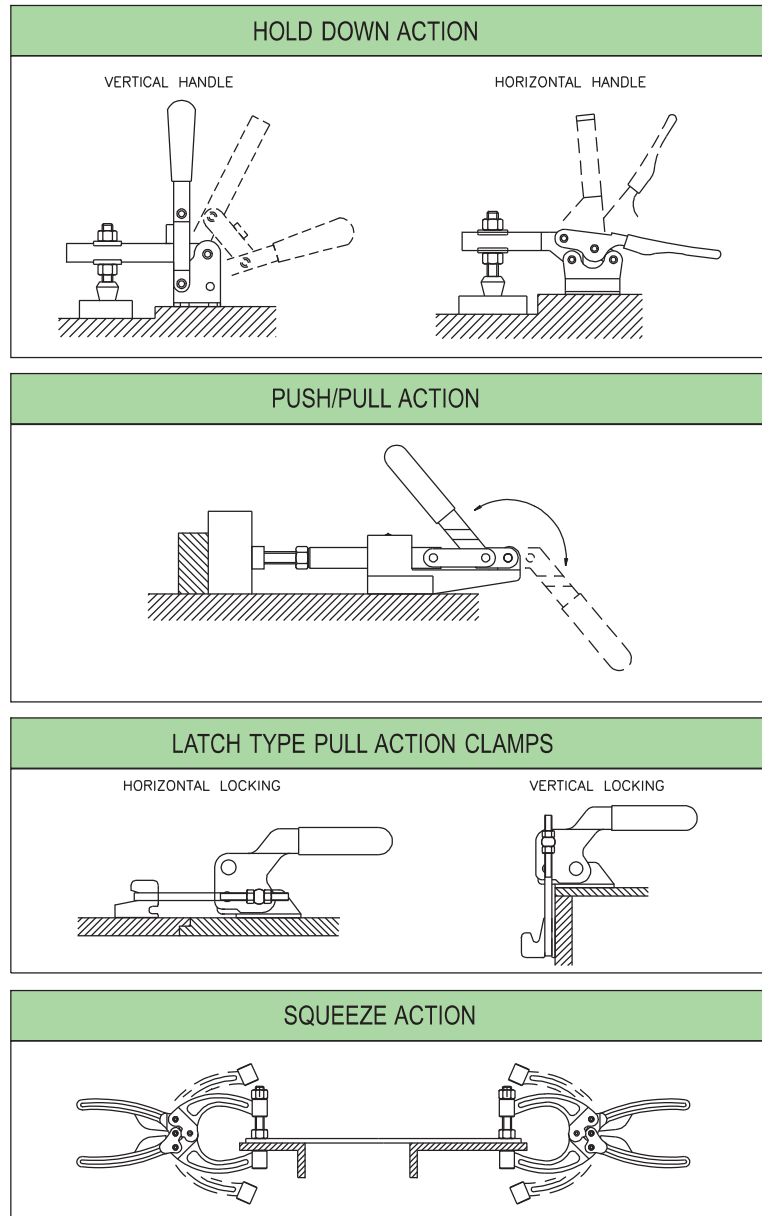


INTRODUCTION

There are four basic types of toggle actions as shown below:



**Stainless Steel
Rivets as
Pivot Pins**

**Rivets Housed
in
Reamed Hole
Bushes**

**Hardened
& Ground
Plungers**

**Red Vinyl
Grip
Handles**

Features of TOOLFAST Toggle Clamps

- Most rivets as pivot pins are of stainless steel for long life of clamps.
- Rivets are housed in reamed hole bushes for accuracy and longer life in most of the models.
- Red Vinyl grip handles for easy identification and operator comfort.
- Pressings from low carbon-cold rolled sheet, zinc plated with blue-brite finish for longer rust prevention.
- Hardened & Ground Plungers & precision machined bearing surfaces in Push/Pull Action Clamps.
- **2D/3D cad files available on request.**

