Gas Springs
Gasdruckfedern
Molle a Gas

OMCR®
STANDARD DIE COMPONENTS

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Gas Springs
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Molle a Gas

GB The **Gas Springs** line close a gap where ever the accent is on accommodation of the utmost force component within a minimum of space – or where exceedingly large travel is demanded : OMCR Gas springs take care of both demands, even in combination.The pressure medium is a commercially available, environment-friendly nitrogen. OMCR gas springs have a standard charge pressure of max. 150 bar (some special to 180 bar). Depending on the spring size and spring type, starting spring forces of 20 daN to 20000 daN can be realised.

D OMCR Gasdruckfedern werden eingesetzt, wenn große Federkräfte auf kleinstmöglichem Raum unterzubringen sind, wenn große Federwege benötigt werden oder wenn beide Forderungen gleichzeitig erfüllt werden müssen.Das Druckmedium ist handelsüblicher und umweltfreundlicher Stickstoff.OMCR Gasdruckfedern werden serienmäßig bis max. 150 bar (180 bar) gefüllt.Je nach Federgröße und Federtyp lassen sich Anfangs-Federkräfte von 20 daN bis 20000 daN realisieren.

I Le **molle a gas** OMCR vengono utilizzate quando è necessaria la sistemazione di un componente con massima forza entro un minimo spazio - o dove è richiesta una corsa estremamente grande: le molle a gas OMCR ricoprono entrambe le esigenze, anche in combinazione. Il gas utilizzato per la messa in pressione è un azoto ecologico disponibile in commercio.Le molle a gas OMCR hanno una pressione di carica standard di max. 150bar (alcune speciali a 180 bar).A seconda delle dimensioni della molla e del tipo di molla, è possibile realizzare forze di molla di partenza da 20 daN a 20000 daN.

OMCR®

STANDARD DIE COMPONENTS

(GB) PRESSURE BUILD UP

In operation the piston rod enters the spring space whose volume is progressively reduced.

Depending on the stroke length, the volume of the pressure chamber is reduced. The resulting increase in pressure can be read from the diagram of the spring size as a factor. The final force is therefore the initial spring force multiplicated to Pressure build-up factor. (Fig.2)

Modification of charge pressure allows variation of the force rating and can be predetermined from the spring diagram. (Fig.1)

(D) DRUCKAUFBAU

Beim Federhub dringt die Kolbenstange in den Druckraum ein. Je nach Hublänge wird das Volumen des Druckraumes verkleinert. Der dadurch bedingte Druckanstieg ist vom Schaubild der Federgröße als Faktor abzulesen. Die Endkraft ist also die Anfangsfederkraft Druckaufbaufaktor. (Abb.2)

Durch den einstellbaren Fülldruck lässt sich die Anfangsfederkraft varieren. Diese ist vom Schaubild der jeweiligen Federtype abzulesen.. (Abb.1)

(I) INCREMENTO PRESSIONE

In lavoro, l'asta del pistone penetra nella cavità del corpo cilindrico. Con l'aumento della lunghezza della corsa eseguita, viene ridotto il volume del vano di compressione. L'incremento di pressione determinato da ciò potrà essere visto nel diagramma relativo e venir letto come un coefficiente. La forza finale esercitata dalla molla è data, perciò, dalla sua forza iniziale moltiplicata per per tale coefficiente. (Fig.2)

La forza iniziale può variare per mezzo della pressione di carica , e può esser calcolata dal diagramma specifico della molla. (Fig.1)

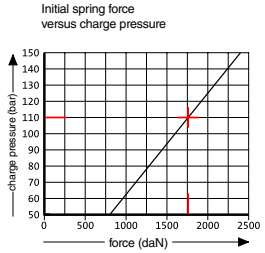


Fig. 1

Example:

Gas spring loaded at a pressure of 150 Bar, will give a initial force of 2400 DaN.
(code G01.020.02400xxx)

Gas spring loaded at a pressure of 110 Bar, its initial force will be 1750 DaN
(code G01.020.02400xxxW110)

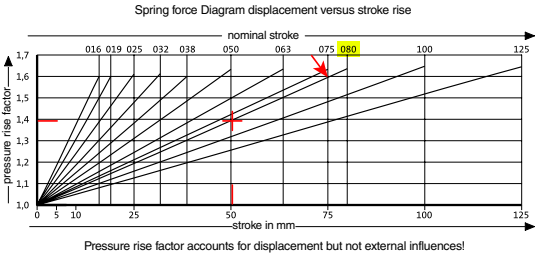


Fig. 2

Example:

(code G01.020.02400080)
Nominal stroke 80mm, used stroke 50mm:
build up factor: 1,4 strength after 50mm of travel :
2400 x 1.4 : 3360 DaN

(code G01.020.02400080W110)
Nominal stroke 80mm, used stroke 50mm:
coefficient 1,4 Istrength after 50mm of travel : 1750 x 1.4 : 2450 DaN

ALL OMCR GAS SPRINGS MEET THE REQUIREMENTS OF THE **PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU.**

(GB) DIRECTIVE 2014/68/EU

The Pressure Equipment Directive (2014/68/EU) was ratified by the European parliament and the Council of Europe in May 1997. The requirements of the pressure equipment directive came into force throughout the EU on 29 May 2002.

The directive defines pressure equipment as vessels, pipework, safety devices and pressure accessories. In terms of the directive a vessel is a casing which is designed and manufactured to contain fluids under pressure.

It follows from this definition that nitrogen gas springs of all sizes are deemed to be pressure vessels and must in this respect comply with the pressure equipment directive (2014/68/EU) from 29 May 2002.

(D) RICHTLINIE 2014/68/EU

Die Druckgeräte Richtlinie (2014/68/EU) wurde im Mai 1997 vom Europäischen Parlamentund vom Europarat angenommen. Seit dem 29. Mai 2002 sind die Bestimmungen der Druckgeräte-Richtlinie in der gesamten EU zwingend. Die Richtlinie definiert Druckgeräte als Behälter, Rohrleitungen, Sicherheitszubehör und Druckzubehör. Gemäß der EN Richtlinie ist ein Behälter ein Gehäuse, das für die Aufnahme unter Druck stehender Fluide konstruiert und hergestellt wurde.Aus dieser Definition geht hervor, dassStickstoff Gasdruckfedern aller Größen als Druckbehälter zu gelten haben und in dieser Eigenschaft nach dem 29. Mai 2002 der Druckgeräte-Richtlinie (2014/68/EU) entsprechen müssen.

(I) DIRETTIVA 2014/68/EU

La Direttiva sulle Apparecchiature a Pressione (2014/68/UE) è stata accolta nel maggio 1997 dal Parlamento Europeo e dal Consiglio d'Europa. Dal 29 maggio 2002 le disposizioni della Direttiva sulle Apparecchiature a Pressione sono effettive nell'intera Comunità Europea. La Direttiva definisce come apparecchiature a pressione: i contenitori, le condutture, gli accessori di sicurezza e gli accessori sottoposti a pressione, connessi con i vari sistemi a pressione.In conformità alla Direttiva una molla a gas è un recipiente che è stato progettato e costruito per contenere fluidi posti sotto pressione.Da questa definizione deriva che le molle a gas a pressione di azoto di tutte le grandezze sono da considerarsi dei contenitori a pressione e che, per questa loro caratteristica, esse devono essere conformi – a partire dal 29 maggio 2002 – al dettato della Direttiva sulle Apparecchiature a Pressione (2014/68/UE).

(GB) MAINTENANCE

OMCR gas springs are designed for long-term maintenance-free operation. We recommend lightly oiling the piston rod before using. For more informations, please see instruction manual.

ATTENTION

When safety functions are triggered (overstroke, return stroke, or overpressure protection), the gas springs can no longer be repaired!

CAUTION

Gas springs may only be charged with commercial grade 5.0 nitrogen gas.

ACCESSORIES

The range of accessories for gas springs includes fastening devices,charging and control units, screw connections and lines for setting up compound systems.OMCR is not liable if fittings that are not original OMCR fittings or fastening,accessory, and attachment parts that are not released by OMCR are used.

(D) MAINTENANCE

OMCR-Gasdruckfedern sind für wartungsfreien Dauerbetrieb ausgelegt. Vor dem Einsatz ist zu empfehlen, die Kolbenstange leicht einzuölen. Siehe Benutzerhandbuch für weitere Informationen.

ACHTUNG

Bei ausgelösten Sicherheitsfunktionen (Überhub-Schutz, Rückhub- Schutz oder Überdruck-Schutz sind die Gasdruckfedern nicht mehr reparabel!

ACHTUNG

Gasdruckfedern dürfen nur mit handelsüblichem Stickstoff der Güteklasse 5.0 gefüllt werden.

ZUBEHOR

Das Gasdruckfeder Zubehörprogramm umfasst Befestigungen, Auffüll - und Kontrollgeräte, Verschraubungen und Leitungen für Verbundsystemanordnung. Bei Verwendung von nicht Original- OMCR- oder von OMCR nicht freigegebenen Befestigungs-, Zubehör- und Anbauteilen erlischt jegliche Haftung.

(I) MANUTENZIONE

Le molle a gas OMCR sono state progettate per un servizio continuativo senza manutenzione. Si raccomanda di oliare leggermente l'asta del pistone prima dell'impiego. Vedi manuale d'uso per ulteriori informazioni.

ATTENZIONE

Se le funzioni di sicurezza sono state attivate, (protezione da sovracorsa, protezione da corsa di ritorno o protezione da sovrappressione), le molle a gas non sono più riparabili!

ATTENZIONE

Le molle a gas devono essere caricate esclusivamente con azoto della classe di qualità 5.0 commerciale.

ACCESSORI

L'assortimento di accessori disponibili per le molle a gas comprende elementi di fissaggio, apparecchiature di controllo, raccorderia e tubi per la realizzazione di sistemi a molle multiple. L'utilizzo di componenti di fissaggio e componenti accessorie non originali OMCR o non autorizzate da OMCR comporta l'annullamento della garanzia

(GB) MOUNTING EXAMPLES

Mounting possibilities for gas springs are listed below. For additional information on mounting, see the corresponding pages in the catalogue.

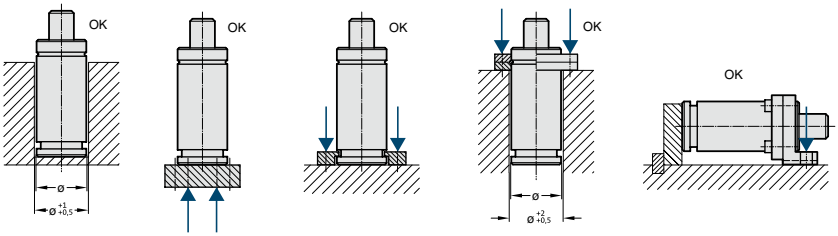
(D) MOUNTING EXAMPLES

Die Befestigungsmöglichkeiten werden im Folgenden beschrieben. Weitere Informationen zur Montage finden Sie auf den entsprechenden Seiten des Katalogs.

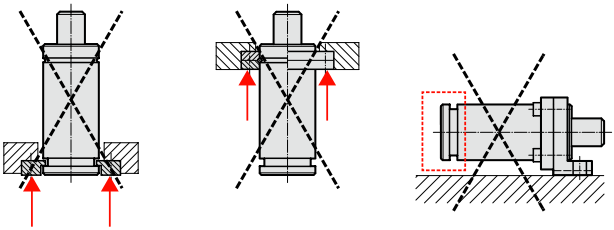
(I) ESEMPI DI MONTAGGIO

Le possibilità di fisssaggio sono descritte di seguito. Per maggiori informazioni sui montaggi,vedi le pagine dedicate nel catalogo.

CORRECT FIXING :



INCORRECT FIXING :



(GB) MOUNTING INSTRUCTIONS

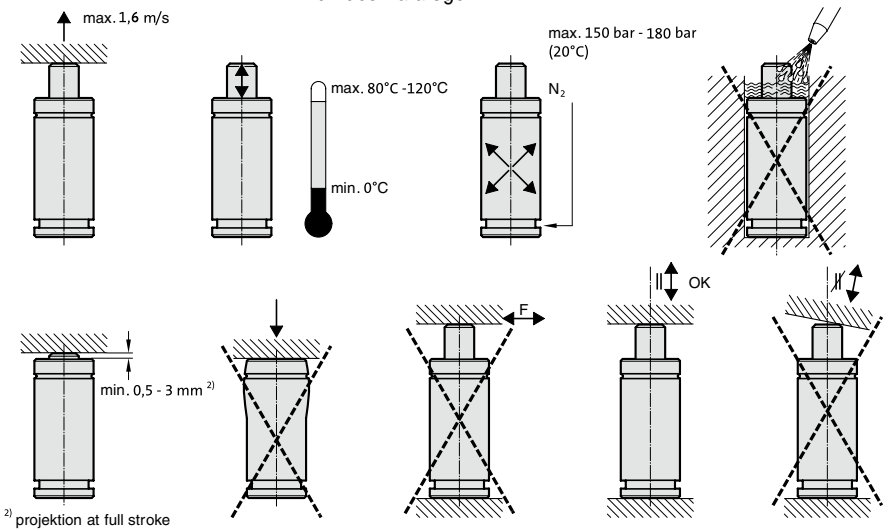
To achieve the best possible service-life and safety from the gas spring, the directions below must be followed.

(D) MONTAGEBEISPIELE

Die Befestigungsmöglichkeiten werden im Folgenden beschrieben.WeitereInformationenzur Montage finden Sie auf den entsprechenden Seiten des Katalogs.

(I) MOUNTING INSTRUCTIONS

Qui di seguito vengono illustrate alcune possibili modalità di montaggio delle molle a gas.



(GB) WARNINGS

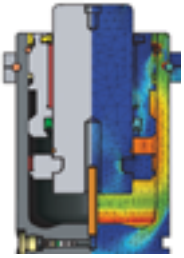
1. Secure the gas spring to the tool/machine whenever possible, using the threaded hole(s) in the base of the gas spring or a suitable flange.
2. The threaded hole in the piston rod top should not be used for mounting purposes. It is only to be used when carrying and servicing the gas spring.
3. Do not use the gas spring in such a way that the piston rod is realised freely from its compressed position, as this could cause internal damage to the gas spring.r).
4. Make sure the gas spring is mounted parallel to the direction of the compression stroke.
5. Ensure the contact surface of the piston rod top is perpendicular to the direction of the compression stroke and is sufficiently hardened.
6. The gas spring should not be subjected to the side loads.
7. Protect the piston rod against mechanical damage and contact with fluids.
8. We recommend providing a stroke reserve of 10% of the nominal stroke length or 5 mm.
9. The maximum charging pressure as a function of the working temperature must not be exceeded as it may effect the safety of the product.
10. Exceeding the gas spring's recommended operating temperature will shorten the service-life of the gas spring.
11. The entire contact surface of the piston rod / piston should be used.

(D) WARNUNG

1. Wenn möglich, Sichern der Gasdruckfeder im Werkzeug / Maschine unter Verwendung der im Federboden eingebrachten Gewindebohrungen oder Befestigungselemente.
2. Die Gewindebohrung in der Kolbenstange darf nicht zur Befestigung der Gasdruckfeder verwendet werden. Sie dient ausschließlich zu Transport und Wartungszwecken.
3. Gasdruckfeder nicht in einer Art und Weise einsetzen, dass die Kolbenstange abrupt aus der gedrückten Position frei wird (innere Beschädigung der Gasdruckfeder).
4. Gasdruckfeder parallel zur Krafteinleitung einbauen.
5. Kontaktoberfläche zur Betätigung der Kolbenstange muss rechtwinklig zum Gasdruckfederhub sein und sollte eine hinreichende Härte aufweisen.
6. Es dürfen keine seitlichen Kräfte auf die Gasdruckfeder wirken.
7. Kolbenstange gegen mechanische Beschädigung und Kontakt mit Flüssigkeiten schützen.
8. Es wird empfohlen, eine Hubreserve von 10% der nominellen Hublänge oder 5 mm vorzusehen.
9. Der maximale Fülldruck (bei 20°C) darf nicht überschritten werden, da ansonsten keine Systemsicherheit gewährleistet werden kann.
10. Ein Überschreiten der max. zulässigen Arbeitstemperatur verringert die Lebensdauer der Gasdruckfeder wesentlich.
11. Die Oberfläche der Kolbenstange/des Kolbens sollte komplett beaufschlagt werden

(I) AVVERTENZE

1. Quando possibile è preferibile effettuare il fissaggio della molla nello stampo/macchina utilizzando i fori filettati esistenti nel fondello della molla, oppure uno degli elementi di fissaggio forniti a richiesta.
2. Il foro filettato esistente nel pistone non deve venir utilizzato per il fissaggio della molla. Essodeve servire esclusivamente per le operazioni di trasporto e manutenzione.
3. Non si deve installare la molla a gas in maniera tale che, nel funzionamento, l'asta del pistone possa venir liberata in modo improvviso e non frenato dalla posizione di molla compressa (ne potrebbero derivare dei danneggiamenti agli organi interni della molla).
4. Montare la molla a gas in modo da assicurarle una posizione parallela alla direzione della forza di compressione con cui verrà azionata.
5. La superficie di appoggio che preme sulla testa del pistone per comprimere la molla deve essere perpendicolare alla corsa del pistone stesso e dovrebbe anche presentare unadurezza sufficiente a svolgere con continuità tale funzione.
6. La molla non deve mai venir sollecitata da forze laterali.
7. Proteggere l'asta del pistone da danneggiamenti dovuti a urti meccanici, oppure a contatto con fluidi esterni.
8. Si raccomanda inoltre di prevedere una riserva di corsa pari al 10% della corsa nominale o di 5 mm.
9. Non si deve superare la massima pressione di carica (a 20°C) dipendente dalla temperaturadi funzionamento perché diversamente non potrà venir garantita la sicurezza del sistema.
10. Il superamento della massima temperatura ammissibile per il funzionamento accorcia in misura sostanziale la durata utile della molla a gas.
11. La superficie del pistone / dell'asta del pistone deve venir integralmente coinvolta nel funzionamento



GB PED APPROVED

PED Approval for 2 million strokes. OMCR Gas Springs are developed, manufactured and tested for a minimum of 2 million* full strokes in accordance with PED 2014/68/EU. The springs deliver this full performance at the maximum permissible limits in terms of filling pressure and operating temperature - even when combined with any of the various mounting types available.

D PED ZULASSUNG

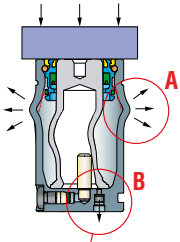
OMCR Gasdruckfedern sind gemäß DGRL 2014/68/EU entwickelt, hergestellt und geprüft für min. 2 Millionen* voll genutzte Hübe. Und das bei maximal zulässigem Fülldruck und maximal zulässiger Betriebstemperatur. Dies gilt auch in Verbindung mit sämtlichen spezifizierten Befestigungsarten.

*Berechnungswert für Dauerfestigkeit

I APPROVAZIONE PED

Le molle a gas OMCR sono state sviluppate, prodotte e testate per 2 milioni* di corse secondo DGRL2014/68/UE. Le molle raggiungono questo rendimento massimo ai limiti assoluti accettabili in termini di pressione di riempimento e temperatura operativa – anche quando sono abbinate con alcuni dei diversi tipi di montaggio disponibili.

*Valore stimato per la resistenza



GB OVERSTROKE PROTECTION

In the event of an overstroke and depending on the spring type, the patented protection system will ensure that either the cylinder wall of the gas spring is deformed in a predefinited manner (A) or the piston rod destroys a rupture bolt in the floor of the cylinder (B), thereby allowing the gas to escape into the atmosphere.

D ÜBERHUB-SCHUTZ

Wird ein Überhub ausgeführt, gewährleisten je nach Federtype die patentierten Schutzsysteme, dass sich entweder die Zylinderwand der Gasdruckfeder definiert verformt (A) oder die Kolbenstange eine Berstschraube im Zylinderboden zerstört (B) und in beiden Fällen das Gas nach außen entweicht.

