

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M6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.

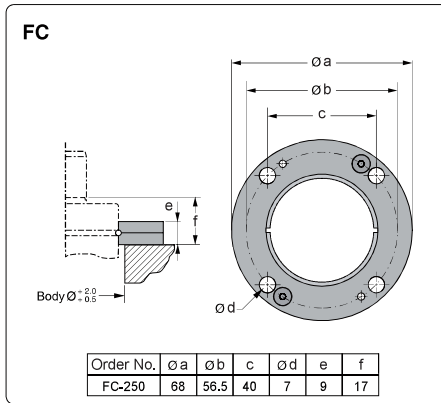
The Power Line springs are available with forces from 1,700 N up to 200,000 N and stroke lengths between 7 and 125 mm.

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

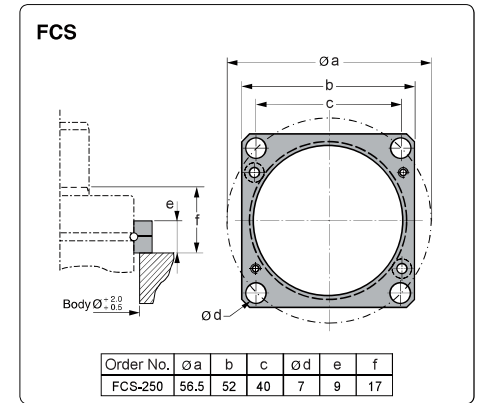
An upper C-groove, lower U-groove together with four M6 threaded holes allow various mounting possibilities using our standard mounts.

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*		
GX500-010	10	4700	7200	50	40
GX500-013	13		7100	56	43
GX500-016	16		7200	62	46
GX500-019	19		7400	68	49
GX500-025	25		7300	80	55
GX500-032	32		7200	94	62
GX500-038	38		7200	106	68
GX500-050	50		7200	130	80
GX500-063	63		7200	156	93
GX500-075	75		7100	180	105
GX500-080	80		7100	190	110
GX500-100	100		7100	230	130
GX500-125	125	7100	280	155	

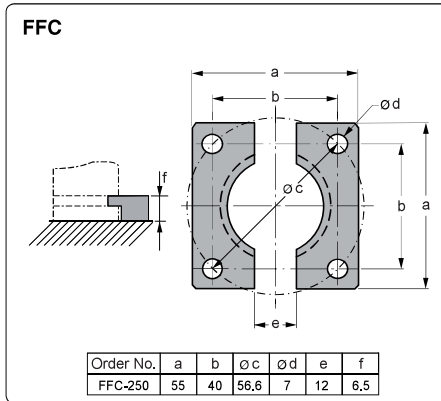
*=在全行程 at full stroke



Order No.	Ø a	Ø b	c	Ø d	e	f
FC-250	68	56.5	40	7	9	17



Order No.	Ø a	b	c	Ø d	e	f
FCS-250	56.5	52	40	7	9	17

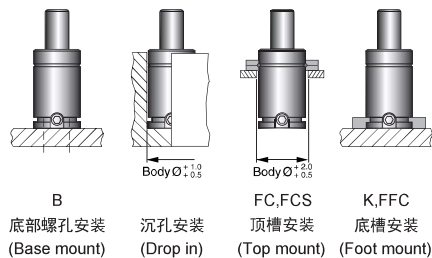


Order No.	a	b	Ø c	Ø d	e	f
FFC-250	55	40	56.6	7	12	6.5

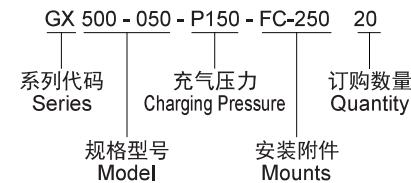
基本参数 Basic information

- 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



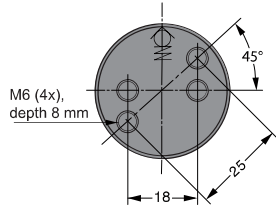
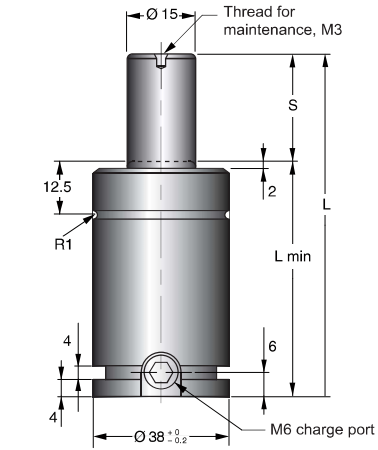
订购方法 Ordering method