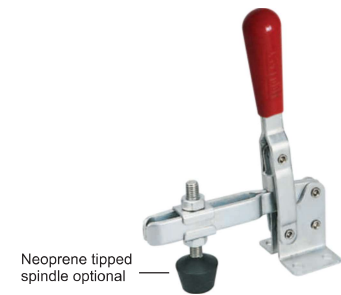
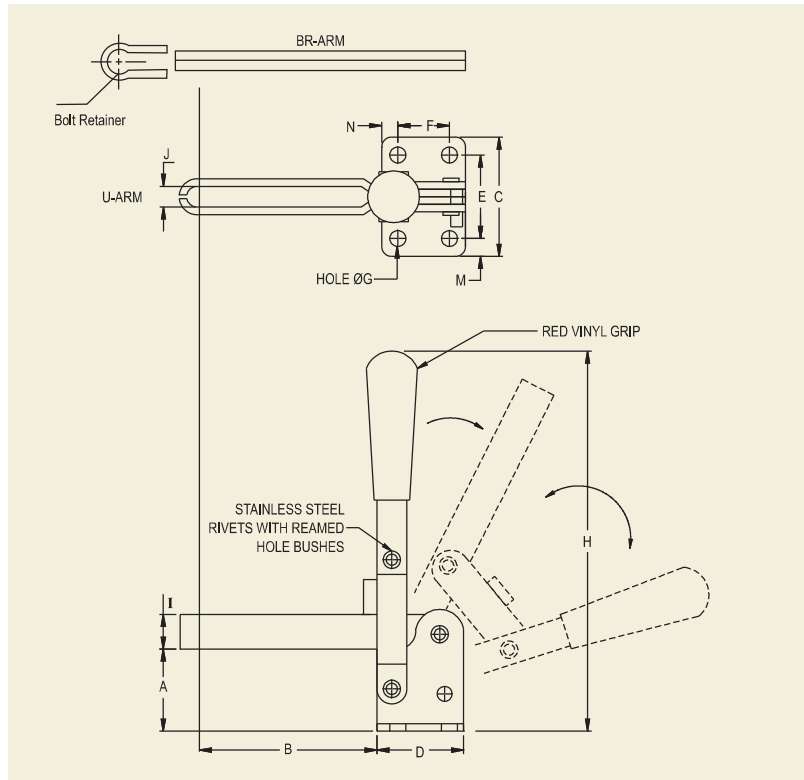
In the following pages of this catalogue different models of above types of toggle clamps manufactured by us to suit different applications are illustrated.

HOLD DOWN TOGGLE CLAMP - VERTICAL HANDLE - FLANGED BASE

These toggle clamps have a flanged base with holes for mounting on the fixture plate. Handle remains in vertical position while clamping. Available in two types of clamping arms as shown below:

U - Arm : This is the most widely used type which permits to locate the clamping spindle anywhere along the length of the arm.

BR - Arm : This type of Arm has Strip Arm onto which the bolt retainer can be welded by the user at any desire angle. Bolt retainer is supplied loose with this model.



