
PORTER®
PORTER PRECISION PRODUCTS CO.
World Class Products That Perform!
NITROGEN
GAS SPRINGS
MANUFACTURED IN THE UK
NITRO-SPRINGS
The engineers choice
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PORTER PRECISION PRODUCTS CO.

Corporate Office & Manufacturing Plant
2734 Banning Rd.
Cincinnati, Ohio 45253-8706
Ph: (513) 923-3777
Fax: (513) 923-1111
Toll Free (800) 543-7041
Porter@porterpunch.com

Georgia Manufacturing Plant
660 James Rd.
Alpharetta, GA 30004
Ph: (770) 751-7234
Fax: (770) 751-7238
Toll Free: (800) 437-5185
Georgia@porterpunch.com

Canada Plant
30 Duke Street West
Suite #503
Kitchener, Ontario, Canada N2H 3W5
Ph: (519) 746-3130
Fax: (519)746-6960
Toll Free: 1-800-265-8844
Canada@porterpunch.com

GAS SPRINGS BY FORCE

	INITIAL FORCE (daN)	MODELS	DIAMETER (MM)
			
1	**30- 200** *67 - 449*	**NG0, NG1, NG2** **EX0170**	**19 - 32** *0.75 - 1.26*
2	**250 - 420** *562 - 944*	**ISNG0250** **EX0320** **EX0360, G-EX0360** **HDG0042**	**25 - 38** *0.98 - 1.50*
3	**500 - 700** *1124 - 1573*	**EX0500, ISNG0500,** **G-EX0500** **HDG007**	**38 - 45** *1.50 -1.77*
4	**750 - 1000** *1686 - 2248*	**EX0750, ISNG0750,** **G-EX0750** **EX1000, MX1000,** **G-EX1000** **HDG010**	**32 - 50** *1.26 - 1.97*
5	**1500 - 1800** *3372 - 4046*	**EX1500, ISNG1500,** **G-EX1500, DSNG1500** **HDG018**	**50 - 75** *1.97 - 2.95*
6	**2400 - 2900** *5395 - 6519*	**EX2400, MX2400,** **G-EX2400** **HDG029**	**63 - 75** *2.48 - 2.95*
7	**3000 - 4700** *6744 -10565*	**ISNG3000, DSNG3000** **EX4200, MX4200,** **G-EX4200** **HDG047**	**75 - 95** *2.95 - 3.74*
8	**5000 - 6600** *11240 - 14836*	**ISNG5000, DSNG5000** **EX6600, MX6600**	**120** *4.72*
9	**7500 - 11800** *22480+*	**ISNG7500, DSNG7500,** **HDG075** **EX9500, MX9500,** **ISNG10000** **HDG118**	**120 - 195** *4.72 - 7.68*

PORTER®

INITIAL FORCE	ISNG	EX	G-EX	MX	DSNG	HDG	MINI	DIA.	STROKE
30 - 200 *67 - 449*		**EX0170**					**NG0** **NG1** **NG2**	**19 - 32** *0.75 - 1.26*	**7 - 125** *0.28 - 4.92*
250 - 320 *562 - 719*	**ISNG0250**	**EX0320**						**25 - 38** *0.98 - 1.26*	**7 - 125** *0.28 - 4.92*
360 - 420 *809 - 944*		**EX0360**	**G-EX0360**			**HDG0042**		**25 - 32** *0.98 - 1.26*	**6 - 125** *0.24 - 4.92*
500 - 700 *1124 - 1573*	**ISNG0500**	**EX0500**	**G-EX0500**					**38 - 45** *1.50 - 1.77*	**7 - 160** *0.28 - 6.30*
750 *1686*	**ISNG0750**	**EX0750**	**G-EX0750**			**HDG007**		**32 - 45** *1.26 -1.77*	**6 - 300** *0.24 - 11.81*
1000 *2248*		**EX1000**	**G-EX1000**	**MX1000**		**HDG010**		**38 - 50** *1.50 - 1.97*	**6 - 300** *0.24 - 11.81*
1500 - 1800 *3372 - 4046*	**ISNG1500**	**EX1500**	**G-EX1500**		**DSNG1500**	**HDG018**		**50 - 75** *1.97 - 2.95*	**6 - 300** *0.24 - 11.81*
2400 *5395*		**EX2400**	**G-EX2400**	**MX2400**				**75** *2.95*	**16 - 300** *0.63 - 11.81*
2900 - 3000 *6519 - 6744*	**ISNG3000**				**DSNG3000**	**HDG029**		**63 - 95** *2.48 - 3.74*	**10 - 300** *0.39 - 11.81*
4200 - 4700 *9442 - 10565*		**EX4200**	**G-EX4200**	**MX4200**		**HDG047**		**75 - 95** *2.95 - 3.74*	**16 - 300** *0.63 - 11.81*
5000 - 6600 *11240 - 14836*	**ISNG5000**	**EX6600**		**MX6600**	**DSNG5000**			**120** *4.72*	**25 - 300** *0.98 - 11.81*
7500 - 9500 *16860 - 21356*	**ISNG7500**	**EX9500**		**MX9500**	**DSNG7500**	**HDG075**		**150** *5.91*	**25 - 300** *0.98 - 11.81*
10000+ *22480+*	**ISNG10000**					**HDG118**		**120 - 195** *4.72 - 7.68*	**10 - 300** *0.39 - 11.81*

SERIES	DESCRIPTION	MODELS	STROKE LENGTHS	INITIAL FORCE	TOTAL LENGTH	BODY DIA.	OVERVIEW PAGE
MINI NITRO	Rod sealed, color coded mini Nitro Springs.	NG0	7 - 125	180	42 + (2 X stroke)	19	19
		NG1	10 - 125	200	42 + (2 X stroke)	25	20
		NG2	10 - 125	200	50 + (2 X stroke)	32	22
EX RANGE	Rod sealed, high force, most compact gas spring available.	EX0170	7 - 125	170	30 + (2 X stroke)	19	21
		EX0320	7 - 125	320	30 + (2 X stroke)	25	25
		EX0360	10 - 125	360	30 + (2 X stroke)	32	26
		EX0500	10 - 125	500	30 + (2 X stroke)	38	30
		EX0750	10 - 125	750	32 + (2 X stroke)	45	35
		EX1000	13 - 125	1000	38 + (2 X stroke)	50	38
		EX1500	13 - 125	1500	44 + (2 X stroke)	63	43
		EX2400	16 - 125	2400	45 + (2 X stroke)	75	49
		EX4200	16 - 125	4200	58 + (2 X stroke)	95	56
		EX6600	16 - 125	6600	68 + (2 X stroke)	120	69
		EX9500	19 - 125	9500	78 + (2 X stroke)	150	69
G-EX RANGE	Extended version of the EX, with a G1/8 port and deeper tapped holes in the base.	G-EX0360	10 - 125	360	40 + (2 X stroke)	32	27
		G-EX0500	10 - 125	500	40 + (2 X stroke)	38	31
		G-EX0750	10 - 125	750	47 + (2 X stroke)	45	36
		G-EX1000	13 - 125	1000	52 + (2 X stroke)	50	39
		G-EX1500	13 - 125	1500	52 + (2 X stroke)	63	44
		G-EX2400	16 - 125	2400	59 + (2 X stroke)	75	50
		G-EX4200	16 - 125	4200	62 + (2 X stroke)	95	57
ISNG RANGE	Optimum design for gas spring durability conforming to ISO 11901 standard.	ISNG0250	10 - 125	250	50 + (2 X stroke)	38	24
		ISNG0500	10 - 160	500	85 + (2 X stroke)	45	32
		ISNG0750	13 - 300	750	95 + (2 X stroke)	50	37
		ISNG1500	25 - 300	1500	110 + (2 X stroke)	75	45
		ISNG3000	25 - 300	3000	120 + (2 X stroke)	95	54
		ISNG5000	25 - 300	5000	140 + (2 X stroke)	120	61
		ISNG7500	25 - 300	7500	155 + (2 X stroke)	150	66
		ISNG10000	25 - 300	10000	160 + (2 X stroke)	195	71
MX RANGE	MX combines the power of the EX range with standard size of the ISNG range.	MX1000	13 - 300	1000	95 + (2 X stroke)	50	40
		MX2400	25 - 300	2400	110 + (2 X stroke)	75	51
		MX4200	25 - 300	4200	120 + (2 X stroke)	95	58
		MX6600	25 - 300	6600	140 + (2 X stroke)	120	64
		MX9500	25 - 300	9500	155 + (2 X stroke)	150	70
DSNG RANGE	Die separation spring based on ISNG sizes.	DSNG1500	25 - 300	1500	110 + (2 X stroke)	75	46
		DSNG3000	25 - 300	3000	120 + (2 X stroke)	95	55
		DSNG5000	25 - 300	5000	140 + (2 X stroke)	120	62
		DSNG7500	25 - 300	7500	155 + (2 X stroke)	150	67
HDG RANGE	Ultra high force compact bore sealed gas spring.	HDG042	6 - 50	420	56 - 195	25	28
		HDG007	6 - 50	700	63 - 195	32	35
		HDG010	6 - 50	1000	61 - 230	38	41
		HDG018	6 - 50	1800	66 - 271	50	47
		HDG029	10 - 50	2900	85 - 256	63.2	5
		HDG047	10 - 50	4700	80 - 273	75	59
		HDG075	10 - 50	7500	90 - 279	95	68
		HDG118	10 - 50	11800	100 - 320	120	72

Metrol Springs Ltd, established in 1984, design and manufacture nitrogen gas springs under the registered brand name "Nitro-Springs".

All Nitro-Springs are manufactured in the UK to the highest standards to meet the arduous demands of the metal stamping industry. Modern manufacturing facilities using the latest in production and design technology, ensure consistent, high quality, long life products that are competitively priced.

All our cylinders are designed and manufactured in accordance with our ISO9001:2008 quality system and conform to the rigorous standards of the European Pressure Equipment Directive (PED97/23/EC).

Metrol Springs is a dynamic and progressive company, equipped to meet the needs of our customers. With a worldwide distribution network; spares, technical support and advice are never far away. We pride ourselves in a high level of service and support for our products wherever you are in the world.

In addition to our standard range of Nitro-Springs, we are able to design and manufacture non-standard sizes and bespoke products to meet the requirements for a wide range of applications in all types of industry. For information and assistance, please contact our technical department.

Nitro-Springs are covered by a comprehensive 2 year, 100,000 stroke meter guarantee.

nqa ISO 9001 Registered

NITRO-SPRINGS
The engineers choice

PORTER

MANUFACTURERS OF NITRO-SPRINGS HEREBY

GUARANTEE FOR TWO YEARS OR 100,000 STROKE/M

Metrol Springs Warrants its products to be free from manufacturing defects for a period of two years or working life of 100,000 stroke meters.The warranty is only valid if the product has been used within strict accordance with our user guidelines. The warranty shall notapply to any product that has been subjected to damage, alteration, abuse, misuse, misapplication or improper maintenance.

This warranty constitutes our entire and only warranty. There being no other warranties, expressed or implied in law or in fact including implied warranties of fitness and merchantability.

SAFETY FEATURES

If misused or damaged, gas springs can be a potential safety hazard. In order to minimise any hazard, Metrol gas springs have in built active safety designs that safely degass the spring in case of over stroke or over-pressurisation.

DESIGN & MODELLING

Designs are evaluated using software modeling to determine safety factors and failure modes.

DYNAMIC TESTING

Metrol gas springs are tested to validate designs by;
Fatigue testing over 2 million cycles at maximum pressure.
Burst test (over-pressurisation)
Sealing components life tests.
Field trials.

SAFETY & MAINTENANCE TRAINING

Metrol and authorised distributors offer essential safety training for the operation and maintenance of Metrol gas springs and gas spring systems.

CHARGING, OVERHAUL AND MAINTENANCE OF METROL GAS SPRINGS

Before attempting any work on a gas spring system the person must have attended and passed the Metrol training course. Upon completion of the course a certificate of competence is issued.

Attempting to perform work on a spring without completing the course may infringe safety and have a negative impact on the life of the product.

Overhaul and maintenance instructions are found in the manual. This manual is available to people who have completed the Metrol training course.

USE ONLY NITROGEN WHEN CHARGING - THE USE OF OXYGEN WILL CAUSE AN EXPLOSION.

TO DEGAS

Withdraw the port plug.

Discharge the gas spring with the vent key, pressing slightly on the valve.

Only certified trained personnel should perform work on gas springs.

Wear safety goggles.
Invert cylinder when de-gasing.

When charging, ensure piston rod is fully extended.

Maximium charge pressure must not be exceeded.

GAS SPRING IDENTIFICATION

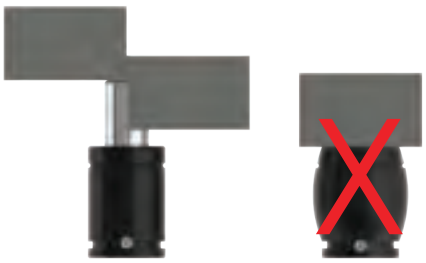
ALL METROL GAS SPRINGS are permanently marked on the cylinder.

- MODEL TYPE / STROKE (e.g. ISNG1500/050)
- MAX CHARGE PRESSURE
- WARNING - USE ONLY NITROGEN
- SERIAL NUMBER
- DATE OF MANUFACTURE
- CE / PED / 97/23/EC (WHERE APPLICABLE ON CYLINDERS OVER 1L @150 BAR)

TOOL SAFETY WARNING PLATES

MET: 8218 - MINI WARNING PLATE

MET: 8219 - LARGE WARNING PLATE



The nominal stroke listed in the catalogue may be utilized fully. However, it is strongly recommended that 5mm or 10% of the nominal stroke length is not used. This is to prevent 'overstroke' as a result of a change in the tool or a mishap.

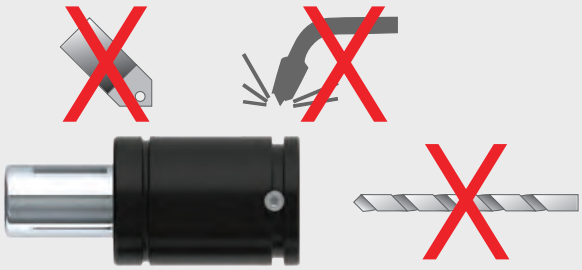
USE ONLY NITROGEN

MAX. 80°C

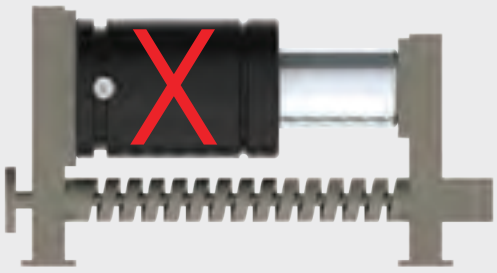
MAX WORKING TEMPERATURE

PROTECT FROM DAMAGE

Any damage to the Gas Spring could affect safety and life of the product. The spring should be de-gased and disposed of.

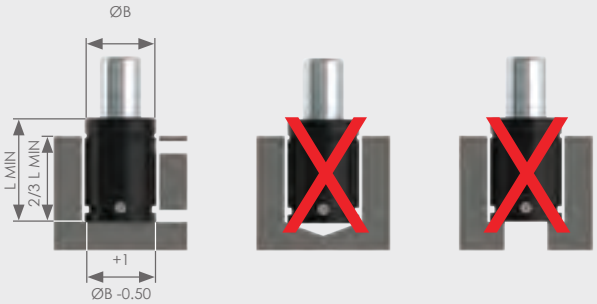


DO NOT MODIFY, MACHINE, DRILL OR WELD.



There is specific equipment to measure gas spring force.
Please see page 105 for gas spring test unit.

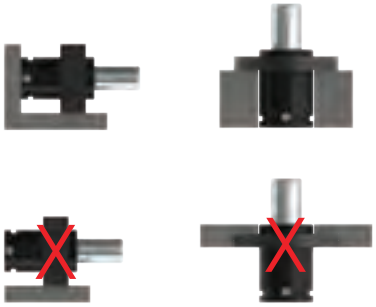
ASSEMBLY GUIDE



Ensure the gas spring sits on a flat surface. Uneven surfaces can cause side loading or structural damage.

Where possible, positively retain springs on a flat surface. Ensure bolts are tight and the spring cannot move.

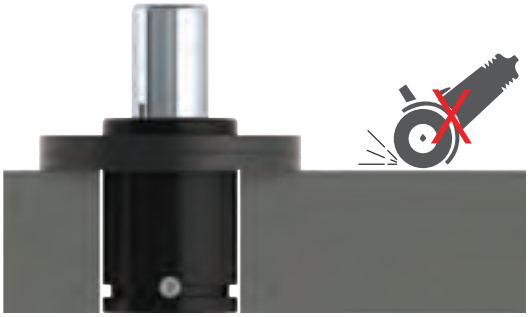
Do not use the threaded hole in piston, this is for maintenance only.



Always use a torque wrench to tighten.

Thread	Torque
M6	10Nm
M8	24Nm
M10	45Nm
M12	80Nm
M16	160-180Nm

Nitro-Springs have a range of fixing elements. Instructions must be adhered to. Incorrect fixing methods may reduce product life and can affect safety.



Gas springs should be protected from grinding dust during tool construction or maintenance.

Grinding dust can adhere to the piston surface and mix with oil to create a grinding paste which can damage the main seal.

If grinding has taken place near the springs, then the piston should be cleaned before operation.

Protect gas springs from liquid or solid contamination.

Pockets should be cleaned regularly and equipped with drainage.

Do not use gas springs in such a way that the piston rod is released freely from its compressed position. This could cause internal damage.

Side loading gas springs is the most common cause for failure and should be avoided at all times. Metrol Gas springs are robuslty designed to minimize the impact of side loading with the following features.

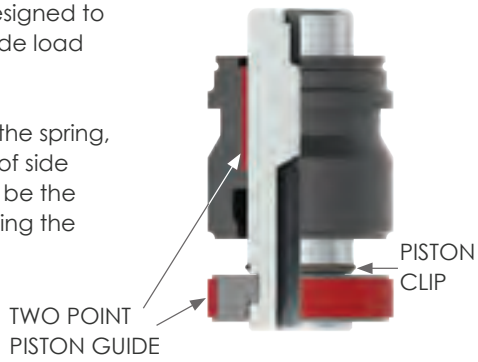
FLEXI GUIDE DESIGN

Specially designed piston guides allow the piston to flex under side loads to eliminate metal to metal contact, which can damge the piston rod surface (large side forces still result in heat build up which can damage the seals).

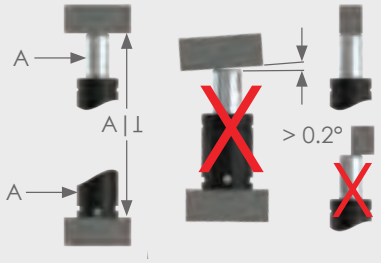
ROD AND STOP GUIDED SPRINGS

The rod and stop guided springs utilize a two guide system. The main guide in the seal unit is designed to offer maixmum guidance reducing the side load impact on the main seal.

The stop is also guided through the bore of the spring, with two areas of guidance the effects of side loading is reduced. This is considered to be the optimum design for durability and reducing the impact side loading.



DESIGN GUIDE FOR REDUCING SIDE LOADING



Gas Springs must always work completely perpendicular to the contact surface. Side forces will dramatically reduce the life of the product.

Thrust plates protect against damage to the piston top and the tool contact area. Damage can introduce side loading, reducing the life of the gas spring. (Please see page 78)

Originally designed to replace die springs, the Mini Nitro-Springs are a versatile range. Available in 19, 25 and 32mm diameters. Mini Nitro-Springs can be pre-set to four different pressures, represented by the colors, green, blue, red and yellow.

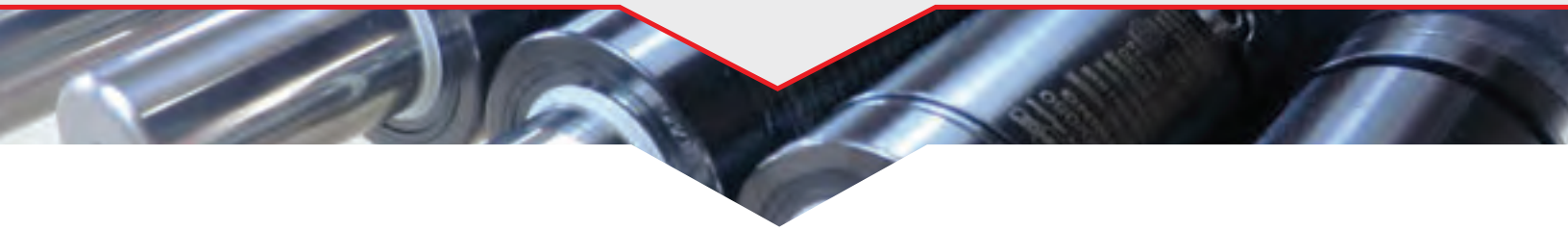
An upper and lower C groove can be used for attachment with a front flange.

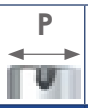
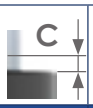
SPRING TYPE	Ø D
NG0	M6 X 1
NG1	M6 X 1
NG2	M6 X 1

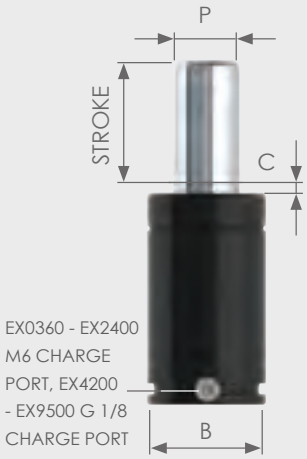
USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

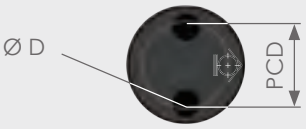
PED 97/23/EC



								
MODELS	P	B	INITIAL FORCE (daN)	STROKE RANGE	C	MOUNTING OPTIONS	PIPE SYSTEM	OVERHAUL
							MICRO 24 / CNOMO	
NG0	8 *0.31*	19 *0.75*	90 *202*	7 - 125 *0.28 - 4.92*	1 *0.04*	DP, TH, FF	×	×	×
NG1	12 *0.47*	24.9 *0.98*	200 *450*	10 - 125 *0.39 - 4.92*	1 *0.04*	DP, TH, FF, ES	×	×	×
NG2	12 *0.47*	32 *1.26*	200 *450*	10 - 125 *0.39 - 4.92*	1 *0.04*	DP, TH, FF, SFF, SF	×	×	×



EX0360 - EX2400 M6 CHARGE PORT, EX4200 - EX9500 G 1/8 CHARGE PORT



EX-0360 TO EX-1500 STYLE CYLINDER

EX-2400 TO EX-9500 STYLE CYLINDER

The EX range is our most powerful, compact rod sealed gas spring. Special rod guiding elements in the seal unit reduce side load impact to prevent rod and seal wear, increasing durability and seal life.

EX0170 and EX0320 have upper and lower C grooves for front flange mounting. EX-0360 > EX-9500 the upper C groove and lower U groove allow numerous flange mounting options.

EX-0360 > EX-2400 there is an M6 side port for charging and also connecting in series using the Micro hose system or CNOMO hose system.
EX-4200 > EX-9500 there is a G1/8 side port for charging and connecting in series using the CNOMO hose system.

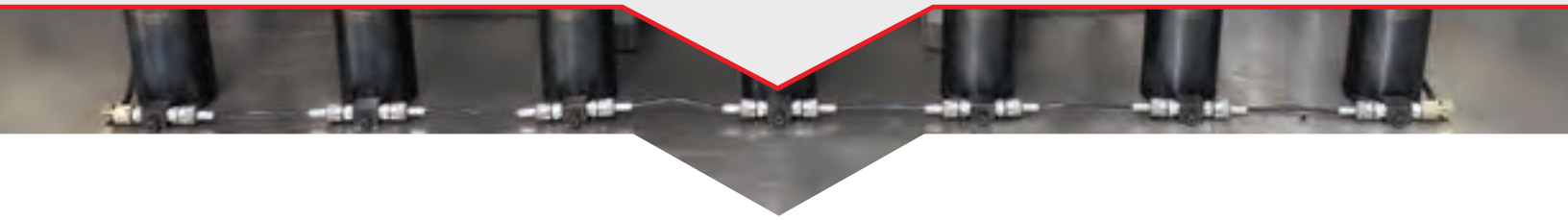
MODELS	PCD (MM) (*ins*)	Ø D	TAPPED HOLE DEPTH (MM) (*ins*)
EX0170	-	**M6 X 1**	**5** - *0.20*
EX0320	-	**M6 X 1**	**5** - *0.20*
EX0360	**20**/*0.79*	**M6 X 2**	**6** - *0.24*
EX0500	**20**/*0.79*	**M6 X 2**	**6** - *0.24*
	25/*0.98*	**M6 X 2**	**6** - *0.24*
EX0750	**20**/*0.79*	**M8 X 2**	**6** - *0.24*
EX1000	**20**/*0.79*	**M8 X 2**	**6** - *0.24*
EX1500	**20**/*0.79*	**M8 X 2**	**6** - *0.24*
EX2400	**40**/*1.57*	**M8 X 4**	**6** - *0.24*
EX4200	**60**/*2.36*	**M8 X 4**	**12** - *0.47*
EX6600	**80**/*3.15*	**M10 X 4**	**12** - *0.47*
EX9500	**100**/*3.95*	**M10 X 4**	**13** - *0.51*

USE ONLY NITROGEN

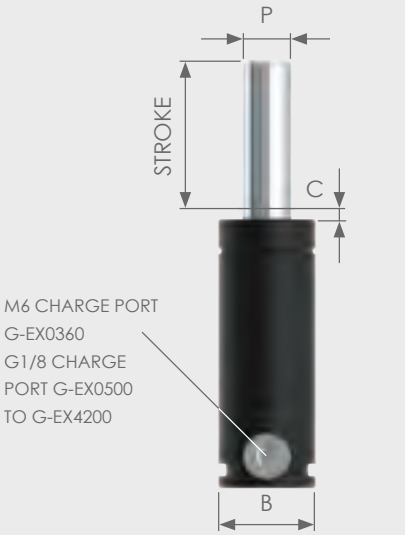
MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2176 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT AVAILABLE

ISO 97/23/EC



MODELS	P	B	INITIAL FORCE (daN)	STROKE RANGE	C	MOUNTING OPTIONS	PIPE SYSTEM		OVERHAUL
							MICRO	CNOMO	
EX0170	**11** *0.43*	**19** *0.75*	**170** *382*	**7 - 125** *0.28 - 4.92*	**1** *0.04*	**DP, TH, FF**	×	×	×
EX0320	**15** *0.59*	**24.9** *0.98*	**320** *719*	**7 - 125** *0.28 - 4.92*	**1** *0.04*	**DP, TH, FF, ES**	×	×	×
EX0360	**16** *0.63*	**32** *1.26*	**360** *809*	**10 - 125** *0.39 - 4.92*	**2** *0.08*	**TH, FF, SF**	✓	✓	✓
EX0500	**20** *0.79*	**38** *1.50*	**500** *1124*	**10 - 125** *0.39 - 4.92*	**2** *0.08*	**TH, FF, SF, SFF, ES**	✓	✓	✓
EX0750	**25** *0.98*	**45** *1.77*	**750** *1686*	**10 - 125** *0.39 - 4.92*	**2** *0.08*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
EX1000	**28** *1.10*	**50** *1.97*	**1000** *3372*	**13 - 125** *0.51 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
EX1500	**36** *1.42*	**63** *2.48*	**1500** *2272*	**13 - 125** *0.51 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
EX2400	**45** *1.77*	**75** *2.95*	**2400** *5395*	**16 - 125** *0.63 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
EX4200	**60** *2.36*	**95** *3.74*	**4200** *9441*	**16 - 125** *0.63 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
EX6600	**75** *2.95*	**120** *4.72*	**6600** *14836*	**16 - 125** *0.63 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
EX9500	**90** *3.54*	**150** *5.91*	**9500** *21356*	**19 - 125** *0.63 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, BP**	✓	✓	✓



G-EX0360 TO G-EX1500 STYLE CYLINDER

G-EX2400 TO G-EX4200 STYLE CYLINDER

The G-EX range is based upon the high tonnage compact EX range, but with a longer body incorporating deeper tapped holes in the base for fixing.

G-EX0360 > G-EX4200 the upper C groove and lower U groove allow numerous flange mounting options.

G-EX0360 has an M6 port for direct connection to the Micro Hose System. G-EX0500 to G-EX4200 have a G1/8 port for direct connection to the CNOMO Hose system.

MODELS	PCD (MM) (*ins*)	Ø D	TAPPED HOLE DEPTH (MM) (*ins*)
G-EX0360	**20**/*0.79*	**M6 X 2**	**15** - *0.59*
G-EX0500	**25**/*0.98*	**M6 X 2**	**15** - *0.59*
G-EX0750	**20**/*0.79*	**M8 X 2**	**16** - *0.63*
G-EX1000	**20**/*0.79*	**M8 X 2**	**16** - *0.63*
G-EX1500	**20**/*0.79*	**M8 X 2**	**16** - *0.63*
G-EX2400	**40**/*1.57*	**M8 X 4**	**16** - *0.63*
G-EX4200	**60**/*2.36*	**M8 X 4**	**16** - *0.63*

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2176 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT AVAILABLE

PED 97/23/EC

MODELS	P	B	INITIAL FORCE (daN)	STROKE RANGE	C	MOUNTING OPTIONS	PIPE SYSTEM		OVERHAUL
							MICRO	CNOMO	
G-EX0360	**16** *0.63*	**32** *1.26*	**360** *809*	**10 - 125** *0.39 - 4.92*	**2** *0.08*	**TH, FF, SF**	✓	✓	✓
G-EX0500	**20** *0.79*	**38** *1.50*	**500** *1124*	**10 - 125** *0.39 - 4.92*	**2** *0.08*	**TH, FF, SF, SFF, ES**	✓	✓	✓
G-EX0750	**25** *0.98*	**45** *1.77*	**750** *1686*	**10 - 125** *0.39 - 4.92*	**2** *0.08*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
G-EX1000	**28** *1.10*	**50** *1.97*	**1000** *2248*	**13 - 125** *0.51 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
G-EX1500	**36** *1.42*	**63** *2.48*	**1500** *3372*	**13 - 125** *0.51 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, BP**	✓	✓	✓
G-EX2400	**45** *1.77*	**75** *2.95*	**2400** *5395*	**16 - 125** *0.63 - 0.63*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
G-EX4200	**60** *2.36*	**95** *3.74*	**4200** *9441*	**16 - 125** *0.63 - 4.92*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓

ISNG0250 TO ISNG0750 CYLINDER

ISNG1500 TO ISNG10000 CYLINDER

The ISNG range is the optimum design for gas spring durability and conforms to the ISO11901 gas spring standard. ISNG range includes strokes up to 300mm and incorporates longer seal unit guides and bore guided piston stops for maximum durability.

The ISNG range can be connected in series using the CNOMO hose system. Upper C-Groove and Lower U-Groove give numerous flange mounting options.

MODELS	PCD (MM) (*ins*)	Ø D	TAPPED HOLE DEPTH (MM) (*ins*)
ISNG0250	**20**/*0.79*	**M6 X 2**	**8** - *0.31*
	25/*0.98*	**M6 X 2**	**8** - *0.31*
ISNG0500	**20**/*0.79*	**M8 X 2**	**12.5** - *0.49*
ISNG0750	**20**/*0.79*	**M8 X 2**	**12.5** - *0.49*
ISNG1500	**40**/*1.57*	**M8 X 4**	**13** - *0.51*
ISNG3000	**60**/*2.36*	**M8 X 4**	**13** - *0.51*
ISNG5000	**80**/*3.15*	**M10 X 4**	**13** - *0.51*
ISNG7500	**100**/*3.94*	**M10 X 4**	**13** - *0.51*
ISNG10000	**120**/*4.72*	**M12 X 4**	**16** - *0.63*

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2176 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

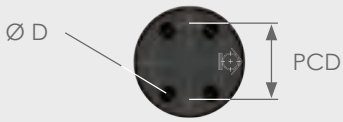
SERVICE KIT AVAILABLE

ISO 11901

PED 97/23/EC

MODELS	P	B	INITIAL FORCE (daN)	STROKE RANGE	C	MOUNTING OPTIONS	PIPE SYSTEM		OVERHAUL
							MICRO	CNOMO	
ISNG0250	**14** *0.55*	**38** *1.50*	**250** *562*	**10 - 125** *0.39 - 4.92*	**2** *0.08*	**TH, FF, SF, SFF, ES**	✓	✓	✓
ISNG0500	**20** *0.79*	**45** *1.77*	**500** *1124*	**10 - 160** *0.39 - 6.30*	**2** *0.08*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
ISNG0750	**25** *0.98*	**50** *1.97*	**750** *1686*	**12.7 - 300** *0.50 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
ISNG1500	**36** *1.42*	**75** *2.95*	**1500** *3372*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
ISNG3000	**50** *1.97*	**95** *3.74*	**3000** *6744*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
ISNG5000	**65** *2.56*	**120** *4.72*	**5000** *11240*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, ES, BP**	✓	✓	✓
ISNG7500	**80** *3.15*	**150** *5.91*	**7500** *16860*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, BP**	✓	✓	✓
ISNG10000	**95** *3.74*	**195** *7.68*	**10000** *22480*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, BP**	✓	✓	✓

MX-1000 STYLE CYLINDER



MX-2400 TO MX-9500 STYLE CYLINDER

The MX range combines the force of the EX range in the envelope sizes of the full height ISNG range, providing a high force durable gas spring.

MX range includes strokes up to 300mm and incorporates longer seal unit guides and bore guided piston stops for maximum durability.

The MX range can be connected in series using the CNOMO hose system. Upper C-Groove and Lower U-Groove give numerous flange mounting options.

MODELS	PCD (MM) (*ins*)	Ø D	TAPPED HOLE DEPTH (MM) (*ins*)
MX1000	**20**/*0.79*	**M8 X 2**	**12.5** - *0.49*
MX2400	**40**/*1.57*	**M8 X 4**	**13** - *0.51*
MX4200	**60**/*2.36*	**M8 X 4**	**13** - *0.51*
MX6600	**80**/*3.15*	**M10 X 4**	**13** - *0.51*
MX9500	**100**/*3.94*	**M10 X 4**	**13** - *0.51*

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2176 PSI*

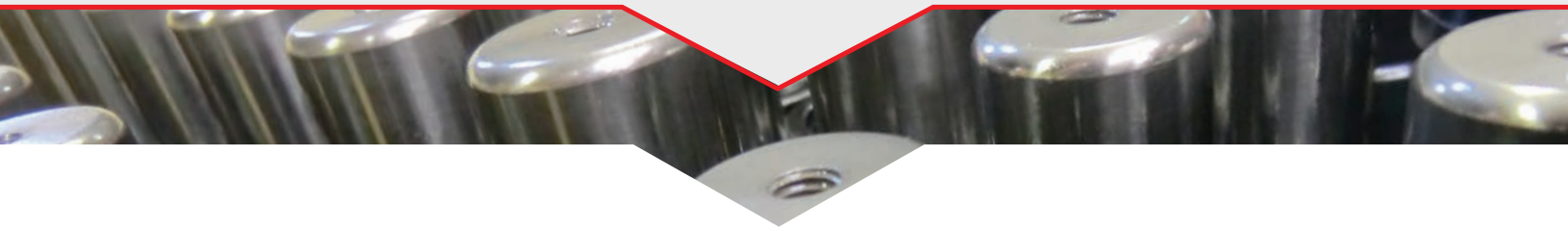
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT AVAILABLE

ISO

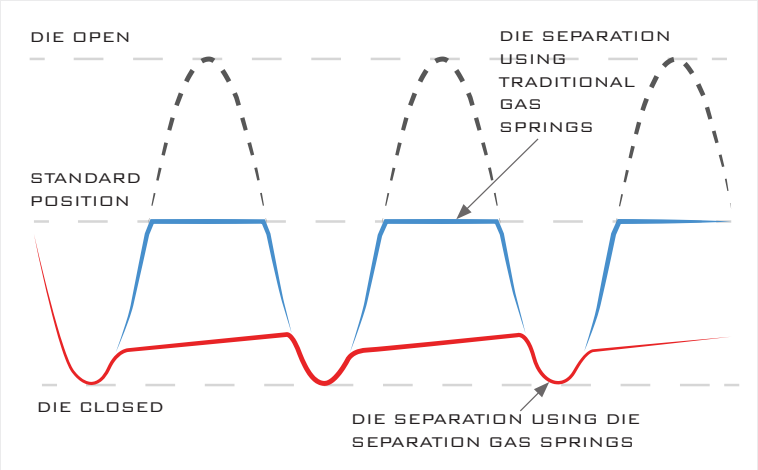
PED 97/23/EC



	P	B			C				
MODELS	P	B	INITIAL FORCE (daN)	STROKE RANGE	C	MOUNTING OPTIONS	PIPE SYSTEM		OVERHAUL
							MICRO	CNOMO	
MX1000	**28** *1.10*	**50** *1.97*	**1000** *2248*	**13 - 300** *0.51 - 11.81*	**3** *0.12*	**TH, BP, FF, SFF, SF, ES**	✓	✓	✓
MX2400	**45** *1.77*	**75** *2.95*	**2400** *5395*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, BP, FF, SFF, SF, ES**	✓	✓	✓
MX4200	**60** *2.36*	**95** *3.74*	**4200** *9442*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, BP, FF, SFF, SF, ES**	✓	✓	✓
MX6600	**75** *2.95*	**120** *4.72*	**6600** *14837*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, BP, FF, SFF, SF, ES**	✓	✓	✓
MX9500	**90** *2.95*	**150** *4.72*	**9500** *14837*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, BP, FF, SFF, SF**	✓	✓	✓

After initial full cycle, only a few millimetres of the stroke is compressed at the bottom end of the spring's travel on each press cycle.