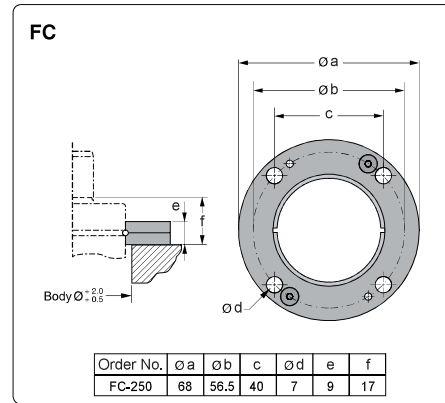
氮气弹簧的标准系是GTU系列，其规格从250到10000的氮气弹簧都符合国际ISO 11901和VDI 3003氮气弹簧标准。
总高度L为50 mm + (2 × 行程)。

The GTU line constitutes our standard line of gas springs. Sizes 250 to 10000 conform to the ISO 11901 gas spring standard as well as VDI 3003. The total length L is 50 mm + (2 × stroke).

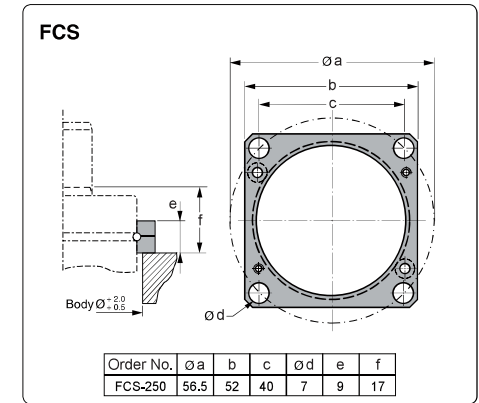


Order No.	行程 Stroke S	弹压力N在150bar/+20°C		L±0.25	Lmin
		初始力 Initial	终始力* End force*		
GTU250-010	10	2650	3500	70	60
GTU250-013	12.7		3500	75.4	62.7
GTU250-016	16		3500	82	66
GTU250-025	25		3500	100	75
GTU250-038	38.1		3500	126.2	88.1
GTU250-050	50		3500	150	100
GTU250-064	63.5		3500	177	113.5
GTU250-080	80		3500	210	130
GTU250-100	100		3500	250	150
GTU250-125	125		3500	300	175

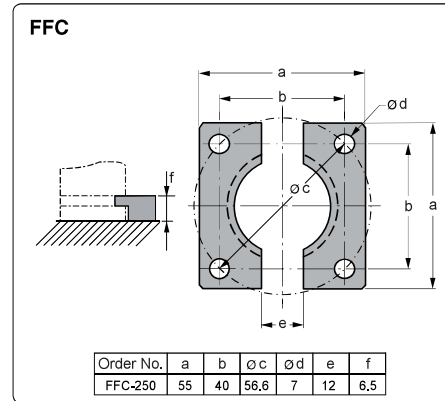
*=在全行程 at full stroke



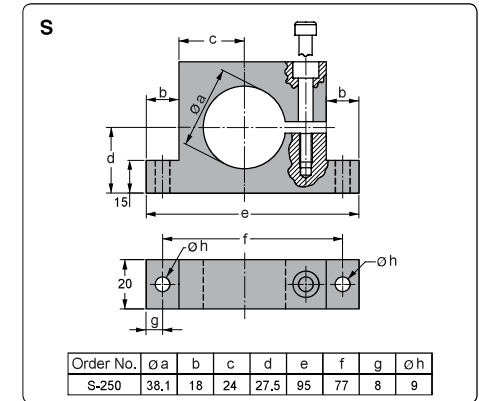
Order No.	Øa	Øb	c	Ød	e	f
FC-250	68	56.5	40	7	9	17