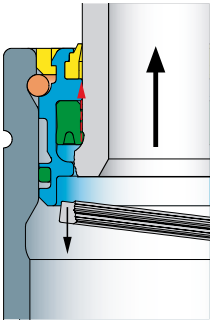
I PROTEZIONE EXTRACORSA

In caso di sovracorsa a seconda del tipo di molla, il sistema di protezione brevettato assicurerà che né la parete del cilindro della molla a gas si deformi in una maniera predefinita (A), né l'asta del pistone distrugga il perno nella base del cilindro (B), così permettendo al gas di rilasciarsi nell'atmosfera.

(GB) RETURN STROKE PROTECTION

If, for any reason, tool component should get stuck and the piston rod should be freely released from its compressed position, conventional gas spring may pose saferty risk ad the piston may not be retined in the gas spring.

OMCR Gas Spring have special guides and a patented safety stop in the piston rods ensure your safety. If the speed is too high during the return stroke, the collar on the piston rod will automatically break. The integrated safety stop then destroys the seal, which allows the gas to escape into the atmosphere and the gas spring become depressurised.

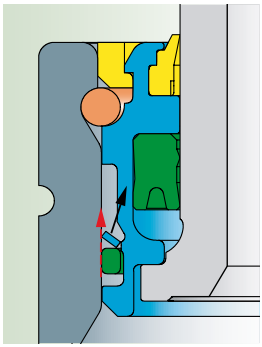


(D) RÜCKHUB-SCHUTZ

Wenn sich Werkzeugkomponenten verklemmen und die gedrückte Kolbenstange anschließend plötzlich entlastet wird, besteht bei herkömmlichen Gasdruckfedern die Gefahr, dass die Kolbenstange nicht in der Gasdruckfeder verbleibt.Hier sorgen spezielle Führungen und ein patentierter Sicherheitsstopp in den Kolbenstangen für Sicherheit. Ist die Geschwindigkeit beim Rückhub zu hoch, bricht automatisch der Bund der Kolbenstange. Der integrierte Sicherheitsstopp zerstört die Dichtung, das Gas entweicht nach außen und die Gasdruckfeder wird drucklos

(I) PROTEZIONE CORSA DI RITORNO INCONTROLLATA

Se, per un qualsiasi motivo, i componenti dello stampo dovessero bloccarsi rilasciando il pistone in maniera incontrollata si potrebbe presentare un rischio per la sicurezza. Le molle a gas OMCR hanno un sistema brevettato di guide e fermi che assicurano la sicurezza. Se la velocita di ritorno è troppo alta, la flangia di sicurezza sulla guarnizione viene automaticamente distrutta. In questo modo il gas fuoriesce nell'atmosfera e la molla a gas perde la pressione.



GB OVERPRESSURE PROTECTION

Conventional gas springs can burst if the internal pressure rises above a maximum permitted value. If this happens, parts flying around can become dangerous projectiles.

With OMCR Gas Spring if the pressure rises above the maximum permitted value, the safety collar on the sealing set is automatically destroyed. The gas then escapes into the atmosphere and the gas spring is depressurised.

GB OVERPRESS ÜBERDRUCK-SCHUTZ

Steigt der Innendruck über den zulässigen Wert, können herkömmliche Gasdruckfedern bersten und stellen ein Sicherheitsrisiko für Bediener und Werkzeug dar.Steigt der Druck über den zulässigen Wert, wird der Sicherheitsbund am Dichtungssatz oder an einer Berstschraube automatisch zerstört. Das Gas entweicht nach außen und die Gasdruckfeder wird drucklos.

GB PROTEZIONE SOVRAPRESSIONE

Le molle a gas convenzionali possono esplodere se la pressione interna supera il massimo valore concesso. Se questo accade, parti che voleranno per aria possono diventare proiettili pericolosi.Le molle a gas OMCR sono diverse: se la pressione supera il massimo valore concesso, la flangia di sicurezza sulla guarnizione viene automaticamente distrutta. In questo modo il gas fuoriesce nell'atmosfera e la molla a gas perde la pressione.

GB WARNING

After a protection function is triggered, the spring cannot be repaired and can no longer be used. It must be replaced completely.

Please refer to the relevant data sheets to check the current safety equipment which is provided with the gas spring you are interested in, or contact OMCR directly

for more information. For the safe handling of gas springs and other nitrogen products, the safety regulations must be observed.

Maintenance work on the product may only be done, if nitrogen gas is no longer contained in the gas spring.

D WARNUNG

Nach Aktivierung einer Schutzfunktion ist die Feder irreparabel und kann nicht mehr verwendet werden. Sie muss vollständig ersetzt werden. Die mit den Gasdruckfedern gelieferte Sicherheitsausrüstung entnehmen Sie bitte dem Produktblatt oder wenden Sie sich für weitere Informationen direkt an OMCR. Für den sicheren Umgang mit Gasdruckfedern und anderem Zubehör sind die Sicherheitsvorschriften unbedingt zu beachten. Wartungsarbeiten am Produkt dürfen nur durchgeführt werden, wenn kein Stickstoff mehr in der Gasfeder vorhanden ist.

I ATTENZIONE

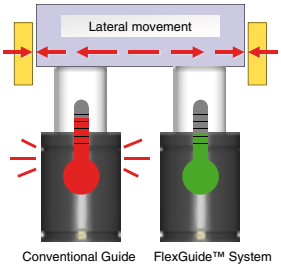
Dopo l'attivazione di una funzione di protezione la molla è irreparabile e non può più essere utilizzata. Deve essere interamente sostituita.Fare riferimento alla scheda di prodotto per controllare l'equipaggiamento di sicurezza in dotazione con le molle a gas o contatta direttamente OMCR per ulteriori informazioni. Per una gestione sicura delle mollea gas e degli altri accessori, èindispensabile osservare lenorme di sicurezza.Si possono eseguire interventi di manutenzione sul prodotto solo se l'azoto non è più presente nella molla a gas.

(GB) THE FLEX GUIDE ™ SYSTEM

The Flex Guide™ Sytem is a flexible guide in the gas spring which absorbs lateral movements of the piston rod. It minimises friction and lowers the operating temperature.

Flex Guide™ System benefits :

- Extended service life
- Increased stroke frequency, i.e. more strokes per minute



(D) THE FLEX GUIDE ™ SYSTEM

Das Flex Guide™ System, eine flexible Führung in der Gasdruckfeder, nimmt seitliche Kolbenstangenbewegungen auf. Es minimiert die Reibung und senkt die Betriebstemperatur.

Flex Guide™ System benefits :

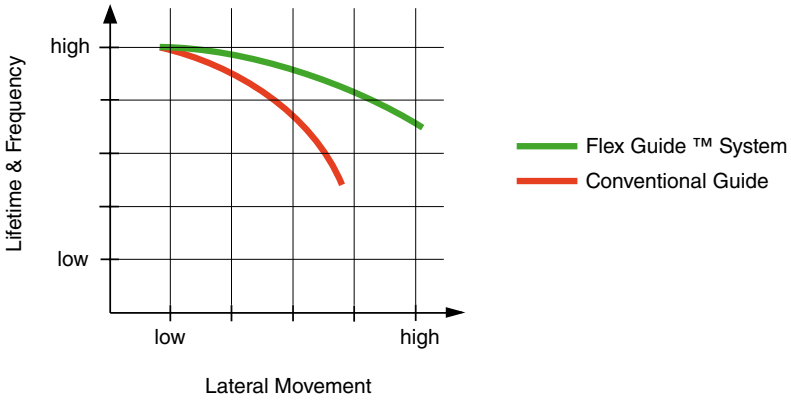
- Längere Lebensdauer
- Höhere Hubfrequenz, d. h. mehr Hübe pro Minute

(I) THE FLEX GUIDE ™ SYSTEM

Il Flex Guide™ System consiste in speciali guide interne al cilindro che assorbono i movimenti laterali,riducendo attito e temperatura di lavoro.

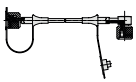
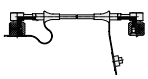
Vantaggi Flex Guide™ System:

- Incremento durata cilindro
- incremento frequenza lavoro; aumento corse/minuto



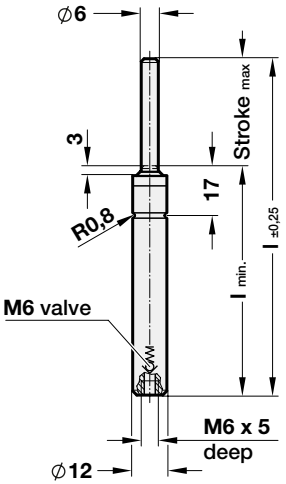
G01.30.01500	G01.30.03000	G01.30.05000	G01.30.07500	G01.30.10000
				
ISO GAS SPRING GASDRUCKFEDER MOLLA A GAS	**ISO** GAS SPRING GASDRUCKFEDER MOLLA A GAS	**ISO** GAS SPRING GASDRUCKFEDER MOLLA A GAS	**ISO** GAS SPRING GASDRUCKFEDER MOLLA A GAS	**ISO** GAS SPRING GASDRUCKFEDER MOLLA A GAS
1168	1170	1172	1174	1176

G02.10	G02.15	G02.20
		
UPPER FLANGE OBERER FLANSCH FLANGIA SUPERIORE	MIDDLE FLANGE ZENTRALER FLANSCH FLANGIA CENTRALE	LOWERFLANGE UBERER FLANSCH FLANGIA INFERIORE
1178	1180	1181

G03.11	G03.12	G03.13	G03.14	G03.50
				
ACCESSORIES ZUBEHÖR ACCESSORI	GAUGING HOSE 0° MESSCHLAUCH BEIDSEITIG 0° TUBO CONNESSIONE 0°	GAUGING HOSE 0°–90° MESSCHLAUCH BEIDSEITIG 0°–90° TUBO CONNESSIONE 0°–90°	GAUGING HOSE 90° MESSCHLAUCH BEIDSEITIG 90° TUBO CONNESSIONE 90°	CONTROL PANEL KONTROLLARMATUR PANNELLO DI CONTROLLO
1189	1194	1194	1195	1196

GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

STOCK 3D WEB



Notes

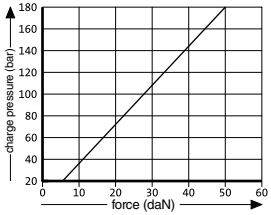
APPROVED PED 2014/68/EU

V>max

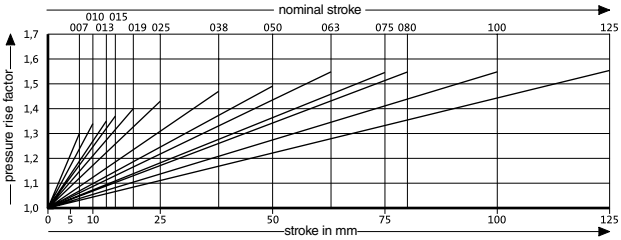
P>max

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

ORDER EXAMPLE	Art.	Init.Spring Force (daN) = 13	Stroke = 7
	G01.10	00013	007

* UNFILLED

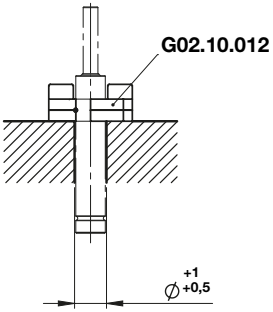
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.10.00000.007	00000*	7	56	49
G01.10.00013.007	00013	7	56	49
G01.10.00025.007	00025	7	56	49
G01.10.00038.007	00038	7	56	49
G01.10.00050.007	00050	7	56	49
G01.10.00000.010	00000*	10	62	52
G01.10.00013.010	00013	10	62	52
G01.10.00025.010	00025	10	62	52
G01.10.00038.010	00038	10	62	52
G01.10.00050.010	00050	10	62	52
G01.10.00000.013	00000*	12,7	67,4	54,7
G01.10.00013.013	00013	12,7	67,4	54,7
G01.10.00025.013	00025	12,7	67,4	54,7
G01.10.00038.013	00038	12,7	67,4	54,7
G01.10.00050.013	00050	12,7	67,4	54,7
G01.10.00000.015	00000*	15	72	57
G01.10.00013.015	00013	15	72	57
G01.10.00025.015	00025	15	72	57
G01.10.00038.015	00038	15	72	57
G01.10.00050.015	00050	15	72	57
G01.10.00000.019	00000*	19	80	61
G01.10.00013.019	00013	19	80	61
G01.10.00025.019	00025	19	80	61
G01.10.00038.019	00038	19	80	61
G01.10.00050.019	00050	19	80	61
G01.10.00000.025	00000*	25	92	67
G01.10.00013.025	00013	25	92	67
G01.10.00025.025	00025	25	92	67
G01.10.00038.025	00038	25	92	67
G01.10.00050.025	00050	25	92	67
G01.10.00000.038	00000*	38	118	80
G01.10.00013.038	00013	38	118	80
G01.10.00025.038	00025	38	118	80
G01.10.00038.038	00038	38	118	80
G01.10.00050.038	00050	38	118	80

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.10.00000.050	00000*	50	142	92
G01.10.00013.050	00013	50	142	92
G01.10.00025.050	00025	50	142	92
G01.10.00038.050	00038	50	142	92
G01.10.00050.050	00050	50	142	92
G01.10.00000.063	00000*	63,5	172	108,5
G01.10.00013.063	00013	63,5	172	108,5
G01.10.00025.063	00025	63,5	172	108,5
G01.10.00038.063	00038	63,5	172	108,5
G01.10.00050.063	00050	63,5	172	108,5
G01.10.00000.075	00000*	75	195	120
G01.10.00013.075	00013	75	195	120
G01.10.00025.075	00025	75	195	120
G01.10.00038.075	00038	75	195	120
G01.10.00050.075	00050	75	195	120
G01.10.00000.080	00000*	80	205	125
G01.10.00013.080	00013	80	205	125
G01.10.00025.080	00025	80	205	125
G01.10.00038.080	00038	80	205	125
G01.10.00050.080	00050	80	205	125
G01.10.00000.100	00000*	100	245	145
G01.10.00013.100	00013	100	245	145
G01.10.00025.100	00025	100	245	145
G01.10.00038.100	00038	100	245	145
G01.10.00050.100	00050	100	245	145
G01.10.00000.125	00000*	125	295	170
G01.10.00013.125	00013	125	295	170
G01.10.00025.125	00025	125	295	170
G01.10.00038.125	00038	125	295	170
G01.10.00050.125	00050	125	295	170

SPRING FORCE MARKING:

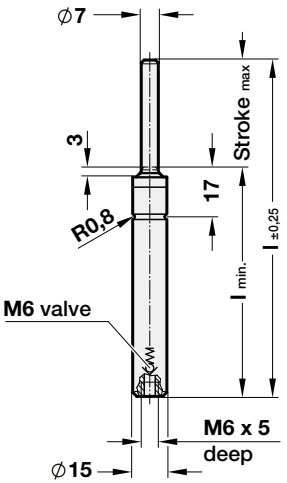
Initial spring force [daN]	Pressure [bar]	Colour
.00000.	00	black
.00013.	45	green
.00025.	90	blue
.00038.	135	red
.00050.	180	yellow

MOUNTING EXAMPLES :



GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

STOCK 3D WEB



Notes

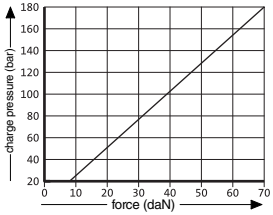
APPROVED PED 2014/68/EU

V>max

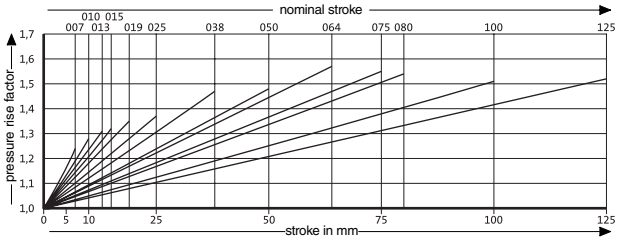
P>max

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

ORDER EXAMPLE	Art.	Init.Spring Force (daN) = 18	Stroke = 7
	G01.11	00018	007

* UNFILLED

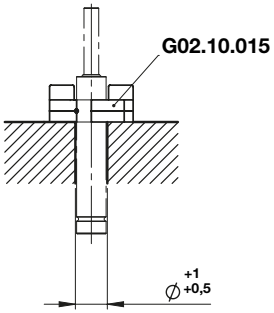
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.11.00000.007	00000*	7	56	49
G01.11.00018.007	00018	7	56	49
G01.11.00035.007	00035	7	56	49
G01.11.00050.007	00050	7	56	49
G01.11.00070.007	00070	7	56	49
G01.11.00000.010	00000*	10	62	52
G01.11.00018.010	00018	10	62	52
G01.11.00035.010	00035	10	62	52
G01.11.00050.010	00050	10	62	52
G01.11.00070.010	00070	10	62	52
G01.11.00000.013	00000*	12,7	67,4	54,7
G01.11.00018.013	00018	12,7	67,4	54,7
G01.11.00035.013	00035	12,7	67,4	54,7
G01.11.00050.013	00050	12,7	67,4	54,7
G01.11.00070.013	00070	12,7	67,4	54,7
G01.11.00000.015	00000*	15	72	57
G01.11.00018.015	00018	15	72	57
G01.11.00035.015	00035	15	72	57
G01.11.00050.015	00050	15	72	57
G01.11.00070.015	00070	15	72	57
G01.11.00000.019	00000*	19	80	61
G01.11.00018.019	00018	19	80	61
G01.11.00035.019	00035	19	80	61
G01.11.00050.019	00050	19	80	61
G01.11.00070.019	00070	19	80	61
G01.11.00000.025	00000*	25	92	67
G01.11.00018.025	00018	25	92	67
G01.11.00035.025	00035	25	92	67
G01.11.00050.025	00050	25	92	67
G01.11.00070.025	00070	25	92	67
G01.11.00000.038	00000*	38,1	118,2	80,1
G01.11.00018.038	00018	38,1	118,2	80,1
G01.11.00035.038	00035	38,1	118,2	80,1
G01.11.00050.038	00050	38,1	118,2	80,1
G01.11.00070.038	00070	38,1	118,2	80,1

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.11.00000.050	00000*	50	142	92
G01.11.00018.050	00018	50	142	92
G01.11.00035.050	00035	50	142	92
G01.11.00050.050	00050	50	142	92
G01.11.00070.050	00070	50	142	92
G01.11.00000.063	00000*	63,5	172	108,5
G01.11.00018.063	00018	63,5	172	108,5
G01.11.00035.063	00035	63,5	172	108,5
G01.11.00050.063	00050	63,5	172	108,5
G01.11.00070.063	00070	63,5	172	108,5
G01.11.00000.075	00000*	75	195	120
G01.11.00018.075	00018	75	195	120
G01.11.00035.075	00035	75	195	120
G01.11.00050.075	00050	75	195	120
G01.11.00070.075	00070	75	195	120
G01.11.00000.080	00000*	80	205	125
G01.11.00018.080	00018	80	205	125
G01.11.00035.080	00035	80	205	125
G01.11.00050.080	00050	80	205	125
G01.11.00070.080	00070	80	205	125
G01.11.00000.100	00000*	100	245	145
G01.11.00018.100	00018	100	245	145
G01.11.00035.100	00035	100	245	145
G01.11.00050.100	00050	100	245	145
G01.11.00070.100	00070	100	245	145
G01.11.00000.125	00000*	125	295	170
G01.11.00018.125	00018	125	295	170
G01.11.00035.125	00035	125	295	170
G01.11.00050.125	00050	125	295	170
G01.11.00070.125	00070	125	295	170

SPRING FORCE MARKING:

