

Clamp Units, Toggle Clamps

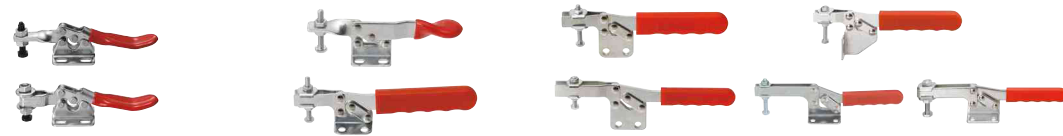
Clamp Units Toggle Clamps



Product Name	Buffered Pusher Pins	Slide Pushers	Spring Clamps - Small / Large	Spring Side Clamps, Tip Attachments
Page	1790	1790	1791	1792



Toggle Clamps - Hold Down, Horizontal Standard Handle	Hold Down, Horizontal Standard Handle / High Arm Type	Hold Down, Horizontal Standard Handle (Straight Base)
1795	1796	1797



Hold Down, Horizontal Long Handle	Hold Down, Horizontal Handle (Flange Base)	Hold Down, Horizontal Handle (Straight Base / Side Mount Base / Flange Base)
1798	1799	1800



Side Push-Pull Free Mounting Direction / Horizontal	Hold Down, Vertical Handle (Flange Base)	Hold Down, Vertical Handle (Straight Base)	Hold Down, Vertical Handle, Long Arm (Flange Base)
1801	1802	1803	1804



Hold Down, Vertical Handle, Long Arm (Straight Base)	Vertical Handle (Flange Base / Straight Base)	Vertical Handle, Welded Tip Screw / High Arm	Two-Pronged	Long Arm
1805	1806, 1807	1808	1809	1809



Side Push (Flange Base)	Smooth Stroke	Weld-On Clamps	Tips for Clamps
1810~1813	1813	1814	1815



Two-Pronged Clamp Arms	Clamp Arm Extension Kits	Clamp Brackets	Height-Adjusting Toggle Clamps	Extension Toggle Clamps
1816	1816	1816	1795, 1800, 1802, 1803, 1807	1795, 1804, 1806, 1816

Buffered Pusher Pins / Slide Pushers

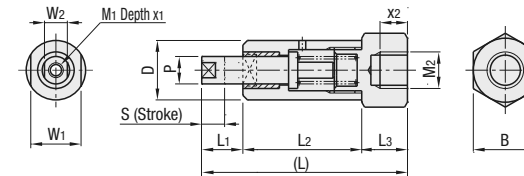
■ **Features:** Absorbs thrust force when attached to the tip of cylinder, holding the workpiece without damages.

■ Buffered Pusher Pins



RoH

Type	Pin			Body			Oil Free Bushing	Spring
	M Material	H Hardness	S Surface Treatment	M Material	H Hardness	S Surface Treatment	M Material	M Material
BFPP	EN 1.0762 Equiv.	23~30HRC	Black Oxide	EN 1.0762 Equiv.	23~30HRC	Black Oxide	PTFE	JIS-SWP-A



		Spring			
		S (Soft)		H (Hard)	
		Set (Stroke 0)	max. (Stroke max.)	Set (Stroke 0)	max. (Stroke max.)
Load (N)	No.8	2.0	7.0	4.0	14.0
	No.10	4.5	10.5	9.0	21.0
	No.14	7.5	15.5	15.0	31.0

Values of applicable cylinder tube I.D. are for reference. Check for specifications of the cylinder in use.

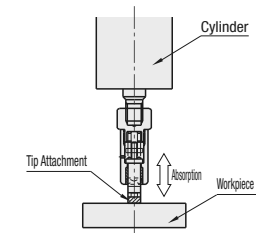
Part Number			D	P	S	(L)	L1	L2	L3	W1	W2	M1 (Coarse)	x1	x2	B	M2	Applicable Cylinder Tube I.D.	Unit Price	
Type	Spring	No.																	
BFPP	S (Light Load)	8	13	6	5	45	9	26	10	11	5	M3	5	6	14	M8xP1.25	Ø20		
	H (Heavy Load)	10	16	8	6	53.5	10	31	12.5	14	7	M4	6	7.5	17	M10xP1.25	Ø25		
		14	22	12	8	78	15	45.5	17.5	21	10	M6	8	10	22	M14xP1.50	Ø40		



Part Number
BFPP-S-10



Example Use tip attachments suitable for shape and material of workpiece.
Inner screw absorbs thrust force, holding the workpiece without damages.



■ **Features:** Clamps a workpiece from the side by spring force.

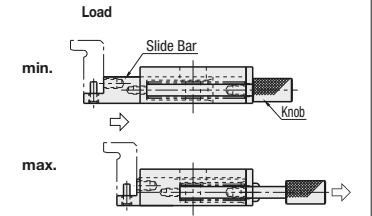
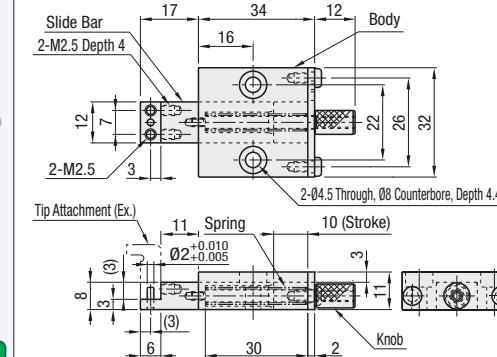
Slide Pushers



RoH

Type	Body, Slide Bar		Spring	Shaft	Knob	Screw
	M Material	S Surface Treatment	M Material	M Material	M Material	M Material
SLDP	EN AW-6061 Equiv.	Clear Anodize	EN 1.4301 (WPB) Equiv.	EN 1.4305 Equiv.	EN 1.4305 Equiv.	EN 1.4301 Equiv.

⚠ Tip attachments are not included. Use tip attachments suitable for shape and material of workpiece.



How to Use

Slide bar is retracted by pulling the knob, then leaps by spring force.

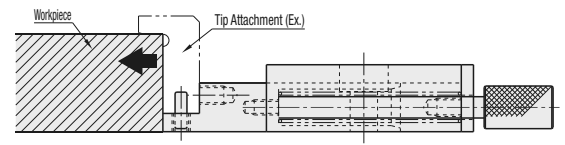
Part Number		Load (N)		Unit Price	Volume Discount Rate
Type	Spring	min.	max.	1 ~ 9 pc(s).	10 ~ 20 pcs.
SLDP	S (Light Load)	1.5	6.4		
	H (Heavy Load)	4.9	14.7		



Part Number
SLDP-S



Example Use tip attachments suitable for shape and material of workpiece.
Clamps a workpiece from the side by spring force.



Small, Large

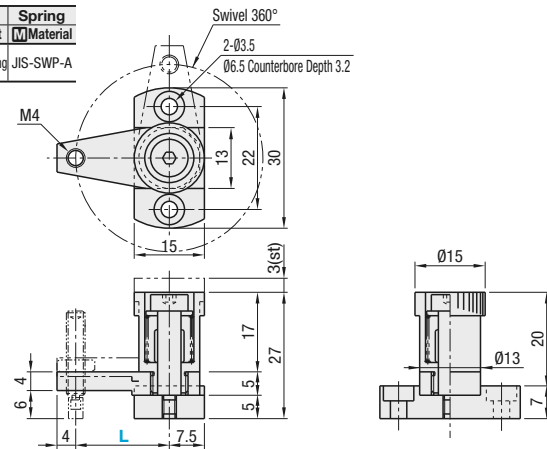
■ **Features:** Spring force clamps workpiece with a constant force.

■ Small



RoHS

Type	Main Body		Spring
	M Material	S Surface Treatment	M Material
SPCPS	EN 1.1191 Equiv.	Electroless Nickel Plating	JIS-SWP-A



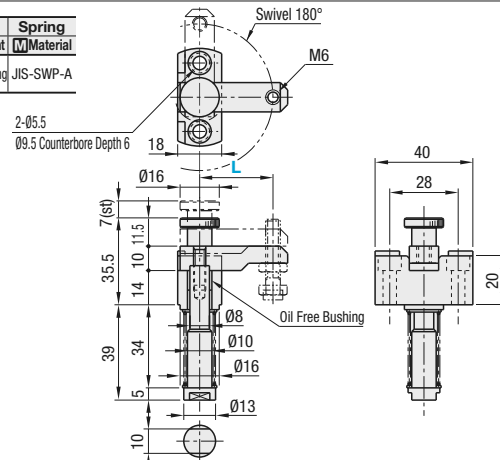
Part Number		Spring	Clamp Force (N)				Unit Price
Type	L		S (Light Load)		H (Heavy Load)		
			Min.	Max.	Min.	Max.	
SPCPS	20	S (Light Load) H (Heavy Load)	2.0	2.6	3.0	3.6	
	30						

■ Large



RoHS

Type	Main Body		Spring
	 Material	 Surface Treatment	 Material
SPCPL	EN 1.1191 Equiv.	Electroless Nickel Plating	JIS-SWP-A



Part Number		Spring	Clamp Force (N)				Unit Price
Type	L		S (Light Load)		H (Heavy Load)		
			Min.	Max.	Min.	Max.	
SPCPL	30	S (Light Load)	3.0	5.1	5.0	8.5	
	40						
	50	H (Heavy Load)					
	60						



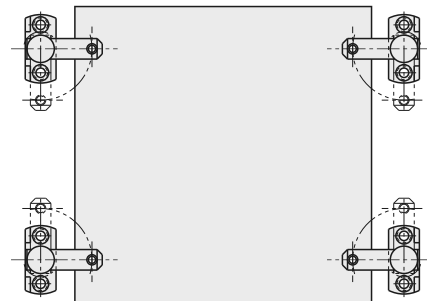
Ordering Example	Part Number		-	Spring
	Type	L		
	SPCPS	20	-	S
	SPCPL	50	-	H



Alterations

Part Number				
Type	L		Spring	(SB)
SPCPS	30		H	SB

Alteration	Code	Spec.
Tip Screw Included	SB	Tip Screw with an Urethane Bumper will be included. SPCPS...USS4-15 (LSE P.1721) SPCPL...SUST6-20 (LSE P.1721)



Clamps a workpiece from above by spring force.

Spring Side Clamps / Tip Attachments

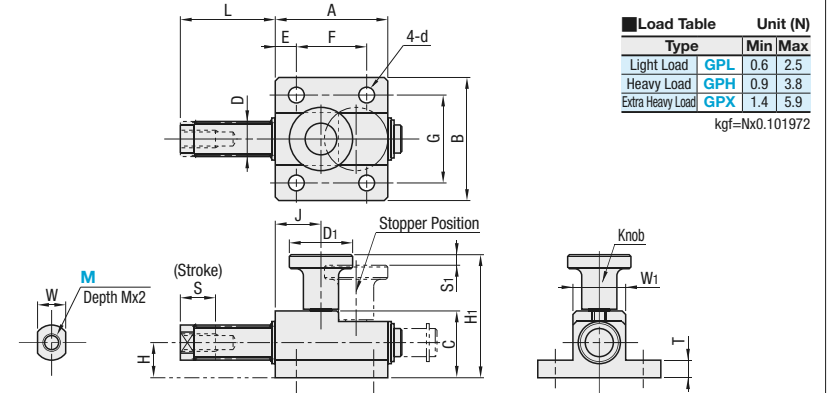
■ Spring Side Clamps



RoH

📌 In addition to the tip attachments shown below (GP and GPF), Urethane Pushers (USLH10 on **P.2-1553**, etc) and Stopper Pins (BSTE8H on **P.1719**, etc) are also attachable to the tip of Spring Side Clamps.

Type	Main Body		Pin		Spring	Knob	
	M Material	S Surface Treatment	M Material	S Surface Treatment	M Material	M Material	
Light Load	G PL	Aluminum Alloy	Clear Anodize	EN 1.1191 Equiv.	Electroless Nickel Plating	EN 1.4301 (WPB) Equiv.	Polyacetal
Heavy Load	G PH						
Extra Heavy Load	G PX						



Shift the knob to the stopper position (lower step) to prevent the pin from moving.

Part Number		S	Pin				Main Body								Knob					Unit Price
Type	M (Coarse)		D	L	W	H	A	B	C	T	G	E	F	d	S ₁	H ₁	J	D ₁	W ₁	
GPL GPH GPX	4	6	8	22	6	5	18	26	11.5	4	18	4	10	4.5	1.5	24.5	5.5	15	10	
	5	10	10	27	8	10	32	35	19	5	25	6	20	5.5	3	35	13	18	15	

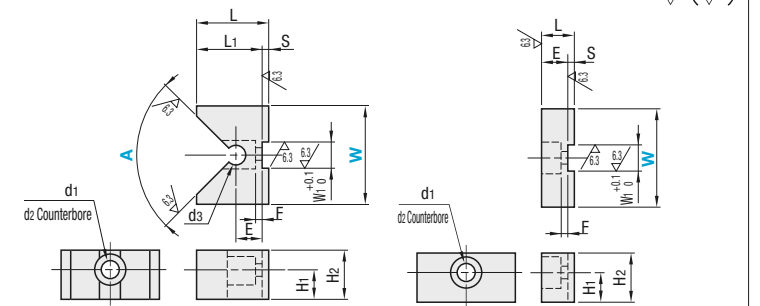
■ Tip Attachments



RoHS

GP (V Shape)

GPF (Flat Shape)



📌 Applicable to M5 size Spring Side Clamp (GPL5, GPH5 and GPX5) only.

M Material: MC Nylon

■ **V Shape**

Part Number	A°	W	d1	d2	L	L1	H1	H2	d3	E	F	S	W1	Unit Price
GP	90	20	5.5	9.5	18	16	9	15	6	8	2	2	8	
		30			22	20								
	120	20			15	13								
		30			18	16								

■ Flat Shape

[illegible]

Ordering Example	Part Number	-	A	-	W
	GPH5				
	GP	-	90	-	30
	GPF			-	20



Example



The diagram shows a rectangular workpiece with three circular holes along its top edge and one circular hole on its right edge. A spring clamp is attached to the bottom-left corner of the workpiece. The clamp consists of a cylindrical body with a circular base and a spring mechanism. A spring is shown with a zigzag line and arrows indicating it is under tension, pulling the clamp towards the workpiece. The clamp is shown in a cross-sectional view, revealing internal components like a piston and a spring.

