

DADCO®

Nitrogen Gas Springs – EU



- Equipped with Overstroke Protection
- Select models and mounts to match Global Automotive Standards
- Forces from 0,4 kN to 95 kN

DADCO®

The global leader in nitrogen gas spring technology

DADCO produces top quality products at competitive prices and provides a superior level of customer service. Founded in 1958, DADCO is the highest volume producer of gas springs for press tools. DADCO's products are widely approved and used in global operations for many industries including metal stamping, automotive and plastic injection molding.

DADCO offers a full range of products that correspond to the VDI standards specification. Refer to the table below, for the gas spring selection by force, diameter or model number. Mount options are available on pages 31-33.

All models listed are equipped with Overstroke Protection.

Force Model	Diameter	DADCO Model	Page
0,42 kN	M16 x 1,5	E.16S	4
1,70 kN	M25 x 1,5	E.24S	4
0,9 kN	ø19	C.090S	5
2,0 kN	ø25	C.180S	6
1,7 kN	ø19	U.0175VS	7
3,2 kN	ø25	U.0325VS	8
3,5 kN	ø32	U.0400S	9
5 kN	ø38	U.0600S	10
7,5 kN	ø45	U.0845VS	11
10 kN	ø50	U.1000S	12
15 kN	ø63	U.1600S	13
24 kN	ø75	U.2600VS	14
42 kN	ø95	U.4600S	15
66 kN	ø120	U.6600S	16
95 kN	ø150	U.9600S	17
1,5 kN	ø32	90.10.00170S	18
2,5 kN	ø38	L.300S	19
5 kN	ø44,5	90.10.00500S	20
7,5 kN	ø50	90.10.00750S	21
15 kN	ø75	90.10.01500S	22
30 kN	ø95	90.10.03000S	23
50 kN	ø120	90.10.05000S	24
75 kN	ø150	90.10.07500S	25
100 kN	ø195	90.10.10000S	26
10 kN	ø50	UX.1000VS	27
24 kN	ø75	UX.2600VS	28
42 kN	ø95	UX.4600S	29
66 kN	ø120	UX.6600S	30
95 kN	ø150	UX.9600S	31

Overstroke Safety Feature

While best practices in die design protect gas springs from over travel, DADCO offers integrated Overstroke Protection for added precaution. These gas springs permit the nitrogen gas to vent through an orifice at the top of the gas spring when the stroke length exceeds the nominal value.

Adjustable Force

For convenience, self-contained cylinders usually are delivered pre-charged to the desired force and ready to install. If force adjustment is needed, a filling/drainage port is located in the cylinder for safe, easy access.

Numerous Piping Options

Many customers have recognized the benefits of piping gas springs to monitor, control, and adjust force from outside the die. DADCO offers a wide selection of hoses, fittings, control panels and equipment to simplify the piping process. For more information, refer to DADCO's Nitrogen Gas Spring Linked System Components Catalog. Training and technical assistance are also offered by DADCO.



Customer Satisfaction

DADCO's motto is "Whatever It Takes To Satisfy Our Customers." DADCO will assist in any way possible to ensure that customers are completely satisfied. DADCO's salespeople and distributors are solution-oriented, product-knowledgeable, and eager to assist customers. DADCO's engineers are available to help customers with specific applications.

Rapid Delivery

DADCO's modern 13,150 m² main production facility as well as satellite facilities permit the fastest deliveries in the industry. Products are available both directly and through a network of trained distributors providing worldwide support.

Warranty

DADCO warrants its nitrogen gas springs to be free from defects in workmanship or materials for a period of one year from date of manufacture.

CAD Templates On-line



DADCO's entire product line is available on-line in solid models and 2D CAD formats. For more information, visit our website, www.dadco.net, or contact DADCO.

Installation Examples

DADCO offers a variety of mount options to meet specific customer applications. Installation and fastening of the gas springs should take into consideration load support, fastener selection and torque values. For additional information on installation requirements see page 35. Cylinder and mount dimensions are shown on pages 4-30.

TO Basic Model in a flat bottom pocket. The pocket must be bored with a flat bottom, or a spacer must be used to create a flat surface.

TO Basic Model mounted inverted requires back-up to support the full load. Retain inverted cylinders tight in the pocket with the appropriate length cap screw to eliminate movement.

TO Basic Model mounted to a plate. Linked cylinders require clearance for the hose and fittings.

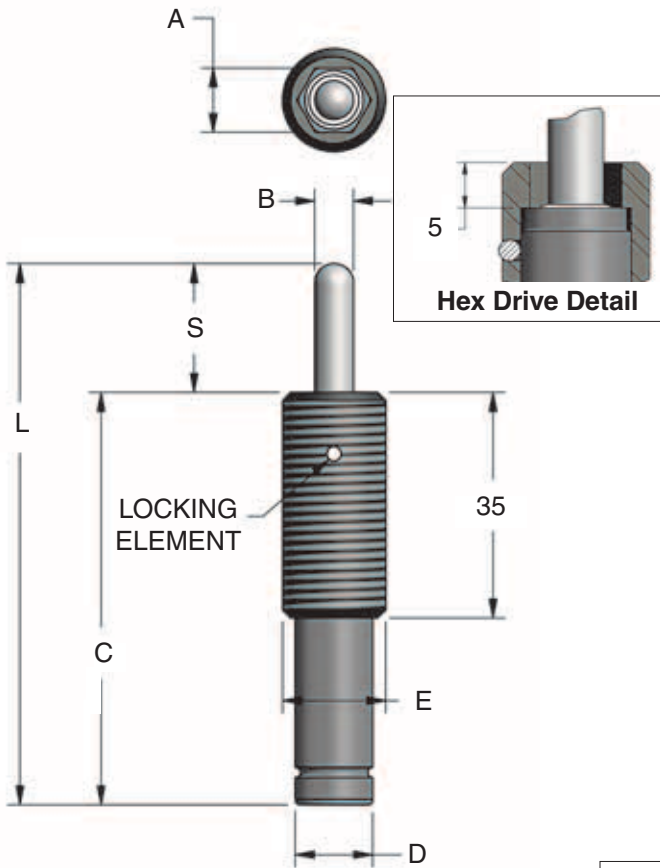
TO Basic Model mounted in a horizontal pocket. Allow clearance in the rod pocket to avoid contacting the body of the cylinder during operation. Allow the rod to locate freely.

B19/B319V mounts require back-up to support the load. For long stroke models use two mounts to secure the cylinder.

B12/B212/B312 mounts must be fastened to the bottom groove only. Back-up is required to support the full load.

Pad extensions or die shoe spacers and striker plates may be used. Never secure anything to the rod end; the rod end construction thread is intended only for assembly purposes.

B21/B25 mounts with provided o-ring must be fastened to the top groove only. Back-up is required to support the full load. Do not mount from the bottom side of the mount.



Model	A	B	D	E
E.16S.____	10	ø6,0	ø12	M16 x 1,5
E.24S.____	17	ø12	ø21,5	M24 x 1,5

Part No.	S mm	C	L ±0,4
E.16S.020	20	64	84
E.16S.050	50	94	144
E.16S.080	80	127	207

Part No.	S mm	C	L ±0,4
E.24S.020	20	80	100
E.24S.050	50	110	160
E.24S.080	80	140	220

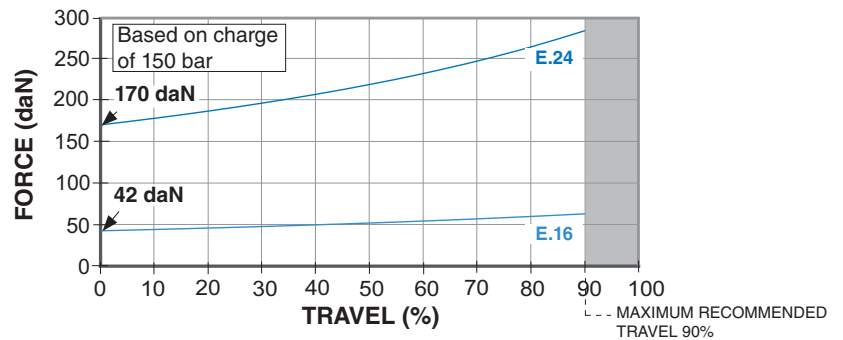
Jam Nuts

Part No.	A	B	D	E
SL16-JN	28	24	8	M16 x 1,5
C90-JN2	36	42	12	M24 x 1,5

Force Charts

On-Contact Force

E.16S		E.24S	
bar	daN	bar	daN
150	42	150	170
75	21	75	85
40	11	40	45
20	6	20	23



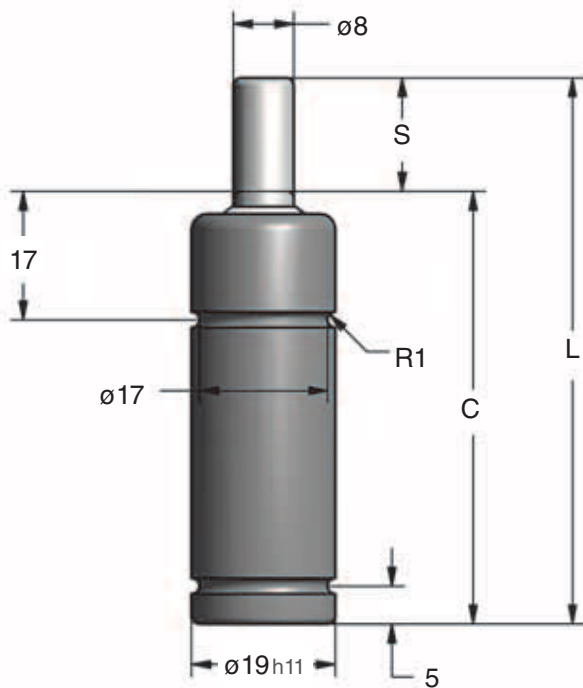
Ordering Example:

E.16S.020. 150

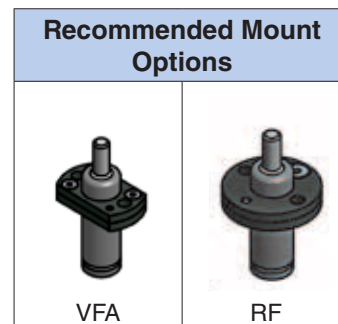
Part Number: Includes Series (E), Model (16S or 24S) and Stroke Length (020, 050 or 080).

Charging Pressure: 20-150 bar. *When not specified, default is 150 bar.*

C.090S – 0,9 kN



Part No.	S mm	C	L ±0,4
C.090S.015	15	57	72
C.090S.025	25	67	92
C.090S.038	38	80	118
C.090S.050	50	92	142
C.090S.063	63,5	108,5	172
C.090S.080	80	125	205
C.090S.100	100	145	245
C.090S.125	125	170	295

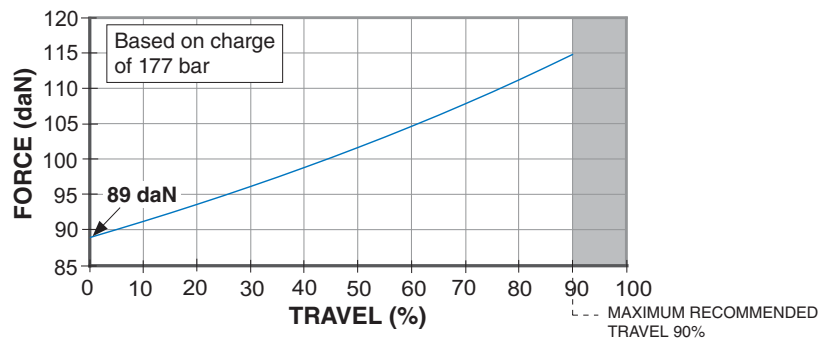


Refer to page 32 for mount information.

Force Charts

On-Contact Force

bar	daN
177	89
150	75
125	63
100	50
75	38
50	25
35	17



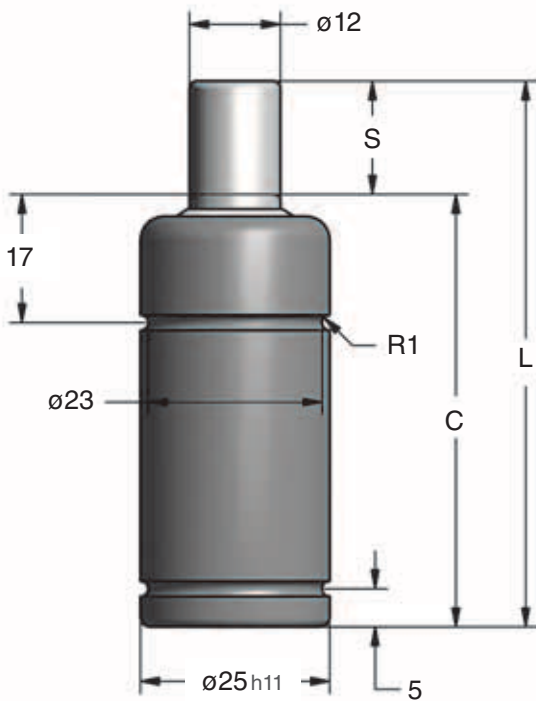
Ordering Example:

C.090S.025. BK.177

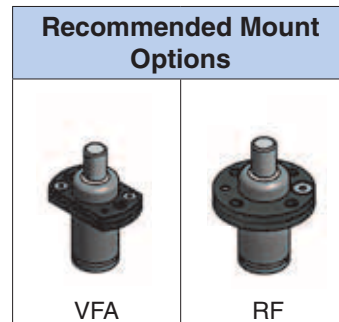
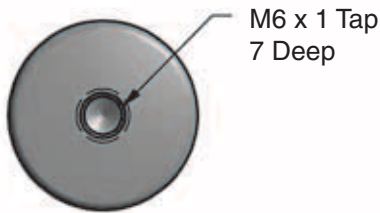
Part Number: Includes Series (C), Model and Stroke Length.

Charging Pressure: 35-177 bar. *When not specified, default is 177 bar.*

Mounts ordered with cylinder will be attached at the factory.



Part No.	S mm	C	L $\pm 0,4$
C.180S.015	15	57	72
C.180S.025	25	67	92
C.180S.038	38	80	118
C.180S.050	50	92	142
C.180S.063	63,5	108,5	172
C.180S.080	80	125	205
C.180S.100	100	145	245
C.180S.125	125	170	295

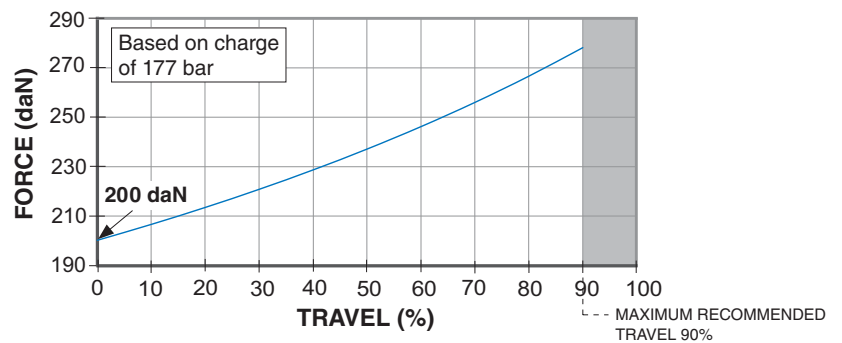


Refer to page 32 for mount information.

Force Charts

On-Contact Force

bar	daN
177	200
150	170
125	141
100	113
75	85
50	57
35	39



Ordering Example:

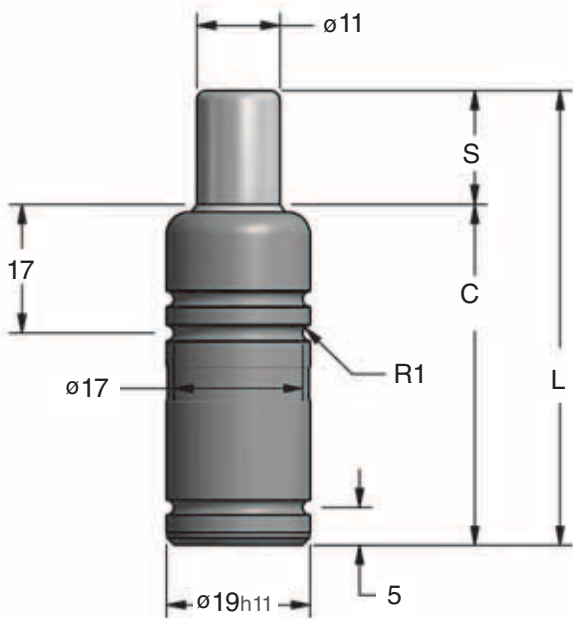
C.180S.025. BK.177

Part Number: Includes Series (C), Model and Stroke Length.

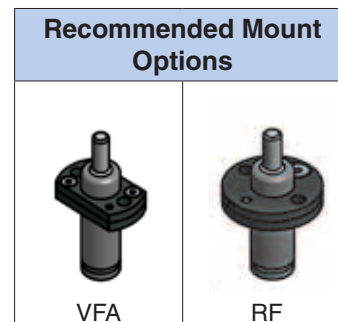
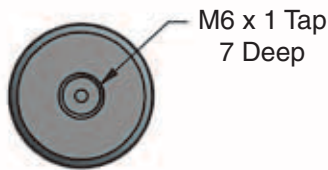
Charging Pressure: 35-177 bar. When not specified, default is 177 bar.

