*77,36*	I
SC 10000 - 038 - C	SC 10000 - 038 - D	38	*1,50*	236	*9,29*	198	*7,80*			15740	*35385*	1370,0	*83,57*	36,55	*80,58*	II
SC 10000 - 050 - C	SC 10000 - 050 - D	50	*1,97*	260	*10,24*	210	*8,27*			16340	*36734*	1640,0	*100,04*	37,89	*83,53*	II
SC 10000 - 063 - C	SC 10000 - 063 - D	63,5	*2,50*	287	*11,30*	223	*8,78*			16780	*37723*	1950,0	*118,95*	39,40	*86,86*	II
SC 10000 - 080 - C	SC 10000 - 080 - D	80	*3,15*	320	*12,60*	240	*9,45*			17290	*38869*	2330,0	*142,13*	41,24	*90,92*	II
SC 10000 - 100 - C	SC 10000 - 100 - D	100	*3,94*	360	*14,17*	260	*10,24*	150 bar *2175 psi*		17690	*39769*	2790,0	*170,19*	43,48	*95,86*	II
SC 10000 - 125 - C	SC 10000 - 125 - D	125	*4,92*	410	*16,14*	285	*11,22*			18050	*40578*	3360,0	*204,96*	46,28	*102,03*	II
SC 10000 - 160 - C	SC 10000 - 160 - D	160	*6,30*	480	*18,90*	320	*12,60*			18370	*41297*	4170,0	*254,37*	50,12	*110,50*	II
SC 10000 - 200 - C	SC 10000 - 200 - D	200	*7,87*	560	*22,05*	360	*14,17*	± 5% + 20 °C *+68 °F*		18800	*42264*	5020,0	*306,22*	55,15	*121,58*	II
SC 10000 - 250 - C	SC 10000 - 250 - D	250	*9,84*	660	*25,98*	410	*16,14*			19300	*43388*	6020,0	*367,22*	61,85	*136,36*	III
SC 10000 - 300 - C	SC 10000 - 300 - D	300	*11,81*	760	*29,92*	460	*18,11*			19670	*44220*	7030,0	*428,83*	68,54	*151,10*	III



HOW TO ORDER

(10 pcs) SC 10000-050-D

(10 pcs) SC 10000-050-D-N

(10 pcs) SC 10000-050-D-E

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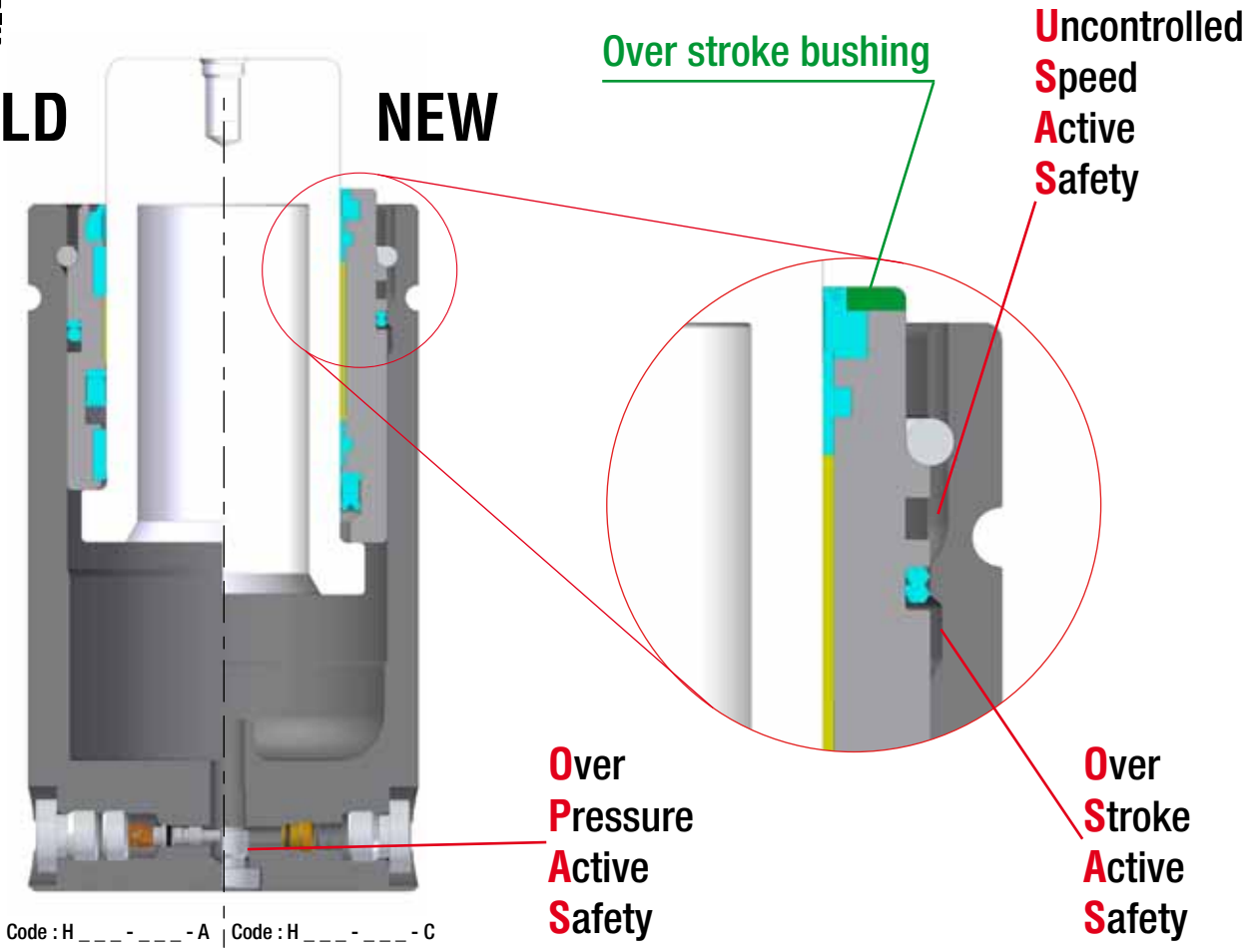
PED 97/23/EC



Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
H 300	32	1,26	10 - 125	0,39 - 4,92	300	674	✓	✓	-	✓
H 500	38	1,50	10 - 125	0,39 - 4,92	470	1057	✓	✓	-	✓
HF 500	M 38 X 1,5	M 38 X 1,5	10 - 125	0,39 - 4,92	470	1057	✓	✓	-	✓
H 700	45	1,77	13 - 160	0,51 - 6,30	680	1529	✓	✓	-	✓
HF 700	M 45 X 1,5	M 45 X 1,5	13 - 160	0,51 - 6,30	680	1529	✓	✓	-	✓
H 1000	50	1,97	13 - 300	0,51 - 11,81	1060	2383	✓	✓	-	✓
HF 1000	M 50 X 1,5	M 50 X 1,5	13 - 300	0,51 - 11,81	1060	2383	✓	✓	-	✓
H 2400	75	2,95	25 - 300	0,98 - 11,81	2385	5362	✓	✓	-	✓
H 4200	95	3,74	25 - 300	0,98 - 11,81	4240	9532	✓	✓	-	✓
H 6600	120	4,72	25 - 300	0,98 - 11,81	6630	14905	✓	✓	-	✓
H 18500	195	7,68	25 - 300	0,98 - 11,81	18400	41365	✓	✓	-	✓

How to Order

H 2400-050-C - N - E

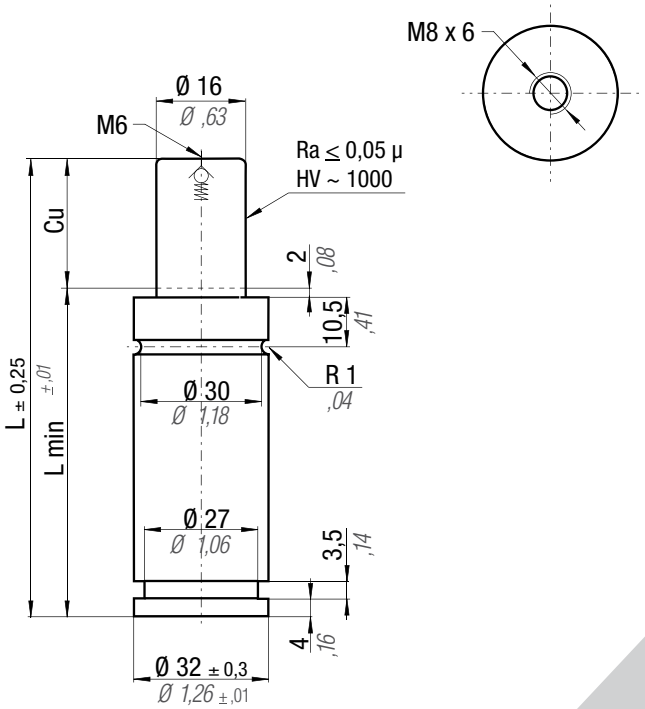
Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

Collegabile con tubi, fornito scarico e senza valvola unidirezionale
Linkable with hoses, supplied without pressure and oneway valve
Anschlussfähig mit Leitungen, geliefert ohne Druck und RückschlagVentil
Connectable avec tubes, fourni sans pression ni valve unidirectionelle
Connectable con tubos, suministrado sin presión y sin válvula unidireccional
Acompláveis com tubos, fornecidos sem pressão e sem válvula unidireccional

Collegabile EASY MANIFOLD, fornito scarico + guarnizione di collegamento
Linkable EASY MANIFOLD, supplied without pressure + connecting seal
Anschlussfähig EASY MANIFOLD, geliefert ohne Druck + Verbindungsdichtung
Connectable EASY MANIFOLD, fourni sans pression + joint de connexion
Connectable EASY MANIFOLD, suministrado sin presión + junta de connexión
Acompláveis EASY MANIFOLD, fornecidos sem pressão + vedantes de conexão

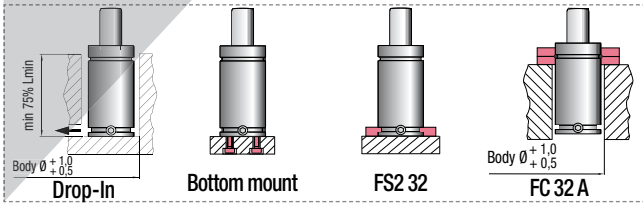
PHASING OUT see H 300 C

PED 97/23/EC



Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	2,01 cm² *0,312 in²*		39BMH00300B

CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
H 300 - 010 - B	10	*0,39*	70	*2,76*	60	*2,36*			-	-	0,29	*0,64*	-
H 300 - 013 - B	13	*0,51*	75,4	*2,97*	62,7	*2,47*			-	-	0,30	*0,66*	-
H 300 - 016 - B	16	*0,63*	82	*3,23*	66	*2,60*	300	*674*	-	-	0,31	*0,68*	-
H 300 - 025 - B	25	*0,98*	100	*3,94*	75	*2,95*			-	-	0,34	*0,75*	-
H 300 - 038 - B	38	*1,50*	126	*4,96*	88	*3,46*	150 bar *2175 psi*		-	-	0,38	*0,84*	-
H 300 - 050 - B	50	*1,97*	150	*5,91*	100	*3,94*			-	-	0,43	*0,95*	-
H 300 - 063 - B	63	*2,48*	177	*6,97*	113,5	*4,47*	± 5%		-	-	0,48	*1,06*	-
H 300 - 080 - B	80	*3,15*	210	*8,27*	130	*5,12*	+ 20 °C *+68 °F*		-	-	0,54	*1,19*	-
H 300 - 100 - B	100	*3,94*	250	*9,84*	150	*5,91*			-	-	0,61	*1,34*	-
H 300 - 125 - B	125	*4,92*	300	*11,81*	175	*6,89*			-	-	0,69	*1,52*	-



HOW TO ORDER

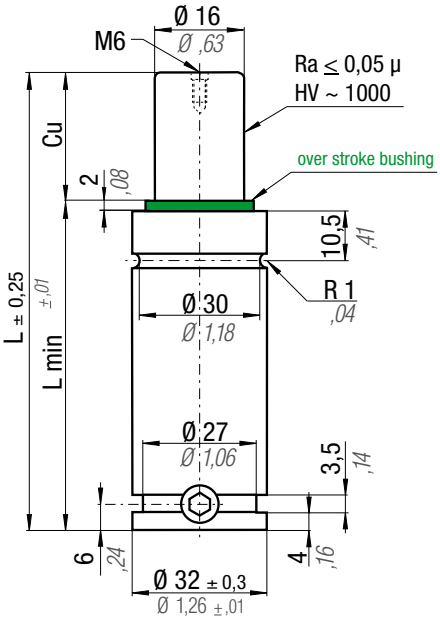
(10 pcs) H 300 - 050 - B

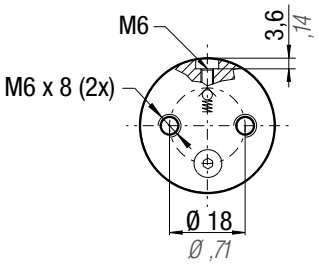
H
HF

H 300

lifeplus concept PED 97/23/EC

SPECIAL SPRINGS



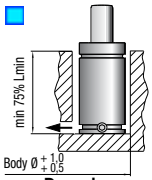


Info

* 100% Cu - Polytropic end forces

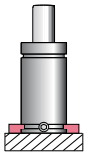
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	2,01 cm² *0,312 in²*	~ 30 ÷ 100 (at 20°C)	1,8 m/s	39BMRV00350B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
H 300 - 010 - C	10	*0,39*	70	*2,76*	60	*2,36*			392	*881*	6,6	*0,40*	0,29	*0,64*	-
H 300 - 013 - C	13	*0,51*	75,7	*2,98*	62,7	*2,47*			408	*917*	8,2	*0,50*	0,30	*0,66*	-
H 300 - 016 - C	16	*0,63*	82	*3,23*	66	*2,60*	300	*674*	420	*944*	9,9	*0,60*	0,31	*0,68*	-
H 300 - 025 - C	25	*0,98*	100	*3,94*	75	*2,95*			449	*1009*	15,0	*0,92*	0,34	*0,75*	-
H 300 - 038 - C	38	*1,50*	126	*4,96*	88	*3,46*	150 bar		477	*1072*	22,2	*1,35*	0,38	*0,84*	-
H 300 - 050 - C	50	*1,97*	150	*5,91*	100	*3,94*	*2175 psi*		494	*1111*	28,9	*1,76*	0,43	*0,95*	-
H 300 - 063 - C	63	*2,48*	176,5	*6,95*	113,5	*4,47*			505	*1135*	36,2	*2,21*	0,48	*1,06*	-
H 300 - 080 - C	80	*3,15*	210	*8,27*	130	*5,12*	± 5%		519	*1167*	45,7	*2,79*	0,54	*1,19*	-
H 300 - 100 - C	100	*3,94*	250	*9,84*	150	*5,91*	+ 20 °C *+68 °F*		529	*1189*	56,9	*3,47*	0,61	*1,34*	-
H 300 - 125 - C	125	*4,92*	300	*11,81*	175	*6,89*			538	*1209*	70,9	*4,32*	0,69	*1,52*	-

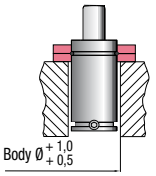


Drop-in

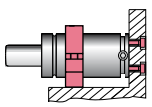
Bottom mount



FS2A 32
FS2B 32



FC 32 A- FCQ 32 A



FSA 32 - FSD 32

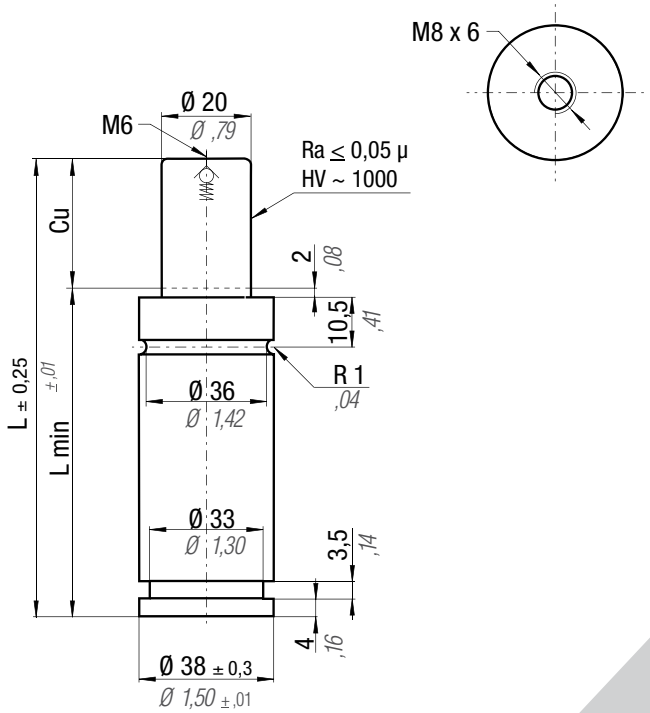
HOW TO ORDER

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

PHASING OUT see H 500 C

H 500

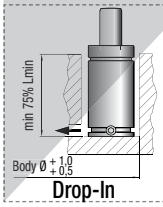
PED 97/23/EC



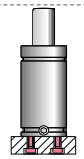
Max Speed	°F	°C		P max	P min	S		Maintenance kit
1,8 m/s	32 - 176	0 - 80	N_2	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*		39BMH00500B

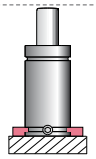
CODE	Cu		L		L min		Fo		Vo				CODE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
H 500 -010 - B	10	*0,39*	70	*2,76*	60	*2,36*			-	-	0,42	*0,93*	-
H 500 -013 - B	13	*0,51*	75,4	*2,97*	62,7	*2,47*			-	-	0,43	*0,95*	-
H 500 -016 - B	16	*0,63*	82	*3,23*	66	*2,60*	470	*1057*	-	-	0,45	*0,99*	-
H 500 -025 - B	25	*0,98*	100	*3,94*	75	*2,95*			-	-	0,50	*1,10*	-
H 500 -038 - B	38	*1,50*	126	*4,96*	88	*3,46*	150 bar		-	-	0,56	*1,23*	-
H 500 -050 - B	50	*1,97*	150	*5,91*	100	*3,94*	*2175 psi*		-	-	0,63	*1,39*	-
H 500 -063 - B	63	*2,48*	177	*6,97*	113,5	*4,47*			-	-	0,70	*1,54*	-
H 500 -080 - B	80	*3,15*	210	*8,27*	130	*5,12*	± 5%		-	-	0,79	*1,74*	-
H 500 -100 - B	100	*3,94*	250	*9,84*	150	*5,91*	+ 20 °C	*+68 °F*	-	-	0,89	*1,96*	-
H 500 -125 - B	125	*4,92*	300	*11,81*	175	*6,89*			-	-	1,08	*2,38*	-

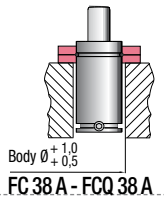
H
HF



Drop-In


Bottom mount


FS2 38



FC 38 A - FCQ 38 A

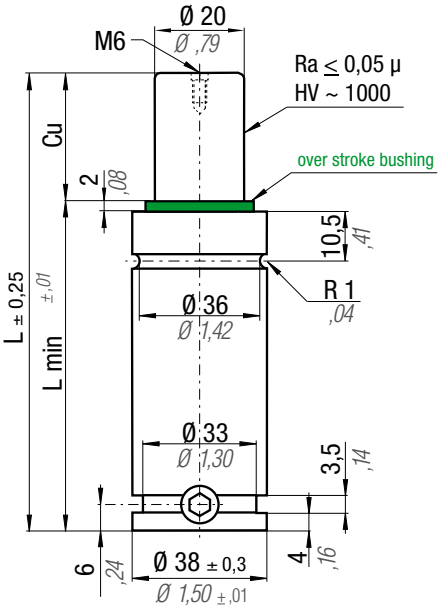
HOW TO ORDER

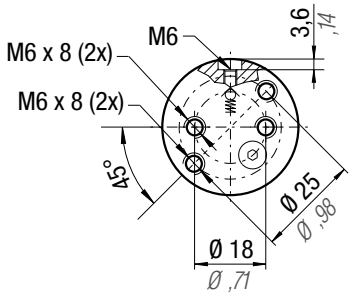
(10 pcs) H 500 - 050 - B

H 500

lifeplus concept PED 97/23/EC

SPECIAL SPRINGS



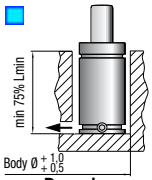


Info

* 100% Cu - Polytropic end forces

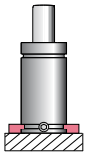
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*	~ 30 - 100 (at 20°C)	1,8 m/s	39BMRV00500B

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
H 500 - 010 - C	10	*0,39*	70	*2,76*	60	*2,36*			633	*1423*	8,7	*0,53*	0,42	*0,93*	-
H 500 - 013 - C	13	*0,51*	75,7	*2,98*	62,7	*2,47*			663	*1490*	10,9	*0,66*	0,43	*0,95*	-
H 500 - 016 - C	16	*0,63*	82	*3,23*	66	*2,60*	470	*1057*	686	*1542*	13,1	*0,80*	0,45	*0,99*	-
H 500 - 019 - C	19	*0,75*	88	*3,46*	69	*2,72*			707	*1589*	16,2	*0,99*	0,48	*1,06*	-
H 500 - 025 - C	25	*0,98*	100	*3,94*	75	*2,95*	150 bar		742	*1668*	19,7	*1,20*	0,50	*1,10*	-
H 500 - 038 - C	38	*1,50*	126	*4,96*	88	*3,46*	*2175 psi*		796	*1789*	29,3	*1,79*	0,56	*1,23*	-
H 500 - 050 - C	50	*1,97*	150	*5,91*	100	*3,94*			830	*1866*	38,1	*2,32*	0,63	*1,39*	-
H 500 - 063 - C	63	*2,48*	176,5	*6,95*	113,5	*4,47*	± 5%		853	*1918*	47,6	*2,90*	0,70	*1,54*	-
H 500 - 080 - C	80	*3,15*	210	*8,27*	130	*5,12*	+ 20 °C	*+68 °F*	881	*1981*	60,1	*3,67*	0,79	*1,74*	-
H 500 - 100 - C	100	*3,94*	250	*9,84*	150	*5,91*			902	*2028*	74,6	*4,55*	0,89	*1,96*	-
H 500 - 125 - C	125	*4,92*	300	*11,81*	175	*6,89*			920	*2068*	93,2	*5,69*	1,08	*2,38*	-

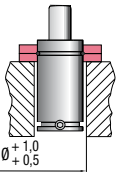


Drop-in

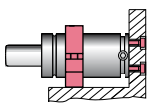
Bottom mount



FS2A 38 - FT 38
FS2B 38 - FTP 38



FC 38 A- FCQ 38 A

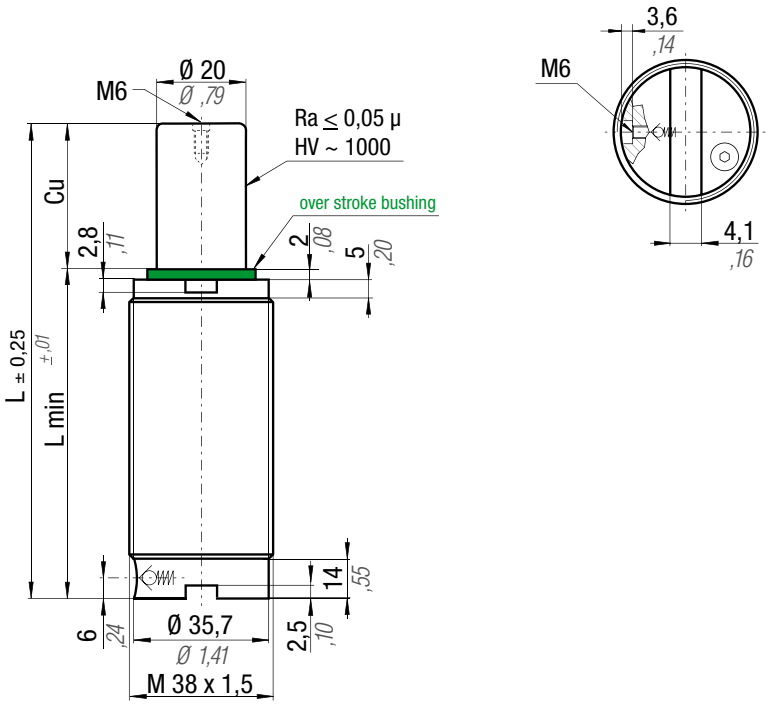


FSA 38 - FSD 38

HOW TO ORDER

(10 pcs) H 500-050-C

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



Info

* 100% Cu - Polytropic end forces

Il nuovo codice sarà fornito solo ad esaurimento del vecchio

The new code will be supplied only when the old will be out of stock

Der neue Kode wird geliefert nur wenn der alte nicht mehr im Lager ist

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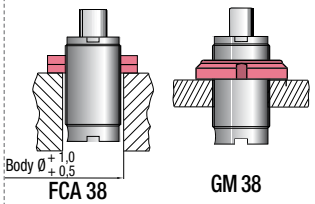
O novo código irá ser fornecido apenas quando o antigo esgotar stock

N_2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	3,14 cm² *0,487 in²*	~ 30 ÷ 100 (at 20°C)	1,8 m/s	39BMRV00500A

CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				
PHASING OUT	NEW	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	CE
HF 500 - 010 - A	HF 500 - 010 - C	10	*0,39*	70	*2,76*	60	*2,36*			633	*1423*	8,7	*0,53*	0,39	*0,86*	-
HF 500 - 013 - A	HF 500 - 013 - C	13	*0,51*	75,7	*2,98*	62,7	*2,47*			663	*1490*	10,9	*0,66*	0,40	*0,88*	-
HF 500 - 016 - A	HF 500 - 016 - C	16	*0,63*	82	*3,23*	66	*2,60*	470	*1057*	686	*1542*	13,1	*0,80*	0,42	*0,93*	-
-	HF 500 - 019 - C	19	*0,75*	88	*3,46*	69	*2,72*			707	*1589*	16,2	*0,99*	0,45	*0,99*	-
HF 500 - 025 - A	HF 500 - 025 - C	25	*0,98*	100	*3,94*	75	*2,95*			742	*1668*	19,7	*1,20*	0,48	*1,06*	-
HF 500 - 038 - A	HF 500 - 038 - C	38	*1,50*	126	*4,96*	88	*3,46*	150 bar *2175 psi*		796	*1789*	29,3	*1,79*	0,54	*1,19*	-
HF 500 - 050 - A	HF 500 - 050 - C	50	*1,97*	150	*5,91*	100	*3,94*			830	*1866*	38,1	*2,32*	0,59	*1,30*	-
HF 500 - 063 - A	HF 500 - 063 - C	63	*2,48*	176,5	*6,95*	113,5	*4,47*	± 5% + 20 °C *+68 °F*		853	*1918*	47,6	*2,90*	0,66	*1,46*	-
HF 500 - 080 - A	HF 500 - 080 - C	80	*3,15*	210	*8,27*	130	*5,12*			881	*1981*	60,1	*3,67*	0,76	*1,68*	-
HF 500 - 100 - A	HF 500 - 100 - C	100	*3,94*	250	*9,84*	150	*5,91*			902	*2028*	74,6	*4,55*	0,85	*1,87*	-
HF 500 - 125 - A	HF 500 - 125 - C	125	*4,92*	300	*11,81*	175	*6,89*			920	*2068*	93,2	*5,69*	1,05	*2,31*	-



FCA 38

GM 38

HOW TO ORDER

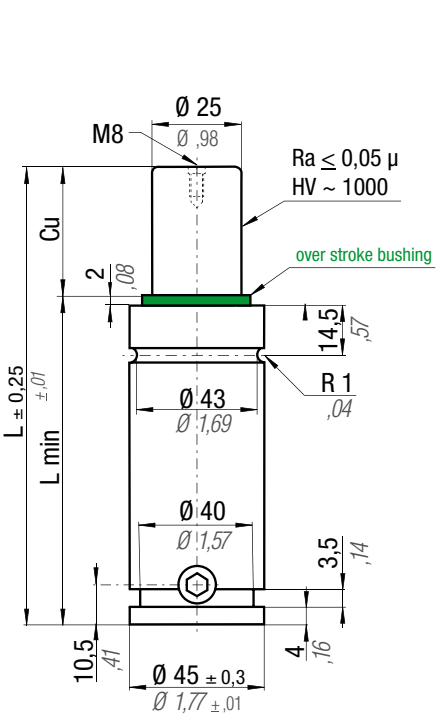
(10 pcs) HF 500-050-C

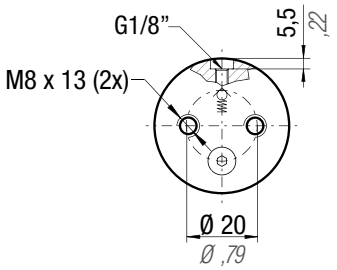
(10 pcs) HF 500-050-C-N

H 700

lifeplus concept

PED 97/23/EC





Info

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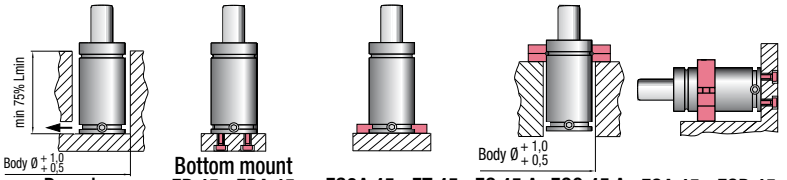
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	4,91 cm² *0,761 in²*	~ 20 ÷ 100 (at 20°C)	1,8 m/s	39BMRV00750B Cu 13 ÷ 80 39BMH00700C Cu 100 ÷ 160

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
-	H 700 - 010 - C	10	0,39	105	4,13	95	3,74			880	1978	60	3,66	0,65	1,43	-
H 700 - 013 - A	H 700 - 013 - C	12,7	0,50	110,4	4,35	97,7	3,85	740	1664	910	2046	64	3,90	0,69	1,52	-
H 700 - 025 - A	H 700 - 025 - C	25	0,98	135	5,31	110	4,33			1005	2259	79	4,82	0,77	1,70	-
H 700 - 038 - A	H 700 - 038 - C	38	1,50	161	6,34	123	4,84			1085	2439	96	5,86	0,86	1,90	-
H 700 - 050 - A	H 700 - 050 - C	50	1,97	185	7,28	135	5,31	150 bar *2175 psi*		1140	2563	111	6,77	0,94	2,07	-
H 700 - 063 - A	H 700 - 063 - C	63,5	2,50	212	8,35	148,5	5,85			1190	2675	128	7,81	1,03	2,27	-
H 700 - 080 - A	H 700 - 080 - C	80	3,15	245	9,65	165	6,50			1210	2720	158	9,64	1,14	2,51	-
H 700 - 100 - A	H 700 - 100 - C	100	3,94	285	11,22	185	7,28	± 5% + 20 °C *+68 °F*		1270	2855	181	11,04	1,51	3,33	-
H 700 - 125 - A	H 700 - 125 - C	125	4,92	335	13,19	210	8,27			1320	2967	213	12,99	1,68	3,70	-
H 700 - 160 - A	H 700 - 160 - C	160	6,30	405	15,94	245	9,65			1570	3530	217	13,24	1,92	4,23	-



Drop-in

Bottom mount
FB 45 - FBA 45
FBB 45

FS2A 45 - FT 45
FS2 45 - FTP 45

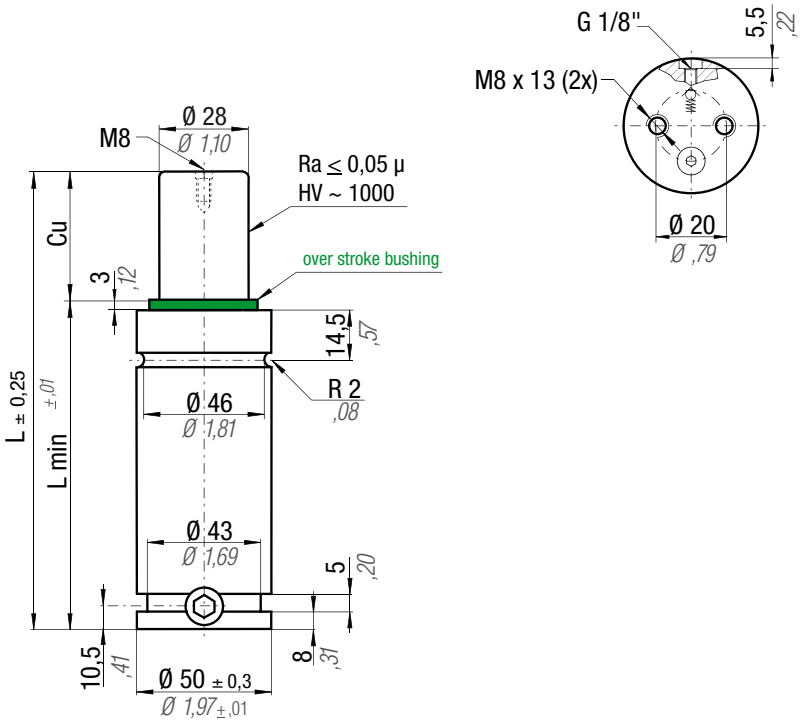
Body Ø + 1,0 + 0,5
FC 45 A- FCQ 45 A

FSA 45 - FSD 45

HOW TO ORDER

(10 pcs) H 700-050-C

(10 pcs) H 700-050-C-N



Info

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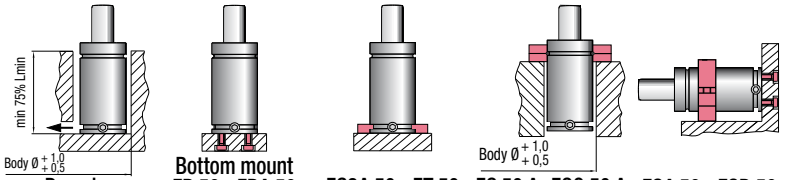
O novo código irá ser fornecido apenas quando o antigo esgotar stock

N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	6,15 cm² *0,953 in²*	~ 15 ÷ 100 (at 20°C)	1,8 m/s	39BMRV01000B Cu 13 ÷ 80 39BMH01000C Cu 100 ÷ 300

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	~lb	CE Cat.
H 1000 - 013 - A	H 1000 - 013 - C	12,7	*0,50*	120,4	*4,74*	107,7	*4,24*			1135	*2552*	80,0	*4,88*	0,97	*2,14*	-
H 1000 - 025 - A	H 1000 - 025 - C	25	*0,98*	145	*5,71*	120	*4,72*			1250	*2810*	100,0	*6,10*	1,08	*2,38*	-
H 1000 - 038 - A	H 1000 - 038 - C	38	*1,50*	171	*6,73*	133	*5,24*			1352	*3039*	120,0	*7,32*	1,19	*2,62*	-
H 1000 - 050 - A	H 1000 - 050 - C	50	*1,97*	195	*7,68*	145	*5,71*	920	*2068*	1426	*3206*	140,0	*8,54*	1,29	*2,84*	-
H 1000 - 063 - A	H 1000 - 063 - C	63	*2,48*	221	*8,74*	158	*6,22*			1490	*3350*	160,0	*9,76*	1,40	*3,09*	-
H 1000 - 075 - A	H 1000 - 075 - C	75	*2,95*	245	*9,65*	170	*6,69*			1540	*3462*	180,0	*10,98*	1,50	*3,31*	-
H 1000 - 080 - A	H 1000 - 080 - C	80	*3,15*	255	*10,04*	175	*6,89*	150 bar	*2175 psi*	1560	*3507*	190,0	*11,59*	1,54	*3,40*	-
H 1000 - 100 - A	H 1000 - 100 - C	100	*3,94*	295	*11,61*	195	*7,68*			1590	*3574*	230,0	*14,03*	1,96	*4,32*	-
H 1000 - 125 - A	H 1000 - 125 - C	125	*4,92*	345	*13,58*	220	*8,66*	± 5%		1652	*3714*	270,0	*16,47*	2,17	*4,78*	-
H 1000 - 150 - A	H 1000 - 150 - C	150	*5,91*	395	*15,55*	245	*9,65*	+ 20 °C	*+68 °F*	1945	*4373*	260,0	*15,86*	2,38	*5,25*	-
H 1000 - 160 - A	H 1000 - 160 - C	160	*6,30*	415	*16,34*	255	*10,04*			1955	*4395*	270,0	*16,47*	2,47	*5,45*	-
H 1000 - 175 - A	H 1000 - 175 - C	175	*6,89*	445	*17,52*	270	*10,63*			1967	*4422*	300,0	*18,30*	2,59	*5,71*	-
H 1000 - 200 - A	H 1000 - 200 - C	200	*7,87*	495	*19,49*	295	*11,61*			1984	*4460*	340,0	*20,74*	2,80	*6,17*	-
H 1000 - 250 - A	H 1000 - 250 - C	250	*9,84*	595	*23,43*	345	*13,58*			2009	*4516*	420,0	*25,62*	3,22	*7,10*	-
H 1000 - 300 - A	H 1000 - 300 - C	300	*11,81*	695	*27,36*	395	*15,55*			2026	*4555*	490,0	*29,89*	3,64	*8,02*	-

H
HF



Drop-in

Bottom mount
FB 50 - FBA 50
FBB 50

FS2A 50 - FT 50
FS2 50 - FTP 50

Body Ø +1,0 +0,5
FC 50 A- FCQ 50 A

FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) H 1000-050-C

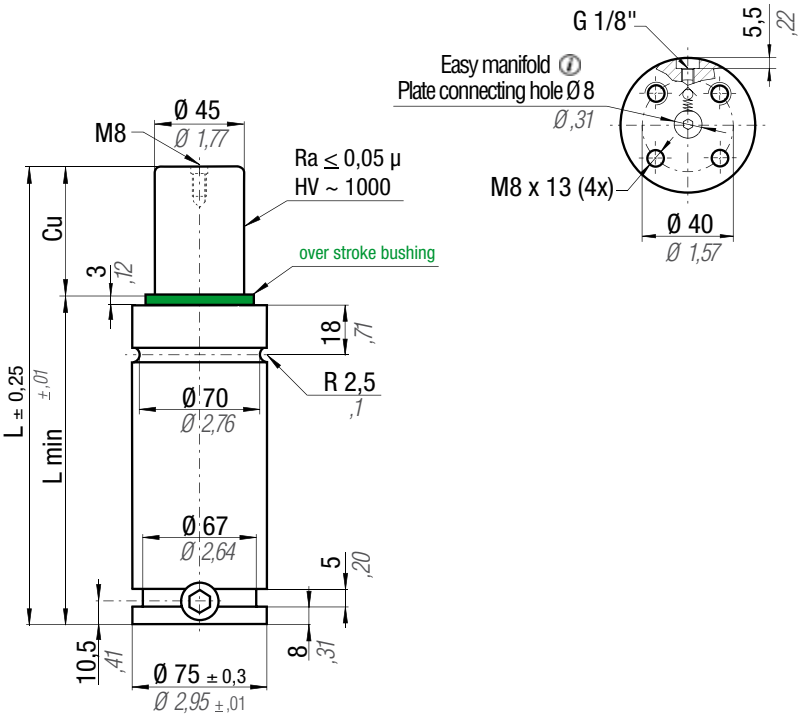
(10 pcs) H 1000-050-C-N

H 2400

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

page 210

Il nuovo codice sarà fornito solo ad esaurimento del vecchio

The new code will be supplied only when the old will be out of stock

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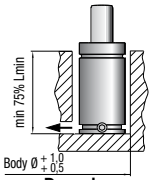
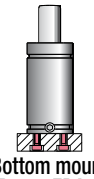
O novo código irá ser fornecido apenas quando o antigo esgotar stock

N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	15,9 cm² 2,465 in²	~ 15 ÷ 100 (at 20°C)	1,8 m/s	39BMRV02400B Cu 25 ÷ 80 39BMH02400C Cu 100 ÷ 300

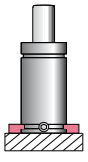
CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
PHASING OUT	NEW	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
H 2400 - 025 - A	H 2400 - 025 - C	25	0,98	160	6,30	135	5,31			3149	7079	291,0	17,75	2,50	5,51	-
H 2400 - 038 - A	H 2400 - 038 - C	38	1,50	186	7,32	148	5,83			3390	7621	344,0	20,98	2,70	5,95	-
H 2400 - 050 - A	H 2400 - 050 - C	50	1,97	210	8,27	160	6,30			3573	8032	392,0	23,91	2,90	6,39	-
H 2400 - 063 - A	H 2400 - 063 - C	63	2,48	236	9,31	173	6,81			3740	8408	444,0	27,08	3,12	6,88	-
H 2400 - 075 - A	H 2400 - 075 - C	75	2,95	260	10,24	185	7,28	2385	5362	3870	8700	492,0	30,01	3,31	7,30	-
H 2400 - 080 - A	H 2400 - 080 - C	80	3,15	270	10,63	190	7,48			3919	8810	513,0	31,29	3,39	7,47	-
H 2400 - 100 - A	H 2400 - 100 - C	100	3,94	310	12,20	210	8,27	150 bar 2175 psi		4738	10651	480,0	29,28	4,45	9,81	-
H 2400 - 125 - A	H 2400 - 125 - C	125	4,92	360	14,17	235	9,25			4861	10928	580,0	35,38	4,86	10,71	-
H 2400 - 150 - A	H 2400 - 150 - C	150	5,91	410	16,14	260	10,24	± 5%		4950	11128	680,0	41,48	5,27	11,62	-
H 2400 - 160 - A	H 2400 - 160 - C	160	6,30	430	16,93	270	10,63	+ 20 °C +68 °F		4980	11195	720,0	43,92	5,43	11,97	-
H 2400 - 175 - A	H 2400 - 175 - C	175	6,89	460	18,11	285	11,22			5020	11285	780,0	47,58	5,68	12,52	-
H 2400 - 200 - A	H 2400 - 200 - C	200	7,87	510	20,08	310	12,20			5074	11407	880,0	53,68	6,08	13,40	-
H 2400 - 250 - A	H 2400 - 250 - C	250	9,84	610	24,02	360	14,17			5153	11584	1080,0	65,88	6,90	15,21	I
H 2400 - 300 - A	H 2400 - 300 - C	300	11,81	710	27,95	410	16,14			5209	11710	1280,0	78,08	7,72	17,02	II



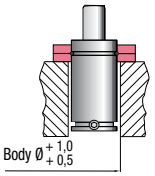
Drop-in



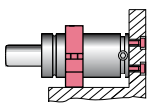
Bottom mount
FB 75 - FBA 75
FBB 75



FS2 75 - FT 75
FS2A 75 - FTP 75



FC 75 A- FCQ 75 A



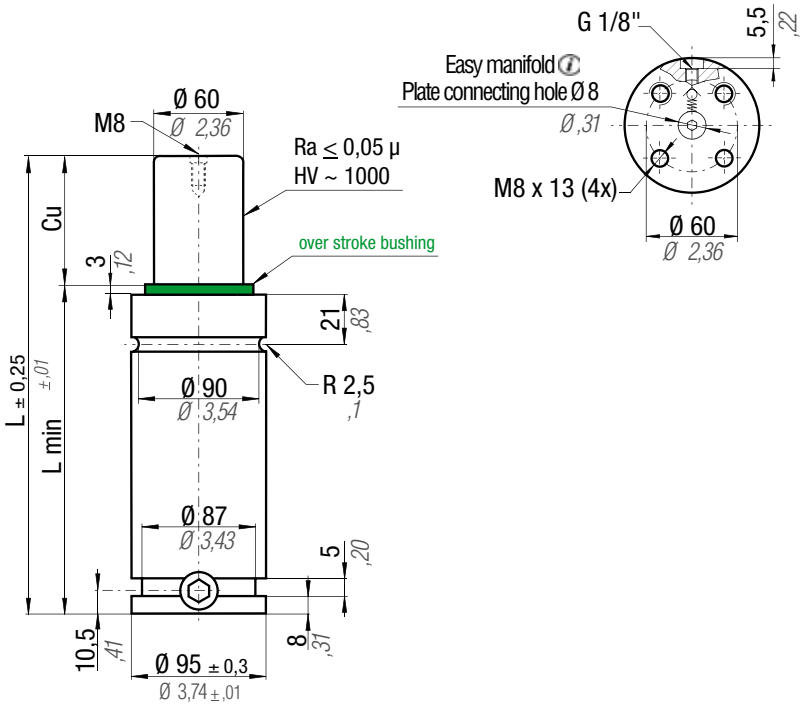
FSA 75 -FSD 75

HOW TO ORDER

(10 pcs) H 2400-050-C

(10 pcs) H 2400-050-C-N

(10 pcs) H 2400-050-C-E



Info

* 100% Cu - Polytropic end forces

page 210

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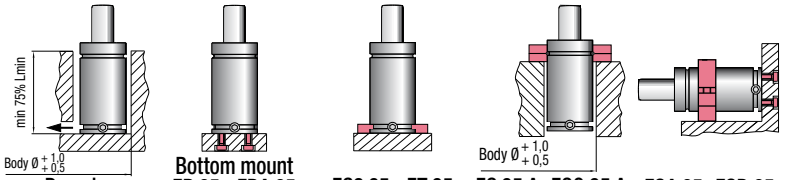
O novo código irá ser fornecido apenas quando o antigo esgotar stock

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	28,27 cm² 4,382 in²	~ 15 ÷ 100 (at 20°C)	1,8 m/s	39BMRV04200B Cu 25 ÷ 80 39BMH04200C Cu 100 ÷ 300

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
H 4200 - 025 - A	H 4200 - 025 - C	25	0,98	170	6,69	145	5,71			5580	12544	520	31,72	4,29	9,46	-
H 4200 - 038 - A	H 4200 - 038 - C	38	1,50	196	7,72	158	6,22			6022	13538	610	37,21	4,62	10,19	-
H 4200 - 050 - A	H 4200 - 050 - C	50	1,97	220	8,66	170	6,69			6365	14309	690	42,09	4,93	10,87	-
H 4200 - 063 - A	H 4200 - 063 - C	63	2,48	246	9,70	183	7,20			6680	15017	780	47,58	5,27	11,62	-
H 4200 - 075 - A	H 4200 - 075 - C	75	2,95	270	10,63	195	7,68	4240	9532	6935	15591	860	52,46	5,57	12,28	-
H 4200 - 080 - A	H 4200 - 080 - C	80	3,15	280	11,02	200	7,87			7030	15804	890	54,29	5,70	12,57	-
H 4200 - 100 - A	H 4200 - 100 - C	100	3,94	320	12,60	220	8,66	150 bar 2175 psi		8904	20017	790	48,19	7,80	17,20	-
H 4200 - 125 - A	H 4200 - 125 - C	125	4,92	370	14,57	245	9,65			9190	20660	960	58,56	8,50	18,74	-
H 4200 - 150 - A	H 4200 - 150 - C	150	5,91	420	16,54	270	10,63	± 5%		9408	21150	1120	68,32	9,17	20,22	I
H 4200 - 160 - A	H 4200 - 160 - C	160	6,30	440	17,32	280	11,02	+ 20 °C	+68 °F	9480	21312	1190	72,59	9,45	20,83	I
H 4200 - 175 - A	H 4200 - 175 - C	175	6,89	470	18,50	295	11,61			9570	21514	1280	78,08	9,86	21,74	II
H 4200 - 200 - A	H 4200 - 200 - C	200	7,87	520	20,47	320	12,60			9704	21815	1450	88,45	10,55	23,26	II
H 4200 - 250 - A	H 4200 - 250 - C	250	9,84	620	24,41	370	14,57			9900	22256	1770	107,97	11,92	26,28	II
H 4200 - 300 - A	H 4200 - 300 - C	300	11,81	720	28,35	420	16,54			10040	22571	2100	128,10	13,29	29,30	II

H
HF



Drop-in

Bottom mount
FB 95 - FBA 95
FBB 95

FS2 95 - FT 95
FS2A 95 - FTP 95

FC 95 A- FCQ 95 A

FSA 95 -FSD 95

HOW TO ORDER

(10 pcs) H 4200-050-C

(10 pcs) H 4200-050-C-N

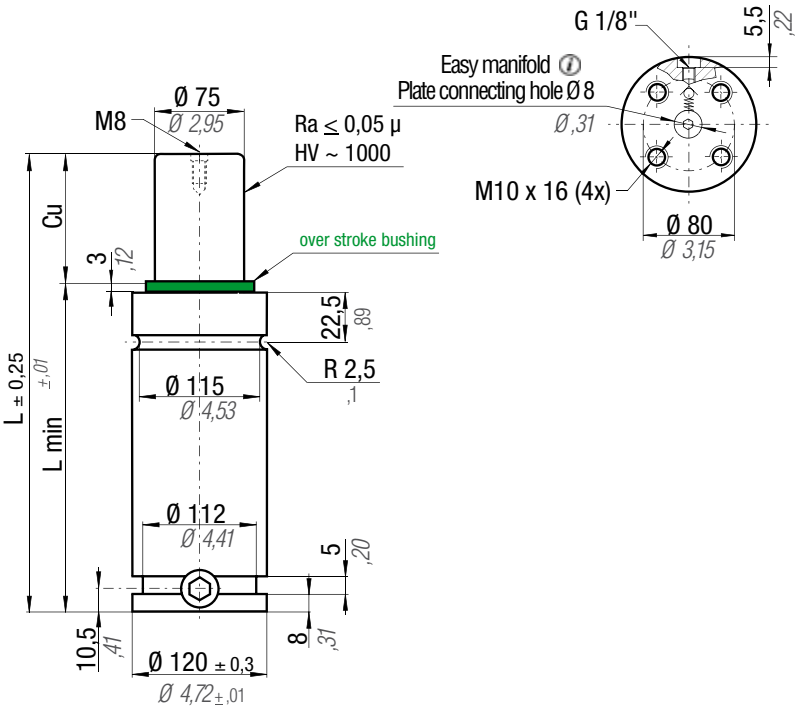
(10 pcs) H 4200-050-C-E

H 6600

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

page 210

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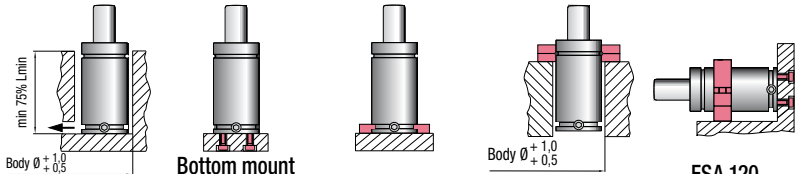
O novo código irá ser fornecido apenas quando o antigo esgotar stock

N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	44,18 cm² 6,848 in²	~ 15 ÷ 100 (at 20°C)	1,8 m/s	39BMRV06600B Cu 25 ÷ 80 39BMH06600C Cu 100 ÷ 300

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
H 6600 - 025 - A	H 6600 - 025 - C	25	0,98	190	7,48	165	6,50			8560	19244	880,0	53,68	8,07	0,32	-
H 6600 - 038 - A	H 6600 - 038 - C	38	1,50	216	8,50	178	7,01			9200	20682	1020,0	62,22	8,6	0,34	I
H 6600 - 050 - A	H 6600 - 050 - C	50	1,97	240	9,45	190	7,48			9710	21829	1150,0	70,15	9,06	0,36	I
H 6600 - 063 - A	H 6600 - 063 - C	63	2,48	266	10,47	203	7,99			10180	22886	1290,0	78,69	9,66	0,38	II
H 6600 - 075 - A	H 6600 - 075 - C	75	2,95	290	11,42	215	8,46	6630	14904	10560	23740	1420,0	86,62	10,11	0,40	II
H 6600 - 080 - A	H 6600 - 080 - C	80	3,15	300	11,81	220	8,66			10700	24055	1470,0	89,67	10,31	0,41	II
H 6600 - 100 - A	H 6600 - 100 - C	100	3,94	340	13,39	240	9,45	150 bar	2175 psi	12990	29203	1350,0	82,35	13,44	0,53	II
H 6600 - 125 - A	H 6600 - 125 - C	125	4,92	390	15,35	265	10,43			13440	30214	1610,0	98,21	14,46	0,57	II
H 6600 - 150 - A	H 6600 - 150 - C	150	5,91	440	17,32	290	11,42	± 5%		13770	30956	1880,0	114,68	15,48	0,61	II
H 6600 - 160 - A	H 6600 - 160 - C	160	6,30	460	18,11	300	11,81	+ 20 °C	+68 °F	13880	31203	1990,0	121,39	15,89	0,63	II
H 6600 - 175 - A	H 6600 - 175 - C	175	6,89	490	19,29	315	12,40			14030	31541	2150,0	131,15	16,5	0,65	II
H 6600 - 200 - A	H 6600 - 200 - C	200	7,87	540	21,26	340	13,39			14240	32013	2420,0	147,62	17,53	0,69	II
H 6600 - 250 - A	H 6600 - 250 - C	250	9,84	640	25,20	390	15,35			14550	32710	2950,0	179,95	19,57	0,77	II
H 6600 - 300 - A	H 6600 - 300 - C	300	11,81	740	29,13	440	17,32			14780	33227	3480,0	212,28	21,72	0,86	II



Drop-in

Bottom mount
FB 120 - FBA 120
FBB 120

FS2 120-FT 120
FS2A 120-FTP 120

FC 120 A- FCQ 120 A

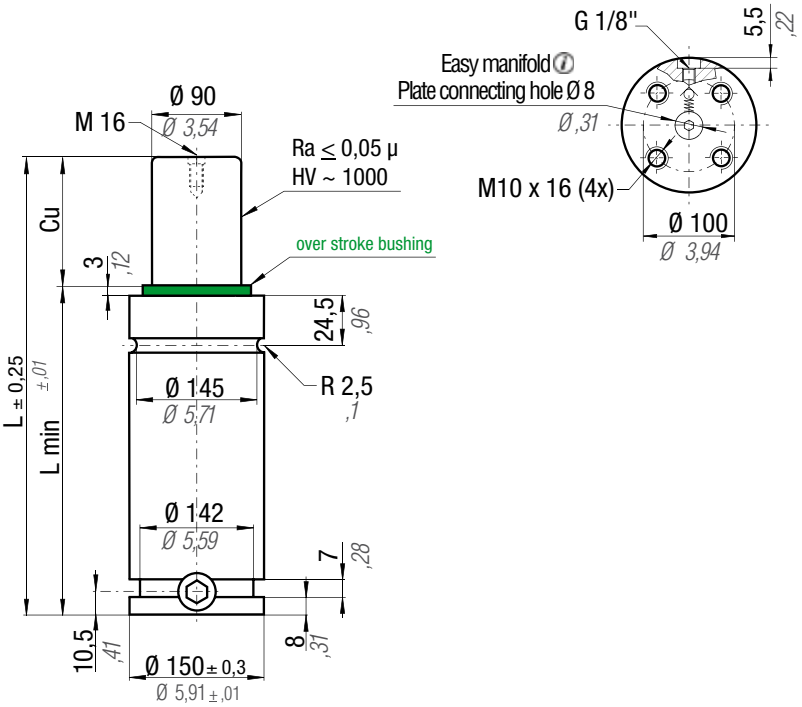
FSA 120
FSD 120

HOW TO ORDER

(10 pcs) H 6600-050-C

(10 pcs) H 6600-050-C-N

(10 pcs) H 6600-050-C-E



Info

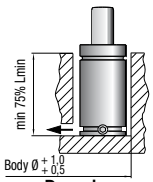
* 100% Cu - Polytropic end forces

page 210

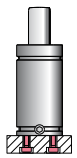
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	63,62 cm² *9,861 in²*	~ 15 ÷ 80 (at 20°C)	1,8 m/s	39BMH09500C

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	
H 9500 - 025 - C	25	*0,98*	205	*8,07*	180	*7,09*			13596	*30565*	900	*54,90*	18,13	*39,97*	-
H 9500 - 038 - C	38	*1,50*	231	*9,09*	193	*7,60*			14744	*33146*	1110	*67,71*	18,95	*41,78*	I
H 9500 - 050 - C	50	*1,97*	255	*10,04*	205	*8,07*			15560	*34980*	1300	*79,30*	19,72	*43,48*	I
H 9500 - 063 - C	63	*2,48*	281	*11,06*	218	*8,58*			16263	*36561*	1510	*92,11*	20,55	*45,30*	II
H 9500 - 075 - C	75	*2,95*	305	*12,01*	230	*9,06*	9540	*21446*	16790	*37745*	1700	*103,70*	21,31	*46,98*	II
H 9500 - 080 - C	80	*3,15*	315	*12,40*	235	*9,25*			16982	*38177*	1780	*108,58*	21,63	*47,69*	II
H 9500 - 100 - C	100	*3,94*	355	*13,98*	255	*10,04*	150 bar		17630	*39634*	2110	*128,71*	22,90	*50,49*	II
H 9500 - 125 - C	125	*4,92*	405	*15,94*	280	*11,02*	*2175 psi*		18240	*41005*	2510	*153,11*	24,50	*54,01*	II
H 9500 - 150 - C	150	*5,91*	455	*17,91*	305	*12,01*	± 5%		18703	*42046*	2910	*177,51*	26,08	*57,50*	II
H 9500 - 160 - C	160	*6,30*	475	*18,70*	315	*12,40*	+ 20 °C *+68 °F*		18856	*42390*	3070	*187,27*	26,72	*58,91*	II
H 9500 - 175 - C	175	*6,89*	505	*19,88*	330	*12,99*			19069	*42869*	3320	*202,52*	27,67	*61,00*	II
H 9500 - 200 - C	200	*7,87*	555	*21,85*	355	*13,98*			19360	*43523*	3720	*226,92*	29,27	*64,53*	II
H 9500 - 250 - C	250	*9,84*	655	*25,79*	405	*15,94*			19802	*44517*	4520	*275,72*	32,45	*71,54*	II
H 9500 - 300 - C	300	*11,81*	755	*29,72*	455	*17,91*			20121	*45234*	5330	*325,13*	35,63	*78,55*	III

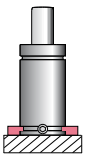
H
HF



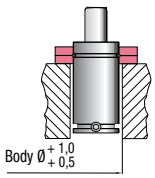
Drop-in



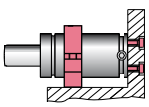
Bottom mount
FB 150 - FBA 150
FBB 150



FS2 150-FT 150
FS2A 150-FTP 150



FC 150 A- FCQ 150 A



FSA 150
FSD 150

HOW TO ORDER

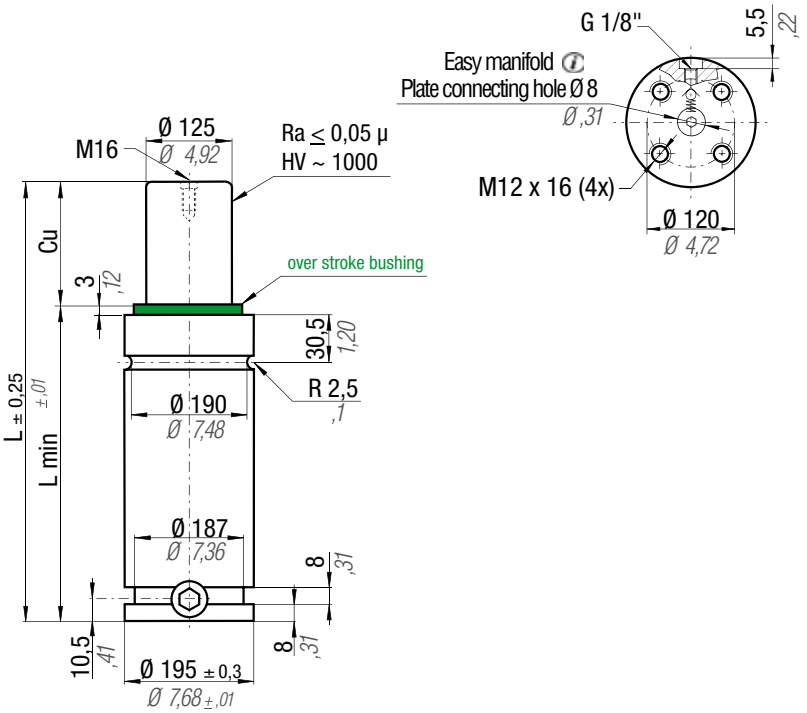
(10 pcs) H 9500-050-C
(10 pcs) H 9500-050-C-N
(10 pcs) H 9500-050-C-E

H 18500

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

page 210

Il nuovo codice sarà fornito solo ad esaurimento del vecchio

The new code will be supplied only when the old will be out of stock

Der neue Kode wird geliefert nur wenn der alte nicht mehr im Lager ist

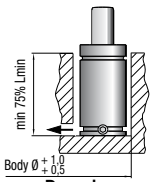
Le nouveau code sera fourni uniquement lorsque le vieux stock sera ecoulé

El nuevo código será suministrado sólo cuando el viejo está fuera de stock

O novo código irá ser fornecido apenas quando o antigo esgotar stock

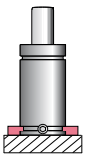
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	122,7 cm² *19,019 in²*	~ 10 ÷ 70 (at 20°C)	1,8 m/s	39BMH18500A

CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
PHASING OUT	NEW	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
H 18500 - 025 - A	H 18500 - 025 - C	25	*0,98*	210	*8,27*	185	*7,28*			27130	*60991*	1580	*96,38*	31,16	*68,70*	II
H 18500 - 038 - A	H 18500 - 038 - C	38	*1,50*	236	*9,29*	198	*7,80*			29759	*66901*	1940	*118,34*	32,63	*71,94*	II
H 18500 - 050 - A	H 18500 - 050 - C	50	*1,97*	260	*10,24*	210	*8,27*	18400	*41363*	31665	*71186*	2270	*138,47*	34,00	*74,96*	II
H 18500 - 063 - A	H 18500 - 063 - C	63,5	*2,50*	287	*11,30*	223,5	*8,80*			33215	*74670*	2650	*161,65*	35,52	*78,31*	II
H 18500 - 080 - A	H 18500 - 080 - C	80	*3,15*	320	*12,60*	240	*9,45*	150 bar	*2175 psi*	35058	*78814*	3110	*189,71*	37,39	*82,43*	II
H 18500 - 100 - A	H 18500 - 100 - C	100	*3,94*	360	*14,17*	260	*10,24*			36636	*82361*	3670	*223,87*	39,66	*87,44*	II
H 18500 - 125 - A	H 18500 - 125 - C	125	*4,92*	410	*16,14*	285	*11,22*			38141	*85744*	4370	*266,57*	42,49	*93,67*	II
H 18500 - 160 - A	H 18500 - 160 - C	160	*6,30*	480	*18,90*	320	*12,60*	± 5%		39684	*89213*	5350	*326,35*	46,45	*102,40*	III
H 18500 - 200 - A	H 18500 - 200 - C	200	*7,87*	560	*22,05*	360	*14,17*	+ 20 °C	*+68 °F*	40947	*92053*	6470	*394,67*	50,98	*112,39*	III
H 18500 - 250 - A	H 18500 - 250 - C	250	*9,84*	660	*25,98*	410	*16,14*			42074	*94586*	7870	*480,07*	56,64	*124,87*	III
H 18500 - 300 - A	H 18500 - 300 - C	300	*11,81*	760	*29,92*	460	*18,11*			42890	*96421*	9260	*564,86*	62,30	*137,35*	III

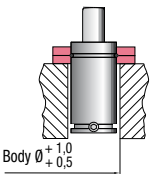


Drop-in

Bottom mount
FB 195 - FBA 195
FBB 195



FS2 195-FT 195
FS2A 195



FC 195 A- FCQ 195 A

HOW TO ORDER

(10 pcs) H 18500-050-C

(10 pcs) H 18500-050-C-N

(10 pcs) H 18500-050-C-E

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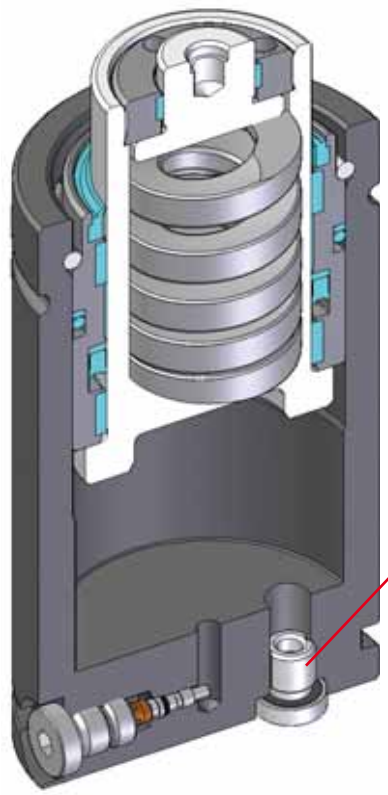
LS SERIES