- Reduces energy required perpress cycle
- Reduces force going through the ram
- Reduces wear on the press
- Reduces unnecessary wear on the gas springs

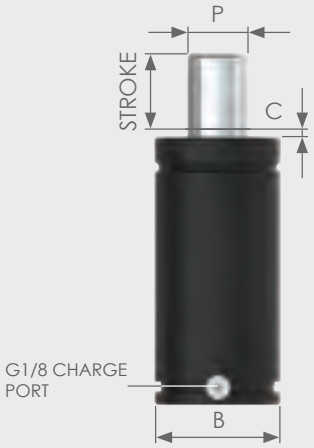


The Greener, Energy Efficient Solution to Die Separation...

Available in standard ISO sizes for **1500, 3000**, **5000** and **7500kg** gas springs.

- Standard ISO fixing flanges
- Full range stroke sizes available from 25mm to 300mm
- Can be retro-fitted in place of standard ISO springs
- Fully serviceable and easy to overhaul

Standard 2 year 100,000 stroke meter *guarantee*!



DSNG1500 TO DSNG7500 STYLE CYLINDER

The DSNG Die Separation Spring is designed for slow return of the piston rod so during each press cycle only a fraction of the stroke is used, reducing the force required by the press and the wear on the gas spring.

The DSNG dimensions are based on the ISNG (ISO) dimensions and are interchangeable

Stroke lengths up to 300mm are available.

Upper C-Groove and Lower U-Groove give numerous flange mounting options.

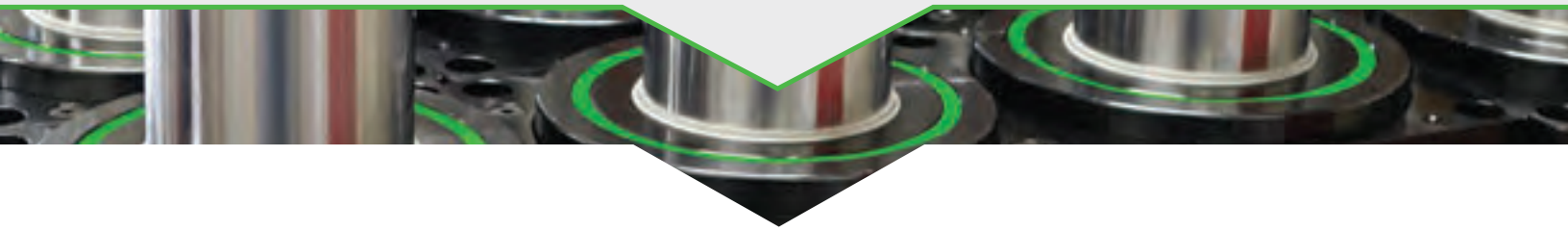
MODEL	PCD (MM) (*ins*)	Ø D	TAPPED HOLE DEPTH (MM) (*ins*)
DSNG1500	**40**/*1.57*	**M8 X 4**	**13** - *0.51*
DSNG3000	**60**/*2.36*	**M8 X 4**	**13** - *0.51*
DSNG5000	**80**/*3.15*	**M10 X 4**	**13** - *0.51*
DSNG7500	**100**/*3.94*	**M10 X 4**	**13** - *0.51*

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2176 PSI* | MIN. PRESSURE: **50 BAR** *725 PSI* | MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT AVAILABLE

PED 97/23/EC



MODELS	P	B	MAX FORCE (daN)	STROKE RANGE	C	MOUNTING OPTIONS	PIPE SYSTEM		OVERHAUL
							MICRO	CNOMO	
DSNG1500	**36** *1.42*	**75** *2.95*	**1500** *3372*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, BP**	×	×	✓
DSNG3000	**50** *1.97*	**95** *3.74*	**3000** *6744*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, BP**	×	×	✓
DSNG5000	**65** *2.56*	**120** *4.72*	**5000** *11240*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, BP**	×	×	✓
DSNG7500	**80** *3.15*	**150** *5.91*	**7500** *16860*	**25 - 300** *0.98 - 11.81*	**3** *0.12*	**TH, FF, SF, SFF, BP**	×	×	✓

HDG RANGE OVERVIEW

HDG-007 TO HDG-029 STYLE CYLINDER

HDG-047 TO HDG-118 STYLE CYLINDER

The HDG range is a compact bore sealed gas spring, giving maximum force for the cylinder diameter.

Stroke lengths up to 50mm are available.

Upper and lower C-Grooves allow the springs to be clamped using flanges, in addition to the tapped holes in the base.
It is always recommended that the springs be positively retained.

MODELS	PCD (MM) (*ins*)	Ø D	TAPPED HOLE DEPTH (MM) (*ins*)
HDG0042	-	**M6 X 1**	-
HDG007	**15**/*0.59*	**M6 X 2**	**5.5** - *0.22*
HDG010	**17**/*0.67*	**M6 X 2**	**6.5** - *0.26*
HDG018	**26**/*1.02*	**M6 X 2**	**6.5** - *0.26*
HDG029	**34**/*1.34*	**M8 X2**	**9** - *0.35*
HDG047	**40**/*1.57*	**M8 X 4**	**9** - *0.35*
HDG075	**52**/*2.05*	**M8 X 4**	**9** - *0.35*
HDG118	**68**/*2.68*	**M8 X 4**	**10** - *0.39*

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2 PSI*	**20 BAR** *290 PSI*	0.8M/SEC

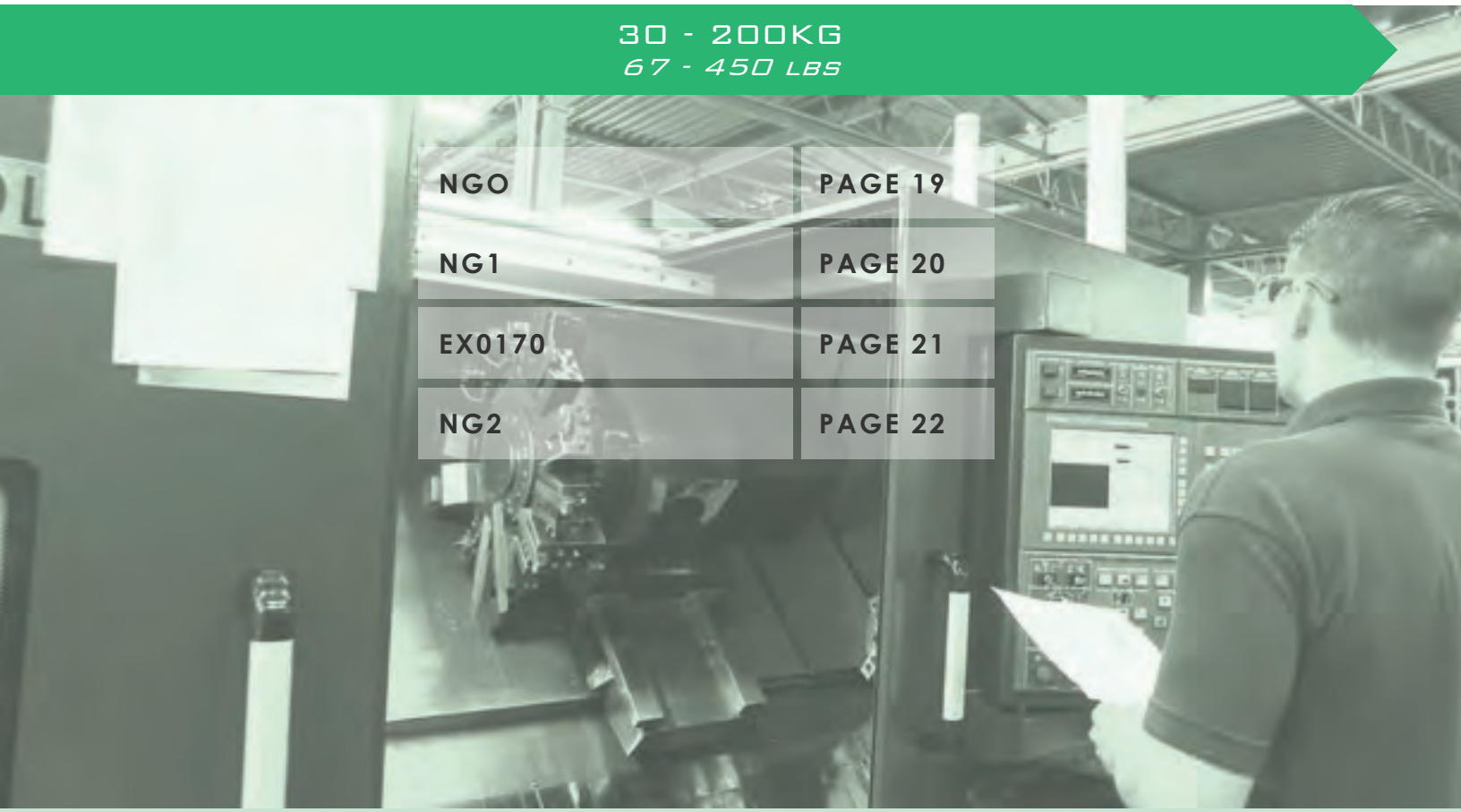
SERVICE KIT AVAILABLE

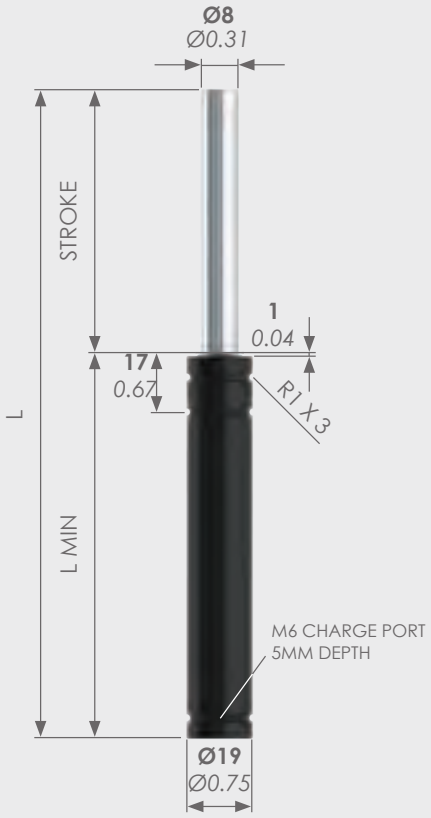
PED 97/23/EC

	P	B			C			

MODELS	P	B	INITIAL FORCE (daN)	STROKE RANGE	C	MOUNTING OPTIONS	PIPE SYSTEM		OVERHAUL
							MICRO 24	CNOMO	
HDG0042	**12** *0.47*	**24.9** *0.98*	**420** *944*	**6 - 50** *0.24 - 1.97*	**1** *0.04*	**DP, TH, FF**	×	×	✓
HDG007	**20** *0.79*	**32** *1.26*	**740** *1664*	**6 - 50** *0.24 - 1.97*	**3** *0.12*	**TH, FF, SFF**	×	×	✓
HDG010	**20** *0.79*	**38** *1.50*	**1060** *2383*	**6 - 50** *0.24 - 1.97*	**3** *0.12*	**TH, FF, SFF**	×	×	✓
HDG018	**30** *1.18*	**50** *1.97*	**1800** *4046*	**6 - 50** *0.24 - 1.97*	**3** *0.12*	**TH, FF, SFF**	×	×	✓
HDG029	**38** *1.50*	**63.2** *2.49*	**2950** *6632*	**6 - 50** *0.24 - 1.97*	**3** *0.12*	**TH, FF, SFF**	×	×	✓
HDG047	**50** *1.97*	**75** *2.95*	**4700** *10566*	**10 - 50** *0.39 - 1.97*	**3** *0.12*	**TH, FF, SFF**	×	×	✓
HDG075	**65** *2.56*	**95** *3.74*	**7500** *16860*	**10 - 50** *0.39 - 1.97*	**3** *0.12*	**TH, FF, SFF**	×	×	✓
HDG118	**80** *3.15*	**120** *4.72*	**11800** *26526*	**10 - 50** *0.39 - 1.97*	**3** *0.12*	**TH, FF, SFF**	×	×	✓

30 - 200KG
67 - 450 LBS





MODELS	CHARGING PRESSURE (bar)(psi)	FORCE (daN) @20˚ C		COLOR
		INITIAL (daN)(lbs)	END (daN)(lbs)	
NG0-060-XXX	60 - 870	30 - 67	53 - 119	Green
NG0-100-XXX	100 - 1450	50 - 112	80 - 179	Blue
NG0-140-XXX	140 - 2031	70 - 157	105 - 236	Red
NG0-180-XXX	180 - 2611	90 - 202	135 - 303	Yellow

MODELS	STROKE (MM) (IN.)	L (MM) (IN.)	L MIN (MM) (IN.)
NG0	007 0.27	56 2.20	49 2.20
	010 0.39	62 2.44	52 2.04
	015 0.59	72 2.83	57 2.24
	025 0.98	92 3.62	67 2.63
	038.1 1.5	118.2 4.65	80.1 3.15
	050 1.96	142 5.59	92 3.62
	063.5 2.5	172 6.77	108.5 4.27
	080 3.14	205 8.07	125 4.92
	100 3.93	245 9.64	145 5.70
	125 4.92	295 11.61	170 6.69

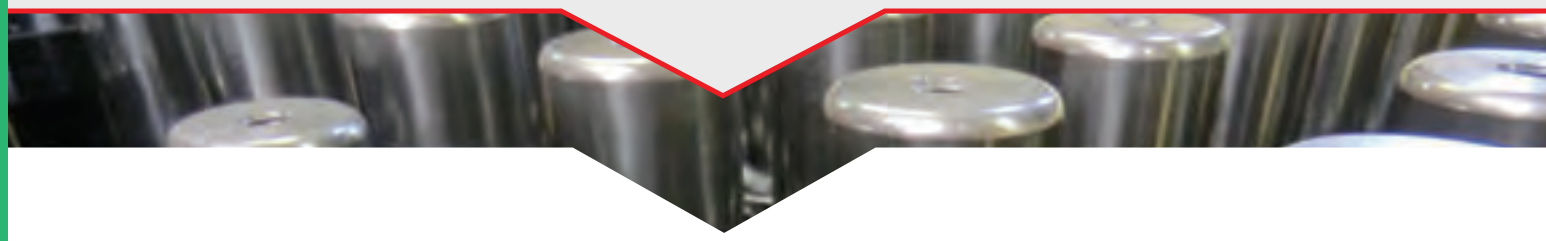
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
180 BAR *2610 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

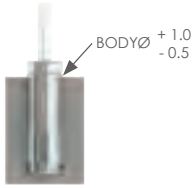
ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

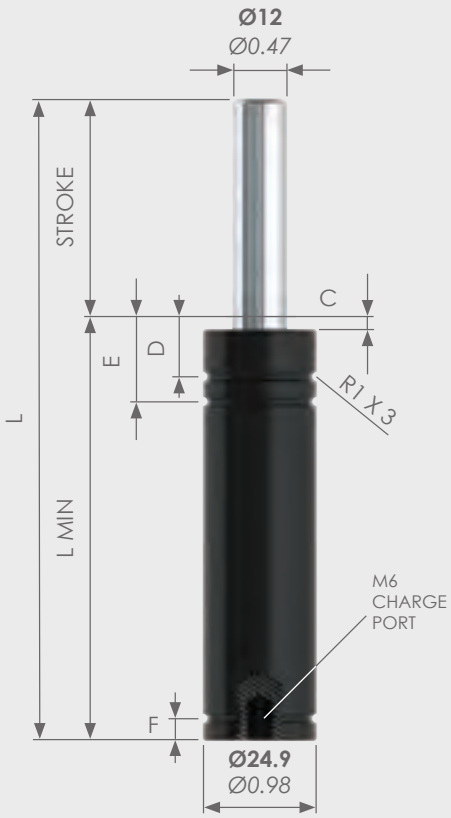


Drop-in Pocket

M6 Tapped Hole

Front Flange
19 FF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: NG0 x 010 + FF



MODELS	CHARGING PRESSURE (bar)(psi)	FORCE (daN) @20° C		COLOR
		INITIAL (daN)(lbs)	END (daN)(lbs)	
NG1-050-XXX	**45** - 653	**50** - 112	**65** - 146	Green
NG1-100-XXX	**90** - 1305	**100** - 224	**131** - 294	Blue
NG1-150-XXX	**135** - 1958	**150** - 337	**196** - 440	Red
NG1-200-XXX	**180** - 2611	**200** - 449	**262** - 588	Yellow

MODELS	STROKE (MM) (IN.)	L (MM) (IN.)	L MIN (MM) (IN.)
NG1	**007** 0.27	**56** 2.20	**49** 2.20
	010 0.39	**62** 2.44	**52** 2.04
	015 0.59	**72** 2.83	**57** 2.24
	025 0.98	**92** 3.62	**67** 2.63
	038.1 1.5	**118.2** 4.65	**80.1** 3.15
	050 1.96	**142** 5.59	**92** 3.62
	63.5 2.5	**172** 6.77	**108.5** 4.27
	80 3.14	**205** 8.07	**125** 4.92
	100 3.93	**245** 9.64	**145** 5.70
	125 4.92	**295** 11.61	**170** 6.69

C	D	E	F
1 0.04	**11.5** 0.45	**17** 0.67	**5** 0.20

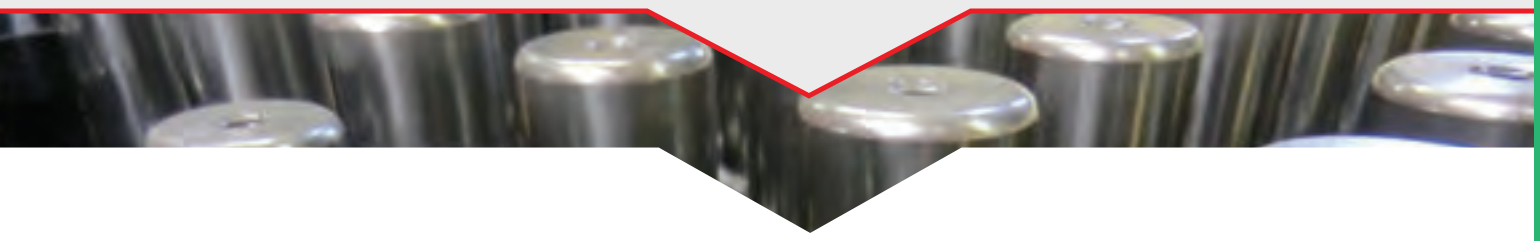
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **180 BAR** *2610 PSI* | MIN. PRESSURE: **20 BAR** *290 PSI* | MAX. PISTON VELOCITY: 1.6M/SEC

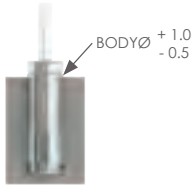
ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77



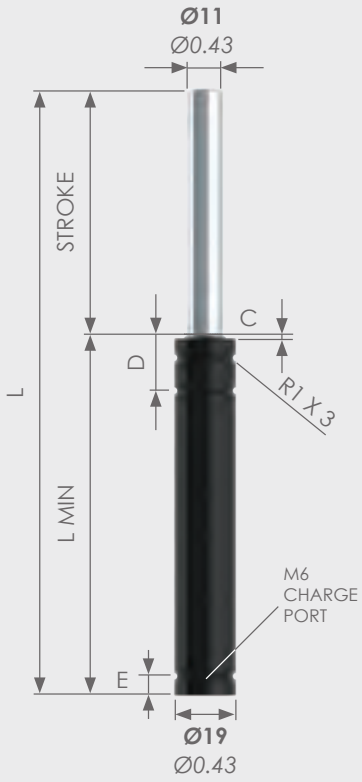
Drop-in Pocket

Front Flange

M6 Tapped Hole

End Support 25 ES

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: NG1 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX0170	007 0.28	170 382	250 562	37 1.46	44 1.73	0.002	0.06 0.03
EX0170	010 0.39		270 606	40 1.57	50 1.97	0.002	0.06 0.03
EX0170	015 0.59		270 606	45 1.77	60 2.36	0.004	0.07 0.03
EX0170	019 0.75		270 606	49 1.93	68 2.68	0.005	0.07 0.03
EX0170	025 0.98		270 606	55 2.17	80 3.15	0.006	0.08 0.04
EX0170	038 1.50		280 629	68 2.68	106 4.17	0.009	0.09 0.04
EX0170	050 1.97		280 629	80 3.15	130 5.12	0.012	0.10 0.05
EX0170	063 2.48		285 640	93 3.66	156 6.14	0.015	0.12 0.05
EX0170	075 2.95		285 640	110 4.33	185 7.28	0.018	0.14 0.06
EX0170	080 3.15		285 640	115 4.53	195 7.68	0.019	0.14 0.06
EX0170	100 3.94		280 629	135 5.31	235 9.25	0.024	0.16 0.07
EX0170	125 4.92		275 618	160 6.30	285 11.22	0.03	0.19 0.09

C	D	E
1 0.04	17 0.67	6 0.24

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

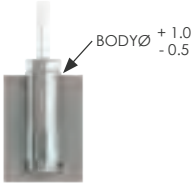
MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

ISO

PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

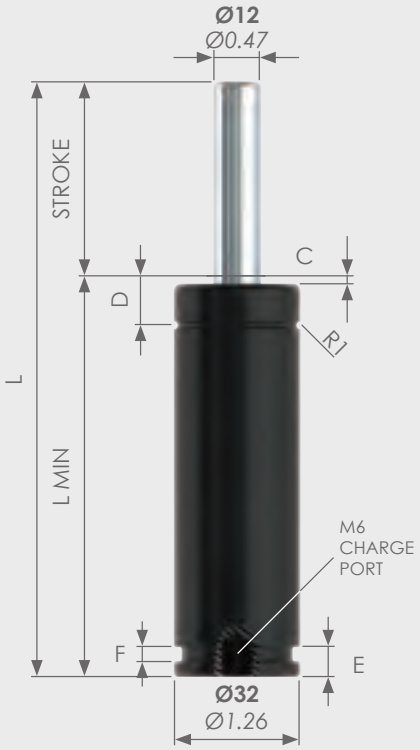


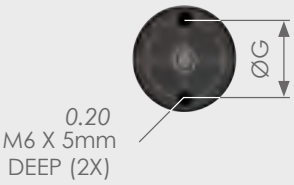
Drop-in Pocket

Front Flange
19FF

M6 Tapped Hole

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX0170 x 010 + FF





MODELS	CHARGING PRESSURE (bar)(psi)	FORCE (daN) @20° C		COLOR
		INITIAL (daN)(lbs)	END (daN)(lbs)	
NG2-050-XXX	**45** - 653	**50** - 112	**65** - 146	Green
NG2-100-XXX	**90** - 1305	**100** - 224	**131** - 294	Blue
NG2-150-XXX	**135** - 1958	**150** - 337	**196** - 440	Red
NG2-200-XXX	**180** - 2611	**200** - 449	**262** - 588	Yellow

MODELS	STROKE (MM) (IN.)	L (MM) (IN.)	L MIN (MM) (IN.)
NG2	**010** 0.39	**70** 2.76	**60** 2.36
	12.7 0.50	**75.4** 2.97	**62.7** 2.47
	016 0.63	**82** 3.23	**66** 2.60
	025 0.98	**100** 3.94	**75** 2.95
	38.1 1.50	**126.2** 4.97	**88.1** 3.47
	050 1.97	**150** 5.91	**100** 3.94
	63.5 2.50	**177** 6.97	**113.5** 4.47
	080 3.15	**210** 8.27	**130** 5.12
	100 3.94	**250** 9.84	**150** 5.91
	125 4.92	**300** 11.81	**175** 6.89

C	D	E	F	ØG
1 0.04	**12.5** 0.49	**7.5** 0.30	**3.5** 0.14	**18** 0.71

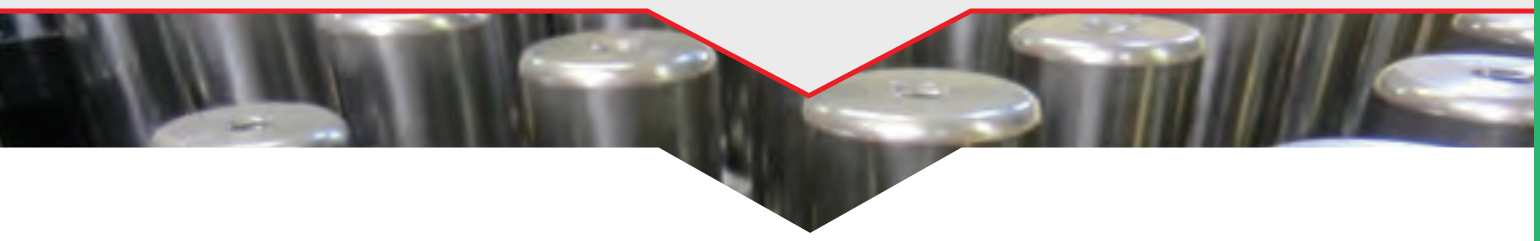
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
180 BAR 2610 PSI	**20 BAR** 290 PSI	1.6M/SEC

ISO

PED 97/23/EC



MOUNTING EXAMPLES

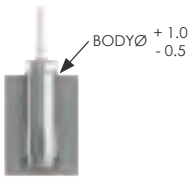
(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

M6 Tapped Hole

Square Front Flange
32 SFF

Front Flange
32 FF

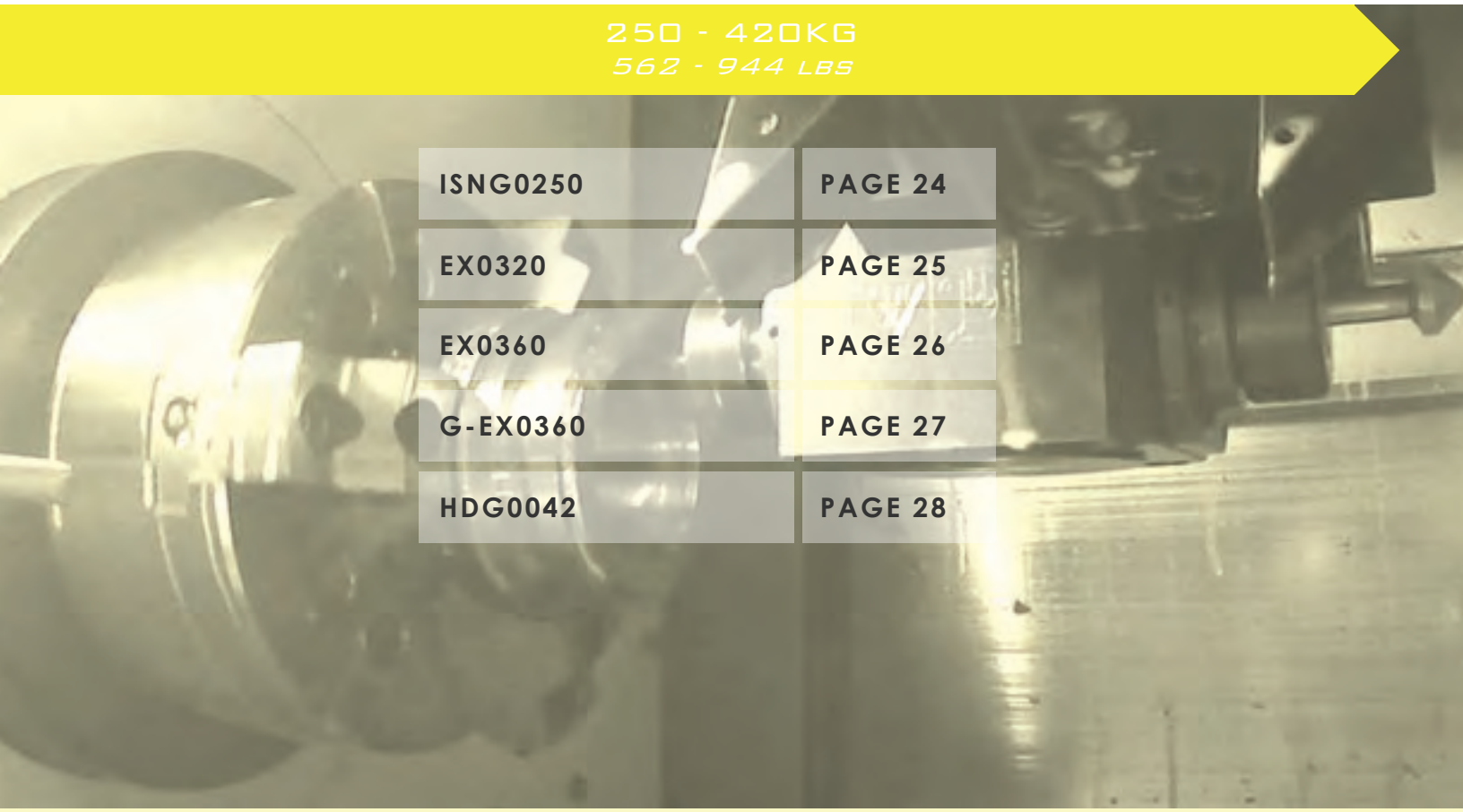
Square Flange
32 SF

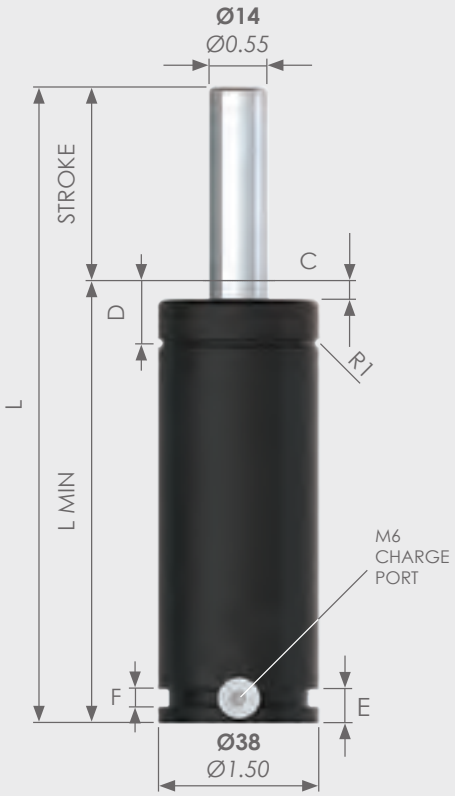


Drop-in Pocket

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: NG2 x 010 + FF

250 - 420KG
562 - 944 LBS

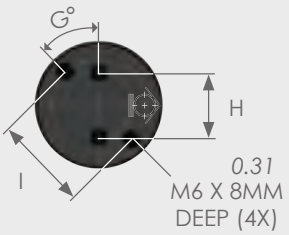




MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG0250	010 0.39	250 562	410 921	60 2.36	70 2.76	0.011	0.40 0.18
ISNG0250	013 0.51		410 921	62.7 2.47	75.4 2.97	0.013	0.42 0.19
ISNG0250	016 0.63		410 921	66 2.60	82 3.23	0.016	0.43 0.20
ISNG0250	025 0.98		410 921	75 2.95	100 3.94	0.023	0.48 0.22
ISNG0250	038 1.50		410 921	88.1 3.47	126.2 4.97	0.032	0.54 0.25
ISNG0250	050 1.97		410 921	100 3.94	150 5.91	0.014	0.60 0.27
ISNG0250	063 2.48		410 921	113.5 4.47	177 6.97	0.051	0.67 0.30
ISNG0250	080 3.15		410 921	130 5.12	210 8.27	0.062	0.75 0.34
ISNG0250	100 3.94		410 921	150 5.91	250 9.84	0.077	0.85 0.39
ISNG0250	125 4.92		410 921	175 6.89	300 11.81	0.096	0.97 0.44

C	D	E	F	G°	ØH	ØI
2	12.5	8	4	45	18	25
0.08	0.49	0.31	0.16		0.71	0.98

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



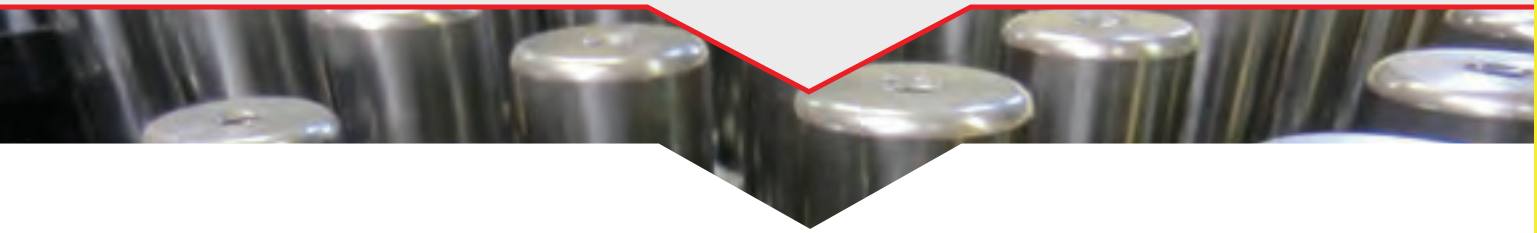
USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT ISNG0250

ISO 11901

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M6 Tapped Holes

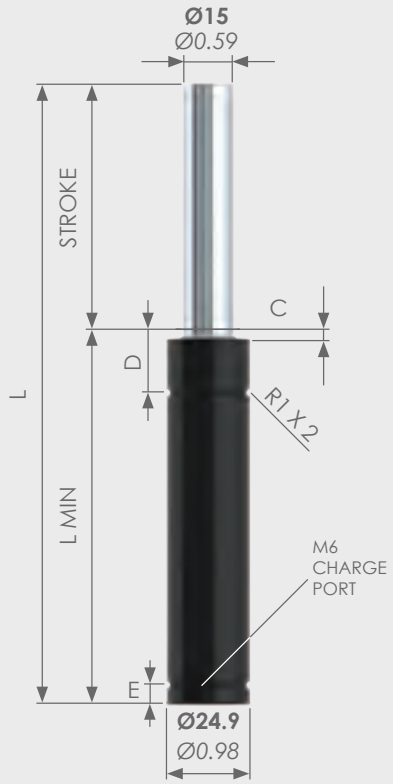
Square Front Flange
38 SFF

Front Flange
38 FF

Square Flange
38 SF

End Support
38 ES

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG0250 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX0320	007 0.28	320 719	480 1079	37 1.46	44 1.73	0.004	0.10 0.05
EX0320	010 0.39		490 1101	40 1.57	50 1.97	0.005	0.11 0.05
EX0320	015 0.59		510 1146	45 1.77	60 2.36	0.007	0.12 0.05
EX0320	019 0.75		510 1146	49 1.93	68 2.68	0.009	0.13 0.06
EX0320	025 0.98		520 1168	55 2.17	80 3.15	0.011	0.14 0.06
EX0320	038 1.50		530 1191	68 2.68	106 4.17	0.017	0.16 0.07
EX0320	050 1.97		530 1191	80 3.15	130 5.12	0.022	0.19 0.09
EX0320	063 2.48		530 1191	93 3.66	156 6.14	0.028	0.21 0.10
EX0320	075 2.95		530 1191	110 4.33	185 7.28	0.034	0.24 0.11
EX0320	080 3.15		530 1191	115 4.53	195 7.68	0.036	0.25 0.11
EX0320	100 3.94		530 1191	135 5.31	235 9.25	0.044	0.29 0.13
EX0320	125 4.92		530 1191	160 6.30	285 11.22	0.055	0.33 0.15

C	D	E
1 0.04	17 0.67	6 0.24

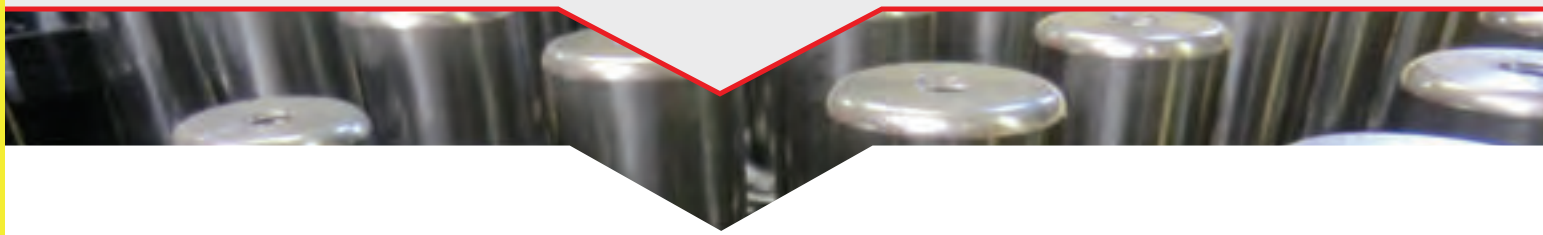
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

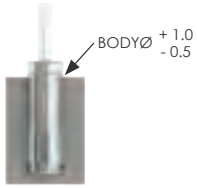
ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77



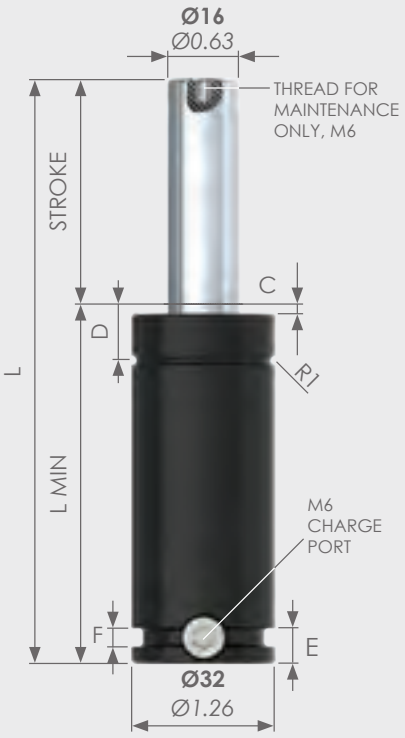
Drop-in Pocket

Front Flange

M6 Tapped Hole

End Support
25 ES

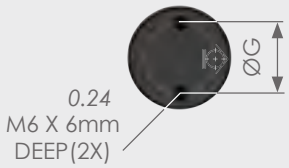
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX0320 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX0360	010 0.39	360 809	520 1168	40 1.57	50 1.97	0.01	0.17 0.08
EX0360	013 0.51		510 1146	43 1.69	56 2.20	0.01	0.18 0.08
EX0360	016 0.63		515 1157	46 1.81	62 2.44	0.01	0.19 0.09
EX0360	019 0.75		520 1168	49 1.93	68 2.68	0.01	0.2 0.09
EX0360	025 0.98		527 1184	55 2.17	80 3.15	0.02	0.22 0.10
EX0360	032 1.26		532 1195	62 2.44	94 3.70	0.02	0.24 0.11
EX0360	038 1.50		535 1202	6 0.24	106 4.17	0.03	0.26 0.12
EX0360	050 1.97		540 1213	80 3.15	130 5.12	0.03	0.29 0.13
EX0360	063 2.48		552 1240	93 3.66	156 6.14	0.04	0.33 0.15
EX0360	075 2.95		553 1243	105 4.13	180 7.09	0.05	0.37 0.17
EX0360	080 3.15		546 1227	110 4.33	190 7.48	0.05	0.39 0.18
EX0360	100 3.94		548 1231	130 5.12	230 9.06	0.05	0.45 0.20
EX0360	125 4.92		550 1236	155 6.10	280 11.02	0.50	0.52 0.24

