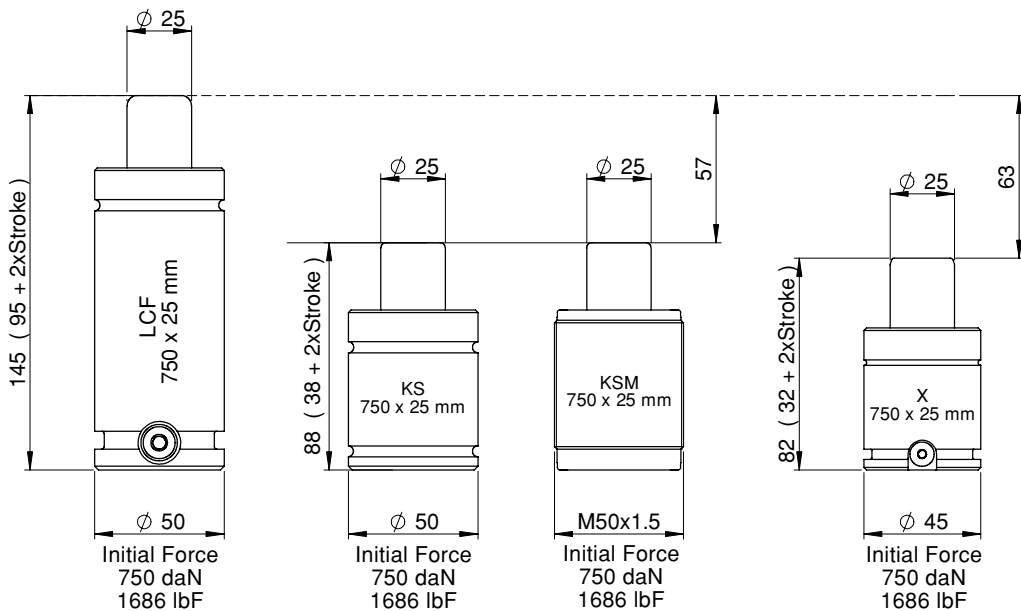
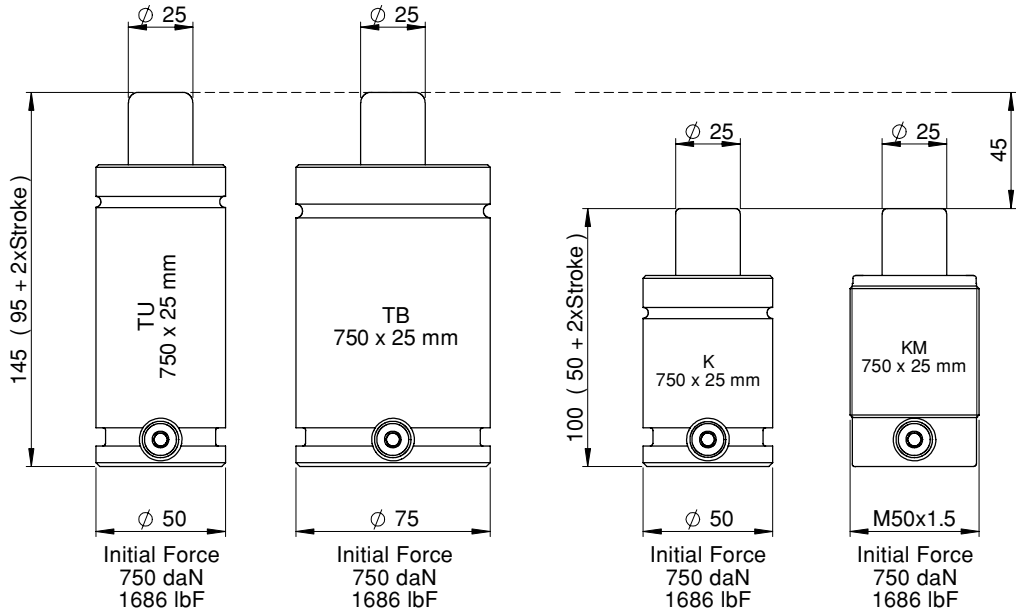










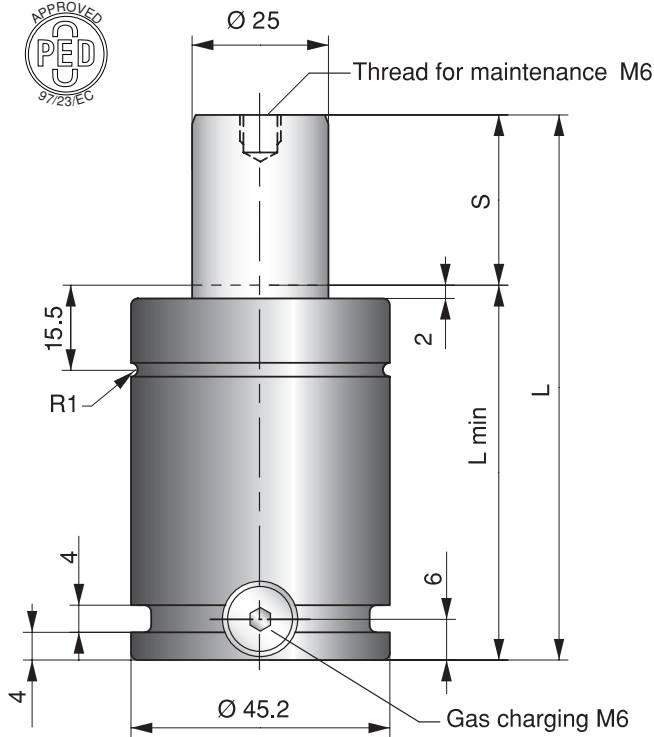


Overview - $750 \leq F_{INIT} < 1000$



$750 \leq F_{INIT} < 1000$

X 750		Page 2.5/2
TU 750	 	Page 2.5/4
TB 750		Page 2.5/6
K 750		Page 2.5/8
KM 750		Page 2.5/10
KS 750	 Discontinued	Page 2.5/12
KSM 750	 Discontinued	Page 2.5/14
LCF 750	 	Page 2.5/16