Mounts ordered with cylinder will be attached at the factory.

U.0175VS – 1,7 kN



Part No.	S mm	C	L ±0,4
U.0175VS.010	10	40	50
U.0175VS.015	15	45	60
U.0175VS.025	25	55	80
U.0175VS.038	38	68	106
U.0175VS.050	50	80	130
U.0175VS.063	63,5	93,5	157
U.0175VS.080	80	115	195
U.0175VS.100	100	135	235
U.0175VS.125	125	160	285

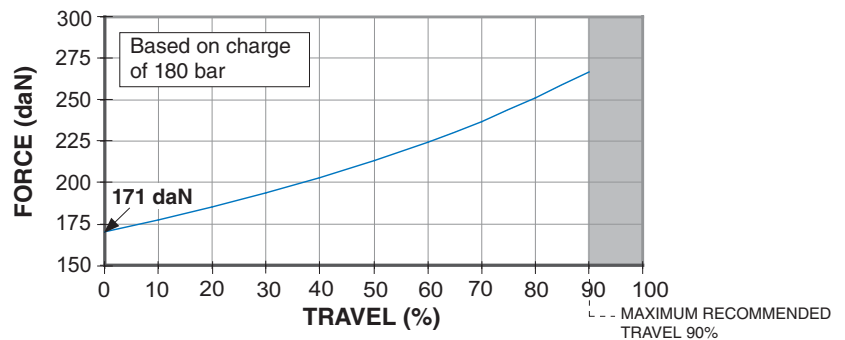


Refer to page 32 for mount information.

Force Charts

On-Contact Force

bar	daN
180	171
150	143
125	119
100	95
75	71
50	48
25	24



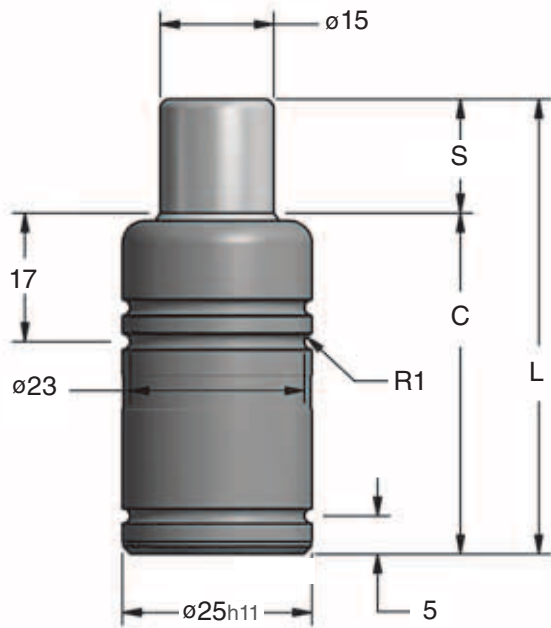
Ordering Example:

U.0175VS.025. 180

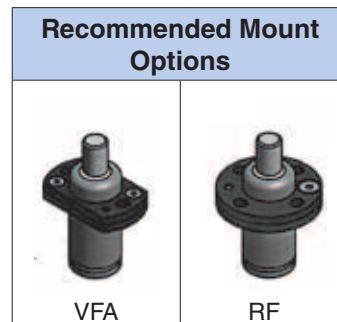
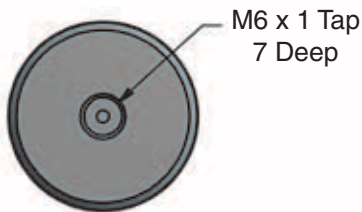
Part Number: Includes Series (U), Model and Stroke Length.

Charging Pressure: 15-180 bar. When not specified, default is 180 bar.

Mounts ordered with cylinder will be attached at the factory.



Part No.	S mm	C	L $\pm 0,4$
U.0325VS.010	10	40	50
U.0325VS.015	15	45	60
U.0325VS.025	25	55	80
U.0325VS.038	38	68	106
U.0325VS.050	50	80	130
U.0325VS.063	63,5	93,5	157
U.0325VS.080	80	115	195
U.0325VS.100	100	135	235
U.0325VS.125	125	160	285

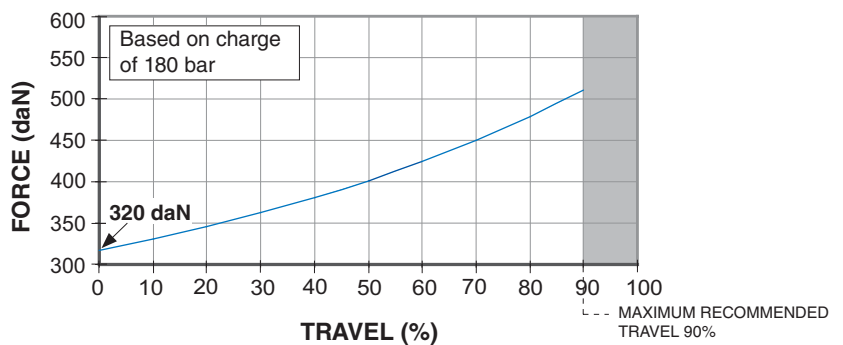


Refer to page 32 for mount information.

Force Charts

On-Contact Force

bar	daN
180	320
150	265
125	221
100	177
75	133
50	88
25	44



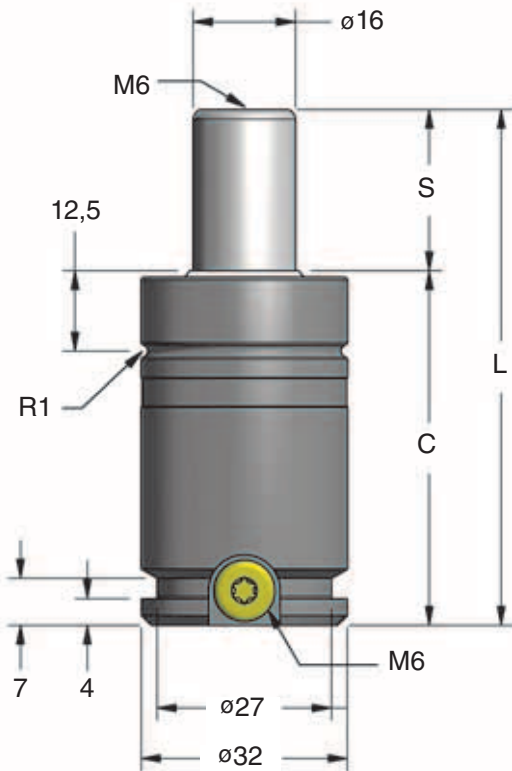
Ordering Example:

U.0325VS.025. 180

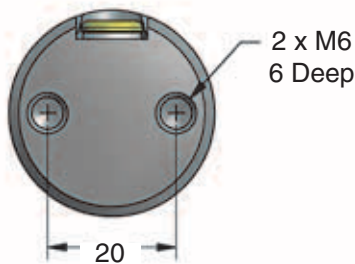
Part Number: Includes Series (U), Model and Stroke Length.

Charging Pressure: 15-180 bar. When not specified, default is 180 bar.

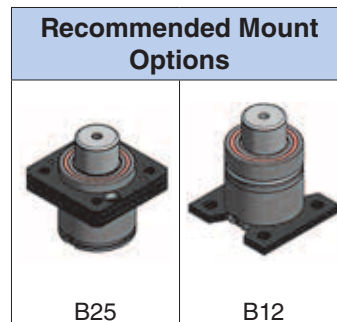
Mounts ordered with cylinder will be attached at the factory.



Part No.	S mm	C	L ±0,25
U.0400S.010	10	40	50
U.0400S.013	12,5	42,5	55
U.0400S.016	16	46	62
U.0400S.025	25	55	80
U.0400S.038	37,5	67,5	105
U.0400S.050	50	80	130
U.0400S.063	62,5	92,5	155
U.0400S.080	80	110	190
U.0400S.100	100	130	230
U.0400S.125	125	155	280



TO – Basic Model

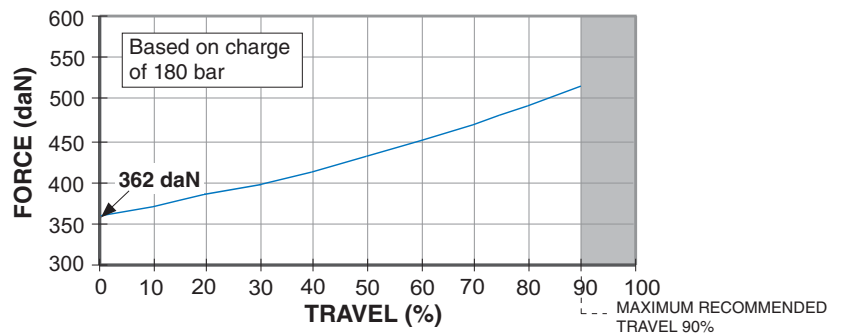


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	daN
180	362
150	302
125	251
100	201
75	151
50	101
25	50



Ordering Example:

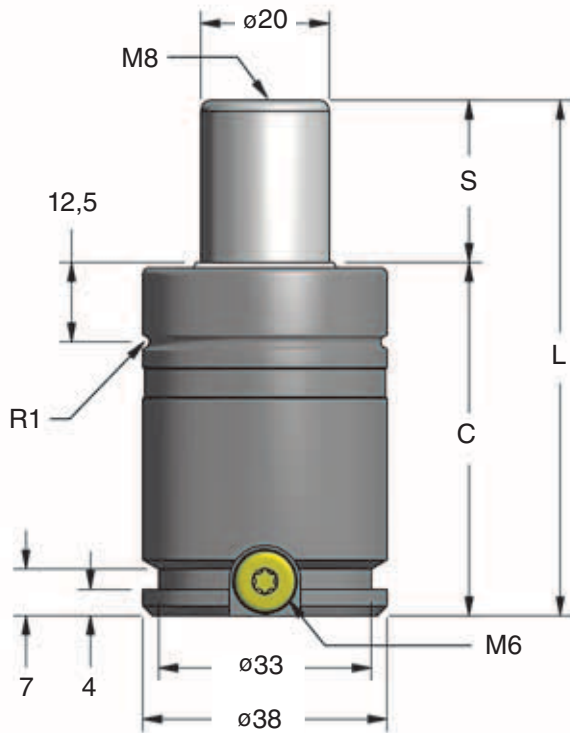
U.0400S.025. TO. C. 180

Part Number: Includes Series (U), Model and Stroke Length.

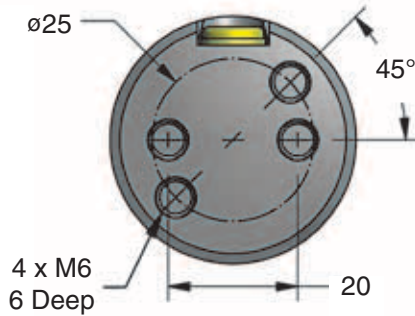
Charging Pressure: 15-180 bar. *When not specified, default is 180 bar.*

Mount Option: TO = Basic Model. *When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.*

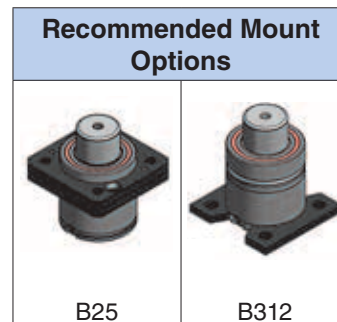
Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*



Part No.	S mm	C	L $\pm 0,25$
U.0600S.010	10	40	50
U.0600S.013	12,5	42,5	55
U.0600S.016	16	46	62
U.0600S.025	25	55	80
U.0600S.038	37,5	67,5	105
U.0600S.050	50	80	130
U.0600S.063	62,5	92,5	155
U.0600S.080	80	110	190
U.0600S.100	100	130	230
U.0600S.125	125	155	280



TO – Basic Model

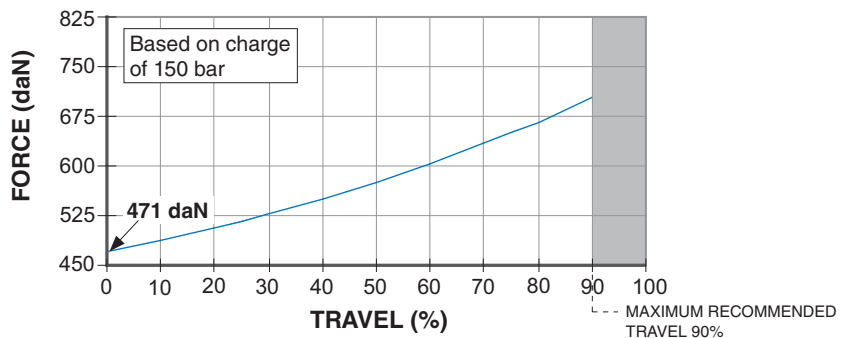


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

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



Ordering Example:

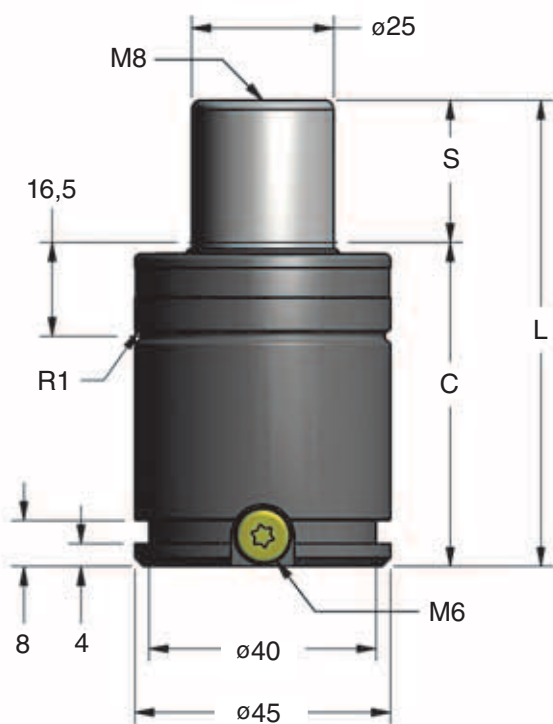
U.0600S.025. TO. C. 150

Part Number: Includes Series (U), Model and Stroke Length.

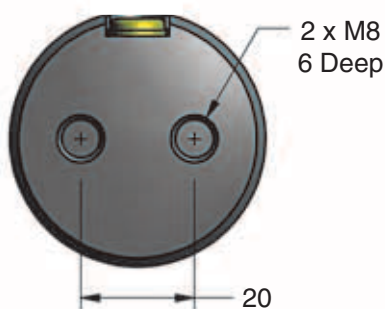
Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



Part No.	S mm	C	L ±0,25
U.0845VS.013	12,5	44,5	57
U.0845VS.025	24,8	56,8	81,6
U.0845VS.038	37,5	69,5	107
U.0845VS.050	50	82	132
U.0845VS.063	62,5	94,5	157
U.0845VS.080	80	112	192
U.0845VS.100	100	132	232
U.0845VS.125	125	157	282



TO – Basic Model

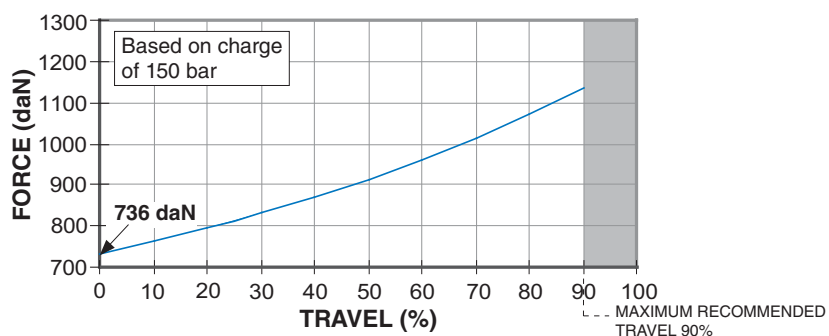


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	daN
150	736
125	614
100	491
75	368
50	245
25	123



Ordering Example:

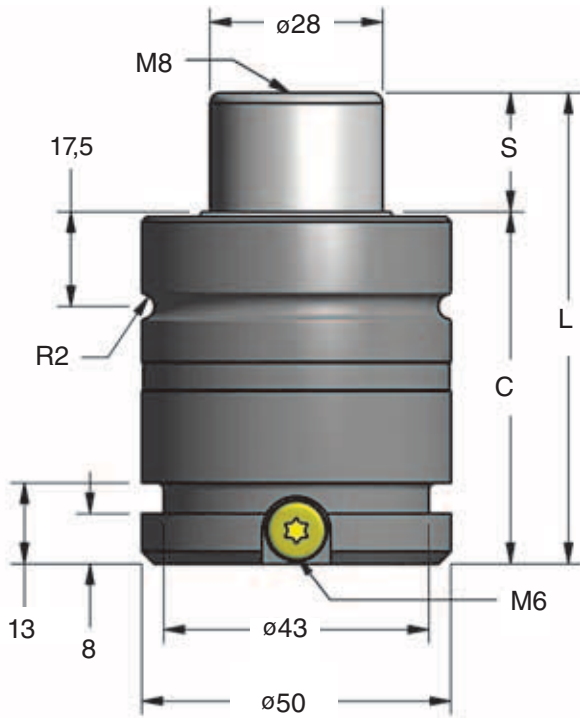
U.0845VS.025. TO. C. 150

Part Number: Includes Series (U), Model and Stroke Length.

