



**STEEL-SMITH<sup>®</sup>**

Clamps on the go... that never let go!



**CATALOG CLAMPS**

## Company Profile

From conceptualization to execution, from drawing to production, there's just one single largest force that drives us. Our customer. He was with us when we first ventured into the uncharted area of toggle clamp manufacturing in India. Two decades later, he still looks up to us with the same trust he began with. Because even as the times changed along with the application areas our products kept pace. Only improving in terms of quality.

Introducing newer and innovative products, continuously improving upon the existing ones and catering to our customers with prompt after sales service; we've grown. We've grown from a small set-up to an established brand name. Today Steel-Smith is the largest manufacturer and exporter of a wide range of toggle clamps and other industrial accessories. In doing so, we owe a lot to our customer; our source of inspiration and unrelenting support.

## Cad Database

Steel Smith has placed its entire line of standard clamping products in a CAD library, which customers can use to save valuable drafting time and increase fixture productivity.

All drawings are done in accurate two dimensional orthographic projections or 3D models and are supplied on CDs or by e-mail.

Drawings are available in all of the popular software formats at no charge to the user.

## Exports

After capturing majority of the Indian market share, Steel-Smith is now making its presence felt in the global scenario. Constant endeavor in quality enhancements and application areas has led Steel Smith to be a globally competitive toggle clamp manufacturer.

We are proud that we have put India on the world map as far as broad-spectrum toggle clamp manufacturing is concerned. Steel-Smith has exported over one million clamps worldwide.

The latest launch of the international range of clamps has broaden the horizon for the company. Our goal is to see Steel-Smith becoming the first choice for Toggle Clamp application, globally in the next new millennium.

## Dealers Network

Steel Smith is now near a city closest to you. With over 10 distributors & stockiest, our Toggle Clamps are just a phone call away from you.

All our distributing centers have application engineers who will assist you in selecting the right clamp for the right application. Please write to us to get our dealers' list.



## Steel Smith Range

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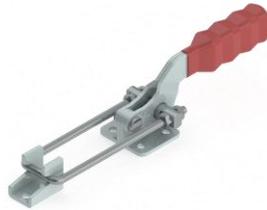
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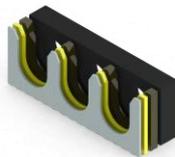
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All dimensions in this catalogue are specified in “mm”.

For the betterment of the products, we reserve the right to change the design and dimensions without prior intimation.

## Introduction

### What is a Toggle Clamp?

Toggle clamp is a simple Mechanism which holds instantly. The Toggle Clamps Consist of a handle to operate, a Clamping Arm to Reach the work piece, linkages for multiplying the applied force, and a base for mounting at the workplace on its base. The handle is operated which thereby moves the clamping arm to hold the work piece. A required clamping force is achieved and exerted on the work piece. Under this action the Toggle Clamp Holds the work piece firmly and positively.

### Toggle Action Force Factors:

#### Holding Capacity:

The holding capacity mentioned for each clamp refers to the maximum force, which the clamp can withstand after being over- centered without damage to the clamp and without the toggle unlocking due to distortion of the clamp.

The over-center dimension is carefully chosen in relation to the elasticity of the clamp to maximize clamping force while ensuring that the clamp locks closed even under vibration or intermittent loading. For Hold Down Clamps, holding capacity is measured with the spindle at the farthest end of the clamping arm and will increase as the spindle goes closer to the clamping arm.

#### Clamping Force:

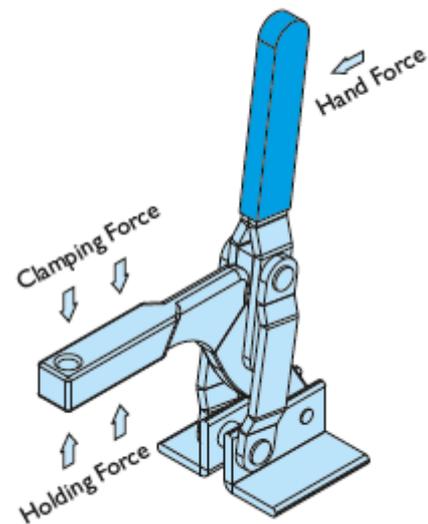
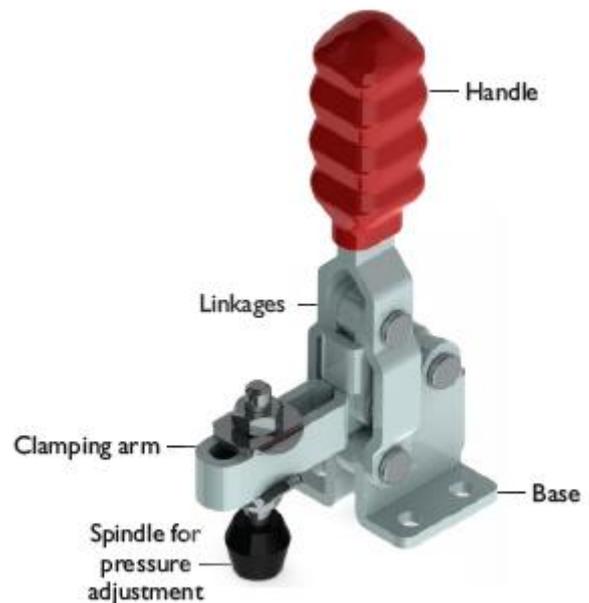
Clamping Force, the amount of force actually applied to the work piece by closing and locking the clamp, is generally less than the stated holding capacity. Actual clamping force depends on many factors including; spindle position, proper spindle height adjustment, spindle cushioning, work piece material and the clamps mechanical advantage. In most cases, roughly 1/3rd of the stated holding capacity can be applied by hand with medium effort.

### Toggle Principle:

Toggle action clamps operate through a linkage system of levers and pivots. The fixed length levers, connected by pivot pins supply the action and clamping force. Toggle action has an over centre lock point which is a fixed stop and linkage. Once in the over centre position, the clamp cannot move or unlock unless the linkage is moved. All types of toggle clamps have same action, just oriented differently.

The Toggle Mechanism in a clamp has three functions.

- 1) To multiply applied load at the handle into a high clamping force to hold the work piece.
- 2) To create an over - centre lock to prevent the clamp from opening & releasing the work piece until opened by the operator.
- 3) To rapidly open & close the clamp giving a maximum clearance in which to load & unload the work piece.

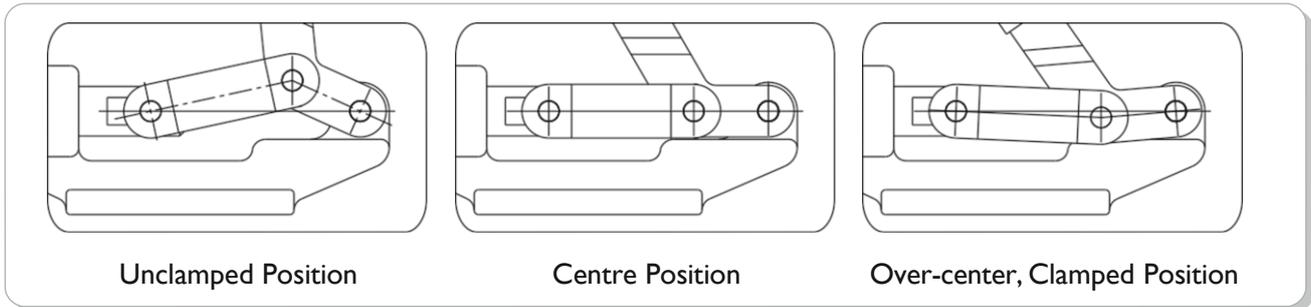


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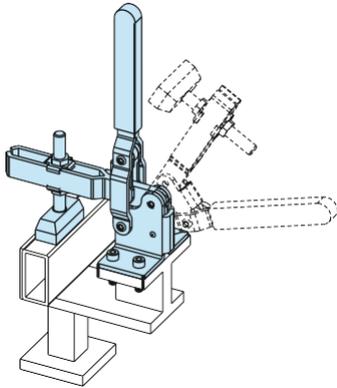
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## Types of Toggle Clamps

### Types Of Toggle Actions

This catalogue contains about 300 different standard toggle clamps & clamping systems. Steel-Smith has developed its range of clamps & clamping equipment for infinite applications, considering the different shapes, sizes, holding capacity, operator's position & strength, frequency of operation etc. Most of the Toggle Clamps belong to one of the following five main actions groups, which are:

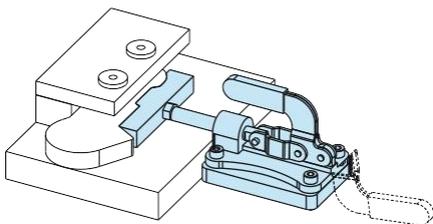
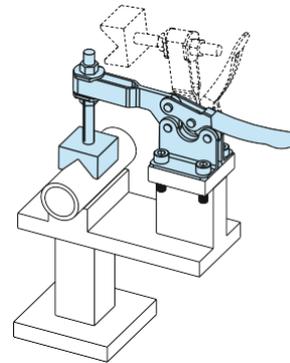


#### Vertical Hold Down Action :(VTC- Series)

As the name implies clamps of this type hold the work piece with a downward clamping action. These clamps are manufactured with a holding capacity up to 3000 kg. The clamping exhibits a minimum of 90o opening angle giving full clearance for loading & unloading of work piece. Clamping arm can be solid bar, U shaped or fixed hole to suit individual requirements.

#### Horizontal hold Down Action : (H series)

The Holding action in these types of Toggle Clamps is same as VTC-Series clamps. The outstanding characteristic is the low height design. Unlike the handle & the clamping bar of the VTC-Series, these of the H-Series clamps move in oppositedirection. The holding capacities range upto 1000kg. The clamping arm can be solid bar, U shaped or fixed hole type.

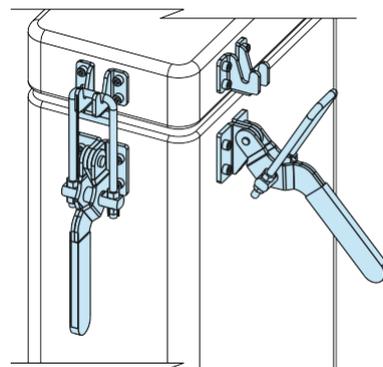


#### PullAction Clamps :(PAH-Series)

Steel-Smith's Pull Action Clamps are designed for sealing chambers, doors, would closures or other such applications requiring closure mechanisms. The handle can be moved to place the clamping U - Bolt Bar hook around the opposing latch & pull down to reach the lock position. The threaded "hook" or "U-bolt" type bar offer an adjustment feature. The clamps can withstand pressures from 150 kgs.to 3000 kgs.

#### Straight LineAction :(HTC-Series)

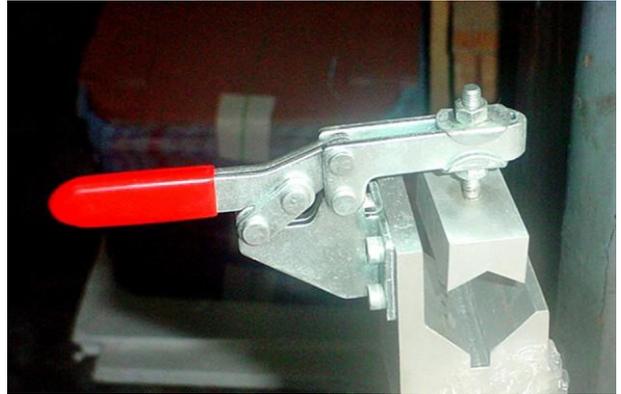
The straight line action toggle clamps design uses a straight-line or push/pull, Toggle clamping action.The push / pull handle is easy to operate & moves the plungers of the clamp in and out along its axis. Most of these clamps can be locked in two positions,allowing you to use them as either push or pull clamps. These clamps are manufactured in a variety of models to accommodate a wide range of load ratings.(45 kgs - 4,500 kgs)



## Applications



H-45105-UB on Co2 Welding fixture



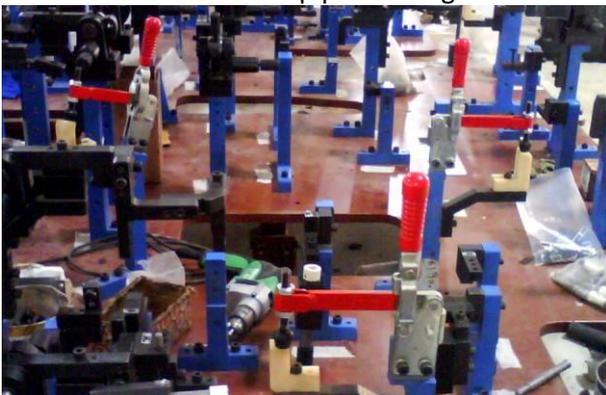
H-4835-UB/FM in gauge checking fixture



HTC - 5065 used in a pipe bending machine



PAH - 1210 in a Vibro- finishing machine



VTC - 4595 - SB/BS on a checking gauge



H - 1330 - UB in a unique paper pad



HV Series Clamp in a BIW fixture



HV Series in a fixture used with standard shims

## Applications



HV Series with modified Arm



AOT-98125-SB used in a SPM



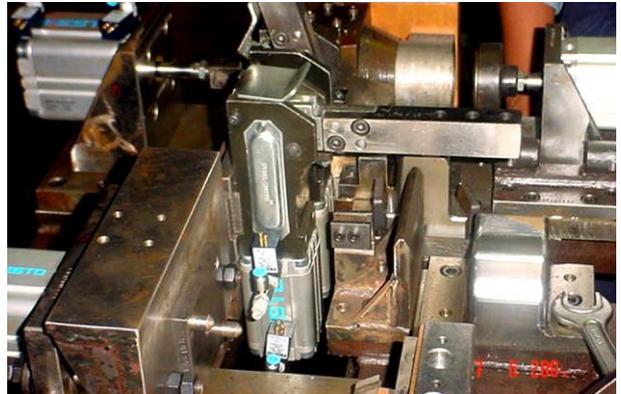
Numerous HV Series used in a Spot welding fixture



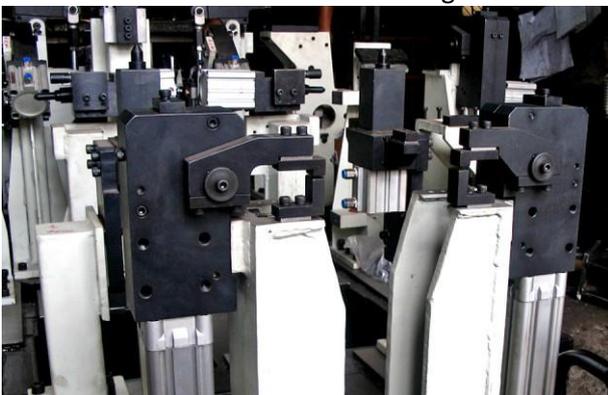
AOT-2530-HTC used to hold cylindrical w/p in tapping process



AOT-3586-SB used in a checking fixture



SSC-2550 used in a SPM



DCTC Series clamps on a Welding Fixture



H - Series Clamps used for Ladder Assembly

## Vertical Hold Down Action

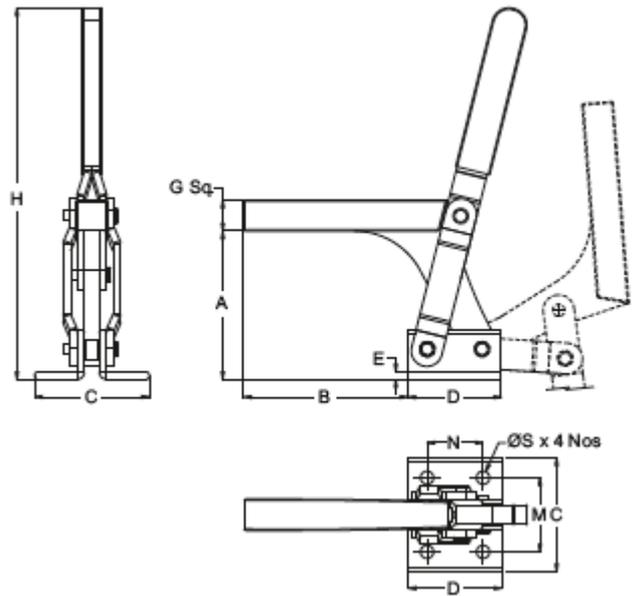
### VTC Series Heavy Duty Clamps - Angle Base



VTC-6561 A



VTC-120132 A



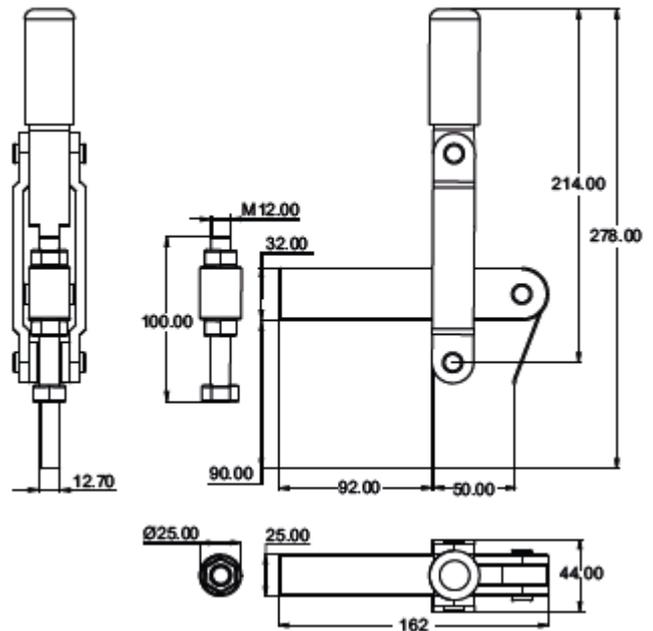
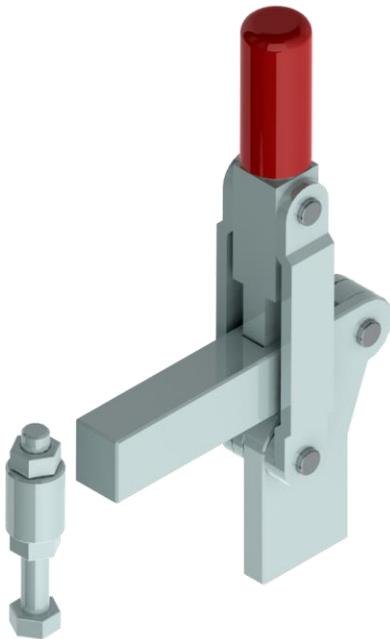
Supplied with suitable spindle

Model No.	A	B	Mounting Base			G	H	Mounting Dimensions			Holding Capacity	Wt. in Kgs
			C	D	E			M	N	ØS		
VTC-6561 A	65	61	85	45	6	20 x 20	170	55	25	6.5	500 Kgs	1.000
VTC-120132 A	120	132	92	75	6	25 x 25	295	60	45	10.5	1000 Kgs	2.400

### VTC - 9092 - HV - SP

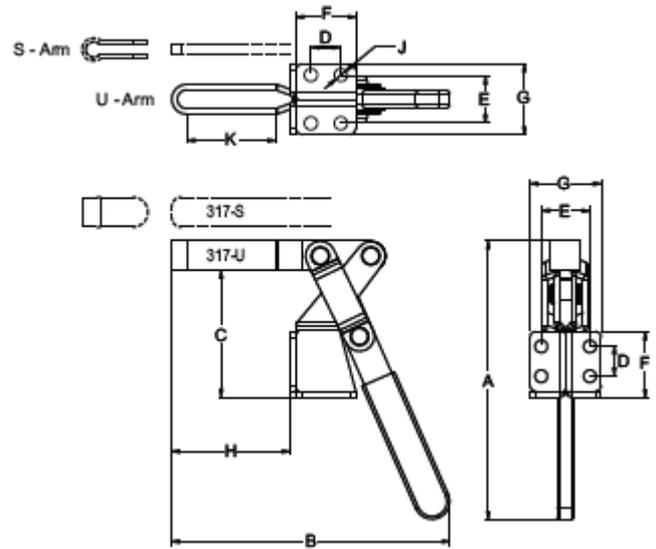
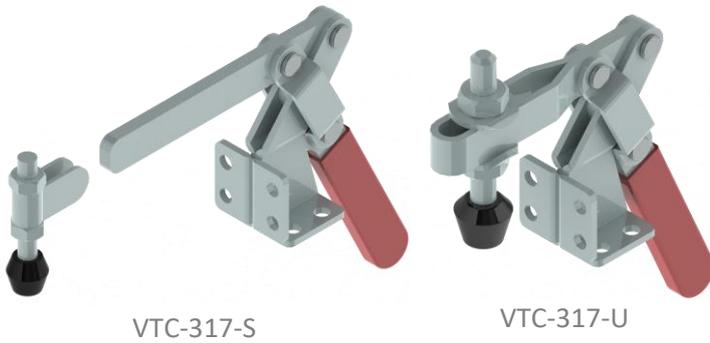
Holding Capacity: 1400 Kgs.

Weight: 2.600 Kgs.



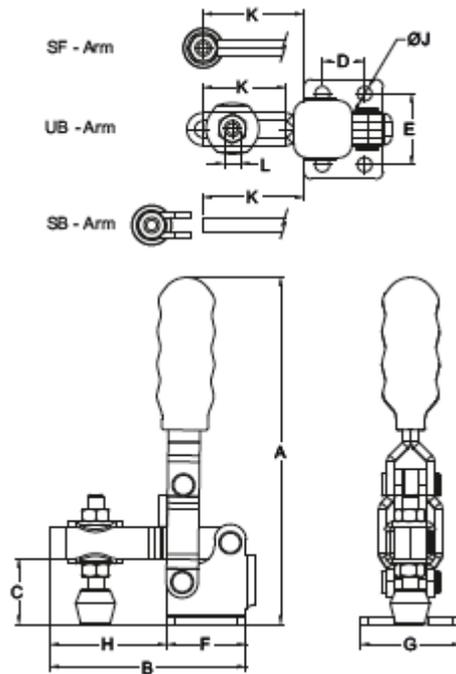
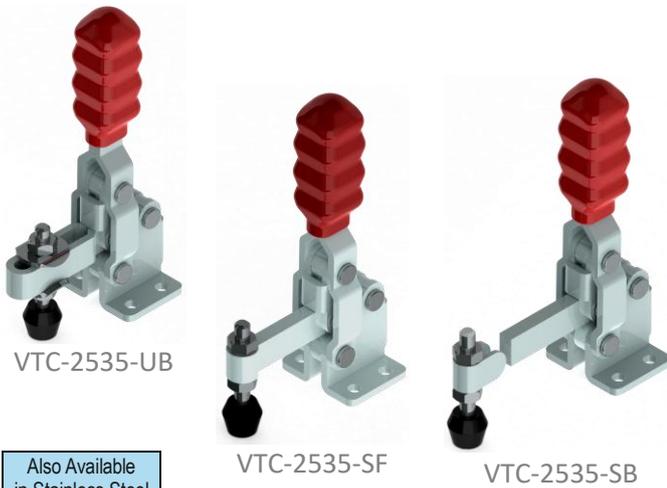
## Vertical Hold Down Action

### VTC 317 Series



Model No.	A	B	C	D	E	F	G	H	ØJ	K	Holding Capacity	Wt. in Kgs	Handle Moves	Bar Open
VTC-317-U	138	140	68	16	25.4	35	38.1	64	6.7	52	170 Kgs	0.360	60°	185°
VTC-317-S	138	157	68	16	25.4	35	38.1	81	6.7	--	170 Kgs	0.350	60°	185°

### VTC Series Medium Duty Clamps Flanged Base



Also Available  
in Stainless Steel  
VTC-1625-UB-SS  
VTC-2535-UB-SS

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC - 1625 - UB	50 Kgs	0.090	65°	104°	81	56	16	16	24	25	33	32	4.5	25	M5 Bolt
VTC - 1625 - SF	50 Kgs	0.090	65°	104°	81	56	16	16	24	25	33	32	4.5	25	M5 Bolt
VTC - 2535 - UB	100 Kgs	0.180	65°	104°	125	75	25	16	27	30	38	44	4.5	30	M6 Bolt
VTC - 2535 - SF	100 Kgs	0.180	65°	104°	125	75	25	16	27	30	38	44	4.5	38	M6 Bolt

VTC - 2535 - SB	100 Kgs	0.180	65°	104°	125	75	25	16	27	30	38	44	4.5	41	M6 Bolt
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## Vertical Hold Down Action

### VTC Series Medium Duty Clamps Flanged Base



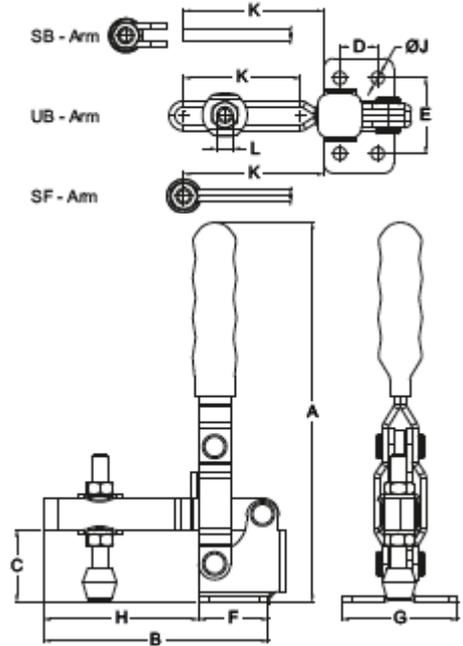
VTC-3670-UB



VTC-3670-SF

Also Available in  
stainless steel

VTC-3670-UB-SS



VTC-4595-UB



VTC-4595-SF



VTC-4595-SB

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC-3670 UB	200 Kgs	0.450	60°	110°	180	115	36	19	38	35	58	80	6.5	60	M8 Bolt
VTC-3670 SF	200 Kgs	0.450	60°	110°	180	115	36	19	38	35	58	80	6.5	72	M8 Bolt
VTC-3670 SB	200 Kgs	0.450	60°	110°	180	105	36	19	38	35	58	70	6.5	70	M8 Bolt
VTC-4595 UB	400 Kgs	0.650	60°	120°	205	150	45	25	55	45	82	105	8.5	80	M10 Bolt
VTC-4595 SF	400 Kgs	0.650	60°	120°	205	150	45	25	55	45	82	105	8.5	95	M10 Bolt
VTC-4595 SB	400 Kgs	0.650	60°	120°	205	140	45	25	55	45	82	95	8.5	95	M10 Bolt
VTC-5040 SF	500 Kgs	0.600	60°	120°	210	99	50	25	45	45	72	54	8.5	44	M10 Bolt
VTC-50125 UB	350 Kgs	0.700	60°	120°	210	180	50	25	45	45	72	135	8.5	110	M12 Bolt
VTC-50125 SF	350 Kgs	0.700	60°	120°	210	180	50	25	45	45	72	135	8.5	125	M12 Bolt
VTC-50125 SB	350 Kgs	0.700	60°	120°	210	175	50	25	45	45	72	130	8.5	130	M12 Bolt
VTC-85150 UB	600 Kgs	2.100	107°	96°	350	238	85	45	60	76	90	162	8.5	108	M16 Bolt
VTC-85150 SF	600 Kgs	2.100	107°	96°	350	251	85	45	60	76	90	175	8.5	160	M16 Bolt
VTC-85150 SB	600 Kgs	2.100	107°	96°	350	218	85	45	60	76	90	142	8.5	142	M16 Bolt

VTC-10088 SF	800 Kgs	1.800	80°	83°	290	182	105	45	60	76	90	106	8.5	105	M12 Bolt
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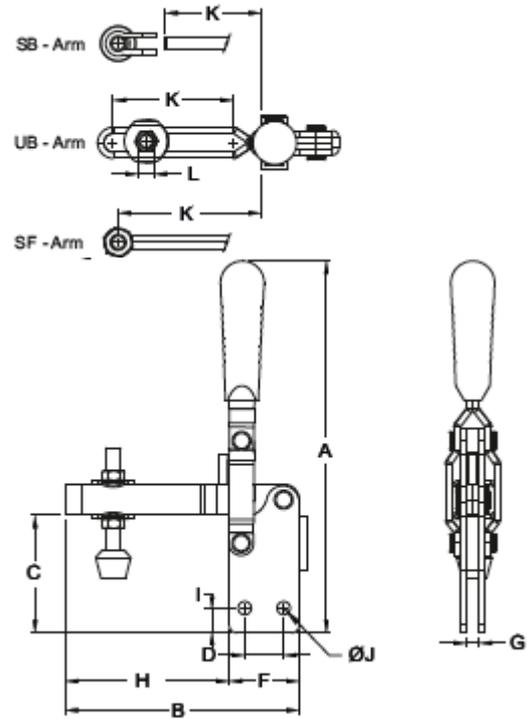
## Vertical Hold Down Action

### VTC Series Medium Duty Clamps Straight Base

The **SF Series** have a solid hold down bar which has a fixed guide bush at its end for the spindle assembly.

The **SB Series** have a solid bar onto which the bolt retainer can be welded at any desired angle.

The **UB Series** have a 'U' bar arm which enables one or more spindles to be moved into any desired position along the arm.



VTC-4595 UB/BS



VTC-4595 SF/BS



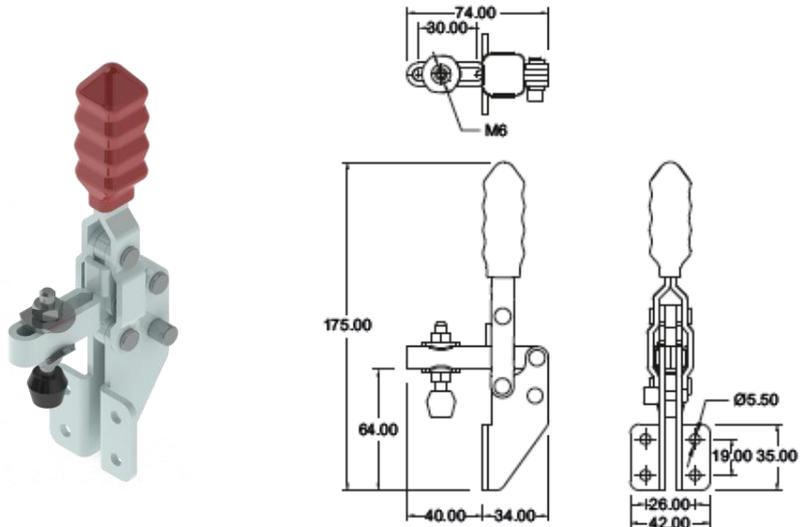
VTC-4595 SB/BS

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions											
					A	B	C	D	E	F	G	H	I	J	K	L
VTC-2535-UB/BS	100 Kgs	0.180	65°	104°	137	75	36	16	6	30	6	44	7	5.5	30	M6
VTC-2535-SF/BS	100 Kgs	0.180	65°	104°	137	74	36	16	6	30	6	44	7	5.5	38	M6
VTC-2535-SB/BS	100 Kgs	0.180	65°	104°	137	71	36	16	6	30	6	41	7	5.5	41	M6
VTC-8154-SB/BS	200 Kgs	0.300	60°	114°	232	98	79	-	6	40	5	58	-	-	58	M8
VTC-3670 UB/BS	200 Kgs	0.450	60°	120°	198	113	57	19	6	35	6	80	8	6.5	60	M8
VTC-3670 SF/BS	200 Kgs	0.450	60°	120°	198	115	57	19	6	35	6	80	8	6.5	72	M8
VTC-3670 SB/BS	200 Kgs	0.450	60°	120°	198	100	57	19	6	35	6	65	8	6.5	65	M8
VTC-4595 UB/BS	400 Kgs	0.650	60°	120°	232	151	75	25	8	45	8	105	11	8.5	75	M10
VTC-4595 SF/BS	400 Kgs	0.650	60°	120°	232	151	75	25	8	45	8	105	11	8.5	95	M10
VTC-4595 SB/BS	400 Kgs	0.650	60°	120°	232	143	75	25	8	45	8	97	11	8.5	97	M10
VTC-50125 UB/BS	350 Kgs	0.700	60°	120°	232	182	75	25	8	45	8	135	11	8.5	108	M12
VTC-50125 SF/BS	350 Kgs	0.700	60°	120°	232	182	75	25	8	45	8	135	11	8.5	127	M10
VTC-50125 SB/BS	350 Kgs	0.700	60°	120°	232	174	75	25	8	45	8	130	11	8.5	130	M12 Bolt
VTC-85150 UB/BS	600 Kgs	2.100	107°	96°	375	237	116	45	10	76	10	162	15	8.5	105	M16
VTC-85150 SF/BS	600 Kgs	2.100	107°	96°	375	235	116	45	10	76	10	175	15	8.5	154	M16
VTC-85150 SB/BS	600 Kgs	2.100	107°	96°	375	218	116	45	10	76	10	142	15	8.5	142	M16

## Vertical Hold Down Action

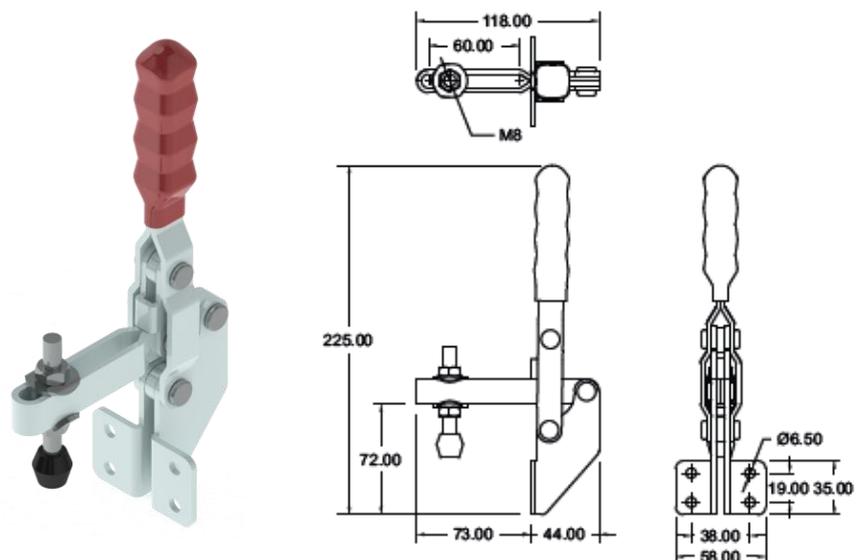
### Model No: VTC - 6440 - UB/FM

Arm: Adjustable Arm  
 Base: Front Mounting  
 Holding Capacity: 100 Kgs.  
 Weight: 0.200 Kgs.



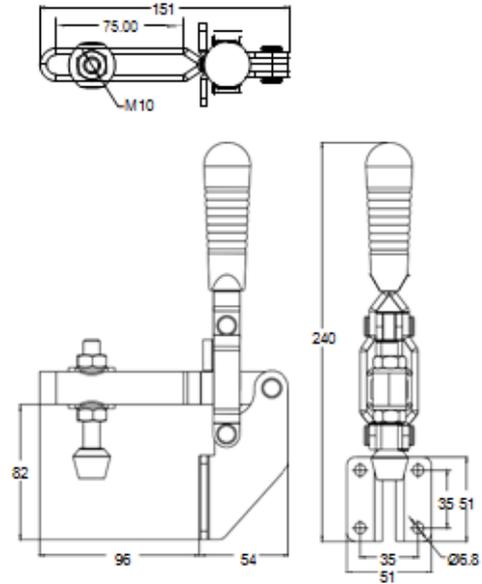
### Model No: VTC - 7273 - UB/FM

Arm: Adjustable Arm  
 Base: Front Mounting  
 Holding Capacity: 200 Kgs.  
 Weight: 0.500 Kgs.



### Model No: VTC - 8296 - UB/FM

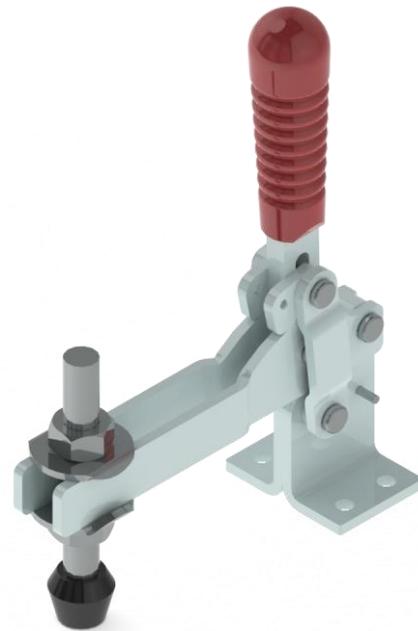
Arm: Adjustable Arm  
 Base: Front Mounting  
 Holding Capacity: 500 Kgs.  
 Weight: 0.700 Kgs.



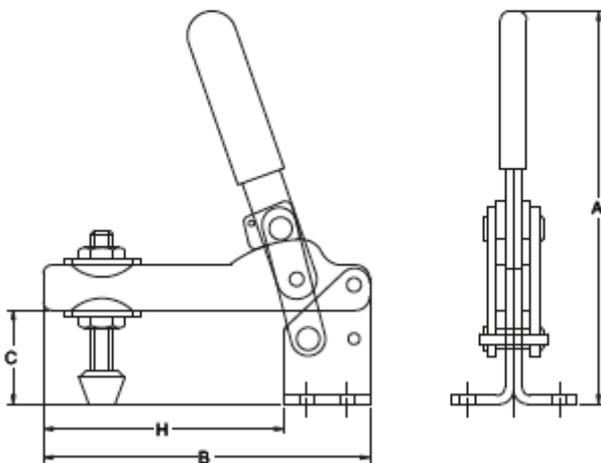
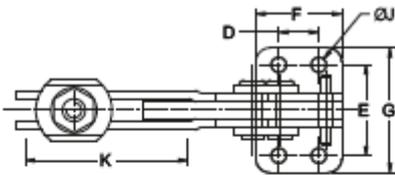
## Cam Clamps

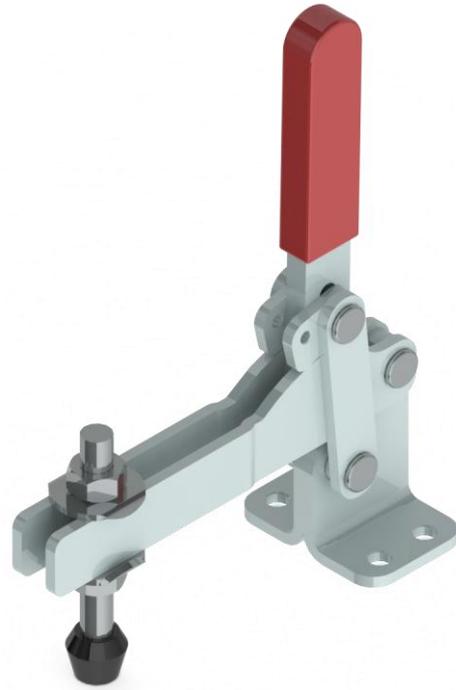
### CAM ACTION CLAMPS

Built in clamping range automatically compensates for variations in part thickness. Cam Clamps are similar to Vertical clamps but the clamping force is generated not by a toggle linkage but by the action of a roller on a cam. The Cam Clamps have a high to low limit clamping range that automatically compensates for part thickness variation & therefore eliminates time consuming readjustments. Cam Clamps are available in three sizes offering part variation thickness allowance from 3 mm to 5 mm. These clamps are ideal for fixtures designed for clamping of castings & forgings. The pivots pins, cam & its roller are hardened for higher efficiency of clamps.



CAM - 219





CAM – 229

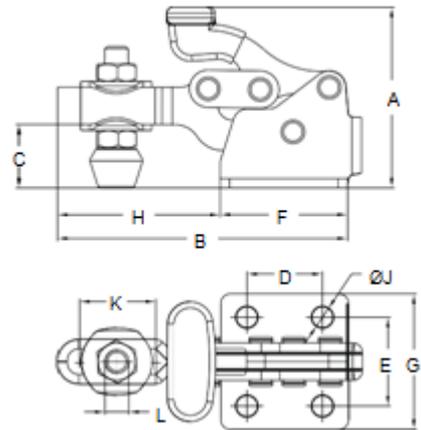
Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions									
					A	B	C	D	E	F	G	H	J	K
CAM - 219	150 Kgs	0.800	180	115	190.5	150.0	46.0	19.1	38.1	38.1	53.0	112.0	6.5	63.5
CAM - 229	450 Kgs	1.100	180	115	230.0	183.0	52.3	22.4	50.8	47.8	70.0	135.0	8.5	69.9

## Horizontal Hold Down Action

Model No: H - 1330 UB



Also Available  
in Stainless Steel  
H - 1330 - UB - SS



Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
H - 1330 - UB	50 Kgs	0.070	170°	95°	37	60	13	16	19	26	29	34	4.5	13	M5 Bolt

## H - Series Miniature Clamps



Model No. H - 1323 - UB

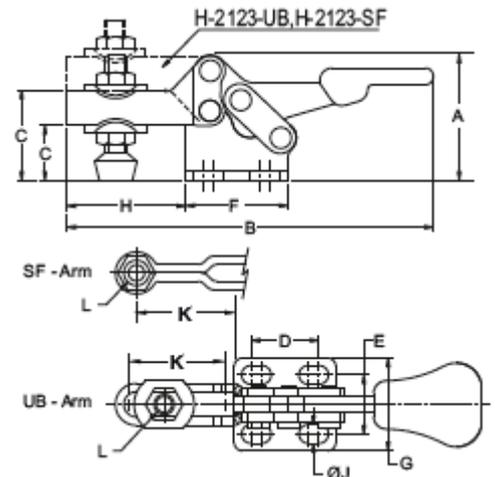


Model No. H - 1323 - SF

Also Available in  
Stainless Steel  
H - 1323 - UB - SS  
H - 2123 - UB - SS



Model No. H - 2123 - UB

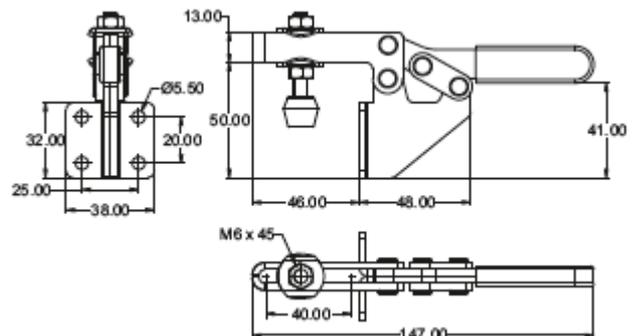
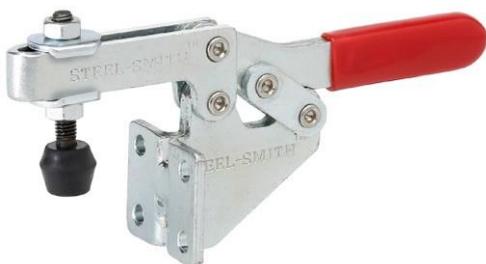


Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
H - 1323 - UB	50 Kgs	0.040	90°	90°	30	85	14	11-16	14	24	22	28.5	4.5	18	M5 Bolt
H - 1323 - SF	50 Kgs	0.040	90°	90°	30	85	14	11-16	14	24	22	28.5	4.5	24	M5 Bolt
H - 2123 - UB	50 Kgs	0.040	90°	90°	30	85	21	11-16	14	24	22	28.5	4.5	18	M5 Bolt
H - 2123 - SF	50 Kgs	0.040	90°	90°	30	85	21	11-16	14	24	22	28.5	4.5	24	M5 Bolt

## Model No: H - 4835 UB/FM

Holding Capacity: 250 Kgs.

Weight: 0.260 Kgs.



## Horizontal Hold Down Action

### H - Series Medium Duty Clamps



Model No. H - 2655 SF



Model No. H - 2655 UB



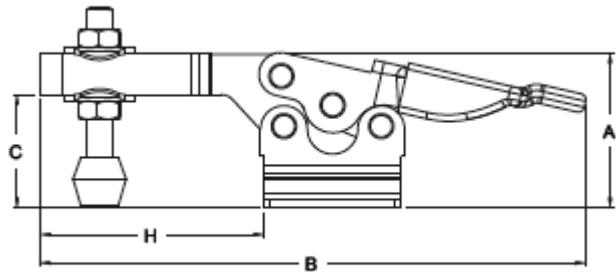
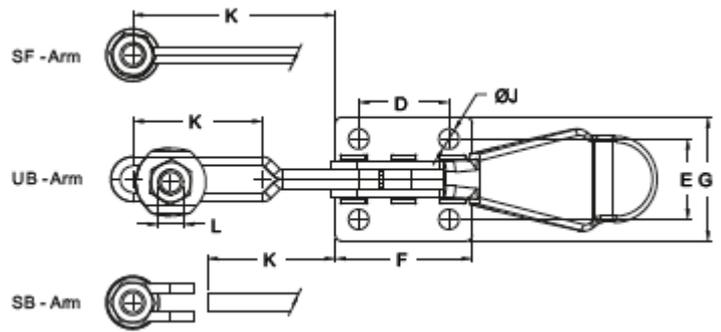
Model No. H - 3665 SF



Model No. H - 3655 UB



Model No. H - 45105 UB

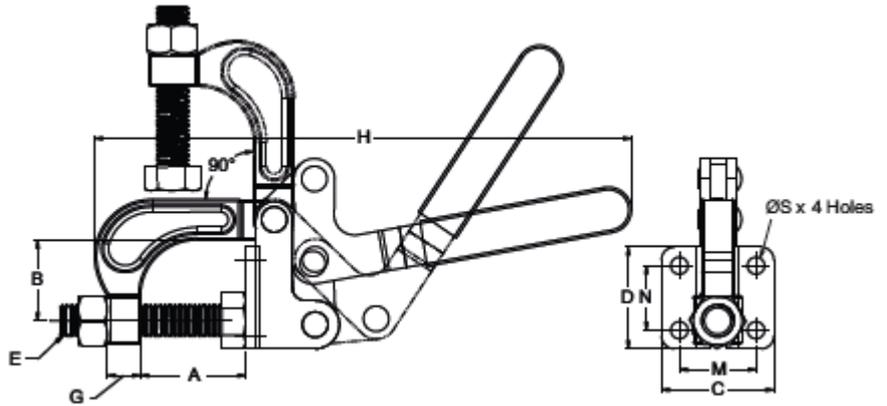


Also Available  
in Stainless Steel  
H-2655-UB-SS  
H-3665-UB-SS

Model No.	Holding Capacity	Weight Kg	Handle	Bar Open	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
H-2655 UB	150 Kgs	0.150	70°	90°	39	148	27	24	22	35	33	64	4.5	33	M6 Bolt
H-2655 SF	150 Kgs	0.150	70°	90°	39	148	27	24	22	35	33	64	4.5	58	M6 Bolt
H-3665 UB	250 Kgs	0.260	70°	90°	50	175	36	29	26	44	40	70	6.5	31	M8 Bolt
H-3665 SF	250 Kgs	0.260	70°	90°	50	175	36	29	26	44	40	70	6.5	62	M8 Bolt
H-3665 SB	250 Kgs	0.260	70°	90°	50	175	36	29	26	44	40	55	6.5	55	M8 Bolt
H-45105 UB	350 Kgs	0.560	60°	85°	65	275	45	40	38	57	55	112	8.3	75	M10
H-45105 SF	350 Kgs	0.560	60°	85°	65	275	45	40	38	57	55	112	8.3	105	M10
H-45105 SB	350 Kgs	0.560	60°	85°	65	275	45	40	38	57	55	95	8.3	95	M10
H-57126 UB	500 Kgs	0.880	60°	85°	82	320	60	45	40	65	62	147	8.5	100	M12
H-57126 SF	500 Kgs	0.880	60°	85°	82	320	60	45	40	65	62	147	8.5	110	M12
H-57126 SB	500 Kgs	0.880	60°	85°	82	320	60	45	40	65	62	150	8.5	120	M12

## Pull Back Action

Model No: GH – 80379



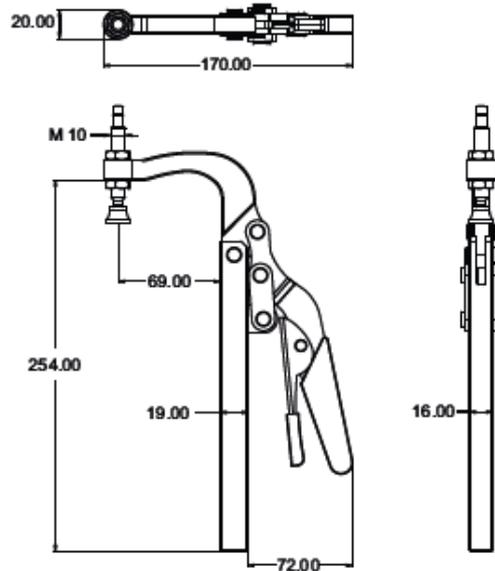
Also Available in  
Stainless Steel  
GH-80379-SS

Model No.	A	B	Mounting Base		E	G	H	M	N	S	Holding Capacity	Wt. in Kgs
			C	D								
GH – 80379	41	32	44	40	M 12	13	210	30	25.4	6.70	400 Kg	0.640

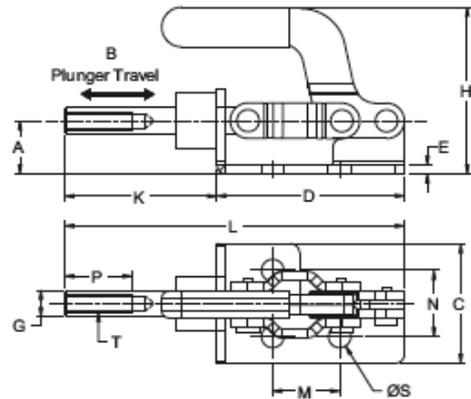
## Model No: PB - 345

Holding Capacity: 350 Kgs.

Weight: 3.000 Kgs.