PED 97/23/EC

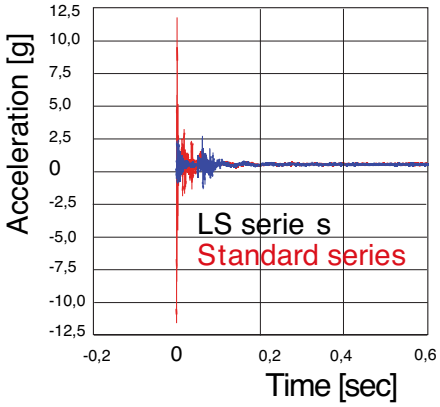
- 55 % noise

- 50 % vibrations

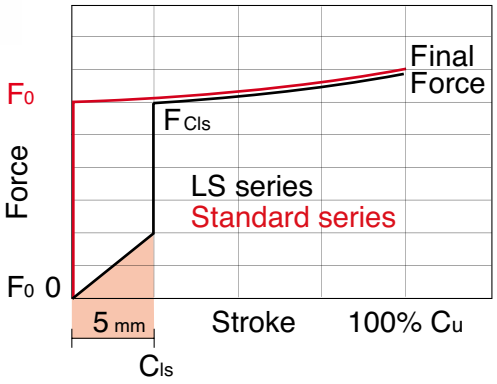


Over
Pressure
Active
Safety

INITIAL IMPACT VIBRATIONS



FORCE CURVE



Range chart

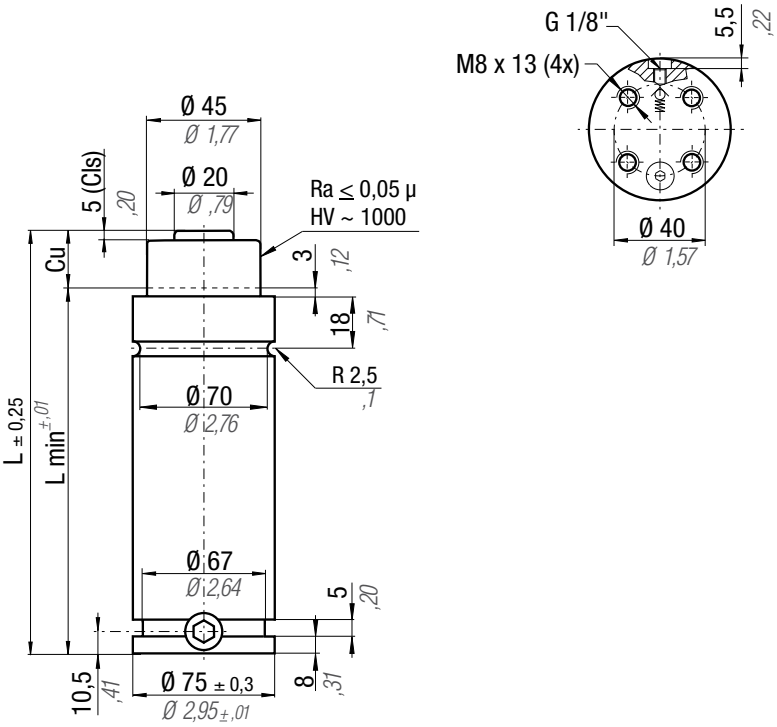
Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
LS 1500	75	2,95	25 - 300	0,98 - 11,81	1590	3574	✓	-	-	-
LS 2400	75	2,95	25 - 300	0,98 - 11,81	2385	5362	✓	-	-	-
LS 3000	95	3,74	25 - 300	0,98 - 11,81	2830	6362	✓	-	-	-
LS 4200	95	3,74	25 - 300	0,98 - 11,81	4240	9532	✓	-	-	-
LS 5000	120	4,72	25 - 300	0,98 - 11,81	4418	9932	✓	-	-	-
LS 6600	120	4,72	25 - 300	0,98 - 11,81	6630	14905	✓	-	-	-
LS 7500	150	5,91	25 - 300	0,98 - 11,81	7630	17152	✓	-	-	-
LS 9500	150	5,91	25 - 300	0,98 - 11,81	9540	21446	✓	-	-	-

How to Order

LS 2400-050-A - N

Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

Collegabile con tubi, fornito scarico e senza valvola unidirezionale
Linkable with hoses, supplied without pressure and oneway valve
Anschlussfähig mit Leitungen, geliefert ohne Druck und RückschlagVentil
Connectable avec tubes, fourni sans pression ni valve unidirectionelle
Connectable con tubos, suministrado sin presión y sin válvula unidireccional
Acompláveis com tubos, fornecidos sem pressão e sem válvula unidireccional



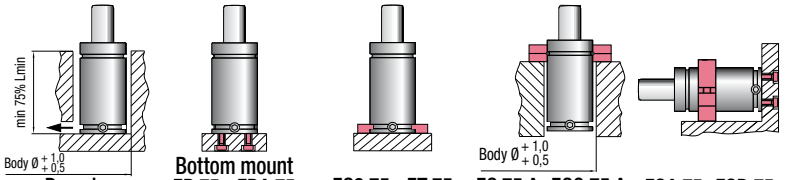
Info

* 100% Cu - Polytropic end forces

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	100 bar *1450 psi*	20 bar *290 psi*	15,9 cm² *2,465 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS01500A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F Cls daN	F Cls lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
LS 1500 - 025 - A	25	*0,98*	160	*6,30*	135	*5,31*					2929	*6584*	126,0	*7,69*	3,71	*8,18*	-
LS 1500 - 038 - A	38	*1,50*	186	*7,32*	148	*5,83*	0	*0*	1590	*3574*	3177	*7142*	174,0	*10,62*	3,79	*8,36*	-
LS 1500 - 050 - A	50	*1,97*	210	*8,27*	160	*6,30*					3327	*7479*	218,0	*13,30*	3,89	*8,58*	-
LS 1500 - 063 - A	63,5	*2,50*	237	*9,33*	173,5	*6,83*					3421	*7690*	268,0	*16,35*	4,48	*9,88*	-
LS 1500 - 080 - A	80	*3,15*	270	*10,63*	190	*7,48*	100 bar *1450 psi*		100 bar *1450 psi*		3548	*7976*	329,0	*20,08*	4,73	*10,43*	-
LS 1500 - 100 - A	100	*3,94*	310	*12,20*	210	*8,27*					3635	*8172*	403,0	*24,59*	4,89	*10,78*	-
LS 1500 - 125 - A	125	*4,92*	360	*14,17*	235	*9,25*	± 5% + 20 °C *+68 °F*		± 5% + 20 °C *+68 °F*		3711	*8342*	495,0	*30,21*	5,57	*12,28*	-
LS 1500 - 160 - A	160	*6,30*	430	*16,93*	270	*10,63*					3782	*8502*	624,0	*38,08*	6,33	*13,96*	-
LS 1500 - 200 - A	200	*7,87*	510	*20,08*	310	*12,20*					3835	*8622*	771,0	*47,05*	7,19	*15,85*	-
LS 1500 - 250 - A	250	*9,84*	610	*24,02*	360	*14,17*					3880	*8724*	955,0	*58,28*	9,19	*20,26*	-
LS 1500 - 300 - A	300	*11,81*	710	*27,95*	410	*16,14*					3911	*8793*	1139,0	*69,51*	11,04	*24,34*	I

LS



Drop-in

Bottom mount
FB 75 - FBA 75
FBB 75

FS2 75 - FT 75
FS2A 75 - FTP 75

FC 75 A- FCQ 75 A

FSA 75 -FSD 75

HOW TO ORDER

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

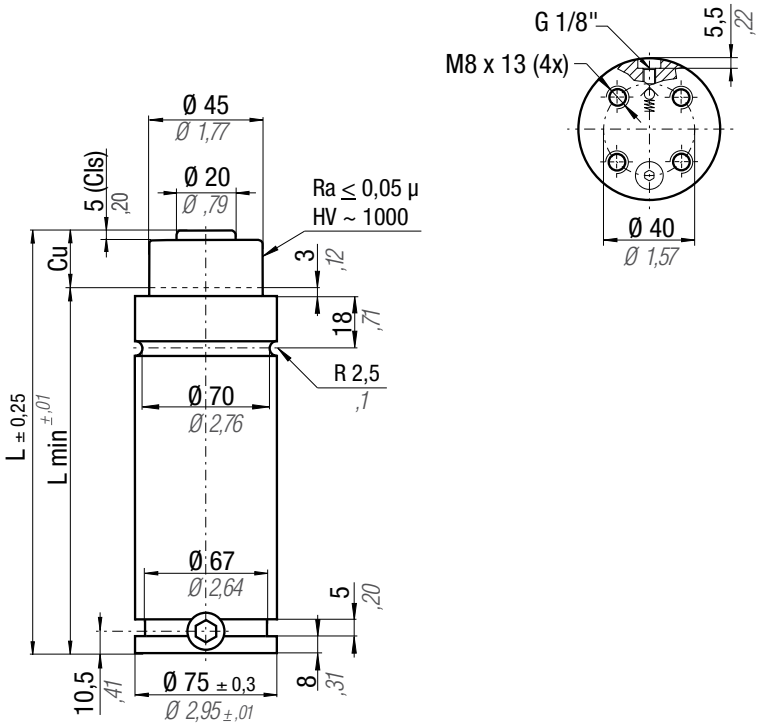
LS 2400

- 50% VIBRATIONS
-55% NOISE

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS

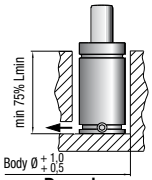


Info

* 100% Cu - Polytropic end forces

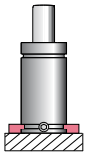
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	15,9 cm² 2,465 in²	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS01500A

CODE	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F Cls daN	F Cls lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
LS 2400 - 025 - A	25	0,98	160	6,30	135	5,31					4379	9845	126,0	7,69	3,71	8,18	-
LS 2400 - 038 - A	38	1,50	186	7,32	148	5,83	0	0	2385	5362	4750	10679	174,0	10,62	3,79	8,36	-
LS 2400 - 050 - A	50	1,97	210	8,27	160	6,30					4974	11183	218,0	13,30	3,89	8,58	-
LS 2400 - 063 - A	63,5	2,50	237	9,33	173,5	6,83					5115	11498	268,0	16,35	4,48	9,88	-
LS 2400 - 080 - A	80	3,15	270	10,63	190	7,48	150 bar 2175 psi		150 bar 2175 psi		5305	11926	329,0	20,08	4,73	10,43	-
LS 2400 - 100 - A	100	3,94	310	12,20	210	8,27					5435	12219	403,0	24,59	4,89	10,78	-
LS 2400 - 125 - A	125	4,92	360	14,17	235	9,25	± 5%		± 5%		5548	12473	495,0	30,21	5,57	12,28	-
LS 2400 - 160 - A	160	6,30	430	16,93	270	10,63	+ 20 °C +68 °F		+ 20 °C +68 °F		5655	12712	624,0	38,08	6,33	13,96	-
LS 2400 - 200 - A	200	7,87	510	20,08	310	12,20					5735	12893	771,0	47,05	7,19	15,85	-
LS 2400 - 250 - A	250	9,84	610	24,02	360	14,17					5802	13044	955,0	58,28	9,19	20,26	-
LS 2400 - 300 - A	300	11,81	710	27,95	410	16,14					5849	13148	1139,0	69,51	11,04	24,34	I

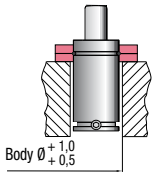


Drop-in

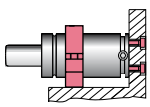
Bottom mount
FB 75 - FBA 75
FBB 75



FS2 75 - FT 75
FS2A 75 - FTP 75



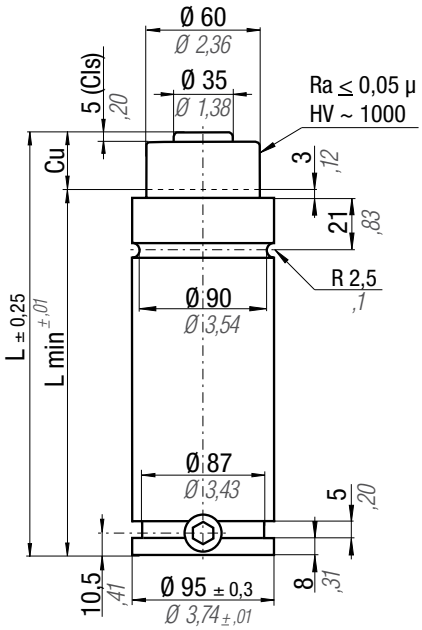
FC 75 A- FCQ 75 A

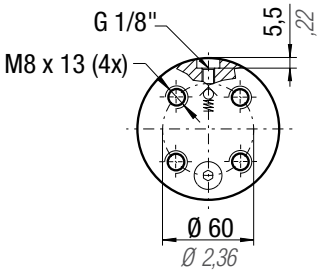


FSA 75 -FSD 75

HOW TO ORDER

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



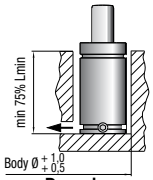


Info

* 100% Cu - Polytropic end forces

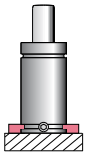
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	100 bar *1450 psi*	20 bar *290 psi*	28,27 cm² *4,382 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS03000A

CODE	Cu		L		L min		F0 Initial force		F Cls		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
LS 3000 - 025 - A	25	*0,98*	170	*6,69*	145	*5,71*					5131	*11535*	195,0	*11,90*	5,69	*12,54*	-
LS 3000 - 038 - A	38	*1,50*	196	*7,72*	158	*6,22*	0	*0*	2830	*6362*	5712	*12841*	274,0	*16,72*	6,48	*14,29*	-
LS 3000 - 050 - A	50	*1,97*	220	*8,66*	170	*6,69*					6098	*13709*	347,0	*21,17*	6,77	*14,93*	-
LS 3000 - 063 - A	63,5	*2,50*	247	*9,72*	183,5	*7,22*					6374	*14330*	429,0	*26,18*	6,84	*15,08*	-
LS 3000 - 080 - A	80	*3,15*	280	*11,02*	200	*7,87*	100 bar *1450 psi*		100 bar *1450 psi*		6722	*15111*	529,0	*32,28*	7,23	*15,94*	-
LS 3000 - 100 - A	100	*3,94*	320	*12,60*	220	*8,66*					6987	*15708*	650,0	*39,66*	7,95	*17,53*	-
LS 3000 - 125 - A	125	*4,92*	370	*14,57*	245	*9,65*	± 5% + 20 °C *+68 °F*		± 5% + 20 °C *+68 °F*		7228	*16248*	801,0	*48,88*	9,58	*21,12*	-
LS 3000 - 160 - A	160	*6,30*	440	*17,32*	280	*11,02*					7462	*16775*	1013,0	*61,82*	10,89	*24,01*	I
LS 3000 - 200 - A	200	*7,87*	520	*20,47*	320	*12,60*					7645	*17188*	1256,0	*76,64*	11,03	*24,32*	I
LS 3000 - 250 - A	250	*9,84*	620	*24,41*	370	*14,57*					7803	*17542*	1559,0	*95,13*	12,06	*26,59*	I
LS 3000 - 300 - A	300	*11,81*	720	*28,35*	420	*16,54*					7914	*17791*	1859,0	*113,44*	13,02	*28,70*	I

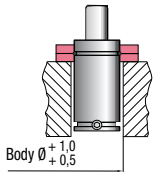


Drop-in

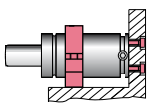
Bottom mount
FB 95 - FBA 95
FBB 95



FS2 95 - FT 95
FS2A 95 - FTP 95



FC 95 A- FCQ 95 A



FSA 95 -FSD 95

HOW TO ORDER

(10 pcs) LS 3000-050-A
(10 pcs) LS 3000-050-A-N

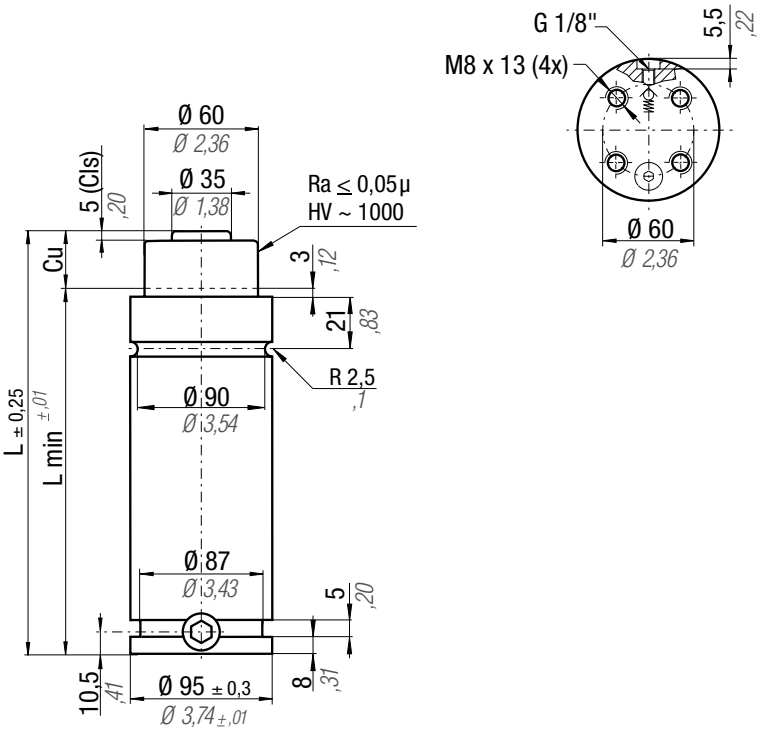
LS 4200

- 50% VIBRATIONS
-55% NOISE

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS

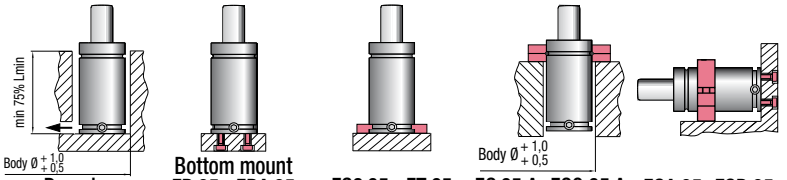


Info

* 100% Cu - Polytropic end forces

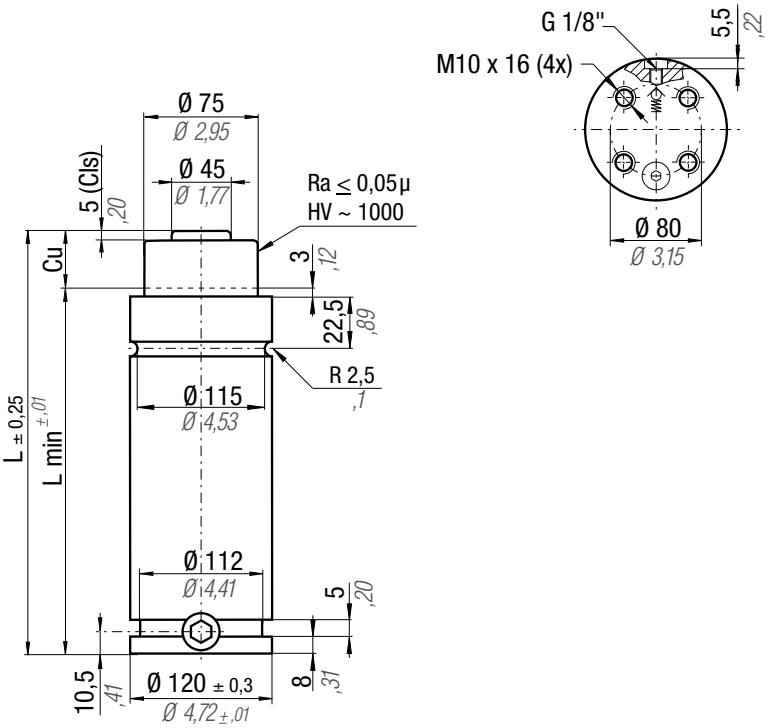
N2	°F 32 - 176	°C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
			± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	28,27 cm² *4,382 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS03000A

CODE	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F Cls daN	F Cls *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	~lb	CE Cat.
LS 4200 - 025 - A	25	*0,98*	170	*6,69*	145	*5,71*					7672	*17247*	195,0	*11,90*	5,69	*12,54*	-
LS 4200 - 038 - A	38	*1,50*	196	*7,72*	158	*6,22*	0	*0*	4240	*9532*	8541	*19201*	274,0	*16,72*	6,48	*14,29*	-
LS 4200 - 050 - A	50	*1,97*	220	*8,66*	170	*6,69*					9118	*20499*	347,0	*21,17*	6,77	*14,93*	-
LS 4200 - 063 - A	63,5	*2,50*	247	*9,72*	183,5	*7,22*					9531	*21426*	429,0	*26,18*	6,84	*15,08*	-
LS 4200 - 080 - A	80	*3,15*	280	*11,02*	200	*7,87*	150 bar *2175 psi*		150 bar *2175 psi*		10051	*22595*	529,0	*32,28*	7,23	*15,94*	-
LS 4200 - 100 - A	100	*3,94*	320	*12,60*	220	*8,66*					10448	*23487*	650,0	*39,66*	7,95	*17,53*	-
LS 4200 - 125 - A	125	*4,92*	370	*14,57*	245	*9,65*	± 5% + 20 °C *+68 °F*		± 5% + 20 °C *+68 °F*		10807	*24295*	801,0	*48,88*	9,58	*21,12*	-
LS 4200 - 160 - A	160	*6,30*	440	*17,32*	280	*11,02*					11158	*25083*	1013,0	*61,82*	10,89	*24,01*	I
LS 4200 - 200 - A	200	*7,87*	520	*20,47*	320	*12,60*					11432	*25700*	1256,0	*76,64*	11,03	*24,32*	I
LS 4200 - 250 - A	250	*9,84*	620	*24,41*	370	*14,57*					11667	*26229*	1559,0	*95,13*	12,06	*26,59*	II
LS 4200 - 300 - A	300	*11,81*	720	*28,35*	420	*16,54*					11833	*26602*	1859,0	*113,44*	13,02	*28,70*	II



HOW TO ORDER

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

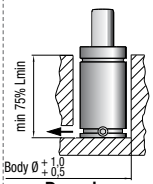


Info

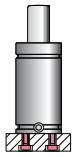
* 100% Cu - Polytropic end forces

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	100 bar *1450 psi*	20 bar *290 psi*	44,18 cm² *6,848 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS05000A

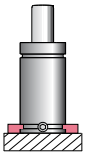
CODE	Cu		L		L min		F0 Initial force		F cls		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
LS 5000 - 025 - A	25	*0,98*	190	*7,48*	165	*6,50*					8559	*19241*	353,0	*21,54*	10,60	*23,37*	-
LS 5000 - 038 - A	38	*1,50*	216	*8,50*	178	*7,01*	0	*0*	4418	*9932*	9531	*21427*	471,0	*28,74*	12,00	*26,46*	-
LS 5000 - 050 - A	50	*1,97*	240	*9,45*	190	*7,48*					10164	*22850*	580,0	*35,39*	13,20	*29,10*	-
LS 5000 - 063 - A	63,5	*2,50*	267	*10,51*	203,5	*8,01*					10674	*23996*	697,0	*42,53*	13,60	*29,98*	-
LS 5000 - 080 - A	80	*3,15*	300	*11,81*	220	*8,66*	100 bar *1450 psi*		100 bar *1450 psi*		11166	*25102*	851,0	*51,93*	14,10	*31,09*	-
LS 5000 - 100 - A	100	*3,94*	340	*13,39*	240	*9,45*					11585	*26044*	1032,0	*62,98*	15,40	*33,95*	I
LS 5000 - 125 - A	125	*4,92*	390	*15,35*	265	*10,43*	± 5% + 20 °C *+68 °F*		± 5% + 20 °C *+68 °F*		11960	*26887*	1259,0	*76,83*	16,90	*37,26*	I
LS 5000 - 160 - A	160	*6,30*	460	*18,11*	300	*11,81*					12323	*27703*	1575,0	*96,11*	18,70	*41,23*	I
LS 5000 - 200 - A	200	*7,87*	540	*21,26*	340	*13,39*					12604	*28335*	1937,0	*118,20*	21,70	*47,84*	II
LS 5000 - 250 - A	250	*9,84*	640	*25,20*	390	*15,35*					12844	*28874*	2390,0	*145,84*	24,80	*54,67*	II
LS 5000 - 300 - A	300	*11,81*	740	*29,13*	440	*17,32*					13012	*29252*	2843,0	*173,49*	28,00	*61,73*	II



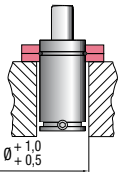
Drop-in



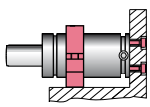
Bottom mount
FB 120 - FBA 120
FBB 120



FS2 120-FT 120
FS2A 120-FTP 120



FC 120 A- FCQ 120 A



FSA 120
FSD 120

HOW TO ORDER

(10 pcs) LS 5000-050-A
(10 pcs) LS 5000-050-A-N

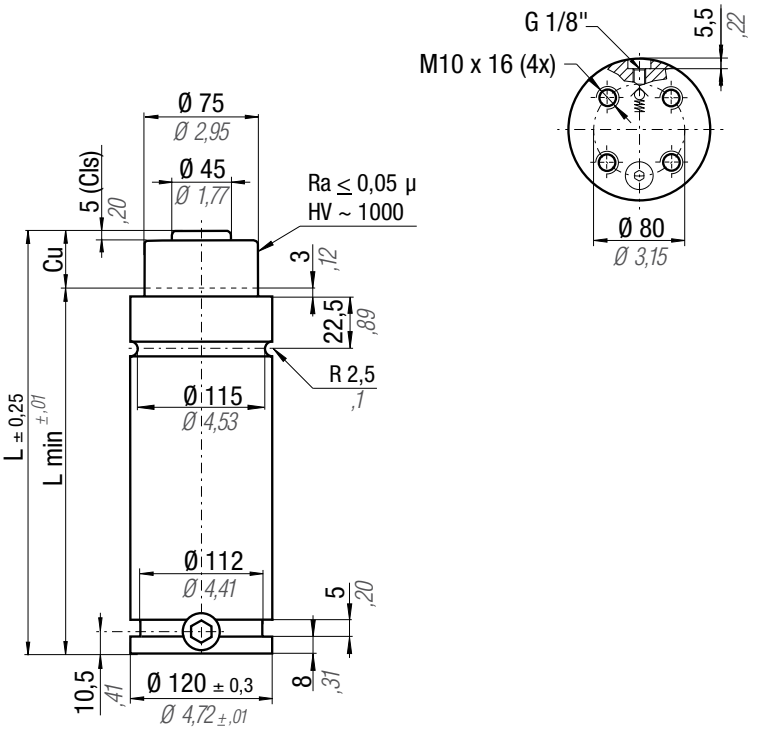
LS 6600

- 50% VIBRATIONS
-55% NOISE

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS

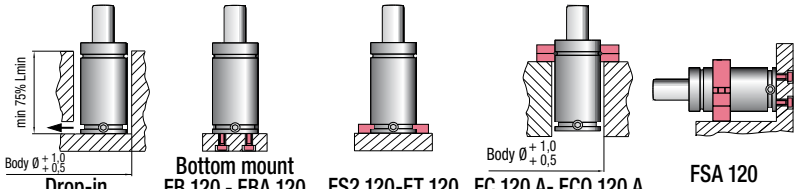


Info

* 100% Cu - Polytropic end forces

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	44,18 cm² *6,848 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS05000A

CODE	Cu		L		L min		F0 Initial force		F Cls		F1 End force *		V0		~Kg	~lb	CE Cat.
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	daN	*lb*	cm³	*in³*			
LS 6600 - 025 - A	25	*0,98*	190	*7,48*	165	*6,50*					12558	*28232*	353,0	*21,54*	10,60	*23,37*	-
LS 6600 - 038 - A	38	*1,50*	216	*8,50*	178	*7,01*	0	*0*	6630	*14905*	13985	*31440*	471,0	*28,74*	12,00	*26,46*	-
LS 6600 - 050 - A	50	*1,97*	240	*9,45*	190	*7,48*					14914	*33528*	580,0	*35,39*	13,20	*29,10*	-
LS 6600 - 063 - A	63,5	*2,50*	267	*10,51*	203,5	*8,01*					15662	*35210*	697,0	*42,53*	13,60	*29,98*	-
LS 6600 - 080 - A	80	*3,15*	300	*11,81*	220	*8,66*	150 bar *2175 psi*		150 bar *2175 psi*		16384	*36833*	851,0	*51,93*	14,10	*31,09*	-
LS 6600 - 100 - A	100	*3,94*	340	*13,39*	240	*9,45*					16998	*38213*	1032,0	*62,98*	15,40	*33,95*	I
LS 6600 - 125 - A	125	*4,92*	390	*15,35*	265	*10,43*	± 5% + 20 °C *+68 °F*		± 5% + 20 °C *+68 °F*		17549	*39452*	1259,0	*76,83*	16,90	*37,26*	I
LS 6600 - 160 - A	160	*6,30*	460	*18,11*	300	*11,81*					18081	*40648*	1575,0	*96,11*	18,70	*41,23*	II
LS 6600 - 200 - A	200	*7,87*	540	*21,26*	340	*13,39*					18494	*41576*	1937,0	*118,20*	21,70	*47,84*	II
LS 6600 - 250 - A	250	*9,84*	640	*25,20*	390	*15,35*					18846	*42367*	2390,0	*145,84*	24,80	*54,67*	II
LS 6600 - 300 - A	300	*11,81*	740	*29,13*	440	*17,32*					19093	*42923*	2843,0	*173,49*	28,00	*61,73*	II



Drop-in

Bottom mount
FB 120 - FBA 120
FBB 120

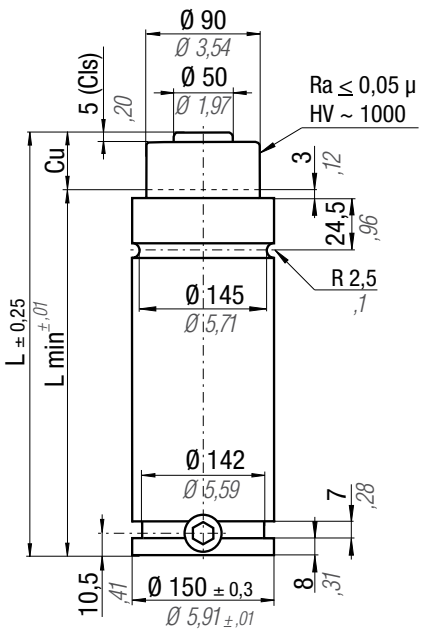
FS2 120-FT 120
FS2A 120-FTP 120

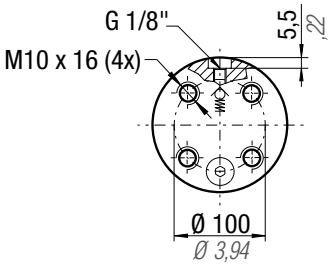
FC 120 A- FCQ 120 A

FSA 120
FSD 120

HOW TO ORDER

(10 pcs) LS 6600-050-A
(10 pcs) LS 6600-050-A-N



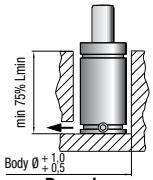


Info

* 100% Cu - Polytropic end forces

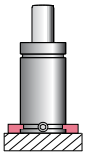
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	120 bar *1740 psi*	20 bar *290 psi*	63,61 cm² *9,860 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS07500A

CODE	Cu		L		L min		F0 Initial force		F Cls		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	~lb	Cat.
LS 7500 - 025 - A	25	*0,98*	205	*8,07*	180	*7,09*					12625	*28382*	654,0	*39,91*	19,95	*43,98*	-
LS 7500 - 038 - A	38	*1,50*	231	*9,09*	193	*7,60*	0	*0*	7630	*17152*	13965	*31395*	839,0	*51,20*	21,15	*46,63*	-
LS 7500 - 050 - A	50	*1,97*	255	*10,04*	205	*8,07*					14852	*33389*	1010,0	*61,63*	21,95	*48,39*	-
LS 7500 - 063 - A	63,5	*2,50*	282	*11,10*	218,5	*8,60*					15591	*35050*	1195,0	*72,92*	22,75	*50,16*	I
LS 7500 - 080 - A	80	*3,15*	315	*12,40*	235	*9,25*	120 bar *1740 psi*		120 bar *1740 psi*		16322	*36693*	1437,0	*87,69*	24,55	*54,12*	I
LS 7500 - 100 - A	100	*3,94*	355	*13,98*	255	*10,04*					16962	*38132*	1723,0	*105,14*	26,25	*57,87*	II
LS 7500 - 125 - A	125	*4,92*	405	*15,94*	280	*11,02*	± 5% + 20 °C *+68 °F*		± 5% + 20 °C *+68 °F*		17548	*39449*	2079,0	*126,87*	28,15	*62,06*	II
LS 7500 - 160 - A	160	*6,30*	475	*18,70*	315	*12,40*					18127	*40751*	2587,0	*157,87*	31,55	*69,56*	II
LS 7500 - 200 - A	200	*7,87*	555	*21,85*	355	*13,98*					18584	*41778*	3148,0	*192,10*	35,15	*77,49*	II
LS 7500 - 250 - A	250	*9,84*	655	*25,79*	405	*15,94*					18981	*42671*	3861,0	*235,61*	38,65	*85,21*	II
LS 7500 - 300 - A	300	*11,81*	755	*29,72*	455	*17,91*					19262	*43303*	4573,0	*279,06*	42,55	*93,81*	II

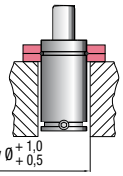


Drop-in

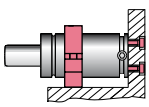
Bottom mount
FB 150 - FBA 150
FBB 150



FS2 150-FT 150
FS2A 150-FTP 150



FC 150 A- FCQ 150 A



FSA 150
FSD 150

HOW TO ORDER

(10 pcs) LS 7500-050-A
(10 pcs) LS 7500-050-A-N

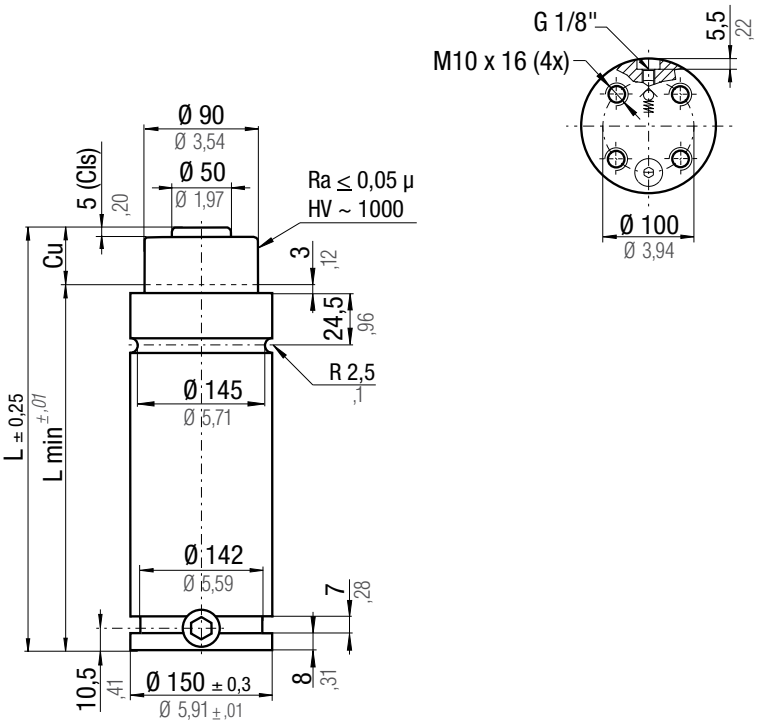
LS 9500

- 50% VIBRATIONS
-55% NOISE

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS

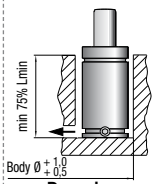


Info

* 100% Cu - Polytropic end forces

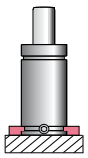
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	63,61 cm² *9,860 in²*	~ 15 - 60 (at 20°C)	1,8 m/s	39BMLS07500A

CODE	Cu		L		L min		F0 Initial force		F Cls		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	~lb	Cat.
LS 9500 - 025 - A	25	*0,98*	205	*8,07*	180	*7,09*					15607	*35086*	654,0	*39,91*	19,95	*43,98*	-
LS 9500 - 038 - A	38	*1,50*	231	*9,09*	193	*7,60*	0	*0*	9540	*21446*	17263	*38809*	839,0	*51,20*	21,15	*46,63*	-
LS 9500 - 050 - A	50	*1,97*	255	*10,04*	205	*8,07*					18361	*41277*	1010,0	*61,63*	21,95	*48,39*	-
LS 9500 - 063 - A	63,5	*2,50*	282	*11,10*	218,5	*8,60*					19273	*43327*	1195,0	*72,92*	22,75	*50,16*	I
LS 9500 - 080 - A	80	*3,15*	315	*12,40*	235	*9,25*	150 bar *2175 psi*		150 bar *2175 psi*		20178	*45362*	1437,0	*87,69*	24,55	*54,12*	II
LS 9500 - 100 - A	100	*3,94*	355	*13,98*	255	*10,04*					20969	*47140*	1723,0	*105,14*	26,25	*57,87*	II
LS 9500 - 125 - A	125	*4,92*	405	*15,94*	280	*11,02*	± 5% + 20 °C *+68 °F*		± 5% + 20 °C *+68 °F*		21693	*48768*	2079,0	*126,87*	28,15	*62,06*	II
LS 9500 - 160 - A	160	*6,30*	475	*18,70*	315	*12,40*					22409	*50377*	2587,0	*157,87*	31,55	*69,56*	II
LS 9500 - 200 - A	200	*7,87*	555	*21,85*	355	*13,98*					22974	*51648*	3148,0	*192,10*	35,15	*77,49*	II
LS 9500 - 250 - A	250	*9,84*	655	*25,79*	405	*15,94*					23465	*52751*	3861,0	*235,61*	38,65	*85,21*	II
LS 9500 - 300 - A	300	*11,81*	755	*29,72*	455	*17,91*					23812	*53532*	4573,0	*279,06*	42,55	*93,81*	II

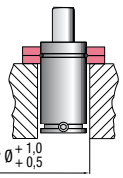


Drop-in

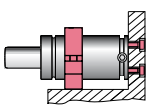
Bottom mount
FB 150 - FBA 150
FBB 150



FS2 150-FT 150
FS2A 150-FTP 150



FC 150 A- FCQ 150 A



FSA 150
FSD 150

HOW TO ORDER

(10 pcs) LS 9500-050-A
(10 pcs) LS 9500-050-A-N

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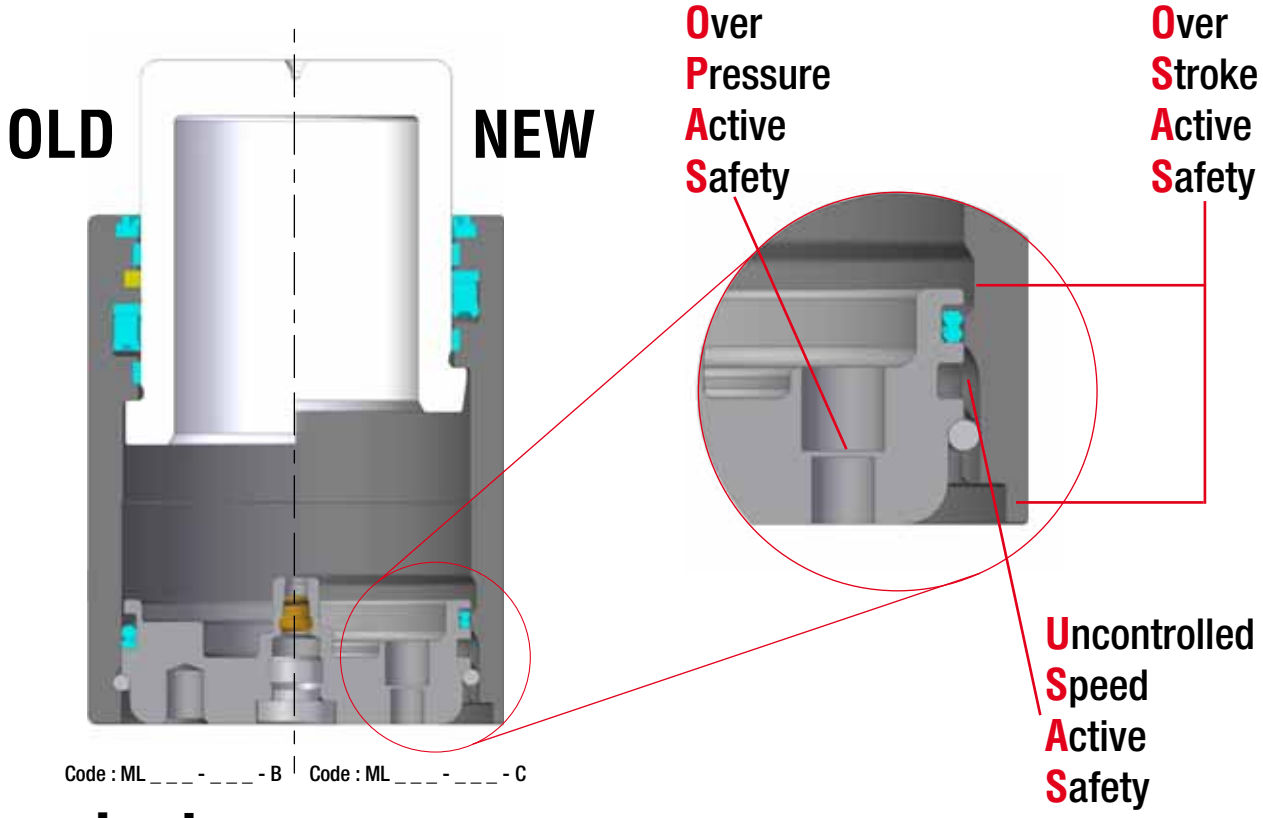


Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
ML 300	25	0,98	10 - 80	0,39 - 3,15	310	697	-	✓	-	✓
ML 500	32	1,26	10 - 80	0,39 - 3,15	510	1147	-	✓	-	✓
ML 1000	38	1,50	10 - 80	0,39 - 3,15	980	2203	✓	✓	-	✓
ML 1000 N	38	1,50	10 - 80	0,39 - 3,15	980	2203	✓	✓	-	✓
ML 1800	50	1,97	15 - 80	0,59 - 3,15	1925	4327	✓	✓	-	✓
ML 1800 N	50	1,97	15 - 80	0,59 - 3,15	1925	4327	✓	✓	-	✓
ML 3000	63	2,48	15 - 80	0,59 - 3,15	4925	11071	✓	✓	-	✓
ML 3000 N	63	2,48	15 - 80	0,59 - 3,15	4925	11071	✓	✓	-	✓
ML 4700	75	2,95	15 - 80	0,59 - 3,15	4925	11071	✓	✓	-	✓
ML 4700 N	75	2,95	15 - 80	0,59 - 3,15	4925	11071	✓	✓	-	✓
ML 7500	95	3,74	15 - 80	0,59 - 3,15	7700	17310	✓	✓	-	✓
ML 7500 N	95	3,74	15 - 80	0,59 - 3,15	7700	17310	✓	✓	-	✓
ML 12000	120	4,72	15 - 80	0,59 - 3,15	12720	28595	✓	✓	-	✓
ML 12000 N	120	4,72	15 - 80	0,59 - 3,15	12720	28595	✓	✓	-	✓

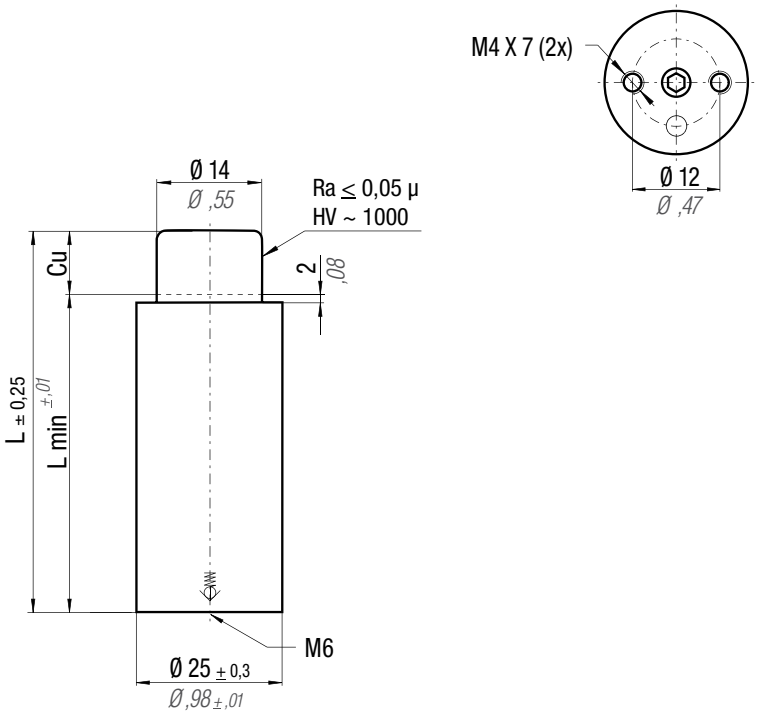
How to Order

ML 1800-050-C - N - EN

Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

Collegabile con tubi, fornito scarico e senza valvola unidirezionale, L+20 mm
Linkable with hoses, supplied without pressure and oneway valve, L+20 mm
Anschlussfähig mit Leitungen, geliefert ohne Druck und RückschlagVentil, L+20 mm
Connectable avec tubes, fourni sans pression ni valve unidirectionelle, L+20 mm
Connectable con tubos, suministrado sin presión y sin válvula unidireccional, L+20 mm
Acompláveis com tubos, fornecidos sem pressão e sem válvula unidireccional, L+20 mm

Collegabile EASY MANIFOLD, fornito scarico senza valvola + NIPPLO di collegamento
Linkable EASY MANIFOLD, supplied without pressure and valve + NIPPLE connecting
Anschlussfähig EASY MANIFOLD, geliefert ohne Druck und ohne Ventil + NIPPEL Verbindungs
Connectable EASY MANIFOLD, fourni sans pression ni valve + NIPPLE de connexion
Connectable EASY MANIFOLD, suministrado sin presión y sin válvula + NIPLE de connexión
Acompláveis EASY MANIFOLD, fornecidos sem pressão e sem válvula + LIGACÃO INTERIOR de conexão



Info

* 100% Cu - Polytropic end forces

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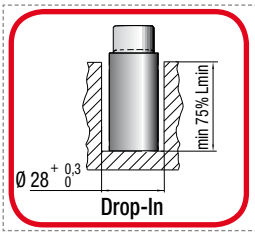
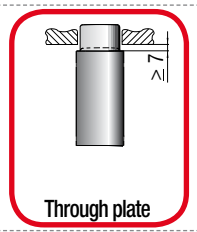
N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar *2900 psi*	20 bar *290 psi*	1,54 cm² *0,239 in²*	~ 40 - 80 (at 20°C)	1,6 m/s	Disposable

CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				
PHASING OUT	NEW	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
ML 300 - 010 - B	ML 300 - 010 - C	10	*0,39*	75	*2,95*	65	*2,56*	310	*697*	473	*1063*	-	-	0,18	*0,40*	-
ML 300 - 015 - B	ML 300 - 015 - C	15	*0,59*	85	*3,35*	70	*2,76*			521	*1171*	-	-	0,19	*0,42*	-
ML 300 - 025 - B	ML 300 - 025 - C	25	*0,98*	105	*4,13*	80	*3,15*	200 bar *2900 psi*		589	*1324*	-	-	0,22	*0,48*	-
ML 300 - 038 - B	ML 300 - 038 - C	38	*1,50*	130	*5,12*	92	*3,62*			653	*1468*	-	-	0,25	*0,55*	-
ML 300 - 050 - B	ML 300 - 050 - C	50	*1,97*	155	*6,10*	105	*4,13*			677	*1522*	-	-	0,28	*0,62*	-
ML 300 - 063 - B	ML 300 - 063 - C	63	*2,48*	185	*7,28*	122	*4,80*	± 5% +20 °C *+68 °F*		672	*1511*	-	-	0,33	*0,73*	-
ML 300 - 080 - B	ML 300 - 080 - C	80	*3,15*	220	*8,66*	140	*5,51*			692	*1556*	-	-	0,38	*0,84*	-






Bottom mount

HOW TO ORDER

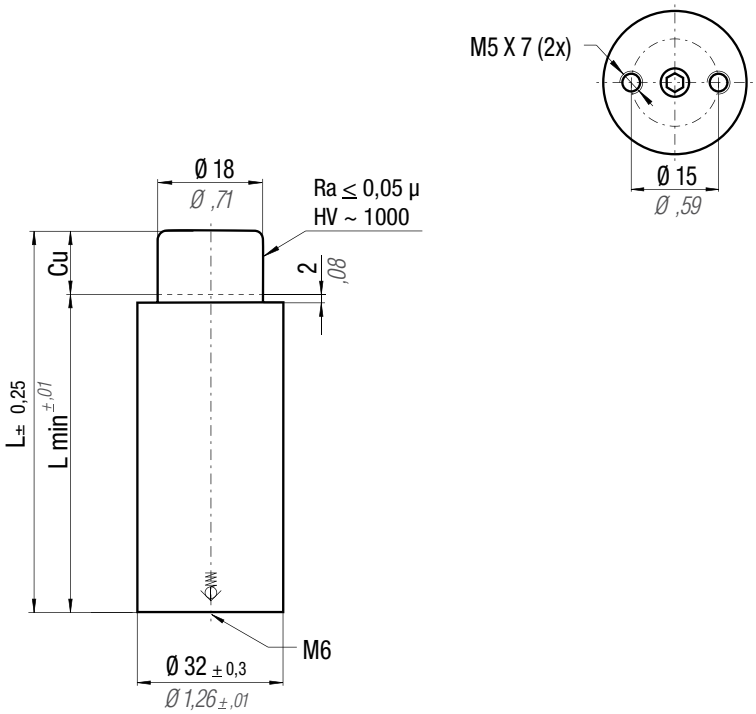
(10 pcs) ML300-050-C

ML 500

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

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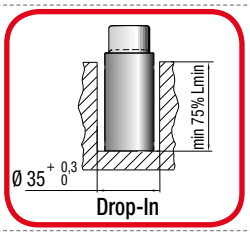
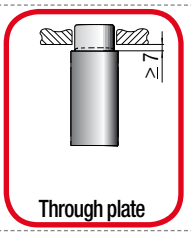
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar *2900 psi*	20 bar *290 psi*	2,54 cm² *0,394 in²*	~ 40 - 80 (at 20°C)	1,6 m/s	Disposable

CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				
PHASING OUT	NEW	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
ML 500 - 010 - B	ML 500 - 010 - C	10	*0,39*	75	*2,95*	65	*2,56*	510	*1147*	779	*1751*	-	-	0,30	*0,66*	-
ML 500 - 015 - B	ML 500 - 015 - C	15	*0,59*	85	*3,35*	70	*2,76*			853	*1918*	-	-	0,33	*0,73*	-
ML 500 - 025 - B	ML 500 - 025 - C	25	*0,98*	105	*4,13*	80	*3,15*	200 bar *2900 psi*		951	*2138*	-	-	0,36	*0,79*	-
ML 500 - 038 - B	ML 500 - 038 - C	38	*1,50*	130	*5,12*	92	*3,62*			1044	*2347*	-	-	0,42	*0,93*	-
ML 500 - 050 - B	ML 500 - 050 - C	50	*1,97*	155	*6,10*	105	*4,13*			1075	*2417*	-	-	0,46	*1,01*	-
ML 500 - 063 - B	ML 500 - 063 - C	63	*2,48*	190	*7,48*	127	*5,00*	± 5% +20 °C *+68 °F*		1017	*2286*	-	-	0,54	*1,19*	-
ML 500 - 080 - B	ML 500 - 080 - C	80	*3,15*	225	*8,86*	145	*5,71*			1051	*2363*	-	-	0,63	*1,39*	-

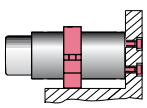


Drop-In



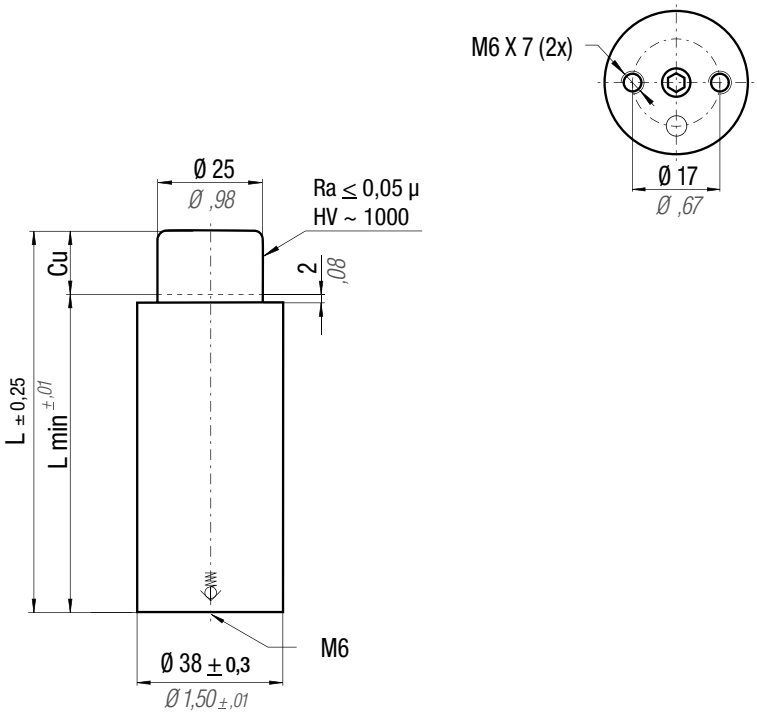
Through plate


Bottom mount


FSA 32 - FSD 32

HOW TO ORDER

(10 pcs) ML500-050-C



Info

* 100% Cu - Polytropic end forces

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N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar 2900 psi	20 bar 290 psi	4,91 cm² 0,761 in²	~ 40 - 80 (at 20°C)	1,6 m/s	39BMML01000C

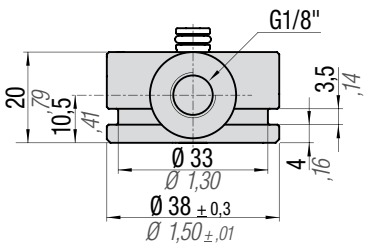
CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
PHASING OUT	NEW	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
ML 1000 - 010 - B	ML 1000 - 010 - C	10	0,39	75	2,95	65	2,56	980	2203	1592	3579	-	-	0,40	0,88	-
ML 1000 - 015 - B	ML 1000 - 015 - C	15	0,59	85	3,35	70	2,76			1780	4002	-	-	0,43	0,95	-
ML 1000 - 025 - B	ML 1000 - 025 - C	25	0,98	105	4,13	80	3,15	200 bar 2900 psi		2047	4602	-	-	0,49	1,08	-
ML 1000 - 038 - B	ML 1000 - 038 - C	38	1,50	135	5,31	97	3,82			2141	4813	-	-	0,58	1,28	-
ML 1000 - 050 - B	ML 1000 - 050 - C	50	1,97	160	6,30	110	4,33			2259	5078	-	-	0,66	1,46	-
ML 1000 - 063 - B	ML 1000 - 063 - C	63	2,48	205	8,07	142	5,59	± 5% +20 °C +68 °F		2019	4539	-	-	0,80	1,76	-
ML 1000 - 080 - B	ML 1000 - 080 - C	80	3,15	240	9,45	160	6,30			2134	4797	-	-	0,87	1,92	-

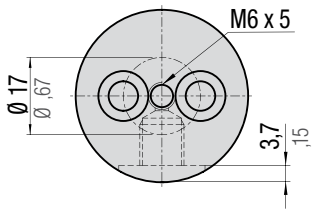
ML

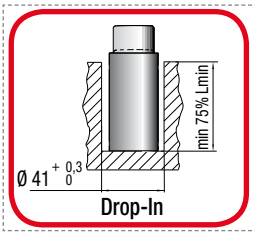
FML 1000

code: 39FML01000A

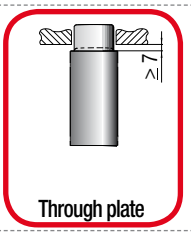
Kit speciale per trasformare cilindri autonomi
Special kit to convert self-contained cylinders
Spezial-Set zum Umbau eigenständiger Zylinder
Kit spécial pour transformer les cylindres autonomes
Kit especial para transformar cilindros autónomos
Kit especial para transformar cilindros autónomos





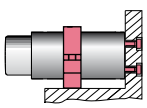


Drop-In



Through plate

Bottom mount



FSA 38 - FSD 38

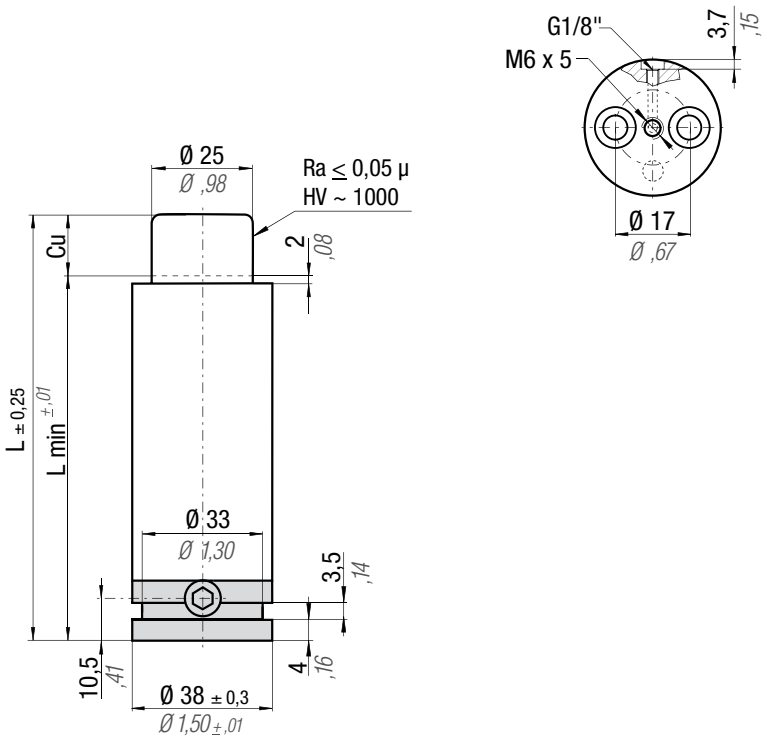
HOW TO ORDER

(10 pcs) ML1000-050-C

ML 1000 N
linkable G1/8”

lifeplus concept

PED 97/23/EC



Info

* 100% Cu - Polytropic end forces

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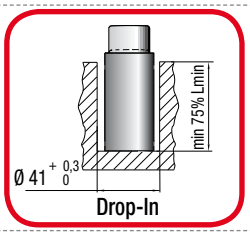
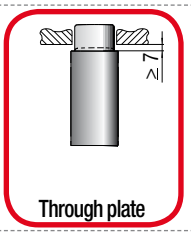
N2	°F / °C	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
	32 - 176 / 0 - 80	± 0,33 %/°C	200 bar 2900 psi	20 bar 290 psi	4,91 cm² 0,761 in²	~ 40 - 80 (at 20°C)	1,6 m/s	39BMML01000C

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	Cat.
ML1000-010-B-N	ML1000-010-C-N	10	0,39	95	3,74	85	3,35	980	2203	1592	3579	18,0	1,10	0,56	1,23	-
ML1000-015-B-N	ML1000-015-C-N	15	0,59	105	4,13	90	3,54			1780	4002	23,0	1,40	0,59	1,30	-
ML1000-025-B-N	ML1000-025-C-N	25	0,98	125	4,92	100	3,94	200 bar 2900 psi		2047	4602	33,0	2,01	0,65	1,43	-
ML1000-038-B-N	ML1000-038-C-N	38	1,50	155	6,10	117	4,61			2141	4813	48,0	2,93	0,74	1,63	-
ML1000-050-B-N	ML1000-050-C-N	50	1,97	180	7,09	130	5,12			2259	5078	60,0	3,66	0,82	1,81	-
ML1000-063-B-N	ML1000-063-C-N	63	2,48	225	8,86	162	6,38	± 5% +20 °C +68 °F		2019	4539	86,0	5,25	0,96	2,12	-
ML1000-080-B-N	ML1000-080-C-N	80	3,15	260	10,24	180	7,09			2134	4797	103,0	6,28	1,03	2,27	-

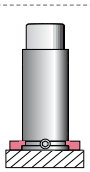


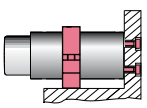
Drop-In



Through plate

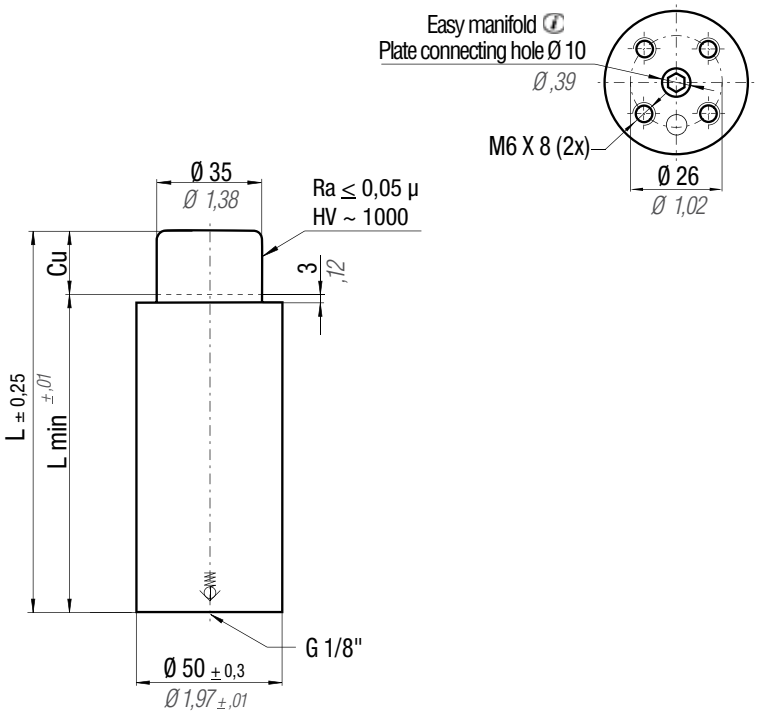

Bottom mount


FS2A 38 - FT 38
FS2B 38 - FTP 38


FSA 38 - FSD 38

HOW TO ORDER

(10 pcs) ML1000-050-C-N



Info

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page 210

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N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar 2900 psi	20 bar 290 psi	9,62 cm² 1,491 in²	~ 40 - 80 (at 20°C)	1,6 m/s	39BMML01800C

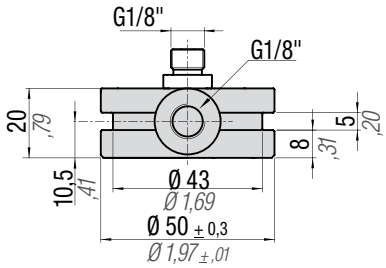
CODE		Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
PHASING OUT	NEW	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	~Kg	~lb	Cat.
ML 1800 - 015 - B	ML 1800 - 015 - C	15	0,59	95	3,74	80	3,15	1925	4327	3161	7106	-	-	0,84	1,85	-
ML 1800 - 025 - B	ML 1800 - 025 - C	25	0,98	115	4,53	90	3,54	200 bar 2900 psi		3661	8230	-	-	0,92	2,03	-
ML 1800 - 038 - B	ML 1800 - 038 - C	38	1,50	150	5,91	112	4,41			3762	8457	-	-	1,11	2,45	-
ML 1800 - 050 - B	ML 1800 - 050 - C	50	1,97	175	6,89	125	4,92			4034	9069	-	-	1,22	2,69	-
ML 1800 - 063 - B	ML 1800 - 063 - C	63	2,48	205	8,07	142	5,59	± 5% +20 °C +68 °F		4367	9817	-	-	1,38	3,04	-
ML 1800 - 080 - B	ML 1800 - 080 - C	80	3,15	245	9,65	165	6,50			4271	9602	-	-	1,57	3,46	-