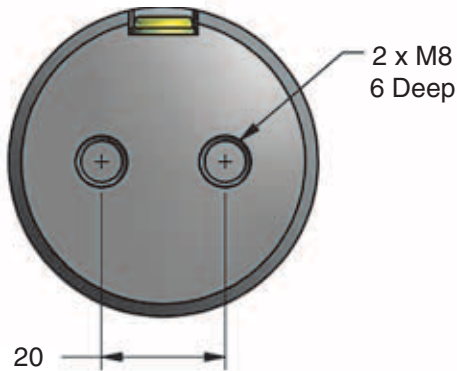
Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

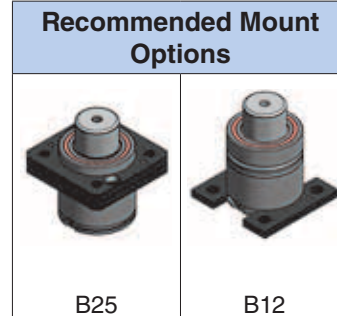
Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



Part No.	S mm	C	L $\pm 0,25$
U.1000S.013	12,5	50,5	63
U.1000S.025	25	63	88
U.1000S.038	37,5	75,5	113
U.1000S.050	50	88	138
U.1000S.063	62,5	100,5	163
U.1000S.080	80	118	198
U.1000S.100	100	138	238
U.1000S.125	125	163	288



TO – Basic Model

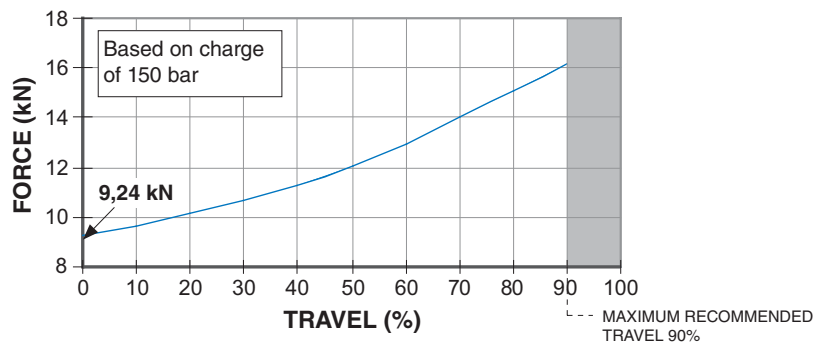


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	9,24
125	7,70
100	6,16
75	4,62
50	3,08
25	1,54



Ordering Example:

U.1000S.025. TO. C. 150

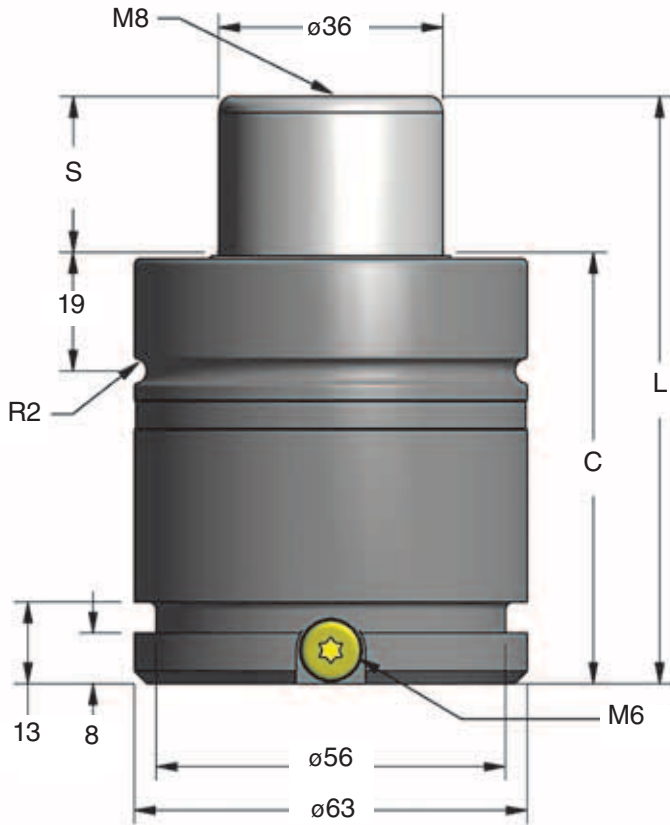
Part Number: Includes Series (U), Model and Stroke Length.

Charging Pressure: 15-150 bar. *When not specified, default is 150 bar.*

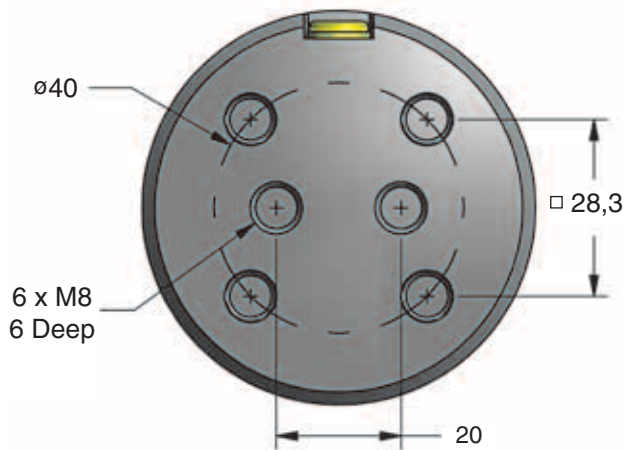
Mount Option: TO = Basic Model. *When not specified, default is TO.* Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*

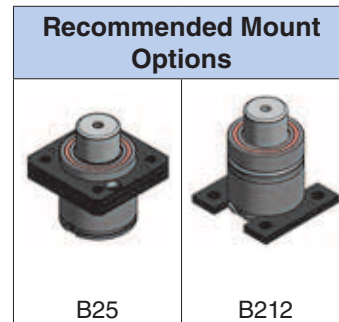
U.1600S – 15 kN



Part No.	S mm	C	L ±0,25
U.1600S.013	12,5	56,5	69
U.1600S.025	25	69	94
U.1600S.038	37,5	81,5	119
U.1600S.050	50	94	144
U.1600S.063	62,5	106,5	169
U.1600S.080	80	124	204
U.1600S.100	100	144	244
U.1600S.125	125	169	294



AO – Basic Model

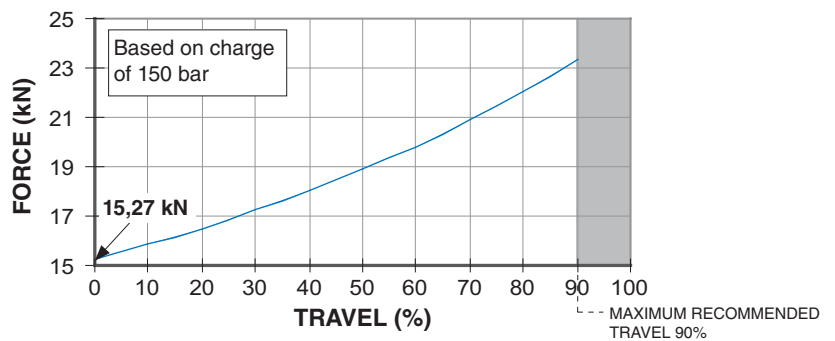


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	15,27
125	12,72
100	10,18
75	7,63
50	5,09
25	2,54



Ordering Example:

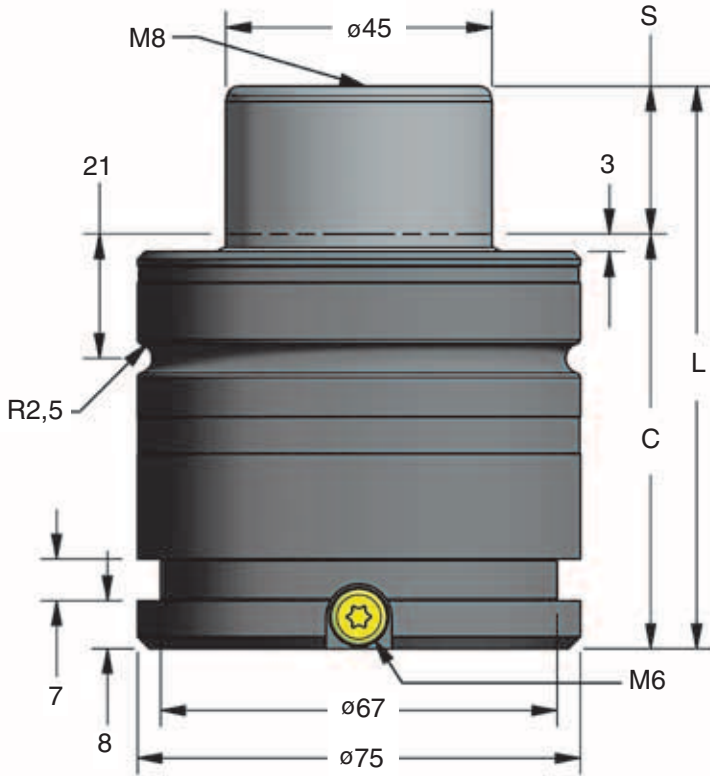
U.1600S.025. AO. C. 150

Part Number: Includes Series (U), Model and Stroke Length.

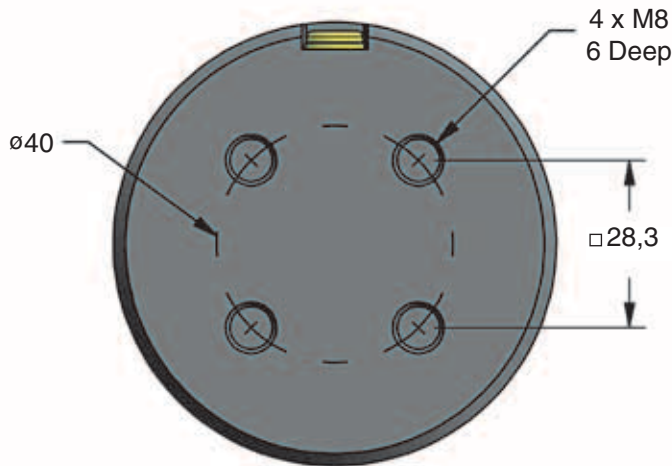
Mount Option: AO = Basic Model. When not specified, default is AO. Mounts ordered with cylinder will be attached at the factory.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

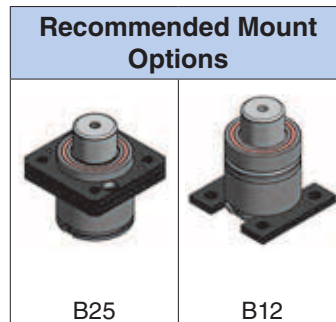
Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



Part No.	S mm	C	L ±0,25
U.2600VS.025	25	70	95
U.2600VS.038	37,5	82,5	120
U.2600VS.050	50	95	145
U.2600VS.063	62,5	107,5	170
U.2600VS.080	80	125	205
U.2600VS.100	100	145	245
U.2600VS.125	125	170	295



TO – Basic Model

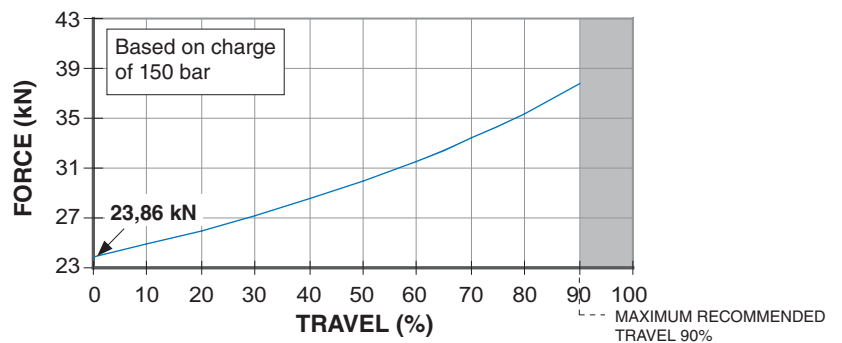


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	23,86
125	19,88
100	15,90
75	11,93
50	7,95
25	3,98



Ordering Example:

U.2600VS.025. TO. C. 150

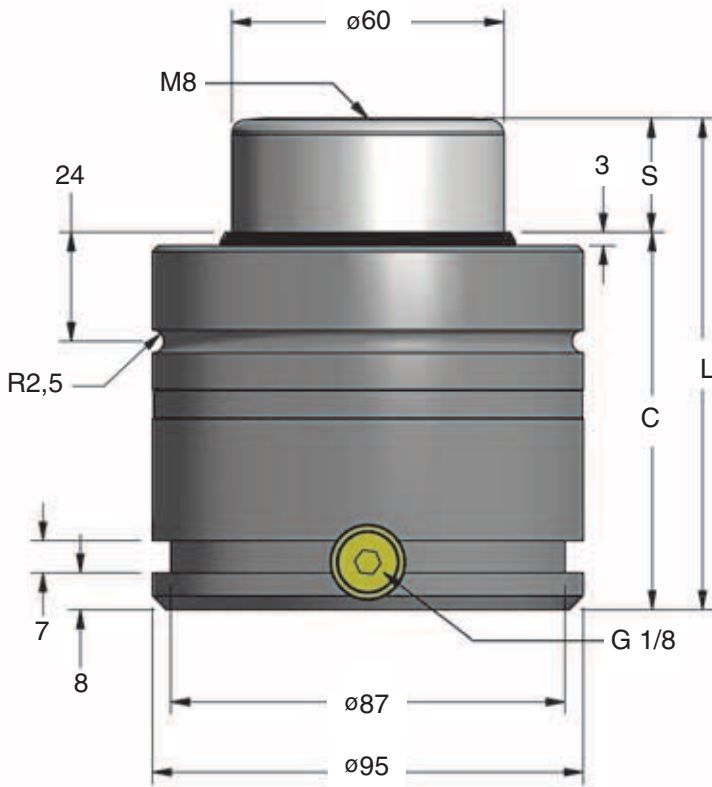
Part Number: Includes Series (U), Model and Stroke Length.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

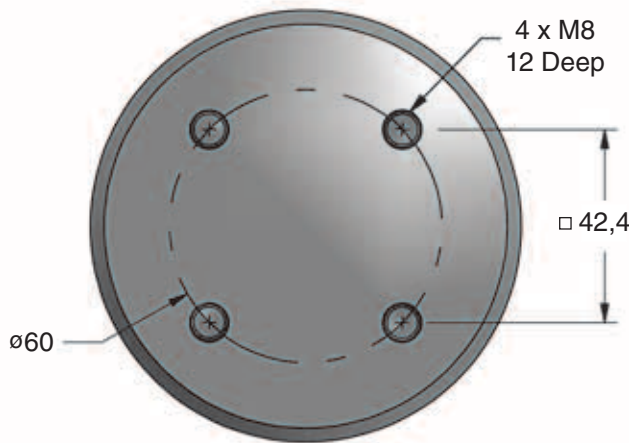
Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.

U.4600S – 42 kN



Part No.	S mm	C	L ±0,25
U.4600S.025	25	83	108
U.4600S.038	37,5	95,5	133
U.4600S.050	50	108	158
U.4600S.063	62,5	120,5	183
U.4600S.080	80	138	218
U.4600S.100	100	158	258
U.4600S.125	125	183	308



TO – Basic Model

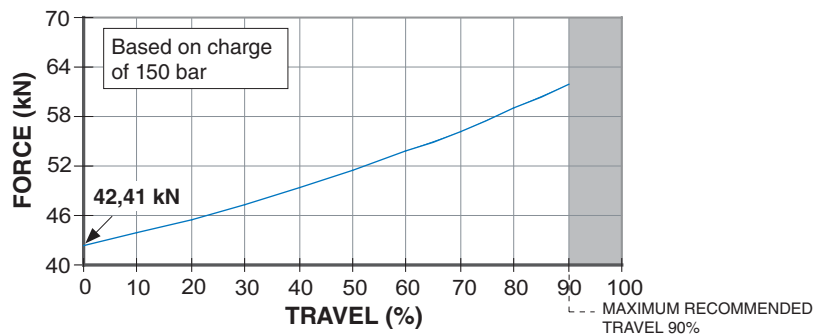


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	42,41
125	35,34
100	28,27
75	21,21
50	14,14
25	7,07



Ordering Example:

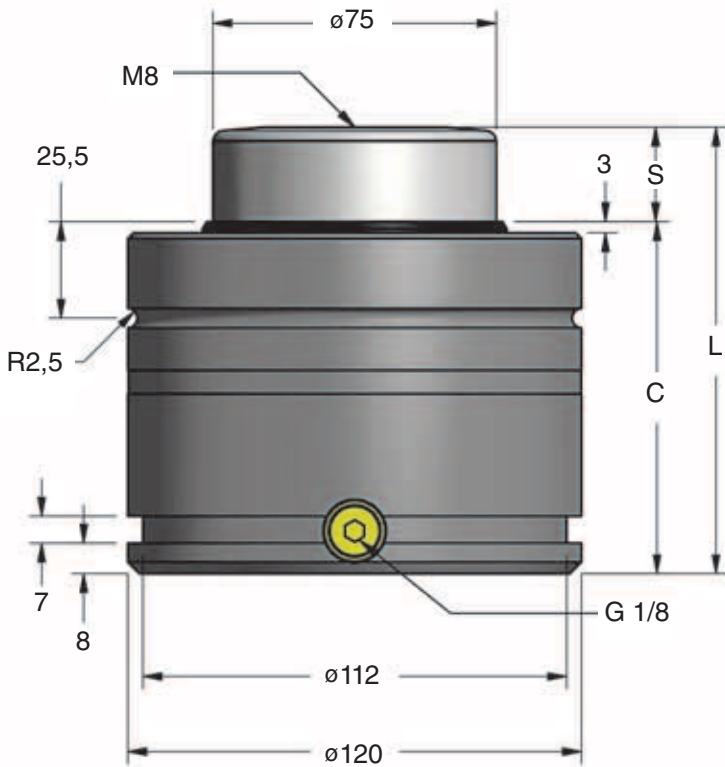
U.4600S.025. TO. C. 150

Part Number: Includes Series (U), Model and Stroke Length.