U-ARM MODEL



BR-ARM MODEL

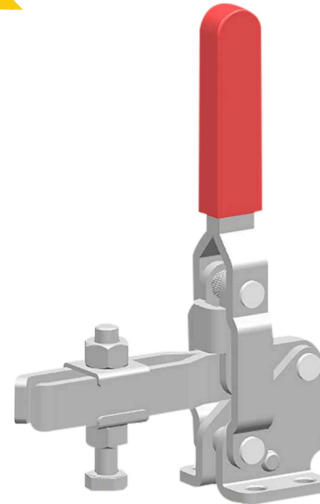
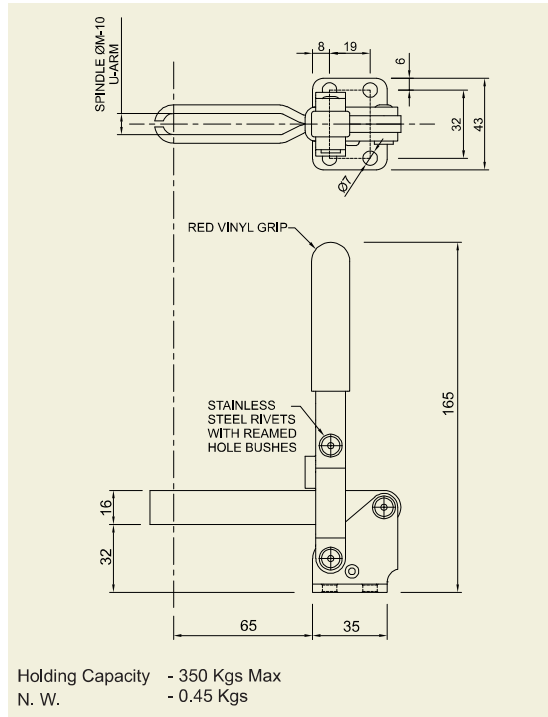
MODEL	ARM TYPE	A	B MAX.	MOUNTING BASE							I	J SUITABLE FOR SPINDLE DIA	H	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	N	ØG					
VHDT-19-U VHDT-19-BR	U-ARM BR-ARM	19	35 50	32	26	24	15	4	5.5	4.5Ø	12	M-6	90	70 Kgs.	0.11 0.11
VHDT-25-U VHDT-25-BR	U-ARM BR-ARM	25	35 50	40	26	27	13	6.5	6.5	5.5Ø	10	M-6	100	100 Kgs.	0.18 0.19
VHDT-26-U VHDT-26-BR	U-ARM BR-ARM	25	43 60	38	30	27	16	5.5	7	5.5Ø	10	M-6	100	100 Kgs.	0.18 0.19
VHDT-32-U VHDT-32-BR	U-ARM BR-ARM	32	65 90	43	35	32	19	5.5	8	6.8Ø	16	M-8	145	200 Kgs.	0.34 0.35
VHDT-36-U VHDT-36-BR	U-ARM BR-ARM	36	65 90	58	35	38	19	10	8	6.8Ø	16	M-8	150	200 Kgs.	0.35 0.36
VHDT-45-U VHDT-45-BR	U-ARM BR-ARM	45	95 120	62	45	44	28	9	8.5	8.5Ø	18	M-10	210	400 Kgs.	0.74 0.75
VHDT-46-U VHDT-46-BR	U-ARM BR-ARM	46	95 120	82	45	55	25	13.5	10	8.5Ø	18	M-10	206	400 Kgs.	0.74 0.75
VHDT-50-U VHDT-50-BR	U-ARM BR-ARM	50	130 150	72	45	45	25	13.5	10	8.5Ø	18	M-10	210	350 Kgs.	0.79 0.81
VHDT-60-U VHDT-60-BR	U-ARM BR-ARM	60	120 140	70	55	53	36.5	8.5	9	8.5Ø	20	M-10	270	500 Kgs.	1.35 1.37
VHDT-80-U VHDT-80-BR	U-ARM BR-ARM	80	135 155	95	75	70	50	12.5	12.5	10.5Ø	32	M-16	340	700 Kgs.	2.28 2.31
VHDT-85-U VHDT-85-BR	U-ARM BR-ARM	85	150 170	90	76	60	45	15	15.5	8.5Ø	32	M-16	346	700 Kgs.	2.30 2.34

Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly is provided as standard accessory with all above clamps. U-Arm models are provided with 2 nos. U-Flanged Washers also along with clamping spindle assembly and BR-arm models are provided with bolt retainers along with clamping spindle assembly.