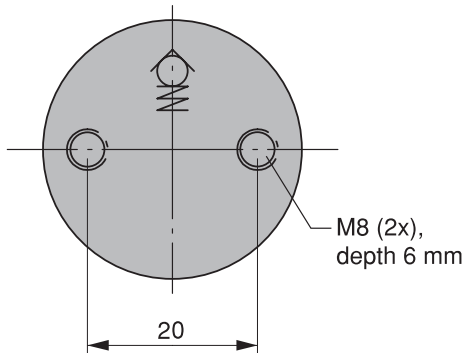
The Powerline gas springs are a new series.

These gas springs are our shortest, with more power to give you a great deal of force in a very small amount of space.

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

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

Millimeters to Inches: mm ÷ 25.4 = inches
Kilograms to Pounds: Kg ÷ 0.45 = pounds
Pounds Force to DecaNewtons: LbF x 0.4448 = decaNewtons



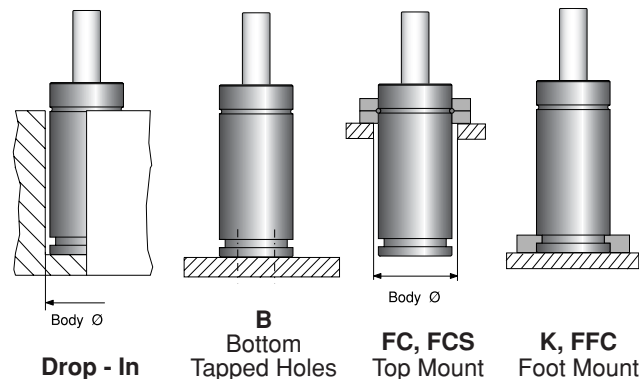
Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
X 750-010	10	1665	2720	52	42	0.02	0.37
X 750-013	13		2720	58	45	0.02	0.39
X 750-016	16		2720	64	48	0.03	0.41
X 750-019	1		2630	70	51	0.03	0.41
X 750-025	25		2650	82	57	0.04	0.45
X 750-032	32		2650	96	64	0.05	0.50
X 750-038	38		2650	108	70	0.05	0.53
X 750-050	50		2650	132	82	0.07	0.61
X 750-063	63		2650	158	95	0.09	0.69
X 750-075	75		2675	182	107	0.10	0.77
X 750-080	80		2675	192	112	0.11	0.80
X 750-100	100		2675	232	132	0.13	0.93
X 750-125	125	2675	282	157	0.17	1.09	

* = at full stroke

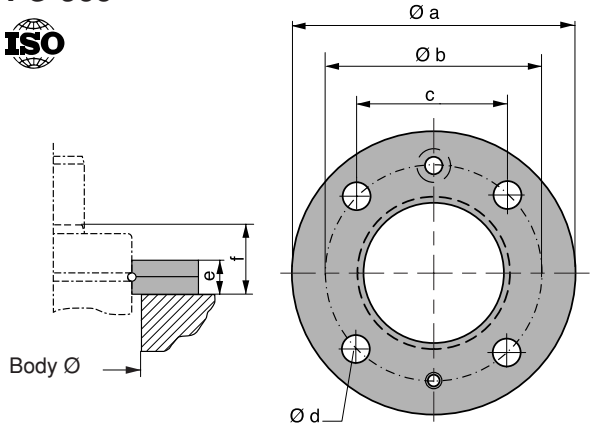
BASIC INFORMATION

Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 25 bar/360 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Recommended max strokes/min ~ 50-100
 Max piston rod velocity 1.6 m/s
 Tube Black oxide
 Repair kit X 750

MOUNTING POSSIBILITIES



FC-500

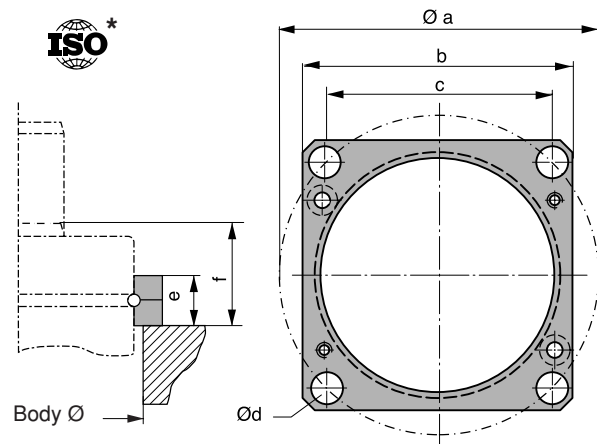


Order No.	ϕa	ϕb	c	ϕd	e	f
FC-500	86	70.7	50	9	13	22

FCS-500

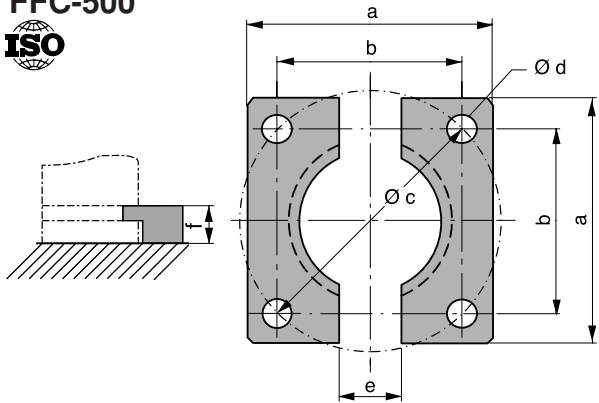


* = Reduced outer dimensions compared to ISO standard.