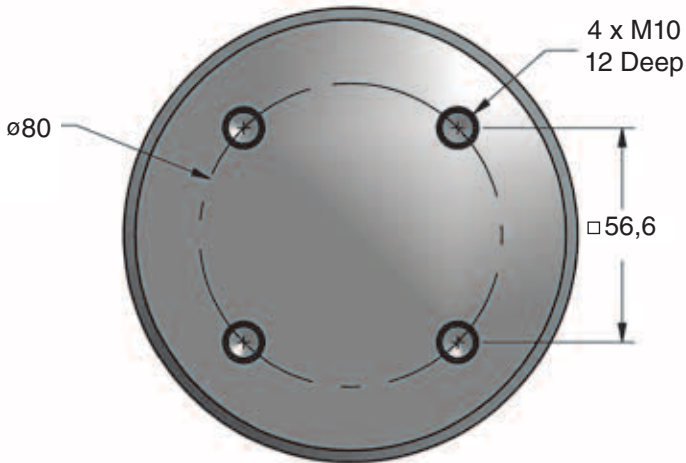
Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

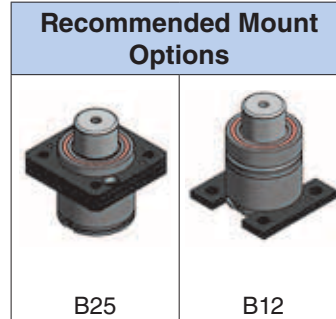
Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



Part No.	S mm	C	L ±0,25
U.6600S.025	25	93	118
U.6600S.038	37,5	105,5	143
U.6600S.050	50	118	168
U.6600S.063	62,5	130,5	193
U.6600S.080	80	148	228
U.6600S.100	100	168	268
U.6600S.125	125	193	318



TO – Basic Model

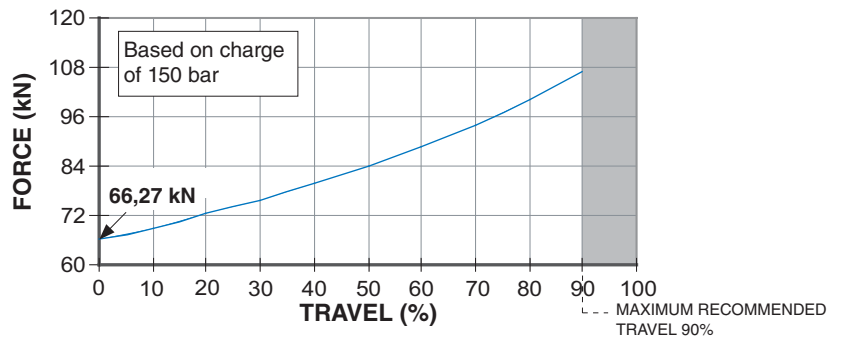


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	66,27
125	55,22
100	44,18
75	33,13
50	22,09
25	11,04



Ordering Example:

U.6600S.025. TO. C. 150

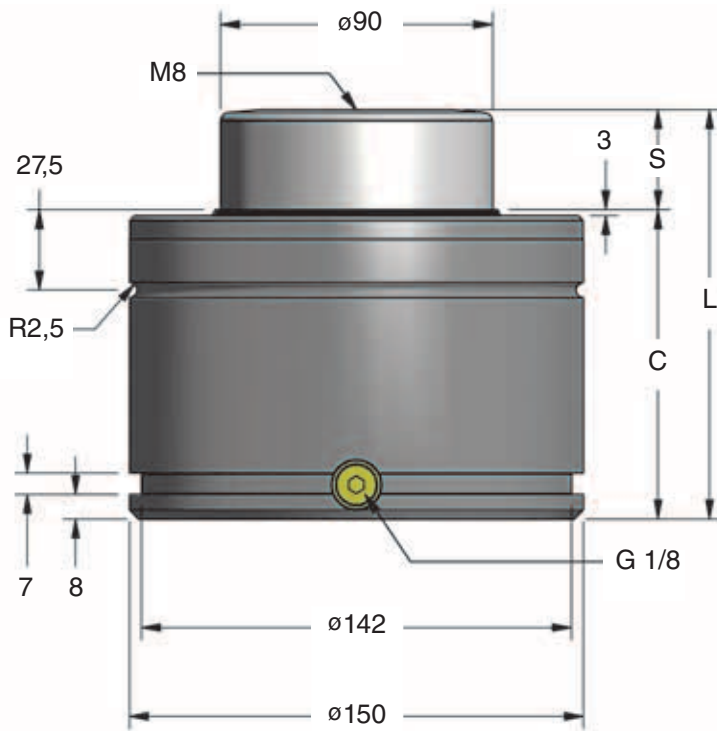
Part Number: Includes Series (U), Model and Stroke Length.

Charging Pressure: 15-150 bar. *When not specified, default is 150 bar.*

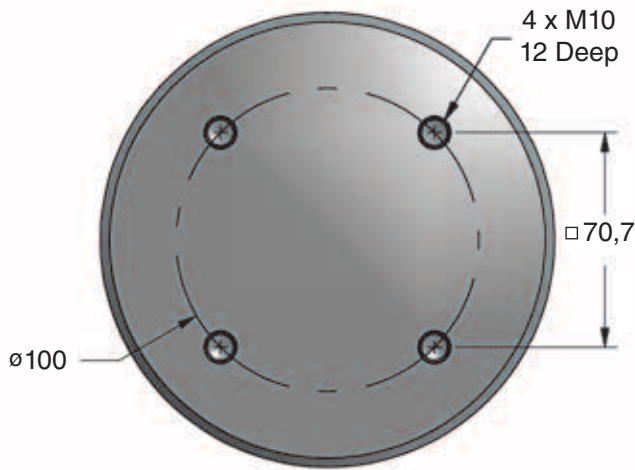
Mount Option: TO = Basic Model. *When not specified, default is TO.* Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*

U.9600S – 95 kN



Part No.	S mm	C	L ±0,25
U.9600S.025	25	103	128
U.9600S.038	37,5	115,5	153
U.9600S.050	50	128	178
U.9600S.063	62,5	140,5	203
U.9600S.080	80	158	238
U.9600S.100	100	178	278
U.9600S.125	125	203	328



TO – Basic Model

Recommended Mount Options

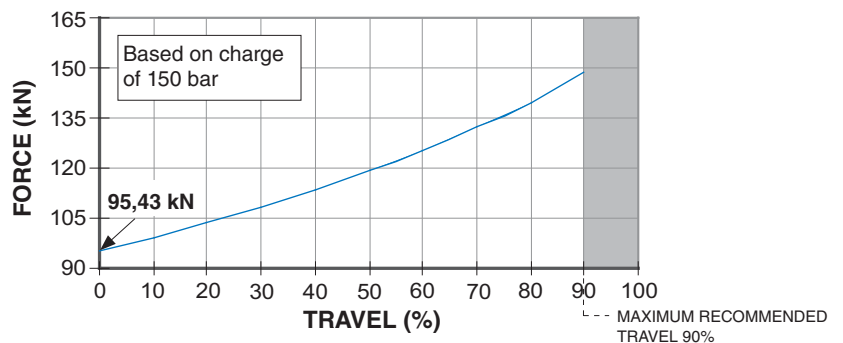
B25 B12

Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	95,43
125	79,52
100	63,62
75	47,71
50	31,81
25	15,90



Ordering Example:

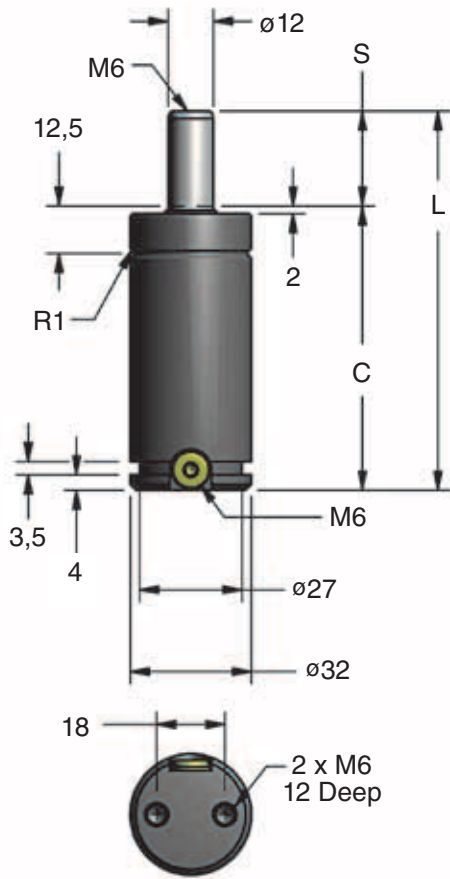
U.9600S.025. TO. C. 150

Part Number: Includes Series (U), Model and Stroke Length.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

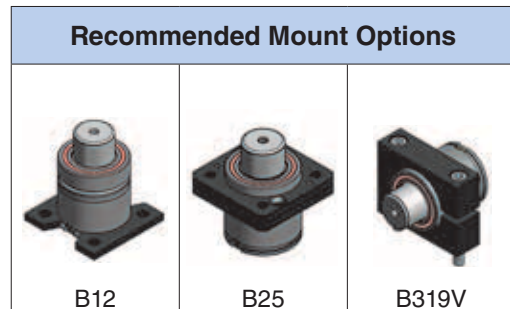
Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



TO – Basic Model

Part No.	S mm	C	L ±0,25
90.10.00170S.010	10	60	70
90.10.00170S.013	12,7	62,7	75,4
90.10.00170S.016	16	66	82
90.10.00170S.025	25	75	100
90.10.00170S.038	38	88	126
90.10.00170S.050	50	100	150
90.10.00170S.063	63,5	113,5	177
90.10.00170S.080	80	130	210
90.10.00170S.100	100	150	250
90.10.00170S.125	125	175	300

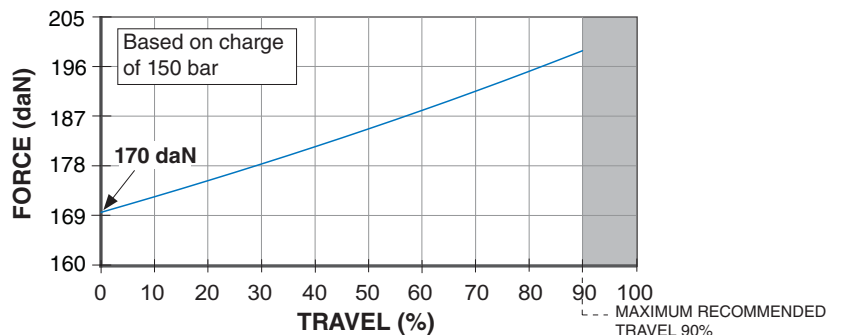


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	daN
150	170
125	141
100	113
75	85
50	57
25	40
20	23



Ordering Example:

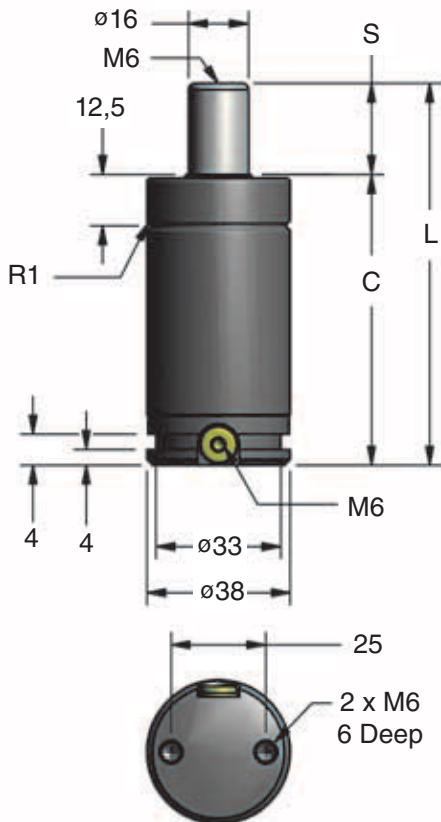
90.10.00170S.025. TO. C. 150

Part Number: Includes Series (90.10), Model and Stroke Length.

Charging Pressure: 15-150 bar. *When not specified, default is 150 bar.*

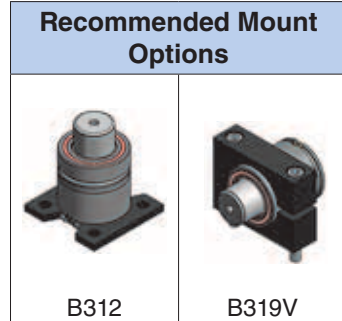
Mount Option: TO = Basic Model. *When not specified, default is TO.* Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*



TO – Basic Model

Part No.	S mm	C	L ±0,25
L.300S.010	10	60,5	70,5
L.300S.013	12,5	63	75,5
L.300S.016	16	66,5	82,5
L.300S.019	19	69,5	88,5
L.300S.025	25	75,5	100,5
L.300S.038	37,5	88	125,5
L.300S.050	50	100,5	150,5
L.300S.063	62,5	113	175,5
L.300S.080	80	130,5	210,5
L.300S.100	100	150,5	250,5
L.300S.125	125	175,5	300,5

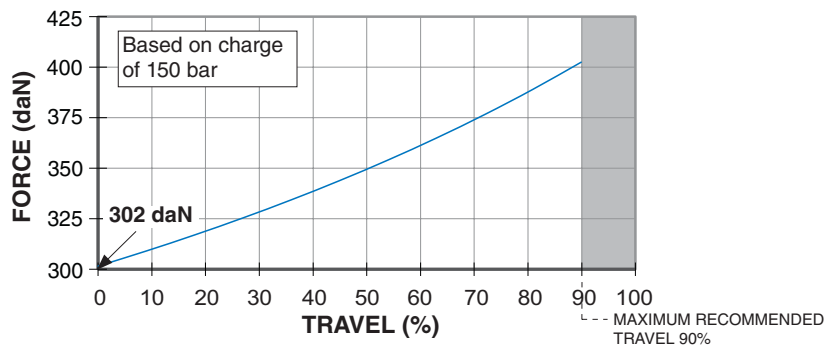


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	daN
150	302
125	251
100	201
75	151
50	101
25	50
20	40



Ordering Example:

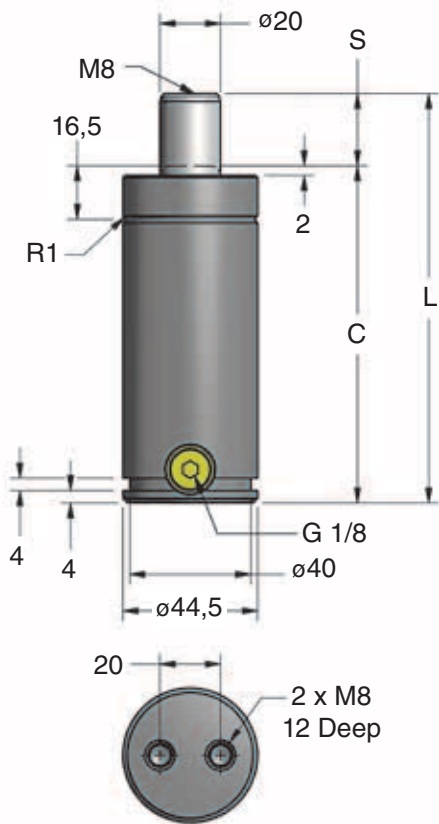
L.300S.025. TO. C. 150

Part Number: Includes Series (L), Model and Stroke Length.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

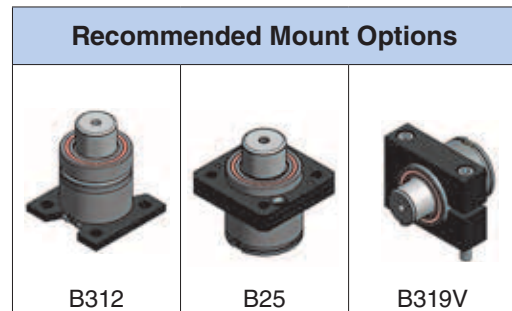
Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



TO – Basic Model

Part No.	S mm	C	L $\pm 0,25$
90.10.00500S.013	12,5	97,5	110
90.10.00500S.025	25	110	135
90.10.00500S.038	37,5	122,5	160
90.10.00500S.050	50	135	185
90.10.00500S.063	62,5	147,5	210
90.10.00500S.080	80	165	245
90.10.00500S.100	100	185	285
90.10.00500S.125	125	210	335
90.10.00500S.160	160	245	405

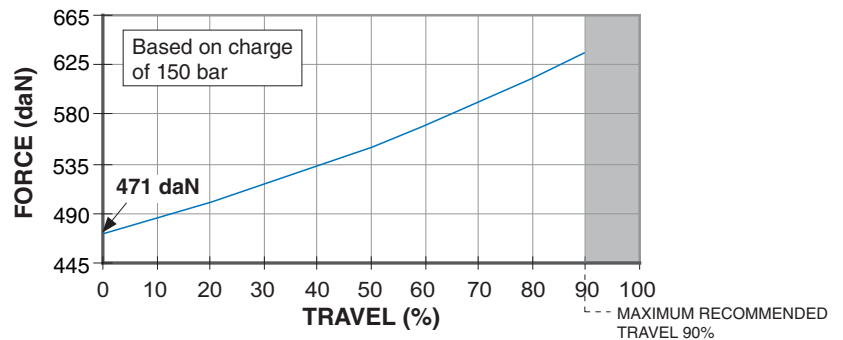


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	daN
150	471
125	393
100	314
75	236
50	157
25	79
20	63



Ordering Example:

90.10.00500S.025. TO. C. 150

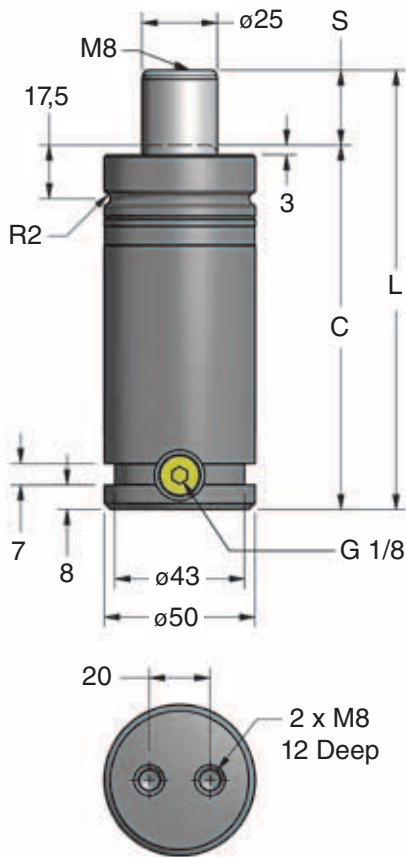
Part Number: Includes Series (90.10), Model and Stroke Length.

