

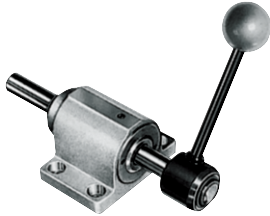
FO Series

Type of Mounting:

- Foot mount

Type of Actuation:

- Hand wheel or hand lever (one-handed operation)
- Locking lever and Plunger (two-handed operation)



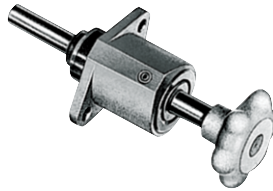
FL Series

Type of Mounting:

- Flange mount

Type of Actuation:

- Locking lever or hand wheel (one-handed operation)
- Locking lever and Plunger (two-handed operation)



G Series

Type of Mounting:

- Through hole mount

Type of Actuation:

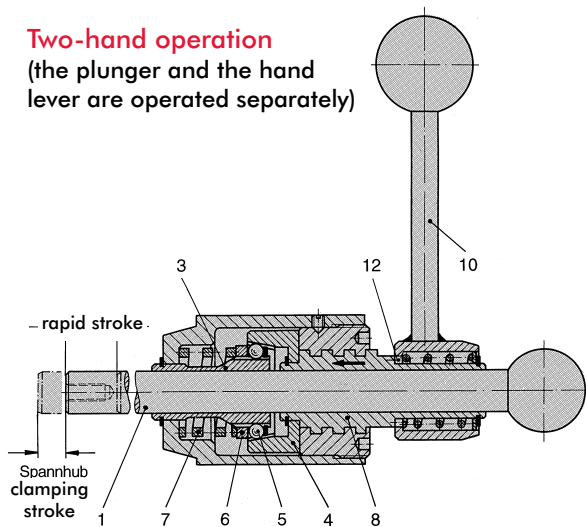
- Locking lever and Plunger (two-handed operation)
- Hand wheel or hand lever (one-handed operation)



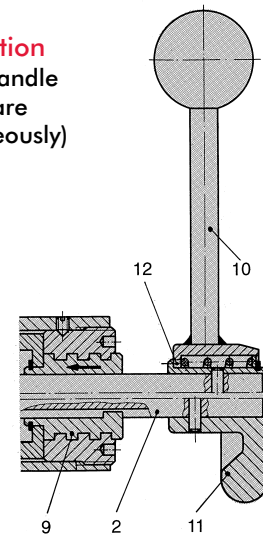
Variable Stroke Straight-Line Action Technical Information

		Model	Holding Capacity max. [lbs] N	Page	Accessories	Model	Page			
Flanged base		FO-082-40	[335] 1500	4.3	Plunger 	12/100	4.4			
		FO-120	[675] 3000			12/200				
	FO-121-45	[675] 3000	12/300							
	FO-122-45	[675] 3000	16/100							
			16/200							
			16/300							
			16/400							
			16/500							
			22/100							
			22/200							
			22/300							
Front flange		FL-120	[675] 3000			4.5		Swivel thrust pad 	K508	4.5
		FL-121-45		K612						
	FL-122-45	K816								
		FL-160	[2020] 9000		K1222					
		FL-161-60								
		FL-162-60								
Threaded mount		G-082-40	[335] 1500							
		G-120	[675] 3000							
		G-121-45	[675] 3000							
		G-122-45								
	F-160	[4,040] 18000	4.3							

Two-hand operation
(the plunger and the hand lever are operated separately)



One-hand operation
(the plunger and handle lever/hand wheel are operated simultaneously)



DE-STA-CO's variable stroke straight-line clamps are used in applications where workpiece thicknesses and workpiece tolerances vary. These clamps are suitable for clamping between ribs and hollow spaces difficult to reach.

Compact design and different types of operation allow for application of the straight-line clamps in fixtures for mass production as well as for single part production.

Mounting types

- Foot base (FO Series)
- Flange mount (FL Series)
- Through hole mount (G Series)

Type of operation

- Two hand operation
- The hand lever (10) and the plunger (1) are separate. The hand lever is connected to the clamping mechanism. The plunger can be removed from the clamp
- One-hand operation
- The hand lever (10) or the hand wheel (11) and the plunger (2) are linked. The plunger is retained within the clamp.

Clamping operation

The plunger (1) or (2) which is guided within the clamp body contacts the workpiece. By rotating the hand lever (10) or the hand wheel (11) clock-wise the clamping stroke, S1 is engaged and the plunger is tightly gripped by the slotted clamping sleeve (3).

Operating principle

The hand lever (10) clock-wise rotation causes the threaded sleeve (8) and the conical sleeve (4) to which it is connected to move in the direction of the arrow shown in the drawing. The conical sleeve produces a force-locking connection between the slotted clamping sleeve (3) and the plunger by means of the ball bearings (5) located at the clamping sleeve's perimeter.

Due to the force-locking connection, the plunger rotates and produces the clamping stroke S1. The plungers rotation may be compensated for by means of a swivel hold-down piece.

The clamping strokes S1 specified in this catalog were measured with no opposing forces present while measurements were taken. When clamping this product against a workpiece, the clamping stroke S1 is reduced by the force-locking connection between the plunger and the workpiece. The straight-action clamp is unlocked by turning the hand lever or the hand wheel counter-clockwise. This method is used for both the one-hand and the two-hand operation types. This counter-clockwise rotation makes the conical sleeve (4) and the threaded sleeve (8) or (9) move backward. The pressure spring (7) pushes back the relieved ball bearings (5) via the pressure ring (6).

The force-locking connection between the slotted clamping sleeve and the plunger can be moved freely again. Straight-line clamps which are two-hand operated can also be applied to pull actions when the plunger is inserted in the clamp's housing in the opposite direction. On the one hand operated clamp, the rotation inducing the clamping stroke S1 is directly transmitted from the plunger (2) or the hand wheel to the threaded sleeve (9) via a groove-spring connection. The clamping and unclamping operations are executed in the same way as described before.

Handling

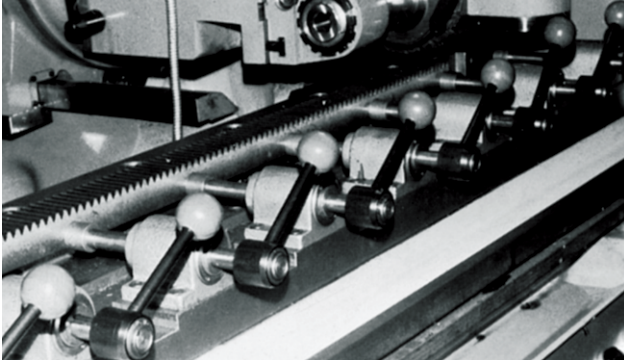
To change the position of the handle while in the clamped or the unclamped position, pull the hand lever off its spline (12) and set it in the desired position.

Important

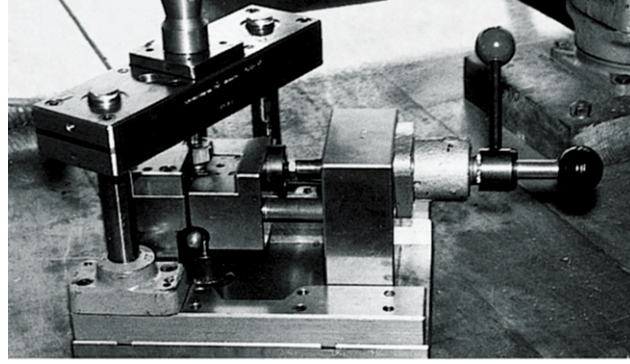
The holding forces specified in the catalog refer to the maximum load exerted on the clamp by counter-forces. For details concerning the clamping force FS exerted on the workpiece by the clamp and depending on the operation force FB (manual force), please see the chart on the next page.

The clamping force is proportional to the operation force. The achieved clamping force must not exceed the maximum holding force.

As the straight-line clamps, with the exception of the F-160 model, are designed only for axial load, we recommend to use an additional radial support for the plunger in the event of side load.



