

Vertical Hold Down Clamps

01/27/2025



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Vertical Hold Down Clamps

01/27/2025

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Table of Contents

Vertical Hold Down Clamps

MC-VHD-1

Vertical Hold Down Clamps

01/27/2025

Table of Contents (continued)

2002 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Large hand clearance for improved safety
- Bolt pattern interchangeable with 202 Series
- Three times the holding capacity of 202 Series
- Hardened bushings at key pivot points
- Near vertical clamping contact
- BLK models feature a black, non-reflective finish
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Checking fixtures
- Assembly & test
- Light machining
- Woodworking

Also Available:

See page MC-ACC-1 for accessories
Accepts M6 or 1/4 spindle accessories

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

2002-**U/USS** Flanged Base U-Bar



-**USS** Stainless Steel Model



2002-**U-LS-BLK** ⓘ Blackout Series Flanged Base U-Bar



2002-**S** Flanged Base Solid Bar



2002-**UB** Straight Base U-Bar



2002-**UB-LS-BLK** ⓘ Blackout Series Straight Base U-Bar



2002-**SB** Straight Base Solid Bar



2002-**UR/URSS** Flanged Base U-Bar DESTACO® Toggle Lock Plus



-**URSS** Stainless Steel Model



2002-**SR** ⓘ Flanged Base Solid Bar DESTACO® Toggle Lock Plus



2002-**UBR** Straight Base U-Bar DESTACO® Toggle Lock Plus



2002-**SBR** ⓘ Straight Base Solid Bar DESTACO® Toggle Lock Plus



2002-**U207** Flanged Base U-Bar

Interchangeable with 207 Series



2002-**UR207** Flanged Base U-Bar

Interchangeable with 207 Series
DESTACO®
Toggle Lock Plus



2002-**UF** Front Mount Base U-Bar



Color Handles

Available on models in this series that use standard red handles.* Add -Y, -G, -B, -K to end of model number.

*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.

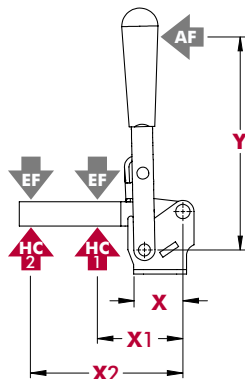


ⓘ This item is available upon request

Model	Max. Holding Capacity	Clamp Bar Opening(+10°)	Handle Opening(+10°)	Weight	Accessories (Supplied)		
					Bolt Retainer	Spindle Assembly	Flanged Washers
2002-U	[600 lbf] 2700 N	75°	66°	[0.48 lbs] 0,22 kg	--	215208-M	215105
2002-USS					--	202943-M	215905
2002-U-LS-BLK ⓘ					--	--	215105-BLK
2002-S					2002115-E	--	--
2002-UB					--	215208-M	215105
2002-UB-LS-BLK ⓘ					--	--	215105-BLK
2002-SB					2002115-E	--	--
2002-UR		90°	72°	[0.55 lbs] 0,25 kg	--	215208-M	215105
2002-URSS					--	202943-M	215905
2002-SR ⓘ					2002115-E	--	--
2002-UBR					--	215208-M	215105
2002-SBR ⓘ					2002115-E	--	--
2002-U207				[0.57 lbs] 0,26 kg	--	215208-M	215105
2002-UR207							
2002-UF		75°	66°	[0.66 lbs] 0,30 kg	--	215208-M	215105

ⓘ This item is available upon request

Holding Capacities



Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
2002-()	[1.12] 28,5	[1.45] 37	[2.64] 67	[3.66] 93	[600 lbf] 2700 N	[295 lbf] 1310 N	11:1	5:1

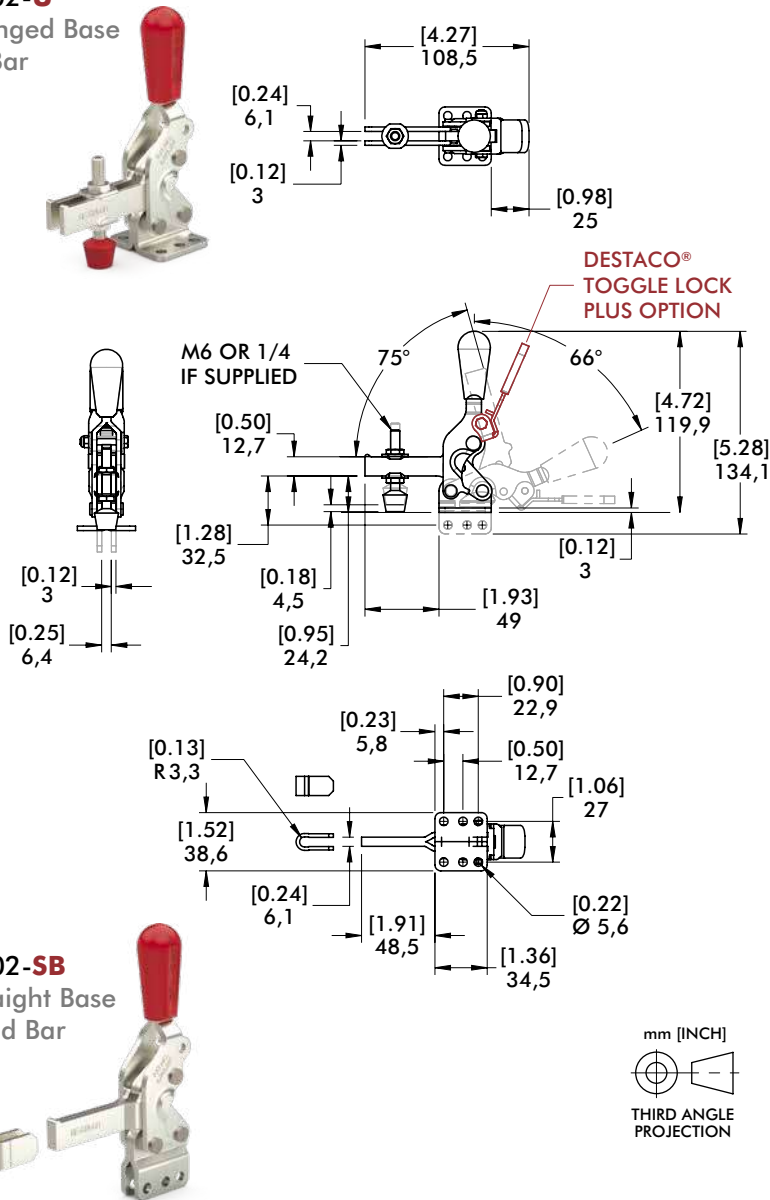
Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

2002 SERIES

Vertical Hold Down Clamps | Dimensions | -U/-USS/-S/-UB/-SB/-UR/-URSS/-SR/-UBR/-SBR

2002-U

Flanged Base
U-Bar

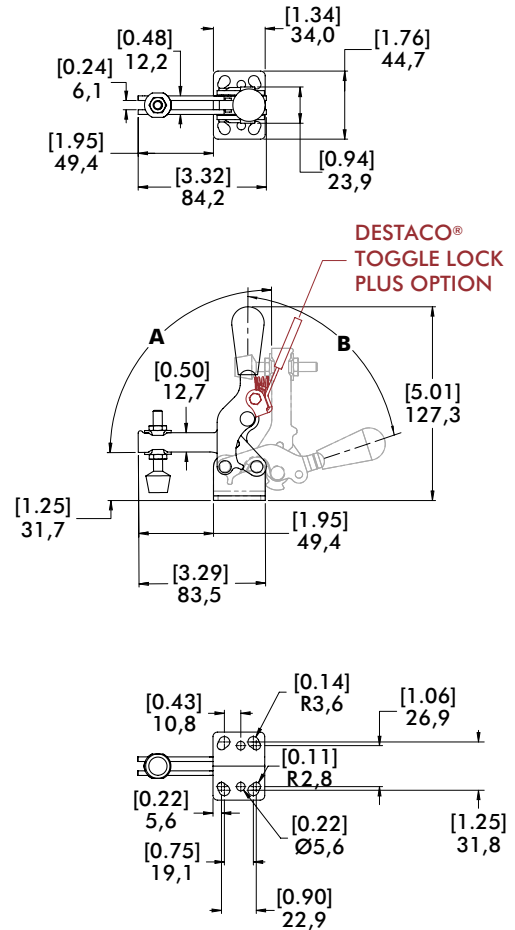


2002-SB

Straight Base
Solid Bar

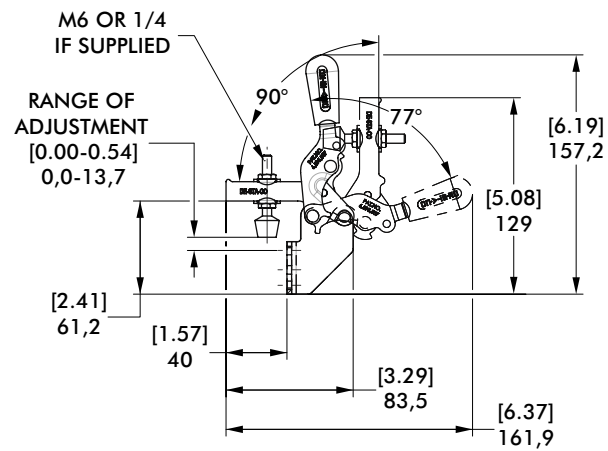
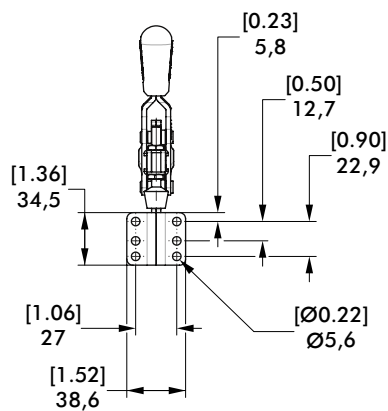
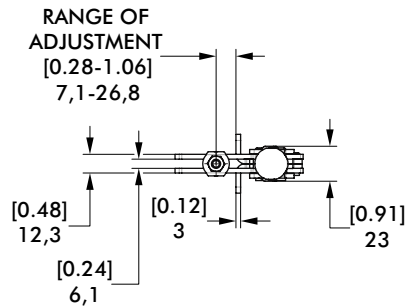
2002-U207/2002-UR207

with interchangeable Series 207
Mounting Pattern



Model	A	B
2002-U207	90°	72°
2002-UR207	75°	57°

2002-UF
 Flanged Base
 U-Bar
 DESTACO®
 Toggle Lock
 Plus



2007 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Large hand clearance for improved safety
- Bolt pattern interchangeable with 207 Series
- Over two times the holding capacity of 207 Series
- Hardened bushings at key pivot points
- Near vertical clamping contact
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Checking fixtures
- Assembly & test
- Light machining
- Woodworking

Also Available:

See page MC-ACC-1 for accessories
Accepts M8 or 5/16 spindle accessories

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

2007-**U/USS** Flanged Base U-Bar



-**USS** Stainless
Steel Model



2007-**U-LS-BLK** ① Blackout Series Flanged Base U-Bar



2007-**S** Flanged Base Solid Bar



2007-**UB** Straight Base U-Bar



2007-**UB-LS-BLK** ① Blackout Series Straight Base U-Bar



2007-**SB** Straight Base Solid Bar



2007-**UR/URSS** Flanged Base U-Bar DESTACO® Toggle Lock Plus



-**URSS** Stainless
Steel Model



2007-**SR** ① Flanged Base Solid Bar DESTACO® Toggle Lock Plus



2007-**UBR** Straight Base U-Bar DESTACO® Toggle Lock Plus



2007-**SBR** ① Straight Base Solid Bar DESTACO® Toggle Lock Plus



2007-**UF** Front Mount Base U-Bar



Color Handles

Available on models in this series that use standard red handles.* Add **-Y**, **-G**, **-B**, **-K** to end of model number.

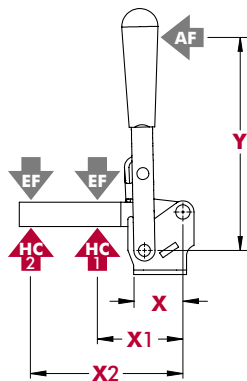
*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)		
					Bolt Retainer	Spindle Assembly	Flanged Washers
2007-U	[1000 lbf] 4450 N	76°	64°	[1.20 lbs] 0,54 kg	--	2007208-M	507107
2007-USS					--	207943-M	507907
2007-U-LS-BLK ⓘ					--	--	507107-BLK
2007-S					2007115-E	--	--
2007-UB					--	2007208-M	507107
2007-UB-LS-BLK ⓘ					--	--	507107-BLK
2007-SB					2007115-E	--	--
2007-UR					--	2007208-M	507107
2007-URSS					--	207943-M	507907
2007-SR ⓘ					2007115-E	--	--
2007-UBR					--	2007208-M	507107
2007-SBR ⓘ					2007115-E	--	--
2007-UF				[1.57 lbs] 0,71 kg	--	2007208-M	507107

ⓘ This item is available upon request

Holding Capacities



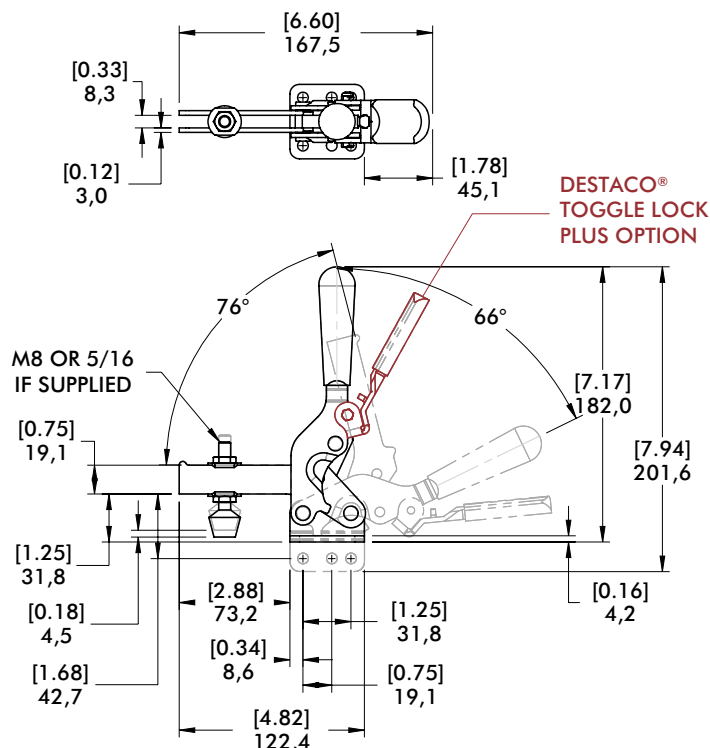
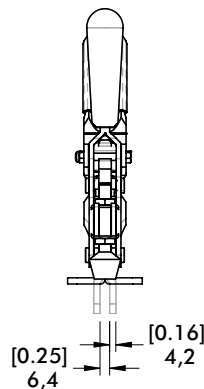
Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
2007-()	[1.59] 40,5	[1.95] 49,5	[3.92] 99,5	[5.16] 131	[1000 lbf] 4450 N	[470 lbf] 2090 N	10:1	5.3:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

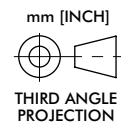
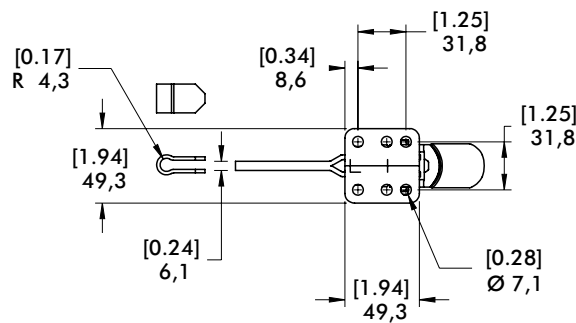
2007 SERIES

Vertical Hold Down Clamps | Dimensions | -U/-USS/-S/-UB/-SB/-UR/-URSS/-SR/-UBR/-SBR

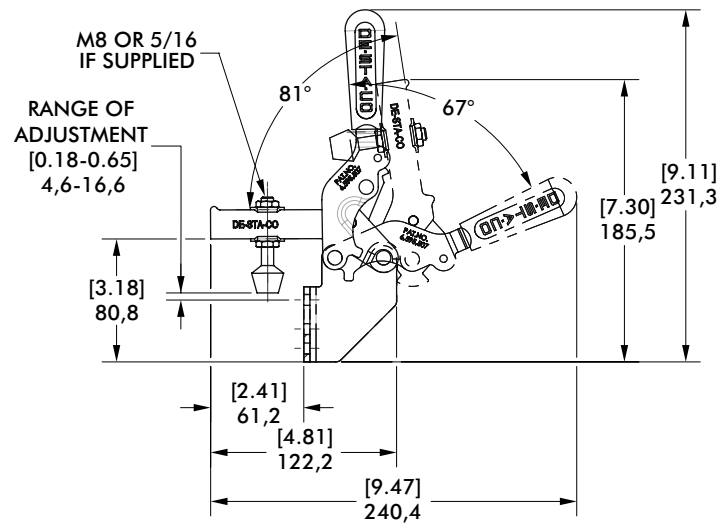
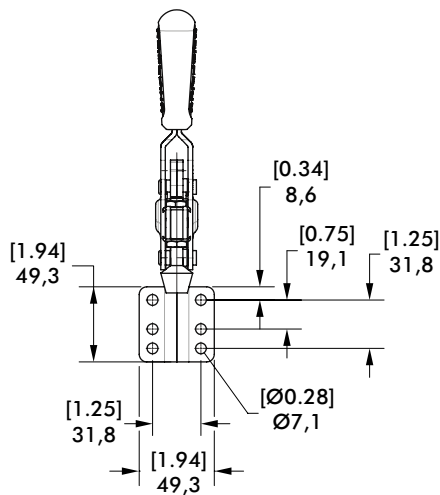
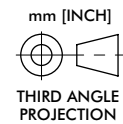
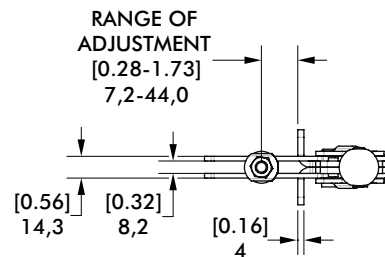
2007-U
Flanged Base
U-Bar



2007-SB
Straight Base
Solid Bar



2007-UF
 Flanged Base
 U-Bar
 DESTACO®
 Toggle Lock
 Plus



2010 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Large hand clearance for improved safety
- Bolt pattern interchangeable with 210 Series
- Over two times the holding capacity of 210 Series
- Hardened bushings at key pivot points
- Near vertical clamping contact
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Checking fixtures
- Assembly & test
- Light machining
- Woodworking

Also Available:

See page MC-ACC-1 for accessories
Accepts M10 or 3/8 spindle accessories

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

2010-U
Flanged Base
U-Bar



2010-S
Flanged Base
Solid Bar



2010-UB
Straight Base
U-Bar



2010-SB
Straight Base
Solid Bar



2010-UR
Flanged Base
U-Bar
DESTACO®
Toggle Lock
Plus



2010-SR^①
Flanged Base
Solid Bar
DESTACO®
Toggle Lock
Plus



2010-UBR
Straight Base
U-Bar
DESTACO®
Toggle Lock
Plus



2010-SBR^①
Straight Base
Solid Bar
DESTACO®
Toggle Lock
Plus



Color Handles
Available on models
in this series that use
standard red handles.*
Add **-Y, -G, -B, -K** to
end of model number.