Charging Pressure: 15-150 bar. *When not specified, default is 150 bar.*

Mount Option: TO = Basic Model. *When not specified, default is TO.* Mounts ordered with cylinder will be attached at the factory.

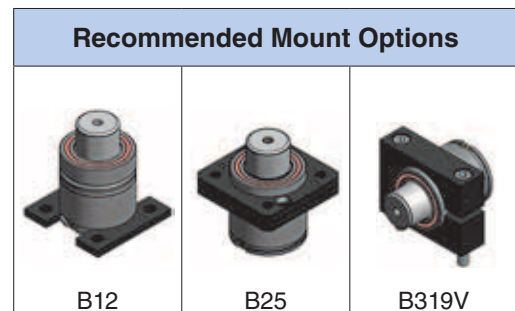
Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*

90.10.00750S – 7,5 kN



TO – Basic Model

Part No.	S mm	C	L ±0,25
90.10.00750S.013	12,5	107,5	120
90.10.00750S.025	25	120	145
90.10.00750S.038	37,5	132,5	170
90.10.00750S.050	50	145	195
90.10.00750S.063	62,5	157,5	220
90.10.00750S.080	80	175	255
90.10.00750S.100	100	195	295
90.10.00750S.125	125	220	345
90.10.00750S.160	160	255	415
90.10.00750S.200	200	295	495
90.10.00750S.250	250	345	595
90.10.00750S.300	300	395	695

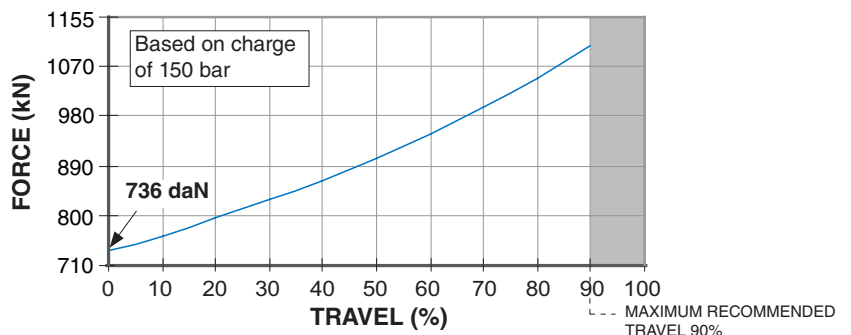


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	daN
150	736
125	614
100	491
75	368
50	245
25	123
20	98



Ordering Example:

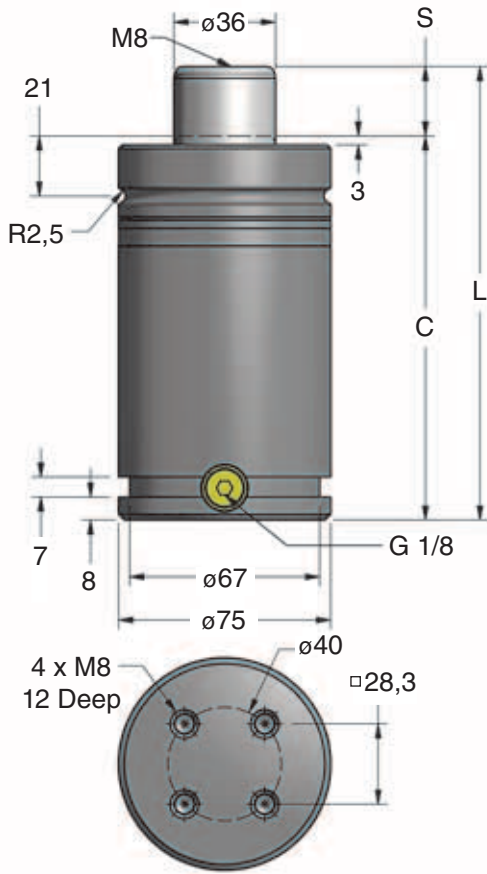
90.10.00750S.025. TO. C. 150

Part Number: Includes Series (90.10), Model and Stroke Length.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

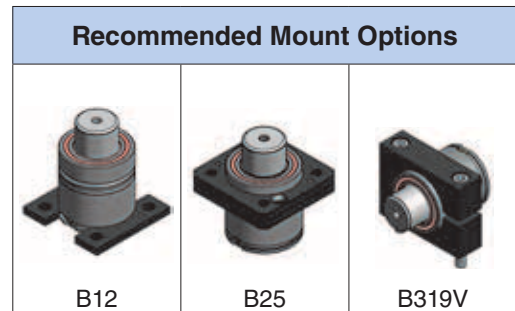
Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



TO – Basic Model

Part No.	S mm	C	L ±0,25
90.10.01500S.013	12,5	122,5	135
90.10.01500S.025	25	135	160
90.10.01500S.038	37,5	147,5	185
90.10.01500S.050	50	160	210
90.10.01500S.063	62,5	172,5	235
90.10.01500S.080	80	190	270
90.10.01500S.100	100	210	310
90.10.01500S.125	125	235	360
90.10.01500S.160	160	270	430
90.10.01500S.200	200	310	510
90.10.01500S.250	250	360	610
90.10.01500S.300	300	410	710

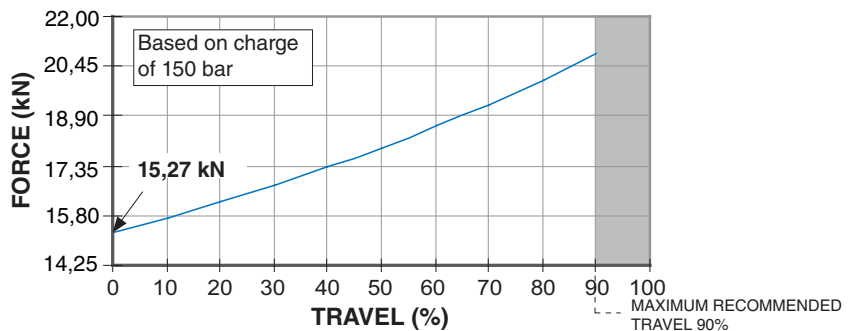


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	15,27
125	12,72
100	10,18
75	7,63
50	5,09
25	2,54
20	2,04



Ordering Example:

90.10.01500S.025 TO C 150

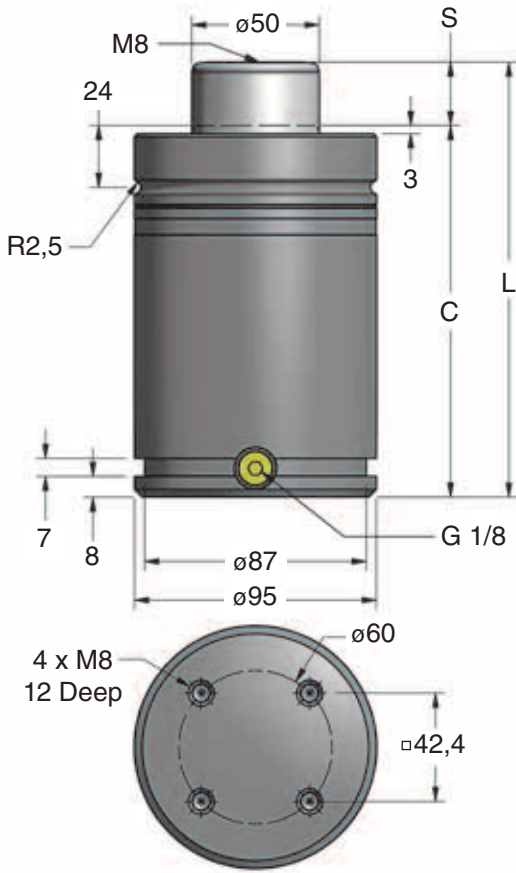
Part Number: Includes Series (90.10), Model and Stroke Length.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

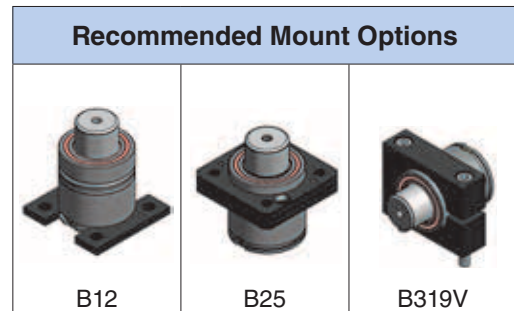
Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.

90.10.03000S – 30 kN



TO – Basic Model

Part No.	S mm	C	L ±0,25
90.10.03000S.013	12,5	132,5	145
90.10.03000S.025	25	145	170
90.10.03000S.038	37,5	157,5	195
90.10.03000S.050	50	170	220
90.10.03000S.063	62,5	182,5	245
90.10.03000S.080	80	200	280
90.10.03000S.100	100	220	320
90.10.03000S.125	125	245	370
90.10.03000S.160	160	280	440
90.10.03000S.200	200	320	520
90.10.03000S.250	250	370	620
90.10.03000S.300	300	420	720

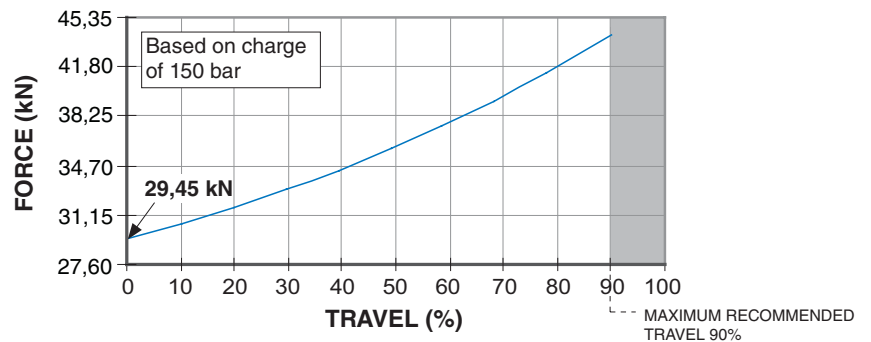


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	29,45
125	24,54
100	19,63
75	14,73
50	9,82
25	4,91
20	3,93



Ordering Example:

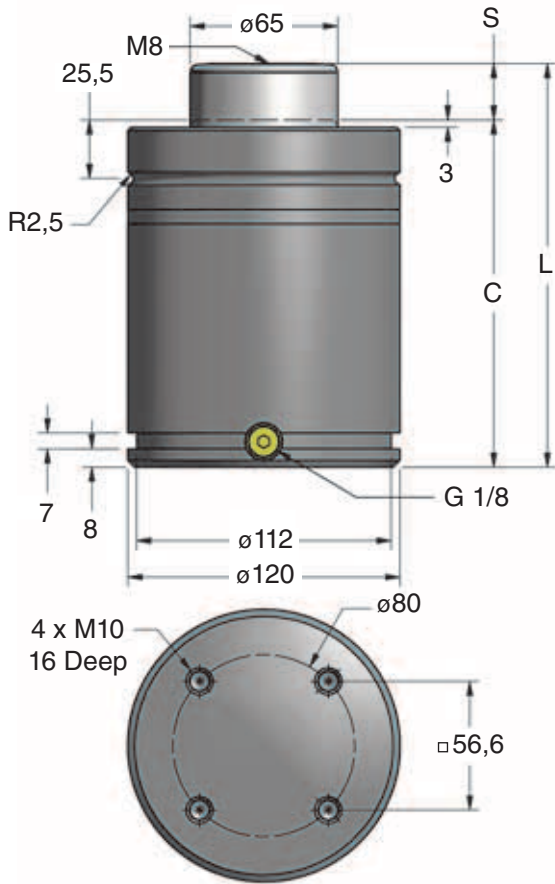
90.10.03000S.025. TO. C. 150

Part Number: Includes Series (90.10), Model and Stroke Length.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

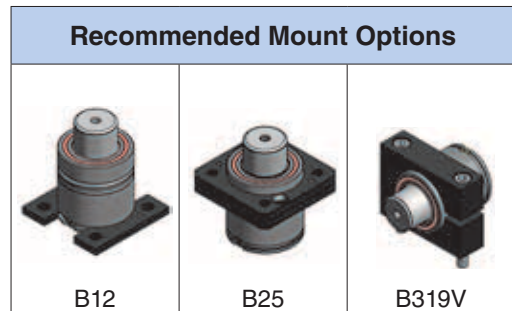
Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



TO – Basic Model

Part No.	S mm	C	L $\pm 0,25$
90.10.05000S.025	25	165	190
90.10.05000S.038	37,5	177,5	215
90.10.05000S.050	50	190	240
90.10.05000S.063	62,5	202,5	265
90.10.05000S.080	80	220	300
90.10.05000S.100	100	240	340
90.10.05000S.125	125	265	390
90.10.05000S.160	160	300	460
90.10.05000S.200	200	340	540
90.10.05000S.250	250	390	640
90.10.05000S.300	300	440	740

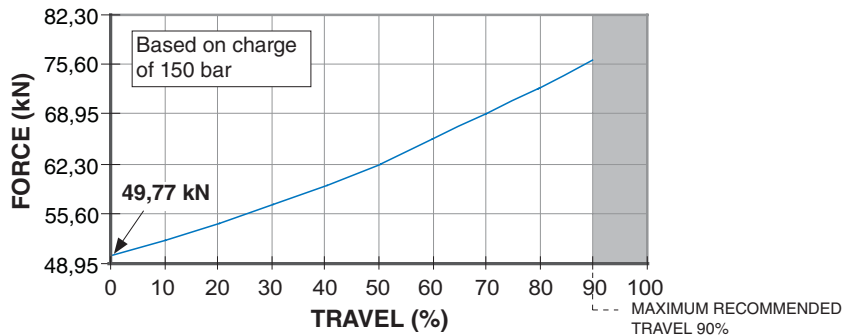


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	49,77
125	41,48
100	33,18
75	24,89
50	16,59
25	8,30
20	6,64



Ordering Example:

90.10.05000S.025. TO. C. 150

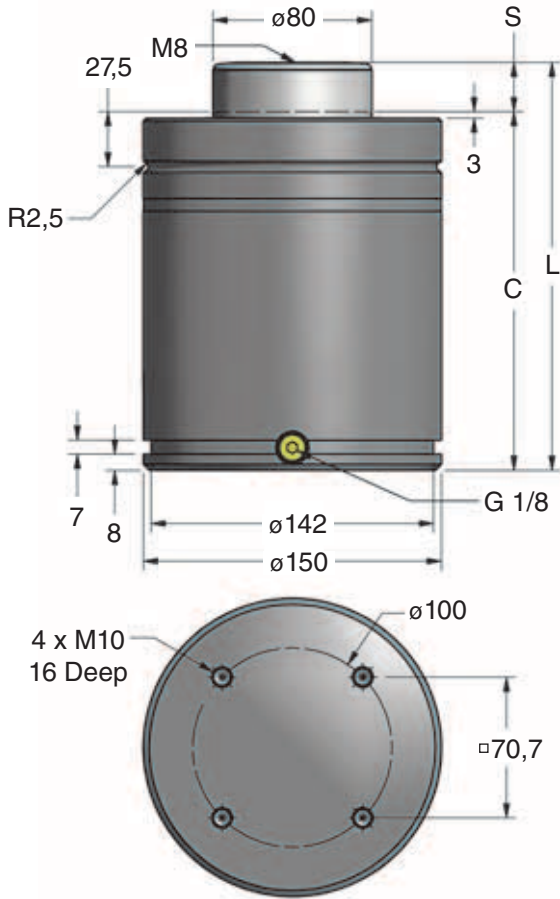
Part Number: Includes Series (90.10), Model and Stroke Length.