Order No.	Øa	b	c	Ød	e	f
FCS-250	56.5	52	40	7	9	17



Order No.	a	b	Øc	Ød	e	f
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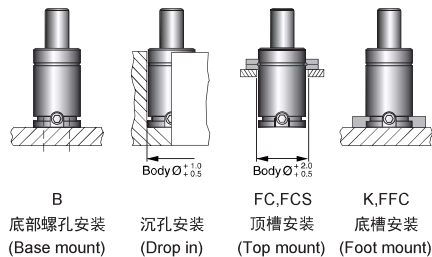


Order No.	Øa	b	c	d	e	f	g	Øh
S-250	38.1	18	24	27.5	95	77	8	9

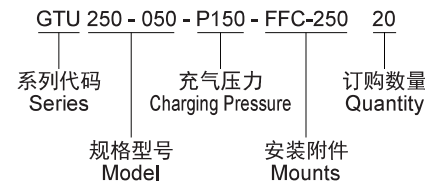
基本参数 Basic information

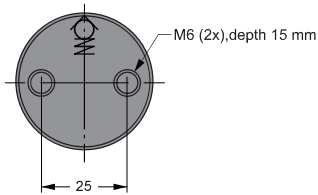
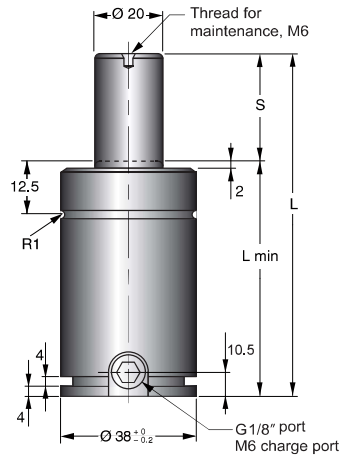
- 充气介质 ----- 氮气 Nitrogen
Pressure medium
- 最大充气压力 ----- 150 bar(at 20°C)
Max.charging pressure
- 最小充气压力 ----- 50 bar(at 20°C)
Min.charging pressure
- 工作环境温度 ----- 0~80°C
Operating temperature
- 单位温度弹压力增量 ----- ±0.3%/°C
Force increase by temperature
- 推荐每分钟工作频率 ----- 20-80spm(20°C)
Recommended working 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





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。些系列氮气弹簧的弹压力从3600 N到66000 N，工作行程从10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，它们同缸体底部二个M6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.

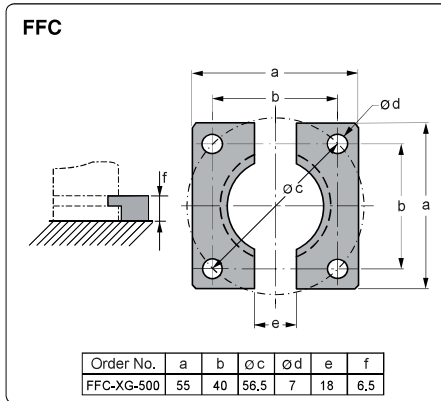
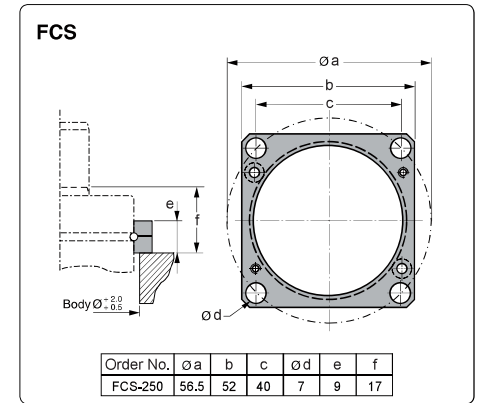
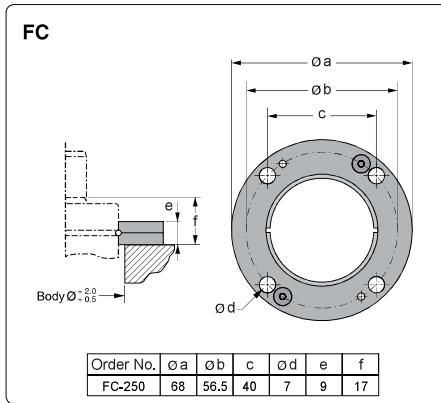
The Power Line springs are available with forces from 3,600 N up to 66,000 N and stroke lengths between 10 and 125 mm.

