

强力氮气弹簧是我们产品中靠柱塞杆密封的最矮、弹压力最大的氮气弹簧。它可以在很小的模具内提供非常大的弹压力。此系列氮气弹簧的弹压力从1700 N到 200000 N，工作行程从7至125mm。

此系列气弹簧在缸侧面有一个充气口，也可以使用这个充气口，用于微型管路连接系统。

缸体上部有一个C形槽，缸体下部有一个U形槽，它们同缸体底部四个M8螺孔一起，提供了各种安装可能性。

The Power Line Series includes our shortest and most powerful Piston Rod Sealed gas springs, offering impressive force in a very compact format.

The Power Line springs are available with forces from 1,700 N up to 200,000 N and stroke lengths between 7 and 125 mm.

There is a side port for gas charging that can also be used to connect to a gas link system.

An upper C-groove, lower U-groove together with four M8 threaded holes allow various mounting possibilities using our standard mounts.

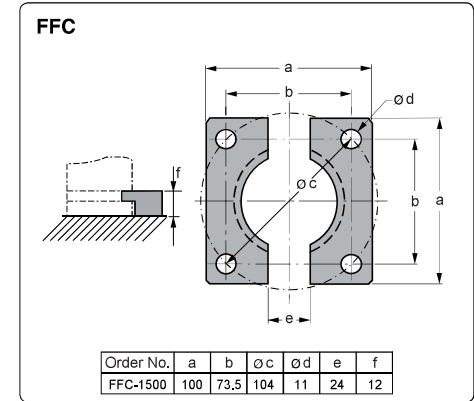
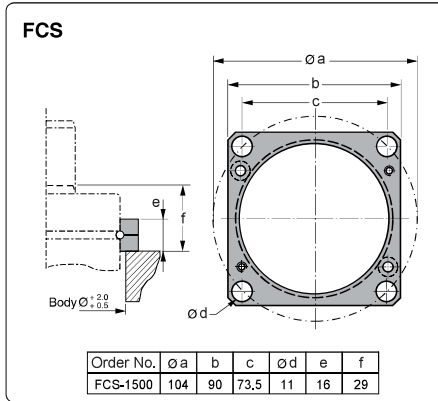
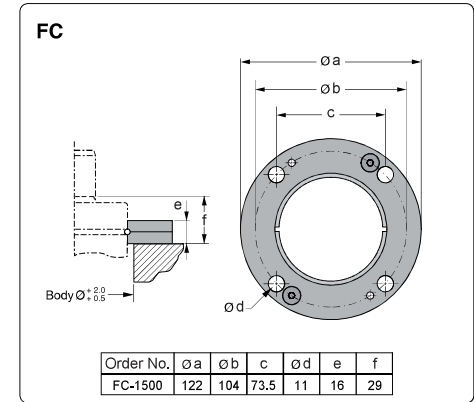
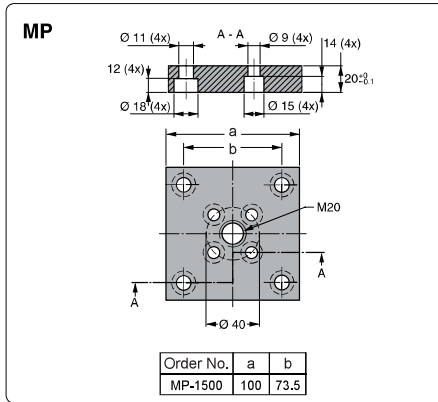
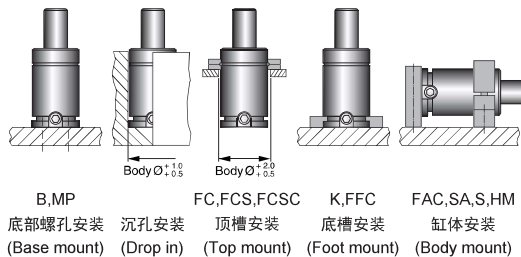
| Order No. | 行程 Stroke S | 弹压力N在150bar/+20°C | | L±0.25 | Lmin |
|------------|-------------------|-------------------|--------------------|--------|------|
| | | 初始力 Initial | 终始力* End force* | | |
| GX2400-016 | 16 | 24000 | 38300 | 77 | 61 |
| GX2400-019 | 19 | | 38500 | 83 | 64 |
| GX2400-025 | 25 | | 38700 | 95 | 70 |
| GX2400-032 | 32 | | 38600 | 109 | 77 |
| GX2400-038 | 38 | | 38400 | 121 | 83 |
| GX2400-050 | 50 | | 39200 | 145 | 95 |
| GX2400-063 | 63 | | 39200 | 171 | 108 |
| GX2400-075 | 75 | | 39200 | 195 | 120 |
| GX2400-080 | 80 | | 39200 | 205 | 125 |
| GX2400-100 | 100 | | 39300 | 245 | 145 |
| GX2400-125 | 125 | 39300 | 295 | 170 | |

*=在全行程 at full stroke

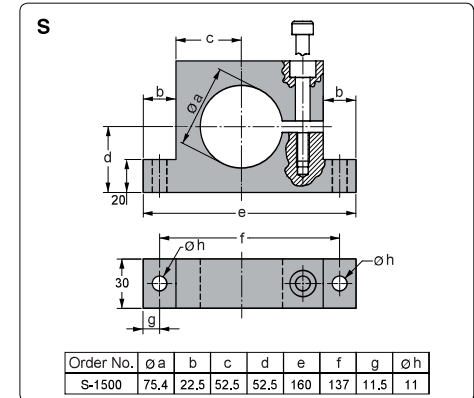
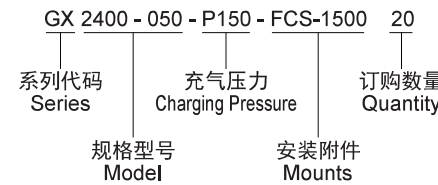
基本参数 Basic information

- 充气介质 ----- 氮气 Nitrogen
Pressure medium
- 最大充气压力 -----150 bar(at 20°C)
Max.charging pressure
- 最小充气压力 ----- 25 bar(at 20°C)
Min.charging pressure
- 工作环境温度 ----- 0~80°C
Operating temperature
- 单位温度弹压力增量 ----- ±0.3%/°C
Force increase by temperature
- 推荐每分钟工作频率 ----- 20-80spm(20°C)
Recommended working frequency
- 最大工作速度 ----- 96 m/min
Max.piston rod velocity

几种安装可能性 Mounting Possibilities



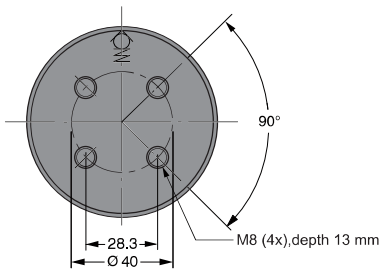
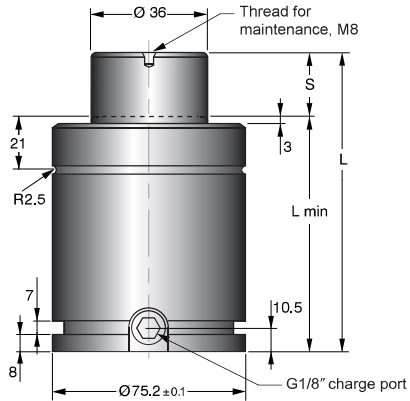
订购方法 Ordering method





氮气弹簧的标准系是GTU系列。
其规格从250到10000的氮气弹簧都符合国际ISO 11901标准。

The standard line of gas springs is the GTU line.
Sizes 250 to 10 000 correspond to the ISO 11901 standard for gas springs.



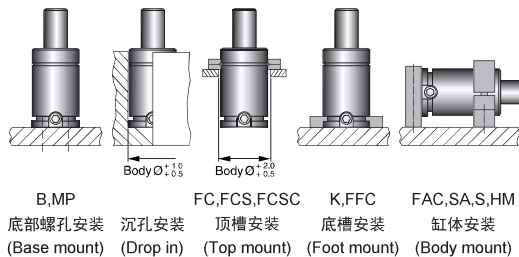
| Order No. | 行程 Stroke S | 弹压力N在150bar/+20°C | | L±0.25 | Lmin |
|-------------|-------------------|-------------------|--------------------|--------|-------|
| | | 初始力 Initial | 终始力* End force* | | |
| GTU1500-025 | 25 | 15000 | 23000 | 160 | 135 |
| GTU1500-038 | 38.1 | | 23000 | 186.2 | 148.1 |
| GTU1500-050 | 50 | | 23000 | 210 | 160 |
| GTU1500-064 | 63.5 | | 23000 | 237 | 173.5 |
| GTU1500-080 | 80 | | 23000 | 270 | 190 |
| GTU1500-100 | 100 | | 23000 | 310 | 210 |
| GTU1500-125 | 125 | | 23000 | 360 | 235 |
| GTU1500-160 | 160 | | 23000 | 430 | 270 |
| GTU1500-200 | 200 | | 23000 | 510 | 310 |
| GTU1500-250 | 250 | | 23000 | 610 | 360 |
| GTU1500-300 | 300 | 23000 | 710 | 410 | |

*=在全行程 at full stroke

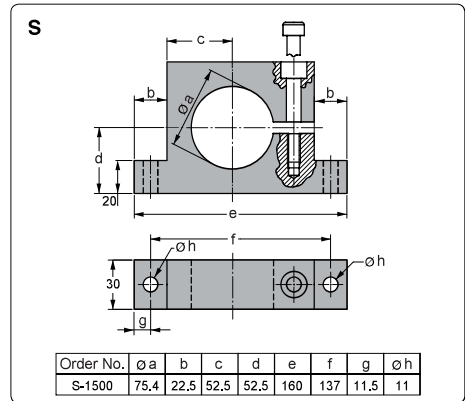
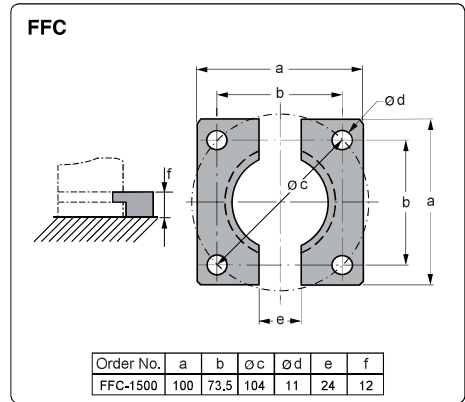
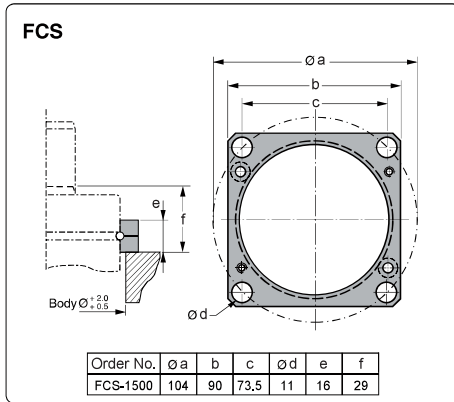
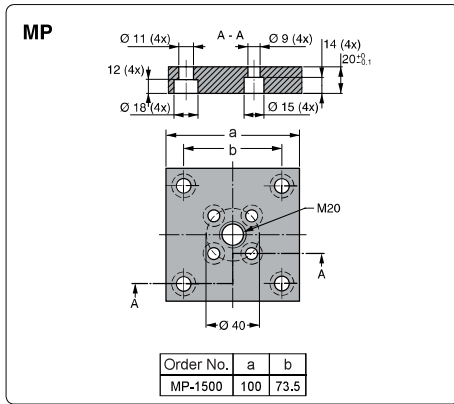
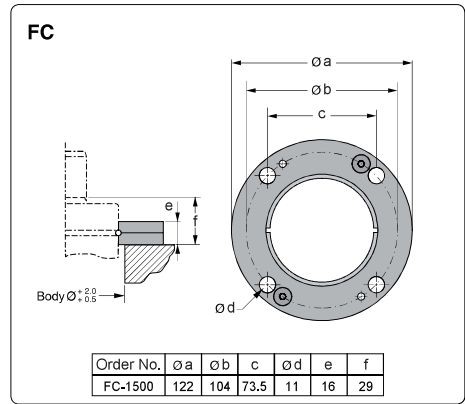
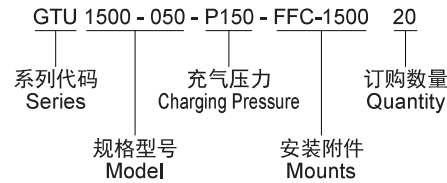
基本参数 Basic information