Clamps a workpiece from the side by spring force.

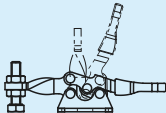
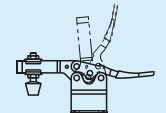
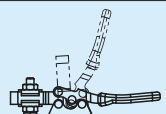
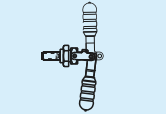
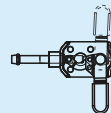
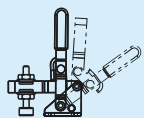
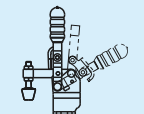
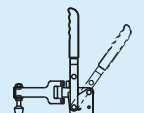
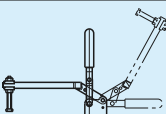
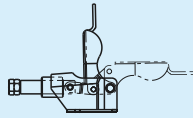
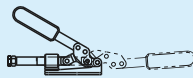
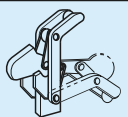
Clamps a workpiece from the side by spring force.

Toggle Clamps - Overview

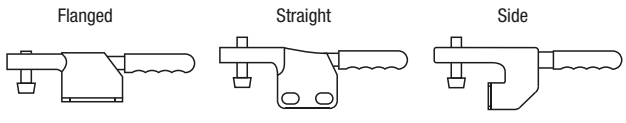
MISUMI toggle clamps are offered in a wide variety of shapes such as Hold Down Types (Vertical / Horizontal Handle) and Side Push Types.
Suitable for inspection, welding, assembly and machining fixtures.

Selection Table

For Clamping Force (Force to Hold Down), Distance to the Workpiece (Stroke, Arm Height and Length) and Material (Steel, Stainless Steel), refer to the information below and see each product page.

Configurations		Appearance	When Clamped (Solid Line) / When Unclamped (Dotted Line)	Features	Mount Type *
Hold Down Horizontal Handle	Standard Handle			- Low Profile Design - Selectable from Flange, Straight and Side Mount Types according to the installation space and the shape.	Flanged Straight Side
	Standard Handle High Arm Type			- High Arm Type - Arm positions higher than those of the conventional clamps eliminate the need for risers for taller workpieces.	Flanged
	Long Handle			Longer handles provide more safety resulting in improved operability.	Flanged
Push-Pull Free Mounting Direction				Handles are mountable at any desired positions and angles.	- (Mounted with a bracket held by a hex nut and a threaded sleeve.)
Horizontal				- Small clamps for light-duty operations. - Horizontally-moving handles are effective when there is an obstacle above.	Flanged
Hold Down Vertical Handle	Standard			- Most widely used in inspection and welding fixtures for automotive and aerospace industries. 90° or more arm open-close angle* secures enough space to remove workpieces when unclamped. * Except MC04-6 series. - Selectable from Flange and Straight Types according to the installation space and the shape.	Flanged Straight
	High Arm Type			- High Arm Type - Arm positions higher than those of the conventional clamps eliminate the need for risers for taller workpieces.	Flanged
	Two-Pronged Clamp Arms			Two clamping positions at a time enhance operability and save space.	Flanged
	Long Arm			- Long Arm - Suitable for clamping a workpiece from a distance.	Flanged Straight
Side Push	Standard			- Suitable for clamping a workpiece from the side. - Available in a wide range of clamping forces, strokes and mounting types including compact and lightweight types.	Flanged
	Stroke Smooth			- Suitable for clamping a workpiece from the side. - Built-in Oil Free Bushing requires no lubrication, and enables smooth strokes.	Flanged
Weld-On				- Assembly-required Clamps. - Suitable for various purposes since arms and handles can be welded in desired angles.	Flanged Straight

* Mounted Views



Tightening Force (N)	Hold Down		Side Push		Material		Part Number	Page
	Arm Length	Arm Height (from Mounting Surface)	Stroke	Shaft Height (from Mounting Surface)	Main Body			
					Steel	Stainless Steel		
196~5000	17.6~108.3	7.7~50	-	-	○	○	MC01-□□	P1795~1797 P.1799, 1800
900~2270	56.9~71.65	41.6~54.1	-	-	○	-	MC01H-□□	P.1796
264~882	21~57	7.7~25	-	-	○	-	MC01L-□□	P.1798
900~3138	-	-	20.34~66.7	-	○	○	MC02-□□	P.1801
450~500	-	-	16~17	10~12.7	○	○	MC03-□□	P.1801
294~4000	24~120	16~97	-	-	○	○	MC04-□□	P.1802, 1803 P.1804~1808
910	34.5	42.2	-	-	○	-	MC04H-2	P.1808
800~1500	150	50	-	-	○	-	MC05-1	P.1809
186~3700	51~264	16~88	-	-	○	-	MC04-□L MC04-□LS MC06-1 LN2BS	P.1804, 1805, 1809
490~16000	-	-	10~80	14~60	○	○	MC07-□□	P.1810~1813
1960	-	-	30	20	○	-	MC08-1	P.1813
1960~9800	-	-	-	-	○	-	MC09-□□	P.1814

Toggle Clamps

Hold Down, Horizontal Standard Handle (Flange Base)

■ Features: MC01-2B is the size between MC01-2 and MC01-3.

■ Hold Down, Horizontal Standard Handle (Flange Base)

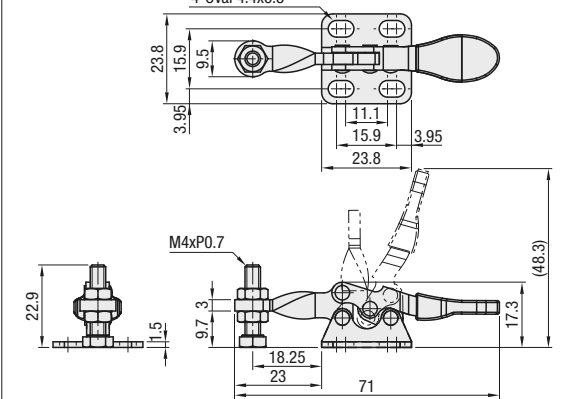


Part Number	MC01-1	MC01-S1
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	264.6	
Weight (g)	30	
Arm Open-Close Angle	90°	
Handle Open-Close Angle	75°	
Accessory	* Nylon Bolt	Stainless Steel Bolt
Unit Price		

RoHS

MC01-1
MC01-S1 (Stainless Steel)

* Not a bolt with rubber.
4-Oval 4.4x6.8



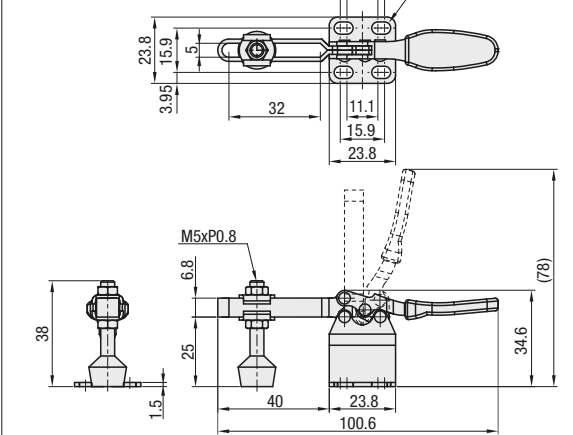
■ Hold Down, Horizontal Standard Handle (Flange Base)



Part Number	MC01-2B
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	400
Weight (g)	60
Arm Open-Close Angle	90°
Handle Open-Close Angle	75°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

RoHS

MC01-2B



■ Hold Down, Horizontal Standard Handle (Flange Base)

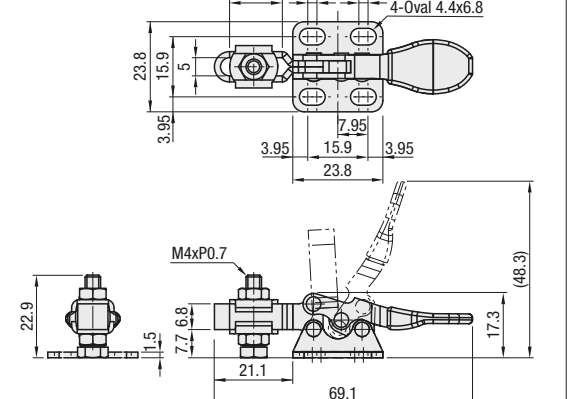


Part Number	MC01-2	MC01-S2
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	264.6	
Weight (g)	35	
Arm Open-Close Angle	90°	
Handle Open-Close Angle	75°	
Accessory	* Nylon Bolt	Stainless Steel Bolt
Unit Price		

RoHS

MC01-2
MC01-S2 (Stainless Steel)

* Not a bolt with rubber.
4-Oval 4.4x6.8



■ Hold Down, Horizontal Standard Handle (Flange Base)

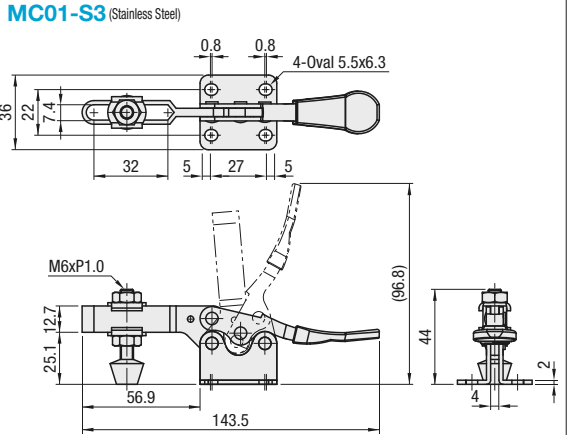


Part Number	MC01-3	MC01-S3
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	882	
Weight (g)	130	
Arm Open-Close Angle	85°	
Handle Open-Close Angle	73°	
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70	* Stainless Steel Bolt
Unit Price		

RoHS

MC01-3
MC01-S3 (Stainless Steel)

* Please note that rubber is not attached to stainless steel bolt.



Ordering Example
Part Number
MC01-1

Toggle Clamps

Hold Down, Horizontal Standard Handle (Flange Base) / High Arm Type (Flange Base)

■ Features: MC01-10 is larger than MC01-4 in size and clamping force. High Arm Type with an arm position higher than conventional products is adjustable without spacers.
(MC01H-3: 16mm higher than MC01-3; MC01H-4: 19mm higher than MC01-4)

■ Hold Down, Horizontal Standard Handle (Flange Base)

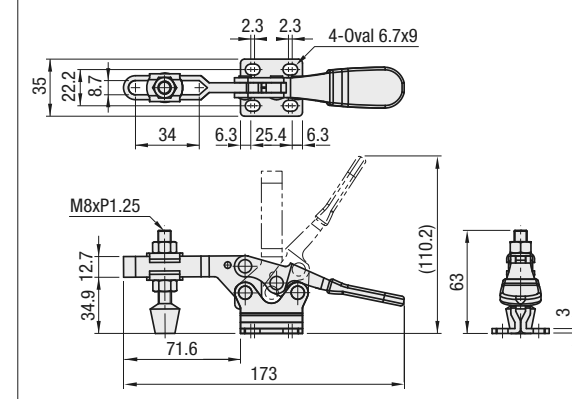


Part Number	MC01-4	MC01-S4
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	2352	
Weight (g)	265	
Arm Open-Close Angle	90°	
Handle Open-Close Angle	65°	
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70	* Stainless Steel Bolt
Unit Price		

RoHS

MC01-4
MC01-S4 (Stainless Steel)

* Please note that rubber is not attached to stainless steel bolt.