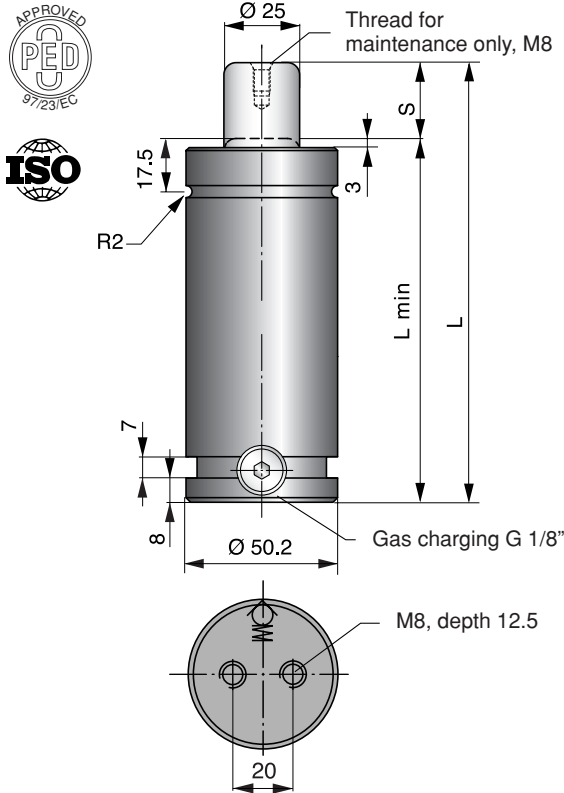


Order No.	ϕa	b	c	ϕd	e	f
FCS-500	70.7	64	50	9	13	22

FFC-500



Order No.	a	b	ϕc	ϕd	e	f
FFC-500	70	50	70.7	9	20	6.5



The basic line of gas springs is the TU line. Sizes 250 to 7500 correspond to the ISO 11 901 standard for gas springs.

Millimeters to Inches: mm ÷ 25.4 = inches
Kilograms to Pounds: Kg ÷ 0.45 = pounds
Pounds Force to DecaNewtons: LbF x 0.4448 = decaNewtons

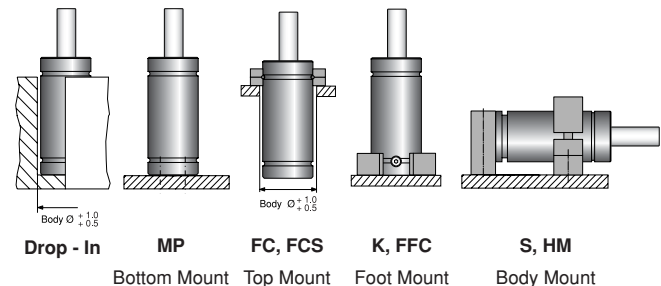
Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)	ISO
		Initial	End force*					
TU 750-012	12.7		2700	120.4	107.7	0.03	1.30	
TU 750-025	25		2700	145	120	0.04	1.45	✓
TU 750-038	38.1		2700	171.2	133.1	0.06	1.50	
TU 750-050	50		2700	195	145	0.07	1.70	✓
TU 750-063	63.5		2700	222	158.5	0.09	1.75	
TU 750-075	75		2700	245	170	0.10	1.85	
TU 750-080	80	1665	2700	255	175	0.11	1.95	✓
TU 750-100	100		2700	295	195	0.14	2.15	✓
TU 750-125	125		2720	345	220	0.17	2.40	✓
TU 750-160	160		2720	415	255	0.21	2.70	✓
TU 750-200	200		2720	495	295	0.26	3.10	
TU 750-250	250		2720	595	345	0.33	3.60	
TU 750-300	300		2720	695	395	0.39	4.10	

* = at full stroke

BASIC INFORMATION

Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 25 bar/360 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Max piston rod velocity 1.6 m/s
 Tube Black oxide
 Repair kit TU 750

MOUNTING POSSIBILITIES



MP-750

ISO

Order No.	a	b
MP-750	75	56.5

FC-750

ISO

Order No.	Ø a	Ø b	c	Ø d	e	f
FC-750	95	80	56.5	9	13	24

FCS-750 * = Reduced outer dimensions compared to ISO standard.

ISO*

Order No.	Ø a	b	c	Ø d	e	f
FCS-750	80	70	56.5	9	13	24

FFC-750

ISO

Order No.	a	b	Ø c	Ø d	e	f
FFC-750	75	56.5	80	9	24	12

S-750

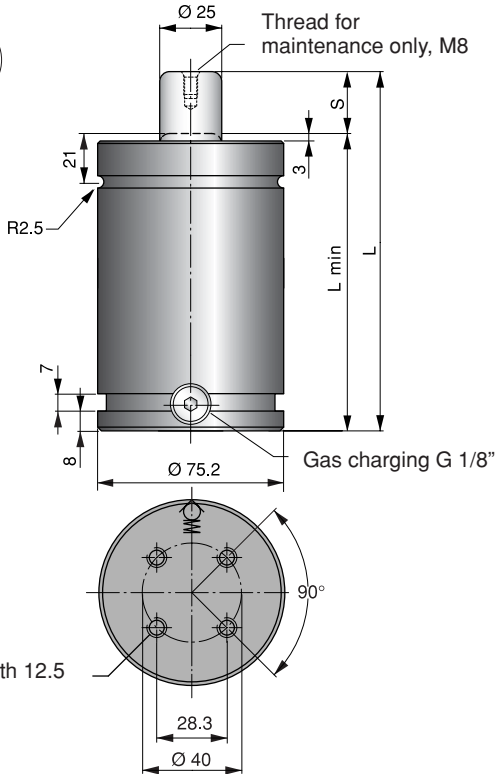
ISO

Note: S is designed to be used with a spring backed up.