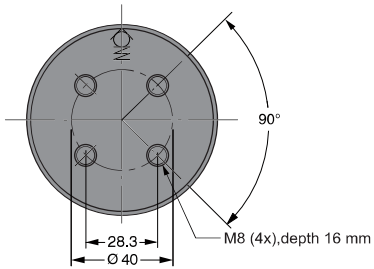
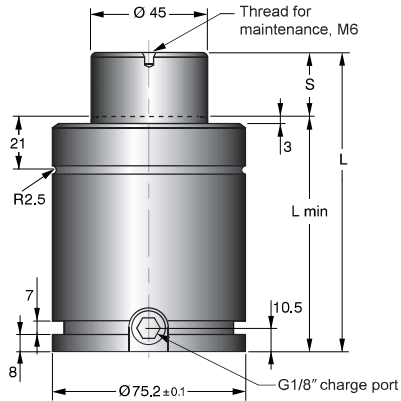
- 充气介质 ----- 氮气 Nitrogen
Pressure medium
- 最大充气压力 ----- 150 bar (at 20°C)
Max. charging pressure
- 最小充气压力 ----- 25 bar (at 20°C)
Min. charging pressure
- 工作环境温度 ----- 0~80°C
Operating temperature
- 单位温度弹压力增量 ----- ±0.3%/°C
Force increase by temperature
- 推荐每分钟工作频率 ----- 20-80spm (20°C)
Recommended working frequency
- 最大工作速度 ----- 96 m/min
Max. piston rod velocity

几种安装可能性 Mounting Possibilities



订购方法 Ordering method





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此系列气弹簧在缸侧面有一个充气气口，也可以使用这个充气气口，用于管路连接系统。

缸体上部有一个C形槽，缸体下部有一个U形槽，它们同缸体底部四个M8螺孔一起，提供了各种安装可能性。

The Power Line Series includes our shortest and most powerful Piston Rod Sealed gas springs, offering impressive force in a very compact format.

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An upper C-groove, lower U-groove together with four M8 threaded holes allow various mounting possibilities using our standard mounts.

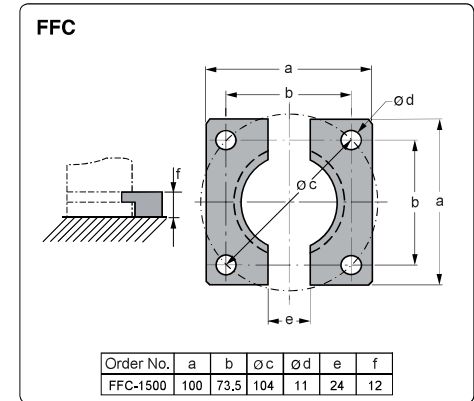
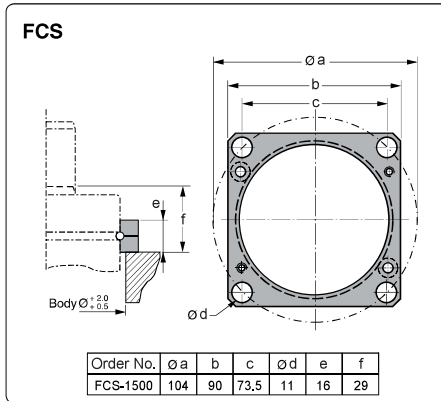
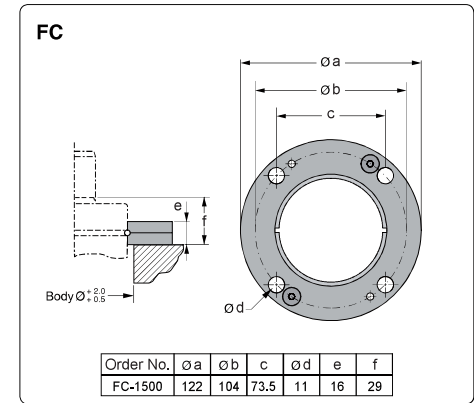
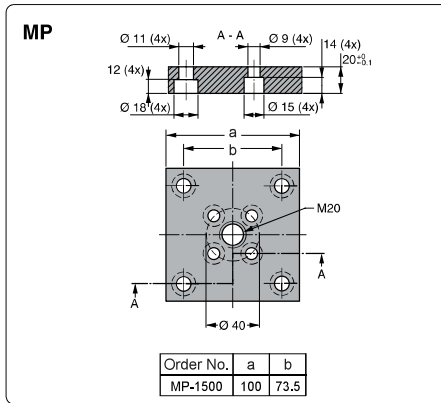
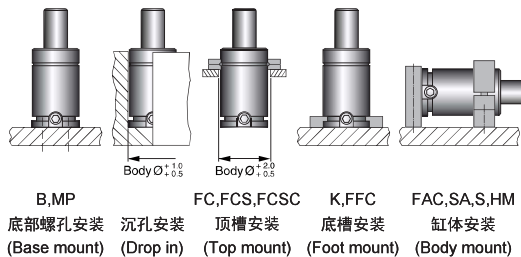
| Order No. | 行程 Stroke S | 弹压力N在150bar/+20°C | | L±0.25 | Lmin |
|-------------|-------------------|-------------------|--------------------|--------|------|
| | | 初始力 Initial | 终始力* End force* | | |
| GXG2400-016 | 16 | 24000 | 38300 | 91 | 75 |
| GXG2400-019 | 19 | | 38500 | 97 | 78 |
| GXG2400-025 | 25 | | 38700 | 109 | 84 |
| GXG2400-032 | 32 | | 38600 | 123 | 91 |
| GXG2400-038 | 38 | | 38400 | 135 | 97 |
| GXG2400-050 | 50 | | 39200 | 159 | 109 |
| GXG2400-063 | 63 | | 39200 | 185 | 122 |
| GXG2400-075 | 75 | | 39200 | 209 | 134 |
| GXG2400-080 | 80 | | 39200 | 219 | 139 |
| GXG2400-100 | 100 | | 39300 | 259 | 159 |
| GXG2400-125 | 125 | 39300 | 309 | 184 | |

*=在全行程 at full stroke

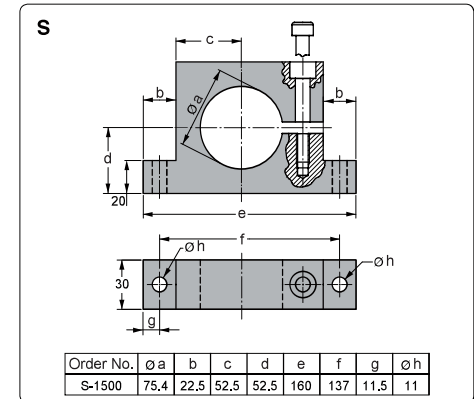
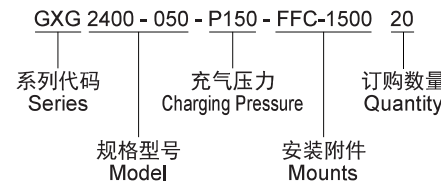
基本参数 Basic information

- 充气介质 ----- 氮气 Nitrogen
Pressure medium
- 最大充气压力 ----- 150 bar(at 20°C)
Max.charging pressure
- 最小充气压力 ----- 25 bar(at 20°C)
Min.charging pressure
- 工作环境温度 ----- 0~80°C
Operating temperature
- 单位温度弹压力增量 ----- ±0.3%/°C
Force increase by temperature
- 推荐每分钟工作频率 ----- 20-80spm(20°C)
Recommended working frequency
- 最大工作速度 ----- 96 m/min
Max.piston rod velocity

几种安装可能性 Mounting Possibilities



订购方法 Ordering method



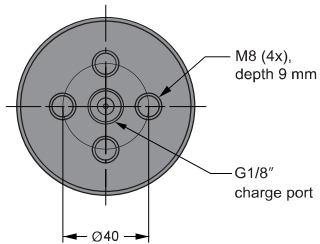
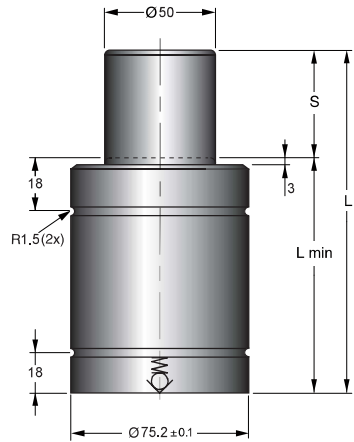


GCU是一种结构非常紧凑的活塞式氮气弹簧，在有效的空间中，能够提供非常大的弹压力，这种氮气弹簧最大频次数可达到100次/分。

此氮气弹簧行程超过25mm时，应当采用法兰安装或氮气弹簧底孔螺纹安装。我们推荐对于短行程的应用，最好也要紧固产品，以便获得最佳的使用寿命。

The GCU gas springs are a very compact Bore Sealed gas springs, offering impressive force in a compact body. The maximum frequency for the spring is 100 strokes/minute.

Springs with stroke lengths over 25 mm should always be attached to the tool, using a flange or the tapped holes in the bottom of the spring. We also recommend fixing of shorter stroke springs for optimal service life.