*Excludes Blackout Series,
Toggle Lock Plus levers
or dipped handles.

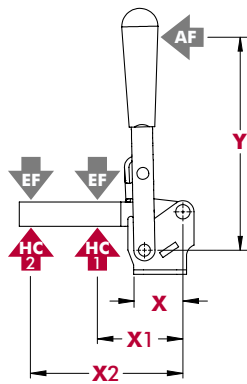


Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)		
					Bolt Retainer	Spindle Assembly	Flanged Washers
2010-U	[1400 lbf] 6230 N	78°	66°	[2.56 lbs] 1,16 kg	---	240208-M	235106
2010-S					2010115-E	---	---
2010-UB					---	240208-M	235106
2010-SB					2010115-E	---	---
2010-UR					---	240208-M	235106
2010-SR ^①					2010115-E	---	---
2010-UBR					---	240208-M	235106
2010-SBR ^①					2010115-E	---	---

^① This item is available upon request

Vertical Hold Down Clamps | Holding Capacities

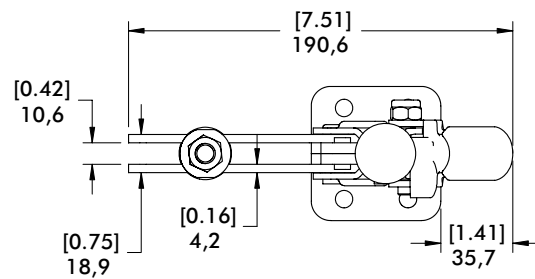


Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
2010-()	[2.04] 51,8	[2.44] 62	[4.88] 124	[7.00] 178	[1400 lbf] 6230 N	[720 lbf] 3200 N	13:1	6:1

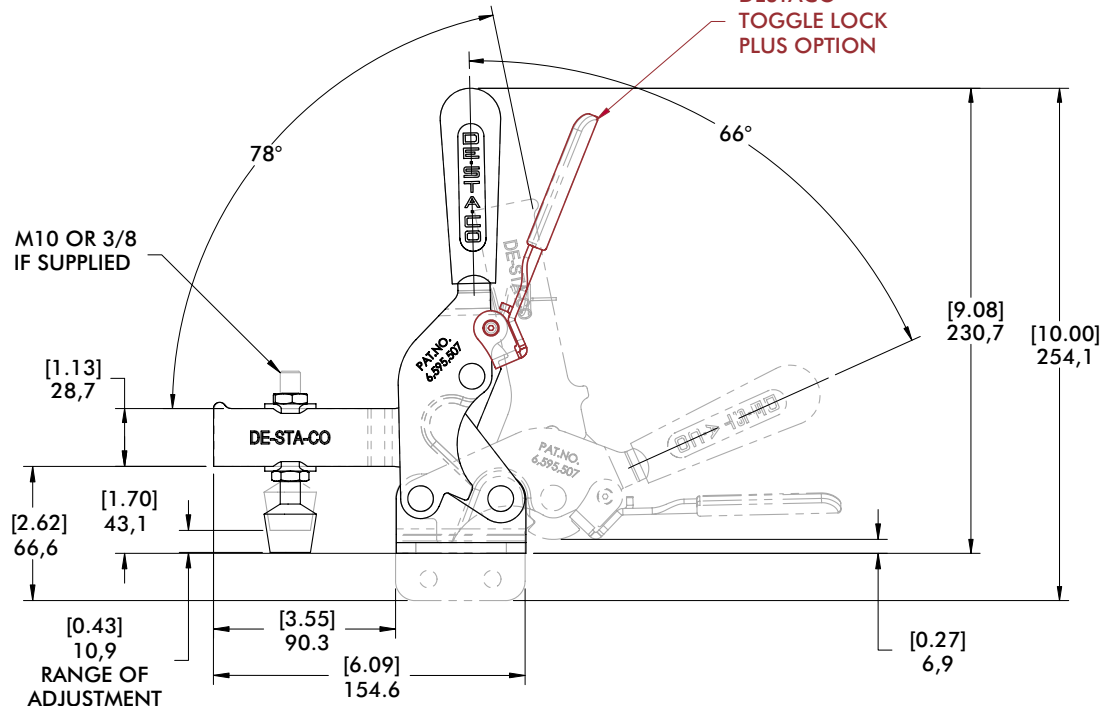
Dimensions shown "mm [inch]" $\pm$ HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

Dimensions | -U/-S/-UB/-SB/-UR/-SR/-UBR/-SBR

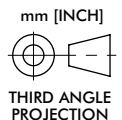
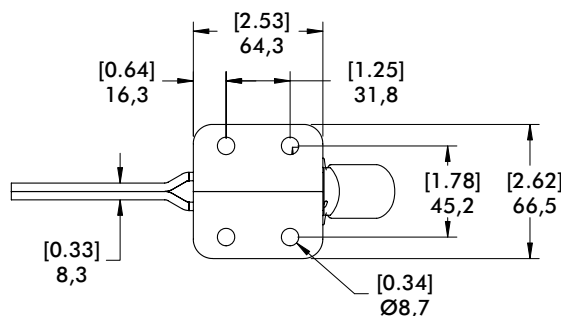
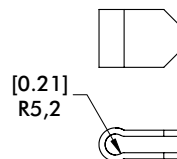
2010-U
Flanged Base
U-Bar



DESTACO®
TOGGLE LOCK
PLUS OPTION



2010-SB
Straight Base
Solid Bar



201 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Smallest series in the Vertical Handle series
- Stainless steel version available
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Checking fixtures
- Assembly & test
- Woodworking

Also Available:

See page MC-ACC-1 for accessories

812-U Pneumatic Toggle Clamp
(See page MC-PTC-1)

201-U/USS Flanged Base U-Bar



-USS Stainless Steel Model



201-UB Straight Base



201-TU Flanged Base U-Bar T-Handle



Color Handles

Available on models in this series that use standard red handles.* Add -Y, -G, -B, -K to end of model number.

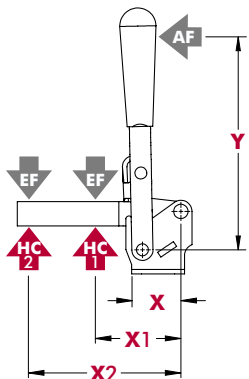
*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)	
					Spindle Assembly	Flanged Washers
201-U	[100 lbf] 440 N	100°	55°	[0.15 lbs] 0,70 kg	305208-M	102111
201-UB						
201-TU	560 N [125 lbf]	100°	55°	[0.15 lbs] 0,70 kg	201943-M	102911
201-USS						

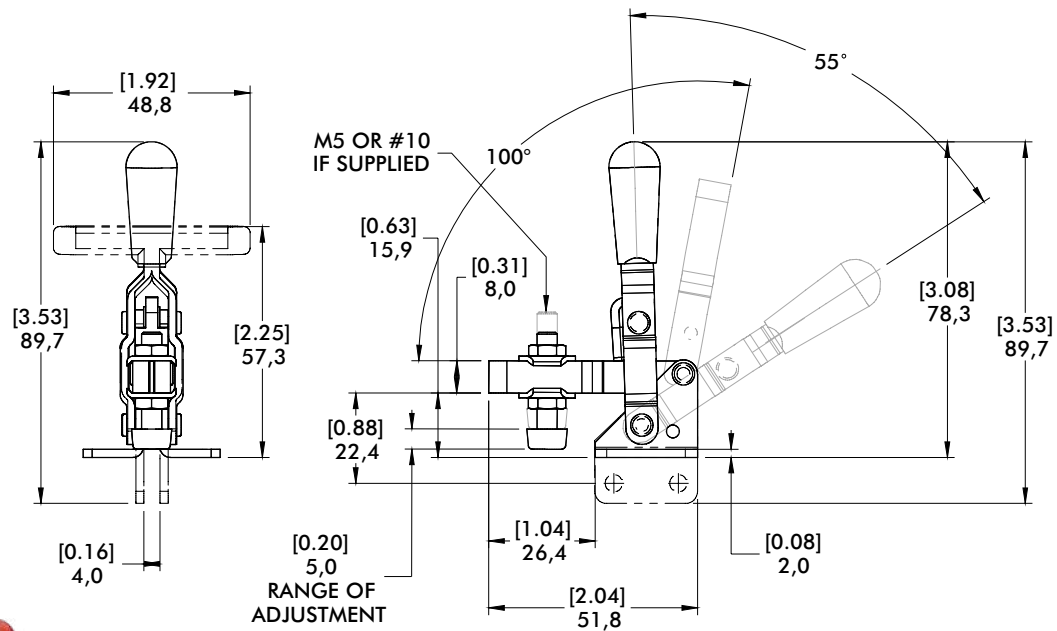
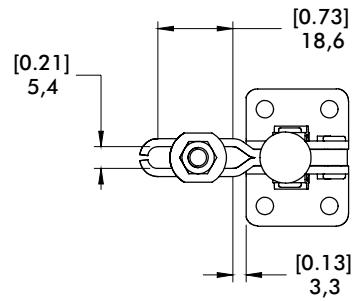
Holding Capacities



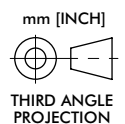
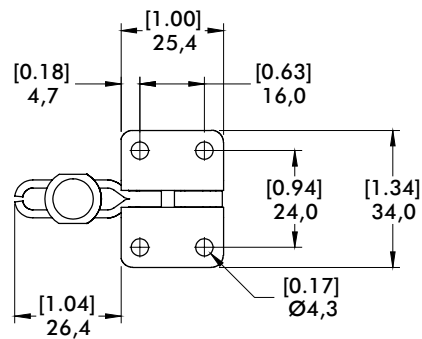
Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
U/UB				[2.25] 57	[100 lbf] 440 N	[55 lbf] 245 N	9:1	6:1
TU	[0.87] 22	[1.06] 27	[1.75] 44,5	[1.38] 35			8.4:1	4:4:1
USS				[2.25] 57	[125 lbf] 560 N	[60 lbf] 270 N	9:1	6:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

201-U
Flanged Base
U-Bar



201-UB
Straight Base



202 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Two bar styles available
- Low profile T-Handle version available
- Available in stainless steel
- Accommodates M6 or 1/4" spindle accessories
- BLK models feature a black, non-reflective finish
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Checking fixtures
- Assembly & test
- Light machining
- Woodworking

Also Available:

See page MC-ACC-1 for accessories

802-U Pneumatic Toggle Clamp
(See page MC-PTC-3)

202-U/USS
Flanged Base
U-Bar



-USS Stainless
Steel Model



202-UL
Flanged Base
Long U-Bar



202/-SS
Flange Base
Solid Bar



-SS Stainless
Steel Model



202-UB
Straight Base
U-bar



202-B
Straight Base
Solid Bar



202-TU
Flanged Base
U-bar,
T-Handle



202-T
Flanged Base
Solid Bar
T-Handle



202-U-L①
Flanged Base
Open U-Bar



202-U-L-BLK①
Blackout Series
Flanged Base
Open U-Bar



202-UB-L①
Straight Base
Open U-Bar



202-UB-L-BLK①
Blackout Series
Straight Base
Open U-Bar



202305
Flanged Grip.
Provides added safety
and protection. Fits all
202 Series (except
T-Handle) clamps.
Order separately.



Color Handles

Available on models
in this series that use
standard red handles.*
Add -Y, -G, -B, -K to
end of model number.

*Excludes Blackout Series,
Toggle Lock Plus levers
or dipped handles.



① This item is available upon request

					Accessories (Supplied)	
Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Spindle Assembly	Flanged Washers
202-U	[200 lbf] 890 N	105°	65°	[0.35 lbs] 0,16 kg	202208-M	215105
202-UL					202943-M	215905
202-USS	1110 N [250 lbf]			202208-M	---	
202	890 N [200 lbf]			205943-M	---	
202-SS	1110 N [250 lbf]			202208-M	215105	
202-UB	[200 lbf] 890 N					
202-B						
202-TU						
202-T	[0.35 lbs] 0,16 kg			---	---	
202-U-L ⓘ						
202-U-L-BLK ⓘ						
202-UB-L ⓘ						
202-UB-L-BLK ⓘ						

ⓘ This item is available upon request

Holding Capacities

Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
202-U	[0.79] 20	[1.25] 32	[2.25] 57	[3.42] 87	[200 lbf] 890 N	[140 lbf] 625 N	10:1	5:1
202-UL			[2.88] 73	87	890 N	[150 lbf] 670 N		4:1
202-USS			[2.25] 57	[3.00] 76	[250 lbf] 1110 N	[170 lbf] 760 N		5:1
202		---	[1.88] 48	[3.42] 87	---	[200 lbf] 890 N	---	8:1
202-SS			[3.00] 76	[3.00] 76	---	[250 lbf] 1110 N		8:1
202-UB		[1.25] 32	[2.25] 57	[3.42] 87	[200 lbf] 890 N	[140 lbf] 625 N	10:1	5:1
202-B		---	[1.88] 48	87	---	[200 lbf] 890 N	---	8:1
202-TU		[1.25] 32	[2.25] 57	[2.13] 54	[200 lbf] 890 N	[140 lbf] 625 N	11:1	7:1
202-T		---	[1.88] 48	54	---	[200 lbf] 890 N	---	6:1
202-U-L ⓘ		[1.25] 32	[2.25] 57	[3.42] 87	[200 lbf] 890 N	[140 lbf] 625 N	10:1	5:1
202-U-L-BLK ⓘ								
202-UB-L ⓘ								
202-UB-L-BLK ⓘ								

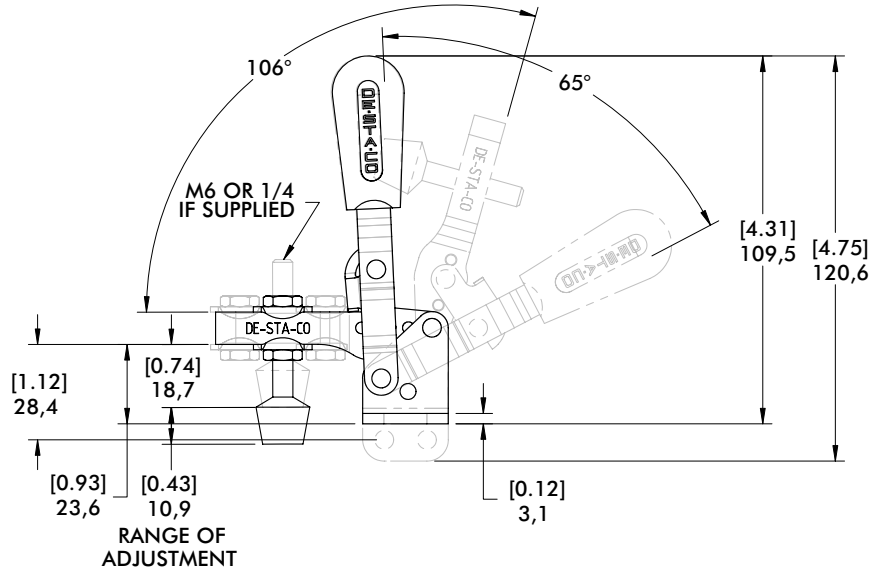
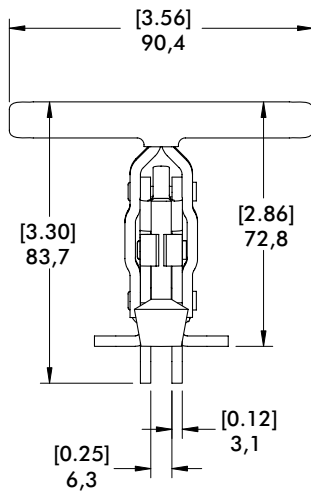
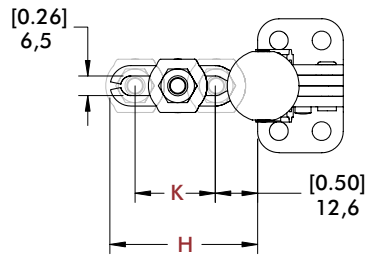
Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force