Model FO-161/60 on a milling machine



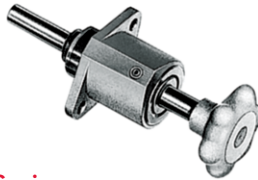
Model FL-160 with plunger 16/100 on a punching fixture

Different Designs



FO Series

Mounting type: flange base foot mount
Operating method: one-hand or two-hand operation



FL Series

Mounting type: front flange mount
Operating method: one-hand or two-hand operation



G Series

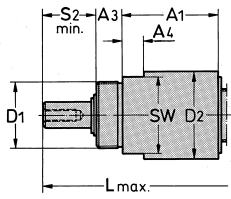
Mounting type: through hole mount
Operating method: one-hand or two-hand operation

Mounting type	Operating method			Model	Max. holding capacity [lbs.] N	Clamping force F_S with an operating force F_B		Rapid stroke		Weight [lbs.] Kg
	Two-hand operation 	One-hand operation 	One-hand operation 			FB [lbs.] N	FS [lbs.] N	S [mm]	S1 [mm]	
Foot mount 			•	FO-082-40	[335] 1500		[100] 450	40	2,5	[0.72] 0,325
		•		FO-120¹⁾	[675] 3000		[425] 1900	100, 200, 300	3	[1.19] 0,540
			•	FO-121-45	[675] 3000		[425] 1900	45	3	[1.47] 0,665
			•	FO-122-45	[675] 3000		[100] 450	40	3	[1.34] 0,610
		•		FO-160¹⁾	[2020] 9000		[560] 2500	100, 200, 300	4	[2.73] 1,240
			•	FO-161-60	[2020] 9000		[560] 2500	60	4	[3.40] 1,540
Flange mount 			•	FO-162-60	[2020] 9000		[190] 850	60	4	[3.15] 1,430
		•		FO-220¹⁾	[4045] 18000		[675] 3000	100, 200, 300	4	[5.85] 2,655
			•	FO-221-80	[4045] 18000	[22] 100	[675] 3000	80	4	[7.46] 3,385
		•		FL-120¹⁾	[675] 3000		[425] 1900	100, 200, 300	3	[1.07] 0,485
			•	FL-121-45	[675] 3000		[425] 1900	45	3	[1.34] 0,610
			•	FL-122-45	[675] 3000		[100] 450	40	3	[1.21] 0,550
Through hole mount 			•	FL-160¹⁾	[2020] 9000		[560] 2500	100, 200, 300	4	[2.49] 1,130
			•	FL-161-60	[2020] 9000		[560] 2500	60	4	[3.15] 1,430
			•	FL-162-60	[2020] 9000		[190] 850	60	4	[2.92] 1,325
		•		G-082-40	[335] 1500		[100] 450	40	2,5	[0.66] 0,300
Through hole mount 			•	G-120¹⁾	[675] 3000		[425] 1900	100, 200, 300	3	[1.01] 0,470
		•		G-121-45	[675] 3000		[425] 1900	45	3	[1.31] 0,595
			•	G-122-45	[675] 3000		[100] 450	40	3	[1.18] 0,335



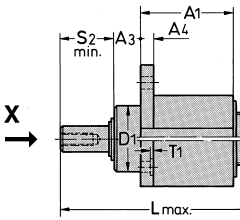
Two-hand operation (the plunger and the hand lever are operated separately)

Through hole mount

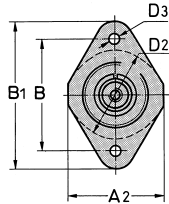


Part no. G-120/--

Flange mount

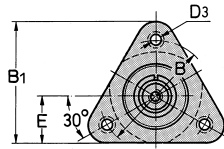


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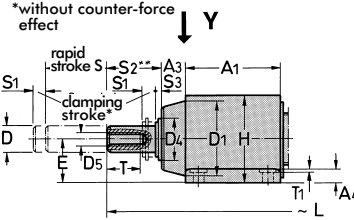
Part no. FL-120/--

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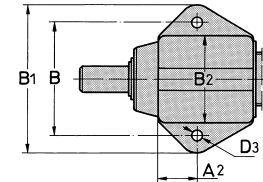


Part no. FL-160/--

Foot mount

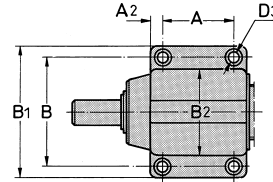


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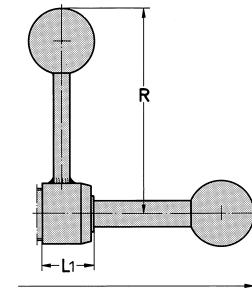


Part no. FO-120/--

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Part no. FO-160/--
FO-220/--



Accessories (order separately)

Plunger

Part no. Ø length	For rapid stroke S	Weight ~ [lbs.] kg	For clamps
12/100	100	[0.30] 0,135	FO-120
12/200	200	[0.62] 0,280	FL-120
12/300	300	[0.82] 0,370	G-120
16/100F	100	[0.88] 0,400	FO-160
16/200F	200	[1.10] 0,500	FL-160
16/300F*	300	[1.54] 0,700	
22/100	100	[2.20] 1,000	
22/200	200	[2.40] 1,090	FO-220
22/300	300	[3.06] 1,390	

Important

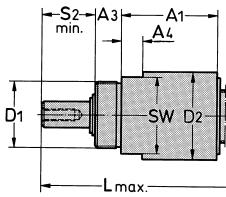
The straight-line clamps are designed only for **axial load**. In case of side load, we recommend an additional radial support of the plunger.

Mounting type	Part no. without plunger	Available rapid strokes S (order plunger separately)	A	A1	A2	A3	A4	A8	B	B1	B2	Dh8	D1	D2	D3	D4
Foot mount	FO-120	100, 200, 300	-	44	19	12	6,3	8,5	52	68	40	12	35	-	6,5	20
	FO-160	100, 200, 300	40	62	11	12	12	10	70	90	52	16	46	-	9	25
	FO-220	100, 200, 300	50	75	13	20	15	12	90	115	69	22	60	-	11	36
Flange mount	FL-120	100, 200, 300	-	44	44	12	6	8,5	52	68	-	12	30f7	40	6,5	20
	FL-160	100, 200, 300	-	60	-	14	14	10	68	73	-	16	40f7	52	9	25
Through hole mount	G-120	100, 200, 300	-	44	-	12	10	8.5	-	-	-	12	M30x1,5	40	-	20

Mounting type	Part no. without plunger	D5	D9	D10	E	E1	H	L with rapid strokes:			L1	R	S2	S3	SW	SW1	T	T1	T3
								~	100	200									
Foot mount	FO-120	M6	30	6	20	12,5	42	228	328	428	24	95	2,5	2,5	-	11	12	-	10
	FO-160	M8	35	8	30	14,8	58	280	380	480	33	130	3	3	-	13	15	1	14
	FO-220	M12	40	9,5	35	19,5	71	295	395	495	35	197	3	3	-	17	25	1	18
Flange mount	FL-120	M6	30	6	-	12,5	-	228	328	428	24	95	2,5	2,5	-	11	12	-	10
	FL-160	M8	35	8	28	14,8	-	280	380	480	33	130	3	3	-	13	15	1	14
Through hole mount	G-120	M6	30	6	-	12,5	-	228	328	428	24	95	2,5	2,5	35	11	12	-	12

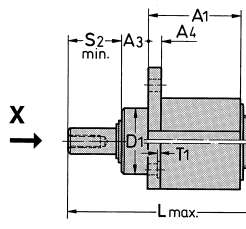
One-hand operation (the plunger and the hand wheel are operated simultaneously)

Through hole mount

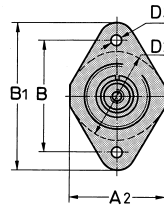


Part no. G-082/40
G-122/45

Flange mount

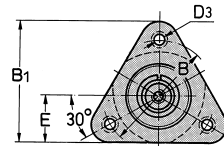


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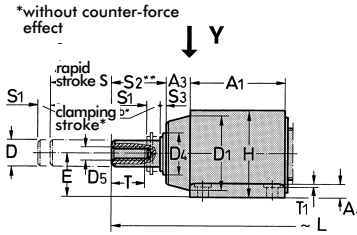
Part no. FL-122/45

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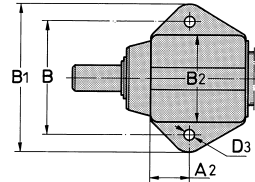


Part no. FL-162/60

Foot mount

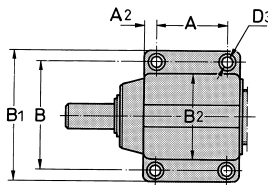


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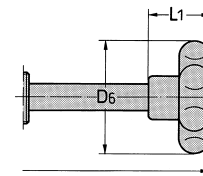


Part no. FO-082/40
FO-122/45

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Part no. FO-162/60



Important

The straight-line clamps are designed only for axial load. In case of side load, we recommend an additional radial support of the plunger.