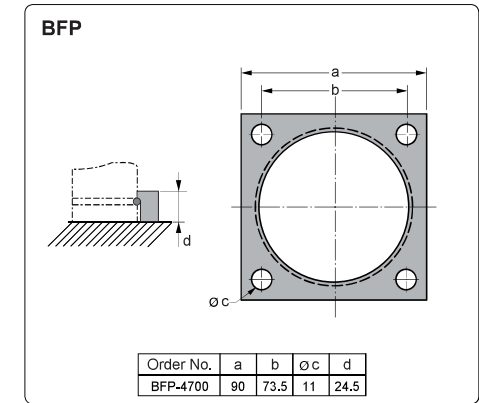
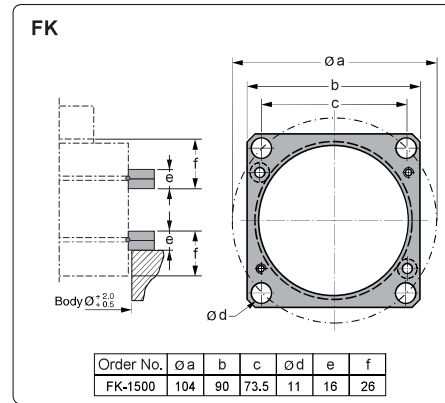
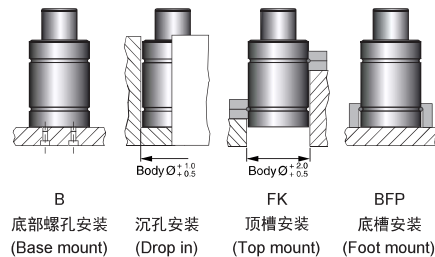
| Order No. | 行程 Stroke S | 弹压力N在150bar/+20°C | | L±0.25 | Lmin |
|-------------|-------------------|-------------------|--------------------|--------|------|
| | | 初始力 Initial | 终始力* End force* | | |
| GCU4700-010 | 10 | 47000 | 67000 | 80 | 70 |
| GCU4700-016 | 16 | | 66000 | 106 | 90 |
| GCU4700-025 | 25 | | 68000 | 135 | 110 |
| GCU4700-032 | 32 | | 67000 | 167 | 135 |
| GCU4700-040 | 40 | | 67000 | 200 | 160 |
| GCU4700-050 | 50 | | 67000 | 240 | 190 |

*=在全行程 at full stroke

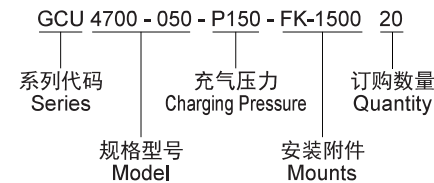
基本参数 Basic information

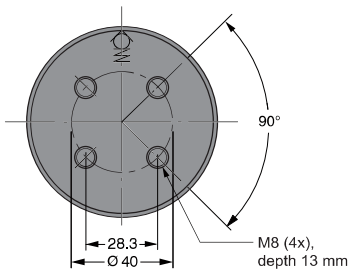
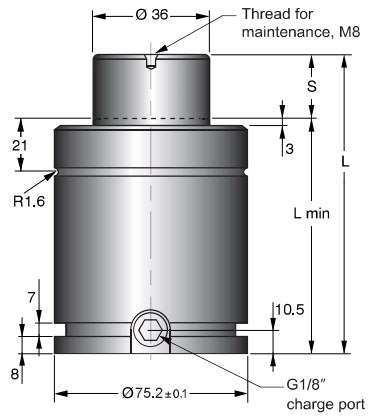
- 充气介质 ----- 氮气 Nitrogen
Pressure medium
- 最大充气压力 ----- 150 bar(at 20°C)
Max.charging pressure
- 最小充气压力 ----- 25 bar(at 20°C)
Min.charging pressure
- 工作环境温度 ----- 0~80°C
Operating temperature
- 单位温度弹压力增量 ----- ±0.3%/°C
Force increase by temperature
- 推荐每分钟工作频率 ----- 20-80spm(20°C)
Recommended working frequency
- 最大工作速度 ----- 96 m/min
Max.piston rod velocity

几种安装可能性 Mounting Possibilities



订购方法 Ordering method





这是一种高度短并可连接管路的氮气弹簧，其初始弹压力15000N。
GK1500总高度L为60 mm + (2 × 行程)，此类弹簧比GTU1500型短50mm。

This is a short height hoseable spring with an initial force of 15,000 N.

The GK1500 has a total length of 60 mm + (2 × stroke). This spring is 50 mm shorter than the GTU1500.

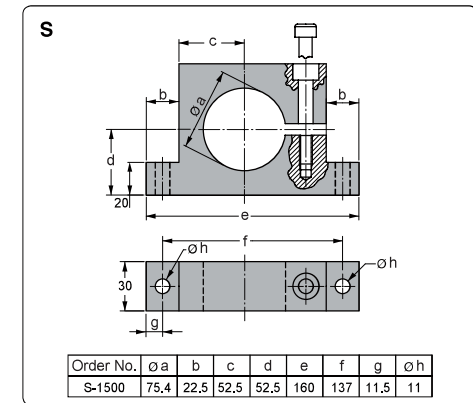
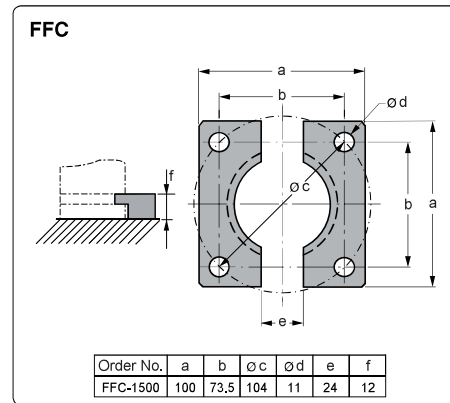
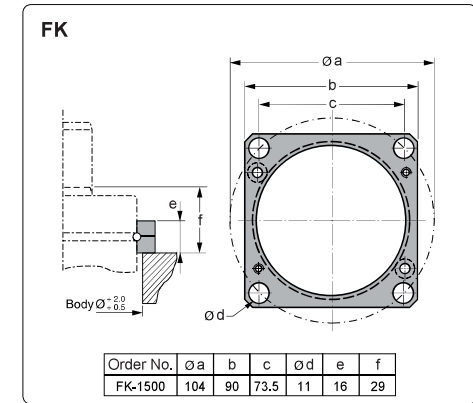
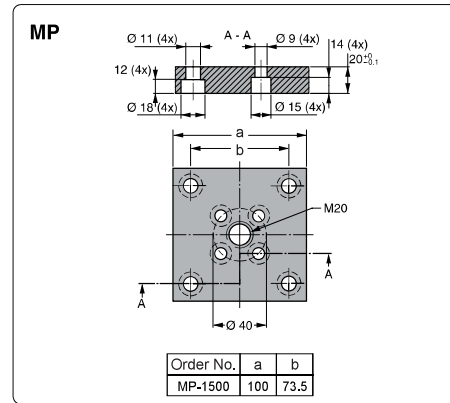
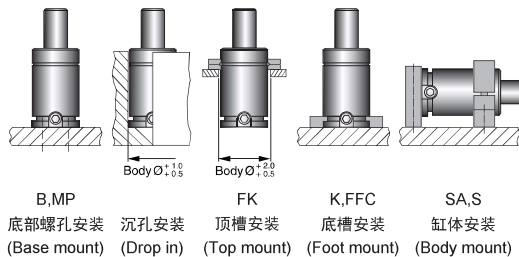
| Order No. | 行程 Stroke S | 弹压力N在150bar/+20°C | | L±0.25 | Lmin |
|------------|-------------------|-------------------|--------------------|--------|-------|
| | | 初始力 Initial | 终始力* End force* | | |
| GK1500-025 | 25 | 15000 | 24000 | 110 | 85 |
| GK1500-038 | 38.1 | | 23000 | 136.2 | 98.1 |
| GK1500-050 | 50 | | 23000 | 160 | 110 |
| GK1500-064 | 63.5 | | 23000 | 187 | 123.5 |
| GK1500-080 | 80 | | 23000 | 220 | 140 |
| GK1500-100 | 100 | | 23000 | 260 | 160 |

*=在全行程 at full stroke

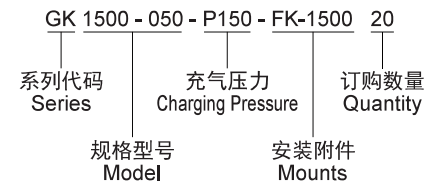
基本参数 Basic information

- 充气介质 ----- 氮气 Nitrogen
Pressure medium
- 最大充气压力 ----- 150 bar(at 20°C)
Max.charging pressure
- 最小充气压力 ----- 25 bar(at 20°C)
Min.charging pressure
- 工作环境温度 ----- 0~80°C
Operating temperature
- 单位温度弹压力增量 ----- ±0.3%/°C
Force increase by temperature
- 推荐每分钟工作频率 ----- 20-80spm(20°C)
Recommended working frequency
- 最大工作速度 ----- 96 m/min
Max.piston rod velocity

几种安装可能性 Mounting Possibilities



订购方法 Ordering method



Nano technology series

Nitrogen gas springs for dies / Cilindri all'azoto per stampi



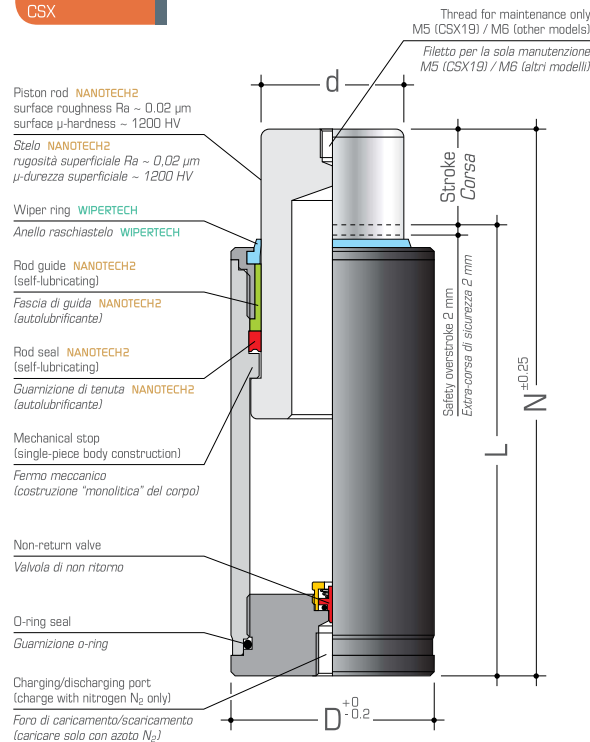
CSX

THE COMPACT POWER: as a rule, the CSX models generate the highest available force, up to +50% in comparison with the other nano-technology series and up to 4 times the force of ISO 11901-1 standard models (diameter being the same).
WHAT'S NEW: upgraded with the new WIPERTECH and NANOTECH2 nano-technologies. New 2XCSX32 models with diameter 32 mm and increased force are available in addition to the CSX32 models. New stroke lengths available for all diameters.
FOR THE DIE MAKER: gas springs with reduced diameters allow to manufacture more compact press dies, cutting all your costs in a drastic way.
FOR THE DIE USER: gas springs with a long service life and high working cycles per minute allow to drastically cut the production costs, die maintenance costs and production stops.
SELF-LUBRICATED for millions of working cycles thanks to the nano-technologies (patent pending).
PROTECTED AGAINST CONTAMINANTS with WIPERTECH protective wiper ring.
RECOMMENDED as the first choice for all projects and applications, thanks to the most advanced technology and the highest available forces.
THE NEW MODELS WILL BE SUPPLIED ONLY WHEN THE OLD ONES ARE OUT OF STOCK.

I COMPATTOPOTENTI: a parità di diametro sviluppano generalmente la forza in assoluto più alta, fino al 50% in più rispetto ai modelli delle altre serie con nano-tecnologie e fino a 4 volte quella dei modelli standard ISO 11901-1.
NOVITÀ: aggiornata con le nuove nano-tecnologie WIPERTECH e NANOTECH2. Disponibili i nuovi modelli 2XCSX32, con diametro 32 mm e forza maggiorata, in aggiunta ai già presenti modelli CSX32. Nuove corse disponibili per tutti i diametri.
PER LO STAMPISTA: cilindri con diametro minore permettano la realizzazione di stampi più compatti, riducendo notevolmente tutti i vostri costi.
PER L'UTILIZZATORE: cilindri con lunga durata ed elevati cicli di lavoro al minuto permettono la drastica riduzione dei costi di produzione, dei costi di manutenzione sugli stampi e dei fermi macchina.
AUTOLUBRIFICATI per milioni di cicli grazie alle nano-tecnologie (in corso di brevetto).
PROTETTI DA CONTAMINANTI con anello raschiastelo di protezione WIPERTECH.
CONSIGLIATI come prima scelta per tutti i progetti e applicazioni, grazie alla tecnologia più avanzata e alle forze in assoluto più alte.