The mounting screw (M8) should be tightened with torque 18 ft. lbs.

Order No.	Ø a	b	c	d	e	f	g	Ø h
S-750	50.4	20	40	40	130	110	10	9

Note: For dimensions on mounting possibilities LUG K and HM, refer to chapter 3.



Not a Stocked Item

TB springs have a larger gas volume than our standard TU series. This reduces the pressure increase as the piston rod is depressed. It also increases the service life of the spring.

TB springs are recommended for applications where a low force increase is desirable. TB springs are also a good choice for higher cycle rates and high volume production.

Note: When ordering mounts for TB 750 springs, a mount of a larger size than the spring must be used.

Millimeters to Inches: mm ÷ 25.4 = inches
Kilograms to Pounds: Kg ÷ 0.45 = pounds
Pounds Force to DecaNewtons: LbF x 0.4448 = decaNewtons

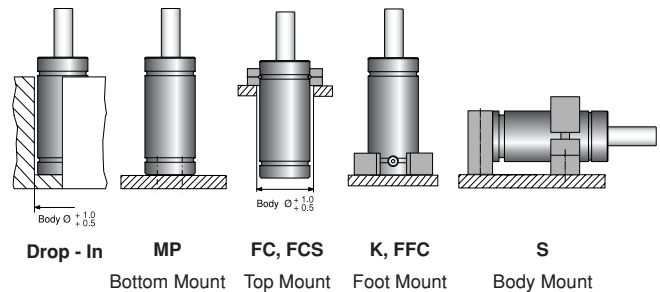
Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
TB 750-012	12.7	1665	2135	120.4	107.7	0.06	3.05
TB 750-025	25		2025	145	120	0.10	3.15
TB 750-038	38.1		2025	171.2	133.1	0.14	3.35
TB 750-050	50		2000	195	145	0.17	3.50
TB 750-063	63.5		1980	222	158.5	0.22	3.75
TB 750-080	80		1980	255	175	0.27	3.95
TB 750-100	100		1980	295	195	0.33	4.25
TB 750-125	125		1980	345	220	0.41	4.65
TB 750-160	160		1980	415	255	0.52	5.15
TB 750-200	200		1980	495	295	0.64	5.65
TB 750-250	250		1980	595	345	0.80	6.45
TB 750-300	300		1980	695	395	0.95	7.25

* = at full stroke

BASIC INFORMATION

Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 25 bar/360 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Recommended max strokes/min ~ 40-80
 Max piston rod velocity 1.6 m/s
 Tube Black oxide
 Repair kit TB 750

MOUNTING POSSIBILITIES



MP-1500

ISO

Order No.	a	b
MP-1500	100	73.5

FC-1500

ISO

Order No.	Ø a	Ø b	c	Ø d	e	f
FC-1500	122	104	73.5	11	16	29

FCS-1500 * = Reduced outer dimensions compared to ISO standard.

ISO *

Order No.	Ø a	b	c	Ø d	e	f
FCS-1500	104	90	73.5	11	16	29

FFC-1500

ISO

Order No.	a	b	Ø c	Ø d	e	f
FFC-1500	100	73.5	104	11	24	12

S-1500

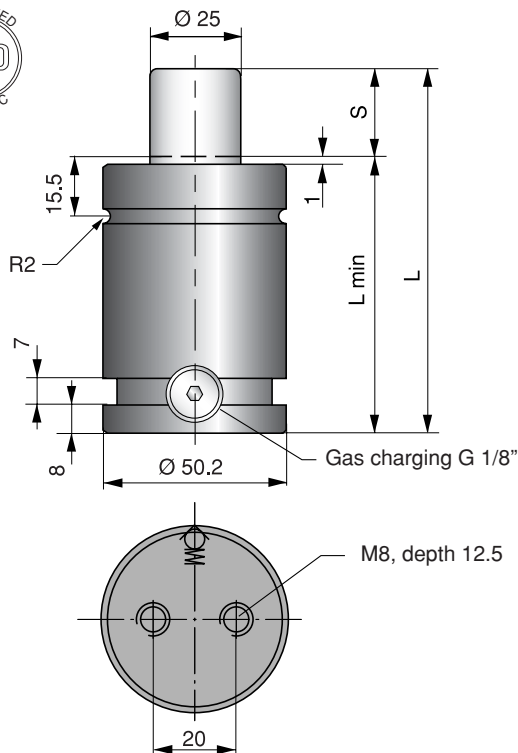
ISO

Note: S is designed to be used with a spring backed up.

The mounting screw (M10) should be tightened with torque 38 ft. lbs.

Order No.	Ø a	b	c	d	e	f	g	Ø h
S-1500	75.4	22.5	52.5	52.5	160	137	11.5	11

Note: For dimensions on mounting possibility LUG K, refer to chapter 3.



