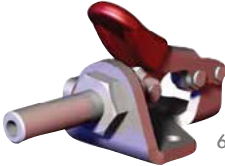
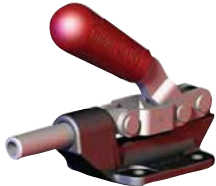
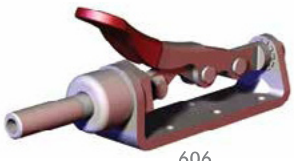































STRAIGHT LINE ACTION CLAMPS

Sizing and Application Chart



Series	Page	MC-SLA-#	Max. Holding Capacity N [lbf.]					Plunger Travel mm [inch]				
			0 to 1000	1000 to 2000	2000 to 3000	3000 to 5000	5000 to 7000	7000 to 10000	10000+	0 to 20	20 to 40	40 to 60

	6001	3	●						●				
	601	4	●						●				
	6015	5			●				●				
	603	7			●					●			
	608	7				●					●		
	605	9		●						●			
	606	10		●						●			
	607	11			●						●		
	609	12		●						●			
	610	13			●						●		
	615	14		●						●			
	620	15			●					●			
	630	16						●			●		
	640	17						●				●	
	650	18						●				●	
	95030	19			●					●			
	95040	19				●				●			
	95050	19						●			●		
	95060	19						●			●		
	5130	21					●				●		
	5131	21			●					●			
	5133	21				●						●	
	5150	23					●			●			
	602	25	●						●				
	604	25		●						●			
	624	25			●							●	
	6004	27		●						●			
	614	29			●					●			
	670	31						●			●		
	675	31						●		●			
	690	31						●				●	
	695	31						●		●			

STRAIGHT LINE ACTION CLAMPS

Heavy-Duty Indexers | Introduction

Overall Height mm [inch]		Overall Length mm [inch]		Overall Width mm [inch]		Suitable Application Areas						Standard Material			Service Environment														
0 to 40 [0 to 1.57]	40 to 60 [1.57 to 2.36]	60 to 80 [2.36 to 3.15]	80 to 100 [3.15 to 3.94]	100 to 120 [3.15 to 4.72]	120 to 140 [4.72 to 5.51]	60 to 80 [2.36 to 3.15]	80 to 120 [2.36 to 4.72]	120 to 160 [4.72 to 6.30]	160 to 200 [6.30 to 7.87]	200 to 240 [7.87 to 9.45]	240 to 280 [9.45 to 11.02]	280+ [11.02+]	0 to 30 [0 to 1.18]	30 to 45 [1.18 to 1.77]	45 to 60 [1.77 to 2.36]	60 to 75 [2.36 to 2.95]	75 to 90 [2.95 to 3.54]	Welding	Assembly	Checking Fixtures	Machining	Woodworking	Food Processing	Duty Cycle	Steel	Stainless Steel	Toggle Lock Plus	Normal	Harsh/Dirty
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6001 SERIES

Straight Line Action Clamps | 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

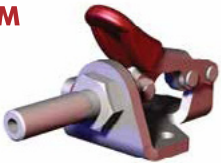
Applications:

- Assembly
- Testing
- Soldering
- Gluing

Also Available:

See page MC-ACC-1 for accessories

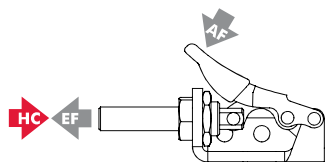
6001
6001-M



6001-SS
6001-MSS

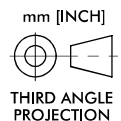
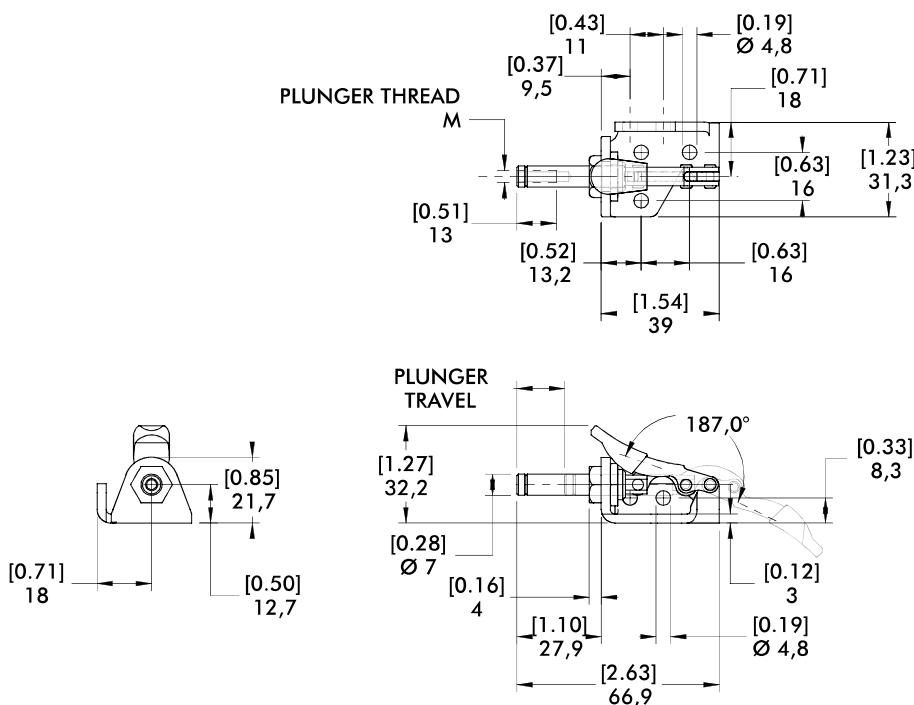


Technical Information | Holding Capacities | Dimensions



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	
6001-SS					#8-32	205943	Yes
6001-MSS					M4	205943-M	

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



601 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Compact straight line action clamp

Applications:

- Assembly
- Testing
- Soldering
- Gluing

Also Available:

See page MC-ACC-1 for accessories

601



601-M



601-O

Straight Base U-Bar



601-SS

Stainless steel

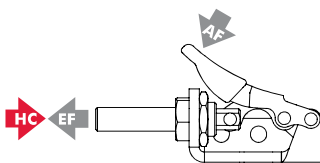


601-OSS ⓘ

Stainless steel External thread

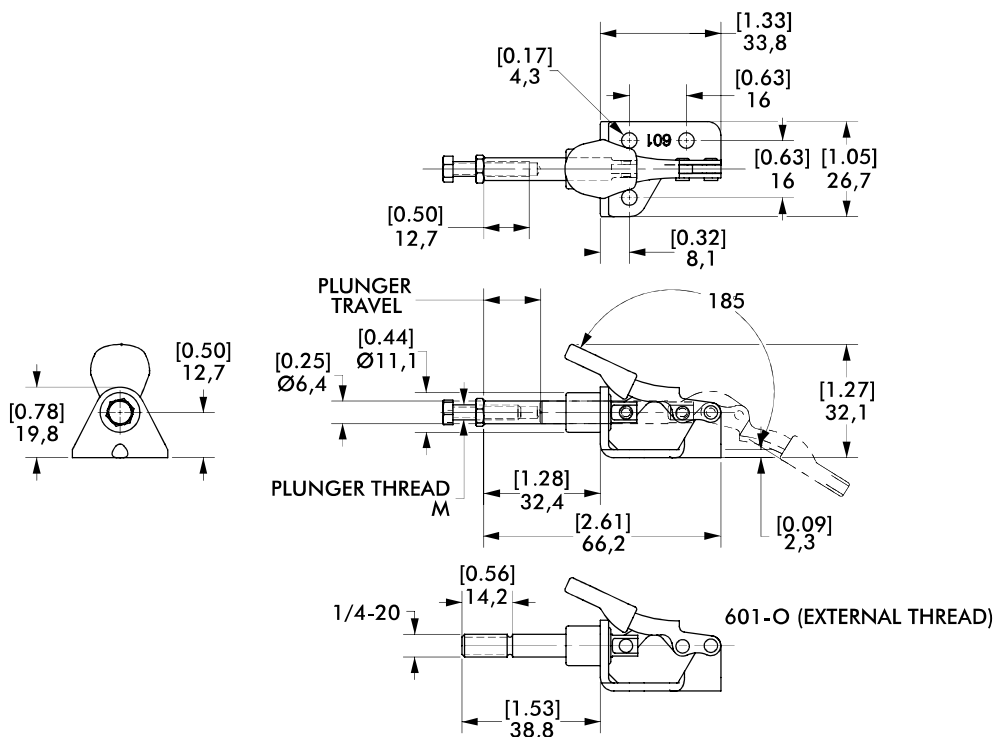


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Spindle (Recommended)	Spindle Included
601					#8-32	105203	Yes
601-M					M4	205208-M	No
601-O	[100 lbf] 440 N	[0.09lb] 0,04kg	14:1/25:1	[0.63] 16	1/4-20	--	No
601-SS					#8-32	205943	Yes
601-OSS ⓘ					1/4-20	--	No

ⓘ This item is available upon request HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



Dimensions and technical information are subject to change without notice

MC-SLA | 4



6015 SERIES

Straight Line Action Clamps | 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:

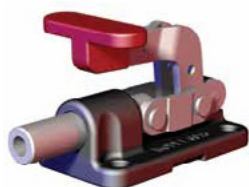
- Assembly
- Checking fixtures
- Tensioning devices

Also Available:

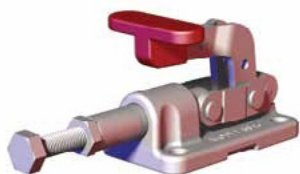
See page MC-ACC-1 for accessories

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

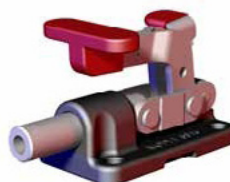
6015
6015-M



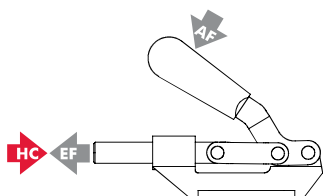
6015-SS,
6015-MSS
Stainless
Steel



6015-R,
6015-MR
with DESTACO®
Toggle Lock
Plus



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

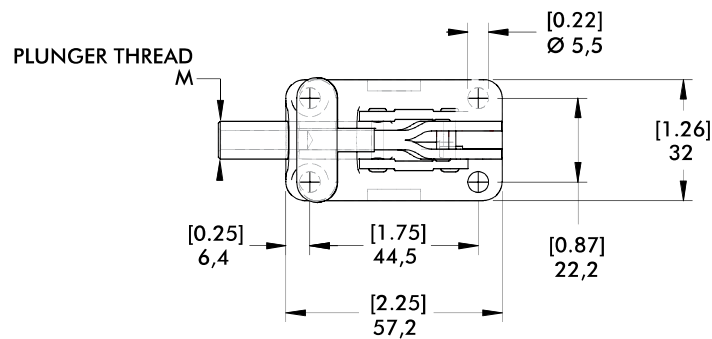
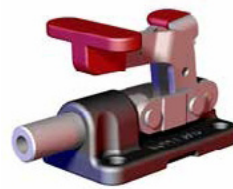
6015 SERIES

Straight Line Action Clamps | Dimensions | -M/-SS/-MSS/-R/-MR

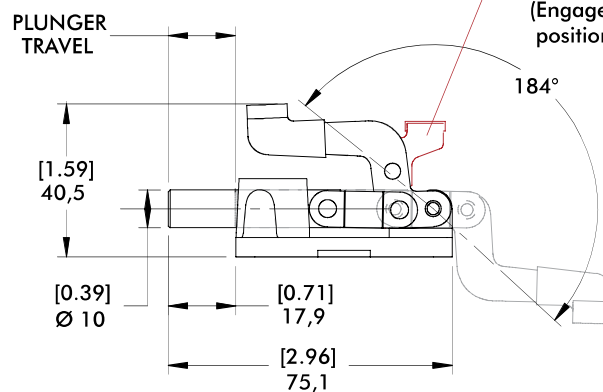
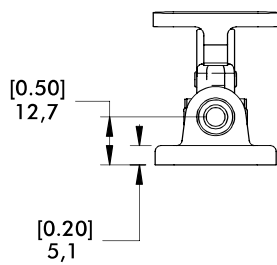
6015
6015-M

6015-SS,
6015-MSS
Stainless
Steel

6015-R,
6015-MR
with DESTACO®
Toggle Lock Plus



DESTACO®
TOGGLE LOCK
PLUS OPTION
6015-R / 6015-MR
(Engages in extended
position only)



mm [INCH]
THIRD ANGLE
PROJECTION

603, 608 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Allow handle to rotate and fall below mounting plane to lock in retracted position
- Large holding capacities for their size
- Available with DESTACO® Toggle Lock Plus

Applications:

- Assembly & test
- Checking fixtures
- Welding fixtures
- Tensioning devices

Also Available:

See page MC-ACC-1 for accessories

803 Pneumatic Toggle Clamp
See page MC-PTC-27

803-ME Pneumatic Toggle Clamp
See page MC-PTC-27

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

603
603-M



603-SS
603-MSS
Stainless Steel



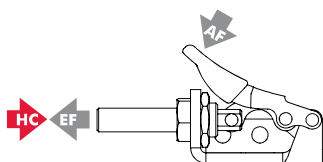
603-R
603-MR
with
DESTACO®
Toggle Lock
Plus



608
608-M



Technical Information | Holding Capacities



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
603	[600 lbf] 2670 N	[0.83lb] 0,38kg	23:1/34:1	[1.25] 31,8	5/16-18	207203
603-M					M8	207203-M
603-SS	[840 lbf] 3740 N				5/16-18	207943
603-MSS					M8	207943-M (supplied)
603-R	[600 lbf] 2670 N				5/16-18	207203
603-MR					M8	207203-M
608	[850 lbf] 3780 N	[1.25lb] 0,57kg	44:1/50:1	[1.63] 41,3	3/8-16	210203
608-M					M10	210203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force