I NUOVI MODELLI SARANNO FORNITI SOLO AD ESAURIMENTO SCORTE DEI VECCHI.

CSX

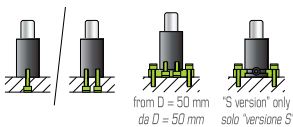


Fixing possibilities

(see also our "Accessories for nitrogen gas springs for dies" catalogue)

Fissaggi possibili

(vedi anche il nostro catalogo "Accessori per cilindri all'azoto per stampi")



TECHNICAL NOTES

Important use instructions and maximum number of cycles per minute on pages 10-17.

For accessories and other mountings, see the "Accessories for nitrogen gas springs for dies" catalogue. Different stroke lengths on request.

The CS models are replaceable with the CSX models.

"S" VERSION

With fixing groove and G1/8 side port, linkable to open system, from D = 50 mm,

» **L and N dimensions: + 20 mm**

» Add an **-S** to order them

Example: no. 8 pcs. CSX50-50-**S**

NOTE TECNICHE

Importanti istruzioni d'uso e numero massimo di cicli/minuto alle pagine 10-17.

Per accessori e altri montaggi, consultare il catalogo "Accessori per cilindri all'azoto per stampi". Corse di lavoro diverse a richiesta.

I modelli CS sono sostituibili con i modelli CSX.

VERSIONE "S"

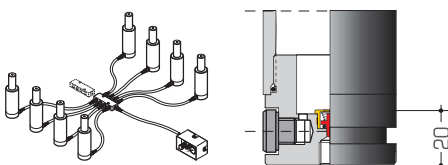
Da D = 50 mm, scanalatura di fissaggio e foro laterale G1/8, per collegamento a sistema.






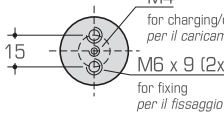
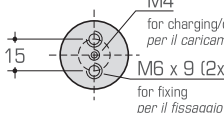
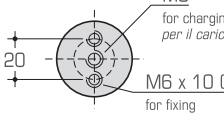
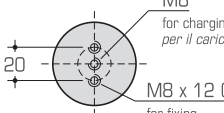
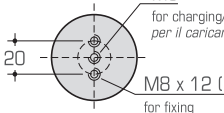
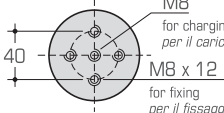
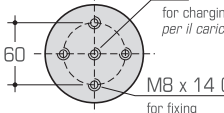
» **Quote L e N: + 20 mm**

» Per ordinarli, aggiungere una **-S**

Esempio: n° 8 CSX50-50-**S**

"S" version



| MODEL MODELLO | MAX STROKE mm CORSIA MAX mm | L mm | N mm | D mm | d mm |  bar |  daN |  daN | GAS SPRING BASE BASE DEL CILINDRO | |
|-------------------|--------------------------------|---------|---------|---------|---------|---|---|---|---|---|
| CSX19-10 | 10 | 65 | 75 | 19 | 10 | 191 | 150 | 200 |  <p>M6 x 8 for charging/discharging per il caricamento/scaricamento for fixing per il fissaggio</p> | |
| 15 | 15 | 70 | 85 | | | | | 210 | | |
| 20 | 20 | 75 | 95 | | | | | 220 | | |
| 25 | 25 | 80 | 105 | | | | | 230 | | |
| 32 | 32 | 88 | 120 | | | | | 230 | | |
| 38 | 38 | 97 | 135 | | | | | 240 | | |
| 45 | 45 | 105 | 150 | | | | | 240 | | |
| 50 | 50 | 110 | 160 | | | | | 240 | | |
| 56 | 56 | 119 | 175 | | | | | 240 | | |
| 63 | 63 | 127 | 190 | | | | | 240 | | |
| 80 | 80 | 140 | 220 | 250 | | | | | | |
| CSX25-10 | 10 | 65 | 75 | 25 | 14 | 195 | 300 | 430 |  <p>M6 x 10 for charging/discharging per il caricamento/scaricamento for fixing per il fissaggio</p> | |
| 15 | 15 | 70 | 85 | | | | | 450 | | |
| 20 | 20 | 75 | 95 | | | | | 480 | | |
| 25 | 25 | 80 | 105 | | | | | 500 | | |
| 32 | 32 | 88 | 120 | | | | | 520 | | |
| 38 | 38 | 97 | 135 | | | | | 530 | | |
| 45 | 45 | 105 | 150 | | | | | 540 | | |
| 50 | 50 | 110 | 160 | | | | | 550 | | |
| 56 | 56 | 119 | 175 | | | | | 550 | | |
| 63 | 63 | 127 | 190 | | | | | 550 | | |
| 80 | 80 | 145 | 225 | 580 | | | | | | |
| CSX32-10 | 10 | 65 | 75 | 32 | 18 | 197 | 500 | 680 |  <p>M4 for charging/discharging per il caricamento/scaricamento M6 x 9 (2x) for fixing per il fissaggio</p> | |
| 15 | 15 | 70 | 85 | | | | | 770 | | |
| 20 | 20 | 75 | 95 | | | | | 800 | | |
| 25 | 25 | 80 | 105 | | | | | 840 | | |
| 32 | 32 | 88 | 120 | | | | | 870 | | |
| 38 | 38 | 97 | 135 | | | | | 870 | | |
| 45 | 45 | 105 | 150 | | | | | 890 | | |
| 50 | 50 | 110 | 160 | | | | | 900 | | |
| 56 | 56 | 119 | 175 | | | | | 910 | | |
| 63 | 63 | 132 | 195 | | | | | 910 | | |
| 80 | 80 | 150 | 230 | 920 | | | | | | |
| New model! | 2XCSX32-10 | 10 | 65 | 75 | 32 | 20 | 210 | 660 | 950 |  <p>M4 for charging/discharging per il caricamento/scaricamento M6 x 9 (2x) for fixing per il fissaggio</p> |
| | 15 | 15 | 70 | 85 | | | | | 1000 | |
| | 20 | 20 | 75 | 95 | | | | | 1050 | |
| | 25 | 25 | 80 | 105 | | | | | 1100 | |
| | 32 | 32 | 88 | 120 | | | | | 1150 | |
| | 38 | 38 | 97 | 135 | | | | | 1150 | |
| | 45 | 45 | 105 | 150 | | | | | 1160 | |
| | 50 | 50 | 110 | 160 | | | | | 1170 | |
| | 56 | 56 | 119 | 175 | | | | | 1180 | |
| | 63 | 63 | 132 | 195 | | | | | 1190 | |
| 80 | 80 | 150 | 230 | 1200 | | | | | | |
| CSX38-10 | 10 | 65 | 75 | 38 | 25 | 205 | 1000 | 1530 |  <p>M8 for charging/discharging per il caricamento/scaricamento M6 x 10 (2x) for fixing per il fissaggio</p> | |
| 15 | 15 | 70 | 85 | | | | | 1730 | | |
| 20 | 20 | 75 | 95 | | | | | 1880 | | |
| 25 | 25 | 80 | 105 | | | | | 2000 | | |
| 32 | 32 | 88 | 120 | | | | | 2080 | | |
| 38 | 38 | 97 | 135 | | | | | 2090 | | |
| 45 | 45 | 105 | 150 | | | | | 2100 | | |
| 50 | 50 | 110 | 160 | | | | | 2110 | | |
| 56 | 56 | 119 | 175 | | | | | 2130 | | |
| 63 | 63 | 142 | 205 | | | | | 2140 | | |
| 80 | 80 | 160 | 240 | 2150 | | | | | | |
| CSX50-10 | 10 | 80 | 90 | 50 | 35 | 209 | 2000 | 3000 |  <p>M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (2x) for fixing per il fissaggio</p> | |
| 15 | 15 | 100 | 115 | | | | | 3050 | | |
| 20 | 20 | 105 | 125 | | | | | 3100 | | |
| 25 | 25 | 110 | 135 | | | | | 3200 | | |
| 32 | 32 | 118 | 150 | | | | | 3500 | | |
| 38 | 38 | 127 | 165 | | | | | 3600 | | |
| 45 | 45 | 135 | 180 | | | | | 3700 | | |
| 50 | 50 | 140 | 190 | | | | | 3800 | | |
| 56 | 56 | 149 | 205 | | | | | 3900 | | |
| 63 | 63 | 157 | 220 | | | | | 4100 | | |
| 80 | 80 | 175 | 255 | 4400 | | | | | | |
| CSX63-10 | 10 | 85 | 95 | 63 | 45 | 189 | 3000 | 3900 |  <p>M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (2x) for fixing per il fissaggio</p> | |
| 15 | 15 | 100 | 115 | | | | | 4000 | | |
| 20 | 20 | 105 | 125 | | | | | 4200 | | |
| 25 | 25 | 110 | 135 | | | | | 4400 | | |
| 32 | 32 | 118 | 150 | | | | | 4600 | | |
| 38 | 38 | 127 | 165 | | | | | 4700 | | |
| 45 | 45 | 135 | 180 | | | | | 4900 | | |
| 50 | 50 | 140 | 190 | | | | | 5000 | | |
| 63 | 63 | 157 | 220 | | | | | 5200 | | |
| 80 | 80 | 175 | 255 | | | | | 5500 | | |
| CSX75-10 | 10 | 90 | 100 | 75 | 58 | 190 | 5000 | 6400 |  <p>M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (4x) for fixing per il fissaggio</p> | |
| 15 | 15 | 110 | 125 | | | | | 6500 | | |
| 25 | 25 | 120 | 145 | | | | | 7000 | | |
| 38 | 38 | 137 | 175 | | | | | 7700 | | |
| 50 | 50 | 150 | 200 | | | | | 8100 | | |
| 63 | 63 | 177 | 240 | | | | | 8200 | | |
| 80 | 80 | 195 | 275 | 8500 | | | | | | |
| CSX95-10 | 10 | 100 | 110 | 95 | 75 | 182 | 8000 | 10900 |  <p>M8 for charging/discharging per il caricamento/scaricamento M8 x 14 (4x) for fixing per il fissaggio</p> | |
| 15 | 15 | 120 | 135 | | | | | 11100 | | |
| 25 | 25 | 130 | 155 | | | | | 11800 | | |
| 38 | 38 | 147 | 185 | | | | | 12600 | | |
| 50 | 50 | 165 | 215 | | | | | 12900 | | |
| 63 | 63 | 192 | 255 | | | | | 13200 | | |
| 80 | 80 | 210 | 290 | | | | | 13600 | | |
| 100 | 100 | 240 | 340 | | | | | 13900 | | |

Nano technology series

Nitrogen gas springs for dies / *Cilindri all'azoto per stampi*



PATENTS PENDING

SMLX

THE SHORTEST AND MOST POWERFUL SINCE 2001: extremely compact with minimum height clearance and with forces up to 3 times the ones of ISO 11901-1 standard models (diameter being the same).

WHAT'S NEW: upgraded with the new WIPESTECH and NANOTECH2 nano-technologies. New SMLX120 models available, with diameter 120 mm and an initial force of 9000 daN. New stroke lengths available for all diameters. FOR THE DIE MAKER: gas springs with reduced diameters and reduced lengths allow to manufacture more compact press dies, cutting all your costs in a drastic way.

FOR THE DIE USER: gas springs with a long service life and high working cycles per minute allow to drastically cut the production costs, die maintenance costs and production stops. SELF-LUBRICATED for millions of working cycles thanks to the nano-technologies (patent pending). PROTECTED AGAINST CONTAMINANTS with WIPESTECH protective wiper ring. RECOMMENDED for all projects and applications, thanks to the most advanced technology, reduced dimensions and high forces.