ⓘ This item is available upon request

202 SERIES

Vertical Hold Down Clamps | Dimensions | -U/-UL/-USS/-SS/-UB/-B/-TU/-T

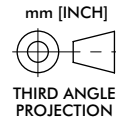
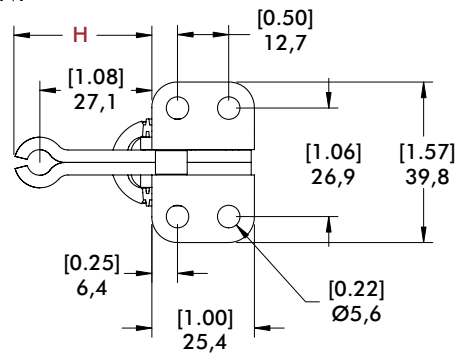
202-U
Flanged Base
U-Bar



**Open Bar
Option**

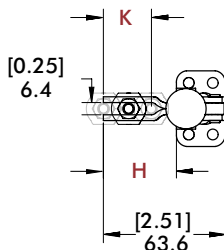


See page
MC-ACC-7
for complete
offering of open
bar accessories



Flanged Base
Model

202-U-L ⓘ
202-U-L-BLK ⓘ



Straight Base
Model

202-UB-L ⓘ
202-UB-L-BLK ⓘ



Bar Style	Clamp Models	H	K
	202-U/202-UB/ 202-USS/202-TU	[1.73] 43,9	[0.98] 25
	202-UL ⓘ	[2.29] 58,1	[1.51] 38,4
	202/202-B/ 202-T/202-SS	[1.31] 33,3	---
	202-U-L ⓘ/ 202-UB-L ⓘ	[1.50] 38,1	[0.99] 25,1

ⓘ This item is available upon request

VERTICAL HOLD DOWN CLAMPS

Application Example

Application Areas

Clamping during the assembling, drilling, testing, gluing, locking of covers and much more. The vertical clamp is the most frequently used product whenever clamping products are to be integrated with a manual fixture.

The essential product features

- In the clamping position, the handle is vertical
- Vertical clamps open at an angle between 75° and 215°
- Vertical clamps are offered with U-shaped or heavy-duty solid clamping bars
- Vertical clamps have a straight or flanged base.
The heavy-duty vertical clamps possess a base that can be welded on without a hole pattern



207 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Largest selection of arm and mounting options
- Low profile T-Handle version available
- Available in stainless steel
- BLK models feature a black, non-reflective finish
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Checking fixtures
- Assembly & test
- Light machining
- Woodworking

Also Available:

See page MC-ACC-1 for accessories

807-U Pneumatic toggle clamp
(See page MC-PTC-6)

807-S Pneumatic toggle clamp
(See page MC-PTC-6)

Accepts M8 or 5/16 spindle accessories

207-U
Flanged Base
U-Bar



-**SS** Stainless
Steel Model



207-UL
Flanged Base
Long U-Bar



207-S
Flanged Base
Solid Bar



207-L
Flanged Base
Long Solid Bar



207-TU
Flanged Base
T-Handle
U-Bar



207-TUL
Flanged Base
T-Handle
Long U-Bar



207-UR
Flanged Base
U-Bar
DESTACO®
Toggle Lock
Plus



207-LR
Flanged Base
Long Solid Bar
DESTACO®
Toggle Lock
Plus



207-UB
Straight Base
U-Bar



207-ULB
Straight Base
Long U-Bar



207-SB
Straight Base
Solid Bar



207-LB
Straight Base
Long Solid
Bar



207-LBR ⓘ
Straight Base
Long Solid Bar
DESTACO®
Toggle Lock
Plus



207-UF ⓘ
U-Bar
Dual Mount



207-SF ⓘ
Solid Bar
Dual Mount



207-U-L ⓘ
Flange Base
Open Bar



207-U-L-BLK
Blackout Series
Flanged Base
Open U-Bar



207-UB-L ⓘ
Straight Base
Open Bar



207-UB-L-BLK
Blackout Series
Straight Base
Open U-Bar



207305

Flanged Grip. Provides added safety and protection. Fits all 207 Series (except T-Handle) clamps. Order separately.



Color Handles

Available on models in this series that use standard red handles.* Add **-Y, -G, -B, -K** to end of model number.

*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.

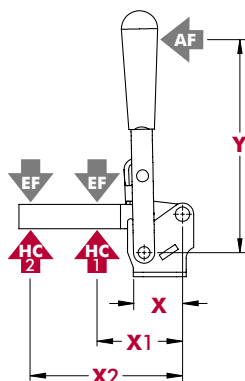


ⓘ This item is available upon request

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)		
					Bolt Retainer	Spindle Assembly	Flanged Washers
207-U 207-UR 207-UL	[375 lbf] 1670 N	99°	57°	0,30 kg [0.67 lbs]	---	225208-M	507107
				0,45 kg [1.00 lbs]			
				0,30 kg [0.67 lbs]			
207-USS	2000 N [450 lbf]			0,32 kg [0.70 lbs]	---	207943-M	507907
207-S 207-L 207-LR	[500 lbf] 2220 N			0,31 kg [0.69 lbs] 0,34 kg [0.74 lbs] 0,45 kg [1.00 lbs]			
207-UB 207-ULB	[375 lbf] 1670 N			[0.72 lbs] 0,33 kg	---	225208-M	507107
207-SB 207-LB 207-LBR ⓘ	[500 lbf] 2220 N			0,31 kg [0.69 lbs] 0,34 kg [0.75 lbs] 0,45 kg [1.00 lbs]	207105	---	---
207-TU 207-TUL	[375 lbf] 1670 N	96°	56°	[0.72 lbs] 0,33 kg	---	---	507107
207-UF ⓘ	1670 N [375 lbf]	90°	57°	0,43 kg [0.94 lbs]	---	225208-M	507107
207-SF ⓘ	2220 N [500 lbf]	99°	57°	0,38 kg [0.84 lbs]	---	---	507107
207-U-L ⓘ	[375 lbf] 1670 N			[0.84 lbs] 0,38 kg	---	---	507107-BLK
207-U-L-BLK ⓘ							507107-BLK
207-UB-L ⓘ							507107-BLK
207-UB-L-BLK ⓘ							507107-BLK

ⓘ This item is available upon request

Holding Capacities



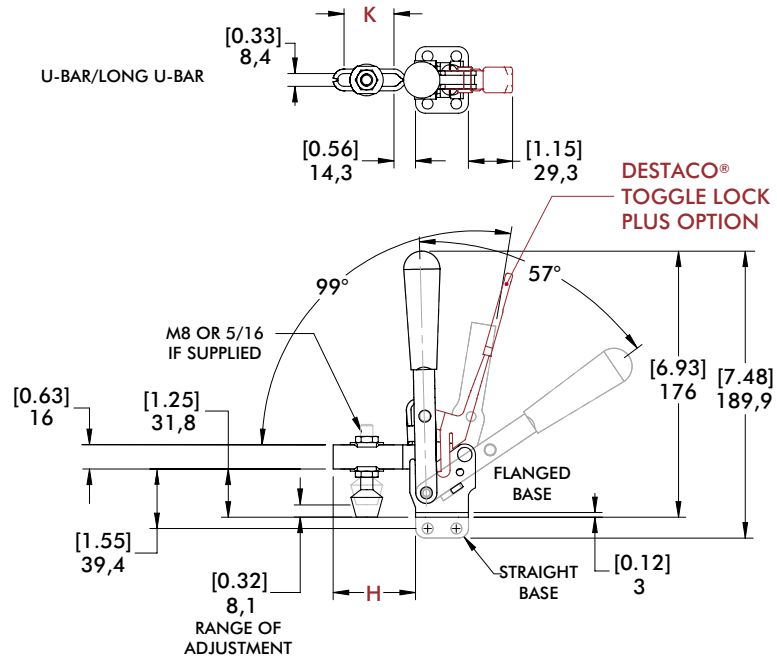
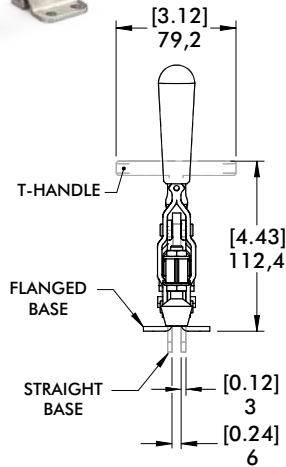
Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
U/UB/UR	[1.28] 32,6	[2.00] 50,8	[3.75] 95,3	[4.90] 124,5	[375 lbf] 1670 N	[225 lbf] 1000 N	12:1	6:1
UL/ULB		[3.88] 98,5	[5.00] 127		[150 lbf] 670 N		7:1	4:1
USS		[2.00] 50,8	[3.75] 95,3		[450 lbf] 2000 N	[240 lbf] 1070 N	10:1	5:1
S/SB		[2.88] 73,0			[500 lbf] 2220 N	[350 lbf] 1560 N		7:1
L/LR LB/LBR		[2.88] 73,0	[5.00] 127	[3.66] 9	[375 lbf] 1670 N	[225 lbf] 1000 N	6:1	4:1
TU		[2.00] 50,8	[3.75] 95,3		[150 lbf] 670 N		4:1	3:1
TUL		[3.88] 98,5	[5.00] 127					
U-L		[2.00] 50,8	[3.75] 95,3		[375 lbf] 1670 N	[2225 lbf] 1000 N	12:1	6:1
UB-L								

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force

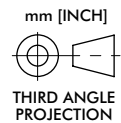
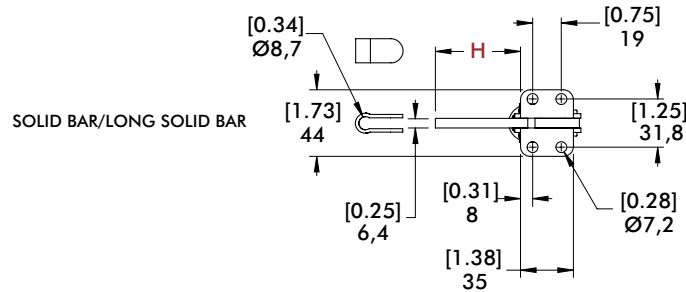
207 SERIES

Vertical Hold Down Clamps | Dimensions | -U/-UL/-S/-L/-TU/-TUL/-UR/-LR/-UB/-ULB/-SB/-LB/-LBR

207-U
Flanged Base
U-Bar



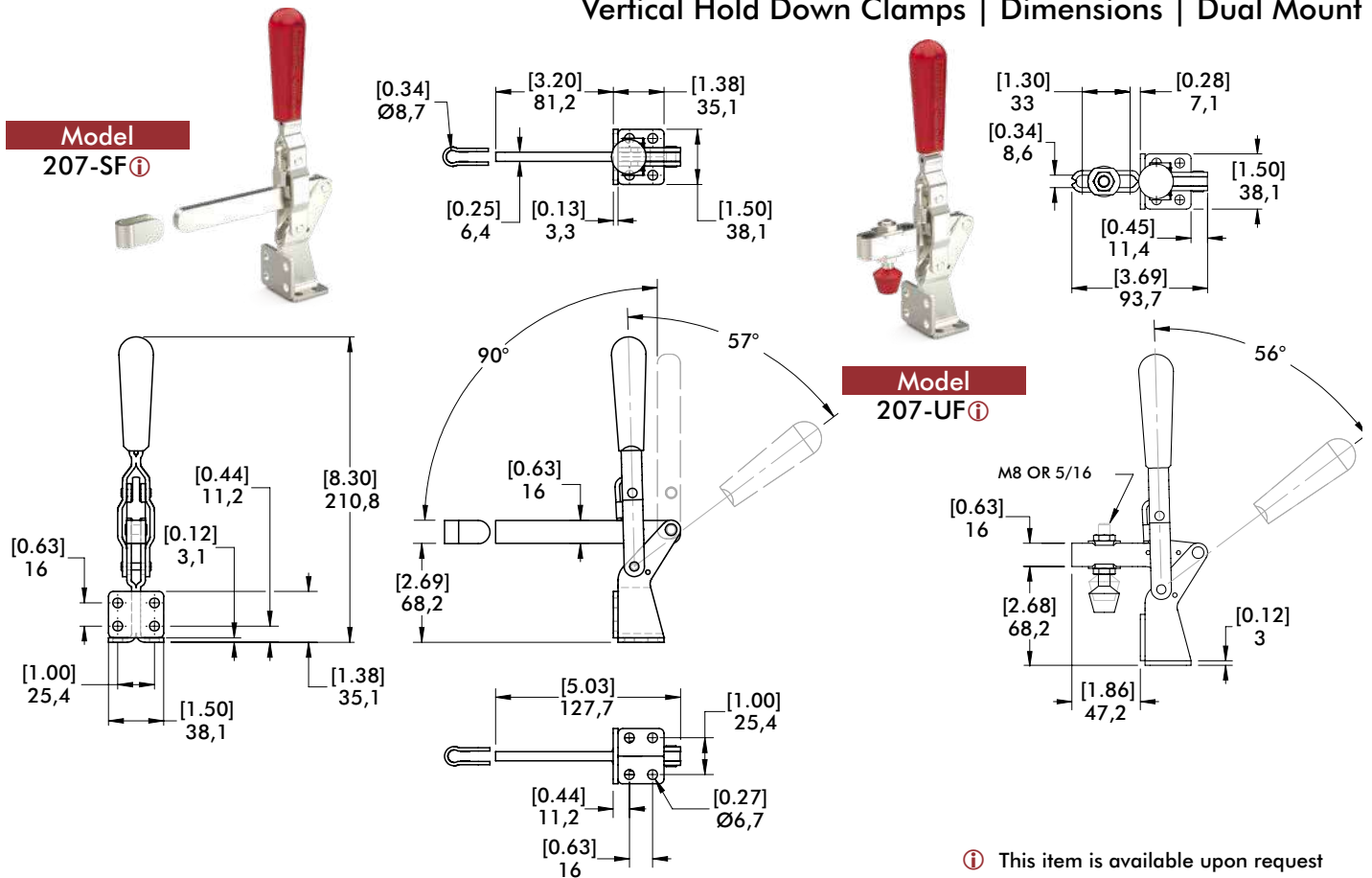
207-SB
Straight Base
Solid Bar



Bar Style	Clamp Models	H	K
	207-U/207-UR/207-TU/207-UB	[2.14] 54,4	[1.30] 33
	207-UL/207-ULB/207-TUL	[3.84] 97,6	[2.94] 74,6
	207-S/207-SB	[2.21] 56,2	---
	207-L/207-LR/207-LB/207-LBR ⓘ	[3.48] 88,4	---

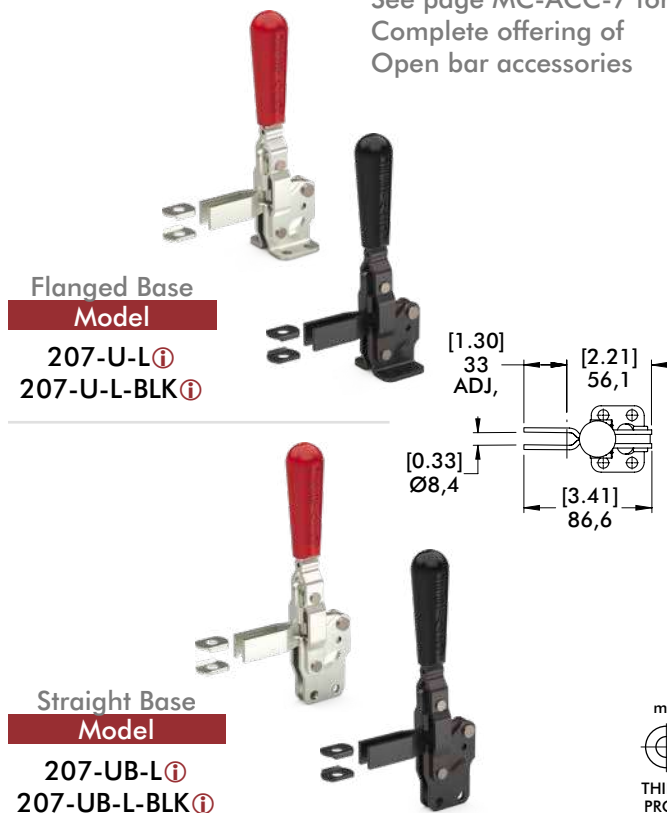
ⓘ This item is available upon request

Vertical Hold Down Clamps | Dimensions | Dual Mount

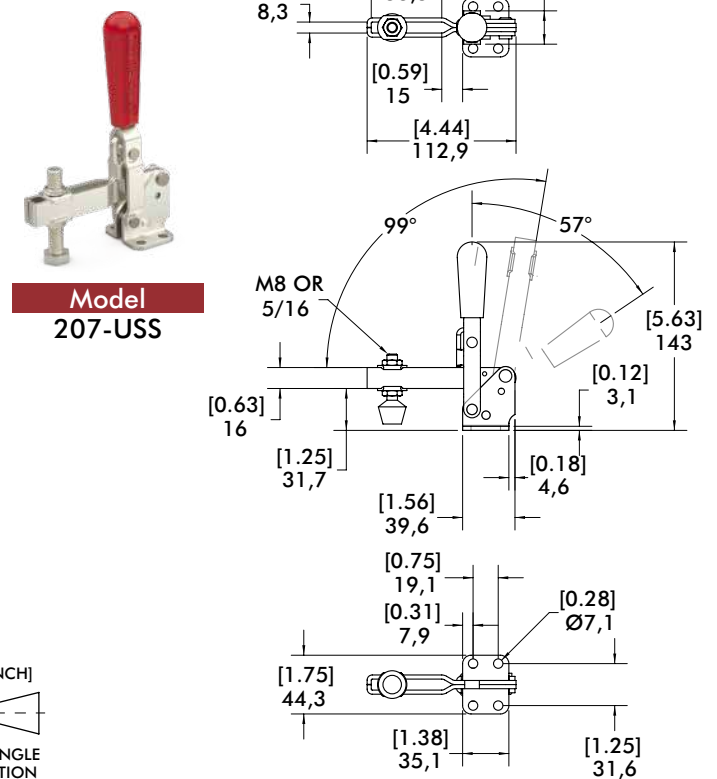


Open Bar Option

See page MC-ACC-7 for Complete offering of Open bar accessories



Stainless Steel



210 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- DESTACO® Toggle Lock Plus™ versions available
- Available in stainless steel
- Accommodates M10 or 3/8 spindle accessories
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Assembly & test
- Light machining
- Light welding