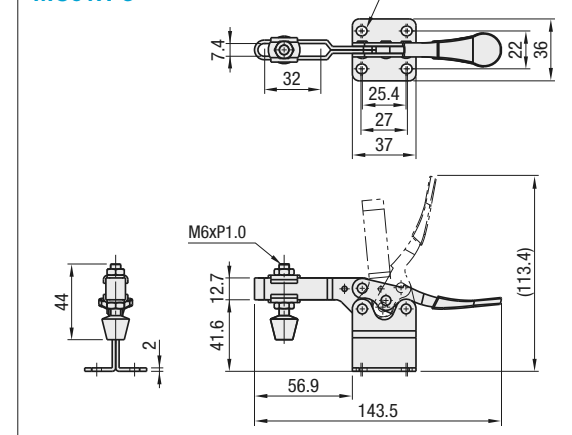
■ High Arm Type (Flange Base)



Part Number	MC01H-3
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	900
Weight (g)	150
Arm Open-Close Angle	85°
Handle Open-Close Angle	73°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

RoHS

MC01H-3



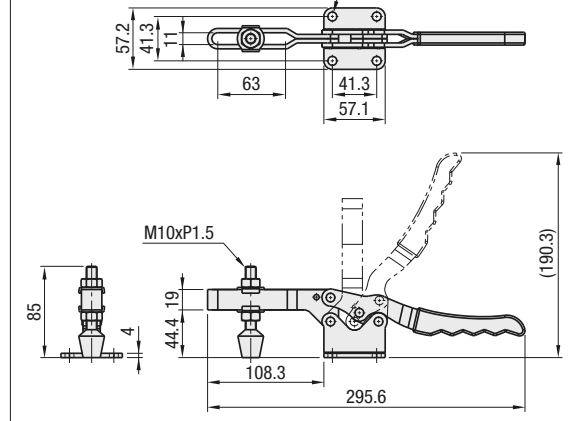
■ Hold Down, Horizontal Standard Handle (Flange Base)



Part Number	MC01-10
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	3400
Weight (g)	640
Arm Open-Close Angle	90°
Handle Open-Close Angle	68°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

RoHS

MC01-10



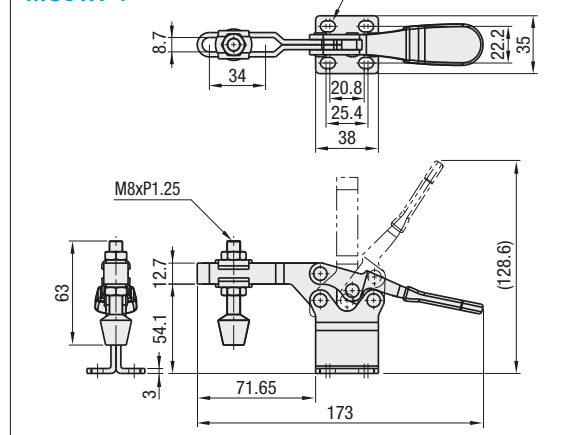
■ High Arm Type (Flange Base)



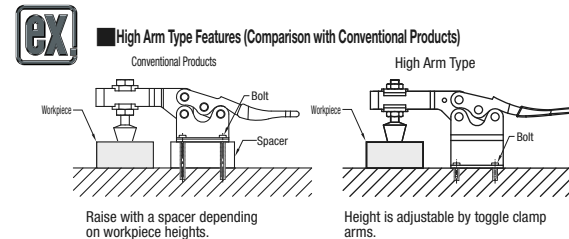
Part Number	MC01H-4
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	2270
Weight (g)	290
Arm Open-Close Angle	90°
Handle Open-Close Angle	65°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

RoHS

MC01H-4



Ordering Example
Part Number
MC01-10
MC01H-3

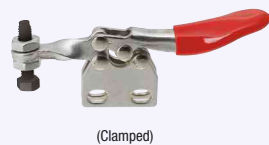


Toggle Clamps

Hold Down, Horizontal Standard Handle (Straight Base)

1N=0.101972kgf

Hold Down, Horizontal Standard Handle (Straight Base)



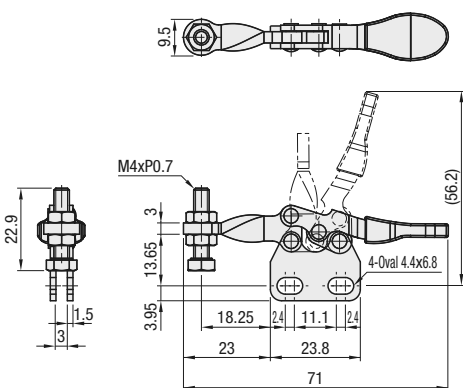
(Clamped)

RoHS

Part Number	MC01-1S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	264.6
Weight (g)	30
Arm Open-Close Angle	90°
Handle Open-Close Angle	75°
Accessory	* Nylon Bolt
Unit Price	

MC01-1S

* Not a bolt with rubber.



Hold Down, Horizontal Standard Handle (Straight Base)

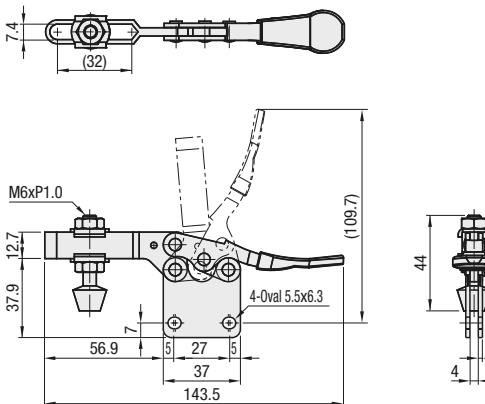


(Clamped)

RoHS

Part Number	MC01-3S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	882
Weight (g)	130
Arm Open-Close Angle	85°
Handle Open-Close Angle	73°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

MC01-3S



Hold Down, Horizontal Standard Handle (Straight Base)



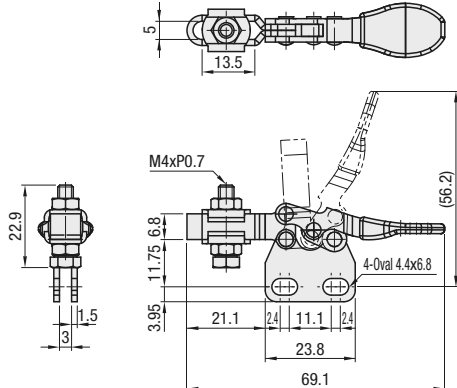
(Clamped)

RoHS

Part Number	MC01-2S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	264.6
Weight (g)	35
Arm Open-Close Angle	90°
Handle Open-Close Angle	75°
Accessory	* Nylon Bolt
Unit Price	

MC01-2S

* Not a bolt with rubber.



Hold Down, Horizontal Standard Handle (Straight Base)

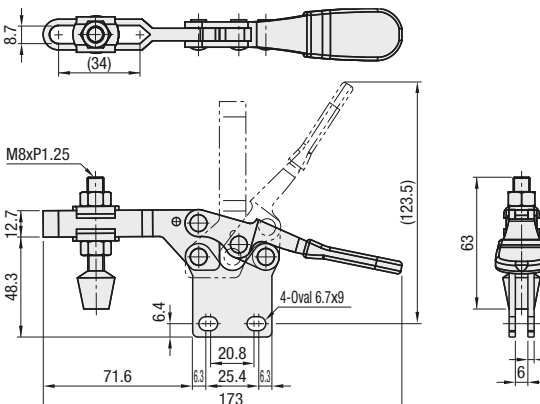


(Clamped)

RoHS

Part Number	MC01-4S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	2352
Weight (g)	265
Arm Open-Close Angle	90°
Handle Open-Close Angle	65°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

MC01-4S



Ordering Example
Part Number
MC01-1S

Toggle Clamps

Hold Down, Horizontal Long Handle (Flange Base)

1N=0.101972kgf

Hold Down, Horizontal Long Handle (Flange Base)



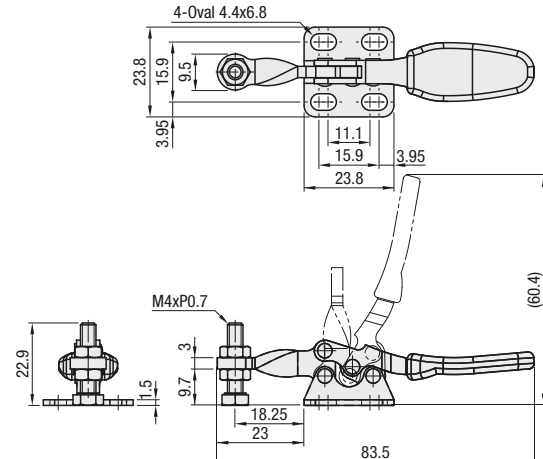
(Clamped)

RoHS

Part Number	MC01L-1
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	264.6
Weight (g)	35
Arm Open-Close Angle	90°
Handle Open-Close Angle	75°
Accessory	* Nylon Bolt
Unit Price	

MC01L-1

* Not a bolt with rubber.



Hold Down, Horizontal Long Handle (Flange Base)

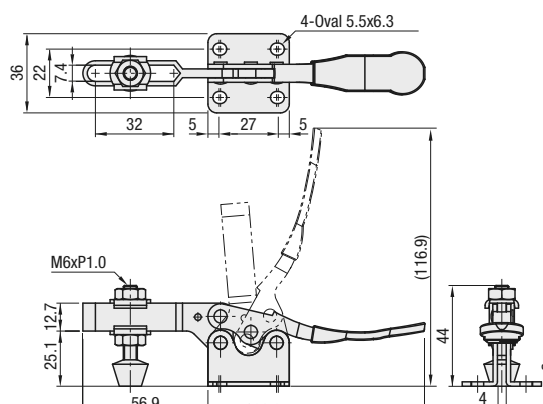


(Clamped)

RoHS

Part Number	MC01L-3
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	882
Weight (g)	140
Arm Open-Close Angle	85°
Handle Open-Close Angle	73°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

MC01L-3



Ordering Example
Part Number
MC01L-1

Hold Down, Horizontal Long Handle (Flange Base)



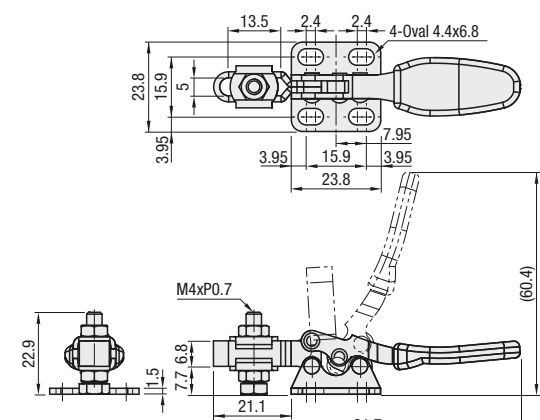
(Clamped)

RoHS

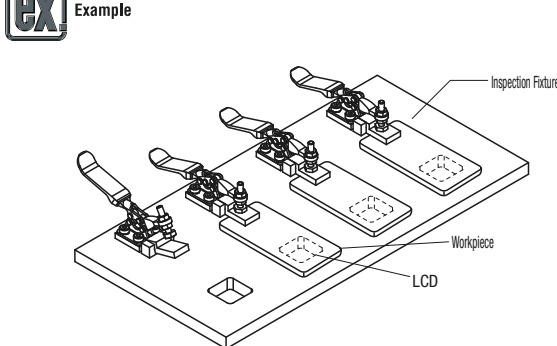
Part Number	MC01L-2
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	264.6
Weight (g)	40
Arm Open-Close Angle	90°
Handle Open-Close Angle	75°
Accessory	* Nylon Bolt
Unit Price	

MC01L-2

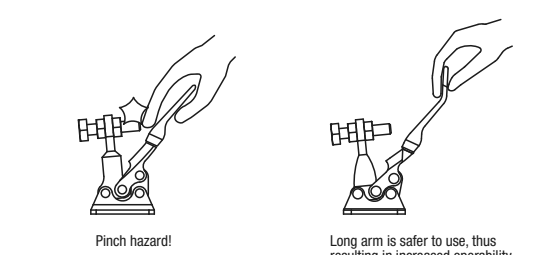
* Not a bolt with rubber.



Example Clamp for LCD Continuity Tests of Mobile Phones.



Long Handle Features (Comparison with Conventional Products)
Conventional Products Long Handle



Toggle Clamps

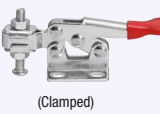
Hold Down, Horizontal Handle (Flange Base)

Hold Down, Horizontal Handle (Flange Base)



Part Number	MC01-5
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	196
Weight (g)	30
Arm Open-Close Angle	71°
Handle Open-Close Angle	72°
Accessory	Steel Bolt
Unit Price	

Hold Down, Horizontal Handle (Flange Base)



Part Number	MC01-6	MC01-S
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	196	-
Weight (g)	30	-
Arm Open-Close Angle	75°	-
Handle Open-Close Angle	82°	-
Accessory	Steel Bolt	Stainless Steel
Unit Price		

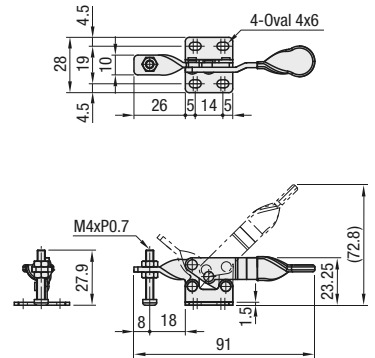
Hold Down, Horizontal Handle (Flange Base)



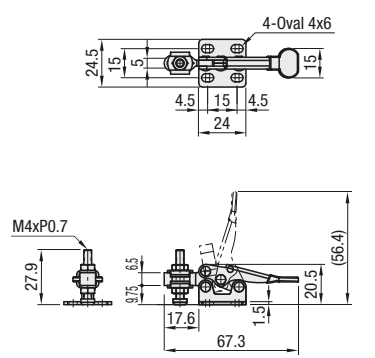
Part Number	MC01-7
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	294
Weight (g)	100
Arm Open-Close Angle	72°
Handle Open-Close Angle	74°
Accessory	Steel Bolt
Unit Price	

1N=0.101972kgf

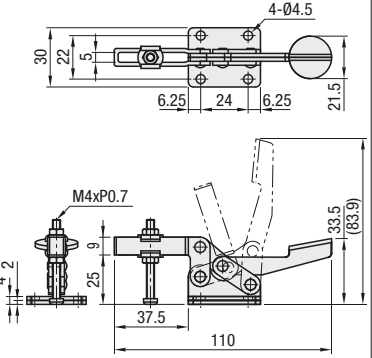
MC01-5



MC01-6
MC01-S6 (Stainless Steel)



MC01-7



Hold Down, Horizontal Handle (Flange Base)



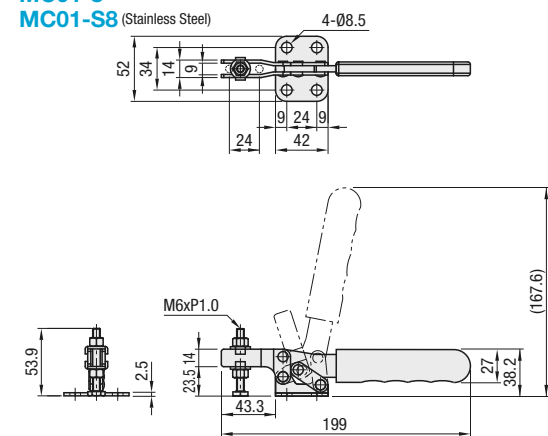
Part Number	MC01-8	MC01-S8
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	2450	-
Weight (g)	210	-
Arm Open-Close Angle	77°	-
Handle Open-Close Angle	85°	-
Accessory	Steel Bolt	Stainless Steel Bolt
Unit Price		

Hold Down, Horizontal Handle (Flange Base)

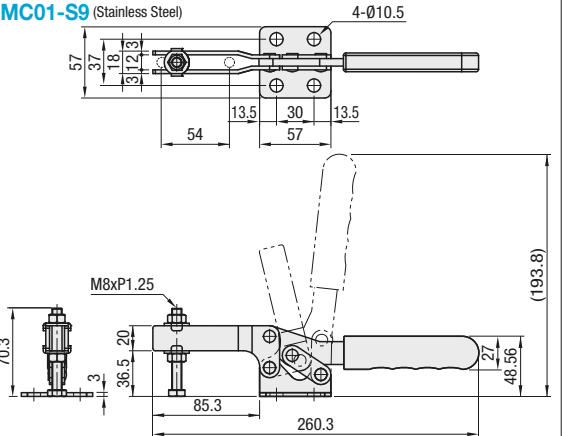


Part Number	MC01-9	MC01-S9
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	2744	-
Weight (g)	435	-
Arm Open-Close Angle	79°	-
Handle Open-Close Angle	86°	-
Accessory	Steel Bolt	Stainless Steel Bolt
Unit Price		

MC01-8
MC01-S8 (Stainless Steel)



MC01-9
MC01-S9 (Stainless Steel)



Ordering Example

Part Number
MC01-6
MC01-S8

Toggle Clamps

Hold Down, Horizontal Handle (Straight Base / Side Mount Base / Flange Base)

Features: MC01-11 is Side Mount Base Type. MC01-12 and MC01-13 have high clamping force.