## Model No: HTC - 1220



Also Available in  
Stainless Steel  
HTC-1220-SS

Model No.	A	Plunger Travel B	Mounting Base				ØS	Plunger Dia. G	H	K	L	Hole Depth P	Tapped Hole TØ	Holding Capacity	Wt. in Kgs	
			C	D	E	M										N
HTC-1220	12	20	27	42	2	15	15	5	6	38	34	76	20	M 4 x 0.70	50 Kg	0.050

## Straight Line Action

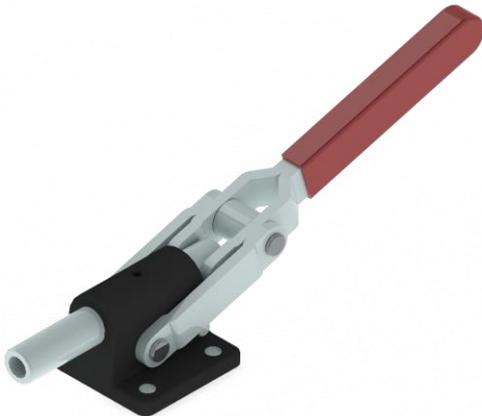
### HTC - Series Clamps Forged Base



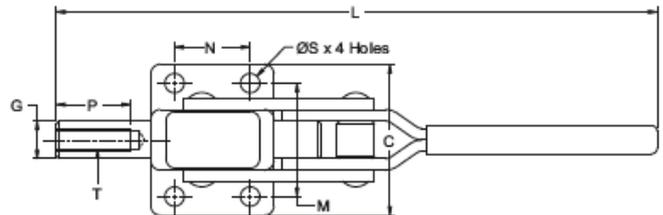
Model No. HTC - 3025



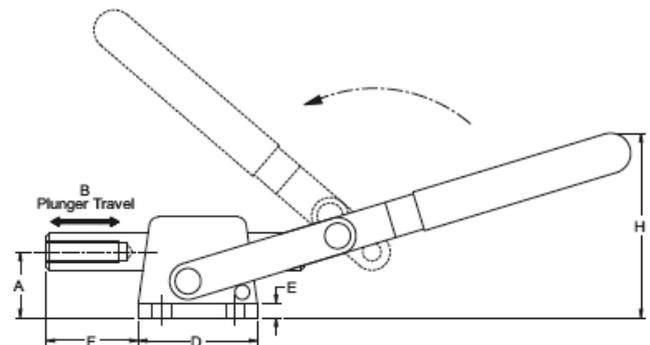
Model No. HTC - 2326



Model No. HTC - 3545



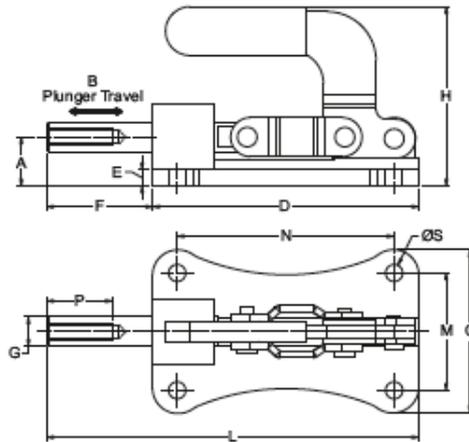
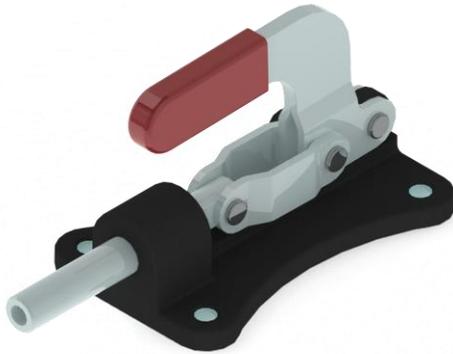
Model No. HTC - 5065



Model No.	A	Plunger Travel B	Mounting Base			F	Plunger Dia. G	H	L	Hole Depth P	Mounting Dimensions			Tapped Hole TØ	Holding Capacity	Wt. in Kgs
			C	D	E						M	N	ØS			
HTC-2326	23	26	54	28	6	26	9.5	58	170	20	42	16	5.5	M6 x 1.00	300 Kg	0.400
HTC-3025	30	25	75	50	6	25	12	75	245	25	55	30	6.5	M 8 x 1.25	1100 Kg	0.870
HTC-3545	35	45	78	68	8	46	20	92	310	30	60	45	8.5	M 12 x 1.75	2600 Kg	1.750
HTC-5065	50	68	100	75	10	85	25	130	375	35	75	50	10.5	M 16 x 2.00	4500 Kg	3.150

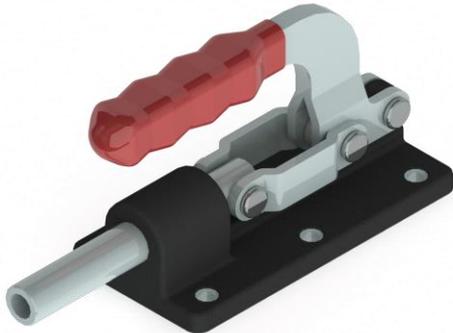
## Straight Line Action

Model No: HTC - 1530 LH

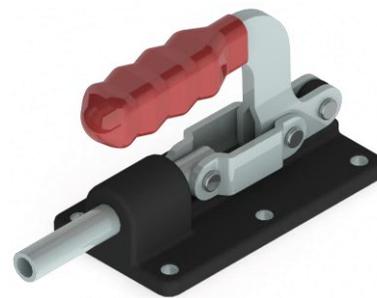


Model No.	A	Plunger Travel B	Mounting Base			F	Plunger Dia. G	H	L	Hole Depth P	Mounting Dimensions			Tapped Hole T Ø	Holding Capacity	Wt. in Kgs
			C	D	E						M	N	ØS			
HTC-1530LH	15	30	51	81	5	30	9	55	110	20	36	66	5.2	M 5 x 0.80	200 Kg	0.400

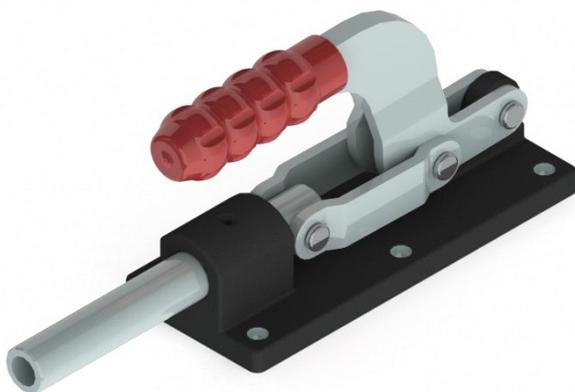
### HTC - Series Clamps - Low Height



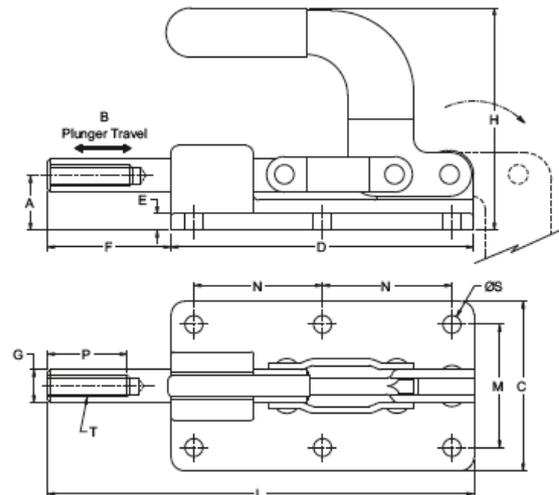
Model No. HTC - 2550 LH



Model No. HTC - 2040 LH



Model No. HTC - 35100

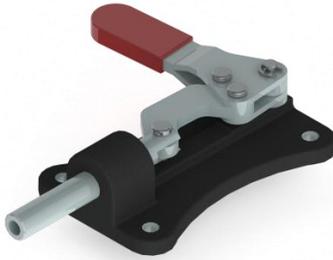


Model No.	A	Plunger Travel B	Mounting Base			F	Plunger Dia. G	H	L	Hole Depth P	Mounting Dimensions			Tapped Hole T Ø	Holding Capacity	Wt. in Kgs
			C	D	E						M	N	ØS			
HTC-2040 LH	20	40	60	110	6	41	12	80	150	25	45	47	6.5	M 8 x 1.25	600 Kg	0.850
HTC-2550 LH	25	50	65	130	8	56	16	85	185	30	48	52	8.5	M 10 x 1.50	800 Kg	1.200
HTC-3075 LH	30	75	75	185	10	75	20	110	260	30	55	82.5	8.5	M 12 x 1.75	1200 Kg	2.000
HTC-35100 LH	35	100	90	215	12.5	111	25	130	319	35	66	95	10.5	M 16 x 2.00	2000 Kg	3.600

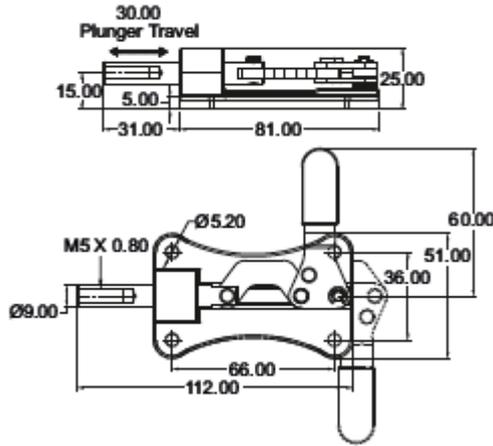
## Straight Line Action

Model No: HTC - 3015 FH - R/L

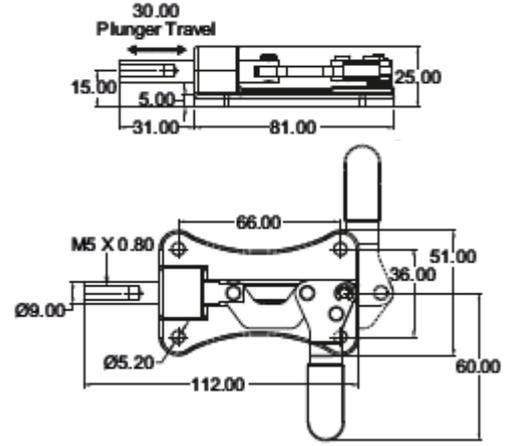
Holding capacity - 200 kgs.  
Weight of clamp - 0.400kgs.



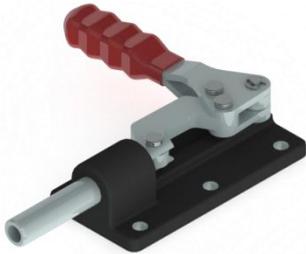
HTC - 3015 FH - L



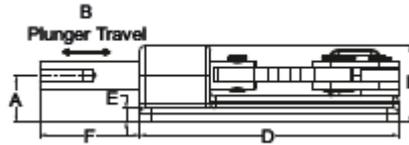
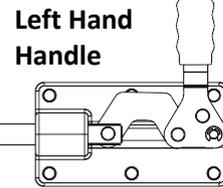
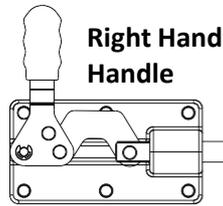
HTC - 3015 FH - R



## HTC - Series Clamps - Flat Handle

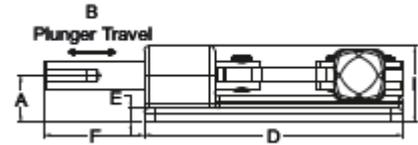


Model No. HTC - 5025 FH



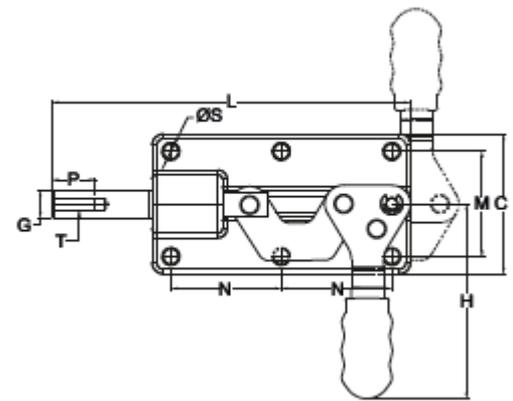
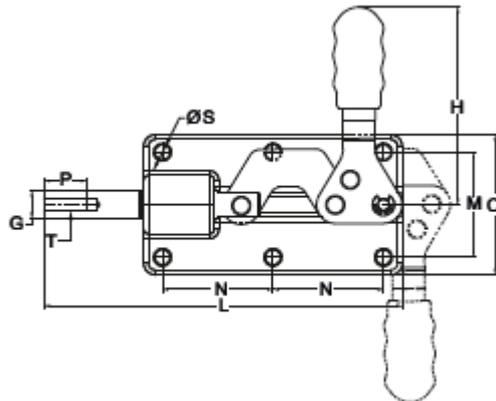
HTC - 4020 FH - L

HTC - 5025 FH - L



HTC - 4020 FH - R

HTC - 5025 FH - R



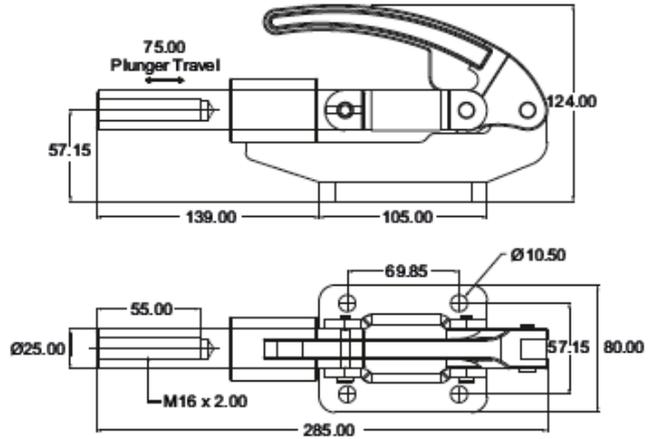
Model No.	A	Plunger Travel B	Mounting Base				Plunger Dia. G	H	I	L	Hole Depth P	Mounting Dimensions			Tappe d Hole TØ	Holding Capacity	Wt. in Kgs
			C	D	E	F						M	N	ØS			
HTC-4020 FH - L HTC-4020 FH - R	20	40	60	110	6	41	12	85	25	150	25	45	47	6.5	M 8 x 1.25	600 Kg	0.850
HTC-5025 FH - L HTC-5025 FH - R	25	50	65	130	8	56	16	107	33	185	30	48	52	8.5	M 10 x 1.50	800 Kg	1.200

## Straight Line Action

### Model No: HTC - 650 - PS

Holding capacity - 3500 kgs.

Weight of clamp - 2.500 kgs.



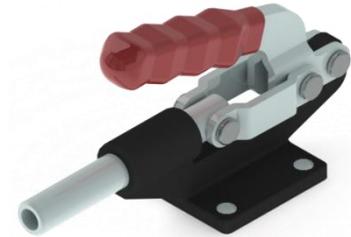
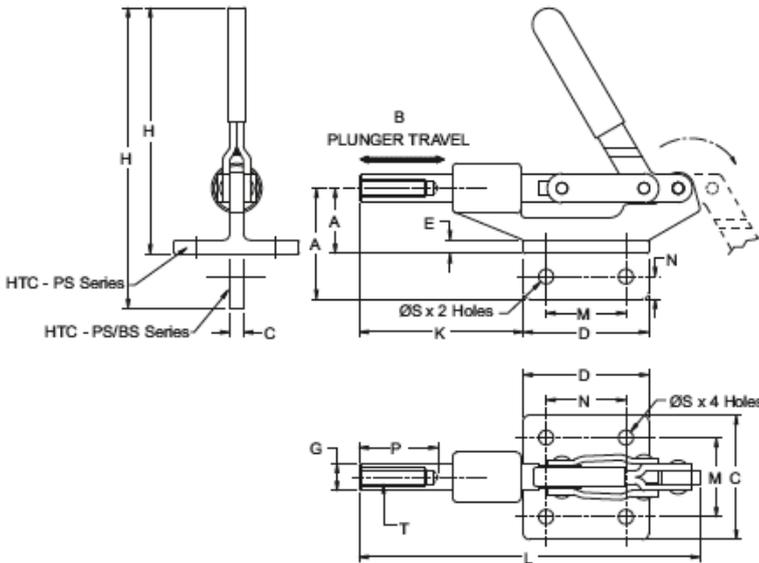
### HTC - Series Clamps - Package Size



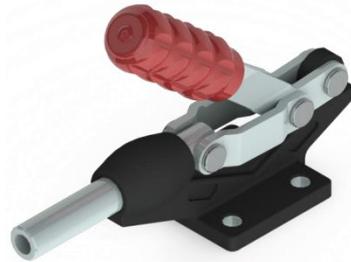
Model No. HTC - 2530 PS/BS



Model No. HTC - 2530 PS



Model No. HTC - 3540 PS



Model No. HTC - 4560 PS

Model No.	A	Plunger Travel B	Mounting Base						Plunger Dia. G	H	K	L	Hole Depth P	Tapped Hole TØ	Holding Capacity	Wt. in Kgs
			C	D	E	M	N	SØ								
HTC-1825 PS	18	29	40	40	5	28	28	5.5	9	70	33	110	20	M5 x 0.80	100 Kg	0.200
HTC-2530 PS	25	34	55	55	6	38	38	6.5	12	100	65	147	25	M 8 x 1.25	300 Kg	0.400
HTC-3540 PS	35	40	61	61	6	42	42	6.5	16	115	85	180	30	M 10 x 1.50	400 Kg	0.880
HTC-4560 PS	45	60	75	75	9	50	50	10.5	20	160	115	230	30	M 12 x 1.75	700 Kg	1.750
HTC-2530 PS/BS	49	34	6	55	-	35	10	6	12	130	67	146	25	M 8 x 1.25	300 Kg	0.375
HTC-3540 PS/BS	61	40	8	61	-	40	10	8	16	135	90	185	30	M 10 x 1.50	400 Kg	0.850
HTC-4560 PS/BS	75	60	8	75	-	50	12.5	10	20	185	122	235	30	M 12 x 1.75	700 Kg	1.650

## Straight Line Action

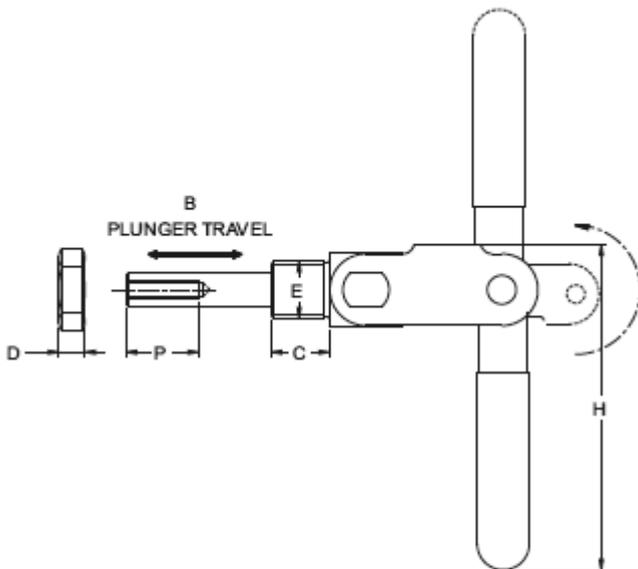
### HTC - Series Clamps - Front Mounting



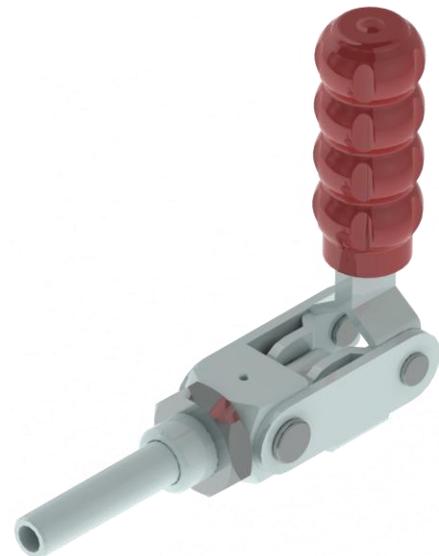
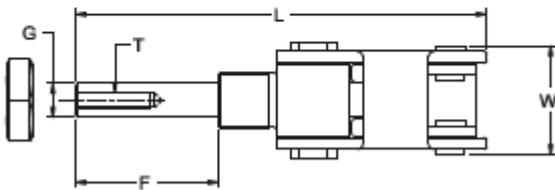
Model No. HTC -190 FM



Model No. HTC -350 FM



Model No. HTC - 500



Model No. HTC - 600

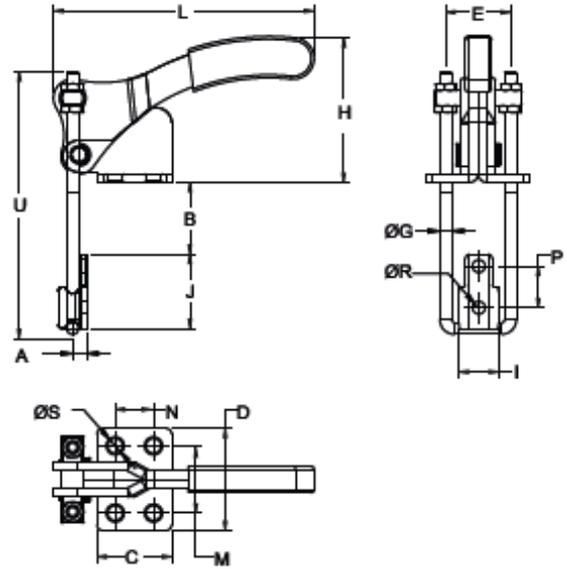
Model No.	Plunger Travel B	C	D	Mounting Thread Size E	F	Plunger Dia. G	H	L	P	W	Tapped Hole T	Holding Capacity	Wt. in Kgs
HTC-190 FM	24	11	6	M 16 x 2.0	30	9.5	78	77	28	24	M 6 x 1.0	50 Kg	0.130
HTC-350 FM	36	15	6	M 20 x 1.5	42	12	102	110	30	33	M 8 x 1.25	100 Kg	0.260
HTC-500 FM	39	18	9	M 20 x 1.5	53	12	120	140	30	40	M 8 x 1.25	150 Kg	0.550
HTC-600 FM	60	24	10	M 24 x 2.0	64	16	145	175	30	47	M 10 x 1.5	350 Kg	0.850

## Pull Action clamps

### Pull Action Clamps - PAV Series



Model No. PAV – 620

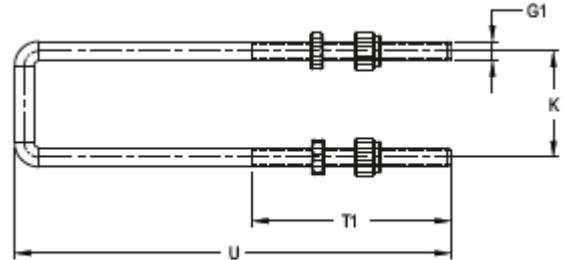


Also Available  
in Stainless Steel  
PAV-620-SS  
PAV-850-SS

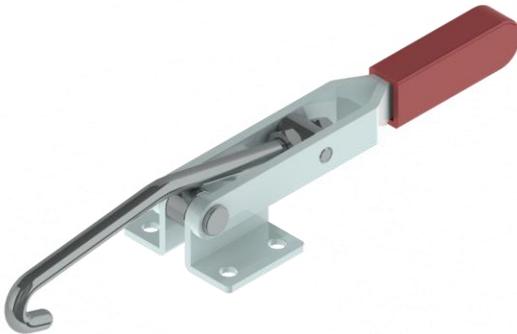
Model No.	A	B		Mounting Base		E	G	H	Latch Plate		L	Mounting Dimensions					Thread Adjustment T	Holding Capacity	Wt. in Kgs
		Min	Max	C	D				I	J		M	N	P	ØS	ØR			
PAV-620	5	1	28	25.4	35	21	4	44	13.5	25	85	23	13	14.2	5.1	4.2	28	100 Kg	0.130
PAV-850	8.5	1	35	35	55	34	6	65	17.5	38	110	40	20	20.5	6.5	5.5	35	500 Kg	0.650

Optional U-Bolt Configuration. Use the below number for additional long U-Bolts.

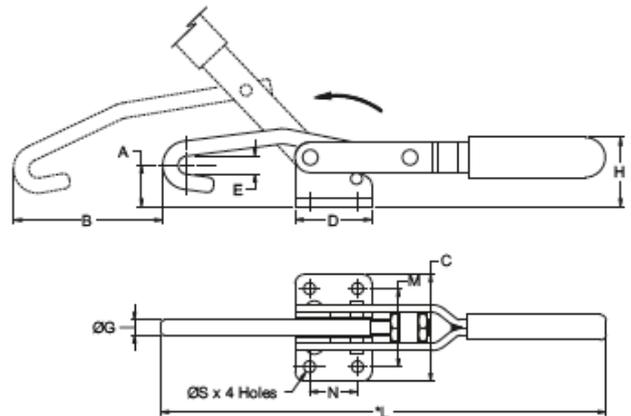
Model No	U Bolt Part Number	SS - U Bolt Part Number	U	T1	G1	K
PAV - 620	M49045	M49045 - SS	90			
PAV - 620 - M25	M411545	M411545 - SS	115	45	M4	21
PAV - 620 - M50	M414045	M414045 - SS	140			
PAV - 850	M613055	M613055 - SS	130			
PAV - 850 - M25	M615555	M615555 - SS	155	55	M6	34
PAV - 850 - M50	M618055	M618055 - SS	180			



### Pull Action Clamps - PA Series



Model No. PA -



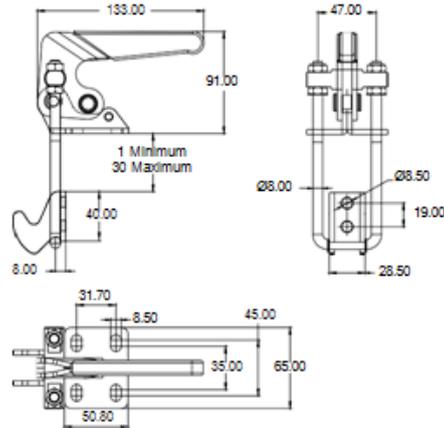
\* Maximum Dimension

Model No.	A	B		Mounting Base		E	G	H	L*	Mounting			Thread Adjustment T	Holding Capacity	Wt. in Kgs
		Min	Max	C	D					M	N	ØS			
PA-1010	12	13	28	38	26	8	6	25	150	27	16	4.5	15	75 Kg	0.120
PA-2056	20	53	66	55	40	10	8	37	245	40	25	6.5	13	200 Kg	0.380
PA-3580	35	52	72	67	47	12	10	55	305	48	30	6.5	20	400 Kg	0.650
PA-4575	45	64	84	85	54	16	12	66	365	60	29	10.5	20	500 Kg	0.950

## Pull Action Clamps

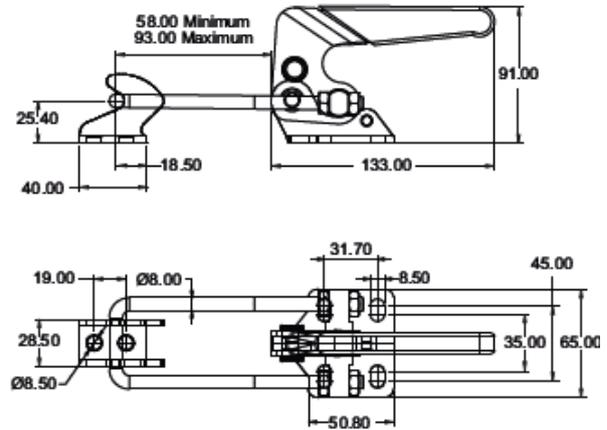
### Model No: PAV - 1065

Holding Capacity: 1,000 Kgs. Weight: 0.800 Kgs.



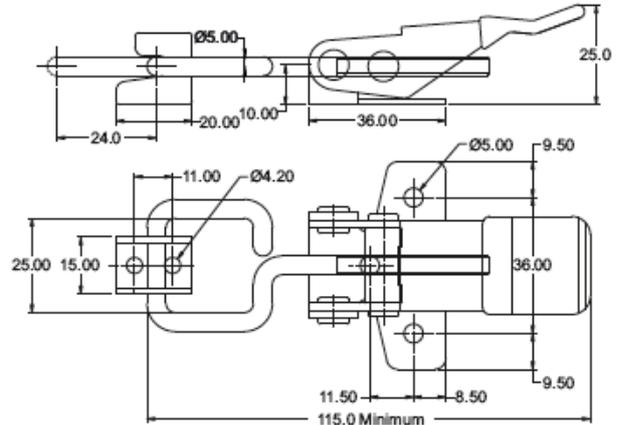
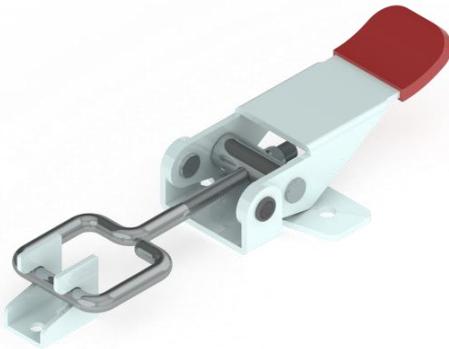
### Model No: PAH - 5601

Holding Capacity: 1,000 Kgs. Weight: 0.800 Kgs.



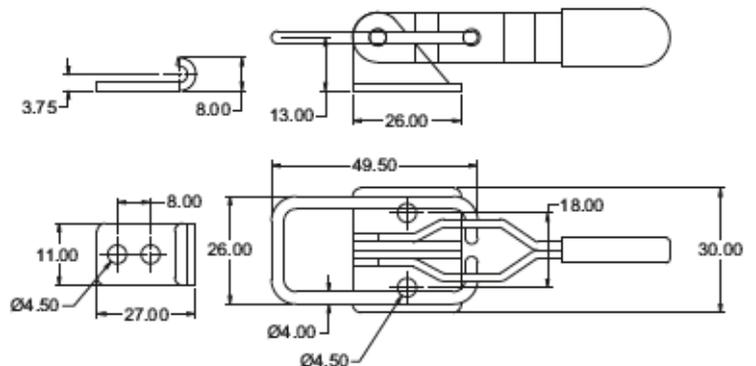
### Model: PAH - 2801

Holding Capacity: 50 Kgs. Weight: 0.100 Kgs.



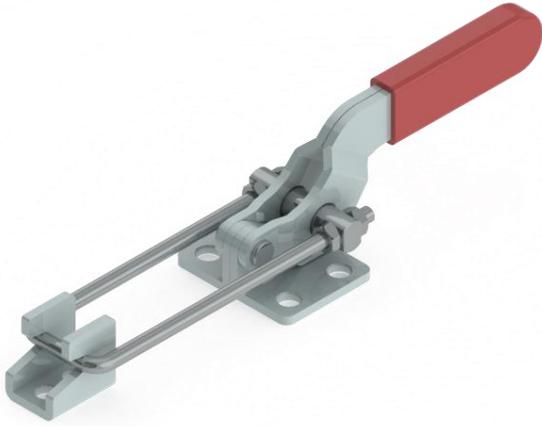
### Model: PA - 325

Holding Capacity: 50 Kgs. Weight: 0.060 Kgs.

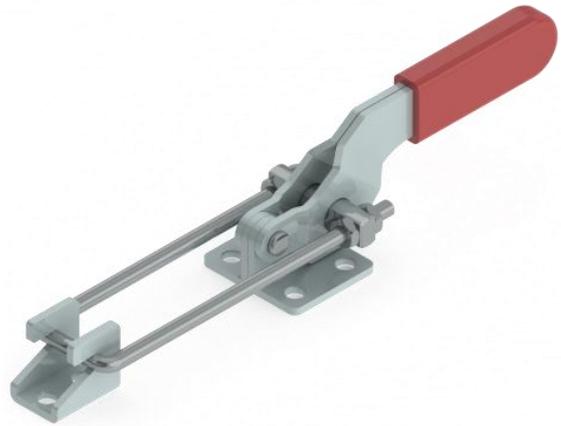


## Pull Action clamps

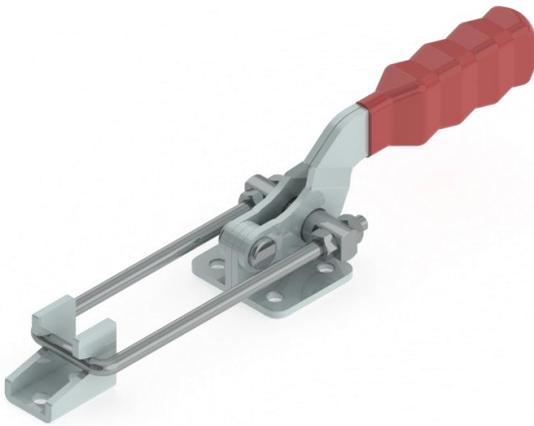
### Pull Action Clamps - PAH Series



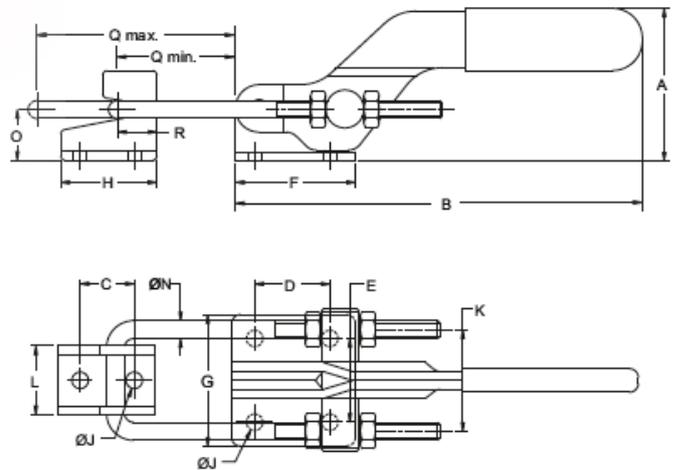
Model No. PAH - 1515



Model No. PAH - 1210



Model No. PAH - 1725

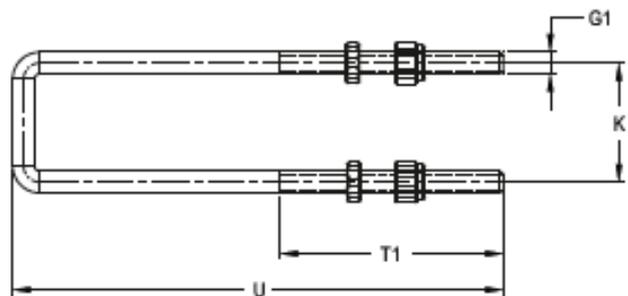


Also Available  
in Stainless Steel  
PAH - 1210 - SS  
PAH - 1515 - SS  
PAH - 1725 - SS

Model No.	Holding Capacity	Weight	Drawing Movement	Dimensions															
				A	B	C	D	E	F	G	H	ØJ	K	L	ØN	O	Q Min	Q Max	R
PAH - 1210	100 Kgs	0.100	46.0	29	95	11	16	20	26	30	20	4.5	21	15	4	12	23.0	56.0	9
PAH - 1515	200 Kgs	0.220	44.0	45	120	11	20	32	35	45	25	6.5	28	19	5	15	38.0	70.0	13
PAH - 1725	350 Kgs	0.350	50.0	50	148	18	25	28	40	45	32	6.5	34	23	6	16.5	40	76.0	16.5

Optional U-Bolt Configuration. Use the below number for additional long U-Bolts

Model No	U Bolt Part Number	SS - U Bolt Part Number	U	T1	G1	K
PAH - 1210	M49045	M49045 - SS	90	45	M4	21
PAH - 1210 - M25	M411545	M411545 - SS	115			
PAH - 1515	M511045	M511045 - SS	110			
PAH - 1515 - M25	M513545	M513545 - SS	135	45	M5	28
PAH - 1515 - M50	M516045	M516045 - SS	160			
PAH - 1725	M613055	M613055 - SS	130			
PAH - 1725 - M25	M615555	M615555 - SS	155	55	M6	34
PAH - 1725 - M50	M618055	M618055 - SS	180			

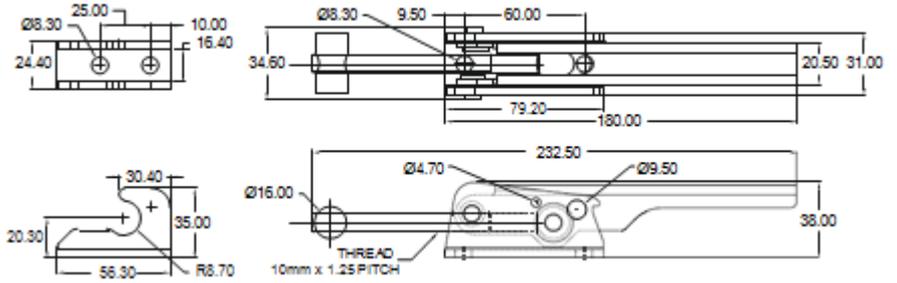


## Pull Action clamps

### Model No: PAH-43-4000

Holding Capacity - 2000 kgs  
Weight - 0.470 kg

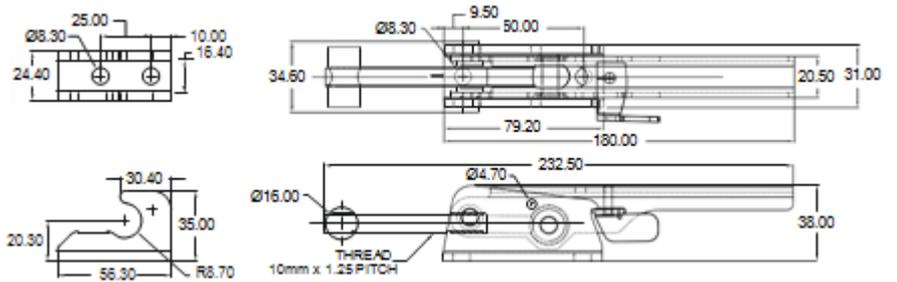
Also Available in  
Stainless Steel  
PAH-43-4000-SS



### Model No: PAH-44-4000-TRIG

With Additional Locking Mechanism  
Holding Capacity - 2000 kgs  
Weight - 0.490 kg

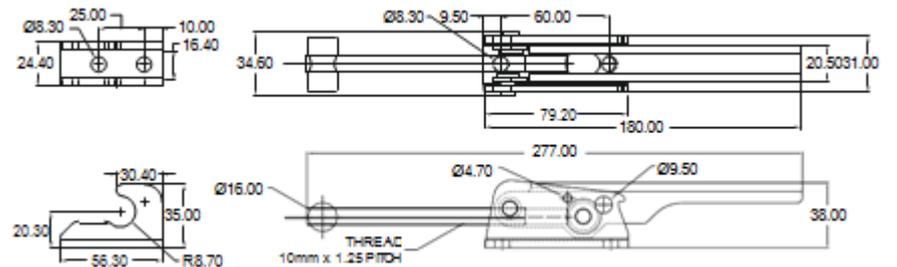
Also Available in  
Stainless Steel  
PAH-44-4000-SS



### Model No: PAH-43-4000-150

Holding Capacity - 2000 kgs  
Weight - 0.500 kg

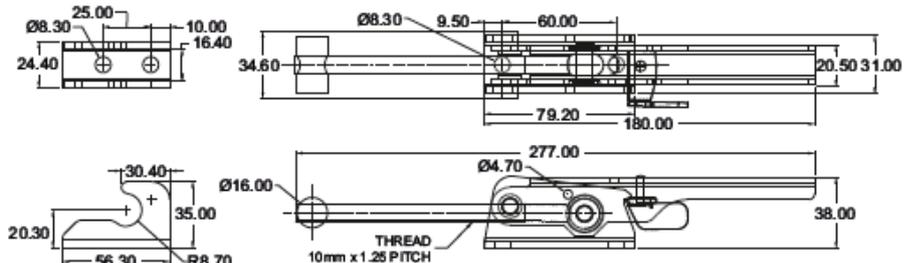
Also Available in  
Stainless Steel  
PAH-43-4000-150-SS



### Model No: PAH-44-4000-150-TRIG

With Additional Locking Mechanism  
Holding Capacity - 2000 kgs  
Weight - 0.520 kg

Also Available in Stainless  
Steel  
PAH-44-4000-150-TRIG-SS

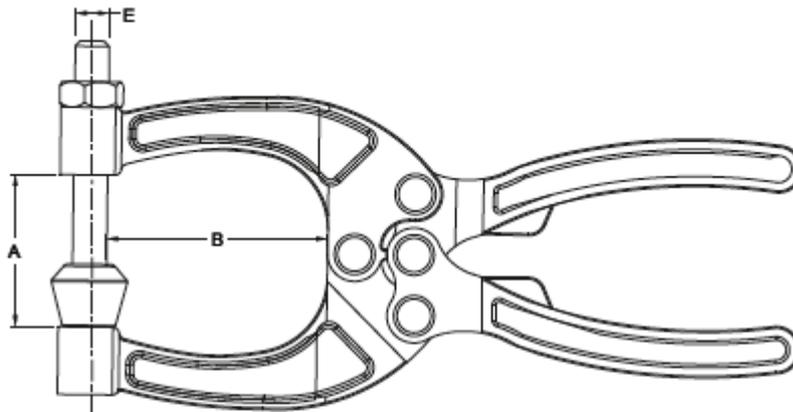


## Squeeze Action Clamps

### Toggle Pliers - TP Series



Model No.TP - 4570



Model No.TP - 2528



Model No.TP - 3245

MODE L	A	B	DØ	E	L	HOLDING CAPACITY	WT. IN
TP - 2528	25	28	13	M 6 X 1.00	128	100 Kg	0.220
TP - 3245	32	45	15	M 8 x 1.25	195	200 Kg	0.570
TP - 4570	45	70	18	M 10 x 1.50	220	400 Kg	0.640

## V.G. Series

### VG Series

Steel-Smith introduces the all new VG Plier series. This new generation plier series expands the wide portfolio of toggle clamps and clamping equipment's. Designed and developed for easy, single hand operation, the VG Plier series come as a great aid in tool room and fix Turing applications.

The 11 member strong family of VG Pliers can take on multiple tasks with remarkable ease. Be it delicate wood work or the extreme welding applications. Each plier comes with a spindle assembly which enables the adjustment of pressure. The spring-loaded mechanism provided at one end of the plier ensures quick release at just a touch of finger.

What's more, with an ever innovative team at the helm of our relentless R & D department, you can always expect newer additions. And If you have a specialized application area, we are equipped to deliver customized design solutions.

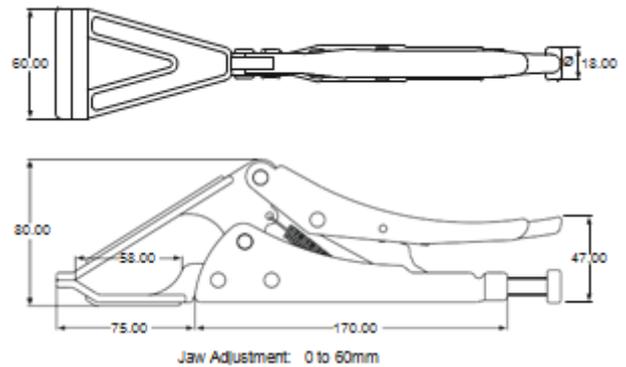


### VG-3070 Flat Jaw Plier

Having a 60mm wide jaw this Plier has a complete surface contact in the clamped position, distributing pressure evenly on the clamped surfaces. The Plier locks with a powerful grip making it ideal as a sheet metal tool and for applications such as bending, forming and crimping.



Model No.VG-307

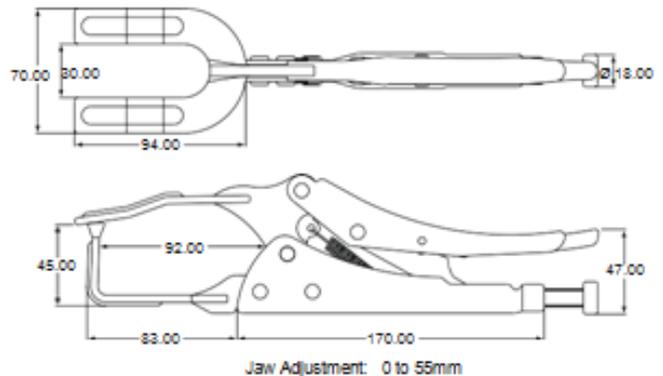


### VG-3060 U Jaw Deep Throat Plier

This Plier is designed with a "U" Shaped Jaw, which gives it a deeper throat depth in the clamped position. Permits the clamping of adjacent joints and perfect visibility when welding.



Model No.VG-3060 U



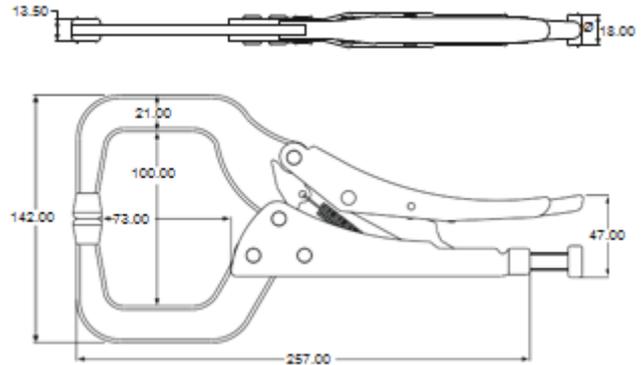
## V.G. Series

### VG-8070 C Jaw Plier

This clamp features wide arms that reach over or around most obstructions. The Plier had a throat depth of 73mm and a jaw depth of 100mm. These pliers can easily replace the conventional C clamps in applications such as welding, spotting, assembling etc.



Model No.VG-8070 C



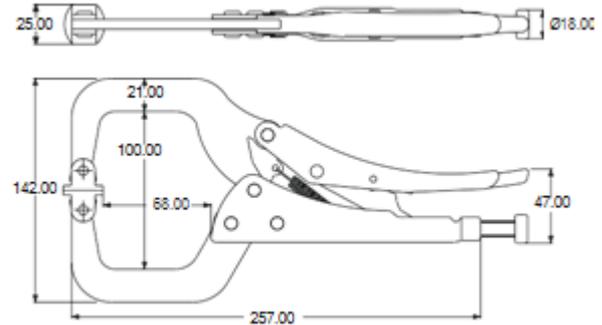
Jaw Adjustment: 0 to 70mm

### VG-10764 C Jaw Plier

Dimensionally this Plier is same as the VG 8070 Plier with an exception of the swivel pad. The swivel pads adjust parallel to the work piece. The Plier had a throat depth of 68mm and a jaw depth of 100mm.



Model No.VG-10764



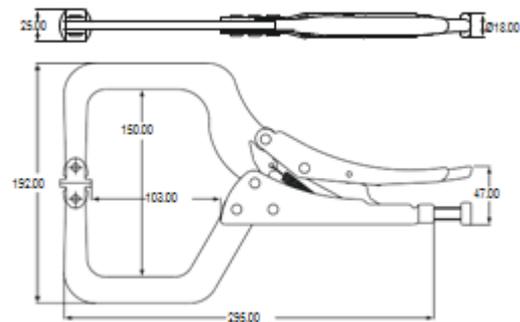
Jaw Adjustment: 0 to 70mm

### VG-150100 C Jaw Plier

This Plier has the deepest jaw depth i.e. 150mm, to reach over flanges or obstructions on the work piece. Swivel pads are a standard feature & they adjust parallel to the work piece. The Plier had a throat depth of 100mm and a jaw depth of 150mm.



Model No.VG-150100 C



Jaw Adjustment: 0 to 80mm

### VG-80200 C Jaw Plier

This is the longest Plier available with Steel Smith. It has a reach of 200mm, which enables it to reach a distant clamping area. The swivel pads adjust parallel to the work piece. The Plier has an adjustment of 0 to 160mm also the highest in the series.

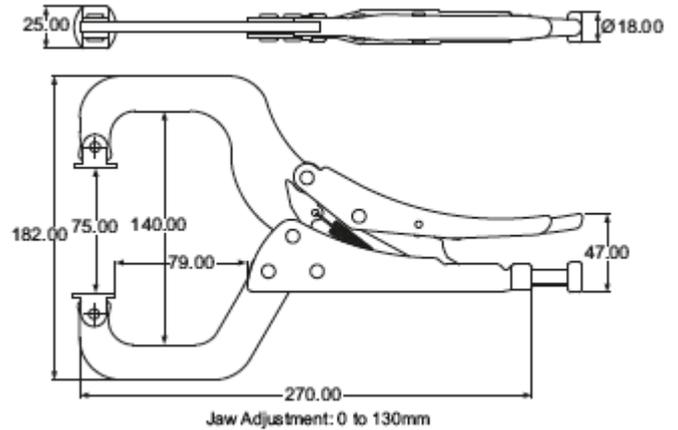
## V.G. Series

### VG-14075 C Jaw Plier

The unique feature of this Plier is that it has a preset Jaw distance of the 75mm. It is specially designed for clamping larger sections. The Plier has an adjustment of 0 to 130mm, so it can clamp a section of 200mm thickness Swivel pads are a standard feature & they adjust parallel to the work piece.