C	D	E	F	ØG
2	12.5	8	4	20
0.08	0.49	0.31	0.16	0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

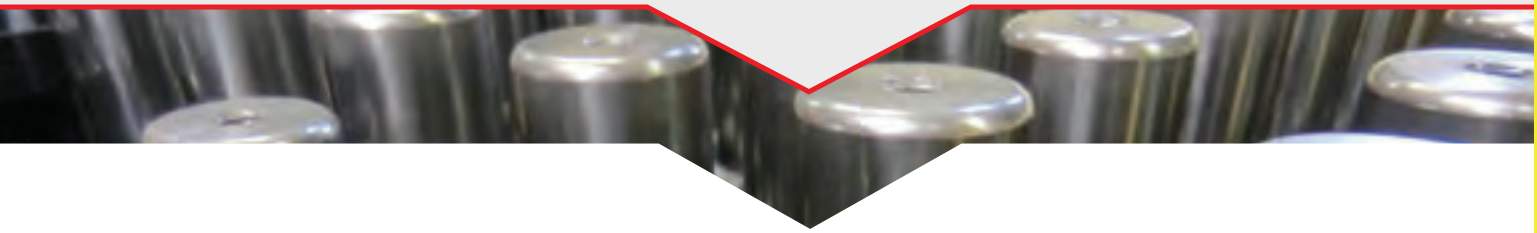
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX0360

ISO PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

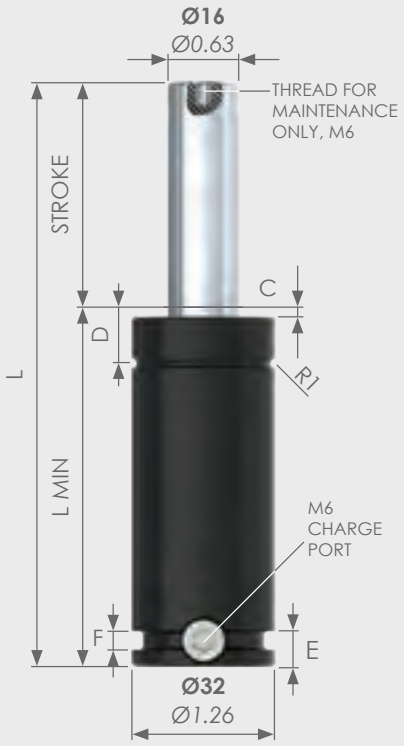
2 X M6 Tapped Holes

Square Front Flange
32 SFF

Front Flange
32 FF

Square Flange
32 SF

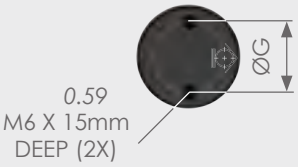
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX0360 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
G-EX0360	010 0.39	360 809	520 1168	50 1.97	60 2.36		0.17 0.08
G-EX0360	013 0.51		510 1146	53 2.09	66 2.60		0.18 0.08
G-EX0360	016 0.63		515 1157	56 2.20	72 2.83		0.19 0.09
G-EX0360	019 0.75		520 1168	59 2.32	78 3.07		0.20 0.09
G-EX0360	025 0.98		527 1184	65 2.56	90 3.54		0.22 0.10
G-EX0360	032 1.26		532 1195	72 2.83	104 4.09		0.24 0.11
G-EX0360	038 1.50		535 1202	78 3.07	116 4.57		0.26 0.12
G-EX0360	050 1.97		540 1213	90 3.54	140 5.51		0.29 0.13
G-EX0360	063 2.48		552 1240	103 4.06	166 6.54		0.33 0.15
G-EX0360	075 2.95		553 1243	115 4.53	190 7.48		0.37 0.17
G-EX0360	080 3.15		546 1227	120 4.72	200 7.87		0.39 0.18
G-EX0360	100 3.94		548 1231	140 5.51	240 9.45		0.45 0.20
G-EX0360	125 4.92		550 1236	165 6.49	290 11.41		0.52 0.24

C	D	E	F	ØG
2 0.08	12.5 0.49	8 0.31	4 0.16	20 0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

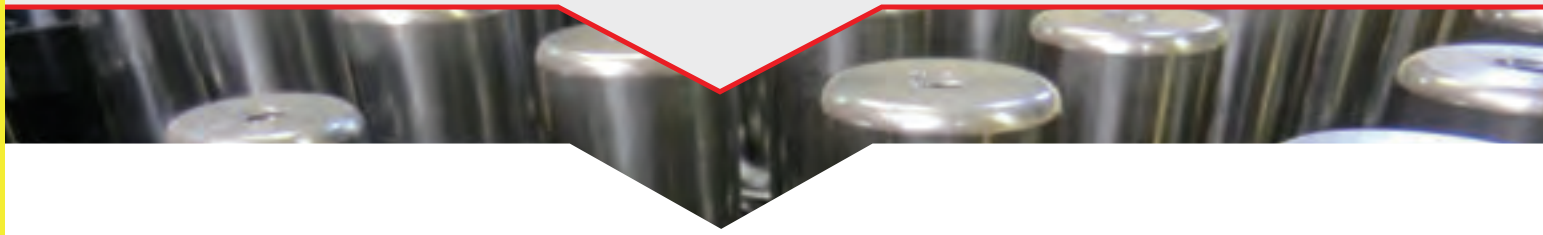
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT G-EX0360

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

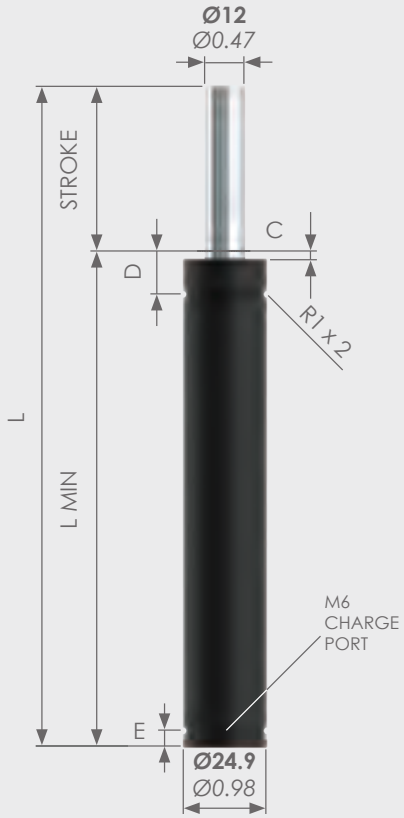
2 X M6 Tapped Holes

Square Front Flange
32 SFF

Front Flange
32 FF

Square Flange
32 SF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: G-EX0360 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG0042	06 0.24	420 944	700 1573	50 1.97	56 2.20	0.003	0.13 0.06
HDG0042	010 0.39		690 1551	60 2.36	70 2.76	0.0V05	0.15 0.07
HDG0042	016 0.63		690 1551	75 2.95	91 3.58	0.008	0.18 0.08
HDG0042	025 0.98		690 1551	95 3.74	120 4.72	0.011	0.22 0.10
HDG0042	032 1.26		760 1708	108 4.25	140 5.51	0.021	0.24 0.11
HDG0042	040 1.57		760 1708	125 4.92	165 6.50	0.026	0.27 0.12
HDG0042	050 1.97		760 1708	145 5.71	195 7.68	0.032	0.31 0.14

C	D	E
1 0.04	11.5 0.45	5 0.20

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

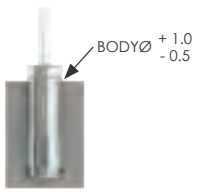
MAX. PISTON VELOCITY: 0.8M/SEC

SERVICE KIT HDG0042

PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77



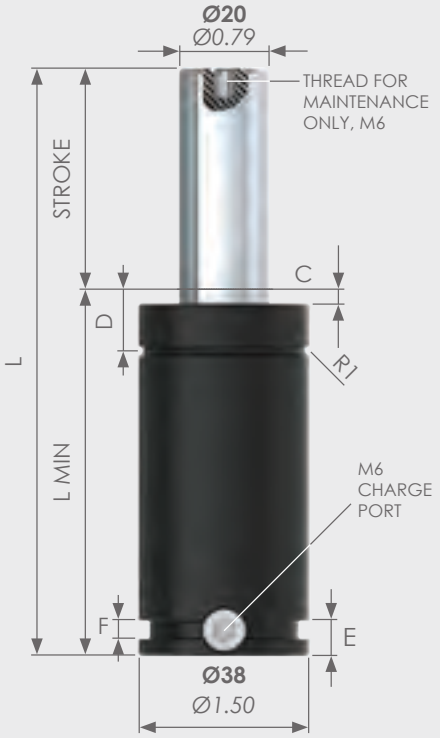
Drop-in Pocket

Front Flange 25 FF

M6 Tapped Hole

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG0042 x 010 + FF

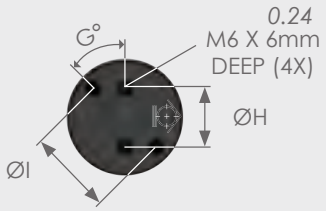
500 - 700KG
1124 - 1574 LBS



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX0500	010 0.39	500 1124	764 1717	40 1.57	50 1.97	0.01	0.25 0.11
EX0500	013 0.51		746 1677	43 1.69	56 2.20	0.01	0.26 0.12
EX0500	016 0.63		754 1694	46 1.81	62 2.44	0.02	0.27 0.12
EX0500	019 0.75		767 1724	49 1.93	68 2.68	0.02	0.28 0.13
EX0500	025 0.98		779 1751	55 2.17	80 3.15	0.03	0.31 0.14
EX0500	032 1.26		788 1771	62 2.44	94 3.70	0.03	0.34 0.15
EX0500	038 1.50		795 1787	68 2.68	106 4.17	0.04	0.36 0.16
EX0500	050 1.97		803 1805	80 3.15	130 5.12	0.05	0.40 0.18
EX0500	063 2.48		825 1854	93 3.66	156 6.14	0.06	0.45 0.20
EX0500	075 2.95		826 1856	105 4.13	180 7.09	0.07	0.50 0.23
EX0500	080 3.15		814 1829	110 4.33	190 7.48	0.08	0.52 0.24
EX0500	100 3.94		817 1836	130 5.12	230 9.06	0.10	0.60 0.27
EX0500	125 4.92		821 1845	155 6.10	280 11.02	0.12	0.40 0.18

C	D	E	F	G	ØH	ØI
2 0.08	12.5 0.49	8 0.31	4 0.16	45°	20 0.79	25 0.98

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT EX0500

ISO PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M6 Tapped Holes

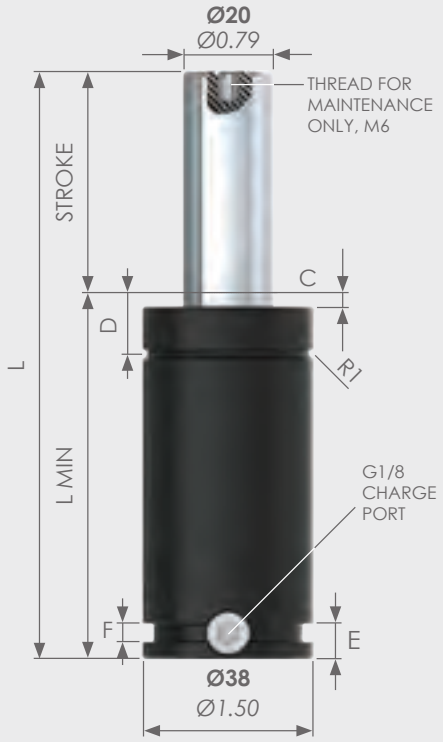
Square Front Flange
38 SFF

Front Flange
38 FF

Square Flange
38 SF

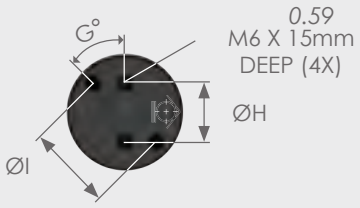
End Support
38 ES

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX0500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
G-EX0500	010 0.39	500 1124	764 1717	50 1.97	60 2.36	0.01	0.33 0.15
G-EX0500	013 0.51		746 1677	53 2.09	66 2.60	0.01	0.34 0.15
G-EX0500	016 0.63		754 1694	56 2.20	72 2.83	0.02	0.36 0.16
G-EX0500	019 0.75		767 1724	59 2.32	78 3.07	0.02	0.37 0.17
G-EX0500	025 0.98		779 1751	65 2.56	90 3.54	0.03	0.39 0.18
G-EX0500	032 1.26		788 1771	72 2.83	104 4.09	0.03	0.42 0.19
G-EX0500	038 1.50		795 1787	78 3.07	116 4.57	0.04	0.44 0.20
G-EX0500	050 1.97		803 1805	90 3.54	140 5.51	0.05	0.49 0.22
G-EX0500	063 2.48		825 1854	103 4.06	166 6.54	0.06	0.54 0.25
G-EX0500	075 2.95		826 1856	115 4.53	190 7.48	0.07	0.58 0.26
G-EX0500	080 3.15		814 1829	120 4.72	200 7.87	0.08	0.6 0.27
G-EX0500	100 3.94		817 1836	140 5.51	240 9.45	0.10	0.68 0.31
G-EX0500	125 4.92		821 1845	165 6.49	290 6.49	0.12	0.77 0.35

C	D	E	F	G°	ØH	ØI
2 0.08	12.5 0.49	8 0.31	4 0.16	45	20 0.79	25 0.98



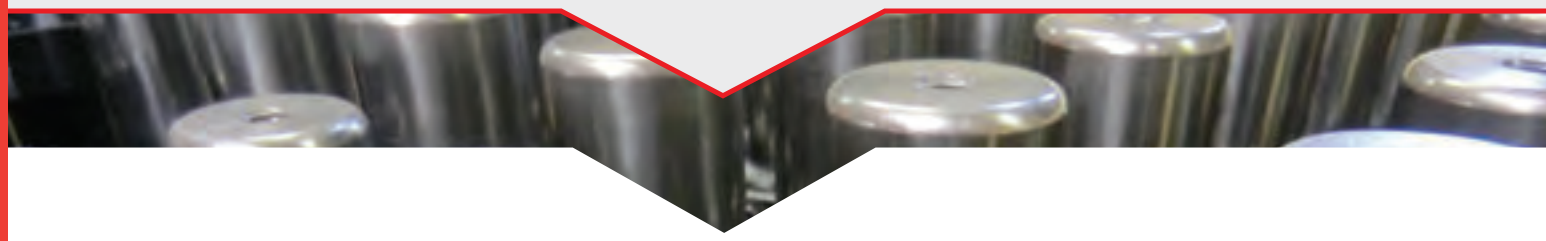
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT G-EX0500

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M6 Tapped Holes

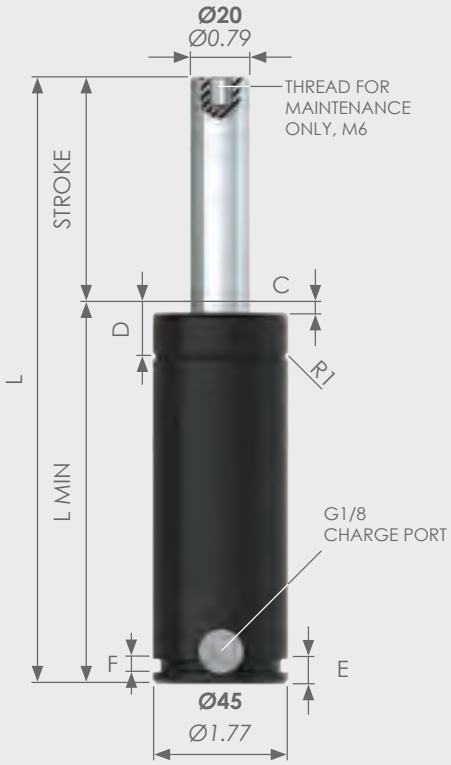
Square Front Flange
38 SFF

Front Flange
38 FF

Square Flange
38 SF

End Support
38 ES

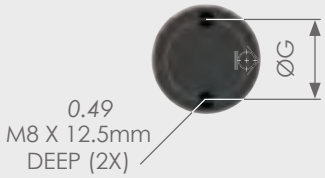
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: G-EX0500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG0500	010 0.39	500 1124	600 1349	95 3.74	105 4.13	0.023	0.93 0.42
ISNG0500	013 0.51		612 1376	97.7 3.85	110 4.33	0.025	0.95 0.43
ISNG0500	025 0.98		670 1506	110 4.33	135 5.31	0.038	1.04 0.47
ISNG0500	038 1.50		685 1540	123.1 4.85	161.2 6.35	0.051	1.13 0.51
ISNG0500	050 1.97		710 1596	135 5.31	185 7.28	0.063	1.21 0.55
ISNG0500	063 2.48		710 1596	148.5 5.85	212 8.35	0.077	1.31 0.60
ISNG0500	080 3.15		710 1596	165 6.50	245 9.65	0.093	1.43 0.65
ISNG0500	100 3.94		710 1596	185 7.28	285 11.22	0.114	1.57 0.71
ISNG0500	125 4.92		710 1596	210 8.27	335 13.19	0.139	1.74 0.79
ISNG0500	160 6.30		710 1596	245 9.65	405 15.94	0.175	1.99 0.90

C	D	E	F	ØG
2 0.08	16.5 0.65	8.2 0.32	4.2 0.17	20 0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT ISNG0500

ISO 11901

PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

Square Front Flange
45 SFF

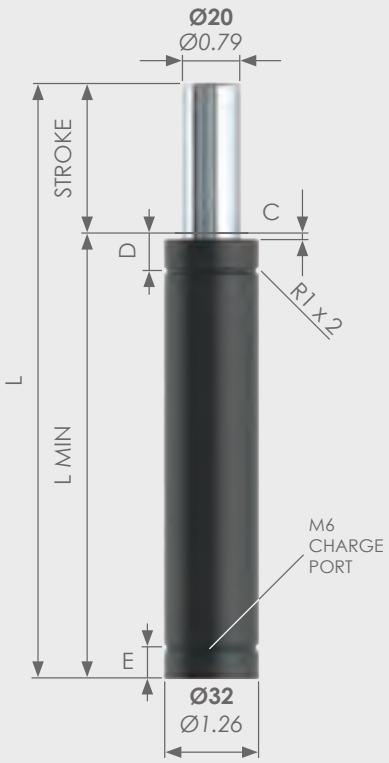
Front Flange
45 FF

Square Flange
45 SF

Base Plate
45 BP

End Support
45 ES

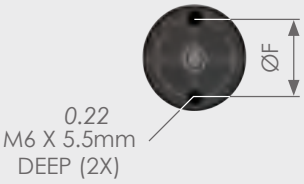
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG0500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG007	006 0.24	740 1663	980 2203	57 2.24	63 2.48	0.012	0.2 0.09
HDG007	010 0.39		1000 2248	65 2.56	75 2.95	0.017	0.24 0.11
HDG007	016 0.63		1100 2472	77 3.03	93 3.66	0.024	0.28 0.13
HDG007	025 0.98		1200 2697	95 3.74	120 4.72	0.034	0.33 0.15
HDG007	032 1.26		1200 2697	108 4.25	140 5.51	0.042	0.37 0.17
HDG007	040 1.57		1200 2697	125 4.92	165 6.50	0.052	0.42 0.19
HDG007	050 1.97		1200 2697	145 5.71	195 7.68	0.063	0.48 0.22

ØP	ØB	C	D	E	ØF
20 0.79	32 1.26	3 0.12	11.5 0.45	10.5 0.41	15 0.59

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

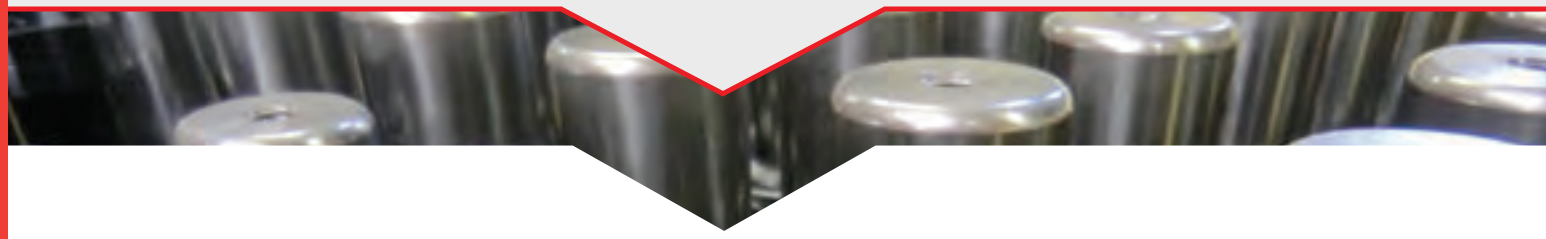


USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	0.8M/SEC

SERVICE KIT HDG007

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

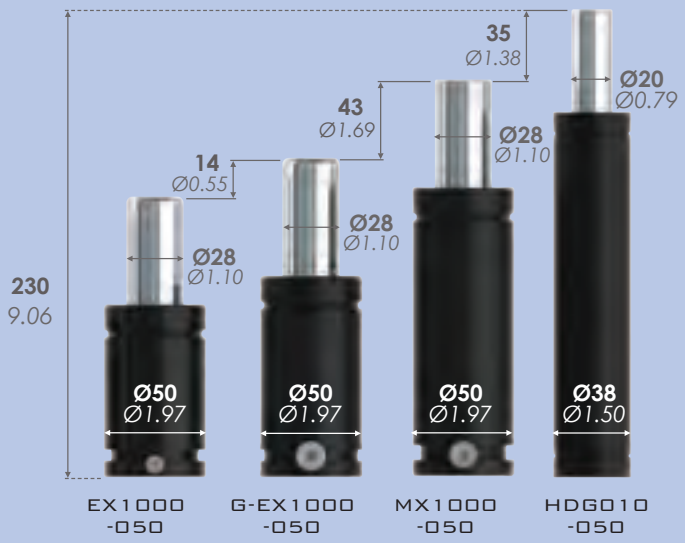
2 X M6 Tapped Holes

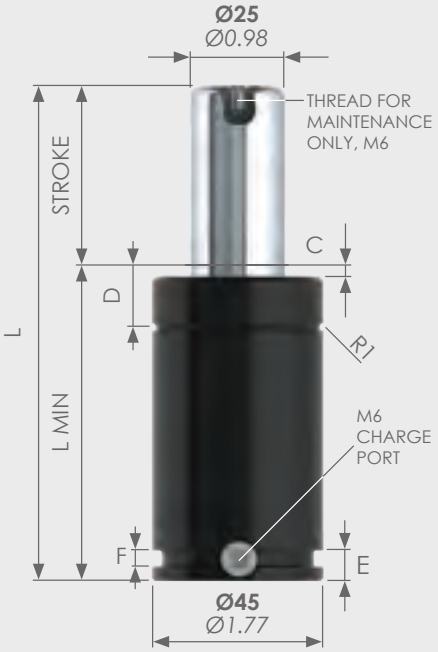
Square Front Flange
32 SFF

Front Flange
32 FF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG007 x 010 + FF

750 - 1000KG
1686 - 2248 LBS

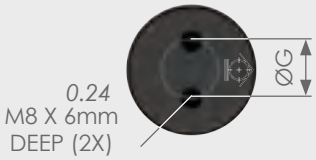




MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX0750	010 0.39	750 1686	1105 2484	42 1.65	52 2.05	0.02	0.37 0.17
EX0750	013 0.51		1085 2439	45 1.77	58 2.28	0.02	0.39 0.18
EX0750	016 0.63		1100 2472	48 1.89	64 2.52	0.03	0.41 0.19
EX0750	019 0.75		1120 2517	51 2.01	70 2.76	0.03	0.41 0.19
EX0750	025 0.98		1145 2573	57 2.24	82 3.23	0.04	0.45 0.20
EX0750	032 1.26		1160 2607	64 2.52	96 3.78	0.05	0.50 0.23
EX0750	0.38 1.50		1170 2630	70 2.76	108 4.25	0.05	0.53 0.24
EX0750	050 1.97		1180 2652	82 3.23	132 5.20	0.07	0.61 0.28
EX0750	063 2.48		1220 2742	95 3.74	158 6.22	0.09	0.69 0.31
EX0750	075 2.95		1225 2753	107 4.21	182 7.17	0.10	0.77 0.35
EX0750	080 3.15		1210 2720	112 4.41	192 7.56	0.11	0.80 0.36
EX0750	100 3.94		1215 2731	132 5.20	232 9.13	0.13	0.93 0.42
EX0750	125 4.92		1220 2742	157 6.18	282 11.10	0.17	1.09 0.50

C	D	E	F	ØG
2	16.5	8	4	20
0.08	0.65	0.31	0.16	0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

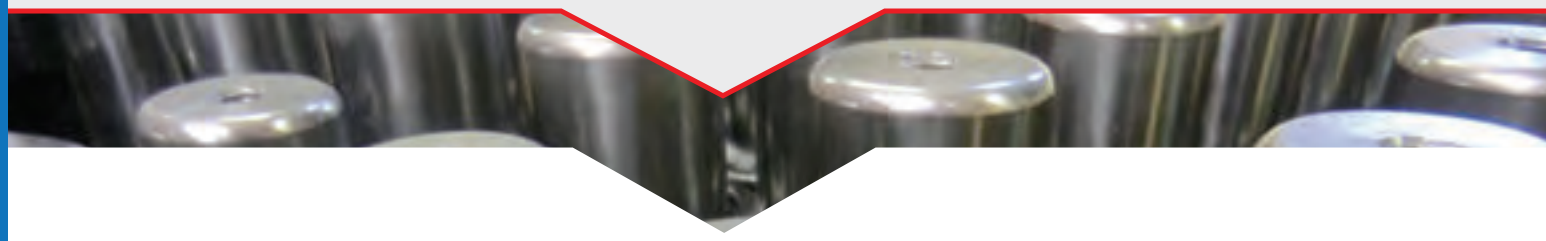
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX0750

ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

Square Front Flange
45 SFF

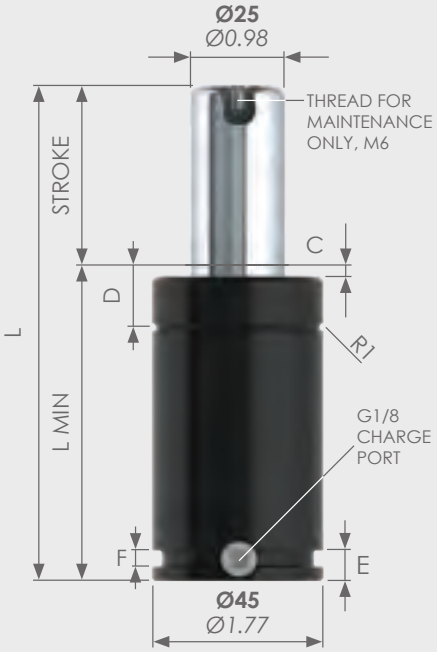
Front Flange
45 FF

Square Flange
45 SF

Base Plate
45 BP

End Support
45 ES

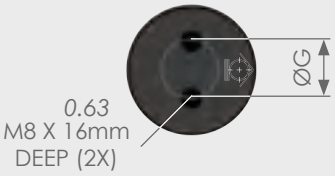
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX0750 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
G-EX0750	**010** *0.39*	**750** *1686*	**1105** *2484*	**57** *2.24*	**67** *2.64*	**0.02**	**0.37** *0.17*
G-EX0750	**013** *0.51*		**1085** *2439*	**60** *2.36*	**73** *2.87*	**0.02**	**0.39** *0.18*
G-EX0750	**016** *0.63*		**1100** *2472*	**63** *2.48*	**79** *3.11*	**0.03**	**0.41** *0.19*
G-EX0750	**019** *0.75*		**1120** *2517*	**66** *2.60*	**85** *3.35*	**0.03**	**0.41** *0.19*
G-EX0750	**025** *0.98*		**1145** *2573*	**72** *2.83*	**97** *3.82*	**0.04**	**0.45** *0.20*
G-EX0750	**032** *1.26*		**1160** *2607*	**79** *3.11*	**111** *4.37*	**0.05**	**0.50** *0.23*
G-EX0750	**0.38** *1.50*		**1170** *2630*	**85** *3.35*	**123** *4.84*	**0.05**	**0.53** *0.24*
G-EX0750	**050** *1.97*		**1180** *2652*	**97** *3.82*	**147** *5.79*	**0.07**	**0.61** *0.28*
G-EX0750	**063** *2.48*		**1220** *2742*	**110** *4.33*	**173** *6.81*	**0.09**	**0.69** *0.31*
G-EX0750	**075** *2.95*		**1225** *2753*	**122** *4.80*	**197** *7.76*	**0.10**	**0.77** *0.35*
G-EX0750	**080** *3.15*		**1210** *2720*	**127** *5.00*	**207** *8.15*	**0.11**	**0.80** *0.36*
G-EX0750	**100** *3.94*		**1215** *2731*	**147** *5.79*	**247** *9.72*	**0.13**	**0.93** *0.42*
G-EX0750	**125** *4.92*		**1220** *2742*	**172** *6.77*	**297** *11.69*	**0.17**	**1.09** *0.50*

C	D	E	F	ØG
2 *0.08*	**16.5** *0.65*	**8** *0.31*	**4** *0.16*	**20** *0.79*

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT G-EX0750

PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

Square Front Flange
45 SFF

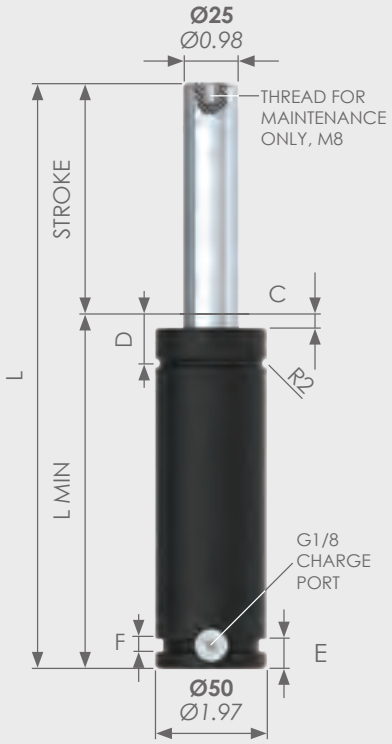
Front Flange
45 FF

Square Flange
45 SF

Base Plate
45 BP

End Support
45 ES

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: G-EX0750 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG0750	012 0.47	750 1686	1140 2562	107.7 4.24	120.4 4.74	0.03	1.33 0.60
ISNG0750	025 0.98		1160 2607	120 4.72	145 5.71	0.04	1.44 0.65
ISNG0750	038 1.50		1170 2630	133.1 5.24	171.2 6.74	0.06	1.57 0.71
ISNG0750	050 1.97		1185 2663	145 5.71	195 7.68	0.07	1.68 0.76
ISNG0750	063 2.48		1190 2675	158.5 6.24	222 8.74	0.09	1.78 0.81
ISNG0750	080 3.15		1200 2697	175 6.89	255 10.04	0.11	1.94 0.88
ISNG0750	100 3.94		1200 2697	195 7.68	295 11.61	0.14	2.13 0.97
ISNG0750	125 4.92		1200 2697	220 8.66	345 13.58	0.17	2.37 1.08
ISNG0750	160 6.30		1200 2697	255 10.04	415 16.34	0.21	2.70 1.23
ISNG0750	200 7.87		1210 2720	295 11.61	495 19.49	0.26	3.10 1.41
ISNG0750	250 9.84		1210 2720	345 13.58	595 23.43	0.33	3.60 1.64
ISNG0750	300 11.81		1210 2720	395 15.55	685 26.97	0.39	4.10 1.86

C	D	E	F	ØG
3 0.12	17.5 0.69	13.5 0.53	5.5 0.22	20 0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

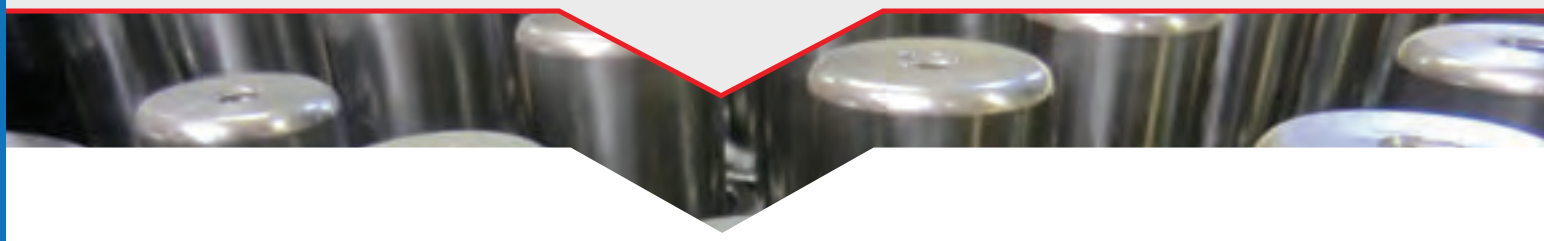
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT ISNG0750

ISO 11901

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

Square Front Flange
50 SFF

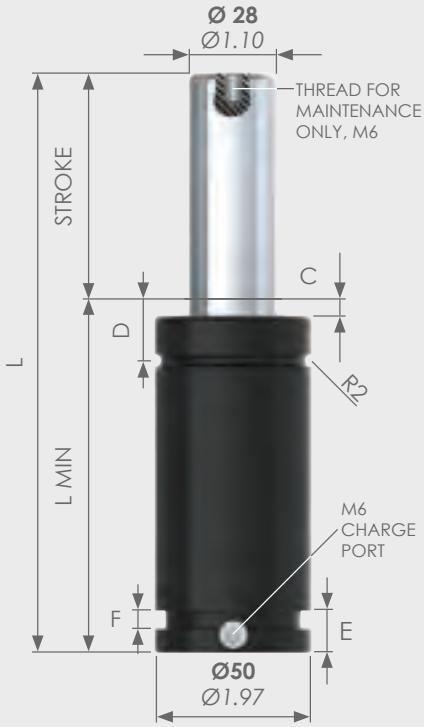
Front Flange
50 FF

Square Flange
50 SF

Base Plate
50 BP

End Support
50 ES / 50 HM

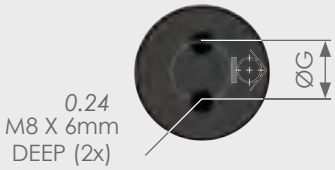
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG0750 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX1000	013 0.51	1000 2248	1564 3515	51 2.01	64 2.52	0.03	0.50 0.23
EX1000	016 0.63		1580 3551	54 2.13	70 2.76	0.04	0.52 0.24
EX1000	019 0.75		1610 3619	57 2.24	76 2.99	0.04	0.54 0.25
EX1000	025 0.98		1630 3664	63 2.48	88 3.46	0.05	0.59 0.27
EX1000	032 1.26		1650 3709	70 2.76	102 4.02	0.06	0.64 0.29
EX1000	038 1.50		1660 3731	76 2.99	114 4.49	0.07	0.70 0.32
EX1000	050 1.97		1680 3776	88 3.46	138 5.43	0.09	0.79 0.36
EX1000	063 2.48		1730 3889	101 3.98	164 6.46	0.11	0.89 0.40
EX1000	075 2.95		1730 3889	113 4.45	188 7.40	0.13	0.99 0.45
EX1000	080 3.15		1700 3821	118 4.65	198 7.80	0.14	1.03 0.47
EX1000	100 3.94		1710 3844	138 5.43	238 9.37	0.17	1.19 0.54
EX1000	125 4.92		1715 3855	163 6.42	288 11.34	0.21	1.39 0.63

C	D	E	F	ØG
3 0.12	17.5 0.69	13.5 0.53	5.5 0.22	20 0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX1000