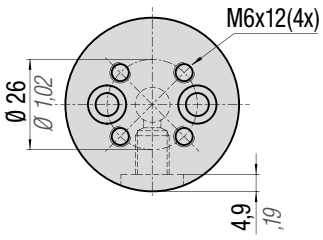
ML

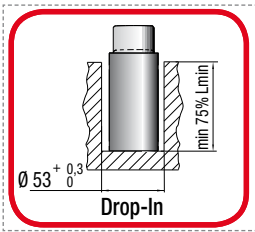
FML 1800

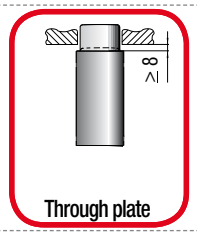
code: 39FML01800A

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
Kit especial para transformar cilindros autónomos
Kit especial para transformar cilindros autónomos

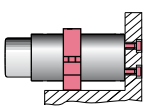









Bottom mount


FSA 50 - FSD 50

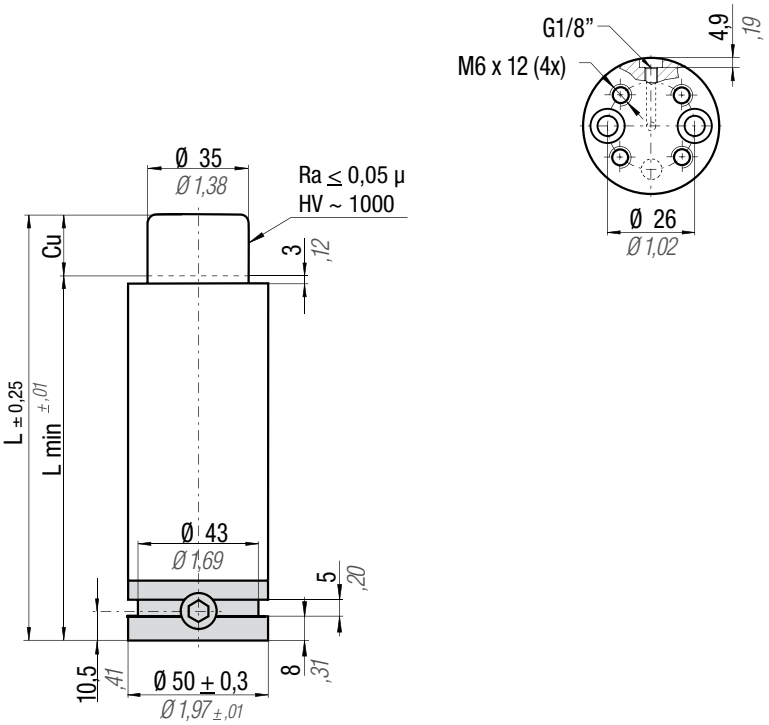
HOW TO ORDER

(10 pcs) ML1800-050-C
(10 pcs) ML1800-050-C-EN

ML 1800 N
linkable G1/8”

lifeplus concept

PED 97/23/EC



Info

* 100% Cu - Polytropic end forces

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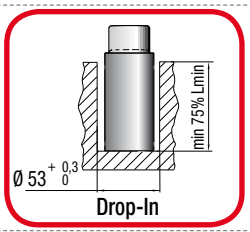
El nuevo código será suministrado sólo cuando el viejo está fuera de stock

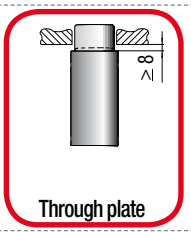
O novo código irá ser fornecido apenas quando o antigo esgotar stock

N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar *2900 psi*	20 bar *290 psi*	9,62 cm² *1,491 in²*	~ 40 - 80 (at 20°C)	1,6 m/s	39BMML01800C

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CE Cat.
ML1800-015-B-N	ML1800-015-C-N	15	*0,59*	115	*4,53*	100	*3,94*	1925	*4327*	3161	*7106*	49,0	*2,99*	1,14	*2,51*	-
ML1800-025-B-N	ML1800-025-C-N	25	*0,98*	135	*5,31*	110	*4,33*			3661	*8230*	67,0	*4,09*	1,22	*2,69*	-
ML1800-038-B-N	ML1800-038-C-N	38	*1,50*	170	*6,69*	132	*5,20*	200 bar *2900 psi*		3762	*8457*	102,0	*6,22*	1,41	*3,11*	-
ML1800-050-B-N	ML1800-050-C-N	50	*1,97*	195	*7,68*	145	*5,71*			4034	*9069*	125,0	*7,63*	1,52	*3,35*	-
ML1800-063-B-N	ML1800-063-C-N	63	*2,48*	225	*8,86*	162	*6,38*	± 5%		4367	*9817*	154,0	*9,40*	1,68	*3,70*	-
ML1800-080-B-N	ML1800-080-C-N	80	*3,15*	265	*10,43*	185	*7,28*	+20 °C *+68 °F*		4271	*9602*	193,0	*11,78*	1,87	*4,12*	-

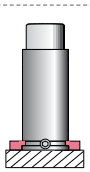


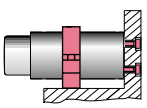
Drop-In



Through plate

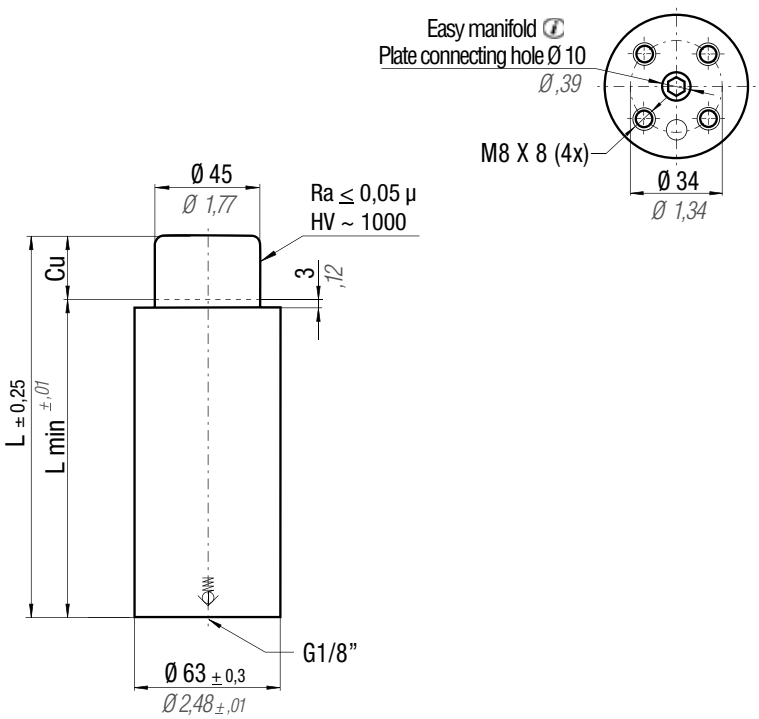

Bottom mount


FS2A 50 - FT 50
FS2B 50 - FTP 50


FSA 50 - FSD 50

HOW TO ORDER

(10 pcs) ML1800-050-C-N



Info

* 100% Cu - Polytropic end forces

page 210

Il nuovo codice sarà fornito solo ad esaurimento del vecchio

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N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar 2900 psi	20 bar 290 psi	15,90 cm² 2,464 in²	~ 40 - 80 (at 20°C)	1,6 m/s	39BMML03000B

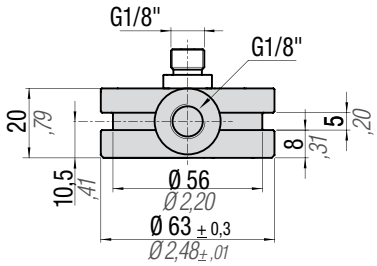
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
ML 3000 - 015 - B	ML 3000 - 015 - C	15	0,59	100	3,94	85	3,35	3180	7149	5114	11497	-	-	1,33	2,93	-
ML 3000 - 025 - B	ML 3000 - 025 - C	25	0,98	120	4,72	95	3,74	200 bar 2900 psi		5895	13252	-	-	1,47	3,24	-
ML 3000 - 038 - B	ML 3000 - 038 - C	38	1,50	150	5,91	112	4,41			6354	14284	-	-	1,69	3,73	-
ML 3000 - 050 - B	ML 3000 - 050 - C	50	1,97	180	7,09	130	5,12			6500	14613	-	-	1,92	4,23	-
ML 3000 - 063 - B	ML 3000 - 063 - C	63	2,48	210	8,27	147	5,79	± 5%		6716	15098	-	-	2,14	4,72	-
ML 3000 - 080 - B	ML 3000 - 080 - C	80	3,15	250	9,84	170	6,69	+20 °C	+68 °F	6883	15474	-	-	2,44	5,38	-

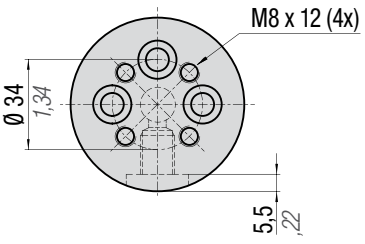
ML

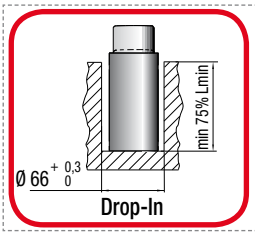
FML 3000

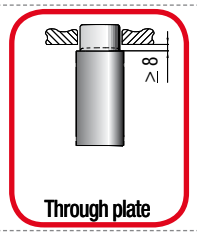
code: 39FML03000A

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

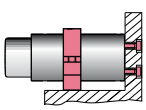









Bottom mount


FSC 63 - FSD 63

HOW TO ORDER

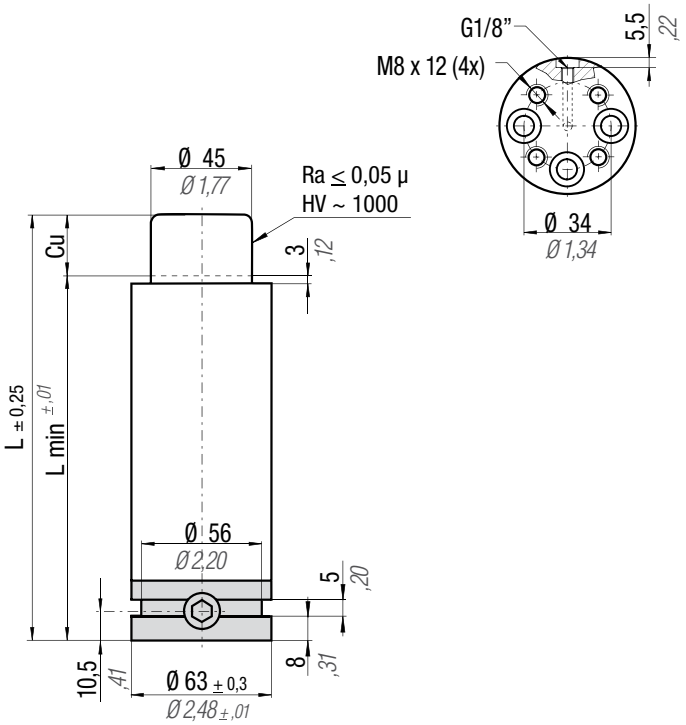
(10 pcs) ML3000-050-C
(10 pcs) ML3000-050-C-EN

ML 3000 N
linkable G1/8”

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

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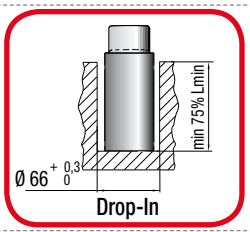
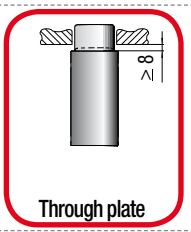
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar 2900 psi	20 bar 290 psi	15,90 cm² 2,464 in²	~ 40 - 80 (at 20°C)	1,6 m/s	39BMML03000B

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
ML3000-015-B-N	ML3000-015-C-N	15	0,59	120	4,72	105	4,13	3180	7149	5114	11497	99	6,04	1,71	3,77	-
ML3000-025-B-N	ML3000-025-C-N	25	0,98	140	5,51	115	4,53			5895	13252	128	7,81	1,85	4,08	-
ML3000-038-B-N	ML3000-038-C-N	38	1,50	170	6,69	132	5,20	200 bar 2900 psi		6354	14284	174	10,62	2,07	4,56	-
ML3000-050-B-N	ML3000-050-C-N	50	1,97	200	7,87	150	5,91			6500	14613	221	13,49	2,30	5,07	-
ML3000-063-B-N	ML3000-063-C-N	63	2,48	230	9,06	167	6,57	± 5%		6716	15098	267	16,29	2,52	5,56	-
ML 3000-080-B-N	ML3000-080-C-N	80	3,15	270	10,63	190	7,48	+20 °C	+68 °F	6883	15474	328	20,02	2,82	6,22	-

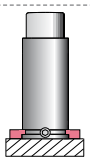


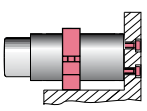
Drop-In



Through plate


Bottom mount


FS2 63 - FS2A 63
FS2B 63 - FT 63
FTP 63

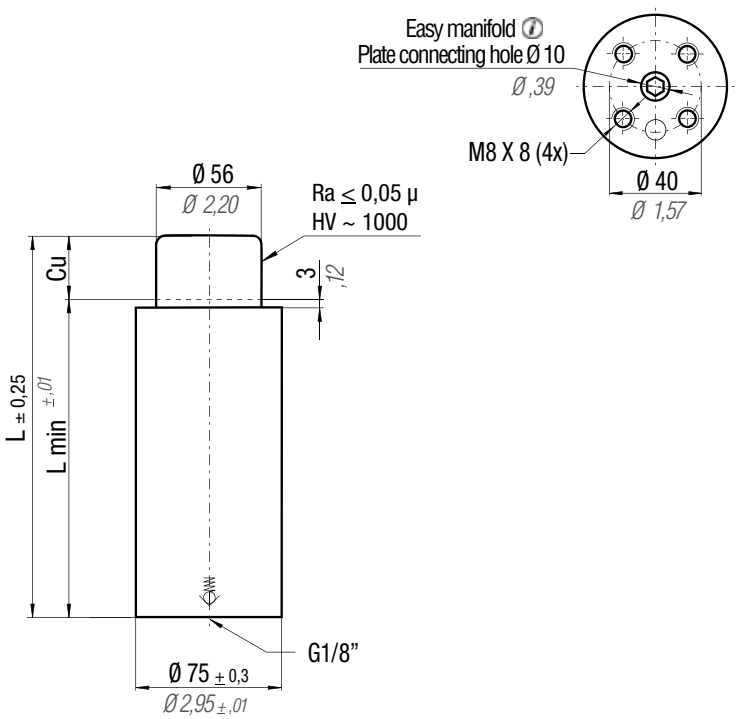

FSC 63 - FSD 63

HOW TO ORDER

(10 pcs) ML3000-050-C-N

ML 4700

PED 97/23/EC lifeplus concept



Info

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page 210

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N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar *2900 psi*	20 bar *290 psi*	24,63 cm² *3,817 in²*	~ 30 - 70 (at 20°C)	1,6 m/s	39BMML04700C

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CE Cat.
ML 4700 - 015 - B	ML 4700 - 015 - C	15	*0,59*	100	*3,94*	85	*3,35*	4925	*11071*	8203	*18441*	-	-	1,88	*4,14*	-
ML 4700 - 025 - B	ML 4700 - 025 - C	25	*0,98*	120	*4,72*	95	*3,74*			9524	*21411*	-	-	2,08	*4,59*	-
ML 4700 - 038 - B	ML 4700 - 038 - C	38	*1,50*	150	*5,91*	112	*4,41*	200 bar *2900 psi*		10275	*23099*	-	-	2,36	*5,20*	-
ML 4700 - 050 - B	ML 4700 - 050 - C	50	*1,97*	180	*7,09*	130	*5,12*			10499	*23603*	-	-	2,65	*5,84*	-
ML 4700 - 063 - B	ML 4700 - 063 - C	63	*2,48*	210	*8,27*	147	*5,79*	± 5%		10850	*24392*	-	-	2,92	*6,44*	-
ML 4700 - 080 - B	ML 4700 - 080 - C	80	*3,15*	250	*9,84*	170	*6,69*	+20 °C *+68 °F*		11118	*24994*	-	-	3,24	*7,14*	-

ML

FML 4700

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
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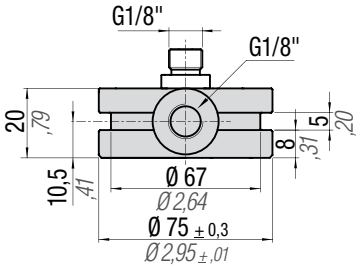
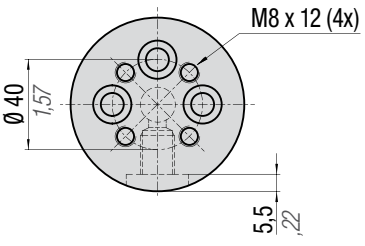
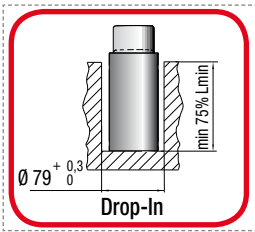
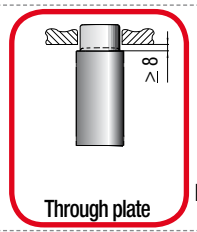
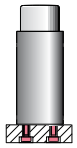


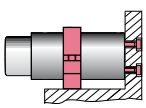








Bottom mount
FB 75 - FBA 75
FBB 75



FSA 75 - FSD 75

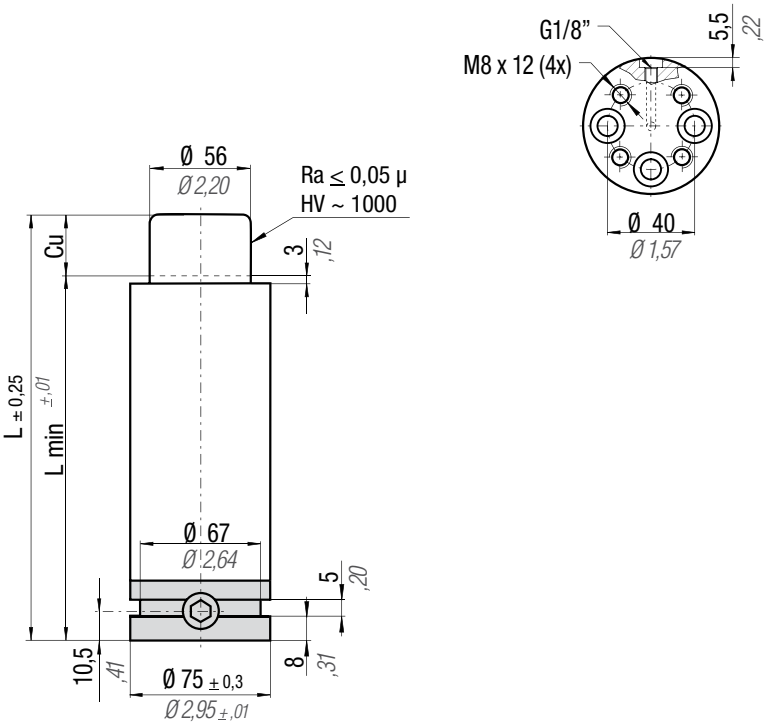
HOW TO ORDER

(10 pcs) ML4700-050-C
(10 pcs) ML4700-050-C-EN

ML 4700 N
linkable G1/8”

lifeplus concept

PED 97/23/EC



Info

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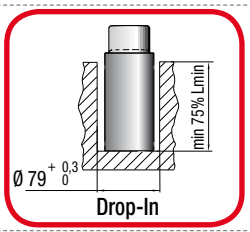
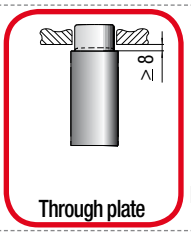
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
ML4700-015-B-N	ML4700-015-C-N	15	0,59	120	4,72	105	4,13	4925	11071	8203	18441	129,0	7,87	2,56	5,64	-
ML4700-025-B-N	ML4700-025-C-N	25	0,98	140	5,51	115	4,53			9524	21411	177,0	10,80	2,76	6,08	-
ML4700-038-B-N	ML4700-038-C-N	38	1,50	170	6,69	132	5,20	200 bar 2900 psi		10275	23099	251,0	15,32	3,04	6,70	-
ML4700-050-B-N	ML4700-050-C-N	50	1,97	200	7,87	150	5,91			10499	23603	327,0	19,95	3,33	7,34	-
ML4700-063-B-N	ML4700-063-C-N	63	2,48	230	9,06	167	6,57	± 5%		10850	24392	402,0	24,53	3,60	7,94	-
ML4700-080-B-N	ML4700-080-C-N	80	3,15	270	10,63	190	7,48	+20 °C	+68 °F	11118	24994	502,0	30,63	3,92	8,64	-

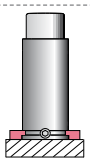


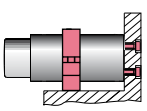
Drop-In



Through plate

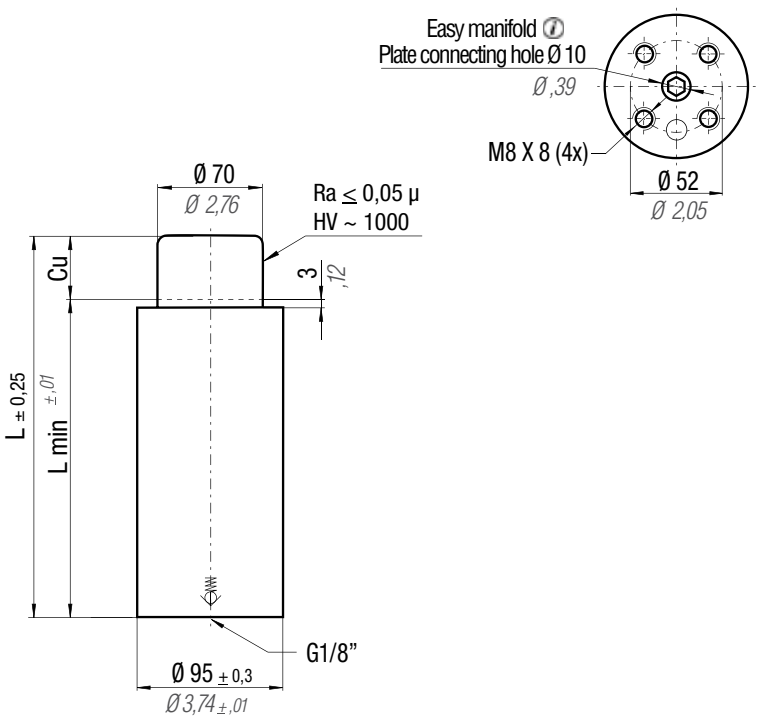

Bottom mount
FB 75 - FBA 75
FBB 75


FS2 75 - FT 75
FS2A 75 - FTP 75


FSA 75 - FSD 75

HOW TO ORDER

(10 pcs) ML4700-050-C-N



Info

* 100% Cu - Polytropic end forces

page 210

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N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	200 bar *2900 psi*	20 bar *290 psi*	38,48 cm² *5,964 in²*	~ 20 - 60 (at 20°C)	1,6 m/s	39BMML07500C

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CE Cat.
ML 7500 - 015 - B	ML 7500 - 015 - C	15	*0,59*	115	*4,53*	100	*3,94*	7700	*17310*	12040	*27067*	-	-	3,53	*7,78*	-
ML 7500 - 025 - B	ML 7500 - 025 - C	25	*0,98*	135	*5,31*	110	*4,33*			13872	*31185*	-	-	3,84	*8,47*	-
ML 7500 - 038 - B	ML 7500 - 038 - C	38	*1,50*	165	*6,50*	127	*5,00*	200 bar *2900 psi*		15048	*33829*	-	-	4,40	*9,70*	-
ML 7500 - 050 - B	ML 7500 - 050 - C	50	*1,97*	190	*7,48*	140	*5,51*			16107	*36210*	-	-	4,67	*10,30*	-
ML 7500 - 063 - B	ML 7500 - 063 - C	63	*2,48*	220	*8,66*	157	*6,18*	± 5%		16620	*37363*	-	-	5,15	*11,35*	-
ML 7500 - 080 - B	ML 7500 - 080 - C	80	*3,15*	260	*10,24*	180	*7,09*	+20 °C	*+68 °F*	17009	*38238*	-	-	5,76	*12,70*	-

ML

FML 7500

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
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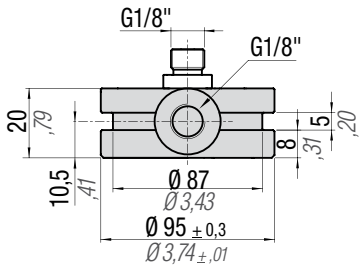
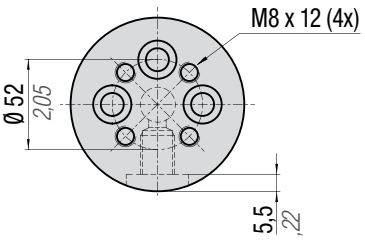
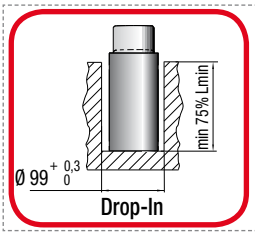
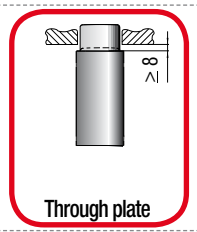
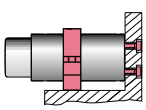









Bottom mount


FSA 95 - FSD 95

HOW TO ORDER

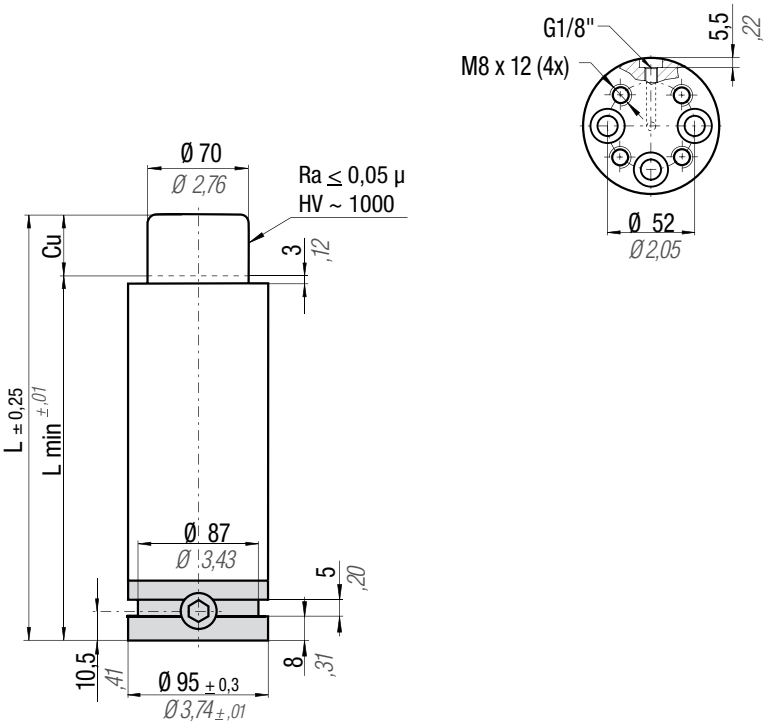
(10 pcs) ML7500-050-C
(10 pcs) ML7500-050-C-EN

ML 7500 N
linkable G1/8”

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

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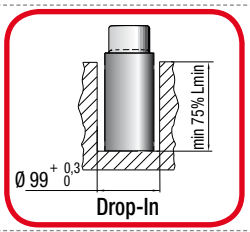
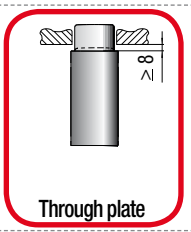
ML7500-015-B-N	ML7500-015-C-N	15	*0,59*	135	*5,31*	120	*4,72*	7700	*17310*	12040	*27067*	239,0	*14,58*	4,63	*10,21*	-
ML7500-025-B-N	ML7500-025-C-N	25	*0,98*	155	*6,10*	130	*5,12*			13872	*31185*	313,0	*19,10*	4,94	*10,89*	-
ML7500-038-B-N	ML7500-038-C-N	38	*1,50*	185	*7,28*	147	*5,79*	200 bar *2900 psi*		15048	*33829*	429,0	*26,18*	5,50	*12,13*	-
ML7500-050-B-N	ML7500-050-C-N	50	*1,97*	210	*8,27*	160	*6,30*			16107	*36210*	523,0	*31,92*	5,77	*12,72*	-
ML7500-063-B-N	ML 7500-063-C-N	63	*2,48*	240	*9,45*	177	*6,97*	± 5%		16620	*37363*	640,0	*39,05*	6,25	*13,78*	-
ML7500-080-B-N	ML7500-080-C-N	80	*3,15*	280	*11,02*	200	*7,87*	+20 °C *+68 °F*		17009	*38238*	796,0	*48,57*	6,86	*15,12*	-

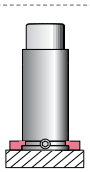


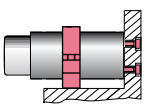
Drop-In



Through plate

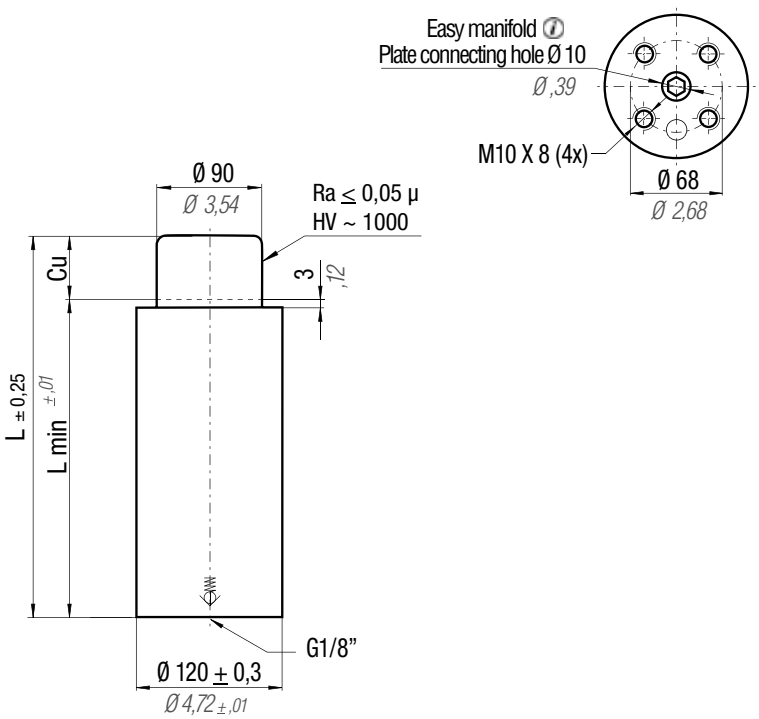

Bottom mount


FS2A 95 - FT 95
FS2B 95 - FTP 95


FSA 95 - FSD 95

HOW TO ORDER

(10 pcs) ML7500-050-C-N



Info

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page 210

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		± 0,33 %/°C	200 bar 2900 psi	20 bar 290 psi	63,62 cm² 9,861 in²	~ 20 - 50 (at 20°C)	1,6 m/s	39BMML12000C

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	Cat.
ML 12000 - 015 - B	ML 12000 - 015 - C	15	0,59	115	4,53	100	3,94	12720	28595	20981	47167	-	-	5,84	12,87	-
ML 12000 - 025 - B	ML 12000 - 025 - C	25	0,98	135	5,31	110	4,33	200 bar 2900 psi		24450	54966	-	-	6,55	14,44	-
ML 12000 - 038 - B	ML 12000 - 038 - C	38	1,50	165	6,50	127	5,00			26556	59700	-	-	7,25	15,98	-
ML 12000 - 050 - B	ML 12000 - 050 - C	50	1,97	195	7,68	145	5,71			27262	61287	-	-	8,06	17,77	-
ML 12000 - 063 - B	ML 12000 - 063 - C	63	2,48	225	8,86	162	6,38	± 5% +20 °C	+68 °F	28269	63551	-	-	9,14	20,15	II
ML 12000 - 080 - B	ML 12000 - 080 - C	80	3,15	265	10,43	185	7,28			29061	65332	-	-	9,84	21,69	II

ML

FML 12000

code: 39FML12000A

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Spezial-Set zum Umbau eigenständiger Zylinder
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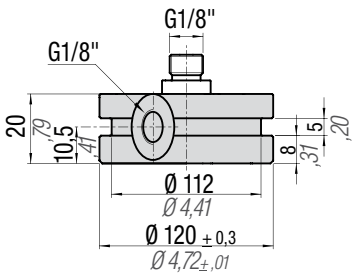
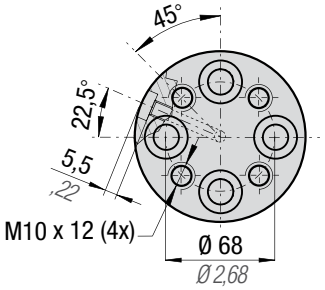
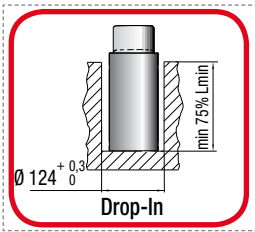
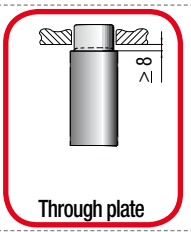
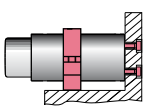









Bottom mount


FSA 120 - FSD 120

HOW TO ORDER

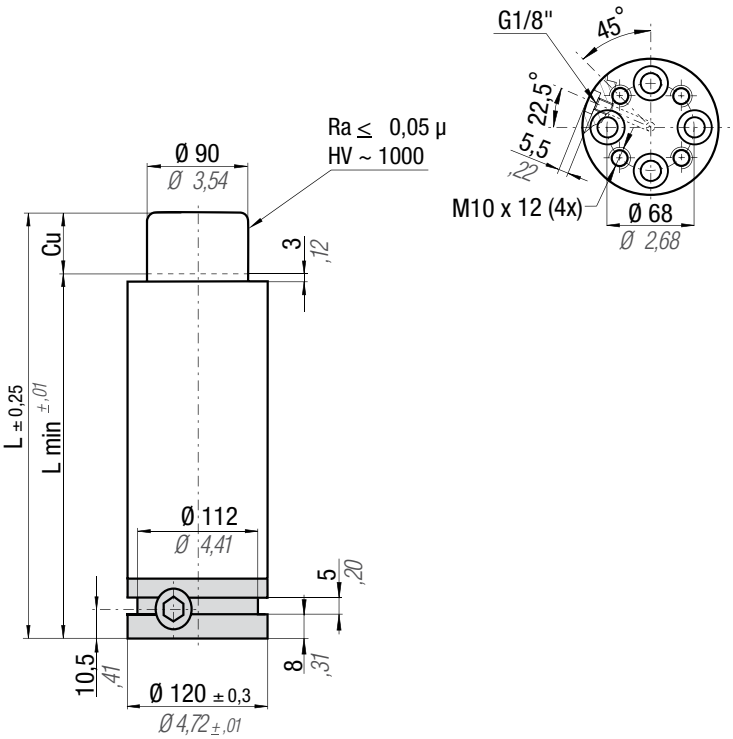
(10 pcs) ML12000-050-C
(10 pcs) ML12000-050-C-EN

ML 12000 N
linkable G1/8”

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



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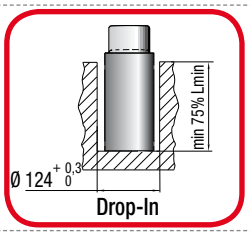
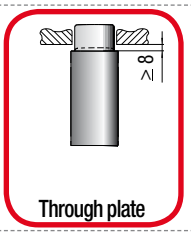
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
ML12000-015-B-N	ML12000-015-C-N	15	0,59	135	5,31	120	4,72	12720	28595	20981	47167	350,0	21,36	7,60	16,76	-
ML12000-025-B-N	ML12000-025-C-N	25	0,98	155	6,10	130	5,12			24450	54966	467,0	28,50	8,31	18,32	-
ML12000-038-B-N	ML12000-038-C-N	38	1,50	185	7,28	147	5,79	200 bar 2900 psi		26556	59700	650,0	39,66	9,01	19,86	-
ML12000-050-B-N	ML12000-050-C-N	50	1,97	215	8,46	165	6,50			27262	61287	838,0	51,14	9,82	21,65	-
ML12000-063-B-N	ML12000-063-C-N	63	2,48	245	9,65	182	7,17	± 5%		28269	63551	1021,0	62,30	10,90	24,03	II
ML12000-080-B-N	ML12000-080-C-N	80	3,15	285	11,22	205	8,07	+20 °C	+68 °F	29061	65332	1267,0	77,32	11,60	25,57	II

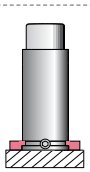


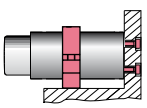
Drop-In



Through plate


Bottom mount


FS2A 120 - FT 120
FS2B 120 - FTP 120


FSA 120 - FSD 120

HOW TO ORDER

(10 pcs) ML12000-050-C-N

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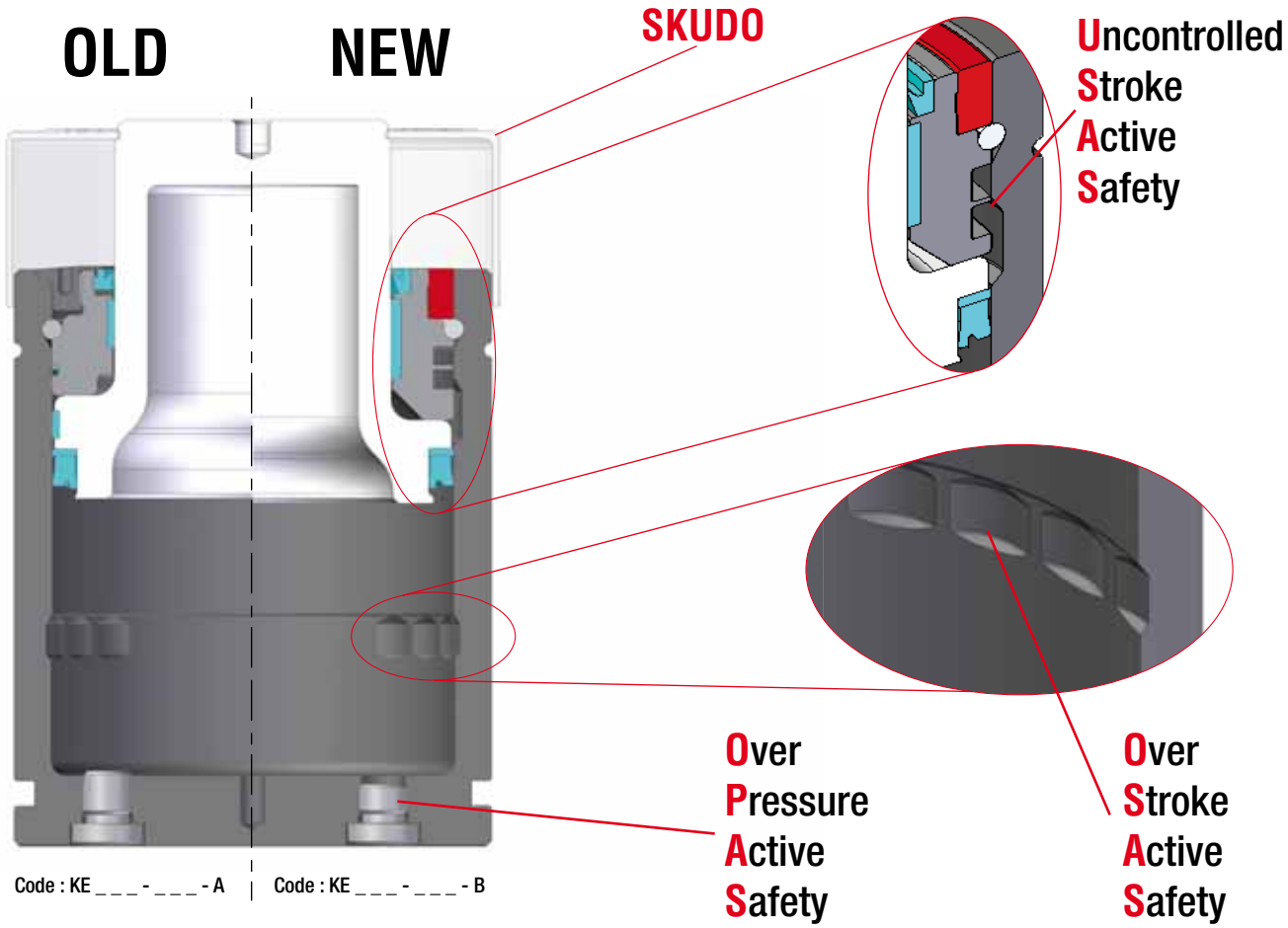


Range chart

Model	Body Ø		Stroke Cu		Initial force		lifeplus concept			
	mm	inch	mm	inch	daN	lb	OPAS	OSAS	SKUDO	USAS
KE 400	25	0.98	10 - 50	0.39 - 1.97	425	955	-	-	✓	-
KE 750	32	1.26	10 - 50	0.39 - 1.97	740	1664	-	✓	✓	✓
KE 1000	38	1.50	6 - 50	0.24 - 1.97	1060	2383	-	✓	✓	✓
KE 1800	50	1.97	6 - 50	0.24 - 1.97	1885	4238	✓	✓	✓	✓
KE 3000	63	2.48	10 - 50	0.39 - 1.97	2945	6620	✓	✓	✓	✓
KE 4700	75	2.95	10 - 50	0.39 - 1.97	4675	10510	✓	✓	✓	✓
KE 7500	95	3.74	10 - 50	0.39 - 1.97	7540	16950	✓	✓	✓	✓
KE 12000	120	4.72	10 - 50	0.39 - 1.97	11780	26481	✓	✓	✓	✓
KE 18500	150	5.91	10 - 50	0.39 - 1.97	18410	41386	✓	✓	✓	✓

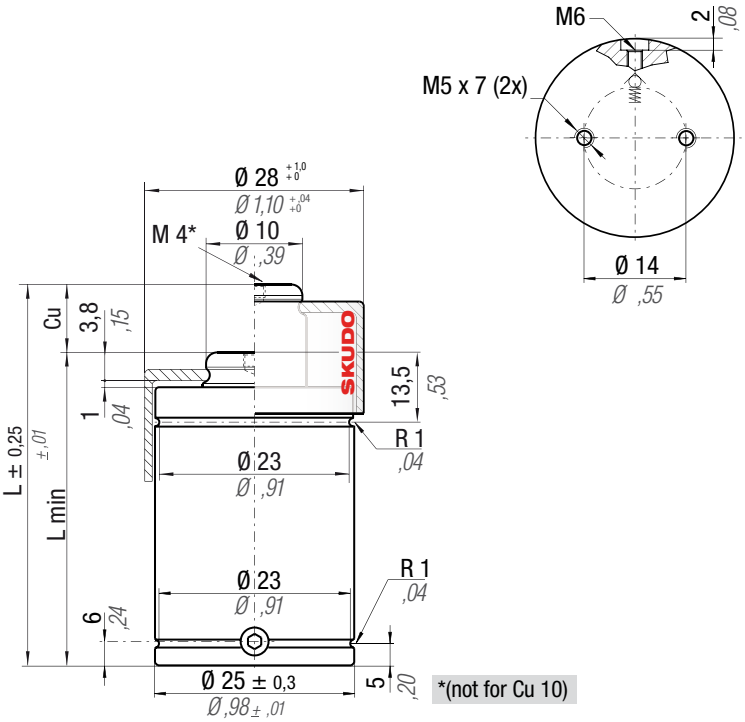
How to Order

KE 1800-050-B - N - ED

Codice cilindro autonomo
Self-contained cylinder code
Kode des eingeständiges Zylinder
Code du cylindre autonome
Codigo del cilindro autónomo
Codigo do cilindro autónomo

Collegabile con tubi, fornito scarico e senza valvola unidirezionale
Linkable with hoses, supplied without pressure and oneway valve
Anschlussfähig mit Leitungen, geliefert ohne Druck und RückschlagVentil
Connectable avec tubes, fourni sans pression ni valve unidirectionelle
Connectable con tubos, suministrado sin presión y sin válvula unidireccional
Acompláveis com tubos, fornecidos sem pressão e sem válvula unidireccional

Collegabile EASY MANIFOLD, fornito scarico + guarnizione di collegamento
Linkable EASY MANIFOLD, supplied without pressure + connecting seal
Anschlussfähig EASY MANIFOLD, geliefert ohne Druck + Verbindungsdichtung
Connectable EASY MANIFOLD, fourni sans pression + joint de connexion
Connectable EASY MANIFOLD, suministrado sin presión + junta de connexión
Acompláveis EASY MANIFOLD, fornecidos sem pressão + vedantes de conexão



Info

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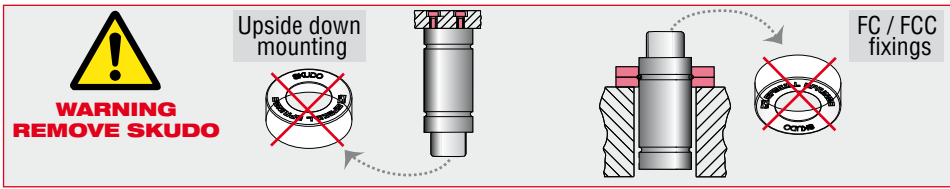
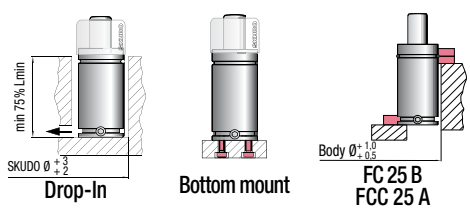
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	2,84 cm² *0,440 in²*	~ 50 - 100 (at 20°C)	0,8 m/s	Disposable

CODE	Cu		L		L min		F0 Initial force		F1 End force *		V0				CE
	mm	*inch*	mm	*inch*	mm	*inch*	daN	*lb*	daN	*lb*	cm³	*in³*	~Kg	*~lb*	Cat.
KE 400 - 010 - A	10	*0,39*	70	*2,76*	60	*2,36*	425	*955*	1153	*2592*	6,1	*0,37*	0,16	*0,35*	-
KE 400 - 016 - A	16	*0,63*	91	*3,58*	75	*2,95*			1171	*2633*	10,0	*0,61*	0,19	*0,42*	-
KE 400 - 025 - A	25	*0,98*	120	*4,72*	95	*3,74*	150 bar *2175psi*		1162	*2612*	15,9	*0,97*	0,23	*0,51*	-
KE 400 - 032 - A	32	*1,26*	140	*5,51*	108	*4,25*			1217	*2736*	19,6	*1,20*	0,25	*0,55*	-
KE 400 - 040 - A	40	*1,57*	165	*6,50*	125	*4,92*	± 5%		1217	*2736*	24,6	*1,50*	0,28	*0,62*	-
KE 400 - 050 - A	50	*1,97*	195	*7,68*	145	*5,71*	+ 20 °C *+68 °F*		1238	*2783*	30,4	*1,86*	0,32	*0,71*	-

KE





HOW TO ORDER

(10 pcs) KE 400-050-A

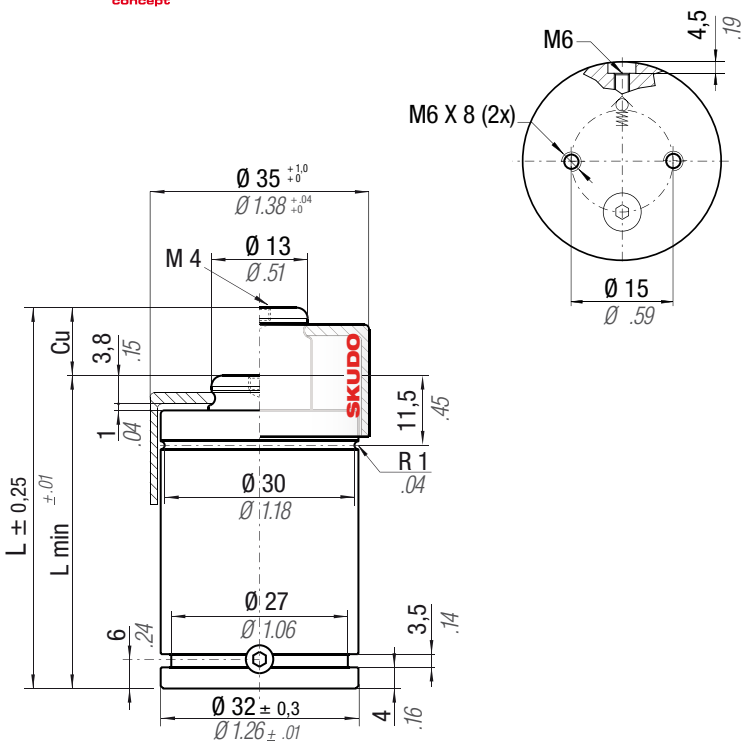
(10 pcs) KE 400-050-A-N

KE 750

lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS



Info

* 100% Cu - Polytropic end forces

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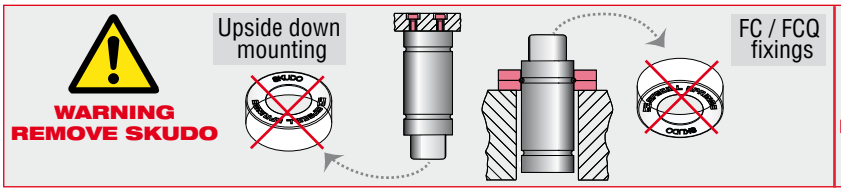
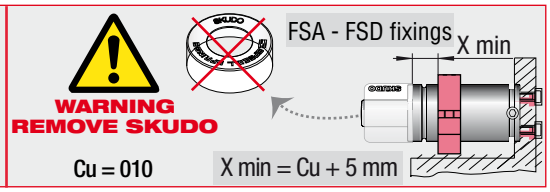
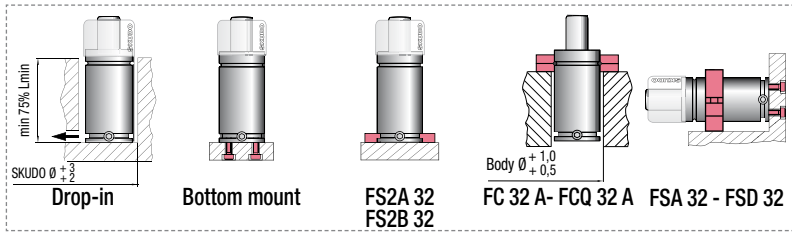
N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	4,91 cm² *0.761 in²*	~ 50 - 100 (at 20°C)	0,8 m/s	39BMKE00750B

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CE Cat.
KE 750 - 006 - A	KE 750 - 006 - B	6	*0.24*	63	*2.48*	57	*2.24*	740	*1664*	1563	*3514*	8,9	*0.54*	0,23	*0.51*	-
KE 750 - 010 - A	KE 750 - 010 - B	10	*0.39*	75	*2.95*	65	*2.56*			1721	*3869*	13,0	*0.79*	0,25	*0.55*	-
KE 750 - 016 - A	KE 750 - 016 - B	16	*0.63*	93	*3.66*	77	*3.03*	150 bar *2175psi*		1840	*4136*	19,2	*1.17*	0,28	*0.63*	-
KE 750 - 025 - A	KE 750 - 025 - B	25	*0.98*	120	*4.72*	95	*3.74*			1926	*4330*	28,5	*1.74*	0,33	*0.73*	-
KE 750 - 032 - A	KE 750 - 032 - B	32	*1.26*	140	*5.51*	108	*4.25*			2000	*4496*	35,2	*2.15*	0,37	*0.82*	-
KE 750 - 040 - A	KE 750 - 040 - B	40	*1.57*	165	*6.50*	125	*4.92*	± 5%		1992	*4478*	44,0	*2.68*	0,42	*0.92*	-
KE 750 - 050 - A	KE 750 - 050 - B	50	*1.97*	195	*7.68*	145	*5.71*	+ 20 °C *+68 °F*		2015	*4530*	54,3	*3.31*	0,47	*1.04*	-



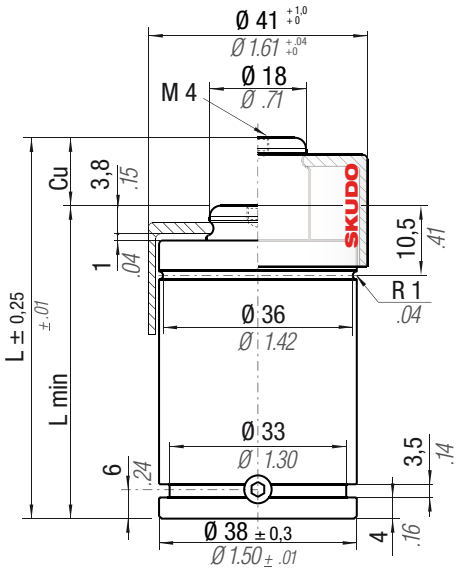


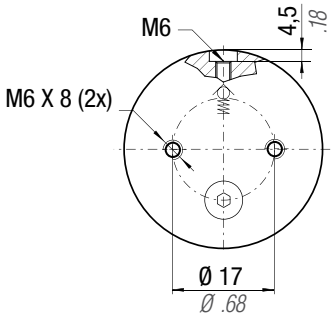


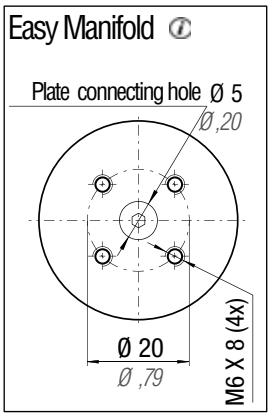
HOW TO ORDER

(10 pcs) KE 750-050-B

(10 pcs) KE 750-050-B-N







Info

* 100% Cu - Polytropic end forces

page 210

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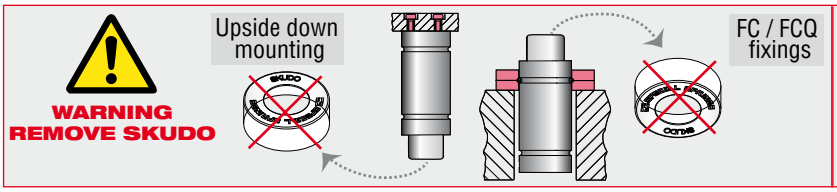
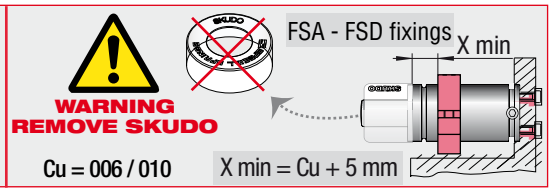
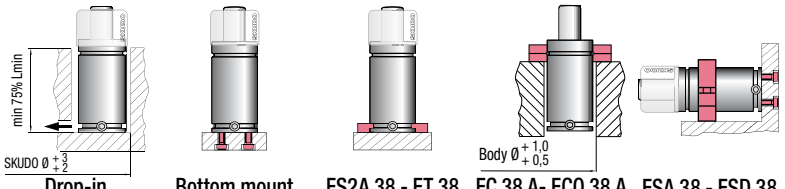
N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	7,07 cm² *1,096 in²*	~ 50 - 100 (at 20°C)	0,8 m/s	39BMKE01000B

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CE Cat.
KE 1000 - 006 - A	KE 1000 - 006 - B	6	*0.24*	61	*2.40*	55	*2.17*	1060	*2383*	2540	*5710*	11,3	*0.69*	0,33	*0.72*	-
KE 1000 - 010 - A	KE 1000 - 010 - B	10	*0.39*	78	*3.07*	68	*2.68*			2357	*5299*	20,9	*1.28*	0,38	*0.84*	-
KE 1000 - 016 - A	KE 1000 - 016 - B	16	*0.63*	100	*3.94*	84	*3.31*	150 bar *2175psi*		2297	*5164*	32,9	*2.01*	0,44	*0.97*	-
KE 1000 - 025 - A	KE 1000 - 025 - B	25	*0.98*	135	*5.31*	110	*4.33*			2207	*4962*	52,3	*3.19*	0,53	*1.17*	-
KE 1000 - 032 - A	KE 1000 - 032 - B	32	*1.26*	167	*6.57*	135	*5.31*	± 5%		2089	*4696*	70,8	*4.32*	0,62	*1.37*	-
KE 1000 - 040 - A	KE 1000 - 040 - B	40	*1.57*	195	*7.68*	155	*6.10*	+ 20 °C *+68 °F*		2130	*4788*	85,8	*5.24*	0,70	*1.54*	-
KE 1000 - 050 - A	KE 1000 - 050 - B	50	*1.97*	230	*9.06*	180	*7.09*			2117	*4759*	104,6	*6.38*	0,79	*1.74*	-

KE







HOW TO ORDER

(10 pcs) KE 1000-050-B

(10 pcs) KE 1000-050-B-N

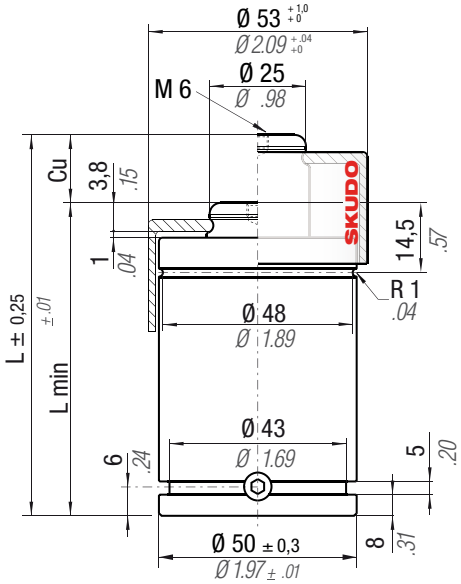
(10 pcs) KE 1000-050-B-ED

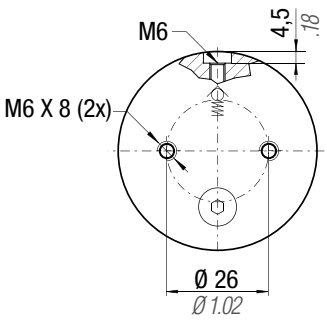
KE 1800

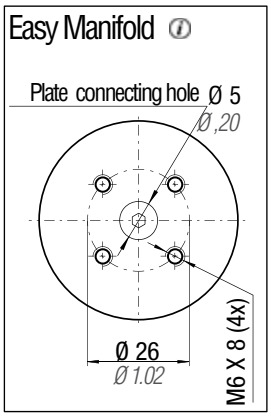
lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS







Info

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page 210

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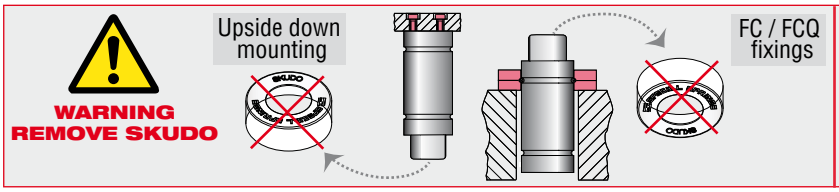
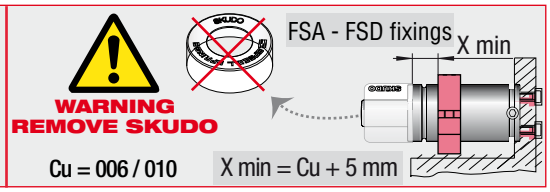
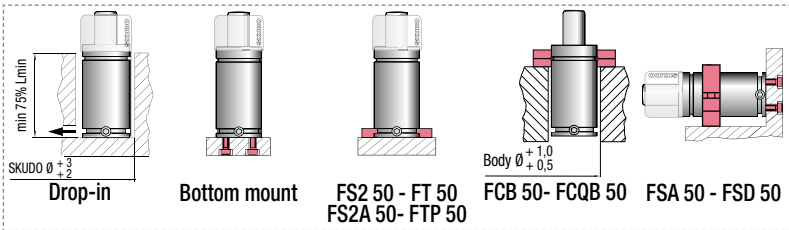
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	12,57 cm² 1,948 in²	~ 50 - 100 (at 20°C)	0,8 m/s	39BMKE01800B

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
KE 1800 - 006 - A	KE 1800 - 006 - B	6	0.24	66	2.60	60	2.36	1885	4238	3884	8732	23,4	1.43	0,62	1.37	-
KE 1800 - 010 - A	KE 1800 - 010 - B	10	0.39	80	3.15	70	2.76			3961	8905	37,0	2.26	0,68	1.50	-
KE 1800 - 016 - A	KE 1800 - 016 - B	16	0.63	106	4.17	90	3.54	150 bar 2175psi		3668	8246	63,6	3.88	0,80	1.76	-
KE 1800 - 025 - A	KE 1800 - 025 - B	25	0.98	135	5.31	110	4.33			3910	8790	91,1	5.56	0,92	2.04	-
KE 1800 - 032 - A	KE 1800 - 032 - B	32	1.26	162	6.38	130	5.12			3855	8666	118,0	7.20	1,05	2.31	-
KE 1800 - 040 - A	KE 1800 - 040 - B	40	1.57	190	7.48	150	5.91	± 5% + 20 °C +68 °F		3898	8763	146,0	8.91	1,17	2.58	-
KE 1800 - 050 - A	KE 1800 - 050 - B	50	1.97	220	8.66	170	6.69			4061	9129	172,8	10.55	1,30	2.87	-





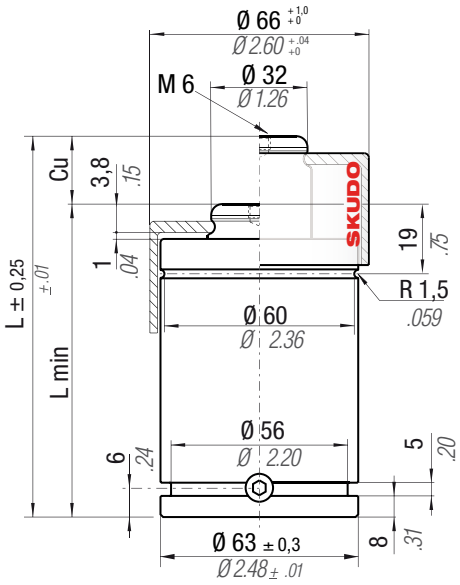


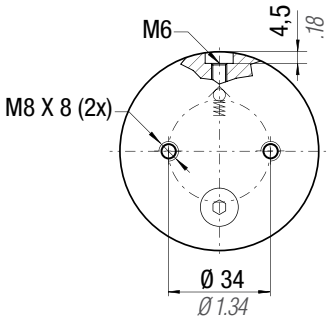
HOW TO ORDER

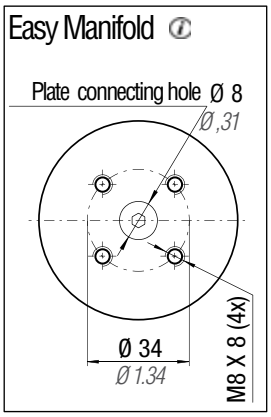
(10 pcs) KE 1800-050-B

(10 pcs) KE 1800-050-B-N

(10 pcs) KE 1800-050-B-ED







Info

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page 210

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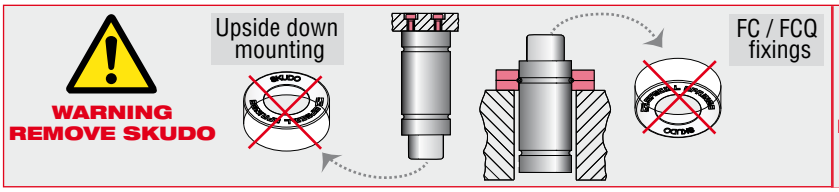
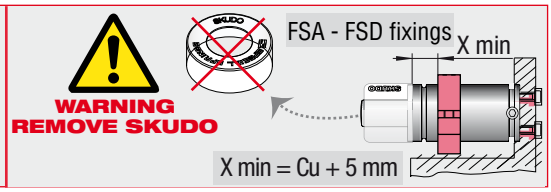
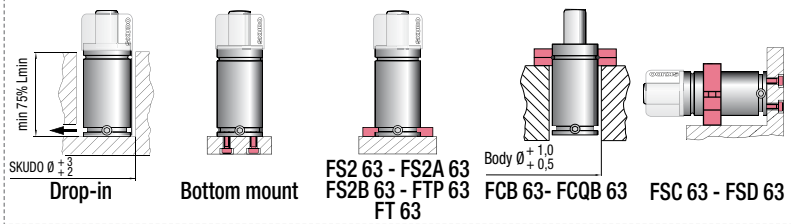
CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
KE 3000 - 010 - A	KE 3000 - 010 - B	10	0.39	85	3.35	75	2.95	2945	6620	5629	12654	55,1	3.36	1,23	2.71	-
KE 3000 - 016 - A	KE 3000 - 016 - B	16	0.63	103	4.06	87	3.43	150 bar 2175psi		6190	13916	81,2	4.95	1,35	2.98	-
KE 3000 - 025 - A	KE 3000 - 025 - B	25	0.98	130	5.12	105	4.13			6660	14972	120,3	7.34	1,54	3.40	-
KE 3000 - 032 - A	KE 3000 - 032 - B	32	1.26	150	5.91	118	4.65			6975	15680	148,7	9.07	1,68	3.70	-
KE 3000 - 040 - A	KE 3000 - 040 - B	40	1.57	175	6.89	135	5.31	± 5% + 20 °C +68 °F		7059	15869	185,4	11.31	1,86	4.10	-
KE 3000 - 050 - A	KE 3000 - 050 - B	50	1.97	205	8.07	155	6.10			7213	16215	228,8	13.96	2,07	4.56	-