Hold Down, Horizontal Handle (Straight Base)



Part Number	MC01-8S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	2450
Weight (g)	210
Arm Open-Close Angle	77°
Handle Open-Close Angle	85°
Accessory	Steel Bolt
Unit Price	

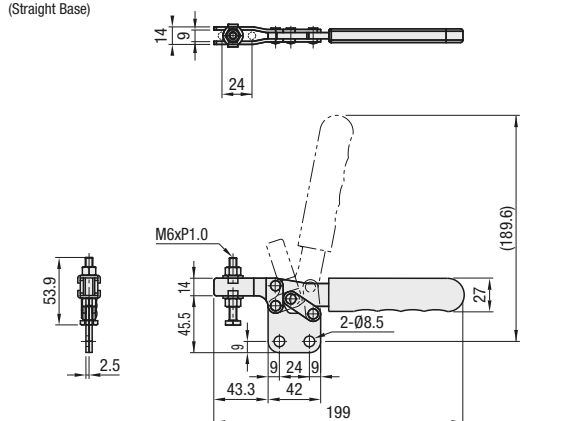
Hold Down, Horizontal Handle (Straight Base)



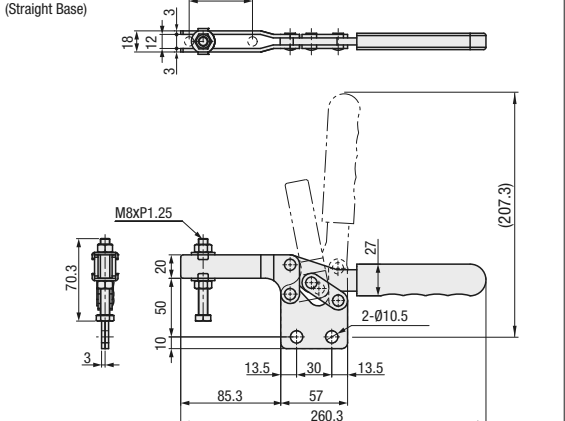
Part Number	MC01-9S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	2744
Weight (g)	435
Arm Open-Close Angle	79°
Handle Open-Close Angle	86°
Accessory	Steel Bolt
Unit Price	

1N=0.101972kgf

MC01-8S



MC01-9S

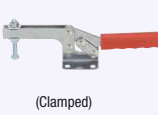


Hold Down, Horizontal Handle (Side Mount Base)



Part Number	MC01-11
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	2500
Weight (g)	210
Arm Open-Close Angle	77°
Handle Open-Close Angle	85°
Accessory	Steel Bolt
Unit Price	

Hold Down, Horizontal Handle (Flange Base)



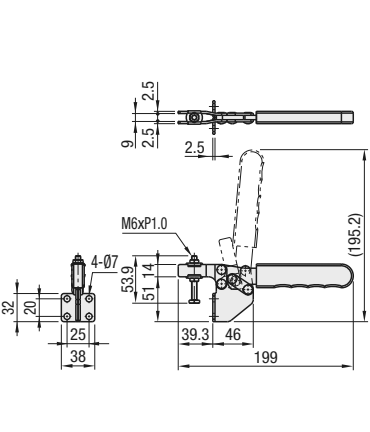
Part Number	MC01-12
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	2800
Weight (g)	530
Arm Open-Close Angle	86°
Handle Open-Close Angle	75°
Accessory	Steel Bolt
Unit Price	

Hold Down, Horizontal Handle (Flange Base)

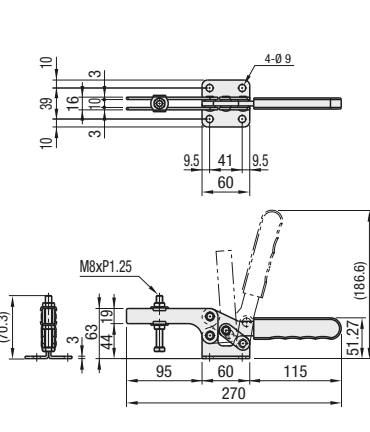


Part Number	MC01-13
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	5000
Weight (g)	635
Arm Open-Close Angle	66°
Handle Open-Close Angle	83°
Accessory	Steel Bolt
Unit Price	

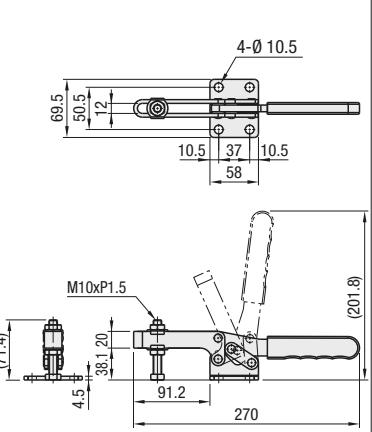
MC01-11



MC01-12



MC01-13



Ordering Example

Part Number
MC01-11
MC01-12

Toggle Clamps

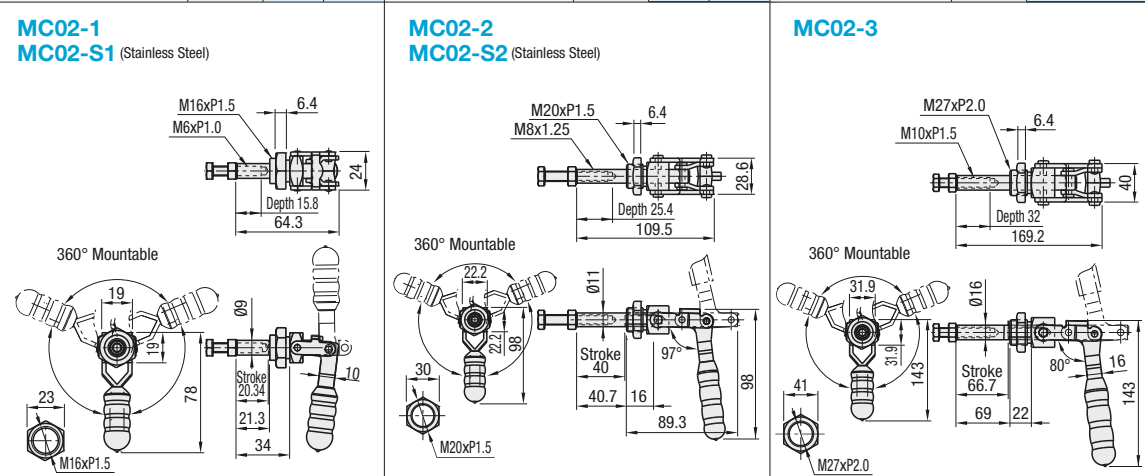
Side Push-Pull Free Mounting Direction / Horizontal (Flange Base)

Toggle Clamps

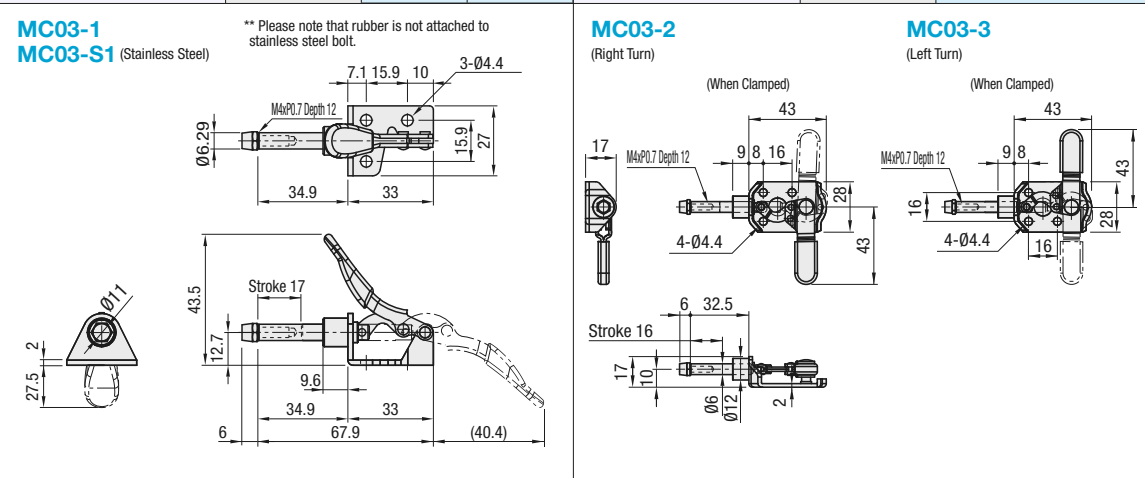
Hold Down, Vertical Handle (Flange Base)

1N=0.101972kgf

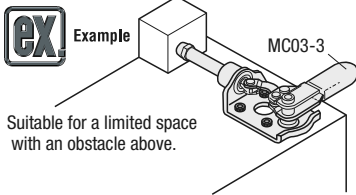
Side Push-Pull Free Mounting Direction		Part Number	MC02-1	MC02-S1	Side Push-Pull Free Mounting Direction		Part Number	MC02-2	MC02-S2	Side Push-Pull Free Mounting Direction		Part Number	MC02-3
		Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.			Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.			Body Material	EN 1.0038 Equiv.
Surface Treatment		* Trivalent Chromate		-	Surface Treatment		* Trivalent Chromate		-	Surface Treatment		* Trivalent Chromate	
Stroke (mm)		20.34		-	Stroke (mm)		40		-	Stroke (mm)		66.7	
Tightening Force (N)		900		-	Tightening Force (N)		1470		-	Tightening Force (N)		3138	
Handle Open-Close Angle		180°		-	Handle Open-Close Angle		180°		-	Handle Open-Close Angle		180°	
Weight (g)		120		-	Weight (g)		280		-	Weight (g)		750	
Accessory		Steel Bolt		Stainless Steel Bolt	Accessory		Steel Bolt		Stainless Steel Bolt	Accessory		Steel Bolt	
Unit Price					Unit Price					Unit Price			



Horizontal (Flange Base)		Part Number	MC03-1	MC03-S1	Horizontal (Flange Base)		Part Number	MC03-2	MC03-3
		Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.			Body Material	EN 1.0038 Equiv.	
Surface Treatment		* Trivalent Chromate		-	Surface Treatment		* Trivalent Chromate		-
Stroke (mm)		17		-	Stroke (mm)		16		-
Tightening Force (N)		450		-	Tightening Force (N)		500		-
Handle Open-Close Angle		190°		-	Handle Open-Close Angle		180°		-
Weight (g)		50		-	Weight (g)		65		-
Accessory		Bolt with Rubber Material: NBR Hardness: Shore A70		* Stainless Steel Bolt	Accessory		Bolt with Rubber Material: NBR Hardness: Shore A70		* Stainless Steel Bolt
Unit Price					Unit Price				