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

An upper C-groove, lower U-groove together with two M6 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*		
GXG500-010	10	4700	7200	60	50
GXG500-013	13		7100	66	53
GXG500-016	16		7200	72	56
GXG500-019	19		7400	78	59
GXG500-025	25		7300	90	65
GXG500-032	32		7200	104	72
GXG500-038	38		7200	116	78
GXG500-050	50		7200	140	90
GXG500-063	63		7200	166	103
GXG500-075	75		7100	190	115
GXG500-080	80		7100	200	120
GXG500-100	100		7100	240	140
GXG500-125	125	7100	290	165	

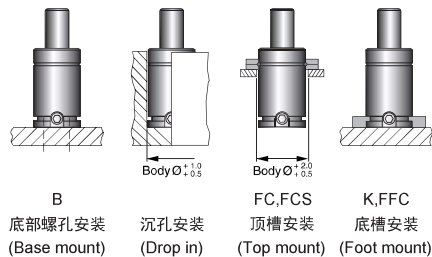
*=在全行程 at full stroke



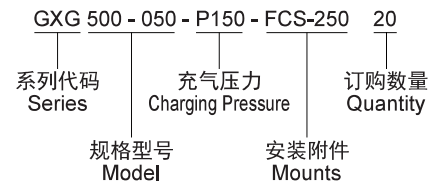
基本参数 Basic information

- 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



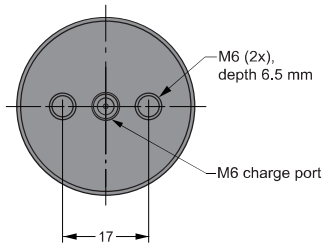
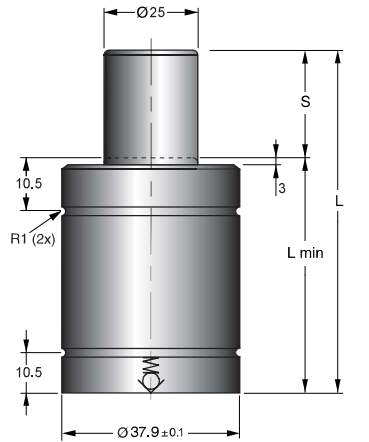