Also Available:

See page MC-ACC-1 for accessories
 810-U Pneumatic Toggle Clamp
 (See page MC-PTC-7)
 810-S Pneumatic Toggle Clamp
 (See page MC-PTC-7)

210-U/USS
 Flanged Base
 U-Bar



-USS Stainless Steel Model

210-S
 Flanged Base
 Solid Bar



210-UB
 Straight Base
 U-bar



210-SB
 Straight Base
 Solid Bar



210-UR
 Flanged Base
 U Bar
 DESTACO®
 Toggle Lock
 Plus



210-SR
 Flanged Base
 Solid Bar
 DESTACO®
 Toggle Lock
 Plus



210-TU
 Flanged Base
 U Bar
 T-Handle



Color Handles

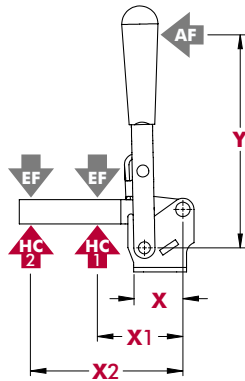
Available on models in this series that use standard red handles.*
 Add -Y, -G, -B, -K to end of model number.

*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)		
					Bolt Retainer	Spindle Assembly	Flanged Washers
210-U	2670 N [600 lbf]	103°	58°	[1.29 lbs] 0,59 kg	---	240208-M	235106
210-USS	[750 lbf]				---	237943-M	235906
210-S	3340 N				210114	237943-M	---
210-UB	2670 N [600 lbf]				---	240208-M	235106
210-SB	3340 N [750 lbf]			[1.60 lbs] 0,73 kg	210114	---	---
210-UR	2670 N [600 lbf]				---	240208-M	235106
210-SR	3340 N [750 lbf]				210114	---	---
210-TU	2670 N [600 lbf]			0,62 kg [1.36 lbs]	---	---	235106

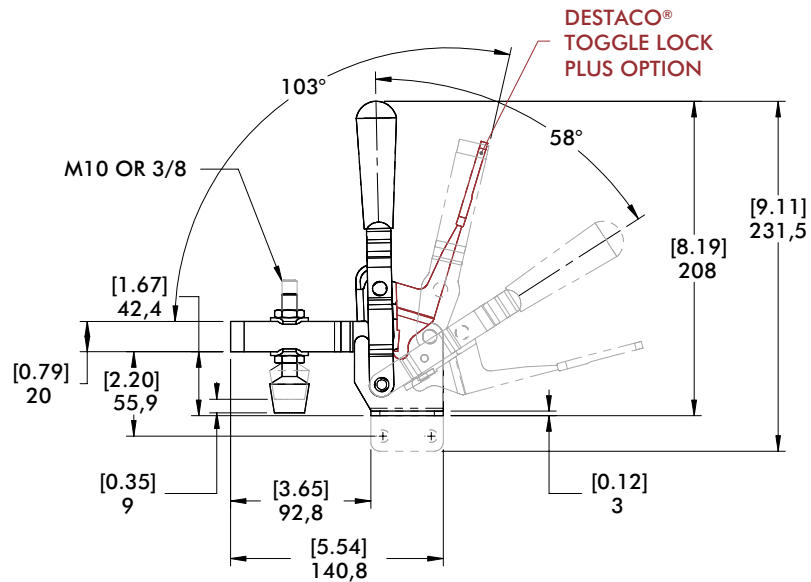
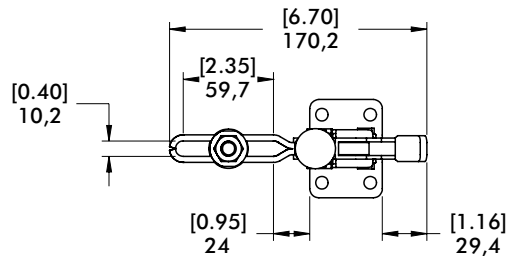
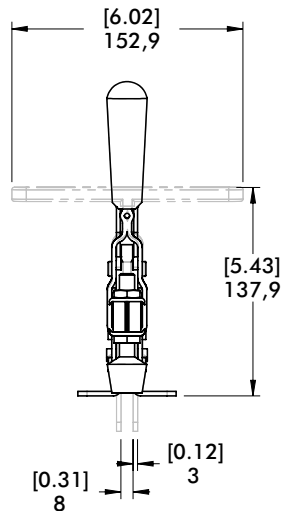


Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	EF(X2):AF
U/UB/UR		[2.38] 60,5	[4.88] 124	[6.75] 171,5	[600 lbf] 2670 N	[290 lbf] 1290 N	14:1	7:1
USS	[1.54] 39				[750 lbf] 3340 N	[360 lbf] 1600 N		
S/SR/SB		[3.62] 92,0	[5.25] 133	[4.50] 114,5	[750 lbf] 3340 N	[500 lbf] 2220 N	11:1	9:1
TU		[2.38] 60,5	[4.88] 124		[600 lbf] 2670 N	[290 lbf] 1290 N		5:1

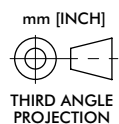
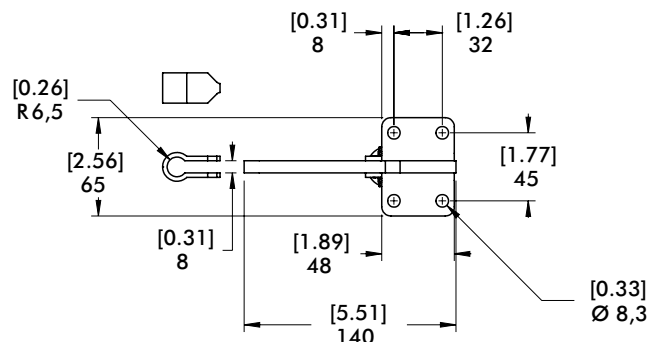
Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

Dimensions | -U/-USS/-S/-UB/-SB/-UR/-SR/-TU

210-U Flanged Base U-Bar



210-SR Flanged Base Solid Bar with DESTACO® Toggle Lock Plus™



247, 267 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Hardened steel bushings
- Large bar guides for greater lateral stability on Model 247
- Series 247 accommodates M12 or 1/2 spindle accessory
- Series 267 accommodates M16 or 5/8 spindle accessory
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Assembly & test
- Light machining
- Welding

Also Available:

See page MC-ACC-1 for accessories
 847-U Pneumatic Toggle Clamp (See page MC-PTC-13)
 847-S Pneumatic Toggle Clamp (See page MC-PTC-13)

247-U
Flanged Base
U-Bar



247-S
Flanged Base
Solid Bar



267-U
Flanged Base
U-Bar



267-S①
Flanged Base
Solid Bar



Color Handles

Available on models in this series that use standard red handles.* Add **-Y**, **-G**, **-B**, **-K** to end of model number.

*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



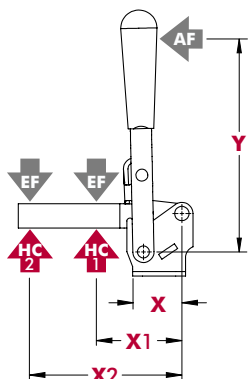
Note:
Clamps shown with included accessories.

Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)		
					Bolt Retainer	Spindle Assembly	Flanged Washers
247-U	[1000 lbf] 4400 N	120°	67°	1,07 kg [2.36 lbs]	---	247208-M	247109
247-S				1,08 kg [2.36 lbs]	247110	---	---
267-U	[1200 lbf] 5340 N	140°	72°	2,18 kg [4.80 lbs]	---	267203-M	267102
267-S①				1,98 kg [4.36 lbs]	110122	---	---

① This item is available upon request

Holding Capacities



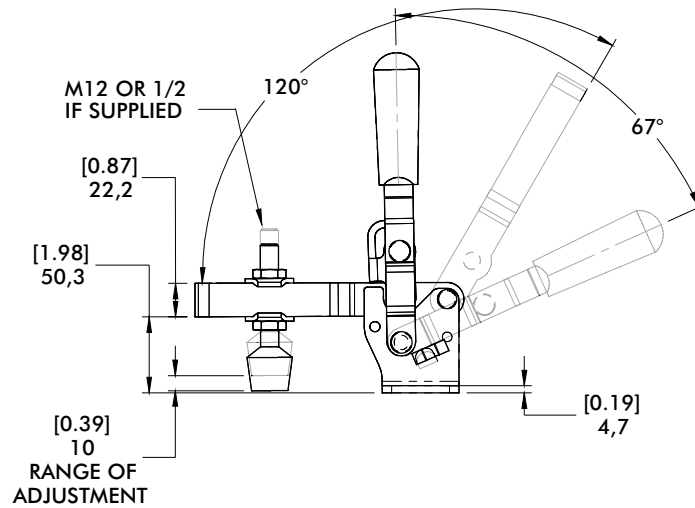
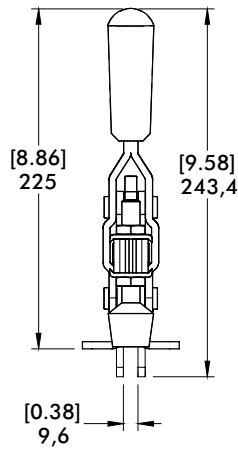
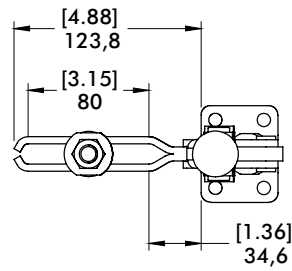
Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
247-U	[1.69]	[3.00] 76,2	[6.13] 155,7	[6.71]	[1000 lbf] 4450 N	[480 lbf] 2140 N	12:1	6:1
247-S	43	[4.56] 115,8	[7.00] 177,8	170,5		[650 lbf] 2900 N	10:1	5:1
267-U	[2.50]	[4.00] 101,6	[8.00] 203,2	[9.25]	[1200 lbf] 5340 N	[600 lbf] 2670 N	18:1	8:1
267-S①	63,5	[6.00] 152,4	[8.75] 222,3	235		[820 lbf] 3650 N	12:1	

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
 See page MC-TEC-4 for additional information. ① This item is available upon request

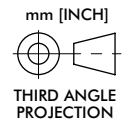
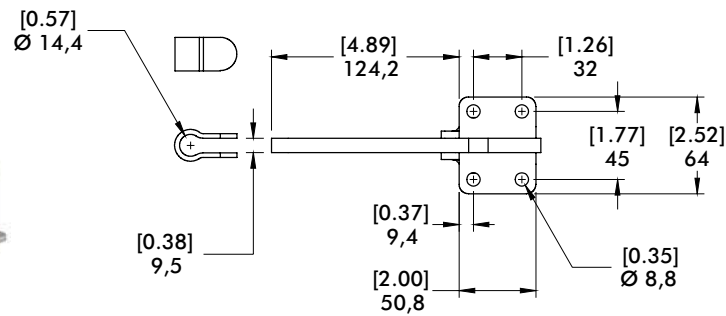
247, 267 SERIES

Vertical Hold Down Clamps | Dimensions | -U/-S/-UB

247-U
Flanged Base
U-Bar



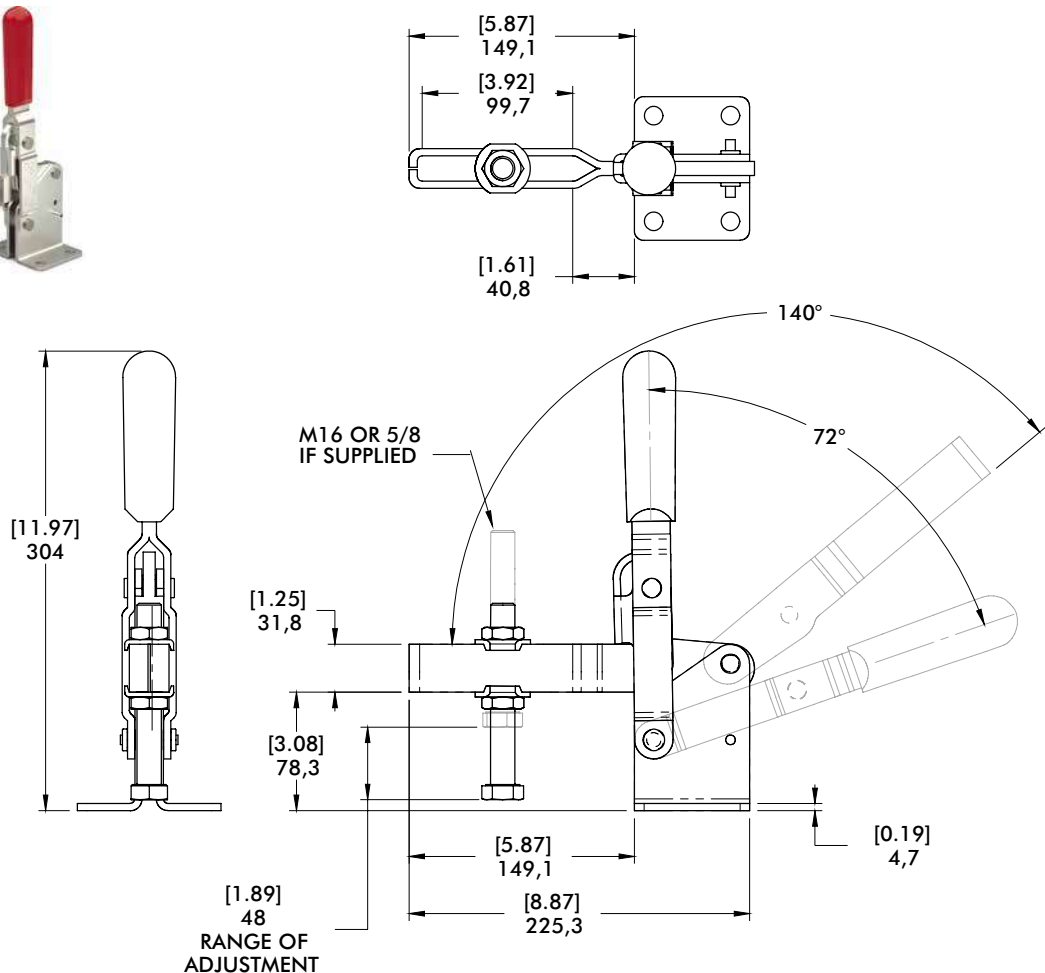
247-S
Flanged Base
Solid Bar



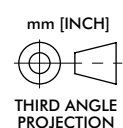
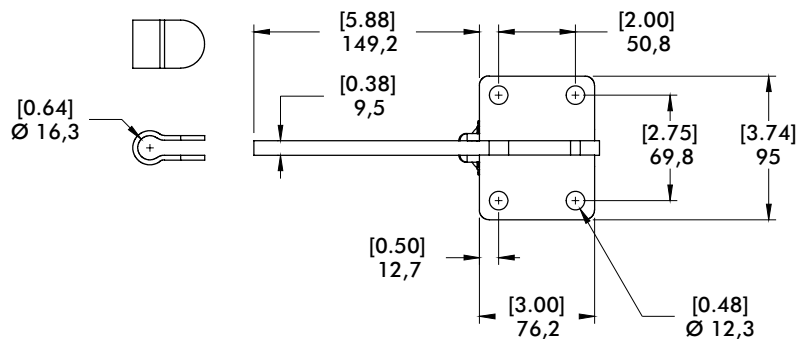
267 SERIES

Vertical Hold Down Clamps | Dimensions

267-U
Flanged Base
U-Bar

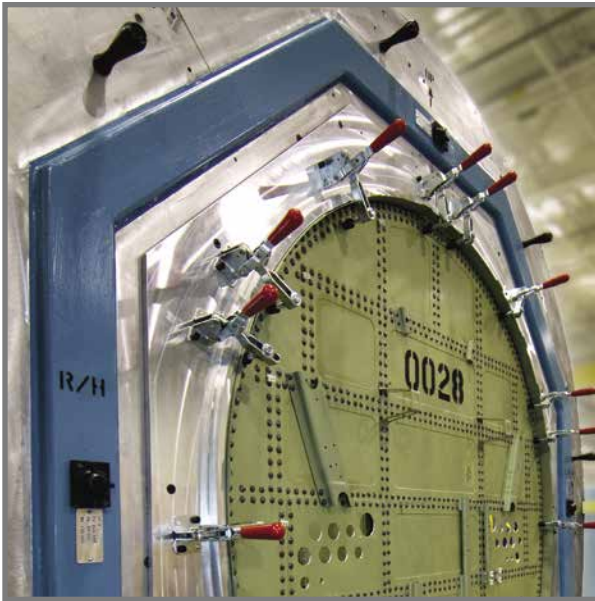


267-S
Flanged Base
Solid Bar



VERTICAL HOLD DOWN CLAMPS

Application Examples



Model 210-U
used in an airframe
assembly fixture

Model 210-U
shown being used
in a checking fixture
application.