603, 608 SERIES

Straight Line Action Clamps | Dimensions | -M/-SS/-MSS/-R/-MR

603
603-M



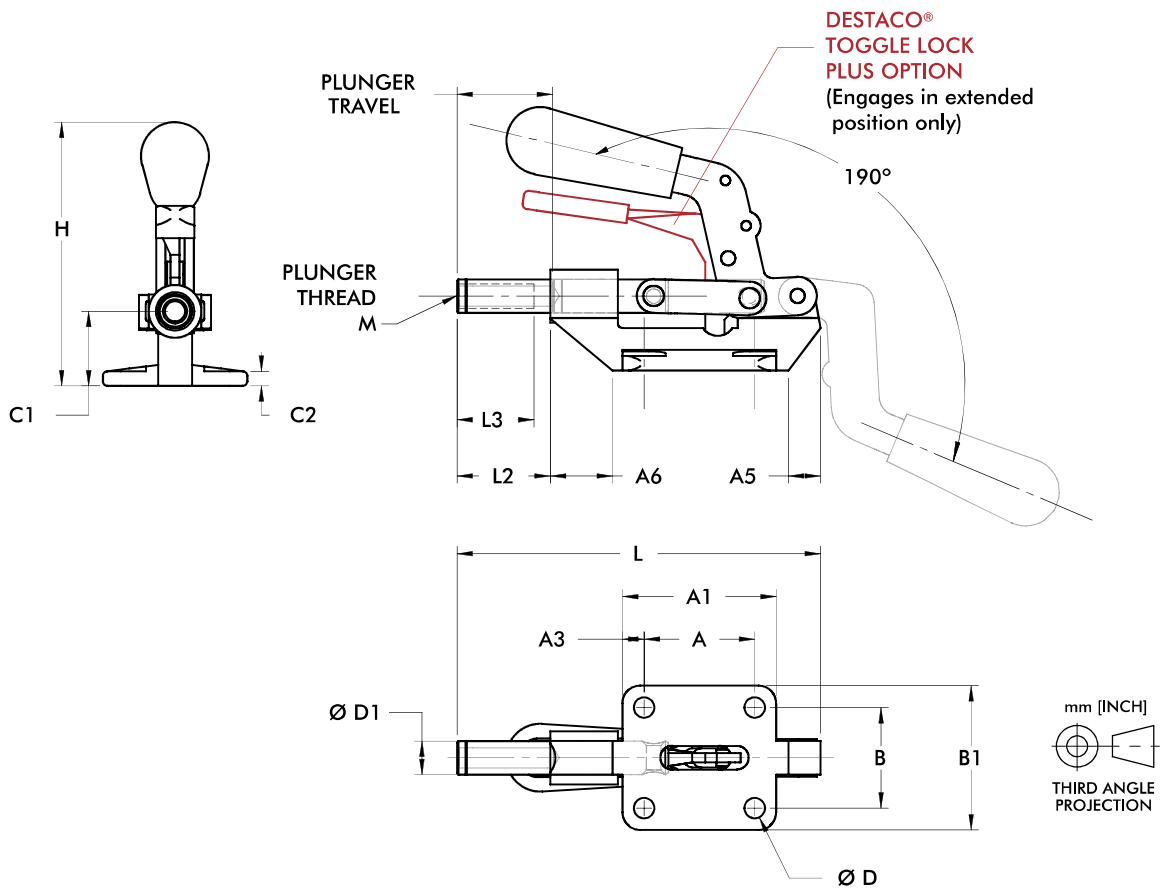
603-SS
603-MSS
Stainless Steel



603-R
603-MR
with
DESTACO®
Toggle Lock
Plus



608
608-M



Model	A	A1	A3	A5	A6	B	B1	C1	C2	D	D1	H	L	L2	L3
603		[2.17]	[0.34]	[0.51]	[0.82]				[0.19]		[0.44]	[3.43]	[4.77]		
603-M		55	8,5	13	21				4,8		11,1	87	121,2		
603-SS	[1.44]			[0.54]	[0.65]	[1.31]	[1.88]	[0.97]	[0.25]	[0.27]	[0.47]	[3.28]	[4.69]	[1.28]	[1.00]
603-MSS	36,6	[2.20]	[0.30]	13,6	16,5	33,3	48	24,6	6,4	6,8	12	83,4	119,2	32,5	25,4
603-R		55,9	7,5	[0.51]	[0.82]						[0.44]	[3.43]	[4.77]		
603-MR				13	21				[0.19]		11,1	87	121,2		
608	[1.63]	[2.25]	[0.31]	[0.75]	[1.40]	[1.63]	[2.25]	[1.25]	4,8	[0.33]	[0.62]	[4.04]	[6.00]	[1.59]	[1.25]
608-M	41,4	57,2	8	19	36	41,4	57,2	31,8		8,4	15,8	102,6	152,3	40,5	31,8

605 SERIES

Straight Line Action Clamps | Product Overview

Features:

- For push/pull clamping
- Allow handle to rotate and fall below mounting plane to lock in retracted position

Applications:

- Assembly & test
- Woodworking
- Tensioning devices

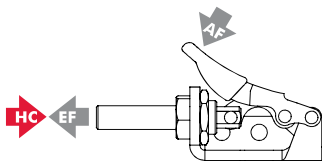
Also Available:

See page MC-ACC-1 for accessories
Reverse action version Model 615/615-M

605
605-M

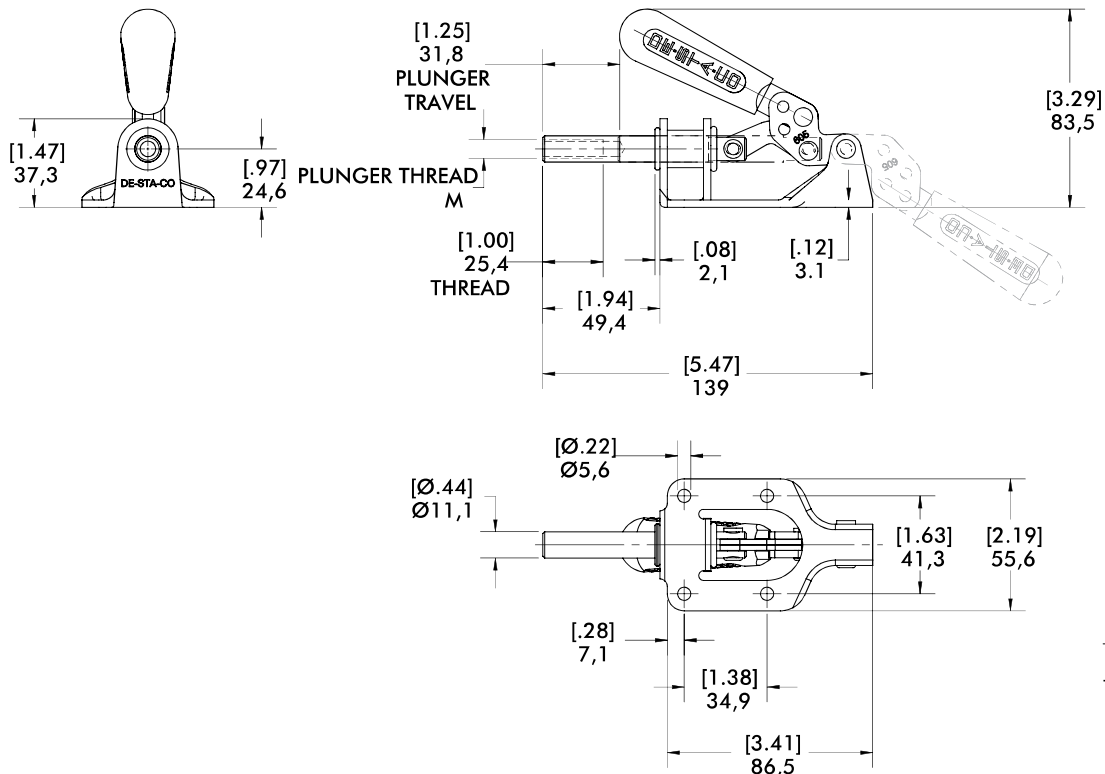


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
605	[300 lbf] 1330 N	[0.69lb] 0,31 kg	45:1/40:1	[1.25] 31,8	5/16-18	207203
605-M					M8	207203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



606 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Handle and linkage swivel 125° for mounting flexibility
- Narrow base for tight spaces
- Plunger locks in extended position only

Applications:

- Assembly & test
- Woodworking
- Tensioning devices

Also Available:

See page MC-ACC-1 for accessories

606
606-M



Mounting configuration:

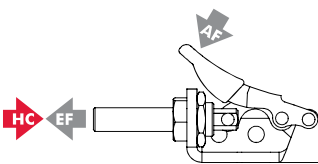


Bottom Mount



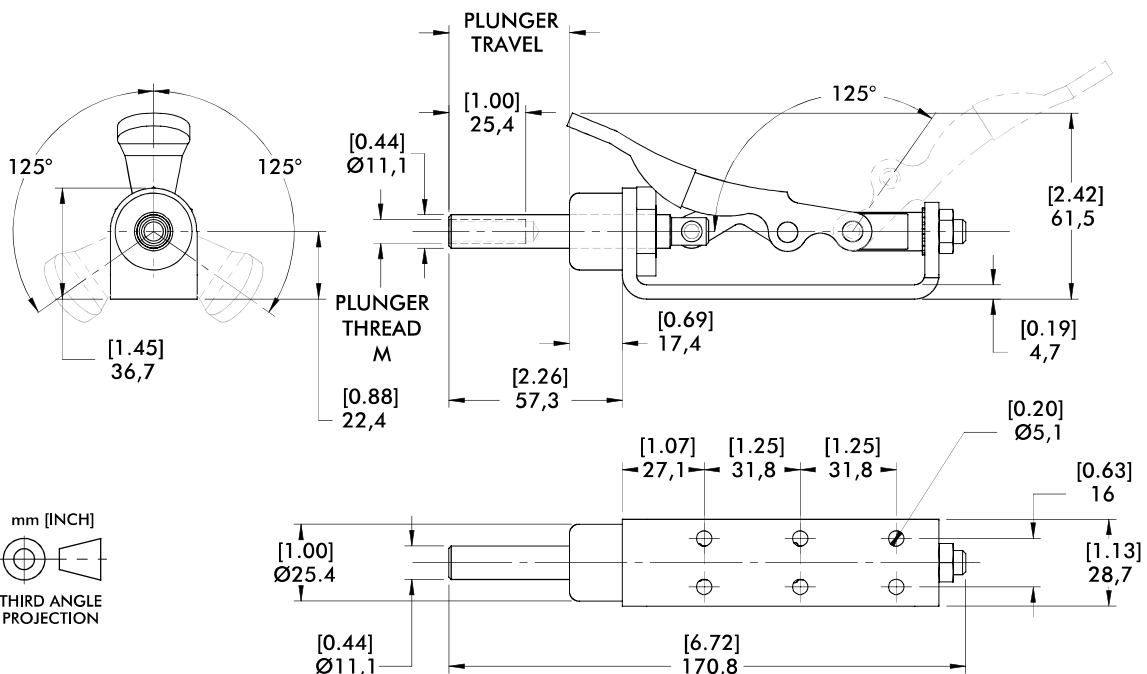
Side Mount

Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
606	[450 lbf] 2000 N	[0.81 lb] 0,37kg	33:1	40 [1.57]	5/16-18 M8	207203 207203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



Dimensions and technical information are subject to change without notice

MC-SLA | 10



607 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Low profile and high holding capacity for its size
- Available with round or square plunger to resist torsional loads
- Allow handle to rotate and fall below mounting plane to lock in retracted position

Applications:

- Assembly & test
- Welding
- Tensioning devices

Also Available:

See page MC-ACC-1 for accessories

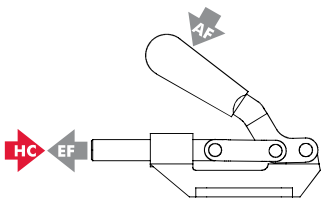
607
607-M



607-SQ
607-SQM
with Square
Plunger

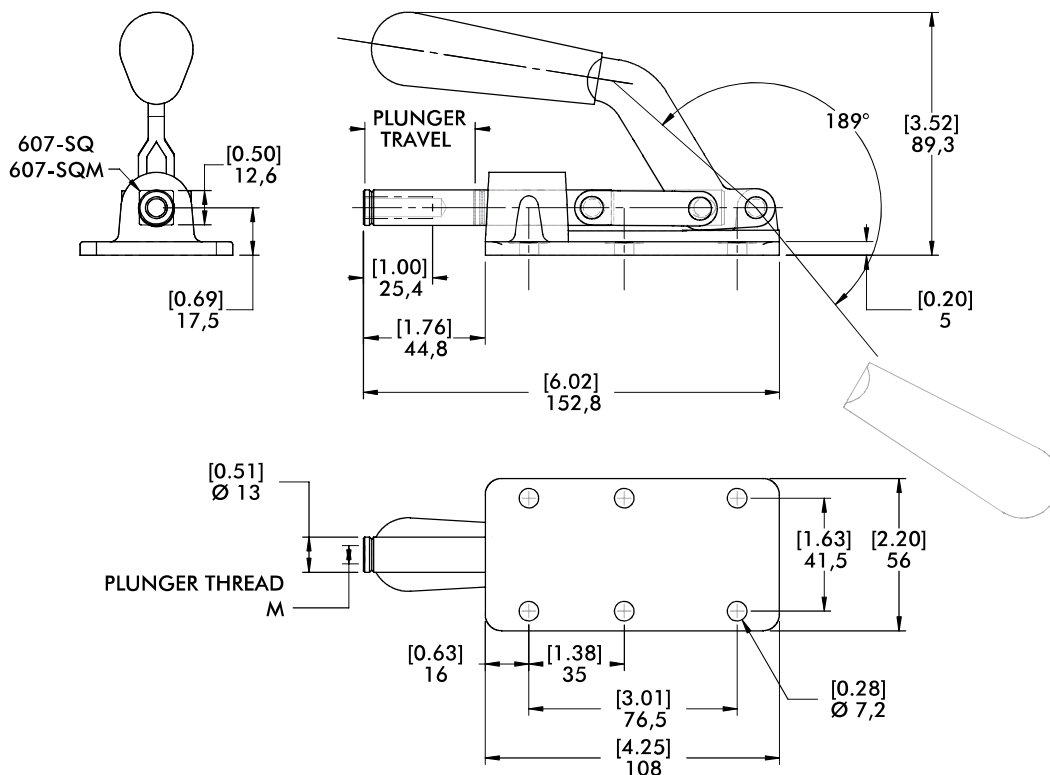


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
607					5/16-18	207203
607-M	[800 lbf] 3560 N	[1.63lb] 0,74kg	37:1/64:1	[1.63] 41,4	M8	207203-M
607-SQ					5/16-18	207203
607-SQM					M8	207203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