GCU是一种结构非常紧凑的活塞式氮气弹簧，在有效的空间中，能够提供非常大的弹压力，这种氮气弹簧最大频次数可达到100次/分。

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。

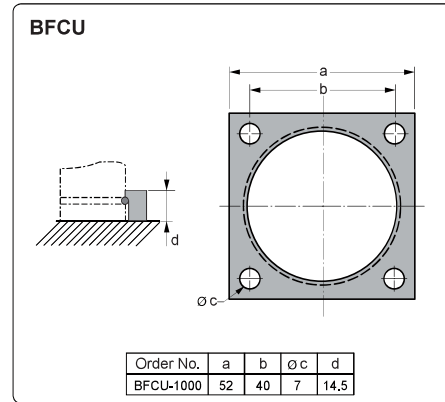
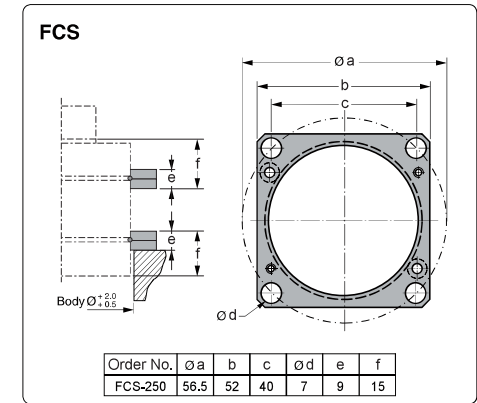
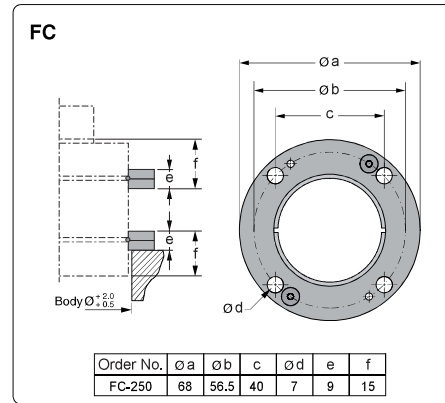
The GCU gas springs are a very compact Bore Sealed gas springs, offering impressive force in a compact body. The maximum frequency for the spring is 100 strokes/minute.

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*		
GCU1000-006	6	10600	16000	61	55
GCU1000-010	10		16000	78	68
GCU1000-016	16		16000	100	84
GCU1000-025	25		16000	135	110
GCU1000-032	32		16000	167	135
GCU1000-040	40		16000	195	155
GCU1000-050	50		16000	230	180

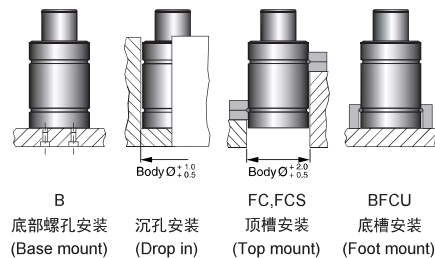
*=在全行程 at full stroke



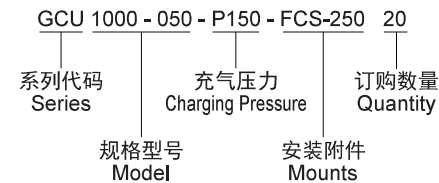
基本参数 Basic information

- 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



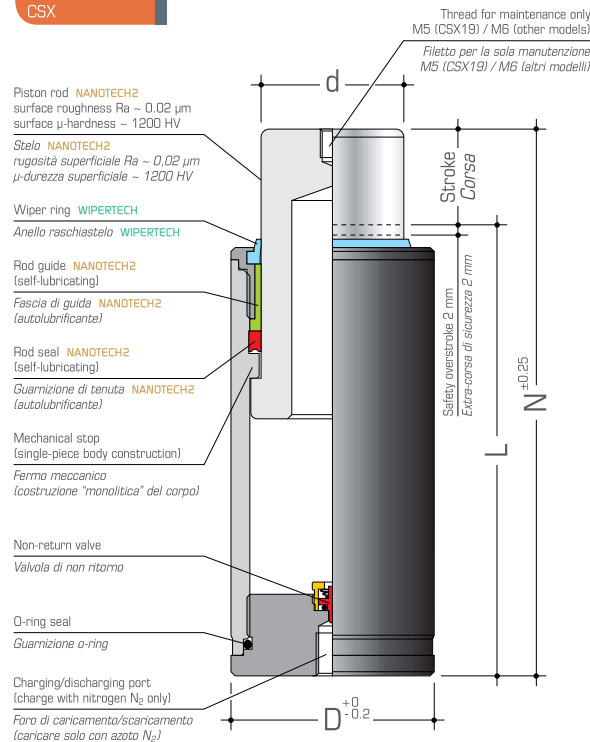
CSX

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

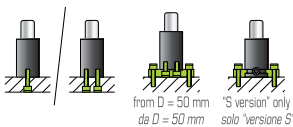


Fixing possibilities

(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"

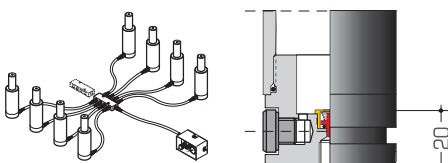
Da D = 50 mm, scanalatura di fissaggio e foro laterale G1/8, per collegamento a sistema.