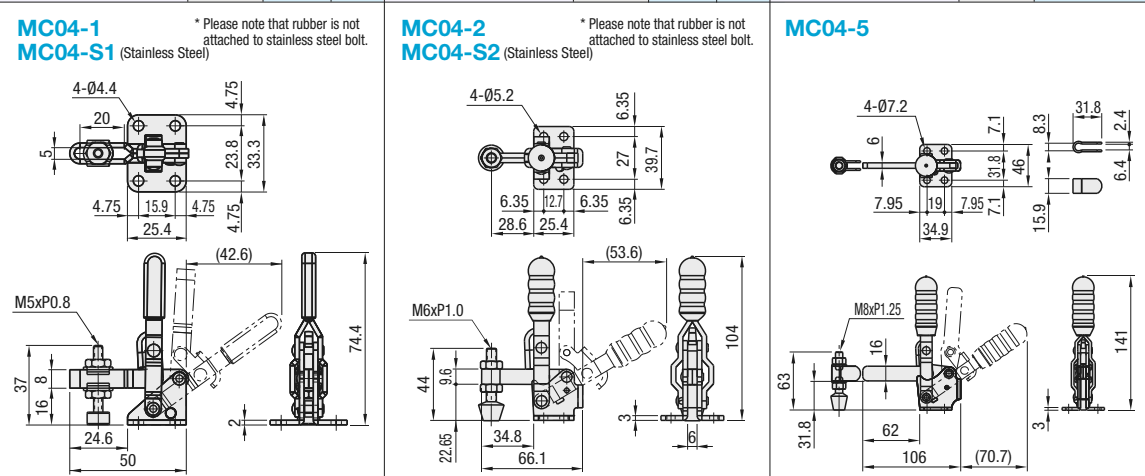


Ordering Example
Part Number
MC02-1

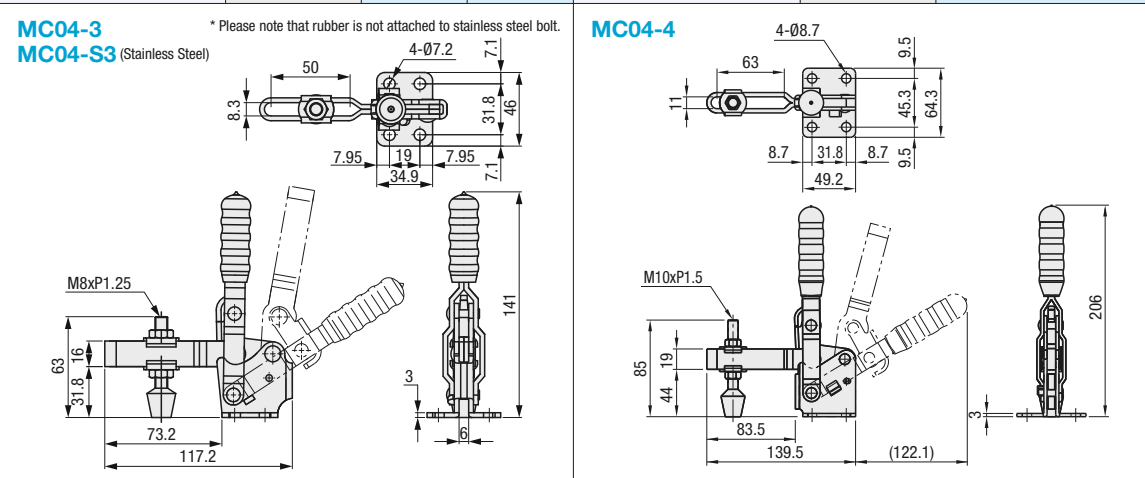


1N=0.101972kgf

Hold Down, Vertical Handle (Flange Base)		Part Number	MC04-1	MC04-S1	Hold Down, Vertical Handle (Flange Base)		Part Number	MC04-2	MC04-S2	Hold Down, Vertical Handle, Welded Tip (Flanged Base)		Part Number	MC04-5
		Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.			Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.			Body Material	EN 1.0038 Equiv.
Surface Treatment		* Trivalent Chromate		-	Surface Treatment		* Trivalent Chromate		-	Surface Treatment		* Trivalent Chromate	
Tightening Force (N)		441		-	Tightening Force (N)		882		-	Tightening Force (N)		2270	
Weight (g)		60		-	Weight (g)		170		-	Weight (g)		340	
Arm Open-Close Angle		100°		-	Arm Open-Close Angle		95°		-	Arm Open-Close Angle		100°	
Handle Open-Close Angle		56°		-	Handle Open-Close Angle		60°		-	Handle Open-Close Angle		56°	
Accessory		Bolt with Rubber Material: NBR Hardness: Shore A70		* Stainless Steel Bolt	Accessory		Bolt with Rubber Material: NBR Hardness: Shore A70		* Stainless Steel Bolt	Accessory		Bolt with Rubber Material: NBR Hardness: Shore A70	
Unit Price					Unit Price					Unit Price			



Hold Down, Vertical Handle (Flange Base)		Part Number	MC04-3	MC04-S3	Hold Down, Vertical Handle (Flange Base)		Part Number	MC04-4
		Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.			Body Material	EN 1.0038 Equiv.
Surface Treatment		* Trivalent Chromate		-	Surface Treatment		* Trivalent Chromate	
Tightening Force (N)		2205		-	Tightening Force (N)		3332	
Weight (g)		355		-	Weight (g)		635	
Arm Open-Close Angle		100°		-	Arm Open-Close Angle		112°	
Handle Open-Close Angle		56°		-	Handle Open-Close Angle		61°	
Accessory		Bolt with Rubber Material: NBR Hardness: Shore A70		* Stainless Steel Bolt	Accessory		Bolt with Rubber Material: NBR Hardness: Shore A70	
Unit Price					Unit Price			



Ordering Example
Part Number
MC04-1

Toggle Clamps

Hold Down, Vertical Handle (Straight Base)

Toggle Clamps

Hold Down, Vertical Handle, Long Arm (Flange Base)

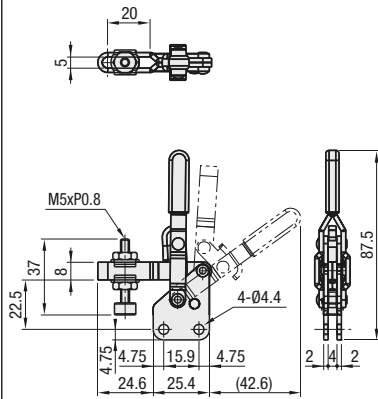
■ Features: MC04-5S is Straight Base, Welded Tip Type.

 RoHS (Clamped)	Part Number MC04-1S	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 441
	Weight (g) 60	Arm Open-Close Angle 100°
	Handle Open-Close Angle 56°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

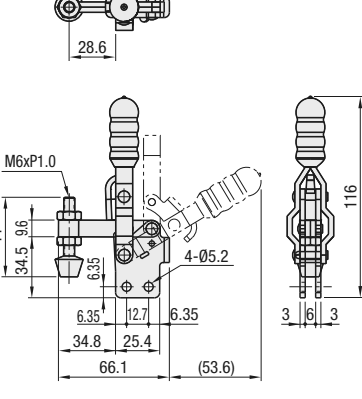
 RoHS (Clamped)	Part Number MC04-2S	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 882
	Weight (g) 170	Arm Open-Close Angle 95°
	Handle Open-Close Angle 60°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

 RoHS (Clamped)	Part Number MC04-5S	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 2270
	Weight (g) 355	Arm Open-Close Angle 100°
	Handle Open-Close Angle 56°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

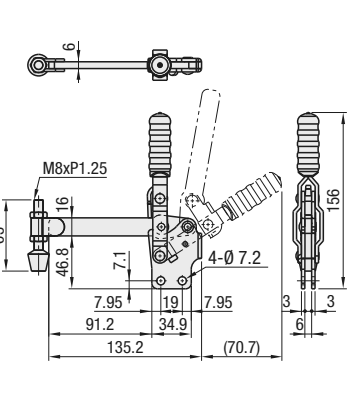
MC04-1S



MC04-2S



MC04-5S

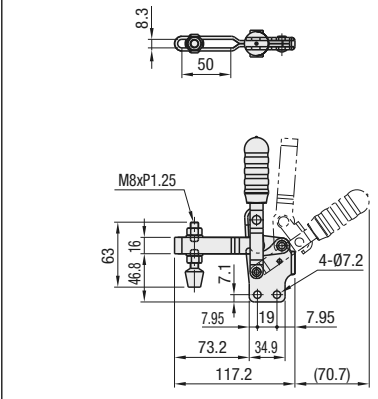


■ Hold Down, Vertical Handle (Straight Base)

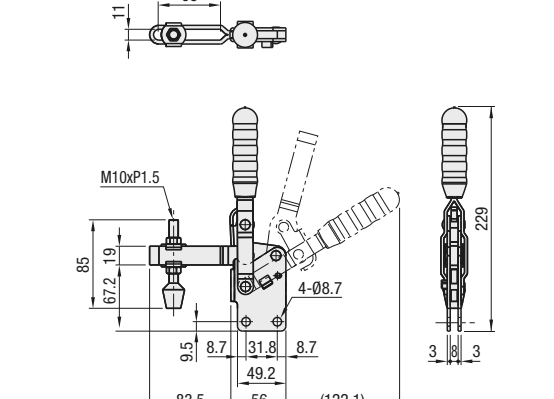
 RoHS (Clamped)	Part Number MC04-3S	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 2205
	Weight (g) 355	Arm Open-Close Angle 100°
	Handle Open-Close Angle 56°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

 RoHS (Clamped)	Part Number MC04-4S	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 3332
	Weight (g) 635	Arm Open-Close Angle 112°
	Handle Open-Close Angle 61°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

MC04-3S



MC04-4S



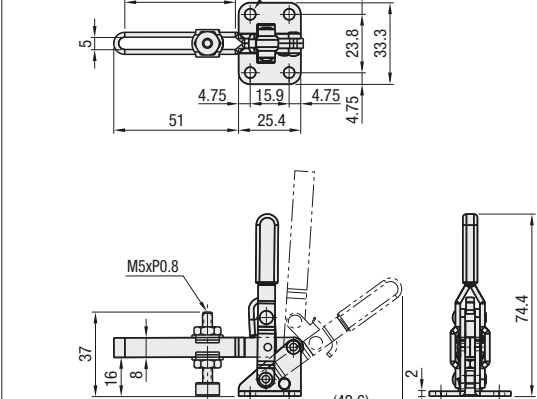
Ordering Example Part Number MC04-1S

1N=0.101972kgf

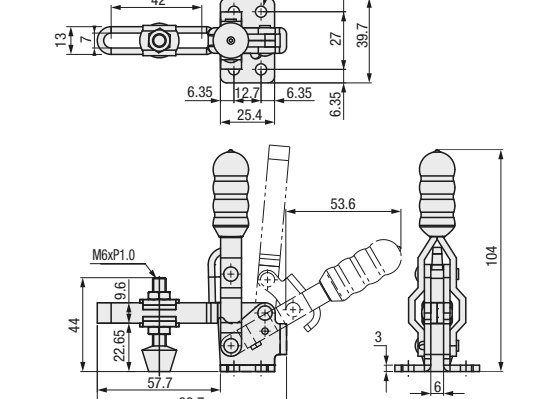
 RoHS (Clamped)	Part Number MC04-1L	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 186
	Weight (g) 75	Arm Open-Close Angle 100°
	Handle Open-Close Angle 56°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

 RoHS (Clamped)	Part Number MC04-2L	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 392
	Weight (g) 175	Arm Open-Close Angle 95°
	Handle Open-Close Angle 60°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

MC04-1L (Long Arm)



MC04-2L (Long Arm)

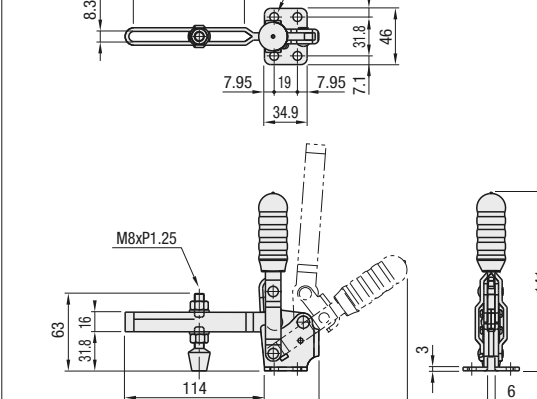


■ Hold Down, Vertical Handle, Long Arm (Flange Base)

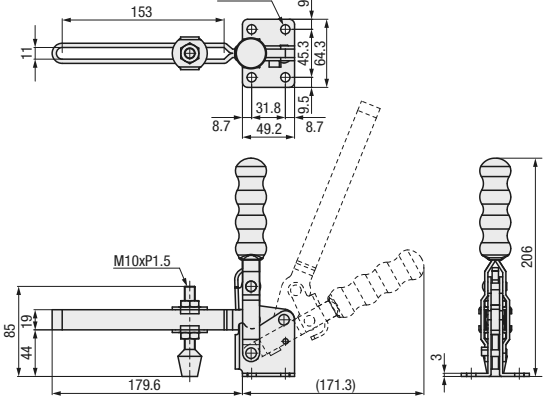
 RoHS (Clamped)	Part Number MC04-3L	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 784
	Weight (g) 370	Arm Open-Close Angle 100°
	Handle Open-Close Angle 56°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

 RoHS (Clamped)	Part Number MC04-4L	Body Material EN 1.0038 Equiv.
	Surface Treatment Trivalent Chromate	Tightening Force (N) 1078
	Weight (g) 815	Arm Open-Close Angle 112°
	Handle Open-Close Angle 61°	Accessory Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price		

MC04-3L (Long Arm)



MC04-4L (Long Arm)



Ordering Example Part Number MC04-3L

Toggle Clamps

Hold Down, Vertical Handle, Long Arm (Straight Base)

1N=0.101972kgf

Hold Down, Vertical Handle, Long Arm (Straight Base)



(Clamped)

RoHS

Part Number	MC04-1LS
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	186
Weight (g)	75
Arm Open-Close Angle	100°
Handle Open-Close Angle	56°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

Hold Down, Vertical Handle, Long Arm (Straight Base)

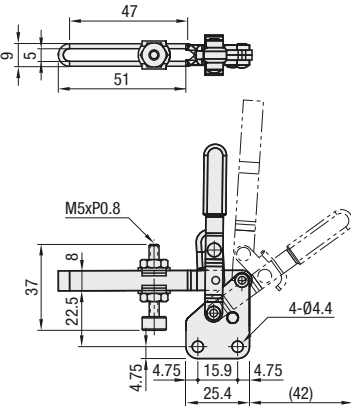


(Clamped)

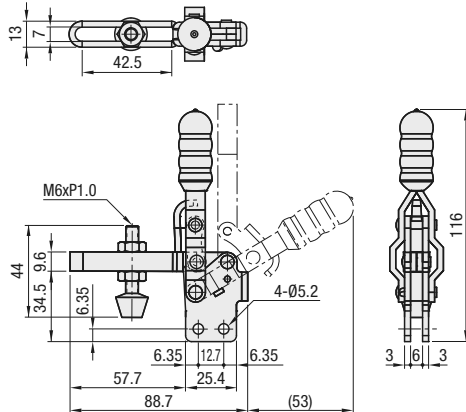
RoHS

Part Number	MC04-2LS
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	392
Weight (g)	175
Arm Open-Close Angle	95°
Handle Open-Close Angle	60°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

MC04-1LS



MC04-2LS



Hold Down, Vertical Handle, Long Arm (Straight Base)



(Clamped)