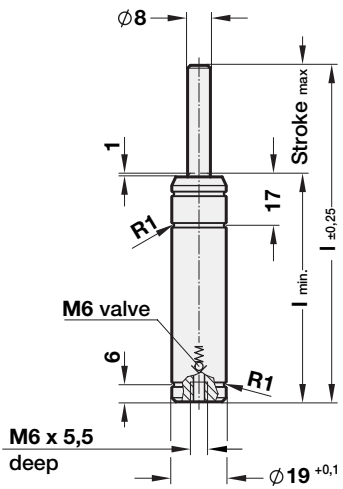
Initial spring force [daN]	Pressure [bar]	Colour
.00000.	00	black
.00018.	45	green
.00035.	90	blue
.00050.	135	red
.00070.	180	yellow

MOUNTING EXAMPLES :



GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

STOCK 3D WEB



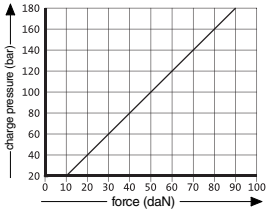
Notes

APPROVED PED 2014/68/EU | VDI | ISO

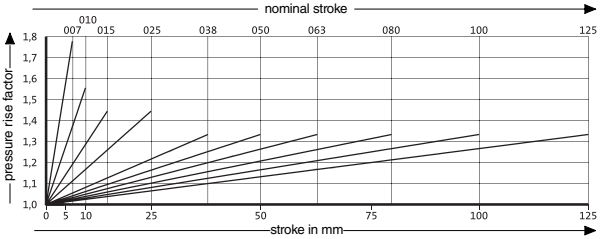
S>max | V>max | P>max

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

ORDER EXAMPLE	Art.	Init.Spring Force (daN) = 30	Stroke = 7
	G01.12	00030	007

* UNFILLED

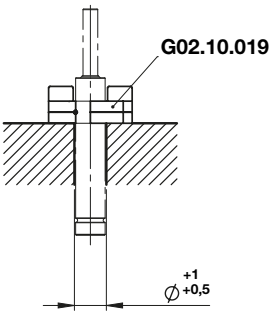
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.12.00000.007	00000*	7	56	49
G01.12.00030.007	00030	7	56	49
G01.12.00050.007	00050	7	56	49
G01.12.00070.007	00070	7	56	49
G01.12.00090.007	00090	7	56	49
G01.12.00000.010	00000*	10	62	52
G01.12.00030.010	00030	10	62	52
G01.12.00050.010	00050	10	62	52
G01.12.00070.010	00070	10	62	52
G01.12.00090.010	00090	10	62	52
G01.12.00000.015	00000*	15	72	57
G01.12.00030.015	00030	15	72	57
G01.12.00050.015	00050	15	72	57
G01.12.00070.015	00070	15	72	57
G01.12.00090.015	00090	15	72	57
G01.12.00000.025	00000*	25	92	67
G01.12.00030.025	00030	25	92	67
G01.12.00050.025	00050	25	92	67
G01.12.00070.025	00070	25	92	67
G01.12.00090.025	00090	25	92	67
G01.12.00000.038	00000*	38,1	118,2	80,1
G01.12.00030.038	00030	38,1	118,2	80,1
G01.12.00050.038	00050	38,1	118,2	80,1
G01.12.00070.038	00070	38,1	118,2	80,1
G01.12.00090.038	00090	38,1	118,2	80,1

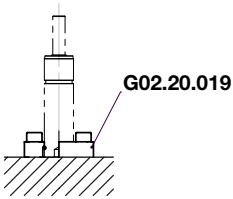
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.12.00000.050	00000*	50	142	92
G01.12.00030.050	00030	50	142	92
G01.12.00050.050	00050	50	142	92
G01.12.00070.050	00070	50	142	92
G01.12.00090.050	00090	50	142	92
G01.12.00000.063	00000*	63,5	172	108,5
G01.12.00030.063	00030	63,5	172	108,5
G01.12.00050.063	00050	63,5	172	108,5
G01.12.00070.063	00070	63,5	172	108,5
G01.12.00090.063	00090	63,5	172	108,5
G01.12.00000.080	00000*	80	205	125
G01.12.00030.080	00030	80	205	125
G01.12.00050.080	00050	80	205	125
G01.12.00070.080	00070	80	205	125
G01.12.00090.080	00090	80	205	125
G01.12.00000.100	00000*	100	245	145
G01.12.00030.100	00030	100	245	145
G01.12.00050.100	00050	100	245	145
G01.12.00070.100	00070	100	245	145
G01.12.00090.100	00090	100	245	145
G01.12.00000.125	00000*	125	295	170
G01.12.00030.125	00030	125	295	170
G01.12.00050.125	00050	125	295	170
G01.12.00070.125	00070	125	295	170
G01.12.00090.125	00090	125	295	170

SPRING FORCE MARKING:

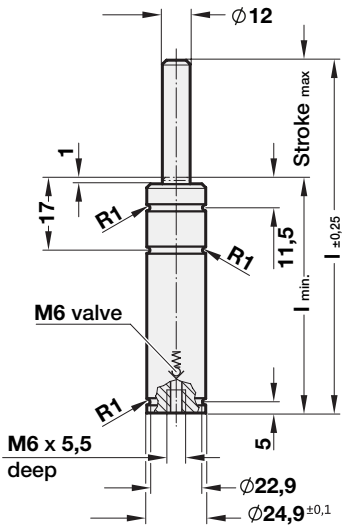
Initial spring force [daN]	Pressure [bar]	Colour
.00000.	00	black
.00030.	60	green
.00050.	100	blue
.00070.	140	red
.00090.	180	yellow

MOUNTING EXAMPLES :





GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA



STOCK 3D WEB

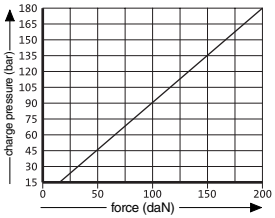
Notes

APPROVED PED 2014/68/EU | VDI | ISO

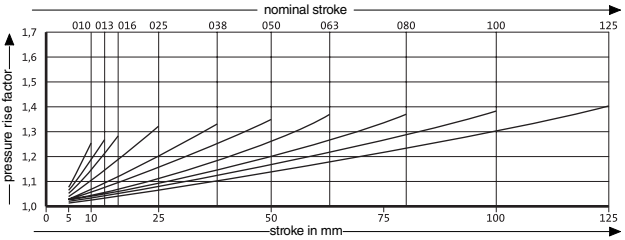
S>max | V>max | P>max

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

ORDER EXAMPLE	Art.	Init.Spring Force (daN) = 50	Stroke = 10
	G01.13	00050	010

* UNFILLED

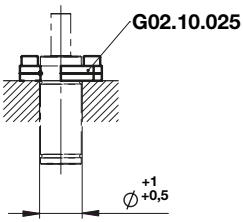
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.13.00000.010	00000*	10	62	52
G01.13.00050.010	00050	10	62	52
G01.13.00100.010	00100	10	62	52
G01.13.00150.010	00150	10	62	52
G01.13.00200.010	00200	10	62	52
G01.13.00000.013	00000*	12,7	67,4	54,7
G01.13.00050.013	00050	12,7	67,4	54,7
G01.13.00100.013	00100	12,7	67,4	54,7
G01.13.00150.013	00150	12,7	67,4	54,7
G01.13.00200.013	00200	12,7	67,4	54,7
G01.13.00000.015	00000*	15	72	57
G01.13.00050.015	00050	15	72	57
G01.13.00100.015	00100	15	72	57
G01.13.00150.015	00150	15	72	57
G01.13.00200.015	00200	15	72	57
G01.13.00000.016	00000*	16	74	58
G01.13.00050.016	00050	16	74	58
G01.13.00100.016	00100	16	74	58
G01.13.00150.016	00150	16	74	58
G01.13.00200.016	00200	16	74	58
G01.13.00000.025	00000*	25	92	67
G01.13.00050.025	00050	25	92	67
G01.13.00100.025	00100	25	92	67
G01.13.00150.025	00150	25	92	67
G01.13.00200.025	00200	25	92	67
G01.13.00000.038	00000*	38,1	118,2	80,1
G01.13.00050.038	00050	38,1	118,2	80,1
G01.13.00100.038	00100	38,1	118,2	80,1
G01.13.00150.038	00150	38,1	118,2	80,1
G01.13.00200.038	00200	38,1	118,2	80,1

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.13.00000.050	00000*	50	142	92
G01.13.00050.050	00050	50	142	92
G01.13.00100.050	00100	50	142	92
G01.13.00150.050	00150	50	142	92
G01.13.00200.050	00200	50	142	92
G01.13.00000.063	00000*	63,5	172	108,5
G01.13.00050.063	00050	63,5	172	108,5
G01.13.00100.063	00100	63,5	172	108,5
G01.13.00150.063	00150	63,5	172	108,5
G01.13.00200.063	00200	63,5	172	108,5
G01.13.00000.080	00000*	80	205	125
G01.13.00050.080	00050	80	205	125
G01.13.00100.080	00100	80	205	125
G01.13.00150.080	00150	80	205	125
G01.13.00200.080	00200	80	205	125
G01.13.00000.100	00000*	100	245	145
G01.13.00050.100	00050	100	245	145
G01.13.00100.100	00100	100	245	145
G01.13.00150.100	00150	100	245	145
G01.13.00200.100	00200	100	245	145
G01.13.00000.125	00000*	125	295	170
G01.13.00050.125	00050	125	295	170
G01.13.00100.125	00100	125	295	170
G01.13.00150.125	00150	125	295	170
G01.13.00200.125	00200	125	295	170

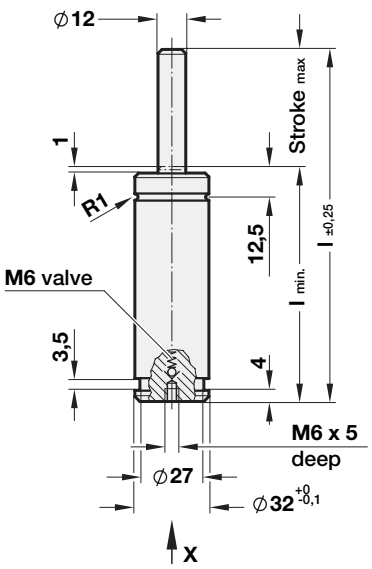
SPRING FORCE MARKING:

Initial spring force [daN]	Pressure [bar]	Colour
.00000.	00	black
.00050.	45	green
.00100.	90	blue
.00150.	135	red
.00200.	180	yellow

MOUNTING EXAMPLES :



GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA



STOCK

3D

WEB

Notes

APPROVED PED 2014/68/EU

VDI

ISO

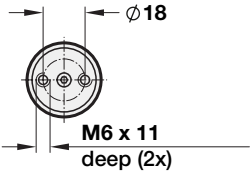
S>max

V>max

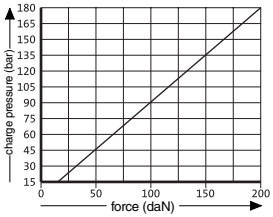
P>max

Max. piston speed: 1.6 m/s

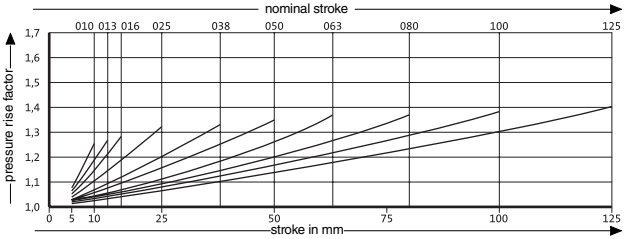
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - SMALL DIMENSION AND LOW FORCE
GASDRUCKFEDER, KLEINE ABMESSUNG, NIEDRIGE FEDERKRAFT
MOLLA A GAS DI PICCOLA DIMENSIONE E CON BASSA FORZA DELLA MOLLA

ORDER EXAMPLE	Art.	Init.Spring Force (daN) = 50	Stroke = 10
	G01.14	00050	010

* UNFILLED

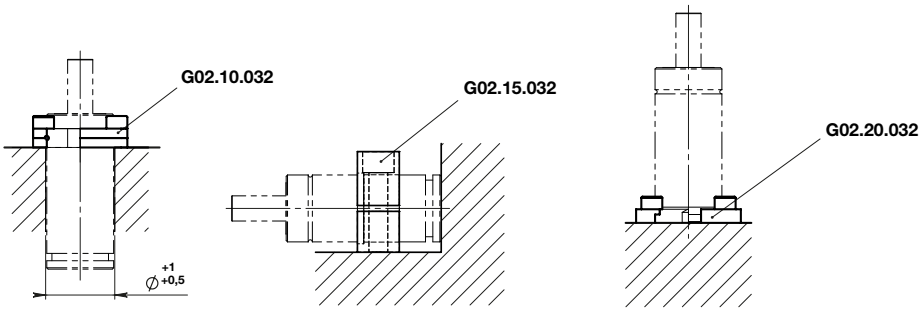
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.14.00000.010	00000*	10	70	60
G01.14.00050.010	00050	10	70	60
G01.14.00100.010	00100	10	70	60
G01.14.00150.010	00150	10	70	60
G01.14.00200.010	00200	10	70	60
G01.14.00000.013	00000*	12,7	75,4	62,7
G01.14.00050.013	00050	12,7	75,4	62,7
G01.14.00100.013	00100	12,7	75,4	62,7
G01.14.00150.013	00150	12,7	75,4	62,7
G01.14.00200.013	00200	12,7	75,4	62,7
G01.14.00000.016	00000*	16	82	66
G01.14.00050.016	00050	16	82	66
G01.14.00100.016	00100	16	82	66
G01.14.00150.016	00150	16	82	66
G01.14.00200.016	00200	16	82	66
G01.14.00000.025	00000*	25	100	75
G01.14.00050.025	00050	25	100	75
G01.14.00100.025	00100	25	100	75
G01.14.00150.025	00150	25	100	75
G01.14.00200.025	00200	25	100	75
G01.14.00000.038	00000*	38,1	126,2	88,1
G01.14.00050.038	00050	38,1	126,2	88,1
G01.14.00100.038	00100	38,1	126,2	88,1
G01.14.00150.038	00150	38,1	126,2	88,1
G01.14.00200.038	00200	38,1	126,2	88,1

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.14.00000.050	00000*	50	150	100
G01.14.00050.050	00050	50	150	100
G01.14.00100.050	00100	50	150	100
G01.14.00150.050	00150	50	150	100
G01.14.00200.050	00200	50	150	100
G01.14.00000.063	00000*	63,5	177	113,5
G01.14.00050.063	00050	63,5	177	113,5
G01.14.00100.063	00100	63,5	177	113,5
G01.14.00150.063	00150	63,5	177	113,5
G01.14.00200.063	00200	63,5	177	113,5
G01.14.00000.080	00000*	80	210	130
G01.14.00050.080	00050	80	210	130
G01.14.00100.080	00100	80	210	130
G01.14.00150.080	00150	80	210	130
G01.14.00200.080	00200	80	210	130
G01.14.00000.100	00000*	100	250	150
G01.14.00050.100	00050	100	250	150
G01.14.00100.100	00100	100	250	150
G01.14.00150.100	00150	100	250	150
G01.14.00200.100	00200	100	250	150
G01.14.00000.125	00000*	125	300	175
G01.14.00050.125	00050	125	300	175
G01.14.00100.125	00100	125	300	175
G01.14.00150.125	00150	125	300	175
G01.14.00200.125	00200	125	300	175

SPRING FORCE MARKING:

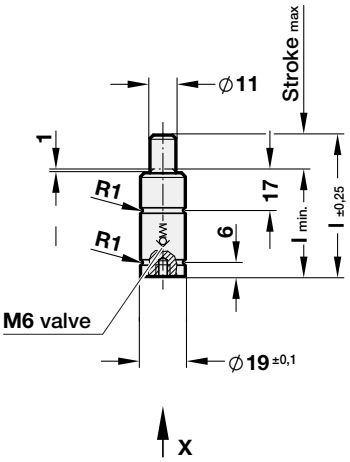
Initial spring force [daN]	Pressure [bar]	Colour
.00000.	00	black
.00050.	45	green
.00100.	90	blue
.00150.	135	red
.00200.	180	yellow

MOUNTING EXAMPLES :



GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



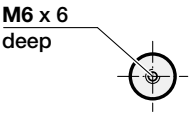
Notes

APPROVED PED 2014/68/EU | VDI | ISO

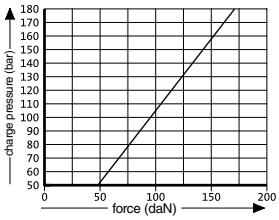
S>max | V>max | P>max

Max. piston speed: 1.6 m/s

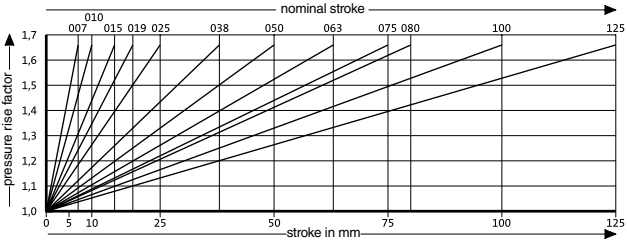
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



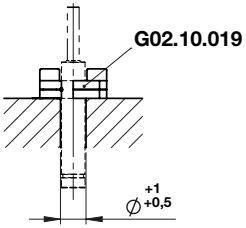
Pressure rise factor accounts for displacement but not external influences!