Optional Accessories : User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

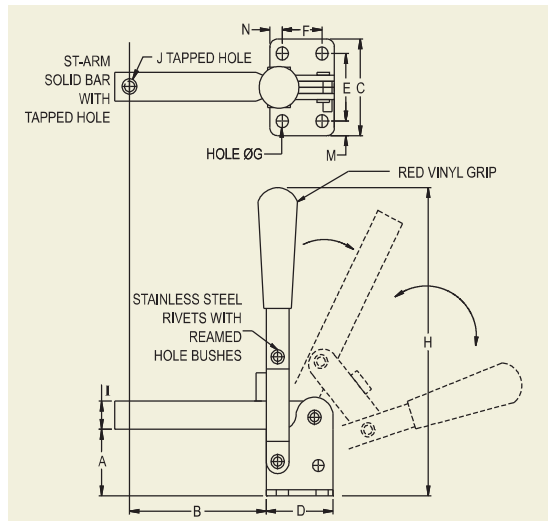
HOLD DOWN TOGGLE CLAMP- VERTICAL HANDLE - FLANGED BASE- HEAVY DUTY MODEL VHDT-32-U-HD

VHDT-32-U-HD is the heavy duty version of the most popular vertical handle toggle clamp VHDT-32-U. This heavy duty version has a holding capacity of 350 KGS max. All working dimensions being same as VHDT-32-U. It can simply replace VHDT-32-U in a fixture if heavier clamp required.



HOLD DOWN TOGGLE CLAMP - VERTICAL HANDLE - SOLID ARM

These toggle clamps have a Solid Arm with a tapped hole at the end. This arm can also be cut to any length and hole can be made at any desired position or a separate clamping assembly can be welded at any desired point as per the application.

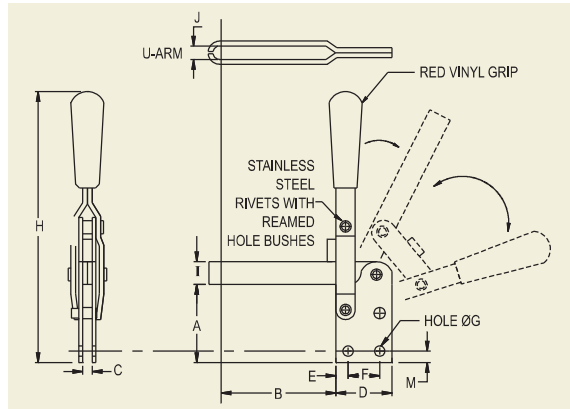


MODEL	ARM TYPE	A	B	MOUNTING BASE							I	J TAPPED HOLE	H	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	N	ØG					
VHDT-25-ST	ST-ARM	25	35	40	26	27	13	6.5	6.5	5.5Ø	10	M-6	100	150 Kgs.	0.17
VHDT-32-ST	ST-ARM	32	65	43	35	32	19	5.5	8	6.8Ø	16	M-8	145	250 Kgs.	0.41
VHDT-45-ST	ST-ARM	45	95	62	45	44	28	9	8.5	8.5Ø	18	M-10	210	500 Kgs.	0.84
VHDT-60-ST	ST-ARM	60	120	70	55	53	36.5	8.5	9	8.5Ø	20	M-10	270	600 Kgs.	1.60
VHDT-80-ST	ST-ARM	80	135	95	75	70	50	12.5	12.5	10.5Ø	28	M-16	340	800 Kgs.	2.71

Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly is provided as standard accessory with all above clamps.

HOLD DOWN TOGGLE CLAMP - VERTICAL HANDLE - BASE STRAIGHT

These toggle clamps are similar to VHDT models but with Base Straight. Straight Base design enables mounting on a vertical surface.