Charging Pressure: 15-150 bar. *When not specified, default is 150 bar.*

Mount Option: TO = Basic Model. *When not specified, default is TO.* Mounts ordered with cylinder will be attached at the factory.

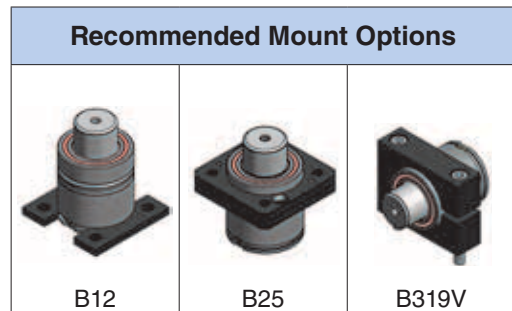
Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*

90.10.07500S – 75 kN



TO – Basic Model

Part No.	S mm	C	L $\pm 0,25$
90.10.07500S.025	25	180	205
90.10.07500S.038	37,5	192,5	230
90.10.07500S.050	50	205	255
90.10.07500S.063	62,5	217,5	280
90.10.07500S.080	80	235	315
90.10.07500S.100	100	255	355
90.10.07500S.125	125	280	405
90.10.07500S.160	160	315	475
90.10.07500S.200	200	355	555
90.10.07500S.250	250	405	655
90.10.07500S.300	300	455	755

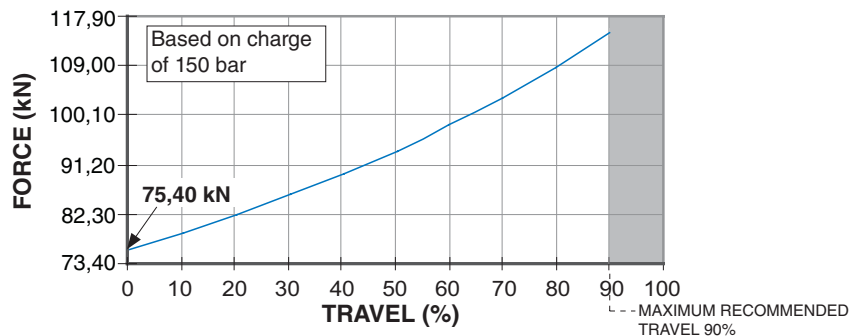


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	75,40
125	62,83
100	50,27
75	37,70
50	25,13
25	12,57
20	10,05



Ordering Example:

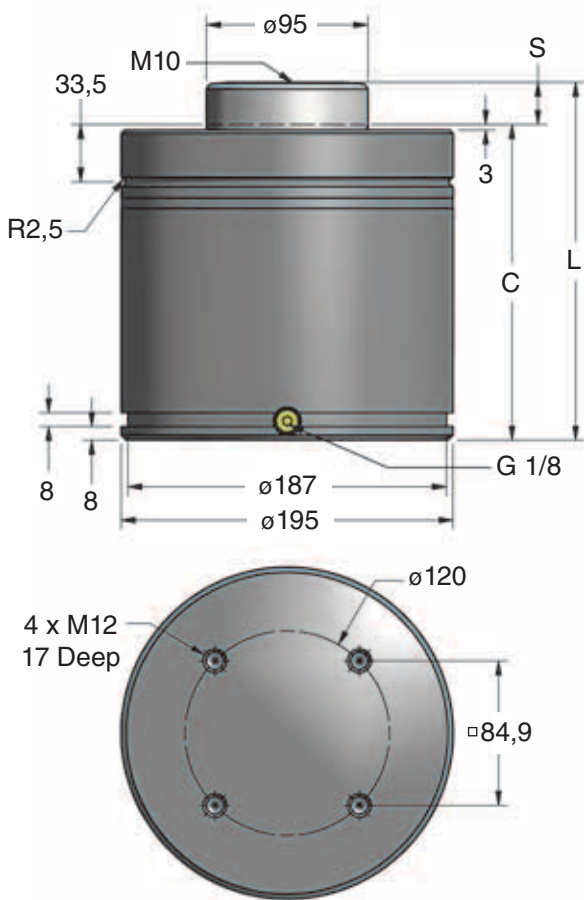
90.10.07500S.025. TO. C. 150

Part Number: Includes Series (90.10), Model and Stroke Length.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

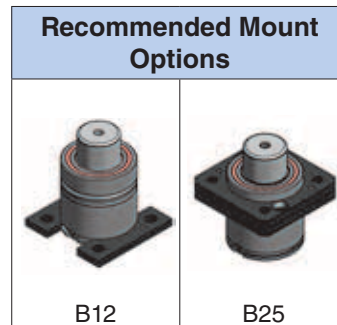
Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



TO – Basic Model

Part No.	S mm	C	L ±0,25
90.10.10000S.025	25	185	210
90.10.10000S.038	37,5	197,5	235
90.10.10000S.050	50	210	260
90.10.10000S.063	62,5	222,5	285
90.10.10000S.080	80	240	320
90.10.10000S.100	100	260	360
90.10.10000S.125	125	285	410
90.10.10000S.160	160	320	480
90.10.10000S.200	200	360	560
90.10.10000S.250	250	410	660

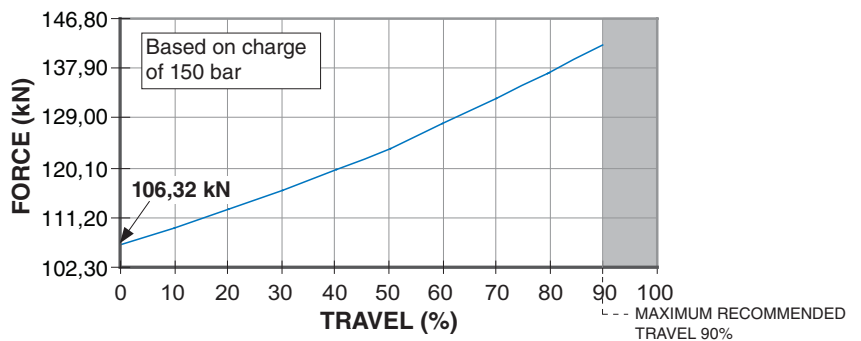


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	106,32
125	88,60
100	70,88
75	53,16
50	35,44
25	17,72
20	14,18



Ordering Example:

90.10.10000S.025. TO. C. 150

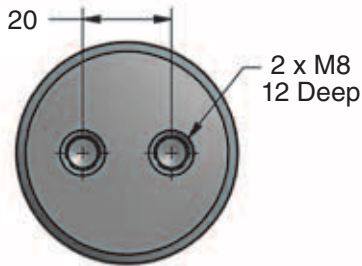
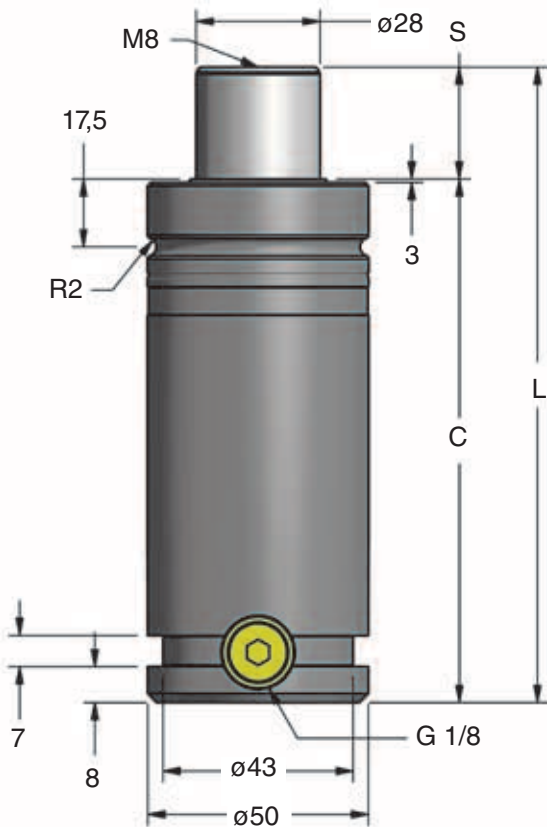
Part Number: Includes Series (90.10), Model and Stroke Length.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

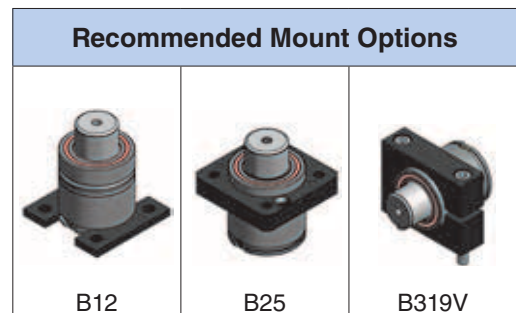
Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.

UX.1000VS – 10 kN



TO – Basic Model

Part No.	S mm	C	L ±0,25
UX.1000VS.013	12,5	107,5	120
UX.1000VS.025	25	120	145
UX.1000VS.038	37,5	132,5	170
UX.1000VS.050	50	145	195
UX.1000VS.063	62,5	157,5	220
UX.1000VS.080	80	175	255
UX.1000VS.100	100	195	295
UX.1000VS.125	125	220	345
UX.1000VS.160	160	255	415
UX.1000VS.200	200	295	495
UX.1000VS.250	250	345	595
UX.1000VS.300	300	395	695

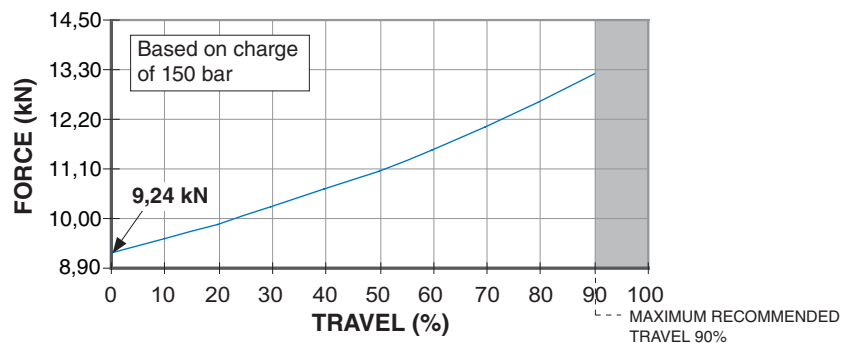


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	9,24
125	7,70
100	6,16
75	4,62
50	3,08
25	1,54
20	1,23



Ordering Example:

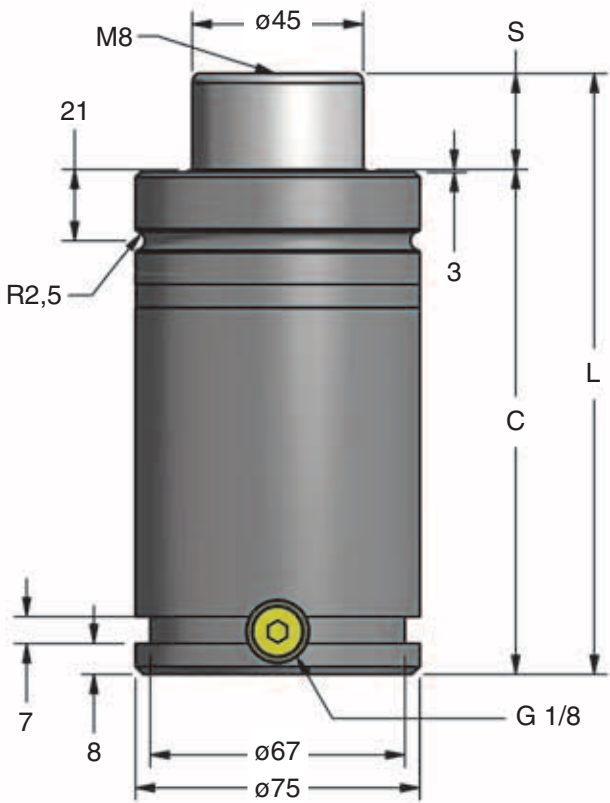
UX.1000VS.025. TO. C. 150

Part Number: Includes Series (UX), Model and Stroke Length.

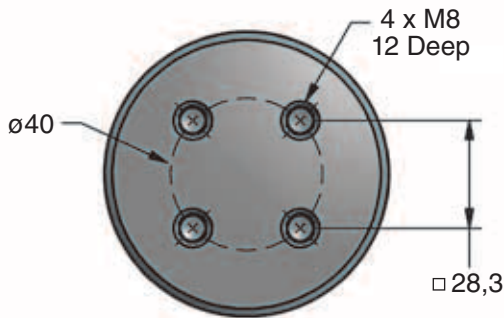
Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.




Part No.	S mm	C	L ±0,25
UX.2600VS.025	25	135	160
UX.2600VS.038	37,5	147,5	185
UX.2600VS.050	50	160	210
UX.2600VS.063	62,5	172,5	235
UX.2600VS.080	80	190	270
UX.2600VS.100	100	210	310
UX.2600VS.125	125	235	360
UX.2600VS.160	160	270	430
UX.2600VS.200	200	310	510
UX.2600VS.250	250	360	610
UX.2600VS.300	300	410	710




TO – Basic Model


Recommended Mount Options



B12



B25



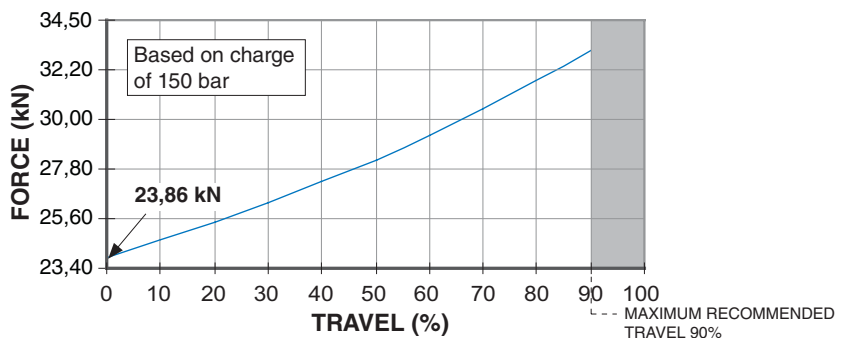
B319V

Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	23,86
125	19,88
100	15,90
75	11,93
50	7,95
25	3,98
20	3,18



Ordering Example:

UX.2600VS.025. TO. C. 150

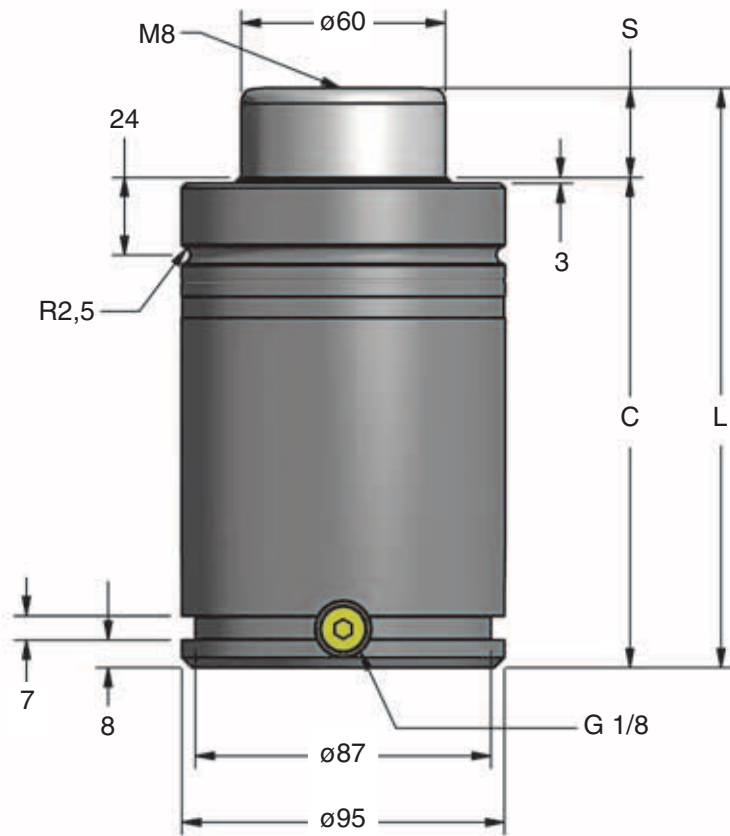
Part Number: Includes Series (UX), Model and Stroke Length.