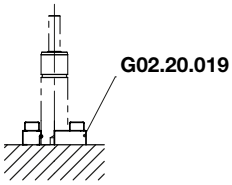
GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 7
	G01.20.00170	007

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.00170.007	00170	7	44	37
G01.20.00170.010		10	50	40
G01.20.00170.015		15	60	45
G01.20.00170.019		19	68	49
G01.20.00170.025		25	80	55
G01.20.00170.038		38	106	68
G01.20.00170.050		50	130	80
G01.20.00170.063		63	156	93
G01.20.00170.075		75	185	110
G01.20.00170.080		80	195	115
G01.20.00170.100		100	235	135
G01.20.00170.125		125	285	160

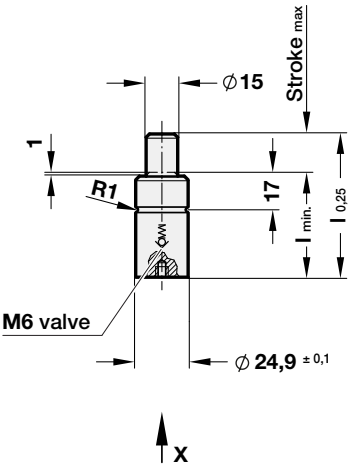
MOUNTING EXAMPLES :



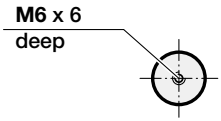


GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



View X - Gas spring



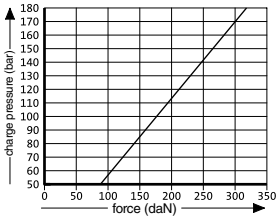
Notes

APPROVED PED 2014/68/EU | VDI | ISO

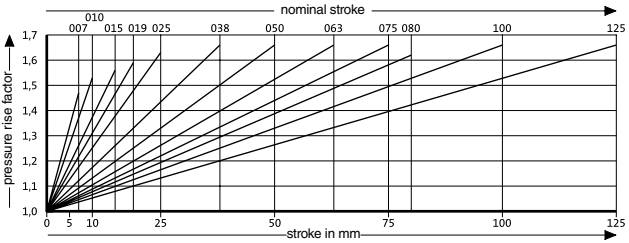
S>max | V>max | P>max

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



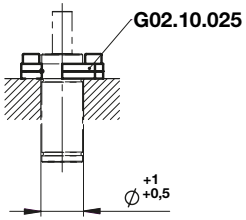
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 7
	G01.20.00320	007

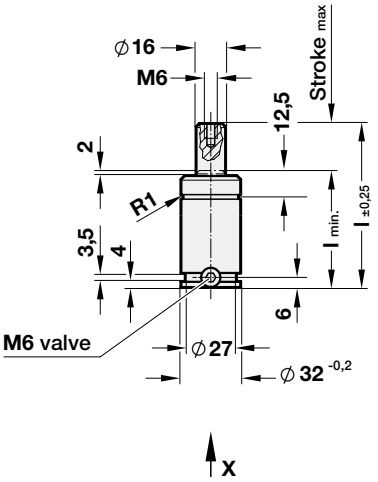
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.00320.007	00320	7	44	37
G01.20.00320.010		10	50	40
G01.20.00320.015		15	60	45
G01.20.00320.019		19	68	49
G01.20.00320.025		25	80	55
G01.20.00320.038		38	106	68
G01.20.00320.050		50	130	80
G01.20.00320.063		63	156	93
G01.20.00320.075		75	185	110
G01.20.00320.080		80	195	115
G01.20.00320.100		100	235	135
G01.20.00320.125		125	285	160

MOUNTING EXAMPLES :



GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



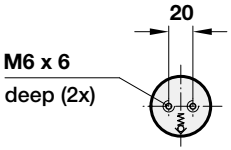
Notes

APPROVED PED 2014/68/EU | VDI | ISO

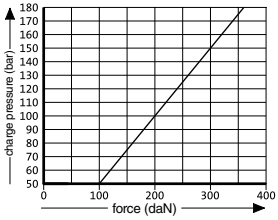
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

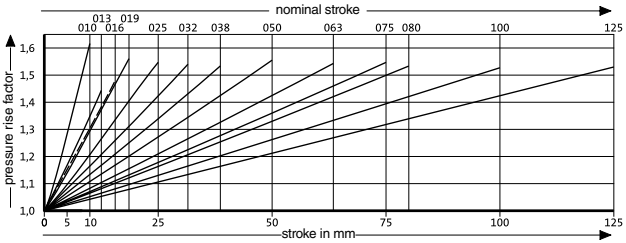
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



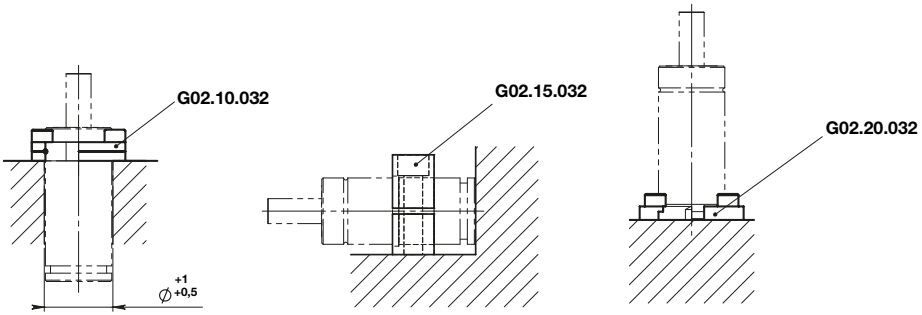
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

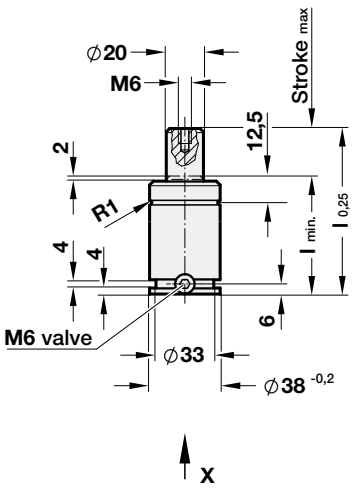
ORDER EXAMPLE	Art.	Stroke = 10
	G01.20.00350	010

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.00350.010	00350	10	50	40
G01.20.00350.013		13	56	43
G01.20.00350.016		16	62	46
G01.20.00350.019		19	68	49
G01.20.00350.025		25	80	55
G01.20.00350.032		32	94	62
G01.20.00350.038		38	106	68
G01.20.00350.050		50	130	80
G01.20.00350.063		63	156	93
G01.20.00350.075		75	180	105
G01.20.00350.080		80	190	110
G01.20.00350.100		100	230	130
G01.20.00350.125		125	280	155

MOUNTING EXAMPLES :



GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE



STOCK 3D WEB

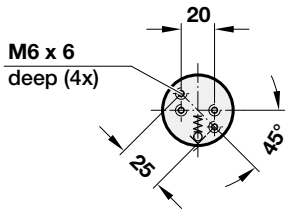
Notes

APPROVED PED 2014/68/EU | VDI | ISO

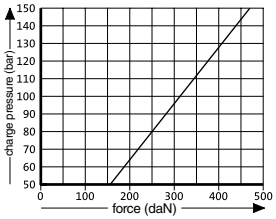
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

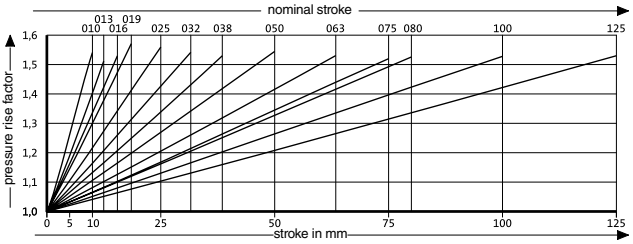
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



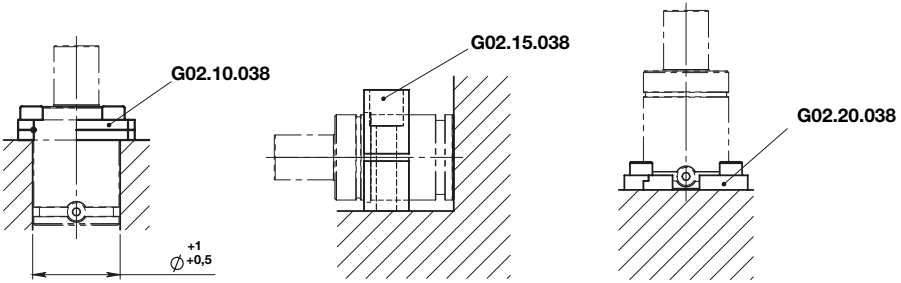
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

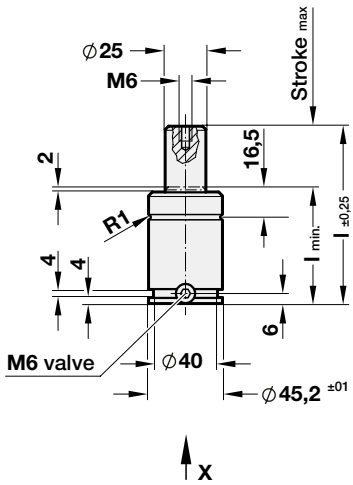
ORDER EXAMPLE	Art.	Stroke = 10
	G01.20.00500	010

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.00500.010	00470	10	50	40
G01.20.00500.013		13	56	43
G01.20.00500.016		16	62	46
G01.20.00500.019		19	68	49
G01.20.00500.025		25	80	55
G01.20.00500.032		32	94	62
G01.20.00500.038		38	106	68
G01.20.00500.050		50	130	80
G01.20.00500.063		63	156	93
G01.20.00500.075		75	180	105
G01.20.00500.080		80	190	110
G01.20.00500.100		100	230	130
G01.20.00500.125		125	280	155

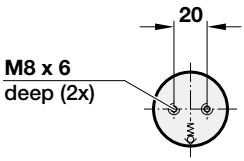
MOUNTING EXAMPLES :



GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE



View X - Gas spring



STOCK

3D

WEB

Notes

APPROVED PED 2014/68/EU

VDI

ISO

S>max

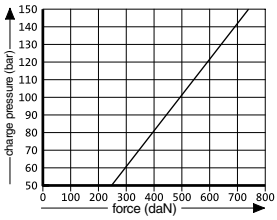
V>max

P>max

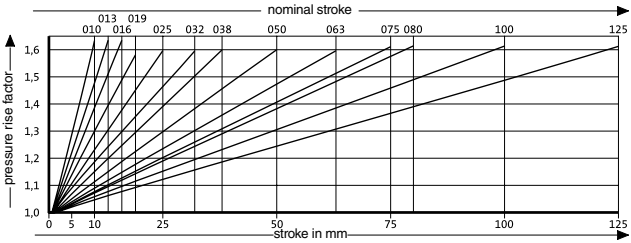
Flex Guide™

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



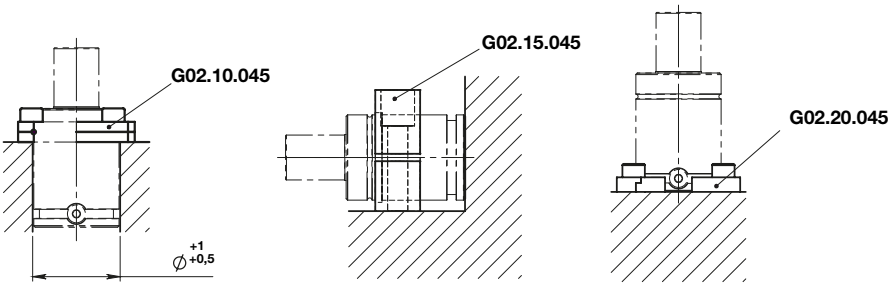
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 10
	G01.20.00750	010

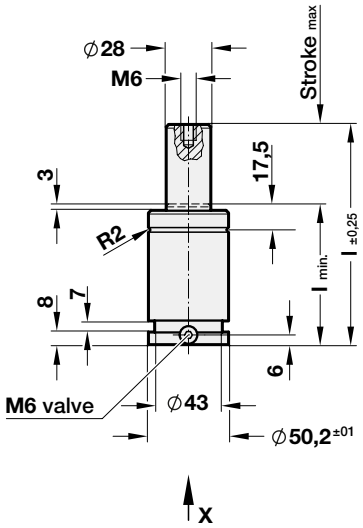
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.00750.010	00750	10	52	42
G01.20.00750.013		13	58	45
G01.20.00750.016		16	64	48
G01.20.00750.019		19	70	51
G01.20.00750.025		25	82	57
G01.20.00750.032		32	96	64
G01.20.00750.038		38	108	70
G01.20.00750.050		50	132	82
G01.20.00750.063		63	158	95
G01.20.00750.075		75	182	107
G01.20.00750.080		80	192	112
G01.20.00750.100		100	232	132
G01.20.00750.125		125	282	157

MOUNTING EXAMPLES :



GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



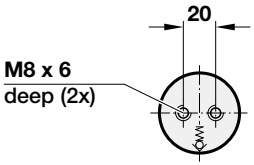
Notes

APPROVED PED 2014/68/EU | VDI | ISO

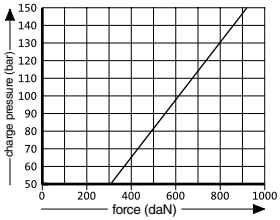
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

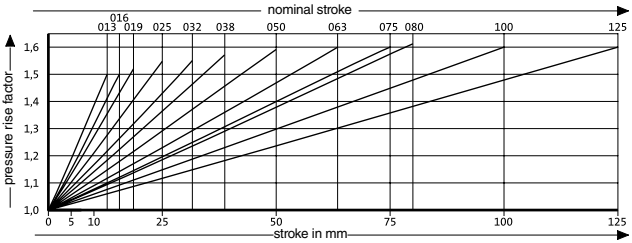
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



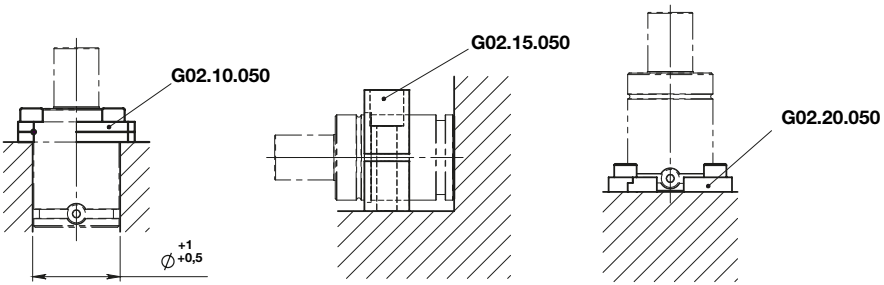
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 13
	G01.20.01000	013

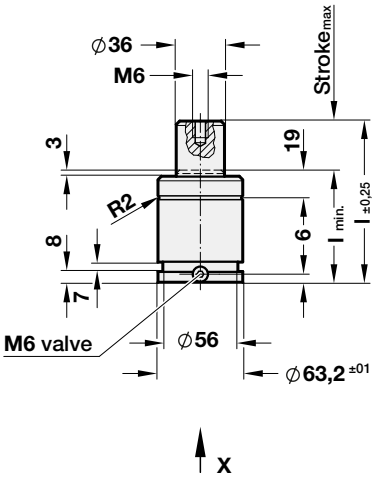
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.01000.013	00920	13	64	51
G01.20.01000.016		16	70	54
G01.20.01000.019		19	76	57
G01.20.01000.025		25	88	63
G01.20.01000.032		32	102	70
G01.20.01000.038		38	114	76
G01.20.01000.050		50	138	88
G01.20.01000.063		63	164	101
G01.20.01000.075		75	188	113
G01.20.01000.080		80	198	118
G01.20.01000.100		100	238	138
G01.20.01000.125		125	288	163

MOUNTING EXAMPLES :



GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



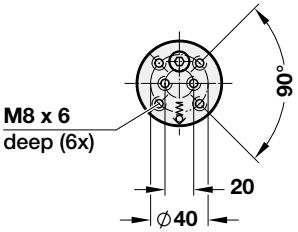
Notes

APPROVED PED 2014/68/EU | VDI | ISO

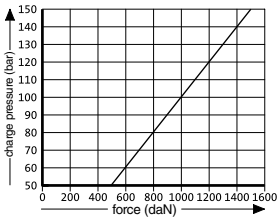
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

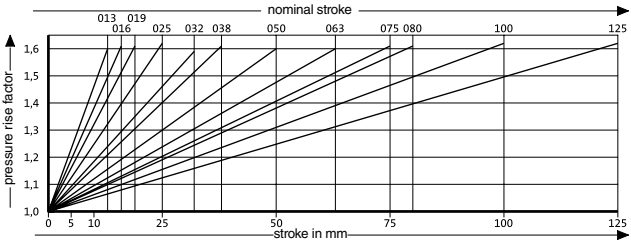
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



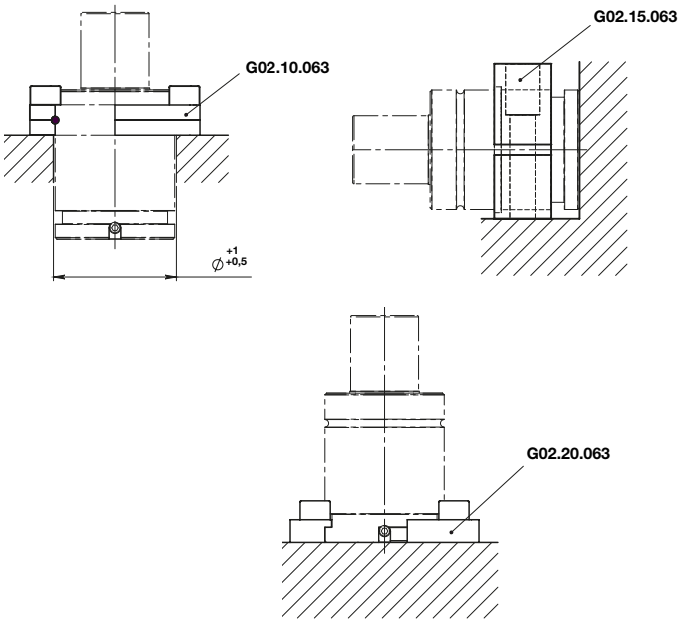
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 13
	G01.20.01500	013

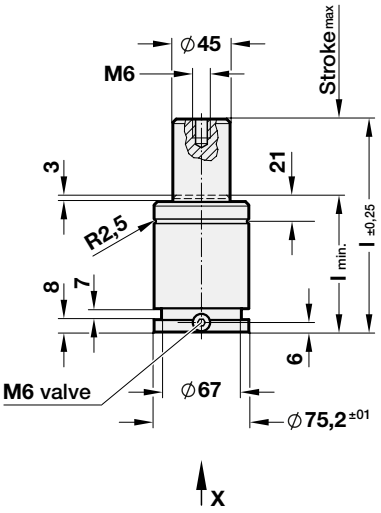
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.01500.013	01500	13	70	57
G01.20.01500.016		16	76	60
G01.20.01500.019		19	82	63
G01.20.01500.025		25	94	69
G01.20.01500.032		32	108	76
G01.20.01500.038		38	120	82
G01.20.01500.050		50	144	94
G01.20.01500.063		63	170	107
G01.20.01500.075		75	194	119
G01.20.01500.080		80	204	124
G01.20.01500.100		100	244	144
G01.20.01500.125		125	294	169

MOUNTING EXAMPLES :

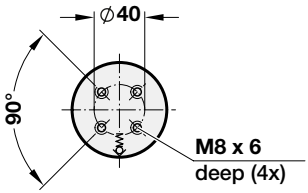


GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



View X - Gas spring



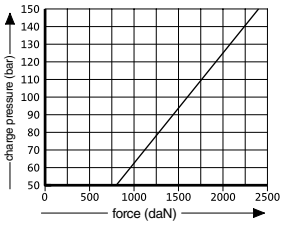
Notes

APPROVED PED 2014/68/EU · VDI · ISO

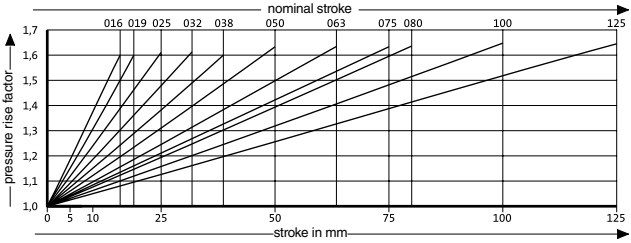
S>max · V>max · P>max · Flex Guide™

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



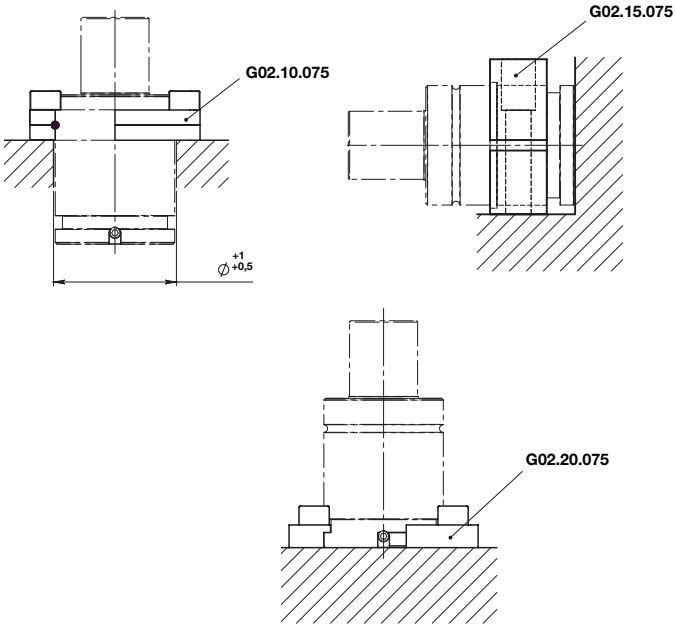
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 16
	G01.20.02400	016

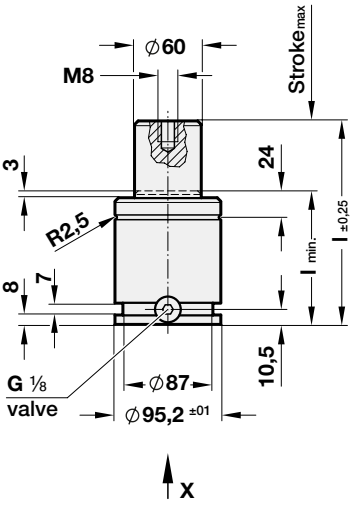
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.02400.016	02400	16	77	61
G01.20.02400.019		19	83	64
G01.20.02400.025		25	95	70
G01.20.02400.032		32	109	77
G01.20.02400.038		38	121	83
G01.20.02400.050		50	145	95
G01.20.02400.063		63	171	108
G01.20.02400.075		75	195	120
G01.20.02400.080		80	205	125
G01.20.02400.100		100	245	145
G01.20.02400.125		125	295	170

MOUNTING EXAMPLES :



GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



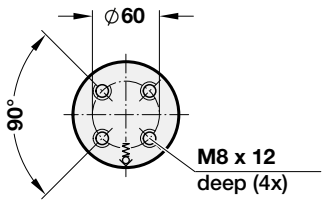
Notes

APPROVED PED 2014/68/EU | VDI | ISO

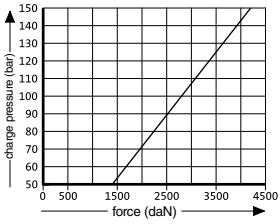
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

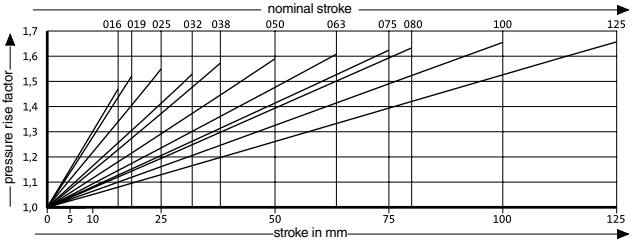
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



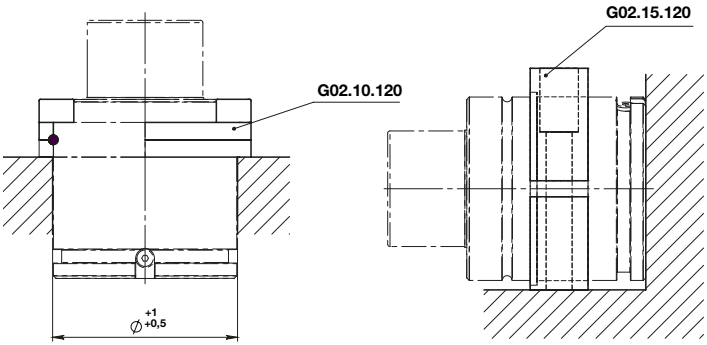
Pressure rise factor accounts for displacement but not external influences!