Model No.VG-14075



## V.G. Series

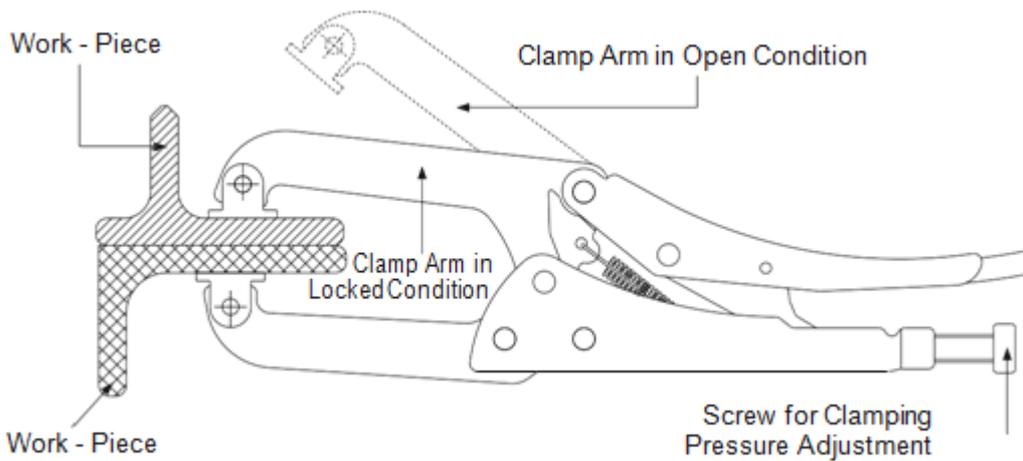
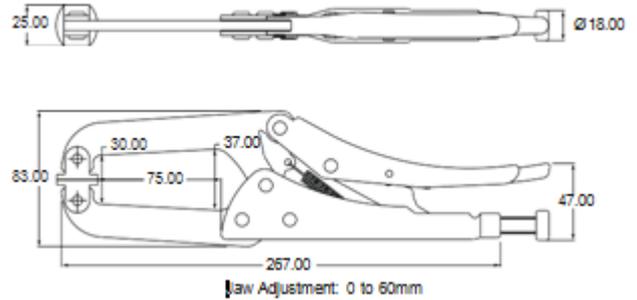
### Tapered Jaw Pliers

#### VG-3075 & VG-50125

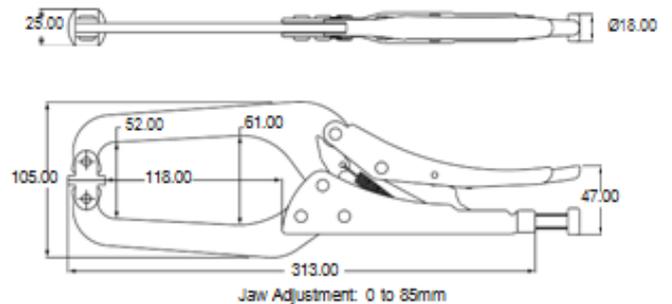
These Pliers have a slim compact design for easy reach into tight corners or small work areas. The pliers are available in 2 different sizes. VG-3075 has a jaw depth of 75mm whereas VG-50125 has a depth of 125mm.



Model No. VG-3075



Model No. VG-50125



## V.G. Series

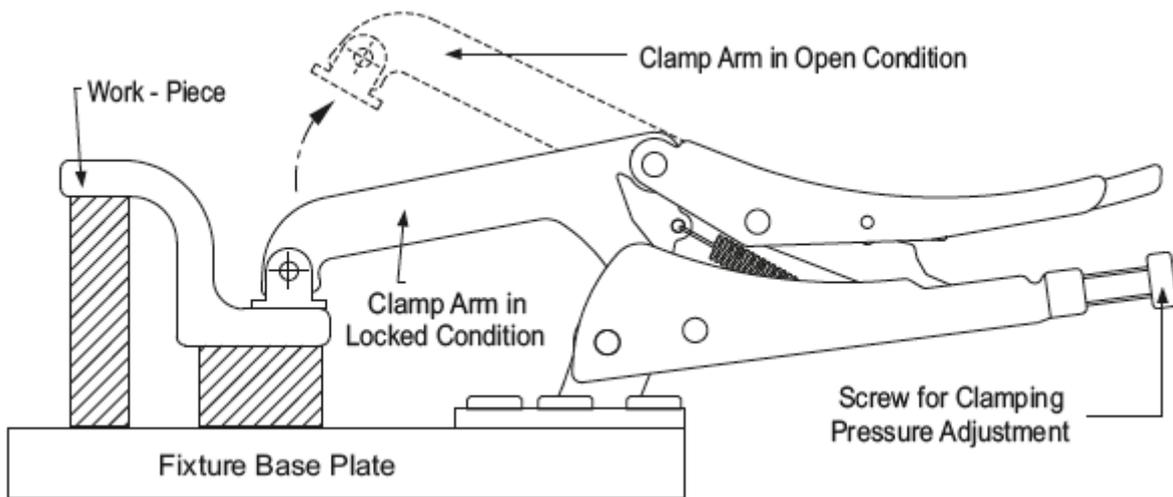
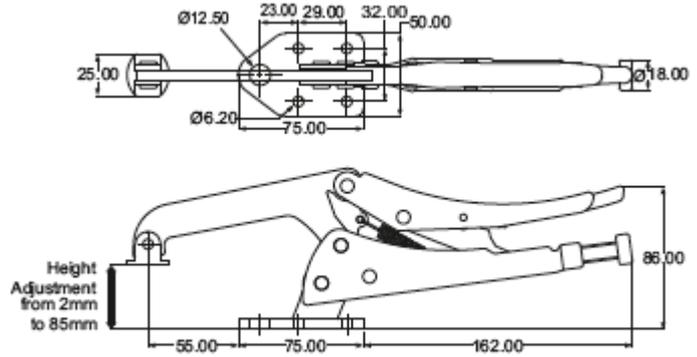
### Single Jaw Pliers

#### VG-5090 OA and VG-95100 OA

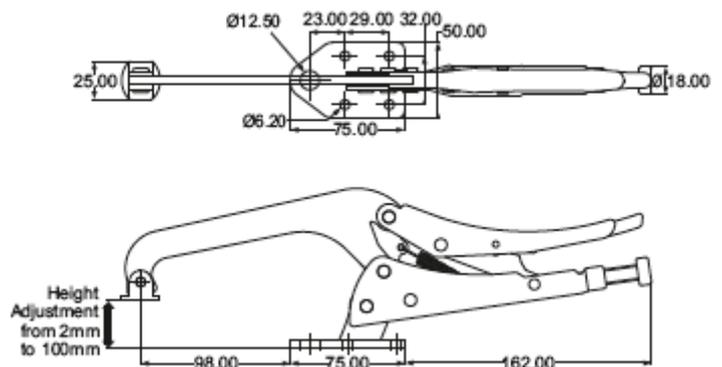
The Single Jaw Pliers have only the Top Jaw and the machine bed or the fixture base plate becomes the second jaw of the Plier. The Plier holds the work-piece against the bench and takes up very little space. This is an excellent Plier for drilling, fitting or gluing applications. The trigger release enables quick opening and closing of the Plier.



Model No.VG-5090 OA



Model No.VG-95100 OA



## F Clamps

### G-C Series F Clamps with Wooden Handle

MODEL NO	A MAX JAW OPENING	B THROAT DEPTH	C SWIVEL PAD	D ACME SCREW	E RAIL SIZE	WEIGHT IN KGS.
G12C	120	60	22	12	13.5 x 6.5	0.30
G16C	160	80	25	14	16.0 x 7.5	0.50
G20C	200	100	32	16	19.5 x 7.5	0.88
G25C	250	120	32	16	22.0 x 10.5	1.23
G30C	300	140	38	18	25.0 x 12.0	1.85
G40C	400	175	38	18	27.0 x 13.0	2.57
G60C	600	175	38	18	27.0 x 13.0	3.06
G80C	800	175	38	18	27.0 x 13.0	3.55

### SG-C Series F Clamps with Wooden Handle

MODEL NO	A MAX JAW OPENING	B THROAT DEPTH	C SWIVEL PAD	D ACME SCREW	E RAIL SIZE	WEIGHT IN KGS.
SG40C	400	120	38	18	25 x 12	1.91
SG50C	500	120	38	18	25 x 12	2.12
SG60C	600	120	38	18	25 x 12	2.33
SG80C	800	120	38	18	27 x 13	3.26
SG100C	1000	120	38	18	27 x 13	3.75
SG125C	1250	120	38	18	27 x 13	4.36
SG150C	1500	120	38	18	27 x 13	4.98

### G-C Series F Clamps with Tommy Bar Handle

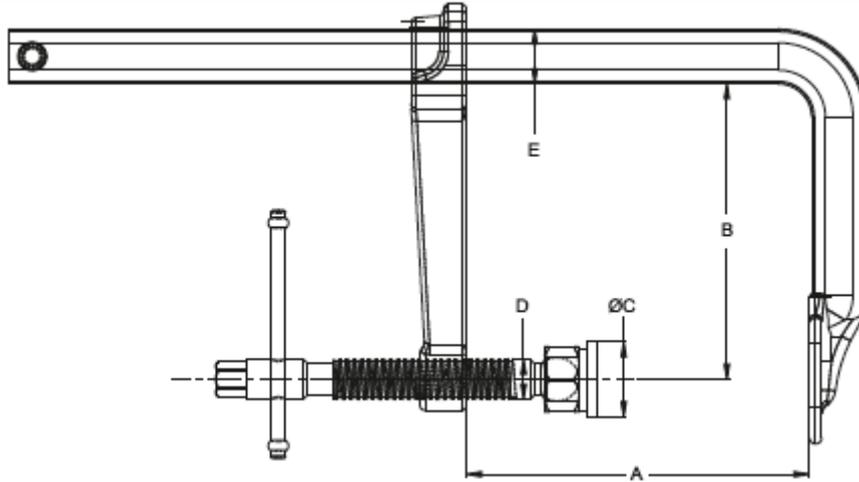
MODEL NO	A MAX JAW OPENING	B THROAT DEPTH	C SWIVEL PAD	D ACME SCREW	E RAIL SIZE	WEIGHT IN KGS.
G16CS	160	80	25	14	16.0 x 7.5	0.50
G20CS	200	100	32	16	19.5 x 7.5	0.88
G25CS	250	120	32	16	22.0 x 10.5	1.23
G30CS	300	140	38	18	25.0 x 12.0	1.85
G40CS	400	175	38	18	27.0 x 13.0	2.57
G60CS	600	175	38	18	27.0 x 13.0	3.06
G80CS	800	175	38	18	27.0 x 13.0	3.55

### SG-C Series F Clamps with Tommy Bar Handle

MODEL NO	A MAX JAW OPENING	B THROAT DEPTH	C SWIVEL PAD	D ACME SCREW	E RAIL SIZE	WEIGHT IN KGS.
SG40CS	400	120	38	18	25 x 12	1.91
SG50CS	500	120	38	18	25 x 12	2.12
SG60CS	600	120	38	18	25 x 12	2.33
SG80CS	800	120	38	18	27 x 13	3.26
SG100CS	1000	120	38	18	27 x 13	3.75
SG125CS	1250	120	38	18	27 x 13	4.36
SG150CS	1500	120	38	18	27 x 13	4.98



## F Clamps

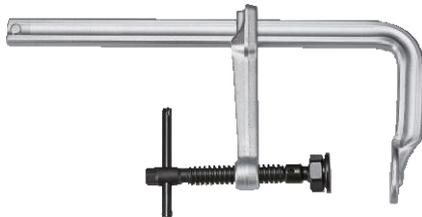


### SG-C12 Series F Clamps with Tommy Bar Handle & Removable Adapter



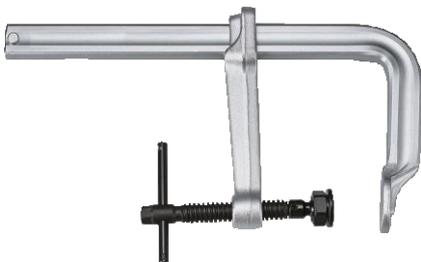
MODEL NO	A MAX JAW OPENING	B THROAT DEPTH	C SWIVEL PAD	D ACME SCREW	E RAIL SIZE	WEIGHT IN KGS.
S20C12	200	120	38	18	27 x 13	1.97
S25C12	250	120	38	18	27 x 13	2.09
S30C12	300	120	38	18	27 x 13	2.21
S40C12	400	120	38	18	27 x 13	2.46
S50C12	500	120	38	18	27 x 13	2.71
S60C12	600	120	38	18	27 x 13	2.96
S100C12	1000	120	38	18	27 x 13	3.88

### GS-C Series Heavy Duty F Clamps with Tommy Bar Handle & Removable Adapter



MODEL NO	A MAX JAW OPENING	B THROAT DEPTH	C SWIVEL PAD	D ACME SCREW	E RAIL SIZE	WEIGHT IN KGS.
GS25C	250	120	41	20	30 x 15	2.76
GS30C	300	140	41	20	30 x 15	3.03
GS40C	400	120	41	20	30 x 15	3.24
GS50C	500	140	41	20	30 x 15	3.66
GS60C	600	120	41	20	30 x 15	3.87
GS80C	800	140	41	20	30 x 15	4.62
GS100C	1000	120	41	20	30 x 15	5.15
GS125C	1250	120	41	20	30 x 15	5.94
GS150C	1500	120	41	20	30 x 15	6.65

### SS-C Series Extra Heavy Duty F Clamps with Tommy Bar Handle & Removable Adapter



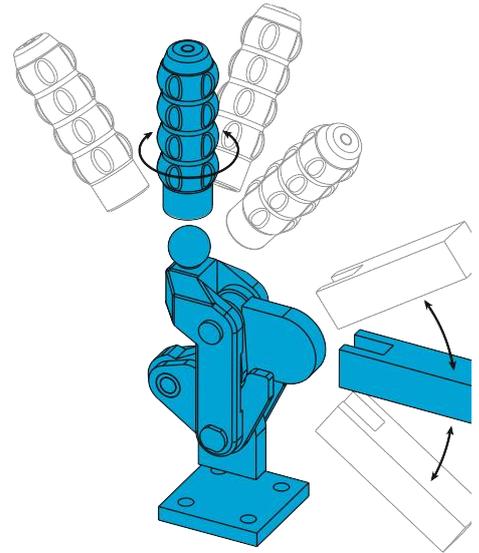
MODEL NO	A MAX JAW OPENING	B THROAT DEPTH	C SWIVEL PAD	D ACME SCREW	E RAIL SIZE	WEIGHT IN KGS.
SS30C	300	175	41	22	40 x 20	5.50
SS40C	400	175	41	22	40 x 20	6.06
SS50C	500	175	41	22	40 x 20	6.62
SS60C	600	175	41	22	40 x 20	7.18
SS80C	800	175	41	22	40 x 20	8.30
SS100C	1000	175	41	22	40 x 20	9.43
SS125C	1250	175	41	22	40 x 20	10.83
SS150C	1500	175	41	22	40 x 20	12.07

## Automotive Clamps

Steel-Smith has designed the Automotive clamps to be adaptable & durable, and to withstand abuse in heavy duty applications. They are ideally used in automotive manufacturing & other production environment which require high clamping forces & long service life. These clamps have a unique design that offers the designer both complete design flexibility & clamping force.

These clamps comprise of a very strong & rugged toggle mechanism. The clamping arm & handle which are provided with the clamp can be welded at the desired angle to suit the individual requirements of work pieces. All components are of first grade steel & the axles are hardened running in either hardened bushes or directly in close tolerance holes. The clamps are finished olive green passivation.

The Versatility of Steel- Smith Clamps allows handle positioning of 120°/360° maximum angular positioning arc through orbital arc.

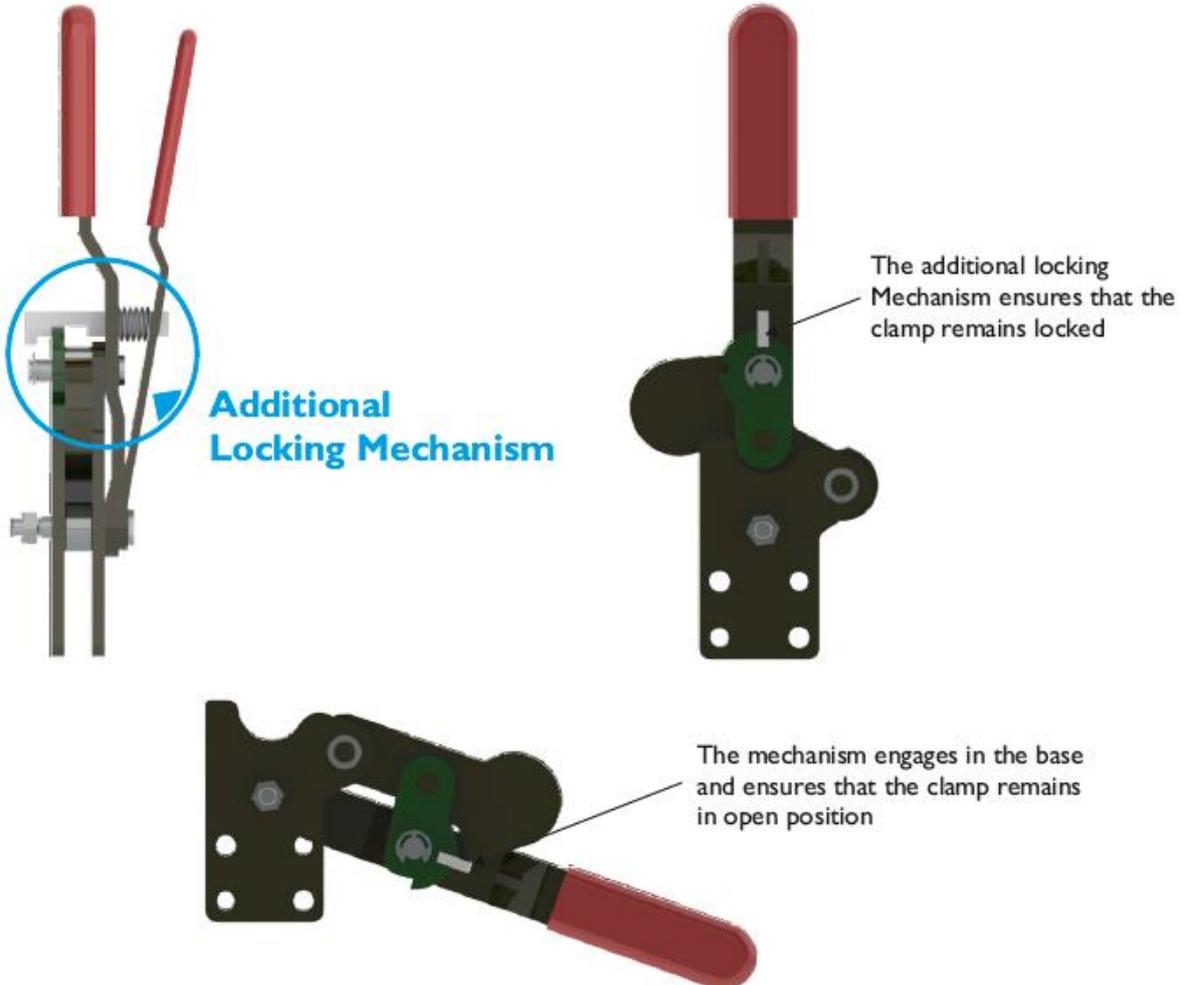


### Automotive Clamps with Additional Locking Mechanism

Steel-Smith introduces its latest range of Automotive clamps with Additional Locking Mechanism, this mechanism ensures that the clamp remains locked in any condition.

In order to unclamp, the mechanism must be first released.

In this Series this mechanism will hold the clamping arm in both the closed and open positions, so that it is protected against unintentional opening or closing through vibration or if the clamp is mounted overhead.



## Automotive Clamps

### H.V. SERIES TOGGLE CLAMPS - SWIVEL BASE

The H.V. Series Toggle Clamps comprise of a basic toggle mechanism onto which can be welded at a desired angle, the clamping arm and handle which are supplied with the clamp. These models feature a swivel base which is welded at the desired angle to the mechanism, then welded either directly to the fixture or alternatively to a base which is offered as an accessory for bolt mounting. The clamping arm exhibits 180 degree opening angle which enables easy unloading of work piece. Accurately machined steel components are equipped with hardened bushes & pivot pins. Three sizes basic linkages are available which allows the designer complete flexibility to position the base, clamp arm handle and weld them to suit the application.

#### Installation:

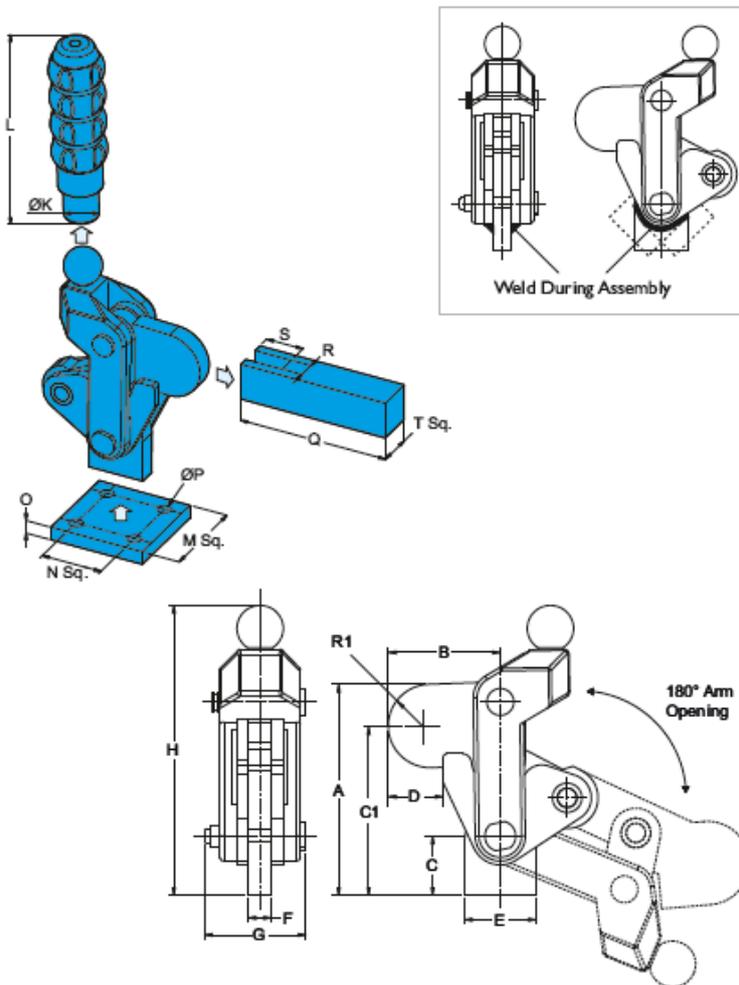
When welding the swivel base of the clamp mechanism ensure that the full length of the adjoining surfaces are welded. Ensure that the welding splatters do not enter the slots which form the forward stop of the mechanism.



Model No. HV-BII-500



Assembled Swivel Base Clamp



Anatomy of Swivel Base Clamp

Model No.	A	B	C	C1	D	E	F	G	H	K	L	M Sq.	N Sq.	O	P	Q	R	S	T Sq.	R1	Holding Capacity	Wt. In Kgs
HV-BII-100	59	29	18	48	15	20	6	28	85	12	50	35	20	6	5.5	50	6	13	12	11	200 Kgs.	0.330
HV-BII-200	76	40	20.5	60	16	24	8	41	106	16	75	45	28.5	6	6.5	75	8	15	20	16	500 Kgs.	0.810
HV-BII-300	90	50	25	73	24	29	10	45	125	22	90	50	30	8	6.5	90	10	21	22	17	700 Kgs.	1.370
HV-BII-500	110	58	27.5	89	30	37	12	58	152	22	100	63	40	10	8.7	100	12	25	25	22	1200 Kgs.	2.300
HV-BII-1000	140	73	33	112	37	57	15	60	182	22	125	80	55	10	10.5	125	15	32	30	27	2500 Kgs.	3.700

## Automotive Clamps

### H.V. SERIES TOGGLE CLAMPS - BASE STRAIGHT

The Base Straight Series is identical to the Swivel Base Series with the exception of the base design. For situations where a vertical surface is used to mount the clamp a straight base can be used.

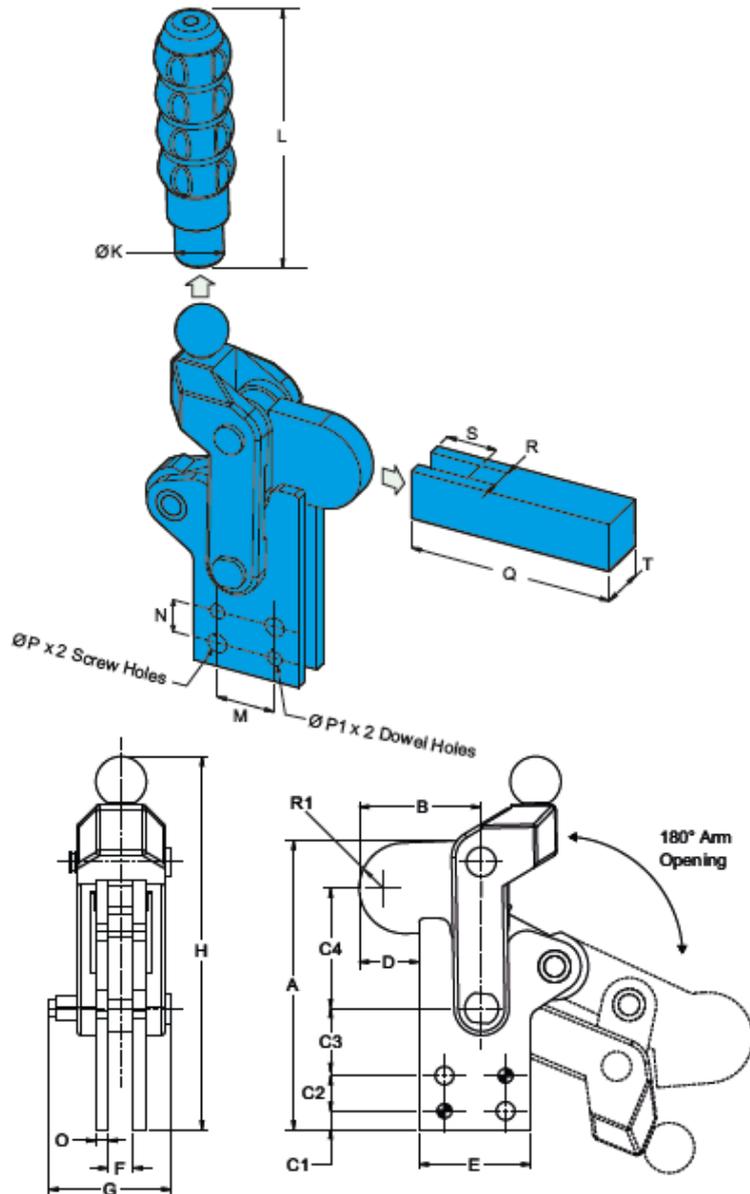
The B.S. series clamps have more height under the clamping bar in the closed position. The clamp opens a full 180° to completely clear the work area. The handle and the clamping arm supplied with the clamp can be welded at a desired angle. Similar to the Swivel Base Series clamps the bushes and pivot pins are hardened for higher efficiency of the clamp. The clamps are available in five sizes.



Model No. HV - BII - 500 BS



Assembled Base Straight Clamp



Model No.	A	B	C1	C2	C3	C4	D	E	F	G	H	K	L	M	N	O	P	P1	Q	R	R1	S	T	Holding Capacity	Wt In Kgs
HV-BII-100 BS	70	30	8.5	12	10	28	14.5	30	6	28	98	12	50	15	12	3	5.5	5	50	6	11	13	12	200 Kgs.	0.290
HV-BII-200 BS	99	41	9	16	21	37	18	46	8	41	130	16	75	26	16	4	6.3	6	75	8	16	15	20	500 Kgs.	0.810
HV-BII-300 BS	120	50.5	12	25	20	46	24	51	10	45	158	22	90	30	25	5	9.0	8	90	10	17	21	22	700 Kgs.	1.350
HV-BII-500 BS	138	58	11	25	23	57	30	54	12	58	180	22	100	35	25	6	9.0	8	100	12	21	25	25	1200 Kgs.	2.150
HV-BII-1000 BS	177	73	15	30	30	74	37	66	15	60	217	22	125	35	30	6	10.5	10	125	15	27	32	30	2500 Kgs.	3.400

## Automotive Clamps

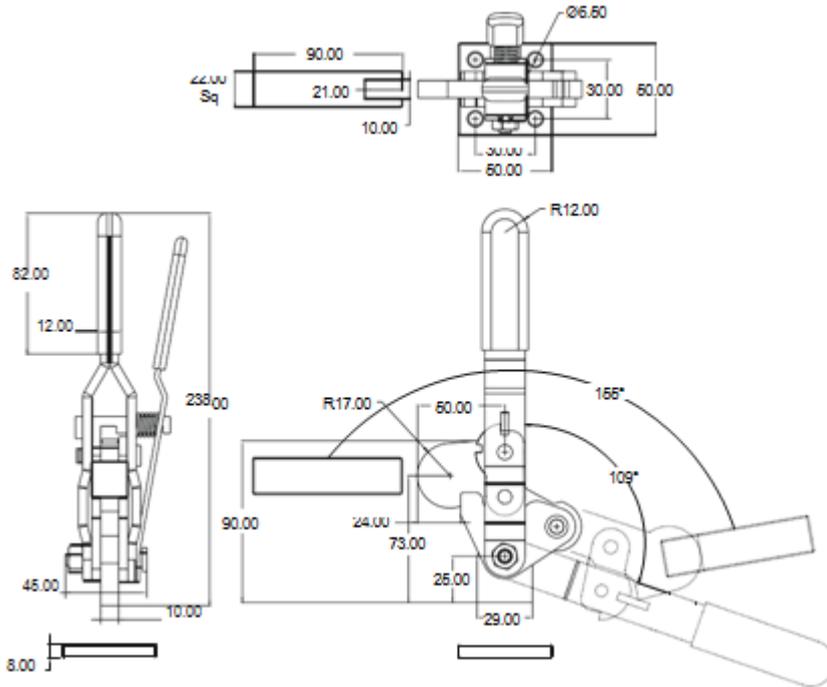
### Model No: HV - BII - 300 - TRIG

Arm: Stub nose for welded extensions.

Base: Swivel for welding in the desired position. Nominal Holding Force: 700 Kgs.

Weight: 700 Kgs.

Weight: 1.400 Kgs



Model No. HV - BII - 500 – TRIG

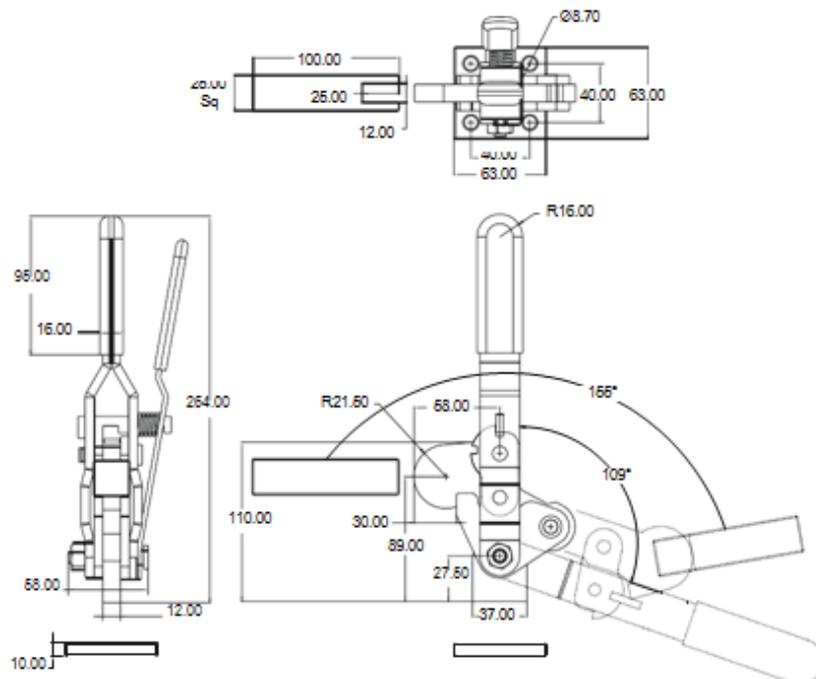
### Model No: HV - BII - 500 – TRIG

Arm: Stub nose for welded extensions.

Base: Swivel for welding in the desired position. Nominal Holding Force: 1200 Kgs.

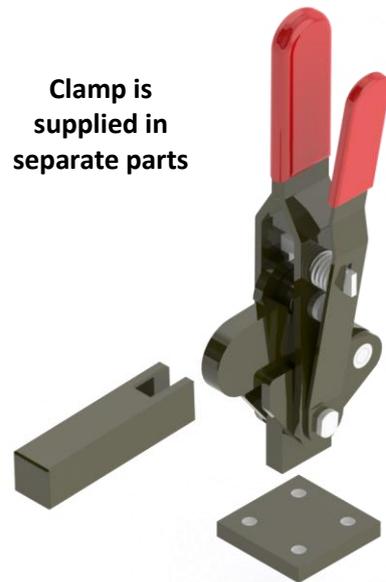
Weight: 1200 Kgs.

Weight: 2.500 Kgs



Assembled Swivel Base Clamp

**Clamp is supplied in separate parts**



## Automotive Clamps

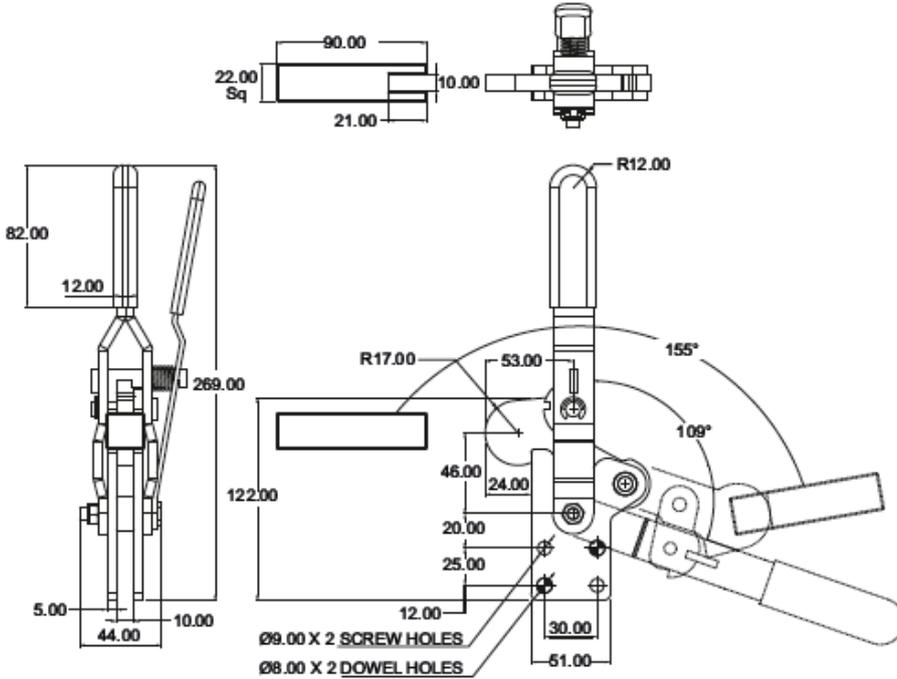
### Model No: HV - BII - 300 BS - TRIG

Arm: Stub nose for welded extensions.

Base: Straight

Nominal Holding Force: 700 Kgs.

Weight: 1.00 Kgs



Model No. HV - BII - 500 BS – TRIG

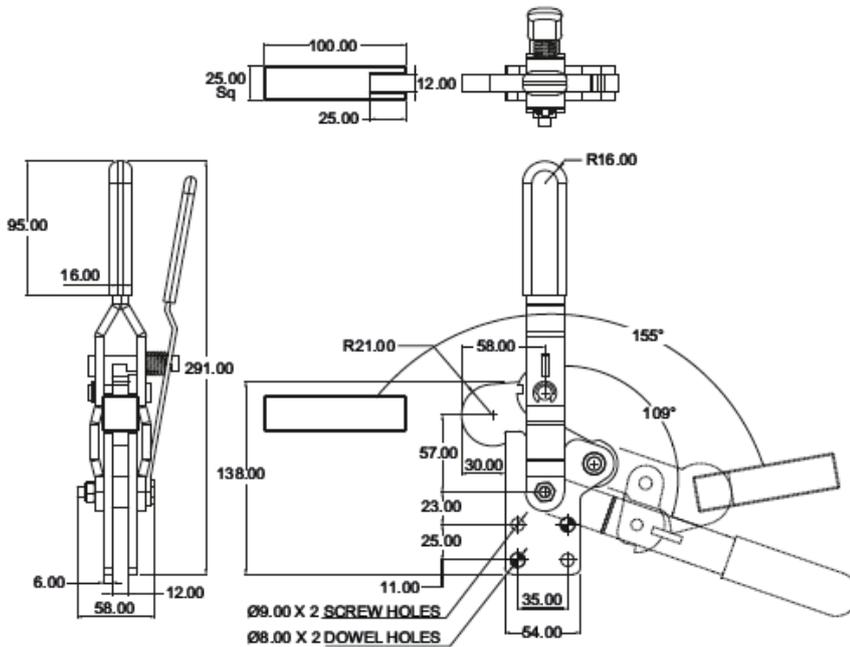
### Model No: HV - BII - 500 BS - TRIG

Arm: Stub nose for welded extensions.

Base: Straight

Nominal Holding Force: 1200 Kgs.

Weight: 2.300 Kgs



Assembled Base Straight Clamp



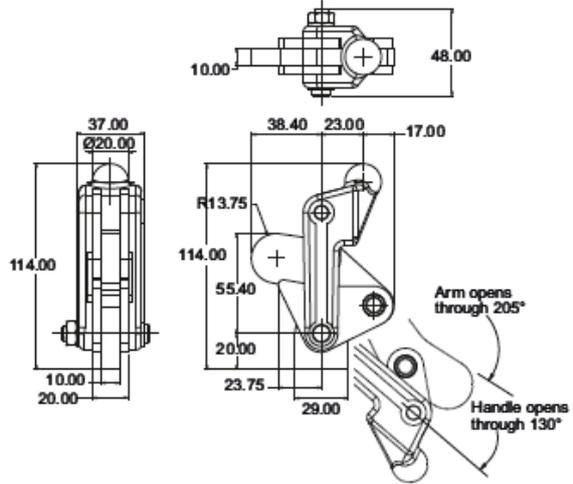
Clamp is supplied in separate parts

Anatomy of a Base Straight Clamp

## Automotive Clamps

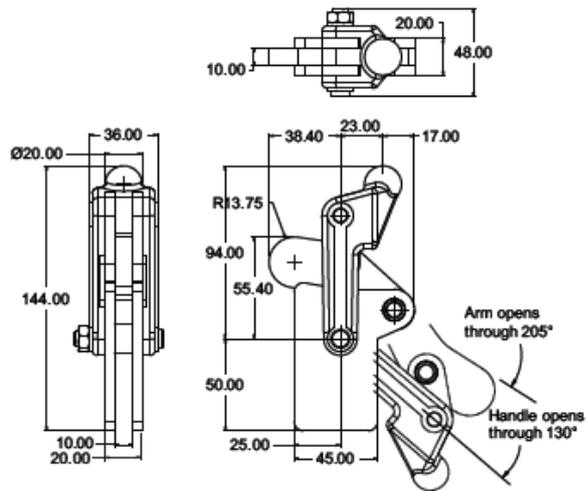
### Model No: HV - 700 - S

Arm: Stub nose for welded extensions.  
 Base: Swivel for welding in the desired position.  
 Nominal Holding Force: 700 Kgs.  
 Weight: 0.700 Kg  
 See "Accessories" for other items.



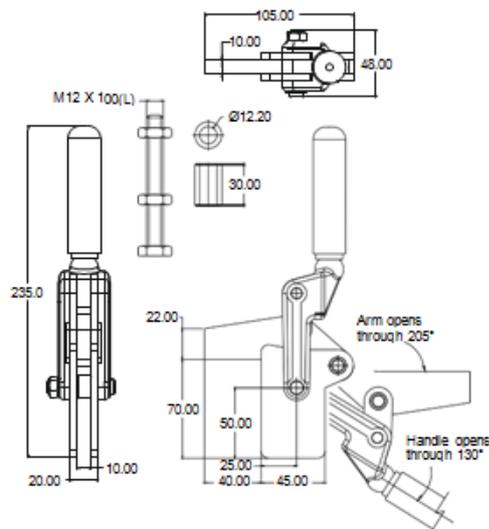
### Model No: HV - 700 - T

Arm: Stub nose for welded extensions. Base: Straight.  
 Nominal Holding Force: 700 Kgs.  
 Weight: 0.800 Kgs.  
 See "Accessories" for other items.



### Model No: HV - 700 - 1A

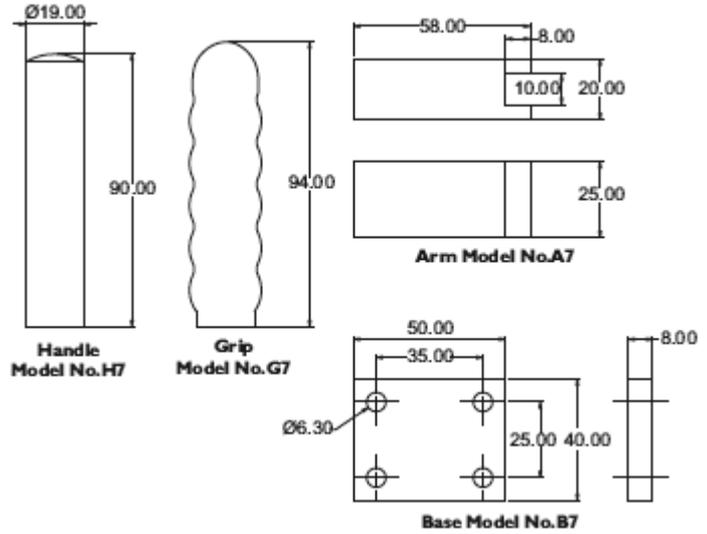
Arm: Solid Arm with weldable bush.  
 Base: Straight  
 Nominal Holding Force: 700 Kgs.  
 Weight: 1.100 Kgs.



## Automotive Clamps

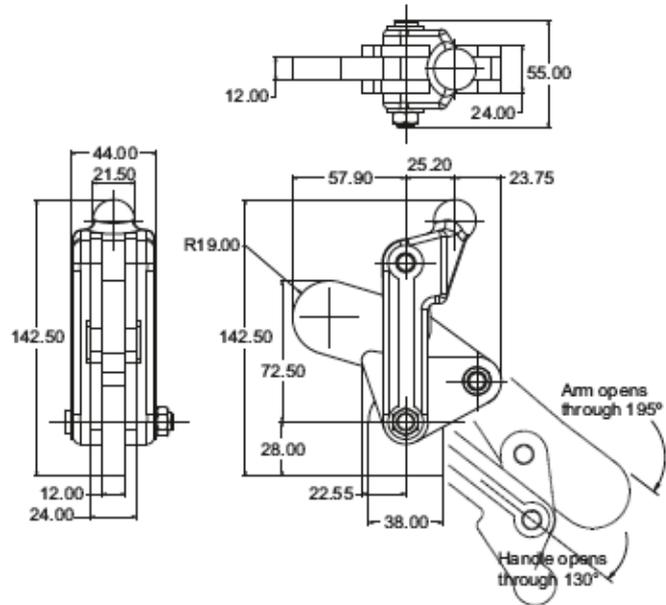
### Accessories for HV - 700

Model H7 Handle: For welding at the desired angle. Model G7 Grip: To fit H7 handle. Model A7 Arm: Clamping Arm. Model B7 Base: For bolt mounting



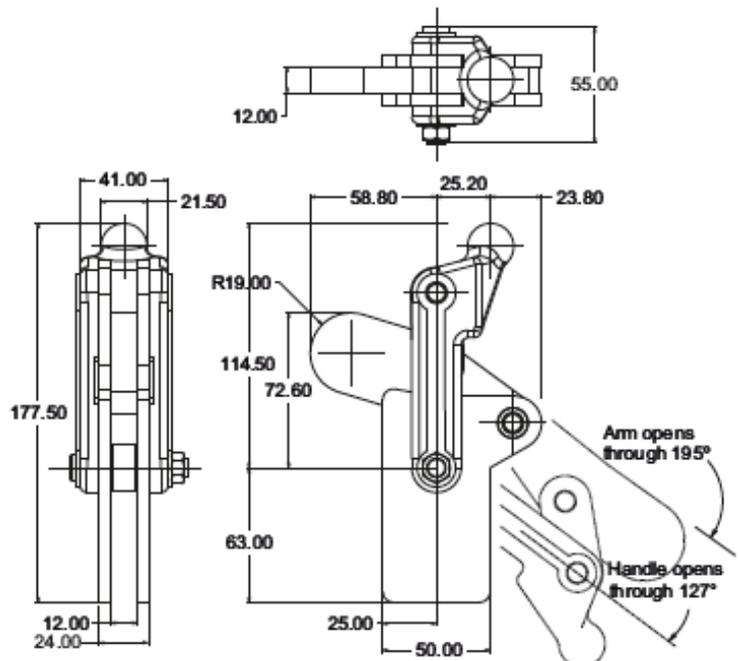
### Model No: HV - 1200 - S

Arm: Stub nose for welded extensions. Base: Swivel for welding in the desired position. Nominal Holding Force: 1200 Kgs. Weight: 1.300 Kg See "Accessories" for other items.



### Model No: HV - 1200 - T

Arm: Stub nose for welded extensions. Base: Straight. Nominal Holding Force: 1200 Kgs. Weight: 1.450 Kgs. See "Accessories" for other items.



## Automotive Clamps

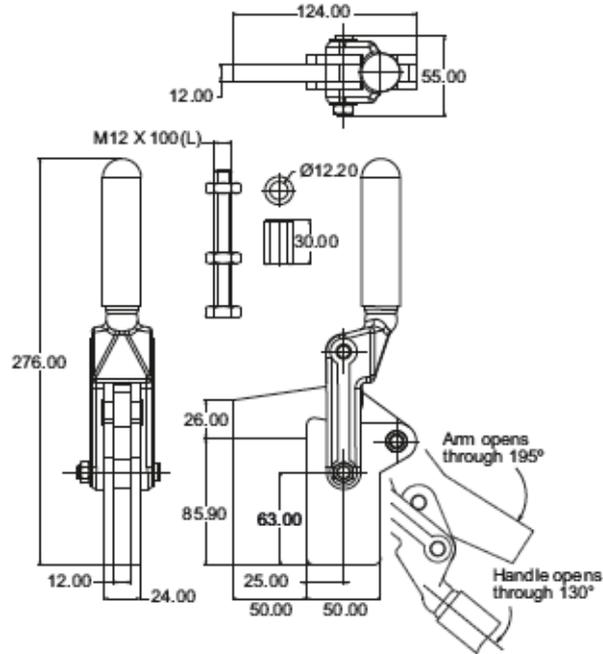
### Model No: HV - 1200 - 1A

Arm: Solid Arm with weldable bush.

Base: Straight

Nominal Holding Force: 1200 Kgs.

Weight: 1.800 Kgs.

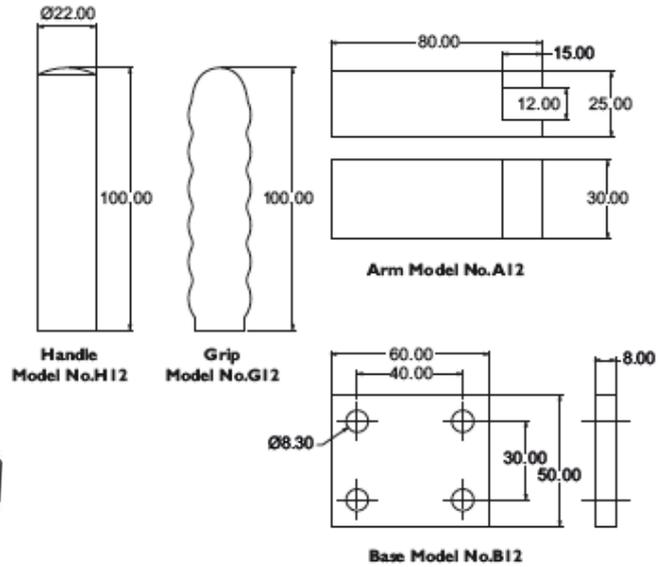


### Accessories for HV – 1200

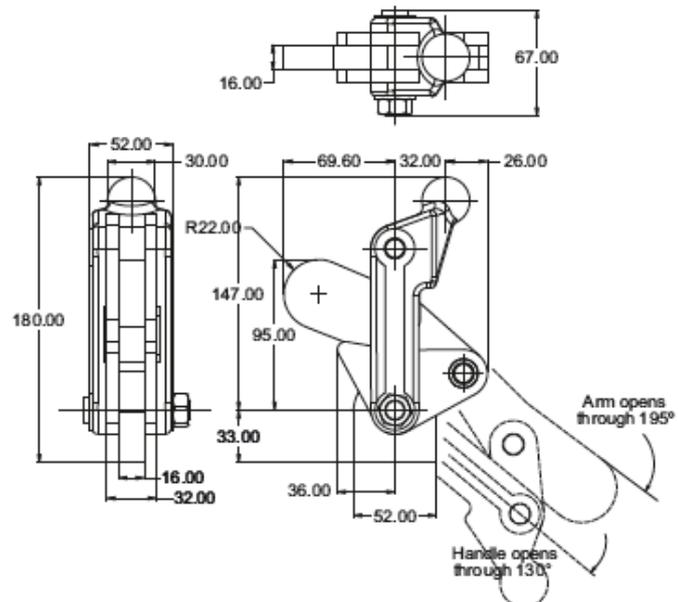
Model H12 Handle: For welding at the desired angle. Model G12 Grip: To fit H7 handle.

Model A12 Arm: Clamping Arm.