This is a short height hoseable spring with an initial force of 1665 lbF.

The K 750 has a total length of 50 mm + (2 x stroke). This spring is 45 mm shorter than the TU 750. Mounting options are the same as for the TU 750.

Millimeters to Inches: mm ÷ 25.4 = inches
Kilograms to Pounds: Kg ÷ 0.45 = pounds
Pounds Force to DecaNewtons: LbF x 0.4448 = decaNewtons

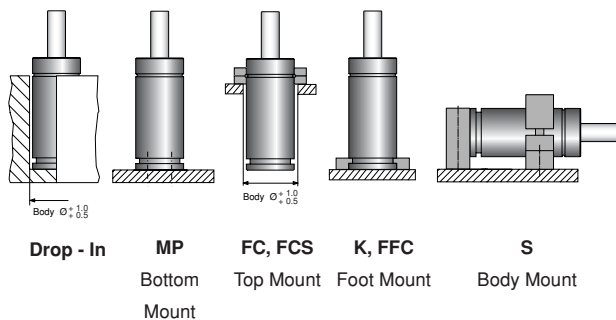
Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
K 750-006	6	1665	3370	62	56	0.01	0.68
K 750-012	12.7		2920	75.4	62.7	0.02	0.73
K 750-019	19		2700	88.1	69.05	0.03	0.80
K 750-025	25		2470	100	75	0.04	0.82
K 750-038	38.1		2470	126.2	88.1	0.06	0.92
K 750-050	50		2470	150	100	0.08	1.06
K 750-063	63.5		2470	177	113.5	0.10	1.12
K 750-080	80		2470	210	130	0.12	1.26
K 750-089	89		2470	228	139	0.14	1.32
K 750-100	100		2470	250	150	0.15	1.39
K 750-114	114		2470	278	164	0.17	1.45
K 750-125	125		2470	300	175	0.19	1.57

* = at full stroke

BASIC INFORMATION

Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 25 bar/360 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Recommended max strokes/min ~ 15-40
 Max piston rod velocity 1.6 m/s
 Tube Black oxide
 Repair kit K/KS 750

MOUNTING POSSIBILITIES



MP-750

ISO

Order No.	a	b
MP-750	75	56.5

FC-750

ISO

Order No.	Ø a	Ø b	c	Ø d	e	f
FC-750	95	80	56.5	9	13	24

FCS-750 * = Reduced outer dimensions compared to ISO standard.

ISO *

Order No.	Ø a	b	c	Ø d	e	f
FCS-750	80	70	56.5	9	13	24

FFC-750

ISO

Order No.	a	b	Ø c	Ø d	e	f
FFC-750	75	56.5	80	9	24	12

S-750

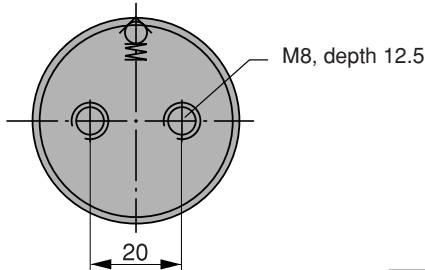
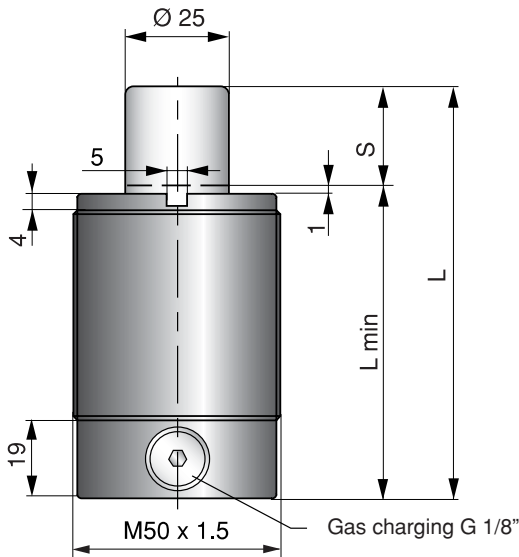
ISO

Note: S is designed to be used with a spring backed up.

The mounting screw (M8) should be tightened with torque 18 ft. lbs.

Order No.	Ø a	b	c	d	e	f	g	Ø h
S-750	50.4	20	40	40	130	110	10	9

Note: For dimensions on mounting possibility LUG K, refer to chapter 3.



The KM 750 is a threaded body version of the K 750.
 All internal components and technical data are the same as for the K 750.
 Dimensions conform to the Ford standard.

Millimeters to Inches: mm ÷ 25.4 = inches
Kilograms to Pounds: Kg ÷ 0.45 = pounds
Pounds Force to DecaNewtons: LbF x 0.4448 = decaNewtons

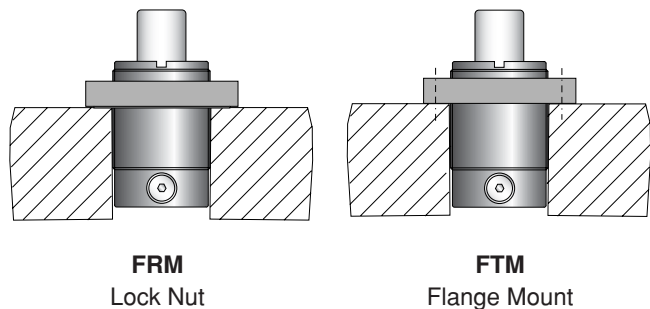
Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
KM 750-006	6	1665	3370	62	56	0.01	0.68
KM 750-012	12.7		2920	75.4	62.7	0.02	0.73
KM 750-019	19		2700	88.1	69.05	0.03	0.80
KM 750-025	25		2470	100	75	0.04	0.82
KM 750-038	38.1		2470	126.2	88.1	0.06	0.92
KM 750-050	50		2470	150	100	0.08	1.06
KM 750-063	63.5		2470	177	113.5	0.10	1.12
KM 750-080	80		2470	210	130	0.12	1.26
KM 750-100	100		2470	250	150	0.15	1.39
KM 750-125	125		2470	300	175	0.19	1.57