Model 533-LB
and **227-UB** shown
with black finish in
a fixture for used for
optical inspection.

5905, 5910, 5915 SERIES

Heavy-Duty Vertical Hold Down Clamps | Product Overview

Features:

- High strength forged clamping arm for heavy-duty service
- Hardened steel pivot pins and bushings provide long life
- Black oxide finish
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Welding fixtures
- Assembly fixtures



5905/5910/5915
Flanged Base



5905-B/5910-B/5915-B
Solid Base



Color Handles

Available on models in this series that use standard red handles.* Add -Y, -G, -B, -K to end of model number.

*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



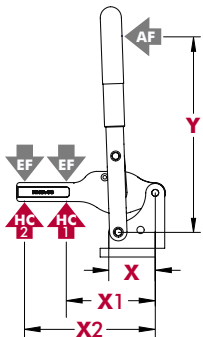
Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight
5905	[750 lbf] 3340N	135°	70°	[1.08 lbs] 0,49 kg
5905-B				[0.82 lbs] 0,37 kg
5910	[1600 lbf] 7120N	132°	71°	[2.84 lbs] 1,29 kg
5910-B				[2.24 lbs] 1,02 kg
5915	[2750 lbf] 12230N	147°	74°	[6.16 lbs] 2,79 kg
5915-B				[5.11 lbs] 2,32 kg



Removable handle stop can be repositioned to limit opening angle to 90°

Holding Forces

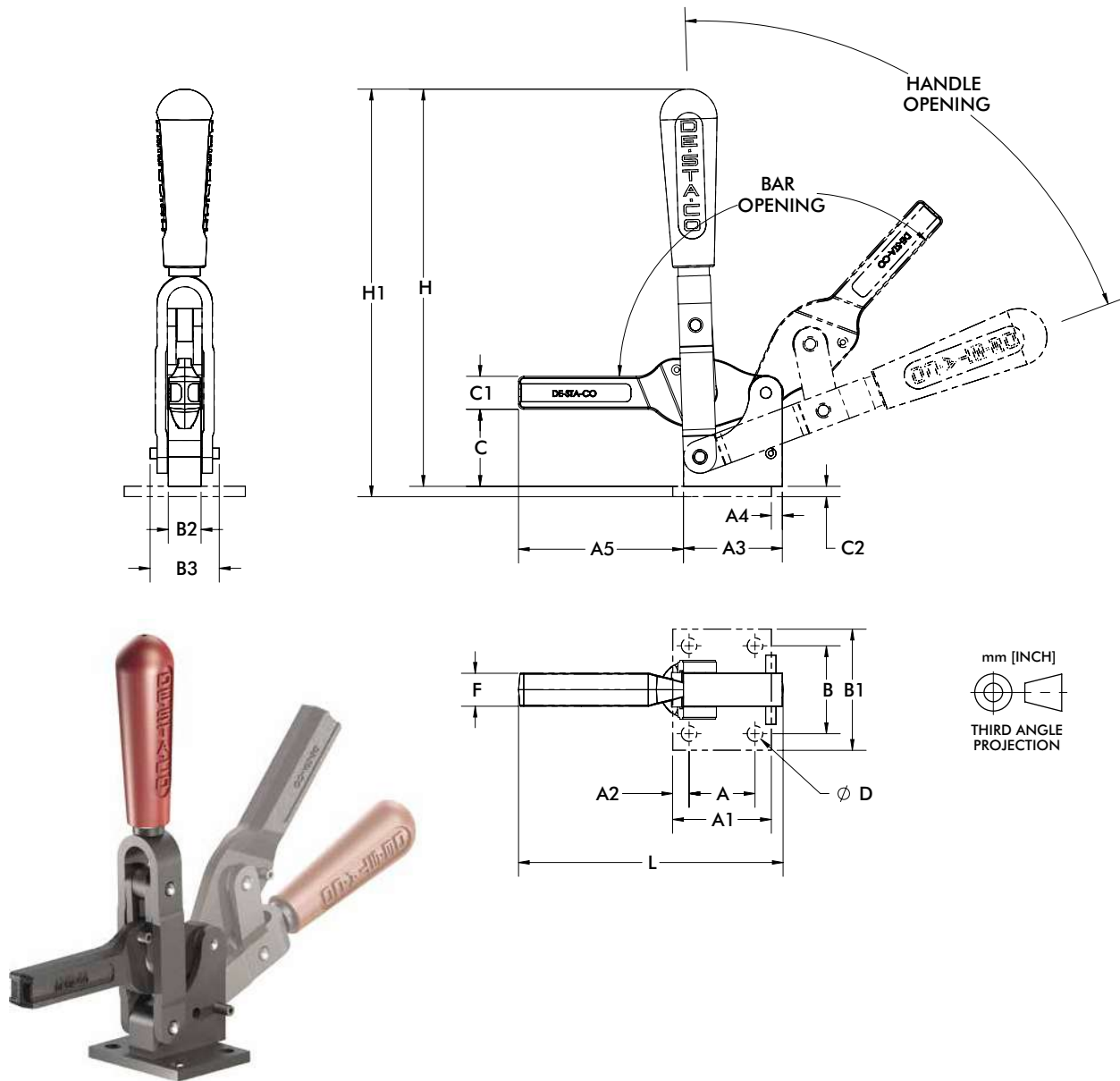


Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
5905	[1.25] 31.9	[2.44] 62	[3.46] 88	[5.31] 135	[750 lbf] 3340 N	[525 lbf] 2335 N	10:1	8:1
5910	[1.87] 47.6	[3.34] 85	[5.12] 130	[6.88] 175	[1600 lbf] 7120 N	[1025 lbf] 4550 N	12:1	5:1
5915	[2.50] 63.5	[4.49] 114	[6.89] 175	[9.05] 230	[2750 lbf] 12230 N	[1790 lbf] 7960 N	10:1	7:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

5905, 5910, 5915 SERIES

Heavy-Duty Vertical Hold Down Clamps | Dimensions



Model	A	A1	A2	A3	A4	A5	B	B1	B2	B3	C	C1	C2	D	F	H	H1	L
5905	[1.00] 25,4	[1.50] 38,1	[0.25] 6,4	[1.51] 38,4	[0.25] 6,4	[2.49] 63,2	[1.50] 38,1	[2.13] 54,1	[0.59] 15,0	[1.02] 25,9	[1.27] 32,3	[0.51] 12,9	[0.24] 6,1	[0.29] 7,3	[0.56] 14,2	[6.51] 165,4	[6.75] 171,4	[4.02] 102.10
5910	[1.50] 38,1	[2.24] 56,9	[0.37] 9,4	[2.25] 57,2	[0.25] 6,4	[3.76] 95,5	[2.00] 50,8	[2.76] 70,1	[0.75] 19,1	[1.57] 39,9	[1.75] 44,5	[0.75] 19,1	[0.24] 6,1	[0.41] 10,5	[0.75] 19,1	[9.04] 229,5	[9.27] 235,5	[6.02] 152.88
5915	[2.00] 50,8	[2.95] 74,9	[0.48] 12,2	[2.99] 75,9	[0.38] 9,7	[5.00] 127,0	[2.75] 69,9	[3.88] 98,6	[0.98] 24,9	[1.97] 50,0	[2.37] 60,2	[1.00] 25,4	[0.35] 8,9	[0.55] 14,0	[1.00] 25,4	[10.89] 276,7	[11.25] 285,7	[7.50] 190.50

Model	A3	A5	B2	B3
5905-B	[1.51] 38,4	[2.49] 63,2	[0.59] 15,0	[1.02] 25,9
5910-B	[2.25] 57,2	[3.76] 95,5	[0.75] 19,1	[1.57] 39,9
5915-B	[2.99] 76	[4.92] 125	[0.98] 25	[1.97] 50

5105, 5110 SERIES

Heavy-Duty Vertical Hold Down Clamps | Product Overview

Features:

- High strength forged clamping arm for heavy-duty service
- Hardened steel pivot pins and bushings provide long life
- Black oxide finish
- Large clearance under the clamping bar
- DESTACO® Toggle Lock Plus™ versions available†

Applications:

- Welding fixtures
- Assembly fixtures



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

5105/5110
Flanged Base



5105-B/5110-B
Solid Base



5105-R/5110-R
Flanged Base
DESTACO®
Toggle Lock
Plus™



5105-BR①/5110-BR①
Solid Base
DESTACO®
Toggle Lock
Plus™



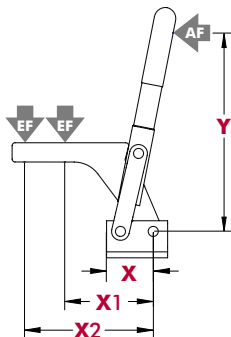
Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight
5105	[700 lbf] 3100N	89°	159°	[1.12 lbs] 0,51 kg
5105-B				[1.06 lbs] 0,48 kg
5105-R				[1.10 lbs] 0,50 kg
5105-BR①				[1.17 lbs] 0,53 kg
5110	[1150 lbf] 5100N	74°	138°	[2.98 lbs] 1,35 kg
5110-B				[2.95 lbs] 1,34 kg
5110-R				[3.00 lbs] 1,36 kg
5110-BR①				[3.02 lbs] 1,37 kg

① This item is available upon request.

† Toggle Lock Plus™ locks the handle in the closed position only.

Holding Forces

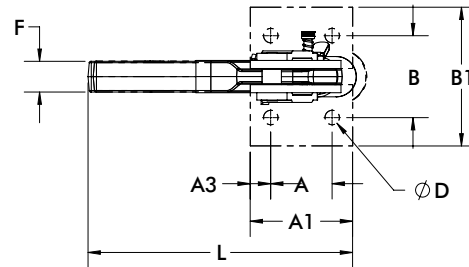
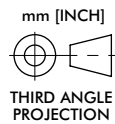
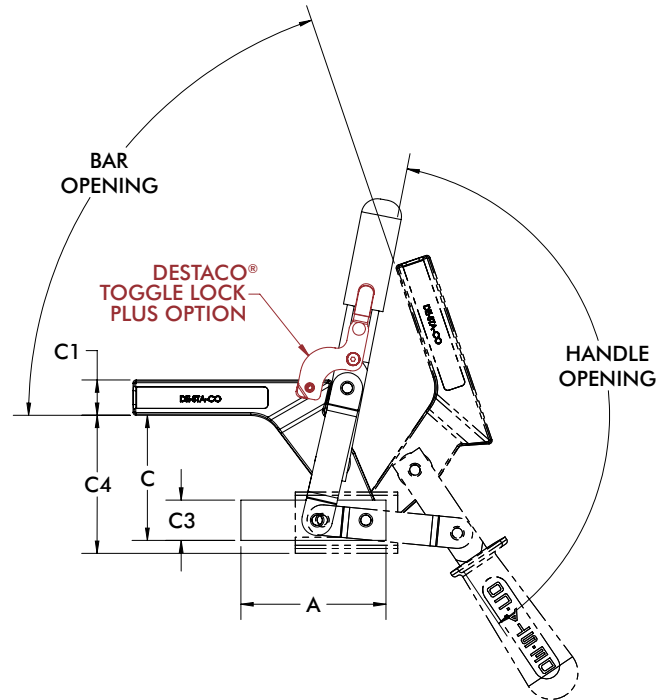
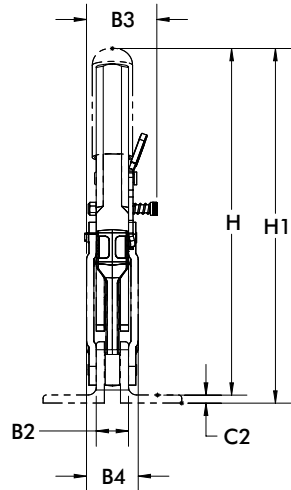


Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
5105	[1.24] 31,5	[2.28] 58	[3.38] 86	[5.31] 135	[700 lbf] 3100 N	[475 lbf] 2100 N	14:1	10:1
5110	[1.85] 47	[3.23] 82	[5.24] 133	[6.69] 170	[1150 lbf] 5100 N	[700 lbf] 3100 N	15:1	10:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

5105, 5110 SERIES

Heavy-Duty Vertical Hold Down Clamps | Dimensions



Model	A	A1	A2	B	B1	B2	B3	B4	C1	C2	C4	D	F	H1	L
5105	[1.00]	[1.62]	[0.31]	[1.46]	[2.24]	[0.59]	--	[0.98]	[0.51]	[0.16]	[2.54]	[0.26]	[0.56]	[6.54]	[4.13]
5105-R	25,4	41,2	7,9	37	57	15	[1.48] 37,5	25	13,0	4,0	64,6	6,6	14,3	166,1	104,9
5110	[1.50]	[2.50]	[0.50]	[2.00]	[2.76]	[0.79]	--	[1.26]	[0.87]	[0.20]	[3.37]	[0.35]	[0.75]	[8.70]	[6.33]
5110-R	38,1	63,5	12,7	50,8	70	20	[1.67] 42,5	32	22,0	5,0	85,6	9,0	19,1	221,1	160,9

Model	A3	B2	B3	B4	C	C1	C3	F	H
5105-B	[2.50]	[0.59]	--	[0.98]	[2.14]	[0.51]	[0.59]	[0.56]	[6.14]
5105-BR①	63,5	15	[1.48] 37,5	25	54,3	13,0	15,0	14,3	156,0
5110-B	[3.54]	[0.79]	--	[1.26]	[3.05]	[0.87]	[0.98]	[0.75]	[8.39]
5110-BR①	90	20	[1.67] 42,5	32	77,5	22,0	25,0	19,1	213,0

① This item is available upon request

528 SERIES

Heavy-Duty Vertical Hold Down Clamps | Product Overview

Features:

- Hardened steel bushings at pivot points for long life
- Solid bar may be modified to suit application requirements

Applications:

- Assembly & test
- Light machining
- Welding
- Medium to heavy duty clamping requirements

528
Flanged Base
Solid Bar



528-F ⓘ
Front Mount
Base Solid Bar

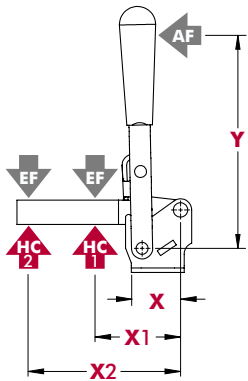


Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight
528	[1000 lbf] 4450 N	180°	177°	[2.50 lbs] 1,13 kg
528-F ⓘ				

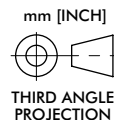
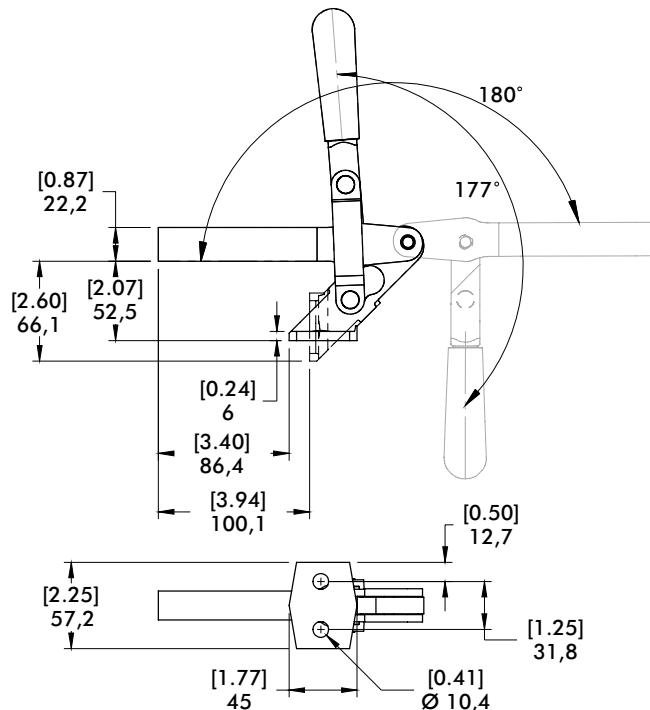
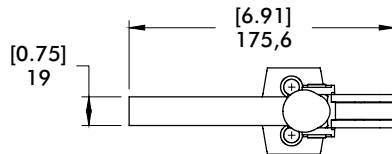
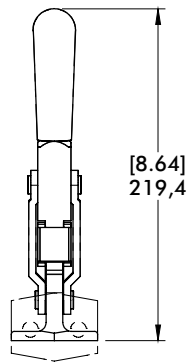
ⓘ This item is available upon request

Holding Capacities | Dimensions



Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
528	[1.38]	[3.50]	[6.00]	[5.50]	[1000 lbf]	[580 lbf]	23:1	12:1
528-F	35	89	152	140	4450 N	2580 N		

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.