Model B12 Base: For bolt mounting



### Model No: HV - 2400 - S



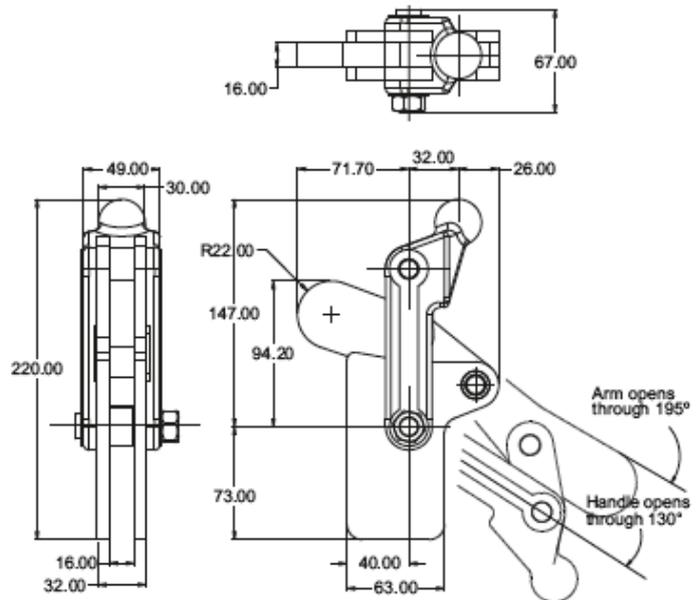
Arm: Stub nose for welded extensions.  
 Base: Swivel for welding in the desired position. Nominal Holding Force: 2400 Kgs.  
 Weight: 2.900 Kg  
 See "Accessories" for other items



## Automotive Clamps

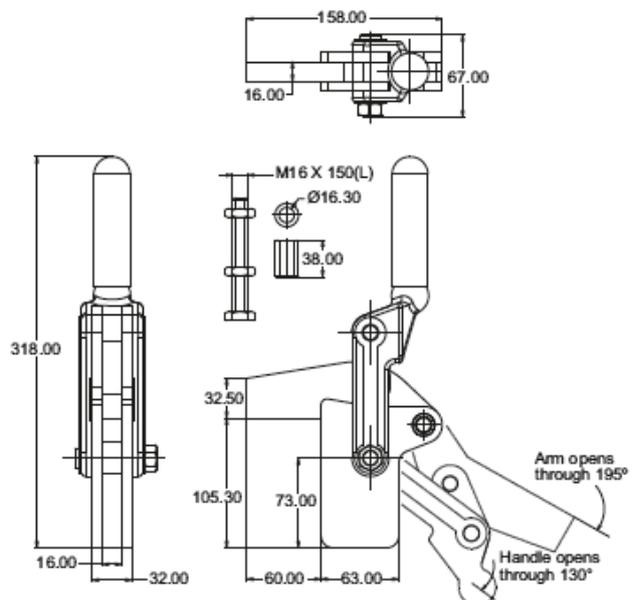
### Model No: HV - 2400 - T

Arm: Stub nose for welded extensions.  
 Base: Straight.  
 Nominal Holding Force: 2400 Kgs.  
 Weight: 3.200 Kgs.  
 See "Accessories" for other items.



### Model No: HV - 2400 - 1A

Arm: Solid Arm with weld able bush.  
 Base: Straight  
 Nominal Holding Force: 2400 Kgs.  
 Weight: 3.7500 Kgs.

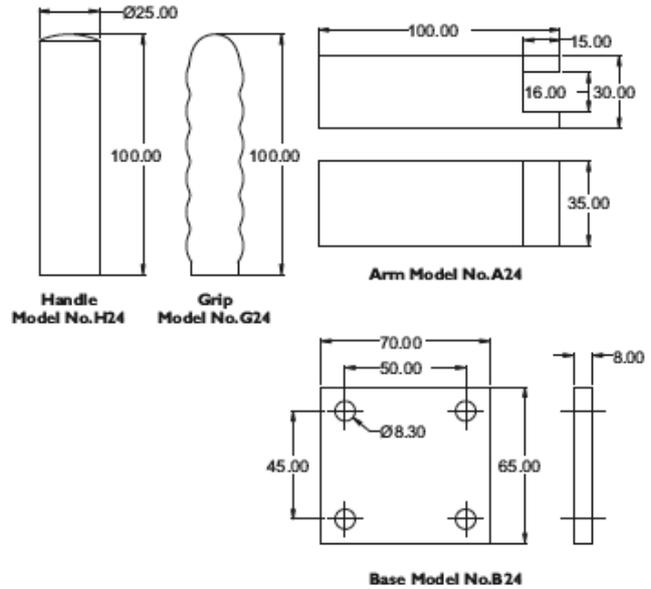


## Accessories for HV - 2400

Model H24 Handle: For welding at the desired angle. Model G24 Grip: To fit H7 handle.

Model A24 Arm: Clamping Arm.

Model B24 Base: For bolt mounting



## Automotive Clamps Horizontal Arm

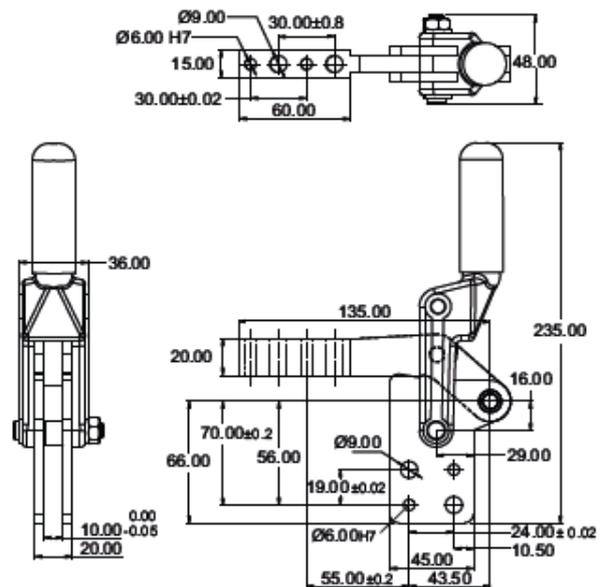
### Model No: HV - 700 - H

Arm: Horizontal Clamping Arm

Base: Straight with Dowel & Bolt Holes

Nominal Holding Force: 700 Kgs.

Weight: 1.200 Kgs.

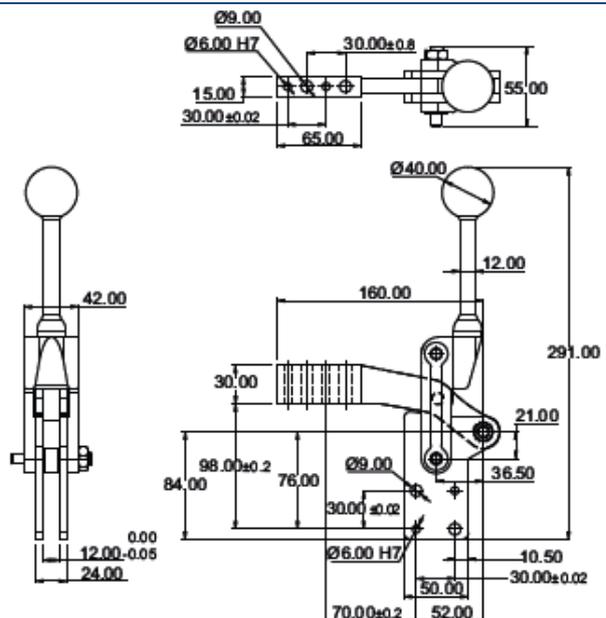


### Model No: HV - 1200 - H - TM - TU

Arm: Horizontal Clamping Arm

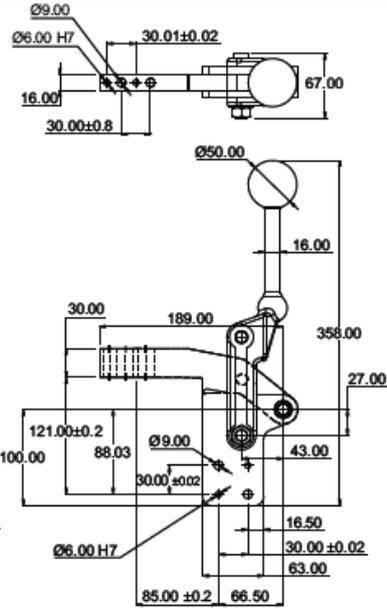
Base: Straight with Dowel & Bolt Holes

Nominal Holding Force: 1200 Kgs.



## Model No: HV - 2400 - H - TM - TU

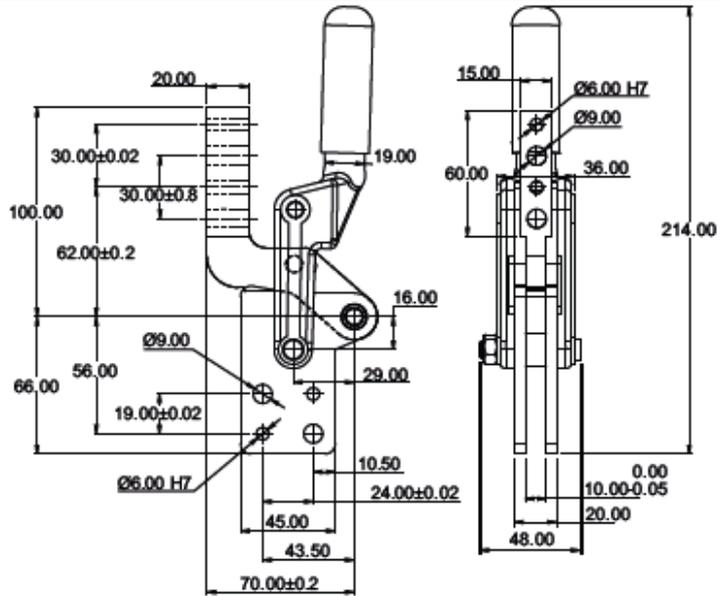
Arm: Horizontal Clamping Arm  
 Base: Straight with Dowel & Bolt Holes  
 Nominal Holding Force: 2400 Kgs.  
 Weight: 3.100 Kgs.



## Automotive Clamps Vertical Arm

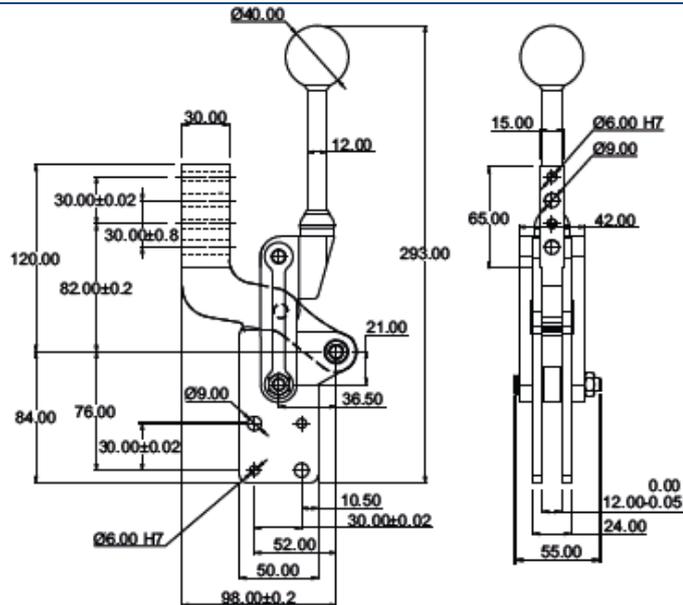
### Model No: HV - 700 - V

Arm: Vertical Clamping Arm  
 Base: Straight with Dowel & Bolt Holes  
 Nominal Holding Force: 700 Kgs.  
 Weight: 1.200 Kgs.

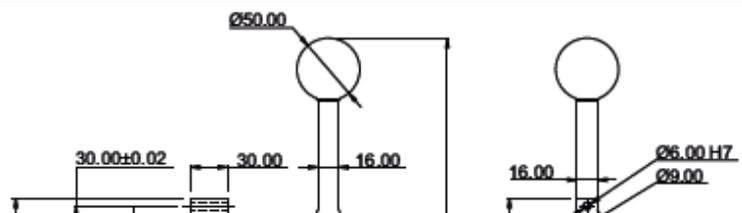


### Model No: HV - 1200 - V - TM - TU

Arm: Vertical Clamping Arm  
 Base: Straight with Dowel & Bolt Holes  
 Nominal Holding Force: 1200 Kgs.  
 Weight: 2.100 Kgs.



### Model No: HV - 2400 - V - TM - TU

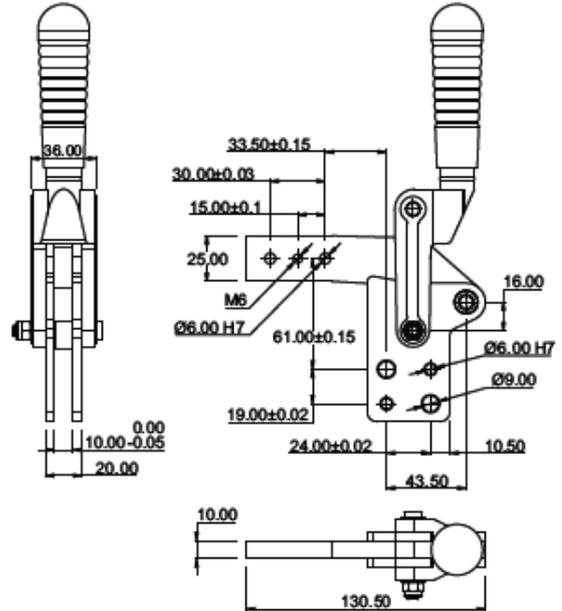


Arm: Vertical Clamping Arm  
 Base: Straight with Dowel & Bolt Holes  
 Nominal Holding Force: 2400 Kgs.  
 Weight: 3.100 Kgs.

## Automotive Clamps Horizontal Arm - TP

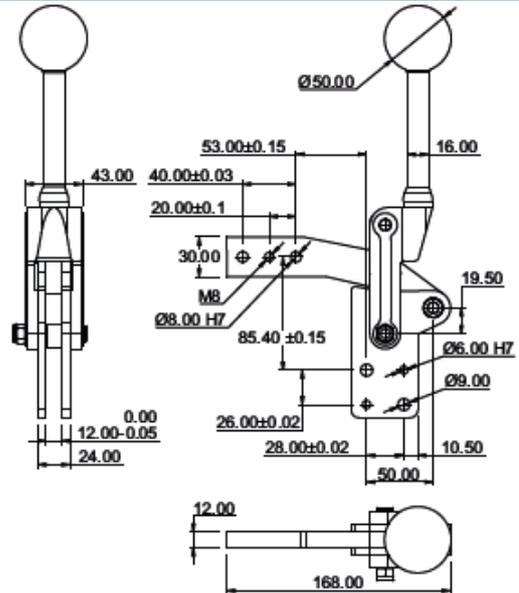
### Model No: HV - 700 - TP

Arm: Horizontal Clamping Arm  
 Base: Straight with Dowel & Bolt Holes  
 Nominal Holding Force: 700 Kgs.  
 Weight: 1.200 Kgs.

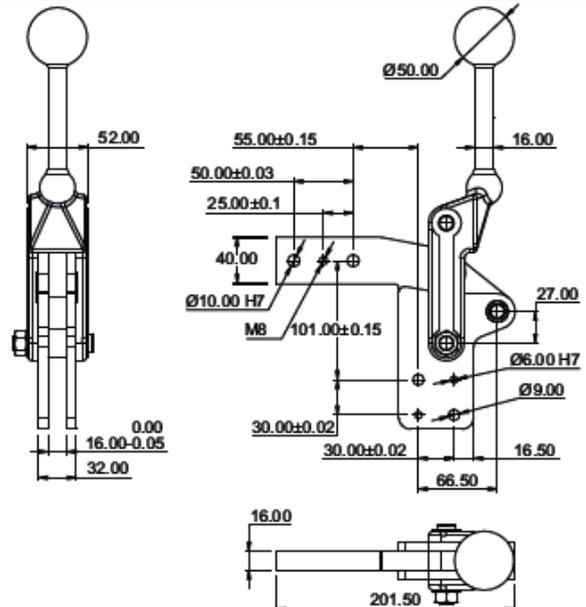


### Model No: HV - 1200 - TP

Arm: Horizontal Clamping Arm  
 Base: Straight with Dowel & Bolt Holes  
 Nominal Holding Force: 1200 Kgs.  
 Weight: 2.100 Kgs.



### Model No: HV - 2400 - TP



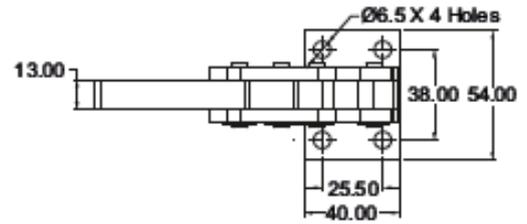
Arm: Horizontal Clamping Arm  
Base: Straight with Dowel & Bolt Holes  
Nominal Holding Force: 2400 Kgs.  
Weight: 3.100 Kgs.



## Automotive Clamps

### Modular Clamps – LH

Compact heavy duty modular clamps with a very low clamping arm height. The unique feature of these clamps is the arm/handle configurations can be change into 8 different types of clamps as shown in the below table

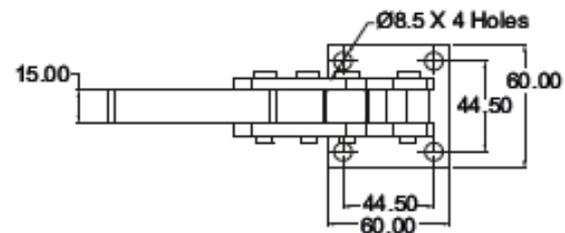
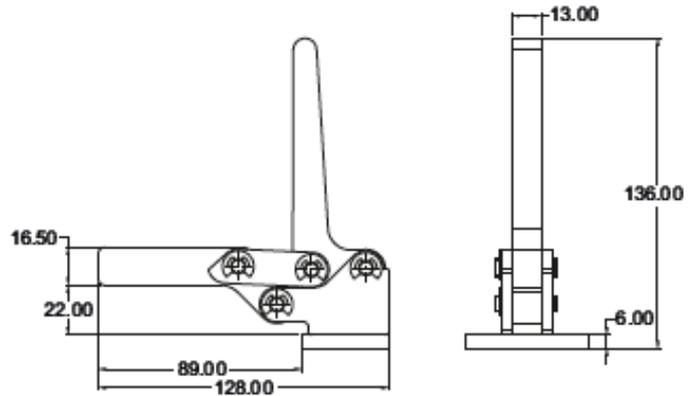


#### Model No: HV - 22 – LH

Nominal Holding Force: 700 Kgs.  
Weight: 0.900 Kgs.  
Arm Opens: 83°  
Handle Opens: 83°

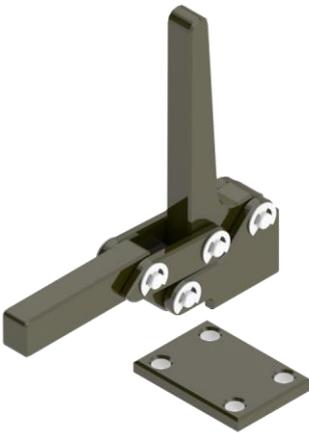


Model No. HV - 25 - LH

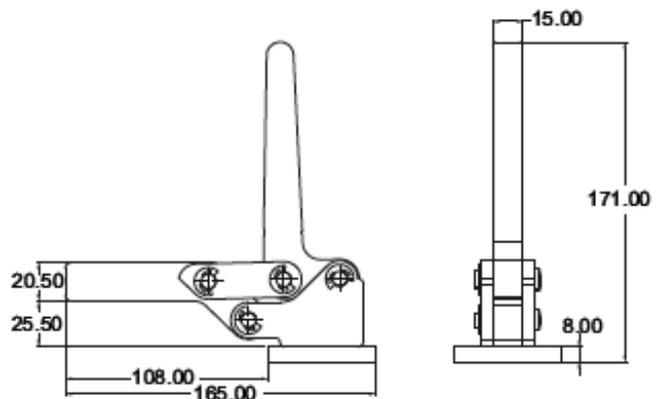


#### Model No: HV - 25 – LH

Nominal Holding Force: 1200 Kgs.  
Weight: 1.200 Kgs.  
Arm Opens: 83°  
Handle Opens: 83°



Anatomy of a Modular Clamp **Mounting Plate will be supplied separately**



## Automotive Clamps

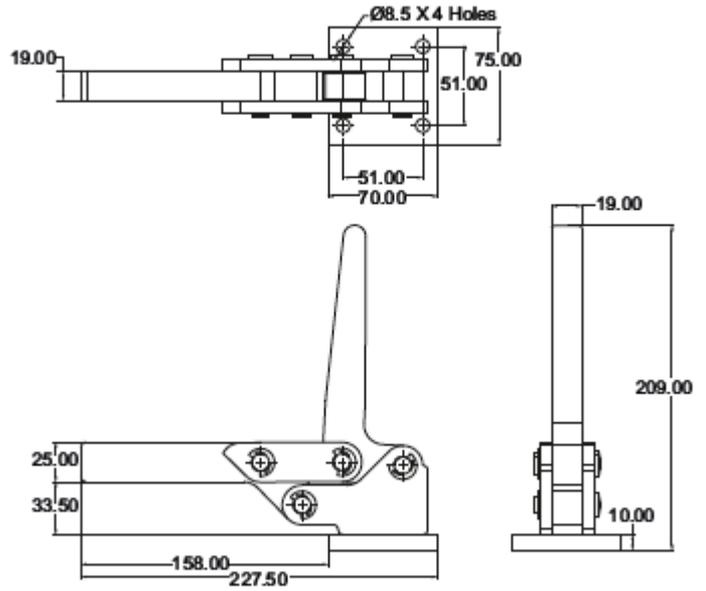
### Model No: HV - 33 - LH

Nominal Holding Force: 2,200 Kgs.

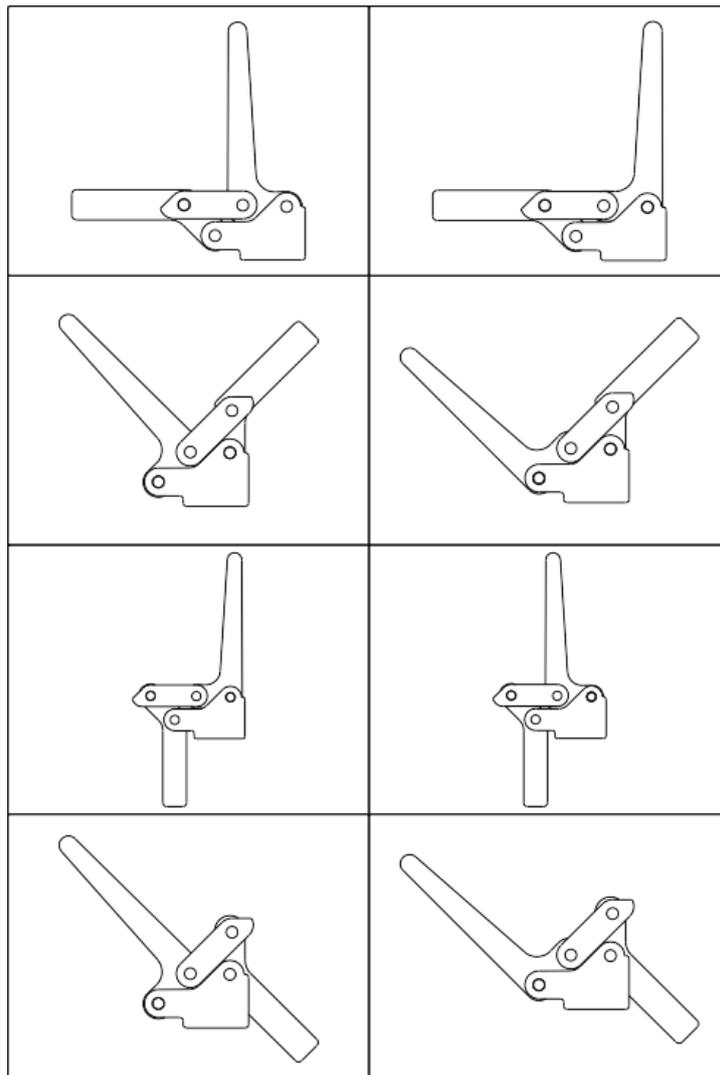
Weight: 2.300 Kgs.

Arm Opens: 83°

Handle Opens: 83°



### 8 Different Configuration of Modular Clamps



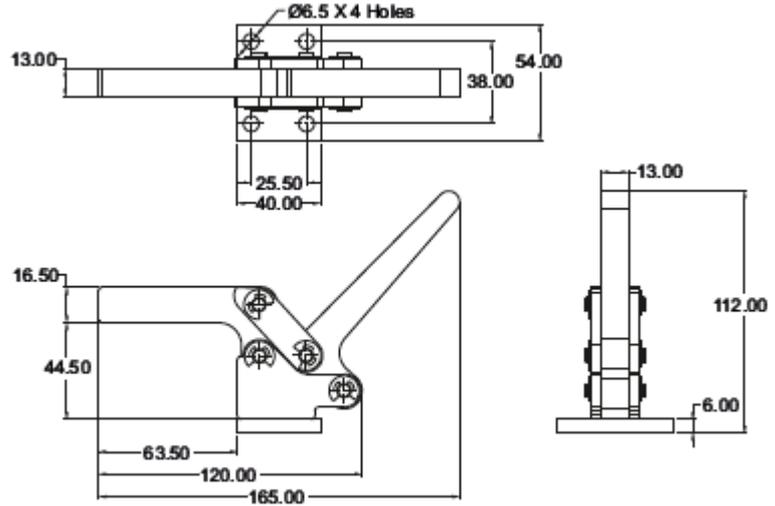
## Automotive Clamps

### Modular Clamps - HA

Compact heavy duty modular clamps with a very low clamping arm height. The unique feature of these clamps is the arm/handle configurations can be change into 8 different types of clamps as shown in the below table

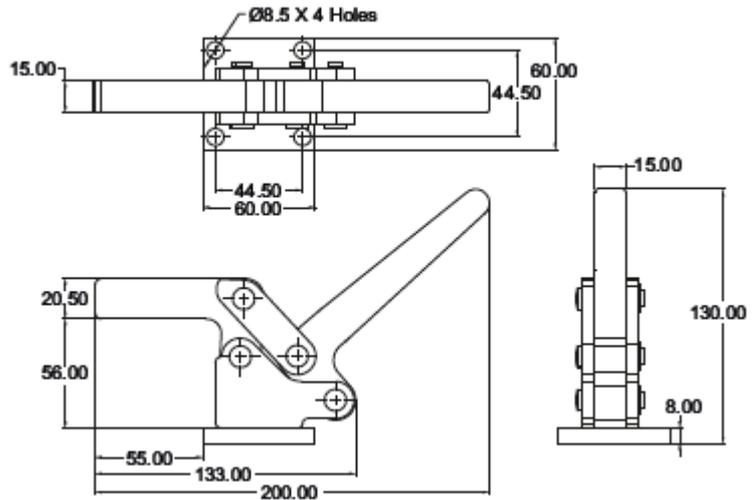
#### Model No: HV - 44 – HA

Nominal Holding Force: 700 Kgs.  
 Weight: 0.900 Kgs.  
 Arm Opens: 83°  
 Handle Opens: 83°



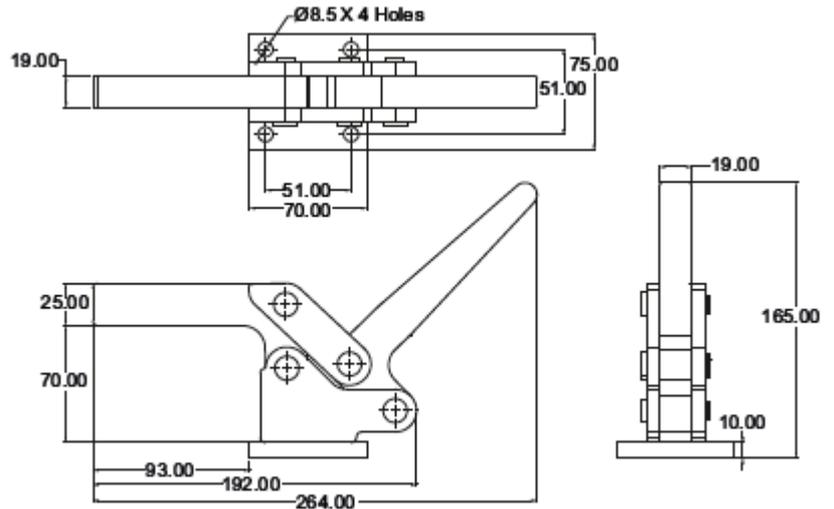
#### Model No: HV - 65 - HA

Nominal Holding Force: 1200 Kgs.  
 Weight: 1.200 Kgs.  
 Arm Opens: 83°  
 Handle Opens: 83°



#### Model No: HV - 70 - HA

Nominal Holding Force: 2,200 Kgs.  
 Weight: 2.300 Kgs.  
 Arm Opens: 83°  
 Handle Opens: 83°



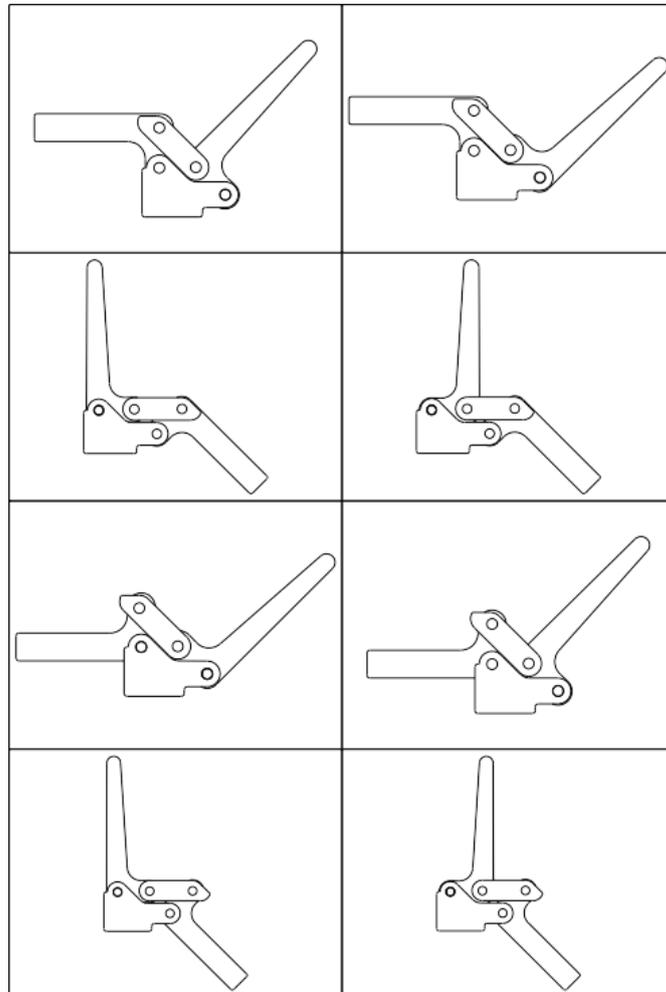
## Automotive Clamps

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Anatomy of a Modular Clamp **Mounting Plate will be supplied separately**

### 8 Different Configuration of Modular Clamps

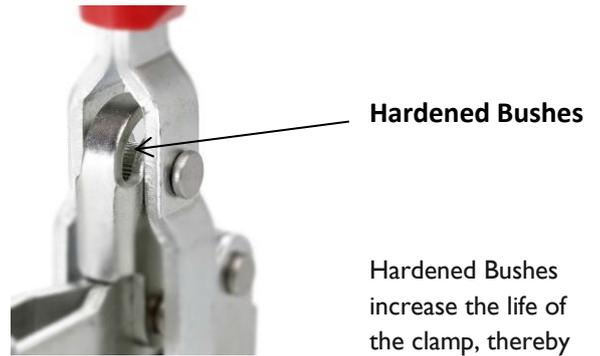


## International Range

The all new international equivalent range of toggle clamps from Steel-Smith. Now all the leading international toggle clamps have their equivalents in this range. What's more, these quality clamps come with hardened bushes for enhanced life, several safety features and slicker finish.

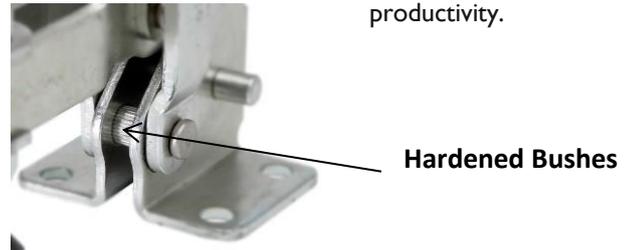


"Safety Cover" on the clamp link



Hardened Bushes

Hardened Bushes increase the life of the clamp, thereby multiplying the productivity.

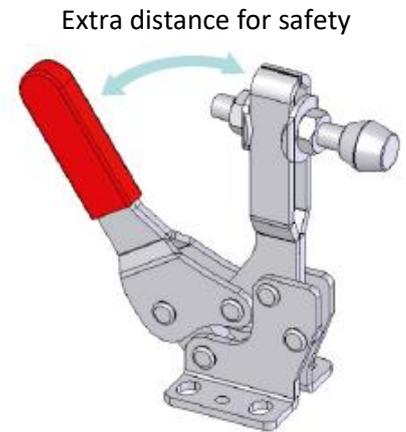


Hardened Bushes

*This feature protects the user's finger from accidentally entering the clamp linking and getting injured during clamping operations.*



New improved design includes increased distance between the handle and the clamping arm. This ensures maximum safety during the clamp's fully open position.



Extra distance for safety

Kindly refer the cross-reference list on Page No.78 & 79 to order the Steel-Smith equivalent toggle clamp that meets your requirement.



### Additional Locking Mechanism

The additional locking Mechanism ensures that the clamp remains locked in any condition. In order to unclamp, the mechanism must be first released.

## Vertical Hold Down Action

### Vertical Hold Down Action VTC - 201 Series

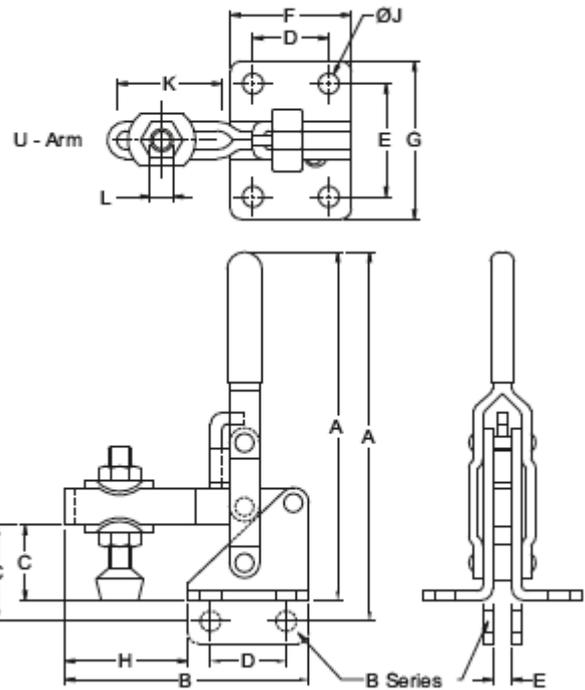


Model No. VTC-201-U



Model No. VTC-201-UB

Also Available  
in Stainless Steel  
VTC-201-U-SS  
VTC-201-UB-SS



Model No.	Arm Type	Base Type
VTC-201-U	Adjustable Arm	Flanged
VTC-201-UB	Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC-201-U	50 Kgs	0.330	60°	110°	80.0	51.3	16.0	16.0	23.9	25.4	33.3	25.9	4.3	18.3	M5 Bolt
VTC-201-UB	50 Kgs	0.330	60°	110°	85.0	51.3	22.4	16.0	4.1	25.4	—	25.9	4.3	18.3	M5 Bolt

## Horizontal Hold Down Action

Arm: Adjustable Arm

Base: Flanged

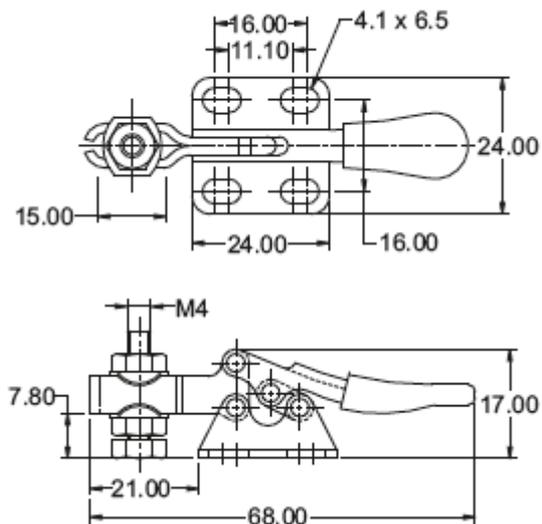
Mounting Holding Capacity: 30 Kgs.

Weight: 0.030 Kgs.

Also Available  
in Stainless Steel  
H-205-U-SS



Model No. H - 205 - U



## Vertical Hold Down Action

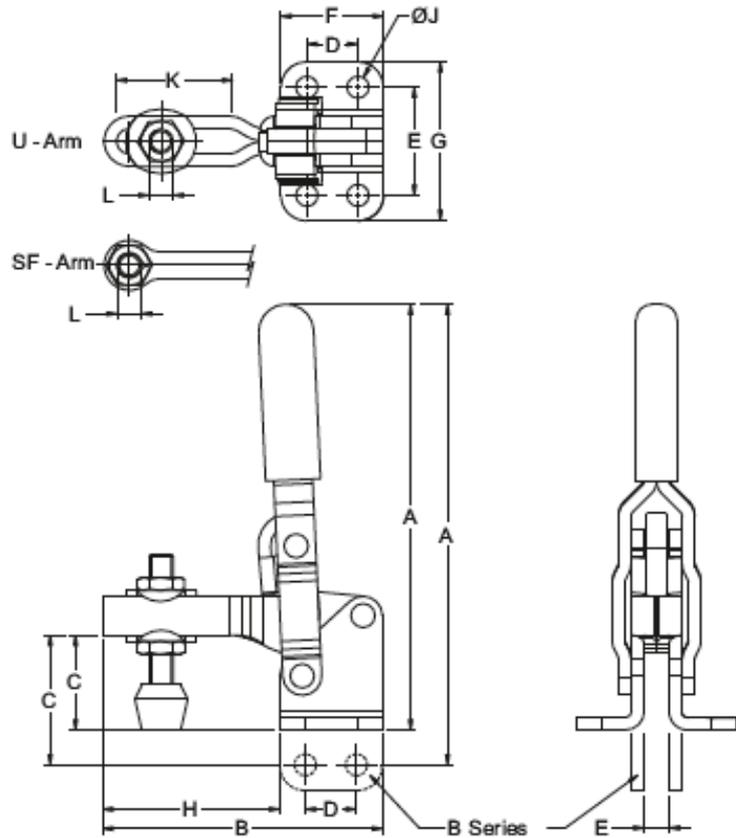
### Vertical Hold Down Action VTC - 202 Series



Model No.VTC-202-UB



Model No.VTC-202-U



Also Available  
in Stainless Steel  
VTC-202-U-SS  
VTC-202-UB-SS

Model No.	Arm Type	Base Type
VTC-202-SF	Spindle Fixed	Flanged
VTC-202-SFB	Spindle Fixed	Straight
VTC-202-U	Adjustable Arm	Flanged
VTC-202-UB	Adjustable Arm	Straight
VTC-202-UL	Adjustable Arm	Flanged

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC-202-SF	100 Kgs	0.150	64°	104°	105.0	58.7	23.9	12.7	26.9	25.4	39.6	33.3	5.6	-	M6 Bolt
VTC-202-SFB	100 Kgs	0.150	64°	104°	111.8	58.7	28.7	12.7	6.0	25.4	-	33.3	5.6	-	M6 Bolt
VTC-202-U	100 Kgs	0.160	64°	104°	105.0	71.3	23.9	12.7	26.9	25.4	39.3	45.8	5.6	25.4	M6 Bolt
VTC-202-UB	100 Kgs	0.160	64°	104°	111.8	71.3	28.7	12.7	6.0	25.4	-	45.8	5.6	25.4	M6 Bolt
VTC-202-UL	100 Kgs	0.160	64°	104°	105.0	83.1	23.9	12.7	26.9	25.4	39.3	57.7	5.6	39.1	M6 Bolt

## Vertical Hold Down Action

### Vertical Hold Down Action VTC - 207 Series



Model No.VTC-207-U



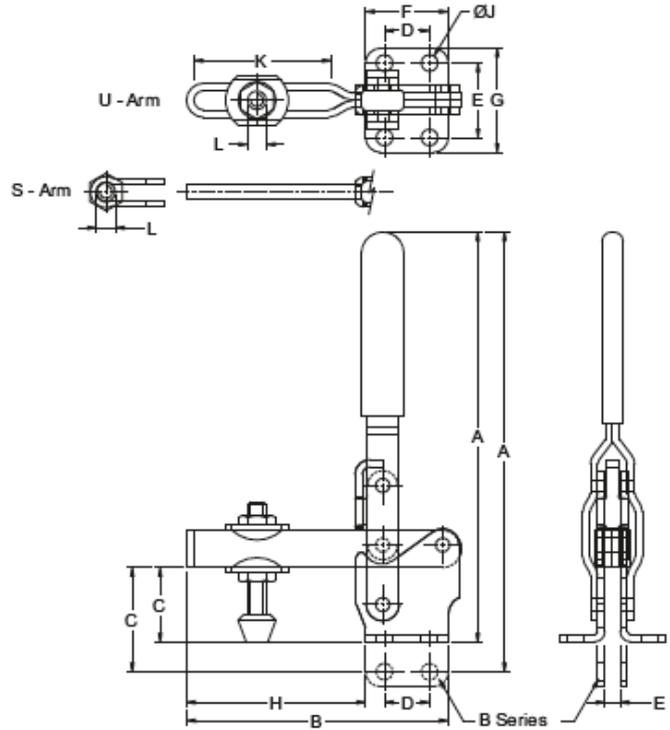
Model No.VTC-207-UB



Model No.VTC-207-S



Model No.VTC-207-SB



Also Available  
in Stainless Steel  
VTC-207-U-SS  
VTC-207-UB-SS

Model No.	Arm Type	Base Type
VTC-207-L	Solid Arm	Flanged
VTC-207-LB	Solid Arm	Straight
VTC-207-S	Solid Arm	Flanged
VTC-207-SB	Solid Arm	Straight
VTC-207-U	Adjustable Arm	Flanged
VTC-207-UB	Adjustable Arm	Straight
VTC-207-UL	Adjustable Arm	Flanged
VTC-207-ULB	Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC-207-L	200 Kgs	0.340	62°	115°	170.0	128.0	31.2	19.1	31.8	35.1	44.5	89.6	7.1	-	M8 Bolt
VTC-207-LB	200 Kgs	0.340	62°	115°	180.0	128.0	40.0	19.1	6.0	35.1	-	89.6	7.1	-	M8 Bolt
VTC-207-S	215 Kgs	0.315	62°	115°	170.0	89.5	31.2	19.1	31.8	35.1	44.5	55.0	7.1	-	M8 Bolt
VTC-207-SB	215 Kgs	0.300	62°	115°	180.0	89.5	40.0	19.1	6.0	35.1	-	55.0	7.1	--	M8 Bolt
VTC-207-U	175 Kgs	0.300	62°	115°	170.0	89.5	31.2	19.1	31.8	35.1	44.5	57.7	7.1	33.0	M8 Bolt
VTC-207-UB	175 Kgs	0.300	62°	115°	180.0	89.5	40.0	19.1	6.0	35.1	-	57.7	7.1	33.0	M8 Bolt
VTC-207-UL	150 Kgs	0.340	62°	115°	170.0	137.0	31.2	19.1	31.8	35.1	44.5	97.8	7.1	69.9	M8 Bolt
VTC-207-ULB	150 Kgs	0.340	62°	115°	180.0	137.0	40.0	19.1	6.0	35.1	-	97.8	7.1	69.9	M8 Bolt

## Vertical Hold Down Action

### Vertical Hold Down Action VTC - 247 & VTC - 267 Series



Model No. VTC-210-U



Model No. VTC-210-UB

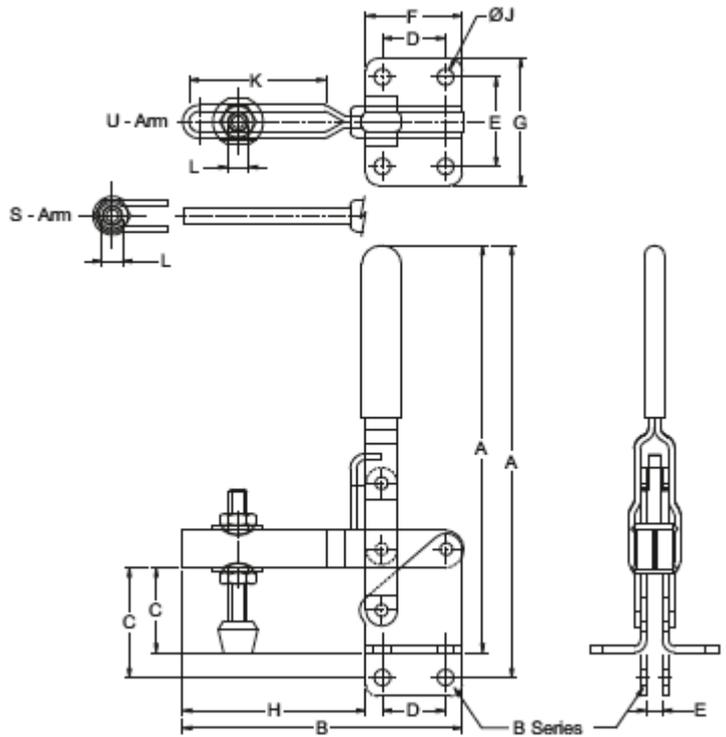


Model No. VTC-210-S



Model No. VTC-210-SB

Also Available  
in Stainless Steel  
VTC-210-U-SS  
VTC-210-UB-SS



Model No.	Arm Type	Base Type
VTC-210-S	Solid Arm	Flanged
VTC-210-SB	Solid Arm	Straight
VTC-210-U	Adjustable Arm	Flanged
VTC-210-UB	Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC-210-S	350 Kgs	0.590	58°	106°	200.0	138.0	42.9	31.8	45.2	48.5	64.3	90.0	8.3	-	M10 Bolt
VTC-210-SB	350 Kgs	0.590	58°	106°	213.0	138.0	55.6	31.8	8.0	48.5	-	90.0	8.3	-	M10 Bolt
VTC-210-U	275 Kgs	0.590	58°	106°	200.0	138.0	42.9	31.8	45.2	48.5	64.3	90.0	8.3	60.0	M10 Bolt
VTC-210-UB	275 Kgs	0.590	58°	106°	213.0	138.0	55.6	31.8	8.0	48.5	-	90.0	8.3	60.0	M10 Bolt

## Vertical Hold Down Action

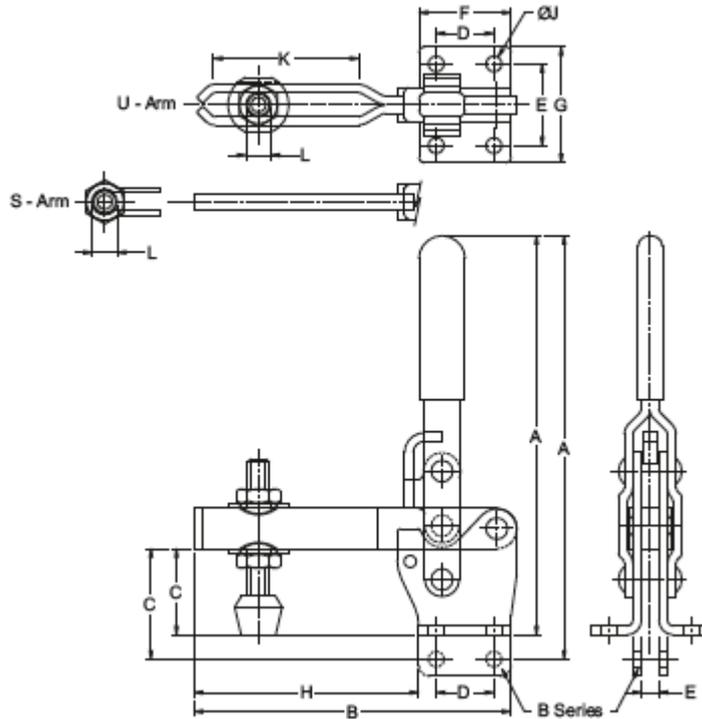
### Vertical Hold Down Action VTC - 247 & VTC - 267 Series



Model No. VTC-247-U



Model No. VTC-247-S



Model No. VTC-267-U



Model No. VTC-247-SB

Model No.	Arm Type	Base Type
VTC-247-S	Solid Arm	Flanged
VTC-247-SB	Solid Arm	Straight
VTC-247-U	Adjustable Arm	Flanged
VTC-247-UB	Adjustable Arm	Straight
VTC-267-S	Solid Arm	Flanged
VTC-267-SB	Solid Arm	Straight
VTC-267-U	Adjustable Arm	Flanged
VTC-267-UB	Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC-247-S	450 Kgs	1.000	75°	136°	220.7	177.8	50.8	31.8	45.2	50.8	64.3	124.0	8.6	-	M12
VTC-247-SB	450 Kgs	1.000	75°	136°	227.1	177.8	57.2	31.8	10.0	50.8	-	124.0	8.6	-	M12
VTC-247-U	450 Kgs	1.100	75°	136°	220.7	177.8	50.8	31.8	45.2	50.8	64.3	124.0	8.6	71.4	M12
VTC-247-UB	450 Kgs	1.100	75°	136°	227.1	177.8	57.2	31.8	10.0	50.8	-	124.0	8.6	71.4	M12
VTC-267-S	550 Kgs	2.000	70°	140°	310.0	228.5	82.0	50.8	69.9	76.2	95.0	147.6	12.5	-	M16
VTC-267-SB	550 Kgs	2.000	70°	140°	325.0	228.5	102.0	50.8	10.0	76.2	-	147.6	12.5	-	M16
VTC-267-U	550 Kgs	2.200	70°	140°	310.0	230.0	82.0	50.8	69.9	76.2	95.0	147.6	12.5	108.0	M16
VTC-267-UB	550 Kgs	2.200	70°	140°	325.0	230.0	102.0	50.8	10.0	76.2	-	147.6	12.5	108.0	M16