KE







HOW TO ORDER

(10 pcs) KE 3000-050-B

(10 pcs) KE 3000-050-B-N

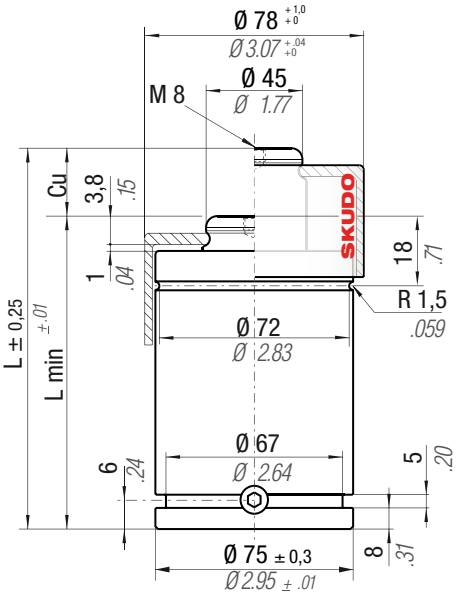
(10 pcs) KE 3000-050-B-ED

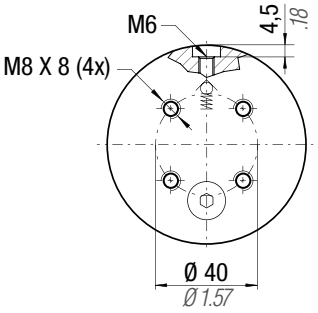
KE 4700

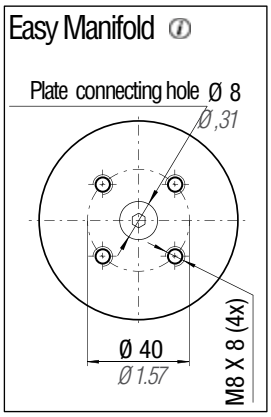
lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS







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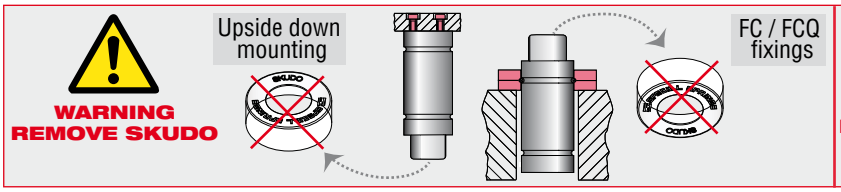
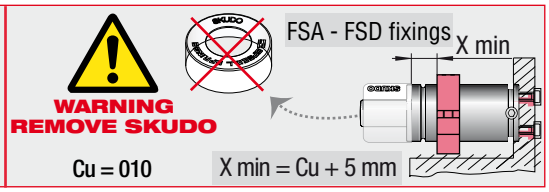
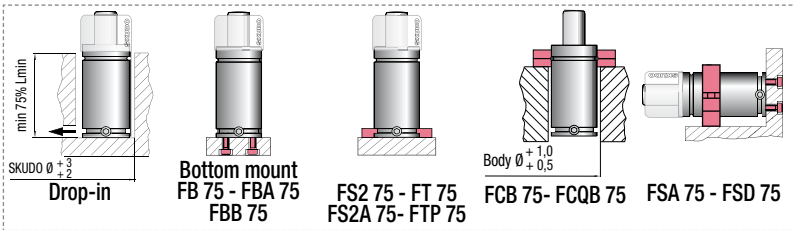
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	31,17 cm² 4,831 in²	~ 80 - 100 (at 20°C)	0,8 m/s	39BMKE04700B

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
KE 4700 - 010 - A	KE 4700 - 010 - B	10	0.39	80	3.15	70	2.76	4675	10510	10292	23137	87,9	5.36	1,60	3.53	-
KE 4700 - 016 - A	KE 4700 - 016 - B	16	0.63	106	4.17	90	3.54			9225	20739	155,7	9.50	1,83	4.03	-
KE 4700 - 025 - A	KE 4700 - 025 - B	25	0.98	135	5.31	110	4.33	150 bar 2175psi		9708	21824	226,2	13.80	2,07	4.56	-
KE 4700 - 032 - A	KE 4700 - 032 - B	32	1.26	167	6.57	135	5.31			9130	20525	310,5	18.95	2,37	5.22	-
KE 4700 - 040 - A	KE 4700 - 040 - B	40	1.57	200	7.87	160	6.30	± 5%		8975	20177	395,7	24.15	2,66	5.86	-
KE 4700 - 050 - A	KE 4700 - 050 - B	50	1.97	240	9.45	190	7.48	+ 20 °C +68 °F		8910	20030	498,3	30.41	3,01	6.64	-





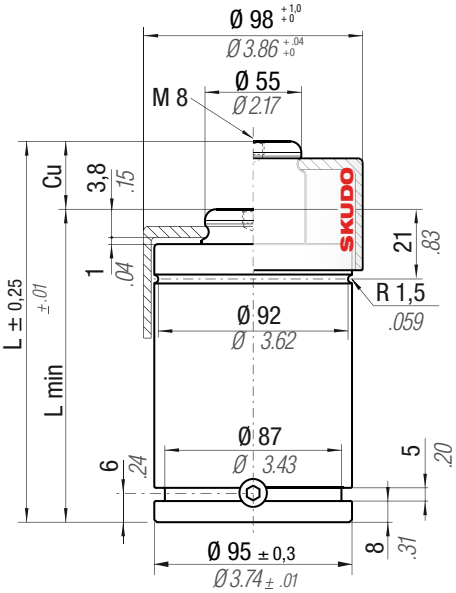


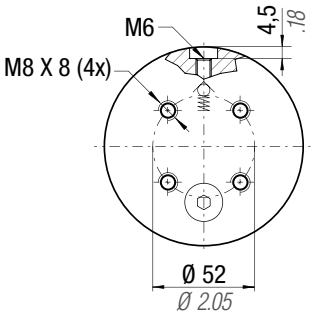
HOW TO ORDER

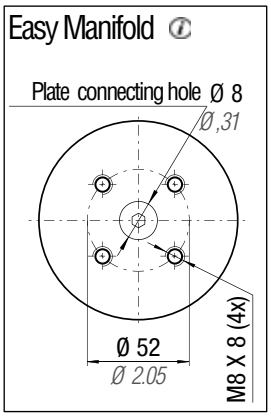
(10 pcs) KE 4700-050-B

(10 pcs) KE 4700-050-B-N

(10 pcs) KE 4700-050-B-ED







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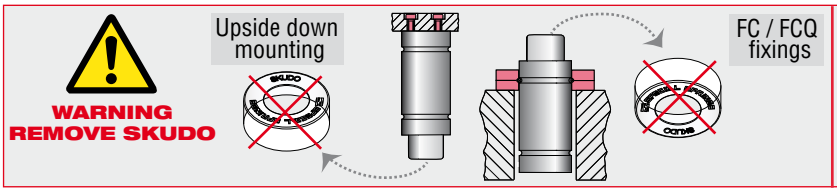
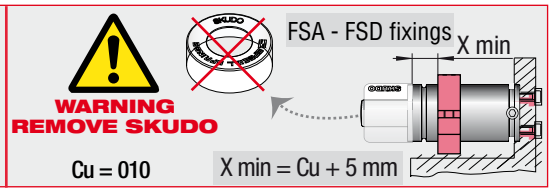
El nuevo código será suministrado sólo cuando el viejo está fuera de stock

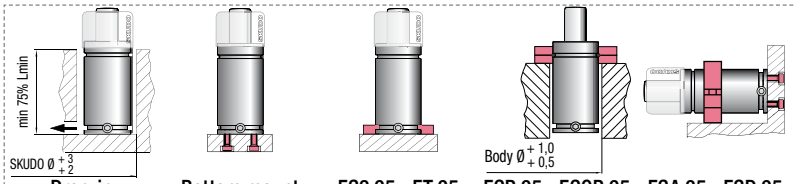
O novo código irá ser fornecido apenas quando o antigo esgotar stock

N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	50,27 cm² 7,791 in²	~ 80 - 100 (at 20°C)	0,8 m/s	39BMKE07500B

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
KE 7500 - 010 - A	KE 7500 - 010 - B	10	0.39	90	3.54	80	3.15	7540	16950	15006	33735	164,2	10.02	2,87	6.33	-
KE 7500 - 016 - A	KE 7500 - 016 - B	16	0.63	116	4.57	100	3.94			14188	31896	273,0	16.66	3,23	7.12	-
KE 7500 - 025 - A	KE 7500 - 025 - B	25	0.98	145	5.71	120	4.72	150 bar 2175psi		15121	33993	386,0	23.56	3,62	7.98	-
KE 7500 - 032 - A	KE 7500 - 032 - B	32	1.26	182	7.17	150	5.91			13920	31293	546,5	33.35	4,16	9.17	-
KE 7500 - 040 - A	KE 7500 - 040 - B	40	1.57	210	8.27	170	6.69	± 5%		14244	32022	658,1	40.16	4,54	10.01	-
KE 7500 - 050 - A	KE 7500 - 050 - B	50	1.97	255	10.04	205	8.07	+ 20 °C +68 °F		13900	31248	847,9	51.74	5,17	11.40	-







HOW TO ORDER

(10 pcs) KE 7500-050-B

(10 pcs) KE 7500-050-B-N

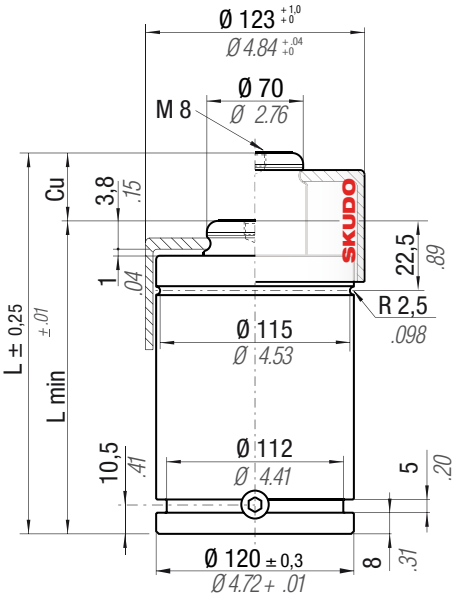
(10 pcs) KE 7500-050-B-ED

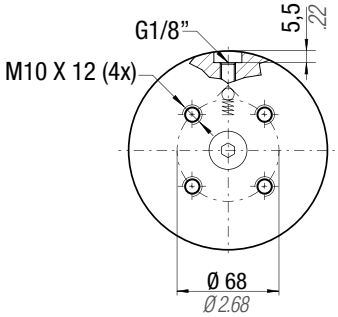
KE 12000

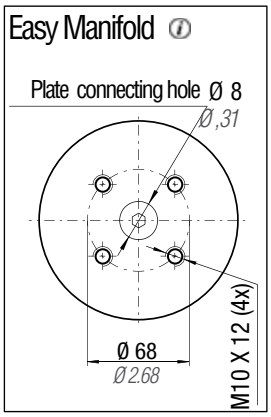
lifeplus concept

PED 97/23/EC

SPECIAL SPRINGS







Info

* 100% Cu - Polytropic end forces

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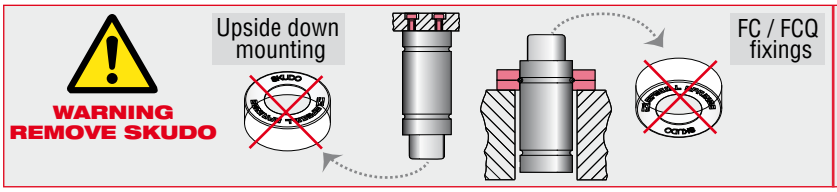
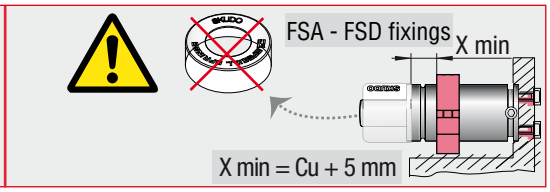
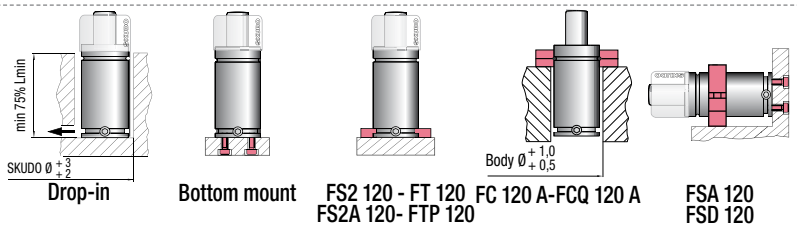
N2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar 2175 psi	20 bar 290 psi	78,54 cm² 12,174 in²	~ 50 - 100 (at 20°C)	0,8 m/s	39BMKE12000B

CODE PHASING OUT	CODE NEW	Cu mm	Cu inch	L mm	L inch	L min mm	L min inch	F0 Initial force daN	F0 lb	F1 End force * daN	F1 lb	V0 cm³	V0 in³	~Kg	~lb	CE Cat.
KE 12000 - 010 - A	KE 12000 - 010 - B	10	0.39	100	3.94	90	3.54	11780	26482	21947	49339	275,7	16.83	5,50	12.13	-
KE 12000 - 016 - A	KE 12000 - 016 - B	16	0.63	126	4.96	110	4.33			21389	48084	445,6	27.19	6,10	13.45	-
KE 12000 - 025 - A	KE 12000 - 025 - B	25	0.98	155	6.10	130	5.12	150 bar 2175psi		22963	51623	621,7	37.94	6,77	14.93	-
KE 12000 - 032 - A	KE 12000 - 032 - B	32	1.26	187	7.36	155	6.10			22079	49636	833,0	50.83	7,54	16.62	-
KE 12000 - 040 - A	KE 12000 - 040 - B	40	1.57	220	8.66	180	7.09	± 5%		22549	50692	1046,3	63.85	8,31	18.32	-
KE 12000 - 050 - A	KE 12000 - 050 - B	50	1.97	260	10.24	210	8.27	+ 20 °C +68 °F		21929	49298	1303,2	79.52	9,25	20.39	I







HOW TO ORDER

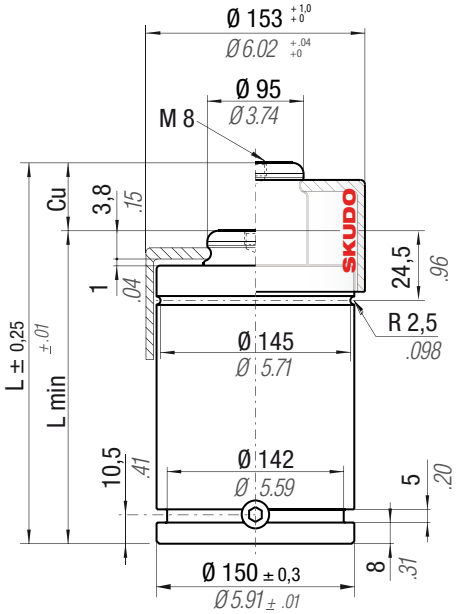
(10 pcs) KE 12000-050-B

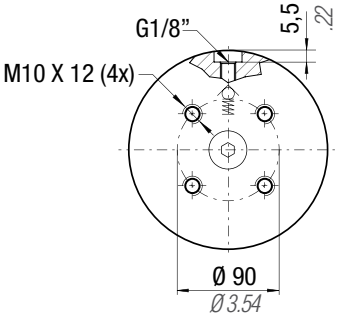
(10 pcs) KE 12000-050-B-N

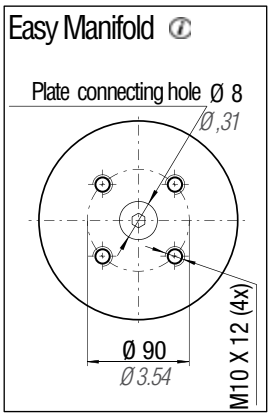
(10 pcs) KE 12000-050-B-ED

KE 18500

PED 97/23/EC lifeplus concept







Info

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page 210

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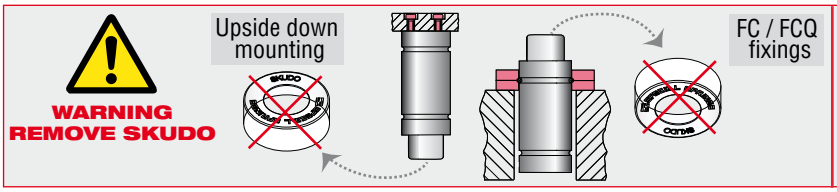
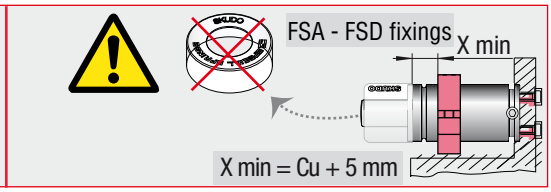
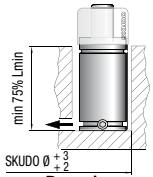
N_2	°F 32 - 176 / °C 0 - 80	ΔP	P max	P min	S	SPM	Max Speed	Maintenance kit
		± 0,33 %/°C	150 bar *2175 psi*	20 bar *290 psi*	122,72 cm² *19,022 in²*	~ 50 - 100 (at 20°C)	0,8 m/s	39BMKE18500B

CODE PHASING OUT	CODE NEW	Cu mm	Cu *inch*	L mm	L *inch*	L min mm	L min *inch*	F0 Initial force daN	F0 *lb*	F1 End force * daN	F1 *lb*	V0 cm³	V0 *in³*	~Kg	*~lb*	CE Cat.
KE 18500 - 010 - A	KE 18500 - 010 - B	10	*0.39*	110	*4.33*	100	*3.94*	18410	*41386*	30567	*68717*	495,9	*30.26*	9,23	*20.35*	-
KE 18500 - 016 - A	KE 18500 - 016 - B	16	*0.63*	136	*5.35*	120	*4.72*			30969	*69621*	767,8	*46.85*	10,20	*22.49*	-
KE 18500 - 025 - A	KE 18500 - 025 - B	25	*0.98*	165	*6.50*	140	*5.51*	150 bar *2175psi*		33418	*75127*	1053,0	*64.26*	11,22	*24.74*	I
KE 18500 - 032 - A	KE 18500 - 032 - B	32	*1.26*	197	*7.76*	165	*6.50*			32694	*73499*	1390,7	*84.86*	12,43	*27.40*	II
KE 18500 - 040 - A	KE 18500 - 040 - B	40	*1.57*	235	*9.25*	195	*7.68*	± 5% + 20 °C *+68 °F*		32028	*72002*	1794,2	*109.49*	13,85	*30.53*	II
KE 18500 - 050 - A	KE 18500 - 050 - B	50	*1.97*	270	*10.63*	220	*8.66*			32897	*73955*	2145,2	*130.91*	15,11	*33.31*	II

KE



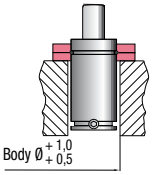




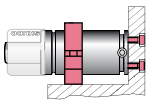
Drop-in

Bottom mount

FS2 150 - FT 150
FS2A 150- FTP 150



FC 150 A- FCQC 150
FCQ 150 A



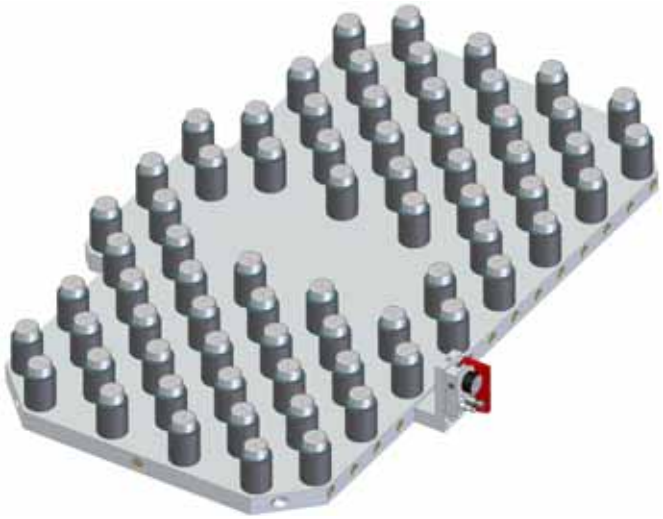
FSA 150
FSD 150

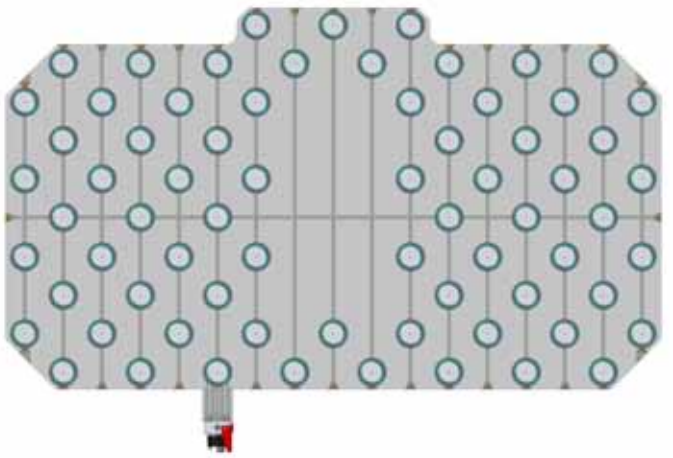
HOW TO ORDER

(10 pcs) KE 18500-050-B

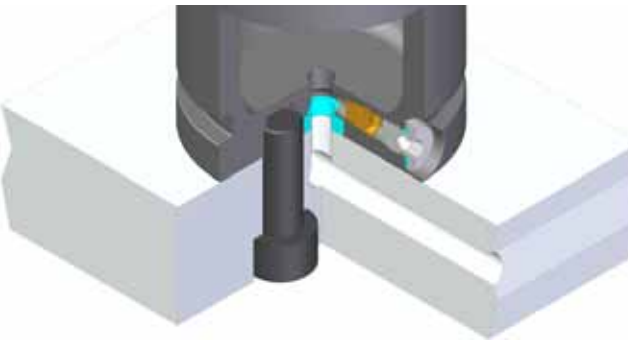
(10 pcs) KE 18500-050-B-N

(10 pcs) KE 18500-050-B-ED

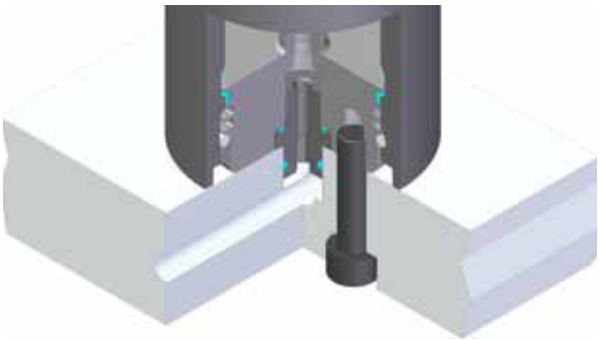




E system



EN system



I CARATTERISTICHE

- Vantaggiosa alternativa ai tradizionali e costosi cilindri Manifold.
- Grande varietà di combinazioni con l'uso di cilindri standard.
- Totale eliminazione di tubi e raccordi.
- Pressione uniforme nel sistema.
- Facile manutenzione, uguale ai cilindri standard.
- Piastre di collegamento realizzabili direttamente dagli utilizzatori.
- Massima flessibilità di realizzazione degli impianti.
- Nessuna richiesta di utensili speciali per l'installazione.
- **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 expensive Manifold cylinders.
- Large variety of combinations with the use of standard cylinders.
- Total elimination of hoses and connections.
- Balanced pressure in the system
- Easy maintenance, the same as standard cylinders.
- Connection plates can be made directly by users.
- Maximum flexibility in creation of systems.
- No special tools required for installation.
- **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 Standardzylindern.
- Komplette Abschaffung von Schläuchen und Anschlüssen.
- Gleichmässigen Druck in der System
- Ebenso wartungsfreundlich wie ein Standardzylinder.
- Die Anschlussplatten können von den Benutzern selbst gebaut werden.
- Höchste Flexibilität bei der Auslegung des Werkzeugs.
- Montage ohne Sonderwerkzeuge.
- **Auf Anfrage werden Platten/Ziehkissen nach den Anweisungen des Kunden von der Fa. Special Springs hergestellt, getestet und montagefertig geliefert.**

F CARACTERISTIQUES:

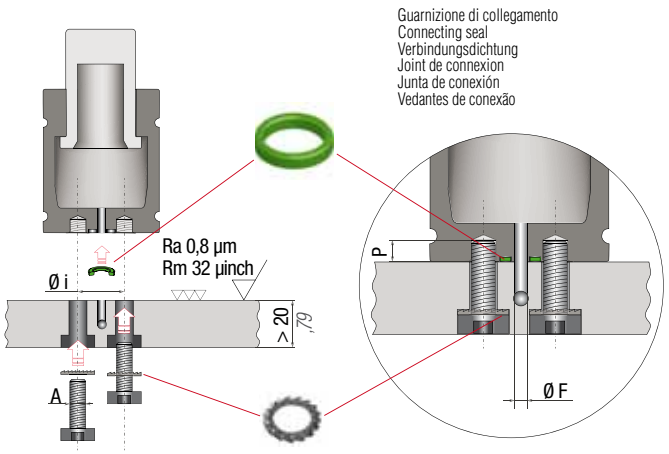
- Une alternative avantageuse aux traditionnels et coûteux cylindres Manifold.
- Une grande variété de combinaisons avec l'emploi de cylindres standard.
- L'élimination totale de tuyaux et raccords.
- Pression uniforme dans le système
- Entretien facile, comme celui des cylindres standard.
- Plaques de liaison réalisables directement par les utilisateurs.
- Très grande souplesse de réalisation des installations.
- Aucun besoin d'outils spéciaux pour l'installation.
- **Special Springs est en mesure de fournir les plaques/coussin sur spécifications du client, testées et prêtes à être installées.**

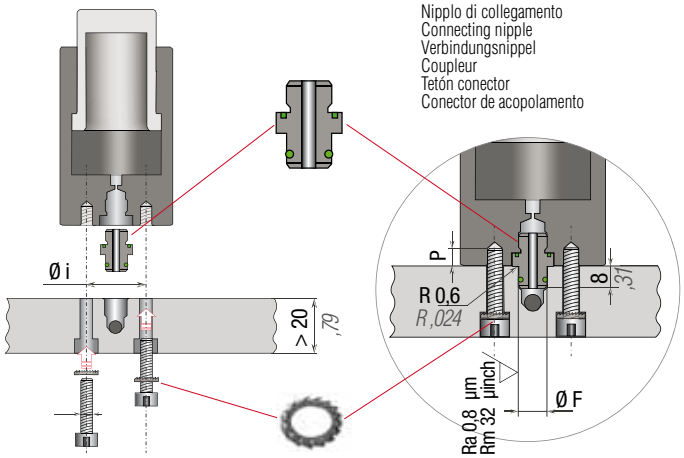
E CARACTERÍSTICAS:

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

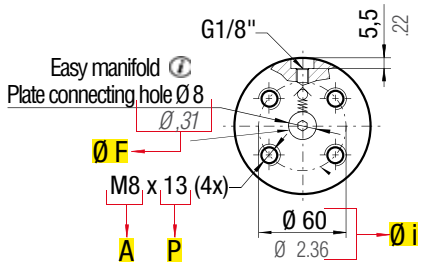
P CARACTERÍSTICAS:

- Vantajosa alternativa aos tradicionais e caros cilindros Manifold.
- Grande variedade de combinações com uso de cilindros standard.
- Total eliminação de tubos e junções.
- Pressão uniforme en o sistema.
- Fácil manutenção, igual a dos cilindros 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.
- **Special Springs pode fornecer chapas/coxim conforme exigência do cliente, testadas e verificadas prontas para a instalação.**

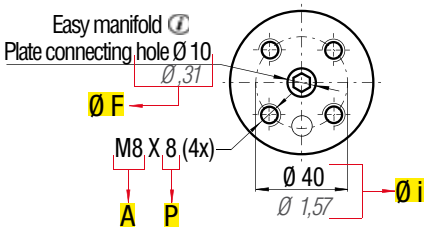




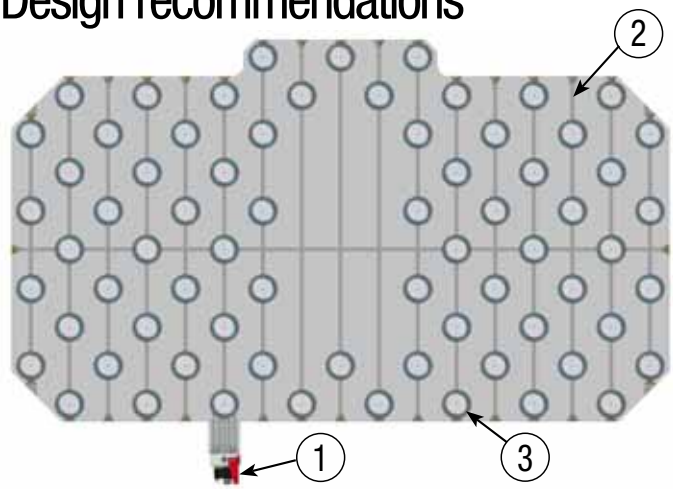
Example : RV 4200



Example : ML 4700



Design recommendations



I **Per una facile progettazione e per ridurre i costi di produzione seguire le linee guida di cui sotto**

1. Per collegare il pannello usare, se possibile, i canali del gas esistenti.
   In alternativa collegare il pannello con tubi e raccordi.
2. Realizzare canali passanti e pulire adeguatamente.
   Evitare canali ciechi.
3. Evitare interferenza tra i fori di fissaggio dei cilindri e i canali del gas
   Selezionare cilindri con corse maggiori per aumentare il volume del sistema

GB **For easier design and manufacturing cost-saving follow the guide lines below**

1. To link the panel, use possibly the existing gas ports.
   Alternatively, link the panel by using hoses and connections.
2. Machine thru-holes and adequately clear the ports.
   Avoid blind channels.
3. Avoid interference between the cylinder's fixing holes and the gas ports
   Select cylinders with higher stroke to increase the volume of the system

D **Für eine bessere Empfehlung und produktionskosten zu speichern, folgen Sie die unteren Richtlinien**

1. Um der Schaltbrett zu verbinden, benutzen, wo möglich, die bestehenden GaskanalenIn
   Als Alternative, Verbinden Sie das Tafel mit Rohren und Verbindungen
2. Realisieren Durchgangslochen und gut abschaben
   Vermeiden Sie Kanälen ohne ausgang
3. Vermeiden Sie die interferenz zwischen befestigung lochungen und die Gaskanalen
   Wählen Sie gasdruckfedern mit grössere Hub, um der Volume des system zu Vergrössern

F **Pour une conception plus facile et de l'épargne des coûts de fabrications suivez les instructions ci-dessous**

1. Pour relier le panneau utiliser, si possible, les canaux du gaz existents
   Alternativement, joindre le panneau en utilisant des tubes et des raccords
2. Réaliser des trous débouchants et nettoyez correctement
   Eviter les trous sans issue
3. Eviter l'interférence entre les trous de fixation des ressorts et les canaux du gaz
   Sélectionner des ressorts avec des courses majeures pour augmenter le volume du système

E **Para facilitar el diseño y para ahorrar costes de producción siguen los lineamientos mencionados a continuación**

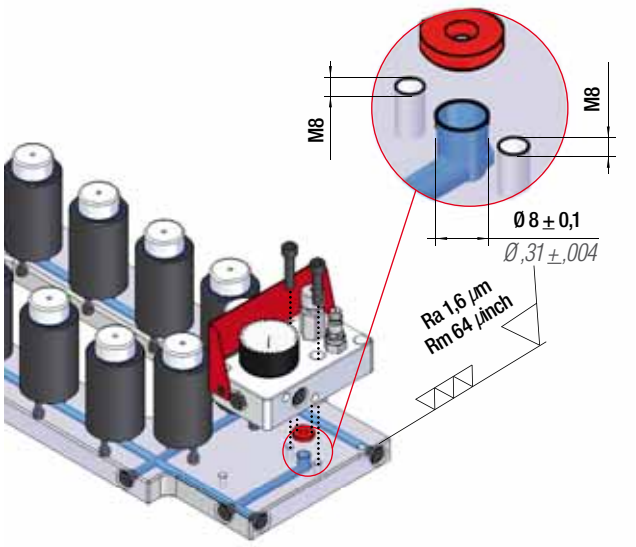
1. Para conectar el panel utilizar, si posible, los canales del gas existentes
   En alternativa, conectar el panel con tuberías y conexiones
2. Realizar orificios pasantes por toda la placa y bien limpiar
   Evite orificios sin salida
3. Evitar la interferencia entre los orificios de fijacion de los cilindros y los canales de gas
   Seleccionar los cilindros con carreras mas grande para aumentar el volumen del sistema

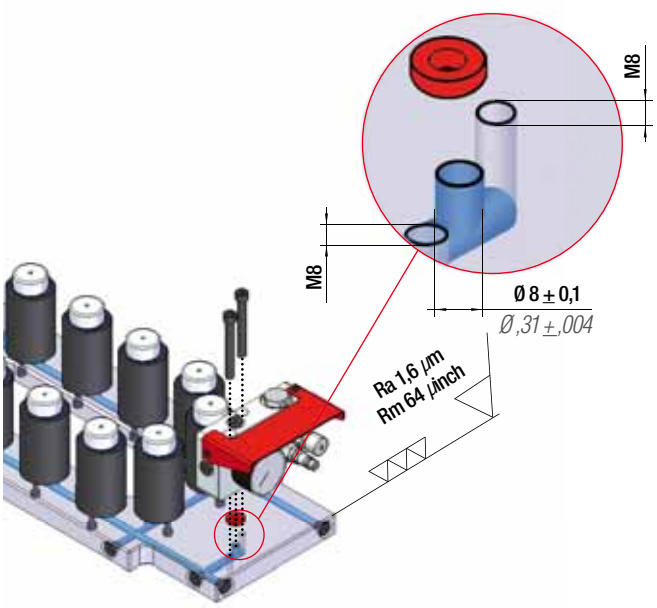
P **Para facilitar o desenho e economizar custos de produção seguir as orientações abaixo mencionados**

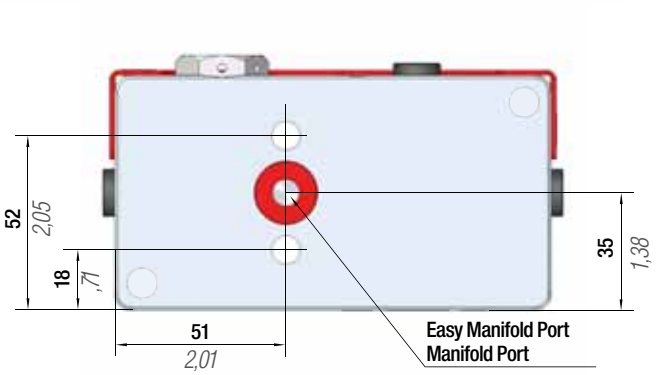
1. Para ligar o painel, se possível, usar os canais de gás existentes
   Em alternativa conecte o painel com tubos e acessórios
2. Realizar orificios de passagem par toda a placa e bem limpar
   Evitar orificios sem saída
3. Evitar a interferência entre os orifícios de fixação dos cilindros e os canais de gás
   Escolher os cilindros com curso mais grande para aumentar o volume do sistema

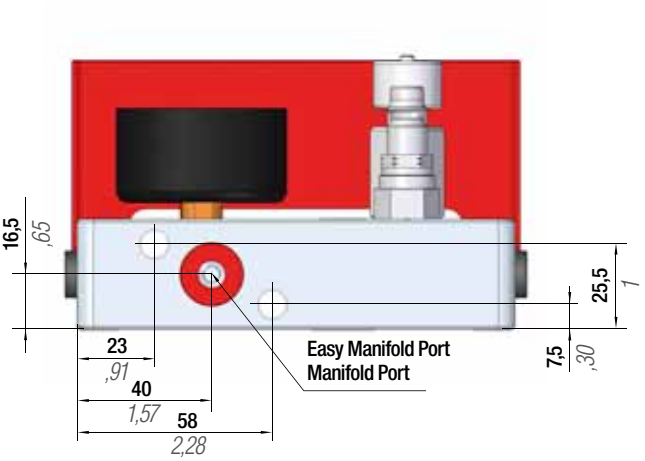
MANI FOLD

39CPVC - Control Panel

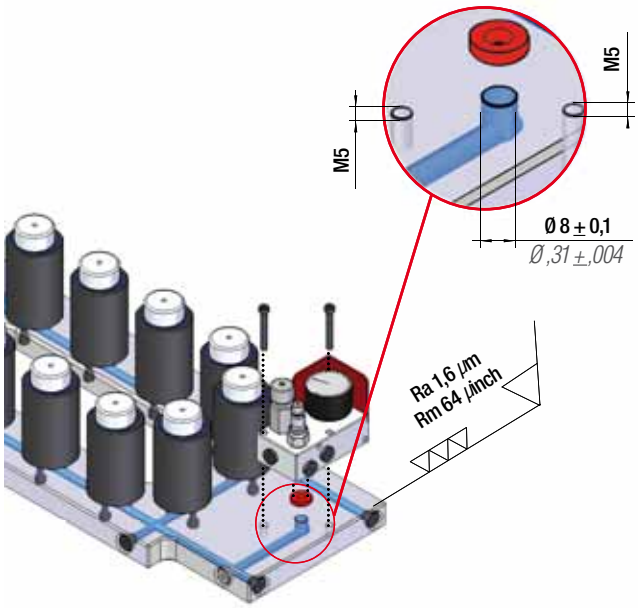


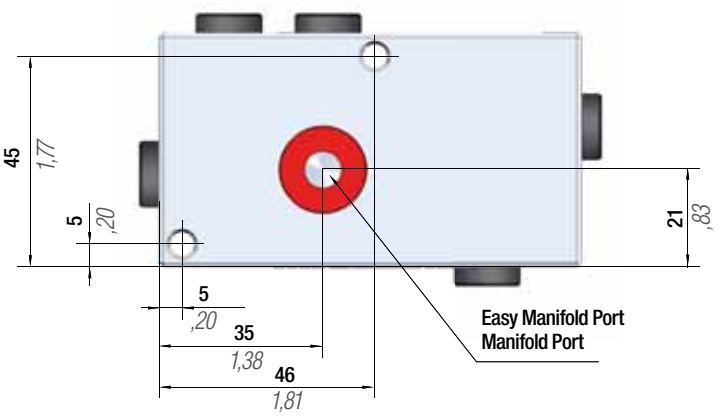






39MCPA - Control Panel





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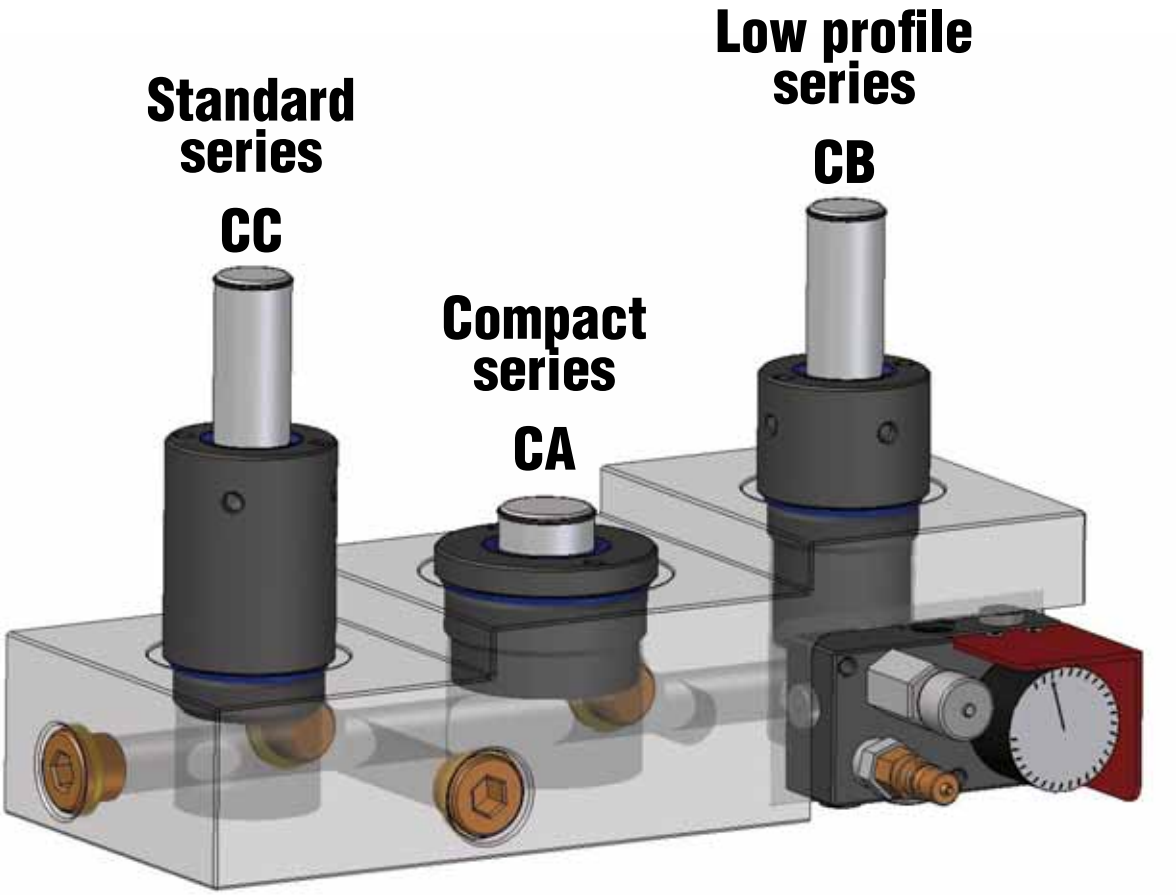
MANIFOLD SYSTEM



MANIFOLD SYSTEM

I 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 ≤ 0,05 µ
- Stelo pistone nitrurato con durezza ~ Hv 700
- Stelo pistone lappato con rugosità ~ Ra ≤ 0,05 µ
- 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

D TANKPLATTENSYSTEM

- 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

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

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

CARACTERÍSTICAS TÉCNICAS

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

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

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

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 nitruré, 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

P SISTEMA MANIFOLD

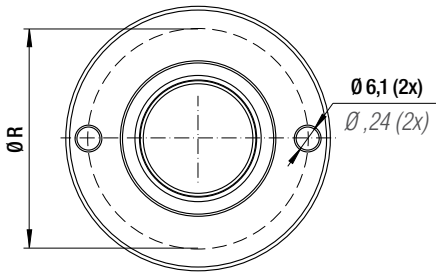
- Alternativa aos cilindros autónomos interligados
- Incremento mínimo de pressão e força
- Mínimo espaço
- Ausência de tubos e "racords"
- Grande força concentrada
- Monitorização e modificação da pressão facilitada através do painel de controlo
- De fácil montagem
- De fácil manutenção
- Longa duração

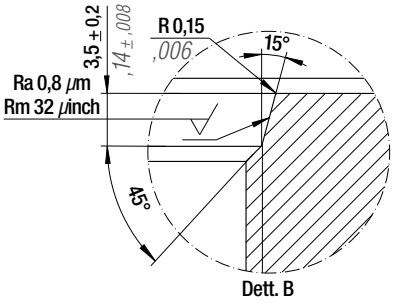
CARACTERÍSTICAS TÉCNICAS

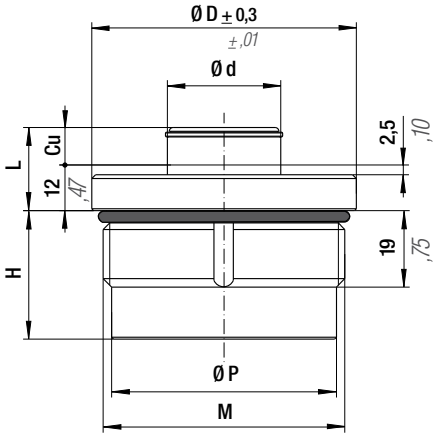
- Cilindros com estanquidade do êmbolo
- Raspador para protecção contra contaminantes
- Duplo guiamento autolubrificado
- Corpo do cilindro nitrurado com dureza - Hv 700
- Corpo do cilindro polido com rugosidade ~Ra ≤ 0,05 µ
- Êmbolo nitrurado com dureza - Hv 700
- Êmbolo polido com rugosidade ~Ra ≤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

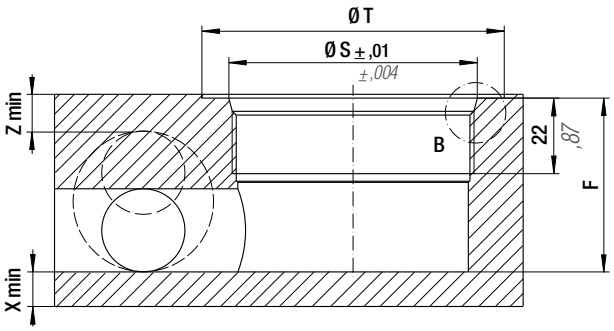
CA 2500

PED 97/23/EC



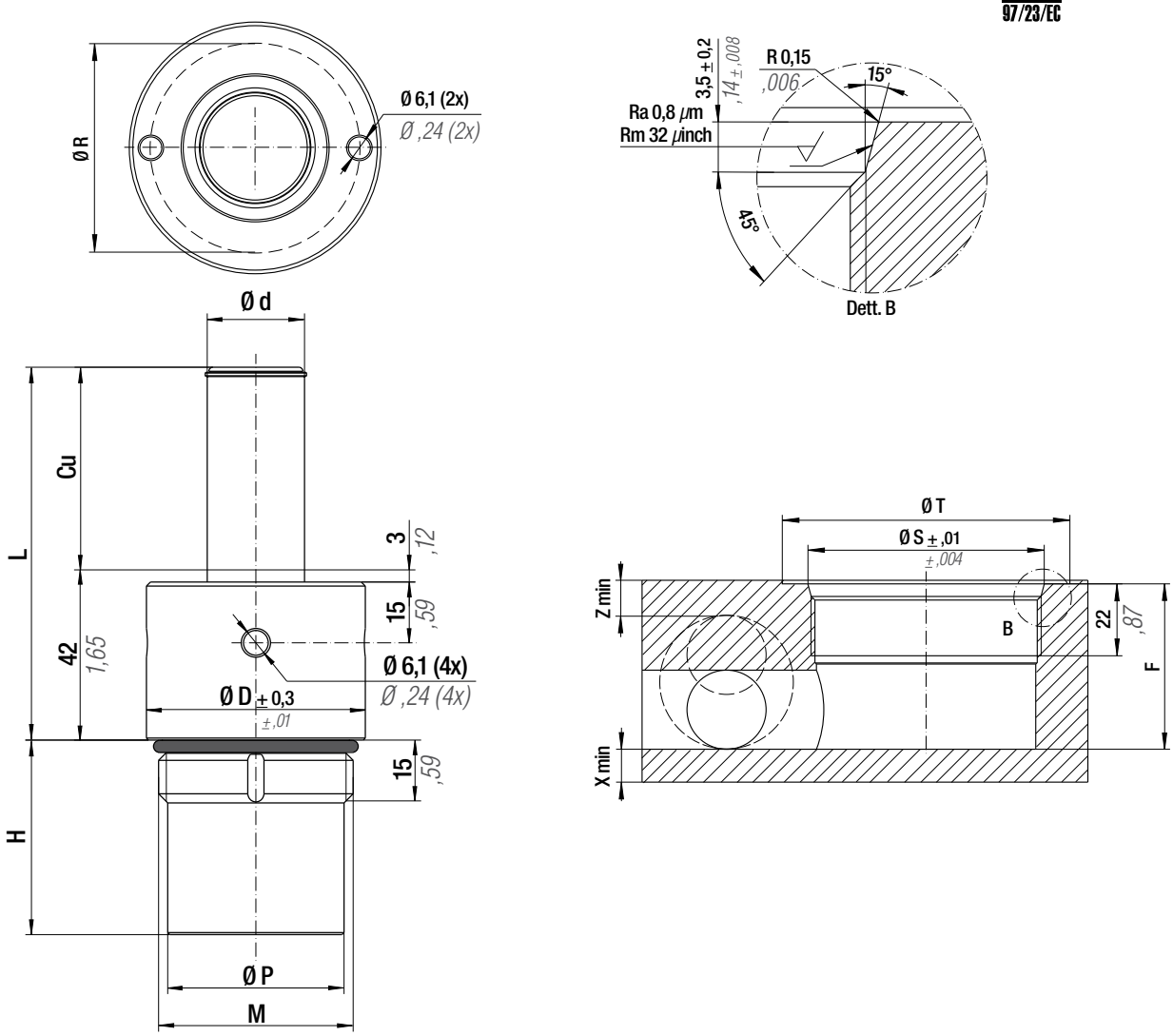






Max Speed		N_2	P max	P min	S		Maintenance kit	
0,8 m/s			110 bar *1595 psi*	20 bar *290 psi*	22,9 cm² *3,55 in²*		-	

MODEL	Fo		M	Cu		L		H		Ø D		Ø d		Ø P		Ø R		Ø T		Ø S		F		Xmin		Zmin	
	daN	*lb*		mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*
CA 2500 - 006 - A	2520	*5665*	M 64 X 2	6	*0,24*	18	*0,71*	30	*1,18*	70	*2,76*	30	*1,18*	59,5	*2,34*	58	*2,28*	80	*3,15*	65,9	*2,59*	33	*1,30*	10	*0,39*	8	*0,31*
CA 2500 - 010 - A	2520	*5665*	M 64 X 2	10	*0,39*	22	*0,87*	34	*1,34*	70	*2,76*	30	*1,18*	59,5	*2,34*	58	*2,28*	80	*3,15*	65,9	*2,59*	37	*1,46*	10	*0,39*	8	*0,31*
CA 2500 - 015 - A	2520	*5665*	M 64 X 2	15	*0,59*	27	*1,06*	39	*1,54*	70	*2,76*	30	*1,18*	59,5	*2,34*	58	*2,28*	80	*3,15*	65,9	*2,59*	42	*1,65*	10	*0,39*	8	*0,31*
CA 2500 - 020 - A	2520	*5665*	M 64 X 2	20	*0,79*	32	*1,26*	44	*1,73*	70	*2,76*	30	*1,18*	59,5	*2,34*	58	*2,28*	80	*3,15*	65,9	*2,59*	47	*1,85*	10	*0,39*	8	*0,31*

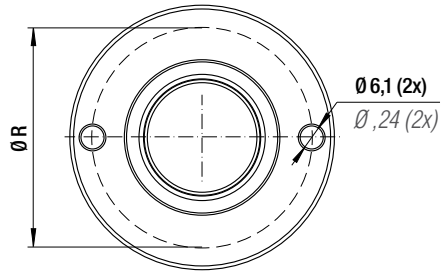


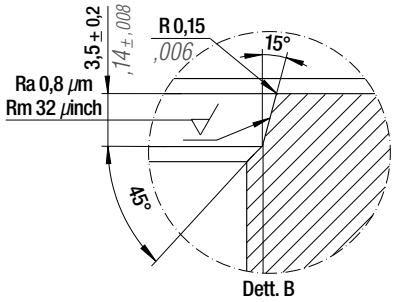
Max Speed		N_2	P max	P min	S		Maintenance kit	
0,8 m/s			110 bar *1595 psi*	20 bar *290 psi*	9,62 cm² *1,49 in²*		-	

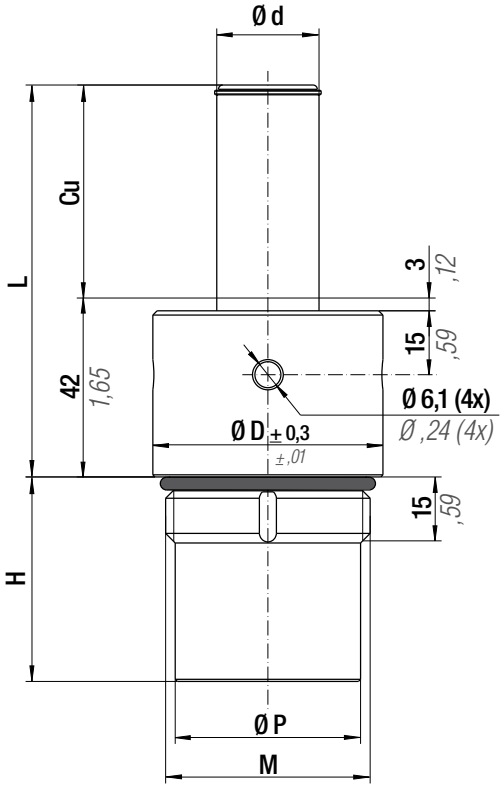
MODEL	Fo		M	Cu		L		H		Ø D		Ø d		Ø P		Ø R		Ø T		Ø S		F		Xmin		Zmin	
	daN	*lb*		mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*
CB 1000 - 025 - A	1060	*2383*	M 48 X 2	25	*0,98*	67	*2,64*	23	*0,91*	54	*2,13*	24	*0,95*	43,5	*1,71*	44	*1,73*	64	*2,52*	49,9	*1,97*	26,0	*1,02*	10	*0,39*	8	*0,31*
CB 1000 - 038 - A	1060	*2383*	M 48 X 2	38	*1,50*	80	*3,15*	36	*1,42*	54	*2,13*	24	*0,95*	43,5	*1,71*	44	*1,73*	64	*2,52*	49,9	*1,97*	39,0	*1,54*	10	*0,39*	8	*0,31*
CB 1000 - 050 - A	1060	*2383*	M 48 X 2	50	*1,97*	92	*3,62*	48	*1,89*	54	*2,13*	24	*0,95*	43,5	*1,71*	44	*1,73*	64	*2,52*	49,9	*1,97*	51,0	*2,01*	10	*0,39*	8	*0,31*
CB 1000 - 075 - A	1060	*2383*	M 48 X 2	75	*2,95*	117	*4,61*	73	*2,87*	54	*2,13*	24	*0,95*	43,5	*1,71*	44	*1,73*	64	*2,52*	49,9	*1,97*	76,0	*2,99*	10	*0,39*	8	*0,31*
CB 1000 - 100 - A	1060	*2383*	M 48 X 2	100	*3,94*	142	*5,59*	98	*3,86*	54	*2,13*	24	*0,95*	43,5	*1,71*	44	*1,73*	64	*2,52*	49,9	*1,97*	101,0	*3,98*	10	*0,39*	8	*0,31*
CB 1000 - 150 - A	1060	*2383*	M 48 X 2z	150	*5,91*	192	*7,56*	148	*5,83*	54	*2,13*	24	*0,95*	43,5	*1,71*	44	*1,73*	64	*2,52*	49,9	*1,97*	151,0	*5,94*	10	*0,39*	8	*0,31*

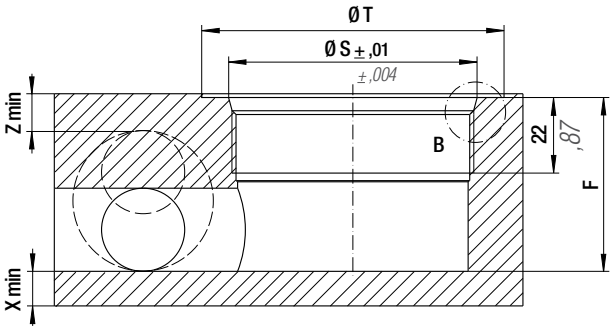
MANI FOLD

CB 2500



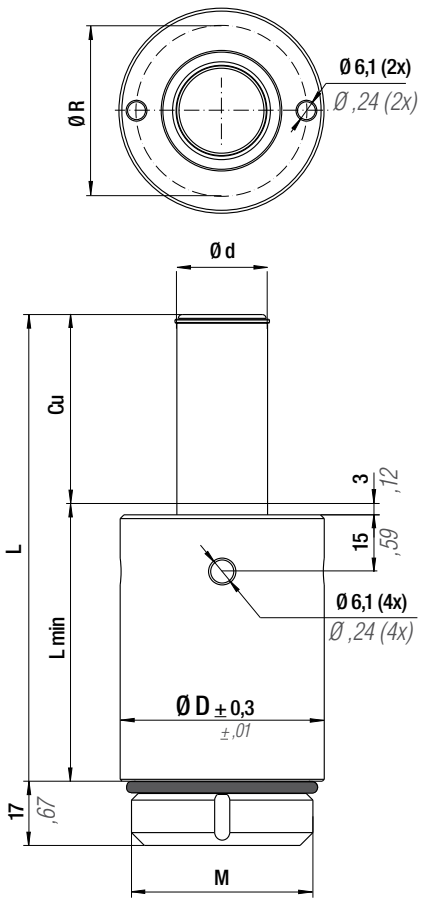


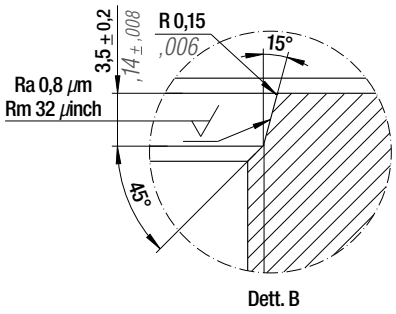


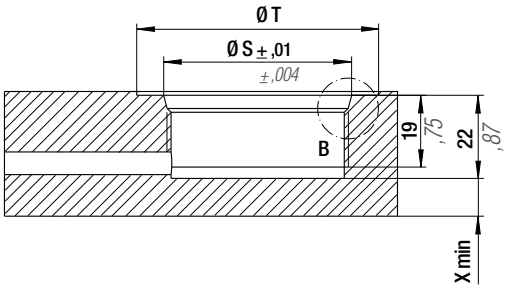


Max Speed	°F / °C		P max	P min	S		Maintenance kit	
0,8 m/s	32 - 176 / 0 - 80	N_2	110 bar / 1595 psi	20 bar / 290 psi	22,9 cm² / 3,55 in²		-	

MODEL	Fo		M	Cu		L		H		Ø D		Ø d		Ø P		Ø R		Ø T		Ø S		F		Xmin		Zmin	
	daN	lb		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
CB 2500 - 025 - A	2520	5665	M 64 X 2	25	0,98	67	2,64	23	0,91	70	2,76	30	1,18	59,5	2,34	58	2,28	80	3,15	65,9	2,59	26,0	1,02	10	0,39	8	0,31
CB 2500 - 038 - A	2520	5665	M 64 X 2	38	1,50	80	3,15	36	1,42	70	2,76	30	1,18	59,5	2,34	58	2,28	80	3,15	65,9	2,59	39,0	1,54	10	0,39	8	0,31
CB 2500 - 050 - A	2520	5665	M 64 X 2	50	1,97	92	3,62	48	1,89	70	2,76	30	1,18	59,5	2,34	58	2,28	80	3,15	65,9	2,59	51,0	2,01	10	0,39	8	0,31
CB 2500 - 075 - A	2520	5665	M 64 X 2	75	2,95	117	4,61	73	2,87	70	2,76	30	1,18	59,5	2,34	58	2,28	80	3,15	65,9	2,59	76,0	2,99	10	0,39	8	0,31
CB 2500 - 100 - A	2520	5665	M 64 X 2	100	3,94	142	5,59	98	3,86	70	2,76	30	1,18	59,5	2,34	58	2,28	80	3,15	65,9	2,59	101,0	3,98	10	0,39	8	0,31
CB 2500 - 150 - A	2520	5665	M 64 X 2	150	5,91	192	7,56	148	5,83	70	2,76	30	1,18	59,5	2,34	58	2,28	80	3,15	65,9	2,59	151,0	5,94	10	0,39	8	0,31







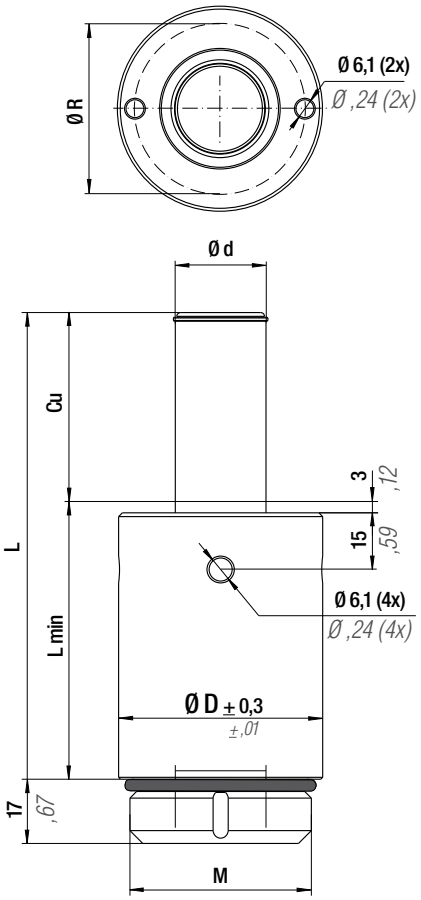
Max Speed	°F	°C		P max	P min	S		Maintenance kit
0,8 m/s	32 - 176	0 - 80	N_2	110 bar / 1595 psi	20 bar / 290 psi	4,90 cm² / 0,76 in²		-

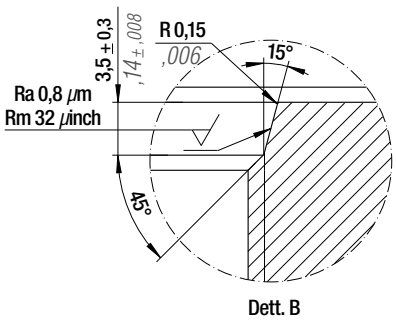
MODEL	Fo		M	Cu		L		L min		Ø D		Ø d		Ø R		Ø T		Ø S		Xmin	
	daN	lb		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
CC 0500 - 012 - A	540	1214	M 36 X 2	12,5	0,49	45,5	1,79	33,0	1,30	42	1,65	12	0,47	32	1,26	52	2,05	37,9	1,49	6	0,24
CC 0500 - 025 - A	540	1214	M 36 X 2	25	0,98	70,5	2,78	45,5	1,79	42	1,65	12	0,47	32	1,26	52	2,05	37,9	1,49	6	0,24
CC 0500 - 038 - A	540	1214	M 36 X 2	38	1,50	96,5	3,80	58,5	2,30	42	1,65	12	0,47	32	1,26	52	2,05	37,9	1,49	6	0,24
CC 0500 - 050 - A	540	1214	M 36 X 2	50	1,97	120,5	4,74	70,5	2,78	42	1,65	12	0,47	32	1,26	52	2,05	37,9	1,49	6	0,24
CC 0500 - 075 - A	540	1214	M 36 X 2	75	2,95	170,5	6,71	95,5	3,76	42	1,65	12	0,47	32	1,26	52	2,05	37,9	1,49	6	0,24
CC 0500 - 100 - A	540	1214	M 36 X 2	100	3,94	220,5	8,68	120,5	4,74	42	1,65	12	0,47	32	1,26	52	2,05	37,9	1,49	6	0,24

MANI FOLD

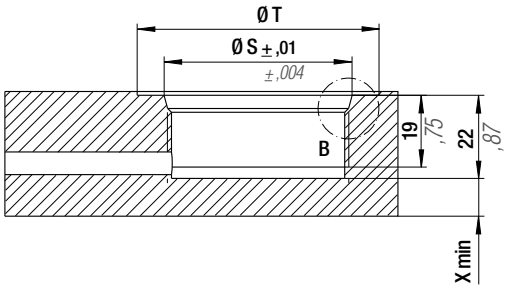
CC 1000

PED 97/23/EC



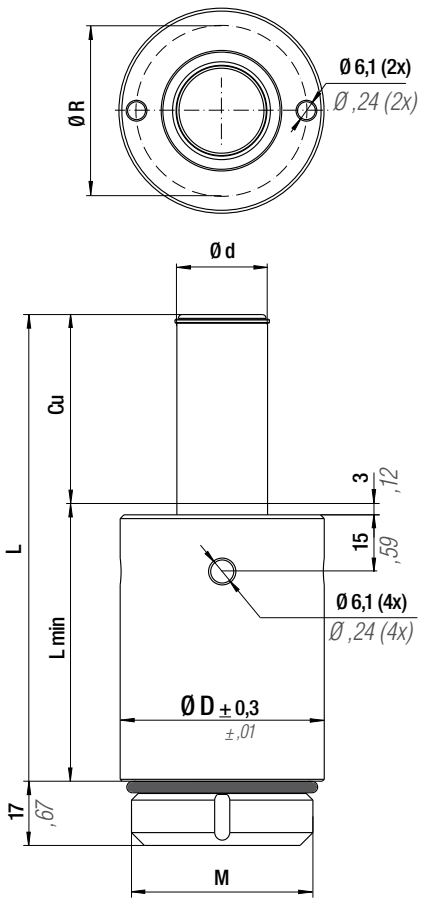


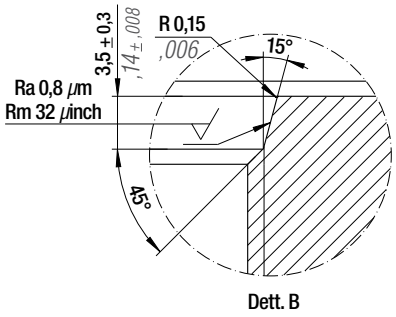
Dett. B

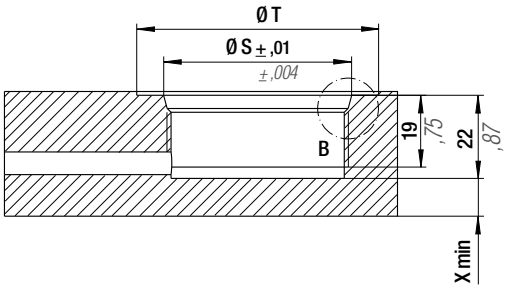


Max Speed	°F	°C		P max	P min	S		Maintenance kit
0,8 m/s	32 - 176	0 - 80	N_2	110 bar / 1595 psi	20 bar / 290 psi	9,62 cm² / 1,491 in²		-

MODEL	Fo		M	Cu		L		L min		Ø D		Ø d		Ø R		Ø T		Ø S		Xmin	
	daN	lb		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
CC 1000 - 025 - A	1060	2383	M 48 X 2	25	0,98	73,5	2,89	48,5	1,91	54	2,13	24	0,95	44	1,73	64	2,52	49,9	1,97	10	0,39
CC 1000 - 038 - A	1060	2383	M 48 X 2	38	1,50	99,5	3,92	61,5	2,42	54	2,13	24	0,95	44	1,73	64	2,52	49,9	1,97	10	0,39
CC 1000 - 050 - A	1060	2383	M 48 X 2	50	1,97	123,5	4,86	73,5	2,89	54	2,13	24	0,95	44	1,73	64	2,52	49,9	1,97	10	0,39
CC 1000 - 075 - A	1060	2383	M 48 X 2	75	2,95	173,5	6,83	98,5	3,88	54	2,13	24	0,95	44	1,73	64	2,52	49,9	1,97	10	0,39
CC 1000 - 100 - A	1060	2383	M 48 X 2	100	3,94	223,5	8,80	123,5	4,86	54	2,13	24	0,95	44	1,73	64	2,52	49,9	1,97	10	0,39
CC 1000 - 150 - A	1060	2383	M 48 X 2	150	5,91	323,5	12,74	173,5	6,83	54	2,13	24	0,95	44	1,73	64	2,52	49,9	1,97	10	0,39







Max Speed	°F	°C		P max	P min	S		Maintenance kit
0,8 m/s	32 - 176	0 - 80	N_2	110 bar / 1595 psi	20 bar / 290 psi	22,9 cm² / 3,55 in²		-

MODEL	Fo		M	Cu		L		L min		Ø D		Ø d		Ø R		Ø T		Ø S		Xmin	
	daN	lb		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
CC 2500 - 025 - A	2520	5665	M 64 X 2	25	0,98	73,5	2,89	48,5	1,91	70	2,76	30	1,18	58	2,28	80	3,15	65,9	2,59	10	0,39
CC 2500 - 038 - A	2520	5665	M 64 X 2	38	1,50	99,5	3,92	61,5	2,42	70	2,76	30	1,18	58	2,28	80	3,15	65,9	2,59	10	0,39
CC 2500 - 050 - A	2520	5665	M 64 X 2	50	1,97	123,5	4,86	73,5	2,89	70	2,76	30	1,18	58	2,28	80	3,15	65,9	2,59	10	0,39
CC 2500 - 075 - A	2520	5665	M 64 X 2	75	2,95	173,5	6,83	98,5	3,88	70	2,76	30	1,18	58	2,28	80	3,15	65,9	2,59	10	0,39
CC 2500 - 100 - A	2520	5665	M 64 X 2	100	3,94	223,5	8,80	123,5	4,86	70	2,76	30	1,18	58	2,28	80	3,15	65,9	2,59	10	0,39
CC 2500 - 150 - A	2520	5665	M 64 X 2	150	5,91	323,5	12,74	173,5	6,83	70	2,76	30	1,18	58	2,28	80	3,15	65,9	2,59	10	0,39

MANI FOLD

FIXINGS

I La seguente tabella indica i riferimenti Special Springs per ogni standards. Vedi esempio sotto riportato.