RoHS

Part Number	MC04-3LS
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	784
Weight (g)	370
Arm Open-Close Angle	100°
Handle Open-Close Angle	56°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

Hold Down, Vertical Handle, Long Arm (Straight Base)

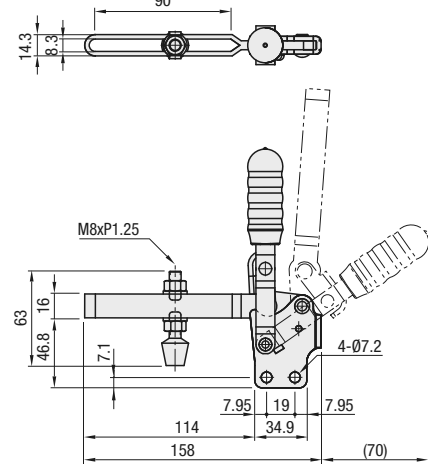


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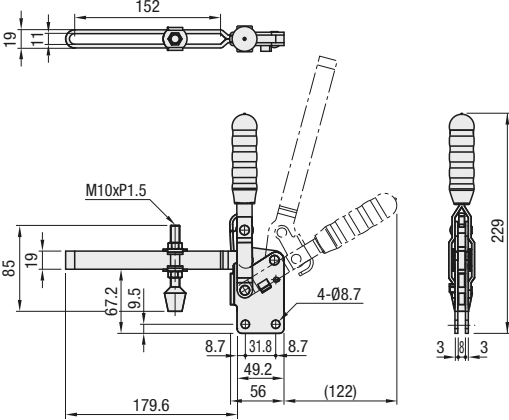
RoHS

Part Number	MC04-4LS
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	1078
Weight (g)	815
Arm Open-Close Angle	112°
Handle Open-Close Angle	61°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

MC04-3LS



MC04-4LS



Ordering Example Part Number MC04-3LS

Toggle Clamps

Hold Down, Vertical Handle (Flange Base)

1N=0.101972kgf

Hold Down, Vertical Handle (Flange Base)



(Clamped)

RoHS

Part Number	MC04-6	MC04-S6
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	294	-
Weight (g)	40	-
Arm Open-Close Angle	80°	-
Handle Open-Close Angle	88°	-
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70	With Rubber Stainless Steel Bolt
Unit Price		

Hold Down, Vertical Handle (Flange Base)

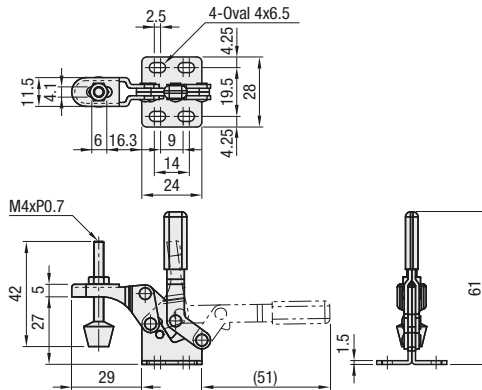


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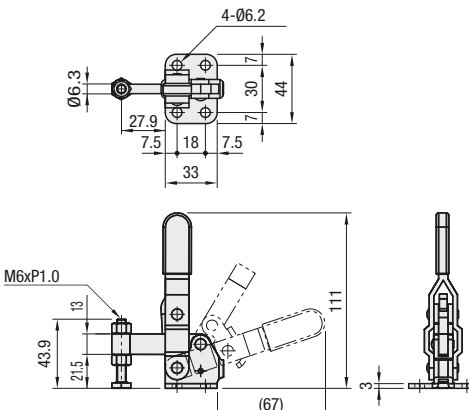
RoHS

Part Number	MC04-7	MC04-S7
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	980	-
Weight (g)	200	-
Arm Open-Close Angle	120°	-
Handle Open-Close Angle	72°	-
Accessory	Steel Bolt	Stainless Steel Bolt
Unit Price		

MC04-6
MC04-S6 (Stainless Steel)



MC04-7
MC04-S7 (Stainless Steel)



Hold Down, Vertical Handle (Flange Base)



(Clamped)

RoHS

Part Number	MC04-8	MC04-S8
Body Material	EN 1.0038 Equiv.	EN 1.4301 Equiv.
Surface Treatment	Trivalent Chromate	-
Tightening Force (N)	1470	-
Weight (g)	370	-
Arm Open-Close Angle	94°	-
Handle Open-Close Angle	54°	-
Accessory	Steel Bolt	Stainless Steel Bolt
Unit Price		

Hold Down, Vertical Handle (Flange Base)

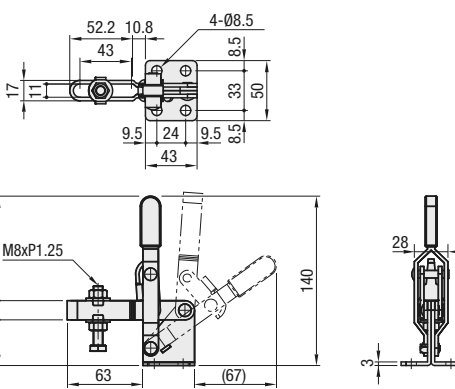


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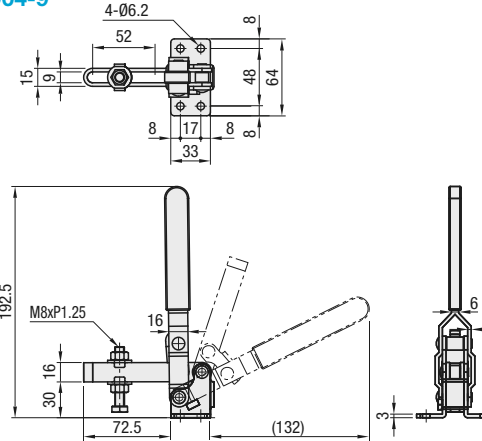
RoHS

Part Number	MC04-9
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	1960
Weight (g)	420
Arm Open-Close Angle	110°
Handle Open-Close Angle	64°
Accessory	Steel Bolt
Unit Price	

MC04-8
MC04-S8 (Stainless Steel)



MC04-9



Ordering Example Part Number MC04-6

Toggle Clamps

Hold Down, Vertical Handle (Straight Base)

Hold Down, Vertical Handle (Straight Base)

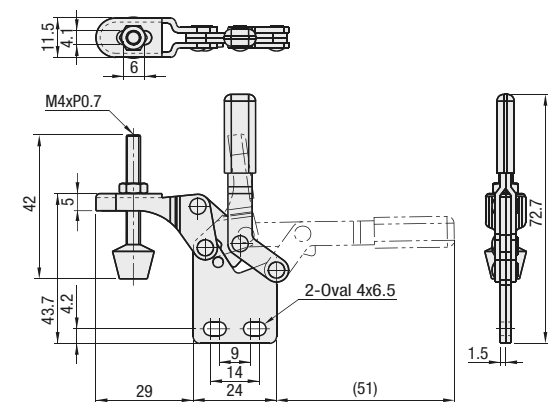


(Clamped)

RoHS

Part Number	MC04-6S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	294
Weight (g)	40
Arm Open-Close Angle	80°
Handle Open-Close Angle	88°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

MC04-6S



Hold Down, Vertical Handle (Straight Base)

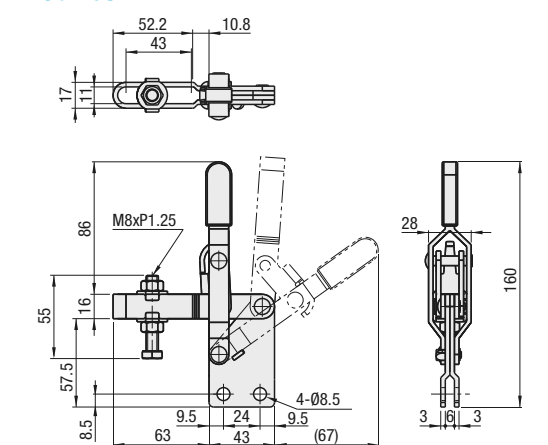


(Clamped)

RoHS

Part Number	MC04-8S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	1470
Weight (g)	370
Arm Open-Close Angle	94°
Handle Open-Close Angle	54°
Accessory	Steel Bolt
Unit Price	

MC04-8S



Hold Down, Vertical Handle (Straight Base)

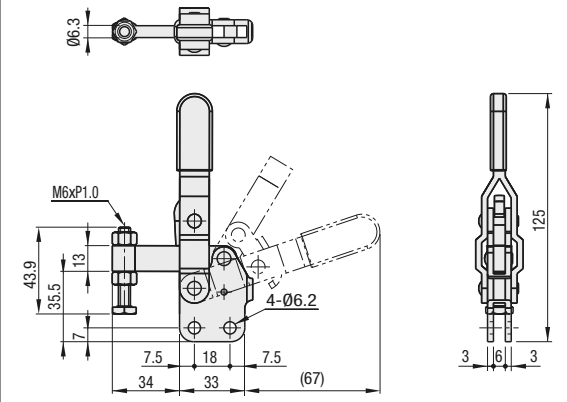


(Clamped)

RoHS

Part Number	MC04-7S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	980
Weight (g)	200
Arm Open-Close Angle	120°
Handle Open-Close Angle	72°
Accessory	Steel Bolt
Unit Price	

MC04-7S



Hold Down, Vertical Handle (Straight Base)

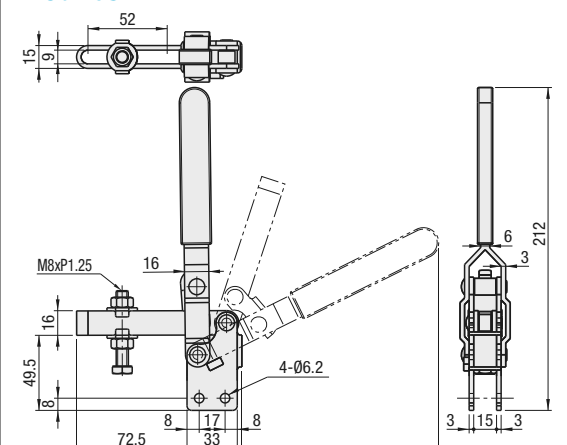


(Clamped)

RoHS

Part Number	MC04-9S
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	1960
Weight (g)	420
Arm Open-Close Angle	110°
Handle Open-Close Angle	64°
Accessory	Steel Bolt
Unit Price	

MC04-9S



1N=0.101972kgf

Toggle Clamps

Hold Down, Vertical Handle, Welded Tip (Straight Base) / High Arm Type (Flange Base)

■Features: Welded Tip Type (MC04-10, MC04-11, MC04-12) allows a screw to be fixed at any desired position to be easily fit in fixture designs. High Arm Type (MC04H-2) is adjustable without spacers because it has an arm position 20mm higher compared to the conventional product (MC04-2).

1N=0.101972kgf

Hold Down, Vertical Handle, Welded Tip (Straight Base)

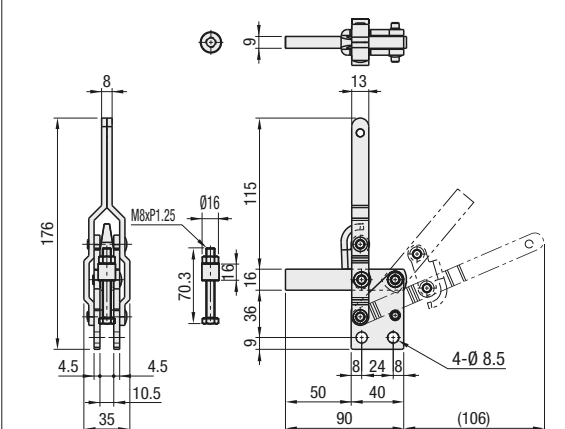


(Clamped)

RoHS

Part Number	MC04-10
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	1500
Weight (g)	430
Arm Open-Close Angle	130°
Handle Open-Close Angle	68°
Accessory	Steel Bolt
Unit Price	

MC04-10



Hold Down, Vertical Handle, Welded Tip (Straight Base)

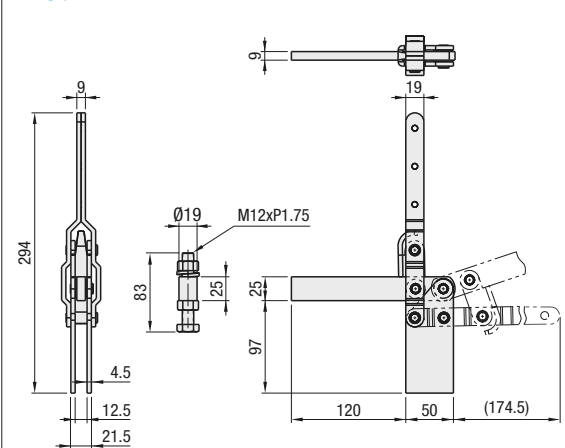


(Clamped)

RoHS

Part Number	MC04-12
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	4000
Weight (g)	1250
Arm Open-Close Angle	160°
Handle Open-Close Angle	88°
Accessory	Steel Bolt
Unit Price	

MC04-12



Hold Down, Vertical Handle, Welded Tip (Straight Base)

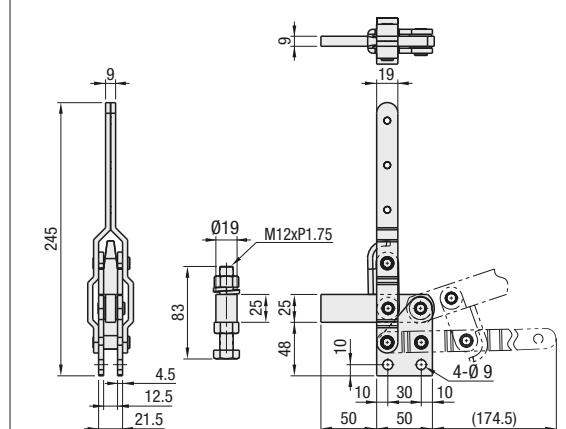


(Clamped)

RoHS

Part Number	MC04-11
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	3500
Weight (g)	960
Arm Open-Close Angle	160°
Handle Open-Close Angle	88°
Accessory	Steel Bolt
Unit Price	

MC04-11



Hold Down, Vertical Handle, High Arm Type (Flange Base)

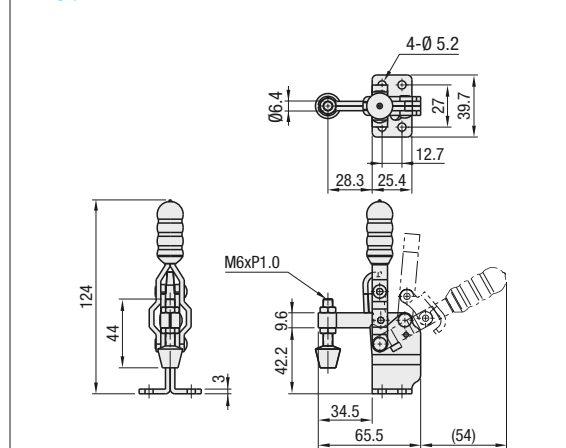


(Clamped)

RoHS

Part Number	MC04H-2
Body Material	EN 1.0038 Equiv.
Surface Treatment	Trivalent Chromate
Tightening Force (N)	910
Weight (g)	170
Arm Open-Close Angle	95°
Handle Open-Close Angle	60°
Accessory	Bolt with Rubber Material: NBR Hardness: Shore A70
Unit Price	

MC04H-2



Ordering Example
Part Number
MC04-7S

Ordering Example
Part Number
MC04-11
MC04H-2

Toggle Clamps

Side Push (Flange Base)

■Features: Please select a product suitable in stroke and clamping force. MC07-9 is a lightweight type with a hollow mount base.