THE NEW MODELS WILL BE SUPPLIED ONLY WHEN THE OLD ONES ARE OUT OF STOCK.

IL PIÙ BASSO E PIÙ POTENTE DAL 2001: estremamente compatti con minimo ingombro in altezza, con forza fino a 3 volte quella dei corrispondenti modelli standard ISO 11901-1.

NOVITÀ: aggiornata con le nuove nano-tecnologie WIPESTECH e NANOTECH2. Disponibili i nuovi modelli SMLX120, con diametro 120 mm e forza iniziale di 9000 daN. Nuove corse disponibili per tutti i diametri.

PER LO STAMPISTA: cilindri con diametro ed altezza minori permettono la realizzazione di stampi più compatti, riducendo notevolmente tutti i vostri costi. PER L'UTILIZZATORE: cilindri con lunga durata ed elevati cicli di lavoro al minuto permettono la drastica riduzione dei costi di produzione, dei costi di manutenzione sugli stampi e dei fermi macchina.

AUTOLUBRIFICATI per milioni di cicli grazie alle nano-tecnologie (in corso di brevetto).

PROTETTI DA CONTAMINANTI con anello raschiastelo di protezione WIPESTECH.

CONSIGLIATI per tutti i progetti e applicazioni, grazie alla tecnologia più avanzata, alle dimensioni ridotte e alle forze elevate.

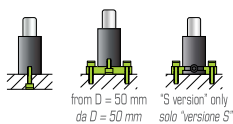
I NUOVI MODELLI SARANNO FORNITI SOLO AD ESAURIMENTO SCORTE DEI VECCHI.

Fixing possibilities

(see also our "Accessories for nitrogen gas springs for dies" catalogue)

Fissaggi possibili

(vedi anche il nostro catalogo "Accessori per cilindri all'azoto per stampi")



"S" VERSION

With fixing groove and G1/8 side port, linkable to open system, from D = 50 mm.

» **L and N dimensions: + 20 mm**

» Add an **-S** to order them

Example: no. 8 pcs. SMLX50-50-**S**

VERSIONE "S"

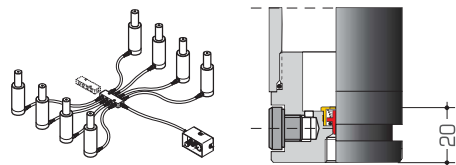
Da D = 50 mm, scanalatura di fissaggio e foro laterale G1/8, per collegamento a sistema.

» **Quote L e N: + 20 mm**

» Per ordinari, aggiungere una **-S**

Esempio: n° 8 SMLX50-50-**S**

"S" VERSION



SMLX

Piston rod **NANOTECH2**
surface roughness Ra ~ 0.02 µm
surface µ-hardness ~ 1200 HV

Stelo **NANOTECH2**
rugosità superficiale Ra ~ 0.02 µm
µ-durezza superficiale ~ 1200 HV

Wiper ring **WIPESTECH**

Anello raschiastelo **WIPESTECH**

Rod guide **NANOTECH2**
(self-lubricating)

Fascia di guida **NANOTECH2**
(autolubrificante)

Rod seal **NANOTECH2**
(self-lubricating)

Guarnizione di tenuta **NANOTECH2**
(autolubrificante)

Mechanical stop
(single-piece body construction)

Fermo meccanico
(costruzione "monolitica" del corpo)

Non-return valve

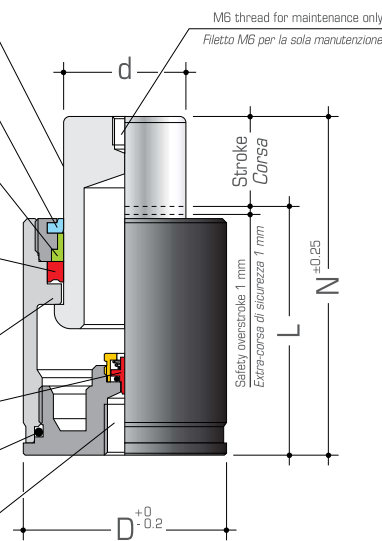
Valvola di non ritorno

O-ring seal

Guarnizione o-ring

Charging/discharging port
(charge with nitrogen N₂ only)

Foro di caricamento/scaricamento
(caricare solo con azoto N₂)



TECHNICAL NOTES

Important use instructions and maximum number of cycles per minute on pages 10-17.

For accessories and other mountings, see the "Accessories for nitrogen gas springs for dies" catalogue. Different stroke lengths on request.

The SML models are replaceable with the SMLX models.











NOTE TECNICHE

Importanti istruzioni d'uso e numero massimo di cicli/minuto alle pagine 10-17.

Per accessori e altri montaggi, consultare il catalogo "Accessori per cilindri all'azoto per stampi". Corse di lavoro diverse a richiesta.

I modelli SML sono sostituibili con i modelli SMLX.

| MODEL MODELLO | MAX STROKE CORSA MAX | L | N | D | d | bar | daN | daN | GAS SPRING BASE BASE DEL CILINDRO |
|------------------|-------------------------|-----|-----|----|----|-----|-----|-----|---|
| SMLX25-05 | 5 | 35 | 40 | 25 | 14 | 195 | 300 | 450 | M6 x 8 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio |
| 10 | 10 | 40 | 50 | | | | | | |
| 13 | 13 | 43 | 56 | | | | | | |
| 15 | 15 | 45 | 60 | | | | | | |
| 20 | 20 | 50 | 70 | | | | | | |
| 25 | 25 | 55 | 80 | | | | | | |
| 32 | 32 | 62 | 94 | | | | | | |
| 38 | 38 | 68 | 106 | | | | | | |
| 50 | 50 | 80 | 130 | | | | | | |
| 63 | 63 | 93 | 156 | | | | | | |
| 75 | 75 | 105 | 180 | | | | | | |
| 80 | 80 | 110 | 190 | | | | | | |
| 100 | 100 | 130 | 230 | | | | | | |
| 125 | 125 | 155 | 280 | | | | | | |

| MODEL MODELLO | MAX STROKE mm CORSA MAX mm | L mm | N mm | D mm | d mm |  bar |  daN |  daN | GAS SPRING BASE BASE DEL CILINDRO |
|------------------|-------------------------------|---------|---------|---------|---------|---|---|---|--|
| SMLX32-05 | 5 | 35 | 40 | 32 | 18 | 196 | 500 | 750 |  <p>M6 x 8 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio</p> |
| 10 | 10 | 40 | 50 | | | | | 790 | |
| 13 | 13 | 43 | 56 | | | | | 830 | |
| 15 | 15 | 45 | 60 | | | | | 850 | |
| 20 | 20 | 50 | 70 | | | | | 870 | |
| 25 | 25 | 55 | 80 | | | | | 880 | |
| 32 | 32 | 62 | 94 | | | | | 880 | |
| 38 | 38 | 68 | 106 | | | | | 890 | |
| 45 | 45 | 75 | 120 | | | | | 900 | |
| 50 | 50 | 80 | 130 | | | | | 900 | |
| 56 | 56 | 86 | 142 | | | | | 910 | |
| 63 | 63 | 93 | 156 | | | | | 930 | |
| 75 | 75 | 105 | 180 | | | | | 930 | |
| 80 | 80 | 110 | 190 | 930 | | | | | |
| 100 | 100 | 130 | 230 | 940 | | | | | |
| 125 | 125 | 155 | 280 | 940 | | | | | |
| SMLX38-05 | 5 | 35 | 40 | 38 | 22 | 197 | 750 | 1050 |  <p>M8 x 12 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio</p> |
| 10 | 10 | 40 | 50 | | | | | 1200 | |
| 13 | 13 | 43 | 56 | | | | | 1250 | |
| 15 | 15 | 45 | 60 | | | | | 1270 | |
| 20 | 20 | 50 | 70 | | | | | 1280 | |
| 25 | 25 | 55 | 80 | | | | | 1350 | |
| 32 | 32 | 62 | 94 | | | | | 1370 | |
| 38 | 38 | 68 | 106 | | | | | 1370 | |
| 45 | 45 | 75 | 120 | | | | | 1400 | |
| 50 | 50 | 80 | 130 | | | | | 1410 | |
| 56 | 56 | 86 | 142 | | | | | 1420 | |
| 63 | 63 | 93 | 156 | | | | | 1430 | |
| 75 | 75 | 105 | 180 | | | | | 1440 | |
| 80 | 80 | 110 | 190 | 1440 | | | | | |
| 100 | 100 | 130 | 230 | 1440 | | | | | |
| 125 | 125 | 155 | 280 | 1450 | | | | | |
| SMLX50-05 | 5 | 40 | 45 | 50 | 30 | 212 | 1500 | 2600 |  <p>M10 x 12 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio</p> |
| 10 | 10 | 45 | 55 | | | | | 2800 | |
| 13 | 13 | 48 | 61 | | | | | 2900 | |
| 15 | 15 | 50 | 65 | | | | | 3000 | |
| 20 | 20 | 55 | 75 | | | | | 3040 | |
| 25 | 25 | 60 | 85 | | | | | 3050 | |
| 32 | 32 | 67 | 99 | | | | | 3060 | |
| 38 | 38 | 73 | 111 | | | | | 3070 | |
| 45 | 45 | 80 | 125 | | | | | 3080 | |
| 50 | 50 | 85 | 135 | | | | | 3090 | |
| 56 | 56 | 91 | 147 | | | | | 3100 | |
| 63 | 63 | 98 | 161 | | | | | 3110 | |
| 75 | 75 | 110 | 185 | | | | | 3120 | |
| 80 | 80 | 120 | 200 | 3130 | | | | | |
| 100 | 100 | 135 | 235 | 3150 | | | | | |
| 125 | 125 | 160 | 285 | 3200 | | | | | |
| SMLX63-05 | 5 | 40 | 45 | 63 | 40 | 159 | 2000 | 3000 |  <p>M10 x 15 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio</p> |
| 10 | 10 | 45 | 55 | | | | | 3600 | |
| 15 | 15 | 50 | 65 | | | | | 3800 | |
| 20 | 20 | 55 | 75 | | | | | 3850 | |
| 25 | 25 | 60 | 85 | | | | | 3880 | |
| 32 | 32 | 67 | 99 | | | | | 3890 | |
| 38 | 38 | 73 | 111 | | | | | 3900 | |
| 50 | 50 | 85 | 135 | | | | | 3910 | |
| 63 | 63 | 98 | 161 | | | | | 3930 | |
| 75 | 75 | 110 | 185 | | | | | 3950 | |
| 80 | 80 | 120 | 200 | | | | | 3980 | |
| 100 | 100 | 135 | 235 | | | | | 4000 | |
| 125 | 125 | 160 | 285 | | | | | 4020 | |
| SMLX75-05 | 5 | 45 | 50 | 75 | 45 | 189 | 3000 | 4400 |  <p>M12 x 14 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio</p> |
| 10 | 10 | 50 | 60 | | | | | 5000 | |
| 15 | 15 | 55 | 70 | | | | | 5400 | |
| 20 | 20 | 60 | 80 | | | | | 5450 | |
| 25 | 25 | 65 | 90 | | | | | 5500 | |
| 32 | 32 | 72 | 104 | | | | | 5550 | |
| 38 | 38 | 77 | 115 | | | | | 5600 | |
| 50 | 50 | 90 | 140 | | | | | 5650 | |
| 63 | 63 | 103 | 166 | | | | | 5700 | |
| 75 | 75 | 115 | 190 | | | | | 5750 | |
| 80 | 80 | 125 | 205 | | | | | 5800 | |
| 100 | 100 | 145 | 245 | | | | | 5900 | |
| 125 | 125 | 170 | 295 | | | | | 6000 | |
| SMLX95-05 | 5 | 55 | 60 | 95 | 58 | 189 | 5000 | 7200 |  <p>M12 x 19 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio</p> |
| 10 | 10 | 60 | 70 | | | | | 8000 | |
| 15 | 15 | 65 | 80 | | | | | 8500 | |
| 20 | 20 | 70 | 90 | | | | | 8700 | |
| 25 | 25 | 75 | 100 | | | | | 8900 | |
| 32 | 32 | 82 | 114 | | | | | 9000 | |
| 38 | 38 | 88 | 126 | | | | | 9050 | |
| 50 | 50 | 100 | 150 | | | | | 9100 | |
| 63 | 63 | 113 | 176 | | | | | 9200 | |
| 75 | 75 | 125 | 200 | | | | | 9250 | |
| 80 | 80 | 130 | 210 | | | | | 9300 | |
| 100 | 100 | 150 | 250 | | | | | 9350 | |
| 125 | 125 | 175 | 300 | | | | | 9400 | |
| SMLX120-15 | 15 | 75 | 90 | 120 | 75 | 204 | 9000 | 14000 |  <p>M16 x 24 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio</p> |
| 20 | 20 | 80 | 100 | | | | | 14500 | |
| 25 | 25 | 85 | 110 | | | | | 15000 | |
| 32 | 32 | 92 | 124 | | | | | 15500 | |
| 38 | 38 | 98 | 136 | | | | | 15700 | |
| 50 | 50 | 110 | 160 | | | | | 16000 | |
| 63 | 63 | 123 | 186 | | | | | 16300 | |
| 75 | 75 | 135 | 210 | | | | | 16500 | |
| 80 | 80 | 140 | 220 | | | | | 16600 | |
| 100 | 100 | 160 | 260 | | | | | 16800 | |
| 125 | 125 | 185 | 310 | 16900 | | | | | |