GB The following table shows the references for each Special Springs standards. See example below.

D Die folgende Tabelle zeigt die Verweise für jede Special Springs Standards. Siehe Beispiel unten.

F Le tableau suivant indique les références pour chacune des normes spéciales Springs. Voir l'exemple ci-dessous.

E La siguiente tabla muestra las referencias de las normas especiales para cada Springs. Consulte el siguiente ejemplo.

P A tabela a seguir mostra as referências para cada normas especiais molas. Veja o exemplo abaixo.

Refernce to standards	Standards	
0	//	Special Springs
1	ISO 11901-2	
2	VDI 3003	
3	B2 4007	BMW
4	W-DX35-62M	Ford
5	W-DX35-80M	Ford
6	W-DX40-80M	Ford
7	90.25.01	General Motors
8	90.25.02	General Motors
9	90.25.03	General Motors
10	90.25.04	General Motors

Refernce to standards	Standards	
11	90.25.07	General Motors
12	90.25.455	General Motors
13	B8 0132 110 008 801	Mercedes Benz
14	B8 0138 100 000 001	Mercedes Benz
15	B8 0134 300 000 001	Mercedes Benz
16	B8 0134 400 008 801	Mercedes Benz
17	B8	Mercedes Benz
18	E24.54.815.G	Peugeot - Citroën
19	EM24.54.700	Renault
20	39D 848	Volkswagen

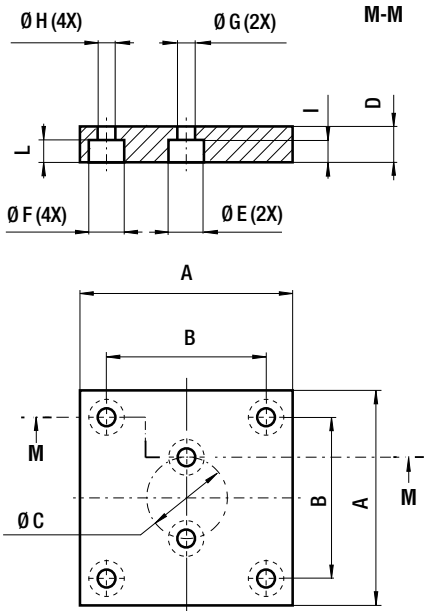
How to read the table

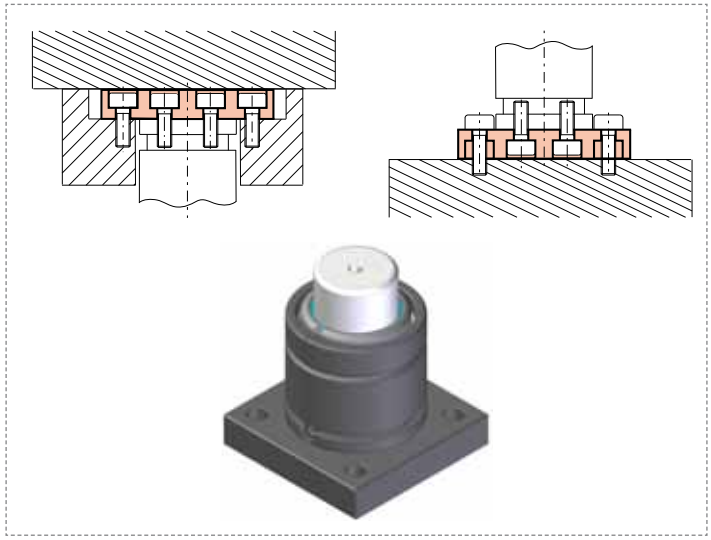
CODE	Refernce to standards	A		B		Ø C		D		Ø E		Ø F		Ø G		Ø H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FB 45	1-2-10-18-19	70	2,76	50	1,97	20	0,79	20	0,79	15	0,59	15	0,59	9	0,35	9	0,35	14	0,55	12	0,47

Special Springs CODE

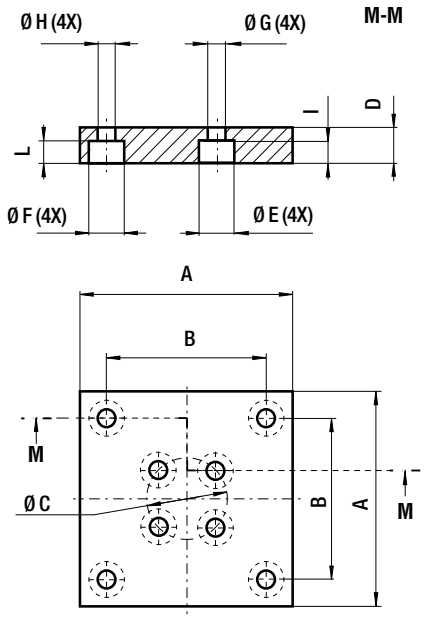
1 = ISO 11901-2
2 = VDI 3003
10 = 90.25.04
18 = E24.54.815.G
19 = EM24.54.700

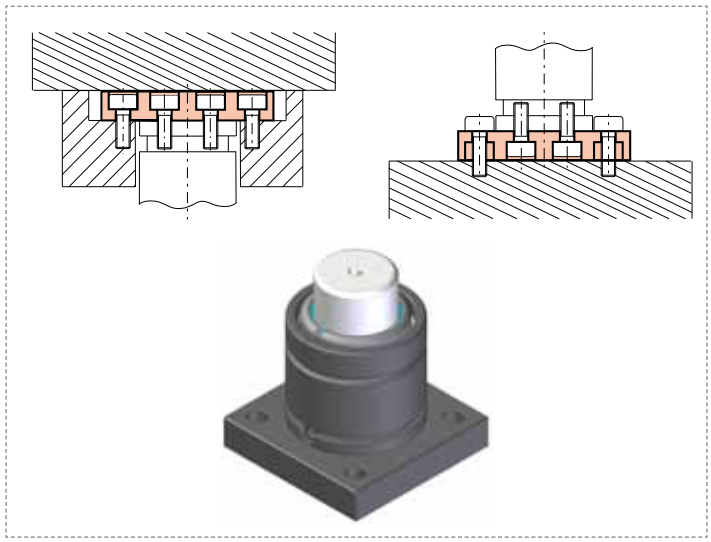
Dimension



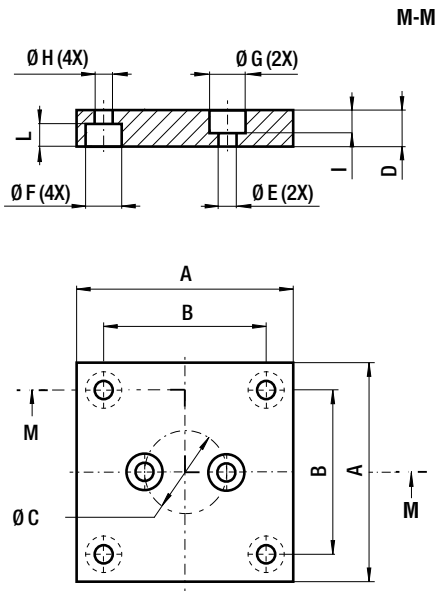


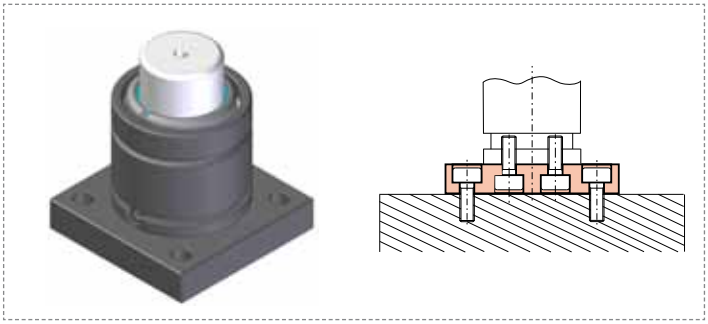
CODE	Refernce to standards	A		B		Ø C		D		Ø E		Ø F		Ø G		Ø H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FB 45	1-2-10-18-19	70	2,76	50	1,97	20	0,79	20	0,79	15	0,59	15	0,59	9	0,35	9	0,35	14	0,55	12	0,47
FB 50	1-2-10-18-19	75	2,95	56,5	2,22	20	0,79	20	0,79	15	0,59	15	0,59	9	0,35	9	0,35	14	0,55	12	0,47



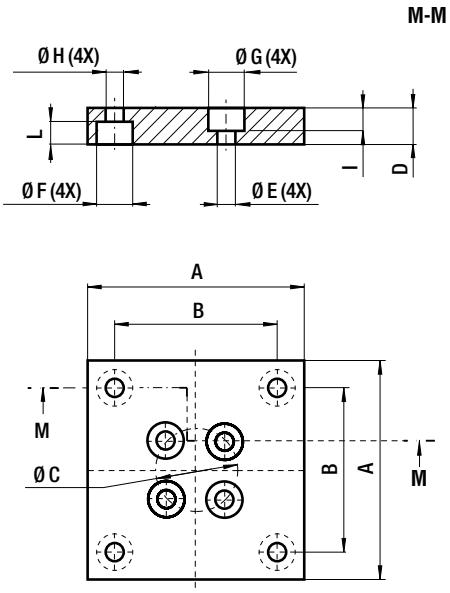


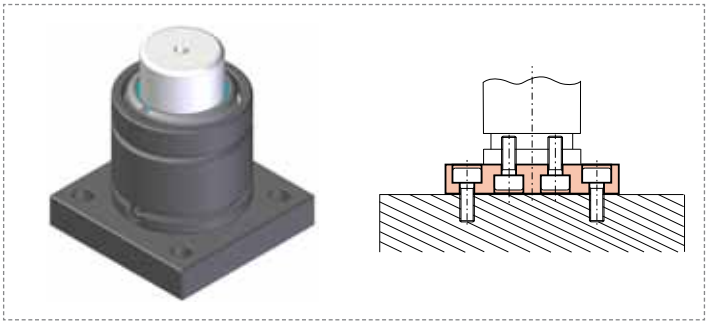
CODE	Refernce to standards	A		B		Ø C		D		Ø E		Ø F		Ø G		Ø H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FB 75	1-2-10-18-19	100	3,94	73,5	2,89	40	1,57	20	0,79	15	0,59	18	0,71	9	0,35	11	0,43	14	0,55	12	0,47
FB 95	1-2-10-18-19	120	4,72	92	3,62	60	2,36	20	0,79	15	0,59	20	0,79	9	0,35	13,5	0,53	14	0,55	13	0,51
FB 120	1-2-10-18-19	140	5,51	109,5	4,31	80	3,15	20	0,79	18	0,71	20	0,79	11	0,43	13,5	0,53	15	0,59	13	0,51
FB 150	1-2-10-18-19	190	7,48	138	5,43	100	3,94	25	0,98	18	0,71	26	1,02	11	0,43	17,5	0,69	15	0,59	17	0,67
FB 195	1-2-10-18-19	210	8,27	170	6,69	120	4,72	25	0,98	20	0,79	26	1,02	13,5	0,53	17,5	0,69	13	0,51	17	0,67



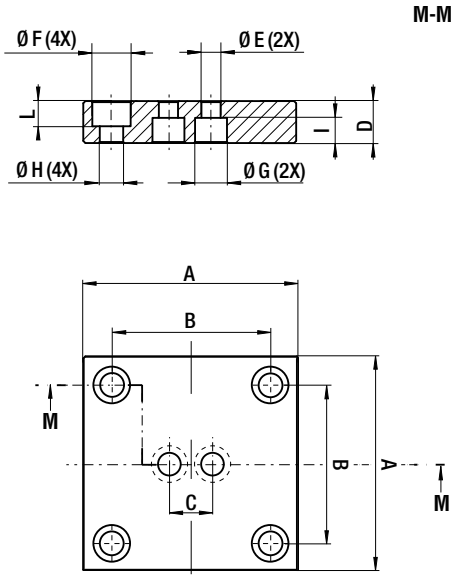


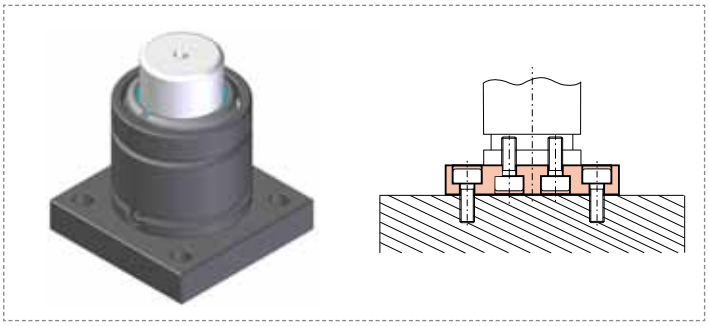
CODE	Refernce to standards	A		B		Ø C		D		Ø E		Ø F		Ø G		Ø H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FBA 45	19	70	2,76	50	1,97	20	0,79	20	0,79	9	0,35	18	0,71	15	0,59	11	0,43	14	0,55	12	0,47
FBA 50	19	75	2,95	56,5	2,22	20	0,79	20	0,79	9	0,35	18	0,71	15	0,59	11	0,43	14	0,55	12	0,47



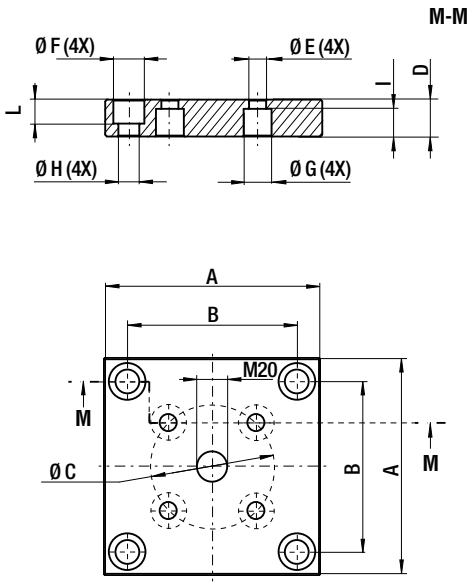


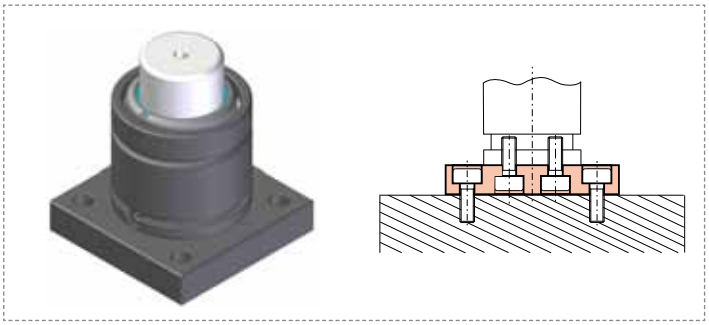
CODE	Refernce to standards	A		B		Ø C		D		Ø E		Ø F		Ø G		Ø H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FBA 75	19	100	3,94	73,5	2,89	40	1,57	20	0,79	9	0,35	18	0,71	15	0,59	11	0,43	14	0,55	12	0,47
FBA 95	19	120	4,72	92	3,62	60	1,57	20	0,79	9	0,35	20	0,79	15	0,59	13,5	0,53	14	0,55	13	0,51
FBA 120	19	140	5,51	109,5	4,31	80	3,15	20	0,79	11	0,43	20	0,79	18	0,71	13,5	0,53	15	0,59	13	0,51
FBA 150	19	190	7,48	138	5,43	100	3,94	25	0,98	11	0,43	26	1,02	18	0,71	17,5	0,69	15	0,59	17	0,67
FBA 195	19	210	8,27	170	6,69	120	4,72	25	0,98	13,5	0,53	26	1,02	20	0,79	17,5	0,69	15	0,59	17	0,67





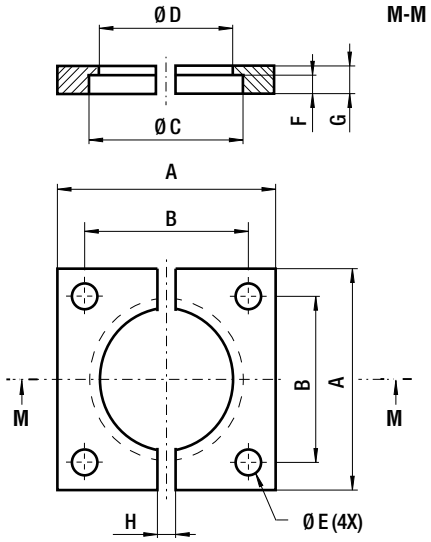
CODE	Refernce to standards	A		B		C		D		Ø E		Ø F		Ø G		Ø H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FBB 45	3-13	70	2,76	50	1,97	20	0,79	20	0,79	9	0,35	15	0,59	15	0,59	9	0,35	12	0,47	12	0,47
FBB 50	3-13	75	2,95	56,5	2,22	20	0,79	20	0,79	9	0,35	15	0,59	15	0,59	9	0,35	12	0,47	12	0,47
FBB 63	3-13	100	3,94	73,5	2,89	20	0,79	20	0,79	9	0,35	18	0,71	15	0,59	11	0,43	12	0,47	12	0,47

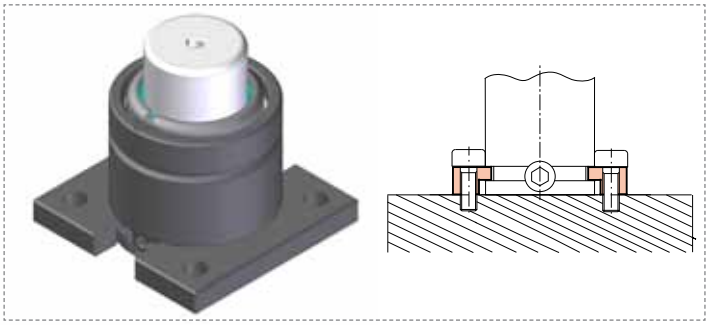




CODE	Refernce to standards	A		B		Ø C		D		Ø E		Ø F		Ø G		Ø H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FBB 75	3-13	100	3,94	73,5	2,89	40	1,57	20	0,79	9	0,35	18	0,71	15	0,59	11	0,43	12	0,47	14	0,55
FBB 95	3-13	120	4,72	92	3,62	60	2,36	20	0,79	9	0,35	20	0,79	15	0,59	13,5	0,53	14	0,55	13	0,51
FBB 120	3-13	140	5,51	109,5	4,31	80	3,15	20	0,79	11	0,43	20	0,79	18	0,71	13,5	0,53	15	0,59	13	0,51
FBB 150	3-13	190	7,48	138	5,43	100	3,94	20	0,79	11	0,43	26	1,02	18	0,71	17,5	0,69	15	0,59	17	0,67
FBB 195	3-13	210	8,27	170	6,69	120	4,72	25	0,98	13,5	0,53	26	1,02	20	0,98	17,5	0,69	15	0,59	17	0,67

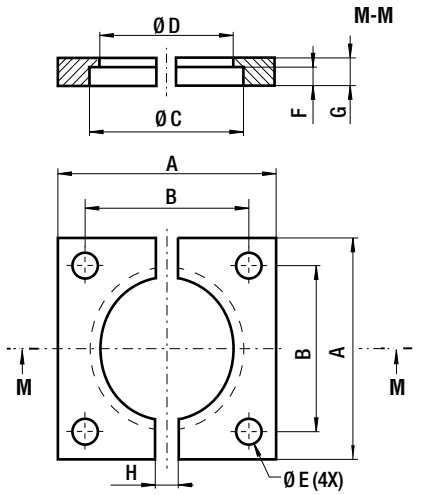
FS2

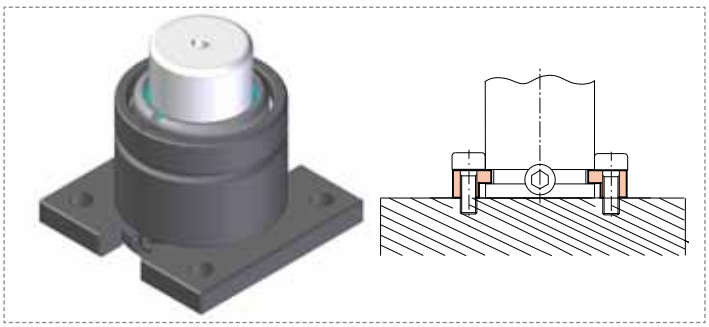




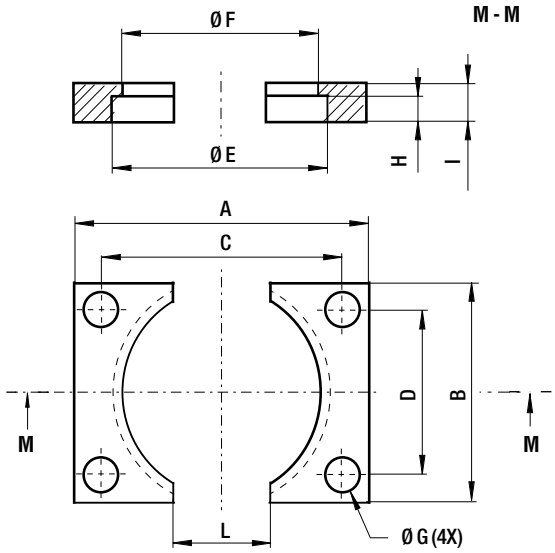
CODE	Refernce to standards	A		B		Ø C		Ø D		Ø E		F		G		H	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FS2 32	1-3-4-7-14	50	1,97	35	1,38	32,5	1,28	28,5	1,12	6,6	0,26	4	0,16	7	0,28	5	0,20
FS2 38	1-3-4-7-14	55	2,17	40	1,57	38,5	1,52	34,5	1,36	6,6	0,26	4	0,16	7	0,28	5	0,20
FS2 45	1-2-3-4-7-14-20	70	2,76	50	1,97	45,5	1,79	41,5	1,63	9	0,35	4	0,16	7	0,28	20	0,79
FS2 50	1-2-3-4-7-14-20	75	2,95	56,5	2,22	50,5	1,99	44,5	1,75	9	0,35	8	0,31	12	0,47	24	0,95
FS2 63	0	85	3,35	63,5	2,50	63,5	2,50	57,5	2,26	11	0,43	8	0,31	12	0,47	24	0,95
FS2 75	1-2-3-4-7-14-20	100	3,94	73,5	2,89	75,5	2,97	68,5	2,70	11	0,43	8	0,31	12	0,47	24	0,95
FS2 95	1-2-3-4-7-14-20	120	4,72	92	3,62	95,5	3,76	88,5	3,48	13,5	0,53	8	0,31	12	0,47	24	0,95
FS2 120	1-2-3-4-7-14-20	140	5,51	109,5	4,31	120,5	4,74	113,5	4,47	13,5	0,53	8	0,31	12	0,47	24	0,95
FS2 150	1-2-3-4-7-14-20	190	7,48	138	5,43	150,5	5,93	143,5	5,65	17,5	0,69	8	0,31	12	0,47	24	0,95
FS2 195	1-2-4-7-14-20	210	8,27	170	6,69	195,5	7,70	188	7,40	17,5	0,69	8	0,31	13	0,51	24	0,95

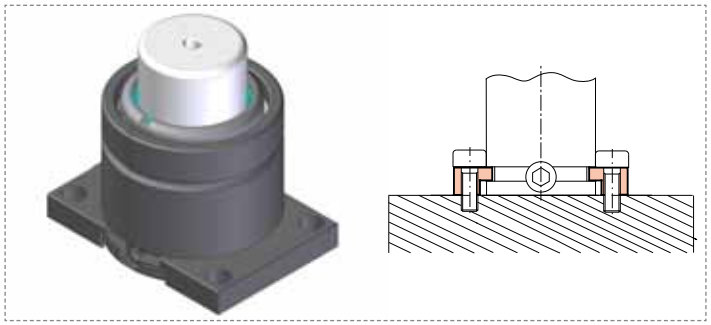
FS2B





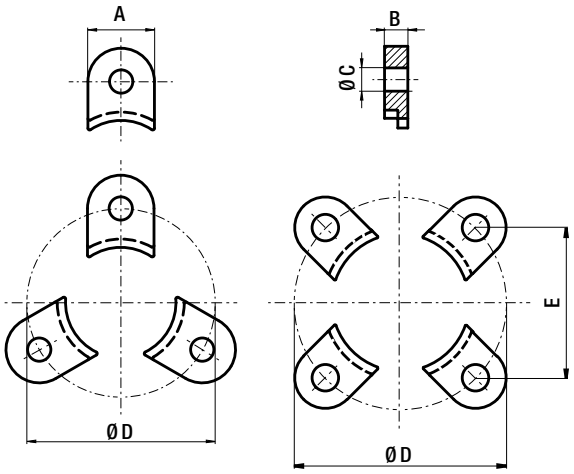
CODE	Refernce to standards	A		B		Ø C		Ø D		Ø E		F		G		H	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FS2B 32	2-20	50	1,97	35	1,38	32,5	1,28	28,5	1,12	6,6	0,26	4	0,16	7	0,28	12	0,47
FS2B 38	2-20	55	2,17	40	1,57	38,5	1,52	34,5	1,36	6,6	0,26	4	0,16	7	0,28	12	0,47
FS2B63	2-3-4-14-20	100	3,94	73,5	2,89	64	2,52	57,5	2,26	11	0,43	8	0,32	12	0,47	24	0,95

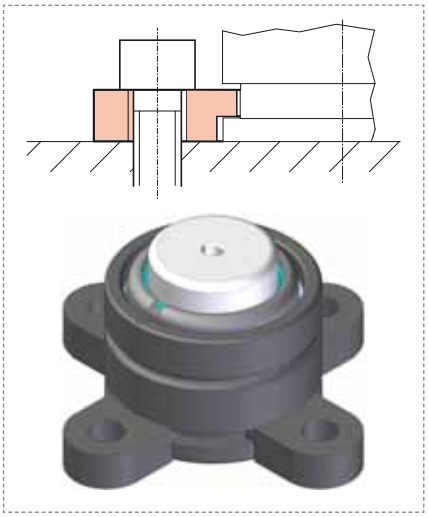




CODE	Refernce to standards	A		B		C		D		Ø E		Ø F		Ø G		H		I		L	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FS2A 32	0	50	1,97	27	1,06	40	1,57	18	0,71	32,5	1,28	28,5	1,12	6,6	0,26	4	0,16	7	0,28	20	0,79
FS2A 38	0	55	2,17	33	1,30	44	1,73	20	0,79	38,5	1,52	34,5	1,36	6,6	0,26	4	0,16	7	0,28	20	0,79
FS2A 45	0	70	2,76	40	1,57	57	2,24	27	1,06	45,5	1,79	41,5	1,63	9	0,35	4	0,16	7	0,28	25	0,98
FS2A 50	0	75	2,95	45	1,77	62	2,44	32	1,26	50,5	1,99	44,5	1,75	9	0,35	8	0,31	12	0,47	25	0,98
FS2A 63	0	85	3,35	58	2,28	69	2,72	42	1,65	63,5	2,50	57,5	2,26	11	0,43	8	0,31	12	0,47	30	1,18
FS2A 75	0	100	3,94	70	2,76	84	3,31	54	2,13	75,5	2,97	68,5	2,70	11	0,43	8	0,31	12	0,47	30	1,18
FS2A 95	0	120	4,72	90	3,54	100	3,94	70	2,76	95,5	3,76	88,5	3,48	13,5	0,53	8	0,31	12	0,47	40	1,57
FS2A 120	0	140	5,51	115	4,53	120	4,72	95	3,74	120,5	4,74	113,5	4,47	13,5	0,53	8	0,31	12	0,47	50	1,97
FS2A 150	0	190	7,48	145	5,71	165	6,50	120	4,72	150,5	5,93	143,5	5,65	17,5	0,69	8	0,31	12	0,47	60	2,36
FS2A 195	0	210	8,27	190	7,48	185	7,28	165	6,50	195,5	7,70	188	7,40	17,5	0,69	8	0,31	13	0,51	80	3,15

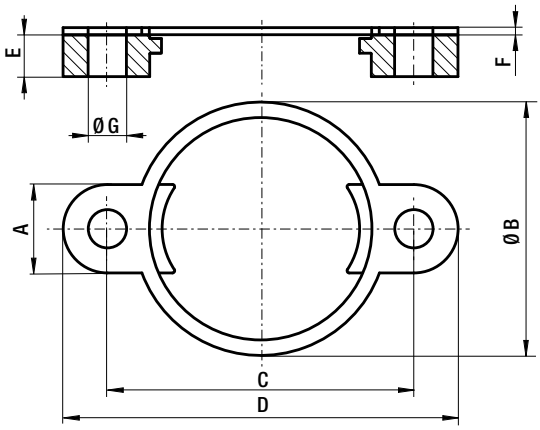
FT

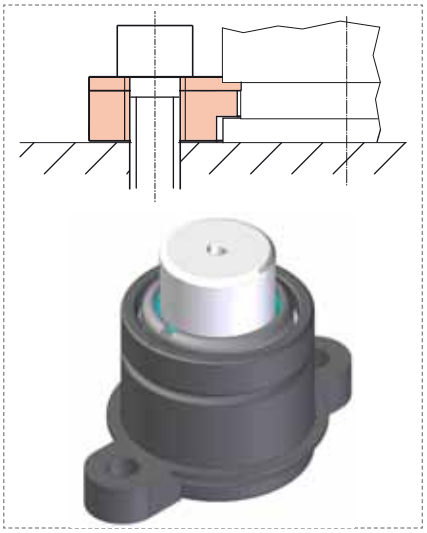




CODE	Refernce to standards	A		B		C		Ø D		E	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FT 38	0	20	0,79	7	0,28	7	0,28	56,6	2,23	-	-
FT 45	0	25	0,98	7	0,28	9	0,35	70,7	2,78	50	1,97
FT 50	0	30	1,18	14,2	0,56	13	0,51	80	3,15	56,5	2,22
FT 63	0	30	1,18	14,2	0,56	13	0,51	92	3,62	65	2,56
FT 75	0	30	1,18	14,2	0,56	13	0,51	104	4,09	73,5	2,89
FT 95	0	40	1,57	14,2	0,56	17	0,67	130	5,12	92	3,62
FT 120	0	50	1,97	14,2	0,56	17	0,67	155	6,10	109,5	4,31
FT 150	0	50	1,97	14,2	0,56	21	0,83	195	7,68	138	5,43
FT 195	0	58	2,28	16	0,63	21	0,83	240	9,45	169	6,65

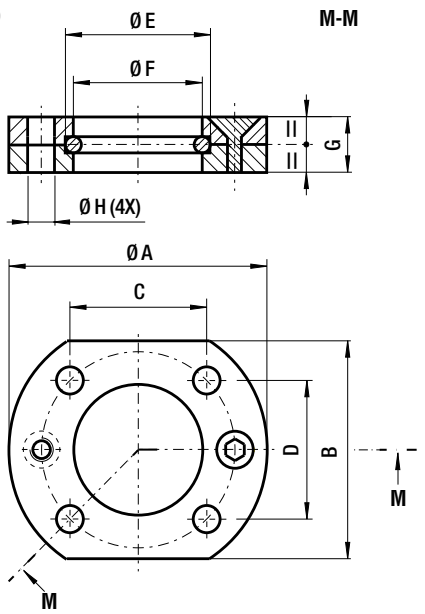
FTP



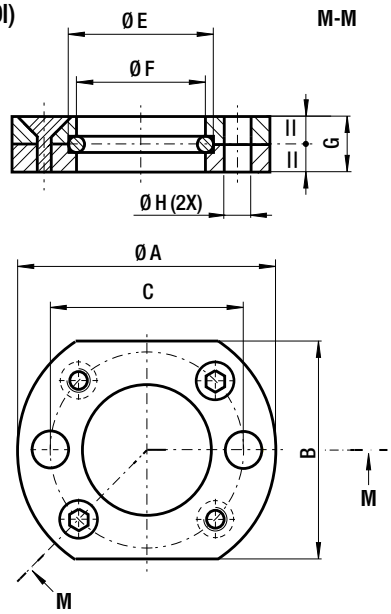


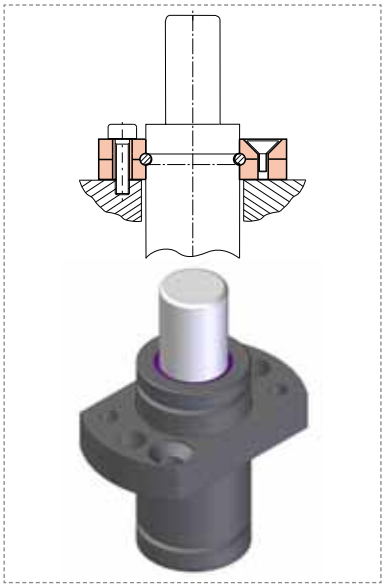
CODE	Refernce to standards	A		Ø B		C		D		E		F		Ø G	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FTP 38	0	20	0,79	48	1,89	56,6	2,23	76,6	3,02	7	0,28	2,5	0,10	7	0,28
FTP 45	0	25	0,98	56	2,20	70,7	2,78	95,7	3,77	7	0,28	2,5	0,10	9	0,35
FTP 50	0	30	1,18	61	2,40	80	3,15	110	4,33	14,2	0,56	2,5	0,10	13	0,51
FTP 63	0	30	1,18	73	2,87	92	3,62	122	4,80	14,2	0,56	2,5	0,10	13	0,51
FTP 75	0	30	1,18	86	3,39	104	4,09	134	5,28	14,2	0,56	2,5	0,10	13	0,51
FTP 95	0	40	1,57	106	4,17	130	5,12	170	6,69	14,2	0,56	2,5	0,10	17	0,67
FTP 120	0	50	1,97	131	5,16	155	6,10	205	8,07	14,2	0,56	2,5	0,10	17	0,67
FTP 150	0	50	1,97	170	6,69	195	7,68	245	9,65	14,2	0,56	2,5	0,10	21	0,83

(ISO)

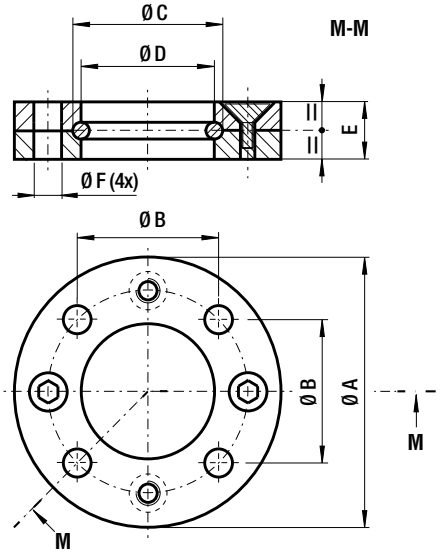


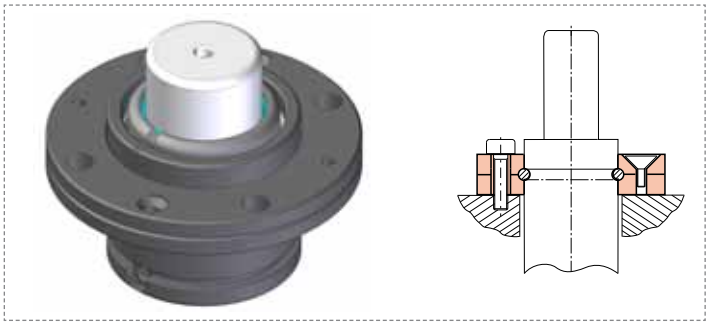
(VDI)





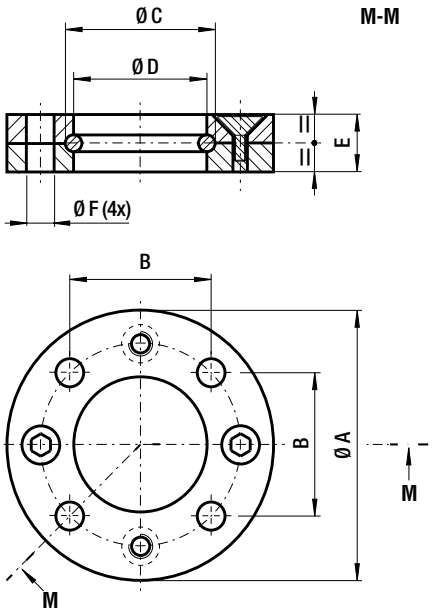
CODE		Refernce to standards	Ø A		B		C		D		Ø E		Ø F		G		Ø H	
			mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FC 19 B	ISO	1-5-18	44	1,73	25	0,98	30	1,18	12	0,47	21	0,83	19,5	0,77	9	0,35	6,6	0,26
FC 25 B	ISO	1-5-18	50	1,97	30	1,18	34	1,34	18	0,71	27	1,06	25,5	1,00	9	0,35	6,6	0,26
FCC 19 A	VDI	2-3-16-20	44	1,73	25	0,98	32	1,26	-	-	21	0,83	19,5	0,77	9	0,35	6,6	0,26
FCC 25 A	VDI	2-3-16-18-20	50	1,97	30	1,18	38	1,50	-	-	27	1,06	25,5	1,00	9	0,35	6,6	0,26





CODE	Refernce to standards	Ø A		Ø B		Ø C		Ø D		E		Ø F	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FC 32 A	1-2-3-9-15	60	2,36	35	1,38	34	1,34	32,5	1,28	9	0,35	6,6	0,26
FC 38 A	1-2-3-9-15	68	2,68	40	1,57	40	1,57	38,5	1,52	9	0,35	6,6	0,26
FC 45 A	1-2-3-9-15	86	3,39	50	1,97	47	1,85	45,5	1,79	13	0,51	9	0,35
FC 50 A	1-2-3-9-15	95	3,74	56,5	2,22	54	2,13	50,5	1,99	13	0,51	9	0,35
FC 63 A	0	122	4,80	73,5	2,89	67	2,64	63,5	2,50	16	0,63	11	0,43
FC 75 A	1-2-3-9-15	122	4,80	73,5	2,89	80	3,15	75,5	2,97	16	0,63	11	0,43
FC 95 A	1-2-3-9-15	150	5,91	92	3,62	100	3,94	95,5	3,76	18	0,71	13,5	0,53
FC 120 A	1-2-3-9-15	175	6,89	109,5	4,31	125	4,92	120,5	4,74	21	0,83	13,5	0,53
FC 150 A	1-2-3-9-15	220	8,66	138	5,43	155	6,10	150,5	5,93	27	1,06	17,5	0,69
FC 195 A	1-2-9-15	290	11,42	170	6,69	200	7,87	195,5	7,70	27	1,06	17,5	0,69

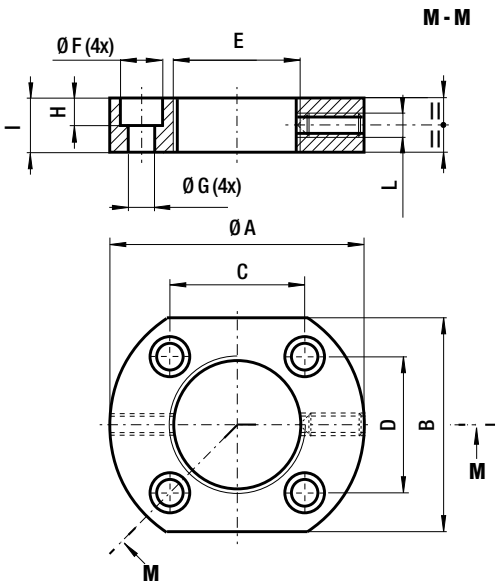
FCB

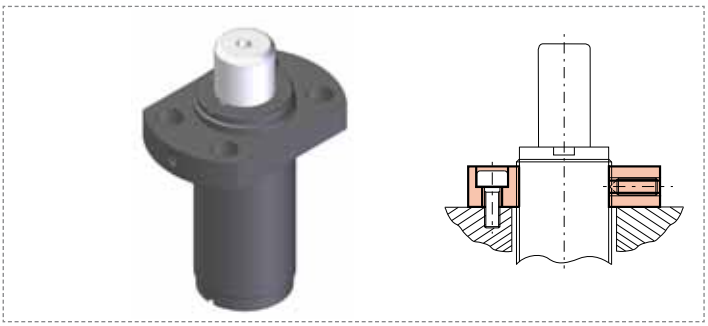


For **KE** series only

CODE	Refernce to standards	Ø A		B		Ø C		Ø D		E		Ø F	
		mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*
FCB 50	0	95	*3,74*	56,5	*2,22*	52	*2,05*	50,5	*1,99*	13	*0,51*	9	*0,35*
FCB 63	0	122	*4,80*	73,5	*2,89*	66	*2,60*	63,5	*2,50*	16	*0,63*	11	*0,43*
FCB 75	0	122	*4,80*	73,5	*2,89*	78	*3,07*	75,5	*2,97*	16	*0,63*	11	*0,43*
FCB 95	0	150	*5,91*	92	*3,62*	98	*3,86*	95,5	*3,76*	18	*0,71*	13,5	*0,53*

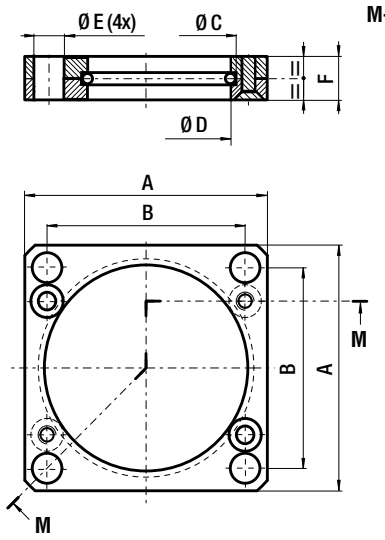
FCA

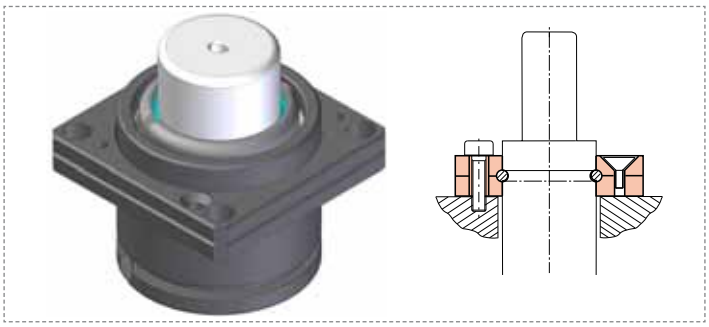




CODE	Refernce to standards	Ø A		B		C		D		E	Ø F		Ø G		H		I		L
		mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*		mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	
FCA 38	0	75	*2,95*	50	*1,97*	50,3	*1,98*	29	*1,14*	M 38 x 1,5	14	*0,55*	9	*0,35*	8	*0,31*	12	*0,47*	M6
FCA 45	0	90	*3,54*	60	*2,36*	60	*2,36*	34	*1,34*	M 45 x 1,5	14	*0,55*	9	*0,35*	8	*0,31*	16	*0,63*	M6
FCA 50	0	100	*3,94*	66	*2,60*	66	*2,60*	38	*1,50*	M 50 x 1,5	14	*0,55*	9	*0,35*	8	*0,31*	16	*0,63*	M6

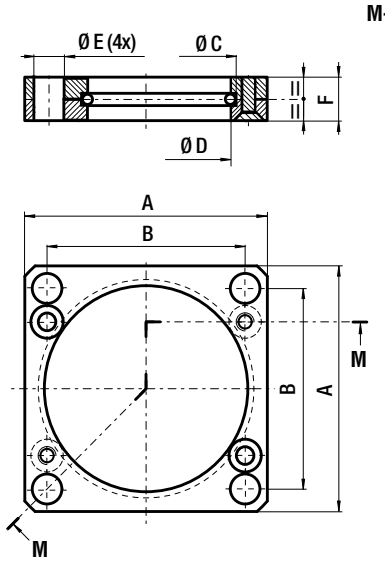
FCQ

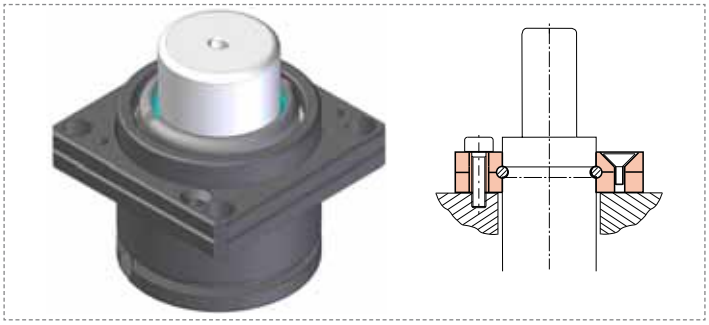




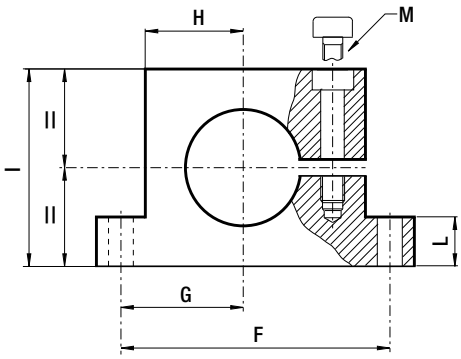
CODE	Refernce to standards	A		B		Ø C		Ø D		Ø E		F	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FCQ 32 A	4-8	45	1,77	35	1,38	34	1,34	32,5	1,28	6,6	0,26	9	0,26
FCQ 38 A	1-3-4-8	52	2,05	40	1,57	40	1,57	38,5	1,52	6,6	0,26	9	0,35
FCQ 45 A	1-3-4-8	64	2,52	50	1,97	47	1,85	45,5	1,79	9	0,35	13	0,51
FCQ 50 A	1-3-4-8	70	2,76	56,5	2,22	54	2,13	50,5	1,99	9	0,35	13	0,51
FCQ 63 A	3	90	3,54	73,5	2,89	67	2,64	63,45	2,50	11	0,43	16	0,63
FCQ 75 A	1-3-4-8	90	3,54	73,5	2,89	80	3,15	75,5	2,97	11	0,43	16	0,63
FCQ 95 A	1-3-4-8	110	4,33	92	3,62	100	3,94	95,5	3,76	13,5	0,53	18	0,71
FCQ 120 A	1-3-4-8	130	5,12	109,5	4,31	125	4,92	120,5	4,74	13,5	0,53	21	0,83
FCQ 150 A	1-3-4-8	162	6,38	138	5,43	155	6,10	150,5	5,93	17,5	0,69	27	1,06
FCQ 195 A	1-4-8	210	8,27	170	6,69	200	7,87	195,5	7,70	17,5	0,69	27	1,06

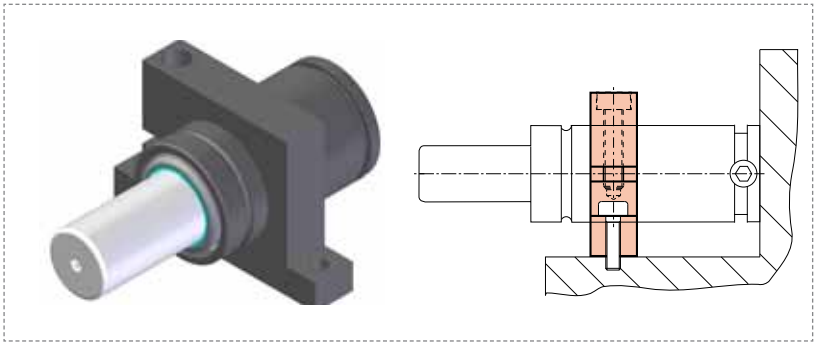
FCQB

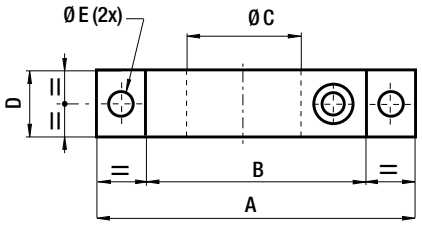




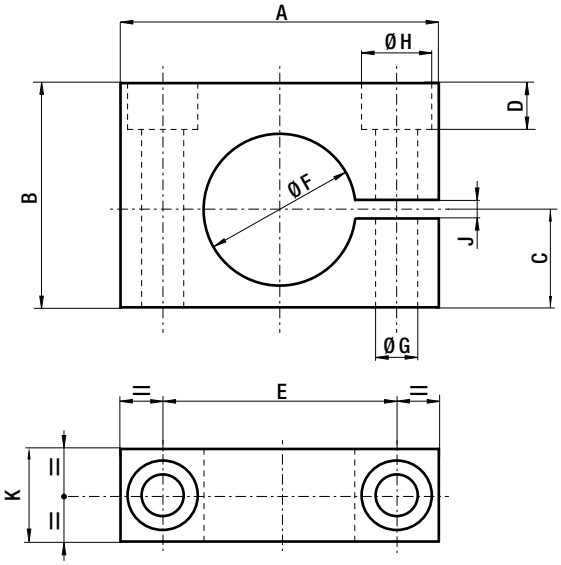
CODE	Refernce to standards	A		B		Ø C		Ø D		Ø E		F	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FCQB 50	0	70	2,76	56,5	2,22	52	2,05	50,5	1,99	9	0,35	13	0,51
FCQB 63	0	90	3,54	73,5	2,89	66	2,60	63,5	2,50	11	0,43	16	0,63
FCQB 75	0	90	3,54	73,5	2,89	78	3,07	75,5	2,97	11	0,43	16	0,63
FCQB 95	0	110	4,33	92	3,62	98	3,86	95,5	3,76	13,5	0,53	18	0,71

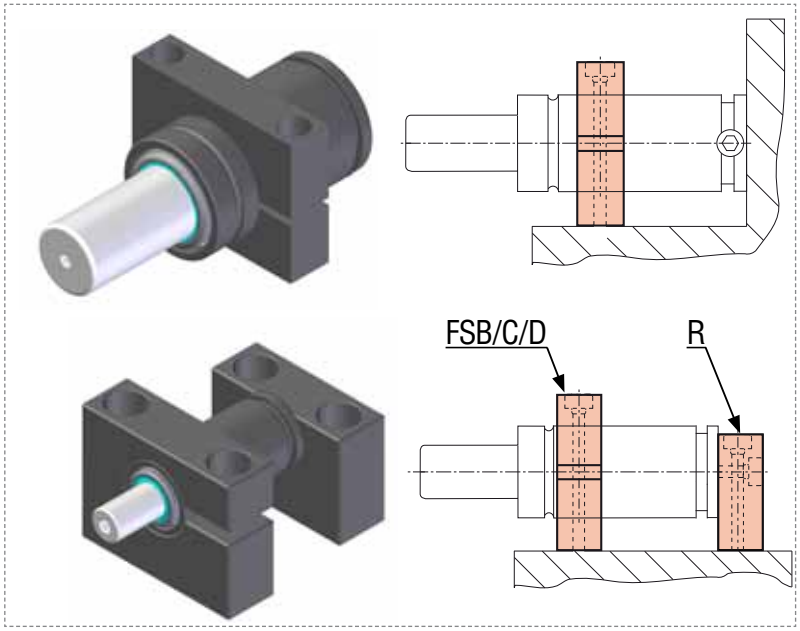






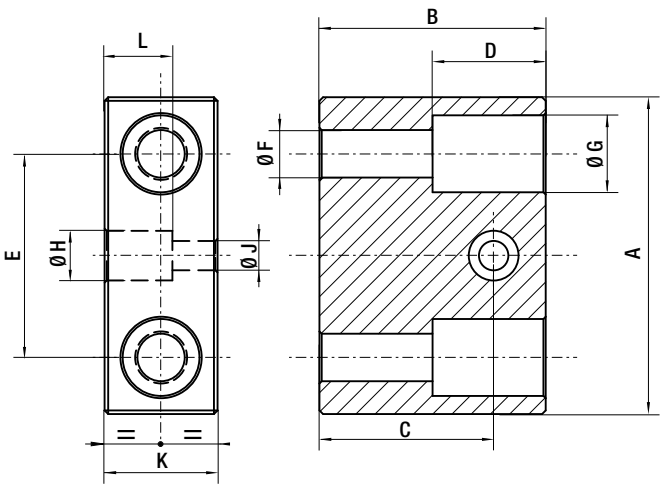
CODE	Refernce to standards	A		B		Ø C		D		Ø E		F		G		H		I		L		M
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	
FSA 32	1-2-3-11-18	90	3,54	54	2,13	32	1,26	20	0,79	9	0,35	72	2,83	31	1,22	22	0,87	45	1,77	15	0,59	M8
FSA 38	1-2-3-11-18	95	3,74	59	2,32	38	1,50	20	0,79	9	0,35	77	3,03	34	1,34	25	0,98	55	2,17	15	0,59	M8
FSA 45	1-2-3-11-18	100	3,94	64	2,52	45	1,77	20	0,79	9	0,35	82	3,23	37	1,46	28	1,10	60	2,36	15	0,59	M8
FSA 50	1-2-3-11-18	130	5,12	90	3,54	50	1,97	30	1,18	9	0,35	110	4,33	50	1,97	40	1,57	80	3,15	20	0,79	M8
FSA 75	1-2-3-11-18	160	6,30	115	4,53	75	2,95	30	1,18	11	0,43	137	5,39	63,5	2,50	52,5	2,07	105	4,13	20	0,79	M10
FSA 95	1-2-3-11-18	195	7,68	145	5,71	95	3,74	30	1,18	13,5	0,53	170	6,69	80	3,15	67,5	2,66	125	4,92	20	0,79	M12
FSA 120	1-2-3-11-18	220	8,66	165	6,50	120	4,72	30	1,18	13,5	0,53	195	7,68	92,5	3,64	77,5	3,05	148	5,83	20	0,79	M12
FSA 150	1-2-3-11-18	260	10,24	200	7,87	150	5,91	30	1,18	13,5	0,53	230	9,06	110	4,33	95	3,74	200	7,87	20	0,79	M12





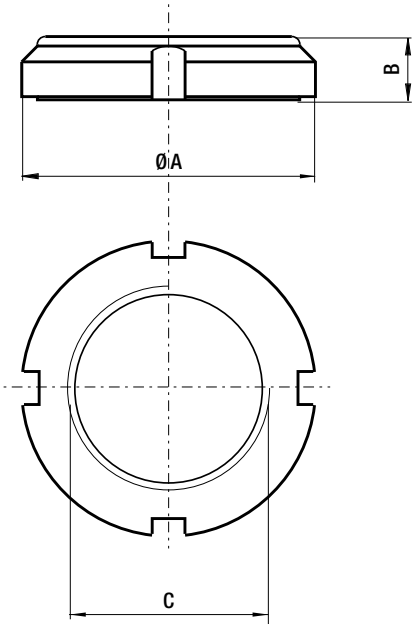
CODE	Refernce to standards	A		B		C		D		E		Ø F		Ø G		Ø H		J		K	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FSB 32	6	80	3,15	63	2,48	38,5	1,52	18	0,71	56	2,20	32	1,26	10,5	0,41	17	0,67	6	0,24	25	0,98
FSD 32	2-3-17-20	68	2,68	48	1,89	20,9	0,82	10	0,39	50	1,97	32,5	1,28	9	0,35	15	0,59	4	0,16	20	0,79
FSD 38	2-3-17-20	74	2,91	54	2,13	23,9	0,94	16	0,63	54	2,13	38,5	1,52	9	0,35	15	0,59	4	0,16	20	0,79
FSD 45	2-3-17-20	80	3,15	60	2,36	27,5	1,08	22	0,87	60	2,36	45,5	1,79	9	0,35	15	0,59	4	0,16	20	0,79
FSD 50	2-3-4-17-20	90	3,54	70	2,76	30	1,18	25	0,98	68	2,68	50,5	1,99	11	0,43	18	0,71	5	0,20	30	1,18
FSC 63	0	105	4,13	80	3,15	40	1,57	11	0,43	80	3,15	63	2,48	10,5	0,41	17	0,67	10	0,39	30	1,18
FSD 63	2-17-20	108	4,25	82	3,23	36,5	1,44	27	1,06	84	3,31	63,5	2,50	11	0,43	18	0,71	5	0,20	30	1,18
FSD 75	2-3-4-17-20	125	4,92	94	3,70	42	1,65	32	1,26	100	3,94	75,5	2,97	13,5	0,53	20	0,79	5	0,20	30	1,18
FSD 95	2-3-4-17-20	140	5,51	115	4,53	52,5	2,07	33	1,30	115	4,53	95,5	3,76	13,5	0,53	20	0,79	5	0,20	30	1,18
FSD 120	2-3-17-20	170	6,69	140	5,51	65	2,56	58	2,28	145	5,71	120,5	4,74	13,5	0,53	20	0,79	7	0,28	30	1,18
FSD 150	2-3-17-20	200	7,87	170	6,69	80	3,15	68	2,68	175	6,89	150,5	5,93	13,5	0,53	20	0,79	7	0,28	30	1,18

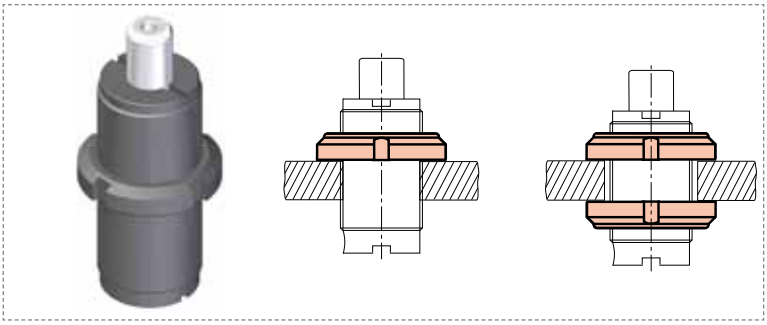
R



CODE	Refernce to standards	A		B		C		D		E		Ø F		Ø G		Ø H		Ø J		L		K	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
R 32 A	5	70	2,76	50	1,97	38,5	1,52	25	0,98	45	1,77	10,5	0,41	17	0,67	11	0,43	6,5	0,26	15	0,59	25	0,98

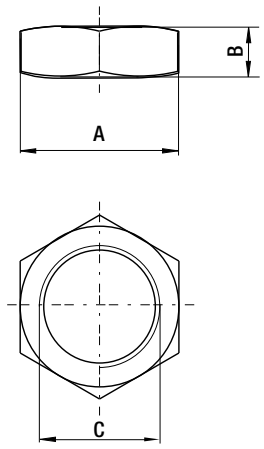
GM

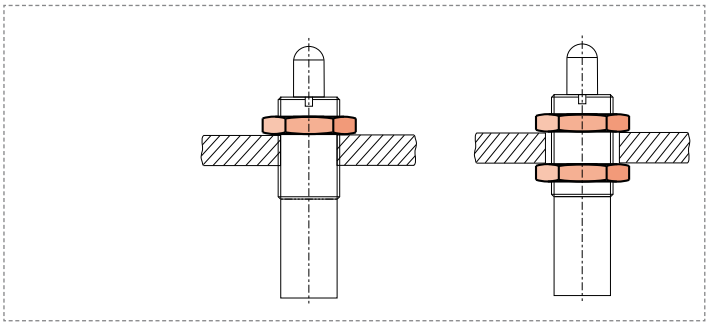




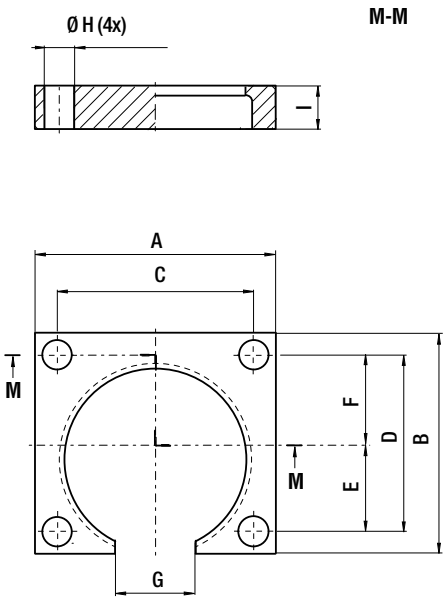
CODE	Refernce to standards	Ø A		B		C
		mm	inch	mm	inch	
GM 38	0	56	2,20	12	0,47	M 38 X 1,5
GM 45	0	62	2,44	12,3	0,48	M 45 X 1,5
GM 50	0	68	2,68	12,9	0,51	M 50 X 1,5

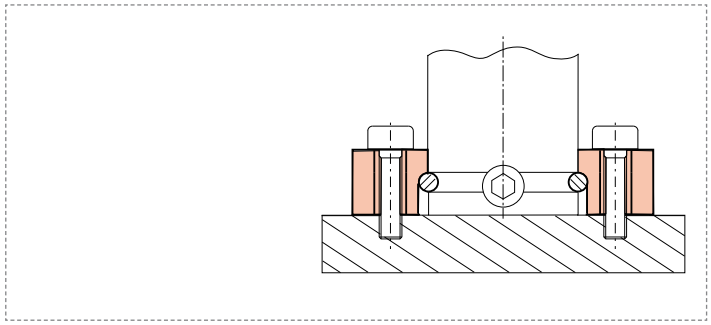
DM - DI





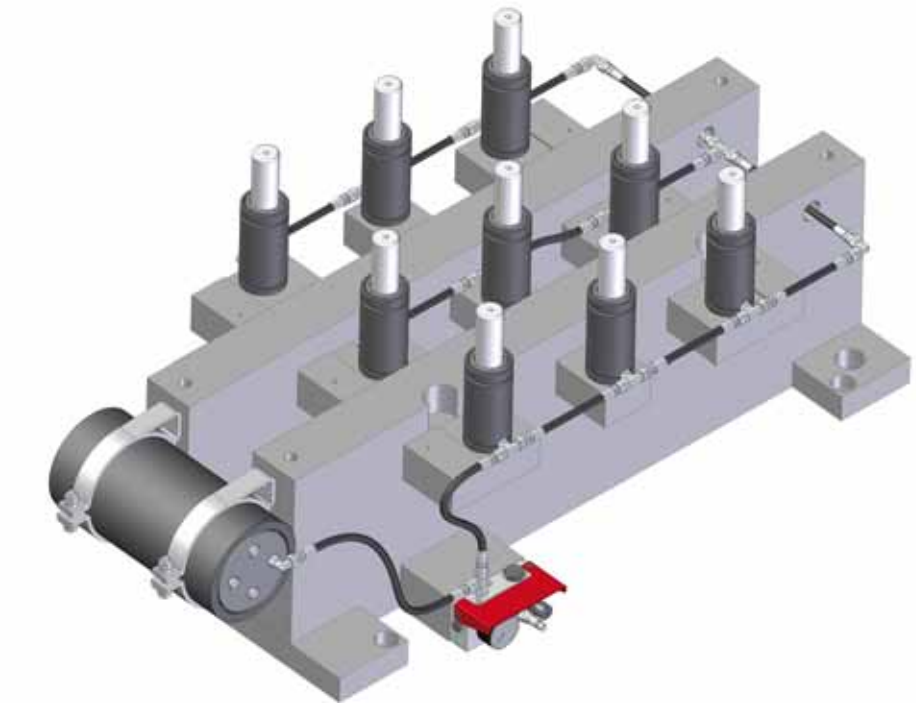
CODE	Refernce to standards	A	B		C
			mm	inch	
DM 16	0	S24	8	0,31	M 16 x 1,5
39DM16X2A	0	S24	16	0,63	M 16 x 2
DM 24	0	S36	10	0,39	M 24 x 1,5
DI 1" - 8	0	S38	14	0,55	1" - 8





CODE	Refernce to standards	A		B		C		D		E		F		G		Ø H		I	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
FHR01000	0	70	2,76	60	2,36	56	2,20	46	1,81	18,5	0,73	27,5	1,08	25	0,98	9	0,35	11,5	0,45

LINKED SYSTEM



I 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 EO - 24°, JIC 37°, Minimess , Micro 32°, ORFS

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 EO - 24°, JIC 37°, Minimess , Micro 32°, ORFS 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 EO - 24°, JIC 37°, Minimess , Micro 32°, ORFS 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 Dichtungsvorrichtungen 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 EO - 24°, JIC 37°, Minimess , Micro 32°, ORFS

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

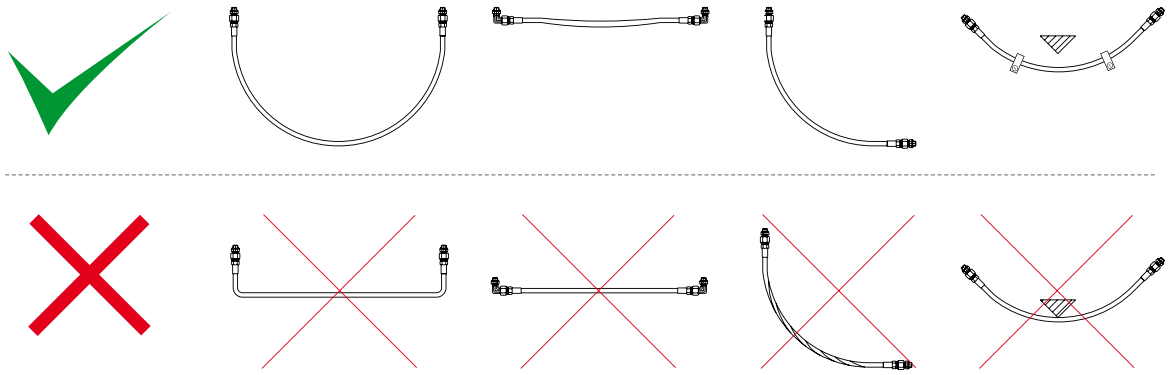
- La misma presión en todos los cilindros
- Control de la presión = control de la fuerza
- Aumento/reducción de la presión=aumento/reducción de la fuerza mediante el panel de control incluso en operaciones de estampación sin actuación directa sobre los cilindros
- Pueden emplearse pulmones de compensación 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 EO - 24°, JIC 37°, Minimess , Micro 32°, ORFS

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 EO - 24°, JIC 37°, Minimess , Micro 32°, ORFS

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.