1N=0.101972N

■Side Push (Flange Base)

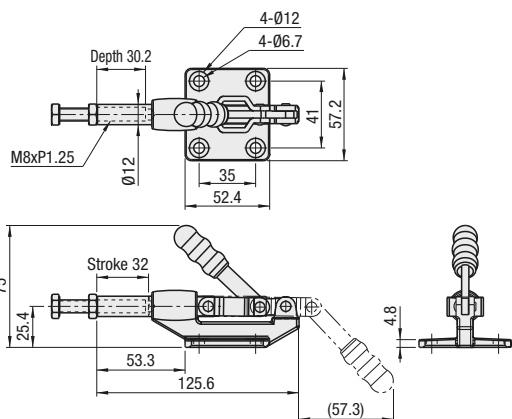


(Clamped)

* Shaft: Nickel Plating

Part Number	MC07-7
Material	Main Body: EN 1.0038 Equiv. / Attaching Portion: EN-JS 1040 Equiv.
Surface Treatment	Main Body: * Trivalent Chromate / Attaching Portion: Chemical Conversion Coating
Stroke (mm)	32
Tightening Force (N)	2270
Weight (g)	340
Handle Open-Close Angle	180°
Accessory	Steel Bolt
Unit Price	

MC07-7



■Side Push (Flange Base)

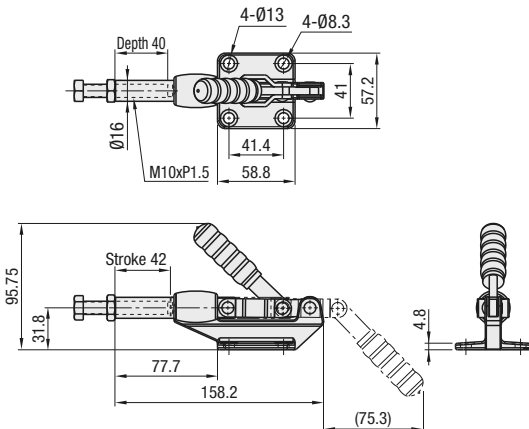


(Clamped)

* Shaft: Nickel Plating

Part Number	MC07-8
Material	Main Body: EN 1.0038 Equiv. / Attaching Portion: EN-JS 1040 Equiv.
Surface Treatment	Main Body: * Trivalent Chromate / Attaching Portion: Chemical Conversion Coating
Stroke (mm)	42
Tightening Force (N)	3860
Weight (g)	580
Handle Open-Close Angle	180°
Accessory	Steel Bolt
Unit Price	

MC07-8



■Side Push (Flange Base)

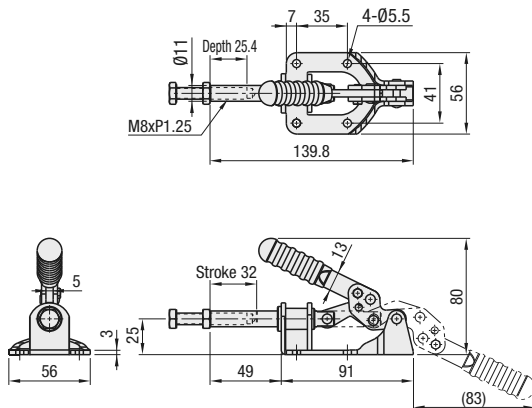


(Clamped)

* Shaft: Nickel Plating

Part Number	MC07-9
Body Material	EN 1.0038 Equiv.
Surface Treatment	* Trivalent Chromate
Stroke (mm)	32
Tightening Force (N)	1360
Weight (g)	300
Handle Open-Close Angle	180°
Accessory	Steel Bolt
Unit Price	

MC07-9



■Side Push (Flange Base)

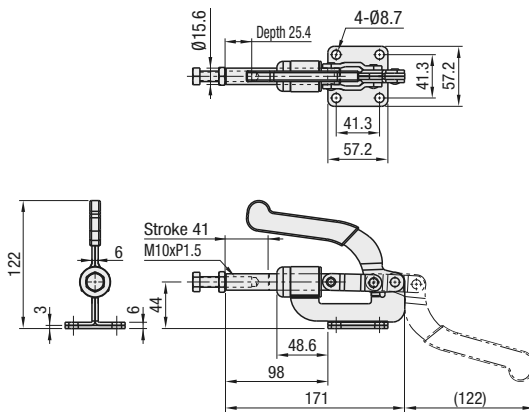


(Clamped)

* Shaft: Nickel Plating

Part Number	MC07-10
Body Material	EN 1.0038 Equiv.
Surface Treatment	* Trivalent Chromate
Stroke (mm)	41.3
Tightening Force (N)	3640
Weight (g)	800
Handle Open-Close Angle	180°
Accessory	Steel Bolt
Unit Price	

MC07-10



■Features: MC07-11 and MC07-13, each having a shorter vertical base length, require smaller installation space.

■Features: MC07-12, having the same shape as MC07-6 (P1810), is larger in size and clamping force and longer in stroke.

1N=0.101972N

■Side Push (Flange Base)

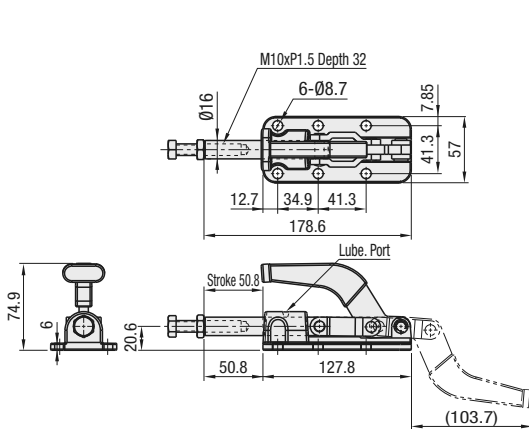


(Clamped)

* Shaft: Nickel Plating

Part Number	MC07-11
Body Material	EN 1.0038 Equiv.
Surface Treatment	* Trivalent Chromate
Stroke (mm)	50.8
Tightening Force (N)	11360
Weight (g)	935
Handle Open-Close Angle	180°
Accessory	Steel Bolt
Unit Price	

MC07-11



■Side Push (Flange Base)

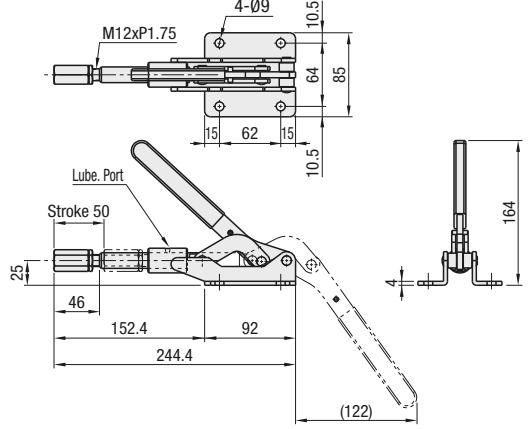


(Clamped)

* Shaft: Nickel Plating

Part Number	MC07-12
Body Material	EN 1.0038 Equiv.
Surface Treatment	* Trivalent Chromate
Stroke (mm)	50.6
Tightening Force (N)	4540
Weight (g)	965
Handle Open-Close Angle	190°
Accessory	Nut
Unit Price	

MC07-12



■Side Push (Flange Base)

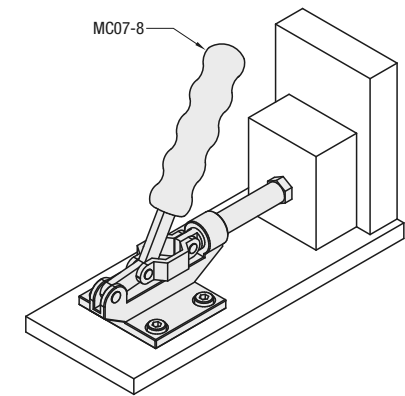
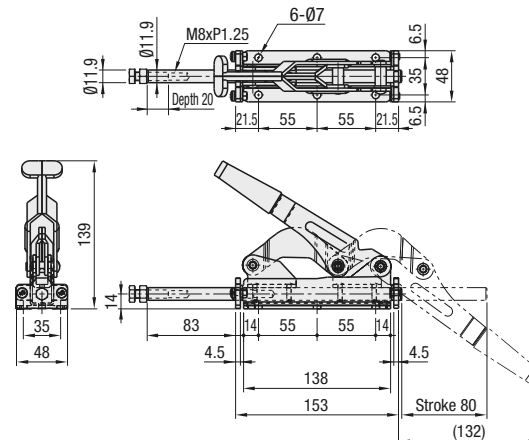


(Clamped)

* Shaft: Nickel Plating

Part Number	MC07-13
Body Material	EN 1.0038 Equiv.
Surface Treatment	* Trivalent Chromate
Stroke (mm)	80
Tightening Force (N)	3000
Weight (g)	1000
Handle Open-Close Angle	180°
Accessory	Steel Bolt
Unit Price	

MC07-13



Ordering
Example

Part Number
MC07-7



Ordering
Example

Part Number
MC07-11

Toggle Clamps

Side Push (Flange Base) / Smooth Stroke (Flange Base)

Toggle Clamps

Welding Clamps (Flange Base, Straight Base)

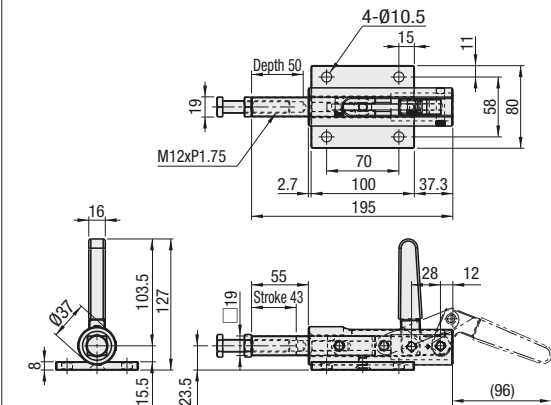
■Features: MC07-14, MC07-15 and MC07-16 can be used for welding and machining fixtures.