ISO

PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

Square Front Flange
50 SFF

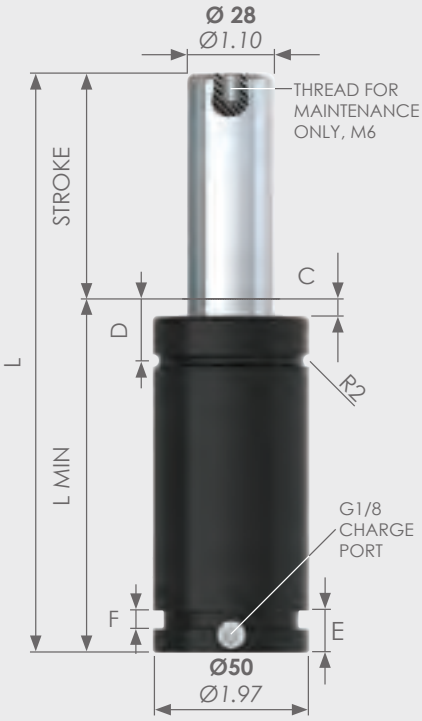
Front Flange
50 FF

Square Flange
50 SF

Base Plate
50 BP

End Support
50 ES / 50 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX1000 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
G-EX1000	013 0.51	1000 2248	1564 3515	65 2.56	78 3.07	0.03	0.50 0.23
G-EX1000	016 0.63		1580 3551	68 2.68	84 3.31	0.04	0.52 0.24
G-EX1000	019 0.75		1610 3619	71 2.80	90 3.54	0.04	0.54 0.25
G-EX1000	025 0.98		1630 3664	77 3.03	102 4.02	0.05	0.59 0.27
G-EX1000	032 1.26		1650 3709	84 3.31	116 4.57	0.06	0.64 0.29
G-EX1000	038 1.50		1660 3731	90 3.54	128 5.04	0.07	0.70 0.32
G-EX1000	050 1.97		1680 3776	102 4.02	152 5.98	0.09	0.79 0.36
G-EX1000	063 2.48		1730 3889	115 4.53	178 7.01	0.11	0.89 0.40
G-EX1000	075 2.95		1730 3889	127 5.00	202 7.95	0.13	0.99 0.45
G-EX1000	080 3.15		1700 3821	132 5.20	212 8.35	0.14	1.03 0.47
G-EX1000	100 3.94		1710 3844	152 5.98	252 9.92	0.17	1.19 0.54
G-EX1000	125 4.92		1715 3855	177 6.97	302 11.89	0.21	1.39 0.63

C	D	E	F	ØG
3 0.12	17.5 0.69	13.5 0.53	5.5 0.22	20 0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

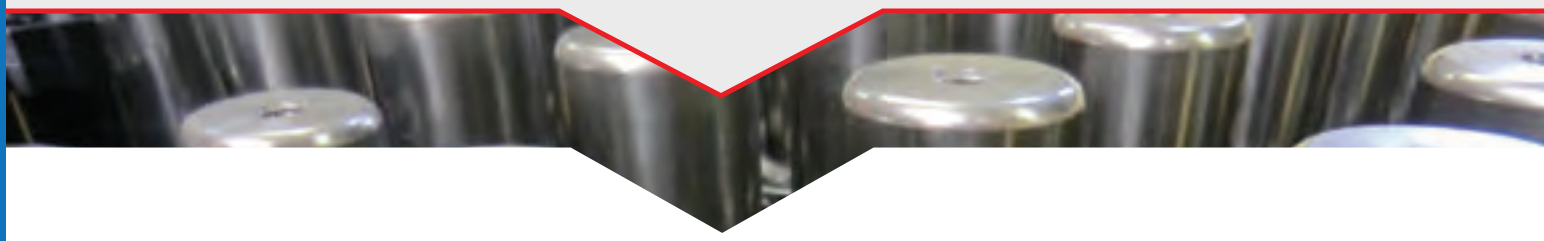
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT G-EX1000

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

Square Front Flange
50 SFF

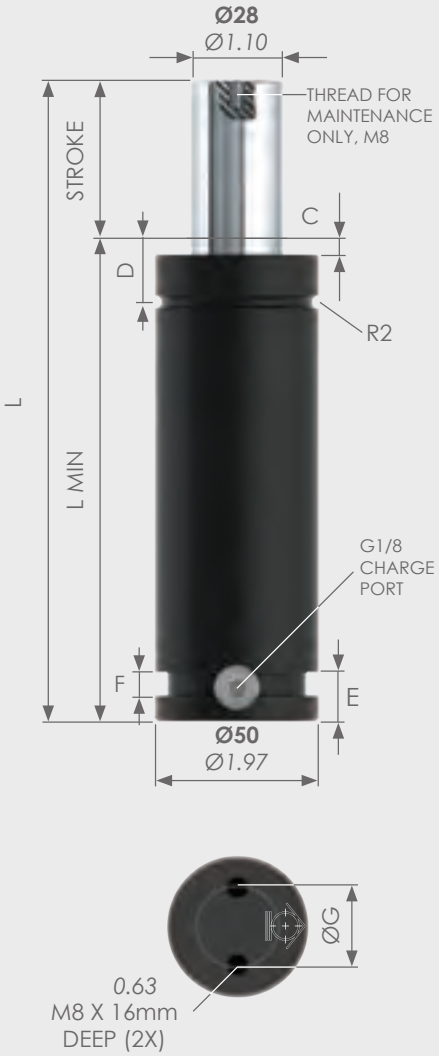
Front Flange
50 FF

Square Flange
50 SF

Base Plate
50 BP

End Support
50 ES / 50 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: G-EX1000 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
MX1000	013 0.51	920 2068	1120 2518	108 4.25	121 4.76	0.06	1.17 0.53
MX1000	025 0.98		1210 2720	120 4.72	145 5.71	0.07	1.27 0.58
MX1000	038 1.50		1280 2877	133 5.24	171 6.73	0.09	1.32 0.60
MX1000	050 1.97		1320 2967	145 5.71	195 7.68	0.11	1.37 0.62
MX1000	063 2.48		1350 3035	158 6.22	221 8.70	0.13	1.58 0.72
MX1000	075 2.95		1370 3080	170 6.69	245 9.65	0.15	1.71 0.78
MX1000	080 3.15		1380 3102	175 6.89	255 10.04	0.16	1.73 0.79
MX1000	100 3.94		1410 3170	195 7.68	295 11.61	0.19	1.90 0.86
MX1000	125 4.92		1430 3215	220 8.66	345 13.58	0.23	2.11 0.96
MX1000	150 5.91		1450 3260	245 9.65	395 15.55	0.27	2.32 1.05
MX1000	160 6.30		1450 3260	255 10.04	415 16.34	0.28	2.40 1.09
MX1000	175 6.89		1460 3282	270 10.63	445 17.52	0.30	2.53 1.15
MX1000	200 7.87		1470 3305	295 11.61	495 19.49	0.34	2.74 1.25
MX1000	250 9.84		1480 3327	345 13.58	595 23.43	0.42	2.96 1.35
MX1000	300 11.81		1490 3350	395 15.55	695 27.36	0.49	3.58 1.63

C	D	E	F	ØG
3 0.12	17.5 0.69	15 0.59	7 0.28	20 0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT MX1000

ISO

PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

Square Front Flange
50 SFF

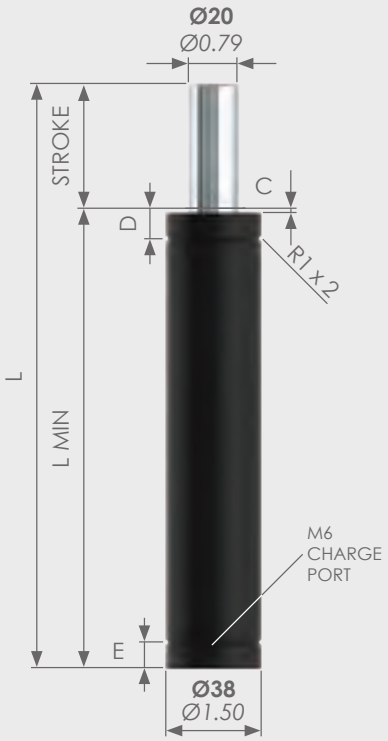
Front Flange
50 FF

Square Flange
50 SF

Base Plate
50 BP

End Support
50 ES / 50 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: MX1000 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG010	006 0.24	1060 2382	1600 3597	55 2.17	61 2.40	0.014	0.3 0.14
HDG010	010 0.39		1600 3597	68 2.68	78 3.07	0.024	0.4 0.18
HDG010	016 0.63		1600 3597	84 3.31	100 3.94	0.036	0.5 0.23
HDG010	025 0.98		1600 3597	110 4.33	135 5.31	0.056	0.6 0.27
HDG010	032 1.26		1600 3597	135 5.31	167 6.57	0.074	0.7 0.32
HDG010	040 1.57		1600 3597	155 6.10	195 7.68	0.092	0.8 0.36
HDG010	050 1.97		1600 3597	180 7.09	230 9.06	0.110	0.9 0.41

C	D	E	ØF
3 0.12	10.5 0.41	10.5 0.41	17 0.67

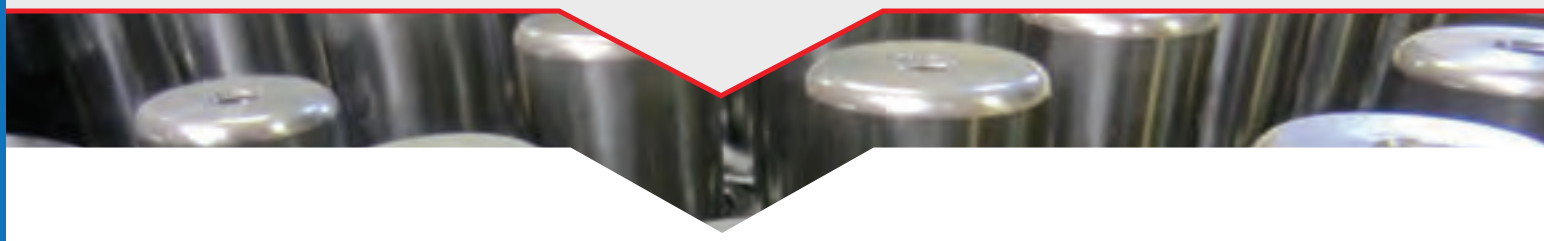
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	0.8M/SEC

SERVICE KIT HDG010

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

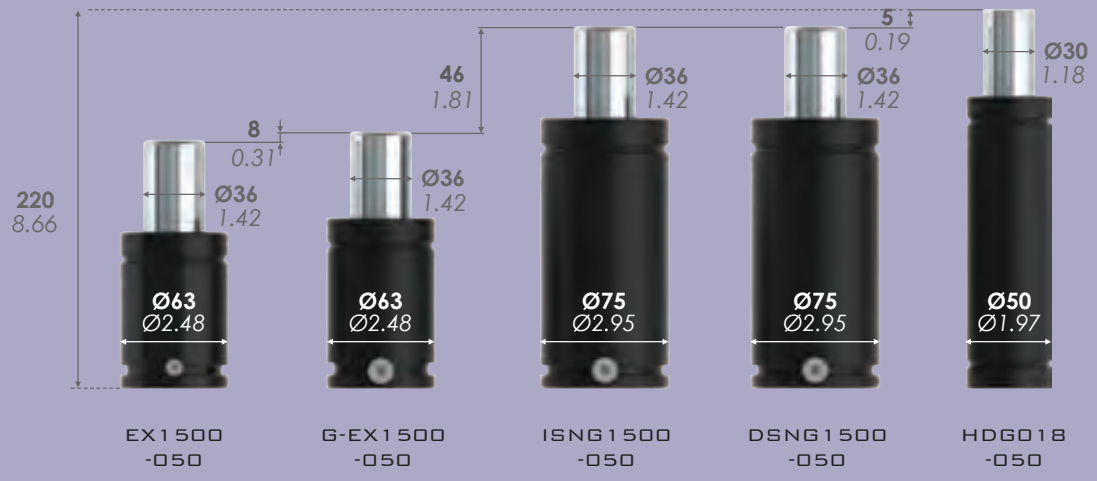
2 x M6 Tapped Holes

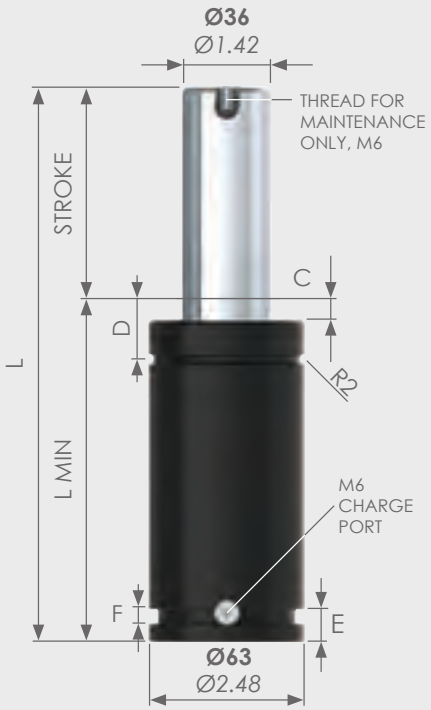
Square Front Flange
38 SFF

Front Flange
38 FF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG010 x 010 + FF

1500 - 1800KG
3372 - 4046 LBS

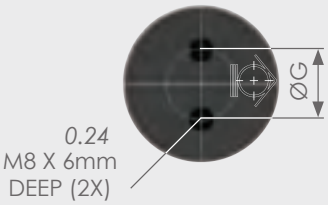




MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX1500	013 0.51	1500 3372	2300 5170	57 2.24	70 2.76	0.05	0.59 0.27
EX1500	016 0.63		2330 5238	60 2.36	76 2.99	0.06	0.93 0.42
EX1500	019 0.75		2380 5350	63 2.48	82 3.23	0.07	0.96 0.44
EX1500	025 0.98		2430 5463	69 2.72	94 3.70	0.08	1.03 0.47
EX1500	032 1.26		2460 5530	76 2.99	108 4.25	0.11	1.08 0.49
EX1500	038 1.50		2480 5575	82 3.23	120 4.72	0.12	1.15 0.52
EX1500	050 1.97		2510 5642	94 3.70	144 5.67	0.15	1.28 0.58
EX1500	063 2.48		2580 5800	107 4.21	170 6.69	0.19	1.43 0.65
EX1500	075 2.95		2590 5822	119 4.69	194 7.64	0.22	1.57 0.71
EX1500	080 3.15		2550 5732	124 4.88	204 8.03	0.24	1.63 0.74
EX1500	100 3.94		2560 5755	144 5.67	244 9.61	0.29	1.86 0.85
EX1500	125 4.92		2580 5800	169 6.65	294 11.57	0.36	2.15 0.98

C	D	E	F	ØG
3	19	13.5	5.5	20
0.12	0.75	0.53	0.22	0.79

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

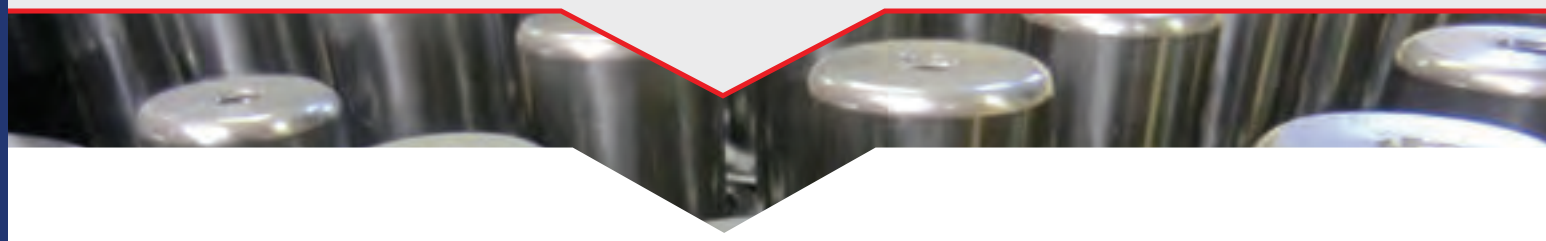
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX1500

ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

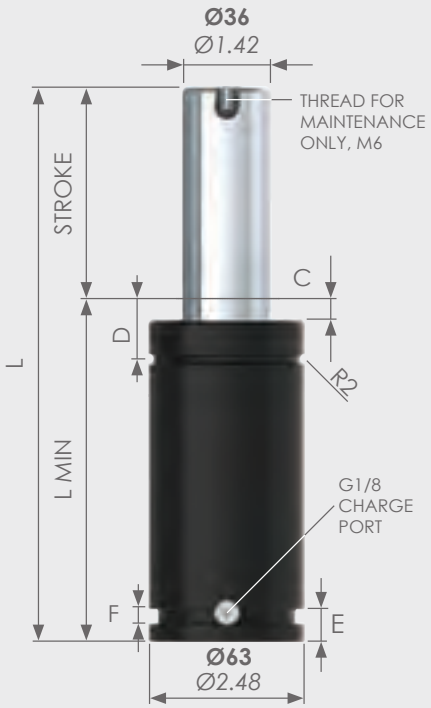
Square Front Flange
63 SFF - 63 SFFA

Front Flange
63 FF

Square Flange
63 SF

Base Plate
63 BP

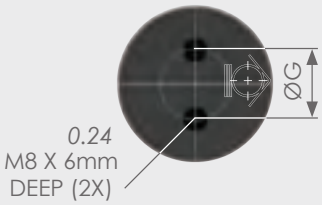
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX1500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
G-EX1500	**013** *0.51*	**1500** *3372*	**2300** *5170*	**65** *2.56*	**78** *3.07*	**0.05**	**0.89** *0.40*
G-EX1500	**016** *0.63*		**2330** *5238*	**68** *2.68*	**84** *3.31*	**0.06**	**0.93** *0.42*
G-EX1500	**019** *0.75*		**2380** *5350*	**71** *2.80*	**90** *3.54*	**0.07**	**0.96** *0.44*
G-EX1500	**025** *0.98*		**2430** *5463*	**77** *3.03*	**102** *4.02*	**0.08**	**1.03** *0.47*
G-EX1500	**032** *1.26*		**2460** *5530*	**84** *3.31*	**116** *4.57*	**0.11**	**1.08** *0.49*
G-EX1500	**038** *1.50*		**2480** *5575*	**90** *3.54*	**128** *5.04*	**0.12**	**1.15** *0.52*
G-EX1500	**050** *1.97*		**2510** *5642*	**102** *4.02*	**152** *5.98*	**0.15**	**1.28** *0.58*
G-EX1500	**063** *2.48*		**2580** *5800*	**115** *4.53*	**178** *7.01*	**0.19**	**1.43** *0.65*
G-EX1500	**075** *2.95*		**2590** *5822*	**127** *5.00*	**202** *7.95*	**0.22**	**1.57** *0.71*
G-EX1500	**080** *3.15*		**2550** *5732*	**132** *5.20*	**212** *8.35*	**0.24**	**1.63** *0.74*
G-EX1500	**100** *3.94*		**2560** *5755*	**152** *5.98*	**252** *9.92*	**0.29**	**1.86** *0.85*
G-EX1500	**125** *4.92*		**2580** *5800*	**177** *6.97*	**302** *11.89*	**0.36**	**2.15** *0.98*

C	D	E	F	ØG
3 *0.12*	**19** *0.75*	**13.5** *0.53*	**5.5** *0.22*	**20** *0.79*

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

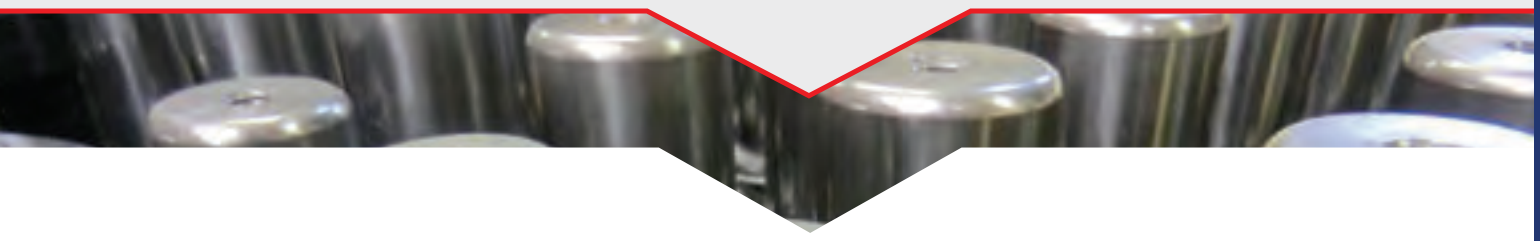
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT G-EX1500

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 X M8 Tapped Holes

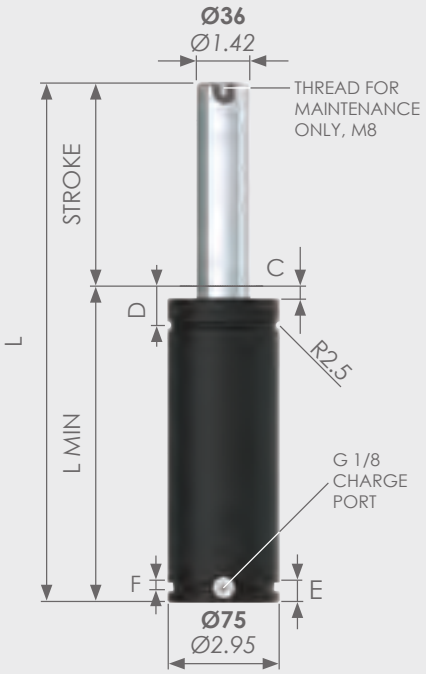
Square Front Flange
63 SFF - 63 SFFA

Front Flange
63 FF

Square Flange
63 SF

Base Plate
63 BP

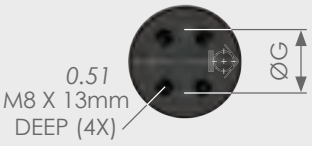
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: G-EX1500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG1500	025 0.98	1500 3372	2040 4586	135 5.31	160 6.30	0.1	3.65 1.66
ISNG1500	038 1.50		2060 4631	148.1 5.83	186.2 7.33	0.15	3.89 1.77
ISNG1500	050 1.97		2090 4698	160 6.30	210 8.27	0.18	4.11 1.87
ISNG1500	063 2.48		2130 4788	173.5 6.83	237 9.33	0.22	4.35 1.98
ISNG1500	080 3.15		2115 4755	190 7.48	270 10.63	0.28	4.66 2.12
ISNG1500	100 3.94		2140 4811	210 8.27	310 12.20	0.34	5.02 2.28
ISNG1500	125 4.92		2160 4856	235 9.25	360 14.17	0.42	5.48 2.49
ISNG1500	160 6.30		2165 4867	270 10.63	430 16.93	0.53	6.12 2.78
ISNG1500	200 7.87		2160 4856	310 12.20	510 20.08	0.68	6.90 3.14
ISNG1500	250 9.84		2180 4901	360 14.17	610 24.02	0.81	7.80 3.55
ISNG1500	300 11.81		2200 4946	410 16.14	710 27.95	0.96	8.90 4.05

C	D	E	F	ØG
3 0.12	21 0.83	13.5 0.53	5.5 0.22	40 1.57

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

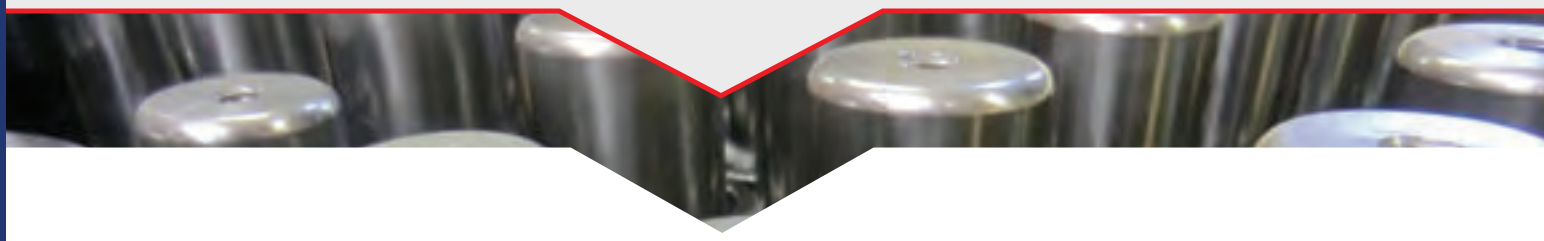
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT ISNG1500

ISO 11901

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
75 SFF

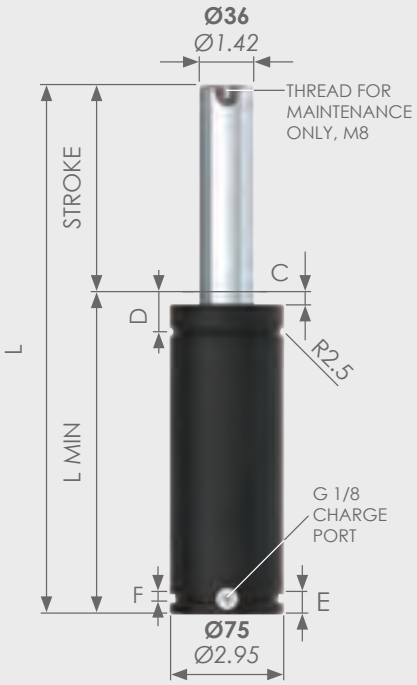
Front Flange
75 FF

Square Flange
75 SF

Base Plate
75 BP

End Support
75 ES / 75 HM

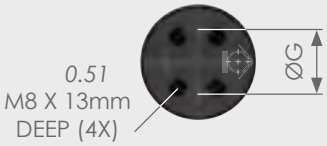
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG1500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
DSNG1500	025 0.98	1500 3372	2040 4586	135 5.31	160 6.30	0.10	3.65 1.66
DSNG1500	038 1.50		2060 4631	148.1 5.83	186.2 7.33	0.15	3.89 1.77
DSNG1500	050 1.97		2090 4698	160 6.30	210 8.27	0.18	4.11 1.87
DSNG1500	063 2.48		2130 4788	173.5 6.83	237 9.33	0.22	4.35 1.98
DSNG1500	080 3.15		2115 4755	190 7.48	270 10.63	0.28	4.66 2.12
DSNG1500	100 3.94		2140 4811	210 8.27	310 12.20	0.34	5.02 2.28
DSNG1500	125 4.92		2160 4856	235 9.25	360 14.17	0.42	5.48 2.49
DSNG1500	160 6.30		2165 4867	270 10.63	430 16.93	0.53	6.12 2.78
DSNG1500	200 7.87		2160 4856	310 12.20	510 20.08	0.68	6.90 3.14
DSNG1500	250 9.84		2180 4901	360 14.17	610 24.02	0.81	7.80 3.55
DSNG1500	300 11.81		2200 4946	410 16.14	710 27.95	0.96	8.90 4.05

C	D	E	F	ØG
3 0.12	21 0.83	13.5 0.53	5.5 0.22	40 1.57

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

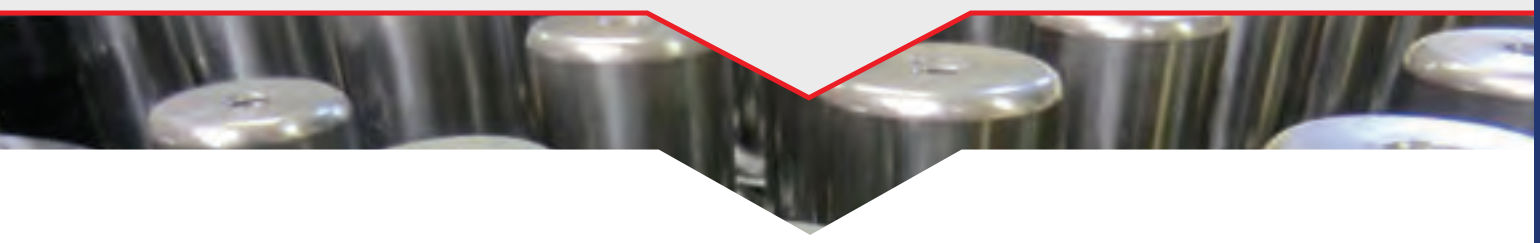


USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT DSNG1500

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77


4 X M10 Tapped Holes

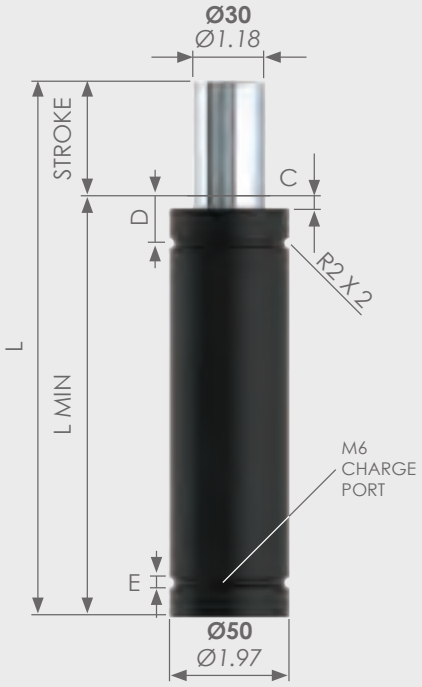

Square Front Flange
75 SFF


Front Flange
75 FF


Square Flange
75 SF


Base Plate
75 BP

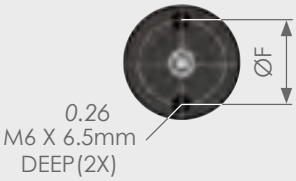
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: DSNG1500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG018	006 0.24	1800 4046	2500 5620	60 2.36	66 2.60	0.030	0.6 0.27
HDG018	010 0.39		2500 5620	70 2.76	80 3.15	0.044	0.7 0.32
HDG018	016 0.63		2500 5620	90 3.54	106 4.17	0.072	0.8 0.36
HDG018	025 0.98		2500 5620	110 4.33	135 5.31	0.100	1 0.45
HDG018	032 1.26		2500 5620	130 5.12	162 6.38	0.126	1.1 0.50
HDG018	040 1.57		2500 5620	150 5.91	190 7.48	0.150	1.2 0.55
HDG018	050 1.97		2500 5620	170 6.69	220 8.66	0.179	1.3 0.59

C	D	E	ØF
3 0.12	14.5 0.57	14.5 0.57	26 1.02

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

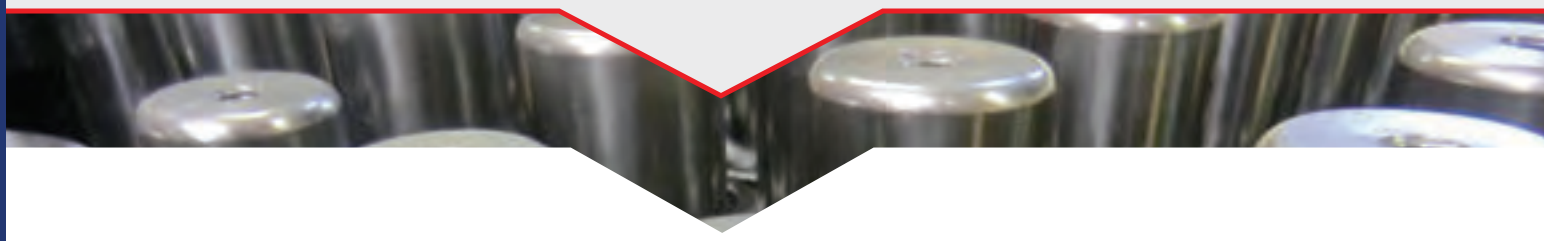


USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	0.8M/SEC

SERVICE KIT HDG018

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

2 x M6 Tapped Holes

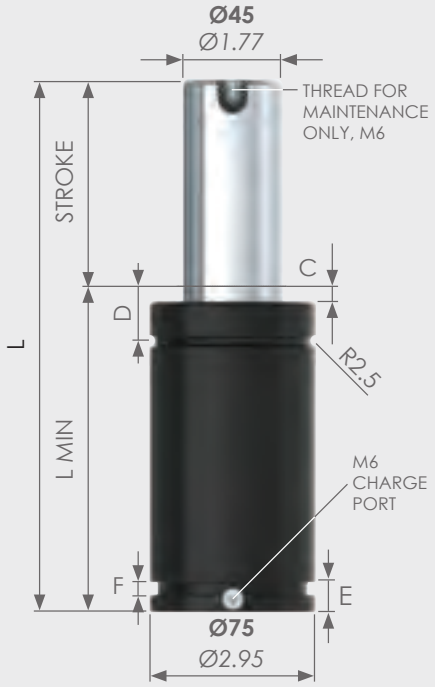
Square Front Flange
50 SFF

Front Flange
50 FF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG018 x 010 + FF

2400 - 2900KG
5395 - 6519 LBS

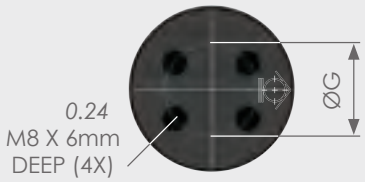
EX2400 -050 | G-EX2400 -050 | HDG029 -050 | MX2400 -050



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX2400	016 0.63	2400 5395	3370 7576	61 2.40	77 3.03	0.09	1.34 0.61
EX2400	019 0.75		3460 7778	64 2.52	83 3.27	0.10	1.38 0.63
EX2400	025 0.98		3570 8025	70 2.76	95 3.74	0.13	1.45 0.66
EX2400	032 1.26		3640 8183	77 3.03	109 4.29	0.16	1.56 0.71
EX2400	038 1.50		3700 8318	83 3.27	121 4.76	0.18	1.65 0.75
EX2400	050 1.97		3780 8497	95 3.74	145 5.71	0.23	1.84 0.84
EX2400	063 2.48		3900 8767	108 4.25	171 6.73	0.28	2.2 1.00
EX2400	075 2.95		3930 8835	120 4.72	195 7.68	0.33	2.26 1.03
EX2400	080 3.15		3880 8722	125 4.92	205 8.07	0.35	2.32 1.05
EX2400	100 3.94		3920 8812	145 5.71	245 9.65	0.43	2.66 1.21
EX2400	125 4.92		3960 8902	170 6.69	295 11.61	0.54	3.05 1.39

C	D	E	F	ØG
3 0.12	21 0.83	13.5 0.53	5.5 0.22	40 1.57

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

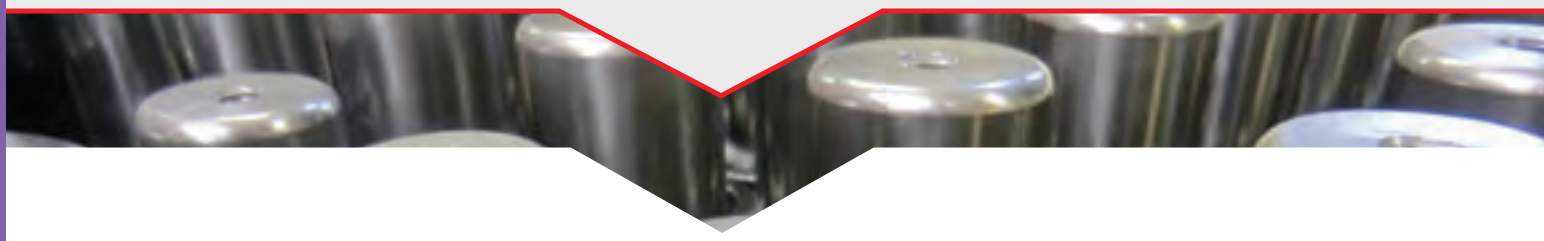
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX2400

ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
75 SFF

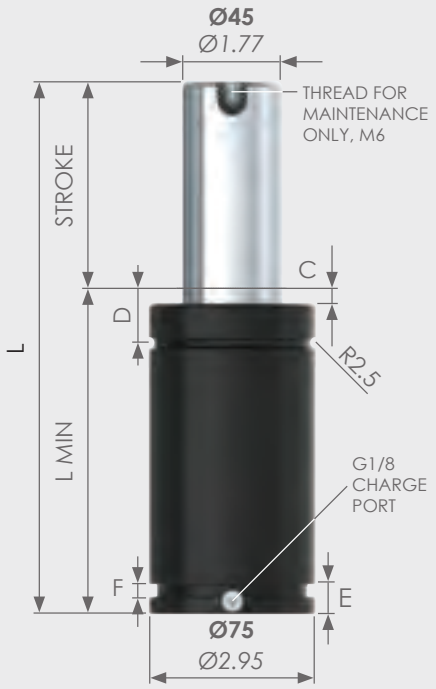
Front Flange
75 FF

Square Flange
75 SF

Base Plate
75 BP

End Support
75 ES / 75 HM

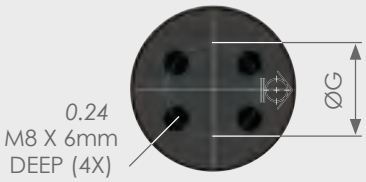
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX2400 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
G-EX2400	016 0.63	2400 5395	3370 7576	75 2.95	91 3.58	0.09	1.34 0.61
G-EX2400	019 0.75		3460 7778	78 3.07	97 3.82	0.10	1.38 0.63
G-EX2400	025 0.98		3570 8025	84 3.31	109 4.29	0.13	1.45 0.66
G-EX2400	032 1.26		3640 8183	91 3.58	123 4.84	0.16	1.56 0.71
G-EX2400	038 1.50		3700 8318	97 3.82	135 5.31	0.18	1.65 0.75
G-EX2400	050 1.97		3780 8497	109 4.29	159 6.26	0.23	1.84 0.84
G-EX2400	063 2.48		3900 8767	122 4.80	185 7.28	0.28	2.20 1.00
G-EX2400	075 2.95		3930 8835	134 5.28	209 8.23	0.33	2.26 1.03
G-EX2400	080 3.15		3880 8722	139 5.47	219 8.62	0.35	2.32 1.05
G-EX2400	100 3.94		3920 8812	159 6.26	259 10.20	0.43	2.66 1.21
G-EX2400	125 4.92		3960 8902	184 7.24	309 12.17	0.54	3.05 1.39