I -Procedure per trasformazione cilindri autonomi in collegati a sistema
GB -Procedure for transforming cylinders from self-contained to hosed
D -Anweisungen zur Umwandlung von autonomen Gasdruckfedern in für Verbundsystemegeeignete Gasdruckfedern
F -Le procédé pour transformer les cylindres autonomes en reliés
E -Descargar instrucciones para transformar cilindros autónomos en cilindros conectados a sistema
P -Procedimentos para transformar cilindros de individuais para conectados

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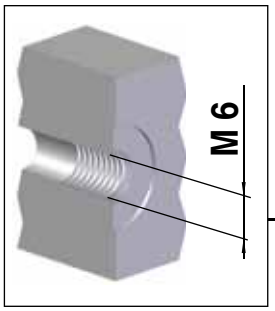
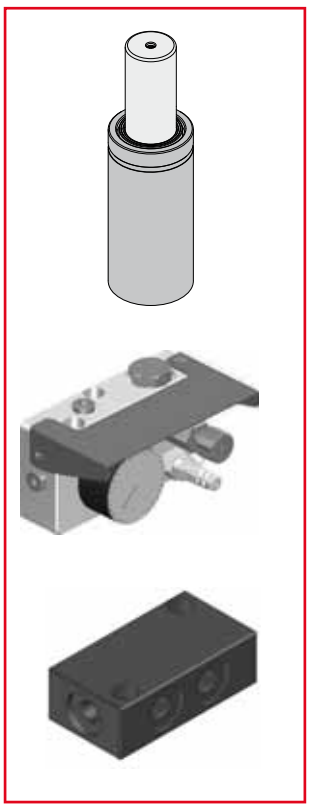
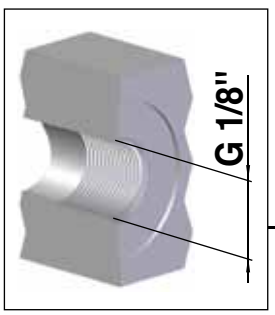
LINKED SYSTEM SELECTION







MINIMESS - CONNECTIONS
S12,65x1,5

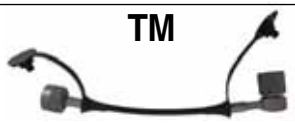
MICRO - CONNECTIONS
M8x1

JIC 37°- CONNECTIONS
7/16"-20 UNF

EO - 24° - CONNECTIONS
M12x1,5

ORFS - CONNECTIONS
9/16"-18 UNF

TM



TSM

TNC

HY 500

HY 400

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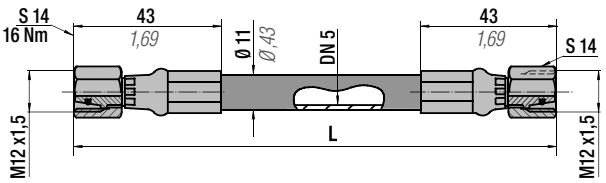
HY 500 EO - 24° Twin seal Hose Ø 11 mm

code 36HY50001...



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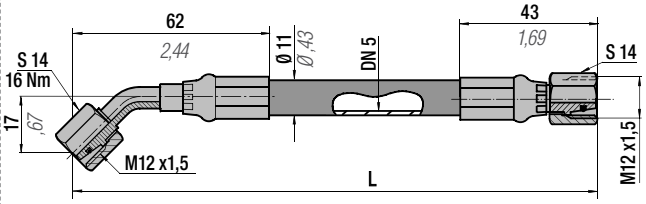

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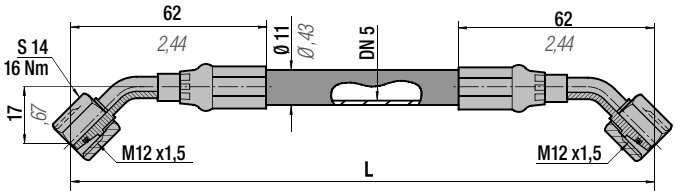

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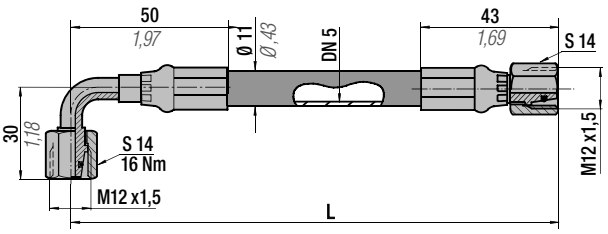

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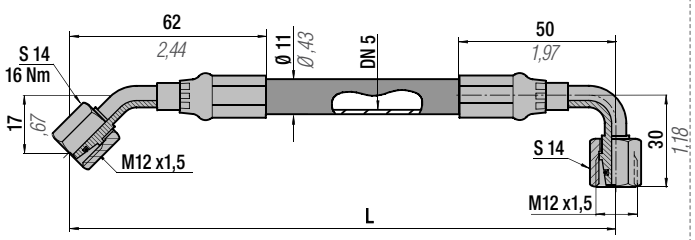

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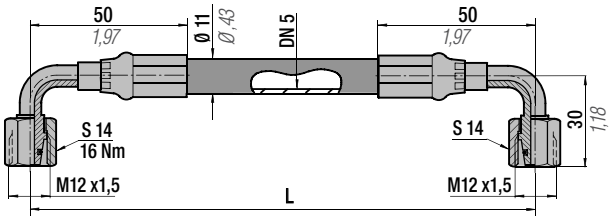


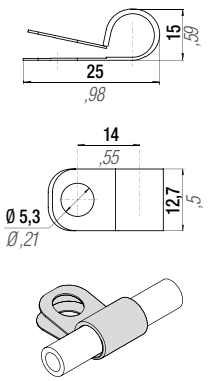
Technical data				
"L" min	120 mm	*4,72 in*	Volume	18 ml/metre
Operation pressure	345 bar	*5003 psi*	Dimension	3/16" (external ø 11 mm)
Burst Pressure	1380 bar at 20°C	*20010 psi at 68°F*	Material	Thermoplastic
R (bending radius)	40 mm	*1,57 in*	Standard	SAE 100R8
Operation temperature	-40+ 100°C	*-38 +212°F*	Outer casing	Perforated

Lunghezza richiesta comprensiva di raccordi terminali
Length upon request including end hose fittings
Länge Anfrage einschließlich Ende Schlaucharmaturen

Longueur requise, y compris des raccords d'extrémité
Longitud requerida, incluyendo accesorios de los extremos
Comprimento necessário incluindo todos os acessórios

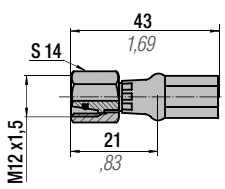
standard L = 120 mm min. - 5 mm upword increase - Example (36HY50001 0300; 36HY50001 0305; ...)

code: 36FF11A



HOSE FITTINGS

code 36P2401



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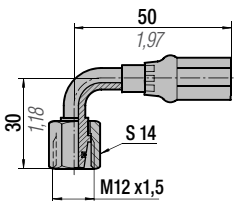

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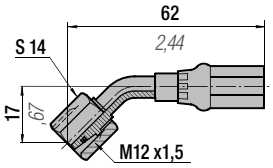
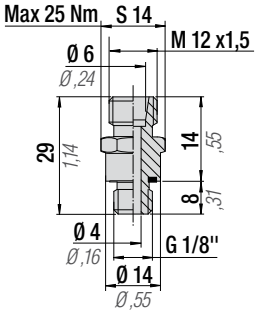


Raccordi tubo-cilindro/pannello - Hose-cylinder/panel connections - Anschlüsse zwischen schlauch und Zylinder/Kontrollarmatur - Raccords tuyau-cylindre/tableau - Conexiones sistema de cilindros/panel - Racord tubo-cilindro/painel

code 36R2401



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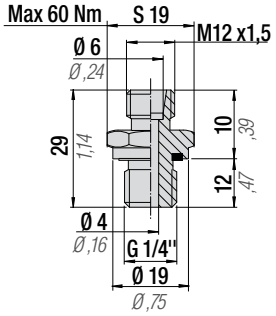
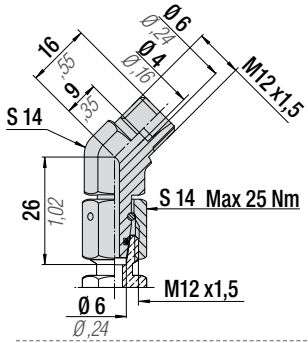


Raccordi di derivazione - Offtake connections - Anschlüßstutzen - Raccords de dérivation - Racores - Racord de derivação

code 36R2403



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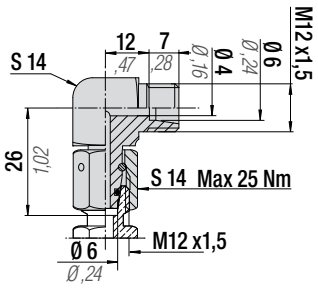

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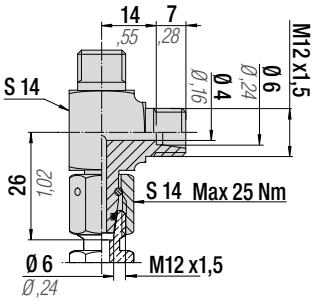

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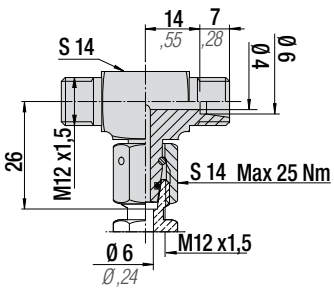
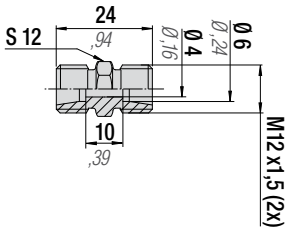


Raccordi tubo-tubo - Hose-hose connections - Anschlüsse zwischen Schlauch und Schlauch - Raccords tuyau-tuyau - Conexiones de tubo a tubo - Racord tubo-tubo

code 36R2407



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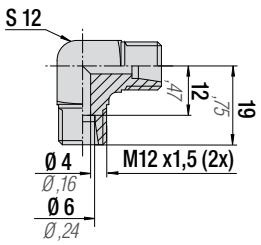

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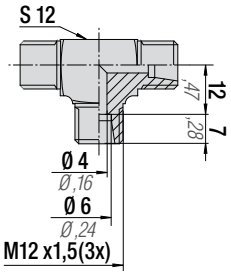

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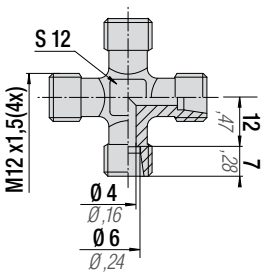
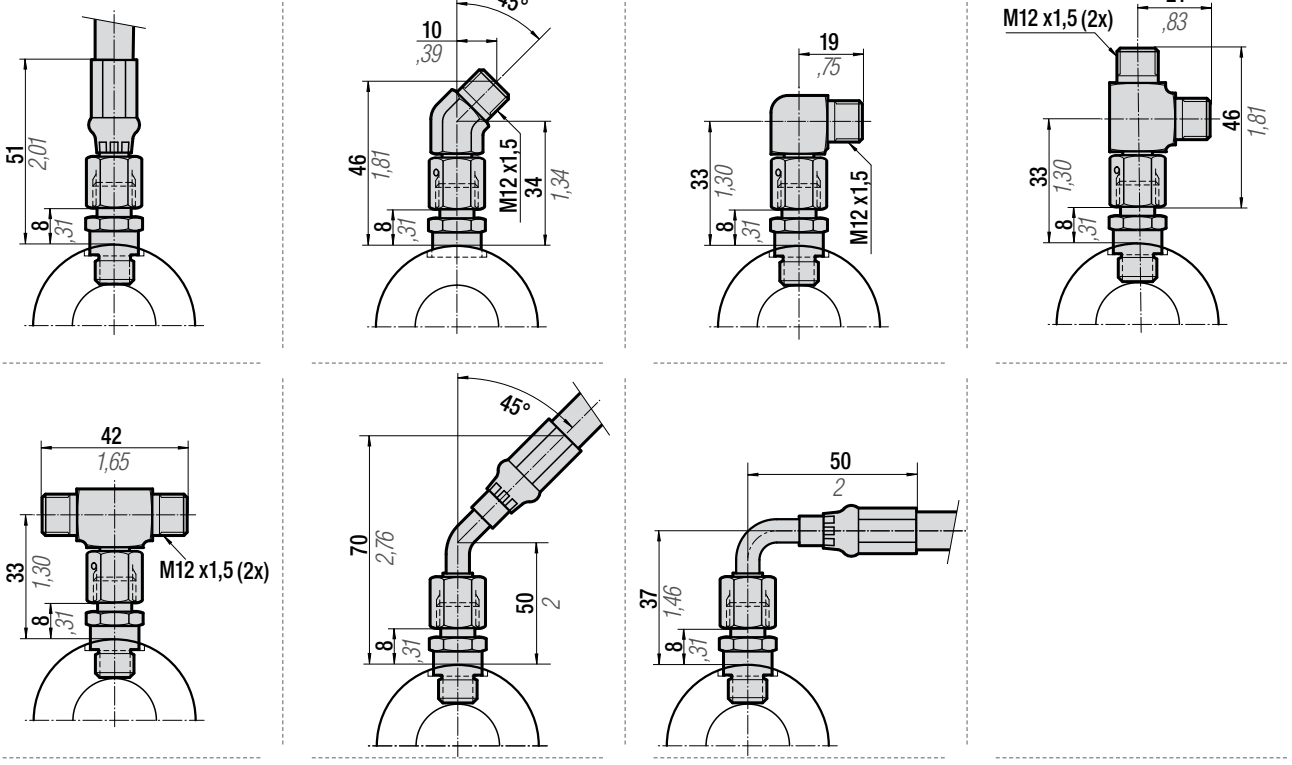


Esempi di installazione - Installation examples - Einbaubeispiele - Exemples de montage - Ejemplos de instalación - Exemplos de instalação



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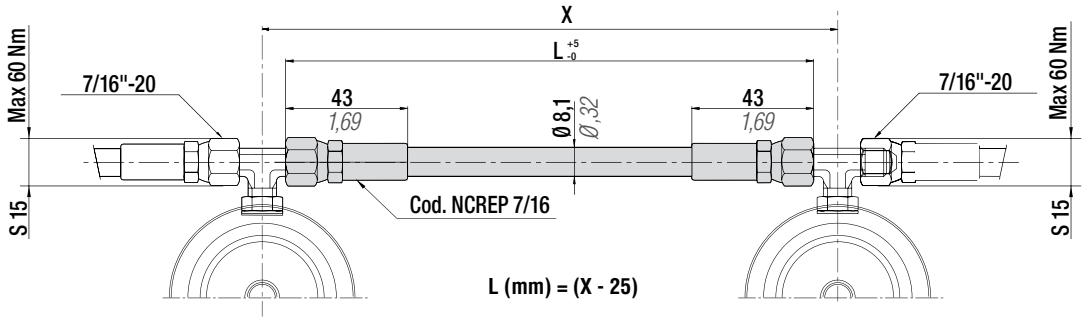
TNC JIC 37° Hose Ø 8,1 mm

code TNC 7/16...



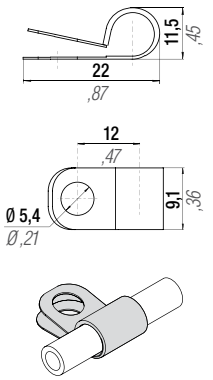
Technical data				
"L" min	140 mm	*5,51 in*	Volume	12,6 ml/metre
Operation pressure	420 bar	*6090 psi*	Dimension	1/8'' (external ø 8,1 mm)
Burst Pressure	1680 bar at 20°C	*24360 psi at 68°F*	Material	Thermoplastic
R (bending radius)	25 mm	*0,98 in*	Standard	SAE 100R8
Operation temperature	-40+ 100°C	*-38 +212°F*	Outer casing	Perforated

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

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

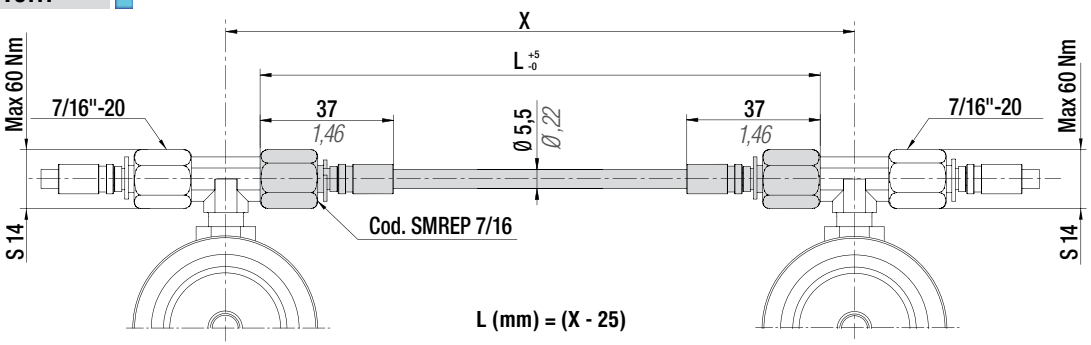
standard L = 140 mm min. - 5 mm upword increase - Example (TNC 7/16 140 mm; TNC 7/16 145 mm ...)

code: 36FF09A



TSM JIC 37° Hose Ø 5,5 mm

code TSM7/16...



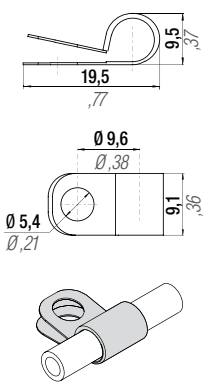
Technical data				
"L" min	90 mm	*3,54 in*	Volume	3 ml/metre
Operation pressure	630 bar	*9135 psi*	Dimension	5/64'' (external ø 5,5 mm)
Burst Pressure	1890 bar at 20°C	*27400 psi at 68°F*	Material	Thermoplastic
R (bending radius)	20 mm	*0,79 in*	Standard	-
Operation temperature	-40+ 100°C	*-38 +212°F*	Outer casing	Perforated

Lunghezze standard (mm) inclusive di n. 2 raccordi SMREP 7/16
Standard lengths (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

standard L = 90 mm min. - 10 mm upword increase - Example (TSM 7/16 90 mm; TSM 7/16 100 mm ...)

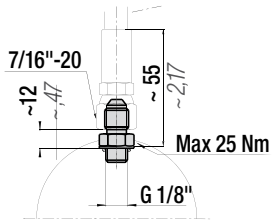
code: 36FF06A



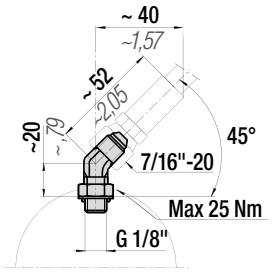
*All dimensions in **mm**/inch*

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/painel

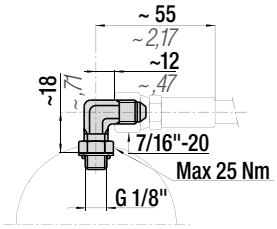
code RTC-D



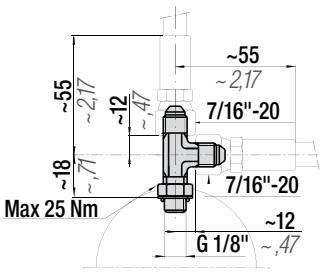
code RTC-M



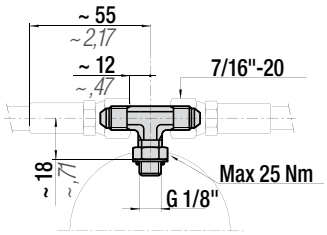
code RTC-R



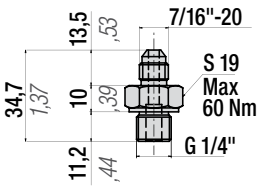
code RTC-L



code RTC-T

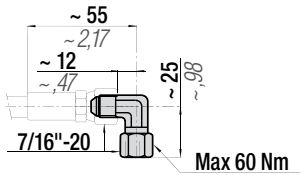


code 36J01A

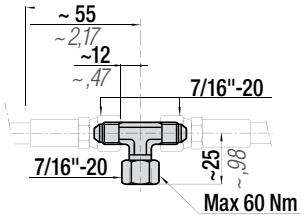


Raccordi di derivazione - Offtake connections - Anschlüßstutzen - Raccords de dérivation - Racores - Racord de derivação

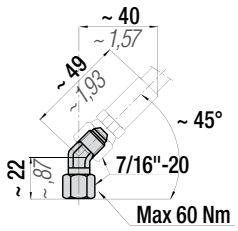
code RDR



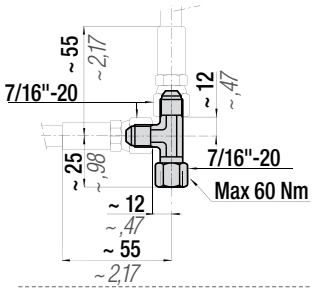
code RDT



code RDM

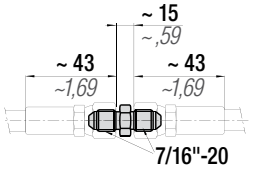


code RDL

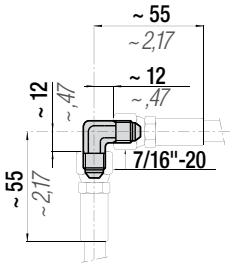


Raccordi tubo-tubo - Hose-hose connections - Anschlüsse zwischen Schlauch und Schlauch - Raccords tuyau-tuyau - Conexiones de tubo a tubo - Racord tubo-tubo

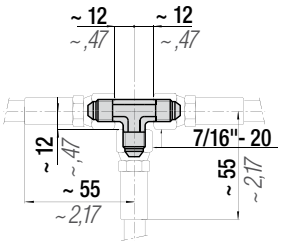
code RTT-D



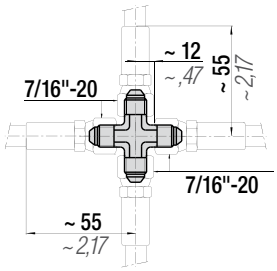
code RTT-R



code RTT-T



code RTT-C

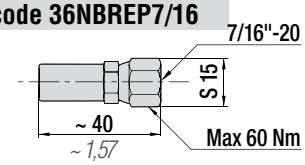


⚠ Available ONLY for loose supply

JIC 37° Hose Ø 8 mm TNB

PARKER made

Hose	Hose fittings
code 36TNB	code 36NBREP7/16

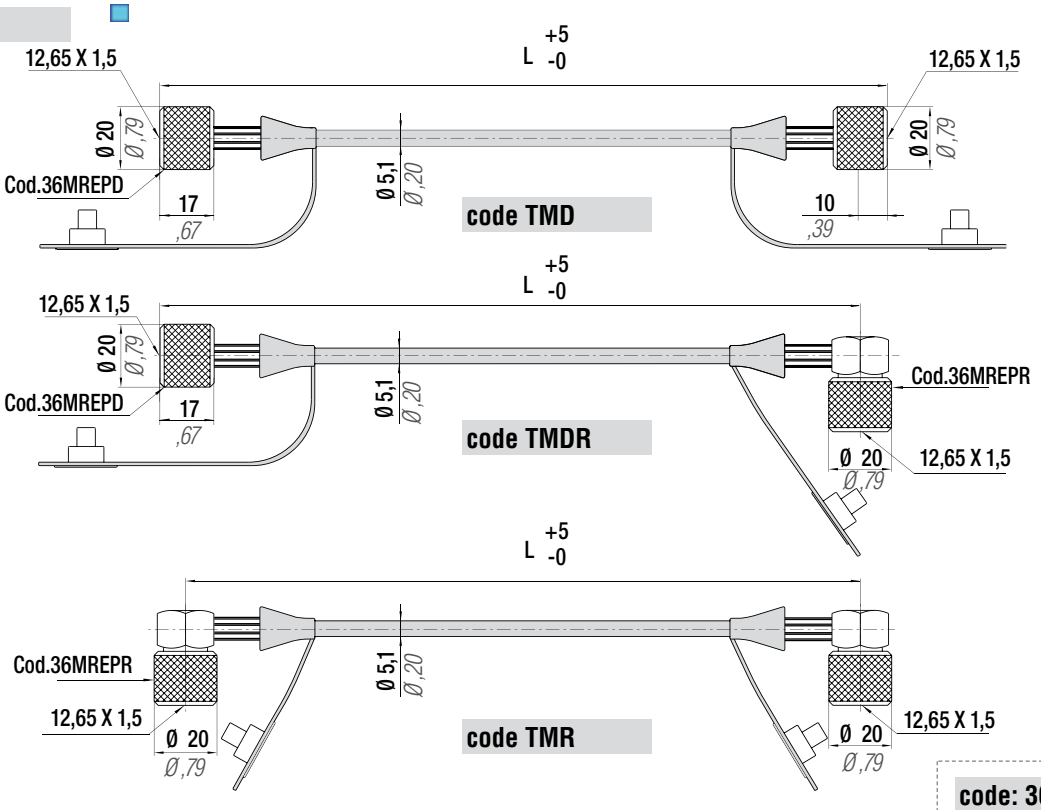


Technical data		
"L" min	140 mm	5,51 in
Operation pressure	415 bar	6017 psi
Burst Pressure	1655 bar at 20°C	24000 psi at 68°F
R (bending radius)	13 mm	0,51 in
Operation temperature	-40+ 100°C	-38 +212°F

*All dimensions in **mm**/inch*

TM MINIMESS Hose Ø 5,1 mm

code TM...



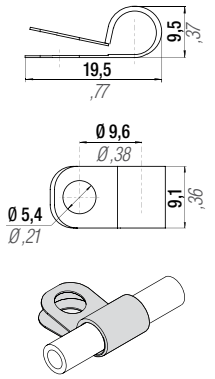
Technical data					
"L" min (TMD)	90 mm	*3,54 in*	Operation temp.	-20 +100°C	*-2 +212°F*
"L" min (TMDR-TMR)	105 mm	*4,13 in*	Dimension	5/64'' (external ø 5,1 mm)	
Operation pressure	630 bar	*9135 psi*	Material	Polyamid	
Burst Pressure	1950 bar at 20°C	*28275 psi at 68°F*	Standard	-	
R (bending radius)	20 mm	*0,79 in*	Outer casing	Perforated	

Lunghezze standard (mm) inclusive di n. 2 raccordi MREP D / R
Standard lengths (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) incluído nas 2 ligações MREP D / R

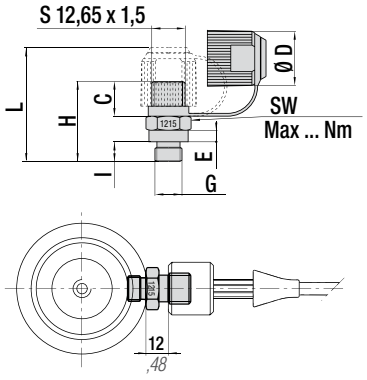
standard L = 90 mm min. - 10 mm upword increase - Example (TM... 90 mm; TM... 100 mm ...)

code: 36FF06A



CONNECTIONS MINIMESS

code RM...



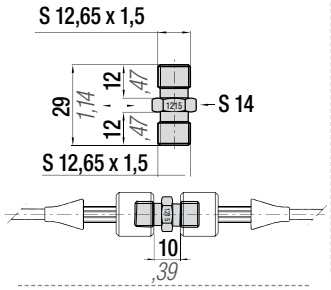
*All dimensions in **mm**/inch*

Technical data								
code RM...	G	I	H	L	SW	C	Ø D	E
RMTC [1]	G 1/8''	8	30	41	14	12	19,5	4
		0,31	*1,18*	*1,61*	25 Nm	*0,47*	*0,77*	*0,16*
RMTC01 [1]	G 1/4''	10	31	39	19	12	17	3
		0,39	*1,22*	*1,54*	60 Nm	*0,47*	*0,67*	*0,12*
RMTC02 [2]	G 1/8''	8	30	-	14	12	-	4
		0,31	*1,18*	-	25 Nm	*0,47*	-	*0,16*
RMTC03 [2]	G 1/4''	10	31	-	19	12	-	3
		0,39	*1,22*	-	60 Nm	*0,47*	-	*0,12*
RMPT [1]	7/16-20	9	30	43	17	12	19,5	3
		0,35	*1,18*	*1,69*	25 Nm	*0,47*	*0,77*	*0,12*

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

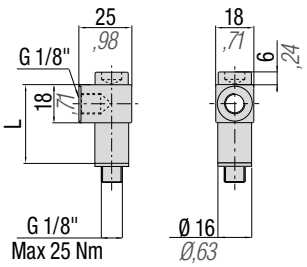
2) Senza valvola unidirezionale - Without one way valve - Ohne Rückschlagventil
Sans valve unidirectionnelle - Sin válvula unidireccional - Sem válvula unidireccional

code RMTT



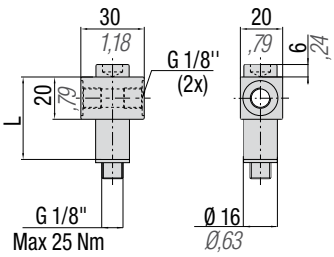
Blocchetto di distribuzione - Distribution block - Gasverteilstück - Plot de distribution - Bloque de distribución - Bloco de distribuição

code BDM01



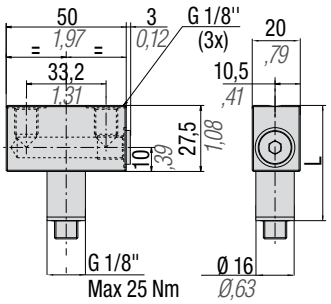
CODE	L mm	L inch
39BDM0102	24	0,94
39BDM01	38,5	1,52
39BDM0103	48	1,89

code BDM02



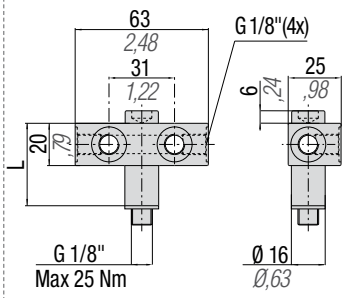
CODE	L mm	L inch
39BDM0202	26	1,02
39BDM02	40,5	1,59
39BDM0203	50	1,97

code BDM03



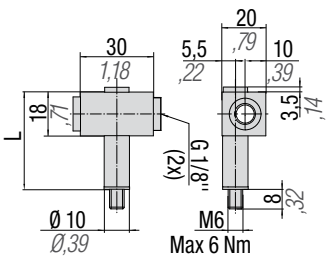
CODE	L mm	L inch
39BDM0302	33,5	1,32
39BDM0301	48	1,89
39BDM0303	57,5	2,26

code BDM04



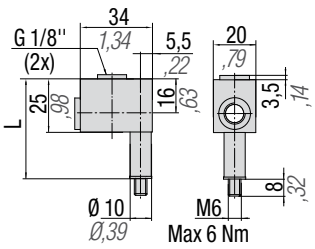
CODE	L mm	L inch
39BDM0402	26	1,02
39BDM04	40,5	1,59
39BDM0403	50	1,97

code BDM...



CODE	L mm	L inch
39BDM05	26	1,02
39BDM06	42	1,65

code BDM...



CODE	L mm	L inch
39BDM07	33	1,3
39BDM08	49	1,93

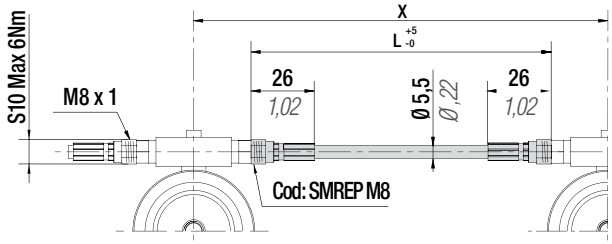
*All dimensions in **mm**/inch*

TSM MICRO 32° Hose Ø 5,5 mm

Twin seal

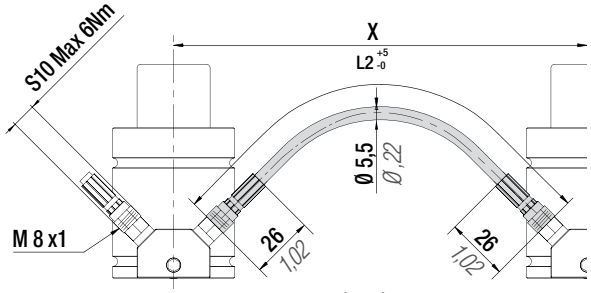
SPECIAL SPRINGS

code TSMM8...



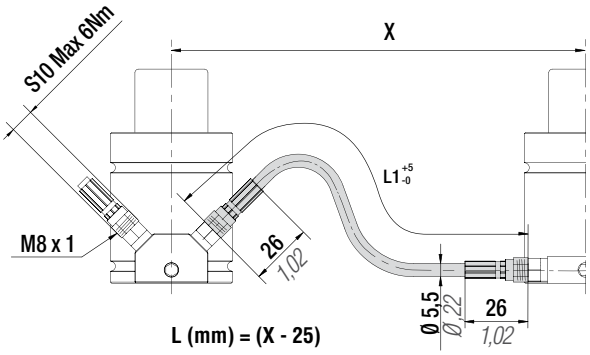
L (mm) = (X - 50)

standard L = 90 mm min. - 10 mm upword increase
Example (TSMM8 090 mm; TSMM8 100 mm ...)



L (mm) = X

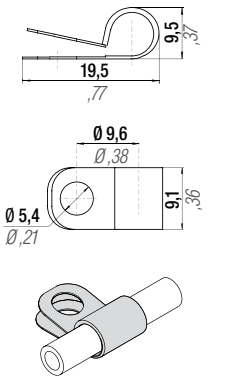
standard L = 190 mm min. - 10 mm upword increase
Example (TSMM8 190 mm; TSMM8 200 mm ...)



L (mm) = (X - 25)

standard L = 170 mm min. - 10 mm upword increase
Example (TSMM8 170 mm; TSMM8 180 mm ...)

code: 36FF06A

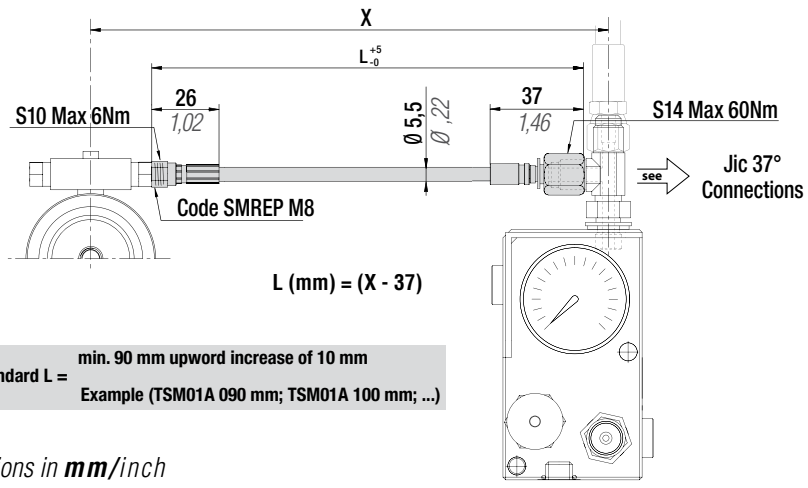


Technical data					
"L" min	90 mm	*3,54 in*	Operation temp.	-40+ 100°C	*-38 +212°F*
"L1" min	170 mm	*6,69 in*	Volume	3 ml/metre	
"L2" min	190 mm	*7,48 in*	Dimension	5/64" (external ø 5,5 mm)	
Operation pressure	630 bar	*9135 psi*	Material	Thermoplastic	
Burst Pressure	1890 bar at 20°C	*27400 psi at 68°F*	Standard	-	
R (bending radius)	20 mm	*0,79 in*	Outer casing	Perforated	

Lunghezze standard (mm) inclusive di n.2 raccordi SMREP M8
Standard lengths (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

TSM MICRO 32° and JIC 37° Hose Ø 5,5 mm

code TSM01A...



L (mm) = (X - 37)

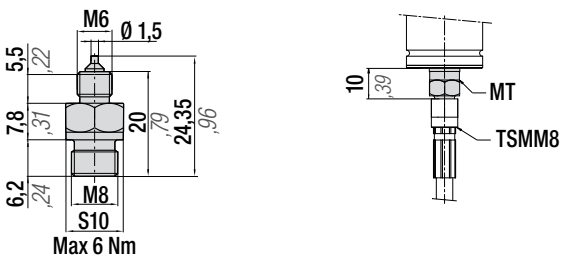
standard L = min. 90 mm upword increase of 10 mm
Example (TSM01A 090 mm; TSM01A 100 mm; ...)

*All dimensions in **mm**/inch*

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/painel

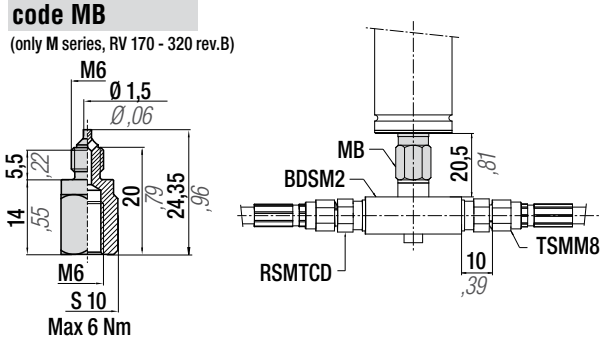
code MT

(only M series, RV 170 - 320 rev.B)

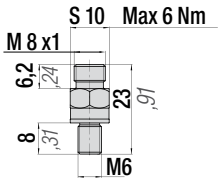


code MB

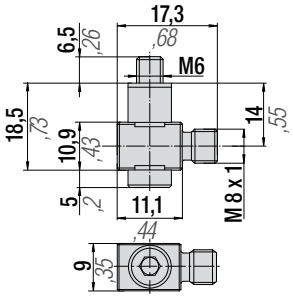
(only M series, RV 170 - 320 rev.B)



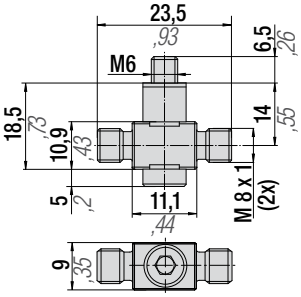
code RSMTCD



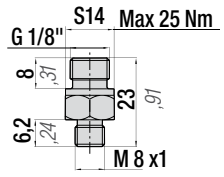
code 36M08A



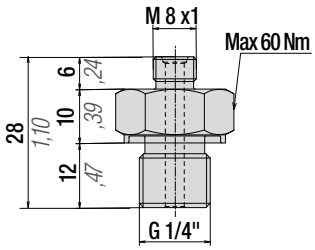
code 36M09A



code RSMPTD

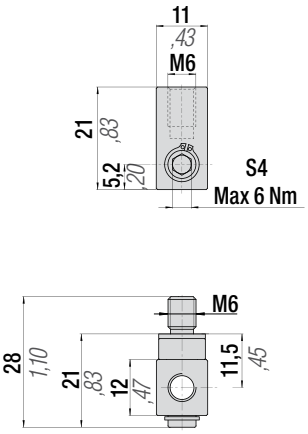


code 36M03A

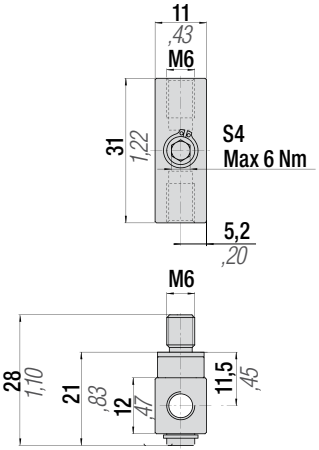


Blocchetto tubo-cilindro - Hose-cylinder block - Block, bestehend aus Schlauch-Zylinder - Bloc tube- cylindre - Bloque tubo-cilindro - Bloqueio do tubo-cilindro

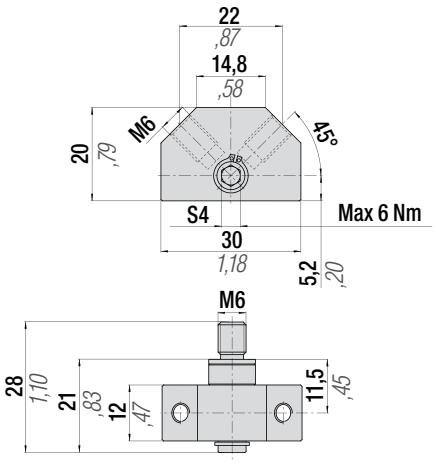
code BDSM1



code BDSM2



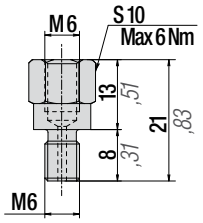
code BDSM2-45



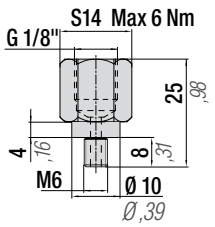
*All dimensions in **mm**/inch*

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

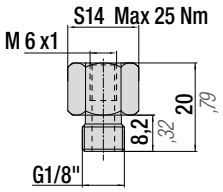
code 36M02A



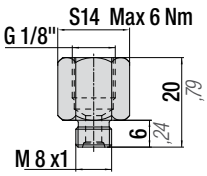
code 36M04A



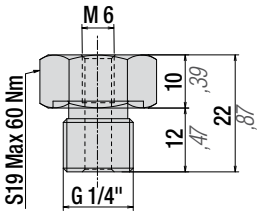
code 36MTC



code 36MTR

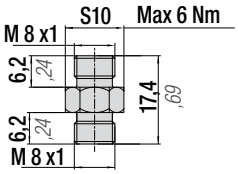


code 36M01A

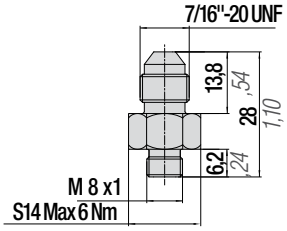


Raccordi tubo-tubo - Hose-hose connections - Anschlüsse zwischen Schlauch und Schlauch - Raccords tuyau-tuyau - Conexiones de tubo a tubo - Racord tubo-tubo

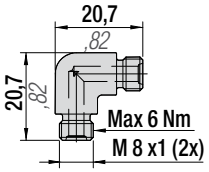
code 36MTTD



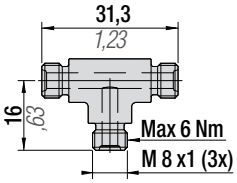
code 36RTTJM



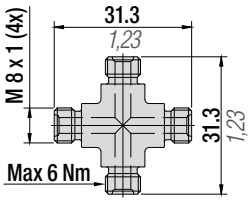
code 36M05A



code 36M06A

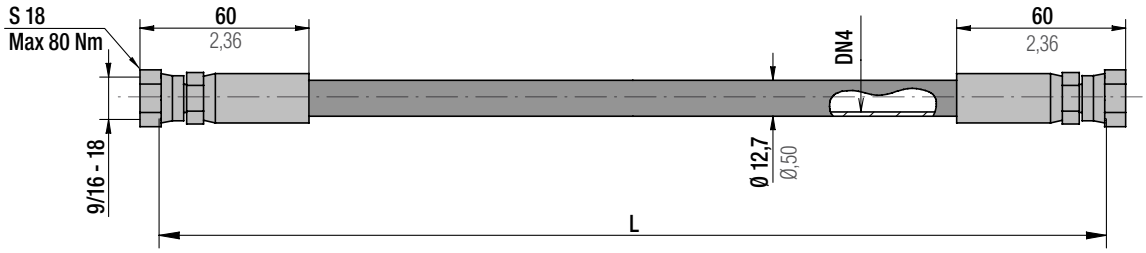


code 36M07A

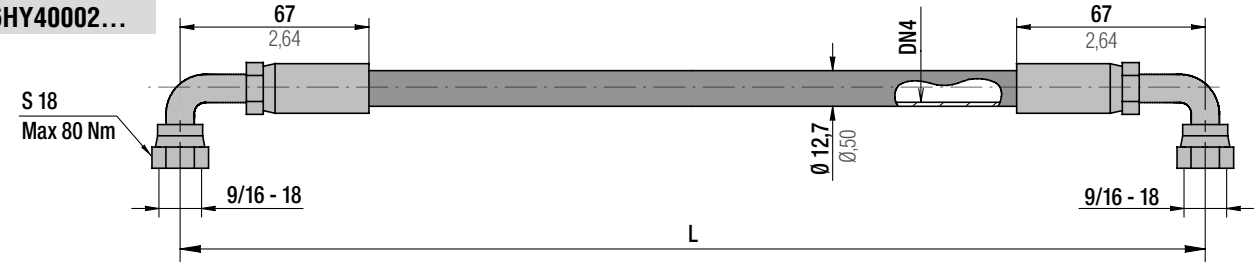


*All dimensions in **mm**/inch*

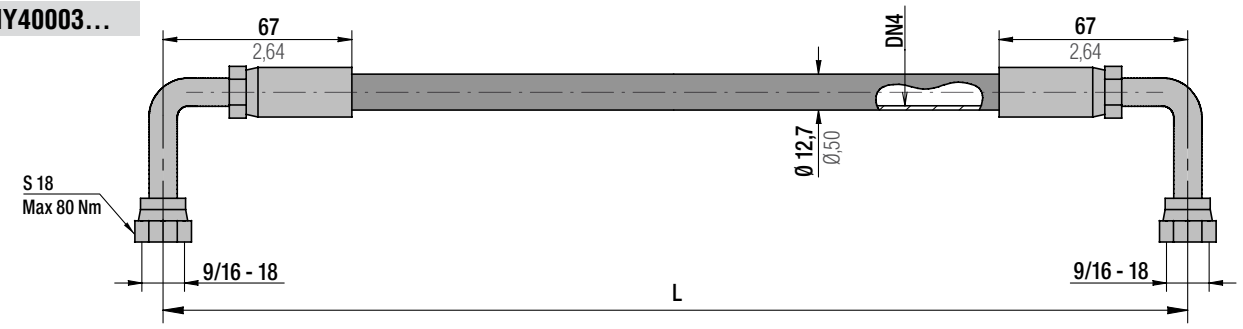
code 36HY40001...



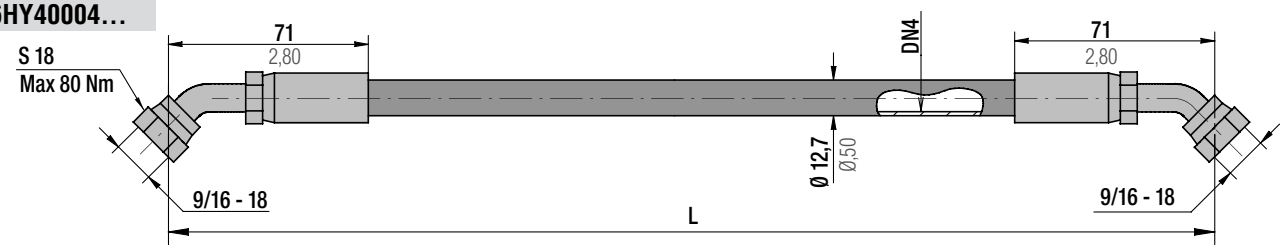
code 36HY40002...



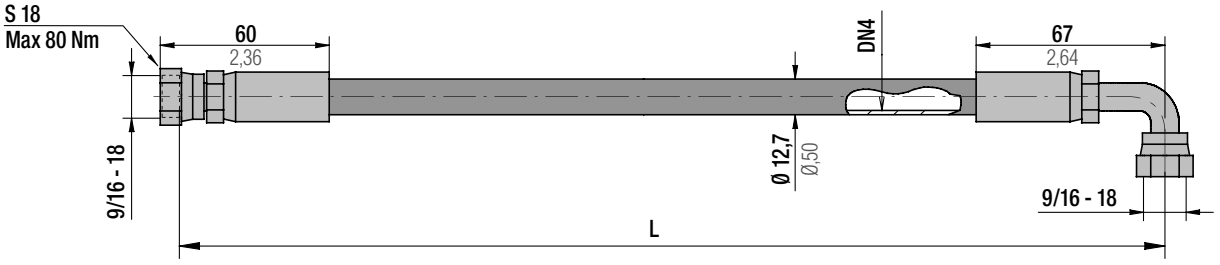
code 36HY40003...



code 36HY40004...



code 36HY40005...



Technical data				
"L" min	255 mm	*10,0 in*	Volume	32 ml/metre
Operation pressure	345 bar	*5003 psi*	Dimension	1/4" (external ø 12,7 mm)
Burst Pressure	1380 bar at 20°C	*20010 psi at 68°F*	Material	Thermoplastic
R (bending radius)	51 mm	*2,01 in*	Standard	SAE 100R8
Operation temperature	-40+ 100°C	*-38 +212°F*	Outer casing	Perforated

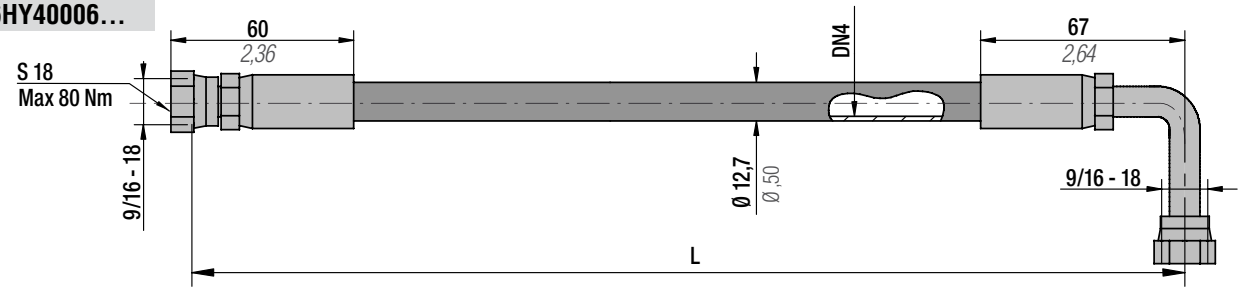
Lunghezza richiesta comprensiva di raccordi terminali
Length upon request including end hose fittings
Länge Anfrage einschließlich Ende Schlaucharmaturen
Longueur requise, y compris des raccords d'extrémité
Longitud requerida, incluyendo accesorios de los extremos
Comprimento necessário incluindo todos os acessórios

standard L = 255 mm min. - 10 mm upword increase - Example (36HY40001 0300; 36HY40001 0305; ...)

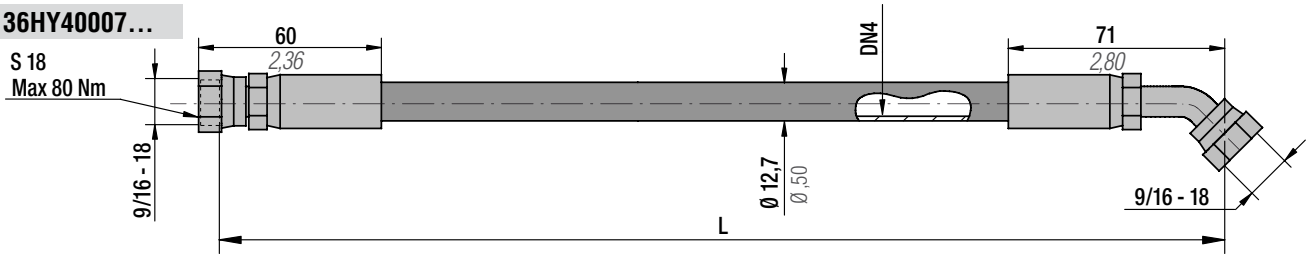
*All dimensions in **mm**/inch*

ORFS - O-ring face seal
Hose Ø 12,7 mm

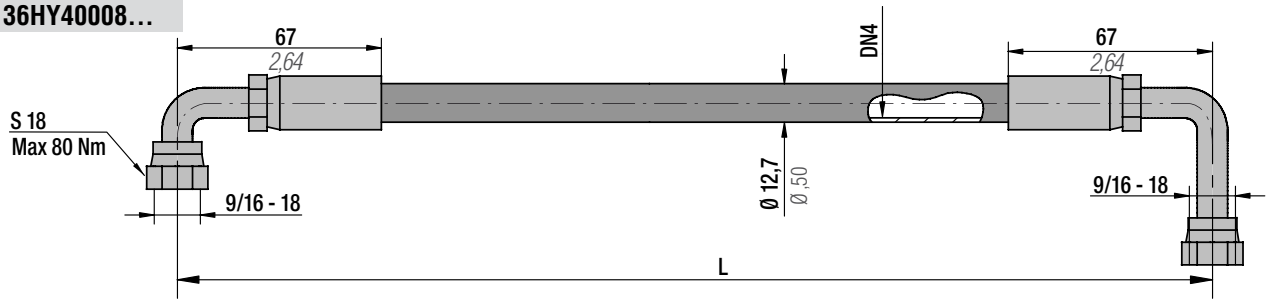
code 36HY40006...



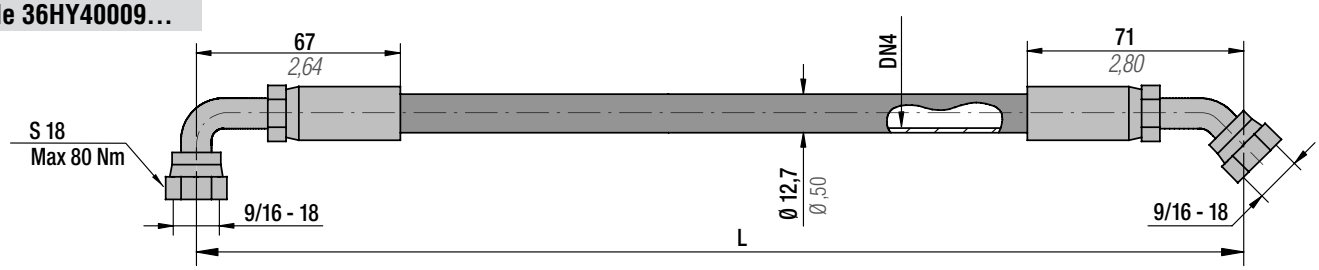
code 36HY40007...



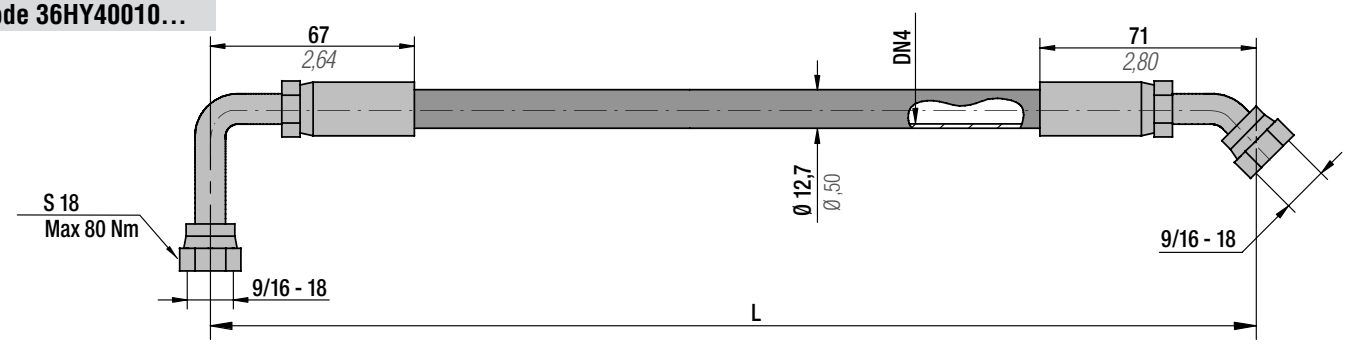
code 36HY40008...



code 36HY40009...



code 36HY40010...