## Horizontal Hold Down Action

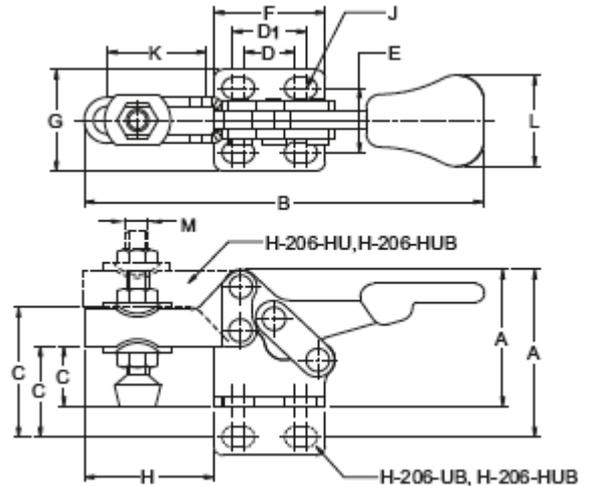
### Horizontal Hold Down Action H - 206 Series



Model No. H-206-U



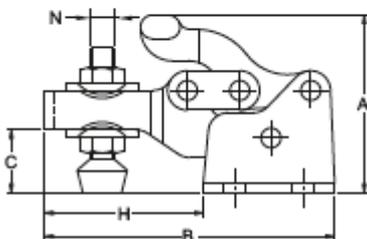
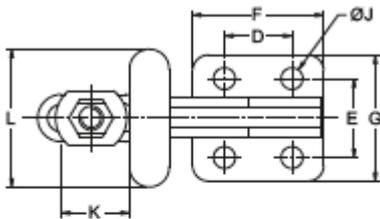
Model No. H-206-HU



Model No.	Arm Type	Base Type
H-206-U	Adjustable Arm	Flanged
H-206-UB	Adjustable Arm	Straight
H-206-HU	High Adjustable Arm	Flanged
H-206-HUB	High Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions												
					A	B	C	D	D1	E	F	G	H	J/Slot	K	L	M
H-206-U	50 Kgs	0.040	90°	90°	27.5	85.0	11.0	11.2	16.0	16.0	24.0	24.0	28.0	4.3 x 6.8	10.4	20.0	M5 Bolt
H-206-UB	50 Kgs	0.040	90°	90°	33.5	85.0	17.0	11.2	16.0	--	24.0	--	28.0	4.3 x 6.8	10.4	20.0	M5 Bolt
H-206-HU	50 Kgs	0.040	90°	90°	27.5	85.0	20.0	11.2	16.0	16.0	24.0	24.0	28.0	4.3 x 6.8	10.4	20.0	M5 Bolt
H-206-HUB	50 Kgs	0.040	90°	90°	33.5	85.0	24.9	11.2	16.0	--	24.0	--	28.0	4.3 x 6.8	10.4	20.0	M5 Bolt

### Horizontal Hold Down Action H - 305, 307, 309 Series



Model No. H-305-U

Also Available in Stainless Steel
H-305-U-SS
H-307-U-SS
H-309-U-SS



Model No. H-307-U

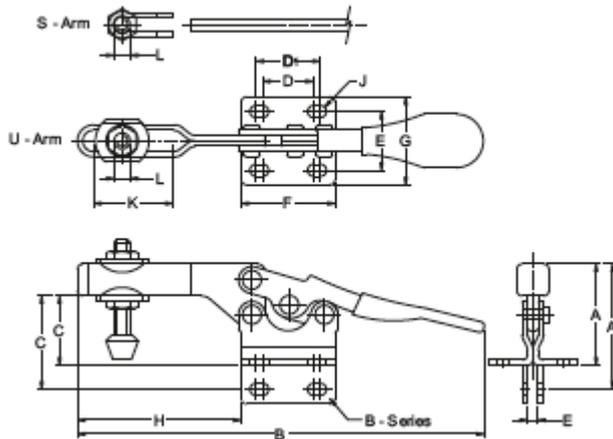
Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions											
					A	B	C	D	E	F	G	H	J	K	L	N
H-305-U	50 Kgs	0.070	175°	92°	38.0	62.0	13.5	13.5	16.0	26.0	29.0	34.0	4.3	15.0	32.0	M5 Bolt
H-307-U	150 Kgs	0.250	175°	92°	62.0	91.7	22.4	23.1	29.5	43.7	46.0	48.0	7.1	19.1	50.8	M8 Bolt
H-309-U	350 Kgs	0.600	160°	88°	91.2	131.8	33.3	35.1	38.1	64.0	62.7	67.6	8.4	26.9	91.2	M10 Bolt

## Horizontal Hold Down Action

### Horizontal Hold Down Action H - 215 Series



Model No. H-215-U



Also Available in Stainless Steel
H-215-U-SS
H-215-UB-SS

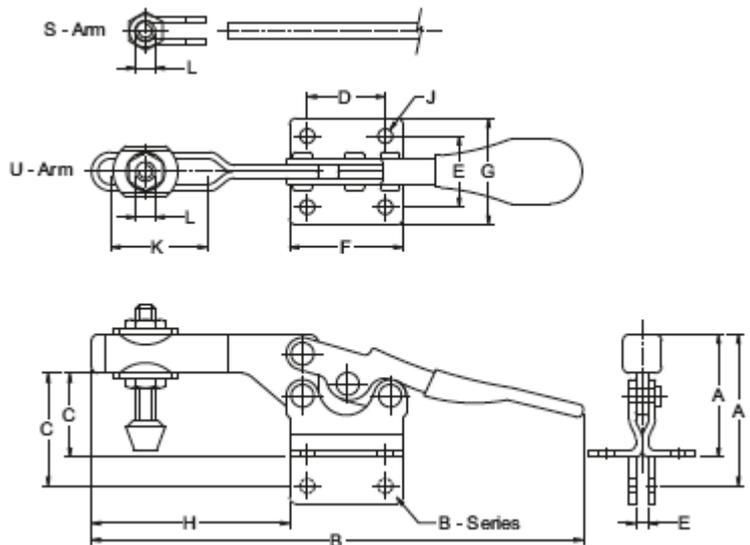
Model No.	Arm Type	Base Type
H-215-S	Solid Arm	Flanged
H-215-SB	Solid Arm	Straight
H-215-U	Adjustable Arm	Flanged
H-215-UB	Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions											
					A	B	C	D	D1	E	F	G	H	J	K	L
H-215-S	100 Kgs	0.150	70°	90°	39.0	148.0	27.0	25.4	26.9	22.4	35.0	33.0	62.0	5.1	-	M6 Bolt
H-215-SB	100 Kgs	0.150	70°	90°	45.2	148.0	35.0	25.4	26.9	5.0	35.0	-	62.0	5.1	-	M6 Bolt
H-215-U	100 Kgs	0.150	70°	90°	39.0	148.0	27.0	25.4	26.9	22.4	35.0	33.0	62.0	5.1	35.0	M6 Bolt
H-215-UB	100 Kgs	0.150	70°	90°	45.2	148.0	35.0	25.4	26.9	5.0	35.0	-	62.0	5.1	35.0	M6 Bolt

### Horizontal Hold Down Action H - 225 Series



Model No. H-225-U



Also Available in Stainless Steel
H-225-U-SS
H-225-UB-SS

Model No.	Arm Type	Base Type
H-225-S	Solid Arm	Flanged
H-225-SB	Solid Arm	Straight
H-225-U	Adjustable Arm	Flanged
H-225-UB	Adjustable Arm	Straight

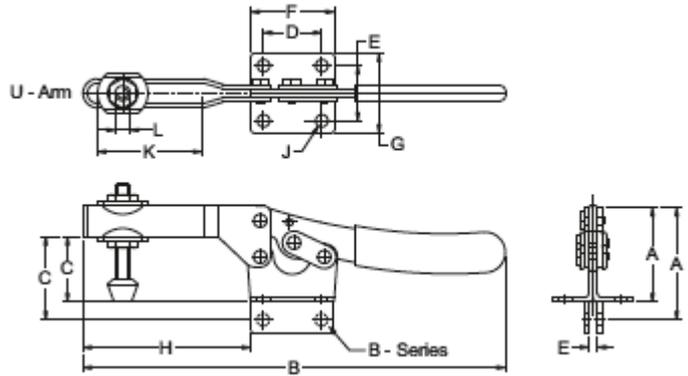
Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
H-225-U	225 Kgs	0.260	70°	90°	49.0	175.0	35.0	25.4	22.4	38.1	35.1	70.0	6.9	38.0	M8 Bolt
H-225-UB	225 Kgs	0.260	70°	90°	54.1	175.0	40.0	25.4	6	38.1	-	70.0	6.9	38.0	M8 Bolt

## Horizontal Hold Down Action

### Horizontal Hold Down Action H - 235 Series



Model No. H-235-U



Model No.	Arm Type	Base Type
H-235-U	Adjustable Arm	Flanged
H-235-UB	Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
H-235-U	350 Kgs	0.560	60°	85°	65.0	290.0	44.5	41.4	41.4	57.2	57.2	110.0	8.5	75.0	M10 Bolt
H-235-UB	350 Kgs	0.560	60°	85°	74.0	290.0	52.5	41.4	8.0	57.2	-	110.0	8.5	75.0	M10 Bolt

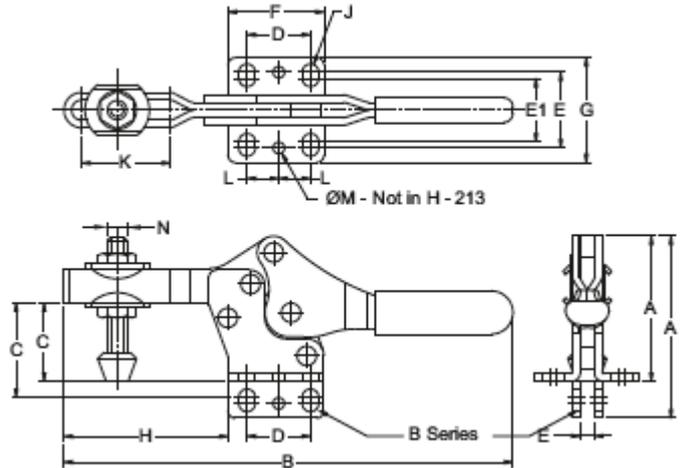
### Horizontal Hold Down Action H - 213, 217 Series



Model No. H-213-U



Model No. H-217-UB



Also Available in Stainless Steel
H-213-U-SS
H-213-UB-SS
H-217-U-SS
H-217-UB-SS



Model No. H-217-U

Model No.	Arm Type	Base Type
H-213-U	Adjustable Arm	Flanged
H-213-UB	Adjustable Arm	Straight
H-217-U	Adjustable Arm	Flanged
H-217-UB	Adjustable Arm	Straight

Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions												
					A	B	C	D	E	E1	F	G	H	J	K	M	N
H-213-U	70 Kgs	0.070	60°	90°	34.5	107.0	19.1	13.5	17.5	16.2	25.4	28.0	35.3	4.3 x	21.3	-	M5 Bolt
H-213-UB	70 Kgs	0.070	60°	90°	44.7	107.0	27.0	13.5	4.0	-	25.4	0.0	35.3	4.3 x	21.3	-	M5 Bolt
H-217-U	100 Kgs	0.190	76°	92°	51.0	165.0	24.6	26.2	29.2	26.4	37.3	41.0	58.9	4.3 x	38.1	4.7	M6 Bolt
H-217-UB	100 Kgs	0.190	76°	92°	63.5	165.0	34.0	26.2	6.0	-	37.3	0.0	58.9	4.3 x	38.1	4.7	M6 Bolt

## Horizontal Hold Down Action

### Horizontal Hold Down Action H - 227, 237, 245 Series



Model No. H-227-U



Model No. H-237-U



Model No. H-245-U



Model No. H-227-UB



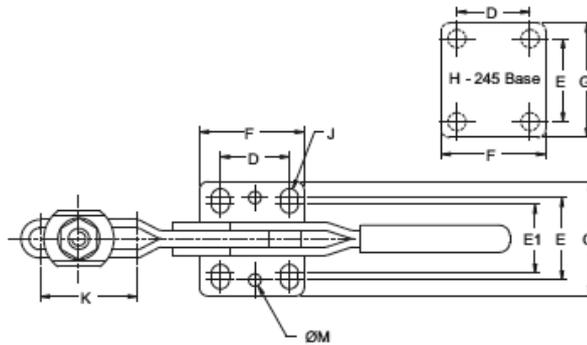
Model No. H-237-UB



Model No. H-245-UB

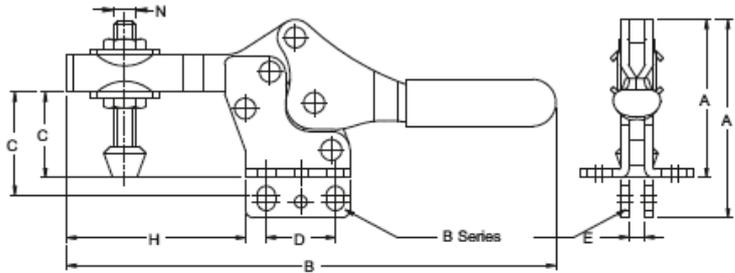


Model No. H-245-S



Also Available  
in Stainless Steel  
H-227-U-SS  
H-227-UB-SS

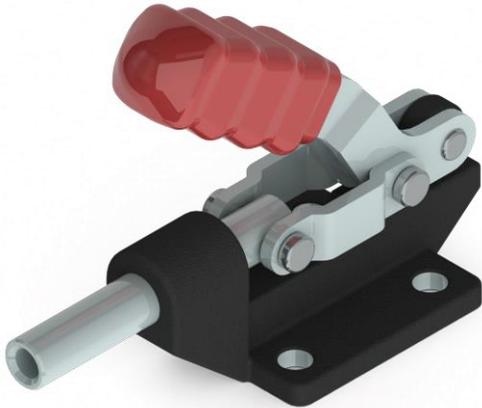
Model No.	Arm Type	Base Type
H-227-U	Adjustable Arm	Flanged
H-227-UB	Adjustable Arm	Straight
H-237-U	Adjustable Arm	Flanged
H-237-UB	Adjustable Arm	Straight
H-245-S	Solid Arm	Flanged
H-245-SB	Solid Arm	Straight
H-245-U	Adjustable Arm	Flanged
H-245-UB	Adjustable Arm	Straight



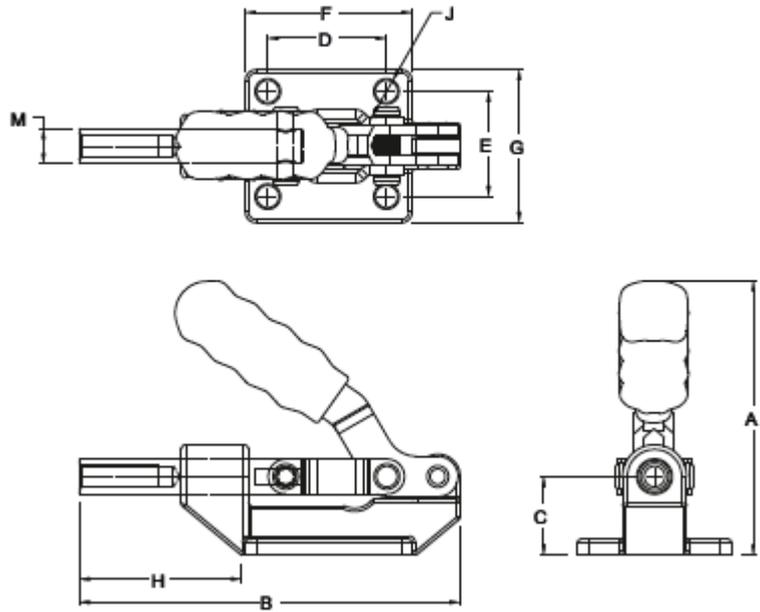
Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions												
					A	B	C	D	E	E1	F	G	H	J	K	M	N
H-227-U	225 Kgs	0.300	62°	92°	62.0	189.0	34.0	26.2	31.8	26.2	39.6	44.0	68.1	6.8 x 9.4	38.1	4.5	M8 Bolt
H-227-UB	225 Kgs	0.300	62°	92°	76.0	189.0	40.0	26.2	6.0	—	39.6	—	68.1	6.8 x 9.4	38.1	4.5	M8 Bolt
H-237-U	350 Kgs	0.750	63°	92°	81.0	275.0	45.0	41.4	42.9	39.5	57.2	57.2	105.0	8.5 x 10.5	80.0	5.5	M10 Bolt
H-237-UB	350 Kgs	0.750	63°	92°	99.0	275.0	55.6	41.4	8.0	—	57.2	—	105.0	8.5 x 10.5	80.0	5.5	M10 Bolt
H-245-S	450 Kgs	1.400	67°	105°	110.5	330.0	58.0	41.4	41.4	—	66.8	67.0	132.0	8.7	—	—	M12 Bolt
H-245-SB	450 Kgs	1.400	67°	105°	128.0	330.0	65.4	41.4	10.0	—	66.8	—	132.0	8.7	—	—	M12 Bolt
H-245-U	450 Kgs	1.400	67°	105°	110.5	325.0	58.0	41.4	41.4	—	66.8	67.0	128.0	8.7	82.0	—	M12 Bolt
H-245-UB	450 Kgs	1.400	67°	105°	128.0	325.0	65.4	41.4	10.0	—	66.8	—	128.0	8.7	82.0	—	M12 Bolt

## Straight Line Action

### HTC Series Clamps - PS Series

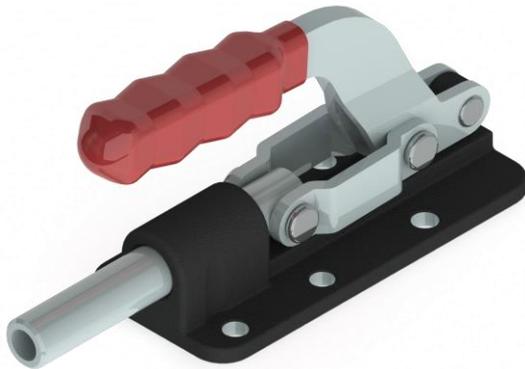


Model No. HTC - 603 - PS

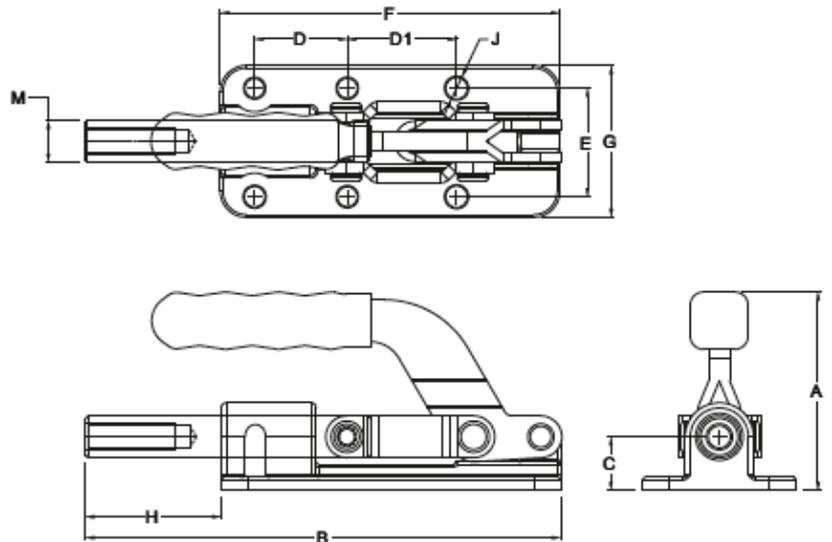


Model No.	Holding Capacity	Weight Kg	Plunger Travel	Plunger Thread	Dimensions									
					A	B	C	D	E	F	G	H	J	M
HTC - 603 - PS	300 Kgs	0.380	31.75	M8 x 1.25	87	120	25	36.5	33.2	52	48	55	6.8	11.1
HTC - 608 - PS	400 Kgs	0.570	41.40	M10 x 1.50	105	155	32	41.4	41.4	57	57	77	8.5	15.7
HTC - 610 - PS	400 Kgs	0.870	41.40	M10 x 1.50	127	173	43.2	41.4	41.4	57	57	108	8.5	15.7

### HTC Series Clamps - LH Series



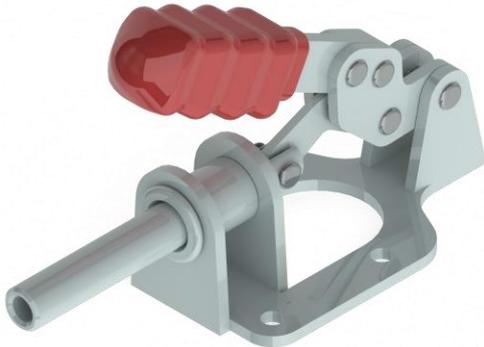
Model No. HTC - 630 - LH



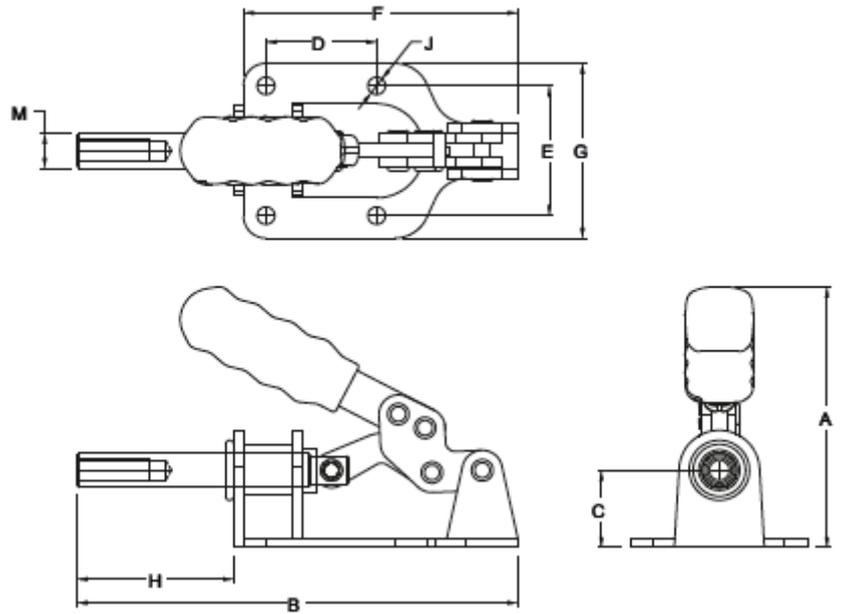
Model No.	Holding Capacity	Weight Kg	Plunger Travel	Plunger Thread	Dimensions										
					A	B	C	D	D1	E	F	G	H	J	M
HTC - 607 - LH	600 Kgs	0.740	41.40	M8 x 1.25	91	153	17.5	35	41.4	41.4	108	56	60	7.0	12.7
HTC - 630 - LH	800 Kgs	0.890	50.80	M10 x 1.50	80	179	20.5	35	41.4	41.4	128.5	58	51	8.5	15.7

## Straight Line Action

### HTC Series Clamps - 605

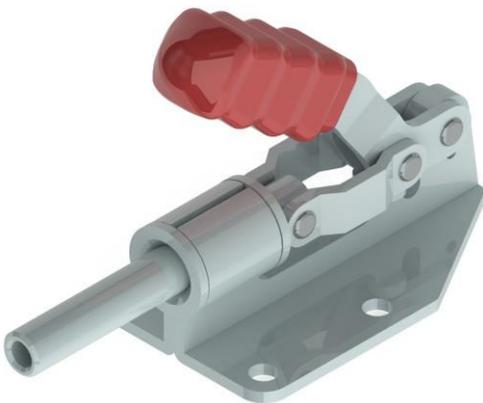


Model No. HTC - 605 - PS

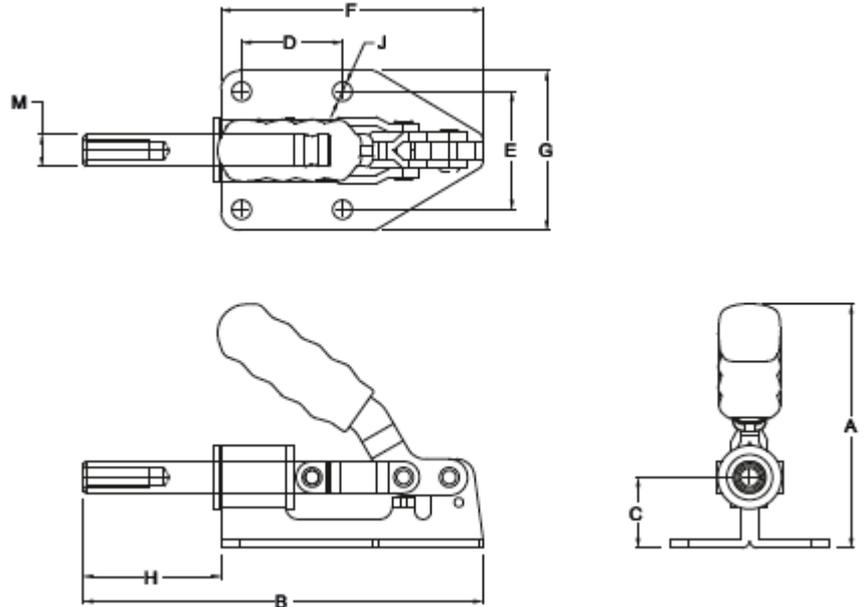


Model No.	Holding Capacity	Weight Kg	Plunger Travel	Plunger Thread	Dimensions									
					A	B	C	D	E	F	G	H	J	M
HTC - 605 - PS	150 Kgs	0.320	31.75	M8 x 1.25	82	139	25	35	41.2	87.5	55.5	49.5	5.6	11.1

### HTC Series Clamps - 609



Model No. HTC - 609 - PS



Model No.	Holding Capacity	Weight Kg	Plunger Travel	Plunger Thread	Dimensions									
					A	B	C	D	E	F	G	H	J	M
HTC - 609 - PS	150 Kgs	0.360	31.75	M8 x 1.25	82	139	25	35	41.2	91.5	55.5	47.5	5.2	11.1

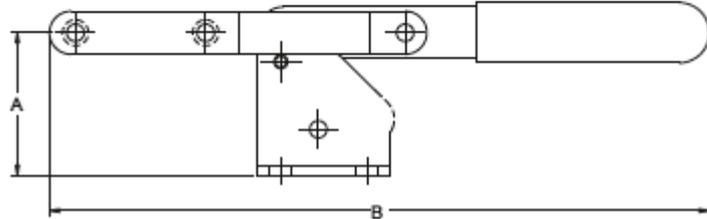
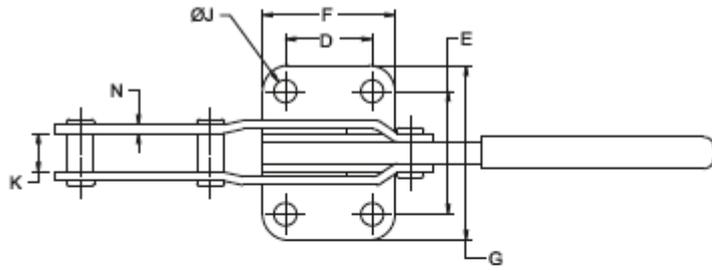
## Pull Action Clamps

### PAH - 301, 311 Series



Model No. PAH - 311

Also Available in Stainless Steel
PAH - 301 - SS
PAH - 311 - SS



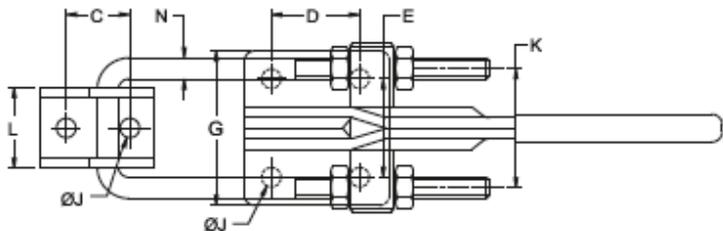
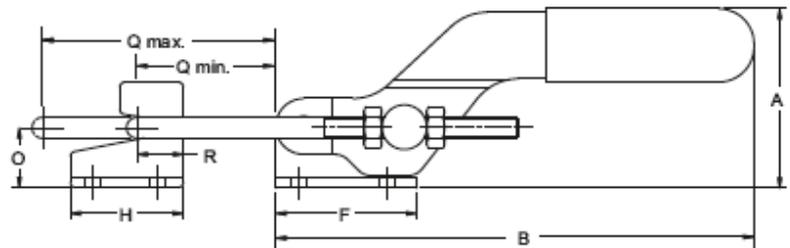
Model No.	Holding Capacity	Weight	Drawing Movement	Dimensions								
				A	B	D	E	F	G	J	K	N
PAH-301	170 Kgs	0.300	101.0	41.4	212.3	19.1	31.8	35.1	44.5	7.1	14.2	3.3
PAH-311	550 Kgs	0.550	85.0	52.3	244.6	31.8	45.2	48.5	64.3	8.4	14.2	3.3

### PAH - 323, 331, 341 Series



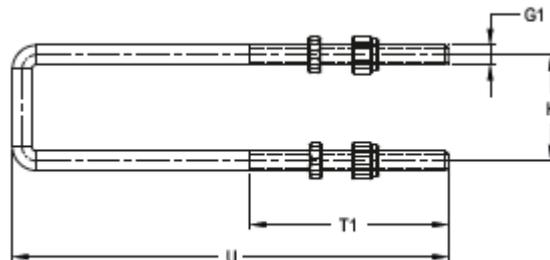
Model No. PAH - 323

Also Available in Stainless Steel
PAH-323-SS
PAH-331-SS
PAH-341-SS



Model No.	Holding Capacity	Weight	Drawing Movement	Dimensions															
				A	B	C	D	E	F	G	H	ØJ	K	L	ØN	O	Q Min	Q Max	R
PAH-323	150 Kgs	0.100	46.0	29	79	9.9	16	19.1	26	28	20	4.2	19.1	13.2	4	12	14	27	11
PAH-331	250 Kgs	0.220	44.0	45	123	14.2	19.1	31.8	35	44.5	25.4	6.9	28	17.5	5	15	15	45	13.8
PAH-341	900 Kgs	1.000	63.0	71	170	19.1	41.4	38.1	60.5	54	38.1	8.5	44.5	30.2	8	23.8	22	42	18.5

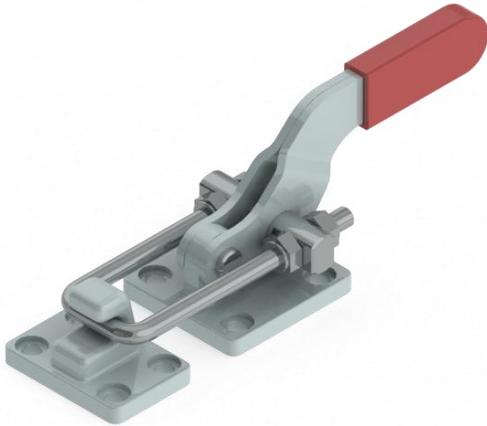
Model No	U Bolt Part	SS - U Bolt Part	U	T1	G1	K
PAH - 323	M49045	M49045 - SS	57	25	M4	19.1
PAH - 323 - M25	M411545	M411545 - SS	82			
PAH - 331	M511045	M511045 - SS	85	45	M5	28
PAH - 331 - M25	M513545	M513545 - SS	110			
PAH - 331 - M50	M516045	M516045 - SS	135			
PAH - 341	M613055	M613055 - SS	118	52	M8	44.5
PAH - 341 - M25	M615555	M615555 - SS	143			
PAH - 341 - M50	M618055	M618055 - SS	168			



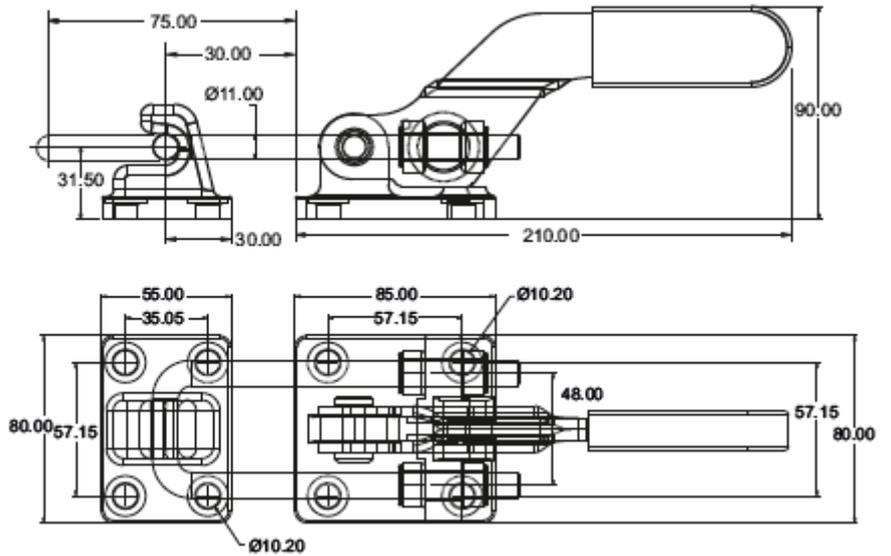
## Pull Action Clamps

### Model No: PAH-375

Holding Capacity - 1800 kgs  
Weight - 2.270 kgs



Model No. PAH - 375

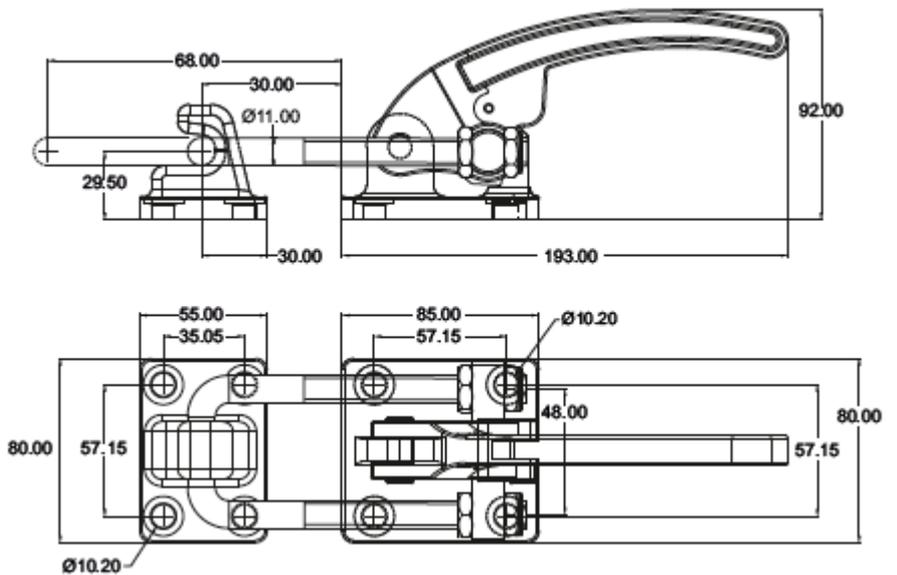


### Model No: PAH-385

Holding Capacity - 3500 kgs  
Weight - 2.500 kgs



Model No. PAH - 385

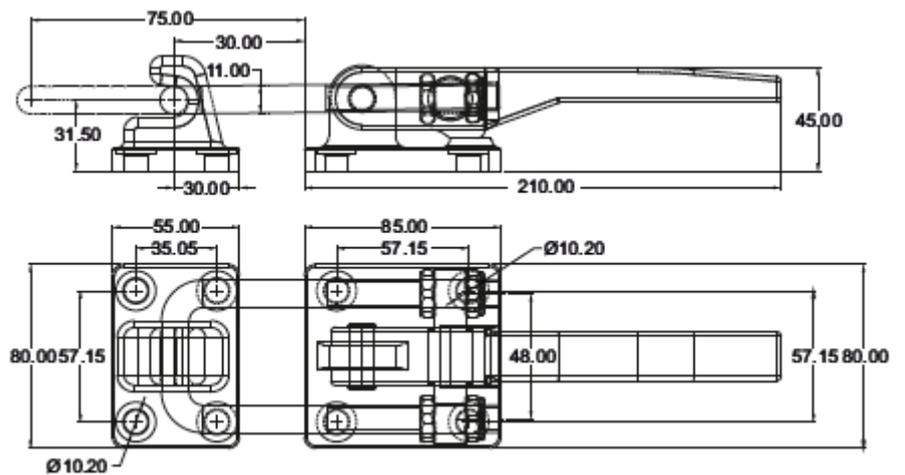


### Model No: PAH-385-L

Holding Capacity - 3500 kgs  
Weight - 1.650 kgs



Model No. PAH - 385 - L

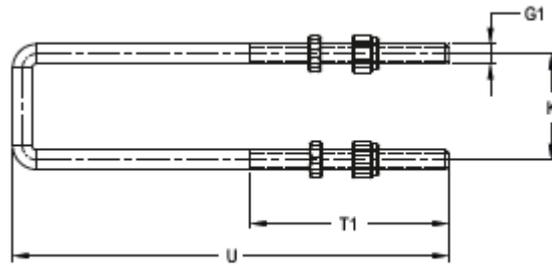


## Pull Action Clamps

### Optional U-Bolt Configuration

Use the below number for additional long U-Bolts

Model No	U Bolt Part Number	U	T1	G1	K
PAH - 375	M1216585	165	85	M12	48
PAH - 375 - M50	M1221585	215			
PAH - 385	M1216585	165			
PAH - 385 - M50	M1221585	215			
PAH - 385 - L	M1216585	165			
PAH - 385-L - M50	M1221585	215			



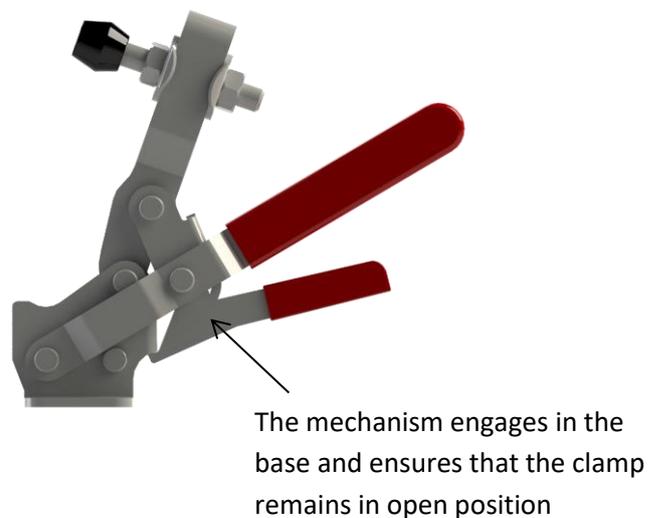
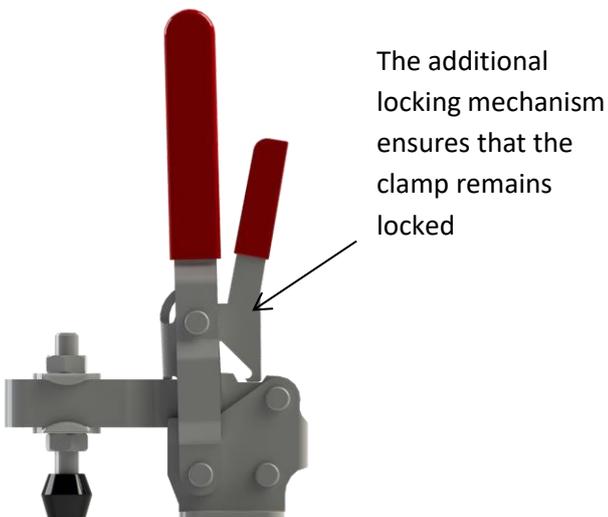
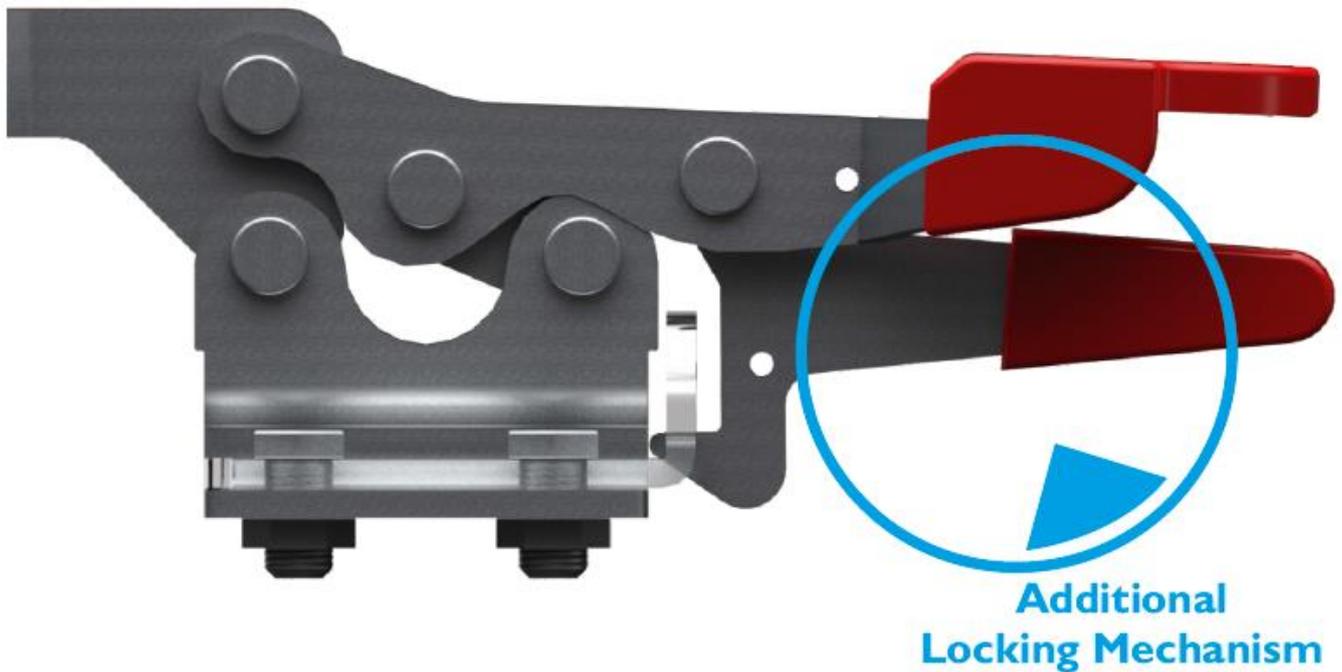
## Additional Locking Mechanism

### Toggle Clamps with Additional Locking Mechanism

Steel-Smith introduces its latest range of clamps with Additional Locking Mechanism, this mechanism ensures that the clamp remains locked in any condition.

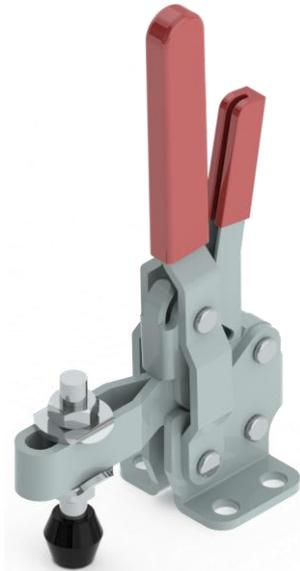
In order to unclamp, the mechanism must be first released.

In the Vertical Series this mechanism will hold the clamping arm in both the closed and open positions, so that it is protected against unintentional opening or closing through vibration or if the clamp is mounted overhead.