Side Push (Flange Base)



Part Number	MC07-14
Material	Main Body / Attaching Portion: EN 1.1191 Equiv.
Surface Treatment	* Chemical Conversion Coating
Stroke (mm)	43
Tightening Force (N)	3000
Weight (g)	1600
Handle Open-Close Angle	115°
Accessory	Steel Bolt
Unit Price	

MC07-14

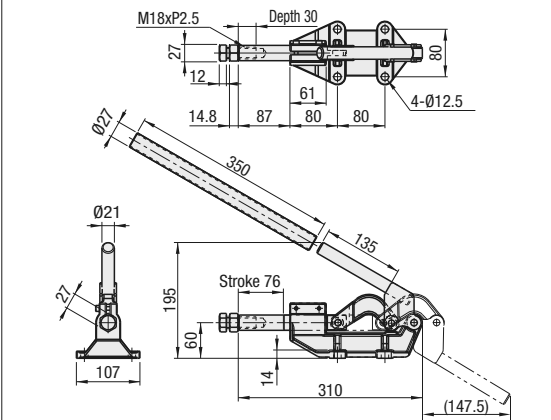


Side Push (Flange Base)



Part Number	MC07-16
Material	Main Body: EN 1.0038 Equiv. / Attaching Portion: EN-JS 1040 Equiv.
Surface Treatment	Main Body: * Trivalent Chromate / Attaching Portion: Chemical Conversion Coating
Stroke (mm)	76
Tightening Force (N)	16000
Weight (g)	4360
Handle Open-Close Angle	180°
Accessory	Steel Bolt, Tube
Unit Price	

MC07-16

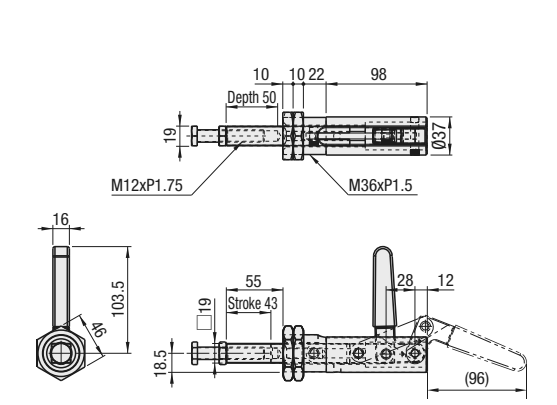


Side Push (Flange Base)

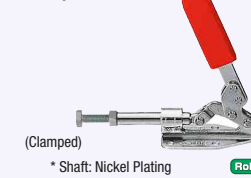


Part Number	MC07-15
Material	Main Body / Attaching Portion: EN 1.1191 Equiv.
Surface Treatment	* Chemical Conversion Coating
Stroke (mm)	43
Tightening Force (N)	3000
Weight (g)	1280
Handle Open-Close Angle	115°
Accessory	Steel Bolt
Unit Price	

MC07-15



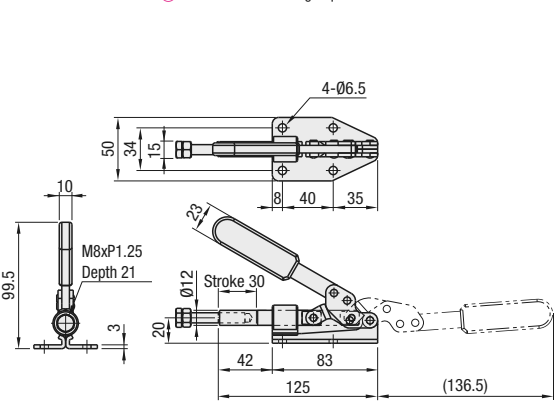
Smooth Stroke (Flange Base)



Part Number	MC08-1
Body Material	EN 1.0038 Equiv.
Surface Treatment	* Trivalent Chromate
Oil Free Bushing	MDZB12-20: 1 pc.
Stroke (mm)	30
Tightening Force (N)	1960
Handle Open-Close Angle	140°
Weight (g)	380
Accessory	Steel Bolt
Unit Price	

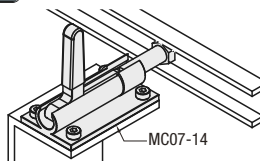
MC08-1

● Built-in Oil Free Bushing requires no lubrication.



Ordering Example
Part Number
MC07-14
MC08-1

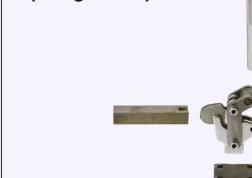
ex Example



1N=0.101972kgf

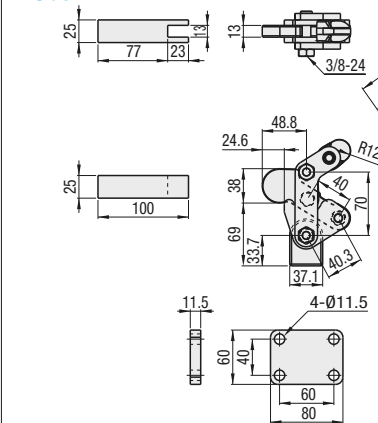
■Features: MC09-2S is Straight Base Type of Welding Clamp MC09-2.

Weld-On Clamps (Flange Base)

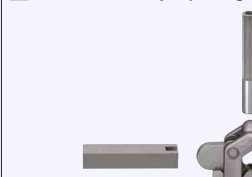


Part Number	MC09-1	MC09-2	MC09-3
Body Material	EN 1.0038 Equiv. (with Hardened Bushing)		
Weight (g)	845	2130	4100
Tightening Force (N)	1960	4900	9800
Handle Movement Angle	122°	122°	128°
Arm Movement Angle	196°	191°	197°

MC09-2



Weld-On Clamps (Straight Base)

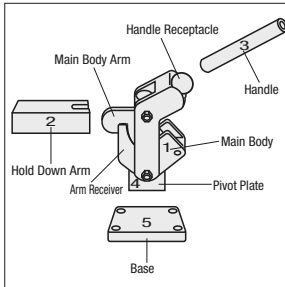


Part Number	MC09-2S
Body Material	EN 1.0038 Equiv. (with Hardened Bushing)
Weight (g)	2500
Tightening Force (N)	5000
Handle Movement Angle	122°
Arm Movement Angle	191°

Ordering Example
Part Number
MC09-1
MC09-2S

Part Number	Unit Price
MC09-1	
MC09-2	
MC09-3	
MC09-2S	

ex How to Use Welding Clamps for Various Applications



Weld-On Clamps are composed of 4 parts shown to the left; handle, main body, base and arm.
① Determine the mounting position of the main body.
② Determine the length of the control arm, then connect to the body arm by welding.
③ Given space from the fixture for clamp mounting, determine the height of the handle, and weld the handle and the body handle receiver.
④ Determine the angle between the main body and the supporting plate, and weld them together.
⑤ Determine how to mount a clamp on to the fixture. If the base is used, weld the base and the supporting plate together.
Assemble a Weld-On clamp as described above.
- Welding Clamps can be flexibly assembled depending on different working situations, thus can be used in wide range of applications.
- Heat treatment (hardness 60HRC) ensures abrasion-resistant assembly of the pin constituting the supporting point, and the surrounding bushing. The clamps are best for fixtures that require frequent use or accuracy.

1N=0.101972kgf

Tips for Clamps

Components for Toggle Clamps

Two-Pronged Clamp Arms, Clamp Arm Extension Kits, Clamp Brackets

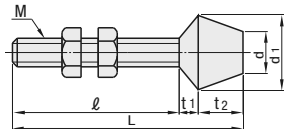
■ Features: Bolts for Toggle Clamps. In addition to the standard type, we offer a variety of types of bolts that are highly capable of resisting abrasion, or buffering impacts from a workpiece.

■ Tips (Standard)



RoHS

Type	Tip		Bolt	
	M	H	M	S
MC4-15	NBR	Shore A70	Steel	Trivalent Chromate
MCS4-32	NBR	Shore A70	Stainless Steel	-



Part Number	M- ℓ (Thread Effective Length)	L (O.A.L)	t1	t2	d	d1	Unit Price
MC4-15	4-15	25	2	8	8	12	
MC4-32	4-32	42					
MC5-27	5-27	38	4	7	11.3	13.5	
MC5-69	5-69	80					
MC6-37	6-37	51					
MC6-62	6-62	76	2	12	10	16	
MC6-87	6-87	101					
MC8-45	8-44.5	63					
MC8-75	8-74.5	93	3.5	15	12.5	19	
MC8-105	8-104.5	123					
MC10-59	10-59	85	6	20	16	24	
MC12-66	12-66	100	9	25	22	32	

Part Number	M- ℓ (Thread Effective Length)	L (O.A.L)	t1	t2	d	d1	Unit Price
MCS4-15	4-15	25					
MCS4-32	4-32	42	2	8	8	12	
MCS6-37	6-37	51		12	10	16	
MCS8-45	8-44.5	63	3.5	15	12.5	19	

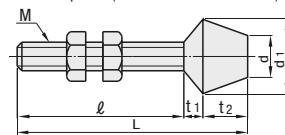
■ Tips (Standard)



RoHS

Type	Tip		Bolt	
	M	H	M	S
TGUB	Urethane*	Shore A90	Steel	Trivalent Chromate

* Excellent in abrasion resistance compared to NBR.
* Gate marks from casting remain in urethane portion. (No adverse effect on actual use)



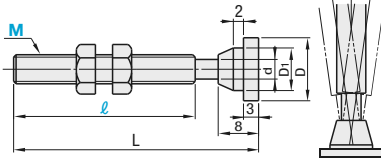
Part Number	L	t1	t2	d	d1	Unit Price
TGUB						
4-13	23		8	8	12	
4-32	42	2				
6-37	51		12	10	16	
6-87	101					
8-49	67	5	13	12	19	
8-105	123					

■ Tips (Universal)



RoHS

Part Number	Tip		Bolt	
	M	S	M	S
TGAR	EN 1.0718 Equiv.	Black Oxide	EN 1.0718 Equiv.	Black Oxide
STGAR	EN 1.4301 Equiv.	-	EN 1.4301 Equiv.	-



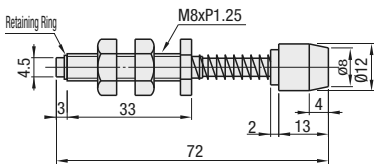
Part Number	L	D	D1	d	Unit Price
TGAR					
4-13	23		7	2.2	
4-32	42	13			
6-37	51		9	3.2	
8-49	67	16	11	5.2	

■ Tips (Rubber Bolt with Springs)



RoHS

Part Number	Tip		Bolt		Spring
	M	H	M	S	
TGSP	NBR (Nitrile Rubber)	Shore A70	EN 1.0038 Equiv.	Black Oxide	EN 1.4301 (WPB) Equiv.
STGSP	NBR (Nitrile Rubber)	Shore A70	SUS304-7	-	EN 1.4301 (WPB) Equiv.



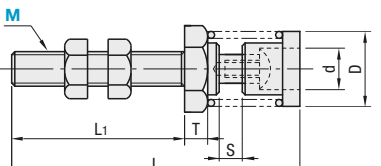
Part Number	Max. Stroke	Load N (kgf)	Unit Price
TGSP			
4	4	30 (3)	
STGSP			

■ Tips (Rubber Bolt with Spring and Resin Pad)



RoHS

Part Number	Pad		Bolt		Spring
	M	S	M	S	
TGSPM	Polyacetal (White)	EN 1.1191 Equiv.	Black Oxide	EN 1.4301 (WPB) Equiv.	



Part Number	M	S (Stroke)	min. Load (N)	max. Load (N)	Unit Price
TGSPM					
4	4	3	19.4	29.1	
6	6	4	21.8	30.5	
8	8	8	18.8	32.4	

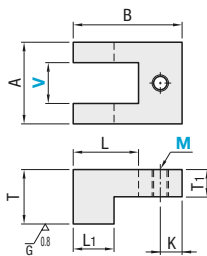
M	L	L1	T	D	d
4	34.5	20	2	12	5.6
6	50	30	4	13	7.2
8	60	30	5	14	7.8

■ Two-Pronged Clamp Arms

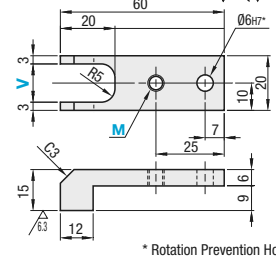


RoHS

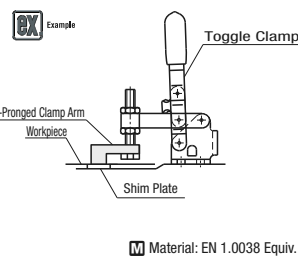
KJWCL (Standard)



KJWCLC (Compact)



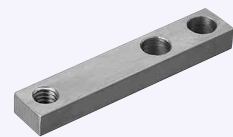
* Rotation Prevention Hole



Material: EN 1.0038 Equiv.

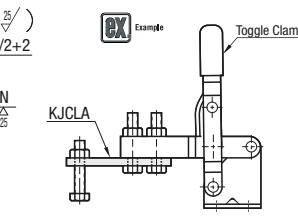
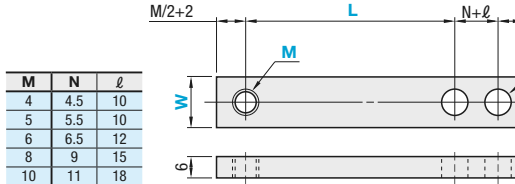
Part Number	Type	V	M Selection			A	B	L	L1	K	T	T1	Unit Price
			4	6	8								
KJWCL		10	4	6	8	20	30	18	10	6	15	7	
		15	6	8	10	30	40	24	15	8	20	10	
		20	8	10	12	40	50	30	20	10	25	12	
KJWCLC		14	4	6	8	(Described in the Drawing)							

■ Clamp Arm Extension Kits



RoHS

KJCLA



Material: EN 1.0038 Equiv.

Part Number	Type	W	L Selection						M Selection		Unit Price					
			10	20	30	40	50	60	4	5	L10	L20	L30	L40	L50	L60
KJCLA		10	10						4	5						
		16							8	10	-					

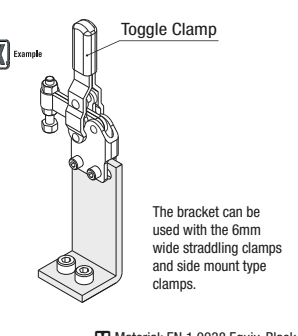
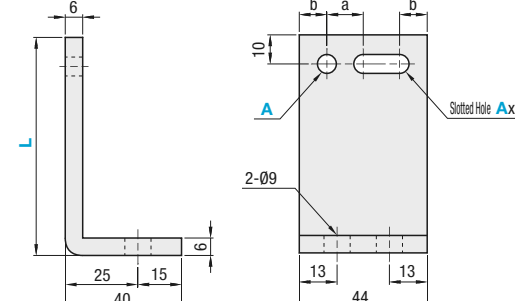
* M6, 8 or 10 is not selectable for L10. (due to an interference with the holes or the mounted bolt nuts)

■ Clamp Brackets



RoHS

KJCLB



Material: EN 1.0038 Equiv. Black

Part Number		L Selection					Hole Dia.		Hole Pitch		Unit Price				
Type	No.						A Selection	B	a	b	L50	L75	L100	L125	L150
KJCLB	6	50 75 100 125 150	6.5	19	13.5	9	480	550	660	750	860				
			8.5	21	12.5	9.5									

Ordering Example	Part Number	-	L	-	M	-	A
	KJWCLC14	-	L60	-	M6	-	A6.5
	KJCLA10	-	L60	-	M6	-	
	KJCLB6	-	L100	-		-	

Alterations	Part Number	-	L	-	M	-	A	-	(STC)
	KJCLA10	-	L60	-	M6	-		-	STC

Alterations	Code	Spec.
Additional Surface Treatment	STC	Adds black oxide surface treatment.