Bulletin No. B17113A

DADCO®

Serie FCL – Molle a gas a cuscino ad azoto

FCL Series

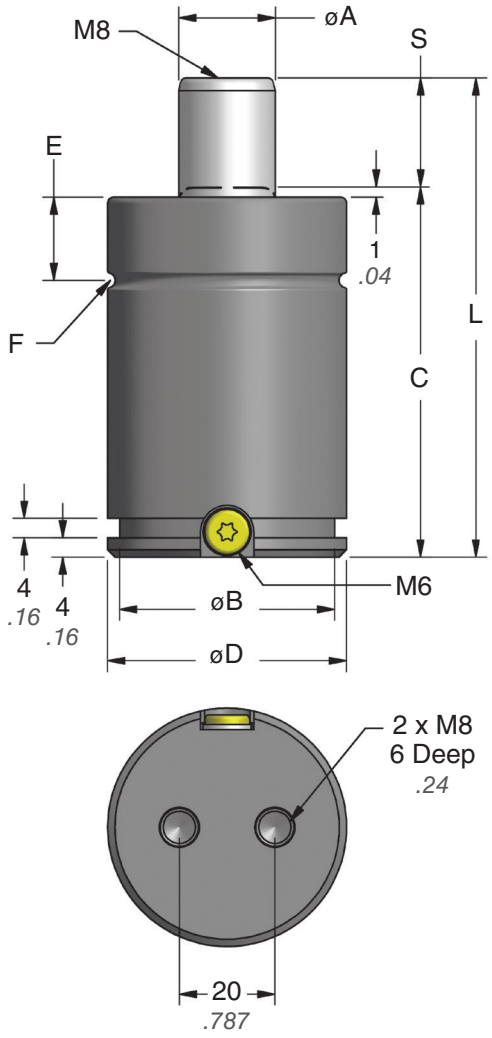
FCL.503.050.TO.150 **FCL.755.050.TO.150**

Mini cilindri a gas con ritorno ammortizzato

- Forza di ritorno ridotta, ideale per camme azionate dalla pressa
- Incremento ridotto della forza durante la corsa
- Lunghezze di corsa fino a 125 mm

PED
2014/68/EU
COMPLIANT

FCL Series *Patented*



TO – Basic Model

Model	FCL.503	FCL.755
A	16 *.63*	20 *.79*
B	40 *1.58*	45 *1.77*
D	44.5 *1.750*	50 *1.968*
E	16.5 *.65*	17.5 *.68*
F	R1 *.04*	R1.5 *.06*

Part No.	S* mm *inch*	C	L ±0.25 *±0.010*
FCL.___.025	24 *0.94*	76.5 *3.01*	100.5 *3.957*
FCL.___.038	36.5 *1.44*	89 *3.50*	125.5 *4.941*
FCL.___.050	49 *1.93*	101.5 *4.00*	150.5 *5.925*
FCL.___.063	61.5 *2.42*	114 *4.49*	175.5 *6.909*
FCL.___.075	74 *2.91*	126.5 *4.98*	200.5 *7.894*
FCL.___.080	79 *3.11*	131.5 *5.18*	210.5 *8.287*
FCL.___.100	99 *3.90*	151.5 *5.96*	250.5 *9.862*
FCL.___.125	124 *4.88*	176.5 *6.95*	300.5 *11.831*

*Gas Spring has a 1 mm stroke reduction.

Ordering Example:

FCL.503.025. ***TO.*** ***150***

Part Number: Includes Series, Model (503 or 755) and Stroke Length.

Mount Option: TO = Basic Model. *When not specified, default is TO.* See page 3 for mount options.

Charging Pressure: 15–150 bar *(220–2175 psi). When not specified, default is 150 bar.*

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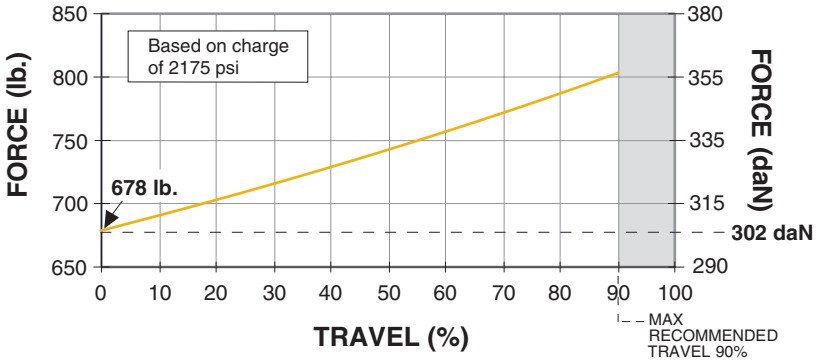
Force Charts