609 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Low profile and high holding capacity for its size
- Flanged or straight base
- Allow handle to rotate and fall below mounting plane to lock in retracted position

Applications:

- Assembly & test
- Welding
- Tensioning devices

Also Available:

See page MC-ACC-1 for accessories

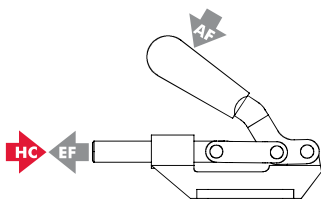
609
Flanged Base



609-B
Straight Base

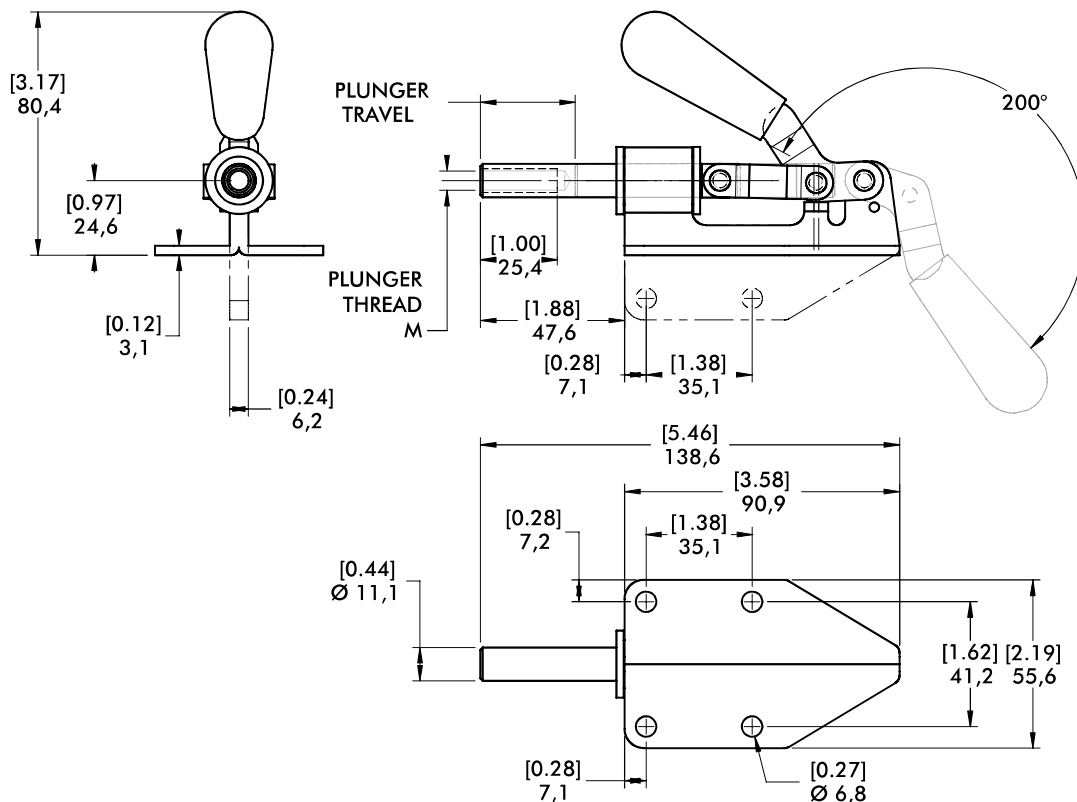


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
609	[300 lbf]	[0.88lb]	36:1/47:1	[1.25]	5/16-18	207203
609-B	1330 N	0,40kg		31,8		

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



Dimensions and technical information are subject to change without notice

MC-SLA | 12



610 SERIES

Straight Line Action Clamps | Product Overview

Features:

- For push/pull clamping
- Allow handle to rotate and fall below mounting plane to lock in retracted position

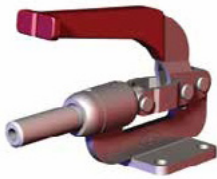
Applications:

- Assembly & test
- Woodworking
- Tensioning devices

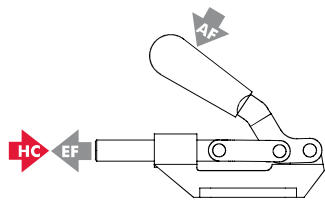
Also Available:

See page MC-ACC-1 for accessories

610
610-M

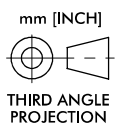
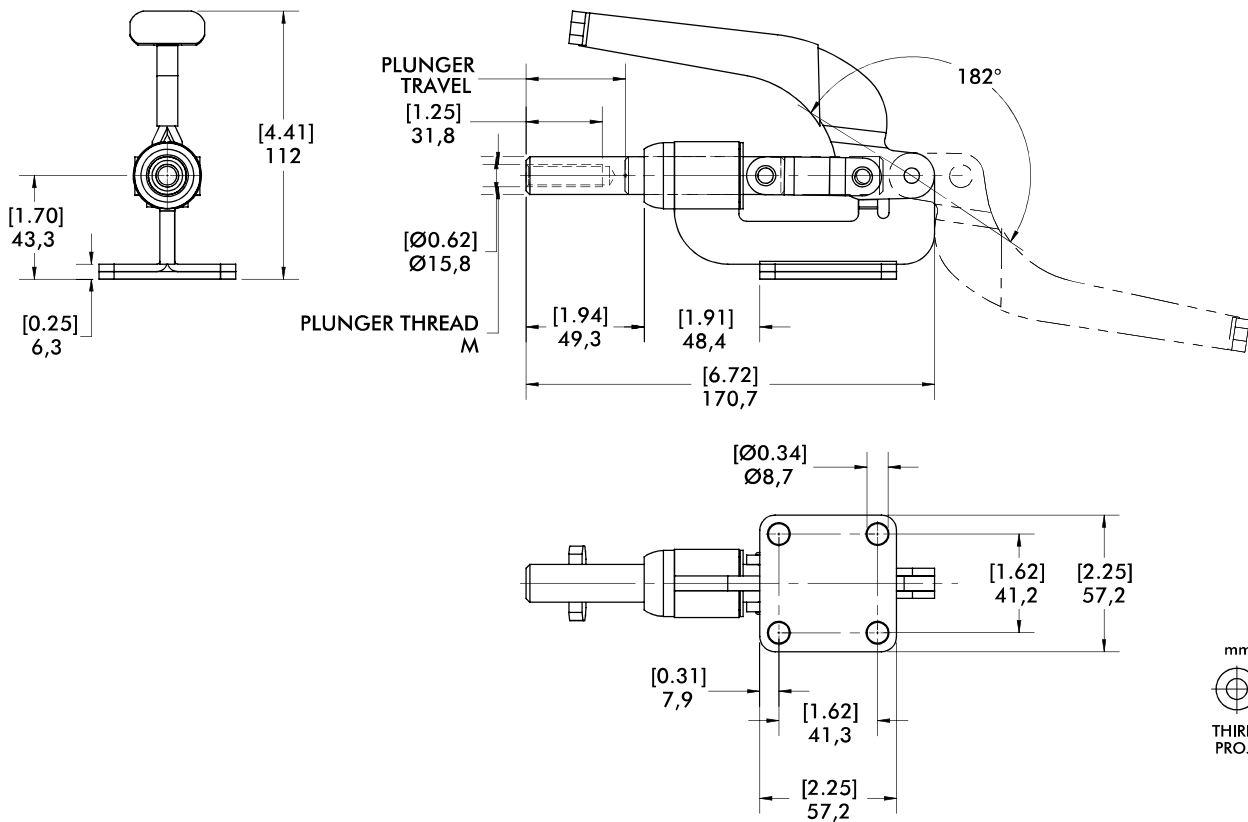


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
610	[800 lbf] 3560 N	[1.69lb] 0,77kg	51:1/70:1	[1.63] 41,4	3/8-16	210203
610-M					M10	210203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



615 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Reverse handle action.
- Plunger locks in the extended position only as the handle is moved downward

Applications:

- Assembly & test
- Woodworking
- Tensioning devices

Also Available:

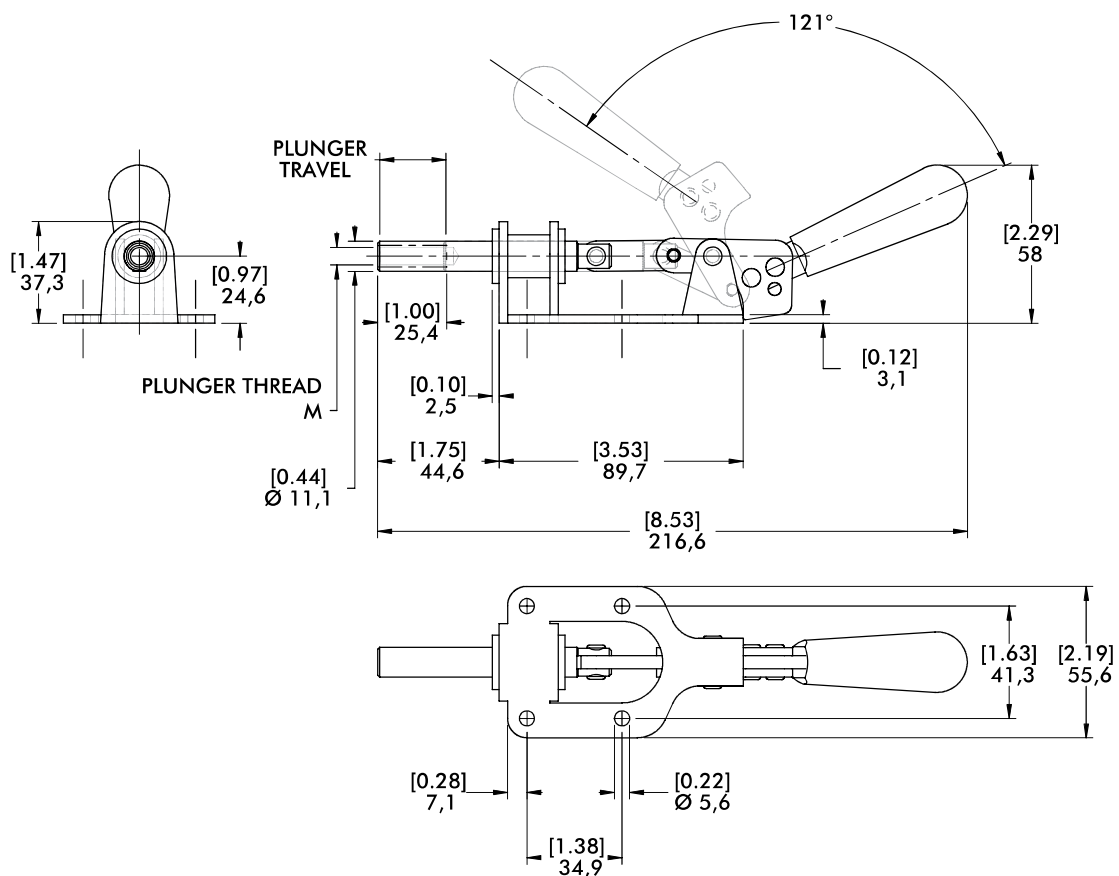
See page MC-ACC-1 for accessories

615



Technical Information | Holding Capacities | Dimensions

Model	Max. Holding Capacity	Weight	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
615	[300 lbf] 1330 N	[0.69lb] 0,31kg	[0.97] 24,6	5/16-18	207203



Dimensions and technical information are subject to change without notice

MC-SLA | 14



620 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Reverse handle action
- Plunger locks in the extended position only as the handle is moved downward

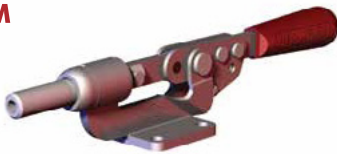
Applications:

- Assembly & test
- Woodworking
- Tensioning devices

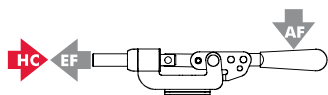
Also Available:

See page MC-ACC-1 for accessories

620
620-M

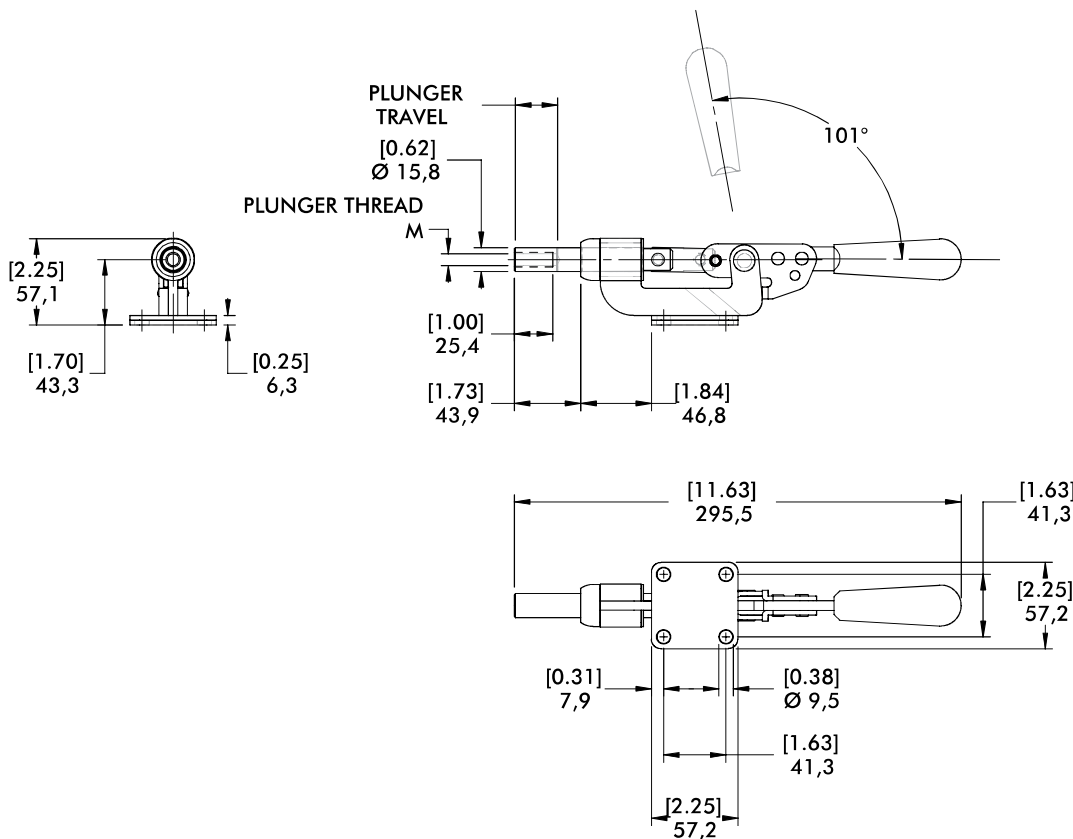


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
620	[600 lbf] 2670 N	[1.50lb] 0,68kg	44:1	[1.11] 28,2	3/8-16	210203
620-M					M10	210203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



630 SERIES

Straight Line Action Clamps | Product Overview

Features:

- For push/pull clamping
- Allow handle to rotate and fall below mounting plane to lock in retracted position
- Available with DESTACO® Toggle Lock Plus

Applications:

- Assembly & test
- Welding
- Tensioning devices

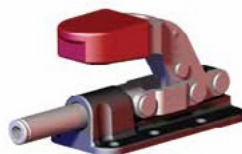
Also Available:

See page MC-ACC-1 for accessories
830, 830-ME Pneumatic Toggle Clamp
(See page MC-PTC-27)

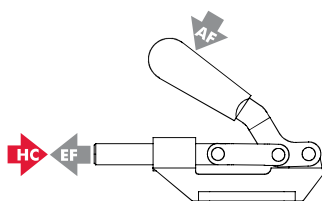
630
630-M



630-R
630-MR
with
DESTACO®
Toggle Lock
Plus

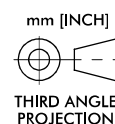
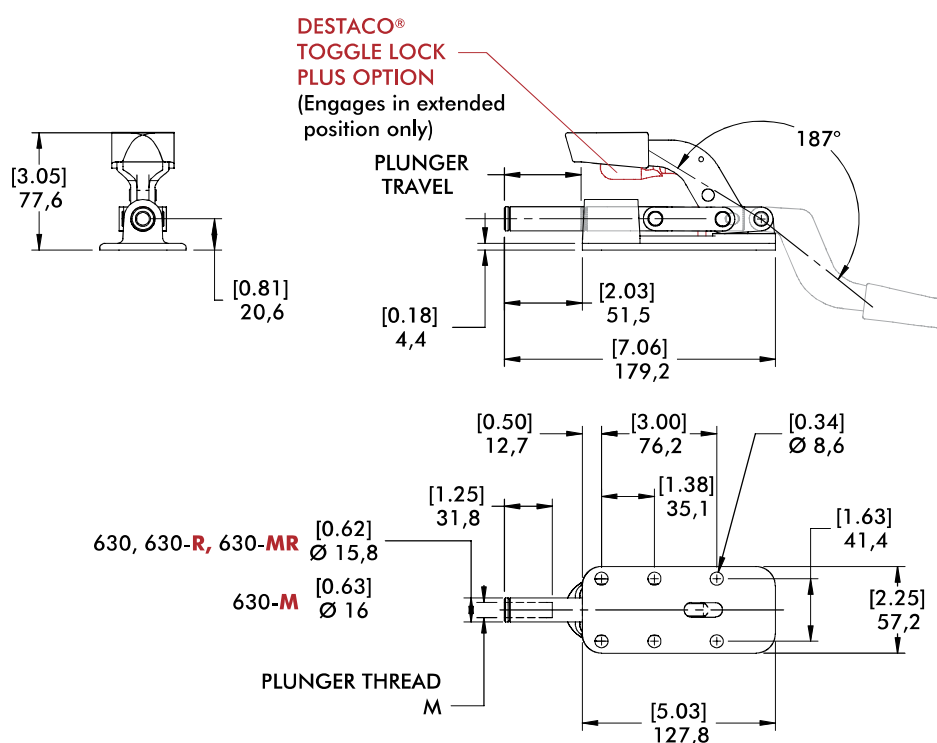


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing/pulling)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
630					3/8-16	210203
630-M	[2,500 lbf] 11100 N	[1.90lb] 0,89kg	36:1/23:1	[2.00] 50,8	M10	210203-M
630-R					3/8-16	210203
630-MR					M10	210203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



Dimensions and technical information are subject to change without notice

MC-SLA | 16



640 SERIES

Straight Line Action Clamps | Product Overview

Features:

- For heavy duty push/pull clamping
- Longest stroke of our Straight Line Action Clamps
- Allow handle to rotate and fall below mounting plane to lock in retracted position
- Available with DESTACO® Toggle Lock Plus

Applications:

- Assembly & test
- Welding
- Tensioning devices

Also Available:

See page MC-ACC-1 for accessories

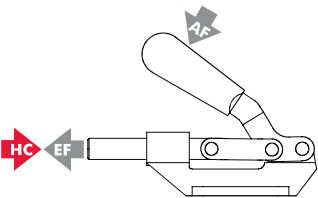
640
640-M



640-R
640-MR
with
DESTACO®
Toggle Lock
Plus

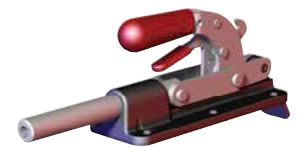
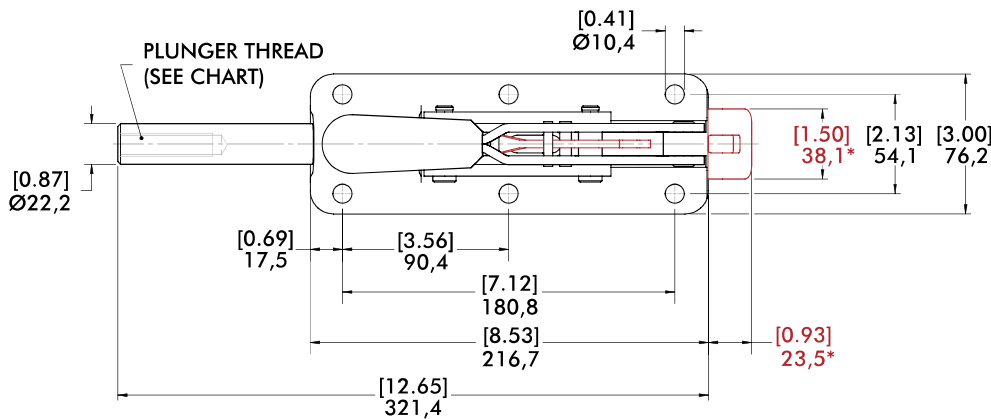


Technical Information | Holding Capacities | Dimensions

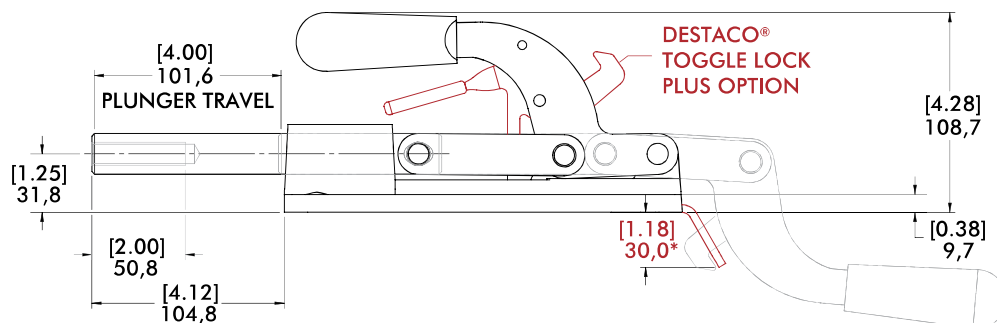


Model	Max. Holding Capacity	Weight	EF:AF (pushing)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
640					1/2-13	220203
640-M	[7,500 lbf] 33400 N	[6.78lb] 3,08kg	35:1	[4.00] 101,6	M12	220203-M
640-R					1/2-13	220203
640-MR					M12	220203-M

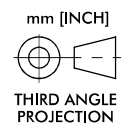
HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



Extended (640-R shown)



Retracted (640-R shown)



(*) Dimensions above in RED applies to the 640-R/640-MR only



650 SERIES

Straight Line Action Clamps | Product Overview

Features:

- For heavy duty push/pull clamping
- Largest of our Straight Line Action Clamps
- Forged steel base and handle
- Allow handle to rotate and fall below mounting plane to lock in retracted position

Applications:

- Assembly
- Welding
- Staking, light presswork
- Tensioning devices

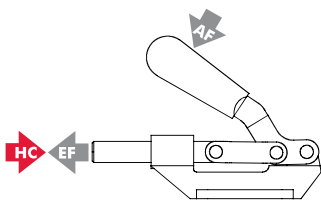
Also Available:

See page MC-ACC-1 for accessories

650
650-M

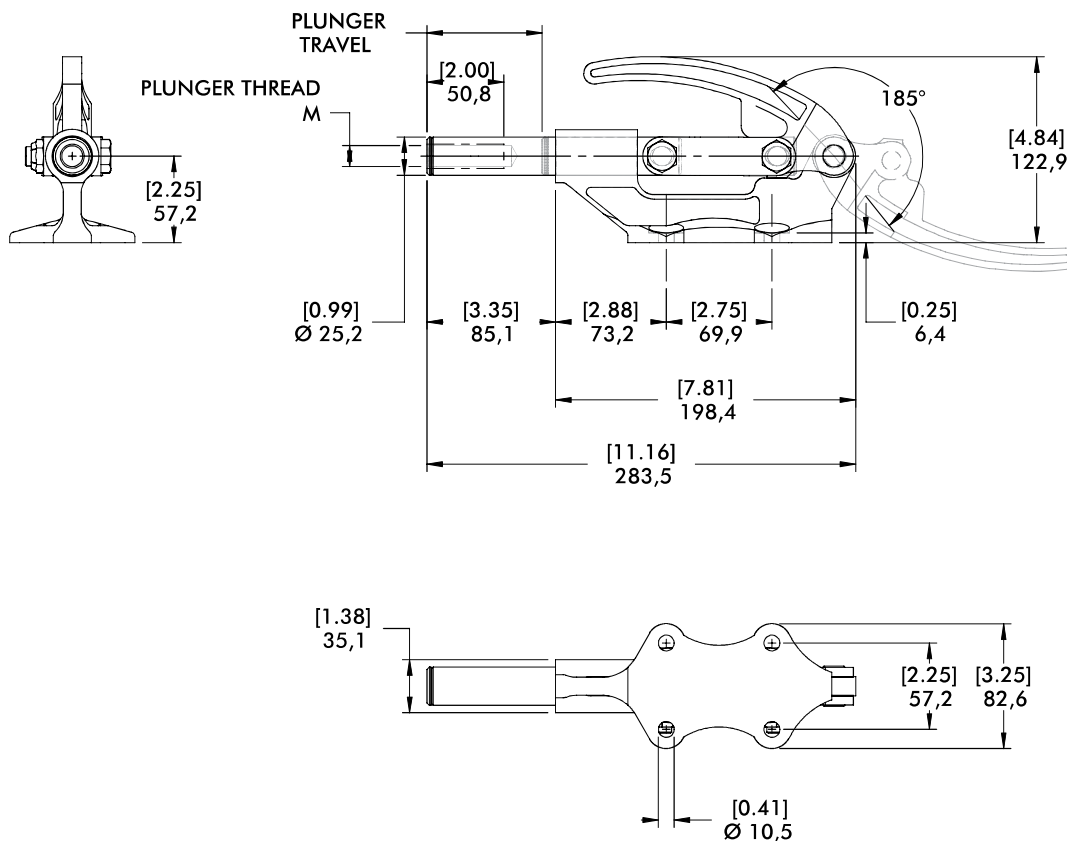


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing)	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
650	[16,000 lbf]	[5.69lb]	25:1	[3.00]	5/8-11	250203
650-M	71200 N	2,58kg		76,6	M16	250203-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



mm [INCH]
THIRD ANGLE PROJECTION

Dimensions and technical information are subject to change without notice

MC-SLA | 18



95030, 95040, 95050, 95060 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Low profile with high holding capacities
- Cast steel base and handle
- Allow handle to rotate and fall below mounting plane to lock in retracted position

Applications:

- Assembly
- Testing
- Tensioning devices

Also Available:

See page MC-ACC-1 for accessories

95030

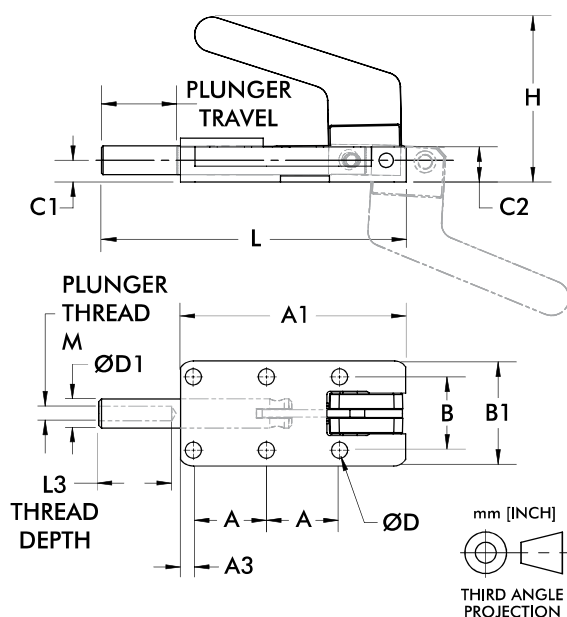
95040

95050 ⓘ

95060 ⓘ



Technical Information | Holding Capacities



Model	Max. Holding Capacity	Weight	Plunger Travel	(M) Plunger Thread	Recommended Spindle (Not Supplied)
95030	[550 lbf] 2450 N	[0.80lb] 2,58kg	[0.98] 24,9	M6	205203-M
95040	[1100 lbf] 4900 N	[1.60lb] 0,73kg	[1.50] 38,1	M8	207203-M
95050 ⓘ	[1650 lbf] 7340 N	[2.10lb] 0,95kg	[1.97] 50	M12	220203-M
95060 ⓘ	[3960 lbf] 17600 N	[6.4lb] 2,9kg	[2.36] 60		

ⓘ This item is available upon request
HC = Holding Capacity, **EF** = Exerting Force, **AF** = Applied Force

Part No.	A	A1	A3	B	B1	C1	C2	ØD	ØD1	H	L	L3
95030	25 [0.98]	77 [3.03]	4.4 [0.17]	25 [0.98]	35.9 [1.41]	7.5 [0.30]	12.2 [0.48]	5.5 [0.22]	10 [0.39]	56 [2.20]	105 [4.13]	25 [0.98]
95040	35 [1.38]	109 [4.29]	7.9 [0.31]	35 [1.38]	50.7 [2.00]	10 [0.39]	18.3 [0.72]	6.5 [0.26]	14 [0.55]	77 [3.03]	149.1 [5.87]	65 [2.56]
95050 ⓘ	45 [1.77]	138.5 [5.45]	8.7 [0.34]	45 [1.77]	66 [2.60]	14 [0.55]	23.8 [0.94]	8.5 [0.33]	19 [0.75]	78 [3.07]	189.8 [7.47]	60 [2.36]
95060 ⓘ	56 [2.20]	167 [6.57]	10.2 [0.40]	55 [2.17]	77 [3.03]	16 [0.63]	27.4 [1.08]	10.5 [0.41]	22 [0.87]	92 [3.62]	229 [9.02]	78.8 [3.10]

ⓘ This item is available upon request

5130, 5131, 5133 SERIES

Heavy-Duty Straight Line Action Clamps | Product Overview

Features:

- Reverse action allows the handle to stay out of the work zone
- Hardened steel pivot pins and bushings provide long life
- Black oxide finish with hardened plungers
- DESTACO® Toggle Lock Plus versions available

Applications:

- Welding fixtures
- Assembly fixtures
- Light machining

5130/-M
5131/-M
5133/-M
Flanged Base

5130-B/-MB
5131-B/-MB
5133-B/-MB
Solid Base

5130-R/-MR
5131-R/-MR
5133-R/-MR
Flanged Base
with DESTACO®
Toggle Lock Plus

5130-BR①/-MBR①
5131-BR①/-MBR①
5133-BR①/-MBR①
Solid Base
with DESTACO®
Toggle Lock Plus



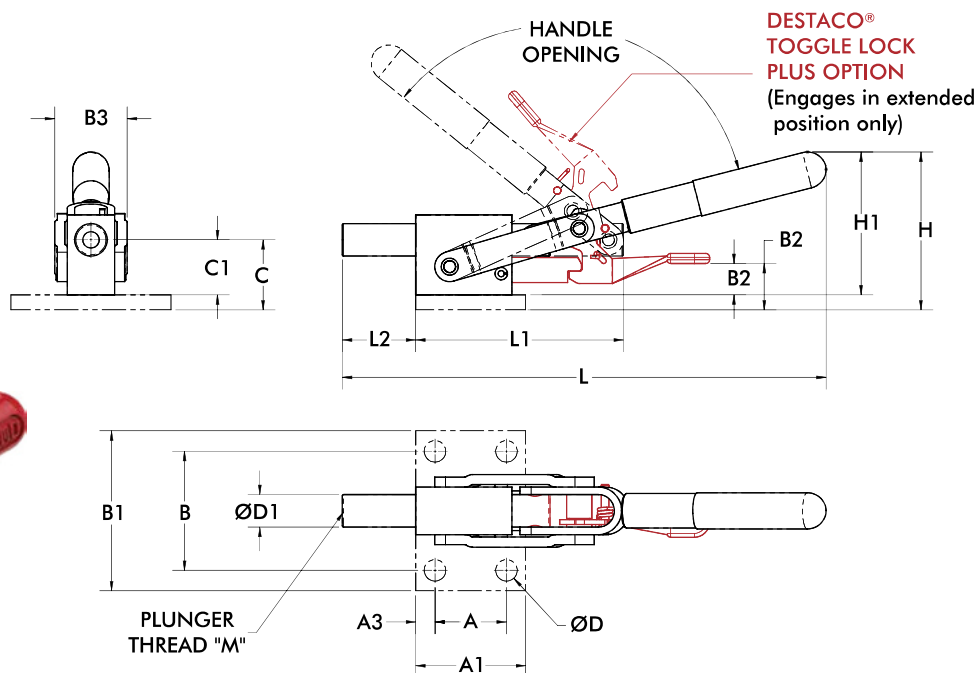
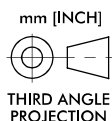
Model	Max. Holding Capacity	Weight	Plunger Travel mm[in.]	Handle Opening	Plunger Thread (M)	Recommended Spindle (not supplied)
5131	[2500lbf.] 11120N	[1.12lbs] 0,51kg	[1.00] 25,4	113°	5/16-18	461203
5131-M					M8	461203-M
5131-B		[0.85lbs] 0,39kg			5/16-18	461203
5131-MB					M8	461203-M
5131-R		[1.15lbs] 0,52kg			5/16-18	461203
5131-MR					M8	461203-M
5131-BR①		[0.88lbs] 0,40kg			5/16-18	461203
5131-MBR①					M8	461203-M
5130	[5800lbf.] 25800N	[2.87lbs] 1,30kg	[1.75] 44,5	125°	1/2-13	325203
5130-M					M12	220203-M
5130-B		[2.40lbs] 1,09kg			1/2-13	325203
5130-MB					M12	220203-M
5130-R		[3.03lbs] 1,37kg			1/2-13	325203
5130-MR					M12	220203-M
5130-BR①		[2.56lbs] 1,16kg			1/2-13	325203
5130-MBR①					M12	220203-M
5133	[4600lbf.] 20460N	[3.12lbs] 1,41kg	[3.13] 79,5	139°	1/2-13	325203
5133-M					M12	220203-M
5133-B		[2.65lbs] 1,20kg			1/2-13	325203
5133-MB					M12	220203-M
5133-R		[3.36lbs] 1,52kg			1/2-13	325203
5133-MR					M12	220203-M
5133-BR①		[2.89lbs] 1,31kg			1/2-13	325203
5133-MBR①					M12	220203-M

① This item is available upon request



5130, 5131, 5133 SERIES

Heavy-Duty Straight Line Action Clamps | Dimensions



Model	A	A1	A3	B	B1	B2	B3	C	D	D1	H	L	L1	L2
5131														
5131-M	28.6	44	7.7	47.6	64	-	29	28	8.6	13	63.1	193.4	83	29.3
5131-R	[1.13]	[1.73]	[0.30]	[1.87]	[2.52]	18.5	[1.14]	[1.10]	[0.34]	[0.51]	[2.49]	[7.61]	[3.27]	[1.15]
5131-MR						[0.73]								
5130														
5130-M	44.5	64	9.8	58.7	76	-	40	35	10.5	19	92.3	283	132	49.7
5130-R	[1.75]	[2.52]	[0.38]	[2.31]	[2.99]	27.2	[1.57]	[1.38]	[0.41]	[0.75]	[3.63]	[11.14]	[5.20]	[1.96]
5130-MR						[1.07]								
5133														
5133-M	44.5	64	9.8	58.7	76	-	39	35	10.5	19	97.5	331.4	167	82.2
5133-R	[1.75]	[2.52]	[0.38]	[2.31]	[2.99]	31.4	[1.54]	[1.38]	[0.41]	[0.75]	[3.84]	[13.05]	[6.58]	[3.24]
5133-MR						[1.24]								

Model	B2	B3	C1	D1	H1
5131-B	-				
5131-MB		29	22	13	57.1
5131-BR ⓘ	12.4	[1.14]	[0.87]	[0.51]	[2.25]
5131-MBR ⓘ	[0.49]				
5130-B					
5130-MB		40	29	19	86.3
5130-BR ⓘ	21.2	[1.57]	[1.14]	[0.75]	[3.40]
5130-MBR ⓘ	[0.84]				
5133-B					
5133-MB		39	29	19	91.5
5133-BR ⓘ	25.4	[1.54]	[1.14]	[0.75]	[3.60]
5133-MBR ⓘ	[1.00]				

ⓘ This item is available upon request

Dimensions and technical information are subject to change without notice

MC-SLA | 22



5150 SERIES

Heavy-Duty Straight Line Action Clamps | Product Overview

Features:

- Square plunger provides positive radial location
- Reverse action allows the handle to stay out of the work zone
- Hardened steel pivot pins and bushings provide long life
- Black oxide finish with hardened plungers

Applications:

- Welding fixtures
- Assembly fixtures
- Light machining

5150/5150-M
Flanged Base



5150-B/5150-MB
Solid Base



5150-R/5150-MR
Flanged Base with DESTACO® Toggle Lock Plus



5150-BR^①/5150-MBR^①
Solid Base with DESTACO® Toggle Lock Plus



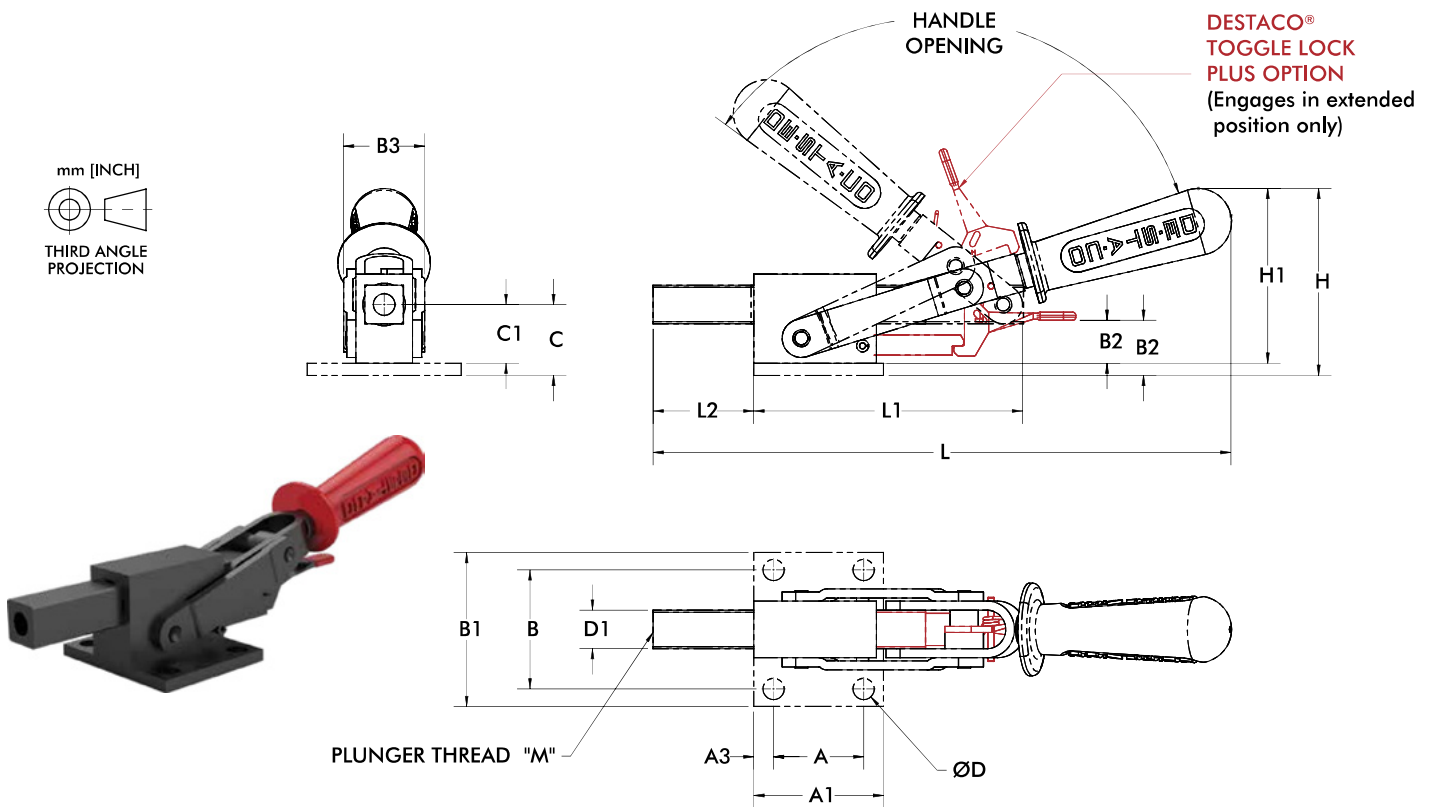
Technical Information

Model	Max. Holding Capacity	Weight	Plunger Travel mm[in.]	Handle Opening	Plunger Thread (M)	Recommended Spindle (not supplied)
5150	[5800lbf.] 25800N	[3.00lbs] 1,36kg	[1.91] 48.4	125°	1/2-13	325203
5150-M					M12	220203-M
5150-B		[2.50lbs] 1,13kg			1/2-13	325203
5150-MB					M12	220203-M
5150-R		[3.15lbs] 1,43kg			1/2-13	325203
5150-MR					M12	220203-M
5150-BR ^①		[2.68lbs] 1,22kg			1/2-13	325203
5150-MBR ^①					M12	220203-M