New models!

• No threaded hole on the piston rod / *Sullo stelo non è presente il foro filettato*

Nano technology series

Nitrogen gas springs for dies / *Cilindri all'azoto per stampi*

WIPERTECH

NANOTECH2



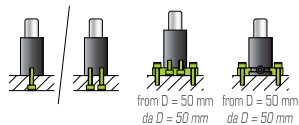
PATENTS PENDING

Fixing possibilities

(see also our "Accessories for nitrogen gas springs for dies" catalogue)

Fissaggi possibili

(vedi anche il nostro catalogo "Accessori per cilindri all'azoto per stampi")



HOW TO ORDER

No. 8 pcs. CX38-50 750daN

No. 8 nitrogen gas springs series CX, D = 38 mm, stroke length = 50 mm, initial force = 750 daN.

ATTENTION: specify the required initial force.

ESEMPIO D'ORDINE

No. 8 CX38-50 750daN

N° 8 cilindri all'azoto serie CX, D = 38 mm, corsa = 50 mm, forza iniziale = 750 daN.

ATTENZIONE: specificare la forza iniziale desiderata.

CX

CX series replaces the previous C series. Available with the same diameters and forces as the SMLX series, the CX gas springs have a less compact length but longer stroke lengths are available (starting from diameter 50 mm).

WHAT'S NEW: upgraded with the new WIPERTECH and NANOTECH2 nano-technologies.

SELF-LUBRICATED for millions of working cycles thanks to the nano-technologies (patent pending).

PROTECTED AGAINST CONTAMINANTS with WIPERTECH protective wiper ring.

RECOMMENDED when the required stroke lengths are not available for CSX and SMLX series.

THE NEW MODELS WILL BE SUPPLIED ONLY WHEN THE OLD ONES ARE OUT OF STOCK.

Sostituisce la precedente serie C. Disponibile negli stessi diametri e stesse forze della serie SMLX, presenta un ingombro in altezza più elevato ma è disponibile con corse di lavoro più lunghe (a partire dal diametro 50 mm).

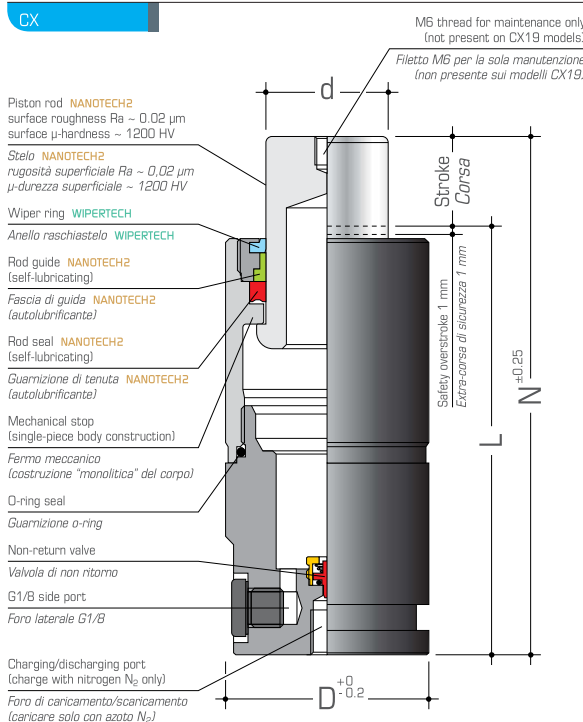
NOVITÀ: aggiornata con le nuove nano-tecnologie WIPERTECH e NANOTECH2.

AUTOLUBRIFICATI per milioni di cicli grazie alle nano-tecnologie (in corso di brevetto).

PROTETTI DA CONTAMINANTI con anello raschiastelo di protezione WIPERTECH.

CONSIGLIATI per applicazioni con corse di lavoro che non sono disponibili per le serie CSX e SMLX.

I NUOVI MODELLI SARANNO FORNITI SOLO AD ESAURIMENTO SCORTE DEI VECCHI.



TECHNICAL NOTES

Important use instructions and maximum number of cycles per minute on pages 10-17.

For accessories and other mountings, see the "Accessories for nitrogen gas springs for dies" catalogue.

The C models are replaceable with the CX models.

ATTENTION:

Rod diameter d = 40 mm for the CX63 models.

Rod diameter d = 36 mm for the C63 models.

NOTE TECNICHE

Importanti istruzioni d'uso e numero massimo di cicli/minuto alle pagine 10-17.

Per accessori e altri montaggi, consultare il catalogo "Accessori per cilindri all'azoto per stampi".

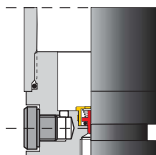
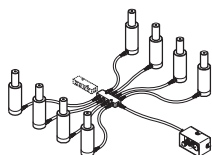
I modelli C sono sostituibili con i modelli CX.

ATTENZIONE:

Diametro dello stelo d = 40 mm per i modelli CX63.

Diametro dello stelo d = 36 mm per i modelli C63.

Linkable / Collegabili








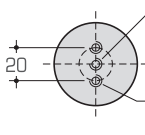

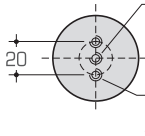
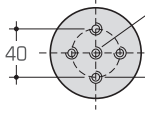
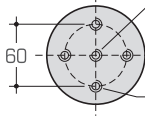
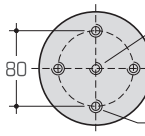


Ready with fixing groove and G1/8 side port, linkable to open system, from D = 50 mm.

ATTENTION: make sure to fully discharge the gas spring before connecting it to open system (see the instructions supplied together with the charging and discharging set COMPL).

Pronti, da D = 50 mm, con scanalatura di fissaggio e foro laterale G1/8, per collegamento a sistema.

ATTENZIONE: assicurarsi di scaricare completamente il cilindro prima di collegarlo a sistema (vedi le istruzioni fornite assieme al set di carico e scarico COMPL).

| MODEL MODELLO | MAX STROKE mm CORSIA MAX mm | L mm | N mm | D mm | d mm |  bar |  daN |  daN | GAS SPRING BASE BASE DEL CILINDRO |
|------------------|--------------------------------|---------|---------|---------|--|---|---|---|---|
| CX19-10 | 10 | 70 | 80 | 19 | 10 | 191 | 150 | 190 |  M8 x 14 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio |
| 15 | 15 | 75 | 90 | | | | | 200 | |
| 25 | 25 | 85 | 110 | | | | | 220 | |
| 38 | 38 | 98 | 136 | | | | | 220 | |
| 50 | 50 | 110 | 160 | | | | | 240 | |
| 80 | 80 | 140 | 220 | | | | | 250 | |
| CX25-10 | 10 | 70 | 80 | 25 | 14 | 195 | 300 | 380 |  M8 x 11 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio |
| 15 | 15 | 75 | 90 | | | | | 400 | |
| 25 | 25 | 85 | 110 | | | | | 440 | |
| 38 | 38 | 98 | 136 | | | | | 490 | |
| 50 | 50 | 110 | 160 | | | | | 500 | |
| 80 | 80 | 140 | 220 | | | | | 540 | |
| CX32-10 | 10 | 60 | 70 | 32 | 18 | 196 | 500 | 700 |  M8 x 8 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio |
| 15 | 15 | 65 | 80 | | | | | 720 | |
| 25 | 25 | 75 | 100 | | | | | 770 | |
| 38 | 38 | 88 | 126 | | | | | 790 | |
| 50 | 50 | 100 | 150 | | | | | 800 | |
| 80 | 80 | 130 | 210 | | | | | 800 | |
| CX38-10 | 10 | 65 | 75 | 38 | 22 | 197 | 750 | 980 |  M8 x 9 for charging/discharging for fixing per il caricamento/scaricamento per il fissaggio |
| 15 | 15 | 70 | 85 | | | | | 1060 | |
| 25 | 25 | 80 | 105 | | | | | 1100 | |
| 38 | 38 | 93 | 131 | | | | | 1150 | |
| 50 | 50 | 105 | 155 | | | | | 1200 | |
| 80 | 80 | 140 | 220 | | | | | 1250 | |
| CX50-10 | 10 | 95 | 105 | 50 | 30 | 212 | 1500 | 1900 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (2x) for fixing per il fissaggio |
| 25 | 25 | 110 | 135 | | | | | 2150 | |
| 38 | 38 | 123 | 161 | | | | | 2250 | |
| 50 | 50 | 135 | 185 | | | | | 2320 | |
| 63 | 63 | 148 | 211 | | | | | 2430 | |
| 80 | 80 | 165 | 245 | | | | | 2430 | |
| 100 | 100 | 195 | 295 | | | | | 2500 | |
| 125 | 125 | 220 | 345 | | | | | 2520 | |
| 160 | 160 | 255 | 415 | | | | | 2550 | |
| 200 | 200 | 295 | 495 | | | | | 2600 | |
| CX63-10 | 10 | 95 | 105 | 63 | 40  | 159 | 2000 | 2900 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (2x) for fixing per il fissaggio |
| 25 | 25 | 110 | 135 | | | | | 3300 | |
| 38 | 38 | 123 | 161 | | | | | 3400 | |
| 50 | 50 | 135 | 185 | | | | | 3500 | |
| 63 | 63 | 148 | 211 | | | | | 3550 | |
| 80 | 80 | 165 | 245 | | | | | 3600 | |
| 100 | 100 | 185 | 285 | | | | | 3650 | |
| 125 | 125 | 220 | 345 | | | | | 3700 | |
| 160 | 160 | 255 | 415 | | | | | 3750 | |
| 200 | 200 | 295 | 495 | | | | | 3800 | |
| CX75-10 | 10 | 105 | 115 | 75 | 45 | 189 | 3000 | 4200 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (4x) for fixing per il fissaggio |
| 25 | 25 | 120 | 145 | | | | | 4700 | |
| 38 | 38 | 133 | 171 | | | | | 5000 | |
| 50 | 50 | 145 | 195 | | | | | 5100 | |
| 63 | 63 | 158 | 221 | | | | | 5200 | |
| 80 | 80 | 175 | 255 | | | | | 5300 | |
| 100 | 100 | 200 | 300 | | | | | 5400 | |
| 125 | 125 | 225 | 350 | | | | | 5500 | |
| 160 | 160 | 265 | 425 | | | | | 5600 | |
| 200 | 200 | 310 | 510 | | | | | 5800 | |
| CX95-25 | 25 | 130 | 155 | 95 | 58 | 189 | 5000 | 7800 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (4x) for fixing per il fissaggio |
| 38 | 38 | 143 | 181 | | | | | 8100 | |
| 50 | 50 | 155 | 205 | | | | | 8300 | |
| 63 | 63 | 168 | 231 | | | | | 8500 | |
| 80 | 80 | 190 | 270 | | | | | 8600 | |
| 100 | 100 | 210 | 310 | | | | | 8700 | |
| 125 | 125 | 245 | 370 | | | | | 8900 | |
| 160 | 160 | 280 | 440 | | | | | 9000 | |
| 200 | 200 | 330 | 530 | 9100 | | | | | |
| CX120-25 | 25 | 140 | 165 | 120 | 75 | 204 | 9000 | 12600 |  M8 for charging/discharging per il caricamento/scaricamento M10 x 15 (4x) for fixing per il fissaggio |
| 38 | 38 | 153 | 191 | | | | | 13400 | |
| 50 | 50 | 165 | 215 | | | | | 13900 | |
| 63 | 63 | 178 | 241 | | | | | 14400 | |
| 80 | 80 | 195 | 275 | | | | | 14800 | |
| 100 | 100 | 215 | 315 | | | | | 15200 | |
| 125 | 125 | 250 | 375 | | | | | 15300 | |
| 160 | 160 | 290 | 450 | | | | | 16500 | |
| 200 | 200 | 340 | 540 | | | | | 16800 | |