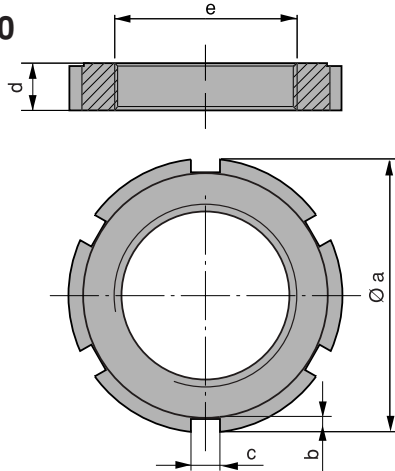
* = at full stroke

BASIC INFORMATION

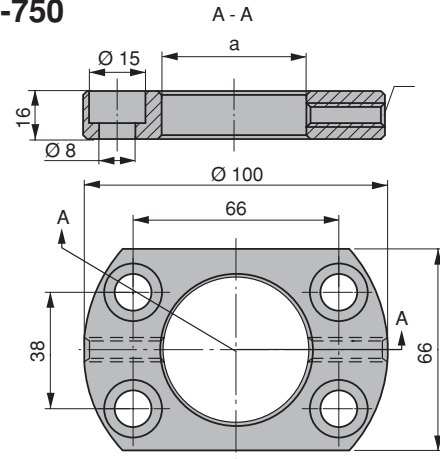
Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 25 bar/360 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Recommended max strokes/min ~ 15-40
 Max piston rod velocity 1.6 m/s
 Tube Black oxide
 Repair kit K/KS 750

MOUNTING POSSIBILITIES

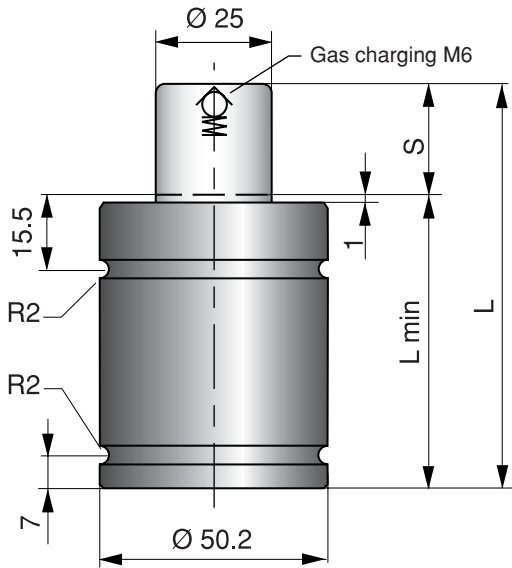


FRM-750

Order No.	Ø a	b	c	d	e
FRM-750	75	3.5	8	13	M50 x 1.5

FTM-750

Order No.	a
FTM-750	M50 x 1.5



This is an ultra short height gas spring with an initial force of 1655 lbF. The internal components are the same as in the K 750.

The KS 750 has a total length of 38 mm +(2 x stroke); this is 57 mm shorter than the TU 750.

Millimeters to Inches: mm ÷ 25.4 = inches
Kilograms to Pounds: Kg ÷ 0.45 = pounds
Pounds Force to DecaNewtons: LbF x 0.4448 = decaNewtons

Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
KS 750-012	12.7	1655	2920	63.4	50.7	0.02	0.60
KS 750-019	19.05		2700	76.1	57.05	0.03	0.64
KS 750-025	25		2470	88	63	0.04	0.68
KS 750-032	32		2470	102	70	0.05	0.73
KS 750-038	38.1		2470	114	76.1	0.06	0.78
KS 750-050	50		2470	130	83	0.08	0.88
KS 750-063	63.5		2470	145	90	0.10	0.98
KS 750-080	80		2470	198	118	0.12	1.10
KS 750-100	100		2470	238	138	0.15	1.26
KS 750-125	125		2470	298	163	0.19	1.45

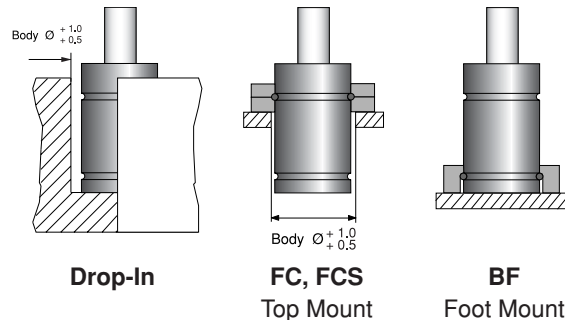
* = at full stroke

Discontinued.
 Recommended alternative: X 1000.
 (See page 2.6/4)

BASIC INFORMATION

Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 25 bar/350 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Recommended max strokes/min ~ 15-40
 Max piston rod velocity 0.8 m/s
 Tube Black oxide
 Repair kit K/KS 750