^① This item is available upon request

5150 SERIES

Heavy-Duty Straight Line Action Clamps | Product Overview



Model	A	A1	A3	B	B1	B2	B3	C	C1	D	D1
5150	44.5	64	9.8	58.7	76			35	-	10.5	
5150-M	[1.75]	[2.52]	[0.38]	[2.31]	[2.99]			[1.57]		[0.41]	
5150-B	-	-	-	-	-			-	29	-	
5150-MB							40		[1.14]		19
5150-R	44.5	64	9.8	58.7	76	27.2	[1.57]	35	-	10.5	[0.75]
5150-MR	[1.75]	[2.52]	[0.38]	[2.31]	[2.99]	[1.07]		[1.57]		[0.41]	
5150-BR	-	-	-	-	-	21.2		-	29	-	
5150-MBR						[0.84]			[1.14]		

Model	H	H1	L	L1	L2	M
5150	92.3	-				1/2-13
5150-M	[3.63]					M12
5150-B		86.3				1/2-13
5150-MB		[3.40]	285.3	72.6	49.7	M12
5150-R	92.3		[11.23]	[2.86]	[1.96]	1/2-13
5150-MR	[3.63]					M12
5150-BR ⓘ		86.3				1/2-13
5150-MBR ⓘ		[3.40]				M12

ⓘ This item is available upon request

602, 604, 624 SERIES

Straight Line Action Clamps | 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 MC-ACC-1 for accessories

602
602-SS
602-MM
602-MMSS



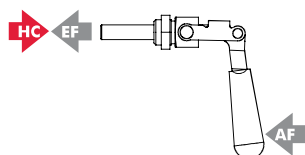
604
604-SS
604-MM
604-MMSS ⓘ



624
624-SS
624-MM



Technical Information | Holding Capacities | 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	[0.44lb] 0,20kg	45:1/26:1	[1.50] 38	5/16-18	207203	606104
604-SS	[400 lbf] 1780 N					--	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

ⓘ This item is available upon request **HC** = Holding Capacity, **EF** = Exerting Force, **AF** = Applied Force

602, 604, 624 SERIES

Straight Line Action Clamps | Dimensions | -SS/-MM/-MMSS

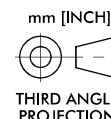
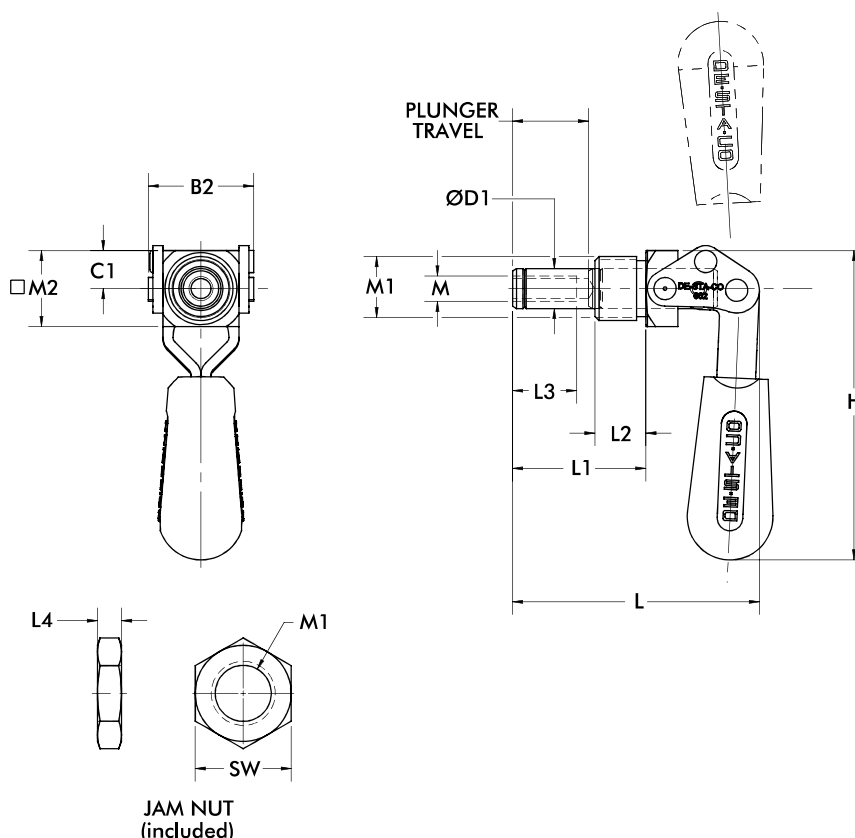
602
602-SS
602-MM
602-MMSS



604
604-SS
604-MM
604-MMSS ⓘ



624
624-SS
624-MM



Model no.	B2	C1	ØD1	H	L	L1	L2	L3	L4	M1	M2	SW
602			[0.39] 10									[0.88] 22,2
602-SS	[1.04] 26,3	[0.37] 9,5	[0.37] 9,5	[3.13] 80	[2.43] 61,7	[1.31] 33,3	[0.50] 12,7	[0.63] 16	[0.25] 6,4	5/8-18	[0.75] 19	[0.87] 22
602-MM			[0.39] 10							M16x1.5		
602-MMSS												
604												
604-SS	[1.30] 33	[0.44] 11	[0.44] 11	[4.16] 106	[4.27] 108,5	[2.18] 55	[0.63] 16	[1.00] 25		3/4-16	[0.88] 22	[1.00] 25,4
604-MM										M20x1.5		[1.18] 30
604-MMSS									[0.25] 6			
624												
624-SS	[1.81] 46	[0.75] 19	[0.62] 16	[5.60] 142	[6.68] 170	[3.62] 92	[0.88] 22	[1.25] 32		1-14	[1.25] 32	[1.50] 38,1
624-MM										M27x2		[1.61] 41

Dimensions and technical information are subject to change without notice

MC-SLA | 26



6004 SERIES

Straight Line Action Clamps | 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 MC-ACC-1 for accessories

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

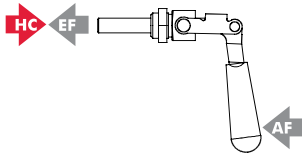
6004
6004-MM



6004-R
6004-MMR
with
DESTACO®
Toggle Lock
Plus

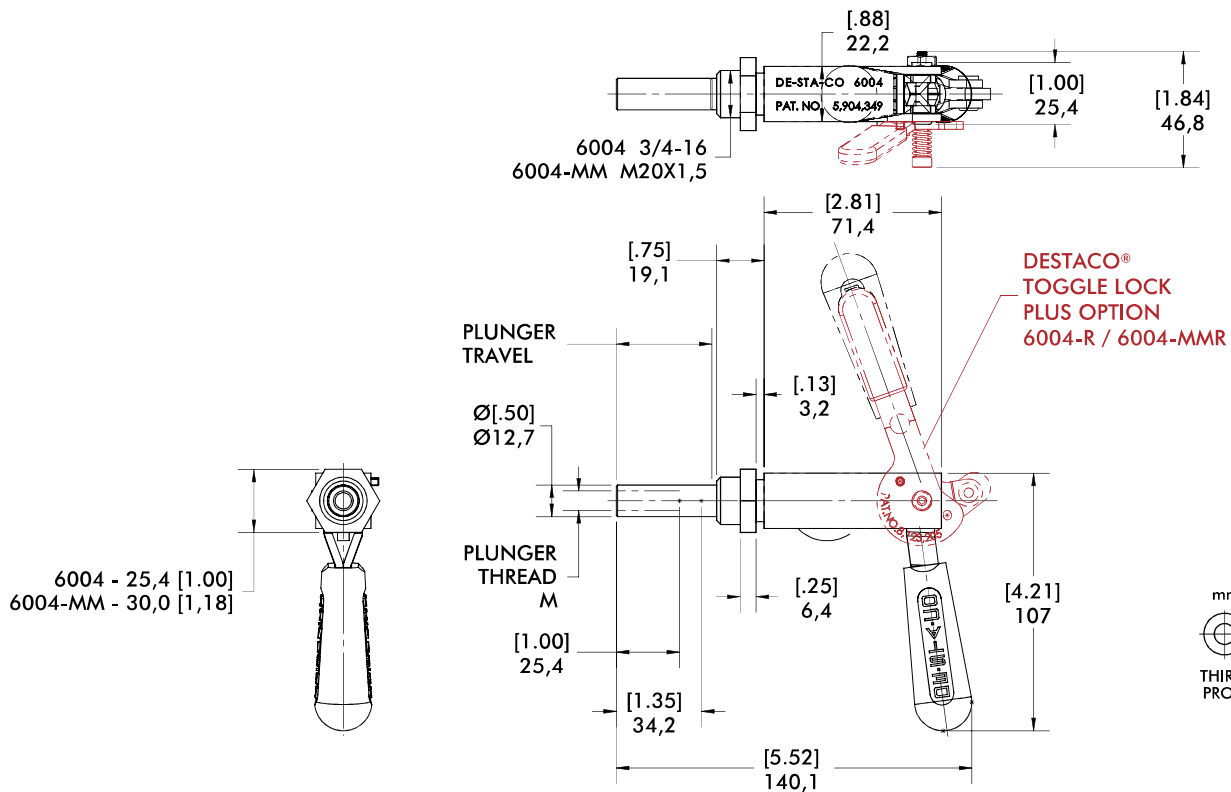


Technical Information | Holding Capacities | Dimensions



Model	Max. Holding Capacity	Weight	EF:AF (pushing)	Plunger Travel	(M) Plunger Thread	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					M8	207203-M	606104-M
6004-R		[0.89lb] 0,40kg			5/16-18	207203	606104
6004-MMR					M8	207203-M	606104-M

HC = Holding Capacity, EF = Exerting Force, AF = Applied Force



602, 604, 624, 6004 SERIES

Straight Line Action Clamps | Mounting Plates

Features:

- Mounting accessories for Threaded Body Straight Line Action Clamps

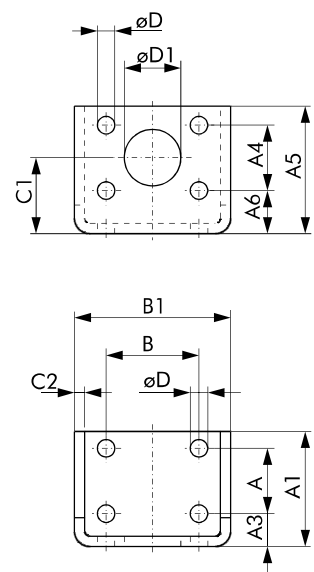
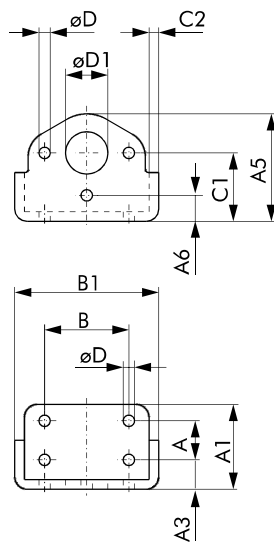
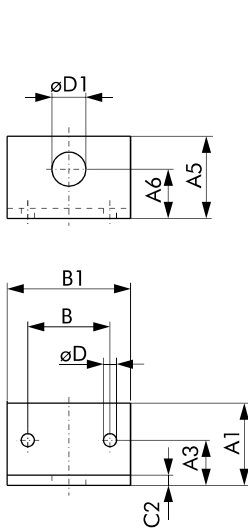
602106-M



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												[0.81] 20,5
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 and technical information are subject to change without notice

MC-SLA | 28



614 SERIES

Straight Line Action Clamps | Product Overview

Features:

- Single hole threaded mount or side mount
- Precision hardened and ground plunger is designed for anti-rotation under torsional loads
- Locks in the extended or retracted position, internal locking in the push direction

Applications:

- Assembly
- Checking fixtures
- Locaters and positioners

Also Available:

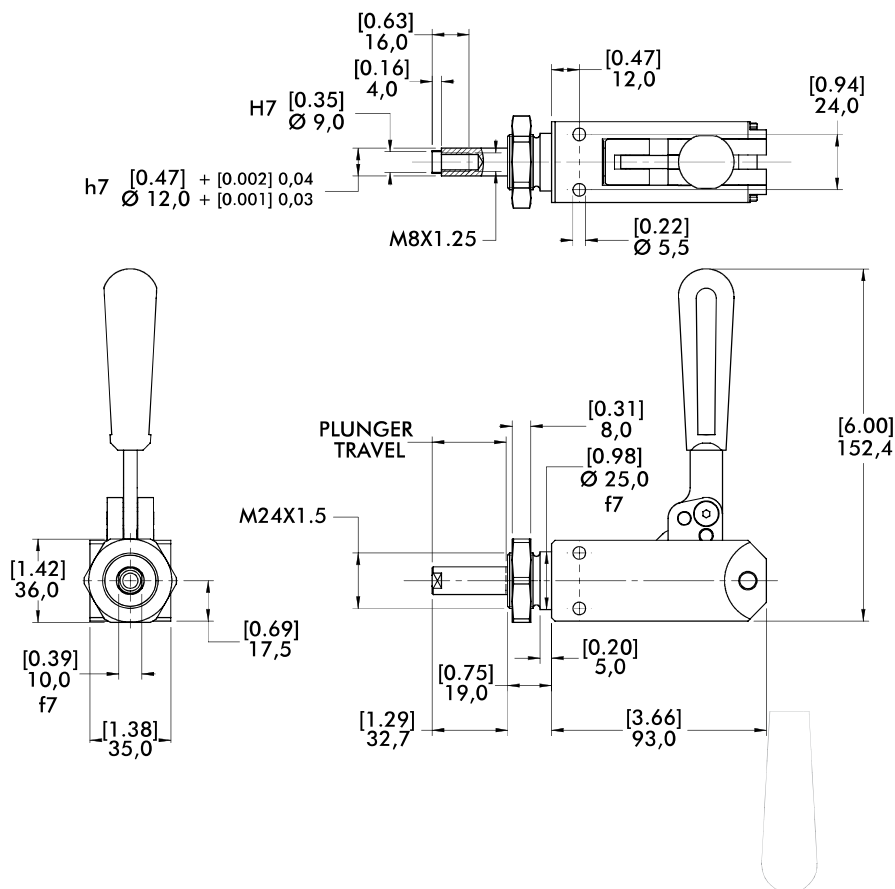
See page MC-ACC-1 for accessories

614-M



Technical Information | Holding Capacities | Dimensions

Model	Max. Holding Capacity	Weight	Plunger Travel	Plunger Thread	Mounting Nut (Supplied)
614-M	[1125 lbf] 5000 N	[1.81lb] 0,82kg	[1.26] 32	M8	614-1-10



670, 675, 690, 695 SERIES

Straight Line Action Clamps | 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



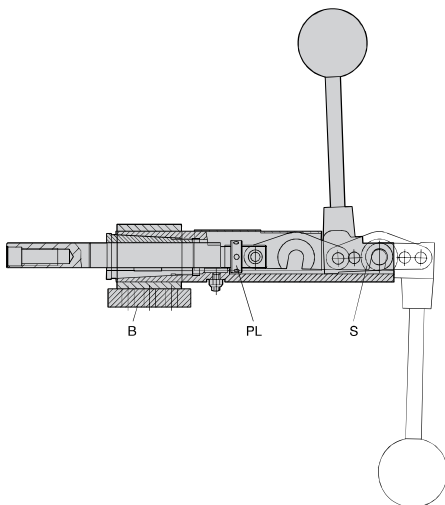
690-1MBPLS



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] 1,91kg	[2.25] 57,2	M12
675-1MBPLS		[4.0lb] 1,81kg	[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	

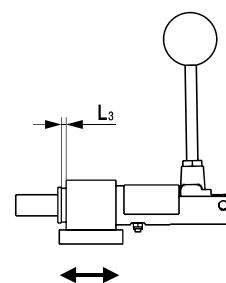
ⓘ This item is available upon request

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.

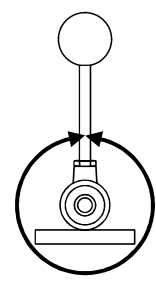
The adjustable pre-load nut (PL) can be used to lock the clamp against itself when not under pressure and therefore prevent opening when mounted vertically. The spring hold-open device (S) prevents the clamp from accidentally closing.

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.



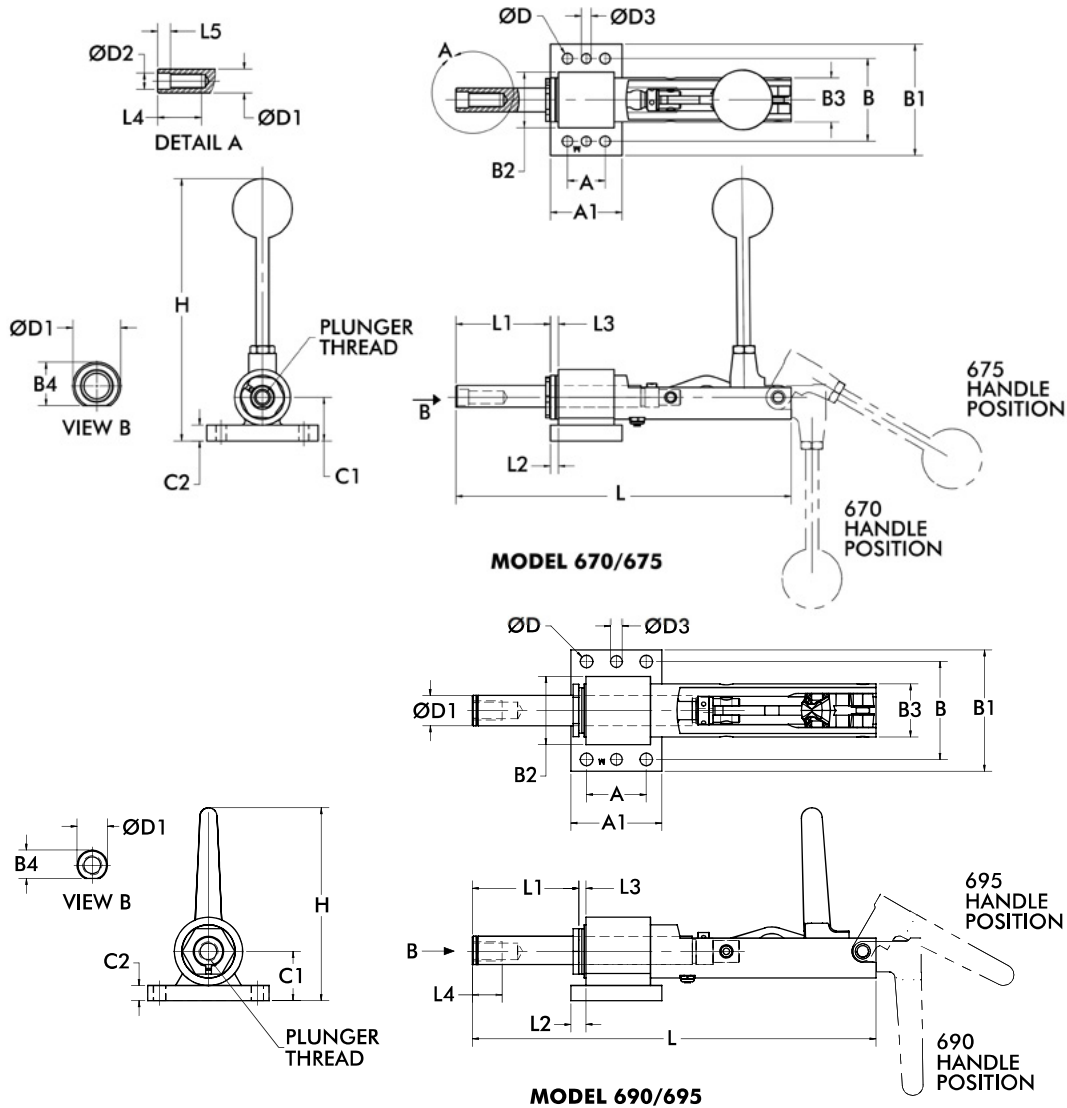
Welding range L_3 axial
0-8mm [0-0.31 in.]



Welding range radial 360°

670, 675, 690, 695 SERIES

Straight Line Action Clamps | Dimensions



Model	A	A1	B	B1	B2	B3	B4	C1	C2	D	D1	D2H7	D3
670-1MBPLS	[1.18]	[2.24]	[2.60]	[3.50]	[1.75]	[1.38]	[0.68]	[1.37]	[0.50]	[0.33]	[0.75]	[0.51]	[0.31]
675-1MBPLS	30	57	66	89	44,5	35	17,3	34,8	12,7	8,4	19	13	7,8
690-1MBPLS	[1.97]	[3.00]	[3.23]	[4.00]	[2.25]	[1.75]	[0.93]	[1.63]	[0.50]	[0.41]	[1.00]	--	[0.39]
695-1MBPLS	50	76,2	82	101,6	57,2	44,4	23,7	41,3	12,7	10,5	25,4	--	9,8

Model	H	L	L1	L2	L3	L4	L5
670-1MBPLS	[8.11]	[10.55]	[2.97]	[0.25]	[0-0.31]	[1.38]	[0.41]
675-1MBPLS	206	[7.68]	[1.74]	6,4	0-8	35	10,3
690-1MBPLS	[6.37]	[13.31]	[3.69]	[0.50]	[0-0.31]	[0.98]	--
695-1MBPLS	162	[9.45]	[2.25]	[0.38]	0-8	25	--
		240	57,2	9,5			

Dimensions and technical information are subject to change without notice

MC-SLA | 32



FO, FL, G SERIES

Variable Stroke Straight Line Action Clamps | Product Overview

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)



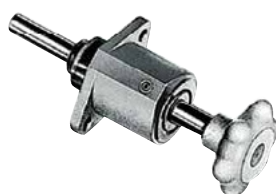
FL Series

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:


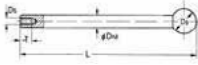


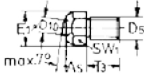




- Through hole mount

Type of Actuation:

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



Technical Information

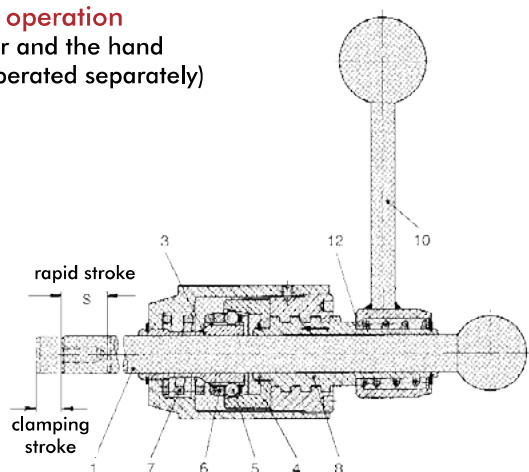
		Model	Holding Capacity Max. [lbs] N	Page MC-VSC-#	Accessories	Model	Page MC-VSC-#
Flanged base		FO-082-40	[335] 1500	3	Plunger 	12/100	4
		FO-120	[675] 3000			12/200	
	FO-121-45	[675] 3000	12/300				
	FO-122-45	[675] 3000	16/100				
	FO-160	[2020] 9000	16/200				
	FO-161-60	[2020] 9000	16/300				
	FO-162-60	[2020] 9000	16/400				
	FO-220	[4045] 18000	16/500				
	FO-221-80	[4045] 18000	22/100				
			22/200				
			22/300				
Front flange		FL-120	[675] 3000	3	Swivel thrust pad 	K508	7
		FL-121-45					
		FL-122-45					
	FL-160	[2020] 9000	3				
	FL-161-60						
	FL-162-60						
Threaded mount		G-082-40	[335] 1500	3			
		G-120	[675] 3000				
		G-121-45	[675] 3000				
	G-122-45	[675] 3000					
		F-160	[4,040] 18000	3			



FO, FL, G SERIES

Variable Stroke Straight Line Action Clamps | Operation

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



DESTACO'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

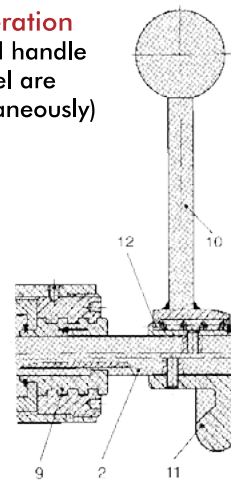
The plunger (1) or (2) which is guided within the clamp body contacts the workpiece. By rotating the hand lever (10) or the hand wheel (11) clock-wise the clamping stroke, S1 is engaged and the plunger is tightly gripped by the slotted clamping sleeve (3).

Operating principle

The hand lever's (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 plunger's rotation may be compensated for by means of a swivel hold-down piece.

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



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 groovespring 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

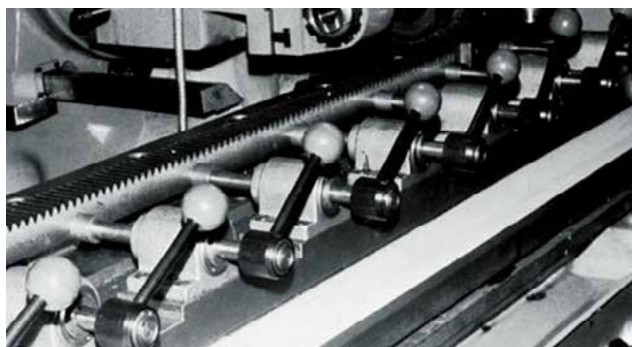
The holding forces specified in the catalog refer to the maximum load exerted on the clamp by counter-forces. For details concerning the clamping force FS exerted on the workpiece by the clamp and depending on the operation force FB (manual force), please see the chart on the next page.

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

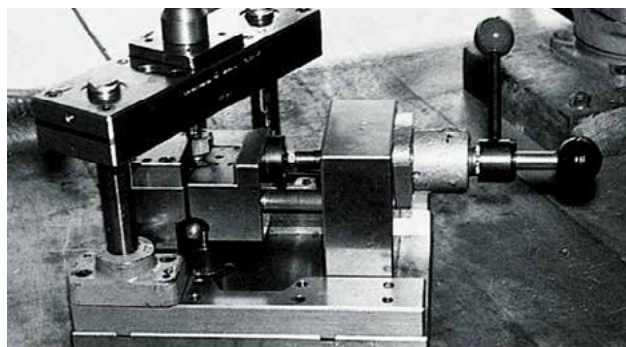
As the Straight Line clamps, with the exception of the F-160 model, are designed only for axial load, we recommend to use an additional radial support for the plunger in the event of side load.