• Without G1/8 side hole and groove / Senza foro laterale G1/8 e scanalatura

• Available on request / Disponibili a richiesta

 Attention: see note on page 26 /  Attenzione: vedere nota a pag. 26

Nano technology series

Nitrogen gas springs for dies / *Cilindri all'azoto per stampi*



PATENTS PENDING

CSMX

CSMX series replaces the previous CSM series. Available with the same diameters and forces as the SMLX series, the CSMX gas springs are the second-shortest as far as overall length. Longer stroke lengths are available in comparison with the SMLX series (starting from diameter 50 mm).

WHAT'S NEW: upgraded with the new WIPERTECH and NANOTECH2 nano-technologies.

SELF-LUBRICATED for millions of working cycles thanks to the nano-technologies (patent pending).

PROTECTED AGAINST CONTAMINANTS with WIPERTECH protective wiper ring.

RECOMMENDED when the required stroke lengths are not available for CSX and SMLX series.

THE NEW MODELS WILL BE SUPPLIED ONLY WHEN THE OLD ONES ARE OUT OF STOCK.

Sostituisce la precedente serie CSM. Disponibile negli stessi diametri e stesse forze della serie SMLX, è – dopo di quest'ultima – la serie con ingombro in altezza più contenuto. Rispetto alla serie SMLX, è disponibile con corse di lavoro più lunghe (a partire dal diametro 50 mm).

NOVITÀ: aggiornata con le nuove nano-tecnologie WIPERTECH e NANOTECH2.

AUTOLUBRIFICATI per milioni di cicli grazie alle nano-tecnologie (in corso di brevetto).

PROTETTI DA CONTAMINANTI con anello raschiastelo di protezione WIPERTECH.

CONSIGLIATI per applicazioni con corse di lavoro che non sono disponibili per le serie CSX e SMLX.

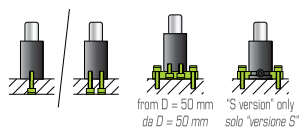
I NUOVI MODELLI SARANNO FORNITI SOLO AD ESAURIMENTO SCORTE DEI VECCHI.

Fixing possibilities

(see also our "Accessories for nitrogen gas springs for dies" catalogue)

Fissaggi possibili

(vedi anche il nostro catalogo "Accessori per cilindri all'azoto per stampi")



HOW TO ORDER

No. 8 pcs. CSMX38-50 750daN

No. 8 nitrogen gas springs series CSMX, $D = 38$ mm, stroke length = 50 mm, initial force = 750 daN.

ATTENTION: specify the required initial force.

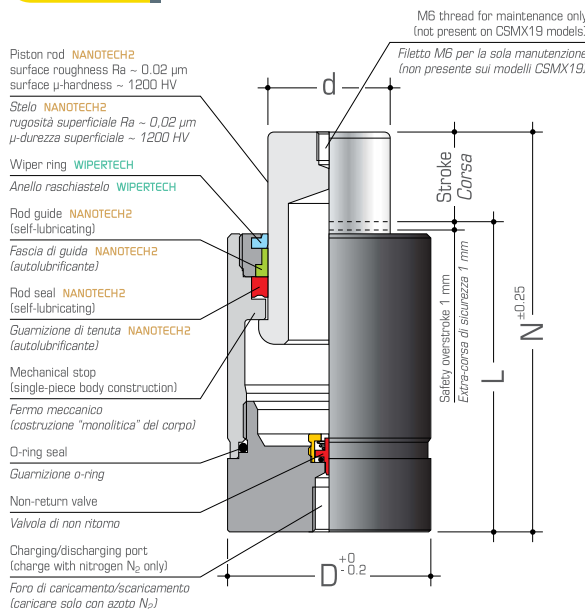
ESEMPIO D'ORDINE

No. 8 CSMX38-50 750daN

N° 8 cilindri all'azoto serie CSMX, $D = 38$ mm, corsa = 50 mm, forza iniziale = 750 daN.

ATTENZIONE: specificare la forza iniziale desiderata.

CSMX



TECHNICAL NOTES

Important use instructions and maximum number of cycles per minute on pages 10-17.

For accessories and other mountings, see the "Accessories for nitrogen gas springs for dies" catalogue.

The CSM models are replaceable with the CSMX models.

ATTENTION:

Rod diameter $d = 40$ mm for the CSMX63 models.

Rod diameter $d = 36$ mm for the CSM63 models.

NOTE TECNICHE

Importanti istruzioni d'uso e numero massimo di cicli/minuto alle pagine 10-17.

Per accessori e altri montaggi, consultare il catalogo "Accessori per cilindri all'azoto per stampi".

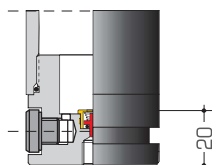
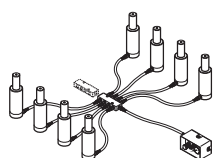
I modelli CSM sono sostituibili con i modelli CSMX.

ATTENZIONE:

Diametro dello stelo $d = 40$ mm per i modelli CSMX63.

Diametro dello stelo $d = 36$ mm per i modelli CSM63.

"S" version



"S" VERSION

With fixing groove and G1/8 side port, linkable to open system, from $D = 50$ mm,

» **L and N dimensions: + 20 mm**

» Add an **-S** to order them

Example: no. 8 pcs. CSMX50-50-S








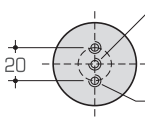

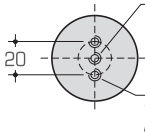
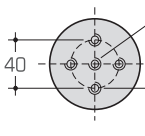
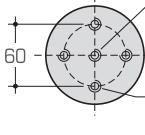
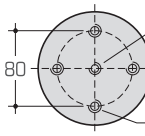
VERSIONE "S"

Da $D = 50$ mm, scanalatura di fissaggio e foro laterale G1/8, per collegamento a sistema.

» **Quote L e N: + 20 mm**

» Per ordinarli, aggiungere una **-S**

Esempio: n° 8 CSMX50-50-S

| MODEL MODELLO | MAX STROKE mm CORSA MAX mm | L mm | N mm | D mm | d mm |  bar |  daN |  daN | GAS SPRING BASE BASE DEL CILINDRO |
|------------------|-------------------------------|------|------|-------|--|---|---|--|---|
| CSMX19-10 | 10 | 50 | 60 | 19 | 10 | 191 | 150 | 200 |  M6 x 8 for charging/discharging per il caricamento/scaricamento for fixing per il fissaggio |
| 15 | 15 | 55 | 70 | | | | | 210 | |
| 25 | 25 | 65 | 90 | | | | | 240 | |
| 38 | 38 | 78 | 116 | | | | | 240 | |
| 50 | 50 | 90 | 140 | | | | | 250 | |
| 80 | 80 | 120 | 200 | | | | | 250 | |
| CSMX25-10 | 10 | 50 | 60 | 25 | 14 | 195 | 300 | 440 |  M6 x 8 for charging/discharging per il caricamento/scaricamento for fixing per il fissaggio |
| 15 | 15 | 55 | 70 | | | | | 510 | |
| 25 | 25 | 65 | 90 | | | | | 520 | |
| 38 | 38 | 78 | 116 | | | | | 550 | |
| 50 | 50 | 90 | 140 | | | | | 560 | |
| 80 | 80 | 120 | 200 | | | | | 580 | |
| CSMX32-10 | 10 | 55 | 65 | 32 | 18 | 196 | 500 | 710 |  M6 x 8 for charging/discharging per il caricamento/scaricamento for fixing per il fissaggio |
| 15 | 15 | 60 | 75 | | | | | 720 | |
| 25 | 25 | 70 | 95 | | | | | 760 | |
| 38 | 38 | 83 | 121 | | | | | 800 | |
| 50 | 50 | 95 | 145 | | | | | 820 | |
| 80 | 80 | 125 | 205 | | | | | 830 | |
| CSMX38-10 | 10 | 55 | 65 | 38 | 22 | 197 | 750 | 1090 |  M8 x 11 for charging/discharging per il caricamento/scaricamento for fixing per il fissaggio |
| 15 | 15 | 60 | 75 | | | | | 1130 | |
| 25 | 25 | 70 | 95 | | | | | 1180 | |
| 38 | 38 | 83 | 121 | | | | | 1230 | |
| 50 | 50 | 95 | 145 | | | | | 1240 | |
| 80 | 80 | 125 | 205 | | | | | 1280 | |
| CSMX50-10 | 10 | 60 | 70 | 50 | 30 | 212 | 1500 | 2460 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (2x) for fixing per il fissaggio |
| 25 | 25 | 75 | 100 | | | | | 2460 | |
| 38 | 38 | 88 | 126 | | | | | 2510 | |
| 50 | 50 | 100 | 150 | | | | | 2590 | |
| 63 | 63 | 113 | 176 | | | | | 2590 | |
| 80 | 80 | 130 | 210 | | | | | 2590 | |
| 100 | 100 | 150 | 250 | | | | | 2650 | |
| 125 | 125 | 190 | 315 | | | | | 2670 | |
| 160 | 160 | 235 | 395 | | | | | 2680 | |
| 200 | 200 | 275 | 475 | | | | | 2690 | |
| CSMX63-10 | 10 | 65 | 75 | 63 | 40  | 159 | 2000 | 2900 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (2x) for fixing per il fissaggio |
| 25 | 25 | 80 | 105 | | | | | 3270 | |
| 38 | 38 | 93 | 131 | | | | | 3430 | |
| 50 | 50 | 105 | 155 | | | | | 3490 | |
| 63 | 63 | 118 | 181 | | | | | 3500 | |
| 80 | 80 | 135 | 215 | | | | | 3500 | |
| 100 | 100 | 160 | 260 | | | | | 3580 | |
| 125 | 125 | 190 | 315 | | | | | 3580 | |
| 160 | 160 | 235 | 395 | | | | | 3690 | |
| 200 | 200 | 275 | 475 | | | | | 3750 | |
| CSMX75-10 | 10 | 65 | 75 | 75 | 45 | 189 | 3000 | 4800 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (4x) for fixing per il fissaggio |
| 25 | 25 | 80 | 105 | | | | | 5200 | |
| 38 | 38 | 93 | 131 | | | | | 5300 | |
| 50 | 50 | 105 | 155 | | | | | 5400 | |
| 63 | 63 | 118 | 181 | | | | | 5500 | |
| 80 | 80 | 135 | 215 | | | | | 5600 | |
| 100 | 100 | 155 | 255 | | | | | 5700 | |
| 125 | 125 | 200 | 325 | | | | | 5800 | |
| 160 | 160 | 250 | 410 | | | | | 5900 | |
| 200 | 200 | 300 | 500 | | | | | 6000 | |
| CSMX95-25 | 25 | 90 | 115 | 95 | 58 | 189 | 5000 | 8500 |  M8 for charging/discharging per il caricamento/scaricamento M8 x 12 (4x) for fixing per il fissaggio |
| 38 | 38 | 103 | 141 | | | | | 8700 | |
| 50 | 50 | 115 | 165 | | | | | 8800 | |
| 63 | 63 | 128 | 191 | | | | | 8900 | |
| 80 | 80 | 155 | 235 | | | | | 9000 | |
| 100 | 100 | 185 | 285 | | | | | 9100 | |
| 125 | 125 | 220 | 345 | | | | | 9200 | |
| 160 | 160 | 260 | 420 | | | | | 9300 | |
| 200 | 200 | 310 | 510 | 9400 | | | | | |
| CSMX120-25 | 25 | 100 | 125 | 120 | 75 | 204 | 9000 | 14000 |  M8 for charging/discharging per il caricamento/scaricamento M10 x 15 (4x) for fixing per il fissaggio |
| 38 | 38 | 113 | 151 | | | | | 15000 | |
| 50 | 50 | 125 | 175 | | | | | 15400 | |
| 63 | 63 | 138 | 201 | | | | | 15500 | |
| 80 | 80 | 160 | 240 | | | | | 15600 | |
| 100 | 100 | 190 | 290 | | | | | 15700 | |
| 125 | 125 | 225 | 350 | | | | | 15800 | |
| 160 | 160 | 270 | 430 | | | | | 17800 | |
| 200 | 200 | 320 | 520 | 18000 | | | | | |