548, 578 SERIES

Heavy-Duty Vertical Hold Down Clamps | Product Overview

Features:

- Large bar guides for lateral stability
- Hardened steel pins and bushings for long life
- Replaceable pins

Applications:

- Assembly & test
- Light machining
- Welding
- Heavy duty clamping requirements

548
Straight Base
Solid Bar



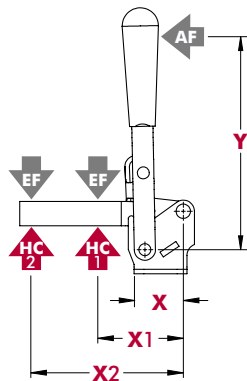
578
Straight Base
Solid Bar



Technical Information

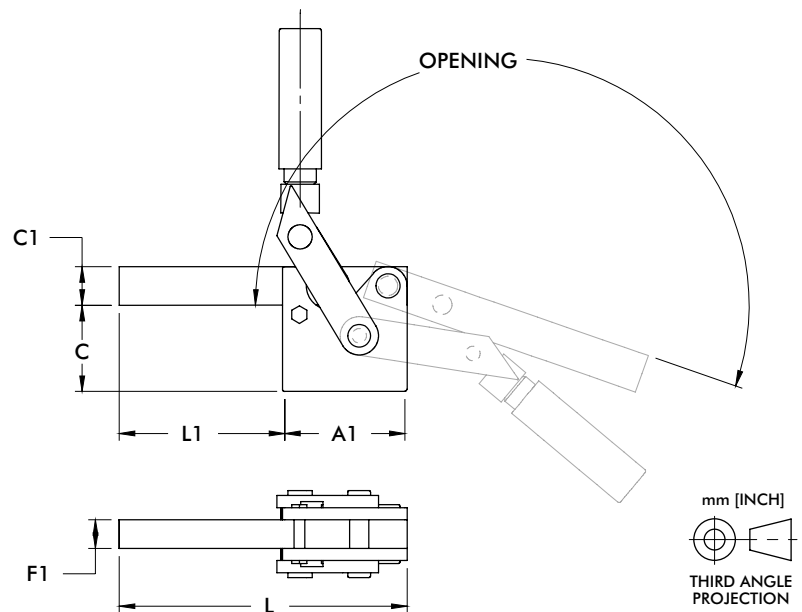
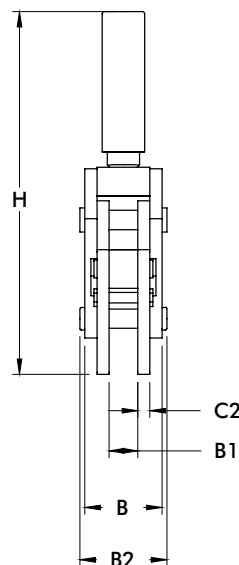
Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight
548	11100 N [2500 lbf]	199°	129°	2,40 kg [5.30 lbs]
578	17800 N [4000 lbf]			4,14 kg [9.12 lbs]

Holding Capacities | Dimensions



Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
548	[2.75] 70	[3.50] 89	[6.00] 152	[7.50] 190	[2500 lbf] 11100 N	[1500 lbf] 6680 N	4.5:1	3.4:1
578	[4.25] 108	[4.50] 114	[7.00] 178	[10.31] 262	[4000 lbf] 17800 N	[2500 lbf] 11100 N	7.6:1	4.2:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.



Model	A1	B	B1	B2	C	C1	C2	F1	H	L	L1
548	[3.25] 82,6	[2.01] 51	[0.75] 19,1	[2.26] 57,5	[2.24] 56,9	[1.00] 25,4	[0.31] 7,9	[0.75] 19,1	[9.45] 240	[7.50] 190,5	[4.25] 107,9
578	[4.02] 102,1	[2.38] 60,5	[0.87] 22,1	[2.70] 68,6	[2.79] 70,9	[1.26] 32	[0.37] 9,5	[0.87] 22,1	[11.04] 280,3	[8.62] 219	[4.61] 117,1

533, 535 SERIES

Heavy-Duty Vertical Hold Down Clamps | Product Overview

Features:

- Hardened steel bushings and pivot pins
- Large bar guides for greater lateral support
- Solid clamping bar may be modified to suit application requirements
- DESTACO® Toggle Lock Plus™ (533-LBR)
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Welding
- Heavy duty clamping applications

Also Available:

See page MC-ACC-1 for accessories

533-L
Flanged Base
Solid Bar



533-LB
Straight Base
Solid Bar



533-LBR
Straight Base
Solid Bar
DESTACO®
Toggle Lock
Plus™



Color Handles
Available on models
in this series that use
standard red handles.*
Add **-Y**, **-G**, **-B**, **-K** to
end of model number.

*Excludes Blackout Series,
Toggle Lock Plus levers
or dipped handles.



535-L
Flanged Base
Solid Bar



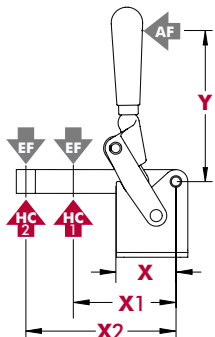
535-LB
Straight Base
Solid Bar



Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)
					Bolt Retainer
533-L	[1575 lbf] 7000 N	120°	90°	[2.20 lbs] 1,00 kg	533108-M
533-LB		90°	74°	1,26 kg [2.78 lbs]	
533-LBR					
535-L	[2250 lbf] 10000 N	120°	90°	[4.087 lbs] 1,85 kg	535108-M
535-LB					

Holding Forces



Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
533-L	[1.97] 50	[3.25] 82.5	[4.82] 122.5	[5.51] 140	[1575 lbf] 7000 N	[700 lbf] 3100 N	9:1	5:1
535-L	[2.46] 62.5	[4.23] 107.5	[6.20] 157.5	[6.22] 158	[2250 lbf] 10000 N	[1500 lbf] 6600 N	8:1	6:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

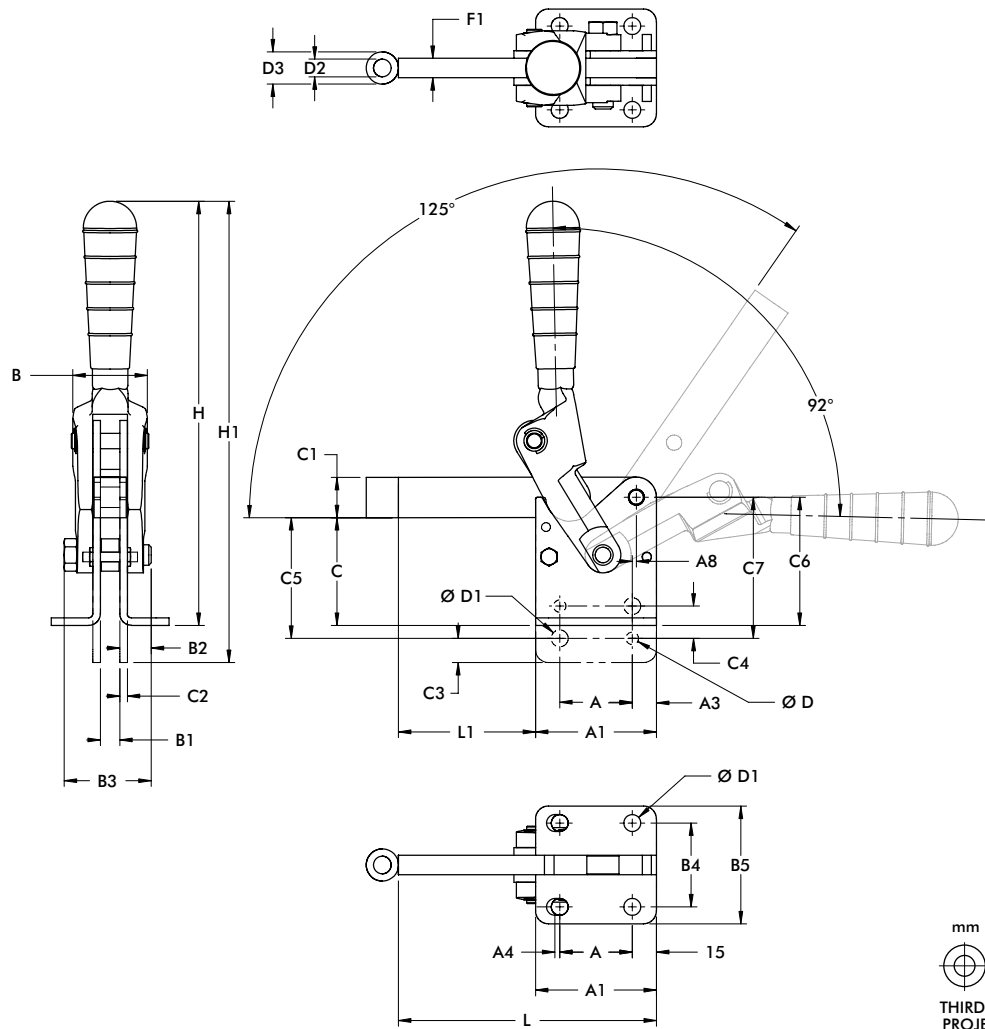
533, 535 SERIES

Heavy-Duty Vertical Hold Down Clamps | Dimensions

533-L
Flanged Base
Solid Bar



535-L
Flanged Base
Solid Bar



mm [INCH]
THIRD ANGLE
PROJECTION

Model	A	A1	A3	A4	A8	B	B1	B2	B3	B4	B5	C	C1	C2
533-L	[1.18] 30	[2.36] 59,9		[0.08] 2	[0.20] 5,1	[1.52] 38,6	[0.39] 9,9	[0.69] 15,5	[1.75] 44,5	[1.77] 45	[2.44] 62	[1.86] 47,2	[0.79] 20,1	
533-LB			[0.59] 15							--	--	--		[0.19] 4,8
535-L	[1.77] 45	[2.95] 74,9		--	[0.18] 4,6	[1.89] 48	[0.47] 11,9	[0.89] 22,6	[2.13] 54,1	[2.05] 52,1	[2.87] 72,9	[2.63] 66,8	[0.98] 24,9	
535-LB										--	--	--		

Model	C3	C4	C5	C6	C7	D	D1	D2	D3	F1	H	H1	L	L1
533-L	--	--	--	[2.24] 56,9	--	--	[0.33] 8,4	[0.35] 8,9	[0.59] 15	[0.39] 9,9	[8.6] 218,4	--	[4.92] 125	[2.56] 65
533-LB	[0.39] 9,9	[0.59] 15	[1.86] 55,1	--	[2.56] 65	[0.22] 5,6					--	[9.31] 236,5		
535-L	--	--	--	[3.13] 79,5	--	--	[0.41] 10,4	[0.43] 10,9	[0.79] 20,1	[0.47] 11,9	[10.35] 262,9	--	[6.30] 160	[3.35] 85,1
535-LB	[0.59] 15	[0.79] 20,1	[2.95] 74,9	--	[3.44] 87,4	[0.30] 7,6					--	[11.26] 286		

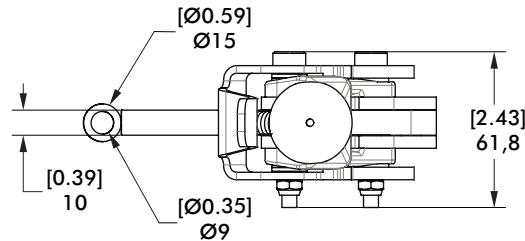
533, 535 SERIES

Heavy-Duty Vertical Hold Down Clamps | Dimensions

533-LBR

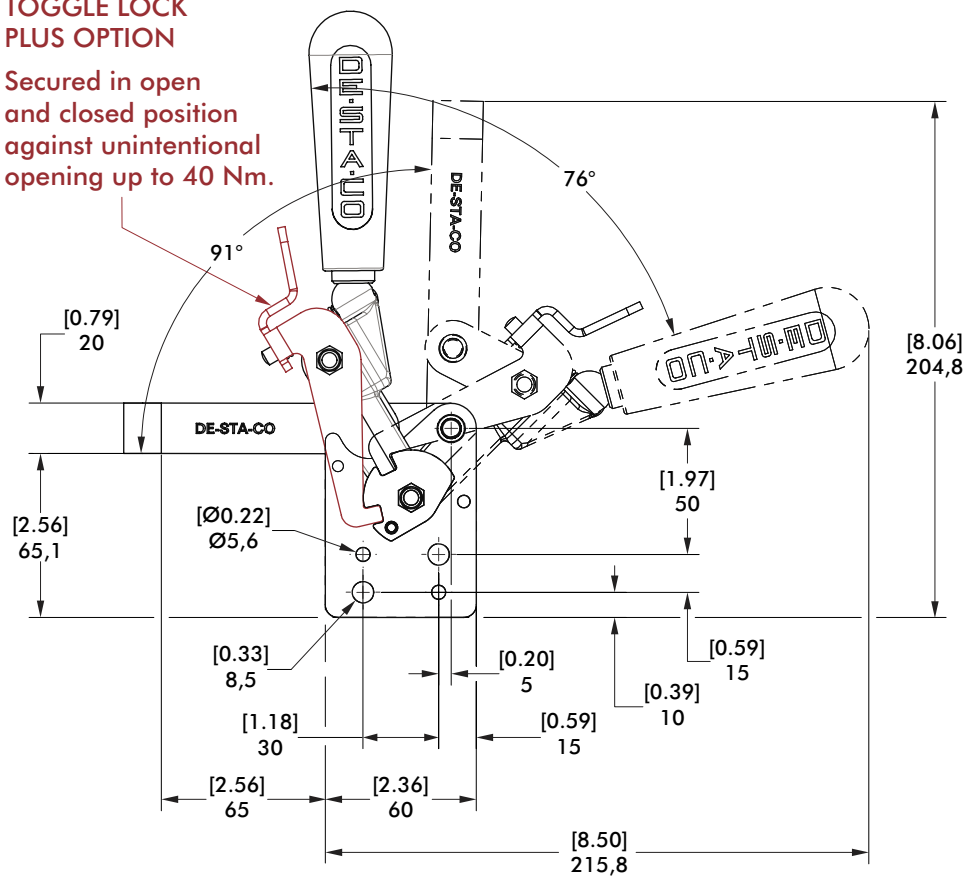
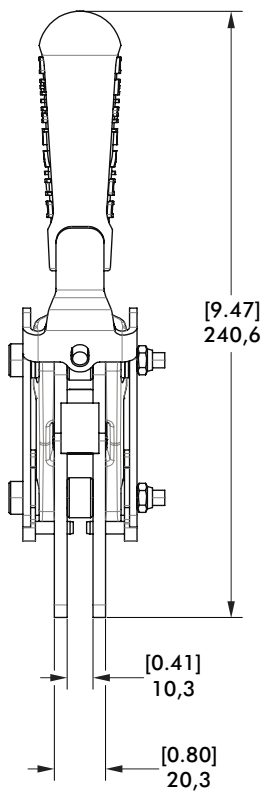
Straight Base
Solid Bar

DESTACO®
Toggle Lock
Plus™



DESTACO® TOGGLE LOCK PLUS OPTION

Secured in open
and closed position
against unintentional
opening up to 40 Nm.



Features:

- Front flange mount
- Accepts M8 or 5/16" spindle accessory (not supplied)
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Assembly & test
- Checking fixtures
- Light machining
- Woodworking

Also Available:

See page MC-ACC-1 for accessories

91090

Front Flanged Base
Open Bar



Color Handles

Available on models in this series that use standard red handles*. Add **-Y**, **-G**, **-B**, **-K** to end of model number.