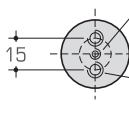
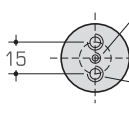
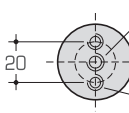
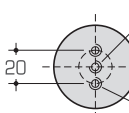
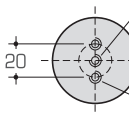
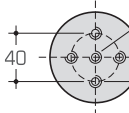
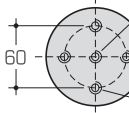
» **Quote L e N: + 20 mm**

» 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					230		
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.

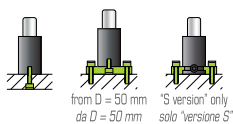
I NUOVI MODELLI SARANNO FORNITI SOLO AD ESAURIMENTO SCORTE DEI VECCHI.

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"

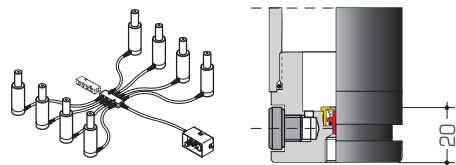
Da D = 50 mm, scanalatura di fissaggio e foro laterale G1/8, per collegamento a sistema.

» **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

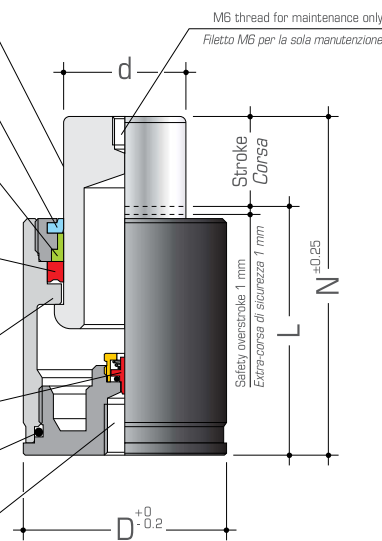
Valvola di non ritorno

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 mm CORSA MAX mm	L mm	N mm	D mm	d mm	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



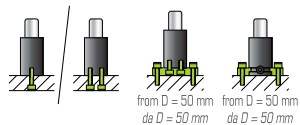
PATENTS PENDING

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).

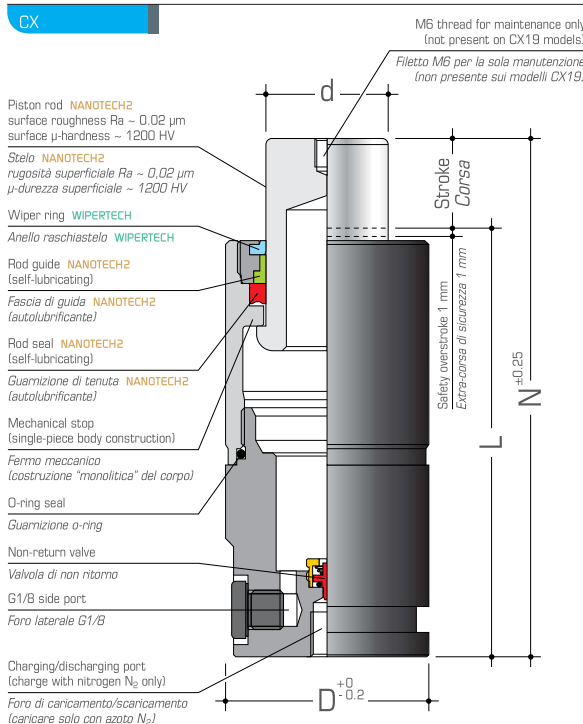
NOVITÀ: aggiornata con le nuove nano-tecnologie WIPERTECH e NANOTECH2.

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".