C	D	E	F	ØG
3 0.12	21 0.83	13.5 0.53	5.5 0.22	40 1.57

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

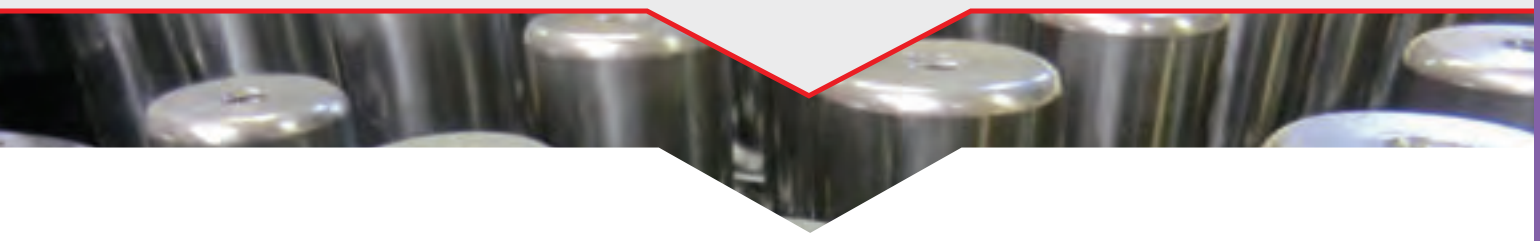


USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT G-EX2400

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
75 SFF

Front Flange
75 FF

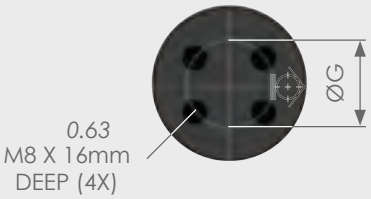
Square Flange
75 SF

Base Plate
75 BP

End Support
75 ES / 75 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: G-EX2400 x 010 + FF

MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
MX2400	025 0.98	2400 5395	3710 8340	135 5.31	160 6.30	0.23	3.10 1.41
MX2400	038 1.50		3760 8452	148 5.83	186 7.32	0.28	3.30 1.50
MX2400	050 1.97		3790 8520	160 6.30	210 8.27	0.33	3.50 1.59
MX2400	063 2.48		3810 8565	173 6.81	236 9.29	0.38	3.70 1.68
MX2400	075 2.95		3830 8610	185 7.28	260 10.24	0.43	3.89 1.77
MX2400	080 3.15		3830 8610	190 7.48	270 10.63	0.45	3.97 1.80
MX2400	100 3.94		3850 8655	210 8.27	310 12.20	0.53	4.29 1.95
MX2400	125 4.92		3870 8700	235 9.25	360 14.17	0.63	4.68 2.13
MX2400	150 5.91		3880 8722	260 10.24	410 16.14	0.73	5.07 2.30
MX2400	160 6.30		3880 8722	270 10.63	430 16.93	0.77	5.23 2.38
MX2400	175 6.89		3890 8745	285 11.22	460 18.11	0.83	5.47 2.49
MX2400	200 7.87		3890 8745	310 12.20	510 20.08	0.93	5.86 2.66
MX2400	250 9.84		3900 8767	360 14.17	610 24.02	1.17	6.65 3.02
MX2400	300 11.81		3910 8790	410 16.14	710 27.95	1.33	7.44 3.38



C	D	E	F	ØG
3	21	15	7	40
0.12	0.83	0.59	0.28	1.57

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

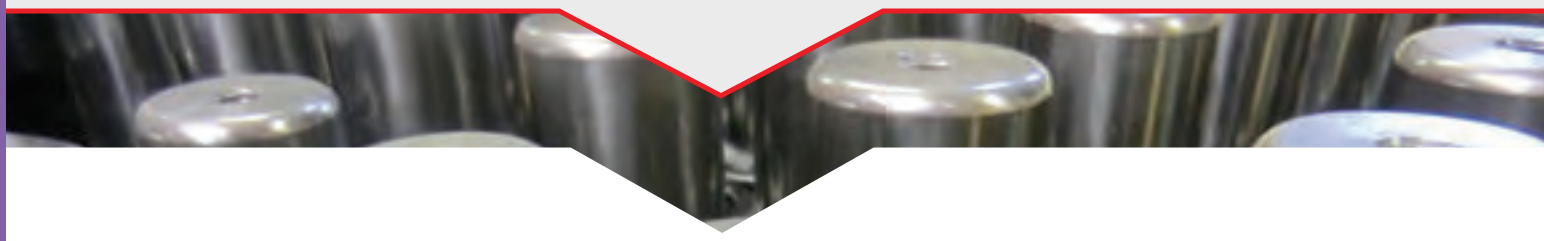
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT MX2400

ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
75 SFF

Front Flange
75 FF

Square Flange
75 SF

Base Plate
75 BP

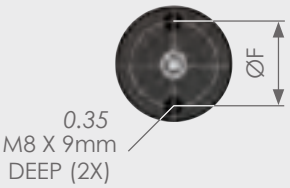
End Support
75 ES / 75 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: MX2400 x 010 + FF

MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG029	010 0.39	2950 6632	3850 8655	75 2.95	85 3.35	0.08	1.1 0.50
HDG029	016 0.63		4100 9217	87 3.43	103 4.06	0.12	1.3 0.59
HDG029	025 0.98		4300 9666	105 4.13	130 5.12	0.16	1.5 0.68
HDG029	032 1.26		4420 9936	118 4.65	150 5.91	0.20	1.6 0.73
HDG029	040 1.57		4520 10161	135 5.31	175 6.89	0.24	1.8 0.82
HDG029	050 1.97		4580 10296	155 6.10	205 8.07	0.29	2.1 0.95

C	D	E	ØF
3 0.12	19 0.75	18 0.71	34 1.34

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

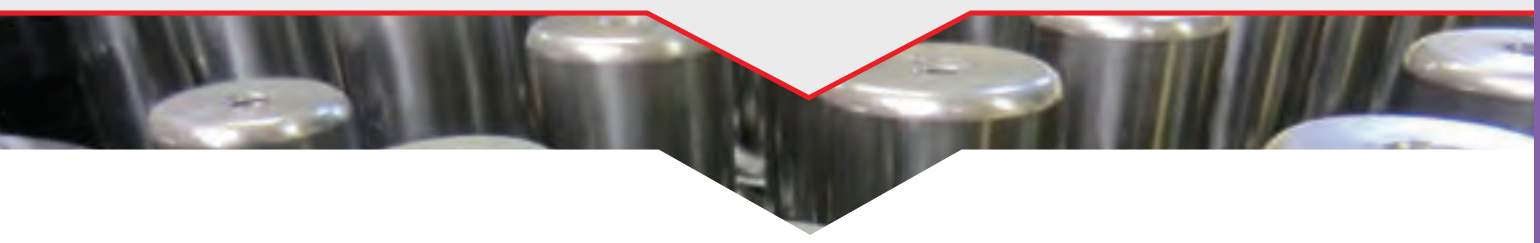


USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	0.8M/SEC

SERVICE KIT HDG029

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

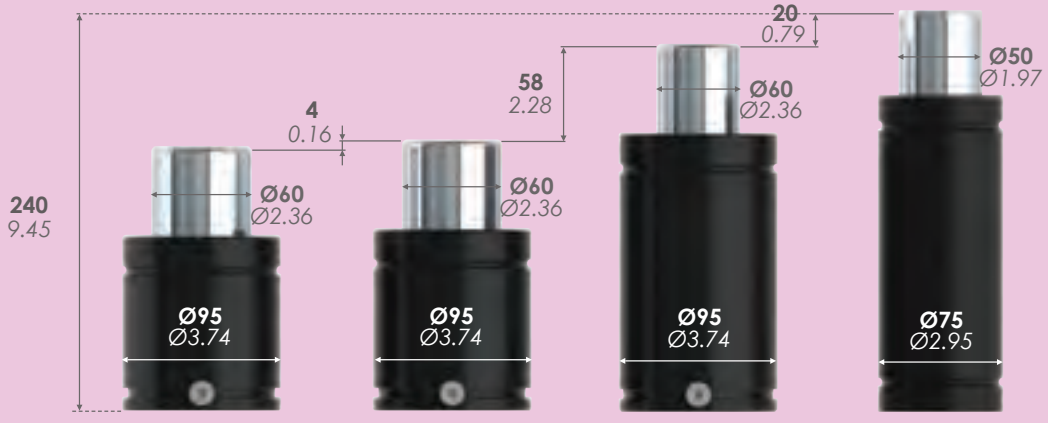
2 X M8 Tapped Holes

Square Front Flange
63 SFF - 63 SFFA

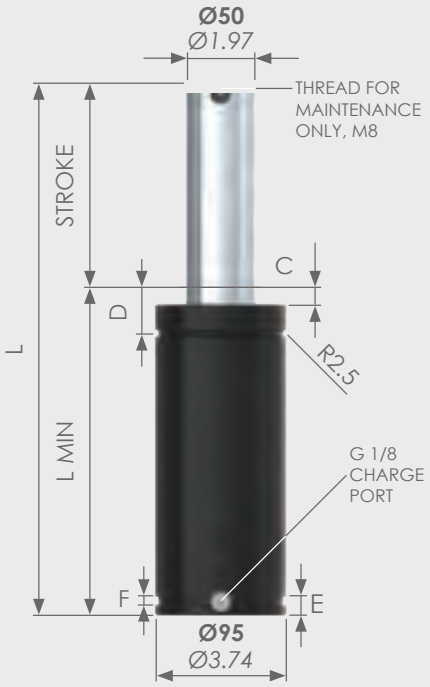
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG029 x 010 + FF

3000 - 4700KG
6744 - 10566 LBS

ISNG3000-050 DSNG3000-050



EX4200-050 G-EX4200-050 MX4200-050 HDG047-050



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG3000	025 0.98	3000 6744	4140 9307	145 5.71	170 6.69	0.20	6.45 2.93
ISNG3000	038 1.50		4210 9464	158.1 6.22	196.2 7.72	0.26	6.87 3.12
ISNG3000	050 1.97		4320 9711	170 6.69	220 8.66	0.32	7.25 3.30
ISNG3000	063 2.48		4480 10071	183.5 7.22	247 9.72	0.38	7.67 3.49
ISNG3000	080 3.15		4500 10116	200 7.87	280 11.02	0.46	8.2 3.73
ISNG3000	100 3.94		4570 10273	220 8.66	320 12.60	0.56	8.83 4.01
ISNG3000	125 4.92		4570 10273	245 9.65	370 14.57	0.69	9.63 4.38
ISNG3000	160 6.30		4580 10296	280 11.02	440 17.32	0.87	10.74 4.88
ISNG3000	200 7.87		4560 10251	320 12.60	520 20.47	1.07	12.20 5.55
ISNG3000	250 9.84		4540 10206	370 14.57	620 24.41	1.32	13.70 6.23
ISNG3000	300 11.81		4590 10318	420 16.54	720 28.35	1.57	15.30 6.95

C	D	E	F	ØG
3	24	13.5	5.5	60
0.12	0.94	0.53	0.22	2.36

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

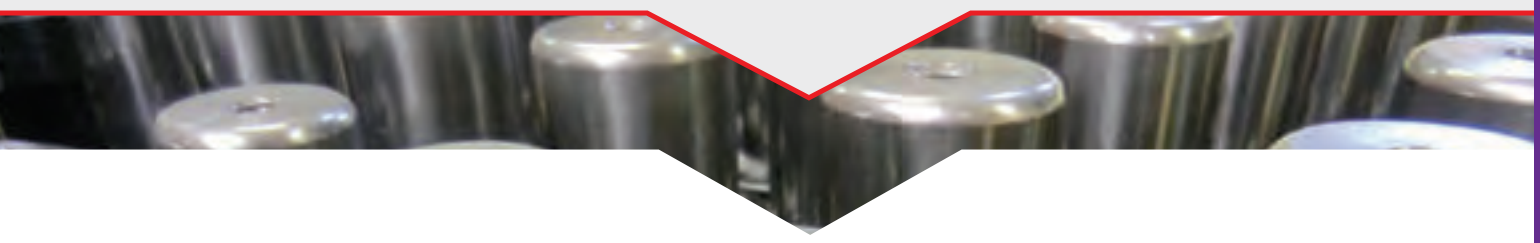
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT ISNG3000

ISO 11901

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
95 SFF

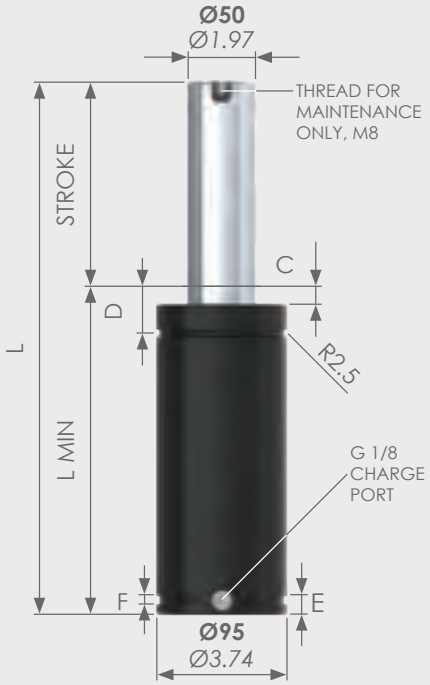
Front Flange
95 FF

Square Flange
95 SF

Base Plate
95 BP

End Support
95 ES / 95 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG3000 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
DSNG3000	25 0.98	3000 6744	4140 9307	145 5.71	170 6.69	0.20	6.45 2.93
DSNG3000	38 1.50		4210 9464	175.1 6.89	196.2 7.72	0.26	6.87 3.12
DSNG3000	50 1.97		4320 9711	170 6.69	220 8.66	0.32	7.25 3.30
DSNG3000	63 2.48		4480 10071	183.5 7.22	247 9.72	0.38	7.67 3.49
DSNG3000	80 3.15		4500 10116	200 7.87	280 11.02	0.46	8.2 3.73
DSNG3000	100 3.94		4570 10273	220 8.66	320 12.60	0.56	8.83 4.01
DSNG3000	125 4.92		4570 10273	245 9.65	370 14.57	0.69	9.63 4.38
DSNG3000	160 6.30		4580 10296	280 11.02	440 17.32	0.87	10.74 4.88
DSNG3000	200 7.87		4560 10251	320 12.60	520 20.47	1.07	12.20 5.55
DSNG3000	250 9.84		4540 10206	370 14.57	620 24.41	1.32	13.70 6.23
DSNG3000	300 11.81		4590 10318	420 16.54	720 28.35	1.57	15.30 6.95

C	D	E	F	ØG
3 0.12	24 0.94	13.5 0.53	5.5 0.22	60 2.36

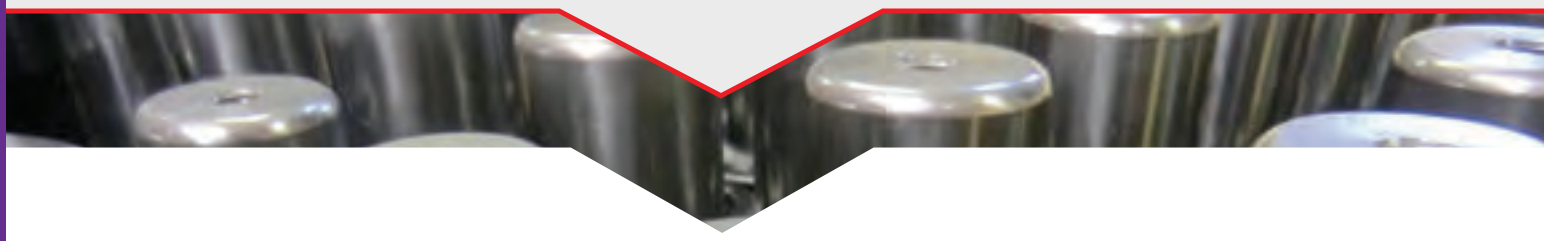
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT DSNG3000

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

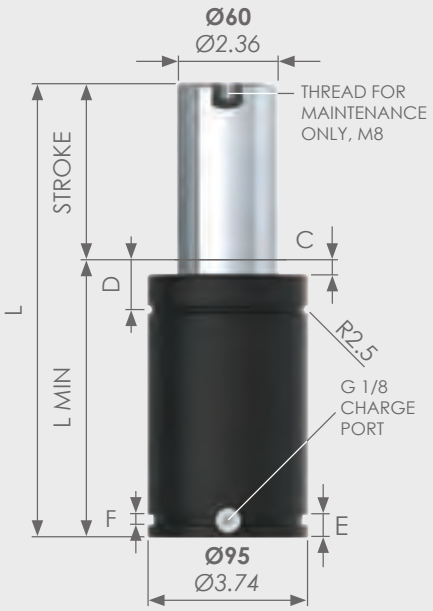
Square Front Flange
95 SFF

Front Flange
95 FF

Square Flange
95 SF

Base Plate
95 BP

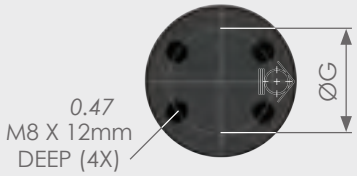
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: DSNG3000 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX4200	**016** *0.63*	**4200** *9442*	**6620** *14882*	**74** *2.91*	**90** *3.54*	**0.15**	**2.81** *1.28*
EX4200	**019** *0.75*		**6620** *14882*	**77** *3.03*	**96** *3.78*	**0.18**	**2.88** *1.31*
EX4200	**025** *0.98*		**6620** *14882*	**83** *3.27*	**108** *4.25*	**0.26**	**2.96** *1.35*
EX4200	**032** *1.26*		**6620** *14882*	**90** *3.54*	**122** *4.80*	**0.30**	**3.13** *1.42*
EX4200	**038** *1.50*		**6620** *14882*	**96** *3.78*	**134** *5.28*	**0.32**	**3.28** *1.49*
EX4200	**050** *1.97*		**6620** *14882*	**108** *4.25*	**158** *6.22*	**0.40**	**3.57** *1.62*
EX4200	**063** *2.48*		**6620** *14882*	**121** *4.76*	**184** *7.24*	**0.49**	**4.10** *1.86*
EX4200	**075** *2.95*		**6620** *14882*	**133** *5.24*	**208** *8.19*	**0.58**	**4.20** *1.91*
EX4200	**080** *3.15*		**6620** *14882*	**138** *5.43*	**218** *8.58*	**0.61**	**4.32** *1.96*
EX4200	**100** *3.94*		**6620** *14882*	**158** *6.22*	**258** *10.16*	**0.74**	**4.81** *2.19*
EX4200	**125** *4.92*		**6620** *14882*	**183** *7.20*	**308** *12.13*	**0.91**	**5.42** *2.46*

C	D	E	F	ØG
3	**24**	**13.5**	**5.5**	**60**
0.12	*0.94*	*0.53*	*0.22*	*2.36*

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

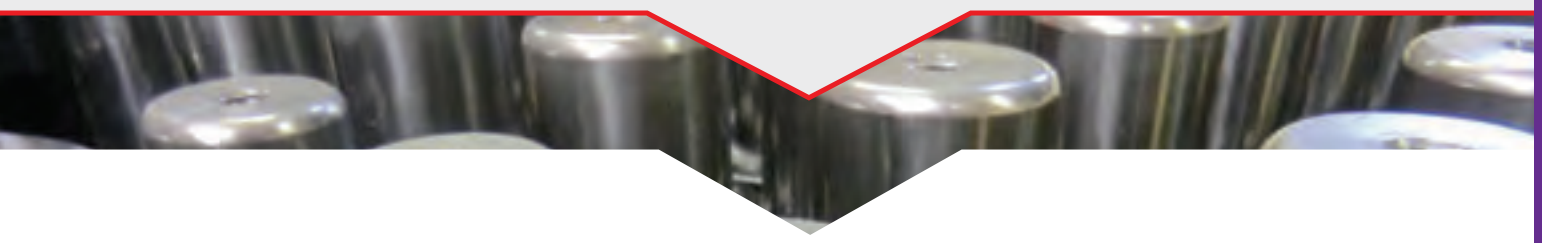
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX4200

ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
95 SFF

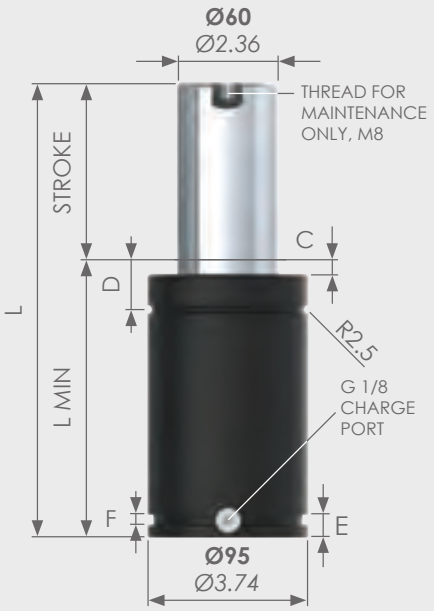
Front Flange
95 FF

Square Flange
95 SF

Base Plate
95 BP

End Support
95 ES / 95 HM

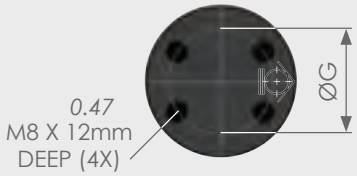
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX4200 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
G-EX4200	**016** *0.63*	**4200** *9442*	**6620** *14882*	**78** *3.07*	**94** *3.70*	**0.15**	**2.81** *1.28*
G-EX4200	**019** *0.75*		**6620** *14882*	**81** *3.19*	**100** *3.94*	**0.18**	**2.88** *1.31*
G-EX4200	**025** *0.98*		**6620** *14882*	**87** *3.43*	**112** *4.41*	**0.26**	**2.96** *1.35*
G-EX4200	**032** *1.26*		**6620** *14882*	**94** *3.70*	**126** *4.96*	**0.30**	**3.13** *1.42*
G-EX4200	**038** *1.50*		**6620** *14882*	**100** *3.94*	**138** *5.43*	**0.32**	**3.28** *1.49*
G-EX4200	**050** *1.97*		**6620** *14882*	**112** *4.41*	**162** *6.38*	**0.40**	**3.57** *1.62*
G-EX4200	**063** *2.48*		**6620** *14882*	**125** *4.92*	**188** *7.40*	**0.49**	**4.10** *1.86*
G-EX4200	**075** *2.95*		**6620** *14882*	**137** *5.39*	**212** *8.35*	**0.58**	**4.20** *1.91*
G-EX4200	**080** *3.15*		**6620** *14882*	**142** *5.59*	**222** *8.74*	**0.61**	**4.32** *1.96*
G-EX4200	**100** *3.94*		**6620** *14882*	**162** *6.38*	**262** *10.31*	**0.74**	**4.81** *2.19*
G-EX4200	**125** *4.92*		**6620** *14882*	**187** *7.36*	**312** *12.28*	**0.91**	**5.42** *2.46*

C	D	E	F	ØG
3 *0.12*	**24** *0.94*	**13.5** *0.53*	**5.5** *0.22*	**60** *2.36*

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

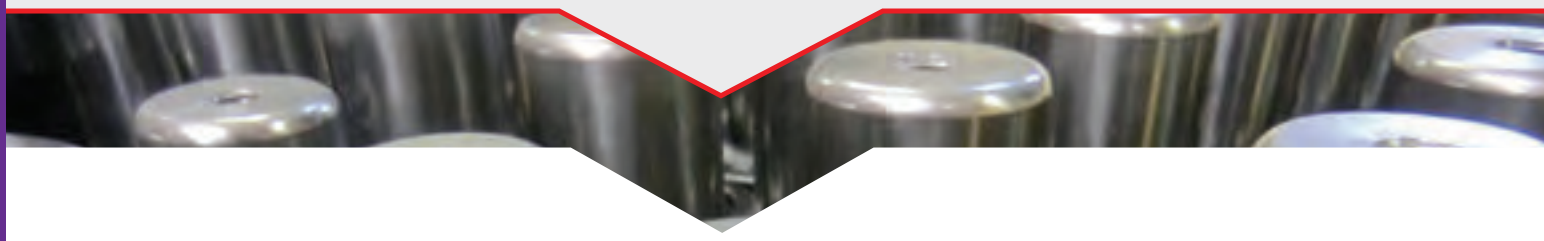


USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT G-EX4200

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77


4 X M8 Tapped Holes


Square Front Flange
95 SFF

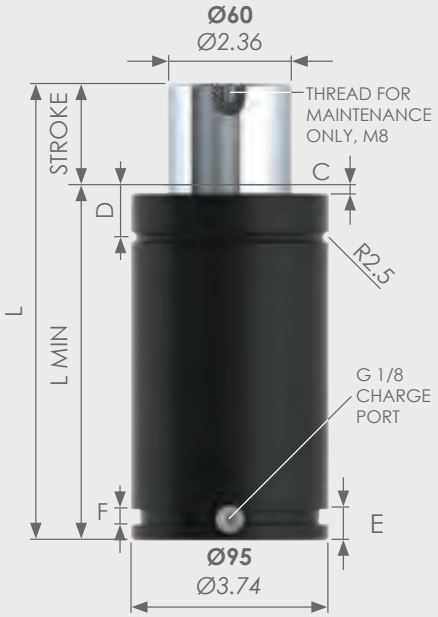

Front Flange
95 FF


Square Flange
95 SF

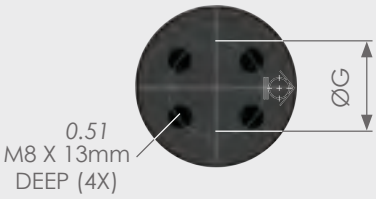

Base Plate
95 BP


End Support
95 ES / 95 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: G-EX4200 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
MX4200	025 0.98	4200 9442	5210 11712	145 5.71	170 6.69	0.43	5.08 2.31
MX4200	038 1.50		5510 12386	158 6.22	196 7.72	0.52	5.41 2.46
MX4200	050 1.97		5720 12859	170 6.69	220 8.66	0.60	5.71 2.60
MX4200	063 2.48		5900 13263	183 7.20	246 9.69	0.68	6.05 2.75
MX4200	075 2.95		6030 13555	195 7.68	270 10.63	0.76	6.35 2.89
MX4200	080 3.15		6080 13668	200 7.87	280 11.02	0.80	6.48 2.95
MX4200	100 3.94		6250 14050	220 8.66	320 12.60	0.93	6.99 3.18
MX4200	125 4.92		6400 14387	245 9.65	370 14.57	1.10	7.63 3.47
MX4200	150 5.91		6510 14634	270 10.63	420 16.54	1.27	8.27 3.76
MX4200	160 6.30		6550 14724	280 11.02	440 17.32	1.33	8.53 3.88
MX4200	175 6.89		6600 14837	295 11.61	470 18.50	1.43	8.91 4.05
MX4200	200 7.87		6680 15017	320 12.60	520 20.47	1.60	9.55 4.34
MX4200	250 9.84		6790 15264	370 14.57	620 24.41	1.93	11.08 5.04
MX4200	300 11.81		6870 15444	420 16.54	720 28.35	2.27	12.11 5.50



C	D	E	F	ØG
3	24	15	7	60
0.12	0.94	0.59	0.28	2.36

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

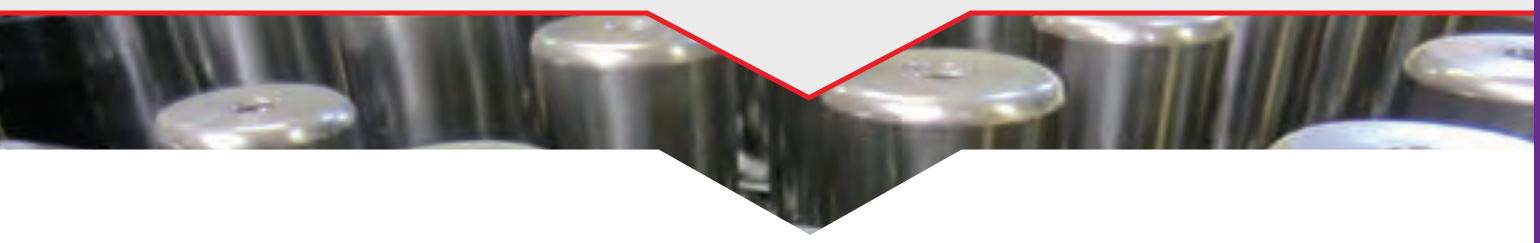
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT MX4200

ISO PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
95 SFF

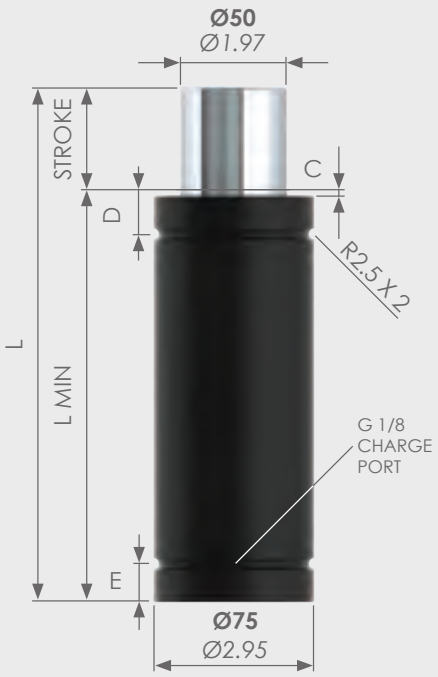
Front Flange
95 FF

Square Flange
95 SF

Base Plate
95 BP

End Support
95 ES / 95 HM

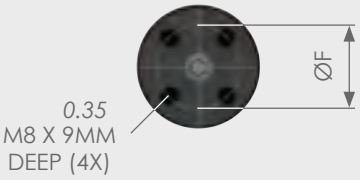
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: MX4200 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG047	010 0.39	4700 10566	6700 15062	70 2.76	80 3.15	0.10	1.4 0.64
HDG047	016 0.63		6700 15062	90 3.54	106 4.17	0.17	1.7 0.77
HDG047	025 0.98		6700 15062	110 4.33	135 5.31	0.24	2.0 0.91
HDG047	032 1.26		6700 15062	135 5.31	167 6.57	0.32	2.4 1.09
HDG047	040 1.57		6700 15062	160 6.30	200 7.87	0.41	2.8 1.27
HDG047	050 1.97		6700 15062	190 7.48	240 9.45	0.52	3.3 1.50

C	D	E	ØF
3	18	18	40
0.12	0.71	0.71	1.57

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

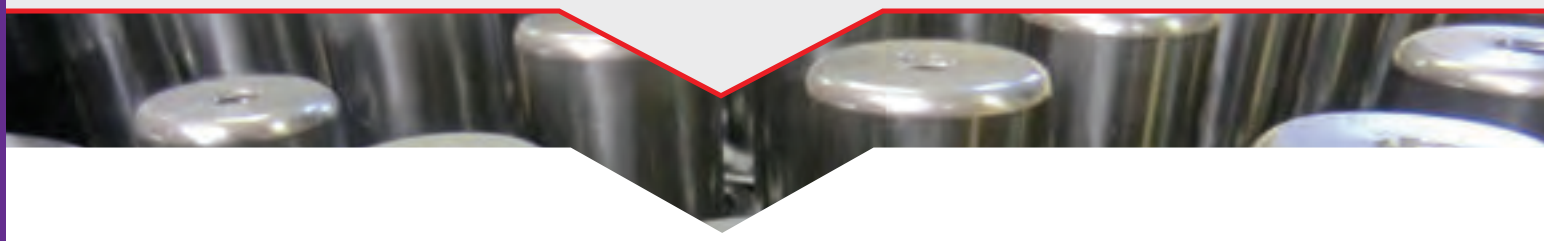
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 0.8M/SEC

SERVICE KIT HDG047

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

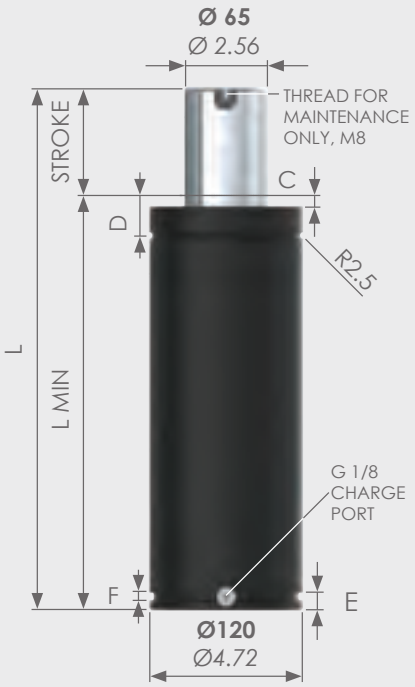
Square Front Flange
75 SFF

Front Flange
75 FF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG047 x 010 + FF

5000 - 6600KG
11240 - 14837 LBS

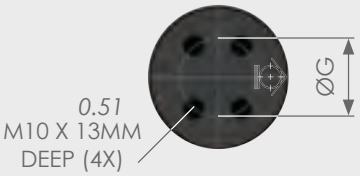
EX6600-050 ISNG5000-050 DSNG5000-050 MX6600-050



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG5000	025 0.98	5000 11240	6900 15511	165 6.50	190 7.48	0.32	12.4 5.64
ISNG5000	038 1.50		7010 15758	178.1 7.01	216.2 8.51	0.42	13.1 5.95
ISNG5000	050 1.97		7210 16208	190 7.48	240 9.45	0.51	13.7 6.23
ISNG5000	063 2.48		7450 16748	203.5 8.01	67 2.64	0.60	14.4 6.55
ISNG5000	080 3.15		7510 16882	220 8.66	300 11.81	0.73	15.3 6.95
ISNG5000	100 3.94		7550 16972	240 9.45	340 13.39	0.89	16.4 7.45
ISNG5000	125 4.92		7560 16995	265 10.43	390 15.35	1.09	17.7 8.05
ISNG5000	160 6.30		7560 16995	300 11.81	460 18.11	1.36	19.60 8.91
ISNG5000	200 7.87		7590 17062	340 13.39	540 21.26	1.68	20.70 9.41
ISNG5000	250 9.84		7560 16995	390 15.35	640 25.20	2.07	22.40 10.18
ISNG5000	300 11.81		7540 16950	440 17.32	740 29.13	2.46	24.66 11.21

C	D	E	F	ØG
3	25.5	13.5	5.5	80
0.12	1.00	0.53	0.22	3.15

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

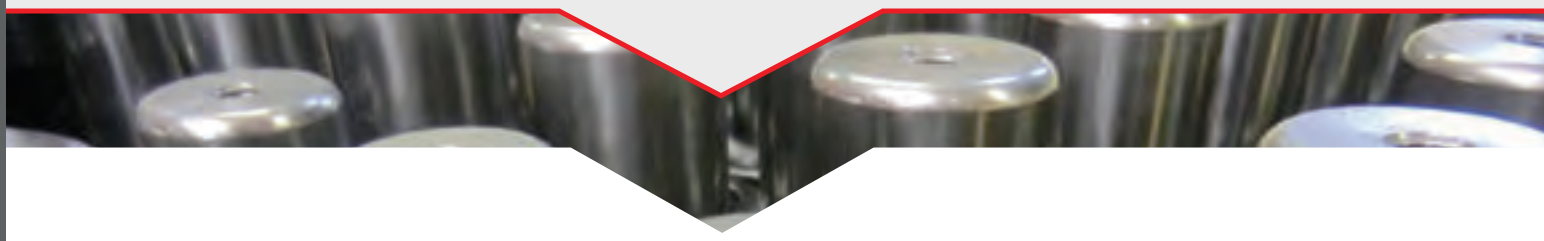
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT ISNG5000

ISO 11901

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M10 Tapped Holes

Square Front Flange
120 SFF

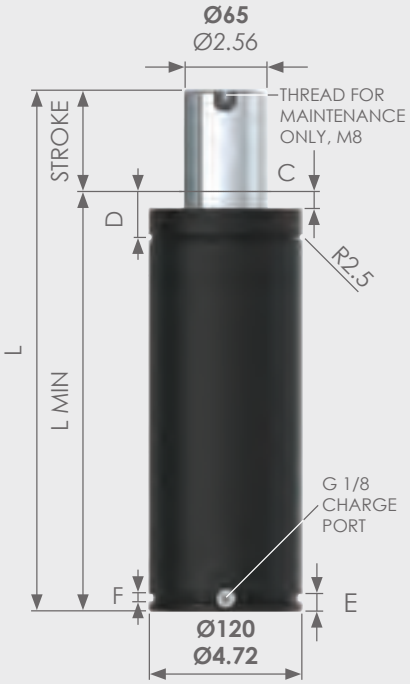
Front Flange
120 FF

Square Flange
120 SF

Base Plate
120 BP

End Support
120 ES / 120 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG5000 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
DSNG5000	25 0.98	5000 11240	6900 15511	165 6.50	190 7.48	0.32	12.40 5.64
DSNG5000	38 1.50		7010 15758	178.1 7.01	216.2 79.38	0.42	13.10 5.95
DSNG5000	50 1.97		7210 16208	190 7.48	240 9.45	0.51	13.70 6.23
DSNG5000	63 2.48		7450 16748	203.5 8.01	267 10.51	0.60	14.40 6.55
DSNG5000	80 3.15		7510 16882	220 8.66	300 11.81	0.73	15.30 6.95
DSNG5000	100 3.94		7550 16972	240 9.45	340 13.39	0.89	16.40 7.45
DSNG5000	125 4.92		7560 16995	265 10.43	390 15.35	1.09	17.70 8.05
DSNG5000	160 6.30		7560 16995	300 11.81	460 18.11	1.36	19.60 8.91
DSNG5000	200 7.87		7590 17062	340 13.39	540 21.26	1.68	20.70 9.41
DSNG5000	250 9.84		7560 16995	390 15.35	640 25.20	2.07	22.40 10.18
DSNG5000	300 11.81		7540 16950	440 17.32	740 29.13	2.46	24.66 11.21

C	D	E	F	ØG
3 0.12	25.5 1.00	13.5 0.53	5.5 0.22	80 3.15

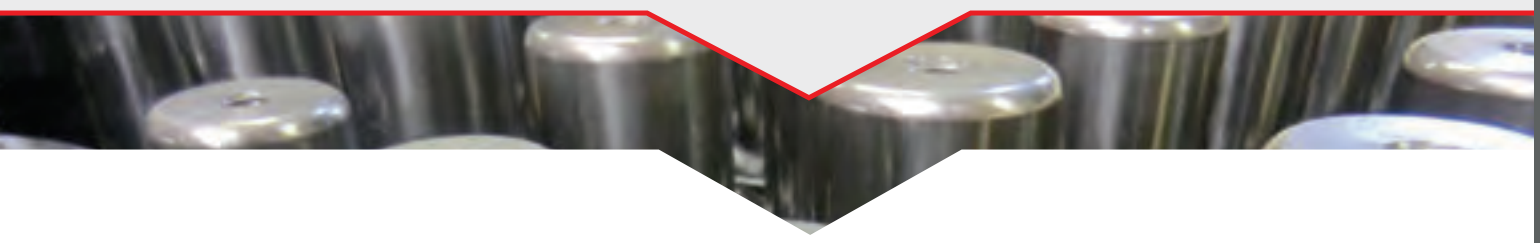
SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	1.6M/SEC