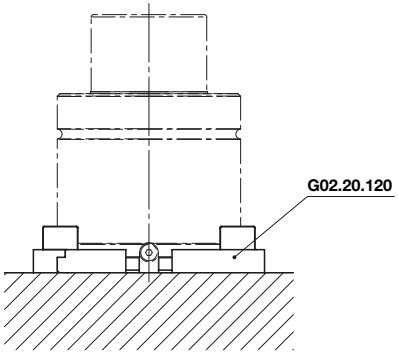
GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 16
	G01.20.04200	016

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.04200.016	04200	16	90	74
G01.20.04200.019		19	96	77
G01.20.04200.025		25	108	83
G01.20.04200.032		32	122	90
G01.20.04200.038		38	134	96
G01.20.04200.050		50	158	108
G01.20.04200.063		63	184	121
G01.20.04200.075		75	208	133
G01.20.04200.080		80	218	138
G01.20.04200.100		100	258	158
G01.20.04200.125		125	308	183

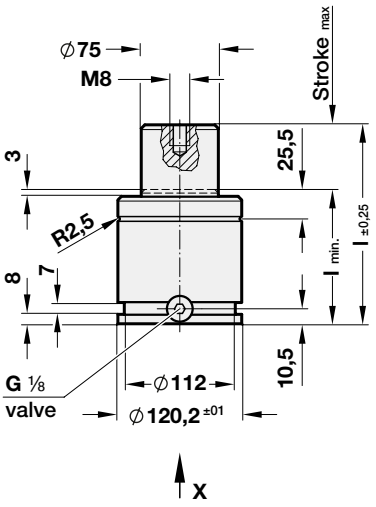
MOUNTING EXAMPLES :



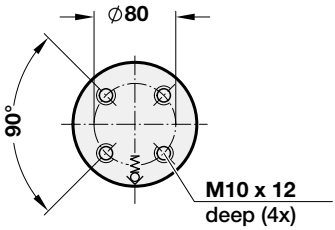


GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



View X - Gas spring



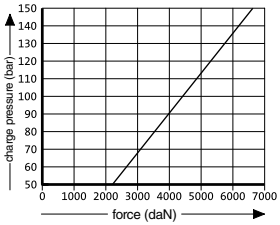
Notes

APPROVED PED 2014/68/EU · VDI · ISO

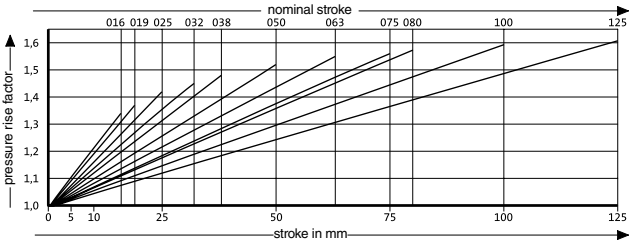
S>max · V>max · P>max · Flex Guide™

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



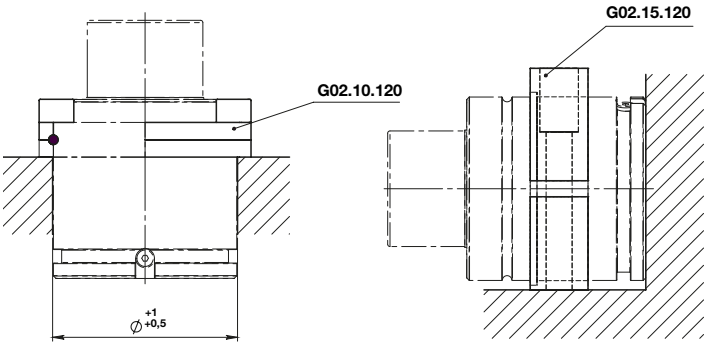
Pressure rise factor accounts for displacement but not external influences!

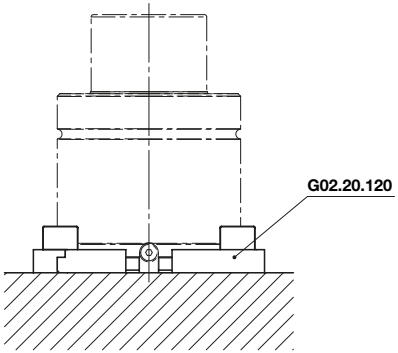
GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 16
	G01.20.06600	016

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.06600.016	06600	16	100	84
G01.20.06600.019		19	106	87
G01.20.06600.025		25	118	93
G01.20.06600.032		32	132	100
G01.20.06600.038		38	144	106
G01.20.06600.050		50	168	118
G01.20.06600.063		63	194	131
G01.20.06600.075		75	218	143
G01.20.06600.080		80	228	148
G01.20.06600.100		100	268	168
G01.20.06600.125		125	318	193

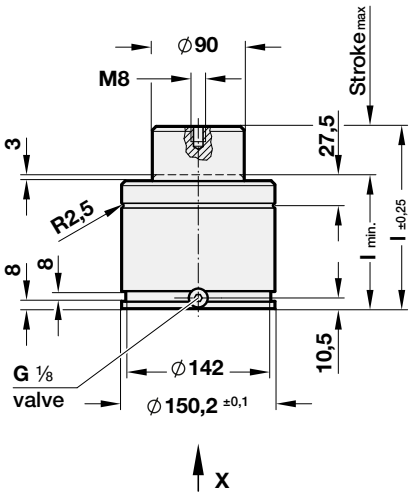
MOUNTING EXAMPLES :



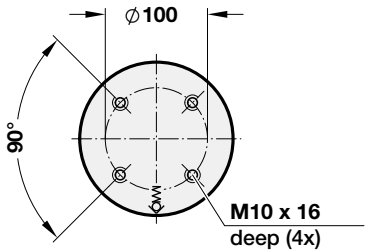


GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



View X - Gas spring



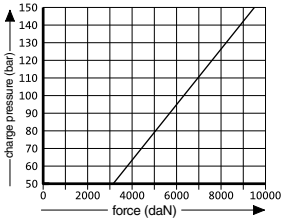
Notes

APPROVED PED 2014/68/EU | VDI | ISO

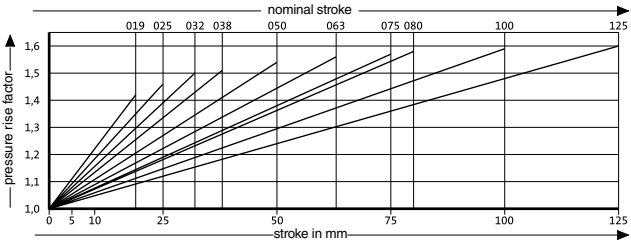
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



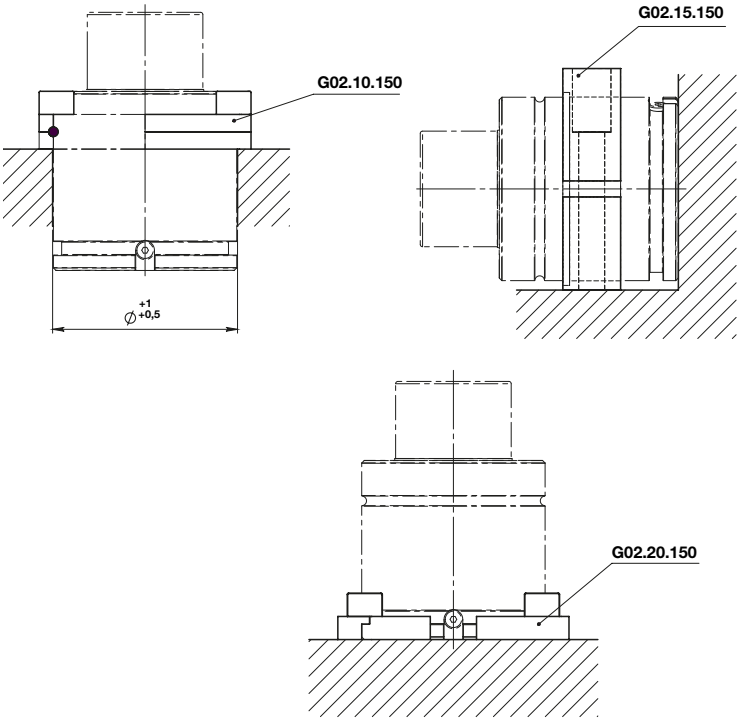
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 19
	G01.20.09500	019

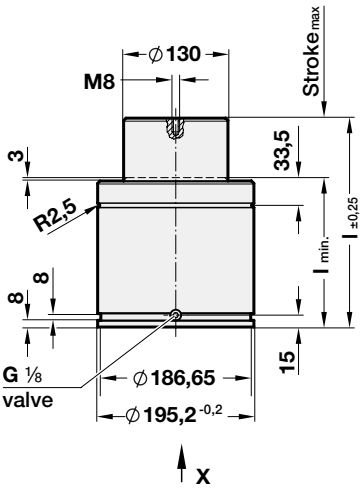
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.09500.019	09500	19	116	97
G01.20.09500.025		25	128	103
G01.20.09500.032		32	142	110
G01.20.09500.038		38	154	116
G01.20.09500.050		50	178	128
G01.20.09500.063		63	204	141
G01.20.09500.075		75	228	153
G01.20.09500.080		80	238	158
G01.20.09500.100		100	278	178
G01.20.09500.125		125	328	203

MOUNTING EXAMPLES :

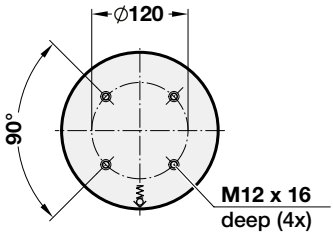


GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

STOCK 3D WEB



View X - Gas spring



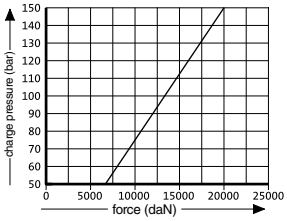
Notes

APPROVED PED 2014/68/EU | ISO

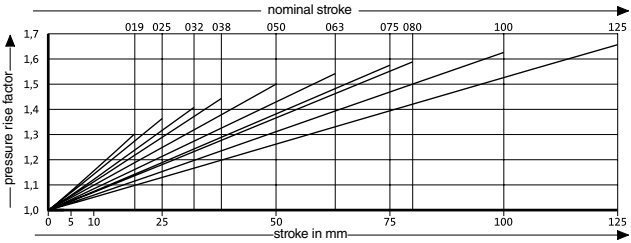
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



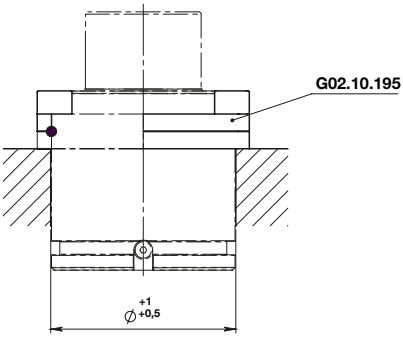
Pressure rise factor accounts for displacement but not external influences!

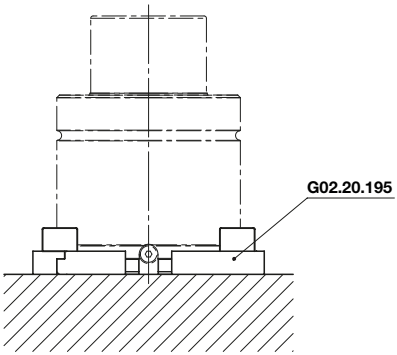
GAS SPRING - POWERLINE
GASDRUCKFEDER POWERLINE
MOLLA A GAS POWERLINE

ORDER EXAMPLE	Art.	Stroke = 19
	G01.20.20000	019

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.20.20000.019	20000	19	148	129
G01.20.20000.025		25	160	135
G01.20.20000.032		32	174	142
G01.20.20000.038		38	186	148
G01.20.20000.050		50	210	160
G01.20.20000.063		63	236	173
G01.20.20000.075		75	260	185
G01.20.20000.080		80	270	190
G01.20.20000.100		100	310	210
G01.20.20000.125		125	360	235

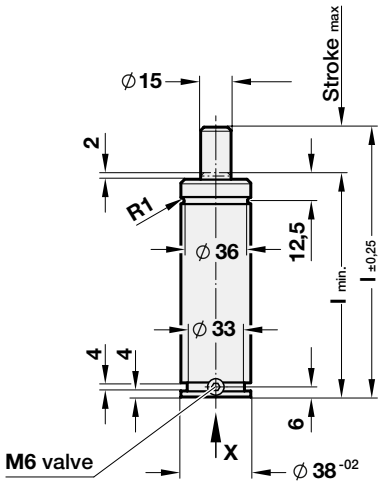
MOUNTING EXAMPLES :





GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

STOCK 3D WEB



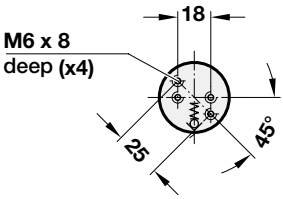
Notes

APPROVED PED 2014/68/EU | VDI | ISO

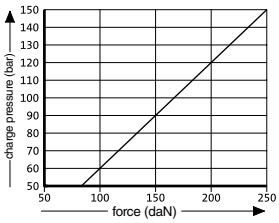
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

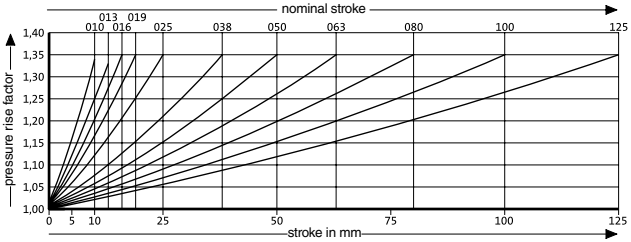
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



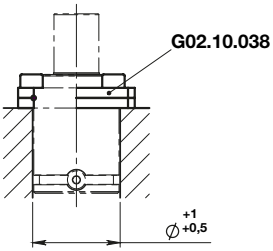
Pressure rise factor accounts for displacement but not external influences!

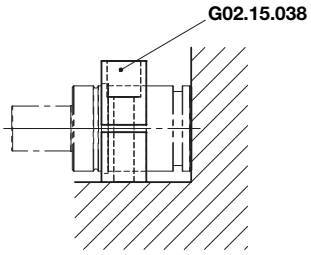
GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

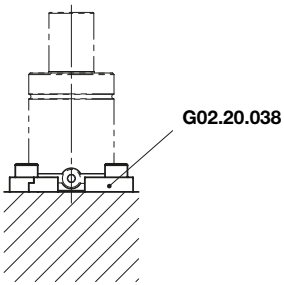
ORDER EXAMPLE	Art.	Stroke = 10
	G01.30.00250	10

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.00250.010	00250	10	70	60
G01.30.00250.013		12,7	75,4	62,7
G01.30.00250.016		16	82	66
G01.30.00250.019		19	88	69
G01.30.00250.025		25	100	75
G01.30.00250.038		38,1	126,2	88,1
G01.30.00250.050		50	150	100
G01.30.00250.063		63,5	177	113,5
G01.30.00250.080		80	210	130
G01.30.00250.100		100	250	150
G01.30.00250.125		125	300	175

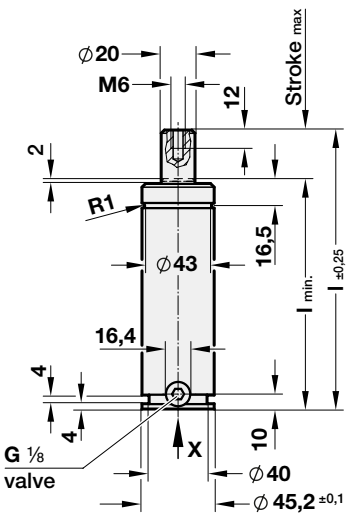
MOUNTING EXAMPLES :







GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD



STOCK 3D WEB

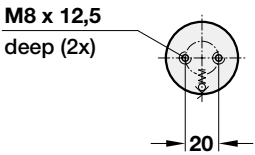
Notes

APPROVED PED 2014/68/EU | VDI | ISO

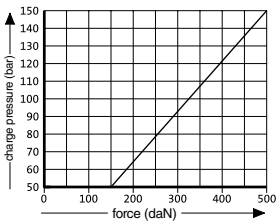
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

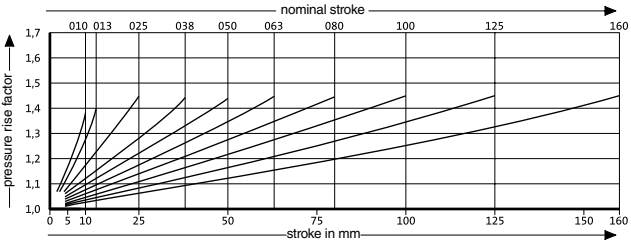
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



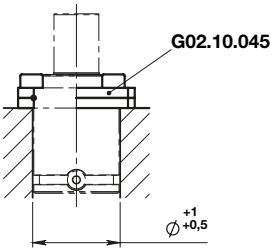
Pressure rise factor accounts for displacement but not external influences!