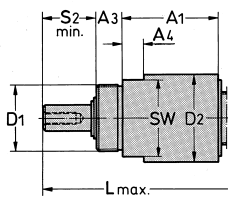
Mounting type	Part no. with plunger	A	A1	A2	A3	A4	A5	B	B1	B2	Dh8	D1	D2	D3	D4
Foot mount	FO-082-40	-	37	15,3	10	5	6	44	56	35	8	30	-	4,5	16
	FO-122-45	-	44	19	12	6,3	8,5	52	68	40	12	35	-	6,5	20
Flange mount	FL-122-45	-	44	44	12	6	85	52	68	-	12	30f7	40	6,5	20
	FL-162-60	-	60	-	14	14	10	68	73	-	16	40f7	52	9	25
Through hole mount	G-082-40	-	37	-	10	8	6	-	-	-	8	M24x1,5	35	-	16
	G-122-45	-	44	-	12	10	8,5	-	-	-	12	M30x1,5	40	-	20

Mounting type	Part no. with plunger	D5	D9	D10	E	E1	H	L	L1	S2	S3	SW	SW1	T	T1	T3
Foot mount	FO-082-40	M5	40	5	18	9,2	36	128	26	9	2,5	-	8	8	-	8
	FO-122-45	M6	75	6	20	12,5	42	153	27	15	2,5	-	11	12	-	10
Flange mount	FL-122-45	M6	52	6	-	12,5	-	153	27	15	2,5	-	11	12	-	10
	FL-162-60	M8	75	8	28	14,8	-	196	35	18	3	-	13	15	1	14
Through hole mount	G-082-40	M5	40	5	-	9,2	-	128	26	9	2,5	30	8	12	-	8
	G-122-45	M6	52	6	-	12,5	-	153	27	15	2,5	35	11	12	-	10



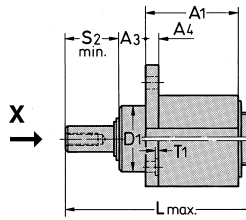
One-hand operation (the plunger and the hand lever are operated simultaneously)

Through hole mount

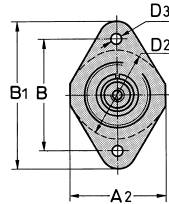


Part no. G-121/45

Flange mount

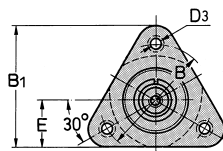


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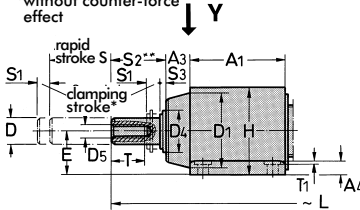
Part no. FL-121/45

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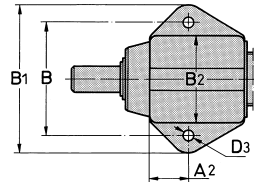


Part no. FL-161/60

Foot mount

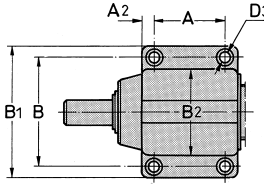


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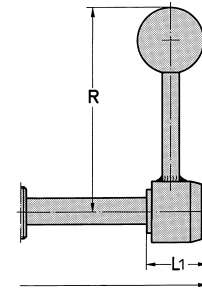


Part no. FO-121/45

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Part no. FO-161/60
FO-221/80

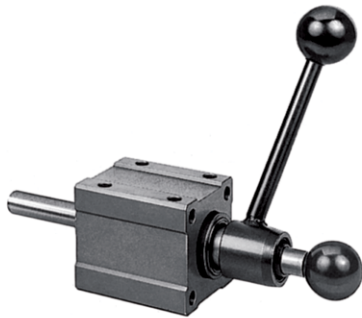


Important

The straight-line clamps are designed only for **axial load**. In case of side load, we recommend an additional radial support of the plunger.

Mounting type	Part no. with plunger	A	A ₁	A ₂	A ₃	A ₄	A ₅	B	B ₁	B ₂	D _{H8}	D ₁	D ₂	D ₃	D ₄
Foot mount	FO-121-45	-	44	19	12	6,3	8,5	52	68	40	12	35	-	6,5	20
	FO-161-60	40	62	11	12	12	10	70	90	52	16	46	-	9	25
	FO-221-80	50	75	13	20	15	12	90	115	69	22	60	-	11	36
Flange mount	FL-121-45	-	44	44	12	6	8,5	52	68	-	12	30f7	40	6,5	20
	FL-161-60	-	60	-	14	14	10	68	73	-	16	40f7	52	9	25
Through hole mount	G-121-45	-	44	-	12	10	8,5	-	-	-	12	M30x1,5	40	-	20

Mounting type	Part no. with plunger	D ₅	D ₁₀	E	E ₁	H	L	L ₁	R	S ₂	S ₃	SW	SW ₁	T	T ₁	T ₃
Foot mount	FO-121-45	M6	6	20	12,5	42	153	27	95	15	2,5	-	11	12	-	10
	FO-161-60	M8	8	30	14,8	58	196	35	130	18	3	-	13	15	1	14
	FO-221-80	M12	9,5	35	19,5	71	245	40	197	20	3	-	17	25	1	18
Flange mount	FL-121-45	M6	6	-	12,5	-	153	27	95	15	2,5	-	11	12	-	10
	FL-161-60	M8	8	28	14,8	-	196	35	130	18	3	-	13	15	1	14
Through hole mount	G-121-45	M6	6	-	12,5	-	153	27	95	15	2,5	35	11	12	-	10



Technical features:

- High holding capacity of [4040 lbf] 18000N lbs.
- High side load capacity
- Plunger guide
- Wiper ring avoiding contamination of clamping mechanism
- Block style base provides for variable mounting
- Low weight due to the aluminium housing
- 50 mm horizontal and vertical hole pattern

Accessories (order separately)

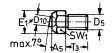
Plunger



Part no.	For rapid stroke S	D _{H8}	D ₅	D ₉	L ~	T ~	Weight ~ [lbs.] kg
16/100F	100	16	M8	35	280	15	[0.90] 0,4
16/200F	200	16	M8	35	380	15	[1.10] 0,5
16/300F*	300	16	M8	35	480	15	[1.54] 0,7