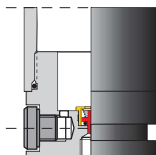
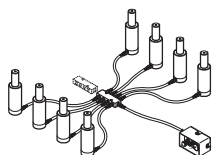
I modelli C sono sostituibili con i modelli CX.

ATTENZIONE:

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

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

Linkable / Collegabili








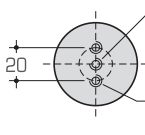

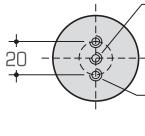
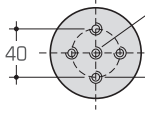
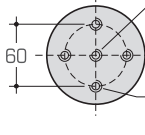
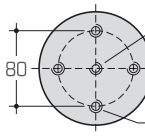


Ready with fixing groove and G1/8 side port, linkable to open system, from D = 50 mm.

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 CORSA 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.

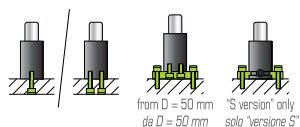
I NUOVI MODELLI SARANNO FORNITI SOLO AD ESAURIMENTO SCORTE DEI VECCHI.

Fixing possibilities

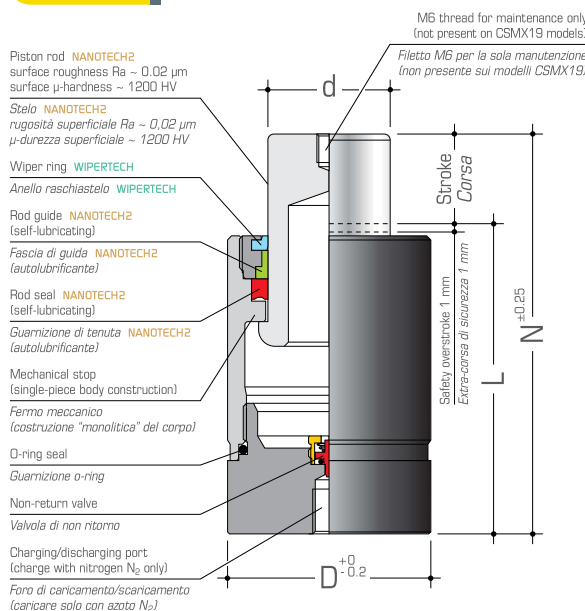
(see also our "Accessories for nitrogen gas springs for dies" catalogue)

Fissaggi possibili

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



CSMX



HOW TO ORDER

ESEMPIO D'ORDINE

No. 8 pcs. CSMX38-50 750daN

No. 8 CSMX38-50 750daN

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

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

ATTENTION: specify the required initial force.

ATTENZIONE: specificare la forza iniziale desiderata.

TECHNICAL NOTES

NOTE TECNICHE

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.

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".

The CSM models are replaceable with the CSMX models.

I modelli CSM sono sostituibili con i modelli CSMX.

ATTENTION:

Rod diameter d = 40 mm for the CSMX63 models.

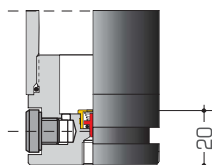
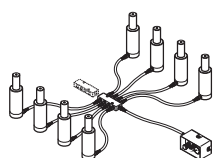
Rod diameter d = 36 mm for the CSM63 models.

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**








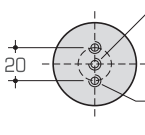

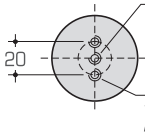
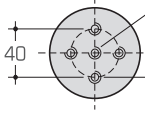
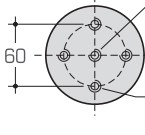
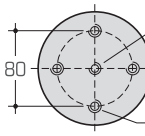
VERSIONE "S"