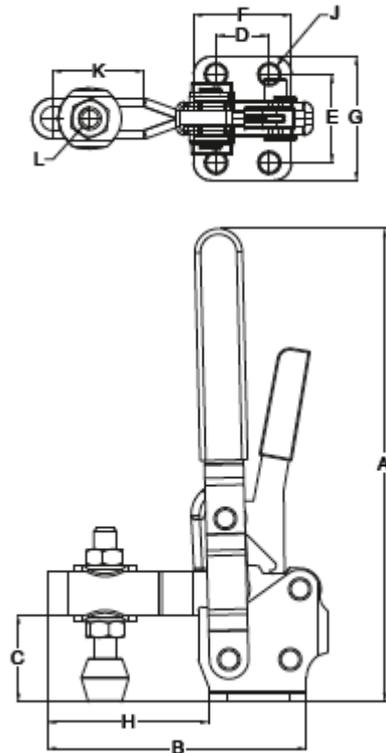


## Additional Locking Mechanism

### Vertical Hold Down Action With Additional Locking Mechanism

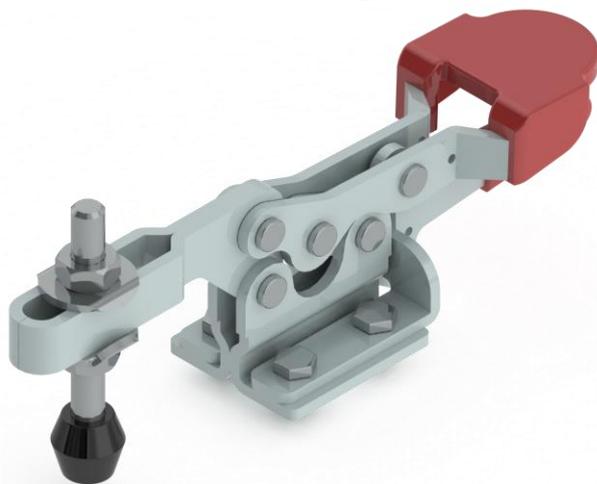


Model No. VTC-207-U-TRIG

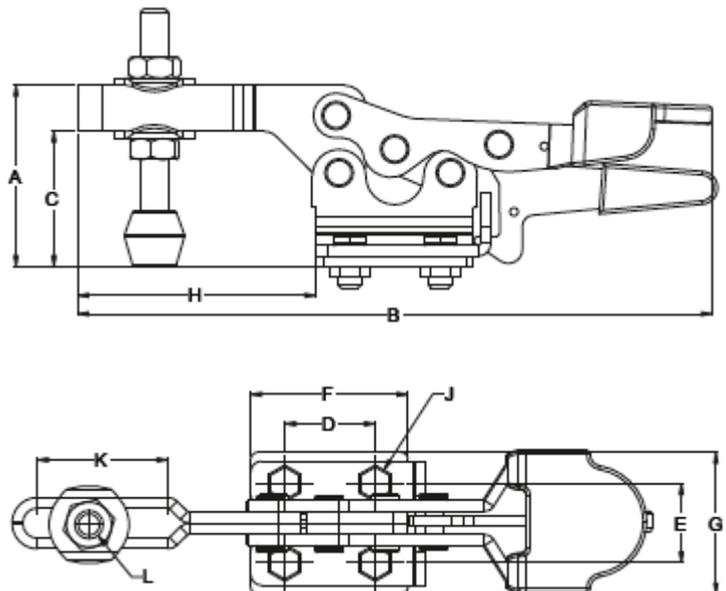


Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
VTC-207-U-TRIG	175 Kgs	0.300	62°	115°	172.0	92.0	32.5	19.1	31.8	35.1	44.5	57.7	7.1	37.0	M8 Bolt
VTC-210-U-TRIG	275 Kgs	0.590	58°	106°	195.0	138.0	40.0	31.8	45.2	48.5	64.3	90.0	8.3	62.0	M10 Bolt

### Horizontal Hold Down Action With Additional Locking Mechanism



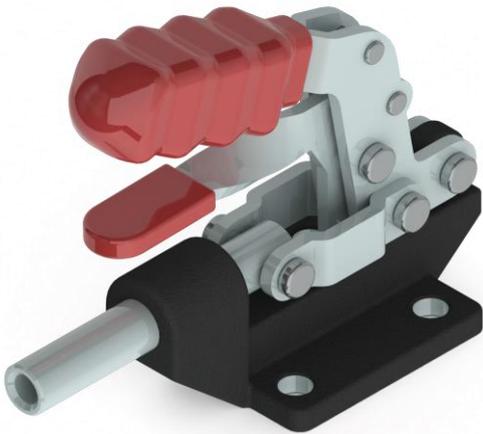
Model No. H-225-U-TRIG



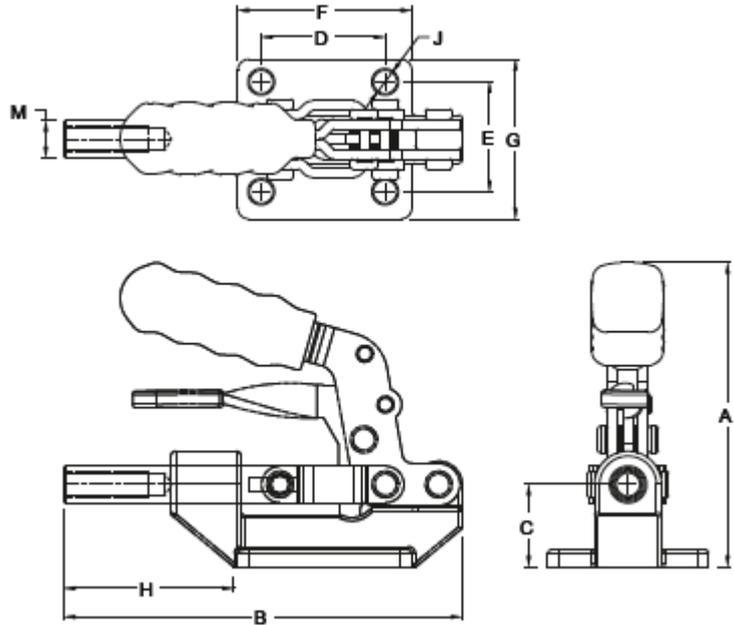
Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
H-225-U-TRIG	225 Kgs	0.315	70°	90°	47.0	185.0	33.5	25.4	22.4	38.1	35.1	73.0	M6	34.0	M8 Bolt
H-235-U-TRIG	350 Kgs	0.560	60°	85°	70.0	285.0	44.5	41.4	41.4	57.2	57.2	115.0	M8	75.0	M10

## Additional Locking Mechanism

### HTC Series Clamps - PS Series With Additional Locking Mechanism

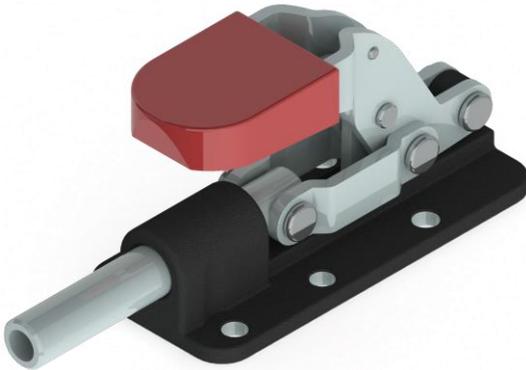


Model No. HTC-603-TRIG

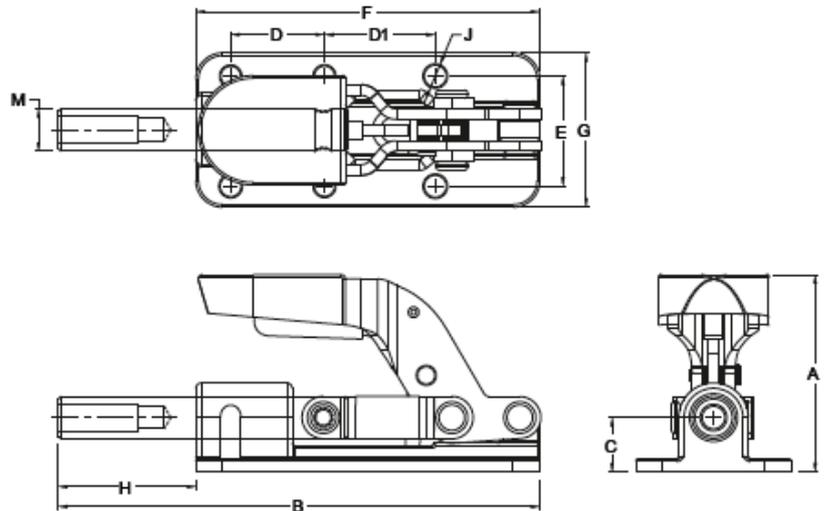


Model No.	Holding Capacity	Weight Kg	Plunger Travel	Plunger Thread	Dimensions									
					A	B	C	D	E	F	G	H	J	M
HTC - 603 - TRIG	300 Kgs	0.380	31.75	M8 x 1.25	87	120	25	36.5	33.2	52	48	55	6.8	11.1
HTC - 608 - TRIG	400 Kgs	0.570	41.40	M10 x 1.50	105	155	32	41.4	41.4	57	57	77	8.5	15.7

### HTC Series Clamps - LH Series With Additional Locking Mechanism



Model No. HTC-630-TRIG



Model No.	Holding Capacity	Weight Kg	Plunger Travel	Plunger Thread	Dimensions										
					A	B	C	D	D1	E	F	G	H	J	M
HTC - 607 - TRIG	600 Kgs	0.740	41.40	M8 x 1.25	91	153	17.5	35	41.4	41.4	108	56	60	7.0	12.7
HTC - 630 - TRIG	800 Kgs	0.890	50.80	M10 x 1.50	80	179	20.5	35	41.4	41.4	128.5	58	51	8.5	15.7

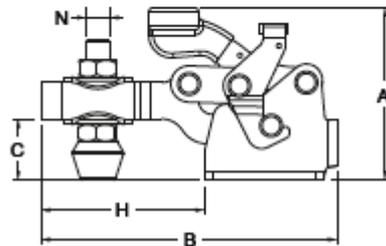
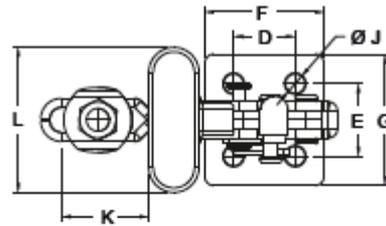
## Additional Locking Mechanism

### Horizontal Hold Down Action With Additional Locking Mechanism



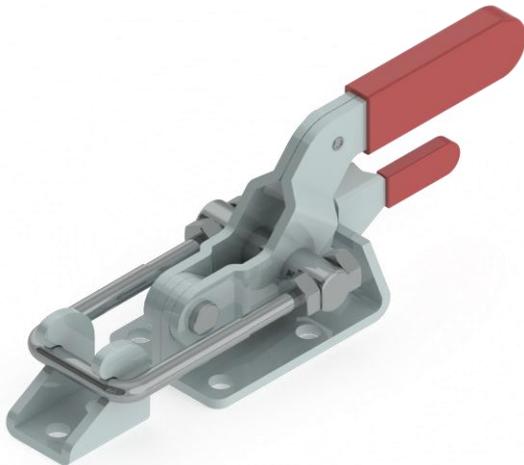
Model No. H - 305 - U – TRIG

Also Available in Stainless Steel
H-305-U-TRIG-SS
H-307-U-TRIG-SS
H-309-U-TRIG-SS



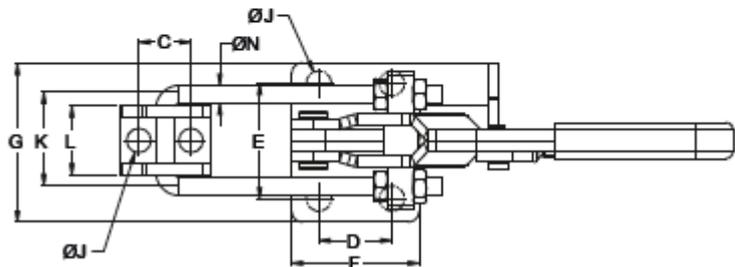
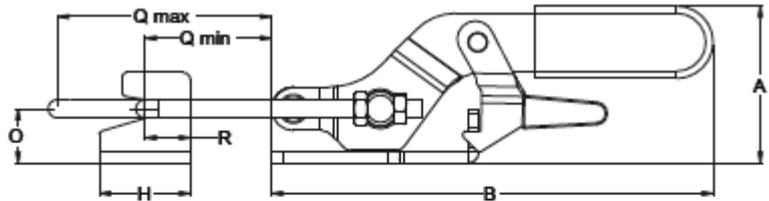
Model No.	Holding Capacity	Weight Kg	Handle Moves	Bar Opens	Dimensions											
					A	B	C	D	E	F	G	H	J	K	L	N
H-305-U-TRIG	50 Kgs	0.070	175°	92°	38.0	62.0	13.5	13.5	16.0	26.0	29.0	34.0	4.3	15.0	32.0	M5 Bolt
H-307-U-TRIG	150 Kgs	0.250	175°	92°	62.0	91.7	22.4	23.1	29.5	43.7	46.0	48.0	7.1	19.1	50.8	M8 Bolt
H-309-U-TRIG	350 Kgs	0.600	160°	88°	91.2	131.8	33.3	35.1	38.1	64.0	62.7	67.6	8.4	26.9	91.2	M10 Bolt

### Pull Action Clamps With Additional Locking Mechanism



Model No. PAH-341-TRIG

Also Available in Stainless Steel
PAH-331-TRIG-SS
PAH-341-TRIG-SS



Model No.	Holding Capacity	Weight	Drawing Movement	Dimensions															
				A	B	C	D	E	F	G	H	ØJ	K	L	ØN	O	Q Min	Q	R
PAH-331-TRIG	325 Kgs	0.250	44.0	45	123	14.2	19.1	31.8	35	44.5	25.4	6.9	28	17.5	5.0	15	15	45	13.8
PAH-341-TRIG	900 Kgs	0.710	63.0	71	170	19.1	41.4	38.1	60.5	54.0	38.1	8.5	44.5	30.2	8.0	23.8	22	42	18.5

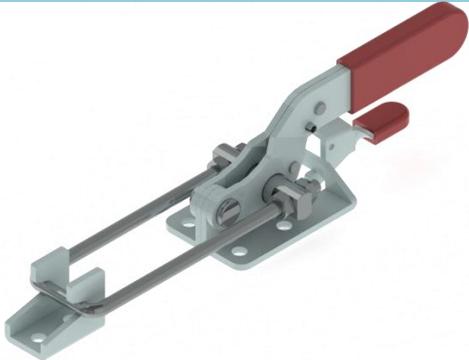
## Additional Locking Mechanism

### Model No: PAH-5271-TRIG

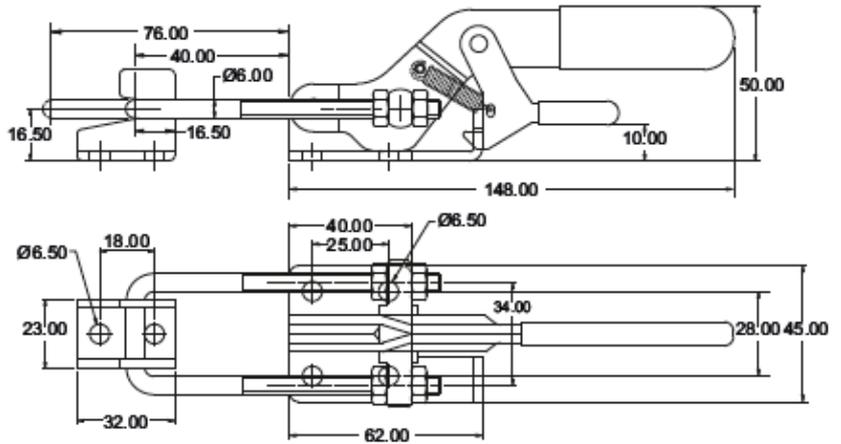
Holding Capacity - 350 kgs

Weight - 0.370 kgs

Available in Stainless Steel :  
PAH-5271-TRIG-SS



Model No. PAH-5271-TRIG-SS

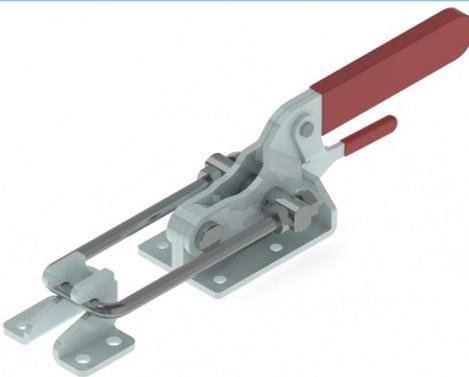


### Model No: PAH-5442-TRIG

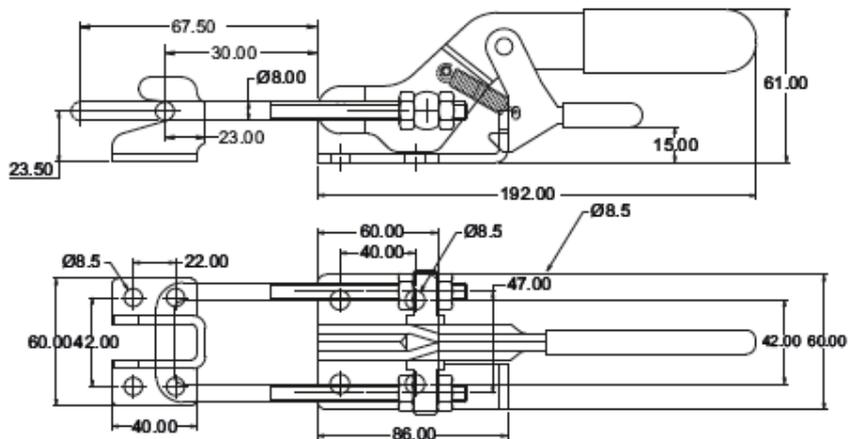
Holding Capacity - 950 kgs

Weight - 0.920 kgs

Also Available in Stainless Steel :  
PAH - 5442 - TRIG - SS



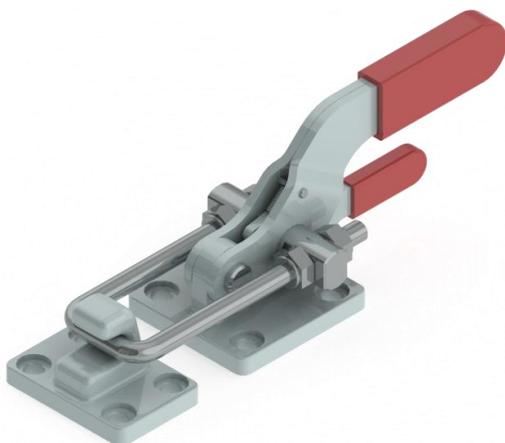
Model No. PAH-5442-TRIG-SS



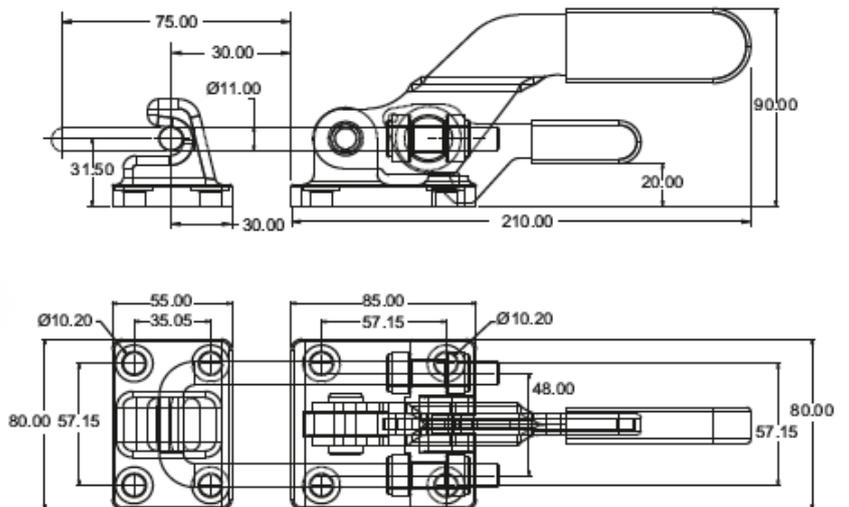
### Model No: PAH-2603-TRIG

Holding Capacity - 1800 kgs

Weight - 2.270 kgs



Model No. PAH-2603-TRIG



## Additional Locking Mechanism

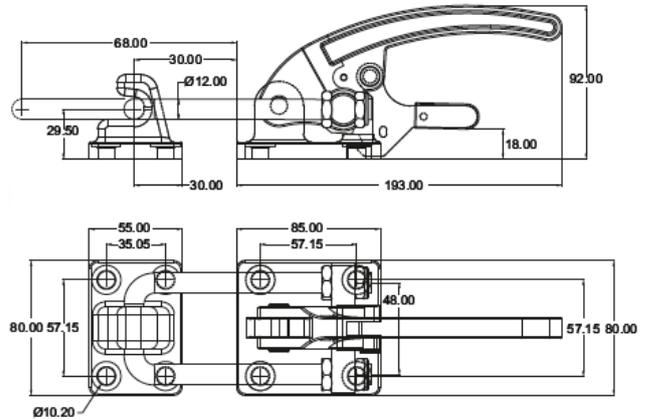
### Model No: PAH-385-TRIG

Holding Capacity - 3500 kgs

Weight - 2.500 kgs



Model No. PAH - 385 - TRIG

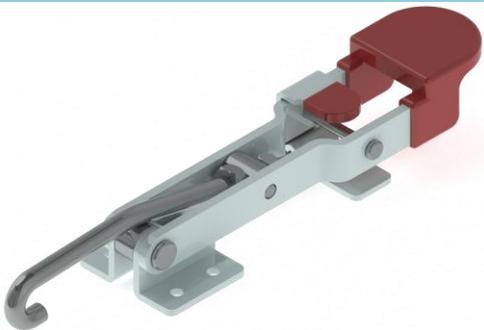


### Model No: PA-351-TRIG

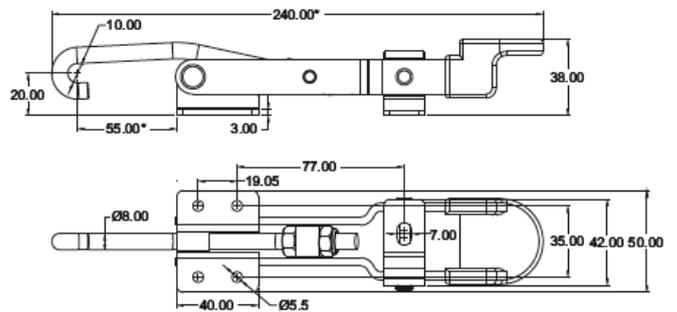
Holding Capacity - 200 kgs

Weight - 0.400 kgs

Also Available in Stainless Steel :  
PA - 351 - TRIG - SS



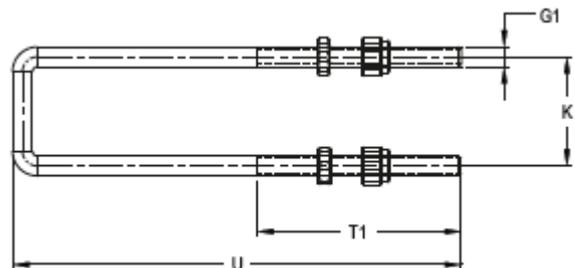
Model No. PA - 351 - TRIG



### Optional U-Bolt Configuration

Use the below number for additional long U-Bolts

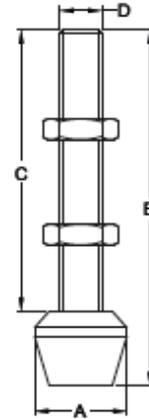
Model No	U Bolt Part	SS - U Bolt Part Number	U	T1	G1	K
PAH - 5271-TRIG	M613055	M613055 - SS	130	55	M6	34
PAH - 5271-TRIG - M25	M615555	M615555 - SS	155			
PAH - 5271-TRIG - M50	M618055	M618055 - SS	180			
PAH - 5442-TRIG	M814570	M814570 - SS	145	70	M8	47
PAH - 5442-TRIG - M25	M817070	M817070 - SS	170			
PAH - 5442-TRIG - M50	M819570	M819570 - SS	195			
PAH - 2603-TRIG	M1216585	M1216585 - SS	165	85	M12	48
PAH - 2603-TRIG - M25	M1219085	M1219085 - SS	190			
PAH - 2603-TRIG - M50	M1221585	M1221585 - SS	215			
PAH - 385 - TRIG	M1216585	--	165			
PAH - 385 - TRIG - M50	M1221585	--	215			



## Accessories

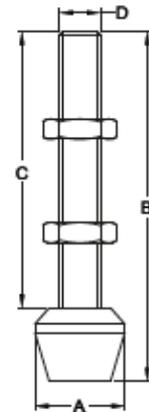
### RUBBER TIP SPINDLES - RT

Model No.	A	B	C	D
RT-420	9	24	19	M 4
RT-525	12	34	24	M 5
RT-645	15	46	33	M 6
RT-865	18	66	50	M 8
RT-1085	23	86	66	M 10
RT-12115	23	116	97	M 12
RT-12155	23	163	144	M 12
RT-16170	32	173	147	M 16



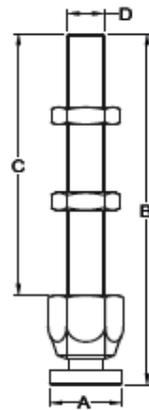
### NYLON TIP SPINDLES - NT

Model No.	A	B	C	D
NT-645	15	48	35	M 6
NT-865	18	72	55	M 8
NT-1085	24	90	70	M 10
NT-12115	24	120	102	M 12
NT-12155	24	160	142	M 12
NT-16170	32	173	147	M 16



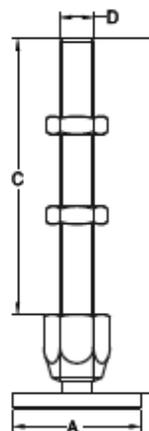
### SWIVEL FOOT SPINDLES - SW

Model No.	A	B	C	D
SW-645	12.5	60	36	M 6
SW-865	16	85	63	M 8
SW-1085	19	102	75	M 10
SW-12115	19	133	105	M 12
SW-12155	19	173	144	M 12
SW-16170	50	190	155	M 16



### LARGE DIAMETER SWIVEL FOOT SPINDLES - SW

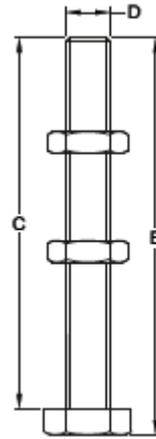
Model No.	A	B	C	D
LDSW-645	12.5	60	36	M 6
LDSW-865	16	85	63	M 8
LDSW-1085	19	102	75	M 10
LDSW-12115	19	133	105	M 12
LDSW-12155	19	173	144	M 12
LDSW-16170	50	190	155	M 16



## Accessories

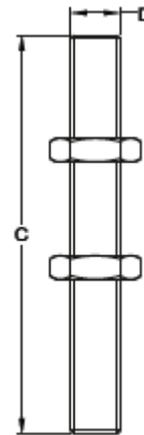
### STANDARD HEX SPINDLES - SH

Model No.	B	C	D
SH-645	49	45	M 6
SH-865	70	64	M 8
SH-1085	97	90	M 10
SH-12115	132	124	M 12
SH-12155	150	142	M 12
SH-16170	192	181	M 16



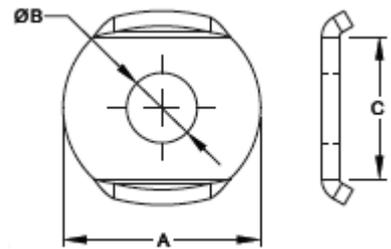
### PLAIN SPINDLES - PS

Model No.	C	D
PS-645	46	M 6
PS-865	69	M 8
PS-1085	85	M 10
PS-12115	116	M 12
PS-16170	172	M 16



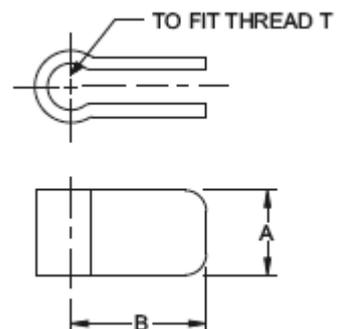
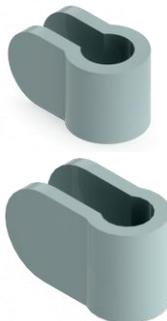
### WASHERS

Model No.	A	B	C
M4-WSHR	9	4.2	-
M5-WSHR	15	5.2	9.5
M6-WSHR	19.5	6.2	13.5
M8-WSHR	22.5	8.2	16.5
M10-WSHR	25	10.2	19.5
M12-WSHR	27.5	12.2	21.5
M16-WSHR	31	16.2	29.5



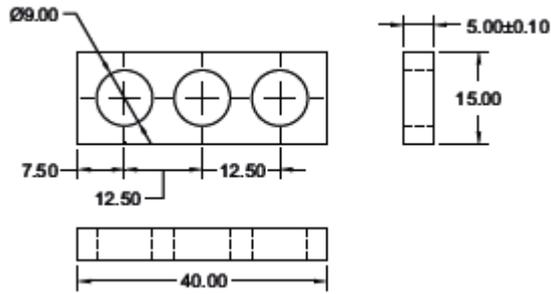
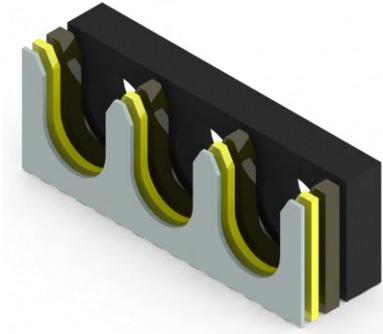
### BOLT RETAINER - BR

Model No.	A	B	TØ
BR-1	10	20	6
BR-2	20	27	10
BR-3	20	30	12
BR-4	25	32	16
BR-5	12	23	8
BR-6	20	27	10
BR-7	25	30	12

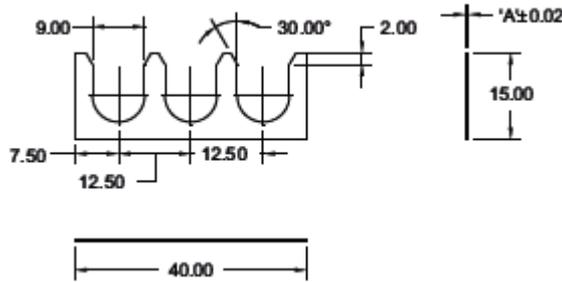
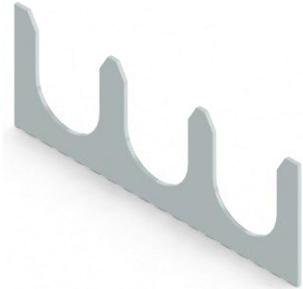


## Shimpacks

### SHIMPACKS SERIES 4015- TML

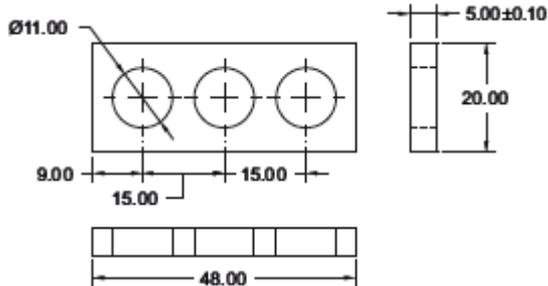
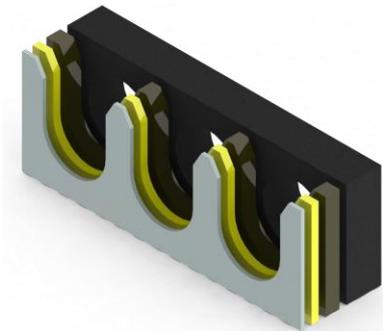


Model No. NX4015-TML-4

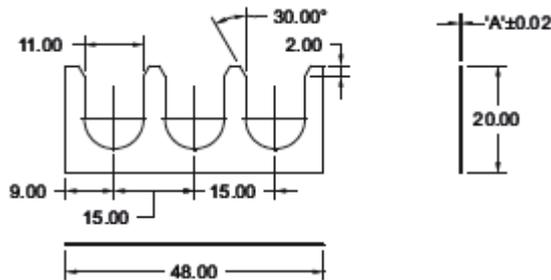
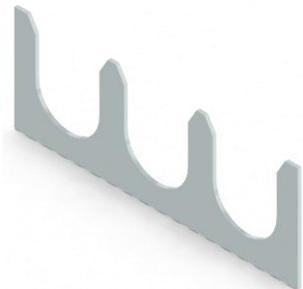


Model No.	Dim 'A'
NX4015-TML-1	0.50 ±0.02
NX4015-TML-2	1.00 ±0.02
NX4015-TML-3	2.00 ±0.02

### SHIMPACKS SERIES 4820- TML



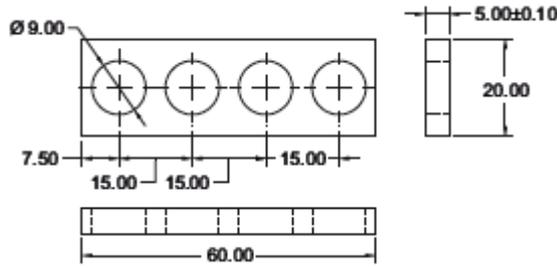
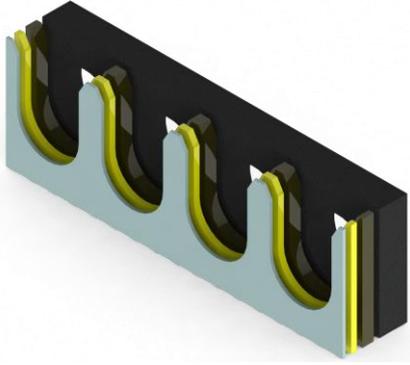
Model No. NX4820-TML-4



Model No.	Dim 'A'
NX4820-TML-1	0.50 ±0.02
NX4820-TML-2	1.00 ±0.02
NX4820-TML-3	2.00 ±0.02

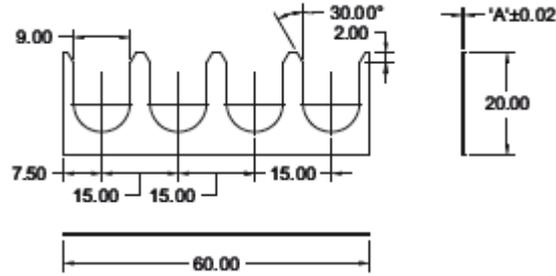
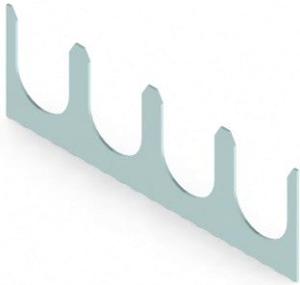
## Shimpacks

### SHIMPACKS SERIES 6020- TML

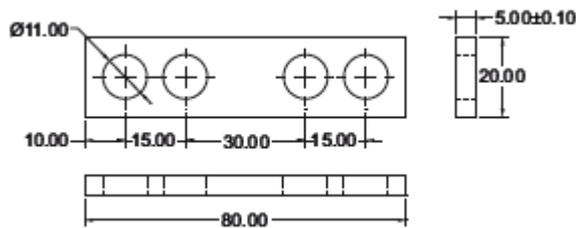
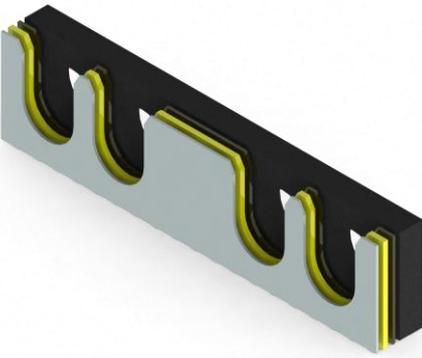


Model No. NX6020-TML-4

Model No.	Dim 'A'
NX6020-TML-1	0.50 ±0.02
NX6020-TML-2	1.00 ±0.02
NX6020-TML-3	2.00 ±0.02

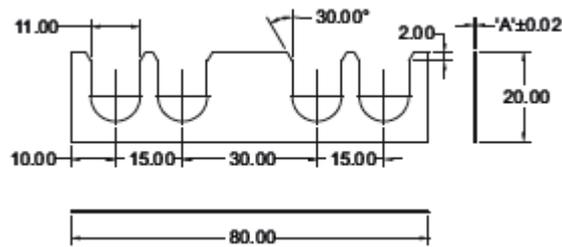
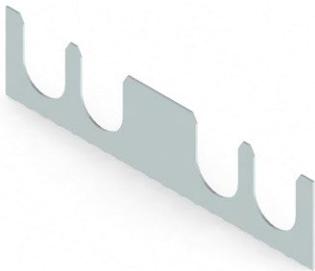


### SHIMPACKS SERIES 8020- TML



Model No. NX8020-TML-4

Model No.	Dim 'A'
NX8020-TML-1	0.50 ±0.02
NX8020-TML-2	1.00 ±0.02
NX8020-TML-3	2.00 ±0.02





**PLASTIC BASE LEVELING PADS**

**LEVELING PADS - FEMALE**

**LEVELING PADS - MALE**

**FIXTURE HEX NUTS**

**EXTENSION FIXTURE HEX NUTS**

**PLAIN WASHERS**

**SPHERICAL WASHERS - CONICAL**

**STUDS FOR T - NUTS**

**COLLAR NUTS**

**UNIVERSAL STEP BLOCKS**

**SPRING PLUNGERS**

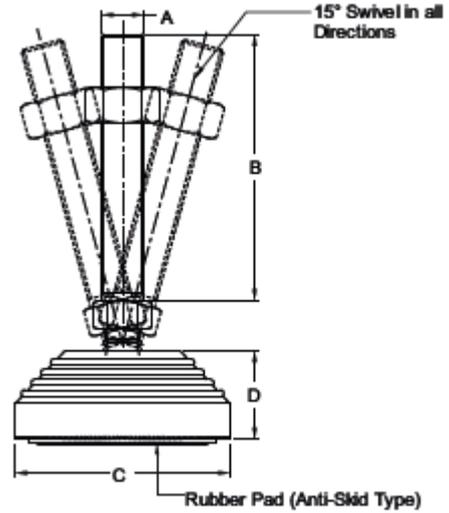
**T - NUTS**

**T - BOLTS**

**STRAP CLAMPS**

## Fixture Elements

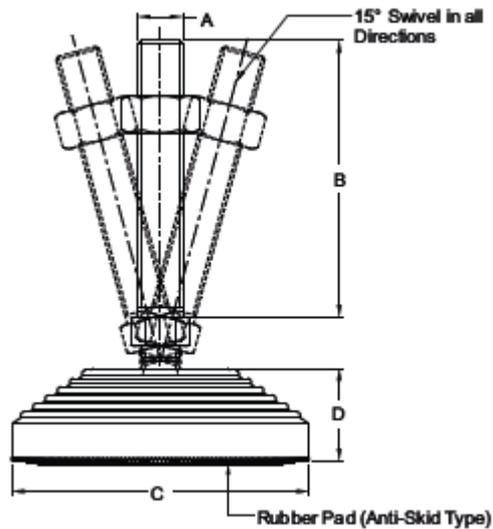
### TECHNOPOLYMER PLASTIC BASE LEVELING PADS With Rubber Bottom for Anti-Skid (60mm Base)



Model No.	A	B	C	D	Max. Load Capacity
TPLP - 1075 - 60	M 10	75	60	24	100 Kgs
TPLP - 10100 - 60	M 10	100	60	24	100 Kgs
TPLP - 10125 - 60	M 10	125	60	24	100 Kgs
TPLP - 1275 - 60	M 12	75	60	24	100 Kgs
TPLP - 12100 - 60	M 12	100	60	24	100 Kgs
TPLP - 12125 - 60	M 12	125	60	24	100 Kgs

Model No.	A	B	C	D	Max. Load Capacity
TPLP - 1675 - 60	M 16	75	60	24	100 Kgs
TPLP - 16100 - 60	M 16	100	60	24	100 Kgs
TPLP - 16125 - 60	M 16	125	60	24	100 Kgs

### TECHNOPOLYMER PLASTIC BASE LEVELING PADS With Rubber Bottom for Anti-Skid (80mm Base)



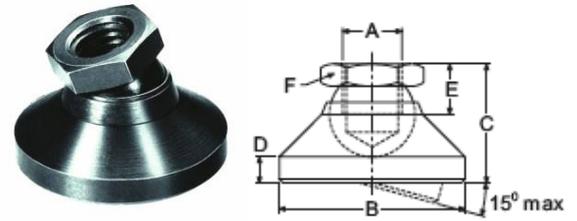
Model No.	A	B	C	D	Max. Load Capacity
TPLP - 1075 - 80	M 10	75	80	22	140 Kgs
TPLP - 10100 - 80	M 10	100	80	22	140 Kgs
TPLP - 10125 - 80	M 10	125	80	22	140 Kgs
TPLP - 1275 - 80	M 12	75	80	22	140 Kgs
TPLP - 12100 - 80	M 12	100	80	22	140 Kgs
TPLP - 12125 - 80	M 12	125	80	22	140 Kgs

Model No.	A	B	C	D	Max. Load Capacity
TPLP - 1675 - 80	M 16	75	80	22	140 Kgs
TPLP - 16100 - 80	M 16	100	80	22	140 Kgs
TPLP - 16125 - 80	M 16	125	80	22	140 Kgs

## Fixture Elements

### LEVELING PADS - FEMALE

Model No.	A	B	C	D	E	F	Wt. in Kgs	Max. load capacity for static
SLPF-624	M 6	20	14	2.5	5	10	0.017	10
SLPF-825	M 8	25	18	4.0	7.0	13	0.036	18
SLPF-1032	M 10	32	22	5.0	9.0	17	0.077	20
SLPF-1240	M 12	40	26	6.0	11.0	19	0.125	35
SLPF-1650	M 16	50	32	7.0	13.5	24	0.250	45
SLPF-2060	M 20	60	42	8.0	17.0	30	0.480	55
SLPF-2460	M 24	60	45	9.5	19.0	36	0.665	65

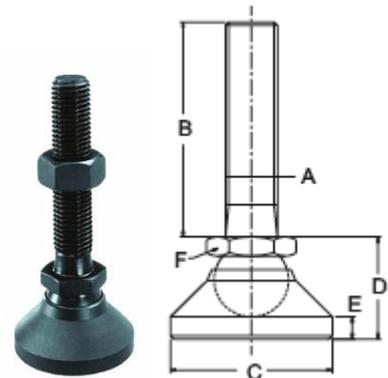


#### FEATURES:

Material: Steel Quality - Heat Treated Finish: Black Oxide

### LEVELING PADS - MALE

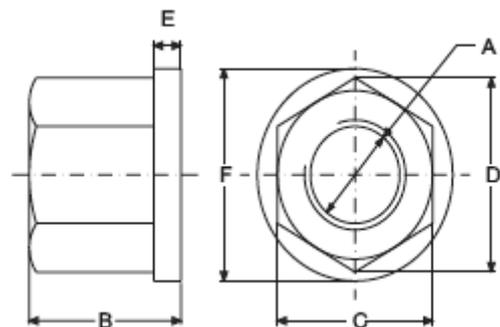
Model No.	A	B	C	D	E	F	Wt. in Kgs	Max. load capacity for static
SLPM-660	M 6	60	20	14	2.5	10	0.032	10
SLPM-880	M 8	80	25	18	4.0	13	0.064	18
SLPM-10100	M 10	100	32	22	5.0	17	0.130	20
SLPM-10150	M 10	150	32	22	5.0	17	0.155	20
SLPM-12100	M 12	100	40	26	6.0	19	0.210	35
SLPM-12150	M 12	150	40	26	6.0	19	0.255	35
SLPM-16100	M 16	100	50	32	7.0	24	0.400	45
SLPM-16200	M 16	200	50	32	7.0	24	0.540	45
SLPM-20100	M 20	100	60	42	8.0	30	0.740	55
SLPM-20200	M 20	200	60	42	8.0	30	0.950	55
SLPM-24100	M 24	100	60	45	9.5	36	0.850	65
SLPM-24200	M 24	200	60	45	9.5	36	1.145	65



#### FEATURES:

Material: Steel Quality - Heat Treated Finish: Black Oxide

### COLLAR NUTS DIN - 6331

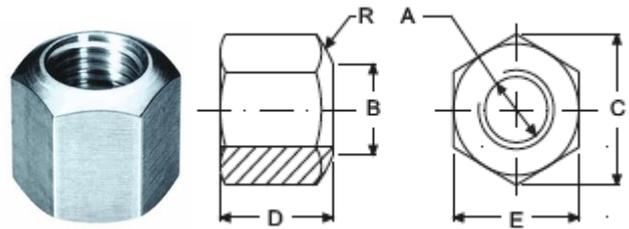


Model No.	A	B	C	D	E	F	Wt. in Kgs
DCCN-812	M 8	12	13	15.0	3.5	18	0.012
DCCN-1015	M 10	15	16	18.5	4.0	22	0.022
DCCN-1218	M 12	18	18	20.8	4.0	25	0.031
DCCN-1624	M 16	24	24	27.7	5.0	31	0.069
DCCN-2030	M 20	30	30	34.6	6.0	37	0.127
DCCN-2436	M 24	36	36	41.6	6.0	45	0.215

## Clamping Devices

### FIXTURE HEX NUTS

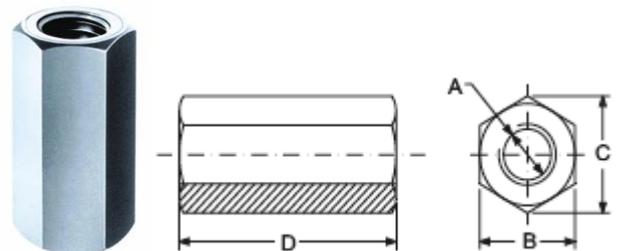
Model No.	A	B	C	D	E	R	Wt. in Kgs
FXN-8120	M 8	9	15	12	13	11	0.010
FXN-10150	M 10	11.5	19.6	15	17	15	0.020
FXN-12180	M 12	14	21.9	18	19	17	0.032
FXN-16240	M 16	18	27.7	24	24	22	0.060
FXN-20300	M 20	22	34.6	30	30	27	0.120
FXN-24360	M 24	26	41.6	36	45	30	0.195
FXN-30450	M 30	32	53.1	45	46	34	0.405



**FEATURES:**  
Material: Steel Quality  
Finish: Black Oxide

### EXTENSION FIXTURE HEX NUTS

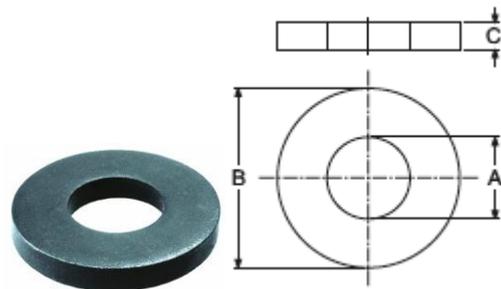
Model No.	A	B	C	D	Wt. in Kgs
EFXN-824	M 8	13	15	24	0.190
EFXN-1030	M 10	17	19.6	30	0.420
EFXN-1236	M 12	19	21.9	36	0.640
EFXN-1648	M 16	24	27.7	48	0.120
EFXN-2060	M 20	30	34.5	60	0.240
EFXN-2472	M 24	36	41.6	72	0.400
EFXN-3090	M 30	45	53.1	90	0.850



**FEATURES:**  
Material: Steel Quality  
Finish: Black Oxide

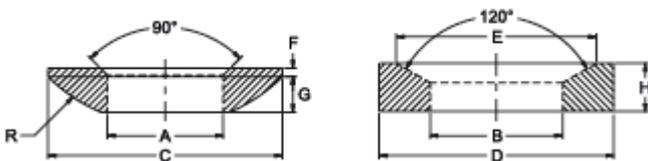
### PLAIN WASHERS - DIN-6340

Model No.	A	B	C	For Bolt	Wt. in Kgs
SPW-84	8.4	23	4	M 8	0.010
SPW-104	10.5	28	4	M 10	0.016
SPW-125	13	35	5	M 12	0.035
SPW-166	17	45	6	M 16	0.060
SPW-206	21	50	6	M 20	0.100
SPW-248	25	60	8	M 24	0.170
SPW-3010	31	68	10	M 30	0.230



**FEATURES:**  
Material: Heat treated Steel  
Finish: Black Oxide

### SPHERICAL WASHERS - CONICAL SEATS DIN - 6319



**FEATURES:**  
Material: Heat treated Steel  
Finish: Black Oxide



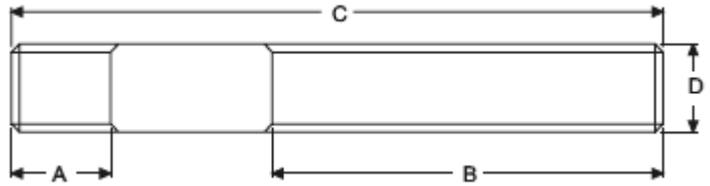
Model No.	For Bolt	A	B	C	D	E	F	G	H	R	Wt. in Kgs
DSWCS-812	M 8	8.4	9.6	17	17	14.5	0.6	3.2	3.5	12	0.006
DSWCS-1015	M 10	10.5	12	21	21	18.5	0.8	4.0	4.2	15	0.012
DSWCS-1217	M 12	13	14.2	24	24	20.0	1.1	4.6	5.0	17	0.012
DSWCS-1622	M 16	17	19	30	30	26.0	1.3	5.3	6.2	22	0.031
DSWCS-2027	M 20	21	23.2	36	36	31.0	2.0	6.3	7.5	27	0.055
DSWCS-2432	M 24	25	28	44	44	37.0	2.4	8.2	9.5	32	0.100

## Clamping Devices

### STUDS FOR T-NUTS DIN-6379



Finish: Black Oxide



**FEATURES:**

Material: Heat Treated Steel

Special: Longer or special studs are available on request.