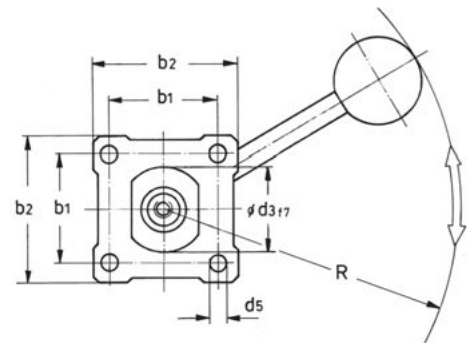
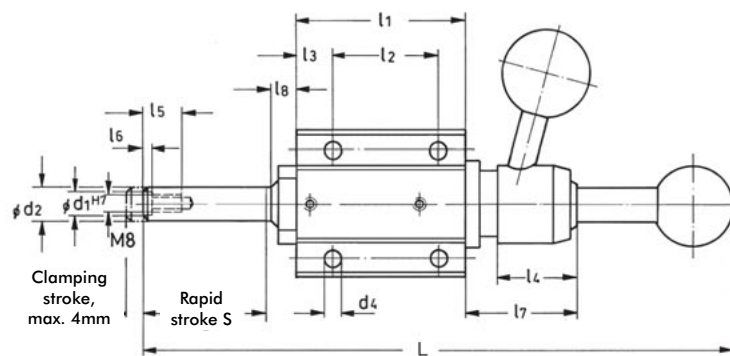
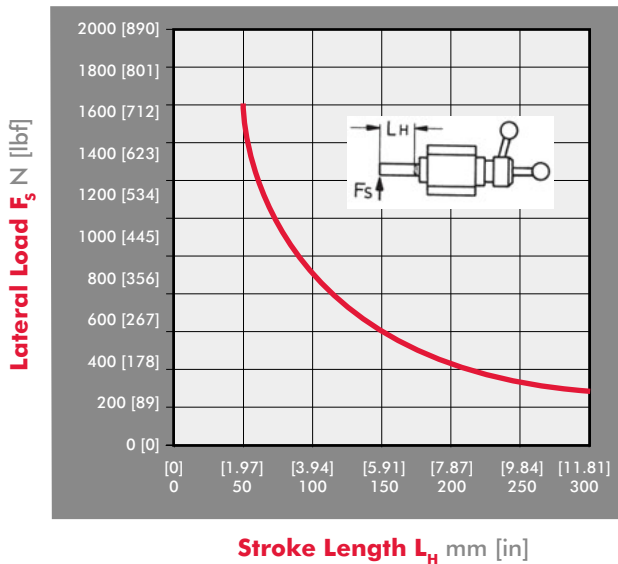
*400 and 500 mm strokes available on request

Swivel thrust pad



Part no.	Use with plunger diameter	A ₅	D ₅	D ₁₀	E ₁	T ₃	SW ₁
K-508	8	6	M5	5	9,2	8	8
K-612	12	8,5	M6	6	12,5	10	11
K-816	16	10	M8	8	14,8	14	13
K-1222	22	12	M12	9,5	19,5	18	17

Allowable side load F_S depending on the stroke length L_H



Part no. without plunger	Max. holding cap. [lbs] N	F _s * [lbs] N	~L													Weight ~ [lbs.] kg						
			b ₁	b ₂	For rapid strokes: 100 200 300																	
F-160	[4040] 18000N	[110] 500N	50	68	250	350	451	80	50	18	35	20	2	50	12	10	16	40	8,3	8,5	165	[3.30] 1,5

*F_s=exerting force at an operating force of [22lbf] 100N.

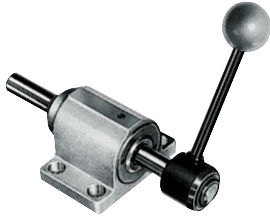
FO Series

Type of Mounting:

- Foot mount

Type of Actuation:

- Hand wheel or hand lever (one-handed operation)
- Locking lever and Plunger (two-handed operation)



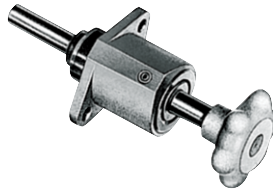
FL Series

Type of Mounting:

- Flange mount

Type of Actuation:

- Locking lever or hand wheel (one-handed operation)
- Locking lever and Plunger (two-handed operation)



G Series

Type of Mounting:

- Through hole mount

Type of Actuation:

- Locking lever and Plunger (two-handed operation)
- Hand wheel or hand lever (one-handed operation)



Variable Stroke Straight-Line Action Technical Information

		Model	Holding Capacity max. [lbs] N	Page	Accessories	Model	Page
Flanged base		FO-082-40	[335] 1500	4.3	Plunger 	12/100	4.4
		FO-120	[675] 3000			12/200	
	FO-121-45	[675] 3000	12/300				
	FO-122-45	[675] 3000	16/100				
			16/200				
			16/300				
			16/400				
			16/500				
			22/100				
			22/200				
			22/300				
Front flange		FL-120	[675] 3000			4.5	
		FL-121-45					
	FL-122-45						
	FL-160	[2020] 9000	K612				
	FL-161-60		K816				
	FL-162-60		K1222				
Threaded mount		G-082-40	[335] 1500	4.3			
		G-120	[675] 3000				
		G-121-45	[675] 3000				
		G-122-45					

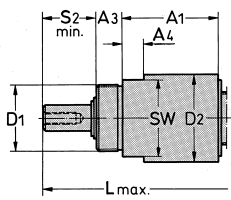
Model	Holding Capacity max. [lbs] N	Page
F-160	[4,040] 18000	4.3





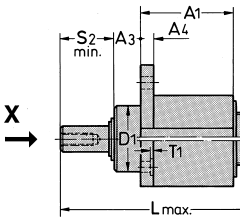
Two-hand operation (the plunger and the hand lever are operated separately)

Through hole mount

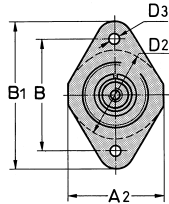


Part no. G-120/--

Flange mount

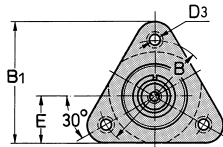


View "X"



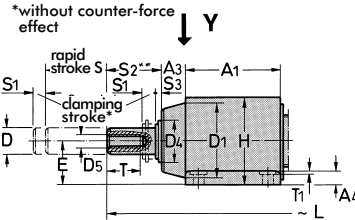
Part no. FL-120/--

View "X"

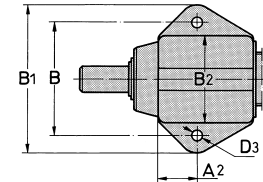


Part no. FL-160/--

Foot mount

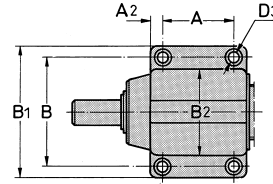


View "Y"

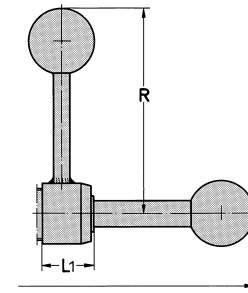


Part no. FO-120/--

View "Y"



Part no. FO-160/--
FO-220/--



Accessories (order separately)

Plunger

Part no. Ø length	For rapid stroke S	Weight ~ [lbs.] kg	For clamps
12/100	100	[0.30] 0,135	FO-120
12/200	200	[0.62] 0,280	FL-120
12/300	300	[0.82] 0,370	G-120
16/100F	100	[0.88] 0,400	FO-160
16/200F	200	[1.10] 0,500	FL-160
16/300F*	300	[1.54] 0,700	
22/100	100	[2.20] 1,000	
22/200	200	[2.40] 1,090	FO-220
22/300	300	[3.06] 1,390	

Important

The straight-line clamps are designed only for **axial load**. In case of side load, we recommend an additional radial support of the plunger.