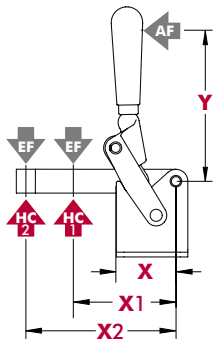
*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



Technical Information | Dimensions

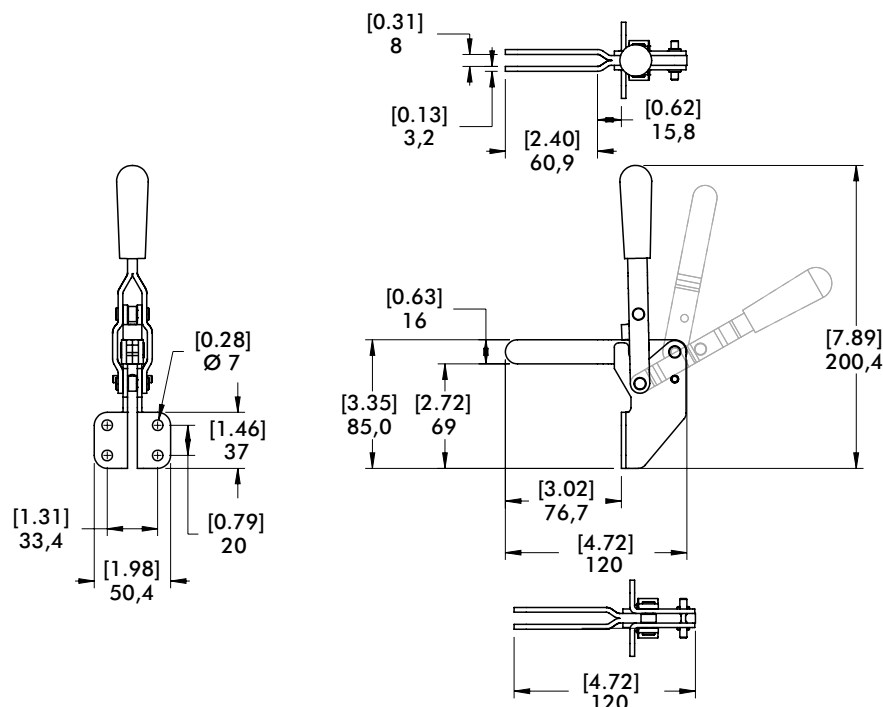
Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Recommended Accessories		
					Bolt Retainer	Spindle Assembly	Flanged Washers
91090	1710 N [385 lbf]	100°	60°	0,37 kg [0.81 lbs]	---	507208-M	507107

Holding Forces



Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
91090	[1.39] 35,3	[2.36] 60	[3.74] 95	[4.13] 105	[385 lbf] 1710 N	[240 lbf] 1065 N	8:1	5:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.



mm [INCH]
THIRD ANGLE
PROJECTION

317 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Dual mounting surfaces
- Large bar opening angle
- Accommodates M8 or 5/16" spindle accessories
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Assembly & test
- Checking fixtures
- Light machining
- Woodworking

Also Available:

See page MC-ACC-1 for accessories
 817-U Pneumatic Toggle Clamp
 (See page MC-PTC-19)
 817-S Pneumatic Toggle Clamp
 (See page MC-PTC-19)

317-U
U-Bar



317-S
Solid Bar



Color Handles

Available on models in this series that use standard red handles*. Add **-Y**, **-G**, **-B**, **-K** to end of model number.

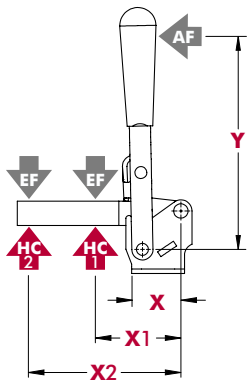
*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)		
					Bolt Retainer	Spindle Assembly	Flanged Washers
317-U	1670 N [375 lbf]	185°	60°	[0.75 lbs] 0,34 kg	---	507208-M	507107
317-S	1780 N [400 lbf]				207105	---	---

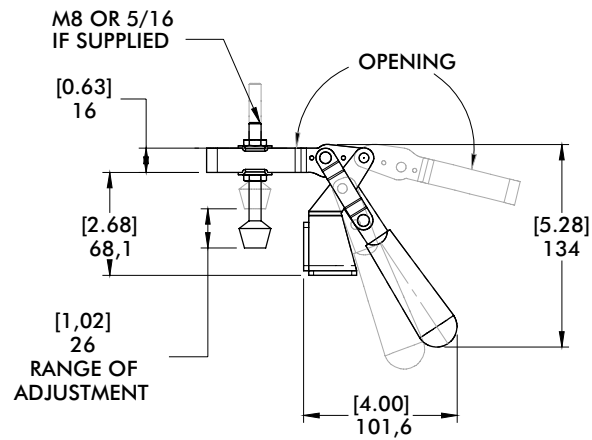
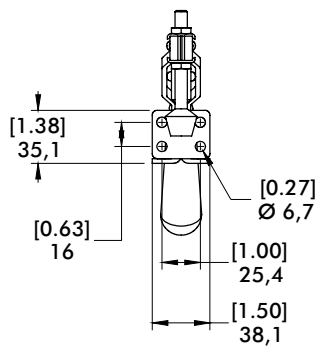
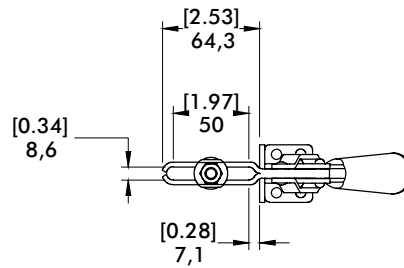
Holding Capacities



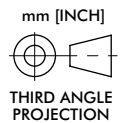
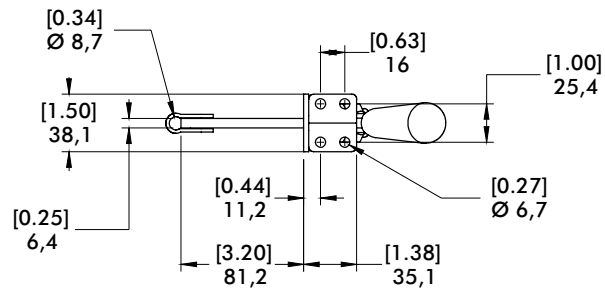
Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
317-U	[1.57] 40,0	[2.00] 50,8	[3.75] 95,3	[4.00] 101,6	[375 lbf] 1670 N	[200 lbf] 900 N	17:1	8:1
317-S		[2.50] 63,5	[5.00] 127,0		[400 lbf] 1780 N	[190 lbf] 850 N	13:1	5:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
 See page MC-TEC-4 for additional information.

317-U
U-Bar



317-S
Solid Bar



527 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Hardened steel bushings at pivot points
- Solid bar can be modified to suit application requirements
- Thumb lever on link for easy opening

Applications:

- Assembly & test
- Light machining
- Woodworking

527
Flanged Base



527-F ⓘ
Front Mount

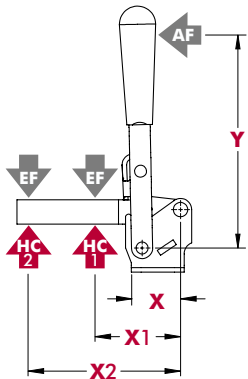


Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight
527	[1000 lbf] 4450 N	195°	65°	[2.50 lbs] 1,13 kg
527-F ⓘ				

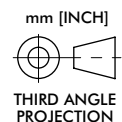
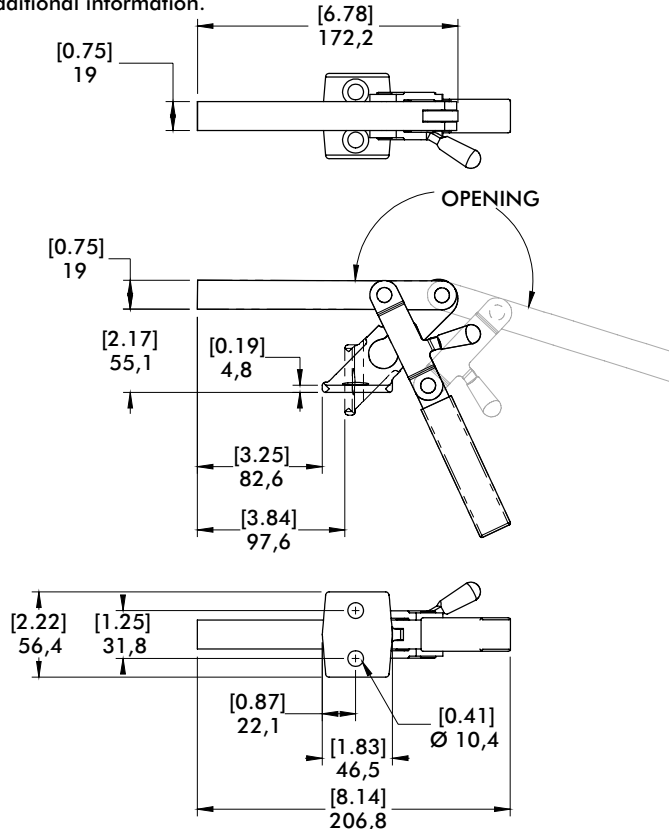
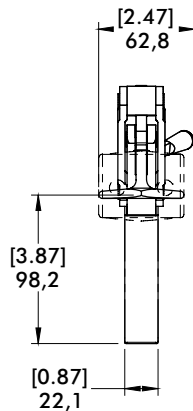
ⓘ This item is available upon request

Holding Capacities | Dimensions



Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
527	[3.12] 79,2	[3.50] 89,0	[6.00] 152,4	[4.00] 101,6	[1000 lbf] 4450 N	[580 lbf] 2580 N	23:1	12:1
527-F	[2.53] 64,3							

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.



7-101, 7-58, 7-59, 7-60 SERIES

Heavy Duty Cam Action Series | Product Overview

Features:

- Cam action accommodates variable workpiece thickness
- Heavy duty construction
- Solid clamp arms may be modified to suit application requirements

Applications:

- Light machining
- Welding
- Assembly

Technical Information

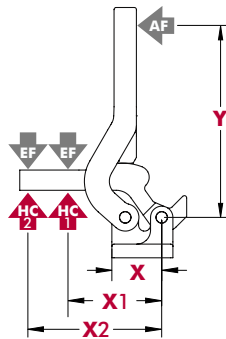
7-101



7-58
7-59
7-60



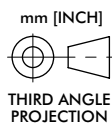
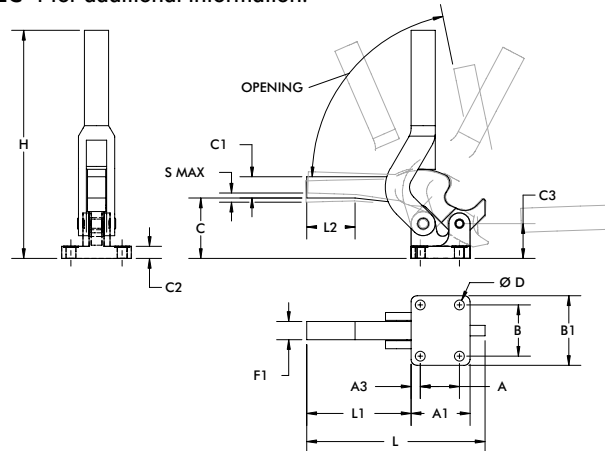
Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Weight
7-101	2110 N [475 lbf]	80°	0,45 kg [1.0 lbs]
7-58	2670 N [600 lbf]	95°	0,91 kg [2.0 lbs]
7-59	4450 N [1000 lbf]	95°	1,36 kg [3.0 lbs]
7-60	7120 N [1600 lbf]	80°	2,27 kg [5.0 lbs]



Holding Forces | Dimensions

Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
7-58	[1.38] 35,1	[2.36] 60	[3.54] 90	[5.31] 135	[600 lbf] 2670 N	[400 lbf] 1780 N	5:1	3:1
7-59	[1.69] 42,8	[3.46] 88	[4.72] 120	[6.69] 170	[1000 lbf] 4450 N	[725 lbf] 3225 N	4:1	3:1
7-60	[2.00] 50,8	[4.53] 115	[5.90] 150	[7.48] 190	[1600 lbf] 7120 N	[1225 lbf] 5450 N	4:1	3:1
7-101	[1.00] 25,4	[1.97] 50	[3.74] 95	[3.46] 88	[475 lbf] 2110 N	[250 lbf] 1110 N	1.50:1	1.25:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.



Model	A	A1	A3	B	B1	C	C1	C2	C3	D	F1	H	L	L1	L2	S max.
7-101	[0.75] 19,1	[1.25] 31,8	[0.25] 6,1	[1.25] 31,8	[1.75] 44,5	[1.44] 36,6	[0.50] 12,7	[0.31] 7,9	[1.00] 25,4	[0.22] 5,6	[0.50] 12,7	[5.00] 127	[4.62] 117,3	[3.12] 79,1	-	[0.13] 3,3
7-58	[1.00] 25,4	[1.69] 42,9	[0.34] 8,6	[1.62] 41,2	[2.25] 57,2	[1.87] 47,5	[0.56] 14,2	[0.38] 9,7	[1.12] 28,5	[0.28] 7,1	[0.50] 12,7	[6.93] 176	[4.62] 117,35	[2.55] 64,8	-	[0.13] 3,3
7-59	[1.38] 35,1	[2.06] 52,3	[0.39] 9,9	[1.88] 47,8	[2.50] 63,5	[2.19] 55,6	[0.63] 16	[0.44] 11,2	[1.25] 31,8	[0.34] 8,6	[0.63] 16	[8.50] 215,9	[6.00] 152,4	[3.45] 87,6	[1.24] 31,5	[0.19] 4,8
7-60	[1.62] 41,2	[2.44] 62	[0.44] 11,2	[2.12] 53,9	[2.88] 73,2	[2.50] 63,5	[0.88] 22,4	[0.50] 12,7	[1.44] 36,6	[0.41] 10,4	[0.75] 19,1	[9.44] 239,8	[7.38] 187,5	[4.32] 109,7	[1.97] 50	[0.25] 6,4

229 SERIES

Vertical Hold Down Clamps | Product Overview

Features:

- Cam action clamp holds workpieces of varying height
- Total clamping range of 8mm [0.31in.]
- Accommodates M12 or 1/2" accessories
- 5 handle colors - see page MC-PRO-7 for details

Applications:

- Assembly & test
- Light machining
- Welding

Also Available:

See page MC-ACC-1 for accessories

229 Flanged Base Open Bar



Color Handles

Available on models in this series that use standard red handles.* Add **-Y**, **-G**, **-B**, **-K** to end of model number.

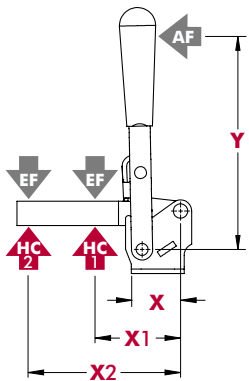
*Excludes Blackout Series, Toggle Lock Plus levers or dipped handles.



Technical Information

Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Handle Opening (+10°)	Weight	Accessories (Supplied)	
					Spindle Assembly	Flanged Washers
229	4450 N [1000 lbf]	115°	180°	1,17 kg [2.59 lbs]	229203	247109

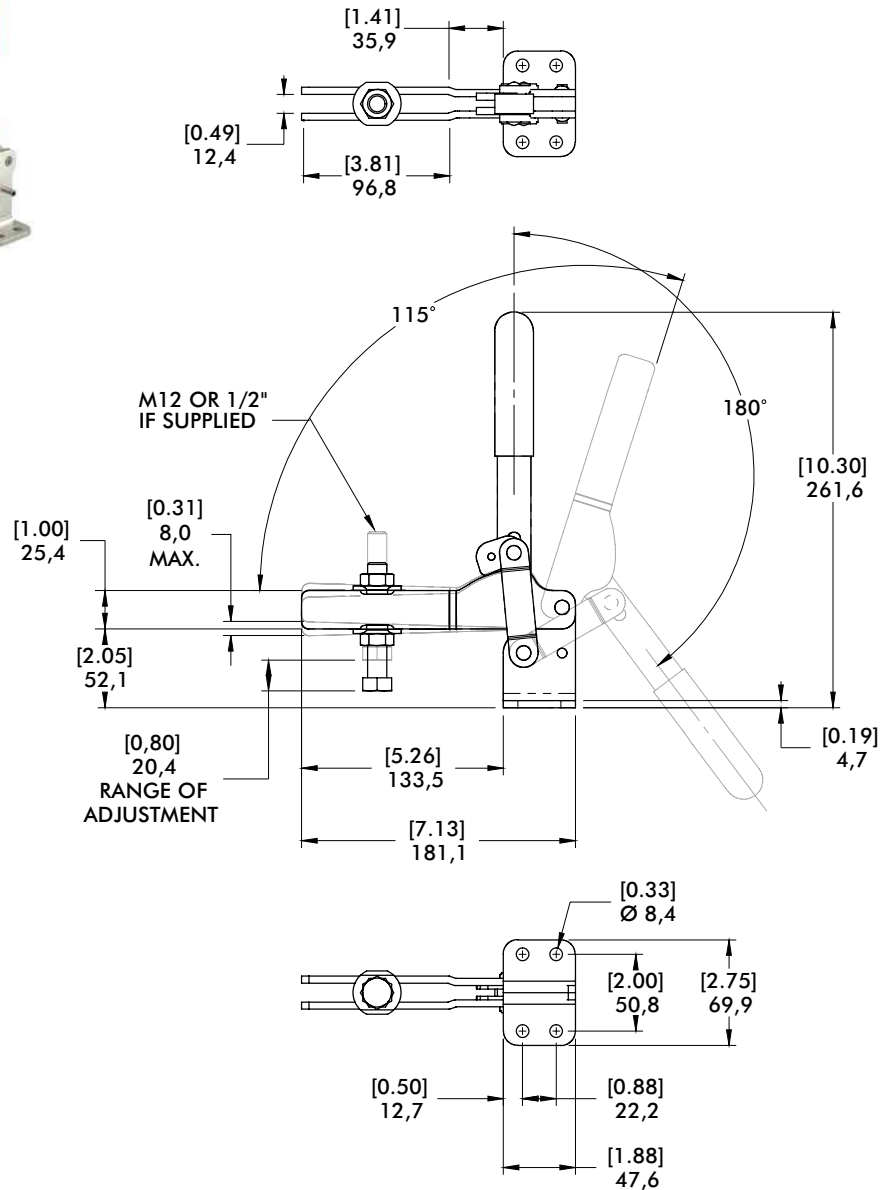
Holding Capacities



Model	X	X1	X2	Y	±HC1	±HC2	±EF(X1):AF	±EF(X2):AF
229	[1.53] 38,9	[3.00] 76,2	[6.12] 155,4	[7.06] 179,3	[1000 lbf] 4450 N	[500 lbf] 2230 N	7:1	3:1

Dimensions shown "mm [inch]" ± HC = Holding Capacity, EF = Exerting Force, AF = Applied Force
See page MC-TEC-4 for additional information.