SERVICE KIT DSNG5000

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M10 Tapped Holes

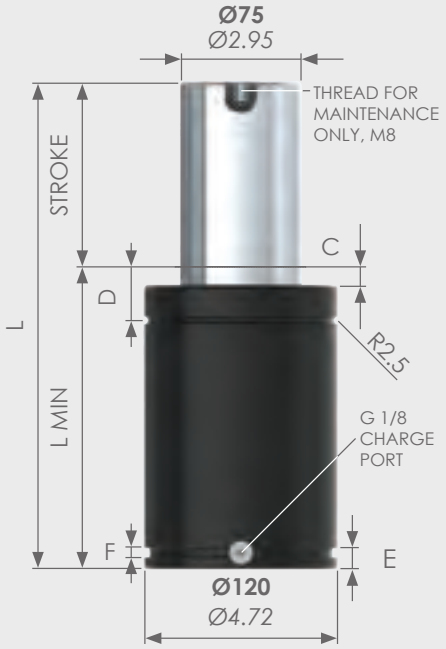
Square Front Flange
120 SFF

Front Flange
120 FF

Square Flange
120 SF

Base Plate
120 BP

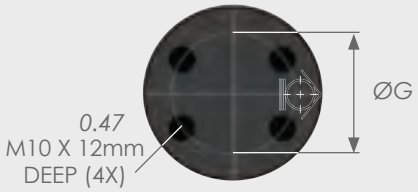
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: DSNG5000 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX6600	016 0.63	6630 14904	7520 16905	84 3.31	100 3.94	0.32	5.00 2.27
EX6600	019 0.75		7700 17310	87 3.43	106 4.17	0.35	5.11 2.32
EX6600	025 0.98		7940 17849	93 3.66	118 4.65	0.42	5.34 2.43
EX6600	032 1.26		8150 18321	100 3.94	132 5.20	0.49	5.61 2.55
EX6600	038 1.50		8340 18748	106 4.17	144 5.67	0.56	5.84 2.65
EX6600	050 1.97		8670 19490	118 4.65	168 6.61	0.69	6.31 2.87
EX6600	063 2.48		9030 20299	131 5.16	194 7.64	0.83	6.81 3.10
EX6600	075 2.95		9250 20794	143 5.63	218 8.58	0.90	7.27 3.30
EX6600	080 3.15		9250 20794	148 5.83	228 8.98	1.01	7.46 3.39
EX6600	100 3.94		9530 21423	168 6.61	268 10.55	1.23	8.23 3.74
EX6600	125 4.92		9800 22030	193 7.60	318 12.52	1.50	9.19 4.18

C	D	E	F	ØG
3 0.12	25.5 1.00	13.5 0.53	5.5 0.22	80 3.15

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

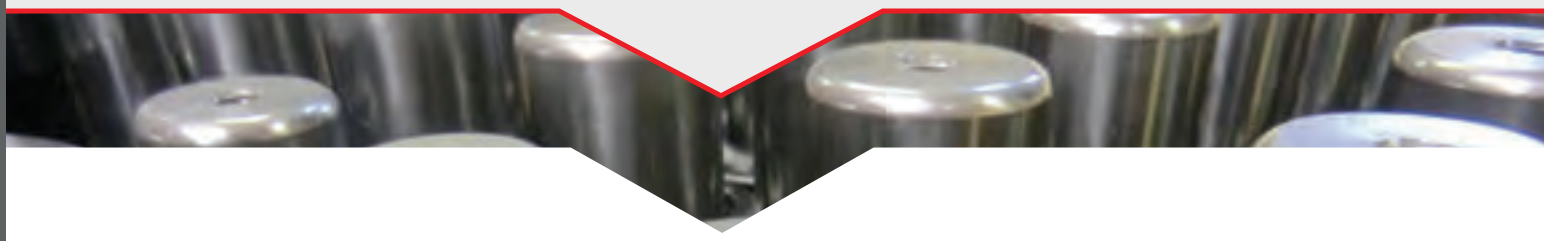
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX6600

ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M10 Tapped Holes

Square Front Flange
120 SFF

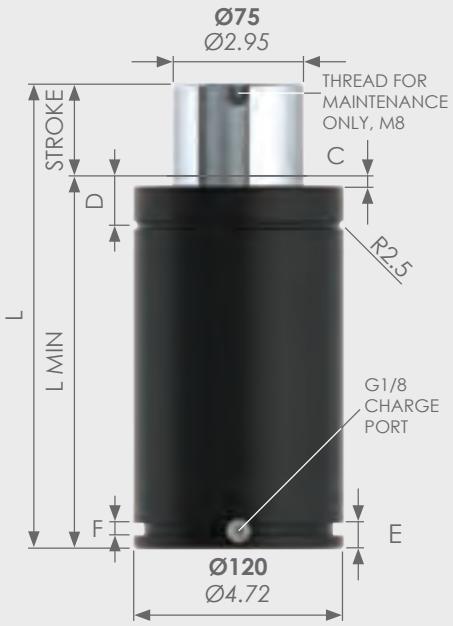
Front Flange
120 FF

Square Flange
120 SF

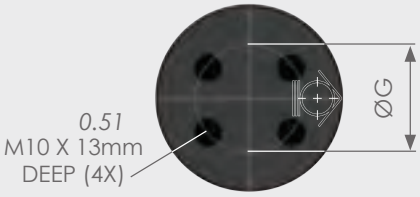
Base Plate
120 BP

End Support
120 ES / 120 HM

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX6600 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
MX6600	025 0.98	6630 14904	7950 17872	165 6.50	190 7.48	0.73	9.28 4.22
MX6600	038 1.50		8390 18861	178 7.01	216 8.50	0.87	9.81 4.46
MX6600	050 1.97		8700 19558	190 7.48	240 9.45	1.00	10.3 4.68
MX6600	063 2.48		8970 20165	203 7.99	266 10.47	1.13	10.83 4.92
MX6600	075 2.95		9180 20637	215 8.46	290 11.42	1.26	11.32 5.15
MX6600	080 3.15		9260 20816	220 8.66	300 11.81	1.31	11.52 5.24
MX6600	100 3.94		9510 21378	240 9.45	340 13.39	1.53	12.33 5.60
MX6600	125 4.92		9760 21940	265 10.43	390 15.35	1.79	13.35 6.07
MX6600	150 5.91		9950 22368	290 11.42	440 17.32	2.05	14.36 6.53
MX6600	160 6.30		10010 22502	300 11.81	460 18.11	2.16	14.77 6.71
MX6600	175 6.89		10100 22705	315 12.40	490 19.29	2.36	15.38 6.99
MX6600	200 7.87		10220 22975	340 13.39	540 21.26	2.58	16.40 7.45
MX6600	250 9.84		10400 23379	390 15.35	640 25.20	3.11	18.43 8.38
MX6600	300 11.81		10530 23671	440 17.32	740 29.13	3.64	20.46 9.30



C	D	E	F	ØG
3 0.12	25.5 1.00	13.5 0.53	5.5 0.22	80 3.15

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*
MIN. PRESSURE: **20 BAR** *290 PSI*
MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT MX6600

ISO

PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77


4 X M10 Tapped Holes


Square Front Flange
120 SFF


Front Flange
120 FF

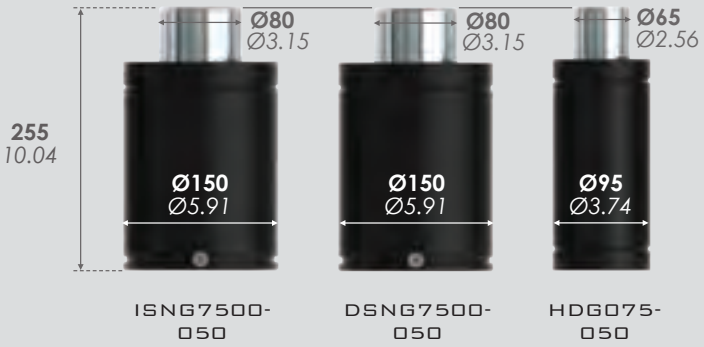

Square Flange
120 SF


Base Plate
120 BP


End Support
120 ES / 120 HM

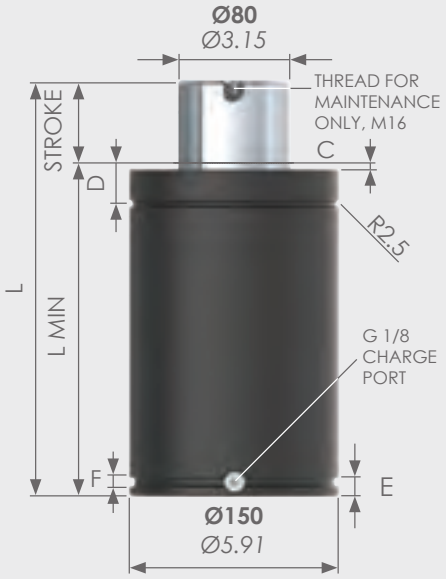
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: MX6600 x 010 + FF

7500 - 11800KG
16860 - 26526 LBS



ISNG7500-050 | DSNG7500-050 | HDG075-050

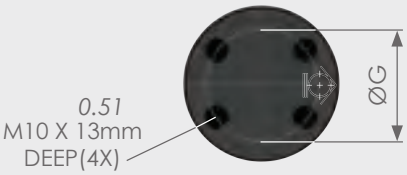
EX9500-050 | MX9500-050 | ISNG10000-050 | HDG118-050



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG7500	025 0.98	7500 16860	10100 22705	180 7.09	205 8.07	0.51	20.3 9.23
ISNG7500	038 1.50		10500 23604	193.1 7.60	231.2 9.10	0.67	21.4 9.73
ISNG7500	050 1.97		10500 23604	205 8.07	255 10.04	0.81	22.4 10.18
ISNG7500	063 2.48		10550 23716	218.5 8.60	282 11.10	0.98	23.5 10.68
ISNG7500	080 3.15		10550 23716	235 9.25	315 12.40	1.18	24.8 11.27
ISNG7500	100 3.94		10550 23716	255 10.04	355 13.98	1.43	26.5 12.05
ISNG7500	125 4.92		10550 23716	280 11.02	405 15.94	1.74	28.5 12.95
ISNG7500	160 6.30		10530 23671	315 12.40	475 18.70	2.17	31.40 14.27
ISNG7500	200 7.87		10520 23649	355 13.98	555 21.85	2.66	34.70 15.77
ISNG7500	250 9.84		10590 23806	405 15.94	655 25.79	3.27	38.80 17.64
ISNG7500	300 11.81		10560 23739	455 17.91	755 29.72	3.88	42.90 19.50

C	D	E	F	ØG
3 0.12	27.5 1.08	13.5 0.53	5.5 0.22	100 3.94

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

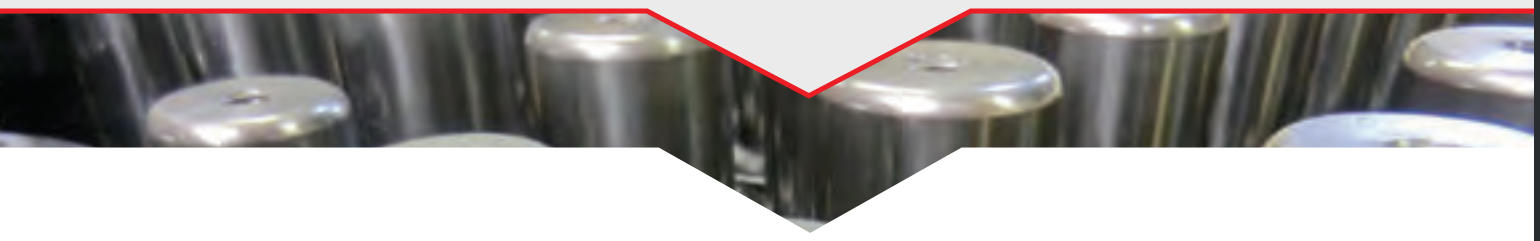
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT ISNG7500

ISO 11901

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M10 Tapped Holes

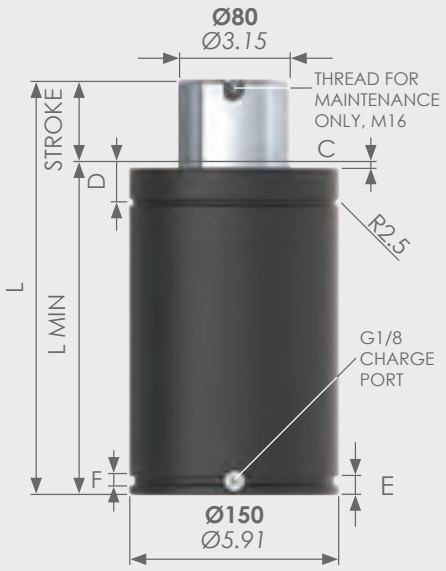
Square Front Flange
150 SFF

Front Flange
150 FF

Square Flange
150 SF

Base Plate
150 BP

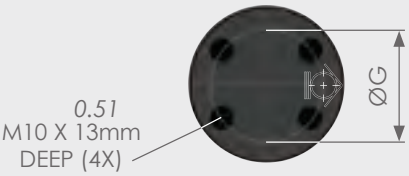
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG7500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
DSNG7500	25 0.98	7500 16860	10100 22705	180 7.09	205 8.07	0.51	20.3 9.23
DSNG7500	38 1.50		10500 23604	193.1 7.60	231.2 9.10	0.67	21.4 9.73
DSNG7500	50 1.97		10500 23604	205 218.50	255 10.04	0.71	22.4 10.18
DSNG7500	63 2.48		10550 23716	218.5 8.60	282 11.10	0.98	23.5 10.68
DSNG7500	80 3.15		10550 23716	235 9.25	315 12.40	1.18	24.8 11.27
DSNG7500	100 3.94		10550 23716	255 10.04	255 10.04	1.43	26.5 12.05
DSNG7500	125 4.92		10550 23716	280 11.02	405 15.94	1.74	28.5 12.95
DSNG7500	160 6.30		10530 23671	315 12.40	475 18.70	2.17	31.40 14.27
DSNG7500	200 7.87		10520 23649	355 13.98	555 21.85	2.66	34.70 15.77
DSNG7500	250 9.84		10590 23806	405 15.94	655 25.79	3.27	38.80 17.64
DSNG7500	300 11.81		10560 23739	455 17.91	755 29.72	3.88	42.90 19.50

C	D	E	F	ØG
3	27.5	13.5	5.5	100
0.12	1.08	0.53	0.22	3.94

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

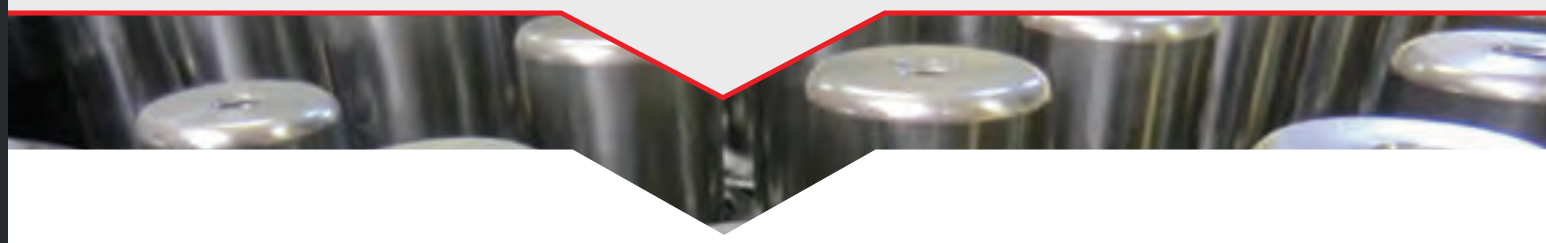
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT DSNG7500

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M10 Tapped Holes

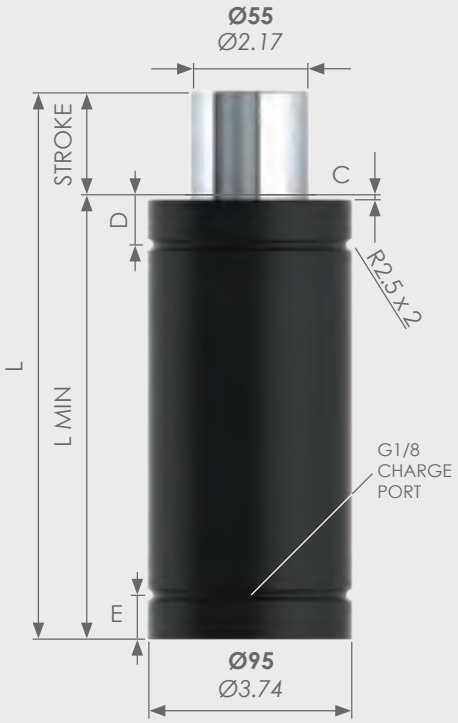
Square Front Flange
150 SFF

Front Flange
150 FF

Square Flange
150 SF

Base Plate
150 BP

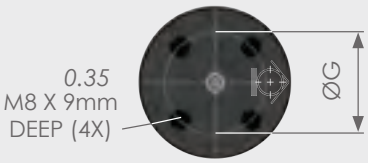
Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: DSNG7500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG0075	010 0.39	7500 16860	10400 23379	80 3.15	90 116	0.18	2.8 1.27
HDG0075	016 0.63		10400 23379	100 3.94	116 4.57	0.30	3.2 1.45
HDG0075	025 0.98		10900 24503	120 4.72	145 5.71	0.41	3.7 1.68
HDG0075	032 1.26		10500 23604	150 5.91	182 7.17	0.57	4.4 2.00
HDG0075	040 1.57		10700 24054	170 6.69	210 8.27	0.68	4.8 2.18
HDG0075	050 1.97		10600 23829	205 8.07	255 10.04	0.87	5.6 2.55

C	D	E	ØG
3 0.12	21 1.08	21 0.53	52 2.05

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

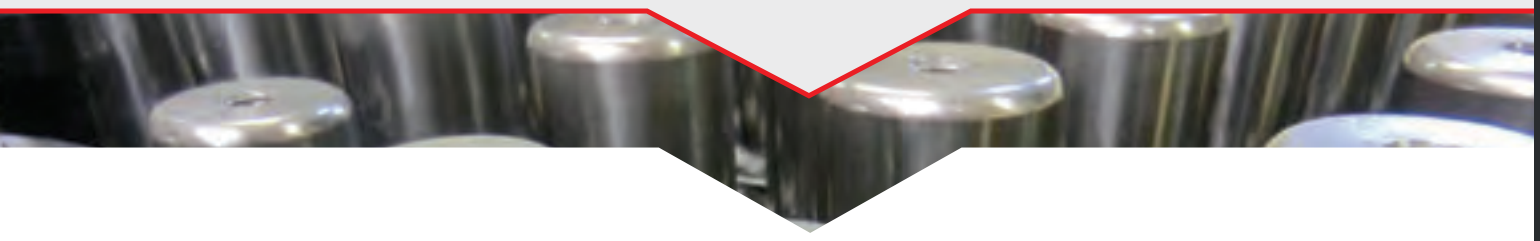


USE ONLY NITROGEN

MAX. PRESSURE:	MIN. PRESSURE:	MAX. PISTON VELOCITY:
150 BAR *2175 PSI*	**20 BAR** *290 PSI*	0.8M/SEC

SERVICE KIT HDG0075

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M8 Tapped Holes

Square Front Flange
95 SFF

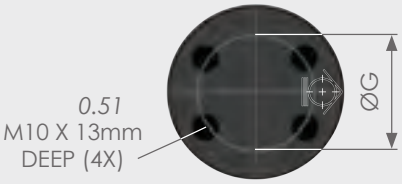
Front Flange
95 FF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG0075 x 010 + FF

MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
EX9500	019 0.75	9500 21356	13370 30056	97 3.82	116 4.57	0.49	9.86 4.48
EX9500	025 0.98		13930 31315	103 4.06	128 5.04	0.58	10.23 4.65
EX9500	032 1.26		14060 31607	110 4.33	142 5.59	0.70	10.67 4.85
EX9500	038 1.50		14320 32191	116 4.57	154 6.06	0.80	11.04 5.02
EX9500	050 1.97		14800 33270	128 5.04	178 7.01	0.99	11.79 5.36
EX9500	063 2.48		15270 34327	141 5.55	204 8.03	1.20	12.60 5.73
EX9500	075 2.95		15510 34866	153 6.02	228 8.98	1.39	13.35 6.07
EX9500	080 3.15		15470 34777	158 6.22	238 9.37	1.47	13.66 6.21
EX9500	100 3.94		15730 35361	178 7.01	278 10.94	1.79	14.91 6.78
EX9500	125 4.92		16000 35968	203 7.99	328 12.91	2.20	16.47 7.49

C	D	E	F	ØG
3 0.12	27.5 1.08	13.5 0.53	5.5 0.22	100 3.94

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

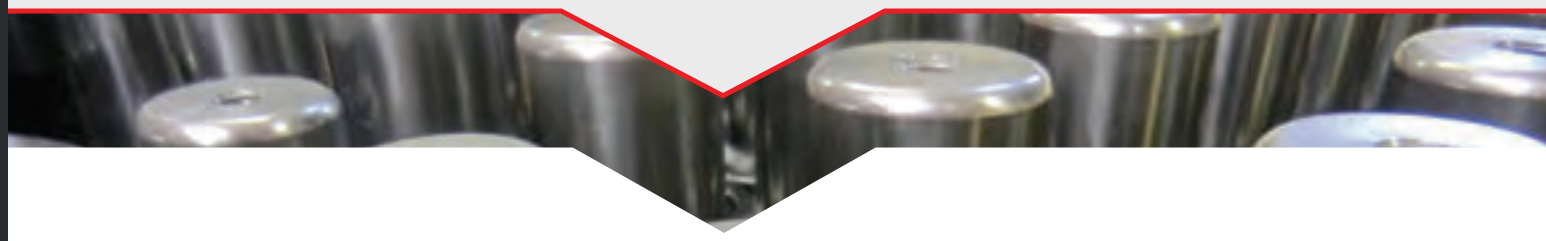
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT EX9500

ISO

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M10 Tapped Holes

Square Front Flange
150 SFF

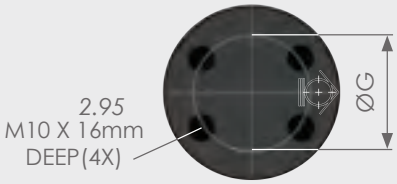
Front Flange
150 FF

Square Flange
150 SF

Base Plate
150 BP

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: EX9500 x 010 + FF

MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
MX9500	025 0.98	9500 21356	11320 25447	180 7.09	205 8.07	1.09	16.79 7.63
MX9500	038 1.50		11900 26751	193 7.60	231 9.09	1.30	17.70 8.05
MX9500	050 1.97		12330 27718	205 8.07	255 10.04	1.49	18.48 8.40
MX9500	063 2.48		12700 28550	218 8.58	281 11.06	1.69	19.32 8.78
MX9500	075 2.95		12970 29157	230 9.06	305 12.01	1.88	20.10 9.14
MX9500	080 3.15		13080 29404	235 9.25	315 12.40	1.96	20.42 9.28
MX9500	100 3.94		13430 30191	255 10.04	355 13.98	2.28	31.72 14.42
MX9500	125 4.92		13760 30932	280 11.02	405 15.94	2.67	23.35 10.61
MX9500	150 5.91		14020 31517	305 12.01	455 17.91	3.07	24.97 11.35
MX9500	160 6.30		14100 31697	315 12.40	475 18.70	3.23	25.62 11.65
MX9500	175 6.89		14220 31967	330 12.99	505 19.88	3.47	26.59 12.09
MX9500	200 7.87		14380 32326	355 13.98	555 21.85	3.86	28.21 12.82
MX9500	250 9.84		14630 32888	405 15.94	655 25.79	4.65	31.46 14.30
MX9500	300 11.81		14820 33315	455 17.91	755 29.72	5.44	34.70 15.77



C	D	E	F	ØG
3 0.12	27.5 1.08	13.5 0.53	5.5 0.22	100 3.94

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT MX9500

ISO PED 97/23/EC

MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77


4 X M10 Tapped Holes

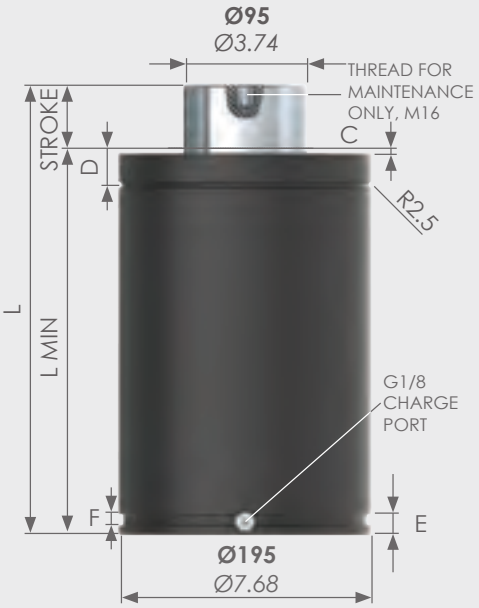

Square Front Flange
150 SFF


Front Flange
150 FF


Square Flange
150 SF


Base Plate
150 BP

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: MX9500 x 010 + FF



MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
ISNG10000	025 0.98	1000 2248	13800 31022	185 7.28	210 8.27	0.87	35.90 16.32
ISNG10000	038 1.50		14300 32146	198.1 7.80	236.2 9.30	1.13	37.60 17.09
ISNG10000	050 1.97		14700 33046	210 8.27	260 10.24	1.37	39.20 17.82
ISNG10000	063 2.48		15000 33720	223.5 8.80	287 11.30	1.64	41.00 18.64
ISNG10000	080 3.15		15200 34170	240 9.45	320 12.60	1.98	43.20 19.64
ISNG10000	100 3.94		15600 35069	260 10.24	360 14.17	2.38	45.80 20.82
ISNG10000	125 4.92		15700 35294	285 11.22	410 16.14	2.88	49.10 22.32
ISNG10000	160 6.30		15800 35518	320 12.60	480 18.90	3.59	54.50 24.77
ISNG10000	200 7.87		16000 35968	360 14.17	560 22.05	4.39	60.00 27.27
ISNG10000	250 9.84		16000 35968	410 16.14	660 25.98	5.40	66.50 30.23
ISNG10000	300 11.81		16000 35968	460 18.11	760 29.92	6.40	73.00 33.18

C	D	E	F	ØG
3 0.12	27.5 1.08	16.2 0.64	8.2 0.32	120 4.72

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST

USE ONLY NITROGEN

MAX. PRESSURE: **150 BAR** *2175 PSI*

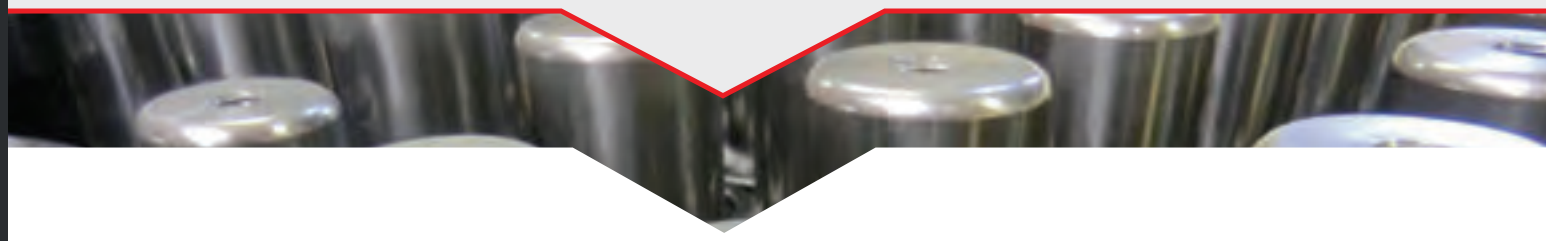
MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 1.6M/SEC

SERVICE KIT ISNG10000

ISO 11901

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M12 Tapped Holes

Square Front Flange
195 SFF

Front Flange
195 FF

Square Flange
195 SF

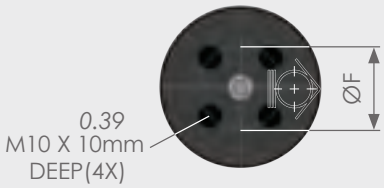
Base Plate
195 BP

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: ISNG10000 x 010 + FF

MODELS	STROKE (MM) (IN.)	SPRING FORCE (daN) INITIAL (lbs)	SPRING FORCE (daN) MAXIMUM (lbs)	L MIN (MM) (In.)	L (MM) (In.)	GAS VOL. (L)	WEIGHT (KG) (lbs)
HDG118	010 0.39	11800 26526	16050 36080	90 3.54	100 3.94	0.33	4.95 2.25
HDG118	016 0.63		15400 34619	110 4.33	126 4.96	0.50	5.55 2.52
HDG118	025 0.98		16100 36193	130 5.12	155 6.10	0.68	6.17 2.80
HDG118	032 1.26		16500 37092	155 6.10	187 7.36	0.88	6.9 3.14
HDG118	040 1.57		16100 36193	180 7.09	220 8.66	1.00	7.65 3.48
HDG118	050 1.97		16150 36305	210 8.27	260 10.24	1.35	8.55 3.89

C	D	E	ØF
3 0.12	22.5 0.89	22.5 0.89	68 2.68

SPECIAL STROKE SIZES AVAILABLE UPON REQUEST



USE ONLY NITROGEN

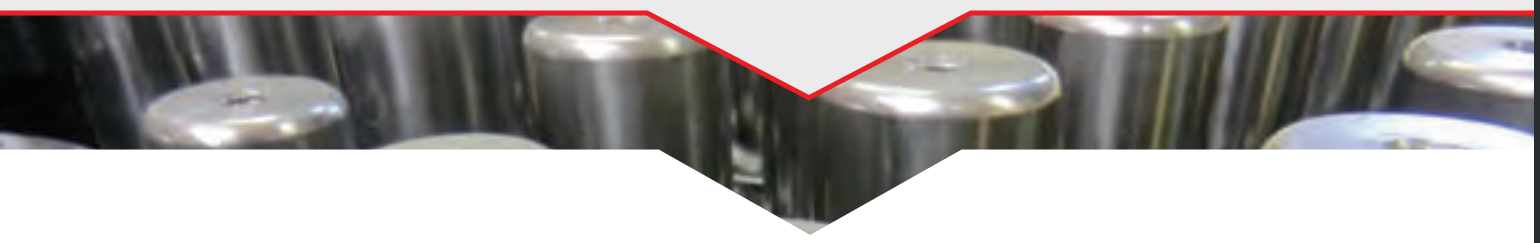
MAX. PRESSURE: **150 BAR** *2175 PSI*

MIN. PRESSURE: **20 BAR** *290 PSI*

MAX. PISTON VELOCITY: 0.8M/SEC

SERVICE KIT HDG118

PED 97/23/EC



MOUNTING EXAMPLES

(all dimensions are mm, unless otherwise stated) for other possible mounting options see pages 74-77

4 X M10 Tapped Holes

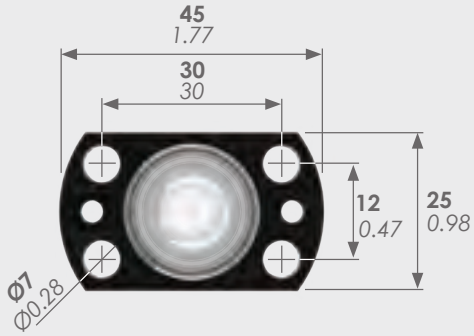
Square Front Flange
120 SFF

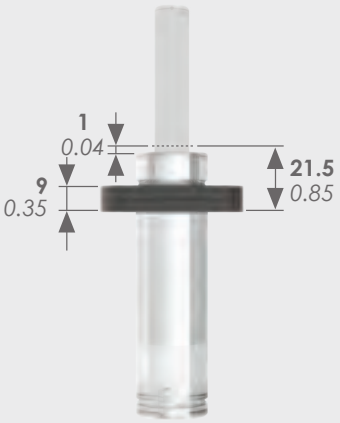
Front Flange
120 FF

Please note: gas springs should always be positively retained where possible. How to order: Spring Type x Stroke + Mounting Type ie: HDG118 x 010 + FF

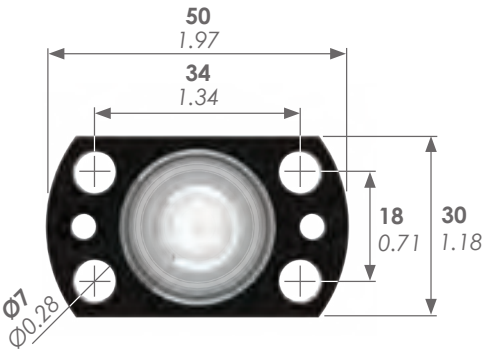
FASTENING ACCESSORIES

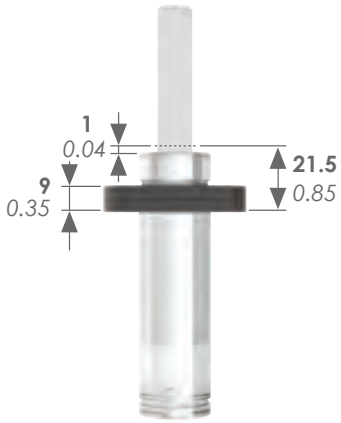
FRONT FLANGE-19FF



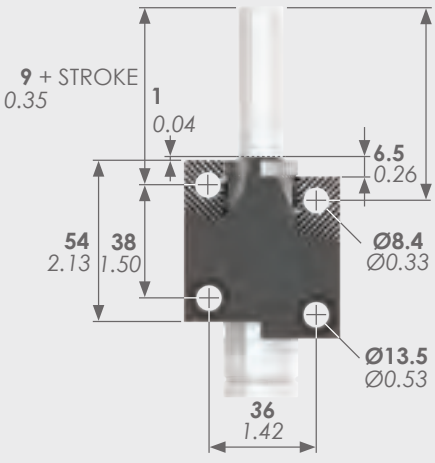


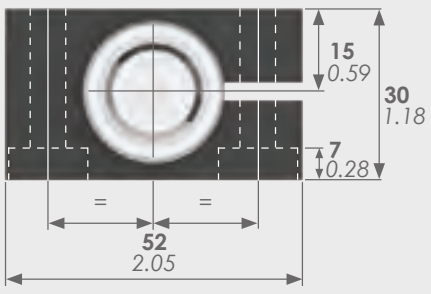
FRONT FLANGE-25FF



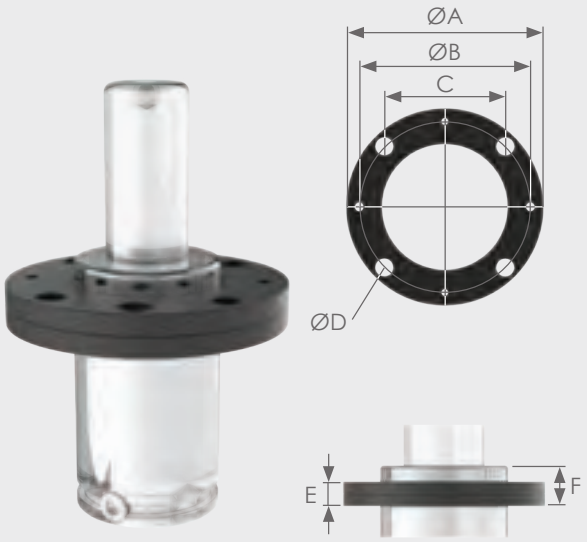


END SUPPORT-25ES



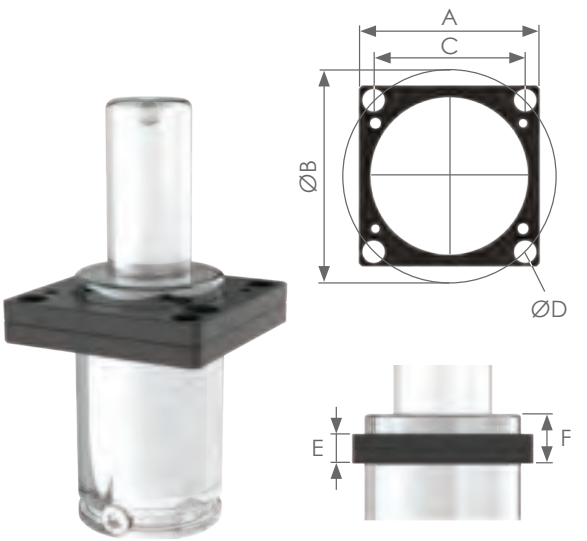


FRONT FLANGE (FF)



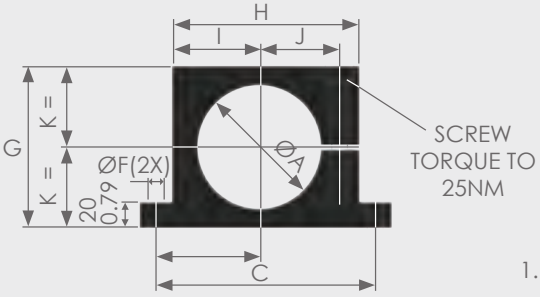
FF-TYPE	ØA	ØB	C	ØD	E	F
19 FF	For Full Dimensions, See Page 74					
25 FF	For Full Dimensions, See Page 74					
32 FF	60 2.36	49.5 1.95	35 1.38	7 0.28	9 0.35	15 0.59
38 FF	68 2.68	56.5 2.22	40 1.57	7 0.28	9 0.35	15 0.59
45 FF	86 3.39	70.7 2.78	50 1.97	9 0.35	13 0.51	21 0.83
50 FF	95 3.74	80 3.15	56.5 2.22	9 0.35	13 0.51	21 0.83
63 FF	122 4.80	104 4.09	73.5 2.89	11 0.43	16 0.63	26 1.02
75 FF	122 4.80	104 4.09	73.5 2.89	11 0.43	16 0.63	26 1.02
95 FF	150 5.91	130 5.12	92 3.62	13.5 0.53	18 0.71	30 1.18
120 FF	175 6.89	155 6.10	109.5 4.31	13.5 0.53	21 0.83	33 1.30
150 FF	220 8.66	195 7.68	138 5.43	17.5 0.69	27 1.06	38 1.50
195 FF	290 8.66	240.4 7.68	170 5.43	17.5 0.69	27 1.06	44 1.50