Mounting type	Part no. without plunger	Available rapid strokes S (order plunger separately)	A	A1	A2	A3	A4	A8	B	B1	B2	Dh8	D1	D2	D3	D4
Foot mount	FO-120	100, 200, 300	-	44	19	12	6,3	8,5	52	68	40	12	35	-	6,5	20
	FO-160	100, 200, 300	40	62	11	12	12	10	70	90	52	16	46	-	9	25
	FO-220	100, 200, 300	50	75	13	20	15	12	90	115	69	22	60	-	11	36
Flange mount	FL-120	100, 200, 300	-	44	44	12	6	8,5	52	68	-	12	30f7	40	6,5	20
	FL-160	100, 200, 300	-	60	-	14	14	10	68	73	-	16	40f7	52	9	25
Through hole mount	G-120	100, 200, 300	-	44	-	12	10	8.5	-	-	-	12	M30x1,5	40	-	20

Mounting type	Part no. without plunger	D5	D9	D10	E	E1	H	L with rapid strokes:			L1	R	S2	S3	SW	SW1	T	T1	T3
								~	100	200									
Foot mount	FO-120	M6	30	6	20	12,5	42	228	328	428	24	95	2,5	2,5	-	11	12	-	10
	FO-160	M8	35	8	30	14,8	58	280	380	480	33	130	3	3	-	13	15	1	14
	FO-220	M12	40	9,5	35	19,5	71	295	395	495	35	197	3	3	-	17	25	1	18
Flange mount	FL-120	M6	30	6	-	12,5	-	228	328	428	24	95	2,5	2,5	-	11	12	-	10
	FL-160	M8	35	8	28	14,8	-	280	380	480	33	130	3	3	-	13	15	1	14
Through hole mount	G-120	M6	30	6	-	12,5	-	228	328	428	24	95	2,5	2,5	35	11	12	-	12

Series 602, 604, 624 Product Overview

Features:

- Versatile and compact straight line action clamps
- Threaded body for through hole mounting
- **-SS** models are stainless steel

Applications:

- Assembly
- Checking fixtures
- Welding fixtures
- Tensioning devices

Also Available:

See page 8.1 for accessories

- ▲ 602
- ▲ 602-SS
- 602-MM
- 602-MMSS



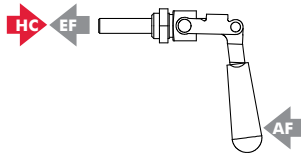
- ▲ 604
- ▲ 604-SS
- 604-MM
- 604-MMSS ⓘ



- ▲ 624
- 624-SS
- 624-MM



Series 602, 604, 624 Technical Information, Holding Capacities, Standard Clamp Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Spindle (Recommended)	Mounting Nut (Supplied)
▲ 602					1/4-20	205203	602105
▲ 602-SS	[200 lbf] 900 N	[0.12lb] 0,05kg	31:1/28:1	[0.75] 19	M6	202943	602905
● 602-MM						205203-M	602105-M
■ 602-MMSS						202943-M	602905-M
▲ 604	[300 lbf] 1330 N				5/16-18	207203	606104
▲ 604-SS	[400 lbf] 1780 N	[0.44lb] 0,20kg	45:1/26:1	[1.50] 38		--	606904
● 604-MM	[300 lbf] 1330 N				M8	207943	606104-M
● 604-MMSS ⓘ	[400 lbf] 1780 N					207943-M (included)	606904-M
▲ 624					3/8-16	210203	624105
● 624-SS	[700 lbf] 3110 N	[1.63lb] 0,74kg	49:1/21:1	[2.63] 66		237943 (included)	624905
● 624-MM					M10	210203-M	624105-M

ⓘ This item is available upon request **HC** = Holding Capacity, **EF** = Exerting Force, **AF** = Applied Force
 Preferred Market: ▲ NA/SA ■ Europe ● Global



Series 602, 604, 624 Standard Clamp Dimensions
602/604/624/-SS/-MM/-MMSS

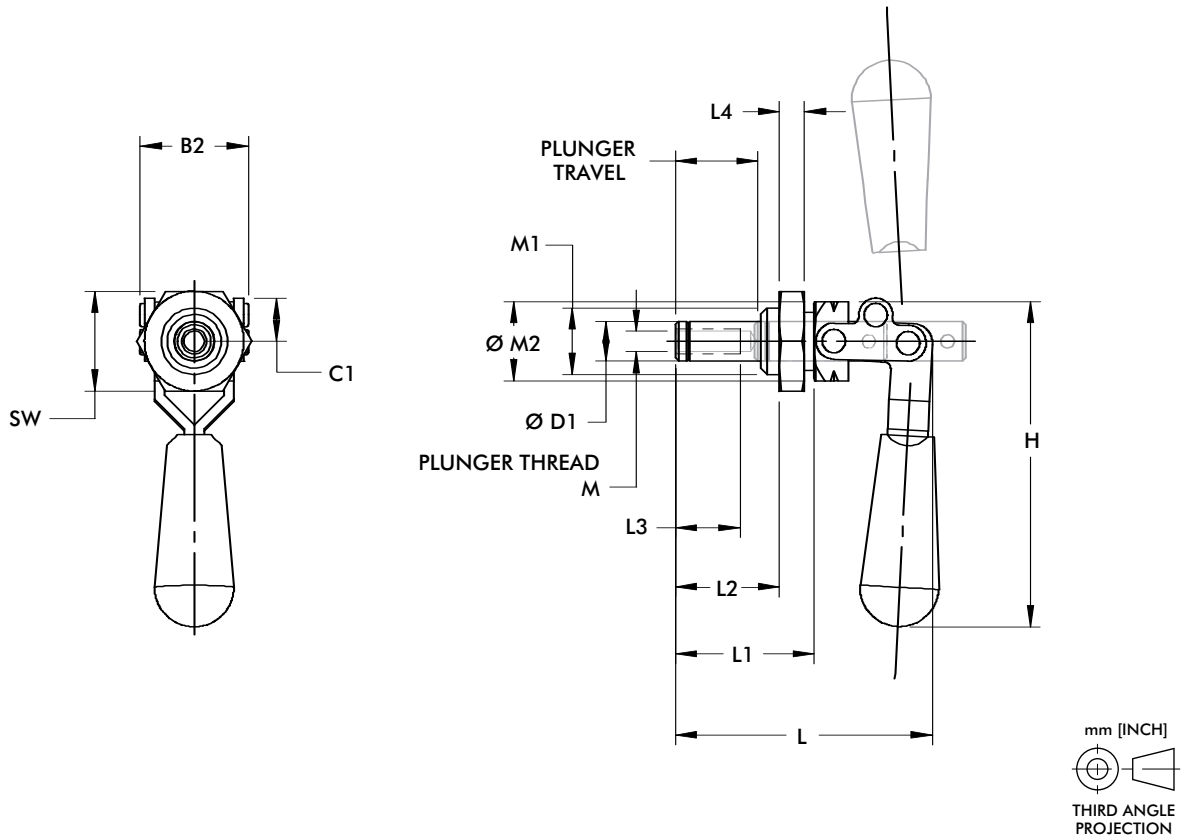
- ▲ 602
- ▲ 602-SS
- 602-MM
- 602-MMSS



- ▲ 604
- ▲ 604-SS
- 604-MM
- 604-MMSS①



- ▲ 624
- 624-SS
- 624-MM



Model no.	B2	C1	ØD1	H	L	L1	L2	L3	L4	M1	M2	SW
602										5/8-18		0.44 in
602-SS		[0.88]	[0.39]	[3.13]	[2.62]	[1.31]	[0.97]	[0.63]			[0.75]	
602-MM		22	10	80	67	33	25	16		M16x1.5	19	24mm
602-MMSS	[1.03]											
604	26											
604-SS		[0.50]	[0.44]	[4.16]	[4.95]	[2.18]	[1.82]	[1.00]	[0.25]	3/4-16	[0.88]	1.00 in
604-MM		13	11	106	126	55	46	25	6		22	
604-MMSS										M20x1.5		30mm
624												
624-SS	[1.81]	[0.75]	[0.62]	[5.60]	[6.68]	[3.62]	[3.24]	[1.25]		1-14	[1.25]	1.50 in
624-MM	46	19	16	142	170	92	82	32			32	
										M27x2		41mm

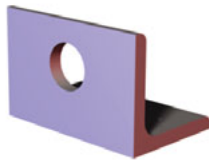
Dimensions shown mm [inch]

Mounting Plates for Series 602, 604, 624, 6004 Product Overview

Features:

- Mounting accessories for Threaded Body Straight Line Action Clamps

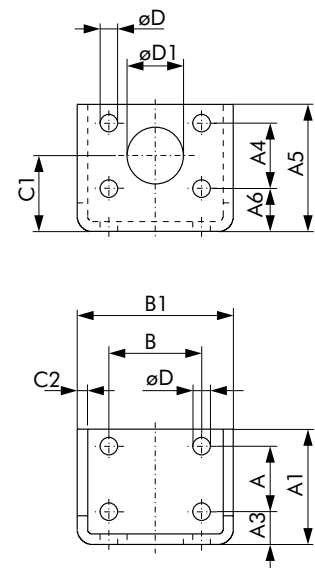
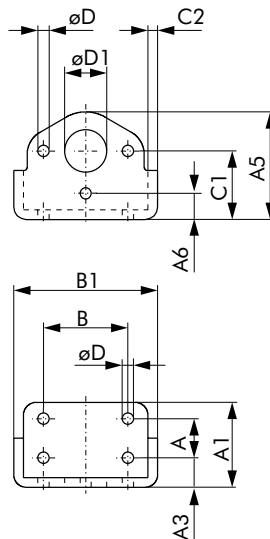
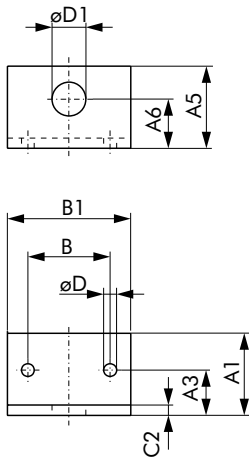
602106-M



604106, 604106-M



624106-M



Item Number	For Use With	A	A1	A3	A4	A5	A6	B	B1	C1	C2	D	D1
602106-M	602 602-MM	--	[1.57] 40	[0.87] 22	--	[1.57] 40	[0.94] 24	[1.57] 40	[2.36] 60	--	[0.20] 5	[0.25] 6,3	[0.65] 16,5
604106	604 6004	[0.75] 19,1	[1.60] 40,6	[0.55] 14	--	[2.05] 52,1	[0.50] 12,7	[1.62] 41,1	[2.80] 71,1	[1.30] 33	[0.19] 4,7	[0.22] 5,6	[0.75] 19,1
604106-M	604-MM 6004-MM												
624106-M	624 624-MM	[1.25] 31,8	[2.20] 56	[0.63] 16	[1.25] 31,8	[2.44] 62	[0.83] 21	[1.78] 45,2	[2.99] 76	[1.46] 37	[0.20] 5	[0.33] 8,5	[1.08] 27,5

Dimensions shown mm [inch]

Series 6004 Product Overview

Features:

- Similar in size to Model 604, with a solid body
- 50% more holding capacity than 604
- May be mounted through a hole or in a tapped hole.
- Locks over center in the extended and retracted position

Applications:

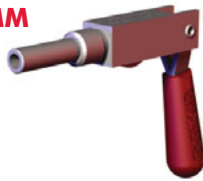
- Assembly
- Checking fixtures
- Welding fixtures
- Tensioning devices

Also Available:

See page 8.1 for accessories

Covered under one year or more U.S./International Patents

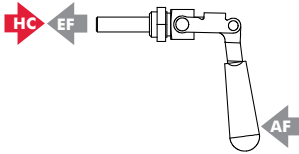
- ▲ 6004
- 6004-MM



- ▲ 6004-R
- 6004-MMR with DE-STA-CO® Toggle Lock Plus

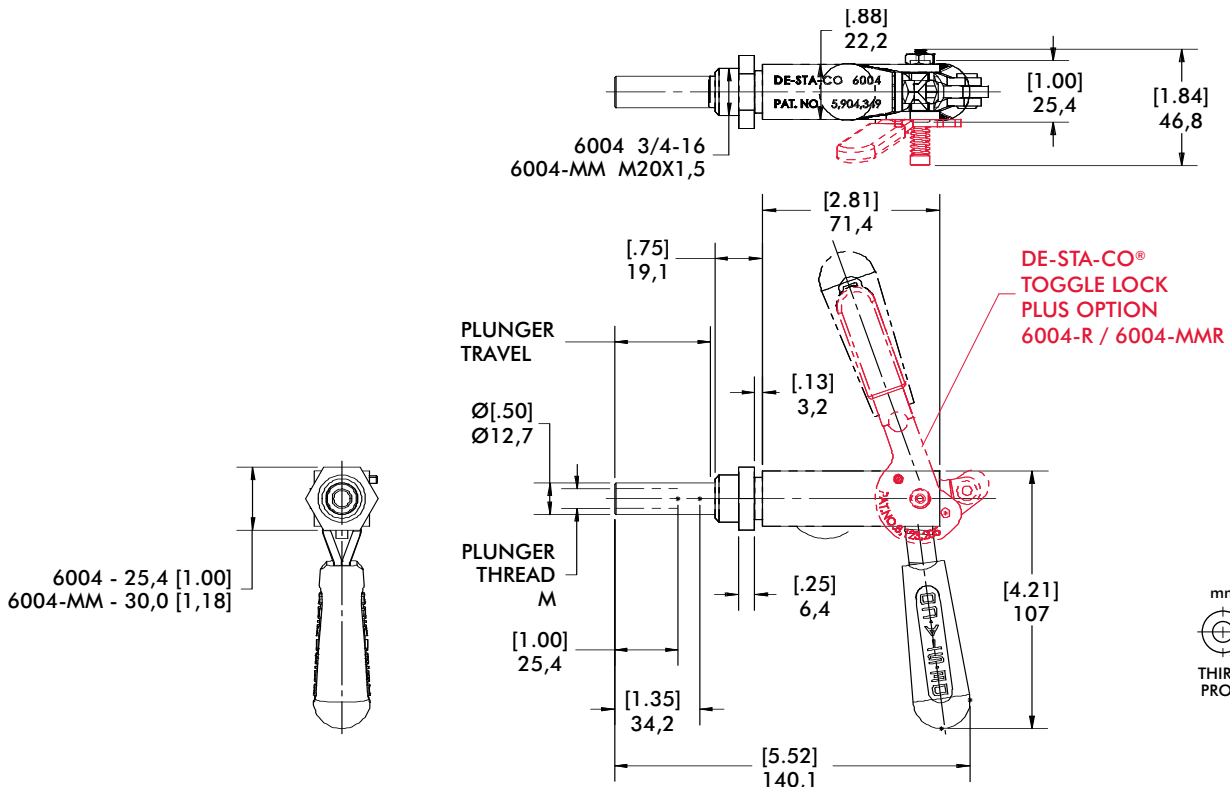


Series 6004 Technical Information, Holding Capacities, Standard Clamp Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing)	Plunger Travel (M)	Plunger Thread (M)	Spindle (Recommended)	Mounting Nut (Supplied)
▲ 6004	[450 lbf] 2000 N	[0.81lb] 0,37kg	14.4:1	38 [1.50]	5/16-18	207203	606104
● 6004-MM		[0.89lb] 0,40kg			M8	207203-M	606104-M
▲ 6004-R	[450 lbf] 2000 N	[0.89lb] 0,40kg	14.4:1	38 [1.50]	5/16-18	207203	606104
● 6004-MMR		[0.89lb] 0,40kg			M8	207203-M	606104-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
 Preferred Market: ▲ NA/SA ■ Europe ● Global



Series 6015 Product Overview

Features:

- Smallest of the solid base Straight Line Action clamps
- Compact design combined with high holding capacity
- Allow handle to fall below mounting plane to lock in retracted position

Applications:

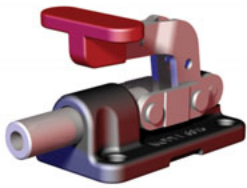
- Assembly
- Checking fixtures
- Tensioning devices

Also Available:

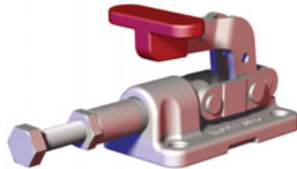
See page 8.1 for accessories

Covered under one year or more U.S./International Patents

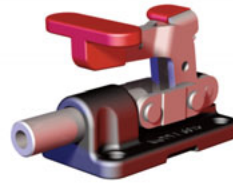
- ▲ 6015
- 6015-M



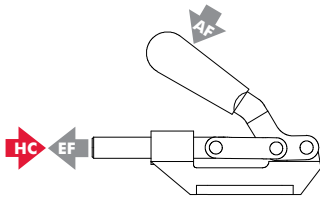
- ▲ 6015-SS,
 - 6015-MSS
- Stainless Steel



- ▲ 6015-R,
 - 6015-MR
- with DE-STA-CO® Toggle Lock Plus



Series 6015 Technical Information, Holding Capacities

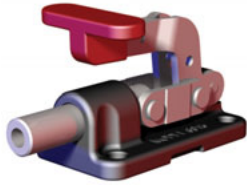


Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
▲ 6015	[560 lbf] 2500 N				1/4-20	205203
● 6015-M					M6	205203-M
▲ 6015-SS	[630 lbf] 2800 N	[0.35lb] 0,15kg	35:1	[0.70] 17,8	1/4-20	202943 (supplied)
● 6015-MSS					M6	202916-M (supplied)
▲ 6015-R	[560 lbf] 2500 N				1/4-20	205203
● 6015-MR					M6	205203-M

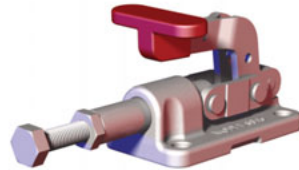
HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
 Preferred Market: ▲ NA/SA ■ Europe ● Global

Series 6015 Standard Clamp Dimensions 6015/-M/-SS/-MSS/-R/-MR

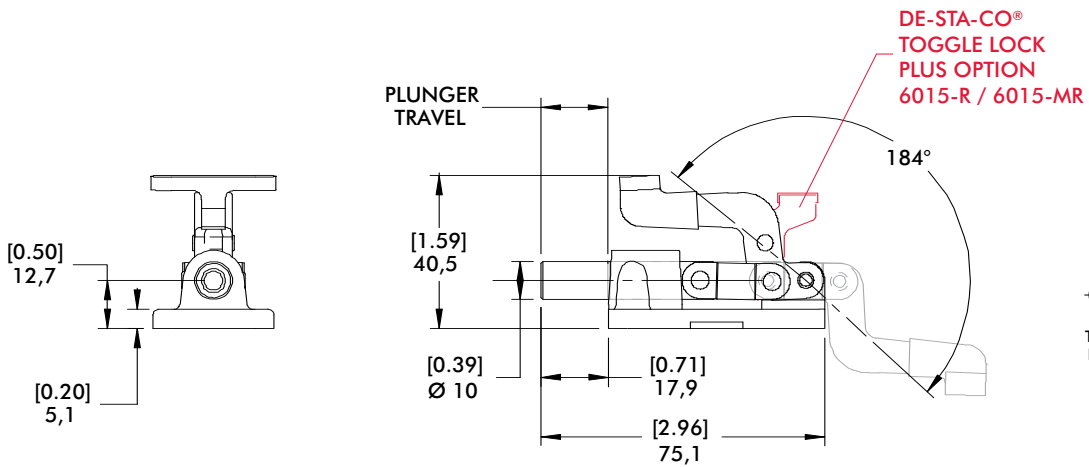
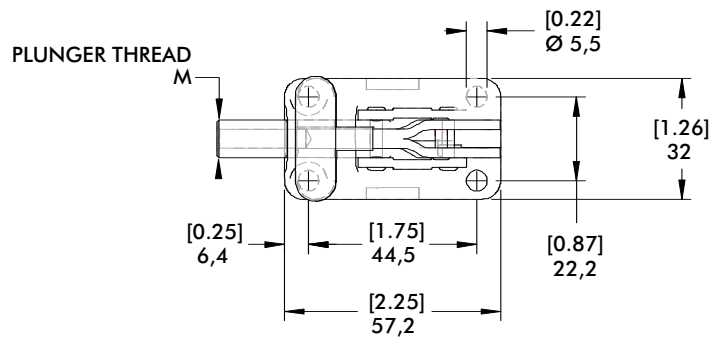
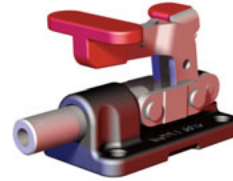
▲ 6015
● 6015-M



▲ 6015-SS,
● 6015-MSS
Stainless
Steel



▲ 6015-R,
● 6015-MR
with DE-STA-CO®
Toggle Lock
Plus



Series 6001 Product Overview

Features:

- Heavier duty version of Model 601 with 50% more holding capacity
- Mounting pattern interchangeable with Model 601
- Allow handle to fall below mounting plane to lock in retracted position

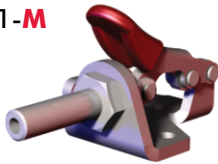
Applications:

- Assembly
- Testing
- Soldering
- Gluing

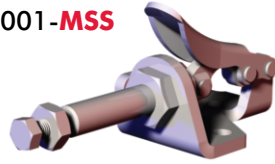
Also Available:

See page 8.1 for accessories

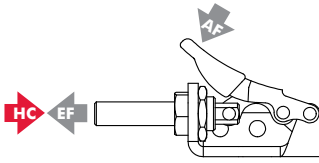
▲ 6001
● 6001-M



▲ 6001-SS
● 6001-MSS

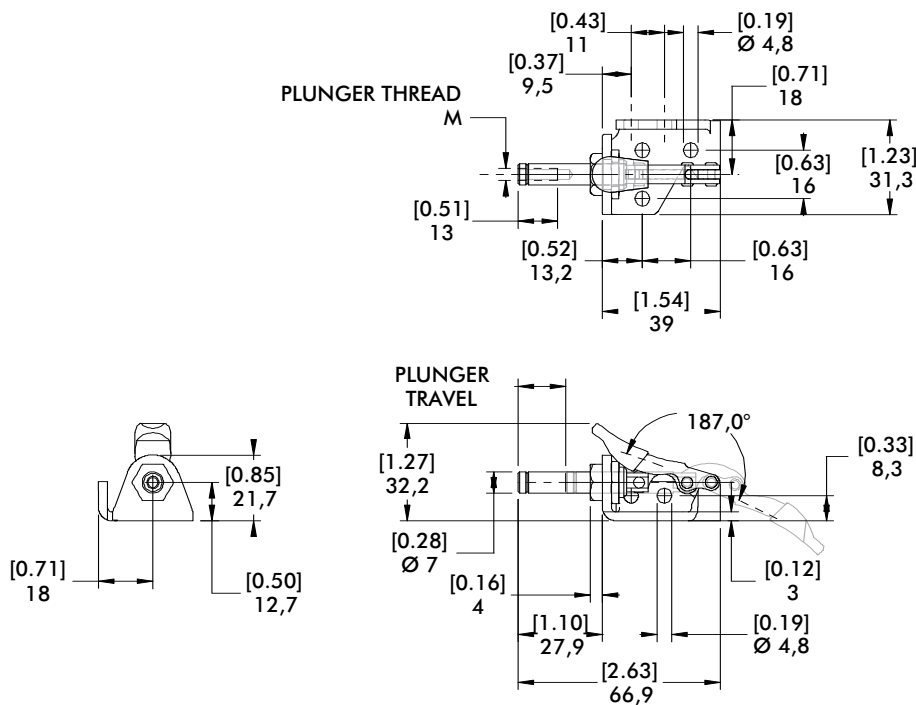


Series 6001 Technical Information, Holding Capacities, Standard Clamp Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Spindle (Recommended)	Spindle Included
▲ 6001					#8-32	105203	No
● 6001-M	[150 lbf] 670 N	[0.12lb] 0,05kg	14:1/25:1	[0.63] 16	M4	205208-M	No
▲ 6001-SS					#8-32	205943	Yes
● 6001-MSS					M4	205943-M	Yes

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
Preferred Market: ▲ NA/SA ■ Europe ● Global