FCL.503

On-Contact Force

psi	lb.
2175	678
2000	623
1750	545
1500	467
1000	312
500	156
250	78



On-Contact Force

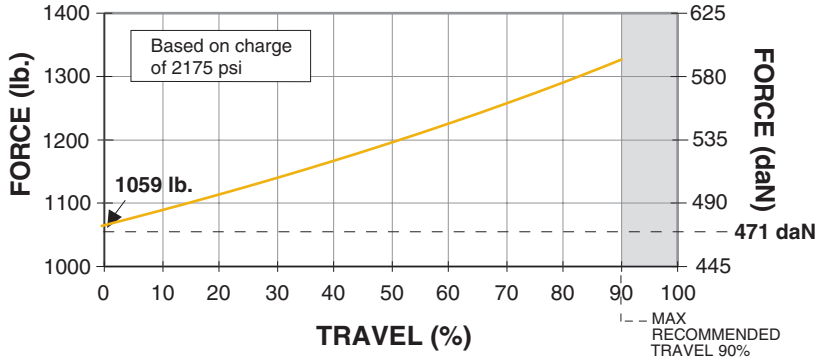
bar	daN
150	302
125	251
100	201
75	151
50	101
25	50
15	30

Note: Pressure rise is lower than a typical ø44.5 mm gas spring.

FCL.755

On-Contact Force

psi	lb.
2175	1059
2000	974
1750	852
1500	730
1000	487
500	243
250	122



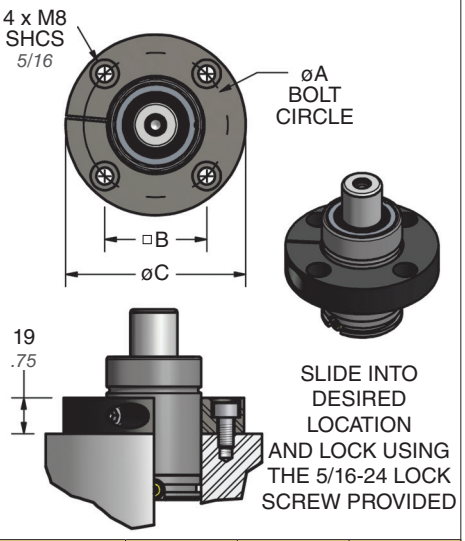
On-Contact Force

bar	daN
150	471
125	393
100	314
75	236
50	157
25	79
15	47

Note: Pressure rise is lower than a typical ø50 mm gas spring.

Mount Options

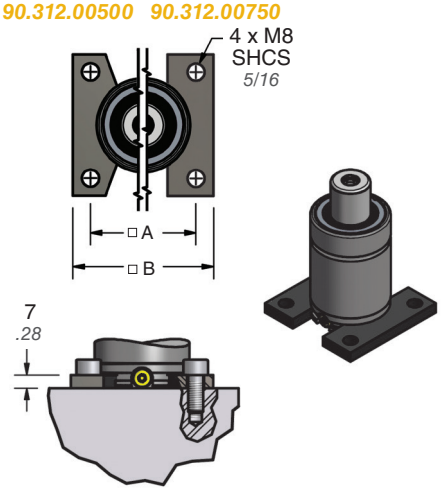
B27 90.27



Part No.	A	B	C
90.27.00500 *(FCL.503)*	63.5 *2.500*	44.9 *1.768*	82.6 *3.25*
90.27.00750 *(FCL.755)*	76.2 *3.000*	53.9 *2.121*	95.3 *3.75*

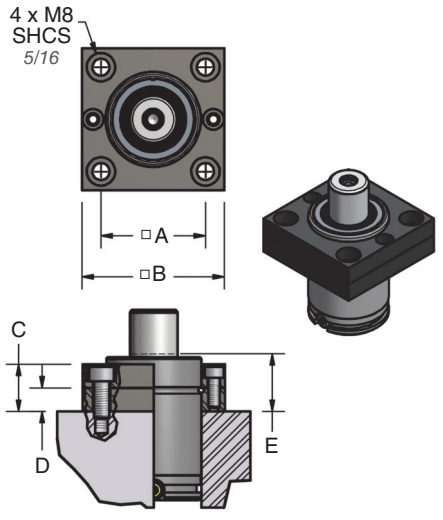
B312 90.312

90.312.00500 90.312.00750



Part No.	A	B
90.312.00500 *(FCL.503)*	50 *1.969*	70 *2.76*
90.312.00750 *(FCL.755)*	56.5 *2.224*	75 *2.95*

B322 90.322



Part No.	A	B	C	D	E
90.322.00500 *(FCL.503)*	52 *2.047*	70 *2.76*	20 *.79*	5.5 *.22*	22 *.87*
90.322.00750 *(FCL.755)*	55 *2.165*	75 *2.95*	25 *.98*	12.5 *.49*	29.5 *1.16*

Additional mount options available, refer to the Mini Nitrogen Gas Spring Catalog.