Technical data				
"L" min	255 mm	*10,0 in*	Volume	32 ml/metre
Operation pressure	345 bar	*5003 psi*	Dimension	1/4" (external ø 12,7 mm)
Burst Pressure	1380 bar at 20°C	*20010 psi at 68°F*	Material	Thermoplastic
R (bending radius)	51 mm	*2,01 in*	Standard	SAE 100R8
Operation temperature	-40+ 100°C	*-38 +212°F*	Outer casing	Perforated

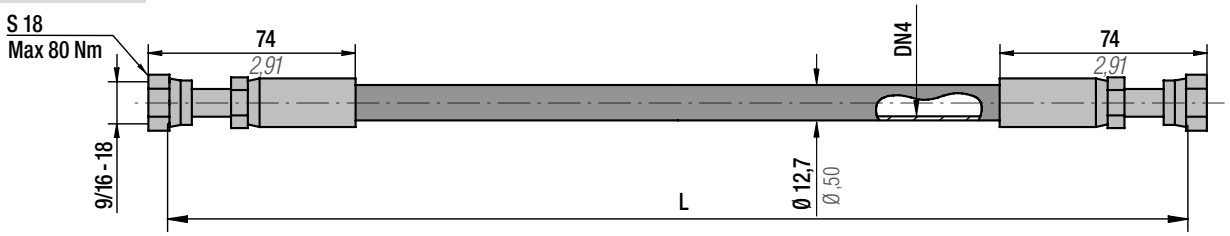
standard L = 255 mm min. - 10 mm upword increase - Example (36HY40009 0300; 36HY40009 0305; ...)

Lunghezza richiesta comprensiva di raccordi terminali
Length upon request including end hose fittings
Länge Anfrage einschließlich Ende Schlaucharmaturen
Longueur requise, y compris des raccords d'extrémité
Longitud requerida, incluyendo accesorios de los extremos
Comprimento necessário incluindo todos os acessórios

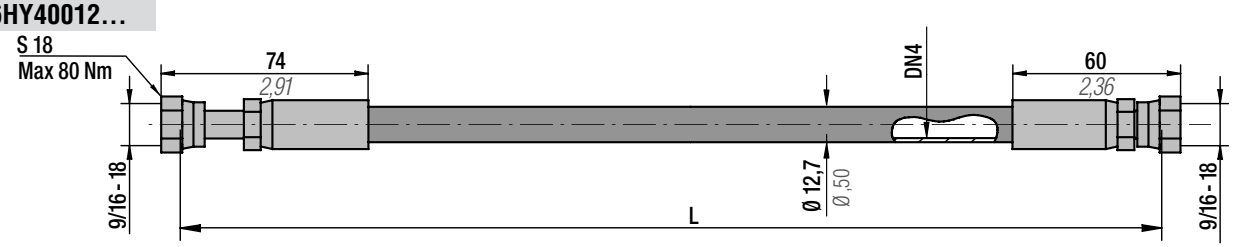
*All dimensions in **mm**/inch*

ORFS - O-ring face seal
Hose Ø 12,7 mm

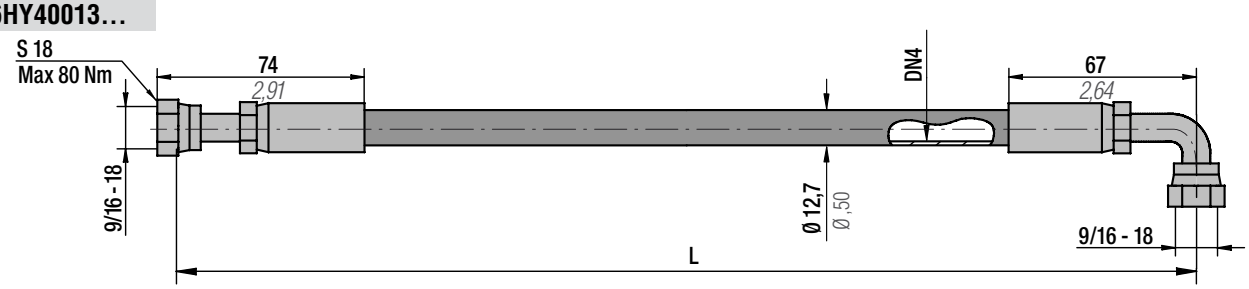
code 36HY40011...



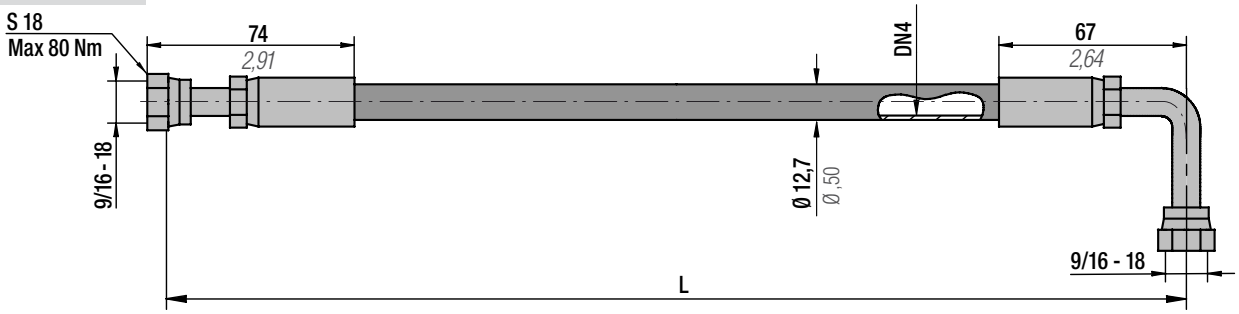
code 36HY40012...



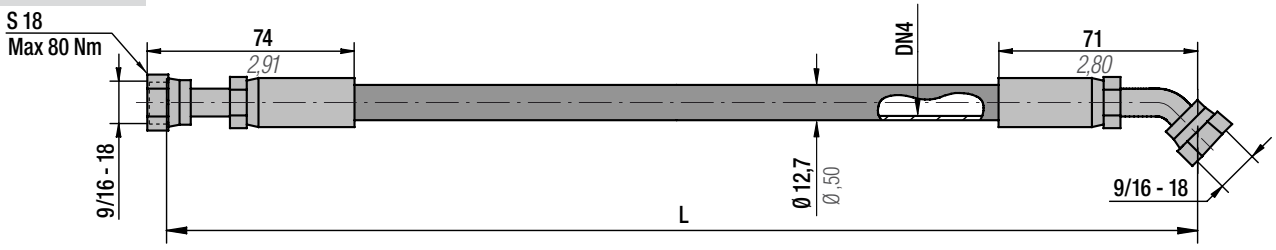
code 36HY40013...



code 36HY40014...



code 36HY40015...



Technical data				
"L" min	255 mm	*10,0 in*	Volume	32 ml/metre
Operation pressure	345 bar	*5003 psi*	Dimension	1/4" (external ø 12,7 mm)
Burst Pressure	1380 bar at 20°C	*20010 psi at 68°F*	Material	Thermoplastic
R (bending radius)	51 mm	*2,01 in*	Standard	SAE 100R8
Operation temperature	-40+ 100°C	*-38 +212°F*	Outer casing	Perforated

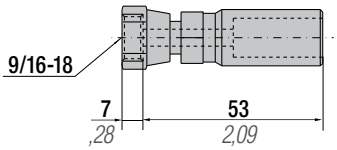
standard L = 255 mm min. - 10 mm upword increase - Example (36HY40015 0300; 36HY40015 0305; ...)

Lunghezza richiesta comprensiva di raccordi terminali
Length upon request including end hose fittings
Länge Anfrage einschließlich Ende Schlaucharmaturen
Longueur requise, y compris des raccords d'extrémité
Longitud requerida, incluyendo accesorios de los extremos
Comprimento necessário incluindo todos os acessórios

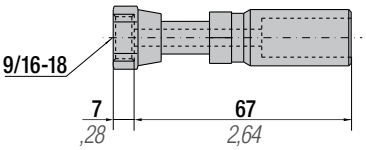
*All dimensions in **mm**/inch*

Raccordi tubo - Hose connections - Schlauchanschlüsse - Raccords tuyau - Conexiones tubo - Racordes tubo

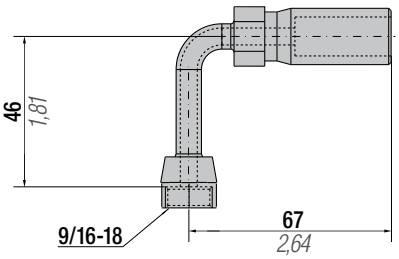
code S-F
Straight Swivel



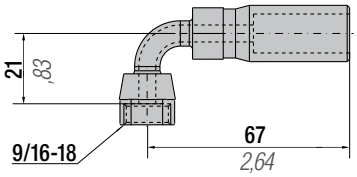
code S-FL
Straight Long Swivel



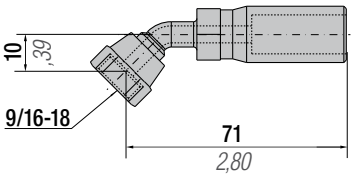
code H-F90L
90° Long Swivel



code H-F
90° Swivel

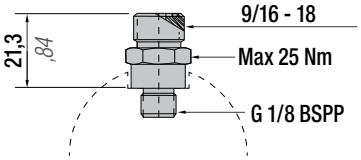


code H-F45
45° Swivel

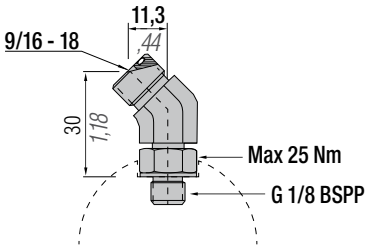


Raccordi tubo-cilindro/pannello - Hose-cylinder/panel connections - Anschlüsse zwischen schlauch und Zylinder/Kontrollarmatur - Raccords tuyau-cylindre/tableau - Conexiones sistema de cilindros/panel - Racord tubo-cilindro/painel

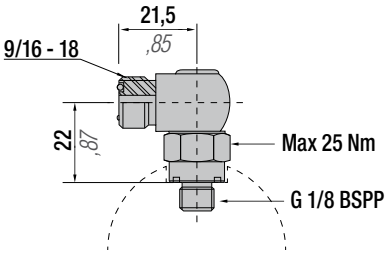
code PA-S
Port Adapter - Straight



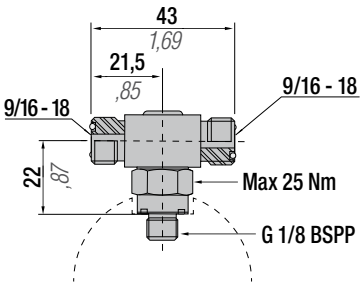
code PA-AS
Port Adapter - Angle Swivel



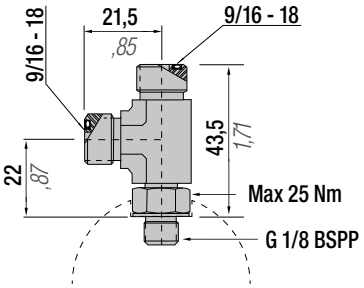
code PA-E
Port Adapter - Elbow



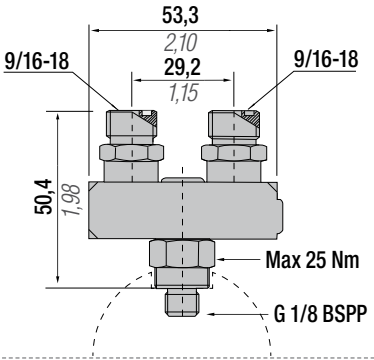
code PA-BTS
Port Adapter - Brach Tee Swivel



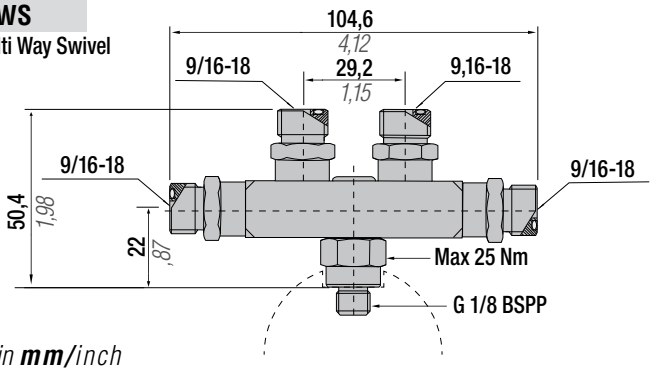
code PA-RT
Port Adapter - Rum Tee



code PA-TWS
Port Adapter - Two Way Swivel



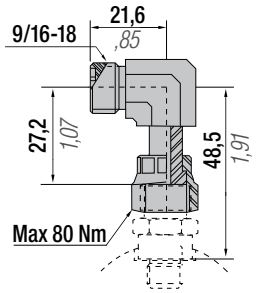
code PA-MWS
Port Adapter - Multi Way Swivel



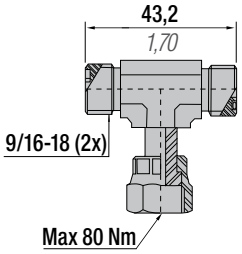
*All dimensions in **mm**/inch*

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

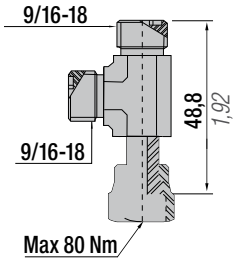
code SN-A
Swivel Nut-Angle



code SN-BT
Swivel Nut-Branch Tee

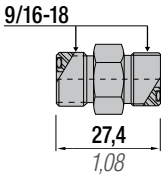


code SN-RT
Swivel Nut-Run Tee

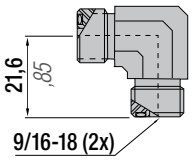


Raccordi tubo-tubo - Hose-hose connections - Anschlüsse zwischen Schlauch und Schlauch - Raccords tuyau-tuyau - Conexiones de tubo a tubo - Racord tubo-tubo

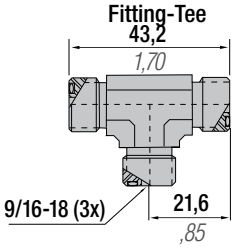
code F-U
Fitting-Union



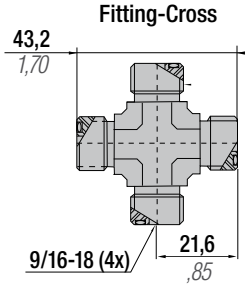
code F-E
Fitting-Elbow



code F-T
Fitting-Tee



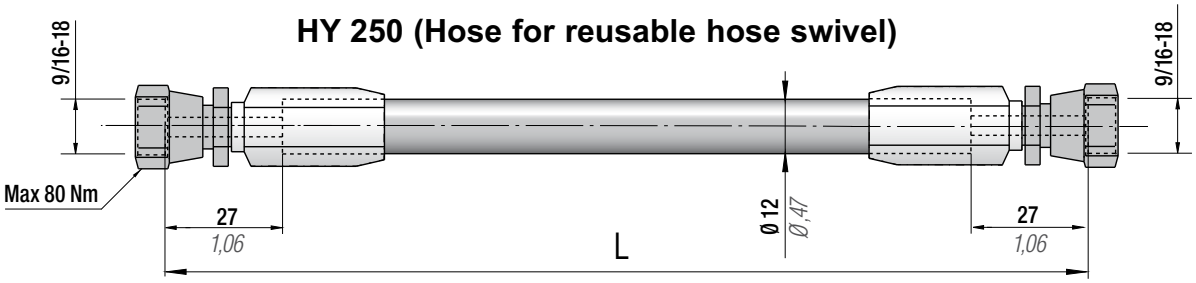
code F-C
Fitting-Cross



ORFS - O-ring face seal
(available in the North America market only) Hose Ø 12 mm

HY 250

HY 250 (Hose for reusable hose swivel)

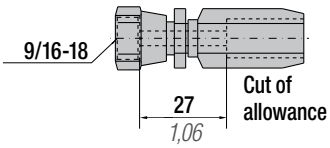


Technical data				
"L" min	254 mm	*10,0 in*	Volume	31 ml/metre
Operation pressure	190 bar	*2750 psi*	Dimension	1/4" (external ø 12 mm)
Burst Pressure	758 bar at 20°C	*11000 psi at 68°F*	Material	Thermoplastic
R (bending radius)	38 mm	*1,5 in*	Standard	SAE 100R7
Operation temperature	-40+ 100°C	*-38 +212°F*	Outer casing	Perforated

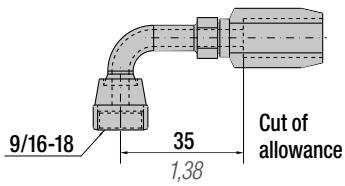
standard L = 254 mm min. - Example(3) (36HY40005 12"(305); **Length upon request including end hose fittings**

REUSABLE HOSE SWIVELS

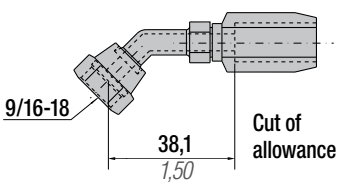
code SHF-R
Sraight Swivel



code HF-R90
90° Swivel



code HF-R45
45° Swivel



*All dimensions in **mm**/inch*

CONTROL PANEL CP01A
Easy Manifold compatible

I Micro pannello di controllo composto da base in alluminio, manometro, valvola per caricamento e scaricamento, tappo di sicurezza e protezione in acciaio. Idoneo per le gestione di impianti collegati realizzati con micro hose e micro connections. 16 uscite M6

GB Micro control panel with aluminium base, gauge, charging and discharging valve, safety plug and steel protection. Suitable for hose systems equipped with micro hose and micro connections. 16 M6 ports.

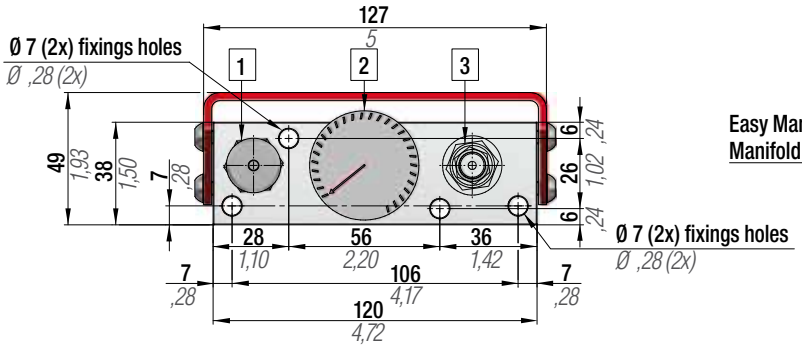
D Micro-Kontrollarmatur mit Aluminiumsockel, Manometer, Auffüll- und Ablassventil, Berstsicherung und Stahlabdeckung. Geeignet für Verbundsysteme mit Micro-Kupplung und -Schläuchen. 16 M6Anschlüsse.

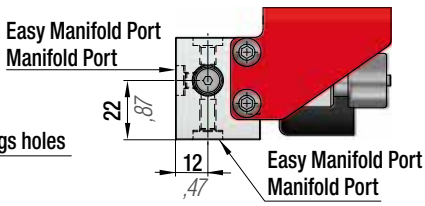
F Le mini panneau de contrôle avec embase aluminium, équipé de manomètre, valve de chargement et déchargement, interrupteur de sécurité et protection acier ; il est adapté aux systèmes connectés équipés de mini tuyaux et mini connexions. Ports 16M6.

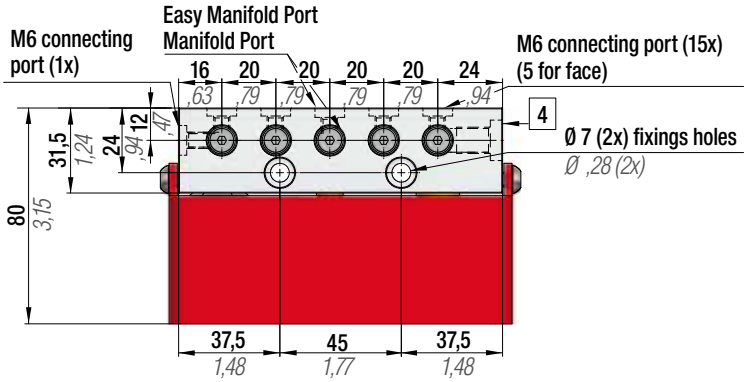
E Micropanel de control con base en aluminio, manómetro, válvula de carga y descarga, tapón de seguridad y protección en acero. Idóneo para la gestión de instalaciones de cilindros conectados entre sí con micro mangueras y micro conectores. 16 salidas M6

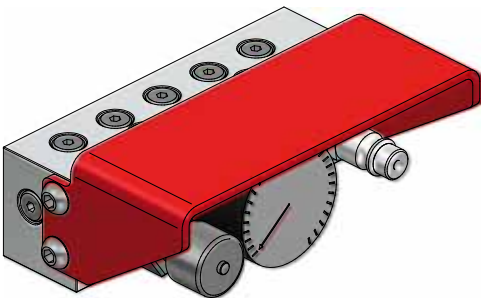
P Micro Painel de Controlo com base em alumínio, manómetro, válvula de carga e descarga, dispositivo de segurança e protecção em aço. Adequado para sistemas de mangueiras, equipado com micro mangueiras e micro conexões. 16 saídas M6

code 39CP01A









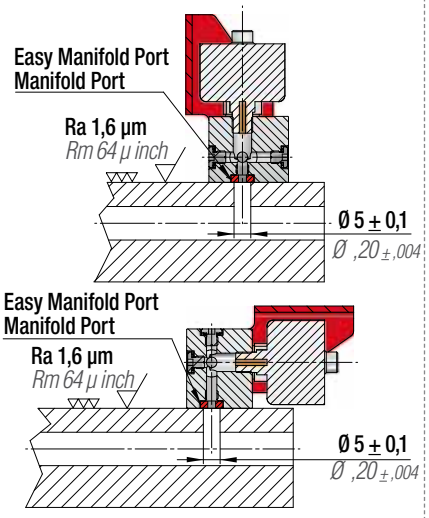
1- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga

2- 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

3- 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

4- Tappo di rottura sovrappressione
Over pressure rupture plug
Überdruck Bruch Stecker
Bouchon de rupture de surpression
Enchufe de la ruptura de sobrepresión
Plugue ruptura sobrepressão

Easy Manifold mounting example



*All dimensions in **mm**/inch*

CONTROL PANEL MCPA
Easy Manifold compatible

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 addizionali 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.

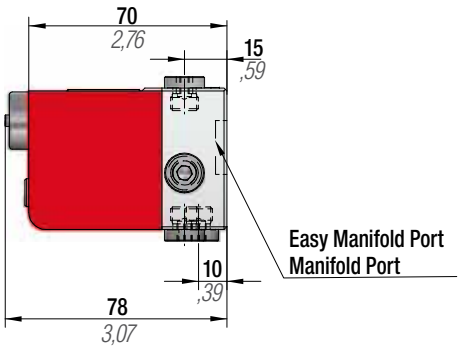
D Die Mini-Steuerung Special Springs bietet dank ihres miniaturisierten und einzigartigen Designs größte Benutzungsflexibilität, die mit den zusätzlichen AUMCP-Einheiten noch erhöht wird. Bestehend aus einem Stahlblock mit Manometer, Lade- und Entladeventil, 5 Ausgängen sowie Sperrventil.

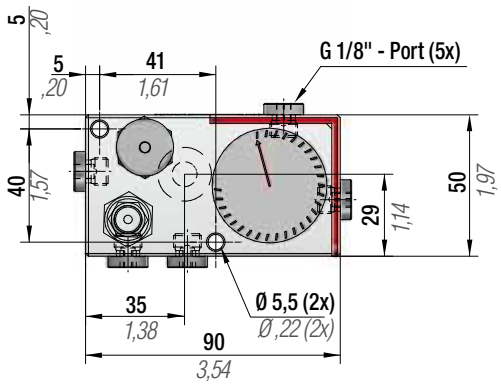
F Grâce à une conception miniaturisée et unique, le mini-panneau de contrôle Special Springs offre une grande souplesse d'utilisation qui augmente avec les unités supplémentaires AUMCP. Il est formé par une embase en acier équipée de manomètre, vanne de chargement et déchargement, 5 sorties, vanne d'arrêt.

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.

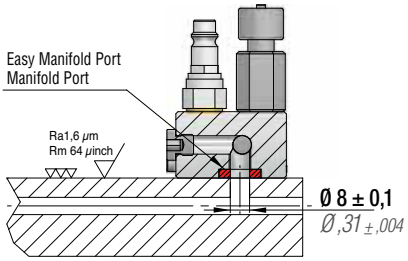
P O mini-painel de controlo Special Springs, graças a um design miniaturizado e exclusivo, oferece uma grande flexibilidade de utilização que aumenta com as unidades adicionais AUMCP. É composto por um bloco em aço com manómetro, válvula de carga e de descarga, 5 saídas e válvula de interceptação.

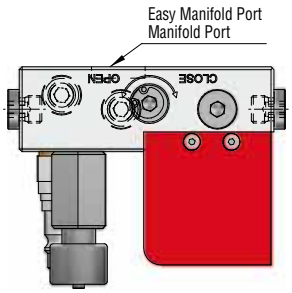
code 39MCPA





Easy Manifold mounting example





1- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga

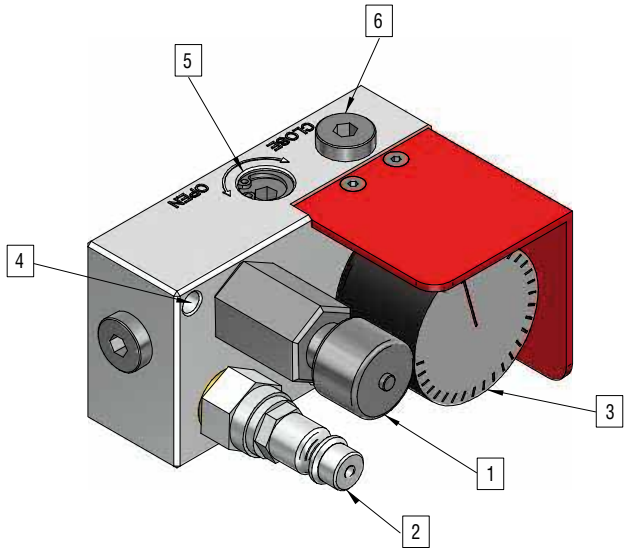
2- Innesto rapido di caricamento Cejn
Quick coupling for charging Cejn
Steckkegel Cejn
Accouplement rapide mâle Cejn
Acoplamiento rápido para carga Cejn
União rápida para carregamento Cejn

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- 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 fixaçío de Ø 5,5 (2x)

5- Valvola di intercettazione
Shut off valve
Sperrventil
Valve d'arrêt
Válvula de interceptación
Válvula de fecho

6- Fori di collegamento 1/8"G (5x)
1/8"G connecting ports (5x)
Anschlussöffnung 1/8"G (5x)
Trous de raccordement 1/8"G (5x)
Agujeros de conexión 1/8"G (5x)
Furo de conexão 1/8G (5x)



*All dimensions in **mm**/inch*

CONTROL PANEL AUMCP

I Unità addizionali 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 hosed 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.

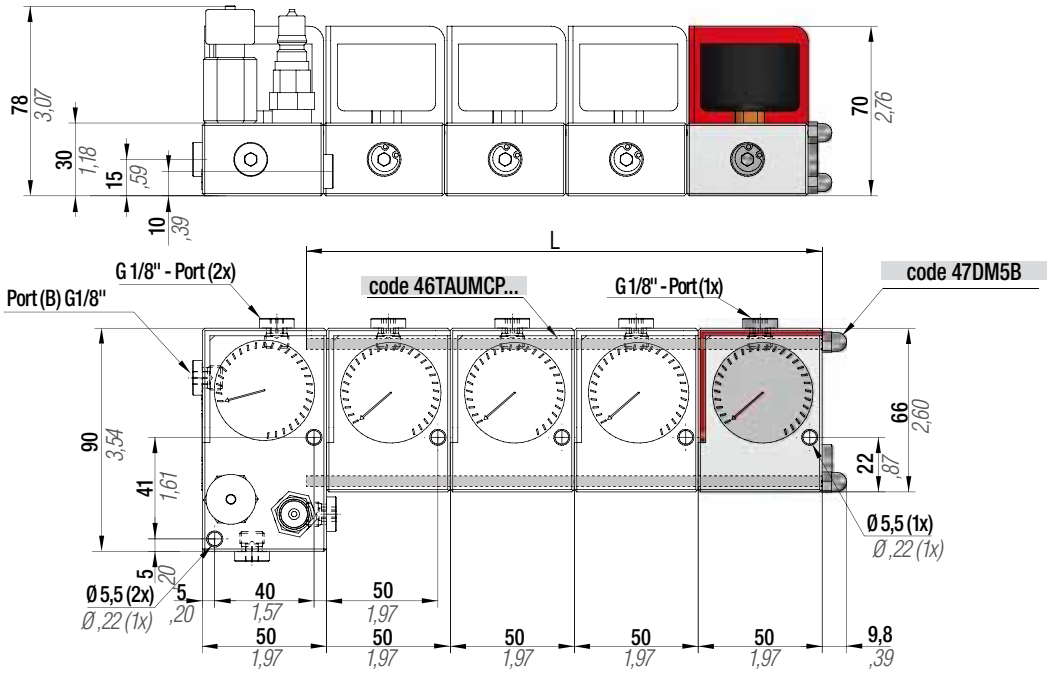
D Zusätzliche Einheiten für die Ministeuerung MCPA. Ideal zur Verwaltung von Anlagen oder einzelnen Zylindern, die beim selben Formprozess verschiedene Druckwerte aufweisen. Jede Einheit ist mit einem Manometer, einem Sperrventil und einem Ausgang ausgestattet. Maximal mögliche Kombination: 1 MCPA + 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.

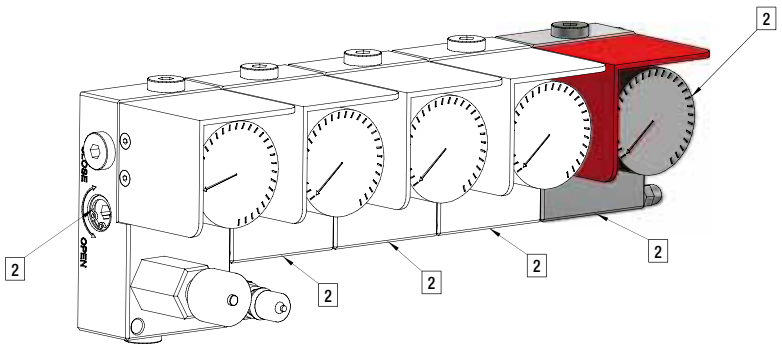
P Unidade adicional para mini-painel MCPA. Ideais para gerir instalações ou cilindros individuais com pressões diferentes na mesma ferramenta. Cada unidade inclui um manómetro, uma válvula de intercepção e 1 saída. Combinação máxima prevista 1 MCPA + 4 AUMCP.

code 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- Valvola di intercettazione
Shut off valve
Sperrventil
Valve d'arrêt
Válvula de interceptación
Válvula de fecho



Ordering	Code	Q.ty	L	
(1) MCPA + (1) AUMPC	46TAUMCP01	2	65	*2,56*
(1) MCPA + (2) AUMPC	46TAUMCP02	2	115	*4,53*
(1) MCPA + (3) AUMPC	46TAUMCP03	2	165	*6,5*
(1) MCPA + (4) AUMPC	46TAUMCP04	2	215	*8,46*

*All dimensions in **mm**/inch*

Ordering example: **(1) MCPA + (4) AUMPC**

CONTROL PANEL CPVC
Easy Manifold compatible

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).

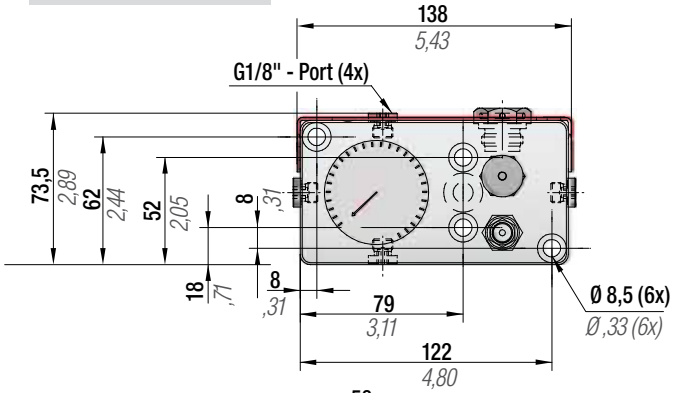
D Standard-Schalttafel zur Ladung, Regulierung, Entladung und Kontrolle des Drucks im angeschlossenen System. Bestehend aus einer Basis mit Manometer, Lade- und Entladeventil, 3 Ausgängen sowie Schutz aus Stahl. Kann mit einer Berstscheibe ergänzt werden (Zubehör).

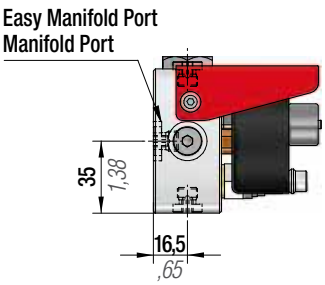
F Panneau standard pour le chargement, le réglage, le déchargement et le contrôle de la pression dans le système relié. Il est formé par une embase équipée de manomètre, vanne de chargement et déchargement, 3 sorties, protection en acier. Il peut être équipé d'un disque de rupture (option).

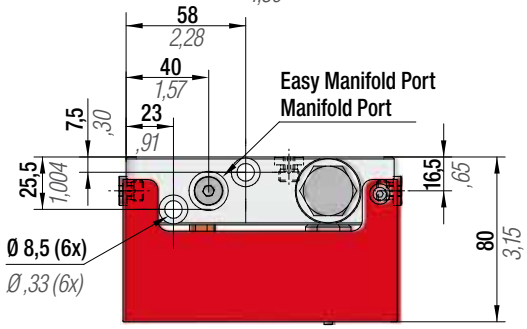
E Panel standard para la carga, regulación, descarga y control de la presión en sistemas de cilindros conectados. Consiste en una base con un manómetro Válvula de carga y descarga, 3 salidas, protección en acero. Puede equiparse con disco de ruptura (opcional).

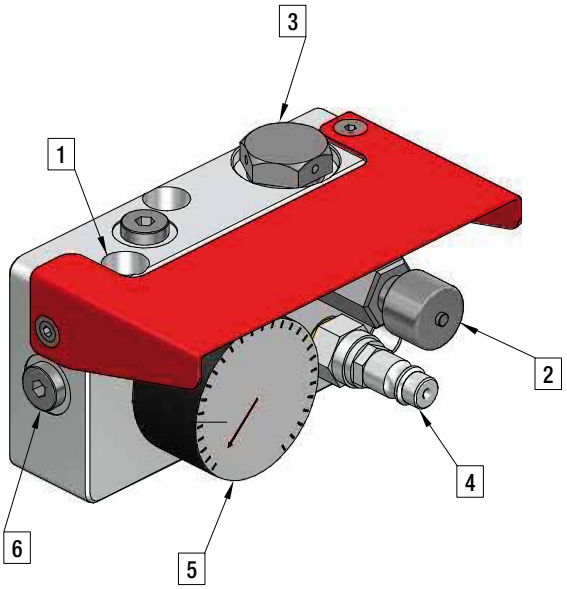
P Painel standard para carga, regulação, descarga e controlo da pressão no sistema ligado. É composto por uma base com manómetro. Válvula de carga e de descarga, 3 saídas, protecção em aço. Pode ser equipado com disco de rotura (opcional).

code 39CPVC

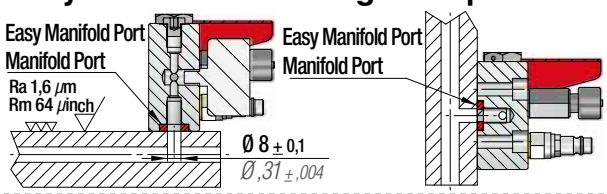








Easy Manifold mounting example



1- Fori di fissaggio ø 8,5 (6x)
ø 8,5 (6x) fixing holes
ø 8,5 (6x) Befestigungslöcher
Trous de fixation ø 8,5 (6 x)
ø 8,5 (6x) orificio de sujeción
Orifícios de fixação de ø 8,5 (6x)

2- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga

3- Code 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- Innesto rapido per caricamento Cejn
Quick coupling for charging Cejn
Steckkegel 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 1/8"G (4x)
1/8"G connecting ports (4x)
Anschlussöffnung 1/8"G (4x)
Trous de raccordement 1/8"G (4x)
Agujeros de conexión 1/8"G (4x)
Furo de conexão 1/8"G (4x)

*All dimensions in **mm**/inch*

CONTROL PANEL CP02A
(FORD and GM North America die Standard)

I Pannello di controllo secondo standard Ford e GM Nord America. Base in alluminio provvista di manometro, valvola di caricamento e scaricamento, adattatore 9/16-18 UNF ORFS, tappo di sicurezza e protezione in acciaio. 3 uscite G1/8" per gestione sistemi collegati.

GB Control panel according to Ford and GM North America standards. Made up of aluminium base. Gauge, charging and discharging valve, 9/16-18 UNF ORFS adapter and steel protection. 3 ports G1/8".

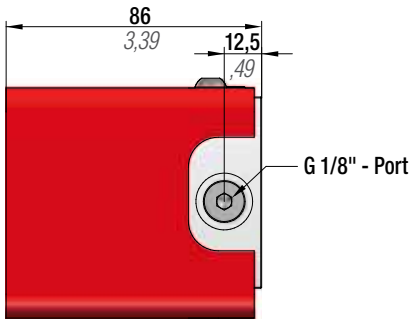
D Kontrollarmatur gem. Ford und GM North America Normen. Aufgebaut auf Aluminiumsockel. Manometer, Auffüll- und Ablassventil, 9/16-18 UNF ORFS Adapter und Stahlabdeckung. 3 G1/8" Anschlüsse.

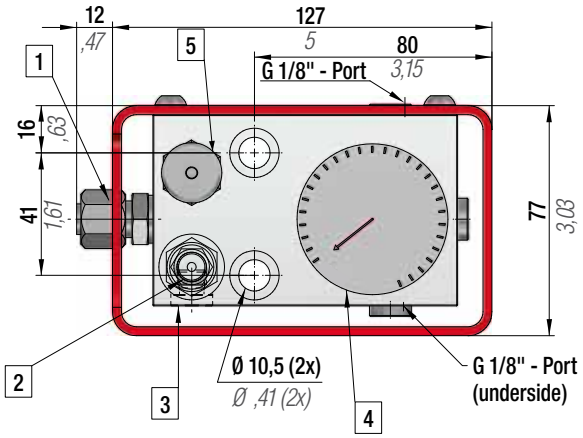
F Panneau de contrôle selon les standards Ford et GM, Amérique du Nord, embase en aluminium. Manomètre, valve de chargement et déchargement, adaptateur 9/16-18 UNF ORFS et protection acier, 3 ports G1/8".

E Panel de control según standard Ford y GM Norte America. Base de aluminio con manómetro, válvula de carga y descarga, adaptador 9/16-18 UNF ORFS, tapón de seguridad y protección en acero. 3 salidas G1/8'' para sistemas de cilindros conectados.

P Painel de controlo de acordo com os Standards Ford e GM América do Norte. Fabricado a partir de uma base de alumínio, manómetro, válvula de carga e descarga, adaptador ORFS 9/16-18 UNF e protecção em aço. 3 saidas G1/8'' para sistemas de gestão relacionados.

code 39CP02A





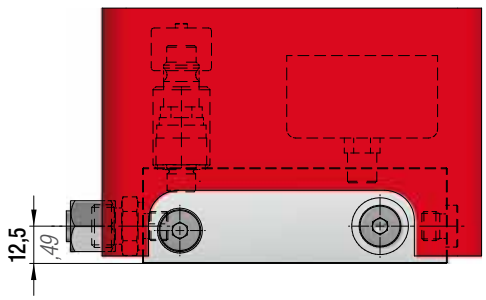
1- Adattatore tenuta frontale 9/16 - 18 UNF
O-Ring Face Seal Adapter 9/16 - 18 UNF
O-ring-Dichtung Adapter 9/16 - 18 UNF
Joint torique adaptateur 9/16-18 UNF
O-ring face seal adapter9/16 - 18 UNF
Adaptador de vedação frontal 9/16 – 18 UNF

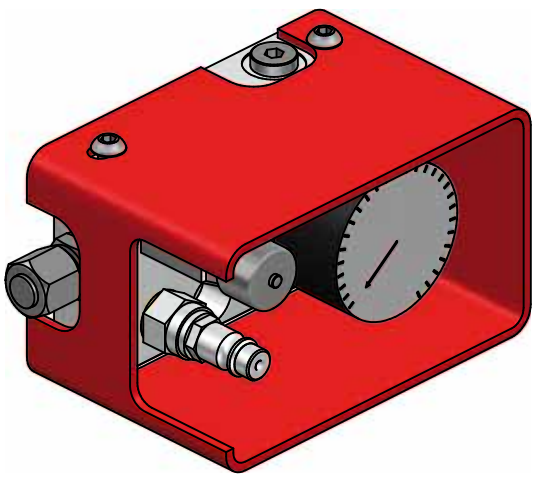
2- Innesto rapido di caricamento Cejn
Quick coupling for charging Cejn
Steckkegel Cejn
Accouplement rapide mãle Cejn
Acoplamiento rápido para carga Cejn
União rápida para carregamento Cejn

3- **Tappo di rottura sovrappressione**
Over pressure rupture plug
Überdruck Bruch Stecker)
Bouchon de rupture de surpression
Enchufe de la ruptura de sobrepresión
Plugue ruptura sobrepressão

4- 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

5- Valvola di scarico
Discharging valve
Auslaßventil
Valve de décharg ment
Válvula de desahogo
Válvula de descarga





*All dimensions in **mm**/inch*

CONTROL PANEL CP03A

I Pannello di controllo con base in alluminio provvisto di manometro con valvola di intercettazione (shut-off valve), valvola di caricamento e scaricamento, tappo di sicurezza, protezione in acciaio, 9 uscite da 1/4" gas per gestione sistemi collegati. La valvola di intercettazione protegge il manometro dalla pressione pulsante durante il normale funzionamento. Per controllare e regolare la pressione dell'impianto bisogna aprire la valvola di intercettazione del manometro.

GB Control panel with aluminium base, gauge with shut-off valve, charging and discharging valve, safety plug, steel protection. 9 G1/4" ports for hose systems managing. With shut-off valve closed the gauge is protected from pulsating pressure during operation. For checking and adjusting the pressure the interception valve on the gauge must be opened.

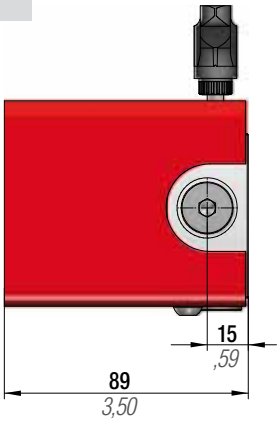
D Kontrollarmatur mit Aluminiumsockel, Manometer mit Sperrventil, Auffüll-und Ablassventil, Berstsicherung und Stahlabdeckung. 9 G1/4" Anschlüsse zur Steuerung der Verbundsysteme. Das Schließen des Manometers mit dem Sperrventil schützt vor Druckschwankungen während des Arbeitsgangs. Zum Prüfen und Einstellen des Drucks muss das Sperrventil am Manometer geöffnet sein.

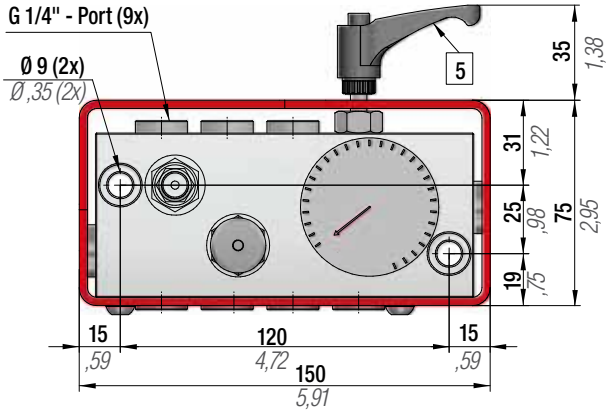
F Panneau de contrôle avec embase aluminium, équipé de manomètre à valve d'arrêt, valve de chargement et déchargement, interrupteur de sécurité et protection acier. Ports 9 G1/4 pour gestion de la connectique. Lorsque la valve d'arrêt est fermée, le manomètre est protégé des vibrations dues à la pression durant les opérations. Pour contrôler et ajuster la pression, il convient d'ouvrir la valve d'interception au niveau du manomètre.

E Panel de control con base de aluminio, manómetro con válvula de interceptación (shut-off valve), válvula de carga y descarga, tapón de seguridad, protección en acero. 9 salidas G1/4" para gestión de sistemas interconectados. Con válvula de interceptación cerrada el manómetro està protegido desde el pico de presión durante un funcionamiento normal. Para controlar y regular la presión abrir la válvula de interceptación del manómetro.

P Painel de Controlo com base em alumínio, manómetro com válvula de obturação, dispositivo de segurança e protecção em aço. 9 furos* G1/4" para uso de sistemas de mangueiras. Com a válvula de obturação fechada fica protegido das pressões existentes durante a operação. Para verificar e ajustar a pressão, a válvula de intercepção no manómetro tem que estar aberta.

code 39CP03A





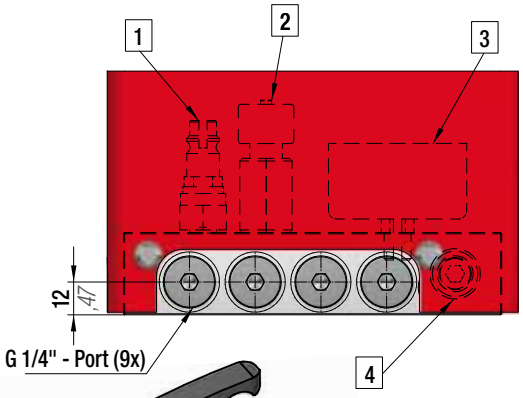
1- Innesto rapido di caricamento Cejn
Quick coupling for charging Cejn
Steckkegel Cejn
Accouplement rapide mãle Cejn
Acoplamiento rápido para carga Cejn
União rápida para carregamento Cejn

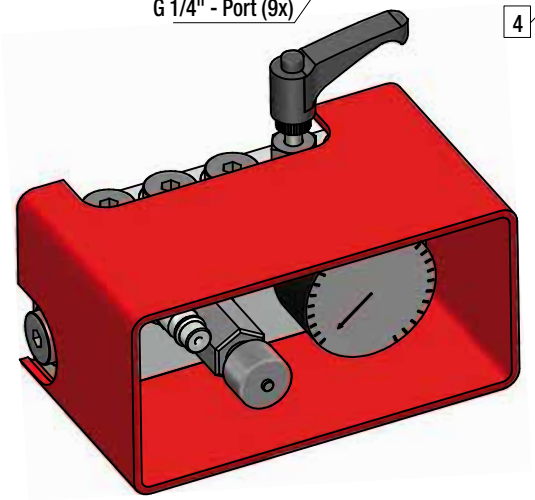
2- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga

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- Tappo di rottura sovrappressione
Over pressure rupture plug
Überdruck Bruch Stecker)
Bouchon de rupture de surpression
Enchufe de la ruptura de sobrepresión
Plugue ruptura sobrepressão

5- Valvola di intercetazione
Shut off valve
Sperrventil
Valve d'arrêt
Válvula de interceptación
Válvula de fecho





*All dimensions in **mm**/inch*

CONTROL PANEL CP06A

I Pannello di controllo con base in alluminio provvisto di sensore di pressione con display digitale , valvola di caricamento e scaricamento, tappo di sicurezza, protezione in acciaio, 2 uscite da 1/8'' gas per gestione sistemi collegati. Collegando direttamente il sensore di pressione al controllo pressa è possibile impostare un range di lavoro desiderato al di fuori del quale il dispositivo invierà un segnale di allarme.

GB Control panel with aluminium base, equipped with pressure sensor with digital display, charging and discharging valve, safety plug, steel protection and two 1/8"gas outlets for hose system managing. By connecting directly the pressure sensor with the Press control unit, it is possible to set a desired working range, outside this value, the controll unit will send an alarm signal.

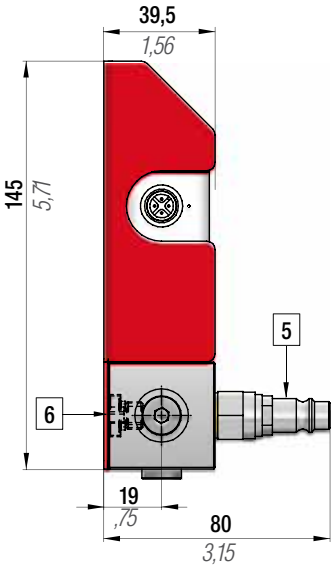
D Kontrollarmatur mit Aluminiumsockel, ausgestattet mit Drucksensor aus digitaler Display, auffüll- und Ablassventil, Berstsicherung, Stahlabdeckung und zwei 1/8" Anschlüsse zur Steuerung der Verbundsysteme. Bei der direkten Verbindung des Drucksensors mit Pressesteuerung es ist möglich eine erwünschte Arbeitsreichweite anzulegen, außerhalb diese Wert wird der Steuerung ein Alarm Signal zu senden.

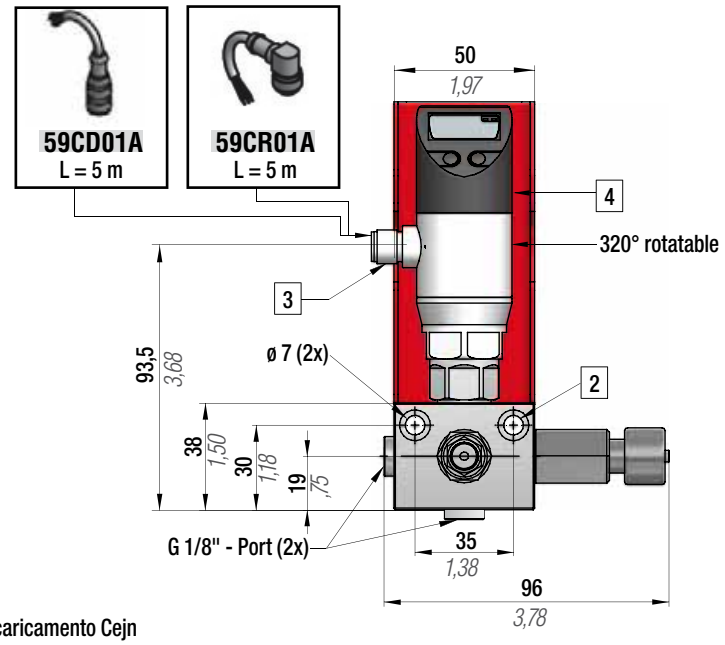
F Panneau de contrôle avec embase en aluminium, équipé de senseur de pression à écran numérique, valve de chargement-déchargement, interrupteur de sécurité, protection en acier et deux sorties 1/8 gaz pour la gestion des systèmes connectés. En reliant directement le senseur de pression au système de gestion de la presse on peut établir un éventail désiré des valeurs de travail, au dehors de ces valeurs, le dispositif émettra un signal d'alarme.

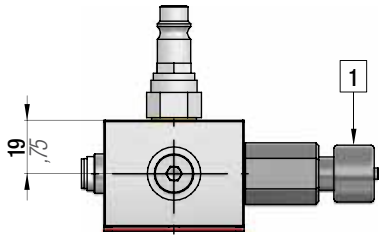
E Panel de control con base de aluminio, provisto de sensor de presión con display digital, válvula de carga y descarga, tapón de seguridad, protección en acero, 2 salidas de 1/8" gas para gestión de sistemas conectados. Conectando directamente el sensor de presión al control de la prensa es posible determinar unos rangos de trabajo, fuera de los cuales el dispositivo envía una señal de alarma.

P Painel de controlo com base de aluminio, equipado com sensor de pressão digital, válvula de carga e descarga, ficha de segurança, sistema de protecção de aço e duas tomadas de 1/8"gas para ligação a mangeuiras. ao ligar directamente o sensor de pressão com a unidade de controlo, é possivél definir o funcionamento desejado, fora destes valores, a unidade de controlo envia um sinal de alarme.

code 39CP06A + 59CD01A or 59CR01A







1- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga

2- Fori di fissaggio ø 7 (2x)
ø 7 (2x) fixing holes
ø 7 (2x) Befestigungslöcher
Trous de fixation ø 7 (2 x)
ø 7 (2x) orificio de sujeción
Orifícios de fixação de ø 7 (2x)

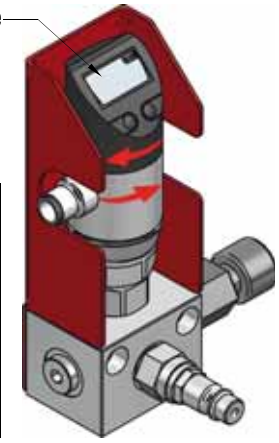
3- Connettore elettrico M12 4-pin 320° ruotabile
Electrical M12 4-pin connector 320° rotatable
Elektrische M12 4-pin 320° drehbar
Connecteur électrique M12 4-pin 320° rotatif
Eléctrica Conector M12 4-pin 320° giratorio
Conector elétrico M12 4-pin 320° rotativo

4- Sensore di pressione 0 - 600 bar display digitale 320° ruotabile
Pressure sensor 0 - 600 bar digital display 320° rotatable
Manometer 0 - 600 bar digitale Anzeige 320° drehbar
Manomètre 0 - 600 bar affichage numérique 320° rotatif
Manómetro 0 - 600 bar display digital se puede girar 320°
Manómetro 0 - 600 bar display digital bar pode ser girado 320°

5- Innesto rapido di caricamento Cejn
Quick coupling for charging Cejn
Steckkegel Cejn
Accouplement rapide mãle Cejn
Acoplamiento rápido para carga Cejn
União rápida para carregamento Cejn

6- Tappo di rottura sovrappressione
Over pressure rupture plug
Überdruck Bruch Stecker)
Bouchon de rupture de surpression
Enchufe de la ruptura de sobrepresión
Plugue ruptura sobrepressão

Digital display 320° rotatable



Technical data	
Nominal pressure	0 - 600 bar
Operating voltage Uo	18...36 V DC
Output current max.	500 mA
No-load supply current Io max	≤ 50 mA
Switching frequency f	200 Hz
Temperature range	- 25°C... + 85°C
Degree of protection as per IEC 60529	IP 67 when connected

*All dimensions in **mm**/inch*

CONTROL PANEL CP07A

I Pannello di controllo con base in alluminio provvisto di manometro, valvola di caricamento e scaricamento, tappo di sicurezza, protezione in acciaio, 3 uscite da 1/4" gas e un uscita da 1/8'' gas per gestione sistemi collegati.

GB Control panel with aluminium base, equipped with gauge, charging and discharging valve, safety plug, steel protection and three 1/4“ and one 1/8“ gas outlets for hose system managing.

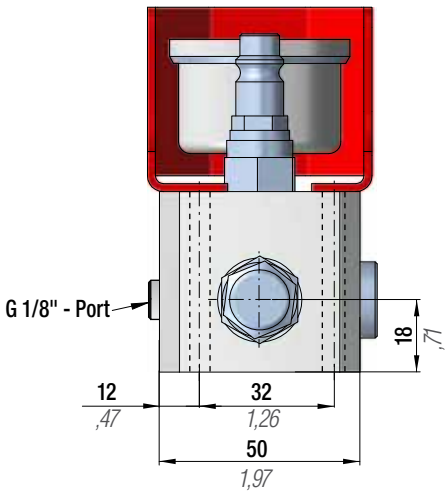
D Kontrollarmatur mit Aluminiumsockel, Manometer, auffüll- und Ablassventil, Berstsicherung, Stahlabdeckung, drei ¼“ und eine 1/8“ Gas Anschlüsse zur Steuerung der Verbundsysteme.

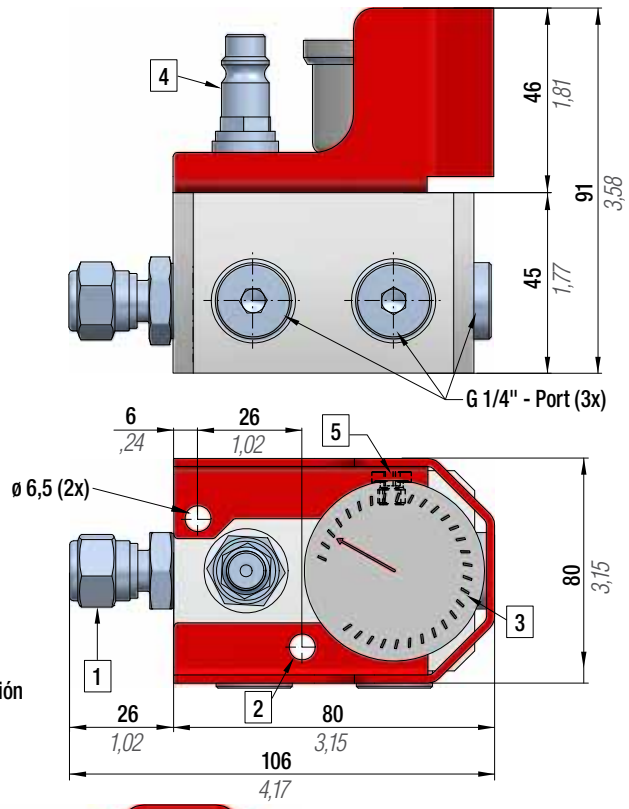
F Panneau de contrôle avec embase en aluminium pourvu de manomètre, valve de chargement-déchargement, interrupteur de sécurité, protection en acier et trois sorties 1/4 gaz et une sortie 1/8 gaz pour la gestion des systèmes connectés.

E Panel de control con base de aluminio provisto de manómetro, válvula de carga y descarga, tapón de seguridad, protección en acero, 3 salidas de 1/4 “ gas y 1 salida de 1/8” gas para gestión de sistemas conectados.