Charging Pressure: 15-150 bar. *When not specified, default is 150 bar.*

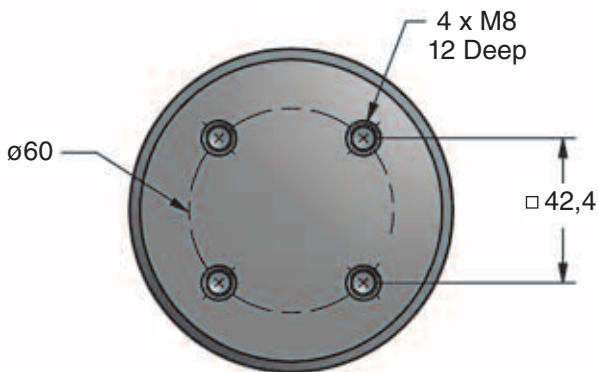
Mount Option: TO = Basic Model. *When not specified, default is TO.* Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*

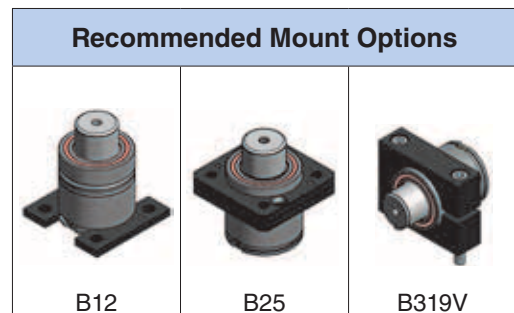
UX.4600S – 42 kN



Part No.	S mm	C	L ±0,25
UX.4600S.025	25	145	170
UX.4600S.038	37,5	157,5	195
UX.4600S.050	50	170	220
UX.4600S.063	62,5	182,5	245
UX.4600S.080	80	200	280
UX.4600S.100	100	220	320
UX.4600S.125	125	245	370
UX.4600S.160	160	280	440
UX.4600S.200	200	320	520
UX.4600S.250	250	370	620
UX.4600S.300	300	420	720



TO – Basic Model

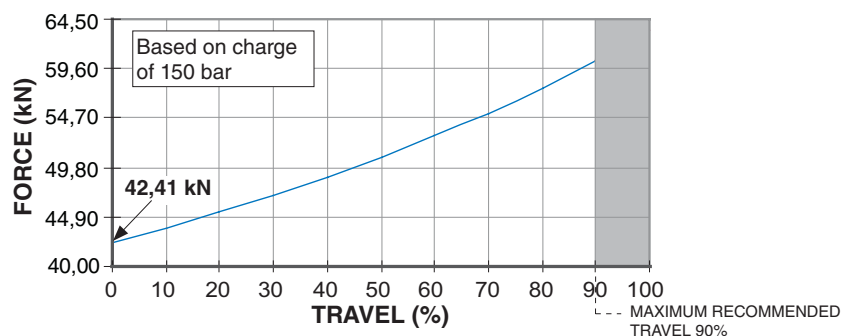


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	42,41
125	35,34
100	28,27
75	21,21
50	14,14
25	7,07
20	5,65



Ordering Example:

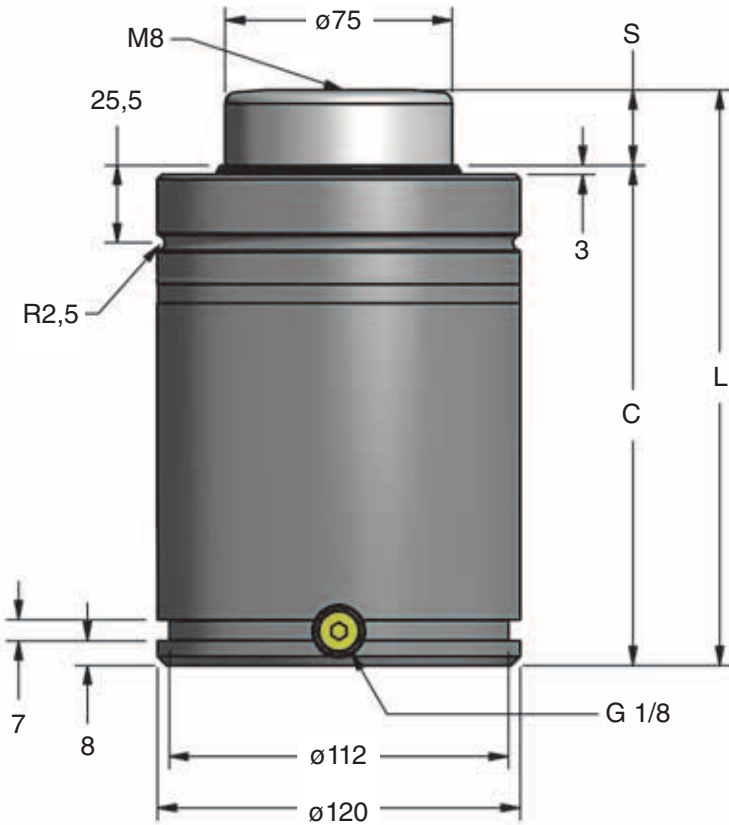
UX.4600S.025. TO. C. 150

Part Number: Includes Series (UX), Model and Stroke Length.

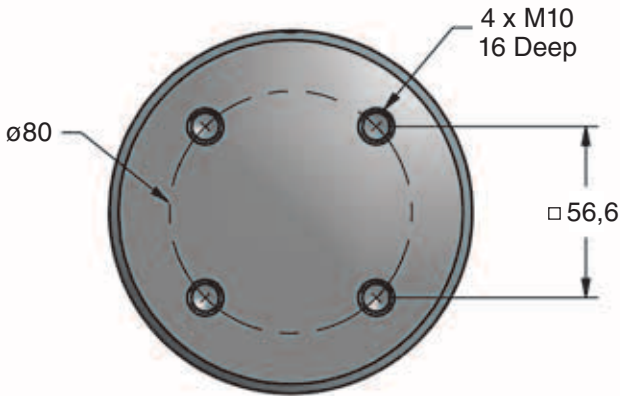
Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



Part No.	S mm	C	L ±0,25
UX.6600S.025	25	165	190
UX.6600S.038	37,5	177,5	215
UX.6600S.050	50	190	240
UX.6600S.063	62,5	202,5	265
UX.6600S.080	80	220	300
UX.6600S.100	100	240	340
UX.6600S.125	125	265	390
UX.6600S.160	160	300	460
UX.6600S.200	200	340	540
UX.6600S.250	250	390	640
UX.6600S.300	300	440	740



TO – Basic Model

Recommended Mount Options

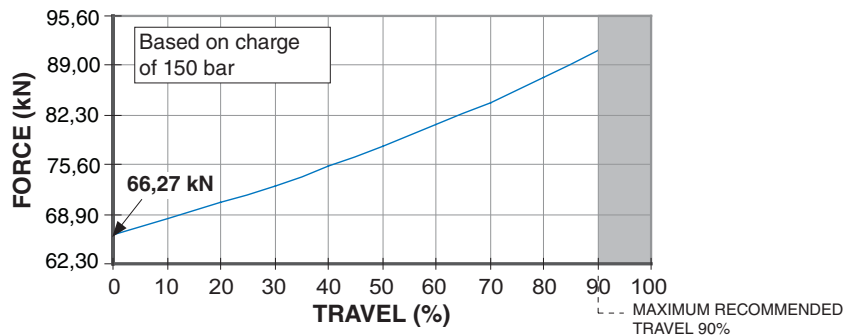
B12 B25 B319V

Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	66,27
125	55,22
100	44,18
75	33,13
50	22,09
25	11,04
20	8,84



Ordering Example:

UX.6600S.025. TO. C. 150

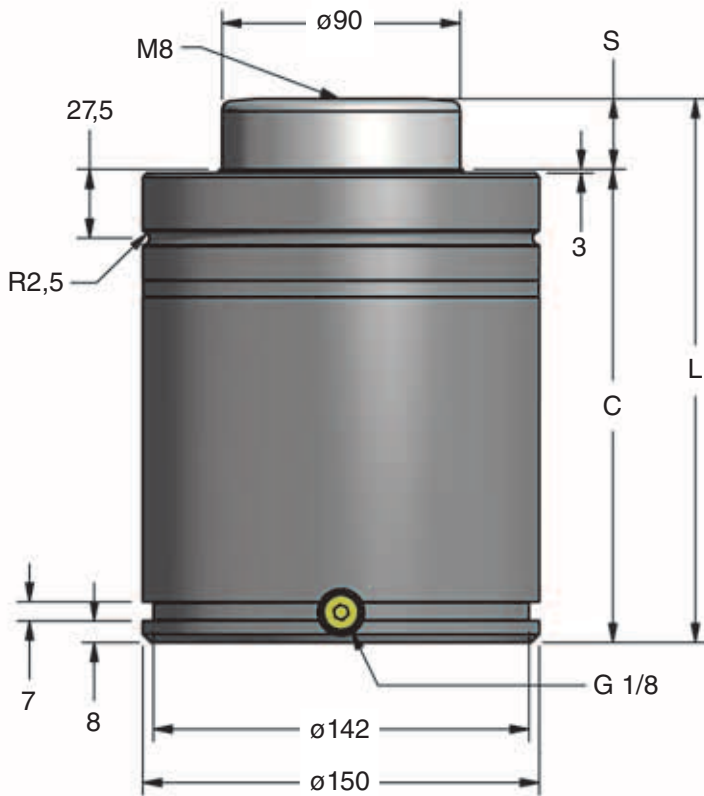
Part Number: Includes Series (UX), Model and Stroke Length.

Charging Pressure: 15-150 bar. *When not specified, default is 150 bar.*

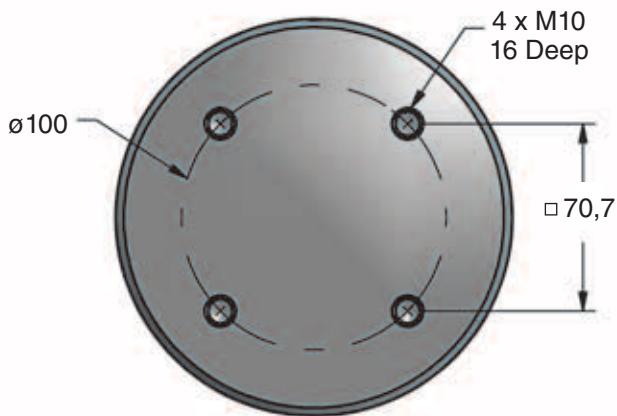
Mount Option: TO = Basic Model. *When not specified, default is TO.* Mounts ordered with cylinder will be attached at the factory.

Operating System: C = Self-contained, F = Open Flow Fitting. *When not specified, default is C.*

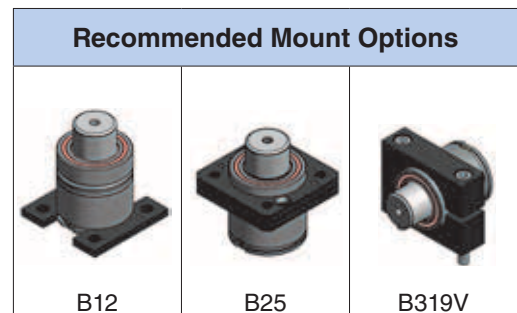
UX.9600S – 95 kN



Part No.	S mm	C	L ±0,25
UX.9600S.025	25	180	205
UX.9600S.038	37,5	192,5	230
UX.9600S.050	50	205	255
UX.9600S.063	62,5	217,5	280
UX.9600S.080	80	235	315
UX.9600S.100	100	255	355
UX.9600S.125	125	280	405
UX.9600S.160	160	315	475
UX.9600S.200	200	355	555
UX.9600S.250	250	405	655
UX.9600S.300	300	455	755



TO – Basic Model

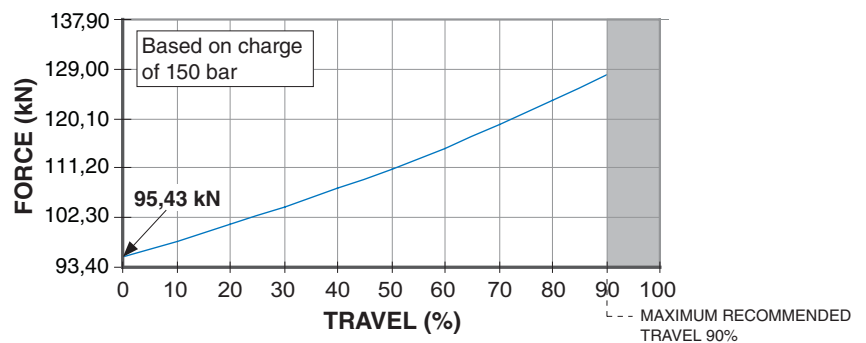


Refer to pages 32-33 for mount information.

Force Charts

On-Contact Force

bar	kN
150	95,43
125	79,52
100	63,62
75	47,71
50	31,81
25	15,90
20	12,72



Ordering Example:

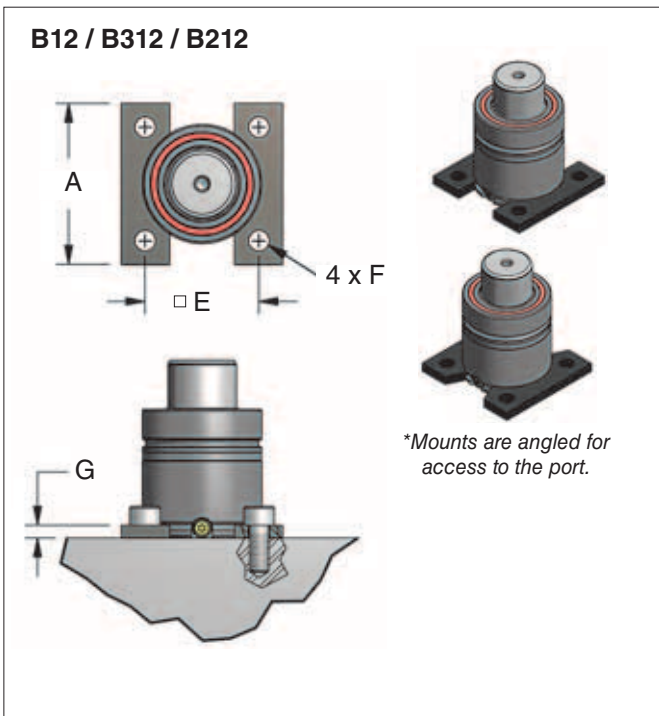
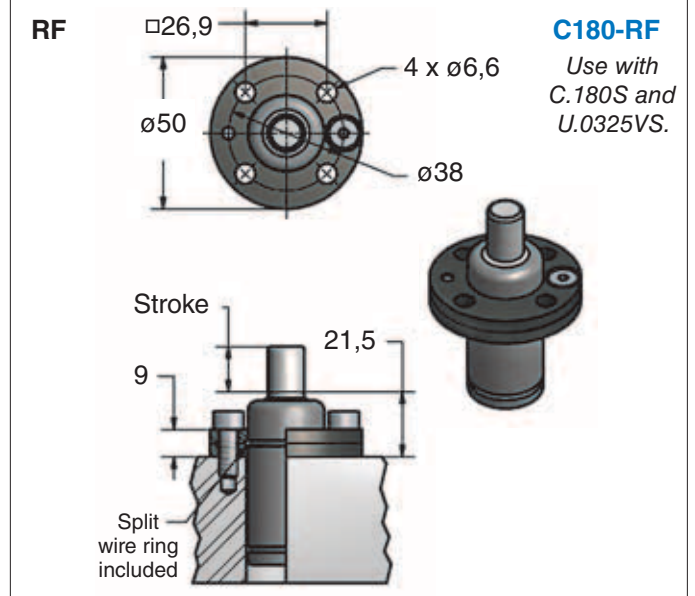
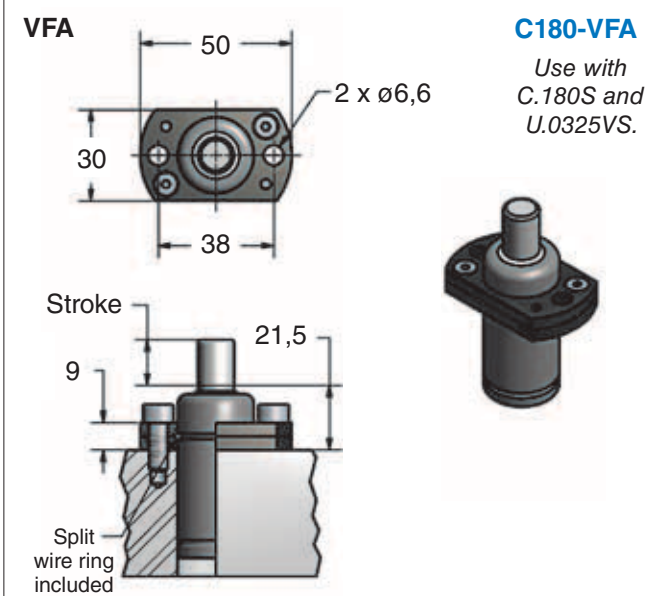
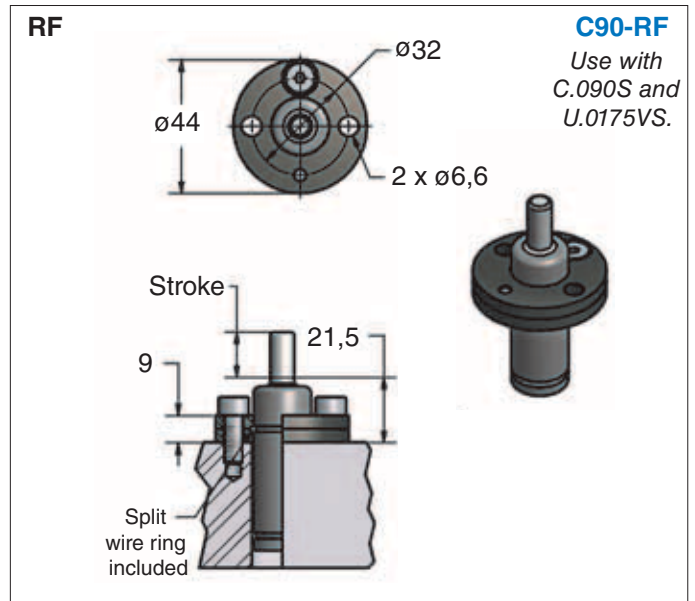
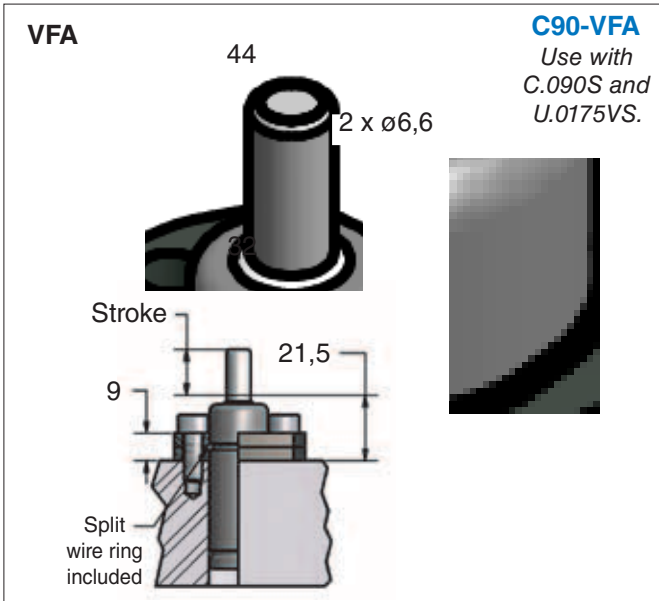
UX.9600S.025. TO. C. 150

Part Number: Includes Series (UX), Model and Stroke Length.