MOUNTING POSSIBILITIES



FC
ISO

Order No.	Ø a	Ø b	c	Ø d	e	f
FC-750	95	80	56.5	9	13	24

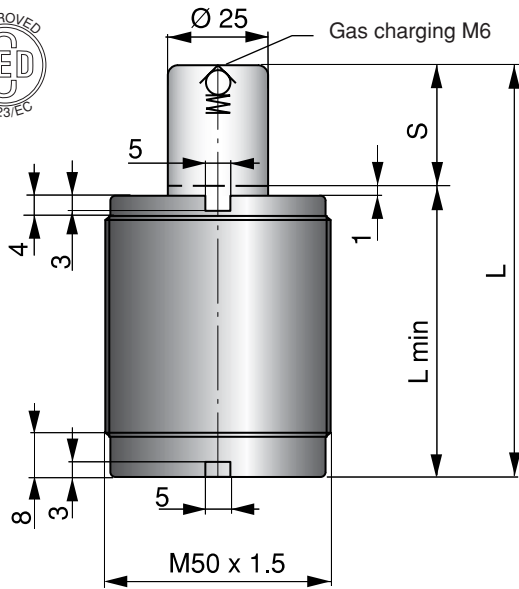
FCS * = Reduced outer dimensions compared to ISO standard.
ISO *

Order No.	Ø a	b	c	Ø d	e	f
FCS-750	80	70	56.5	9	13	24

BF

Order No.	a	b	d
BF-750	65	45	10

Discontinued. Recommended alternative: X1000. (See page 2.6/4)



The KSM 750 is a threaded body version of the KS 750.

All internal components and technical data are the same as for the KS 750.

Millimeters to Inches: mm ÷ 25.4 = inches

Kilograms to Pounds: Kg ÷ 0.45 = pounds

Pounds Force to DecaNewtons:

LbF x 0.4448 = DecaNewtons

Discontinued.
Recommended alternative: X 1000
(See page 2.6/14)

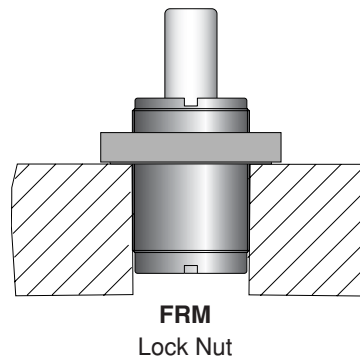
Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
KSM 750-017	12.7	1665	2920	63.4	50.7	0.02	0.57
KSM 750-019	19.05		2700	76.1	57.05	0.03	0.61
KSM 750-025	25		2700	88	63	0.04	0.65
KSM 750-038	38.1		2700	114.2	76.1	0.06	0.75
KSM 750-050	50		2700	138	88	0.07	0.85
KSM 750-063	63.5		2700	165	101.5	0.09	0.95
KSM 750-080	80		2700	198	118	0.11	1.08
KSM 750-100	100		2700	238	138	0.14	1.23
KSM 750-125	125		2700	288	163	0.17	1.42

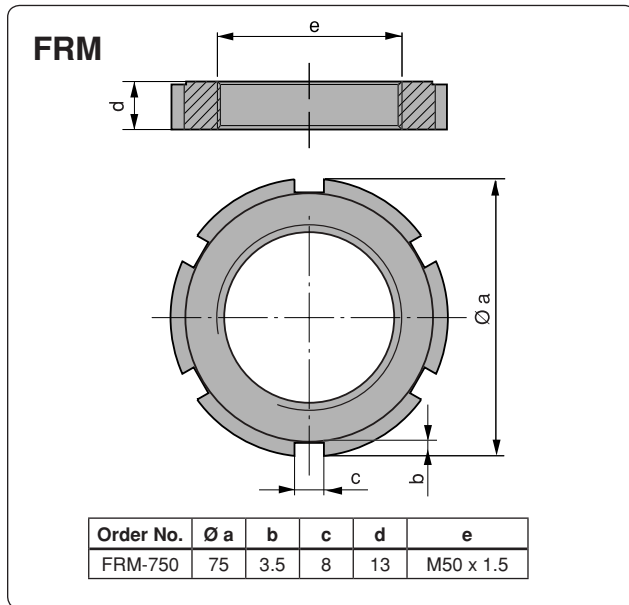
* = at full stroke

BASIC INFORMATION

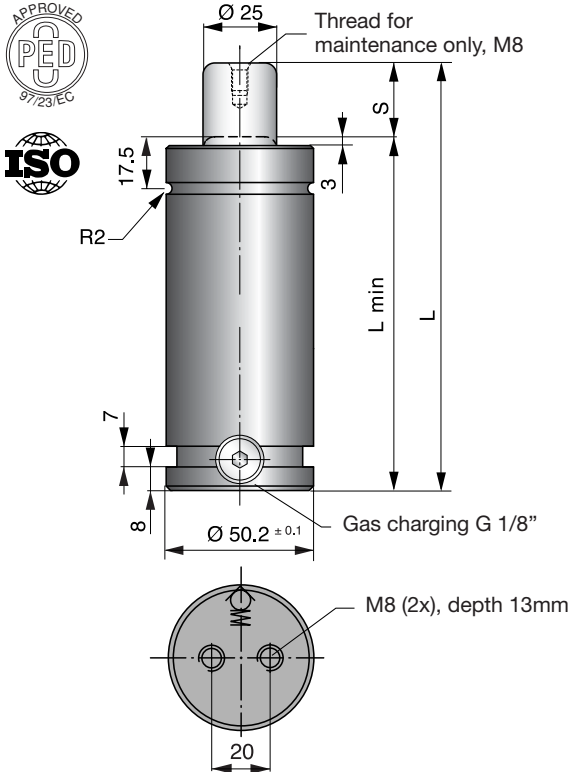
Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 25 bar/360 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Recommended max strokes/min ~ 15-40
 Max piston rod velocity 1.6 m/s
 Tube Black oxide
 Repair kit K/KS 750