• Available on request / Disponibili a richiesta

 Attention: see note on page 28 /  Attenzione: vedere nota a pag. 28

Standard series

Nitrogen gas springs for dies / Cilindri all'azoto per stampi



TOP

Gas springs with bore seal design. The TOP25 models are still the most powerful gas springs with diameter 25 mm, generating an initial force of 400 daN (when possible, the use of MSML25 models is recommended, since they feature a more advanced technology and generate an initial force of 360 daN). TOP series gas springs must be manually lubricated, as they are not self-lubricated. TOP series gas springs must be protected against contaminants, as they cannot be provided with a wiper ring. RECOMMENDED only for diameter 25 mm, in case the initial force of 360 daN generated by the MSML25 models is not enough for the specific application. For the other diameters, the use of CSX models is recommended because of the more advanced technology.

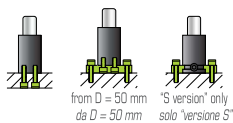
Cilindri con tenuta di tipo pistone (tenuta della guarnizione sulle pareti interne del corpo del cilindro). Rimangono i cilindri più potenti per quanto riguarda il diametro 25 mm, che sviluppa una forza iniziale di 400 daN (si valuti comunque la possibilità di utilizzare i modelli MSML25, che a parità di diametro sviluppano una forza iniziale di 360 daN e sono dotati di una tecnologia più avanzata). I cilindri della serie TOP devono essere lubrificati manualmente, non essendo autolubrificati. I cilindri della serie TOP devono essere protetti da contaminanti, non potendo essere dotati di anello raschiastelo. CONSIGLIATI per il solo diametro 25 mm qualora la forza iniziale di 360 daN sviluppata dai modelli MSML25 non sia sufficiente per l'applicazione. Per gli altri diametri, si consiglia l'utilizzo dei modelli CSX data la tecnologia più avanzata.

Fixing possibilities

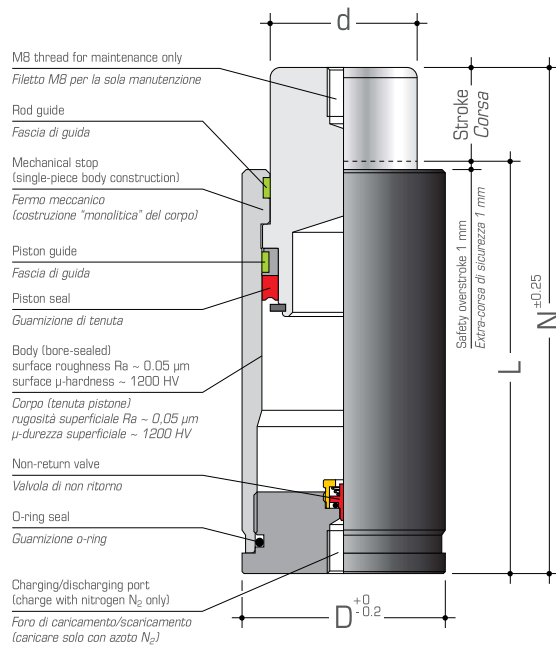
(see also our "Accessories for nitrogen gas springs for dies" catalogue)

Fissaggi possibili

(vedi anche il nostro catalogo "Accessori per cilindri all'azoto per stampi")



TOP 25/120



TECHNICAL NOTES

Important use instructions and maximum number of cycles per minute on pages 10-17.

For accessories and other mountings, see the "Accessories for nitrogen gas springs for dies" catalogue.

NOTE TECNICHE

Importanti istruzioni d'uso e numero massimo di cicli/minuto alle pagine 10-17.

Per accessori e altri montaggi, consultare il catalogo "Accessori per cilindri all'azoto per stampi".

"S" VERSION

With fixing groove and G1/8 side port, linkable to open system, from D = 50 mm,

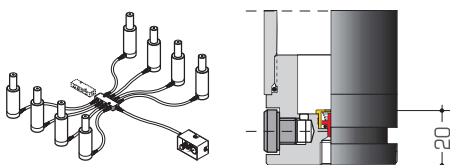
- » **L and N dimensions: + 20 mm**
- » Add an **-S** to order them
- Example: no. 8 pcs. TOP50-50-**S**




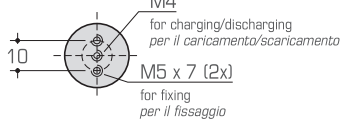
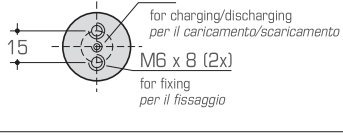




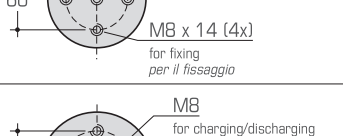
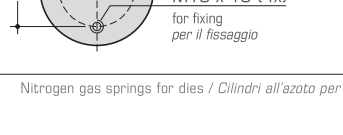
VERSIONE "S"

Da D = 50 mm, scanalatura di fissaggio e foro laterale G1/8, per collegamento a sistema.

- » **Quote L e N: + 20 mm**
- » Per ordinarli, aggiungere una **-S**
- Esempio: n° 8 TOP50-50-**S**

"S" version



| MODEL MODELLO | MAX STROKE mm CORSA MAX mm | L mm | N mm | D mm | d mm |  bar |  daN |  daN | GAS SPRING BASE BASE DEL CILINDRO |
|------------------|-------------------------------|---------|---------|---------|---------|---|---|---|---|
| TOP25-10 | 10 | 65 | 75 | 25 | 16 | 157 | 400 | 770 |  <p>M4 for charging/discharging per il caricamento/scaricamento</p> <p>M5 x 7 (2x) for fixing per il fissaggio</p> |
| 15 | 15 | 75 | 90 | | | | | 790 | |
| 25 | 25 | 95 | 120 | | | | | 800 | |
| 50 | 50 | 145 | 195 | | | | | 810 | |
| TOP32-10 | 10 | 65 | 75 | 32 | 20 | 154 | 700 | 1500 |  <p>M4 for charging/discharging per il caricamento/scaricamento</p> <p>M6 x 8 (2x) for fixing per il fissaggio</p> |
| 15 | 15 | 75 | 90 | | | | | 1520 | |
| 25 | 25 | 95 | 120 | | | | | 1530 | |
| 50 | 50 | 145 | 195 | | | | | 1540 | |
| TOP38-10 | 10 | 65 | 75 | 38 | 24 | 162 | 1000 | 1870 |  <p>M8 for charging/discharging per il caricamento/scaricamento</p> <p>M6 x 10 (2x) for fixing per il fissaggio</p> |
| 15 | 15 | 75 | 90 | | | | | 1880 | |
| 25 | 25 | 95 | 120 | | | | | 1930 | |
| 50 | 50 | 145 | 195 | | | | | 2000 | |
| TOP50-10 | 10 | 70 | 80 | 50 | 36 | 159 | 2000 | 3750 |  <p>M8 for charging/discharging per il caricamento/scaricamento</p> <p>M8 x 12 (2x) for fixing per il fissaggio</p> |
| 15 | 15 | 80 | 95 | | | | | 3850 | |
| 25 | 25 | 100 | 125 | | | | | 3900 | |
| 50 | 50 | 150 | 200 | | | | | 3950 | |
| TOP63-10 | 10 | 75 | 85 | 63 | 46 | 153 | 3000 | 5300 |  <p>M8 for charging/discharging per il caricamento/scaricamento</p> <p>M8 x 12 (2x) for fixing per il fissaggio</p> |
| 15 | 15 | 85 | 100 | | | | | 5650 | |
| 25 | 25 | 105 | 130 | | | | | 5690 | |
| 50 | 50 | 155 | 205 | | | | | 5790 | |
| TOP75-10 | 10 | 75 | 85 | 75 | 56 | 142 | 4000 | 6900 |  <p>M8 for charging/discharging per il caricamento/scaricamento</p> <p>M8 x 12 (4x) for fixing per il fissaggio</p> |
| 15 | 15 | 85 | 100 | | | | | 7100 | |
| 25 | 25 | 105 | 130 | | | | | 7100 | |
| 50 | 50 | 155 | 205 | | | | | 7300 | |
| TOP95-10 | 10 | 80 | 90 | 95 | 70 | 154 | 7000 | 10800 |  <p>M8 for charging/discharging per il caricamento/scaricamento</p> <p>M8 x 14 (4x) for fixing per il fissaggio</p> |
| 15 | 15 | 90 | 105 | | | | | 11700 | |
| 25 | 25 | 110 | 135 | | | | | 11800 | |
| 50 | 50 | 160 | 210 | | | | | 11900 | |
| TOP120-10 | 10 | 90 | 100 | 120 | 90 | 141 | 10000 | 15000 |  <p>M8 for charging/discharging per il caricamento/scaricamento</p> <p>M10 x 16 (4x) for fixing per il fissaggio</p> |
| 15 | 15 | 100 | 115 | | | | | 16000 | |
| 25 | 25 | 120 | 145 | | | | | 17000 | |
| 50 | 50 | 170 | 220 | | | | | 18000 | |