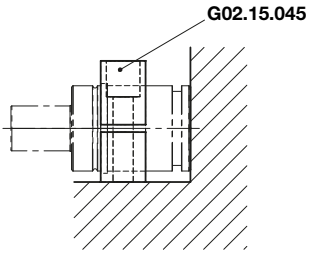
GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

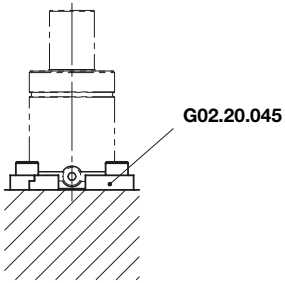
ORDER EXAMPLE	Art.	Stroke = 10
	G01.30.00500	010

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.00500.010	00500	10	105	95
G01.30.00500.013		12,7	110,4	97,7
G01.30.00500.025		25	135	110
G01.30.00500.038		38,1	161,2	123,1
G01.30.00500.050		50	185	135
G01.30.00500.063		63,5	212	148,5
G01.30.00500.080		80	245	165
G01.30.00500.100		100	285	185
G01.30.00500.125		125	335	210
G01.30.00500.160		160	405	245

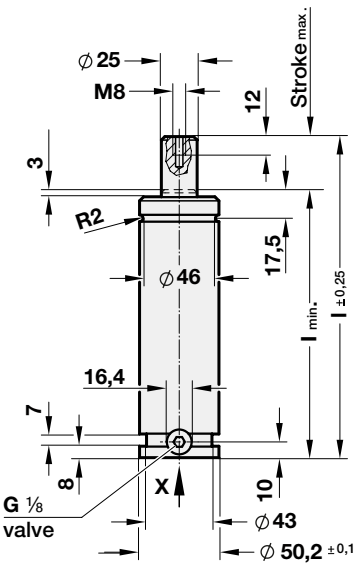
MOUNTING EXAMPLES :







GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD



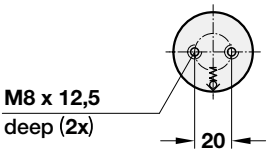
STOCK 3D WEB

Notes

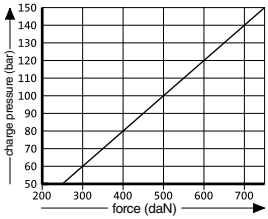
APPROVED PED 2014/68/EU | VDI | ISO

Max. piston speed: 1.6 m/s

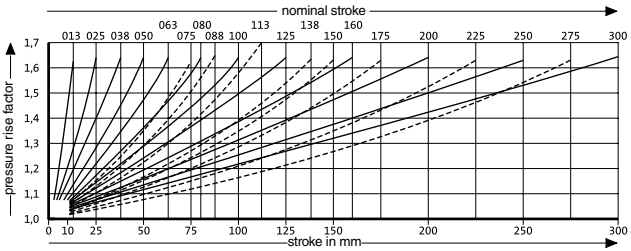
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



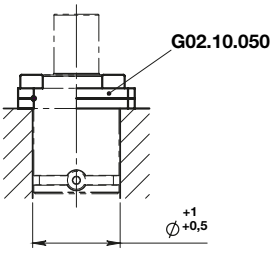
Pressure rise factor accounts for displacement but not external influences!

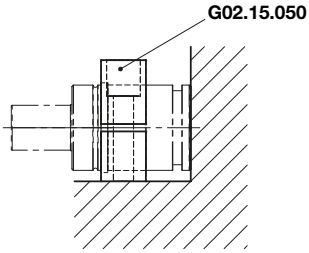
GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

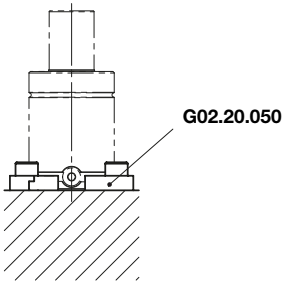
ORDER EXAMPLE	Art.	Stroke = 12,7
	G01.30.00750	013

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.00750.013	00750	12,7	120,4	107,7
G01.30.00750.025		25	145	120
G01.30.00750.038		38,1	171,2	133,1
G01.30.00750.050		50	195	145
G01.30.00750.063		63,5	222	158,5
G01.30.00750.075		75	245	170
G01.30.00750.080		80	255	175
G01.30.00750.088		87,5	270	182,5
G01.30.00750.100		100	295	195
G01.20.00750.113		112,5	320	207,5
G01.30.00750.125		125	345	220
G01.30.00750.138		137,5	370	232,5
G01.30.00750.150		150	395	245
G01.30.00750.160		160	415	255
G01.30.00750.175		175	445	270
G01.30.00750.200		200	495	295
G01.30.00750.225		225	545	320
G01.30.00750.250		250	595	345
G01.30.00750.275		275	645	370
G01.30.00750.300		300	695	395

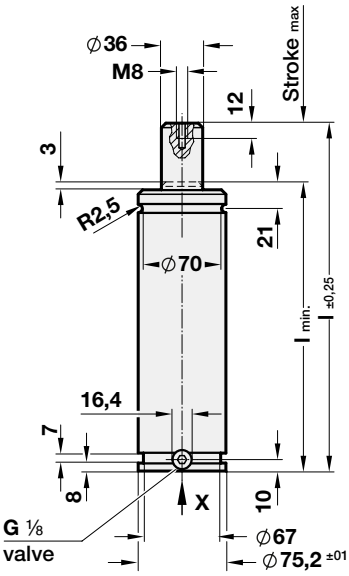
MOUNTING EXAMPLES :







GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD



STOCK

3D

WEB

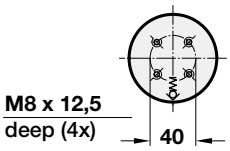
Notes

APPROVED PED 2014/68/EU | VDI | ISO

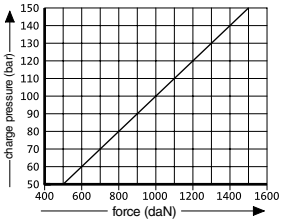
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

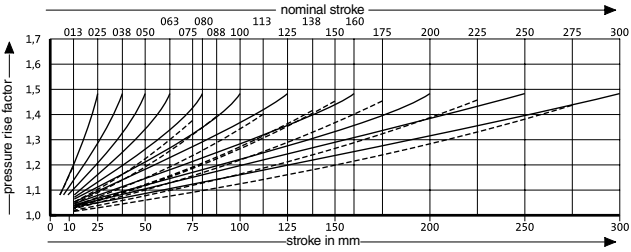
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



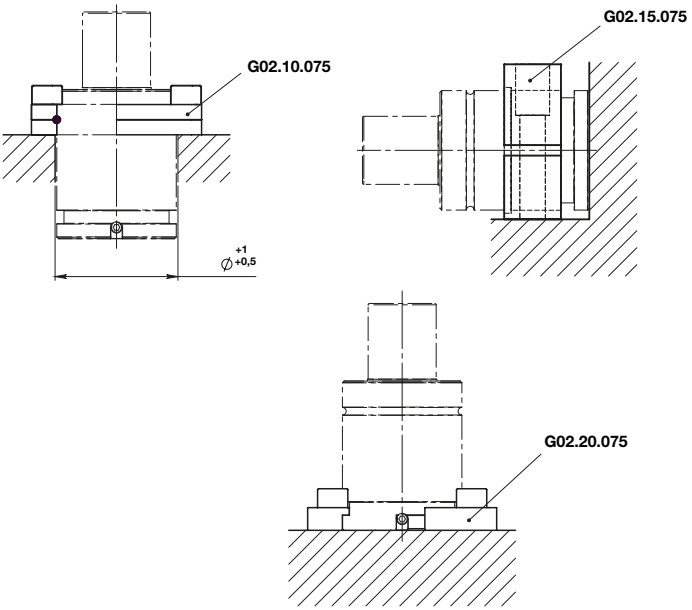
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

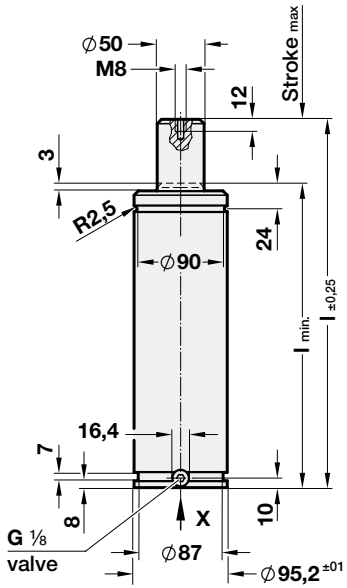
ORDER EXAMPLE	Art.	Stroke = 12,7
	G01.30.01500	013

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.01500.013	01500	12,7	135	122,3
G01.30.01500.025		25	160	135
G01.30.01500.038		38,1	186,2	148,1
G01.30.01500.050		50	210	160
G01.30.01500.063		63,5	237	173,5
G01.30.01500.075		75	260	185
G01.30.01500.080		80	270	190
G01.30.01500.088		87,5	285	197,5
G01.30.01500.100		100	310	210
G01.30.01500.113		112,5	335	222,5
G01.30.01500.125		125	360	235
G01.30.01500.138		137,5	385	247,5
G01.30.01500.150		150	410	260
G01.30.01500.160		160	430	270
G01.30.01500.175		175	460	285
G01.30.01500.200		200	510	310
G01.30.01500.225		225	560	335
G01.30.01500.250		250	610	360
G01.30.01500.275		275	660	385
G01.30.01500.300		300	710	410

MOUNTING EXAMPLES :



GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD



STOCK

3D

WEB

Notes

APPROVED PED 2014/68/EU

VDI

ISO

S>max

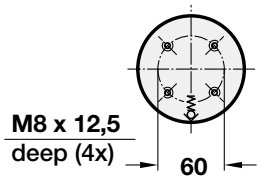
V>max

P>max

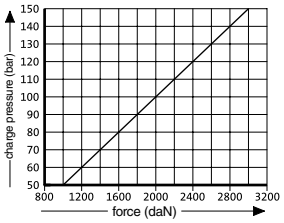
Flex Guide™

Max. piston speed: 1.6 m/s

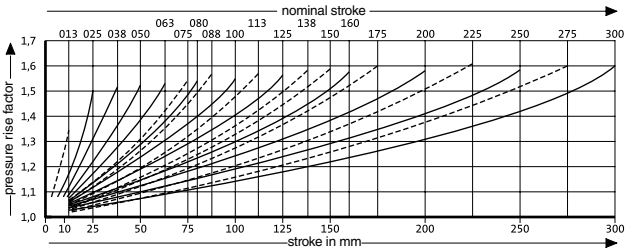
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!

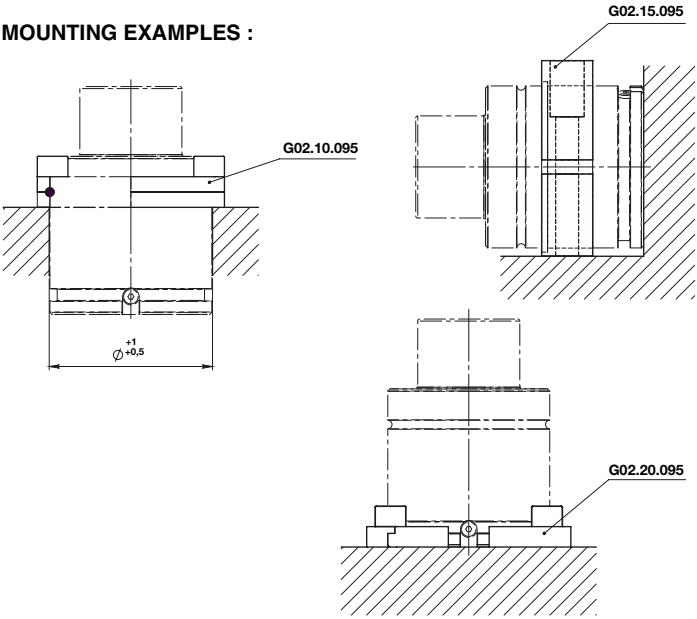
GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

ORDER EXAMPLE	Art.	Stroke = 12,7
	G01.30.03000	013

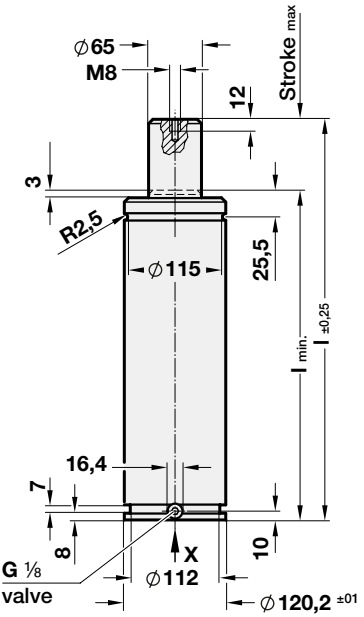
OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.03000.013*	03000	12,7	145	132,3
G01.30.03000.025		25	170	145
G01.30.03000.038		38,1	196,2	158,1
G01.30.03000.050		50	220	170
G01.30.03000.063		63,5	247	183,5
G01.30.03000.075*		75	270	195
G01.30.03000.080		80	280	200
G01.30.03000.088*		87,5	295	207,5
G01.30.03000.100		100	320	220
G01.30.03000.113*		112,5	345	232,5
G01.30.03000.125		125	370	245
G01.30.03000.138*		137,5	395	257,5
G01.30.03000.150*		150	420	270
G01.30.03000.160		160	440	280
G01.30.03000.175*		175	470	295
G01.30.03000.200		200	520	320
G01.30.03000.225*		225	570	345
G01.30.03000.250		250	620	370
G01.30.03000.275*		275	670	395
G01.30.03000.300		300	720	420

***** Special stroke lengths Not for gas springs to Renault Standard EM24.54.700.

MOUNTING EXAMPLES :



GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD



STOCK

3D

WEB

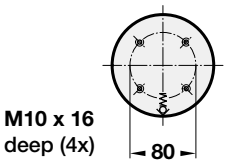
Notes

APPROVED PED 2014/68/EU | VDI | ISO

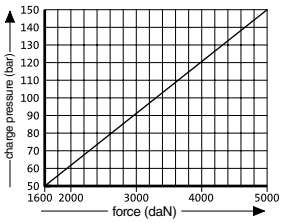
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

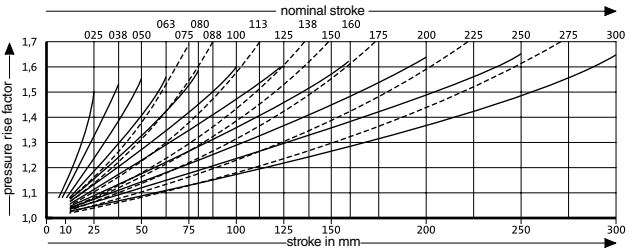
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



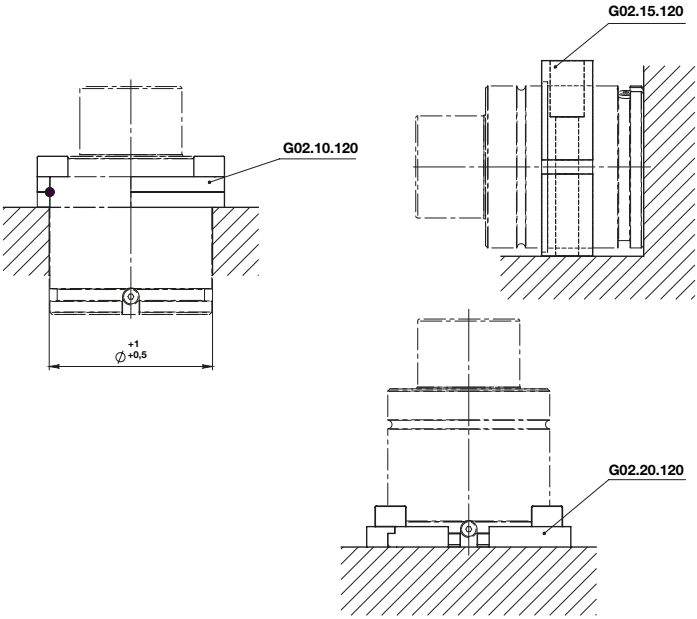
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

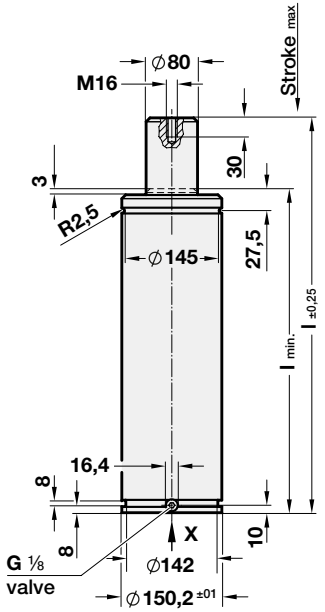
ORDER EXAMPLE	Art.	Stroke = 25
	G01.30.05000	025

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.05000.025	05000	25	190	165
G01.30.05000.038		38,1	216,2	178,1
G01.30.05000.050		50	240	190
G01.30.05000.063		63,5	267	203,5
G01.30.05000.075		75	290	215
G01.30.05000.080		80	300	220
G01.30.05000.088		87,5	315	227,5
G01.30.05000.100		100	340	240
G01.30.05000.113		112,5	365	252,5
G01.30.05000.125		125	390	265
G01.30.05000.138		137,5	415	277,5
G01.30.05000.150		150	440	290
G01.30.05000.160		160	460	300
G01.30.05000.175		175	490	315
G01.30.05000.200		200	540	340
G01.30.05000.225		225	590	365
G01.30.05000.250		250	640	390
G01.30.05000.275		275	690	415
G01.30.05000.300		300	740	440

MOUNTING EXAMPLES :



GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD



STOCK

3D WEB

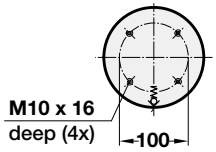
Notes

APPROVED PED 2014/68/EU | VDI | ISO

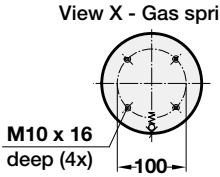
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

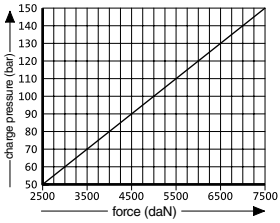
View X - Gas spring



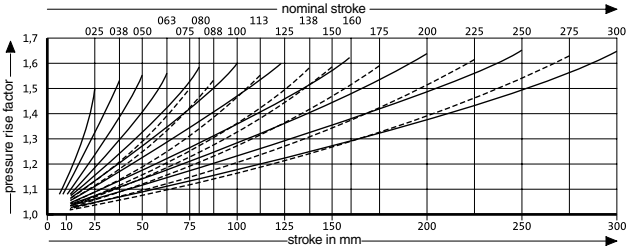
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



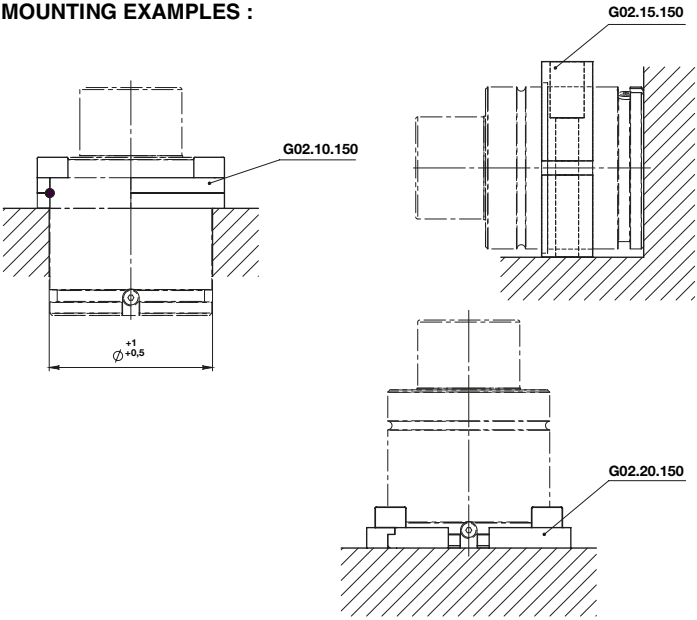
Pressure rise factor accounts for displacement but not external influences!

GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

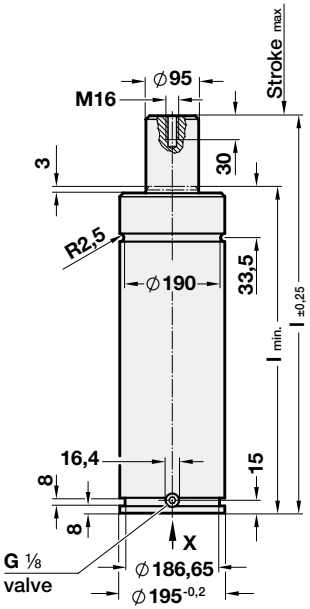
ORDER EXAMPLE	Art.	Stroke = 25
	G01.30.07500	025

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.07500.025	07500	25	205	180
G01.30.07500.038		38,1	231,2	193,1
G01.30.07500.050		50	255	205
G01.30.07500.063		63,5	282	218,5
G01.30.07500.075		75	305	230
G01.30.07500.080		80	315	235
G01.30.07500.088		87,5	330	242,5
G01.30.07500.100		100	355	255
G01.30.07500.113		112,5	380	267,5
G01.30.07500.125		125	405	280
G01.30.07500.138		137,5	430	292,5
G01.30.07500.150		150	455	305
G01.30.07500.160		160	475	315
G01.30.07500.175		175	505	330
G01.30.07500.200		200	555	355
G01.30.07500.225		225	605	380
G01.30.07500.250		250	655	405
G01.30.07500.275		275	705	430
G01.30.07500.300		300	755	455

MOUNTING EXAMPLES :



GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD



STOCK 3D WEB

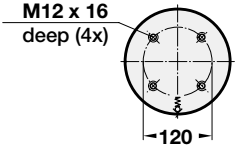
Notes

APPROVED PED 2014/68/EU | VDI | ISO

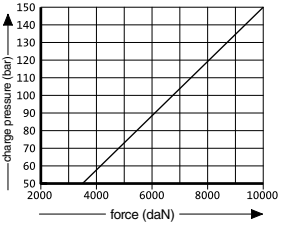
S>max | V>max | P>max | Flex Guide™

Max. piston speed: 1.6 m/s

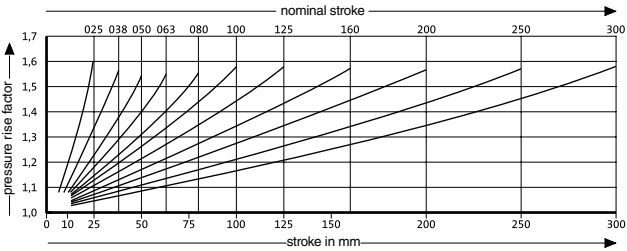
View X - Gas spring



Initial spring force
versus charge pressure



Spring force Diagram displacement versus stroke rise



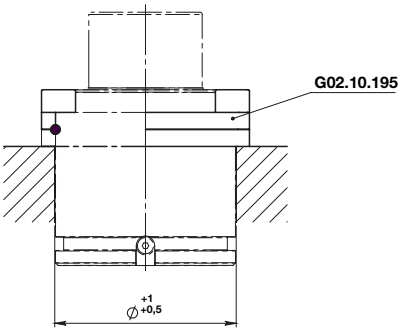
Pressure rise factor accounts for displacement but not external influences!

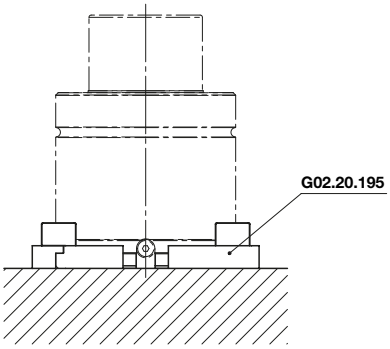
GAS SPRING - STANDARD
GASDRUCKFEDER STANDARD
MOLLA A GAS STANDARD

ORDER EXAMPLE	Art.	Stroke = 25
	G01.30.10000	025

OMCR CODE	INITIAL SPRING FORCE (daN)	STROKE max.	l	l min.
G01.30.10000.025	10000	25	210	185
G01.30.10000.038		38,1	236,2	198,1
G01.30.10000.050		50	260	210
G01.30.10000.063		63,5	287	223,5
G01.30.10000.080		80	320	240
G01.30.10000.100		100	360	260
G01.30.10000.125		125	410	285
G01.30.10000.160		160	480	320
G01.30.10000.200		200	560	360
G01.30.10000.250		250	660	410
G01.30.10000.300		300	760	460

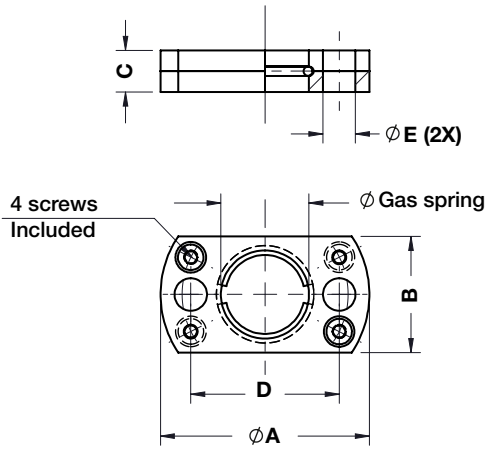
MOUNTING EXAMPLES :





UPPER FLANGE FOR GAS SPRING
OBERER FLANSCH FÜR GASDRUCKFEDERN
FLANGIA SUPERIORE PER CILINDRO AZOTO

STOCK 3D WEB

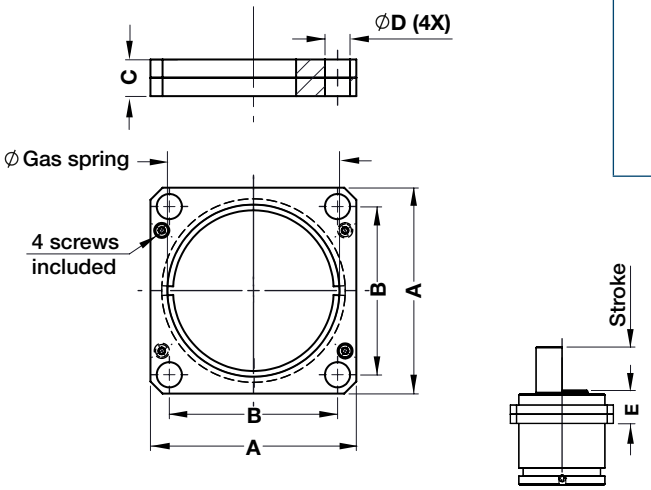


ORDER EXAMPLE	Art.	Gas Spring Diameter = 15
	G02.10	015

OMCR CODE	Ø A	B	C	Ø D	E	Ø GAS SPRING
G02.10.012	34	21	9	24	6,6	12
G02.10.015	37	24	9	27	6,6	15
G02.10.019	45	25	9	32	7	19
G02.10.025	50	30	9	38	6,6	25

UPPER FLANGE FOR GAS SPRING
OBERER FLANSCH FÜR GASDRUCKFEDERN
FLANGIA SUPERIORE PER CILINDRO AZOTO

STOCK 3D WEB

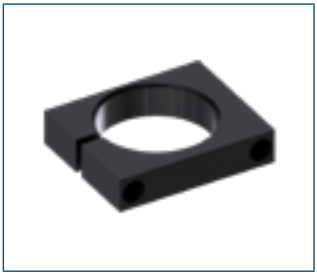


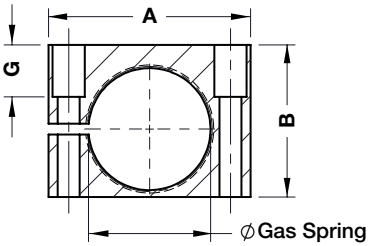
ORDER EXAMPLE	Art.	Gas Spring Diameter = 38
	G02.10	038

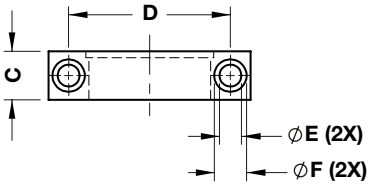
OMCR CODE	Ø A	B	C	D	Ø E	Ø GAS SPRING
G02.10.032	45	35	9	7	17	32
G02.10.038	52	40	9	7	17	38
G02.10.045	64	50	13	9	23	45
G02.10.050	70	56,5	13	9	24	50
G02.10.063	90	73,5	16	11	27	63
G02.10.075	90	73,5	16	11	29	75
G02.10.095	110	92	18	13	33	95
G02.10.120	130	109,5	21	13	36	120
G02.10.150	162	138	27	17,5	41	150
G02.10.195	210	170	27	17,5	47	195

MIDDLE FLANGE FOR GAS SPRING
ZENTRALER FLANSCH FÜR GASDRUCKFEDERN
FLANGIA CENTRALE PER CILINDRO AZOTO

STOCK 3D WEB







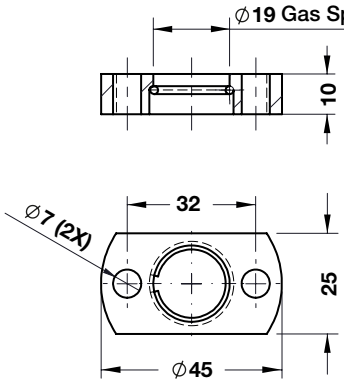
ORDER EXAMPLE

Art.	Gas Spring Diameter = 50
G02.15	050

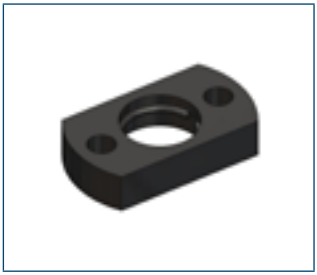
OMCR CODE	A	B	C	D	Ø E	Ø F	G	Ø GAS SPRING
G02.15.032	68	48	20	50	9	15	10	32
G02.15.038	74	54	20	54	9	15	16	38
G02.15.045	80	60	20	60	9	15	22	45
G02.15.050	90	70	30	68	11	18	25	50
G02.15.063	108	82	30	84	11	18	27	63
G02.15.075	125	94	30	100	13,5	20	32	75
G02.15.095	140	115	30	115	13,5	20	33	95
G02.15.120	170	140	30	145	13,5	20	58	120
G02.15.150	200	170	30	175	13,5	20	68	150

G02.20

LOWER FLANGE FOR GAS SPRING
UBERER FLANSCH FÜR GASDRUCKFEDERN
FLANGIA INFERIORE PER CILINDRO AZOTO



STOCK 3D WEB

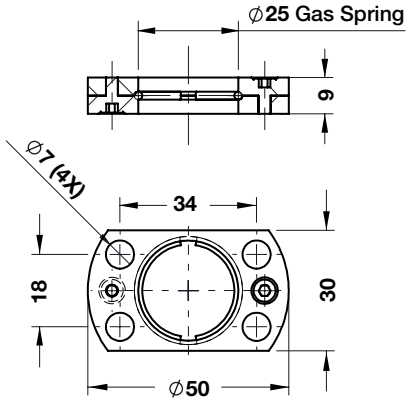


ORDER EXAMPLE	Art.	Gas Spring Diameter = 19
	G02.20	019

OMCR CODE	Ø GAS SPRING
G02.20.019	19

G02.20

LOWER FLANGE FOR GAS SPRING
UBERER FLANSCH FÜR GASDRUCKFEDERN
FLANGIA INFERIORE PER CILINDRO AZOTO



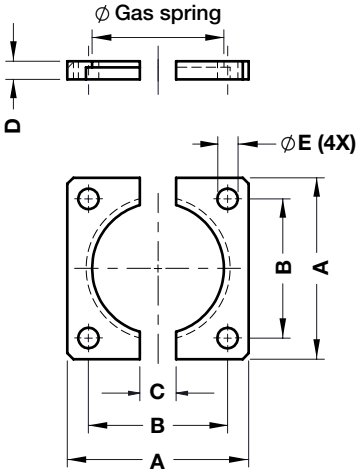
STOCK 3D WEB

ORDER EXAMPLE	Art.	Gas Spring Diameter = 25
	G02.20	025

OMCR CODE	Ø GAS SPRING
G02.20.025	25

LOWER FLANGE FOR GAS SPRING
UBERER FLANSCH FÜR GASDRUCKFEDERN
FLANGIA INFERIORE PER CILINDRO AZOTO

STOCK 3D WEB



ORDER EXAMPLE	Art.	Gas Spring Diameter = 45
	G02.20	045

OMCR CODE	A	B	C	D	Ø E	Ø GAS SPRING
G02.20.032	50	35	12	7	7	32
G02.20.038	55	40	12	7	7	38
G02.20.045	70	50	20	7	9	45
G02.20.050	75	56,5	24	12	9	50
G02.20.063	100	73,5	24	12	11	63
G02.20.075	100	73,5	24	12	11	75
G02.20.095	120	92	24	12	13	95
G02.20.120	140	109,5	24	12	13	120
G02.20.150	190	138	24	12	17,5	150
G02.20.195	210	170	24	13	17	195

(GB) DESCRIPTION

Connecting gas springs in one more systems enables the user to monitor gas spring pressure from outside the tool, to adjust it if necessary, to fill it and to drain it.

The connector system has many advantages including ease of maintenance, reliability and improvement in the quality of gas spring use in the tool.

(D) BESCHREIBUNG

Das Verbinden von Gasdruckfedern in einem oder mehren Systemen bietet dem Anwender die Möglichkeit, den Gasdruck der Gasdruckfedern außerhalb des Werkzeugs zu überwachen, nach Bedarf einzustellen, zu befüllen und abzulassen. Die Vorteile des Verbundsystems liegen in der Wartungsfreundlichkeit.

(I) DESCRIZIONE

La connessione delle molle a gas in uno o più sistemi offre all'utente la possibilità di monitorare la pressione dall'esterno dell'utensile, di regolarla secondo necessità, di caricare o di scaricare il gas. Il vantaggio offerto dai sistemi interconnessi è quello di semplificare la manutenzione e di incrementare la sicurezza e la qualità del funzionamento delle molle a gas

MINIMESS-SYSTEM

+ Small external hose diameter 5 mm

+ Small bending radius Rmin = 20

+ High pressure resistance

+ Vibration-proof measurement couplings

+ Connector with valve

+ No tools needed for connecting hose to adapter, and disconnecting

± Swaged non-detachable hose fitting

– Not for use with a pressure reservoir

TECHNICAL DATA:

Hose: Polyamide 11, black, dimpled

Hose fittings: Free cutting steel, zinc-plated

Measuring couplings: Free cutting steel, zinc-plated

Adapter: Steel, burnished

Max. permi. pressure: 630 bar

Temperature range: 0–100°C

Recommended application:

Most commonly used system for all gas springs with G1/8 gas connection.

Not suitable for use with a pressure reservoir due to small internal diameter (reduced flow volume).

Einsatzempfehlung:

Meist eingesetztes System für alle Gasdruckfedern mit G1/8 Gasanschluss. Wegen kleinem Innendurchmesser nicht für den Einsatz in Verbindung mit Druckspeichertank geeignet (verminderte Durchflussmenge).

Raccomandazioni per l'impiego:

Si tratta del sistema più frequentemente impiegato per le molle a gas con foro di carica filettato G1/8. A causa del minimo diametro interno non idoneo all'utilizzo con accumulatore a serbatoio (ridotta portata).

(GB) INSTRUCTIONS FOR HOSE ASSEMBLY

Never exceed the maximum pressures and temperatures for the hoses. Ensure that all hoses and adaptors are perfectly clean prior to assembly. The sheathing of the hoses must be perforated so that they can be used for pressurised gas. Follow the instructions below to ensure functionality and maximum service life for the hose connection:

(D) ANLEITUNG FÜR DIE SCHLAUCHMONTAGE

Nie die für Druck und Temperatur der Schläuche angegebenen Höchst erte überschreiten. Vor der Montage ist für die einwandfreie Sauberkeit aller Schläuche und Adapter zu sorgen. Die Ummantelung der Schläuche muss perforiert sein, damit sie für unter Druck stehendes Gas verwendet werden können.Um die Funktionsfähigkeit sicherzustellen und die Lebensdauer der Schlauchleitungen nicht durch zusätzliche Beanspruchung zu verkürzen, sind nachfolgende Anforderungen zu erfüllen.

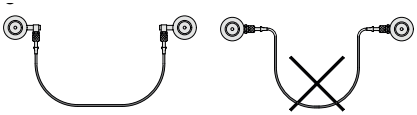
(I) ISTRUZIONI PER ASSEMBLAGGIO IMPIANTO

Non superare, in nessun caso, le indicazioni di massima temperatura e pressione indicate per il tubo flessibile in questione. Prima del montaggio verificare la perfetta pulizia di tutti i tubi e di tutta la raccorderia di connessione e di adattamento.La guaina di rivestimento dei tubi flessibili deve essere perforata e adatta all'alta pressione del gas. Allo scopo di assicurare la funzionalità dei circuiti idraulici e non pregiudicare la durata utile ,saseguire le informazione qui di seguito esposte:

(1) Select a hose length to provide a certain amount of play.

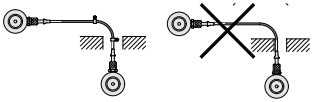
(2) The longitudinal marking on the hose must not be twisted during assembly.

(3) Use only hose fittings which prevent kinks forming in the hose.



(4) Any bends in the hose must always have the recommended minimum radius, as detailed in the catalogue.

(4) The hose must be connected correctly to avoid mechanical damage.



Refer to DIN 20066 for further details on installing hose connections.

Attention! Any modifications whatsoever to the product are prohibited.

CONNECTOR SYSTEM EXAMPLE

(GB) GROUP SERIES CONNECTION

FUNCTION: The springs are interconnected and there is just one test line to the control fitting.

NOTE: When installing gas springs always remove the valve from the gas spring.

(D) BATTERIE-REIHENANSCHLUSS

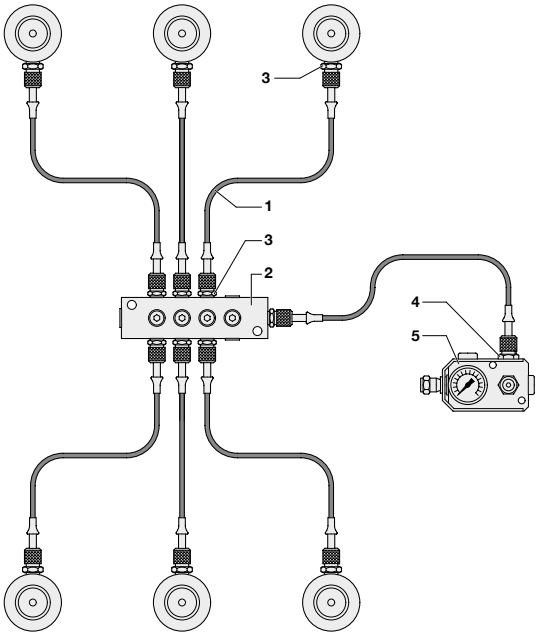
FUNKTION: Die Federn werden miteinander verbunden und mit nur einer Prüfleitung an die Kontrollarmatur angeschlossen.

HINWEIS: Bei Verbundanordnung der Gasdruckfedern Ventil aus den GF entnehmen!

(I) CONNESSIONE IN SERIE

FUNZIONAMENTO:
Le molle vengono collegate fra di loro e, tutte assieme, al complesso di controllo per mezzo di un unico tubo flessibile di controllo.

NOTE: Nelle connessioni a rete di molle multiple è necessario smontare la valvola da ogni singola molla a gas.