FCL Series – Cushion Nitrogen Gas Springs

Operating Specifications

Charging Medium:	Nitrogen Gas	Maximum Speed:	500 mm/sec *(20 in/sec)**
Charging Pressure Range:	15 – 150 bar *(220 – 2175 psi)*		**For FCL.755 models charged >100 bar (>1500 psi), maximum speed is 330 mm/sec (13 in/sec).*
Operating Temperature:	4°C – 71°C *(40°F – 160°F)*		

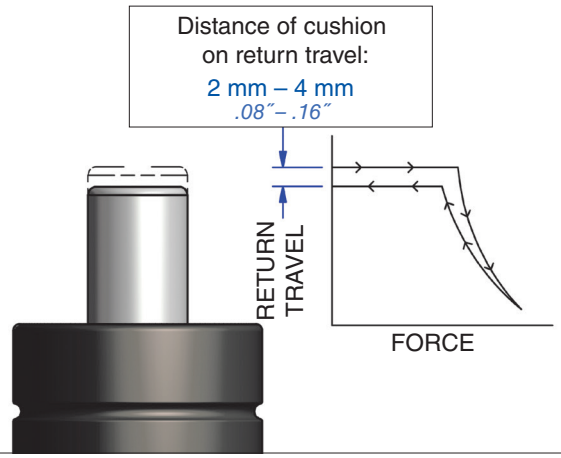
DO NOT EXCEED 90% OF STROKE

Repair Kits

FCL.RK.503
FCL.RK.755

FCL Repair Kits include dust cover, cushion collar assembly, cartridge assembly, bottle of assembly oil and a maintenance manual.

Internal Cushion

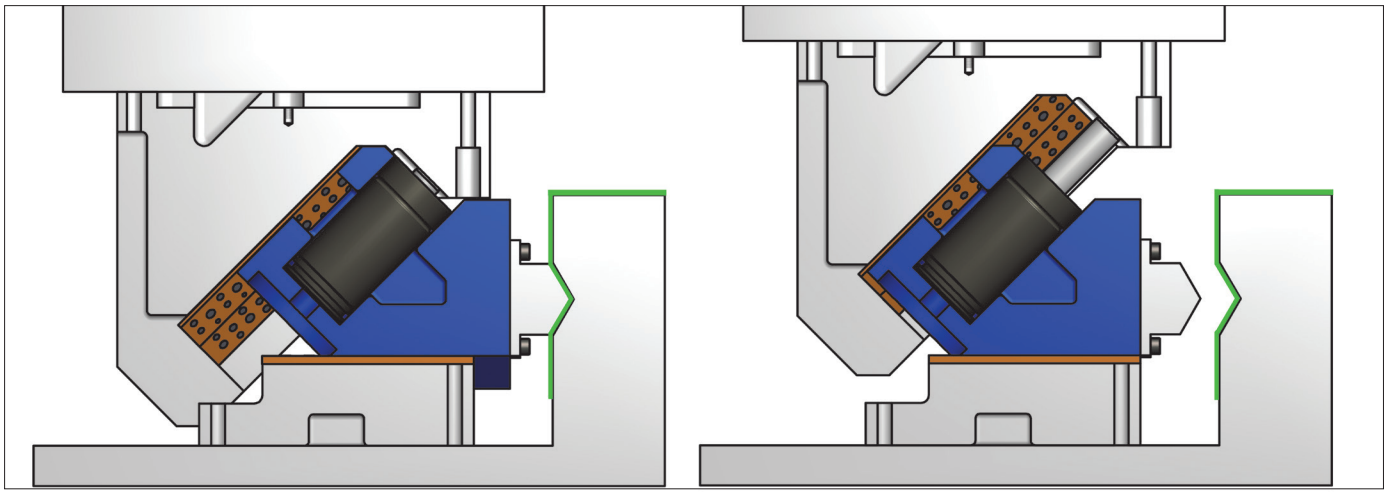


Maximum Strokes Per Minute

bar *charging pressure*	psi *charging pressure*	strokes per minute
150	2175	42
125	1800	50
100	1450	60
75	1100	60*

*Do not exceed 60 strokes per minute.

Application Example



A FCL.755 cushioned nitrogen gas spring is installed in a cam that forms a part with a tool attached to the cam slide, illustrated above. FCL series gas springs are well suited for die driven cam applications. The built-in cushion provides a decelerated force on the return travel and a reduction in the overall pressure rise during operation.

DADCO®
The global leader in nitrogen gas spring technology
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