SQUARE FRONT FLANGE (SFF)



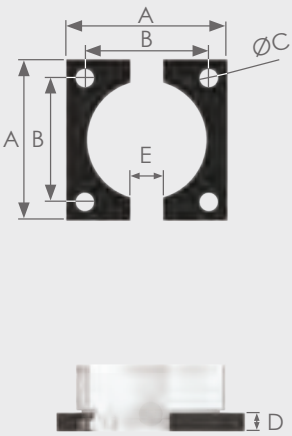
SFF-TYPE	ØA	ØB	C	ØD	E	F
32 SFF	45 1.77	49.5 1.95	35 1.38	7 0.28	9 0.35	15 0.59
38 SFF	52 2.05	56.5 2.22	40 1.57	7 0.28	9 0.35	15 0.59
45 SFF	64 2.52	70.7 2.78	50 1.97	9 0.35	13 0.51	21 0.83
50 SFF	70 2.76	80 3.15	56.5 2.22	9 0.35	13 0.51	21 0.83
63 SFF-A	80 3.15	90.5 3.56	64 2.52	11 0.43	16 0.63	24 0.94
63 SFF	90 3.54	104 4.09	73.5 2.89	11 0.43	16 0.63	24 0.94
75 SFF	90 3.54	104 4.09	73.5 2.89	11 0.43	16 0.63	26 0.94
95 SFF	110 4.33	130 5.12	92 3.62	13.5 0.53	18 0.71	30 1.18
120 SFF	130 5.12	155 6.10	109.5 4.31	13.5 0.53	21 0.83	33 1.30
150 SFF	162 6.38	195 7.68	138 5.43	17.5 0.69	27 1.06	38 1.50
195 SFF	210 8.27	240.4 9.46	170 6.69	17.5 0.69	27 1.06	43 1.69

END SUPPORT (ES)



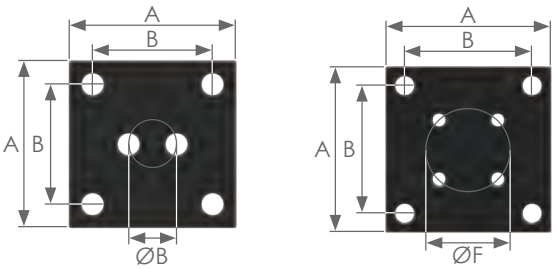
ES-TYPE	ØA	ØB	C	ØD	E	ØF	G	H	I	ØSCREW	J	K
38 ES	38 1.50	34 1.34	77 3.03	43 1.69	95 3.74	9 0.35	55 2.17	59 2.32	25 0.98	M6	25 0.98	27.5 1.08
45 ES	45 1.77	37.5 1.48	82 3.23	46 1.81	100 3.94	9 0.35	60 2.36	66 2.60	29 1.14	M8	29 1.14	30 1.18
50 ES	50 1.97	50 1.97	110 4.33	60 2.36	130 5.12	9 0.35	80 3.15	90 3.54	40 1.57	M8	37.5 1.48	40 1.57
63 ES	75 2.95	63.5 2.50	137 5.39	75 2.95	160 6.30	11 0.43	105 4.13	115 4.53	52.5 2.07	M10	50 1.97	52.5 2.07
75 ES	95 3.74	80 3.15	170 6.69	92.5 3.64	195 7.68	13 0.51	125 4.92	145 5.71	67.5 2.66	M12	62.5 2.46	62.5 2.46
120 ES	120 4.72	92.5 3.64	195 7.68	105 4.13	220 8.66	13.5 0.53	148 5.83	165 6.50	77.5 3.05	M12	76.2 3.00	74 2.91

SQUARE FLANGE (SF)



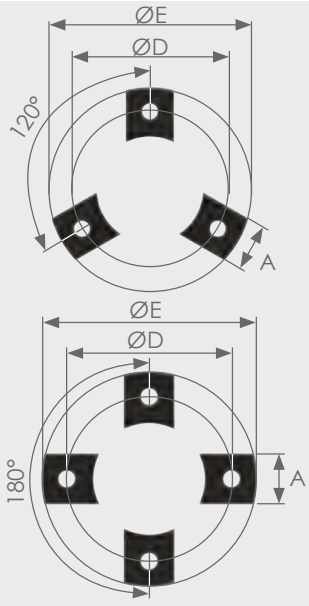
SF-TYPE	A	B	ØC	D	E
32 SF	50 1.97	35 1.38	7 0.28	7 0.28	12 0.47
38 SF	55 2.17	40 1.57	7 0.28	7 0.28	12 0.47
45 SF	70 2.76	50 1.97	9 0.35	7 0.28	20 0.79
50 SF	75 2.95	56.5 2.22	9 0.35	12 0.47	24 0.94
63 SF	100 3.94	73.5 2.89	11 0.43	12 0.47	24 0.94
75 SF	100 3.94	73.5 2.89	11 0.43	12 0.47	24 0.94
95 SF	120 4.72	92 3.62	13.5 0.53	12 0.47	24 0.94
120 SF	140 5.51	109.5 4.31	13.5 0.53	12 0.47	24 0.94
150 SF	190 7.48	138 5.43	17.5 0.69	12 0.47	24 0.94
195 SF	210 8.27	170 6.69	17.5 0.69	13 0.51	24 0.94

BASE PLATE (BP)



BP-TYPE	A	B	ØC	ØD	E	ØF	ØG	ØH	I
45 BP	70 2.76	50 1.97	9 0.35	15 0.59	12 0.47	20 0.79	9 0.35	15 0.59	14 0.55
50 BP	75 2.95	56.5 2.22	9 0.35	15 0.59	12 0.47	20 0.79	9 0.35	15 0.59	14 0.55
63 BP	100 3.94	73.5 2.89	10.5 0.41	18 0.71	12 0.47	20 0.79	9 0.35	15 0.59	12 0.47
75 BP	100 3.94	73.5 2.89	11 0.43	18 0.71	12 0.47	40 1.57	9 0.35	15 0.59	14 0.55
95 BP	120 4.72	92 3.62	13.5 0.53	20 0.79	13 0.51	60 2.36	9 0.35	15 0.59	14 0.55
120 BP	140 5.51	109.5 4.31	13.5 0.53	20 0.79	13 0.51	80 3.15	11 0.43	18 0.71	15 0.59
150 BP	190 7.48	138 5.43	17.5 0.69	26 1.02	17 0.67	100 3.94	11 0.43	18 0.71	15 0.59
195 BP	210 8.27	170 6.69	17.5 0.69	26 1.02	17 0.67	100 3.94	13.5 0.53	20 0.79	13 0.51

FOOT (F)

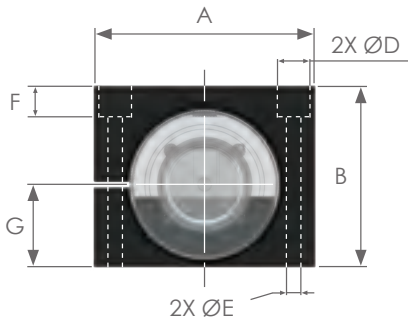


F-TYPE	A	B	C	D	E
45 F	25 0.98	7 0.28	9 0.35	70.7 2.78	95.8 3.77
50 F	30 1.18	12 0.47	9 0.35	80 3.15	110 4.33
75 F	30 1.18	12 0.47	11 0.43	104 4.09	134 5.28
95 F	40 1.57	12 0.47	13 0.51	130 5.12	170 6.69
120 F	50 1.97	12 0.47	13 0.51	155 6.10	195 7.68
150 F	60 2.36	12 0.47	17 0.67	184 7.24	220 8.66

The horizontal mount (HM) conforms to the ford WDX35-62 standard.

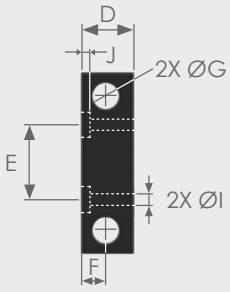
Mount and the support are supplied as a kit.

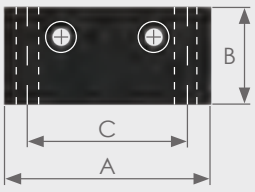
MOUNT



FLANGE TYPE	A	B	ØD	ØE	F	G	I	J	K	L
38HM	**74** *2.91*	**54** *2.13*	**15** *0.59*	**9** *0.35*	**16** *0.63*	**23.9** *0.94*	**20** *0.79*	**54** *2.13*	**10** *0.39*	**3** *0.12*
50HM	**90** *3.54*	**70** *2.76*	**18** *0.71*	**11** *0.43*	**25** *0.98*	**30** *1.18*	**30** *1.18*	**68** *2.68*	**15** *0.59*	**4.5** *0.18*
75HM	**125** *4.92*	**94** *3.70*	**20** *0.79*	**13.5** *0.53*	**19** *0.75*	**42** *1.65*	**30** *1.18*	**100** *3.94*	**15** *0.59*	**6** *0.24*
95HM	**140** *5.51*	**115** *4.53*	**20** *0.79*	**13.5** *0.53*	**40** *1.57*	**52.5** *2.07*	**30** *1.18*	**115** *4.53*	**15** *0.59*	**6** *0.24*

SUPPORT





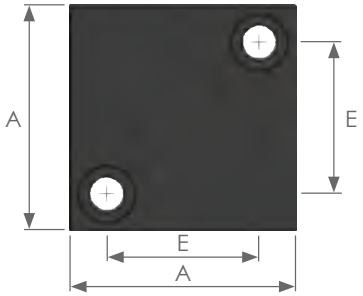
FLANGE TYPE	A	B	C	D	E	F	ØG	ØI	J
38HM	**60** *2.36*	**38** *1.50*	**40** *1.57*	**28** *1.10*	**18** *0.71*	**16** *0.63*	**9** *0.35*	**6** *0.24*	**4** *0.16*
50HM	**65** *2.56*	**45** *1.77*	**44** *1.73*	**28** *1.10*	**20** *0.79*	**15** *0.59*	**11** *0.43*	**8** *0.31*	**5** *0.20*
75HM	**80** *3.15*	**45** *1.77*	**57** *2.24*	**28** *1.10*	**21.3** *0.84*	**16** *0.63*	**13.5** *0.53*	**8** *0.31*	**5** *0.20*
95HM	**95** *3.74*	**45** *1.77*	**70** *2.76*	**28** *1.10*	**42.4** *1.67*	**13** *0.51*	**13.5** *0.53*	**8** *0.31*	**5** *0.20*

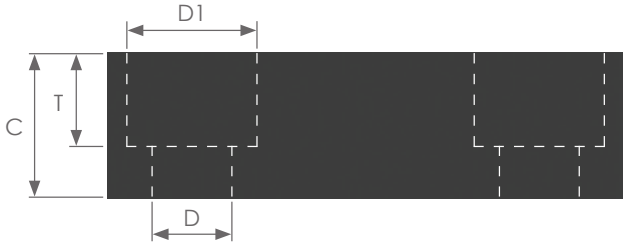
THRUST PLATES FOR GAS SPRINGS

Thrust plates protect against damage to the piston top and the tool contact area. Damage can introduce side loading, reducing the life of the gas spring.

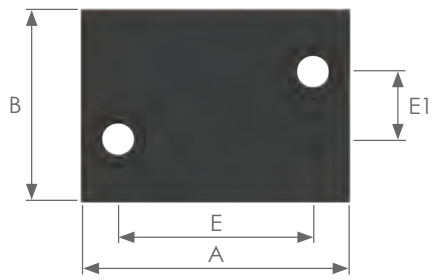
Material:
Tool Steel DIN 90MnCrV8 (1.2842),
hardened 55 - 60 HRc

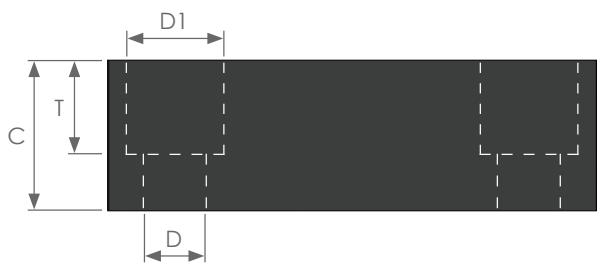
ORDER NO	MAX. PISTON ROD DIAMETER	A	C	D	D1	E	T
TP15	15 0.59	40 1.57	15 0.59	9 0.35	15 0.59	21 0.83	10 0.39
TP15-2	15 0.59	40 1.57	15 0.59	7 0.28	11 0.43	24 0.94	7 0.28
TP25	25 0.98	56 2.20	20 0.79	11 0.43	18 0.71	32 1.26	13 0.51
TP50	50 1.97	71 2.80	20 0.79	11 0.43	18 0.71	48 1.89	13 0.51
TP50-2	50 1.97	70 2.76	15 0.59	9 0.35	15 0.59	50 1.97	9 0.35
TP65	65 2.56	90 3.54	12 0.47	9 0.35	15 0.59	64 2.52	9 0.35
TP80	80 3.15	90 3.54	20 0.79	11 0.43	18 0.71	67 2.64	13 0.51
TP80-2	80 3.15	90 3.54	15 0.59	9 0.35	15 0.59	70 2.76	9 0.35
TP95	95 3.74	140 5.51	20 0.79	11 0.43	18 0.71	110 4.33	13 0.51



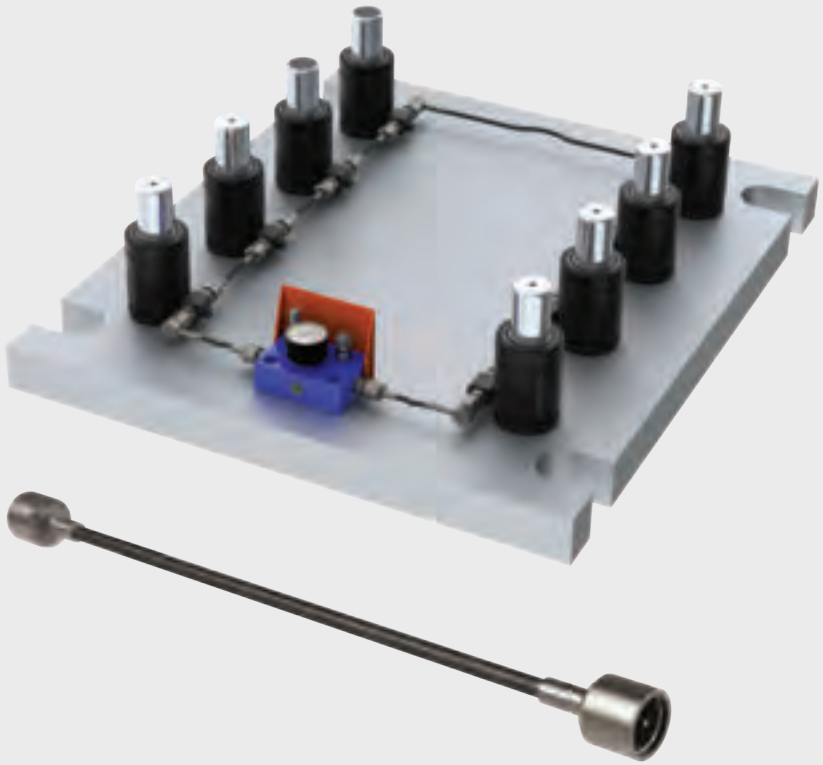


ORDER NO	MAX. PISTON ROD DIAMETER	A	B	C	D	D1	E	E1	T
TPR15	15 0.59	50 1.97	25 0.98	12 0.47	7 0.28	11 0.43	32 1.26	8 0.31	7 0.28
TPR20	20 0.79	55 2.17	30 1.18	12 0.47	7 0.28	11 0.43	40 1.57	14 0.55	7 0.28
TPR25	25 0.98	70 2.76	35 1.38	15 0.59	9 0.35	15 0.59	48 1.89	14 0.55	9 0.35
TPR36	36 1.42	75 2.95	50 1.97	15 0.59	9 0.35	15 0.59	56 2.20	30 1.18	9 0.35
TPR50	50 1.97	85 3.35	60 2.36	15 0.59	9 0.35	15 0.59	66 2.60	40 1.57	9 0.35
TPR65	65 2.56	100 3.94	80 3.15	20 0.79	11 0.43	18 0.71	72 2.83	56 2.20	11 0.43
TPR80	80 3.15	110 4.33	100 3.94	20 0.79	11 0.43	18 0.71	85 2.28	75 2.95	11 0.43





HOSE SYSTEMS



Features:

- Material: Black polyamide construction with synthetic fibre braid.
- Minimum bend radius: 20mm
- Max working pressure: 500bar

Advantages:

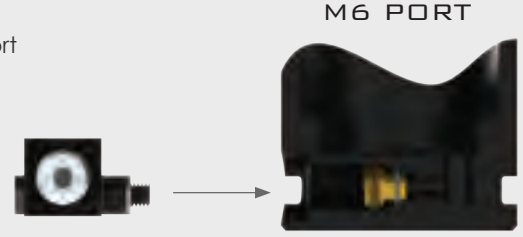
- O-ring Sealed and vibration resistant hose fitting.
- Finger tighten hoses
- A complete hose can be removed and system remains charged
- Large range of adaptors
- Direct connection of G1/8 port to hose

No direct hose to spring connection available for M6 port

NO DIRECT HOSE TO SPRING CONNECTION

MET1054-1057 – SPRING TO T-ADAPTOR

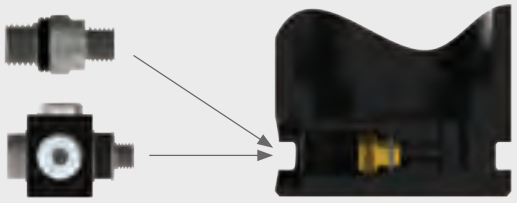
M6 PORT



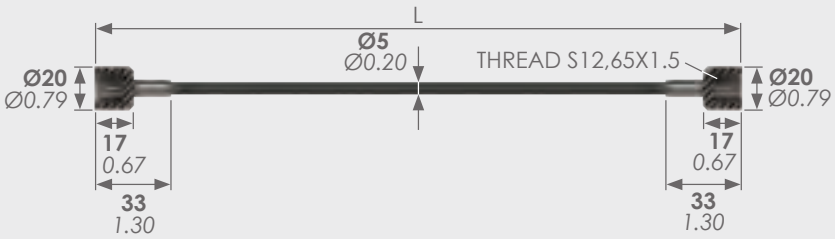
MET1040 – SPRING TO HOSE ADAPTOR

MET1050 – 1053 – SPRING TO T-ADAPTOR

G 1/8 PORT

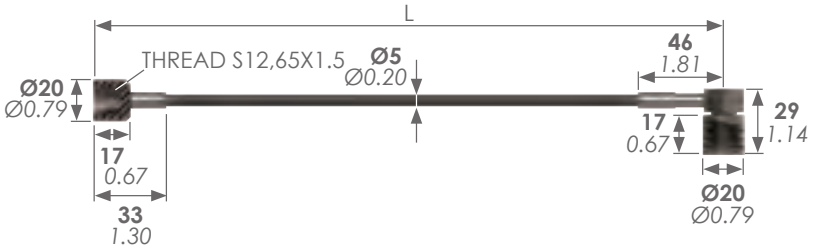


KEVLAR BRAIDED HOSE WITH STRAIGHT FITTINGS



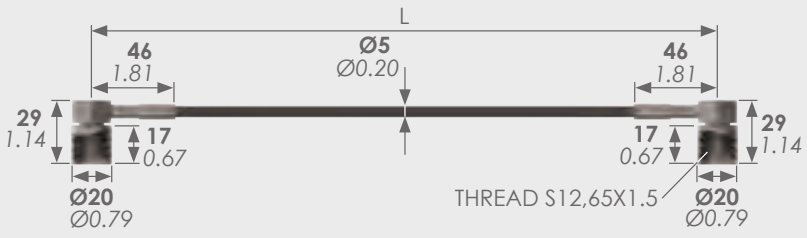
ORDER NO.	LENGTH (L) (mm)(ins)
MET 1000	200 - 7.87
MET 1001	300 - 11.81
MET 1002	400 - 15.75
MET 1003	500 - 19.69
MET 1004	600 - 23.62
MET 1005	800 - 31.50
MET 1006	1000 - 39.37
MET 1007	1200 - 47.24
MET 1008	1500 - 59.06
MET 1009	2000 - 78.74
MET 1010	2500 - 98.43
MET 1011	3000 - 118.11
MET 1012	CUSTOMER SPECIFICATION
MINIMUM LENGTH 100 - 3.94	

KEVLAR BRAIDED HOSE WITH STRAIGHT AND COMPACT 90 FITTNG



ORDER NO.	LENGTH (L) (mm)(ins)
MET 1013	200 - 7.87
MET 1014	300 - 11.81
MET 1015	400 - 15.75
MET 1016	500 - 19.69
MET 1017	600 - 23.62
MET 1018	800 - 31.50
MET 1019	1000 - 39.37
MET 1020	1200 - 47.24
MET 1021	1500 - 59.06
MET 1022	2000 - 78.74
MET 1023	2500 - 98.43
MET 1024	3000 - 118.11
MET 1025	CUSTOMER SPECIFICATION
MINIMUM LENGTH 100 - 3.94	

KEVLAR BRAIDED HOSE WITH COMPACT 90 FITTNGS

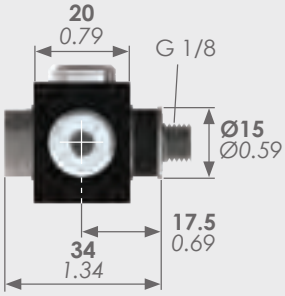


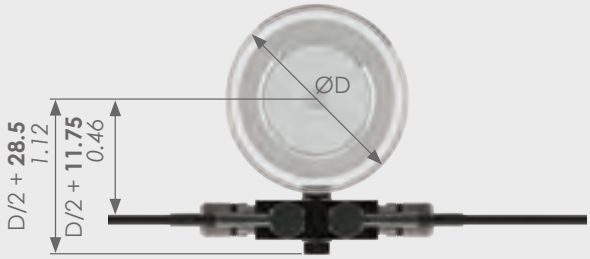
ORDER NO.	LENGTH (L) (mm)(ins)
MET 1026	200 - 7.87
MET 1027	300 - 11.81
MET 1028	400 - 15.75
MET 1029	500 - 19.69
MET 1030	600 - 23.62
MET 1031	800 - 31.50
MET 1032	1000 - 39.37
MET 1033	1200 - 47.24
MET 1034	1500 - 59.06
MET 1035	2000 - 78.74
MET 1036	2500 - 98.43
MET 1037	3000 - 118.11
MET 1038	CUSTOMER SPECIFICATION
MINIMUM LENGTH 100 - 3.94	

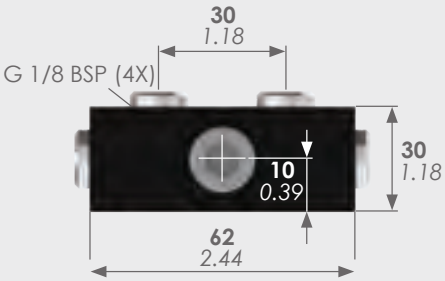
Please see page 102 for CNOMO hose components MET1080 (Straight end) MET1081 (90 degree end) and MET1082 (Micro bore hose).

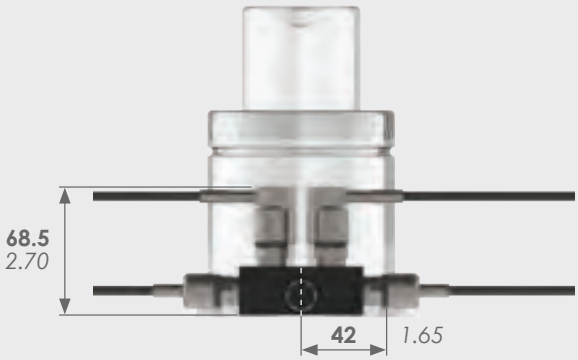
MET 1050

4 way multiple adaptor



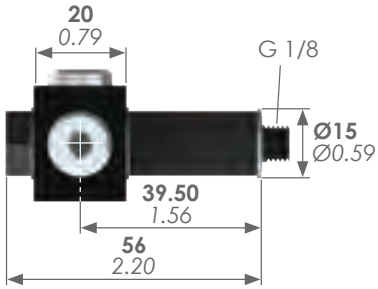


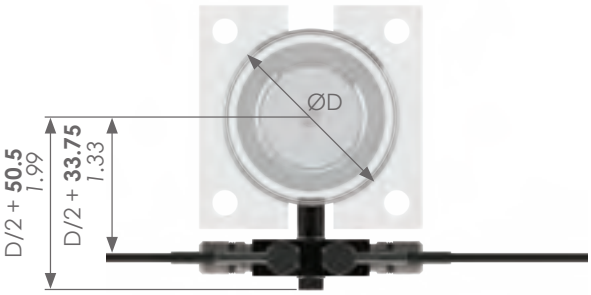


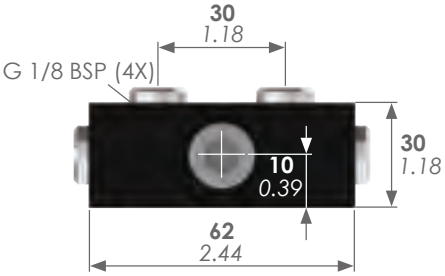


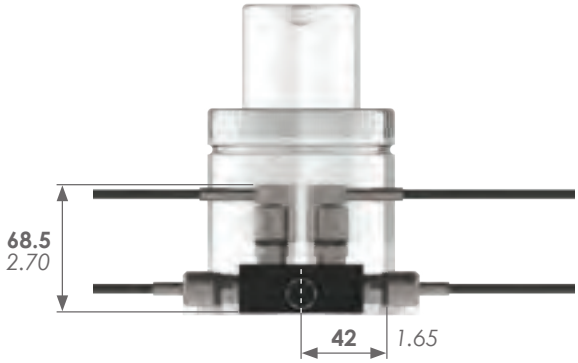
MET 1051

Multiple adaptor when springs are clamped using SF flange

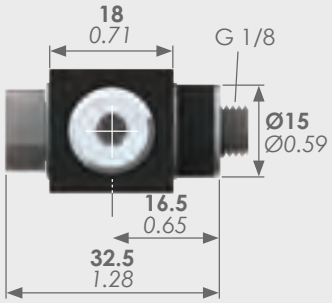


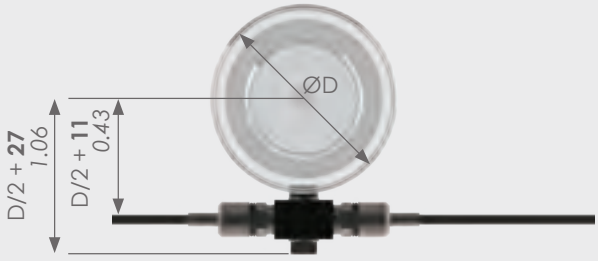


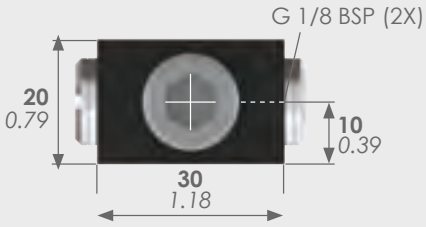




MET 1052

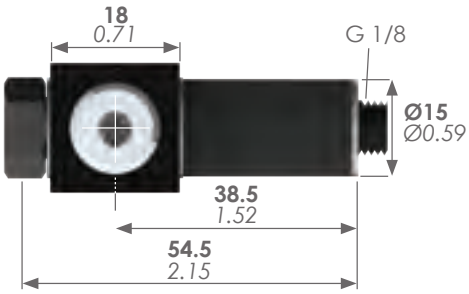


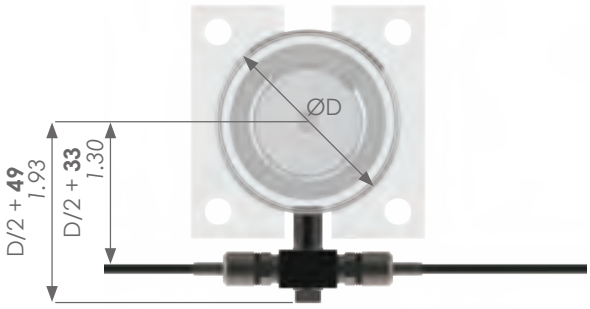


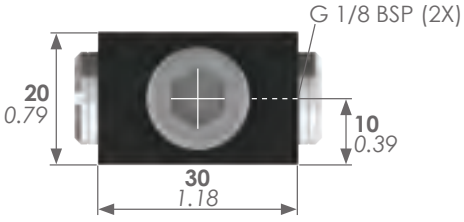


MET 1053

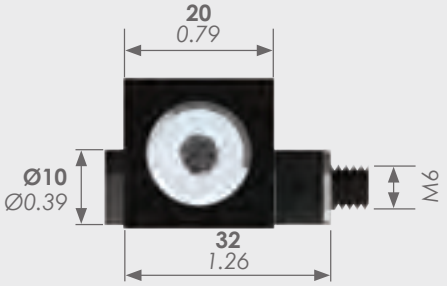
When springs are clamped using SF Flange.

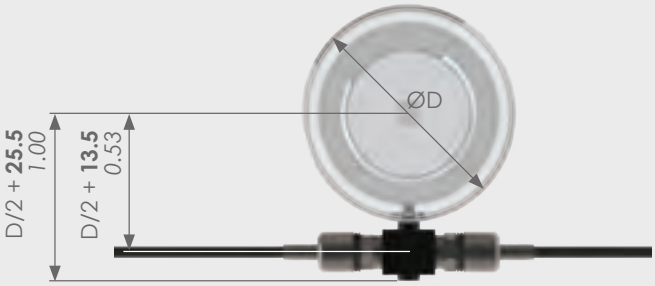


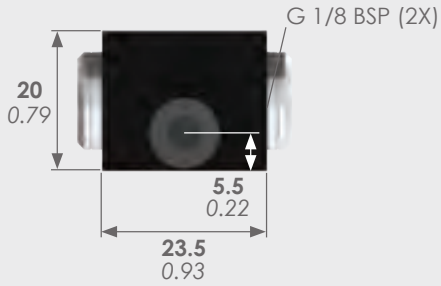


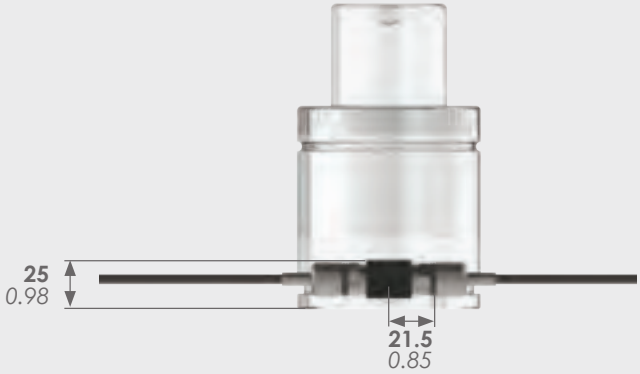


MET 1054



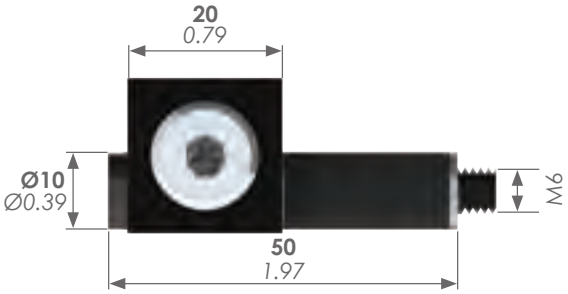


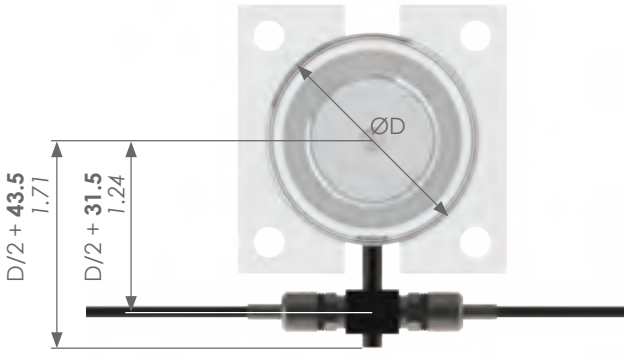


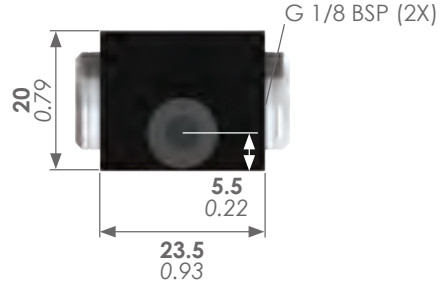


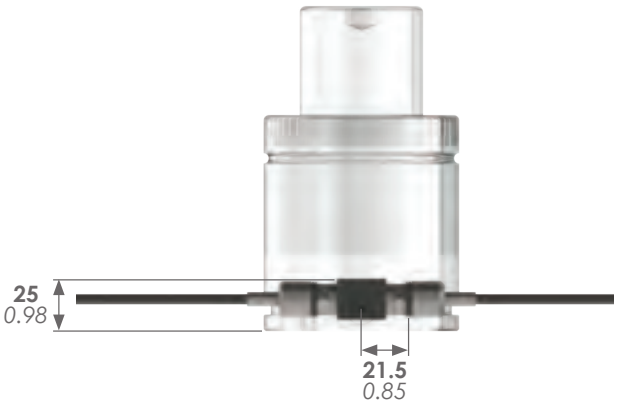
MET 1055

When using SF Flange.

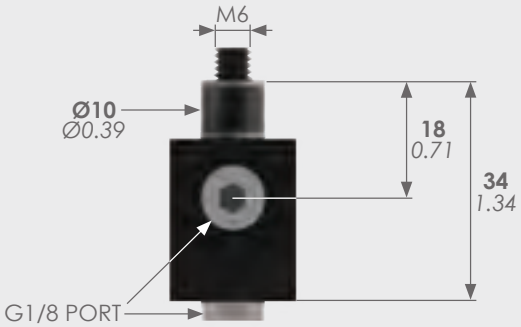






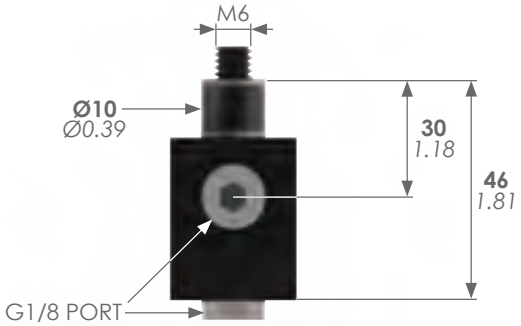


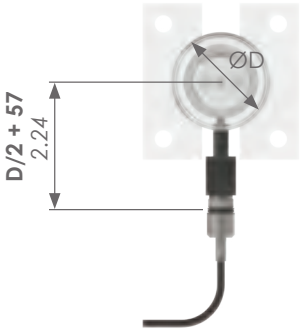
MET 1056



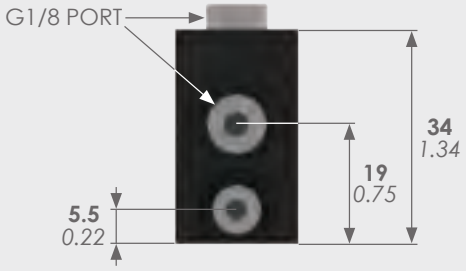
MET 1057

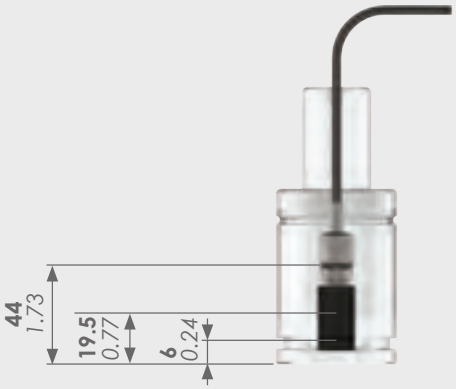
When using SF Flange.