P Painel de controlo com base de aluminio, equipado com manómetro, válvula de carga e descarga, sistema de protecção de aço, três tomadas de 1/4” e uma 1/8”gas para ligação a mangeuiras.

code 39CP07A





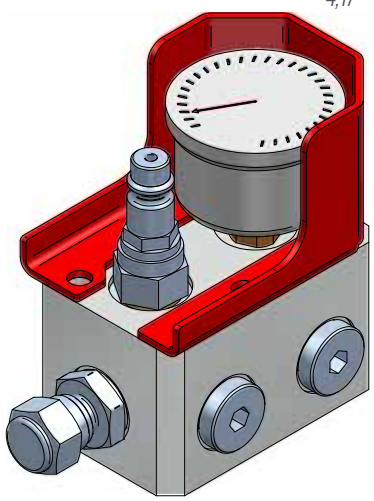
1- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga

2- Fori di fissaggio ø 6,5 (2x)
ø 6,5 (2x) fixing holes
ø 6,5 (2x) Befestigungslöcher
Trous de fixation ø 6,5 (2 x)
ø 6,5 (2x) orificio de sujeción
Orifícios de fixação de ø 6,5 (2x)

3- Manometro 0 - 600 bar
Pressure gauge 0 - 600 bar
Manometer 0 - 600 bar
Manomètre 0 - 600 bar
Manómetro 0 - 600 bar
Manómetro 0 - 600 bar

4- Innesto rapido di caricamento Cejn
Quick coupling for charging Cejn
Steckkegel Cejn
Accouplement rapide mãle Cejn
Acoplamiento rápido para carga Cejn
União rápida para carregamento Cejn

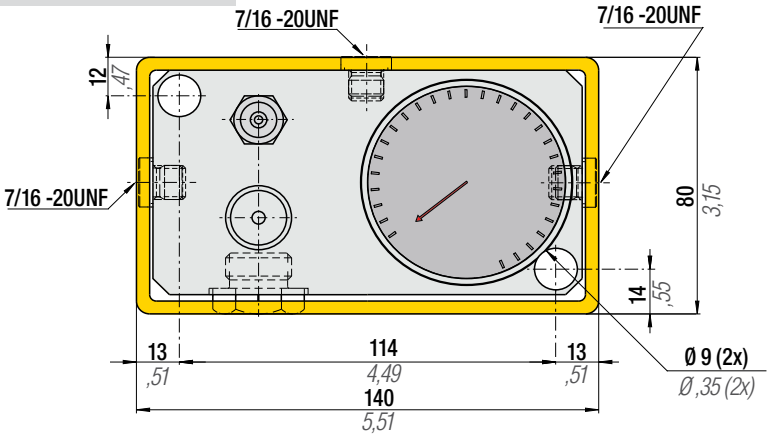
5- Tappo di rottura sovrappressione
Over pressure rupture plug
Überdruck Bruch Stecker)
Bouchon de rupture de surpression
Enchufe de la ruptura de sobrepresión
Plugue ruptura sobrepressão

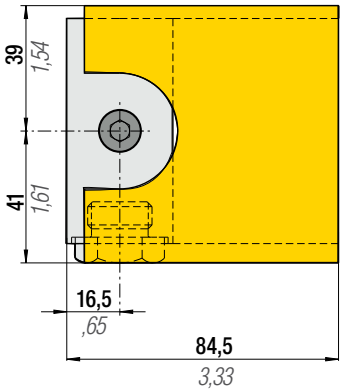


*All dimensions in **mm**/inch*

CONTROL PANEL CPVD
(Fiat standard)

code 39CPVD





code TS-460 (Optional) - 460 bar

1- 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)

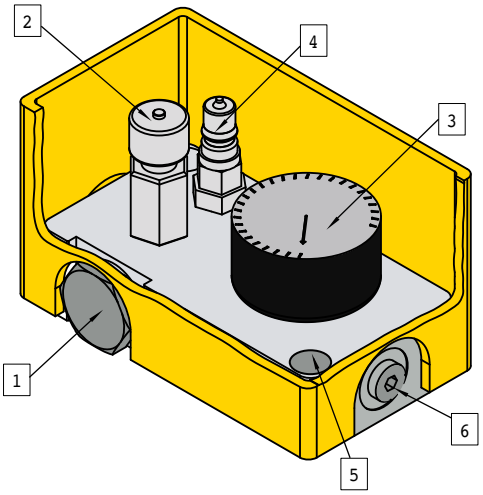
2- Valvola di scarico
Discharging valve
Auslaßventil
Valve de déchargement
Válvula de desahogo
Válvula de descarga

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- Innesto 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

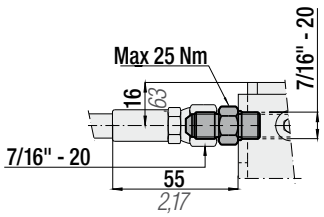
5- Fori di fissaggio ø 9 (2x)
ø 9 (2x) fixing holes
ø 9 (2x) Befestigungslöcher
Trous de fixation ø 5,5 (2 x)
ø 9 (2x) orificio de sujeción
Orifícios de fixação de ø 9 (2x)

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)

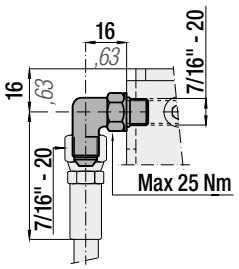


CONTROL PANEL CPVD (FIAT standard) - Hose connections

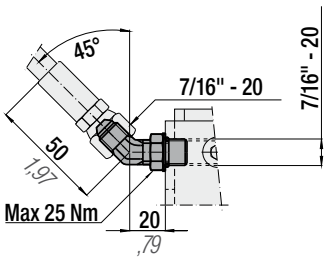
code RPT-D



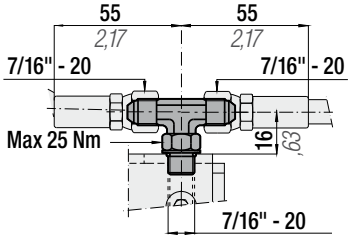
code RPT-R



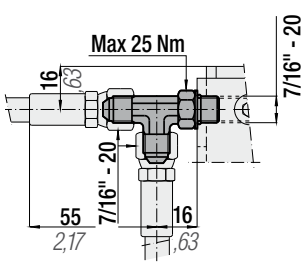
code RPT-M



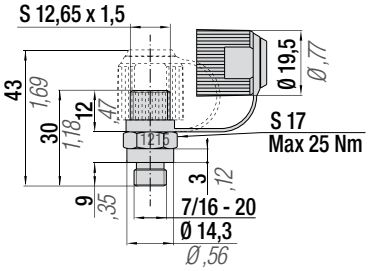
code RPT-T



code RPT-L



code RMPT



*All dimensions in **mm**/inch*

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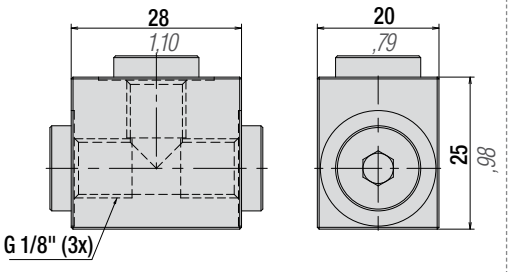
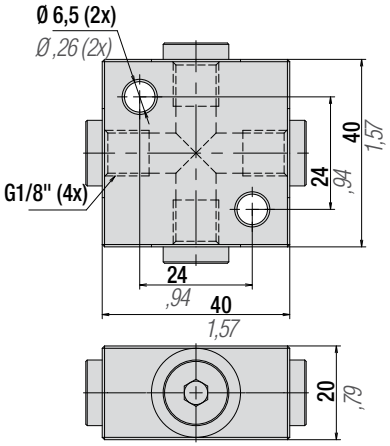
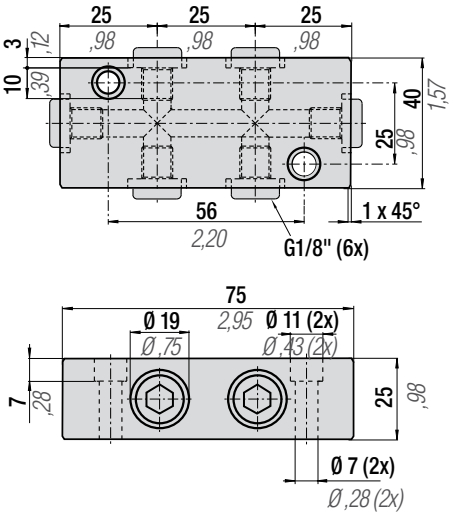
code 39BD0301A



code 39BD0401A



code 39BD06A



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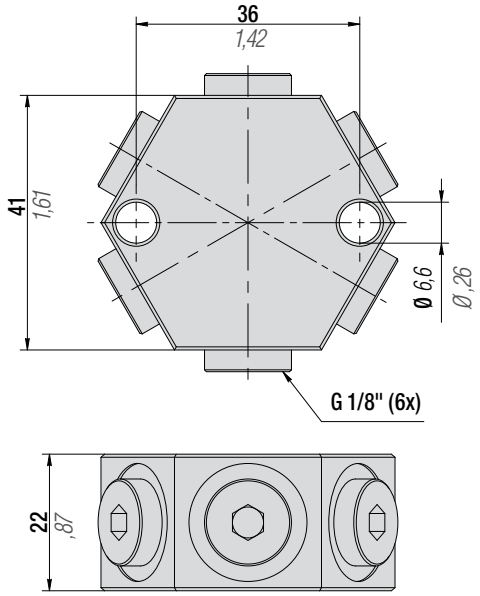

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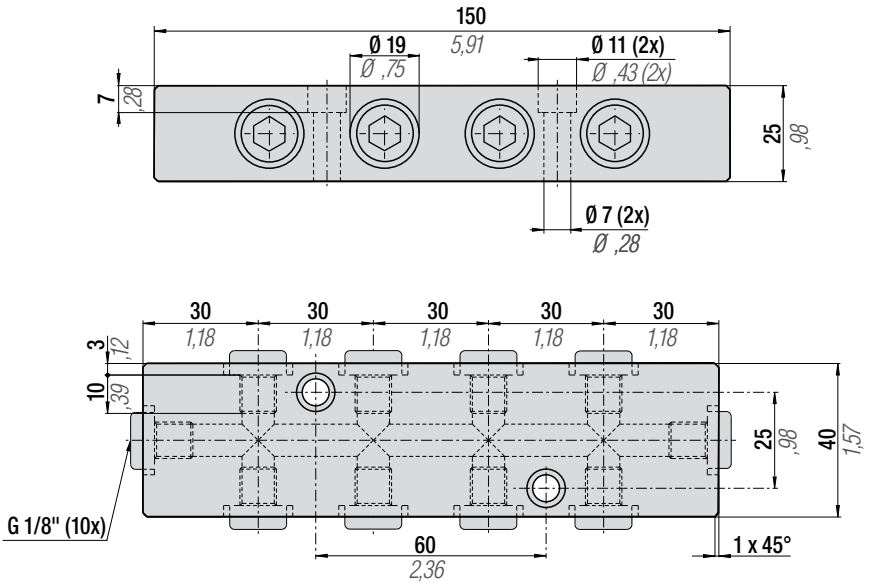
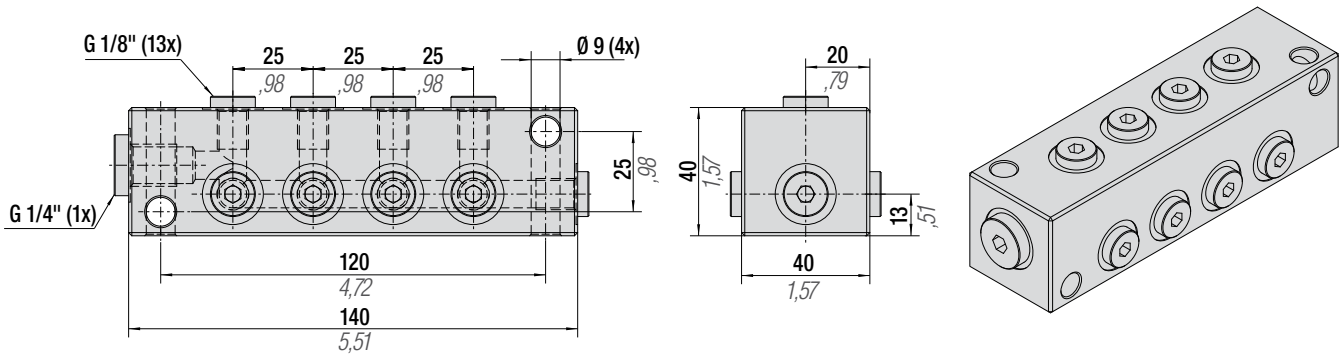


code 39BD1401A



*All dimensions in **mm**/inch*

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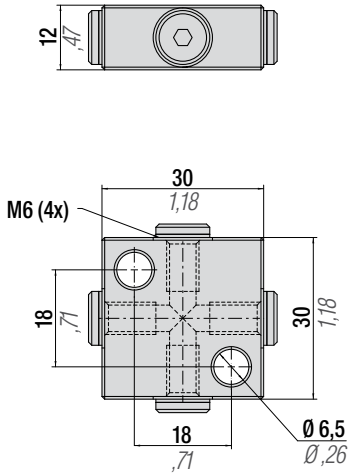
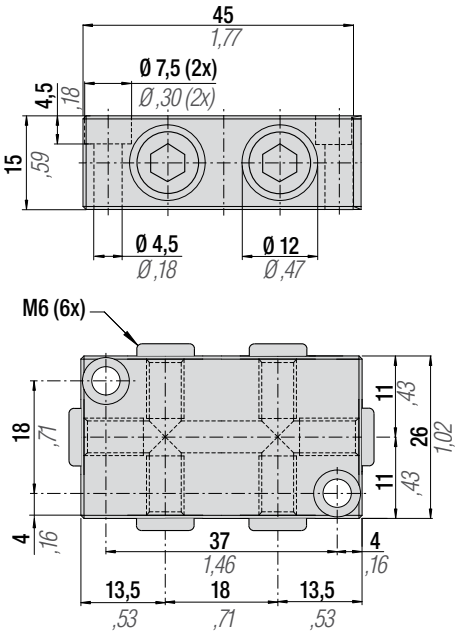
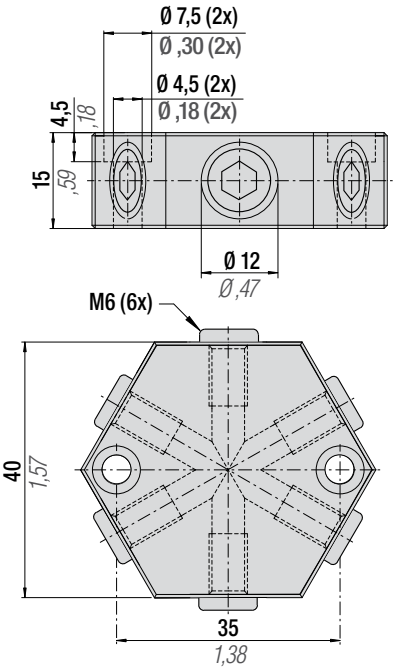


code BD06/1



code DB06/2



*All dimensions in **mm**/inch*

COMPENSATION TANKS

I Nel modo di funzionamento non autonomo i cilindri possono essere collegati ad un polmone di compensazione esterno. Lo scopo principale é 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 é facilmente calcolabile applicando la seguente formula:

Vp = n • {[S • x • R / (R-1)] - V0}

Vp = 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 [cm^3]

Esempio:
Forza richiesta ~6000 daN ed R=1,1 (10%). Si scelgono n. 4 SC1500-50 (oppure n. 2 SC3000-50) Il volume richiesto é di circa 1300 cm^3 e quindi la scelta sara' per il polmone tipo PC-3. Un eventuale maggior volume del polmone non é un problema. Inoltre possono essere collegati tra loro piu' polmoni di compensazione per ottenere volumi piu' 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:

Vp = n • {[S • x • R / (R-1)] - V0}

Vp = 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 [cm^3]

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 cm^3. 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 notwendingen Ausgleichvolumens kann mit folgender Formel leicht errechnet werden:

Vp = n • {[S • x • R / (R-1)] - V0}

Vp = Speichervolumen [cm3]
n = Anzahl der Zylinder im System
S = Stangenquerschnitt (Kolben für Serie KE) jedes einzelnen Zylinders [cm2]
x = tatsächlicher Arbeitshub [cm]
R = Verhältinis zwischen Anfangsund Enddruck des Systems
V_0 = Anfangsvolumen jedes einzelnen Zylinders [cm^3]

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 cm^3, 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:

Vp = n • {[S • x • R / (R-1)] - V0}

Vp = 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 [cm^3]

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 cm^3 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.

*All dimensions in **mm**/inch*

COMPENSATION TANKS

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:

Vp = n • {[S • x • R / (R-1)] - V0}

Vp = 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.
V0 = 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 cm^3. 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

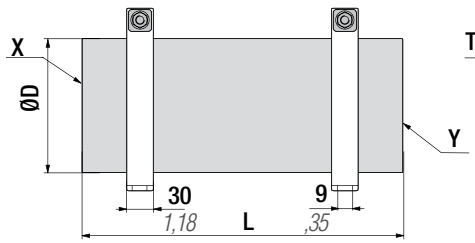
P Os cilindros de gás que operam em modo não autónomo podem ser ligados a um depósito de compensação. O principal objectivo é limitar o aumento de pressão dentro do sistema a um valor inferior ao que se obteria normalmente com taxas de compressão normalizadas. O volume do depósito de compensação pode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

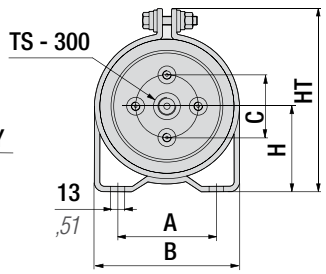
Vp = n • {[S • x • R / (R-1)] - V0}

Vp = volume de compensação [cm^3]
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.
V0 = Volume inicial de cada cilindro em [cm3]

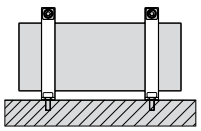
Exemplo:
Força requerida ~6000 daN e R = 1,1 (10%).
Nº de cilindros = 4 Tipo SC1500-50 (ou 2 Tipo SC3000-50). O volume de compensação requerido é de aproximadamente 1300 cm^3. Logo, o depósito de compensação requerido é do tipo PC-3. O volume suplementar no depósito não é geralmente um problema e, para obter um volume mais preciso, podem ser ligados ao sistema depósitos suplementares

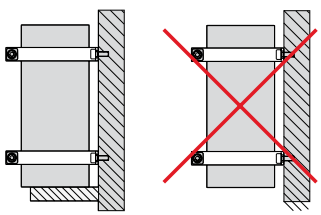
Codice / Code / Bestellnr. / Code / Codigo / Còdigo	Ø D mm	Ø D inch	L mm	L inch	A mm	A inch	H mm	H inch	HT mm	HT inch	B mm	B inch	Faccia X / X Side / Seite X / Face X / Cara X / Face X	Faccia Y / Y Side / Seite Y / Face Y / Cara Y / Face Y	C mm	C inch	Raccordi / Fittings / Anschlüsse / Raccords / Racores / Ligações	Volume cm³	Volume in³	CE Cat.
39PC001A	100	3,94	290	11,42	90	3,54	58	2,28	140	5,51	125	4,92	G1/8" (3x)	G1/8" (4x)	40	1,57		1000	61,02	-
39PC003A	150	5,91	310	12,20	136	5,35	83	3,27	190	7,48	172	6,77	G1/8" (4x)	G1/8" (4x)	70	2,76	RTC	3000	183,07	II
39PC005A	150	5,91	475	18,70	136	5,35	83	3,27	190	7,48	172	6,77	G1/8" (4x)	G1/8" (4x)	70	2,76	RMTC	5000	305,12	II
39PC008A	200	7,87	415	16,34	212	8,35	108	4,25	242	9,53	252	9,92	G1/8" (6x)	G1/8" (6x)	97	3,82	RSMPTD	8000	488,18	II
39PC010A	200	7,87	505	19,88	212	8,35	108	4,25	242	9,53	252	9,92	G1/8" (6x)	G1/8" (6x)	97	3,82		9960	607,79	II





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





code TS - 300

Tappo 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

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

*All dimensions in **mm**/inch*

TANKS FOR AIR SYSTEMS

I Le tabelle sotto riportate devono essere utilizzate, in fase di progettazione, per determinare il numero, il volume e le dimensioni dei serbatoi aria a bordo stampi. Tabella volumi (litri): volume d'aria necessario per cilindro pneumatico in relazione al diametro e alla corsa.

GB The tables below must be used, during design, to define the number, volume and sizes of the air tanks on the dies. Volume table (litres): volume of air needed for the pneumatic cylinder in relation to the diameter and stroke.

D Die untenstehenden Tabellen werden in der Planungsphase für die Bestimmung der Anzahl, des Volumens und der Abmessung der Luftbehälteran Bord der Formen benutzt. Tabelle der Volumen (Liter): Das für Pneumatikzylinder in Bezug auf Durchmesser und Hub notwendige Luftvolumen

F Les tableaux reportés ci-dessous doivent être utilisés, lors de la conception, pour déterminer le nombre, le volume et les dimensions des réservoirs d'air sur le bord des moules. Tableau des volumes (litres) : volume d'air nécessaire par cylindre pneumatique par rapport au diamètre et à la course.

E Las tablas propuestas abajo deben ser utilizadas, en la fase de diseño, para determinar el número, el volumen y las dimensiones de los tanques de aire al borde de moldes. Tabla de volúmenes (litros): volumen de aire necesario para cilindro pneumático en relación al diámetro y a la carrera.

P As tabelas abaixo devem ser usadas na fase de design de forma a detarminar o número, o volume e o tamanho do reservatório de ar da ferramenta.

Cilindro pneumatico / Pneumatic cylinder / Pneumatikzylinder / Vérin pneumatique / Cilindro neumático / Cilindro pneumático		Corse standard - Standard Strokes - Standardhübe - Course standard - Carreras estándar - Cursos standard															
		mm	inch														
		25	0,98	40	1,57	50	1,97	60	2,36	75	2,95	100	3,94	125	4,92	150	5,91	175	6,89
mm	inch	Volume - Volume - Volumens - Volume - Volumen - Volume dm³ in³															
Ø 32	Ø 1,26	0,020	1,220	0,032	1,953	0,040	2,441	0,048	2,929	0,060	3,661	0,080	4,882	0,100	6,102	0,120	7,323	0,140	8,543
Ø 40	Ø 1,57	0,031	1,892	0,050	3,051	0,063	3,844	0,075	4,577	0,094	5,736	0,126	7,689	0,157	9,581	0,189	11,533	0,221	13,486
Ø 50	Ø 1,97	0,049	2,990	0,078	4,760	0,098	5,980	0,118	7,201	0,147	8,970	0,196	11,961	0,245	14,951	0,294	17,941	0,343	20,931
Ø 63	Ø 2,48	0,078	4,760	0,125	7,628	0,158	9,642	0,187	11,411	0,234	14,280	0,312	19,039	0,390	23,799	0,488	29,780	0,546	33,319
Ø 80	Ø 3,15	0,126	7,689	0,201	12,266	0,251	15,317	0,302	18,429	0,377	23,006	0,503	30,700	0,528	32,221	0,754	46,012	0,880	53,701
Ø 100	Ø 3,94	0,196	11,961	0,314	19,161	0,393	23,982	0,471	28,742	0,589	35,943	0,785	47,904	0,982	59,925	1,177	71,825	1,374	83,847
Ø 125	Ø 4,92	0,308	18,795	0,491	29,963	0,614	37,469	0,738	45,036	0,920	56,142	1,227	74,876	1,534	93,610	1,841	112,34	2,147	131,02
Ø 160	Ø 6,30	0,502	30,634	0,804	49,063	1,005	61,329	1,208	73,717	1,508	92,024	2,010	122,66	2,513	153,35	3,016	184,05	3,519	214,74
Ø 200	Ø 7,87	0,785	47,904	1,257	76,707	1,571	95,868	1,885	115,03	2,356	143,77	3,142	191,74	3,928	239,70	4,712	287,54	5,498	335,51

I Per cilindri pneumatici funzionanti a doppio effetto (d.e.) determinare il volume attraverso la tabella.
Per cilindri pneumatici funzionanti a semplice effetto (s.e.) determinare sempre il volume tramite la tabella e moltiplicare il risultato ottenuto per 3. Sommare tutti i volumi dei vari cilindri pneumatici a bordo stampo per ricavare la capacità totale (dm^3) del serbatoio. Scegliere il serbatoio in relazione alla capacità totale ricavata (dm^3) ed allo spazio disponibile sullo stampo.

GB For double acting pneumatic cylinders (d.e.) use the table to define the volume.
For single-acting pneumatic cylinders (s.e.) still use the table to define the volume and multiply the result obtained by 3.
Add all the volumes of the various pneumatic cylinders on the die to obtain the total capacity (dm^3) of the tank.
Choose the tank in relation to the total capacity obtained (dm^3) and to the space available on the die.

D Für Pneumatikzylinder mit Doppeleffekt (d.e.) wird das Volumen auf Grund der Tabelle bestimmt.
Für Pneumatikzylinder mit Einzeleffekt (s.e.) wird das Volumen zwar auf Grund der Tabelle bestimmt, das erhaltene Ergebnis aber mit 3 multipliziert. Die Summe der Volumen aller an Bord der Form vorhandenen, pneumatischen Zylinder ergibt das gesamte Fassungsvermögen des Tanks (dm^3). Den Tankbehälter auf Grund des errechneten Fassungsvermögen (dm^3) und dem auf der Form vorhandenen Raum auswählen.

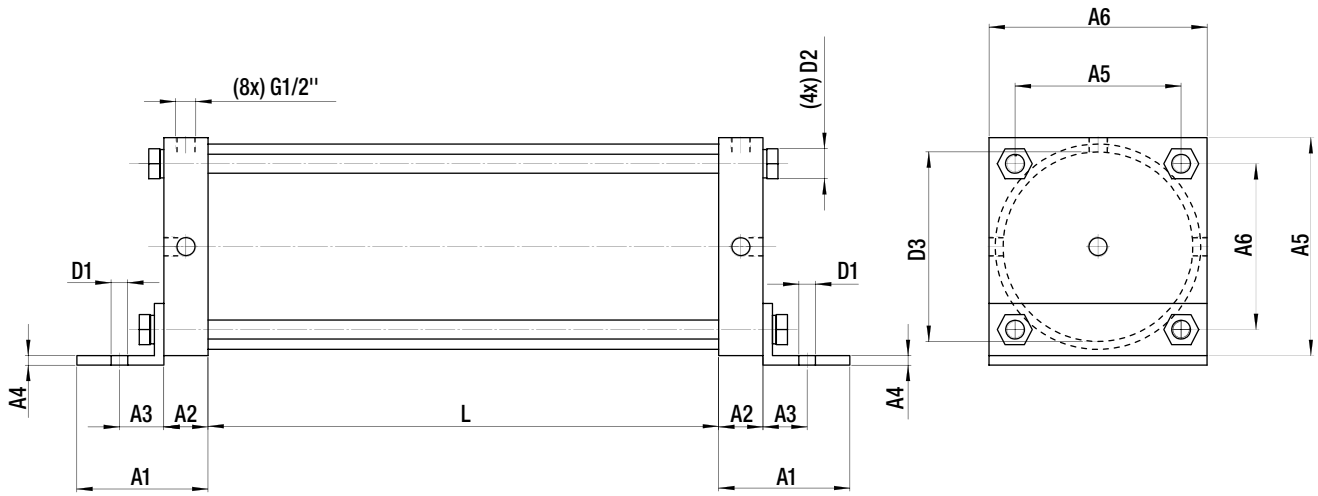
F Pour les cylindres pneumatiques fonctionnant à double effet (d.e.), déterminer le volume au moyen du tableau. Pour les cylindres pneumatiques fonctionnant à effet simple (s.e.), déterminer toujours le volume au moyen du tableau et multiplier le résultat obtenu par 3. Sommer tous les volumes des différents cylindres pneumatiques sur le bord du moule pour obtenir la capacité totale (dm^3) du réservoir. Choix du réservoir par rapport à la capacité totale obtenue (dm^3) et à l'espace disponible sur le moule.

E Para cilindros neumáticos funcionantes a doble efecto (d. e.) determinar el volumen por medio de la tabla. Para cilindros neumáticos funcionantes a simple efecto (s. e.) determinar siempre el volumen por medio de la tabla y multiplique el resultado obtenido por 3.Sumar todos los volúmenes de los varios cilindros pneumáticos en el borde de la prensa para calcular la capacidad total (dm^3) del depósito. Selección del tanque en relación a la capacidad total relevada (dm^3) y a el espacio disponible en la prensa

P Para cilindros pneumáticos de duplo efeito (d.e), o volume deve ser determinado de acordo com a tabela. Para cilindros pneumáticos de efeito único, o volume deve ser determinado de acordo com a mesma tabela. o resultado deve ser multipicado por3. Para saber a capacidade total (litros) do reservatório, deve somar todos os volumes dos cilindros pneumáticos A escolha da capacidade do reservatório, está relacionada com o cálculo da capacidade total (litros) e o espaço disponível na ferramenta.

*All dimensions in **mm**/inch*

TANKS FOR AIR SYSTEMS



Codice Code Bestellnr. Code Codigo Còdigo	Volume Volume Volumen Volume Volumen Volume		A1		A2		A3		A4		A5		A6		D1		D2	D3		L		Peso Weight Gewicht Poids Peso Peso	
	dm³	in³	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		mm	inch	mm	inch	~Kg	~lb
39SRA1003A	3	0,12	83	3,27	28	1,10	34	1,34	6	0,24	105	4,13	138	5,43	10,5	0,41	M12	120	4,72	271	10,67	14	30,86
39SRA1004A	4	0,16	83	3,27	28	1,10	34	1,34	6	0,24	105	4,13	138	5,43	10,5	0,41	M12	120	4,72	360	14,17	15,7	34,61
39SRA1005A	5	0,20	83	3,27	28	1,10	34	1,34	6	0,24	105	4,13	138	5,43	10,5	0,41	M12	120	4,72	449	17,68	17,4	38,36
39SRA1006A	6	0,24	83	3,27	28	1,10	34	1,34	6	0,24	105	4,13	138	5,43	10,5	0,41	M12	120	4,72	538	21,18	19,1	42,11
39SRA1008A	8	0,31	83	3,27	28	1,10	34	1,34	6	0,24	105	4,13	138	5,43	10,5	0,41	M12	120	4,72	716	28,19	22,5	49,60
39SRA2003A	3	0,12	83	3,27	28	1,10	34	1,34	6	0,24	127	5,00	168	6,61	12,5	0,49	M12	150	5,91	175	6,89	17,2	37,92
39SRA2004A	4	0,16	83	3,27	28	1,10	34	1,34	6	0,24	127	5,00	168	6,61	12,5	0,49	M12	150	5,91	232	9,13	18,4	40,57
39SRA2005A	5	0,20	83	3,27	28	1,10	34	1,34	6	0,24	127	5,00	168	6,61	12,5	0,49	M12	150	5,91	289	11,38	19,7	43,43
39SRA2006A	6	0,24	83	3,27	28	1,10	34	1,34	6	0,24	127	5,00	168	6,61	12,5	0,49	M12	150	5,91	346	13,62	21,0	46,30
39SRA2008A	8	0,31	83	3,27	28	1,10	34	1,34	6	0,24	127	5,00	168	6,61	12,5	0,49	M12	150	5,91	460	18,11	23,6	52,03
39SRA2010A	10	0,39	83	3,27	28	1,10	34	1,34	6	0,24	127	5,00	168	6,61	12,5	0,49	M12	150	5,91	574	22,60	26,2	57,76
39SRA2012A	12	0,47	83	3,27	28	1,10	34	1,34	6	0,24	127	5,00	168	6,61	12,5	0,49	M12	150	5,91	688	27,09	28,7	63,27
39SRA3004A	4	0,16	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	132	5,20	26,3	57,98
39SRA3005A	5	0,20	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	164	6,46	27,3	60,19
39SRA3006A	6	0,24	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	196	7,72	28,3	62,39
39SRA3008A	8	0,31	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	260	10,24	30,3	66,80
39SRA3010A	10	0,39	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	324	12,76	32,4	71,43
39SRA3012A	12	0,47	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	388	15,28	34,4	75,84
39SRA3015A	15	0,59	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	484	19,06	37,4	82,45
39SRA3018A	18	0,71	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	580	22,83	40,4	89,07
39SRA3022A	22	0,87	83	3,27	28	1,10	34	1,34	6	0,24	163	6,42	218	8,58	12,5	0,49	M16	200	7,87	708	27,87	44,4	97,89

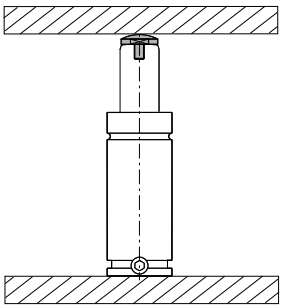
50°C	122°F	Temperatura max esercizio - Max. operating temperature - max. Betriebstemperatur Température maximum de fonctionnement - Temperatura máx. de ejercicio - Temepratura Max operacional.
15 bar	218 psi	P. max esercizio - Maximum operating pressure - max: Betriebsdruck Pression Max de Fonctionnement - Presión máx de ejercicio - Pressão máxima de operação.
25 bar	363 psi	Pressione di collaudo - Testing pressure - Druckprüfung Pression d'essais - Probar la presión - Pressão de teste.

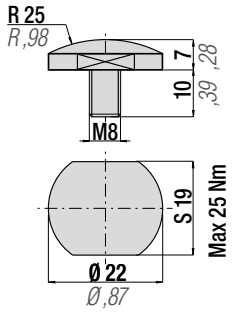
*All dimensions in **mm**/inch*

ACCESSORIES

I	**Calotta**	Temperato
GB	**Thrust plates**	Hardened
D	**Schaftkappe**	Gehärtet
F	**Calotte pour tiges**	Tempré
E	**Casquillo para vástagos**	Templado
P	**Calote para embolo**	Temperado

49 - 52 HRC

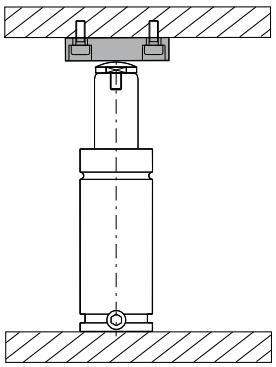


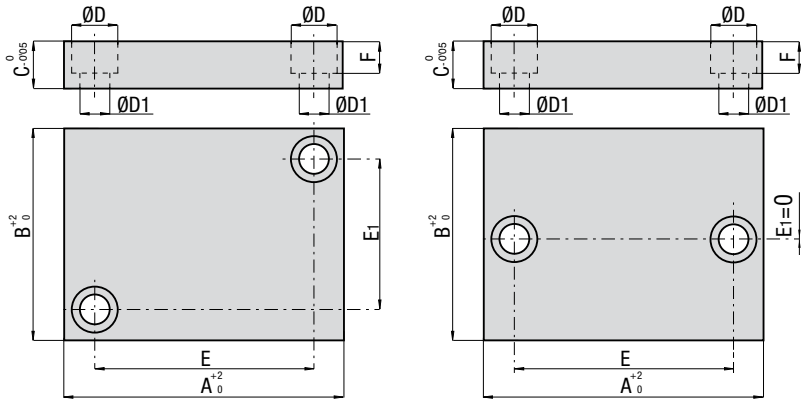


code FA 022

I	**Piastra**	Temperato
GB	**Counter Plate**	Hardened
D	**Stellplatten**	Gehärtet
F	**Plaques d'appui**	Tempré
E	**Placas de soporte**	Templado
P	**Placas de apoio**	Temperado

49 - 52 HRC



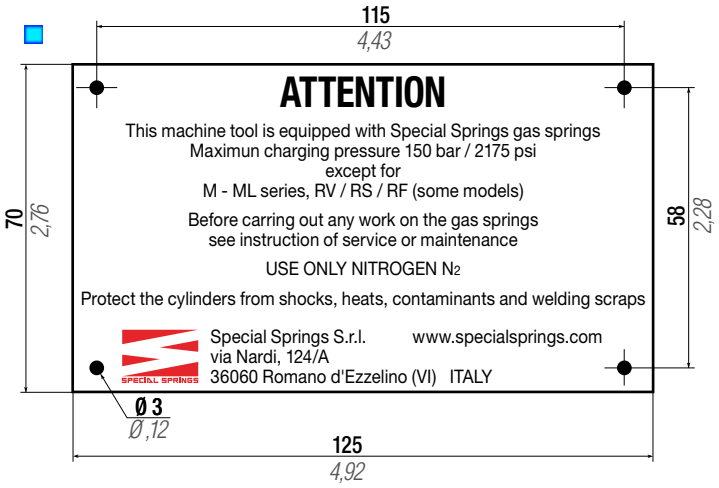


CODE		A		B		C		Ø D		Ø D1		E		E1		F		d	
PHASING OUT	NEW	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
PS040040	39PA040040A [1]	40	1,57	40	1,57	15	0,59	15	0,59	9	0,35	21	0,83	21	0,83	10	0,39	d ≤ 20	,79
-	39PAA040040A	40	1,57	40	1,57	15	0,59	11	0,43	7	0,28	24	0,94	24	0,94	7	0,28	d ≤ 20	,79
PS056056	39PA056056A [3]	56	2,20	56	2,20	20	0,79	18	0,71	11	0,43	32	1,26	32	1,26	13	0,51	d ≤ 36	1,42
-	39PA070070A [1]	70	2,76	70	2,76	15	0,59	15	0,59	9	0,35	50	1,97	50	1,97	9	0,35	d ≤ 60	2,36
PS071071	39PA071071A	71	2,80	71	2,80	20	0,79	18	0,71	11	0,43	48	1,89	48	1,89	13	0,51	d ≤ 60	2,36
-	39PA080080A [2]	80	3,15	80	3,15	16	0,63	15	0,59	9	0,35	62	2,44	0	0	10	0,39	d ≤ 65	2,56
-	39PAB090090A	90	3,54	90	3,54	12	0,47	15	0,59	9	0,35	64	2,52	64	2,52	9	0,35	d ≤ 80	3,15
-	39PAA090090A [1]	90	3,54	90	3,54	15	0,59	15	0,59	9	0,35	70	2,76	70	2,76	9	0,35	d ≤ 80	3,15
-	39PA090090A [2][3]	90	3,54	90	3,54	20	0,79	18	0,71	11	0,43	67	2,64	67	2,64	13	0,51	d ≤ 80	3,15
-	39PA100100A [2]	100	3,94	100	3,94	16	0,63	15	0,59	9	0,35	82	3,23	0	0	10	0,39	d ≤ 90	3,54
-	39PA140140A [3]	140	5,51	140	5,51	20	0,79	18	0,71	11	0,43	110	4,33	110	4,33	13	0,51	d ≤ 130	5,12
PS050025	39PA050025A [1]	50	1,97	25	0,98	12	0,47	11	0,43	7	0,28	32	1,26	8	0,31	8	0,31	d ≤ 15	,59
	39PA050030A	50	1,97	30	1,18	12	0,47	11	0,43	7	0,28	40	1,57	14	0,55	8	0,31	d ≤ 20	,79
PS055030	39PA055030A [1]	55	2,17	30	1,18	12	0,47	11	0,43	7	0,28	40	1,57	14	0,55	8	0,31	d ≤ 20	,79
-	39PA055032A [2]	55	2,17	32	1,26	16	0,63	15	0,59	9	0,35	37	1,46	0	0	10	0,39	d ≤ 20	,79
-	39PA065050A [2]	65	2,56	50	1,97	16	0,63	15	0,59	9	0,35	47	1,85	0	0	10	0,39	d ≤ 36	1,42
PS070035	39PA070035A [1]	70	2,76	35	1,38	15	0,59	15	0,59	9	0,35	48	1,89	14	0,55	10	0,39	d ≤ 30	1,18
PS075050	39PA075050A [1]	75	2,95	50	1,97	15	0,59	15	0,59	9	0,35	56	2,20	30	1,18	10	0,39	d ≤ 36	1,42
-	39PA080060A [2]	80	3,15	60	2,36	16	0,63	15	0,59	9	0,35	62	2,44	0	0	10	0,39	d ≤ 55	2,17
-	39PAA085060A	85	3,35	60	2,36	15	0,59	15	0,59	9	0,35	56	2,20	40	1,57	10	0,39	d ≤ 55	2,17
PS085060	39PA085060A [1]	85	3,35	60	2,36	15	0,59	15	0,59	9	0,35	66	2,60	40	1,57	10	0,39	d ≤ 55	2,17
PS100080	39PA100080A [1]	100	3,94	80	3,15	20	0,79	18	0,71	11	0,43	72	2,83	56	2,20	12	0,47	d ≤ 70	2,76
PS110100	39PA110100A	110	4,33	100	3,94	20	0,79	18	0,71	11	0,43	85	3,35	75	2,95	12	0,47	d ≤ 100	3,94

*All dimensions in **mm**/inch*

[1] VDI 3003 [2] Volvo Norm [3] Renault Norm

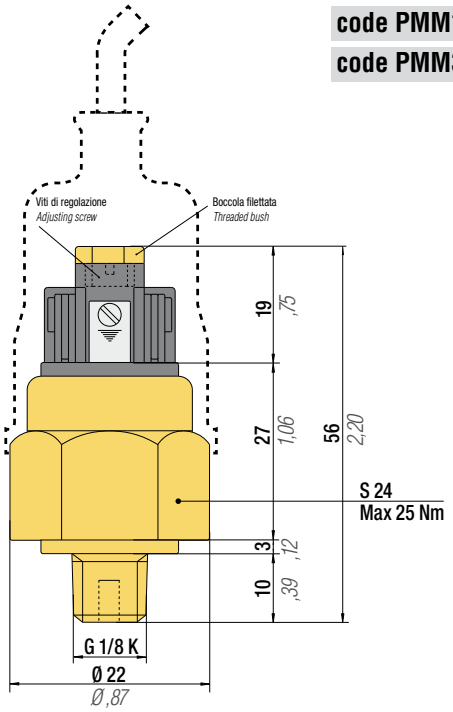
WARNING PLATE

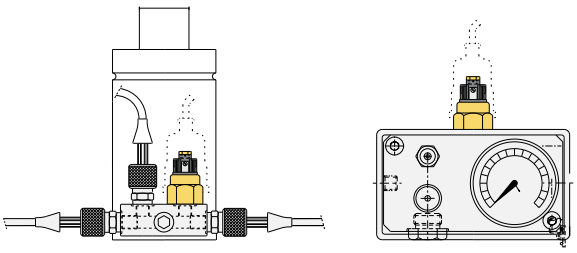


I	Targhetta	Codice	TAR-I
GB	Advice plate	Code	TAR-GB
D	Schilder	Bestell-nummer	TAR-D
F	Plaquettes	Référence	TAR-F
E	Placas	Codigo	TAR-E
P	Etiquetas	Codigo	TAR-P

PRESSURE SWITCH

code PMM150A (50 : 150 bar)
code PMM300A (50 : 300 bar)





I	Pressostato	Tensione di lavoro 48 V max	Normalmente aperto
GB	Pressure switch	Operating voltage 48 V max	Normally opened
D	Druckwächter	Arbeitsspannung 48 V max	Normalerweise offen
F	Pressostat	Tension d'utilisation 48 V max	Normalement ouvert
E	Presostato	Tensión de trabajo 48 V max	Normalmente abierto
P	Pressostato	Tensão de Trabalho 48 V max	Normalmente aberto

*All dimensions in **mm**/inch*

ACCESSORIES

code 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 hosed 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 autônomos e sistemas conectados.

code 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.

code 39DMCPVA

1/4" BSP

I 3 mt di tubo - attacco rapido femmina Cejin - 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 Cejin 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 Cejin – Ventil ON/OFF – Ablassrohrventil – 1 Anschlussteil 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 Cejin – soupape ON/OFF – soupape de déchargement tuyau – un raccord pour réducteur/bouteille de 1 ½ - 20 UNF + 1 enclenchement instantané supplémentaire (UNIQUEMENT POUR CPVB - CPVD) - joint en le jeu cod. 39DMA.

E 3 mt de tubo - enganche rápido hembra Cejin - 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 Cejin - 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.

code 39IR01A

I Innesto rapido femmina ISO (72 - C - 2 - 2 - RP)

GB Quick female ISO coupling (72 - C - 2 - 2 - RP)

D Schnellkupplung ISO (72 - C - 2 - 2 - RP)

F Enclenchement instantané femelle ISO (72 - C - 2 - 2 - RP)

E Inserción rápida hembra ISO (72 - C - 2 - 2 - RP)

P Engate rápido fêmea ISO (72 - C - 2 - 2 - RP)

code 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).

code 39QDFV01 for 1/8G thread
code 39QDFV02 for M6 thread
code 39QDFV03 for M6 thread

I Adattatore per caricamento diretto con innesto rapido maschio Cejn.

GB Cejin male quick fit adapter for direct charging.

D Direkt Laden Adapter mit Schnellkupplung Cejn.

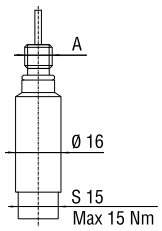
F Adaptateur direct pour le chargement avec enclenchement instantané mâle Cejn.

E Adaptador directo para la carga con enganche râpido macho Cejn.

P Adaptador direto para la carga con engate râpido macho Cejn.

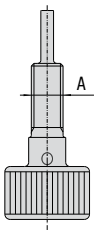
>>> see tab pag. 276 for combination

code ADM...



Codice Code Bestellnr. Code Codigo Codigo	**ADM01**	**ADM02**	**ADM03**	**ADM04**	**ADM05**	**ADM06**	**ADM08**	**ADM09**	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	M6	G 1/8"
Modello Model Modell Model Modelo Modelo	ML1800-12000	HR300 Cu 5-16 HR500 Cu 5-16 HR700 Cu 10-16 HRF700 Cu 10-16 ML500 ML1000 LI400 Cu 13	NE16, NE24 (rev A) HR1000-4200 HRF1000 LI900-2000	SC150, SC250 SCF250, H300 H500,HF500 HR500 Cu 25-125 HR700 Cu 19-125 HRF500 Cu 25-125 HRF700 Cu 19-125 LI400 Cu 25-100	K40 ML300	HR200 MCS19 MCS19-TBM MCS19-TBI MCS19-TEM MCS25	NE16 - NE24 (revB) M90 - MS90 M90 TBM - TBI - TEM M200 - MS200 M300 KE400-7500 RV170-2400 RS170-2400 SC150 - 250 (rev D) H 300 - 500 (rev C) ML300 (rev B+C)	ML500-1000 (rev B+C)	SC500-10000, SCF500-750 H700-18500 HF700-1000 HR6600-11800 LI3200 LS1500-9500 KE12000-18500 S500-S3000 RV4200-RV20000 RS4200-RS9500 RF750-RF2400 RT350-RT9500 ML1800-ML12000(rev B+C)
	39QDFV01	**39QDFV03**	**39QDFV02**	**39QDFV03**	**39QDFV02**	**39QDFV02**	**39QDFV02**	**39QDFV03**	**39QDFV01**

code DDS-...



I Dispositivo di scaricamento.

GB Discharging adapters.

D Abslasvorrichtung.

F Dispositif de déchargement.

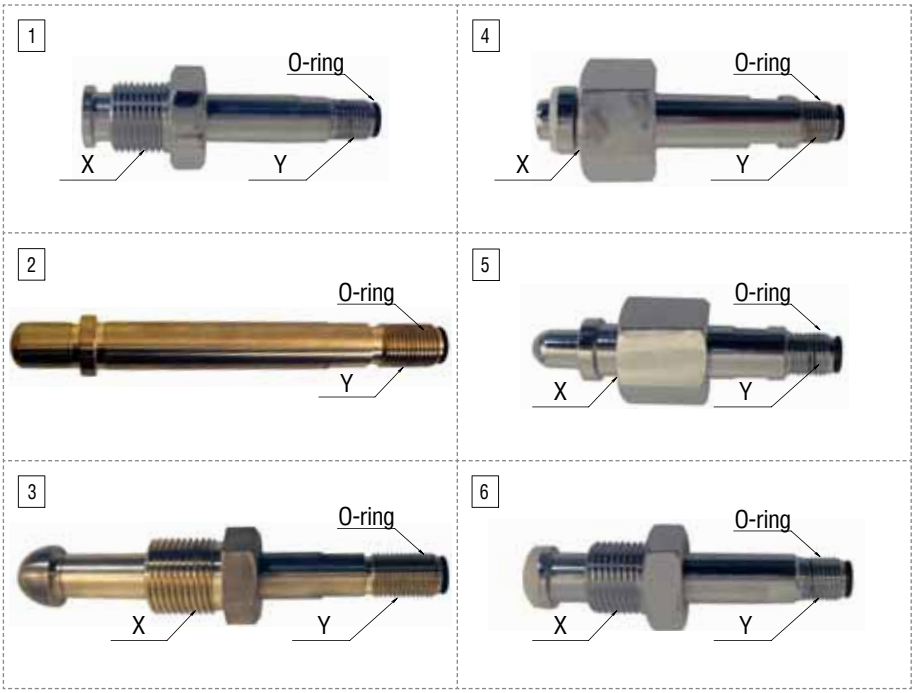
E Dispositivo de descarga.

P Dispositivo de descarga.

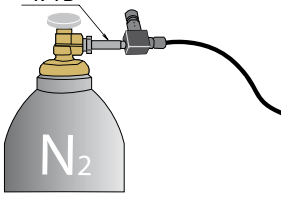
Code	**DDS-M6/1**	**DDS-M6/2**	**DDS-M6/3**	**DDS-1/8G1**	**DDS-1/8G**
A	M6	M6	M6	G 1/8"	G 1/8"
Model	MCS, K, ML (rev.A), HR, LI	NE(rev.A), SC, H, HR, LI	NE(rev.B), M, MS, KE, ML (rev.B+C), RV, RS, SC (rev.D), H (rev.C)	K, ML (rev.A)	SC, H, HR, LI, LS, KE, ML (rev.B), S, RV, RS, RF, RT

ACCESSORIES

code 47TB...



Example:
47TB



I Tubo per collegamento tra riduttore e bombola gas Azoto

GB Connecting hose between pressure regulator and nitrogen tank

D Verbindungsrohr zwischen Druckminderer und Stickstoff-Gasflasche

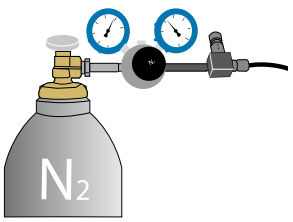
F Tuyau pour le lien entre le réducteur et la bouteille de gaz Azote

E Tubo para conexión entre reductor y bombona gas Nitrógeno

P Tubo para ligação entre redutor e garrafa de gás Azoto

CODE	IMG	Y	X	COUNTRY
47TB	1	1/4'' BSP	W 21,7x1/14'' - Male - UNI 4409	Italy
47TB01	2	1/4'' BSP	-	China - Korea
47TB02	3	1/4'' BSP	14 G 7/16'' - Male	Japan - Indonesia
47TB03	4	1/4'' BSB	DIN 477 - 10 N2 - Female	Germany
47TB04	5	1/4'' BSP	MFE 29 - 650 CXR133 - Female	France
47TB05	6	1/4'' BSP	W 21,7x1/14'' - Male	India

code 39RP...



I Riduttore di pressione completo di attacco bombola per controllare e ridurre la pressione.

GB Pressure reducer complete with cylinder connection to control and reduce the pressure.

D Druckminderer vollstaending mit Flasche verbindungs, um die Druck zu uberwaechen und verringern

F Réducteur de pression complet avec jonction de bouteille pour contrôler et réduire la pression.

E Reductor de presión completo con enganche de las bombonas para controlar y reducir la presión.

P Redutor de pressão completo com engate para controlar e reduzir a pressão.

CODE	Riduttore di pressione + attacco Pressure reducer + connection Druckminderer + Verbindung Réducteur de pression + jonction Reductor de presión + enganche Redutor de pressão + engate	COUNTRY
39RP	39RP + 47TB	Italy
39RP01	39RP + 47TB01	China - Korea
39RP02	39RP + 47TB02	Japan - Indonesia
39RP03	39RP + 47TB03	Germany
39RP04	39RP + 47TB04	France
39RP05	39RP + 47TB05	India

code CMC

code CMCT

code CMC-…

code 39PM02A

I Serie completa di accessori per lo smontaggio ed il rimontaggio dei cilindri

CMC = set completo
CMCT = solo set utensili
CMC-... = set accessori per determinata famiglia di cilindri (es. CMC-SC 10000)
39PM02A = Pressa manuale per assemblaggio stelo, boccola e anello di ritegno a C

GB Complete set of hardware for dismantling and assembling nitrogen cylinders

CMC = full set
CMCT = tool set only
CMC-... = set of accessories for a specific family of cylinders (ex. CMC-SC 10000)
39PM02A = Table manual press for assembly of piston-rod, assembled bushing and retaining C-ring

D Werkzeugeset zum Zerlegen und Zusammenbauen von Stickstoffzylindern

CMC = Komplettset
CMCT = nur Werkzeugset
CMC-... = Zubehörset für bestimmte Zylindertypen (z. B. CMC-SC 10000)
39PM02A = Manuelle Presse zur Montage von Kolbenstange, Buchse und Sprengring

F Ensemble complet du petit matériel de montage et démontage des ressorts gaz

CMC = jeu complet
CMCT = uniquement jeu d'outils
CMC-... = jeu d'accessoires pour une famille donnée de cylindres (ex.: CMC-SC 10000)
39PM02A = Presse manuelle pour l'assemblage de la queue, douille et bague d'étanchéité en C

E Serie completa de accesorios para el desmontado y remontado de los cilindros

CMC = set completo
CMCT = sólo set de herramientas
CMC-... = set de accesorios para una determinada familia de cilindros (p.ej. CMC-SC 10000)
39PM02A = Prensa manual para ensamblaje perno, casquillo y anillo de retención a C

P Série completa de acessórios para a desmontagem e montagem dos cilindros

CMC = conjunto completo
CMCT = apenas utensílios de conjunto
CMC-... = acessórios de conjunto para determinada família de cilindros (ex. CMC-SC 10000)
39PM02A = Prensa manual para ensambladura haste, bucha e aro de retenção a C

ACCESSORIES

code 39NCU01A

N due plus BOOSTER

F **Caractéristiques**

- securité maximum, temps de chargemet minimum
- arrêt automatique à la pression établie
- signal lumineux de cycle final
- valve de securité pour la surpression
- pompe électrique
- Pression de sortie réglable
- Châssis à chariot avec logement de bonbonne N2
- À utiliser avec le set de chargement DMA (en option)

Données techniques
-Alimentation: 3 phases + PE
230/400/415/440/480/575 V - 50 Hz/60 Hz
- Pression maximum de sortie: 210 bar
- Pression minimum d'entrée: 20 bar
- Température de travail: 0÷ 45 °C
- Dimensions: 600x560x680 - Poids: 138 kg.

E **Características**

-Máxima seguridad, tiempo mínimo de carga.
-Parada automática en la presión elegida
-Señal luminosa de final de ciclo
-Válvula de seguridad para sobrepresión
-Bomba eléctrica
-Presión de salida regulable
-Chasis sobre ruedas y alojamiento para botella de gas nitrogeno
-Utilizar en combinación con set de carga DMA (opcional)

Datos técnicos
-Alimentación: trifase + PE
230/400/415/440/480/575 V - 50 Hz / 60Hz
-Presión máxima de salida: 210 bar
-Presión mínima de entrada: 20 bar
-Temperatura de operación: 0 ÷ 45°C
-Dimensiones: 600x560x680 - Peso: 138 Kg

P **Características**

-Máxima segurança, tempos de carregamento mais baixos
-Paragem automática quando atingida a pressão especificada
-Sinal luminoso de fim de ciclo
-Válvula de segurança activa sobrepressão
-Bomba eléctrica
-Saída de pressão ajustável
-Quadro rodado com alojamento para tank N2
-Para ser utilizado com o conjunto de carregamento DMA (opcional)

Informação técnica
-Alimentação : 3 entradas
230/400/415/440/480/575 V - 50 Hz/60 Hz
-Máxima pressão de saída: 210 bar
-máxima pressão de entrada: 20 bar
-Temperatura de trabalho: 0÷ 45 °C
-Dimensões: 600x560x680 - Peso: 138 kg.

I **Caratteristiche**

-Massima sicurezza, minimi tempi di caricamento
-Arresto automatico alla pressione impostata
-Segnale luminoso di fine ciclo
-Valvola di sicurezza per sovrapressione
-Pompa elettrica
-Pressione di uscita regolabile
-Telaio carrellato con alloggiamento bombola N2
-Utilizzare in combinazione con set di caricamento DMA (opzionale)

Dati tecnici
-Alimentazione: trifase + PE
230/400/415/440/480/575 V - 50 Hz / 60Hz
-Pressione massima in uscita: 210 bar
-Pressione minima in entrata: 20 bar
-Temperatura d'esercizio: 0 ÷ 45°C
-Dimensioni: 600x560x680 - Peso: 138 Kg

GB **FEATURES**

- maximum safety, low charging time
- automatic stop when reaching the set pressure
- light signal of end cycle
- Safety valve for overpressure
- Electric pump
- Adjustable output pressure
- Wheeled chassis with N2 bottle lodging
- To be used with charging set DMA (optional)

TECHNICAL DATA
- Feeding: 3 steps+ PE
230/400/415/440/480/575 V - 50 Hz/60 Hz
- Maximum output pressure: 210 bar
- Minimum input pressure: 20 bar
- Working temperature: 0÷ 45 °C
- Dimensions: 600x560x680 - Weight: 138 kg.

D **Eigenschaften**

- Maximale Sicherheit, minimale Befüllzeiten
- Automatischers Anhalten beim Erreichen des eingestellten Drucks
- Leuchtsignal bei Zyklusende
- Überdruck-Sicherheitsventil
- Elektrische Pumpe
- Einstellbarer Output-Druck
- Fahrbares Gestell mit Ablagefach für N2-Gasflasche
- Zum Einsatz in Kombination mit der DMA Ladevorrichtung geeignet (optional)

Technische Eigenschaften
- Stromversorgung: dreiphasig + PE
230/400/415/440/480/575 V - 50 Hz / 60Hz
- Max. Druck Output: 210 bar
- Min. Druck Input: 20 bar
- Betriebstemperatur: 0 - 45 °C
- Maße: 600x560x680 - Gewicht: 138 kg

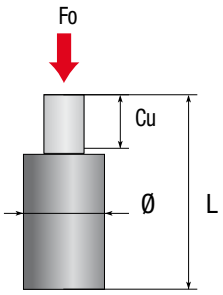
Usare solo gas azoto N2
Use only nitrogen gas N2
Ausschließlich N2-Stickstoffgas verwenden
Utiliser seulement gas azote N2
utilizar sólo con gas N2
Utilizar apenas gás nitrogénio N2

Bombola azoto non inclusa
Nitrogen tank not included
Stickstoffflasche nicht imbegriffen
Bombonne de azote non inclue
Botella de nitrógeno no incluida
Garrafa de nitrogênio não incluída

ACCESSORIES

code FT7500 Digital force tester

code 59VCATM02

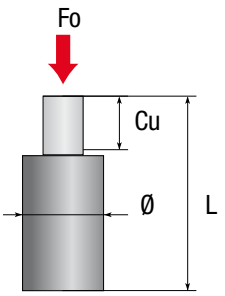


	MIN.	MAX.
F0	0 daN	7500 daN
Ø	12 mm	120 mm
L	40 mm	400 mm
Cu	5 mm	125 mm

ACCESSORIES

code IPC/DIG Digital force tester

code 59VCM051



code 59RE150

	MIN.	MAX.
F0	0 daN	20.000 daN
Ø	12 mm	195 mm
L	40 mm	760 mm
Cu	5 mm	300 mm

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 Ardeitszyklus.
- 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 cliclo de la prensa.
- Velocidad de retorno del vástago constante a regulable.
- Fuerza de contraste del cilindro: constante, aumentable o disminuible 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 contínua dispersión del calor producido durante la operación gracias a la presencia de un intercambiador de calor en la unidadde control.
- Fiabilidad máxima del troquel garantizada por la constante renovación del fluido en el sistema

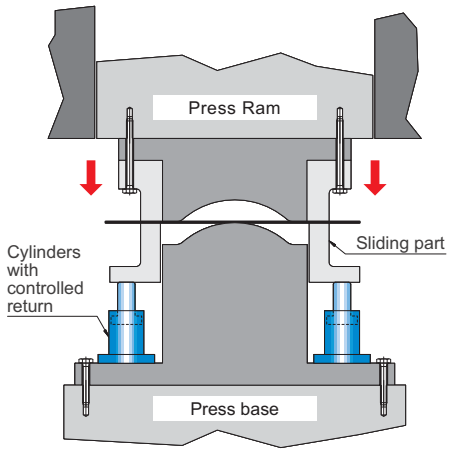
P

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 fluído no sistema.

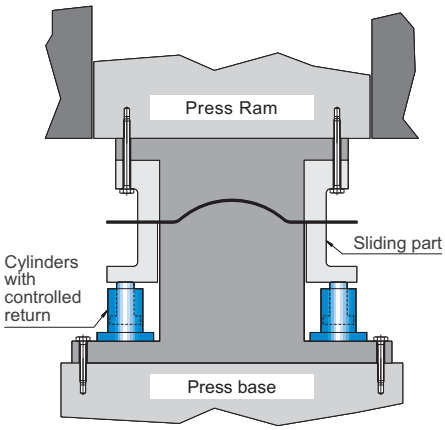
CYLINDERS WITH CONTROLLED RETURN

Practical example



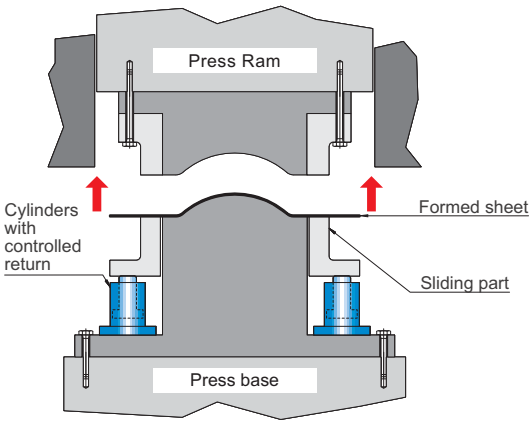
START OF WORKING CYCLE

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



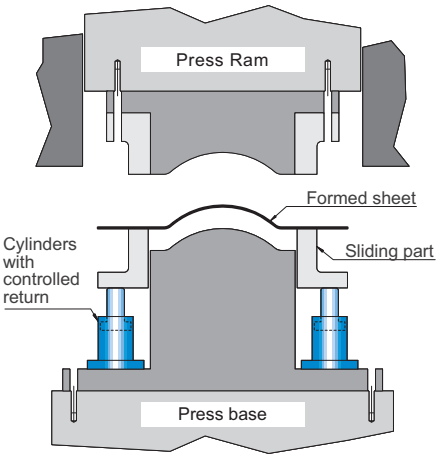
END OF WORKING CYCLE

- 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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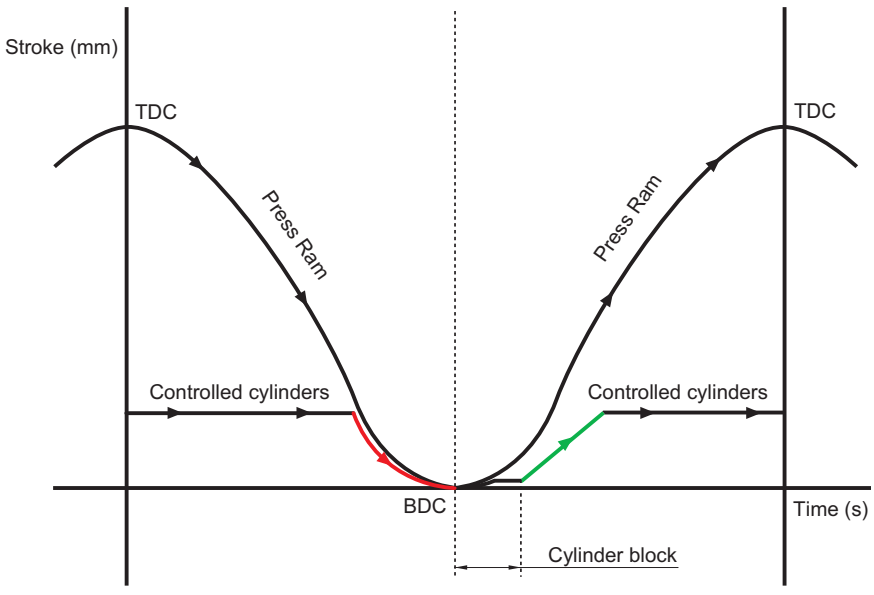
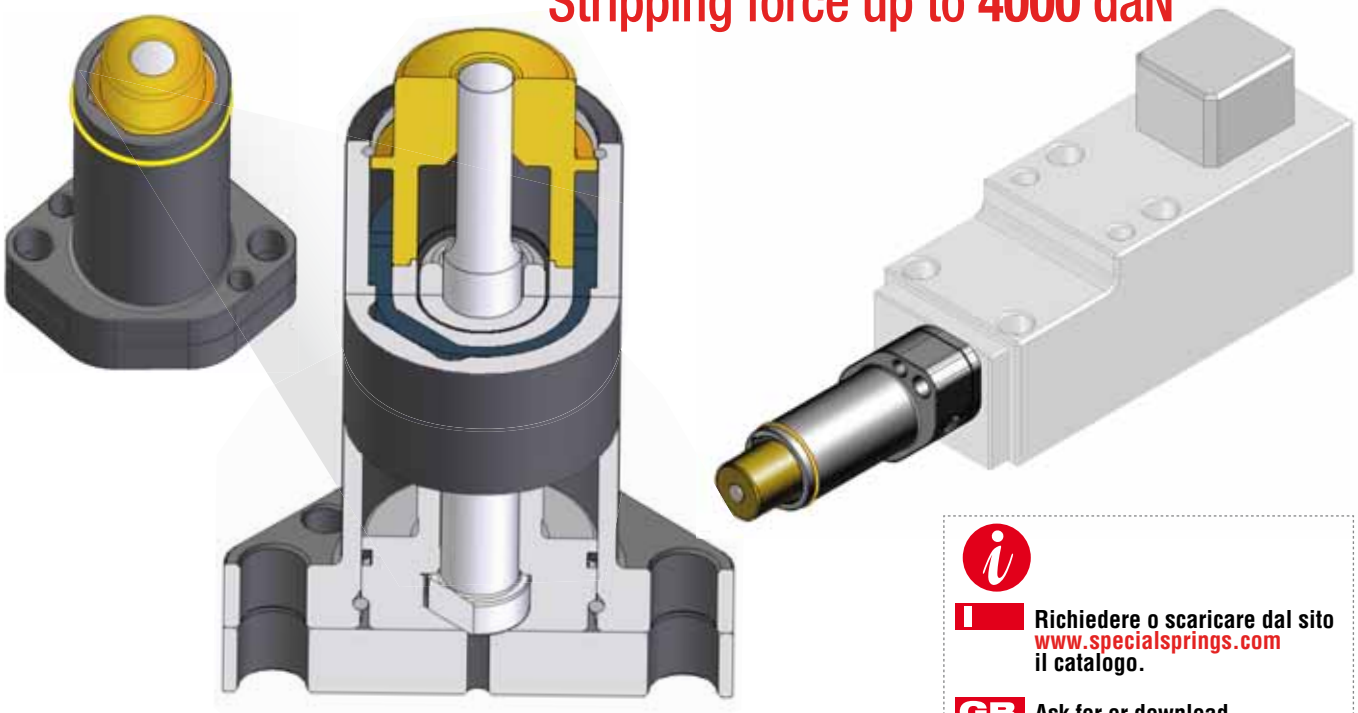
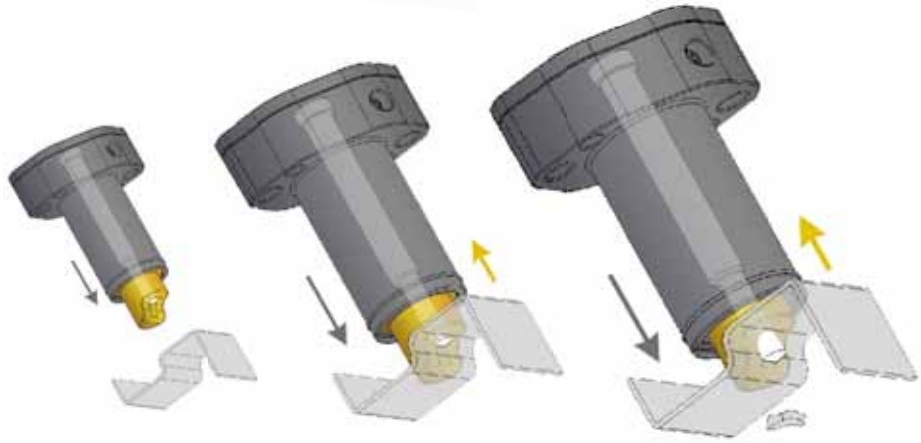


NITROGEN PUNCHING UNIT

Initial force up to 2000 daN
Stripping force up to 4000 daN





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I
- Testa premilamiera estraibile e sagomabile
- Facile posizionamento e fissaggio
- Elevata forza di estrazione
- Dimensioni compatte
- Adatto per punzoni ISO 8020
- Non è richiesto l' uso di altro portapunzone
- Ideale per uso combinato con unità cam

F
-Tête de bronze que peut être modelée et extraite
-Positionnement facile
-Force elevée de extraction
-Dimensions compactes
-Indiqué pour poincons ISO 8020
-Il ne demande pas l'emploi de autre poincon
- Idéal à utiliser avec l' unitée CAM

GB
- Stripper head removable and mouldable
- Easy positioning
- High and adjustable holding and stripping force
- Compact dimensions
- Suitable for ISO 8020 shoulder style punch
- Doesn't require the use of standard retainer
- Ideal for combined use with cam unit

E
- Cabeza de despegador desmontable y moldeable
- Facil posicionamiento
- Fuerza de extraccion superior y ajustable
- Dimensiones compactas
- Apropiado para punzon con cabeza ISO 8020
- No requiere uso de porta punzon estandar
- Ideal para utilizar con carro

D
- Niederhalterkopf herausnehmbar und mit bearbeitbarer Kontur
- Einfache Positionierung
- Hohe und einstellbare Niederhalter- und Abstreiferkraft
- Kompakte Größe
- Geeignet für Schneidstempel ISO 8020
- Andere Stempelhalteplatten sind nicht erforderlich
- Ideal für den Einsatz in Kombination mit Schiebern

P
- Cabeça de corte fácil remoção e maquinavel
- Fácil posicionamento
- Fixação alta e ajustável e força de corte
- Dimensões compactas
- Adequado para punção o ISO 8020 respigado
- Não necessita do uso de um retentor normalizado
- Ideal para uso combinado com uma unidade CAM

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