MOUNTING POSSIBILITIES





**Discontinued.
Recommended alternative: X 1000.
(See page 2.6/4)**

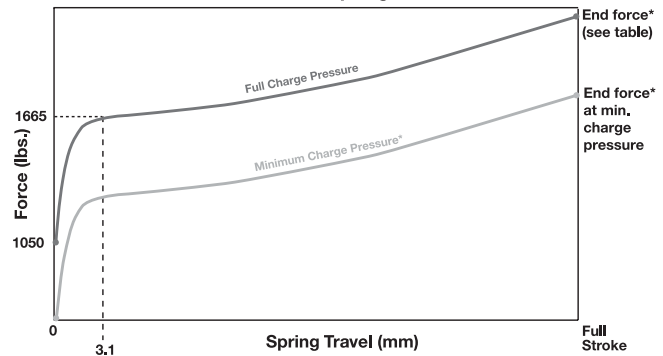


LCF Series

Low Contact Force (LCF) gas springs are designed to reduce excessive shock loads and high noise levels, factors that lead to high press maintenance costs and noise pollution.

Millimeters to Inches: mm ÷ 25.4 = inches
Kilograms to Pounds: Kg ÷ 0.45 = pounds
Pounds Force to DecaNewtons: LbF x 0.4448 = decaNewtons

Force vs Stroke for LCF 750 Springs



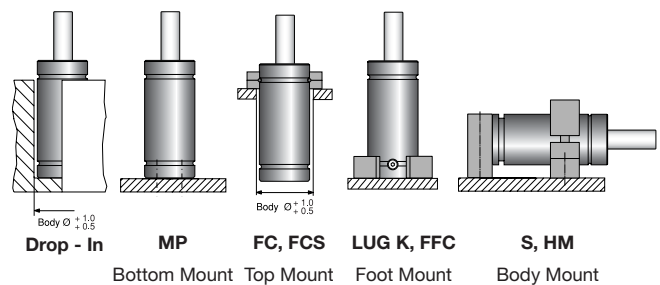
Order No.	S Stroke	Pounds Force (lbF) at 2175 psi		L ± 0.25	L min	Gas vol. (l)	Weight (kg)	ISO
		Initial	End force*					
LCF 750-012	12.7		2700	120.4	107.7	0.03	1.30	
LCF 750-025	25		2700	145	120	0.04	1.45	✓
LCF 750-038	38.1		2700	171.2	133.1	0.06	1.50	
LCF 750-050	50		2700	195	145	0.07	1.70	✓
LCF 750-063	63.5		2700	222	158.5	0.09	1.75	
LCF 750-080	80	1665	2700	255	175	0.11	1.95	✓
LCF 750-100	100		2700	295	195	0.14	2.15	✓
LCF 750-125	125		2720	345	220	0.17	2.40	✓
LCF 750-160	160		2720	415	255	0.21	2.70	✓
LCF 750-200	200		2720	495	295	0.26	3.10	
LCF 750-250	250		2720	595	345	0.33	3.60	
LCF 750-300	300		2720	695	395	0.39	4.10	

* = at full stroke

BASIC INFORMATION

Pressure medium Nitrogen
 Max. charging pressure 150 bar/2175 psi
 Min. charging pressure 70 bar/1015 psi
 Operating temperature 0 - 80°C/0 - 176°F
 Force increase by temperature ±0.3%/°C
 Recommended max strokes/min ~ 15-40
 Max piston rod velocity 1.6 m/s
 Repair kit LCF 750

MOUNTING POSSIBILITIES



MP-750

ISO

Side view dimensions: $\varnothing 9$ (2x), 12 (2x), $\varnothing 15$ (2x), 14 (2x), 20 $_{-0.01}^{+0}$.

Top view dimensions: a, b, M10, $\varnothing 20$.

Note: Comes complete with screws to mount gas spring.

Order No.	a	b
MP-750	75	56.5

FC-750

ISO

Side view dimensions: Body $\varnothing +1.0_{+0.5}$.

Top view dimensions: $\varnothing a$, $\varnothing b$, c, $\varnothing d$, e, f.

Order No.	$\varnothing a$	$\varnothing b$	c	$\varnothing d$	e	f
FC-750	95	80	56.5	9	13	24

FCS-750 * = Reduced outer dimensions compared to ISO standard.

ISO *

Side view dimensions: Body $\varnothing +1.0_{+0.5}$.

Top view dimensions: $\varnothing a$, b, c, $\varnothing d$, e, f.

Order No.	$\varnothing a$	b	c	$\varnothing d$	e	f
FCS-750	80	70	56.5	9	13	24

FFC-750

ISO

Side view dimensions: e, f.

Top view dimensions: a, b, $\varnothing c$, $\varnothing d$, e, f.

Order No.	a	b	$\varnothing c$	$\varnothing d$	e	f
FFC-750	75	56.5	80	9	24	12

S-750

ISO

Note: S is designed to be used with a spring backed up.

The mounting screw (M8) should be tightened with torque 18 ft. lbs.

Side view dimensions: c, b, $\varnothing a$, 20, e.

Top view dimensions: f, $\varnothing h$, g, $\varnothing h$.

Order No.	$\varnothing a$	b	c	d	e	f	g	$\varnothing h$
S-750	50.4	20	40	40	130	110	10	9

Note: For dimensions on mounting possibilities LUG K and HM, refer to chapter 3.