FO, FL, G SERIES

Variable Stroke Straight Line Action Clamps | Technical Information



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

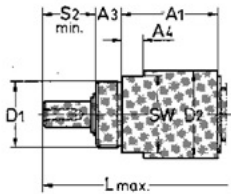
Mounting type	Operating method			Model	Max. holding capacity [lbs.] N	Clamping force F _s with an operating force F _b		Rapid stroke S [mm]	Max. clamping stroke S1 [mm]	Weight [lbs] Kg
	Two-hand operation Plunger and hand lever	One-hand operation Hand lever	One-hand operation Hand wheel			FB [lbs.] N	FS [lbs.] N			
Foot mount		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-082-40	[335] 1500	[100] 450	40	2,5	[0.72] 0,325
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-120 ¹⁾	[675] 3000	[425] 1900	100, 200, 300	3	[1.19] 0,540
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-121-45	[675] 3000	[425] 1900	45	3	[1.47] 0,665
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-122-45	[675] 3000	[100] 450	40	3	[1.34] 0,610
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-160 ¹⁾	[2020] 9000	[560] 2500	100, 200, 300	4	[2.73] 1,240
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-161-60	[2020] 9000	[560] 2500	60	4	[3.40] 1,540
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-162-60	[2020] 9000	[190] 850	60	4	[3.15] 1,430
Flange mount		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-220 ¹⁾	[4045] 18000	[675] 3000	100, 200, 300	4	[5.85] 2,655
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FO-221-80	[4045] 18000	[675] 3000	80	4	[7.46] 3,385
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FL-120 ¹⁾	[675] 3000	[22] 100 [425] 1900	100, 200, 300	3	[1.07] 0,485
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FL-121-45	[675] 3000	[425] 1900	45	3	[1.34] 0,610
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FL-122-45	[675] 3000	[100] 450	40	3	[1.21] 0,550
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FL-160 ¹⁾	[2020] 9000	[560] 2500	100, 200, 300	4	[2.49] 1,130
Through hole mount		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FL-161-60	[2020] 9000	[560] 2500	60	4	[3.15] 1,430
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FL-162-60	[2020] 9000	[190] 850	60	4	[2.92] 1,325
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G-082-40	[335] 1500	[100] 450	40	2,5	[0.66] 0,300
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G-120 ¹⁾	[675] 3000	[425] 1900	100, 200, 300	3	[1.01] 0,470
Through hole mount		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G-121-45	[675] 3000	[425] 1900	45	3	[1.31] 0,595
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G-122-45	[675] 3000	[100] 450	40	3	[1.18] 0,335

FO, FL, G SERIES

Variable Stroke Straight Line Action Clamps | Technical Information | Dimensions

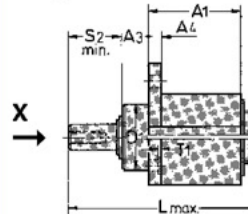
Two-hand operation (the plunger and the hand lever are operated separately)

Through hole mount



Part no. G-121/45

Flange mount

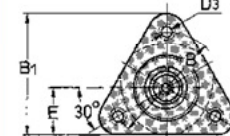


View "X"



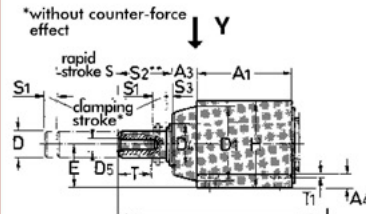
Part no. FL-120/--

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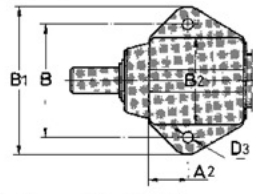


Part no. FL-160/--

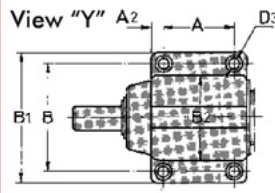
Foot mount



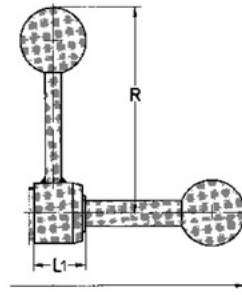
View "Y"



Part no. FO-120/--

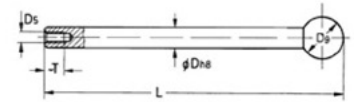


Part no. FO-160/--
FO-220/--



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
16/100	100	[0.88] 0,400	FO-160
16/200	200	[1.10] 0,500	FL-160
16/300*	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	

*400 and 500 mm lengths available upon request.

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	M30 x1,5	40	-	20

Mounting type	Part no. without plunger	D5	D6	E	E1	H	~ L L with rapid strokes:			L1	R	S2	S3	SW	SW1	T	T1	T3
							~ 100	200	300									
Foot mount	FO-120	M6	30	20	12,5	42	228	328	428	24	95	2,5	2,5	-	11	12	-	10
	FO-160	M8	35	30	14,8	58	280	380	480	33	130	3	3	-	13	15	1	14
	FO-220	M12	40	35	19,5	71	295	395	495	35	197	3	3	-	17	25	1	18
Flange mount	FL-120	M6	30	-	12,5	-	228	328	428	24	95	2,5	2,5	-	11	12	-	10
	FL-160	M8	35	28	14,8	-	280	380	480	33	130	3	3	-	13	15	1	14
Through hole mount	G-120	M6	30	-	12,5	-	228	328	428	24	95	2,5	2,5	35	11	12	-	12

Dimensions and technical information are subject to change without notice

MC-VSC | 4

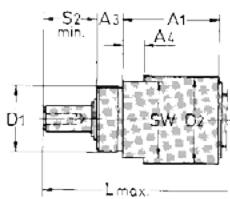


FO, FL, G SERIES

Variable Stroke Straight Line Action Clamps | Technical Information | Dimensions

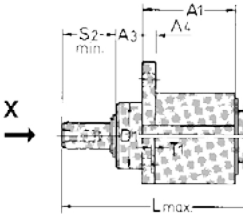
One-hand operation (the plunger and the hand wheel are operated simultaneously)

Through hole mount

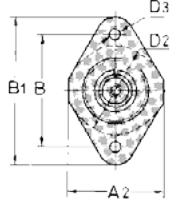


Part no. G-082/40
G-122/45

Flange mount



View "X"



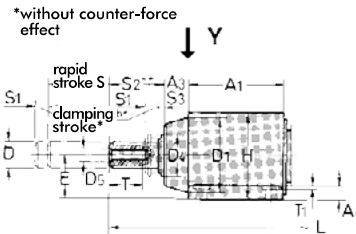
Part no. FL-122/45

View "X"

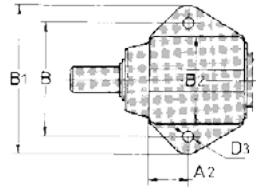


Part no. FL-162/60

Foot mount

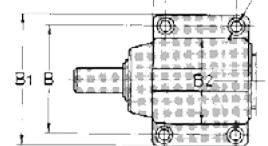


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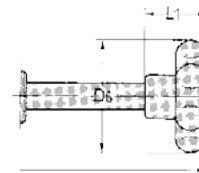


Part no. FO-082/40
FO-122/45

View "Y"



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	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-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
		FO-162-60	40	62	11	12	12	10	70	90	52	16	46	-	9	25
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

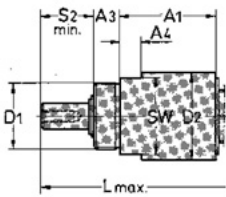
Mounting type		Part no. with plunger	D ₅	D ₆	E	E ₁	H	L	L ₁	S ₂	S ₃	SW	SW ₁	T	T ₁	T ₃
Foot mount		FO-082-40	M5	40	18	9,2	36	128	26	9	2,5	-	8	8	-	8
		FO-122-45	M6	75	20	12,5	42	153	27	15	2,5	-	11	12	-	10
		FO-162-60	M8	75	30	14,8	58	196	35	18	3	-	13	15	1	14
Flange mount		FL-122-45	M6	52	-	12,5	-	153	27	15	2,5	-	11	12	-	10
		FL-162-60	M8	75	28	14,8	-	196	35	18	3	-	13	15	1	14
Through hole mount		G-082-40	M5	40	-	9,2	-	128	26	9	2,5	30	8	12	-	8
		G-122-45	M6	52	-	12,5	-	153	27	15	2,5	35	11	12	-	10

FO, FL, G SERIES

Variable Stroke Straight Line Action Clamps | Technical Information | Dimensions

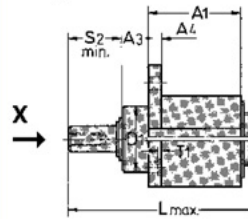
One-hand operation (the plunger and the hand lever are operated simultaneously)

Through hole mount



Part no. G-121/45

Flange mount

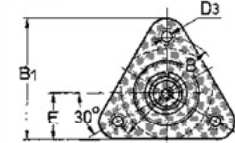


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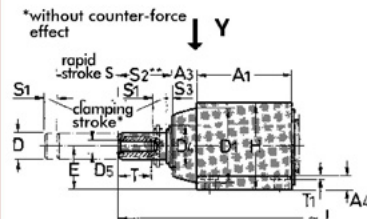
Part no. FL-121/45

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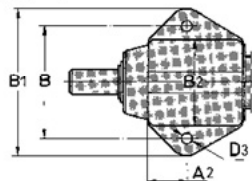


Part no. FL-161/60

Foot mount

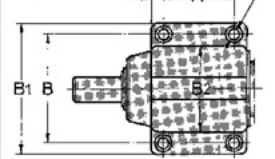


View "Y"

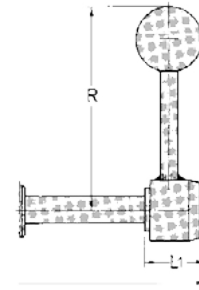


Part no. FO-121/45

View "Y"



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	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	20	12,5	42	153	27	95	15	2,5	-	11	12	-	10
	FO-161-60	M8	30	14,8	58	196	35	130	18	3	-	13	15	1	14
	FO-221-80	M12	35	19,5	71	245	40	197	20	3	-	17	25	1	18
Flange mount	FL-121-45	M6	-	12,5	-	153	27	95	15	2,5	-	11	12	-	10
	FL-161-60	M8	28	14,8	-	196	35	130	18	3	-	13	15	1	14
Through hole mount	G-121-45	M6	-	12,5	-	153	27	95	15	2,5	35	11	12	-	10

Dimensions and technical information are subject to change without notice

F-160 SERIES

Variable Stroke Straight Line Action Clamps | Technical Information | Dimensions

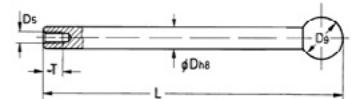


Technical features:

- 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)

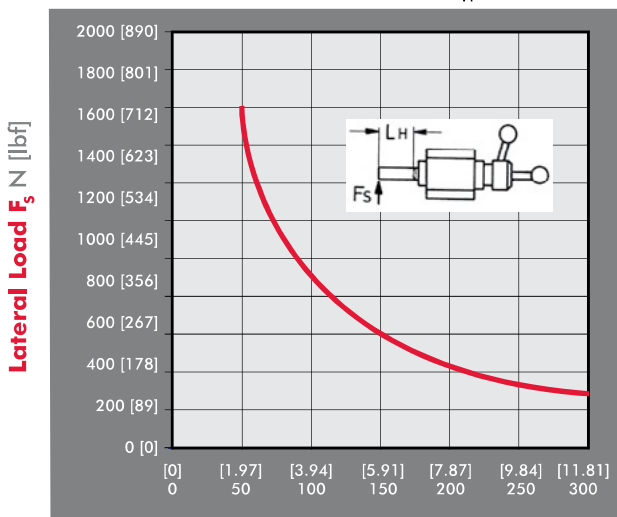
Plunger



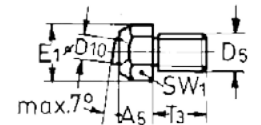
Part no.	For rapid stroke S	D _{h8}	D ₅	D ₉	L	T	Weight ~ [lbs.] kg
16/100	100	16	M8	35	280	15	[0.90] 0,4
16/200	200	16	M8	35	380	15	[1.10] 0,5
16/300*	300	16	M8	35	480	15	[1.54] 0,7

*400 and 500 mm strokes available on request

Allowable side load F_s depending on the stroke length L_H

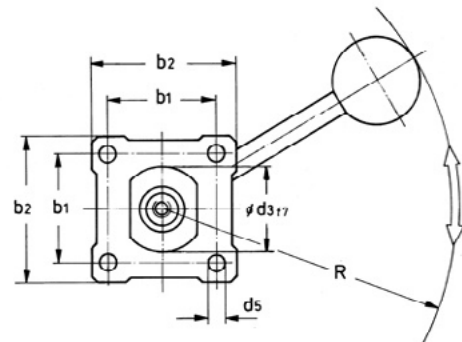
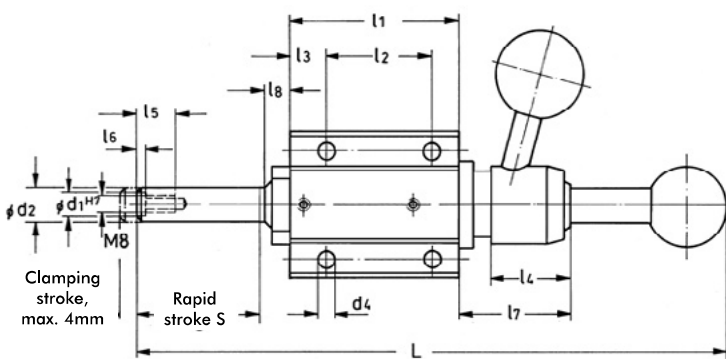


Swivel thrust pad



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

Stroke Length L_H mm [in]



Part no. without plunger	Max. holding cap. [lbs] N	F _s * [lbs] N	b ₁	b ₂	~L													Weight ~ [lbs.] kg				
					For rapid strokes:			11	12	13	14	15	16	17	18	d ₁ ^{H7}	d ₂ ^{H8}		d ₃	d ₄	d ₅	R
F-160	[4040] 18000N	[1124] 5000N	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.