ITEM No.	DESCRIPTION	Q.TY	ORDER No.
1	Gauging hose	7	G03.12.XXXX
2	Distributor	1	G01.11.0011
3	Gauging Coupling	13	G03.11.000X
4	Gauging Coupling	1	G01.11.000X
5	Control fitting	1	G03.50.000X

CONNECTOR SYSTEM EXAMPLE

(GB) GROUP SERIES CONNECTION

FUNCTION: The springs are interconnected and there is just one test line to the control fitting.

NOTE: When installing gas springs always remove the valve from the gas spring.

(D) BATTERIE-REIHENANSCHLUSS

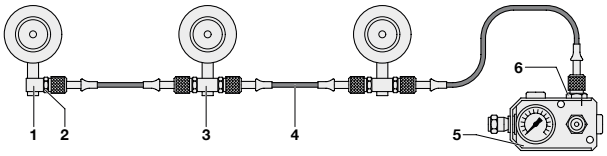
FUNKTION: Die Federn werden miteinander verbunden und mit nur einer Prüfleitung an die Kontrollarmatur angeschlossen.

HINWEIS: Bei Verbundanordnung der Gasdruckfedern Ventil aus den GF entnehmen!

(I) CONNESSIONE IN SERIE

FUNZIONAMENTO:
Le molle vengono collegate fra di loro e, tutte assieme, al complesso di controllo per mezzo di un unico tubo flessibile di controllo.

NOTE: Nelle connessioni a rete di molle multiple è necessario smontare la valvola da ogni singola molla a gas.



ITEM No.	DESCRIPTION	Q.TY	ORDER No.
1	Simple adaptor	1	G01.11.0008 (9)
2	Gauging Coupling	5	G01.11.0003
3	Multiple adapter	2	G01.11.0006 (7)
4	Gauging hose	3	G03.12.XXXX
5	Control fitting	1	G03.50.000X
6	Gauging Coupling	1	G01.11.000X

CONNECTOR SYSTEM EXAMPLE

(GB) INDEPENDENT TEST CONNECTION

FUNCTION: The springs work independently and have a gauging coupling with valve. If required the springs can be tested and pressure adjusted individually. A control fitting is used for the purpose.

NOTE: When installing gas springs always remove the valve from the gas spring.

(D) AUTONOM-PRUFANSCHLUSS

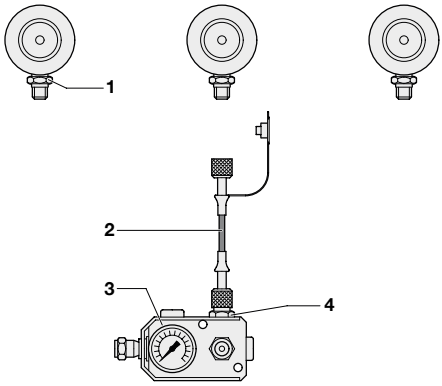
FUNKTION: Die Federn arbeiten autonom und sind mit einer Messkupplung mit Ventileinsatz ausgerüstet.

HINWEIS: Bei Verbundanordnung der Gasdruckfedern Ventil aus den GF entnehmen!

(I) INDEPENDENT TEST CONNECTION

FUNZIONAMENTO: Le molle lavorano in maniera autonoma e sono equipaggiate ciascuna con un raccordo di misura (G03.11.0001) provvisto di valvola.

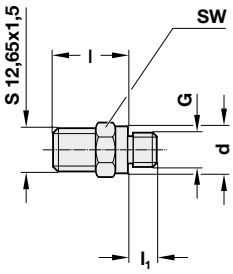
NOTE: Nelle connessioni con raccordo con valvola è necessario smontare la valvola dalla molla a gas



ITEM No.	DESCRIPTION	Q.TY	ORDER No.
1	Gauging Coupling	3	G03.11.000X
2	Gauging hose	1	G03.12.XXXX
3	Control fitting	1	G03.50.000X
4	Gauging Coupling	1	G03.11.000X

G03.11

GAUGING COUPLING
MESSKUKUPPLUNG
RACCORDO



STOCK 3D WEB

FOR CONNECTION TO GAS SPRINGS

G03.11.0001 with valve	G03.11.0003 without valve

FOR CONNECTION TO CONTROL PANEL

G03.11.0002 with valve	G03.11.0002 with valve

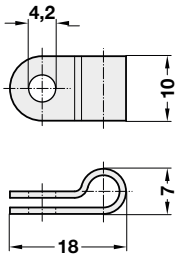
ORDER EXAMPLE	Art.	Connection type: 1/8 with valve
	G03.11	0001

OMCR CODE	G	d	SW	l	l_1
G03.11.0001	G 1/8	14	14	22	8
G03.11.0002	G 1/4	19	19	21	10
G03.11.0003	G 1/8	14	14	22	8
G03.11.0004	G 1/4	19	19	21	10

NOTE: The measuring coupling with valve is used for standard assembly layouts.

G03.11

HOSE CLAMP
SCHLAUCHSCHELL
FASCETTA PER TUBO



STOCK 3D WEB

ORDER EXAMPLE	Art.	HOSE CLUMP
	G03.11	0005

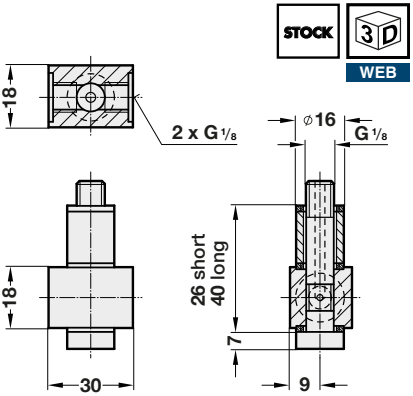
OMCR CODE	HOSE DIAMETER
G03.11.0005	5

Hose clamp for gauging hose Ø 5mm

NOTE: Supplied without screws

G03.11

DUAL ADAPTER G1/8
ZWEIFACH ADAPTER G1/8
RACCORDO DOPPIO G1/8

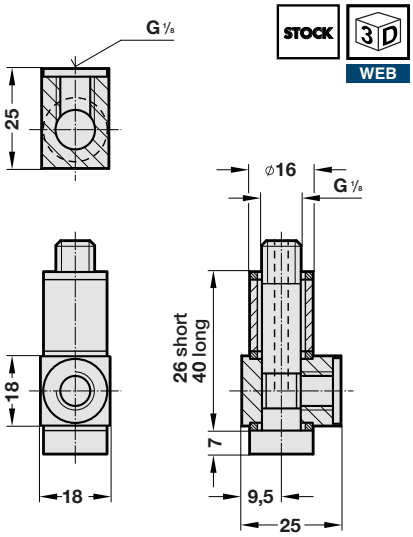


ORDER EXAMPLE	Art.	Connection type: SHORT
	G03.11	0007

OMCR CODE	TYPE
G03.11.0006	LONG
G03.11.0007	SHORT

G03.11

GAUGING COUPLING G1/8
EINFACH ADAPTER G1/8
RACCORDO SINGOLO G1/8

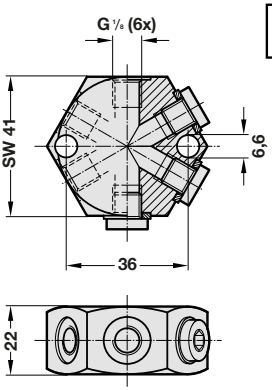


ORDER EXAMPLE	Art.	Connection type: SHORT
	G03.11	0009

OMCR CODE	TYPE
G03.11.0008	LONG
G03.11.0009	SHORT

G03.11

DISTRIBUTOR BLOCK G1/8, 6 PORTS
VERTEILERBLOCK G1/8, 6 ANSCHLUSSE
BLOCCHETTO DISTRIBUZIONE G1/8 6 ATTACCHI



STOCK 3D WEB

ORDER EXAMPLE	Art.	Connection type: 6 SLOTS
	G03.11	0010

OMCR CODE	PORTS
G03.11.0010	6

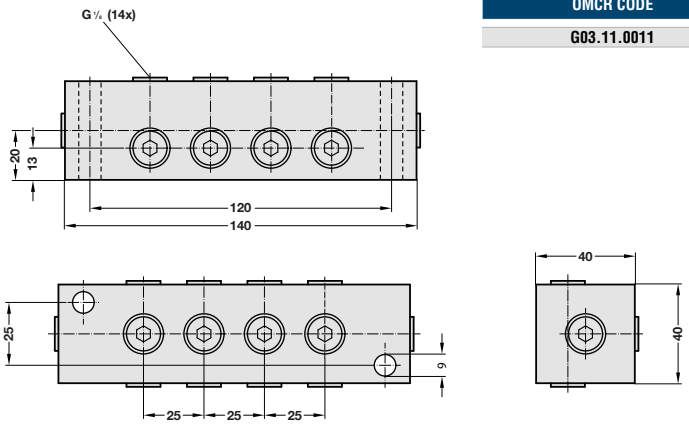
G03.11

DISTRIBUTOR BLOCK G1/8, 14 PORTS
VERTEILERBLOCK G1/8, 14 ANSCHLUSSE
BLOCCHETTO DISTRIBUZIONE G1/8 14 ATTACCHI

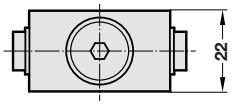
STOCK 3D WEB

ORDER EXAMPLE	Art.	Connection type: 14 SLOTS
	G03.11	0011

OMCR CODE	PORTS
G03.11.0011	14



DISTRIBUTOR BLOCK G1/8, 4 PORTS
VERTEILERBLOCK G1/8, 4 ANSCHLUSSE
BLOCCHETTO DISTRIBUZIONE G1/8 4 ATTACCHI



STOCK

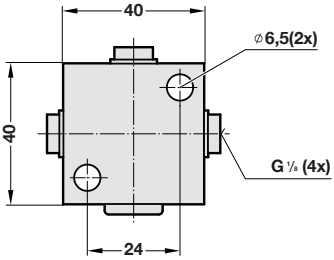
3D

WEB

ORDER EXAMPLE

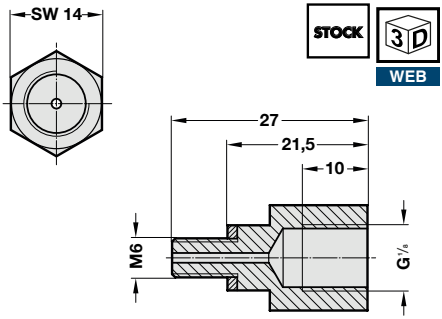
Art.	Connection type: 4 SLOTS
G03.11	0012

OMCR CODE	PORTS
G03.11.0012	4



G03.11

CONNECTION FITTING M6 - G1/8
ANSCHLUSSADAPTER M6 - G1/8
RACCORDO DA M6 A G1/8

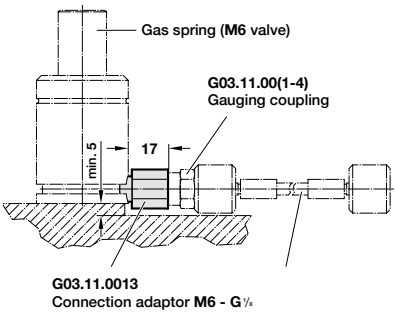


STOCK 3D WEB

ORDER EXAMPLE	Art.	Connection FITTING
	G03.11	0013

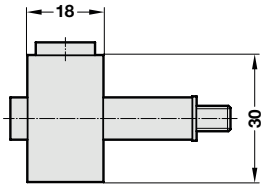
OMCR CODE
G03.11.0013

MOUNTING EXAMPLES :



G03.11

DUAL ADAPTER M6
ZWEIFACH ADAPTER M6
RACCORDO DOPPIO M6

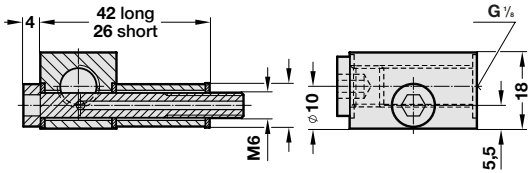


STOCK 3D WEB

ORDER EXAMPLE	Art.	Connection type: SHORT
	G03.11	0015

OMCR CODE	TYPE
G03.11.0014	LONG
G03.11.0015	SHORT

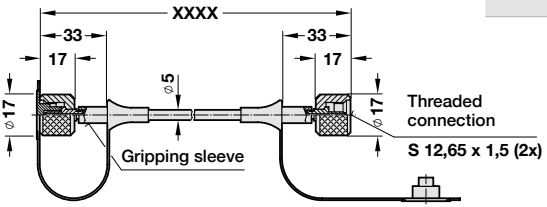
NOTE: For connection of gas springs with M6 filling connection



G03.12

GAUGING HOSE BOTH ENDS STRAIGHT
MESSCHLAUCH BEIDSEITIG GERADE
TUBO CONNESSIONE 0° - 0°

STOCK 3D WEB



ORDER EXAMPLE	Art.	Connection lenght = 350 mm
	G03.12	0350

OMCR CODE	LENGHT
G03.12.	XXXX

ORDER EXAMPLE

Shortest factory length: 90 mm
XXXX: Lenght in mm
Minimum bending radius: R20

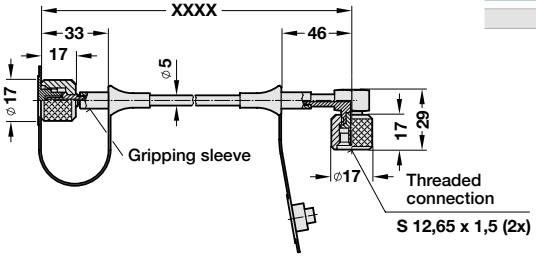
*Measuring hose available in the following lengths:

5 mm step range < 1000 mm
10 mm step range > 1000 mm
Max lenght :3000mm

G03.13

GAUGING HOSE ONE END STRAIGHT ONE 90°
MESSCHLAUCH EIDSEITIG GERADE / 90°
TUBO CONNESSIONE 0° - 90°

STOCK 3D WEB



ORDER EXAMPLE	Art.	Connection lenght = 350 mm
	G03.13	0350

OMCR CODE	LENGHT
G03.13.	XXXX

ORDER EXAMPLE

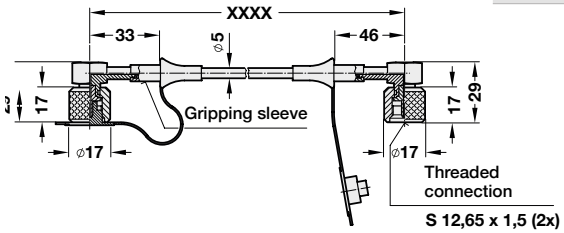
Shortest factory length: 90 mm
XXXX: Lenght in mm
Minimum bending radius: R20

*Measuring hose available in the following lengths:

5 mm step range < 1000 mm
10 mm step range > 1000 mm
Max lenght :3000mm

GAUGING HOSE BOTH ENDS 90°
MESSCHLAUCH BEIDSEITIG 90°
TUBO CONNESSIONE 90° - 90°

STOCK 3D WEB



ORDER EXAMPLE	Art.	Connection lenght = 350 mm
	G03.14	0350

OMCR CODE	LENGHT
G03.14.	XXXX

ORDER EXAMPLE

Shortest factory length: 90 mm
XXXX: Lenght in mm
Minimum bending radius: R20

*Measuring hose available in the following lengths:

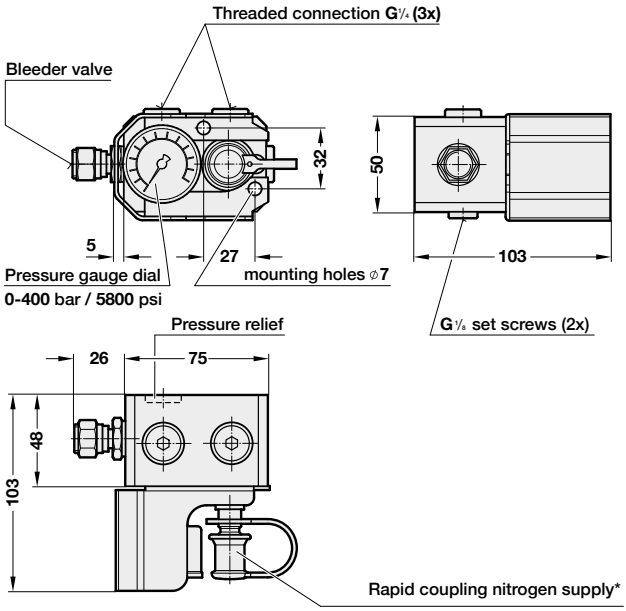
5 mm step range < 1000 mm
10 mm step range > 1000 mm
Max lenght :3000mm

CONTROL FITTING
KONTROLLARMATUR
PANNELLO DI CONTROLLO

STOCK 3D WEB

ORDER EXAMPLE	Art.	Control Panel Model
	G03.50	0003

OMCR CODE	TYPE
G03.50.0001	1
G03.50.0002	2
G03.50.0003	3
G03.50.0004	4



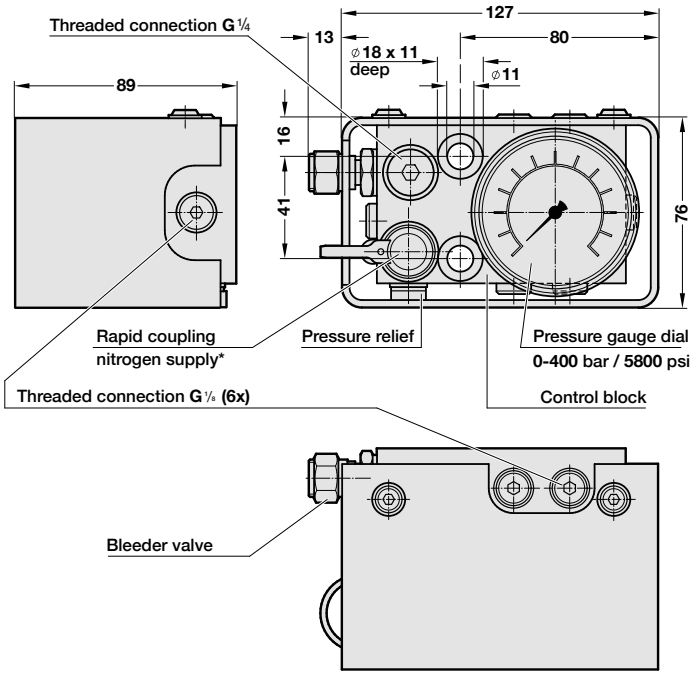
ITEM No.	DESCRIPTION
1	without pressure switch
	ohne Druckschalter
	senza interruttore pressostatico
2	with pressure switch
	mit Druckschalter
	con interruttore pressostatico
3	without pressure switch and with pressure relief
	ohne Druckschalter und mit Berstsicherung
	senza interruttore pressostatico e con sicurezza anti-scoppio
4	with pressure switch, with pressure relief
	mit Druckschalter und mit Berstsicherung
	con interruttore pressostatico e con sicurezza anti-scoppio

CONTROL FITTING WITHOUT PRESSURE SWITCH WITH PRESSURE RELIEF
KONTROLLARMATUR OHNE DRUCKSHALTER MIT BERSTSICHERUNG
PANNELLO DI CONTROLLOSENZA INTERRUTTORE PRESSOSTATICO CON ANTISCOPPIO

STOCK 3D WEB

ORDER EXAMPLE	Art.	Control Panel Model
	G03.50	0005

OMCR CODE
G03.50.0005



DESCRIPTION: The control fitting is used to constantly monitor the filling pressure of one or more gas springs.

The control fitting is equipped with rapid coupling for nitrogen supply and a bleeder valve. There are three G1/8 ports for simultaneous pressure checking at the control fitting. Measuring range from 0 - 400 bar / 5800 psi.


Cam Unit
Gas Springs
Wire Springs
Eyebolts
Elastomers
OMCR
STANDARD DIE COMPONENTS
PRODUCTS
CHW

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