Series 670, 675, 690, 695 Product Overview

Features:

- Precision clamping for high production
- Adjustable collet-type bushing minimizes radial plunger movement
- Plunger has a flat surface for anti rotation
- Pre-load nut and hold open device included

Applications:

- Assembly
- Welding

670-1MBPLS



675-1MBPLS



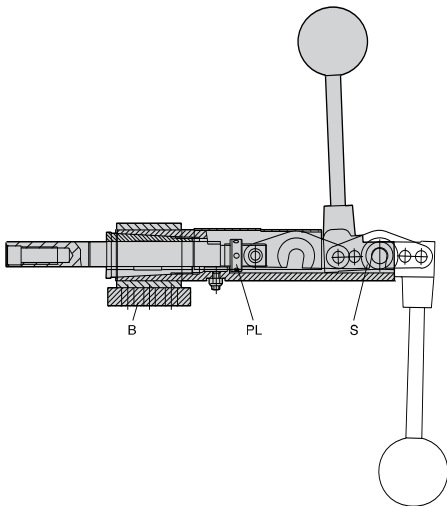
690-1MBPLS



695-1MBPLS ⓘ



Series 670, 675, 690, 695 Technical Information, Holding Capacities



Model	Max. Holding Capacity	Weight	Plunger Travel	Plunger Thread
670-1MBPLS	[2400 lbf] 10680 N	[4.2lb] 1,91 kg	[2.25] 57,2	M12
675-1MBPLS		[4.0lb] 1,81 kg	[1.10] 28	
690-1MBPLS	[5000 lbf] 22240 N	[8.2lb] 3,72kg	[3.00] 76,2	M16
695-1MBPLS ⓘ		[7.2lb] 3,27kg	[1.50] 38,1	

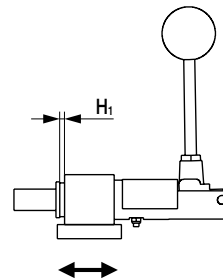
ⓘ This item is available upon request

The unique feature of these clamps is the collet-type bushing that can be adjusted to eliminate plunger end movement after long repeated use. The plunger also has a flat which prevents lateral movement and allows offset piloting and holding. The plunger is drilled and tapped for threaded spindles or custom fixturing.

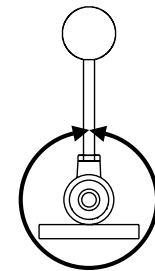
The adjustable pre-load nut (PL) can be used to lock the clamp against itself when not under pressure and therefore prevent opening when mounted vertically. The spring hold-open device (S) prevents the clamp from accidentally closing.

The mounting base (B) is supplied disassembled with the four models, to enable welding the base and the main assembly in any handle position.

Series 675 and 695 (shorter stroke) reach the over-center position only when clamping. Series 670 and 690 (longer stroke) lock in both the extended and retracted position.

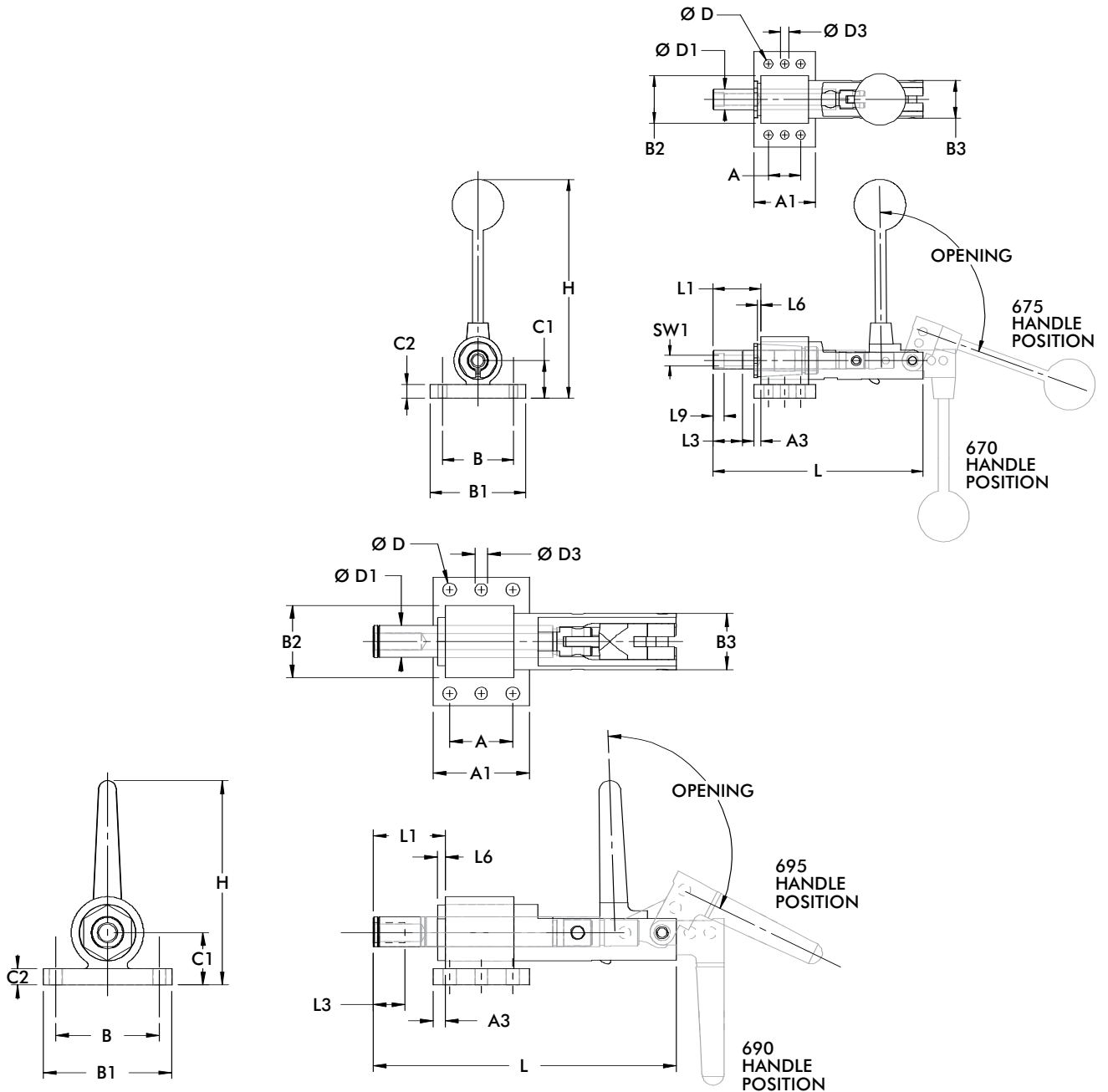


Welding range
H₁ axial 0-8mm



Welding range
radial 360°

Series 670, 675, 690, 695 Standard Clamp Dimensions



Model	A	A1	A3	B	B1	B2	B3	C1	C2	ØD	ØD1	ØD3	H	L	L1	L3
670-1MBPLS	[1.18]	[2.24]	[0.25]	[2.60]	[3.50]	[1.75]	[1.38]	[1.37]		[0.33]	[0.75]	[0.31]	[8.11]	[10.55]	[2.97]	[1.38]
675-1MBPLS	30	57	6.4	66	89	44.5	35	34.8		8.4	19	7.8	206	[7.68]	[1.74]	35
690-1MBPLS									[0.50]					195	44.4	
695-1MBPLS	[1.97]	[3.0]	[0.37]	[3.23]	[4.02]	-	[1.75]	[1.63]		[0.41]	[0.98]	[0.39]	[6.37]	[13.31]	[3.69]	[0.98]
695-1MBPLS	50	76.2	9.5	82	102		44.4	41.3		10.5	25	9.8	162	[9.45]	[3.69]	25
									12.7					240	93.7	

Model	L6	L9	SW1
670-1MBPLS		[0.41]	13H
675-1MBPLS		10.3	7
690-1MBPLS	0-8		
695-1MBPLS		-	-