229
Flanged Base
Open Bar



500 SERIES

Weldable Vertical Hold Down Clamps | Product Overview

Features:

- Hardened pivot pins and bushings
- Weldable clamping bar
- LSC version with locking spring clip for securing the handle in the open position
- DESTACO® Toggle Lock Plus™ (503-MLBR)
- Modular design allows you to set up the clamp to meet application requirements
- 5 handle colors (503-MLBR only) - see page MC-PRO-7 for details

Applications:

- Welding
- Assembly
- Heavy duty, production clamping applications

Also Available:

See page MC-VHD-47 for accessories

503-MB
Swivel Base



503-MLB
Long Base



503-MLBR
Long Base,
DESTACO®
Toggle Lock
Plus™



503-MBLSC ⓘ
Swivel Base
with Locking
Spring Clip



503-MLBLSC ⓘ
Long Base
with Locking
Spring Clip



505-MB
Swivel Base



505-MLB
Long Base



505-MBLSC ⓘ
Swivel Base
with Locking
Spring Clip



505-MLBLSC ⓘ
Long Base
with Locking
Spring Clip



506-MB
Swivel Base



506-MLB ⓘ
Long Base



506-MBLSC ⓘ
Swivel Base
with Locking
Spring Clip

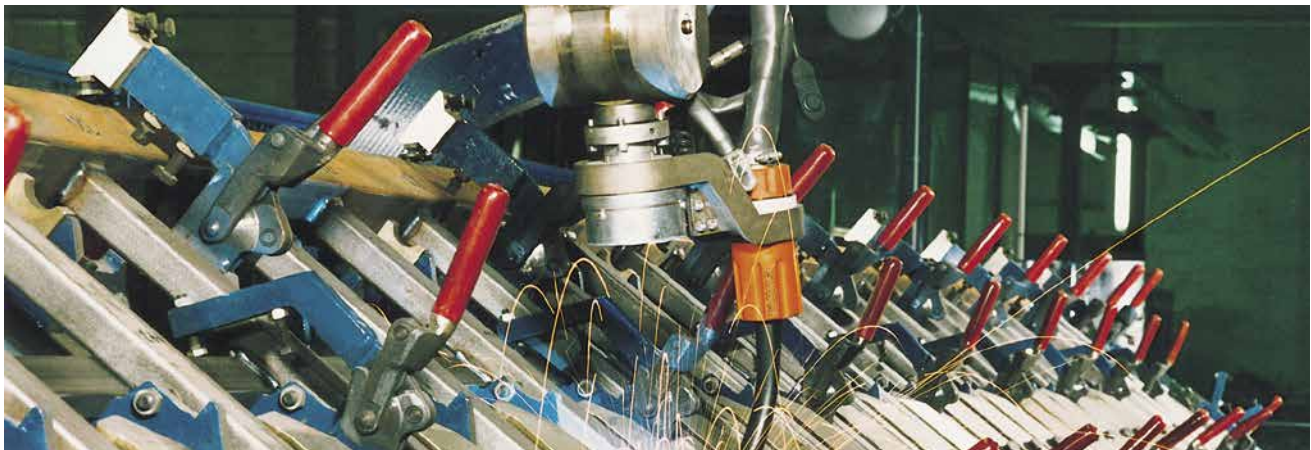


506-MLBLSC ⓘ
Long Base
with Locking
Spring Clip



Model 505-MLB in a robotic welding fixture

ⓘ This item is available upon request



Weldable Vertical Hold Down Clamps | Technical Information

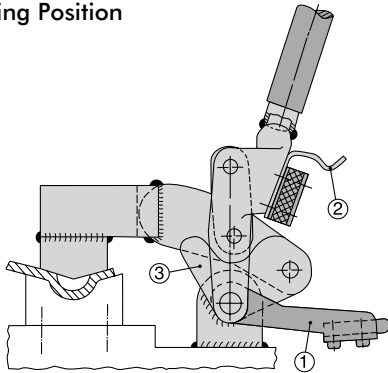
Model	Max. Holding Capacity	Clamp Bar Opening (+10°)	Weight
503-MB	[1575 lbf] 7000 N	200°	0,70 kg [1.54 lbs]
503-MLB			0,80 kg [1.76 lbs]
503-MLBR		90°	1,26 kg [2.78 lbs]
503-MBLSC ⓘ		200°	0,80 kg [1.76 lbs]
503-MLBLSC ⓘ			0,90 kg [1.98 lbs]
505-MB	1,40 kg [3.09 lbs]		
505-MLB	[2475 lbf] 11000 N		1,50 kg [3.31 lbs]
505-MBLSC ⓘ			1,60 kg [3.53 lbs]
505-MLBLSC ⓘ			2,60 kg [5.73 lbs]
506-MB			[5060 lbf] 22500 N
506-MLB ⓘ	3,00 kg [6.61 lbs]		
506-MBLSC ⓘ			
506-MLBLSC ⓘ			

ⓘ This item is available upon request

Note:

The clamping bars are made from forged alloy steel and must be heated to 200°C (400°F) prior to welding. We recommend welding the handles, clamp arms, and mounting bases when disassembled. Welding of non pre-heated parts may only be done with the addition of welding fillers.

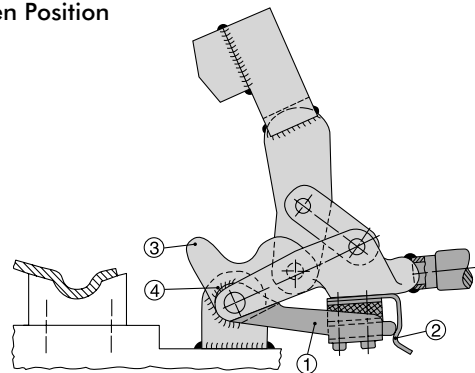
Clamping Position



Patented spring latch hold-open device

1. Mount the clamp and place it in the closed position
2. Position the bracket in the leaf spring

Open Position

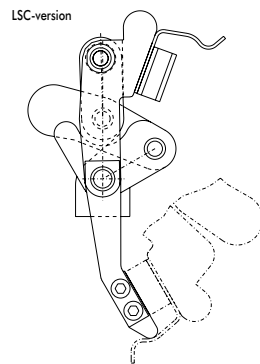
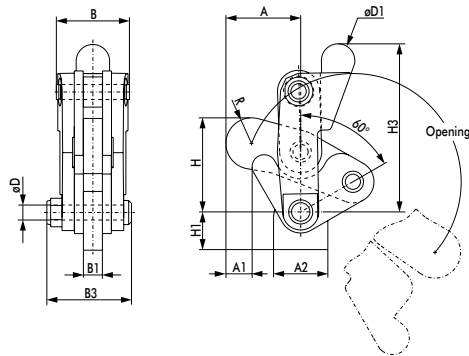


3. Swivel the clamp into the open position
4. In this position, weld the bracket with the bar guide feature at point

500 SERIES

Weldable Vertical Hold Down Clamps | Dimensions | -MB/-MLB/-MBLSC/-MLBLSC

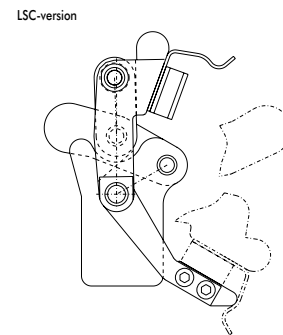
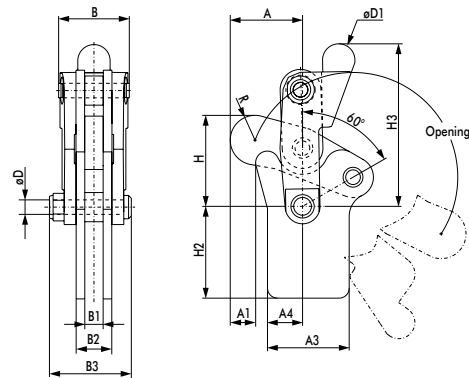
Swivel Base



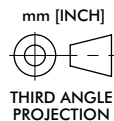
503-MB
Swivel Base



Long Base



503-MLB
Long Base



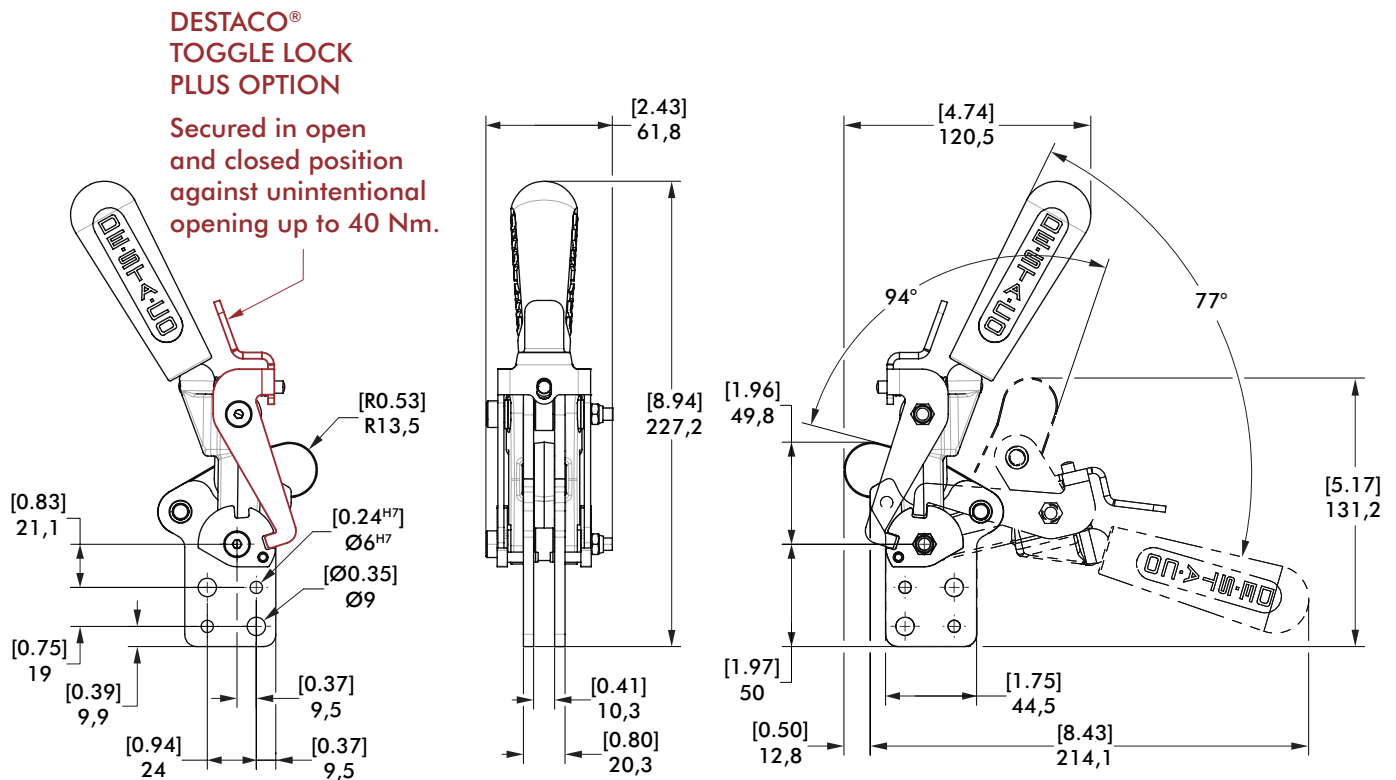
Swivel Base Dimensions

Model	A	A1	A2	B	B1	B3	ØD	ØD1	H	H1	H3	R
503-MB	[1.54]	[0.50]	[1.12]	[1.52]	[0.39]	[1.82]	[0.31]	[0.69]	[1.96]	[0.79]	[3.51]	[0.53]
503-MBLSC ①	39,2	12,8	28,5	38,5	10	46,2	8	17,5	49,8	20	89,1	13,5
505-MB	[2.22]	[1.02]	[1.38]	[1.89]	[0.48]	[2.31]	[0.37]	[0.87]	[2.79]	[1.10]	[4.33]	[0.72]
505-MBLSC ①	56,5	25,9	35	48	12,3	58,6	9,5	22,2	70,8	28	110,1	18,3
506-MB	[2.82]	[1.27]	[1.97]	[1.91]	[0.63]	[2.72]	[0.47]	[0.94]	[3.45]	[1.29]	[5.30]	[0.84]
506-MBLSC ①	71,7	32,3	50	48,4	16	69	12	24	87,7	32,8	134,6	21,4

Long Base Dimensions

Model	A	A1	A3	A4	B	B1	B2	B3	ØD	ØD1	H	H2	H3	R
503-MLB	[1.54]		[1.75]	[0.75]	[1.52]	[0.39]	[0.79]	[1.82]	[0.31]	[0.69]	[1.96]	[1.97]	[3.51]	[0.53]
503-MLBLSC ①	39,2		44,5	19	38,5	10	20	46,2	8	17,5	49,8	50	89,1	13,5
505-MLB	[2.22]	[1.02]	[2.09]	[1.08]	[1.89]	[0.48]	[0.88]	[2.31]	[0.37]	[0.87]	[2.79]	[2.50]	[4.33]	[0.72]
505-MLBLSC ①	56,5	25,9	53	27,5	48	12,3	22,3	58,6	9,5	22,2	70,8	63,5	110,1	18,3
506-MLB	[2.82]	[1.27]	[2.58]	[1.45]	[1.91]	[0.63]	[1.10]	[2.72]	[0.47]	[0.94]	[3.45]	[3.00]	[5.30]	[0.84]
506-MLBLSC ①	71,7	32,3	65,5	36,9	48,4	16	28	69	12	24	87,7	76,2	134,6	21,4

Long Base with DESTACO® Toggle Lock Plus



503-MLBR

Long Base,
DESTACO®
Toggle Lock
Plus™



Color Handles

Available on this model.
Add -Y, -G, -B, -K
to end of model number.



500 SERIES

Weldable Vertical Hold Down Clamps | Accessories

Features:

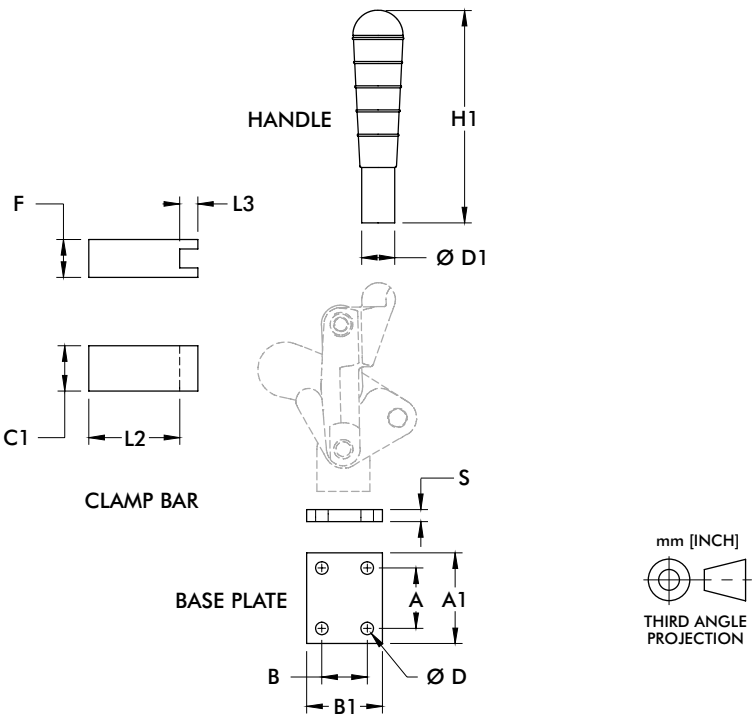
- Used with 500 Series Vertical Clamps
- Allows you to customize the clamp to suit application requirements

Applications:

- Welding
- Assembly
- Heavy duty, production clamping applications

Also Available:

See page MC-VHD-43 for clamp linkage



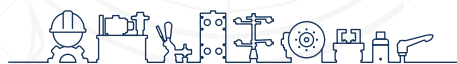
Use with	Part No.	Handle*		Clamping Bar				Base Plate					
		ØD1	H1	C1	F	L2	L3	A	A1	B	B1	ØD	S
503	503503-L	Ø18	129.5	-	-	-	-	-	-	-	-	-	-
	503501	-	-	25	20	50	8	-	-	-	-	-	-
	503502	-	-	-	-	-	-	25	40	35	50	6.3	8
505	505503-L	Ø22	159	-	-	-	-	-	-	-	-	-	-
	505501	-	-	30	25	60	12	-	-	-	-	-	-
	505502	-	-	-	-	-	-	40	60	30	50	8.1	8
506	506503-L	Ø28	188	-	-	-	-	-	-	-	-	-	-
	506501	-	-	35	30	75	15	-	-	-	-	-	-
	506502	-	-	-	-	-	-	50	70	45	65	8.1	8

*Handle comes standard on 503-MLBR. Note: Dimensions shown in millimeters.

500 SERIES

Notes

[illegible]



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