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	
15	15	55	70						
25	25	65	90						
38	38	78	116						
50	50	90	140						
80	80	120	200						
CSMX25-10	10	50	60	25	14	195	300	440	
15	15	55	70						
25	25	65	90						
38	38	78	116						
50	50	90	140						
80	80	120	200						
CSMX32-10	10	55	65	32	18	196	500	710	
15	15	60	75						
25	25	70	95						
38	38	83	121						
50	50	95	145						
80	80	125	205						
CSMX38-10	10	55	65	38	22	197	750	1090	
15	15	60	75						
25	25	70	95						
38	38	83	121						
50	50	95	145						
80	80	125	205						
CSMX50-10	10	60	70	50	30	212	1500	2460	
25	25	75	100						
38	38	88	126						
50	50	100	150						
63	63	113	176						
80	80	130	210						
100	100	150	250						
125	125	190	315						
160	160	235	395						
200	200	275	475						
CSMX63-10	10	65	75	63	40 	159	2000	2900	
25	25	80	105						
38	38	93	131						
50	50	105	155						
63	63	118	181						
80	80	135	215						
100	100	160	260						
125	125	190	315						
160	160	235	395						
200	200	275	475						
CSMX75-10	10	65	75	75	45	189	3000	4800	
25	25	80	105						
38	38	93	131						
50	50	105	155						
63	63	118	181						
80	80	135	215						
100	100	155	255						
125	125	200	325						
160	160	250	410						
200	200	300	500						
CSMX95-25	25	90	115	95	58	189	5000	8500	
38	38	103	141						
50	50	115	165						
63	63	128	191						
80	80	155	235						
100	100	185	285						
125	125	220	345						
160	160	260	420						
200	200	310	510						
CSMX120-25	25	100	125	120	75	204	9000	14000	
38	38	113	151						
50	50	125	175						
63	63	138	201						
80	80	160	240						
100	100	190	290						
125	125	225	350						
160	160	270	430						
200	200	320	520						

• 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.

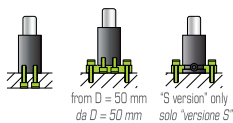
Cilindri con tenuta di tipo pistone (tenuta della guarnizione sulle pareti interne del corpo del cilindro). Rimangono i cilindri più potenti per quanto riguarda il diametro 25 mm, che sviluppa una forza iniziale di 400 daN (si valuti comunque la possibilità di utilizzare i modelli MSML25, che a parità 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

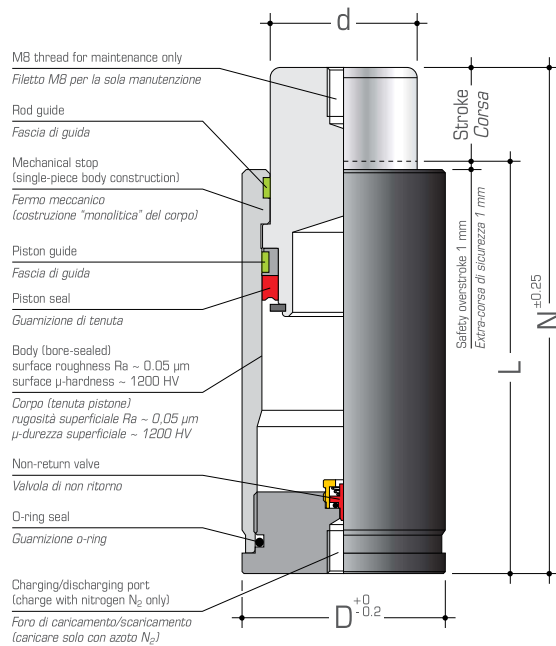
(see also our "Accessories for nitrogen gas springs for dies" catalogue)

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,

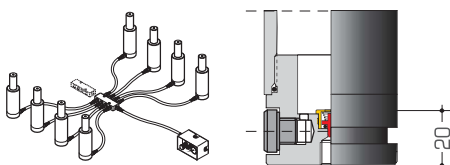
- » **L and N dimensions: + 20 mm**
- » Add an **-S** to order them
- Example: no. 8 pcs. TOP50-50-**S**

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	
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	
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	
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	
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	
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	
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	
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	
15	15	100	115					16000	
25	25	120	145					17000	
50	50	170	220					18000	