Model No.	A	B	C	D	Wt. in Kgs.
DCS-632	9	16	32	M 6	0.008
DCS-650	9	30	50	M 6	0.011
DCS-663	9	40	63	M 6	0.014
DCS-680	9	50	80	M 6	0.018
DCS-840	11	20	40	M 8	0.010
DCS-863	11	40	63	M 8	0.020
DCS-8100	11	63	100	M 8	0.030
DCS-8160	11	100	160	M 8	0.045
DCS-1080	13	50	80	M 10	0.040
DCS-10100	13	75	100	M 10	0.050
DCS-10125	13	75	125	M 10	0.065
DCS-10160	13	100	160	M 10	0.080
DCS-10200	13	125	200	M 10	0.100
DCS-1280	15	50	80	M 12	0.060
DCS-12100	15	63	100	M 12	0.070
DCS-12125	15	75	125	M 12	0.090
DCS-12200	15	125	200	M 12	0.140
DCS-16100	19	63	100	M 16	0.130
DCS-16125	19	75	125	M 16	0.160
DCS-16160	19	100	160	M 16	0.210

Model No.	A	B	C	D	Wt. in Kgs.
DCS-16200	19	125	200	M 16	0.280
DCS-16250	19	160	250	M 16	0.325
DCS-16315	19	180	315	M 16	0.425
DCS-16500	19	180	500	M 16	0.650
DCS-20125	27	70	125	M 20	0.255
DCS-20160	27	100	160	M 20	0.330
DCS-20200	27	125	200	M 20	0.410
DCS-20250	27	160	250	M 20	0.510
DCS-20315	27	190	315	M 20	0.640
DCS-20400	27	250	400	M 20	0.815
DCS-20500	27	315	500	M 20	1.020
DCS-24100	35	45	100	M 24	0.290
DCS-24125	35	63	125	M 24	0.380
DCS-24160	35	100	160	M 24	0.470
DCS-24200	35	125	200	M 24	0.580
DCS-24250	35	160	250	M 24	0.725
DCS-24315	35	200	315	M 24	0.920
DCS-24400	35	250	400	M 24	1.160
DCS-24630	35	315	630	M 24	1.850

### UNIVERSAL STEP BLOCKS

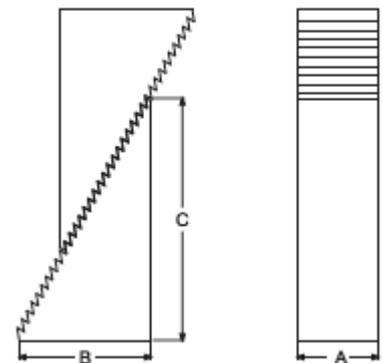


**FEATURES:**

Material: Heat Treated Steel

Finish: Black Oxide

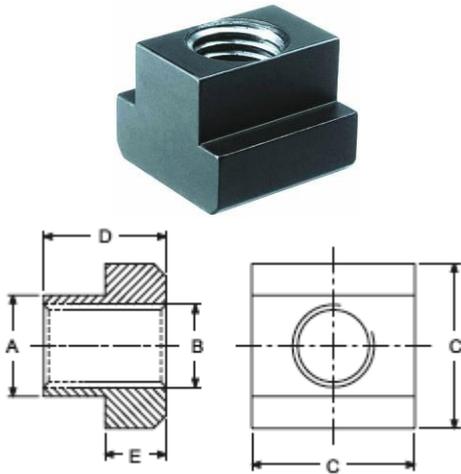
Note: All three sizes can be combined with one another



Model No.	A	B	C	Adjustable Height		Wt. in Kgs.
				Min.	Max.	
SSB-5033	24	30	33	22	50	0.110
SSB-10766	40	30	66	38	107	0.220
SSB-210131	73	30	131	69	208	0.490

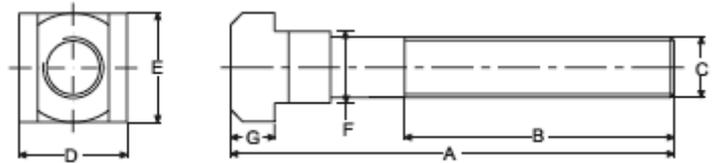
## Clamping Devices

### T-NUTS DIN-508



Model No.	T-Slot Size	A	B	C	D	E	Wt. in Kgs
TNSS-108	10	9.6	M 8	15	12	6	0.014
TNSS-128	12	11.6	M 8*	18	14	7	0.022
TNSS-1210	12	11.6	M 10	18	14	7	0.022
TNSS-1410	14	13.6	M 10*	22	16	8	0.034
TNSS-1412	14	13.6	M 12	22	16	8	0.034
TNSS-1612	16	15.6	M 12*	25	18	9	0.050
TNSS-1816	18	17.6	M 16	28	20	10	0.068
TNSS-2016	20	19.6	M 16*	32	24	12	0.107
TNSS-2220	22	21.6	M 20	35	28	14	0.155
TNSS-2420	24	23.6	M 20*	40	32	16	0.220
TNSS-2824	28	27.6	M 24	44	36	18	0.330

### T-BOLTS DIN-787



Model No.	T-Slot	A	B	C	D	E	F	G	Wt. in Kgs
TBSS - 850	8	50	35	M 8	13	13	7.6	6	0.025
TBSS - 865	8	65	35	M 8	13	13	7.6	6	0.035
TBSS - 880	8	80	50	M 8	13	13	7.6	6	0.040
TBSS - 1050	10	50	30	M 10	15	15	9.6	6	0.040
TBSS - 1065	10	65	45	M 10	15	15	9.6	6	0.050
TBSS - 1080	10	80	50	M 10	15	15	9.6	6	0.060
TBSS - 10100	10	100	60	M 10	15	15	9.6	6	0.070
TBSS - 1250	12	50	35	M 12	18	18	11.6	7	0.060
TBSS - 1265	12	65	40	M 12	18	18	11.6	7	0.065
TBSS - 1280	12	80	55	M 12	18	18	11.6	7	0.075
TBSS - 12100	12	100	65	M 12	18	18	11.6	7	0.090
TBSS - 12125	12	125	75	M 12	18	18	11.6	7	0.120
TBSS - 12160	12	160	80	M 12	18	18	11.6	7	0.145
TBSS - 12200	12	200	120	M 12	18	18	11.6	7	0.165
TBSS - 12250	12	250	150	M 12	18	18	11.6	7	0.185
TBSS - 1450	14	50	35	M 12	22	22	13.6	8	0.070
TBSS - 1465	14	65	40	M 12	22	22	13.6	8	0.080
TBSS - 1480	14	80	55	M 12	22	22	13.6	8	0.100
TBSS - 14100	14	100	65	M 12	22	22	13.6	8	0.110
TBSS - 14125	14	125	75	M 12	22	22	13.6	8	0.120
TBSS - 14160	14	160	80	M 12	22	22	13.6	8	0.150
TBSS - 14200	14	200	120	M 12	22	22	13.6	8	0.180
TBSS - 14250	14	250	150	M 12	22	22	13.6	8	0.220
TBSS - 1665	16	65	45	M 16	25	25	15.6	9	0.140
TBSS - 1680	16	80	55	M 16	25	25	15.6	9	0.160
TBSS - 16100	16	100	65	M 16	25	25	15.6	9	0.186
TBSS - 16125	16	125	80	M 16	25	25	15.6	9	0.205
TBSS - 16160	16	160	100	M 16	25	25	15.6	9	0.264
TBSS - 16200	16	200	100	M 16	25	25	15.6	9	0.315
TBSS - 16250	16	250	150	M 16	25	25	15.6	9	0.380
TBSS - 16315	16	315	180	M 16	25	25	15.6	9	0.440
TBSS - 1865	18	65	45	M 16	28	28	17.6	10	0.160
TBSS - 1880	18	80	55	M 16	28	28	17.6	10	0.185

Model No.	T-Slot	A	B	C	D	E	F	G	Wt. in Kgs
TBSS - 18100	18	100	65	M 16	28	28	17.6	10	0.203
TBSS - 18125	18	125	65	M 16	28	28	17.6	10	0.235
TBSS - 18160	18	160	100	M 16	28	28	17.6	10	0.280
TBSS - 18200	18	200	125	M 16	28	28	17.6	10	0.330
TBSS - 18250	18	250	150	M 16	28	28	17.6	10	0.430
TBSS - 18315	18	315	180	M 16	28	28	17.6	10	0.530
TBSS - 2080	20	80	55	M 20	32	32	19.6	12	0.290
TBSS - 20100	20	100	65	M 20	32	32	19.6	12	0.340
TBSS - 20125	20	125	85	M 20	32	32	19.6	12	0.390
TBSS - 20160	20	160	110	M 20	32	32	19.6	12	0.470
TBSS - 20200	20	200	125	M 20	32	32	19.6	12	0.550
TBSS - 20250	20	250	150	M 20	32	32	19.6	12	0.670
TBSS - 20315	20	315	190	M 20	32	32	19.6	12	0.800
TBSS - 2280	22	80	55	M 20	35	35	21.6	14	0.330
TBSS - 22100	22	100	60	M 20	35	35	21.6	14	0.400
TBSS - 22125	22	125	85	M 20	35	35	21.6	14	0.428
TBSS - 22125	22	160	100	M 20	35	35	21.6	14	0.500
TBSS - 22200	22	200	125	M 20	35	35	21.6	14	0.570
TBSS - 22250	22	250	150	M 20	35	35	21.6	14	0.680
TBSS - 22315	22	315	190	M 20	35	35	21.6	14	0.820
TBSS - 24100	24	100	70	M 24	40	40	23.6	16	0.540
TBSS - 24125	24	125	85	M 24	40	40	23.6	16	0.640
TBSS - 24160	24	160	110	M 24	40	40	23.6	16	0.770
TBSS - 24200	24	200	125	M 24	40	40	23.6	16	0.900
TBSS - 24250	24	250	150	M 24	40	40	23.6	16	1.040
TBSS - 24315	24	315	190	M 24	40	40	23.6	16	1.270
TBSS - 28100	28	100	70	M 24	44	44	27.6	18	0.650
TBSS - 28125	28	125	75	M 24	44	44	27.6	18	0.720
TBSS - 28160	28	160	110	M 24	44	44	27.6	18	0.800
TBSS - 28200	28	200	125	M 24	44	44	27.6	18	0.950
TBSS - 28250	28	250	150	M 24	44	44	27.6	18	1.120
TBSS - 28315	28	315	160	M 24	44	44	27.6	18	1.350
TBSS - 28400	28	400	250	M 24	44	44	27.6	18	1.500

## Clamping Devices

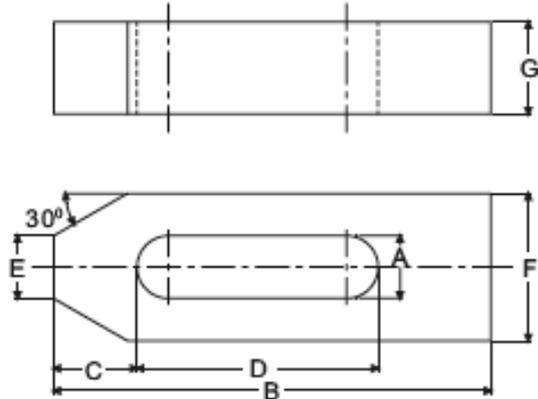
### STRAP CLAMP FLAT DIN-6134



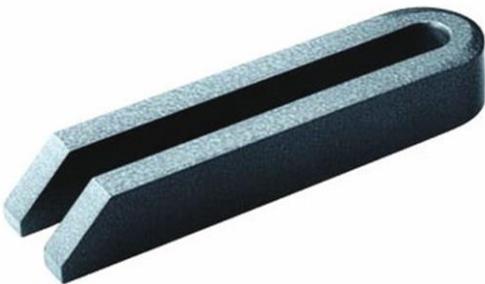
**FEATURES:**

Material: Heat Treated Steel

Finish: Black Oxide



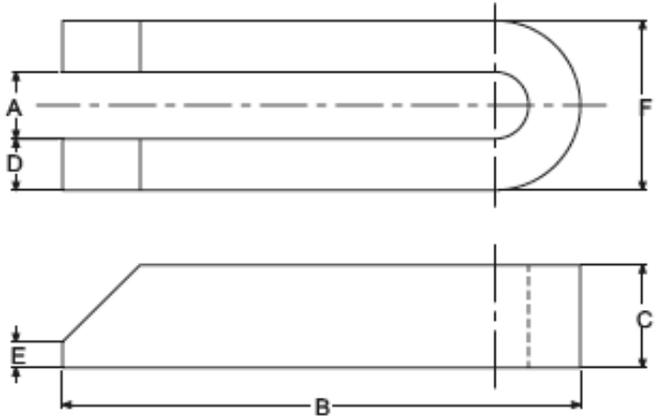
### OPEN-ENDED STRAP CLAMP FLAT DIN-6135-B



**FEATURES :**

Material: Heat Treated Steel

Finish: Black Oxide



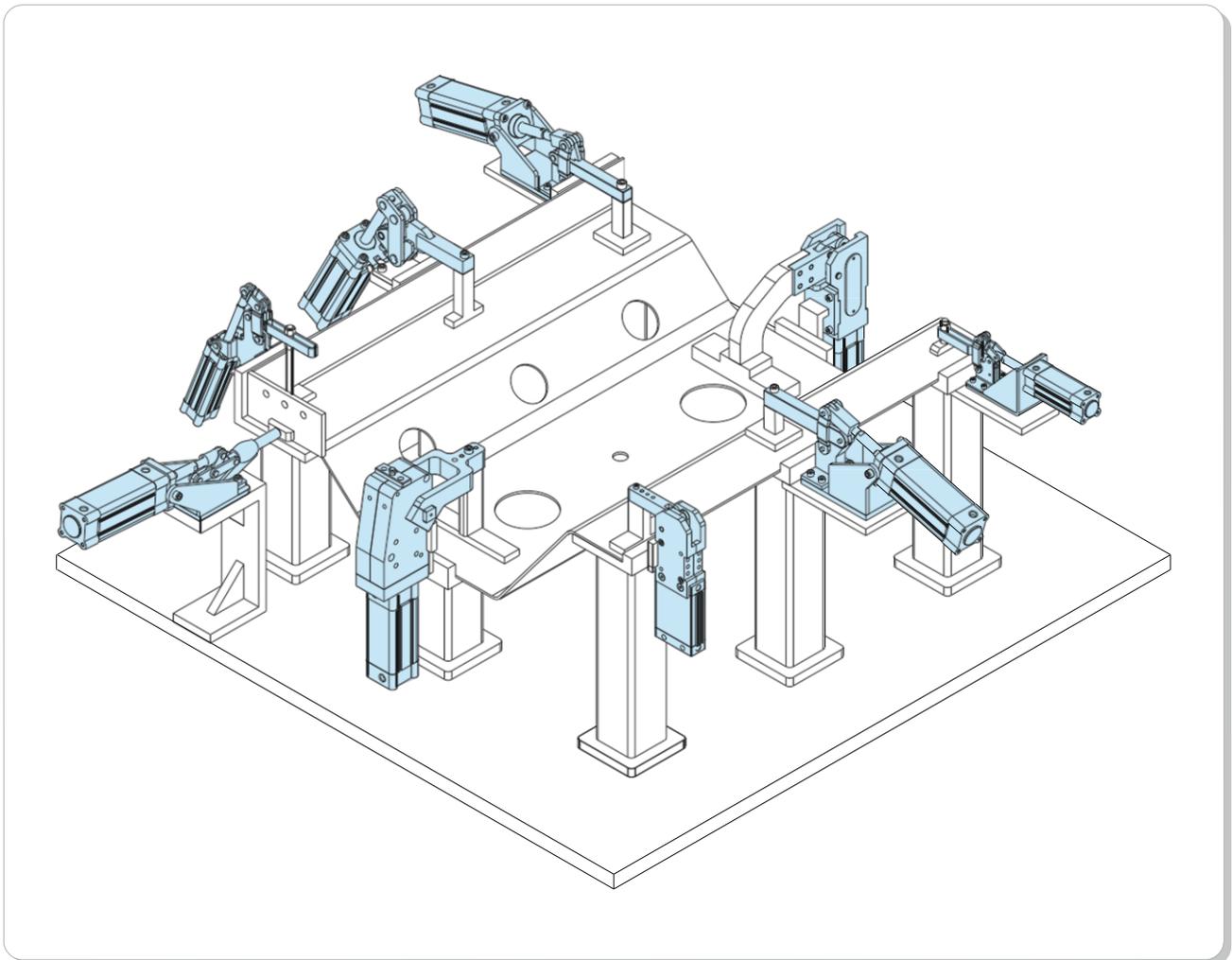
Model No.	A	B	C	D	E	F	For Bolt	Wt. in Kgs
UFS-880	9	80	15	8	4	25	M 8	0.150
UFS-10100	11	100	20	10	5	31	M 10	0.300
UFS-12125	14	125	25	12	6	38	M 12	0.570
UFS-12160	14	160	25	12	6	38	M 12	0.730
UFS-12200	14	220	25	12	6	38	M 12	0.910
UFS-16160	18	160	30	16	8	50	M 16	1.080
UFS-16200	18	200	30	16	8	50	M 16	1.360
UFS-16250	18	250	30	16	8	50	M 16	1.700
UFS-20200	22	200	40	20	10	62	M 20	1.800
UFS-20250	22	250	40	20	10	62	M 20	3.020
UFS-20315	22	315	40	20	10	62	M 20	3.830
UFS-24200	26	200	40	20	10	66	M 24	2.400
UFS-24250	26	250	40	20	10	66	M 24	3.050
UFS-24315	26	315	40	20	10	66	M 24	3.830

## Pneumatic Clamps

### The sheer power of air clamping at your command

Steel-Smith Pneumatic Toggle Clamps combine the unfaltering Steel-smith toggle action with the speed and efficiency of pneumatic actuators.

These clamps yield high-speed operations with secure and finely controlled clamping pressures. Any number of these clamps can be operated instantly at the touch of a switch and where required they can be arranged to operate in any desired clamping sequence. Pneumatic Toggle Clamps are available in a variety of actions and models to meet the various clamping requirements.



#### Advantages:

- Pneumatic Toggle Clamps relieve operator of strenuous clamping
- Movement A number of clamps can be used simultaneously
- A number of clamps with different sequences can be simultaneously
- Operated One or more clamps can be controlled from the machine panel
- One or more clamps can be operated from different positions
- Clamps stay locked in the event of air failure
- Low air consumption with maximum leverage
- Large opening angle ensures easy component removal
- Assurance of a maximum power-to movement ratio
- Production time is reduced by 40%

## Pneumatic Clamps

### Introduction

#### What is a Pneumatic Toggle Clamp?

A Pneumatic Toggle clamp is basically a Toggle Clamp actuated with a double acting pneumatic cylinder. The Clamps consists of a double acting cylinder, a clamping arm, linkages for multiplying the applied force, and a base for mounting at the workplace on its base.

Air pressure is applied in the clamping port, which thereby moves the clamping arm to hold the work piece. A required clamping force is achieved and exerted on the work piece. Under this action the Toggle Clamp Holds the work piece firmly and positively. To unlock the clamp the air pressure is applied in the unclamping port.

#### Pneumatic Toggle Action Force Factors

##### Holding Capacity:

The holding capacity mentioned for each clamp refers to the maximum force, which the clamp can withstand after being over- centered without damage to the clamp and without the toggle unlocking due to distortion of the clamp.

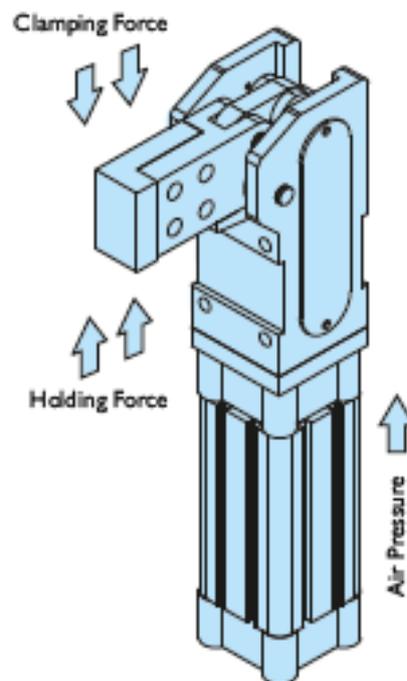
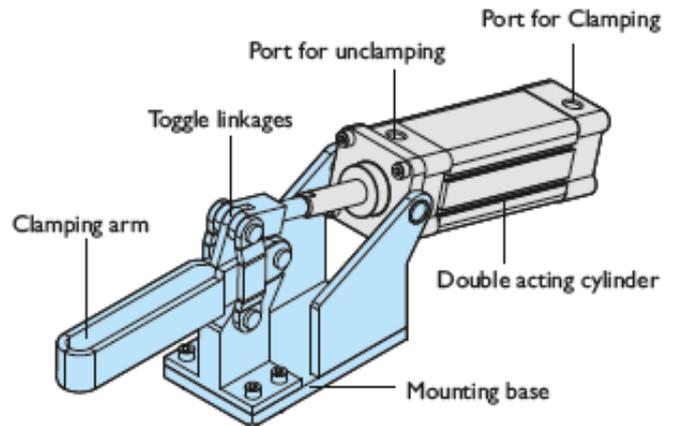
The over-center dimension is carefully chosen in relation to the elasticity of the clamp to maximize clamping force while ensuring that the clamp locks closed even under vibration or intermittent loading. For Hold Down Clamps, holding capacity is measured with the spindle at the nearest end of the clamping arm and will decrease as the spindle goes farther away from the clamping arm. In cases of DCTC & SSC series the holding capacity is measured considering the specified arm length and if the arm length is increased the holding capacity will decrease accordingly.

##### Clamping Force:

Clamping Force, the amount of force actually applied to the work piece by closing and locking the clamp, is generally less than the stated holding capacity. Actual clamping force depends on many factors including; spindle position (clamping arm length), cylinder bore, cylinder area, available air pressure and the clamps mechanical advantage. In most cases, the Clamping force is roughly 2 to 3 times the force exerted by the pneumatic cylinder.

##### Clamping Arm Lengths:

Steel Smith strongly recommends using of clamping arms as per its specified data. Using heavier and longer clamping arms on smaller clamps may disturb the smooth movement of the clamp linkages and also a higher wear and tear in its pins & bushes. Please ask for data sheets on each clamp to know the maximum permissible clamp arm usage for that particular clamp.



#### Toggle Principle:

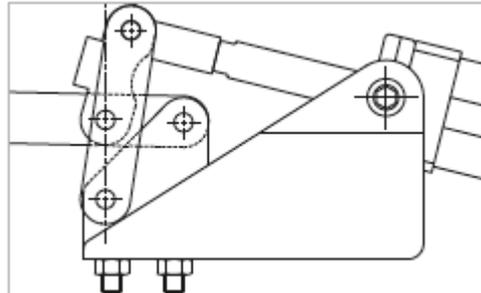
Toggle action clamps operate through a linkage system of levers and pivots. The fixed length levers, connected by pivot pins supply the action and clamping force. Toggle action has an over center lock point which is a fixed stop and linkage. Once in the over center position, the clamp cannot move or unlock unless the linkage is moved. All types of toggle clamps have same action, just oriented differently.

#### The Toggle Mechanism in a clamp has three functions:

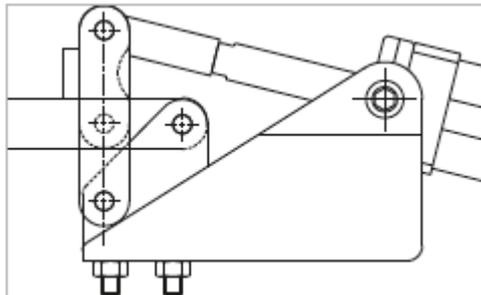
- 1) To multiply applied load at the handle into a high clamping force to hold the work piece.
- 2) To create an over - center lock to prevent the clamp from opening & releasing the work piece until opened by the operator.
- 3) To rapidly open & close the clamp giving a maximum clearance in which to load & unload the work piece.

## Pneumatic Clamps

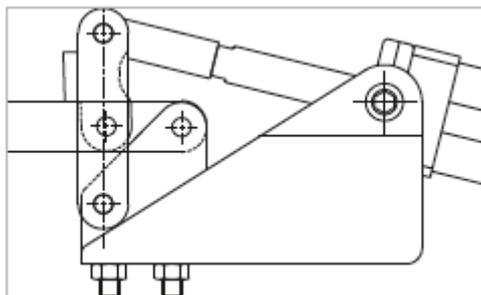
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**Unclampe**



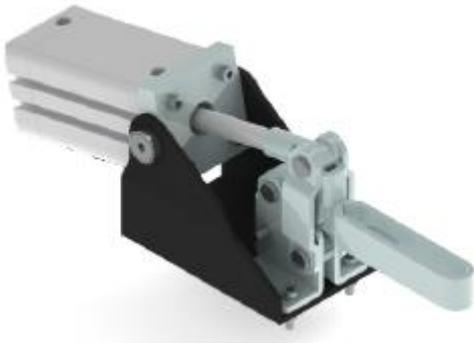
**Center**



**Over-center, clamped**

## Pneumatic Clamps

### Types of Pneumatic Clamps



#### Hold Down Action - Pneumatic Clamps

These clamps utilize the same basic design and operation as manual hold down, only they are operated pneumatically. As the clamp uses the toggle action principle it ensures that the clamp stays locked in the event of air failure. These clamps are extremely compact in design and feature a very low height, allowing free movement of operating tools in drilling, tapping, milling etc. The clamp units are completely self-contained with a double acting cylinder and require only to be connected to the air line. The clamping arm exhibits a minimum 95° opening angle for easy unloading of work piece and is available in two different options.



#### Hold Down Action - Pneumatic Clamps Fixed Cylinder

These Fixed Cylinder clamps are identical to the Hold Down Action Pneumatic clamps with the exception of Cylinder Mounting design. The outstanding characteristic of the clamp is that the cylinder does not move at all while the clamp is in operation. As there is no movement in the cylinder, fixed solid tubing can be used instead of flexible tubing in welding applications. The clamping arm exhibits a minimum 80° opening angle for easy unloading of work piece and is available in two different options.



#### Right Angle Hold Down Clamps

Primarily these clamps belong to the same family of pneumatically hold down clamps with a exception of mounting flexibility. These clamps utilize the same basic design and operation as the pneumatic hold down clamps. In addition these clamps have a flexibility of mounting themselves on the side of the fixture and can also be mounted on top of the fixture. The clamps are used where a right angle model is desirable due to the space constraint. These clamps are nomenclature as Right Angle Hold Down Clamps as the position of the cylinder is in the downwards perpendicular direction to the clamping unit. Due to these features these clamps can be accommodated in lesser area than the hold down clamps. The clamping arm exhibits a maximum 95° opening and is available in two different options. The typical applications of these clamps are on rotary indexing tables, wood working, injection molding, PU mold closures, etc.



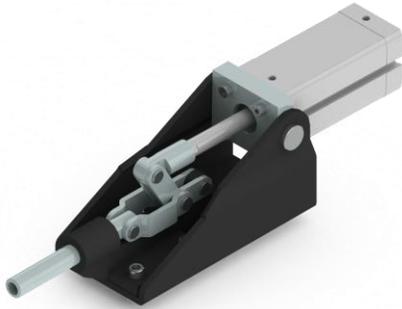
#### H.V. Series Pneumatic Clamps

These clamps are the air powered version of the manual H.V. Series. They comprise of a very strong and rugged toggle mechanism actuated by a double acting cylinder. The clamping arm is provided with the clamp and can be welded at any desired angle to suit the individual requirement of work pieces. These clamps carry the 'Over Centre Toggle Lock' principle for maximum safety as they remain in locked condition even in case of air failure. The clamps have almost all the features of the manual H.V. Series clamps. These clamps are available in three sizes off the shelf.

## Pneumatic Clamps

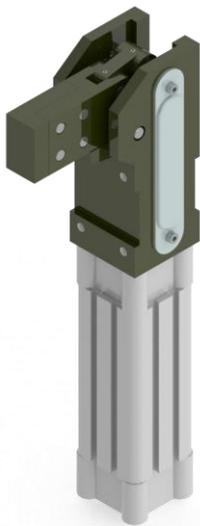
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### Types of Pneumatic Clamps



#### **Straight Line Action Clamps**

These clamps utilize the same basic design as manual straight line action clamps with an exception of pneumatic actuation. They are completely self-contained with a double acting cylinder suitable to the clamp design and only need pressurized air connection. These cylinders are mounted in line with the plunger of the clamp. The to-and-fro motion of the cylinder operates the clamp. The cylinder piston extends the plunger of the clamp to achieve the lock position and vice versa for unlocking the clamp. The clamp plunger is drilled and tapped for easy loading of suitable adaptors. Plungers are hardened and ground which run in closed tolerance holes for smooth and accurate functioning of clamps. These clamps are widely used in fixtures where locating of components or holes is required and also in mini-automatized presses.



#### **SSC-Series Pneumatic Clamps**

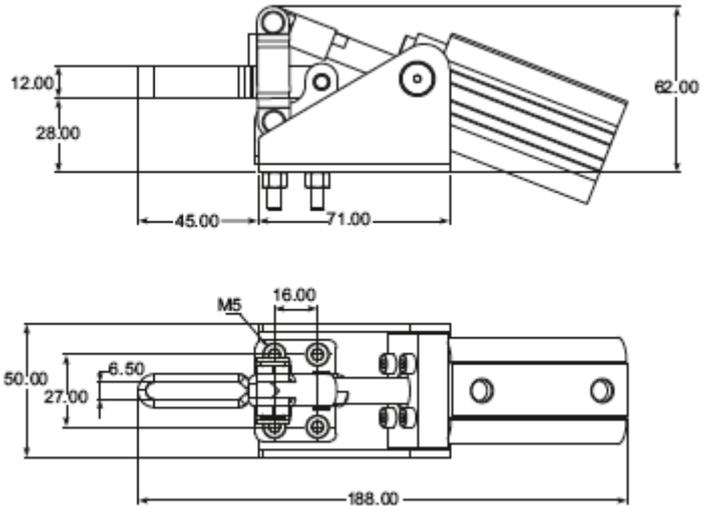
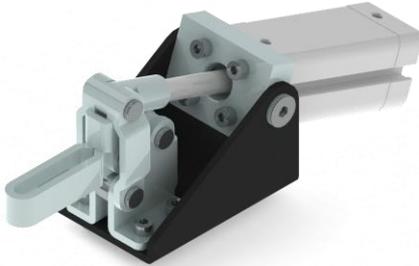
SSC Series Pneumatic Clamps are the solution to applications, which demands 'Precision', 'Performance' and the most important factor as far as fix Turing is concerned 'Compactness'. These clamps have been specially designed by gathering information and suggestions from customers presently using Steel-Smith pneumatic clamps. The design helps a fixture manufacturer as far as space constrains is concerned. These clamps are flexible from the maintenance point of view, with features like compatible to all standards, brands and types of pneumatic cylinders. The linkages, connector to piston rod, and the clamping device consists hardened bushings and pivot pins which are easily replaceable in case of wear outs. The clamping device comes with mounting holes, which can be according to the customer's requirement helping them to standardize on their clamping adaptors. The Mounting of the clamp can also be customized in case of substitutes. SSC - Series pneumatic clamps are available in cylinder size from 16mm bore to 63mm bore size.

## Pneumatic Clamps

### Hold Down Action

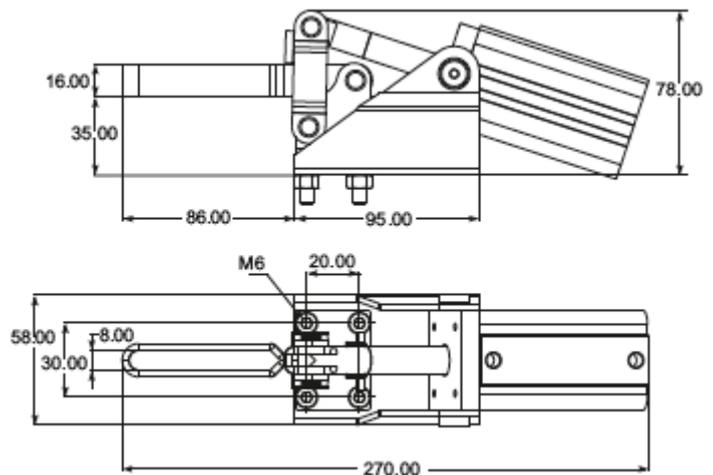
#### Model No: AOT - 2535 UB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 100 Kgs.  
 Cylinder Stroke: 40mm  
 Cylinder Bore: 16mm  
 Port Size: M5



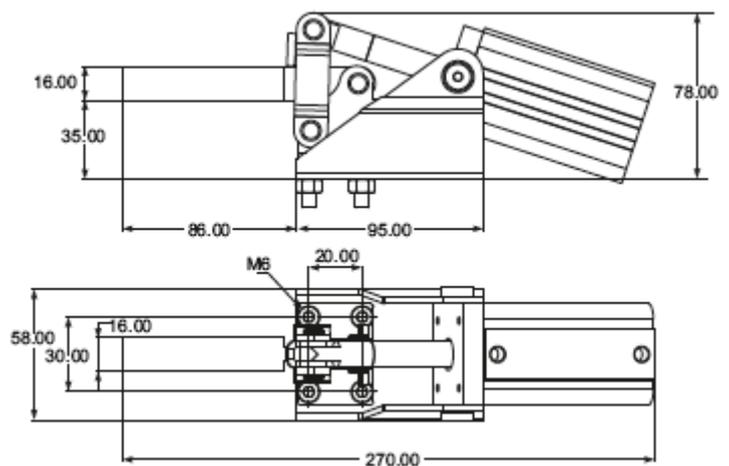
#### Model No: AOT - 3586 UB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 250 Kgs.  
 Cylinder Stroke: 50mm  
 Cylinder Bore: 25mm  
 Port Size: M5  
 Clamp Arm Opening: 95°



#### Model No: AOT - 3586 SB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 250 Kgs.  
 Cylinder Stroke: 50mm  
 Cylinder Bore: 25mm  
 Port Size: M5  
 Clamp Arm Opening: 95°

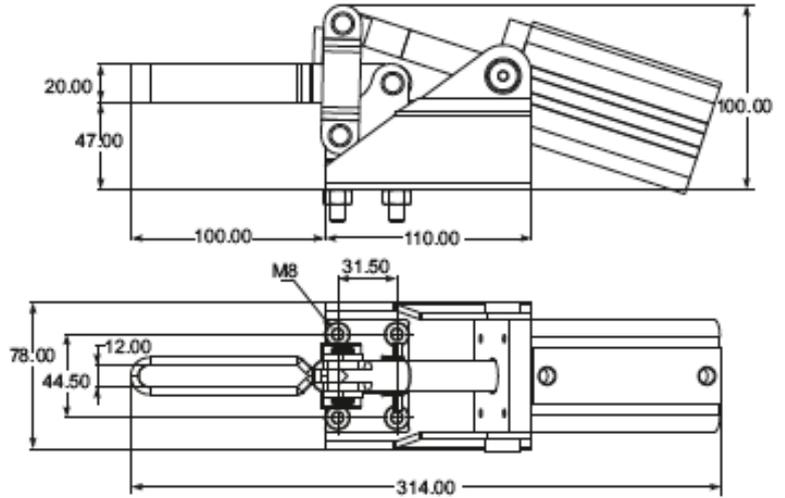
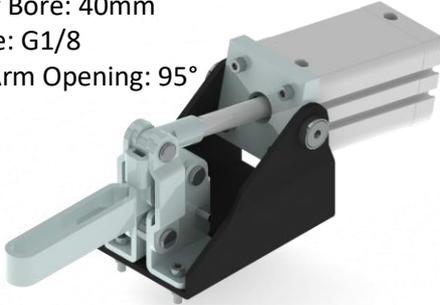


## Pneumatic Clamps

### Hold Down Action

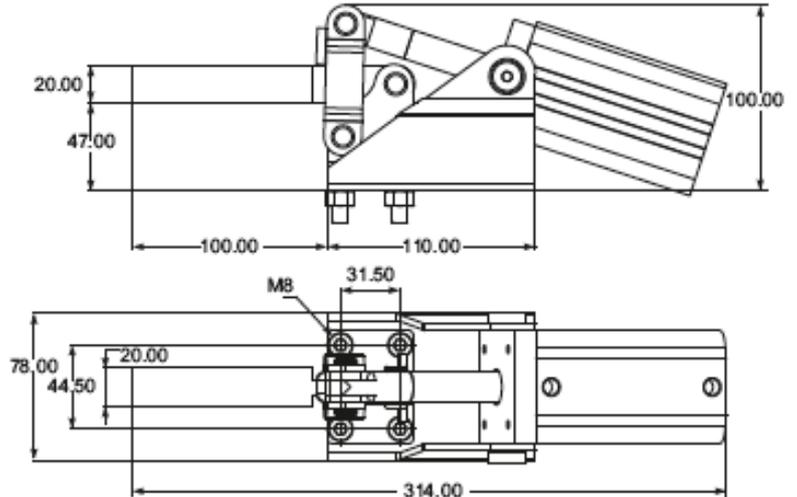
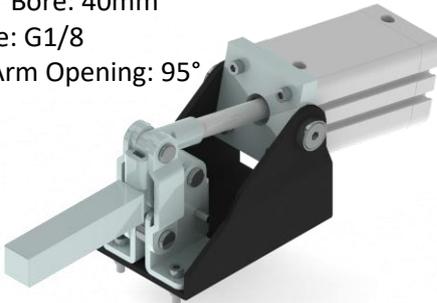
#### Model No: AOT - 4690 UB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 500 Kgs.  
 Cylinder Stroke: 60mm  
 Cylinder Bore: 40mm  
 Port Size: G1/8  
 Clamp Arm Opening: 95°



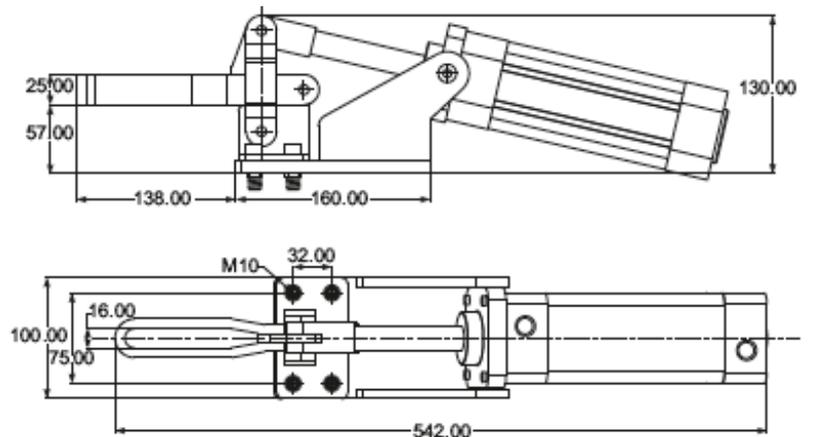
#### Model No: AOT - 4690 SB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 500 Kgs.  
 Cylinder Stroke: 60mm  
 Cylinder Bore: 40mm  
 Port Size: G1/8  
 Clamp Arm Opening: 95°



#### Model No: AOT - 57124 UB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 750 Kgs.  
 Cylinder Stroke: 100mm  
 Cylinder Bore: 63mm  
 Port Size: G 3/8  
 Clamp Arm Opening: 100°

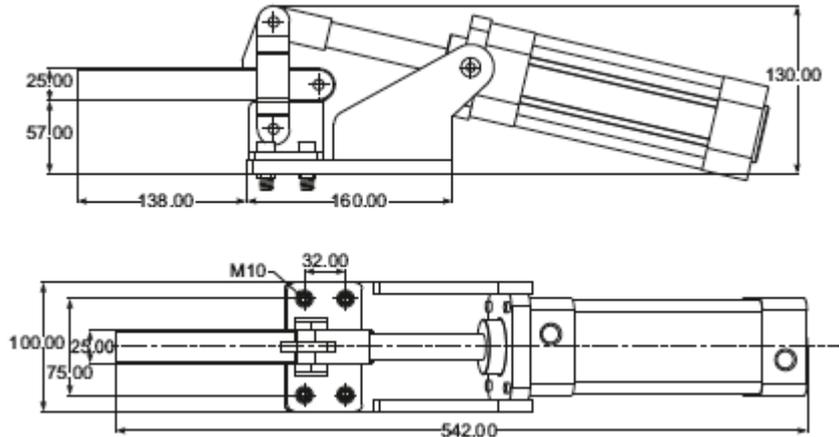
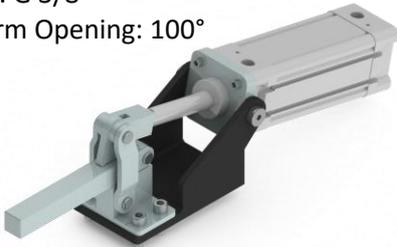


## Pneumatic Clamps

### Hold Down Action

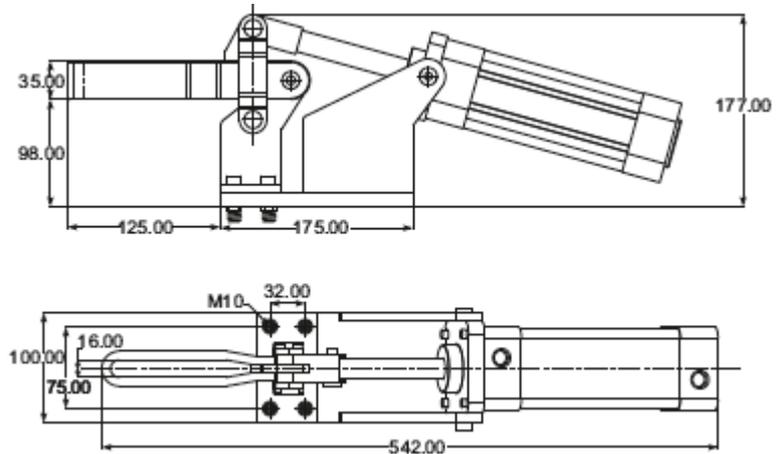
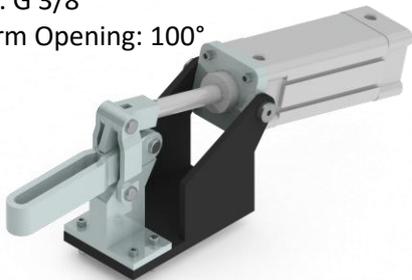
#### Model No: AOT - 57124 SB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 750 Kgs.  
 Cylinder Stroke: 100mm  
 Cylinder Bore: 63mm  
 Port Size: G 3/8  
 Clamp Arm Opening: 100°



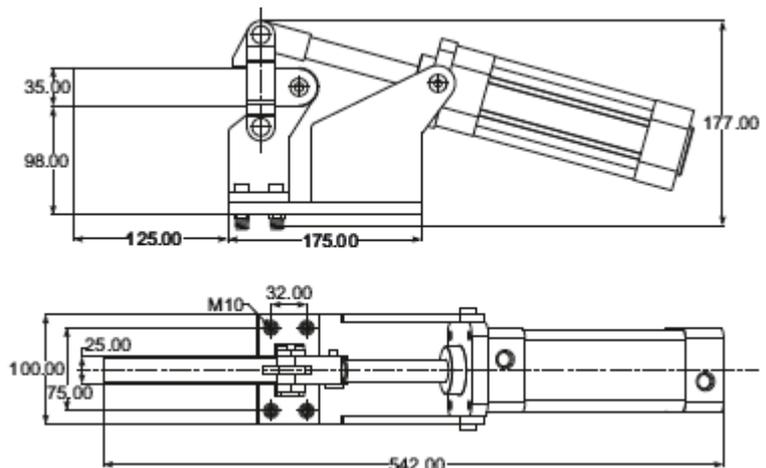
#### Model No: AOT - 98125 UB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 1000 Kgs.  
 Cylinder Stroke: 100mm  
 Cylinder Bore: 63mm  
 Port Size: G 3/8  
 Clamp Arm Opening: 100°



#### Model No: AOT - 98125 SB

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 1000 Kgs.  
 Cylinder Stroke: 100mm  
 Cylinder Bore: 63mm  
 Port Size: G 3/8  
 Clamp Arm Opening: 100°



## Pneumatic Clamps

### Hold Down Action - Fixed Cylinder

#### Model No: AOT - 3565 UB/FC

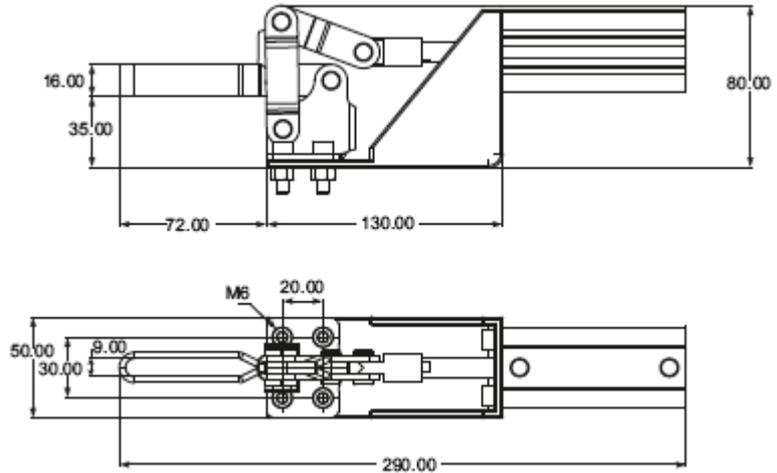
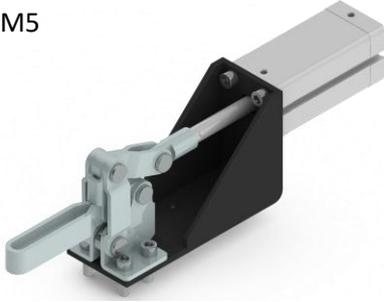
Operating Pressure: 2 - 6 Bar

Holding Capacity: 250 Kgs.

Cylinder Stroke: 50mm

Cylinder Bore: 25mm

Port Size: M5



#### Model No: AOT - 3565 SB/FC

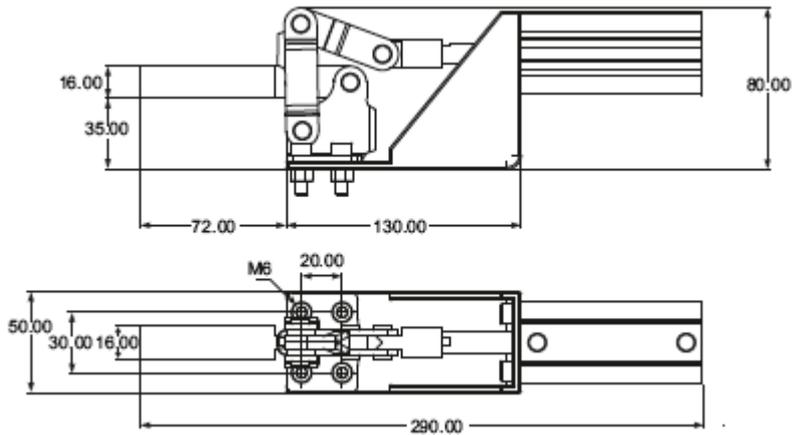
Operating Pressure: 2 - 6 Bar

Holding Capacity: 250 Kgs.

Cylinder Stroke: 50mm

Cylinder Bore: 25mm

Port Size: M5



#### Model No: AOT - 5095 UB/FC

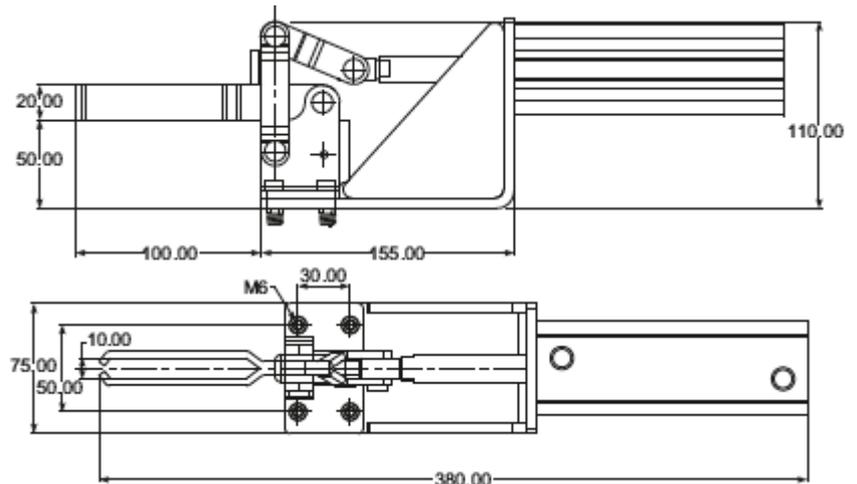
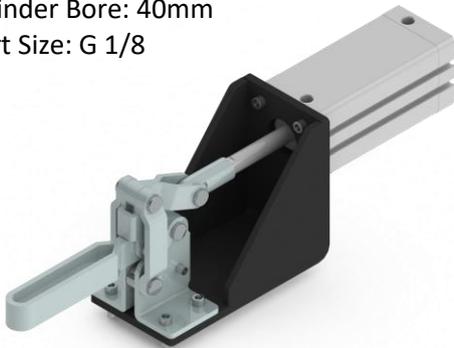
Operating Pressure: 2 - 6 Bar

Holding Capacity: 500 Kgs.

Cylinder Stroke: 80mm

Cylinder Bore: 40mm

Port Size: G 1/8



## Pneumatic Clamps

### Hold Down Action - Fixed Cylinder

**Model No: AOT - 5095 SB/FC**

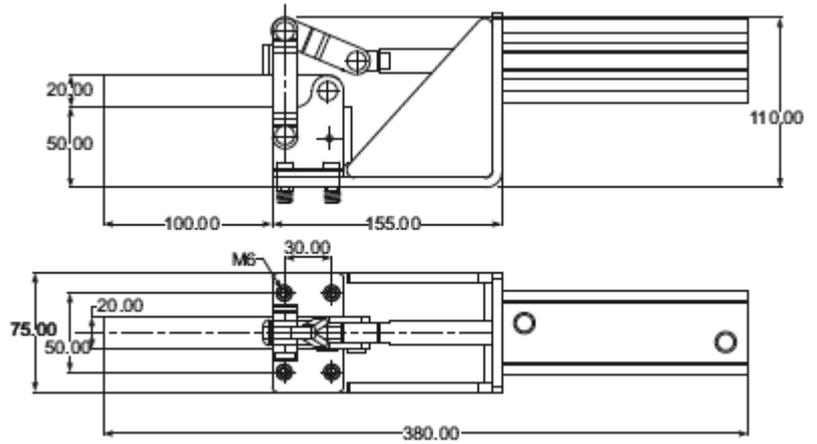
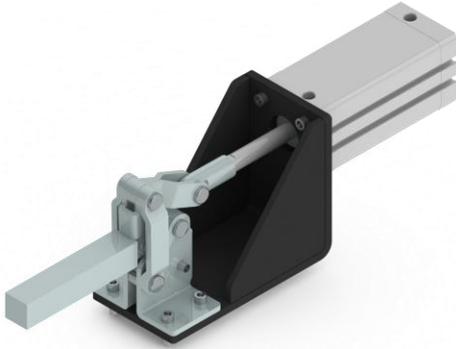
Operating Pressure: 2 - 6 Bar

Holding Capacity: 500 Kgs.

Cylinder Stroke: 80mm

Cylinder Bore: 40mm

Port Size: G 1/8



## Pneumatic Clamps

### Hold Down Action - Right Angle

**Model No: AOT - 4085 UB / AOT - 4085 SB**

Operating Pressure: 2 - 6 Bar

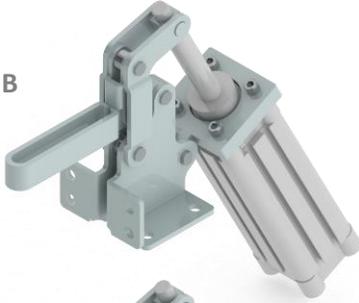
Holding Capacity: 400 Kgs.

Cylinder Stroke: 80mm

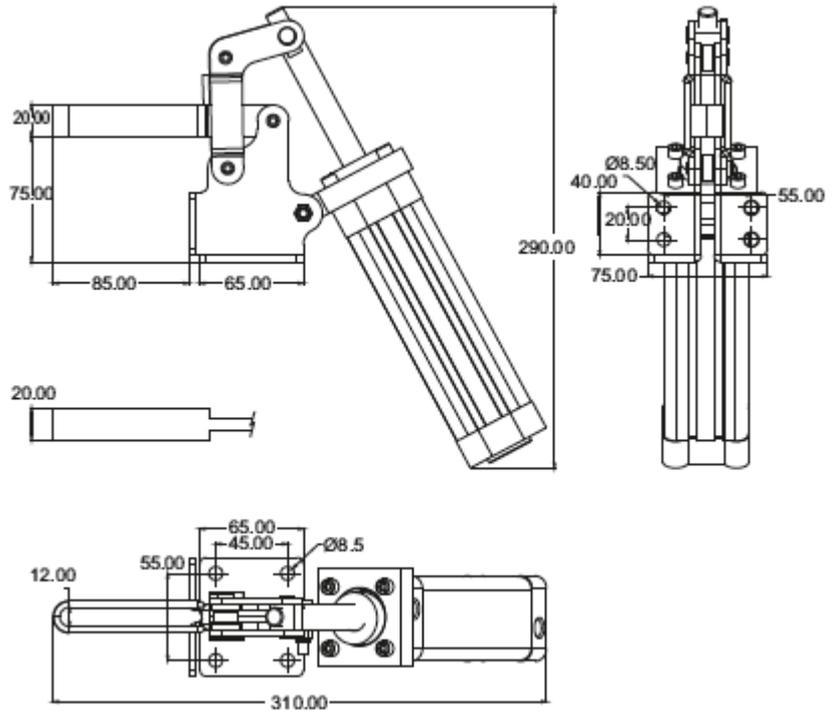
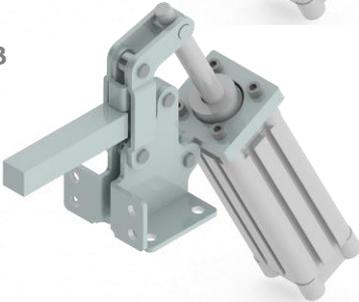
Cylinder Bore: 40mm

Port Size: G ¼

AOT - 4085 UB



AOT - 4085 SB



**Model No: AOT - 40125 UB / AOT - 40125 SB**

Operating Pressure: 2 - 6 Bar

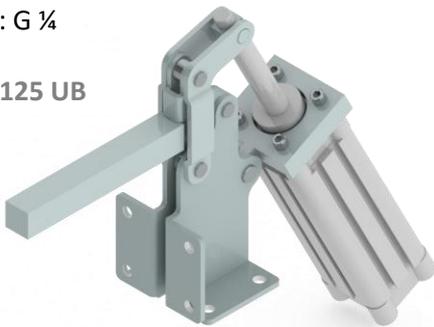
Holding Capacity: 650 Kgs.