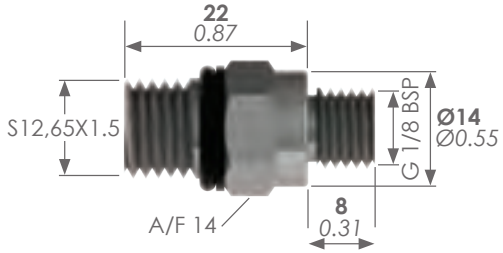
MET 1056 & 1057



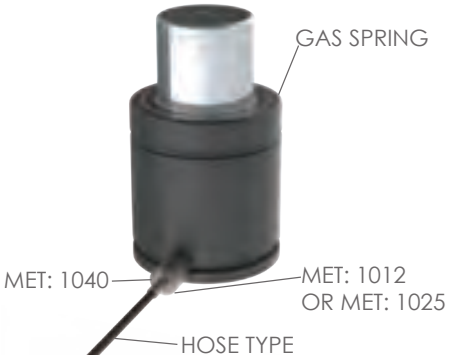


MET 1040

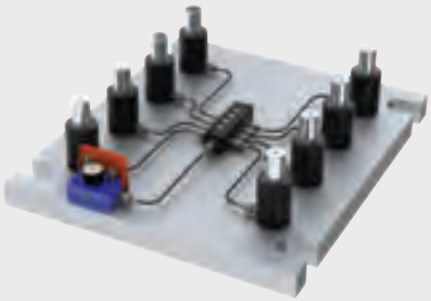
One way valve coupling

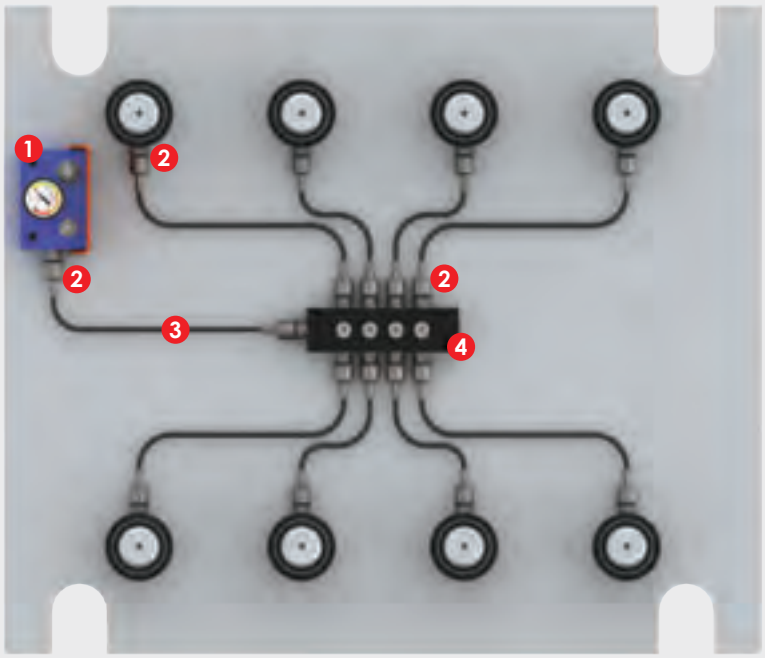


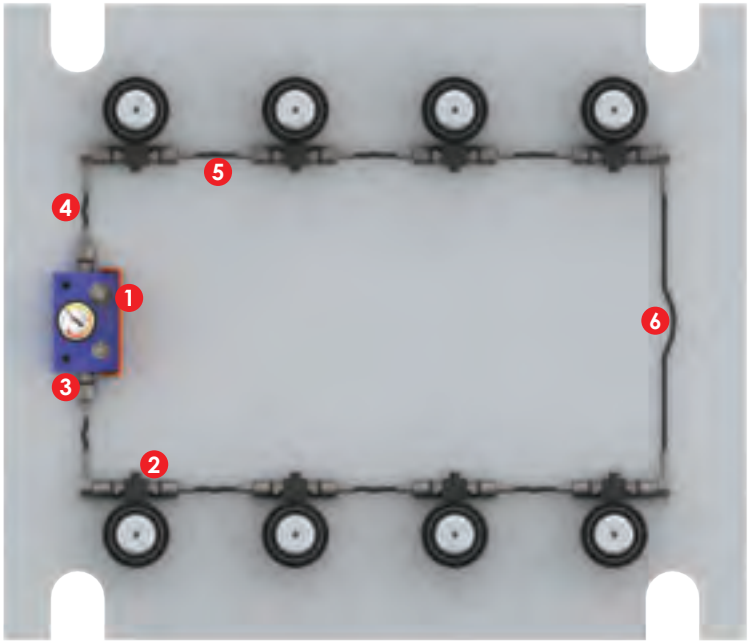
Gas Spring direct to CNOMO hose connection



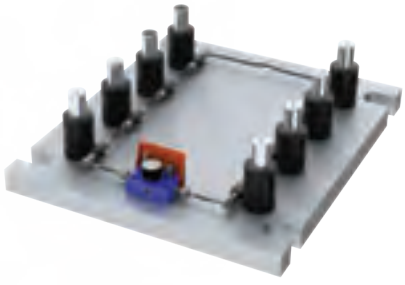
1. MET111 Control Panel
2. MET1040
3. MET1012
4. MET1060







1. MET111 Control Panel
2. MET1052
3. MET1040
4. MET1025
5. MET1012
6. MET1038



Features:

- Material: Black polyamide construction with synthetic fibre braid.
- Minimum bend radius: 20mm
- Max working pressure: 500bar

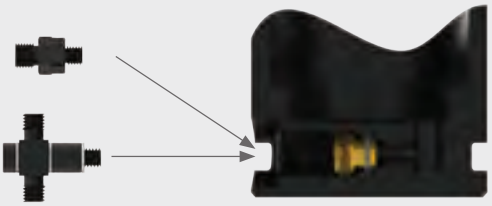
Advantages:

- Dual sealed to prevent leaking
- Compact hose fittings and adaptors where space is restricted.
- Direct connection of M6 and G1/8 port to hose

M6 PORT

MET2001 – HOSE TO SRING ADAPTOR

MET2010 TO MET2017 - SPRING TO T-ADAPTOR

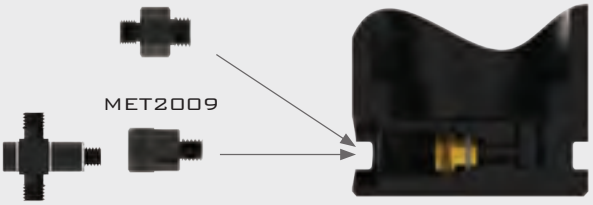


G 1/8 PORT

MET2002 - SPRING TO HOSE ADAPTOR

MET2009

MET2010 TO 2017 - SPRING TO T-ADAPTOR



The micro hose system is primarily used with M6 ports or where space is limited. The dual seal system prevents leaking and gives protection against vibration and rotation.

Custom hose lengths for the Micro range can be specified.

BASIC INFORMATION

Material: Polyamide Black

External Dimension: 5mm

Volume: 3ml/meter

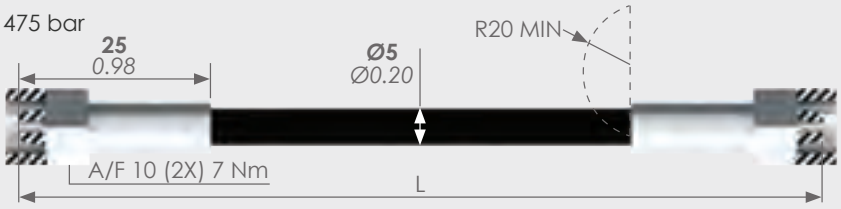
Outer Casing: Perforated

Min. Bend Radius: 20mm

Temperature Range: -20°C 80°C

Max. Working Pressure: 475 bar

ORDER NO.	LENGTH (L) (mm)(ins)
MET 2020	200 - *7.87*
MET 2021	300 - *11.81*
MET 2022	400 - *15.75*
MET 2023	500 - *19.69*
MET 2024	600 - *23.62*
MET 2025	800 - *31.50*
MET 2026	1000 - *39.37*
MET 2027	1200 - *47.24*
MET 2028	1500 - *59.06*
MET 2030	CUSTOMER SPECIFICATION
MINIMUM LENGTH 80 - *3.15*	

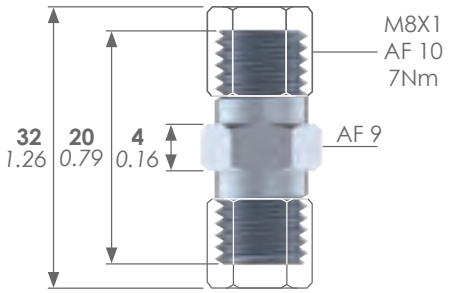


Please see page 102 for MICRO hose components MET1085 (Straight end) and MET1082 (Micro bore hose).

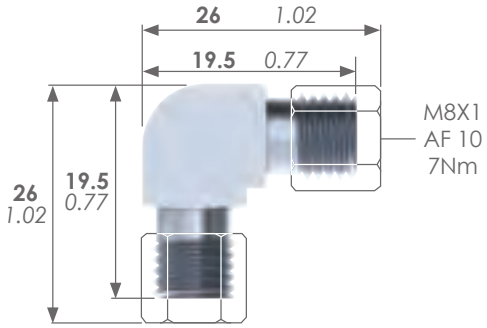
MICRO HOSE ADAPTORS

The following adapters are used to connect Micro Hose .

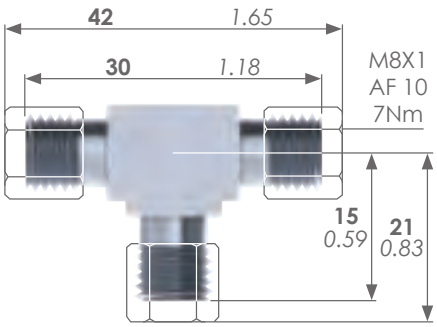
MET 2004



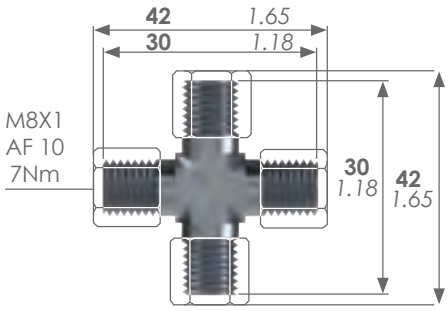
MET 2005



MET 2006

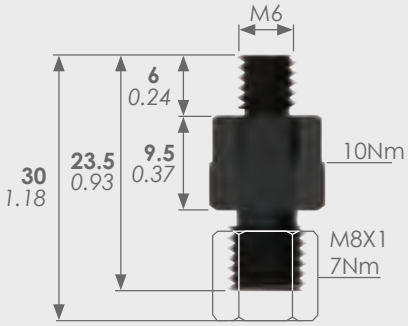


MET 2007



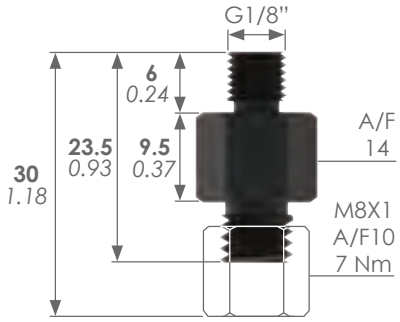
MET 2001

For connection of hose to gas spring with M6 Port.



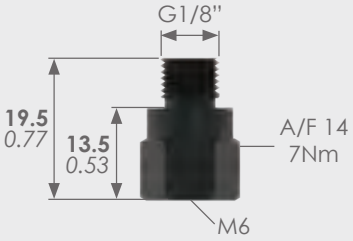
MET 2002

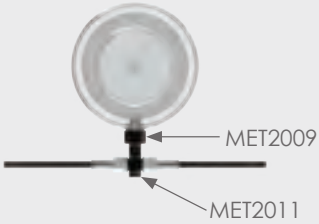
For connection to control panel or gas spring with G1/8 Port.



MET 2009

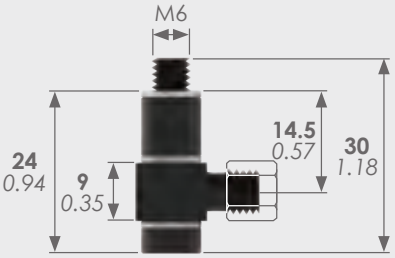
Adapter for Connection of G1/8 Port when using T-adapter on the Micro Hose System.

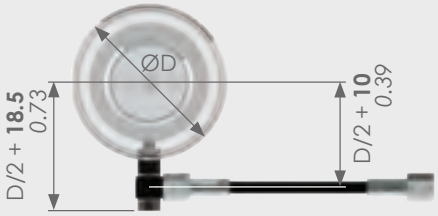


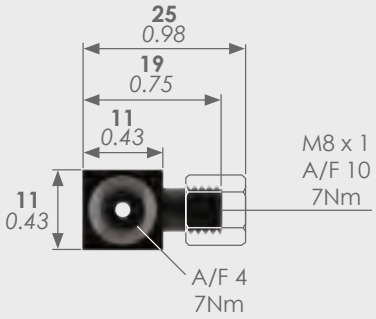


(All dimensions are mm, unless otherwise stated)

MET 2010

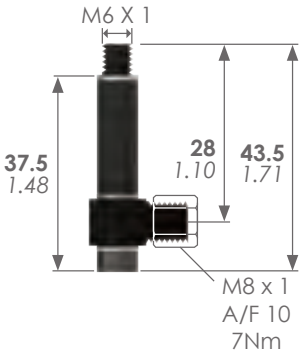


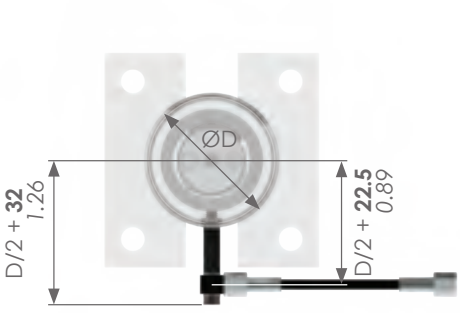


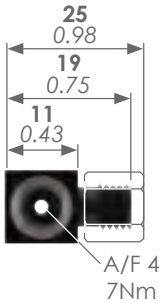


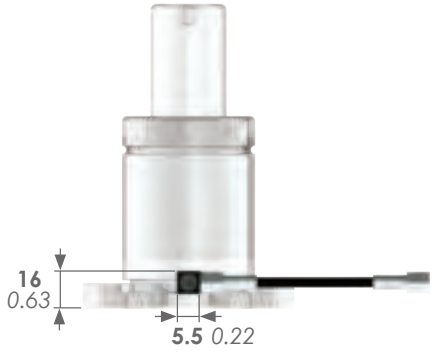
MET 2014

When using SF Flange.

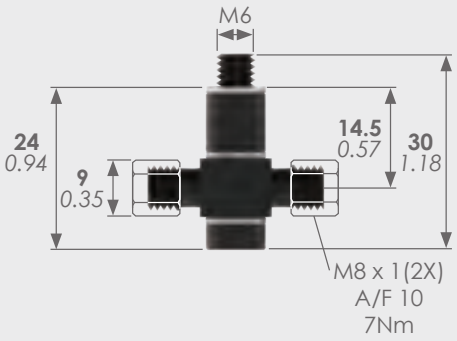


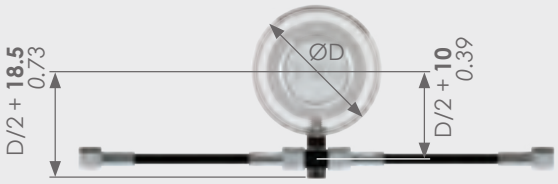


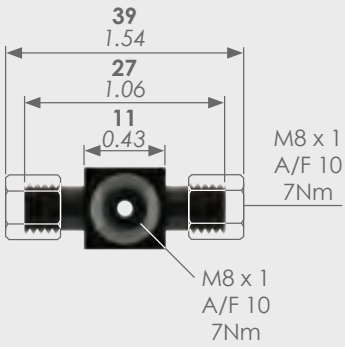




MET 2011

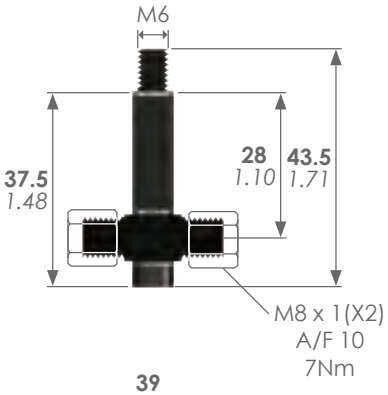


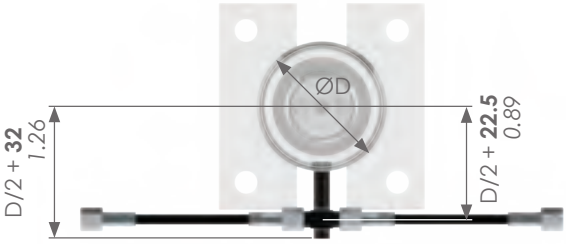


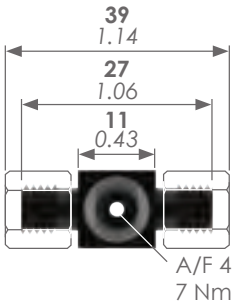


MET 2015

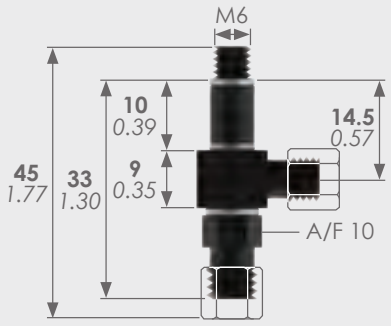
When using SF Flange.

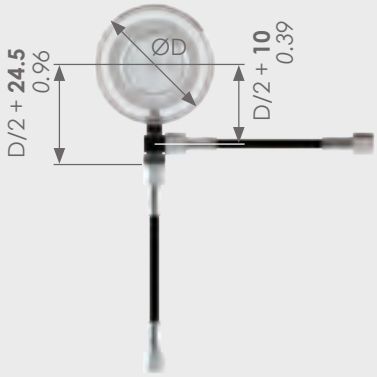


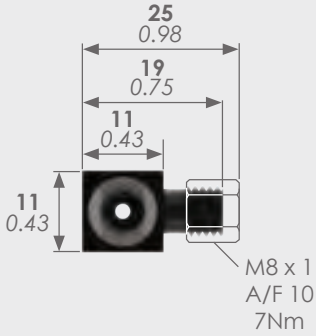


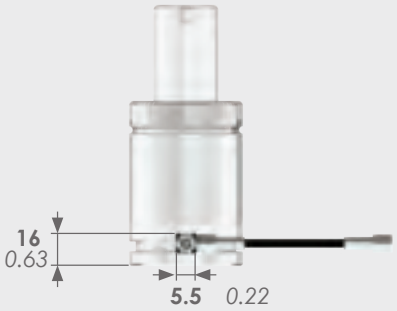


MET 2012



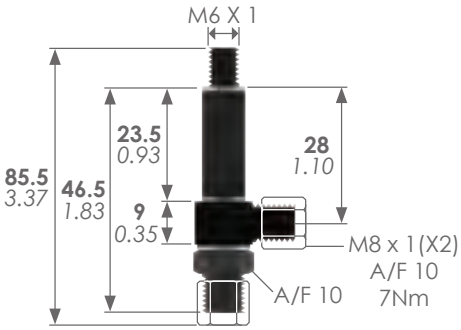


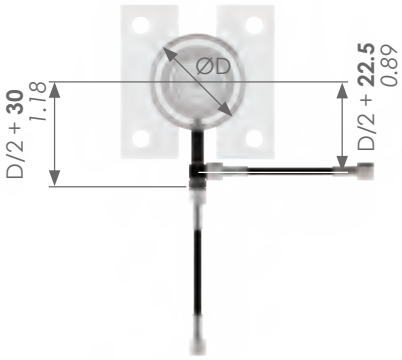


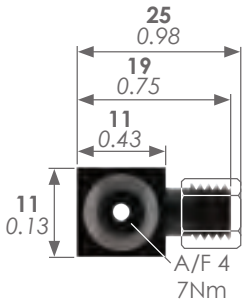


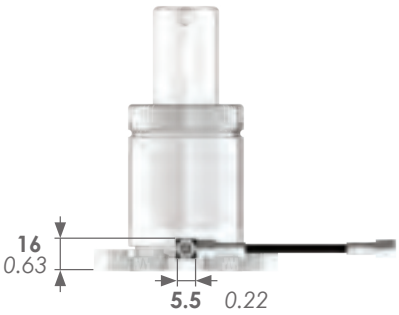
MET 2016

When using SF Flange.

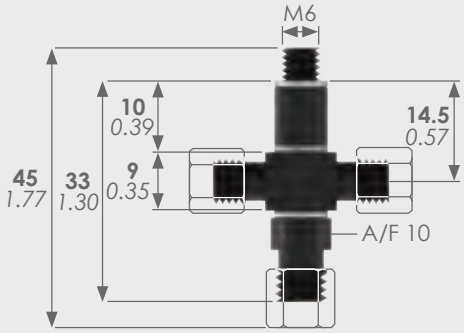


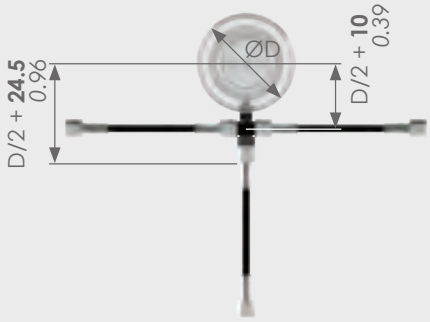


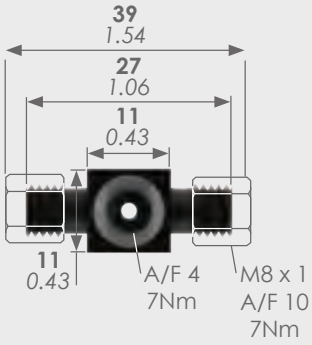


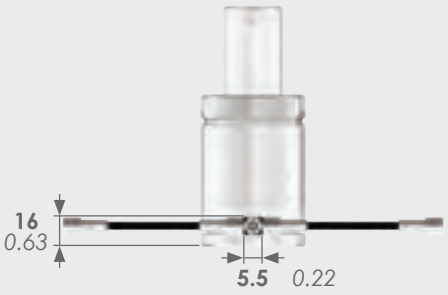


MET 2013



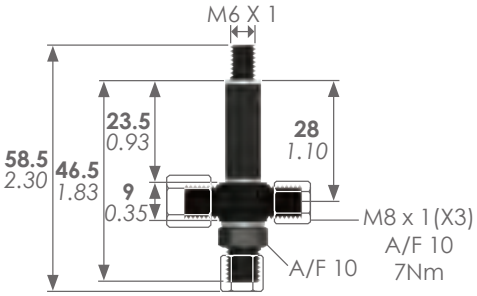


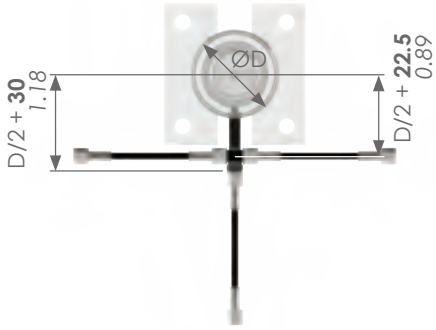


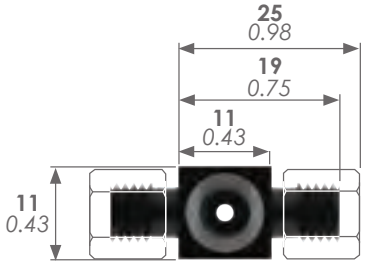


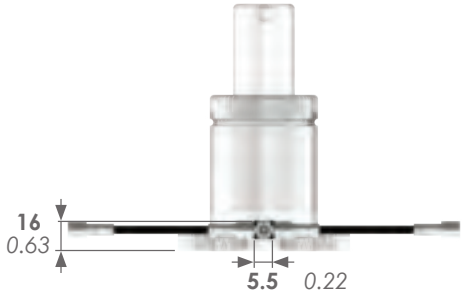
MET 2017

When using SF Flange.

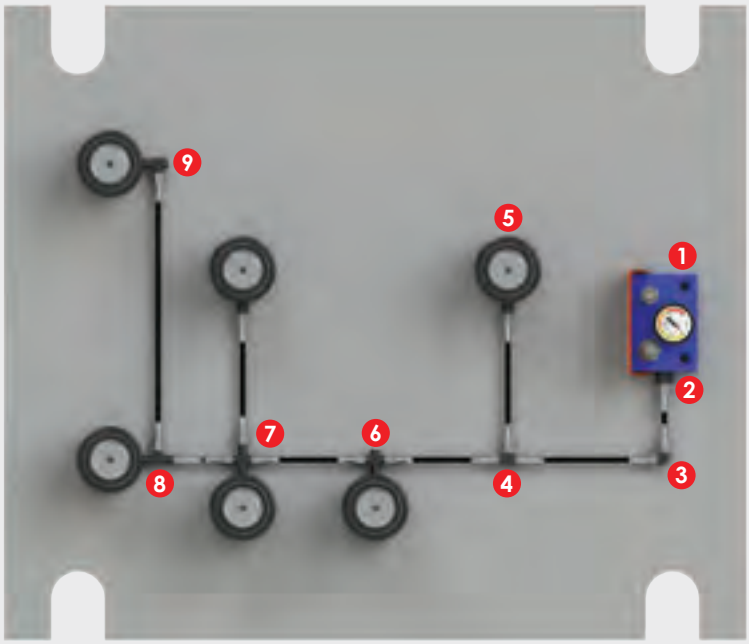


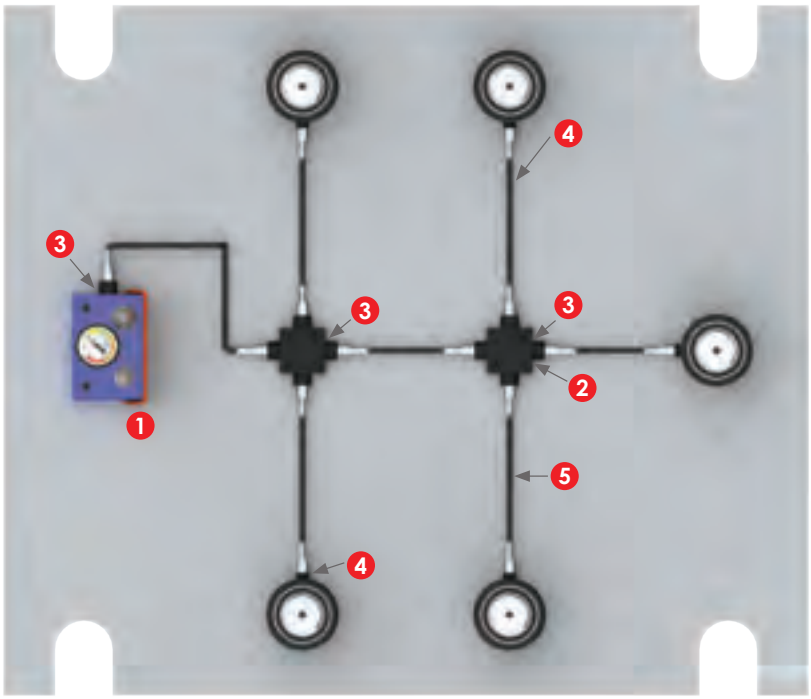






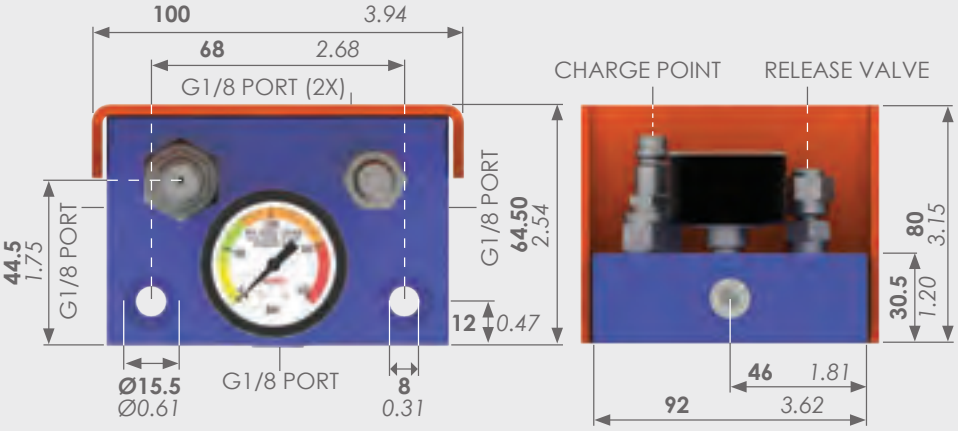
1. MET111 Control Panel
2. MET2002
3. MET2005
4. MET2006
5. MET2001
6. MET2011
7. MET2013
8. MET2012
9. MET2010



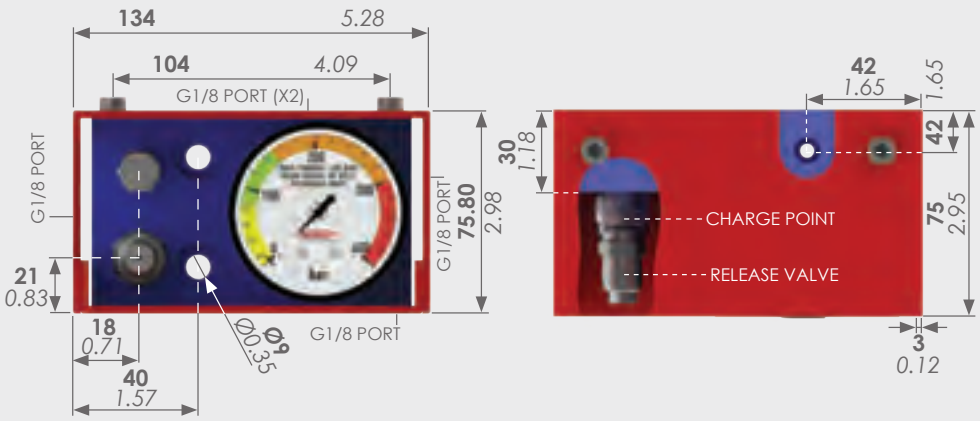


1. MET111 Control Panel
2. MET1061
3. MET2002
4. MET2001
5. MET2030

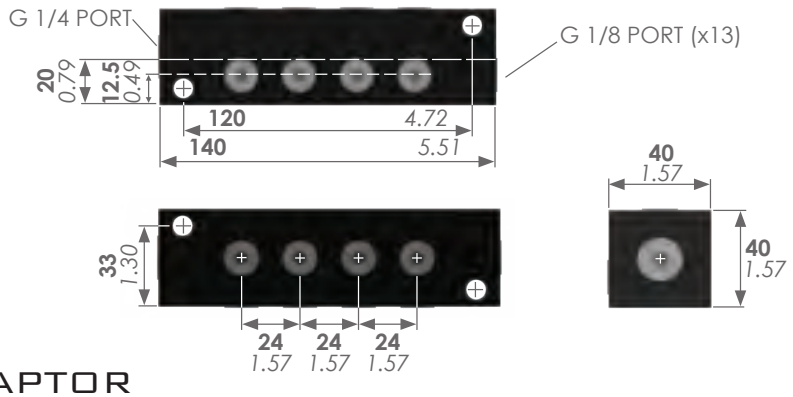
MET 111 - MINI CONTROL PANEL



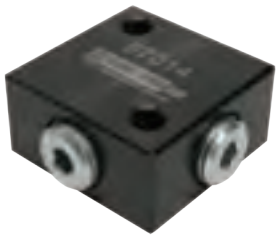
MET 222 - STANDARD CONTROL PANEL

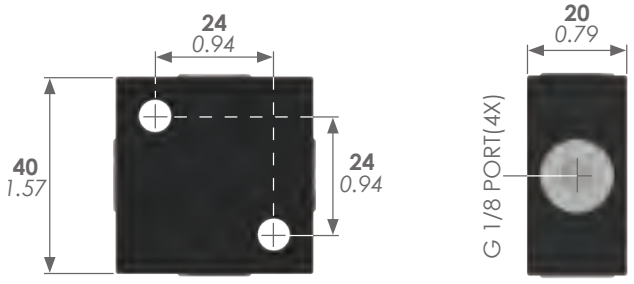


MET 1060 - 14 WAY ADAPTOR



MET 1061 - 4 WAY ADAPTOR

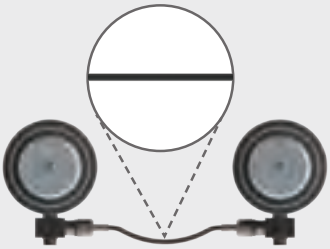




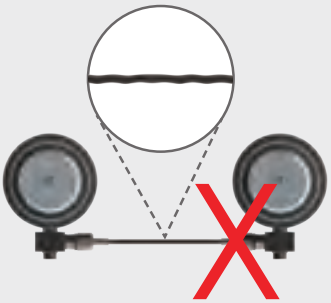
HOSE INSTALLATION GUIDELINES

Never exceed maximum values given for pressure and temperature for the hoses. Make sure all hoses and couplings are perfectly clean before fitting.

Select a hose length that will allow for a certain amount of movement.

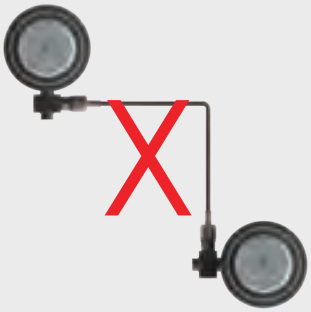


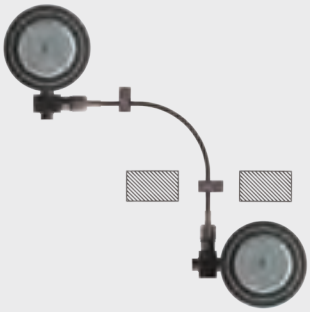
The longitudinal marking on the hose must not be twisted after fitting.



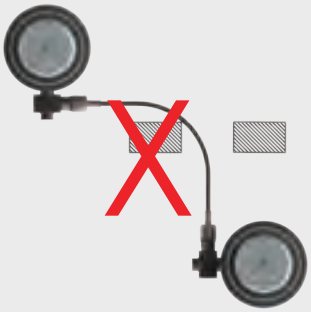
Select hose couplings that avoid sharp bends in the hose.

Never go below the recommended minimum bend radius of the hose.





Fix the hose correctly to avoid mechanical damage.



MET009 hose clip for both CNOMO and MICRO hose systems

GAS SPRING ACCESSORIES

To check that a gas spring is at the correct force, a test stand should be used. Testing in any other way could be dangerous and cause a safety issue.

Designed to measure the initial gas spring force with an accurate easy to read digital display.

MET: 8220
BENCH MOUNTED TEST STAND

10t Light duty test stand with digital display.

For use with lower tonnage gas springs and short stroke full height springs. Maximum gas spring height 280mm.

Gas spring force should be checked with a test stand only!

MET: 8223
FLOOR MOUNTED TEST STAND

20t Heavy Duty test stand with digital display.

For use on all gas spring types including high tonnage and long strokes.

Gas spring force should be checked with a test stand only!

MET: 8221
63 DIAMETER MANOMETER

MET: 8222
48 DIAMETER MANOMETER

MET: 8204
MALE CHARGE FITTING

MET: 8200
HOSE & SHUT OFF VALVE

MET: 8201
REGULATOR

MET: 8202
CHARGE UNIT - G1/8

MET: 8205
FEMALE CHARGE FITTING

MET: 8206
M6 CHARGE ADAPTOR

MET: 8208
M8 CHARGE ADAPTOR

NITRO-SPRING SERVICE KITS

Kit includes:

- Complete seal unit.
- Retaining Clip & Dust Seal.
- Valve.
- Oil Bottle.
- Plug & Valve.

* See gas spring data page for overhaul kit part number.

MET: 8101
G1/8 PORT

MET: 8102
M6 PORT

IMPORTANT SAFETY INFORMATION

ONLY TRAINED AND CERTIFIED PERSONS SHOULD ATTEMPT TO CARRY OUT MAINTENANCE WORK ON GAS SPRINGS.

MET: 8216 GAS SPRING TOOL KIT

Provides all necessary equipment to overhaul and maintain Nitro-Springs.

MET: 8004
VALVE TOOL

MET: 8005
M6 VALVE TOOL

T-BAR: MET: 9005 - M6
MET: 8017 - M8

MET: 8206
M6 CHARGE ADAPTER

MET: 8208
M8 CHARGE ADAPTER

MET: 8205
FEMALE CHARGE FITTING

MET: 8003
CLIP REMOVING TOOL

MET: 8000
SEAL UNIT DEPRESSOR

MET: 8217
LEAK DETECTOR SPRAY

MET: 1080
CNOMO END FITTING - STRAIGHT

MET: 1081
CNOMO END FITTING - 90 DEGREE

MET: 1085
MICRO HOSE END

MET: 1082 - MICRO BORE HOSE
5MM DIA. HOSE FOR BOTH MICRO AND CNOMO HOSE SYSTEMS

MET: 1086
HOSE CUTTERS

MET: 1087
PORTABLE HOSE CRIMPING MACHINE

MET: 1088
BENCH MOUNT HOSE CRIMPING MACHINE

MET: 1089
PNEUMATIC FOOT OPERATED PEDAL

DIGITAL PRESSURE SWITCH MONITOR

MET8400

The digital pressure monitor switch is ideal for piped gas spring systems where the pressure is critical, if the pressure drops below a certain level the tool produces a bad part. The pressure monitor can be set to the critical pressure levels, should the pressure in the system fall or rise below the set levels then the press unit will alarm and can be stopped automatically.

- **Digital display.**
- **NO or NC (selectable).**
- **Supply Voltage 12-30V dc.**
- **2 switching outputs.**
- **Connection G1/4.**
- **Easy set with 3 digit password protection.**

MET8400 pressure switch connected to MET222 control panel.

Corporate Office &
Manufacturing Plant
2734 Banning Rd.
Cincinnati, Ohio 45253-8706
Ph: (513) 923-3777
Fax: (513) 923-1111
Toll Free (800) 543-7041
Porter@porterpunch.com

Georgia
Manufacturing Plant
660 James Rd.
Alpharetta, GA 30004
Ph: (770) 751-7234
Fax: (770) 751-7238
Toll Free: (800) 437-5185
Georgia@porterpunch.com

Canada Plant
30 Duke Street West
Suite #503
Kitchener, Ontario, Canada N2H 3W5
Ph: (519) 746-3130
Fax: (519)746-6960
Toll Free: 1-800-265-8844
Canada@porterpunch.com