Mount Option: TO = Basic Model. When not specified, default is TO. Mounts ordered with cylinder will be attached at the factory.

Charging Pressure: 15-150 bar. When not specified, default is 150 bar.

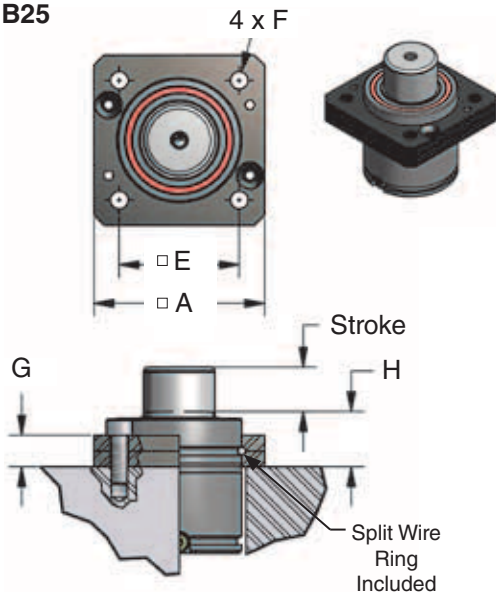
Operating System: C = Self-contained, F = Open Flow Fitting. When not specified, default is C.



Models	Diameter	Part No.	A	E	F	G
U.0400S	$\phi 32$	90.12.0400*	50	35	M6	7
U.0600S L.300S	$\phi 38$	90.312.0300*	55	40	M6	7
U.0845VS 90.10.00500S	$\phi 45$	90.312.00500*	70	50	M8	7
U.1000S 90.10.00750S UX.1000VS	$\phi 50$	90.12.00750	75	56,5	M8	12
U.1600S	$\phi 63$	90.212.1600	100	73,5	M10	12
U.2600VS 90.10.01500S UX.2600VS	$\phi 75$	90.12.01500	100	73,5	M10	12
U.4600S 90.10.03000S UX.4600S	$\phi 95$	90.12.03000	120	92	M12	12
U.6600S 90.10.05000S UX.6600S	$\phi 120$	90.12.05000	140	109,5	M12	12
U.9600S 90.10.07500S UX.9600S	$\phi 150$	90.12.07500	190	138	M16	12
90.10.10000S	$\phi 195$	90.12.10000	210	170	M16	13

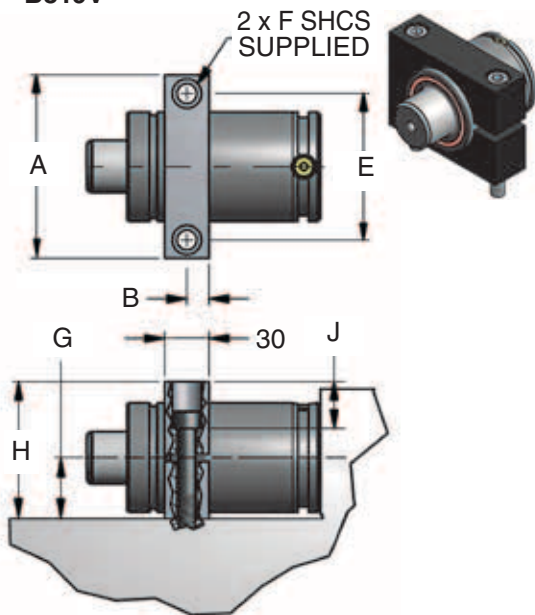
Mount Options

B25



Models	Diameter	Part No.	A	E	F	G	H
U.0400S	ø32	90.25.0400	45	35	M6	9	17
U.0600S	ø38	90.25.00300	52	40	M6	9	17
90.10.00500S	ø44,5	90.25.00500	64	50	M8	13	23
U.0845VS	ø45	90.25.0845	64	50	M8	13	23
U.1000S							
90.10.00750S	ø50	90.25.00750	70	56,5	M8	13	24
UX.1000VS							
U.1600S	ø63	90.25.1600	90	73,5	M10	16	27
U.2600VS							
90.10.01500S	ø75	90.25.01500	90	73,5	M10	16	29
UX.2600VS							
U.4600S							
90.10.03000S	ø95	90.25.03000	110	92	M12	18	33
UX.4600S							
U.6600S							
90.10.05000S	ø120	90.25.05000	130	109,5	M12	21	36
UX.6600S							
U.9600S							
90.10.07500S	ø150	90.25.07500	162	138	M16	27	41
UX.9600S							
90.10.10000S	ø195	90.25.10000	210	170	M16	27	47

B319V



Models	Diameter	Part No.	A	B	E	F	G	H	J
U.0400S	ø32	90.319V.0400	68	10	50	M8 x 50	20,9	48	10
U.0600S	ø38	90.319V.0600	74	10	54	M8 x 50	23,9	54	16
U.0845VS	ø45	90.319V.0800	80	10	60	M8 x 50	27,5	60	22
U.1000S									
UX.1000VS	ø50	90.319V.1000	90	15	68	M10 x 60	30	70	25
U.1600S	ø63	90.319V.1600	108	15	84	M10 x 70	36,5	82	27
U.2600VS									
UX.2600VS	ø75	90.319V.2600	125	15	100	M12 x 80	42	94	32
U.4600S									
UX.4600S	ø95	90.319V.4600	140	15	115	M12 x 100	52,5	115	33
U.6600S									
UX.6600S	ø120	90.319V.6600	170	15	145	M12 x 100	65	140	58
U.9600S									
UX.9600S	ø150	90.319V.9600	200	15	175	M12 x 120	80	170	68

SLIDE MOUNT INTO DESIRED LOCATION AND SECURE USING THE TWO SHCS PROVIDED

Repair Kits

DADCO repair kits include the parts necessary to perform basic repair to these products. To choose the appropriate repair kit, examine the laser mark on the cylinder for the repair kit number. Instructions specific to each product are included in each repair kit to facilitate safe and proper repair. For more information contact DADCO.



Model	90.10.00170S	90.10.00500S	90.10.00750S	90.10.01500S
Kit Number	90.201S.00170	90.201S.00500	90.201S.00750	90.201S.01500

Model	90.10.03000S	90.10.05000S	90.10.07500S	90.10.10000S
Kit Number	90.201S.03000	90.201S.05000	90.201S.07500	90.201S.10000

Model	U.0400S	U.0600S	U.0845VS	U.1000S	UX.1000VS
Kit Number	90.108RS.00400	90.108RS.00600	90.108VS.00800	90.108S.01000	90.108VS.01000

Model	U.1600S	U.2600VS	U.4600S	U.6600S	U.9600S
		UX.2600VS	UX.4600S	UX.6600S	UX.9600S
Kit Number	90.108S.01600	90.108VS.02600	90.108S.04600	90.108S.06600	90.108S.09600

E.16S, E.24S, C.090S, C.180S, U.0175VS and U.0325VS may be recharged but not disassembled.

Valve Bleed Tool

90.360.4

Use the DADCO Valve Bleed Tool to slowly discharge a spring to the desired pressure. For more information contact DADCO.



Port Servicing Tool

90.320.8

To perform all necessary servicing to the valve compartment. For more information request bulletin B05110A.



DADCO Repair Tool Kits

DADCO's most popular repair tools are available in boxed sets for each of our three main classifications of nitrogen gas springs: Micro, Mini and Large Series. Kits may include load cells, charging nipples and various repair tools. For more information request bulletin B05143B.



Quick Disconnect Charging Assembly

90.310.040 (CA-40)

Use the DADCO Quick Disconnect Charging Assembly, 90.310.040, with the 90.310.143 or 90.310.111 Charging Nipple or 90.315.5 Pressure Analyzer to charge self-contained gas springs.

DADCO recommends using the 90.310.041 High Pressure Charging Assembly to charge all models that require a pressure above 150 bar.



Quick Disconnect Charging Nipple

90.310.143 (M6 Port)

90.310.111 (G 1/8 Port)

Use the DADCO Quick Disconnect Charging Nipples to charge self-contained Gas Springs.



90.310.143



90.310.111

CAUTION:
DO NOT attempt maintenance on spring until internal pressure is exhausted.

Operating Specifications	
Charging Medium:	Nitrogen Gas
E.16S, E.24S / C.090S – C.180S Charging Pressure:	35 – 177 bar (500 psi – 2560 psi)
U.0175VS, U.0325VS, U.0400S Charging Pressure:	15 – 180 bar (220 psi – 2600 psi)
U.0600S – U.9600S / UX.1000VS – UX.9600S / 90.10.00170S – 90.10.10000S Charging Pressure:	15 – 150 bar (220 psi – 2175 psi)
Operating Temperature:	4°C – 71°C (40°F – 160°F)
Maximum Speed:	1.6 m/sec (41 in/sec)

Installation Requirements

Avoid Sudden Release

- Jammed parts are very dangerous. If parts are jamming, determine the root cause and repair it before production continues. Sudden release may cause gas to exhaust. Slightly preloading the gas spring (F.1) prevents spring damage and sudden release (F.2).

Provide Stroke Reserve

- DADCO gas springs will permit travel of the full nominal stroke; however, at least a 10% stroke reserve is recommended to achieve optimal performance and safety (F.3 and F.4).

Avoid Side Loading

- A misaligned press or die can cause side loading that increases wear on the bearing, seal, and piston rod (F.6). Therefore, avoid side loading when possible (F.5).

Rod End Thread (U.0400S - U.20000S)

- The end of the piston rod has a construction thread intended for assembly and disassembly purposes only, and should never be used to mount or secure the gas spring (F.6). Die vibration and/or misalignment will damage the spring.

Protect From Fluids

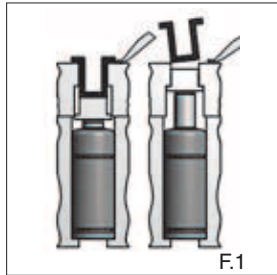
- Direct contact with certain die lubricants and cleaners should be avoided (F.8). Protect gas springs by providing adequate drainage in gas spring pockets (F.7).

Discharging Self-Contained Gas Spring

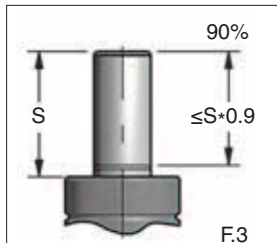
- Refer to the Installation and Operation Guidelines bulletin that ships with the gas springs for information on how to discharge gas springs that have a bottom port (E.16S/E.24S/C.090S/C.180S/UE.0175S/U.0175S).
- The DADCO Pressure Analyzer (90.315.5) allows for charging, discharging and gauging of the pressure in gas springs that feature a side port (U.0400S-U.9600S/UX Series/90.10 Series) (F.9). For information on completely exhausting the gas spring refer to the product Maintenance Instructions.

Recharging Self-Contained Gas Spring

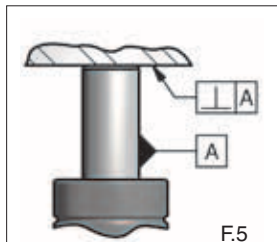
- Refer to the Micro Catalog (C05104C) for information on how to charge the gas springs that have a bottom port (E.16S/E.24S/C.090S/C.180S/UE.0175S/U.0175S).
- Hold the spring vertically at all times during filling. Never compress the gas spring in a vice or clamp outside of the die or application as damage to the gas spring can result (F.10).
- Never fill a gas spring unless the rod is in the fully extended position (F.12). Thread the T-handle (90.320.1, 90.320.2 or 90.320.10) into the rod end and depress the valve stem with the Valve Bleed Tool (90.360.4) or Port Servicing Tool (90.320.8), detailed on page 34. Pull the rod cartridge assembly up until it is seated firmly against the retaining ring (F.11). Remove the T-handle from the rod and charge the gas spring to the desired pressure. Refer to the product Maintenance Instructions for complete step-by-step instructions.



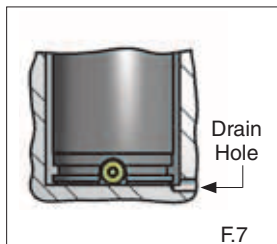
F.1



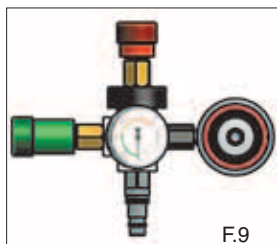
F.3



F.5



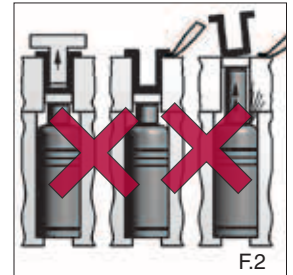
F.7



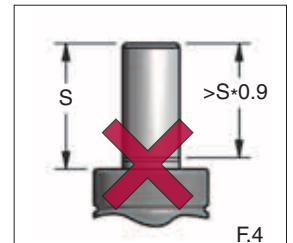
F.9



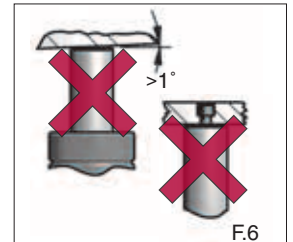
F.11



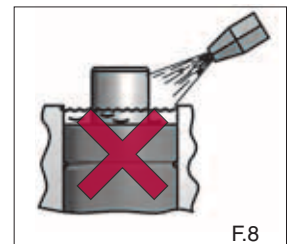
F.2



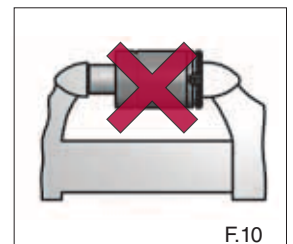
F.4



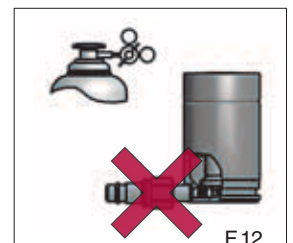
F.6



F.8



F.10



F.12

Other DADCO Products



Nitrogen Gas Spring Two Post Lifters

- Rugged and reliable two post lift
- Narrow profile (25 mm, 32 mm and 50 mm)
- 160 mm and 180 mm rail widths
- Stroke lengths available from 23 mm to 198 mm
- Ideal for progressive die lifter rail, work holding and balancing applications



Non-Rotating Nitrogen Gas Lifters

- Non-rotating design; provides lift and guidance
- Two guide rod options for single point, multipoint or rail lift applications
- Force provided by Micro/Mini Nitrogen Gas Springs
- Stroke lengths available from 25 mm to 125 mm
- Ideal for progressive stamping dies



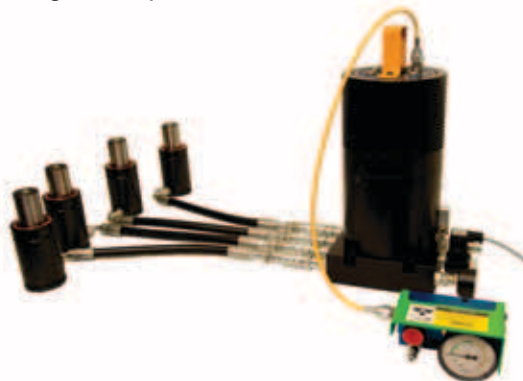
Guide Retainer Sets – GRS / GRS.HD Series

- Robust design with combined guidance and retention
- Five rod diameters: 25 mm, 30 mm, 36 mm, 50 mm and 65 mm
- Various stroke lengths to suit application requirements
- Replaces common pins, bushings and spools



Power Cam and Power Pump System

- Guided hydraulic die cam with nitrogen return
- Power Cam may be installed and operated in any orientation
- 15 kN and 40 kN force models available
- Ideal for secondary operations such as punching, piercing, forming or flanging



Delay Return System (DRS)

- Custom designed per application for delayed return operation
- Nitrogen gas-over-hydraulic oil system
- Reliable leak-free operation
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- 115 VAC, 230 VAC or 24 VDC operation
- Optional accessories for cooling and no spring-back

DADCO
The global leader in nitrogen
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