Cylinder Stroke: 80mm

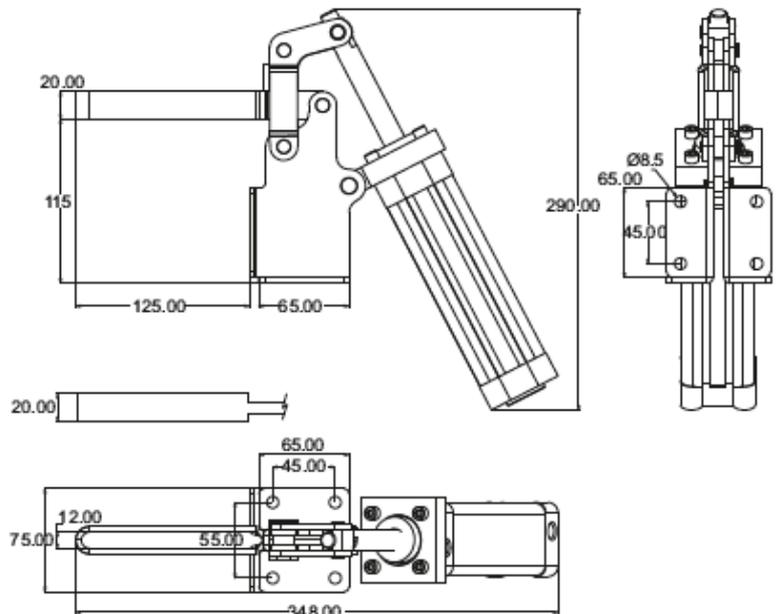
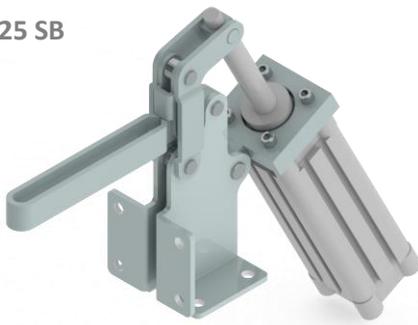
Cylinder Bore: 40mm

Port Size: G ¼

AOT - 40125 UB



AOT - 40125 SB

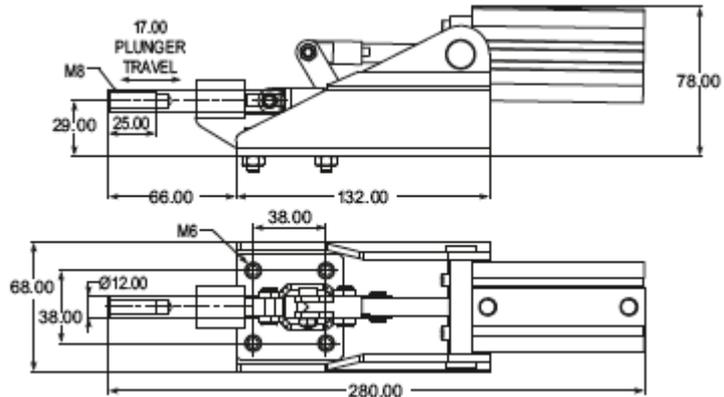
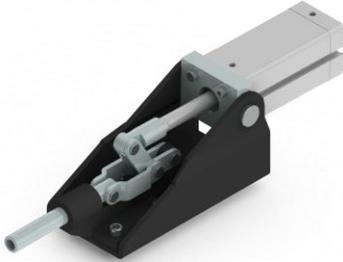


## Pneumatic Clamps

### Straight Line Action

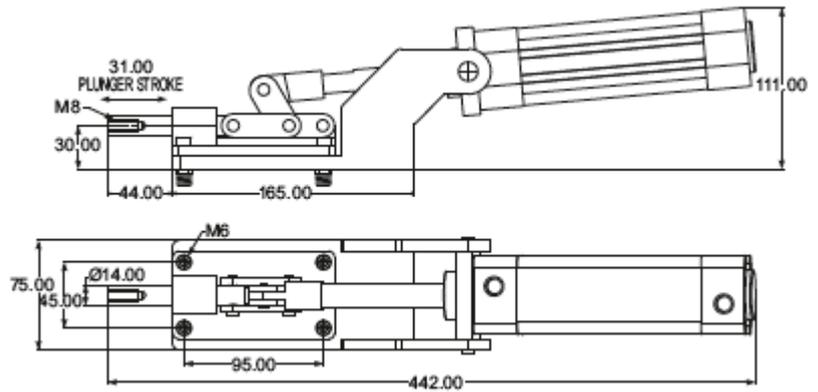
#### Model No: AOT - 2530 HTC

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 300 Kgs.  
 Cylinder Stroke: 50mm  
 Cylinder Bore: 25mm  
 Port Size: M5



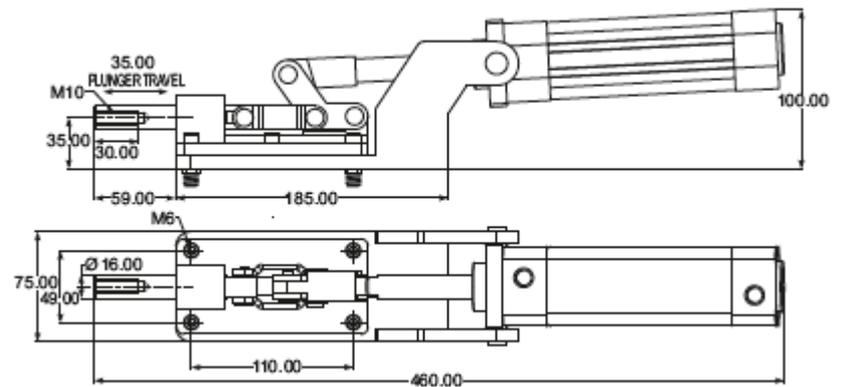
#### Model No: AOT - 3231 HTC

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 1200 Kgs.  
 Cylinder Stroke: 80mm  
 Cylinder Bore: 40mm  
 Port Size: G ¼



#### Model No: AOT - 3550 HTC

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 1600 Kgs.  
 Cylinder Stroke: 80mm  
 Cylinder Bore: 40mm  
 Port Size: G ¼



## Pneumatic Clamps

### Straight Line Action

**Model No: AOT - 5560 HTC**

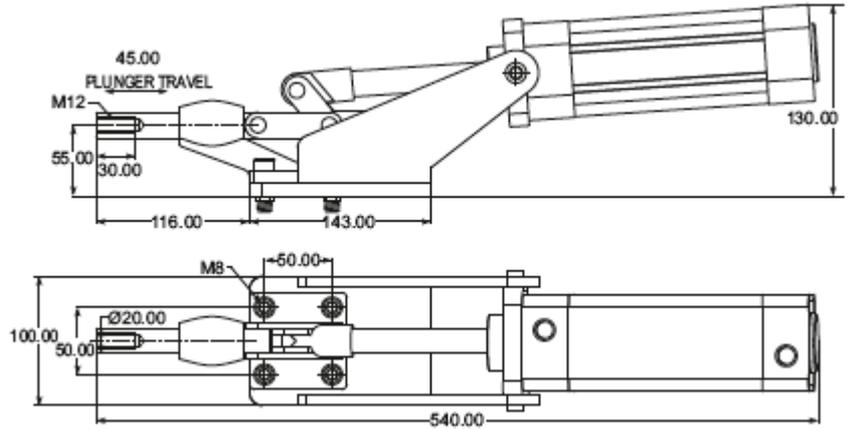
Operating Pressure: 2 - 6 Bar

Holding Capacity: 2500 Kgs.

Cylinder Stroke: 100mm

Cylinder Bore: 63mm

Port Size: G 3/8



**Model No: AOT - 6750 HTC**

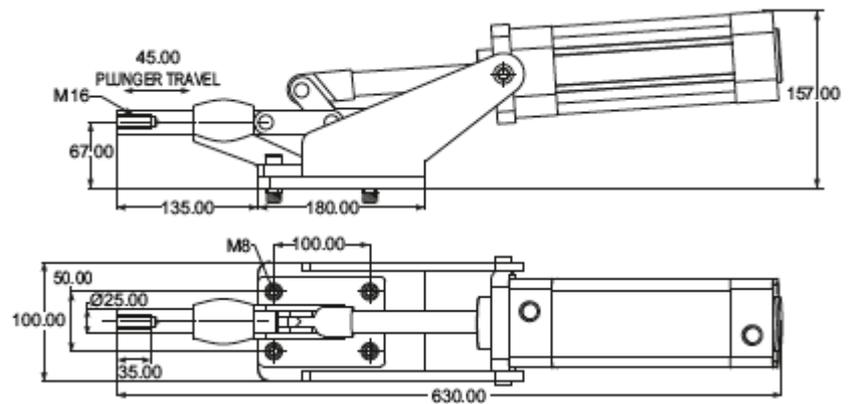
Operating Pressure: 2 - 6 Bar

Holding Capacity: 7500 Kgs.

Cylinder Stroke: 100mm

Cylinder Bore: 63mm

Port Size: G 3/8



## Pneumatic Clamps

### SSC Series

**Model No: SSC – 1640**

Operating Pressure: 2 - 6

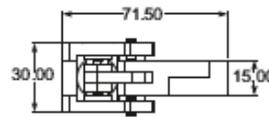
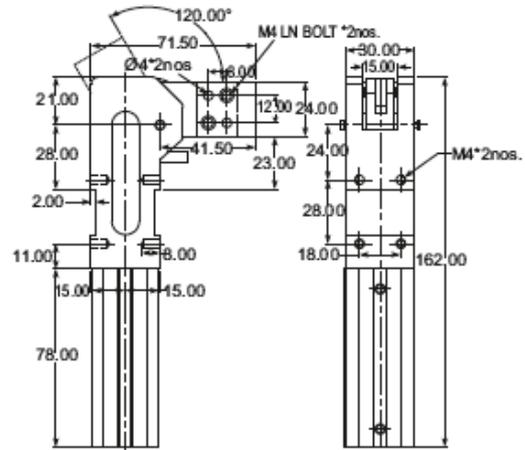
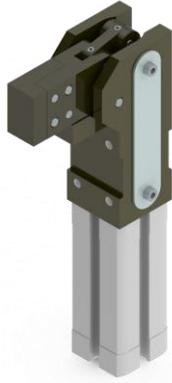
Bar

Holding Capacity: 250 Kgs.

Cylinder Stroke: 40mm

Cylinder Bore: 16mm

Port Size: M5



**Model No: SSC – 2550**

Operating Pressure: 2 - 6

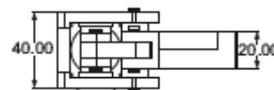
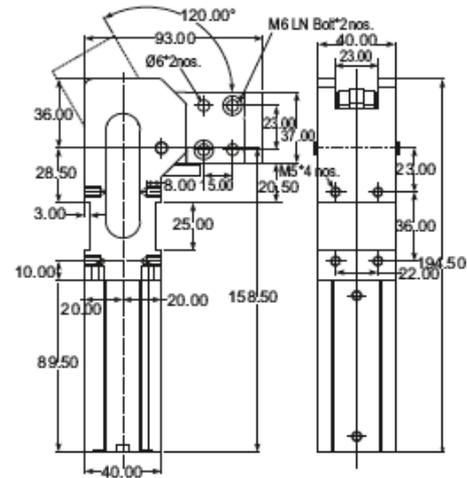
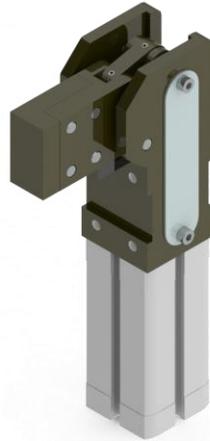
Bar Holding Capacity: 500

Kgs. Cylinder Stroke:

50mm

Cylinder Bore: 25mm

Port Size: M5



**Model No: SSC – 4065**

Operating Pressure: 2 - 6

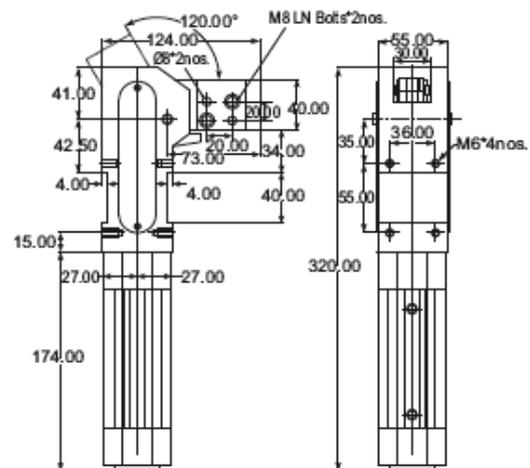
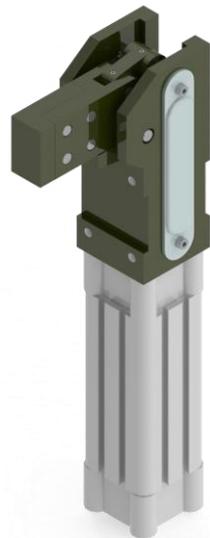
Bar Holding Capacity: 800

Kgs.

Cylinder Stroke: 80mm

Cylinder Bore: 40mm

Port Size: G 1/4





## Pneumatic Clamps

### H.V. Series

#### Model No : AOT - BII – 200

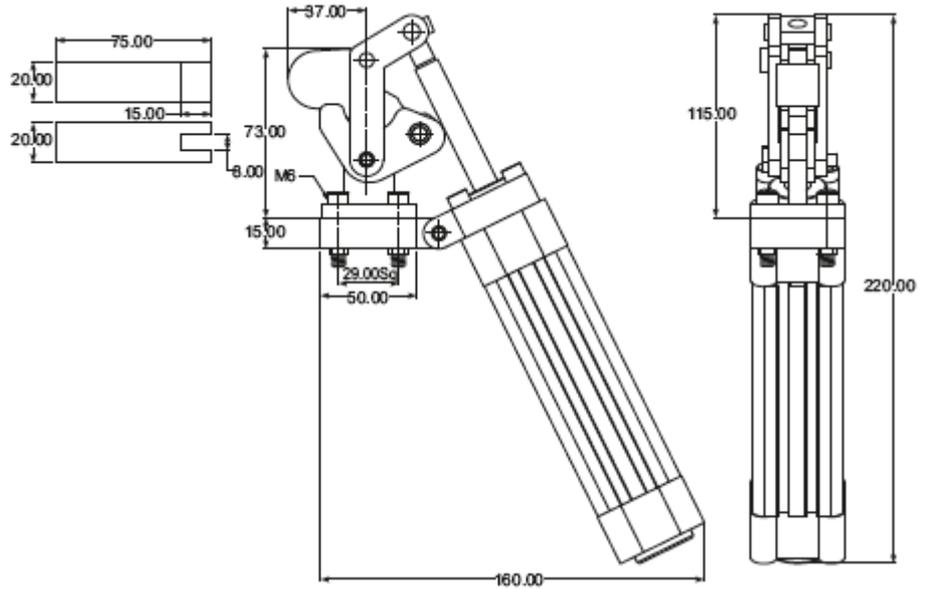
Operating Pressure: 2 - 6 Bar

Holding Capacity: 200 Kgs.

Cylinder Stroke: 80mm

Cylinder Bore: 32mm

Port Size: G 1/8



#### Model No: AOT - BII – 300

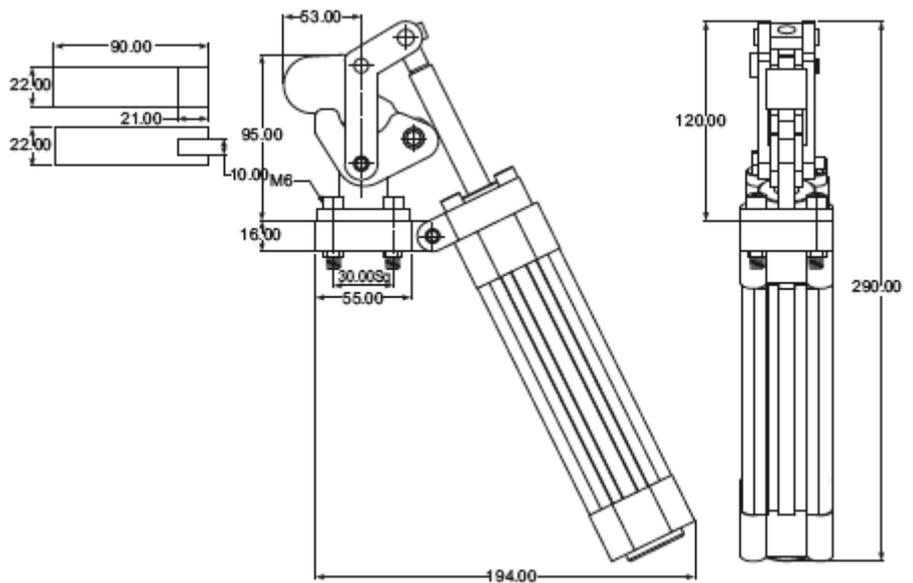
Operating Pressure: 2 - 6 Bar

Holding Capacity: 300 Kgs. Cylinder

Stroke: 80mm

Cylinder Bore: 32mm

Port Size: G 1/8

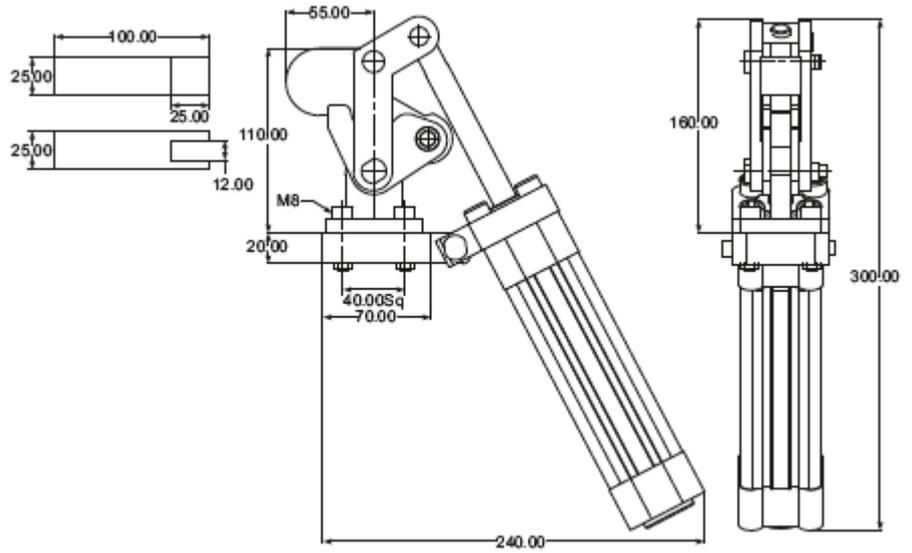


## Pneumatic Clamps

### H.V. Series

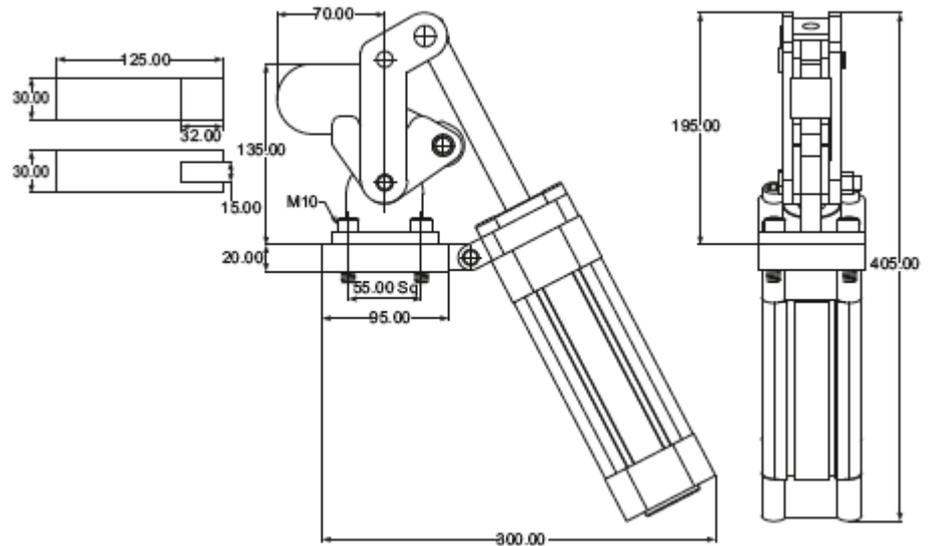
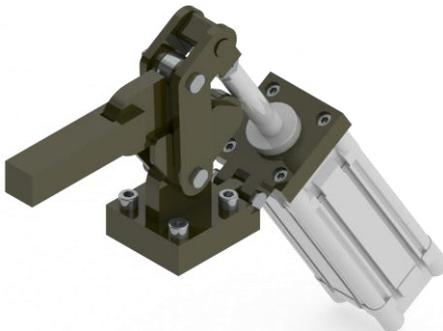
#### Model No: AOT - BII – 500

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 750 Kgs. Cylinder  
 Stroke: 100mm  
 Cylinder Bore: 40mm  
 Port Size: G ¼



#### Model No: AOT - BII – 1000

Operating Pressure: 2 - 6 Bar  
 Holding Capacity: 1000 Kgs. Cylinder  
 Stroke: 100mm  
 Cylinder Bore: 63mm  
 Port Size: G 3/8

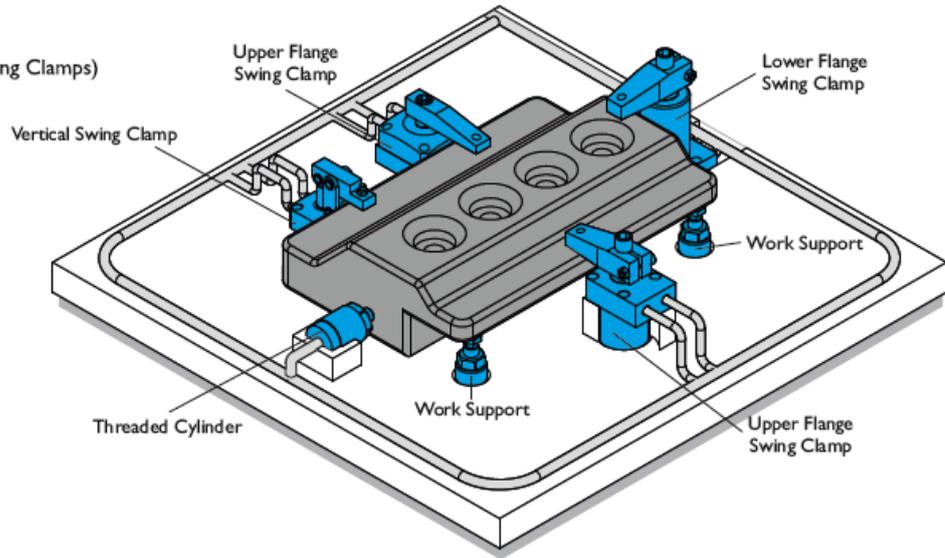


## Swing Clamps

### Introduction

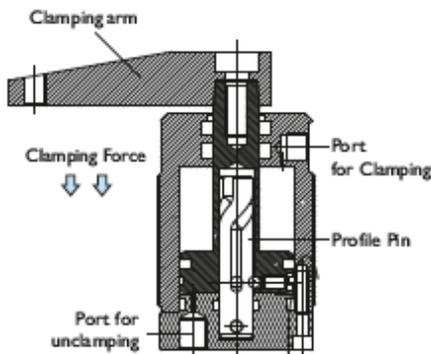
Steel-Smith introduces India's biggest range of Swing Clamps having clamping capacity range from 20 kg. to 1600 kg. The unique single cylinder design powers both the swing & force cycles eliminating the bulkier, two-cylinder concept that requires one cylinder for the swing motion and another cylinder for the force cycles. Gives you more force in less space with less parts. Loading and unloading of the job is very easy due to the swing action. There are two types of Clamping Cylinders.

- Swing Action Clamps
- Link Clamps (Vertical Swing Clamps)

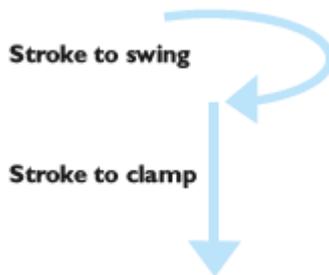


### Anatomy & Information

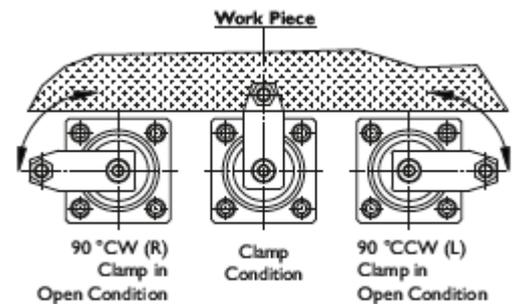
#### Cross Section View of Swing Clamp



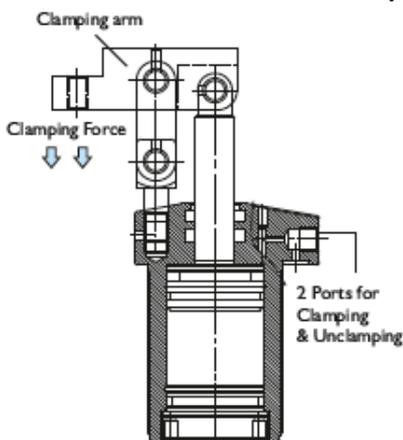
#### Swing Clamps Stroke to Swing / Clamp Stroke



#### Direction of Rotation



#### Cross Section View of Link Clamp



#### Link Clamps

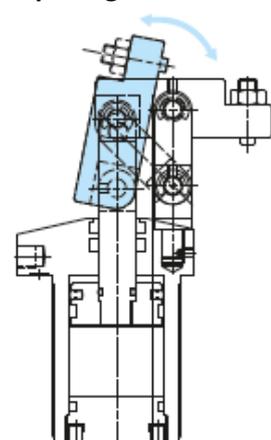
##### Features

In Vertical Swing clamping cylinders the clamping arm swings vertically to give the required clamping and unclamping action.

Can be used to clamp low profile work pieces.

Can produce larger clamp force than Swing Clamps in the same bore size.

#### Opening of Link Clamp

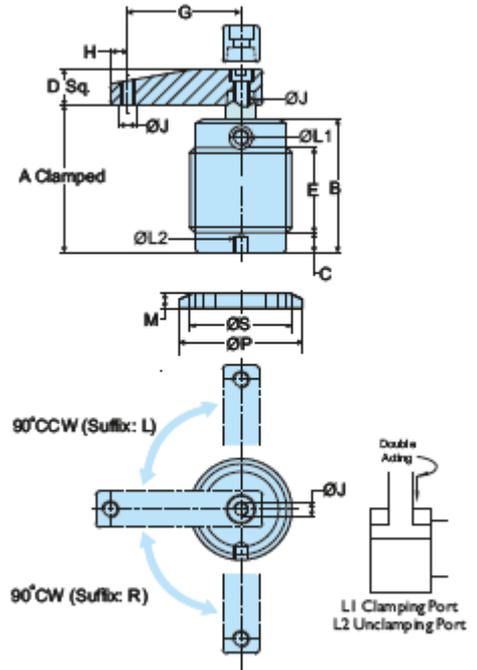


## Pneumatic Swing Clamps

### Pneumatic Swing Clamp - PST Series Threaded Body Model

- Body Thread for precise cylinder height positioning
- Threaded port connection
- Easy installation and removal
- Greatest flexibility in fixture design
- Available with two Flange Nuts

Material	Aluminum Alloy Body
Acting Type	Double Acting
Force	16 - 140 kgs
Stroke	28 - 30 mm
Pressure	4 - 7 Bar
Swivel Angle	90° ±2°

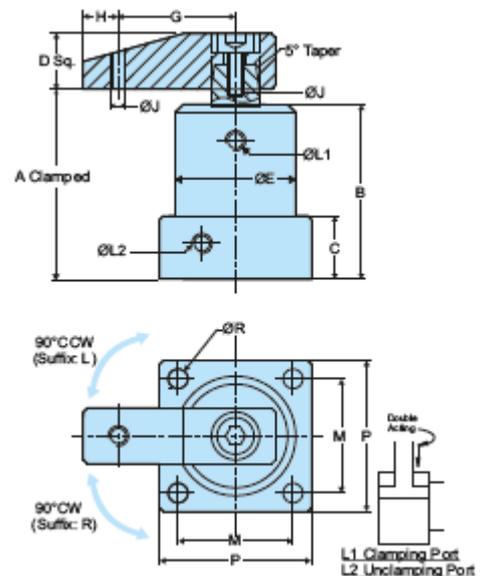


Model No.	A Clamped	B	C	D Sq.	E	G	H	J	L	M	P	S	Weight	Piston Dia.	Bore Dia.	Swing	Clamping Stroke	Force in Kgs (5 <sub>2</sub> )
PST-25-R/L	76	70	10	16	35	50	6	M6x1	M5x0.8	9	58	M40 x 1.5	0.800	14	25	14	14	16
PST-32-R/L	83	79	13	19	40	60	9	M8x1.25	G1/8	11	70	M50 x 1.5	1.100	16	32	14	16	30
PST-40-R/L	87	83	13	19	45	70	9	M8x1.25	G1/8	11	75	M55 x 1.5	1.250	16	40	14	15	50
PST-50-R/L	92	87	13	25	50	80	10	M12x1.5	G1/8	12	85	M65 x 1.5	1.700	20	50	14	14	85
PST-63-R/L	97	92	13	25	56	90	10	M12x1.5	G1/8	15	105	M80 x 1.5	2.200	20	63	15	15	140

### Pneumatic Swing Clamp - PSF Series Lower Flange Version

- No Fixture hole required
- Cylinder can be bolted directly to the fixture
- Easiest mounting preparation in the swing clamp line
- Square flange design enables clamping at all four sides of the clamp
- Allows extra-large parts to be clamped

Material	Aluminum Alloy Body
Acting Type	Double Acting
Force	16 - 140 kgs
Stroke	26 - 29 mm
Pressure	4 - 7 Bar
Swivel Angle	90° ±2°



Model No.	A Clamped	B	C	D Sq.	E	G	H	J	L	M	P	R	Weight	Piston Dia.	Bore Dia.	Swing Stroke	Clamping Stroke	Force in Kgs (5 ka/cm <sup>2</sup> )
PSF-25-R/L	69.5	65.5	23	16	35	30	8	M6 x 1.00	M5 x 0.8	30	40	4.5	0.400	14	25	12	14	16
PSF-32-R/L	76.5	71	23	19	50	50	9	M8 x 1.25	1/8 PT	44	54	6.5	0.700	16	32	12	14	30
PSF-40-R/L	79	75	26	19	55	50	9	M8 x 1.25	1/8 PT	48	58	6.5	0.850	16	40	12	15	50
PSF-50-R/L	84	80	26	25.4	65	70	10	M10 x 1.5	1/8 PT	55	68	8.5	1.300	20	50	14	15	85
PSF-63-R/L	90	86	30	25.4	75	70	10	M10 x 1.5	1/8 PT	64	80	8.5	1.800	20	63	14	15	140

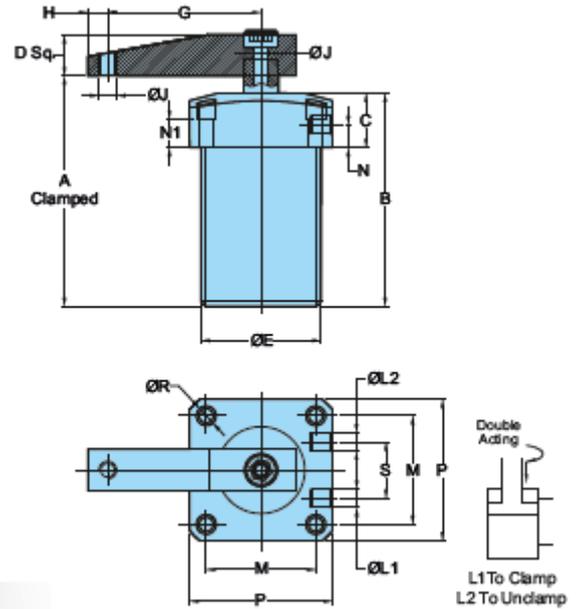
## Pneumatic Swing Clamps

### Pneumatic Swing Clamp - NPSU Series Upper Flange Version

- No Fixture hole required
- Cylinder can be bolted directly to the fixture
- Easiest mounting preparation in the swing clamp line
- Square flange design enables clamping at all four sides of the clamp
- Allows extra-large parts to be clamped



Material	Aluminum Alloy Body
Acting Type	Double Acting
Force	16 - 140 kgs
Stroke	27 - 32 mm
Pressure	4 - 7 Bar
Swivel Angle	90° ±2°



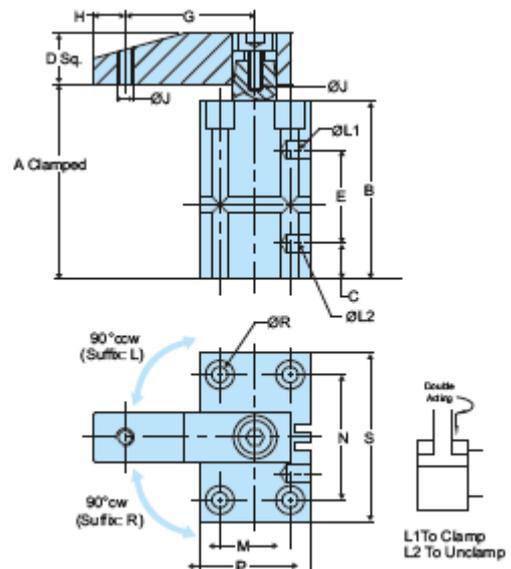
Model No.	A Unclamp	B	C	D Sq.	E	G	H	J	L	M	N	N1	P	R	S	Weight	Piston Dia.	Bore Dia.	Swin g	Clamping Stroke	Force in Kgs (5)
NPSU-25-R/L	92	87	25	16	M40 x 1.5	50	6	M6	M5	37	11.5	14.5	50	5.5	23	0.700	14	25	13	14	16
NPSU-32-R/L	103	98	25	19	M50 x 1.5	60	9	M8	G1/8"	45	10.5	13	60	6.5	23	0.800	16	32	16	14	30
NPSU-40-R/L	103	98	25	19	M55 x 1.5	70	9	M8	G1/8"	50	10.5	13	65	6.5	26	0.850	16	40	15	15	50
NPSU-50-R/L	110	105	25	25	M65 x 1.5	80	10	M12	G1/8"	58	10.5	11	75	8.5	32	1.000	20	50	17	15	80
NPSU-63-R/L	110	105	25	25	M80 x 1.5	90	10	M12	G1/8"	70	10.5	11	90	8.5	35	1.200	20	63	15	15	140

### Pneumatic Swing Clamp - PSB Series Block Version

- Block Design permits the clamp to be mounted from three different faces
- Grooves on one side for Reed switch mounting
- Simple mounting preparation and easy installation 2 or 4 mounting bolts



Material	Aluminum Alloy Body
Acting Type	Double Acting
Force	16 - 140 kgs
Stroke	27 - 32 mm
Pressure	4 - 7 Bar
Swivel Angle	90° ±2°



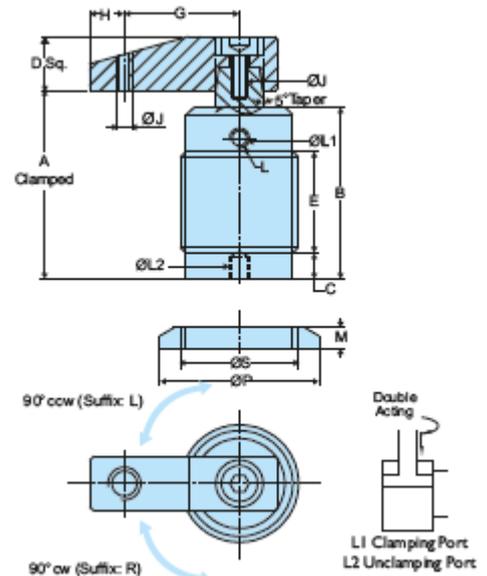
Model No.	A Clamped	B	C	D Sq.	E	G	H	J	L	M	N	P	R	S	Weight	Piston Dia.	Bore Dia.	Swin g	Clamping Stroke	Force in Kgs (5 kg/cm <sup>2</sup> )
PSB-25-R/L	82	78	21	16	34.5	50	6	M6 x 1.00	M5 x 0.8	20	40	35	6.5	55	0.700	14	25	13	14	16
PSB-32-R/L	96	90	21	19	51.5	60	9	M8 x 1.25	G 1/8"	30	45	45	6.5	60	0.900	16	32	16	14	30
PSB-40-R/L	96	90	22	19	50.5	70	9	M8 x 1.25	G 1/8"	37	52	55	8.5	70	1.100	16	40	15	15	50
PSB-50-R/L	105	100	25	25	53.5	80	10	M12 x 1.5	G 1/8"	46	66	65	8.5	85	1.200	20	50	17	15	80
PSB-63-R/L	107	100	28	25	52	90	10	M12 x 1.5	G 1/8"	60	80	80	10.5	100	1.400	20	63	15	15	140

## Hydraulic Swing Clamps

### Hydraulic Swing Clamp - HST Series Threaded Body

- Body Thread for precise cylinder height positioning
- Threaded port connection
- Easy installation and removal
- Greatest flexibility in fixture design
- Available with two Flange Nuts

Material	Aluminum Alloy Body
Acting Type	Double Acting
Force	59 - 400 kgs
Stroke	26 - 29 mm
Pressure	20 - 70 Bar
Swivel Angle	90° ± 2°

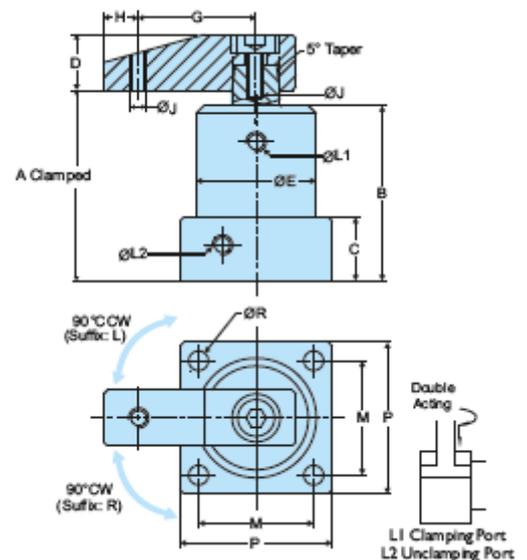


Model No.	A	B	C	D	E	G	H	J	L	M	P	S	Weight	Piston Dia.	Bore Dia.	Swing	Clamping Stroke	Force in Kgs (25)
HST-25-R/L	74	70	9	25.4	35	50	10	M10 x 1.5	1/8 PT	10	65	M45 x 1.5	0.800	18	25	12	14	59
HST-32-R/L	82	76	9	25.4	45	55	10	M10 x 1.5	1/8 PT	11	70	M50 x 1.5	1.100	20	32	14	15	125
HST-40-R/L	84.6	80	9	25.4	45	55	10	M10 x 1.5	1/8 PT	11	75	M55 x 1.5	1.250	20	40	14	15	200
HST-50-R/L	92	87	9	25.4	50	55	10	M10 x 1.5	1/8 PT	12	85	M65 x 1.5	1.700	20	50	14	14	400

### Hydraulic Swing Clamp - HSF Series Lower Flange Version

- No Fixture hole required
- Cylinder can be bolted directly to the fixture
- Easiest mounting preparation in the swing clamp line
- Square flange design enables clamping at all four sides of the clamp
- Allows extra-large parts to be clamped

Material	Aluminum Alloy Body
Acting Type	Double Acting
Force	59 - 600 kgs
Stroke	26 - 29 mm
Pressure	20 - 70 Bar
Swivel Angle	90° ± 2°



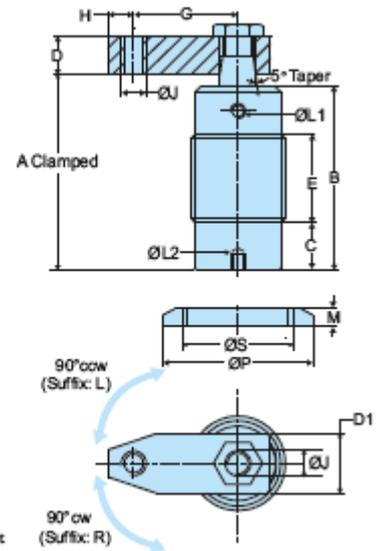
Model No.	A	B	C	D	E	G	H	J	L	M	P	R	Weight	Piston Dia.	Bore Dia.	Swing	Clamping Stroke	Force in kgs (25)
HSF-25-R/L	74	70	23	25.4	45	50	10	M10 x 1.5	1/8	40	50	6.5	0.800	18	25	12	14	59
HSF-32-R/L	82	76	25	25.4	50	55	10	M10 x 1.5	1/8	44	55	6.5	1.000	20	32	14	15	125
HSF-40-R/L	84.6	80	27	25.4	54	55	10	M10 x 1.5	1/8	48	62	8.5	1.100	20	40	14	15	200
HSF-50-R/L	85.5	80	27	25.4	65	55	10	M10 x 1.5	1/8	57	74	8.5	1.400	20	50	14	15	400
HSF-63-R/L	89	85	32	32	80	75	11	M12 x 1.75	1/8	70	88	10.5	2.300	25	63	14	15	600

## Hydraulic Swing Clamps

### Hydraulic Swing Clamp - NFT Series Threaded Body Model

- Body Thread for precise cylinder height positioning
- Threaded port connection
- Easy installation and removal
- Greatest flexibility in fixture design
- Available with two Flange Nuts

Material	Medium Carbon Steel Body
Acting Type	Single Acting / Double Acting
Force	495 - 1600 kgs
Stroke	23 - 33 mm
Pressure	50 - 350 Bar
Swivel Angle	90° ± 2°

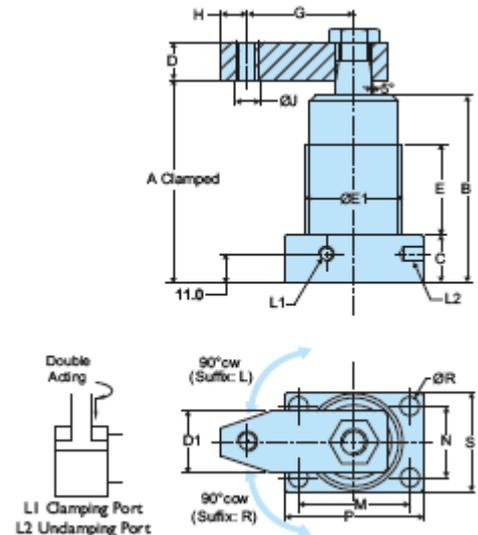


Model No.	A Clamped	B	C	D	E	G	H	J	L	M	P	S	Weight	Piston Dia.	Bore Dia.	Swing Stroke	Clamping Stroke	Force in Kgs (210)	
<b>Single Acting</b>																			
NFT-25-A-R/L	108	102	18	19	48	45	10	M12	1/8	10	65	M45 x 1.5	1.800	18	25	12	11	495	
NFT-32-A-R/L	105	97	18	19	52	50	10	M12	1/8	11	70	M50 x 1.5	2.100	22	32	12	11	890	
NFT-40-A-R/L	105	98	18	19	54	50	10	M12	1/8	11	80	M60 x 1.5	2.200	25	40	12	11	1600	
<b>Double Acting</b>																			
NFT-25-B-R/L	103	102	18	19	48	45	10	M12	1/8	10	65	M45 x 1.5	1.800	18	25	15	18	495	
NFT-32-B-R/L	103	97	18	19	52	50	10	M12	1/8	11	70	M50 x 1.5	2.100	22	32	15	18	890	
NFT-40-B-R/L	103	98	18	19	54	50	10	M12	1/8	11	80	M60 x 1.5	2.200	25	40	15	18	1600	

### Hydraulic Swing Clamp - NFS Series Lower Flange Version

- No Fixture hole required
- Cylinder can be bolted directly to the fixture
- Flexible design allows for manifold or threaded port connection
- Easiest mounting preparation in the swing clamp line
- Square flange design enables clamping at all four sides of the clamp
- Allows extra-large parts to be clamped

Material	Medium Carbon Steel Body
Acting Type	Single Acting / Double Acting
Force	495 - 1600 kgs
Stroke	23 - 33 mm
Pressure	50 - 350 Bar
Swivel Angle	90° ± 2°



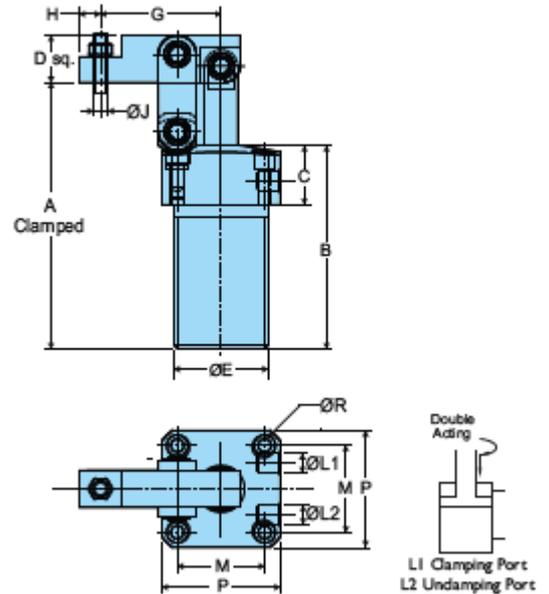
Model No.	A Clamped	B	C	D	E	E1	G	H	J	L	M	N	P	R	S	Weight	Piston Dia.	Bore Dia.	Swing Stroke	Clamping Stroke	Force in Kgs (210)
<b>Single Acting</b>																					
NFS-25-A-R/L	112	106	22	19	48	M45 x 1.5	45	10	M12	1/8	50	30	64	6.5	46	1.600	18	25	12	11	495
NFS-32-A-R/L	109	101	22	19	52	M50 x 1.5	50	10	M12	1/8	54	34	68	8.5	54	1.800	22	32	12	11	890
NFS-40-A-R/L	109	102	22	19	54	M60 x 1.5	50	10	M12	1/8	66	40	84	8.5	64	2.800	25	40	12	11	1600
<b>Double Acting</b>																					
NFS-25-B-R/L	107	106	22	19	48	M45 x 1.5	45	10	M12	1/8	50	30	64	6.5	46	1.400	18	25	15	18	495
NFS-32-B-R/L	107	101	22	19	52	M50 x 1.5	50	10	M12	1/8	54	34	68	8.5	54	1.700	22	32	15	18	890
NFS-40-B-R/L	107	102	22	19	54	M60 x 1.5	50	10	M12	1/8	66	40	84	8.5	64	2.700	25	40	15	18	1600

## Link Clamps

### Pneumatic Link Clamps - PLCU Series Upper Flanged Version

- Cylinder can be bolted directly to the fixture
- Square flange design enables clamping at all four sides of the clamp
- Allows extra-large parts to be clamped

Material	Aluminum Alloy Body
Acting Type	Double Acting
Force	34 - 218 kgs
Pressure	4 - 7 Bar

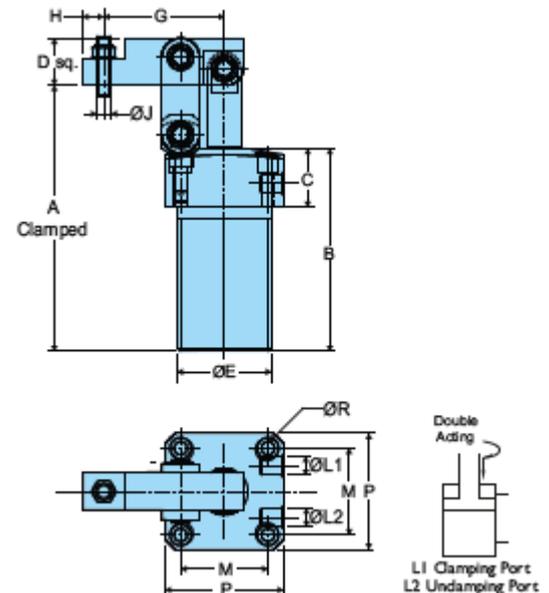


Model No.	A Clamped	B	C	D	E	G	H	J	L	M	P	R	Weight	Piston Dia.	Bore Dia.	Stroke	Force in Kgs (7 kg/cm <sup>2</sup> )
PLCU-25	111.5	86.5	25	17	M40 x 1.5	41	7	M6x1.0	M5x0.8	37	50	5.5	0.600	14	25	22	34
PLCU-32	129.5	97.5	25	20	M50 x 1.5	52	8	M8x1.25	G1/8	45	60	6.5	1.000	16	32	28	56
PLCU-40	132.5	97.5	25	25	M55 x 1.5	56	10	M8x1.25	G1/8	50	65	6.5	1.200	16	40	30	88
PLCU-50	144	104	25	30	M65 x 1.5	63.5	14	M12x1.75	G1/8	58	75	8.5	2.000	20	50	30	137
PLCU-63	149	105	25	30	M80 x 1.5	74	14	M12x1.75	G1/8	70	90	8.5	2.700	20	63	30	218

### Hydraulic Link Clamp - LHC01D Series - Upper Flange Version

- Cylinder can be bolted directly to the fixture
- Square flange design enables clamping at all four sides of the clamp
- Allows extra-large parts to be clamped

Material	S45C Body
Acting Type	Double Acting
Force	122 - 780 kgs
Pressure	20 - 70 Bar



Model No.	A Clamped	B	C	D	E	G	H	J	L	M	P	R	Weight	Piston Dia.	Bore Dia.	Stroke	Force in Kgs (70 kg/cm <sup>2</sup> )
LHC01D-25	111.5	86.5	25	17	M40 x 1.5	41	7	M6x1.0	1/8 PT	37	50	5.5	1.200	14	25	22	122
LHC01D-32	129	97	25	20	M50 x 1.5	52	8	M8x1.25	1/8 PT	45	60	6.5	1.800	16	32	28	201
LHC01D-40	132	97	25	25	M55 x 1.5	56	10	M8x1.25	1/8 PT	50	65	6.5	2.500	16	40	30	315
LHC01D-50	144	104	25	30	M65 x 1.5	63.5	14	M12x1.75	1/8 PT	58	75	8.5	4.000	20	50	30	490
LHC01D-63	149	105	25	30	M80 x 1.5	74	14	M12x1.75	1/8 PT	70	90	8.5	6.500	20	63	30	780