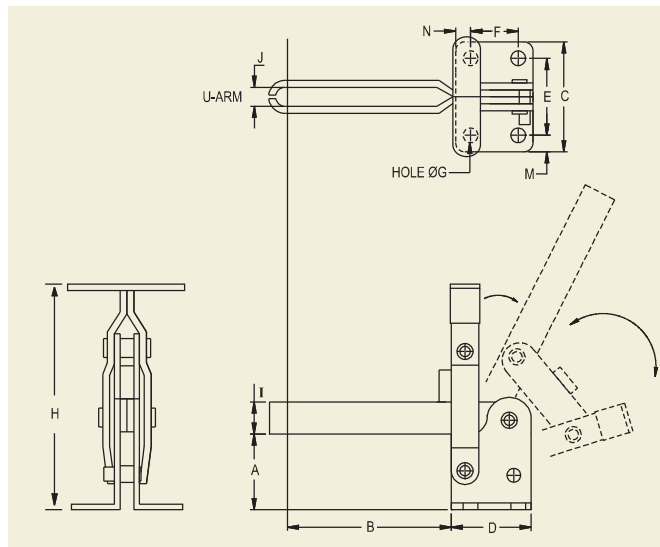


MODEL	ARM TYPE*	A	B MAX.	MOUNTING BASE						I	J SUITABLE FOR SPINDLE DIA	H	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	ØG					
VHDT-19-U-BS	U-ARM	29	35	4	26	5.5	15	4	4.5Ø	12	M-6	100	70 Kgs.	0.11
VHDT-25-U-BS	U-ARM	40	35	6	26	6.5	13	6.5	5.5Ø	10	M-6	115	100 Kgs.	0.18
VHDT-26-U-BS	U-ARM	36	43	6	30	7	16	5.5	5.5Ø	10	M-6	110	100 Kgs.	0.18
VHDT-32-U-BS	U-ARM	47	65	6	35	8	19	5.5	6.8Ø	16	M-8	160	200 Kgs.	0.34
VHDT-36-U-BS	U-ARM	57	65	6	35	8	19	10	6.8Ø	16	M-8	173	200 Kgs.	0.35
VHDT-45-U-BS	U-ARM	70	95	8	45	8.5	28	9	8.5Ø	18	M-10	235	400 Kgs.	0.74
VHDT-46-U-BS	U-ARM	77	95	8	45	10	25	13.5	8.5Ø	18	M-10	235	400 Kgs.	0.74
VHDT-50-U-BS	U-ARM	76	130	8	45	10	25	13.5	8.5Ø	18	M-10	235	350 Kgs.	0.79
VHDT-60-U-BS	U-ARM	88	120	8	55	9	36.5	8.5	8.5Ø	20	M-10	298	500 Kgs.	1.35
VHDT-80-U-BS	U-ARM	125	135	10	75	12.5	50	12.5	10.5Ø	32	M-16	385	700 Kgs.	2.28
VHDT-85-U-BS	U-ARM	119	150	10	76	15.5	45	15	8.5Ø	32	M-16	380	700 Kgs.	2.31

* All above base straight models are available with BR ARM or ST ARM also on request.

HOLD DOWN TOGGLE CLAMP - T HANDLE - FLANGED BASE

Smaller sizes of VHDT models are also available in T-Handles. These are available in U-arm models only as shown in table below.

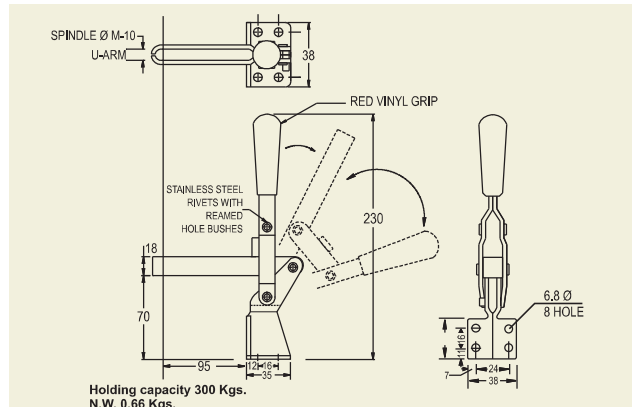


MODEL	ARM TYPE	A	B MAX.	MOUNTING BASE							I	J SUITABLE FOR SPINDLE DIA	H	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	N	ØG					
VHDT-25-TU	U-ARM	25	35	40	26	27	13	6.5	6.5	5.5Ø	10	M-6	80	100 Kgs.	0.18
VHDT-32-TU	U-ARM	32	65	43	35	32	19	5.5	8	6.8Ø	16	M-8	115	200 Kgs.	0.34

Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly complete with U-Flanged washers and lock nuts is provided as standard accessory with above clamps.

HOLD DOWN TOGGLE CLAMP - VERTICAL HANDLE - RIGHT ANGLE BASE - Model RATC-70

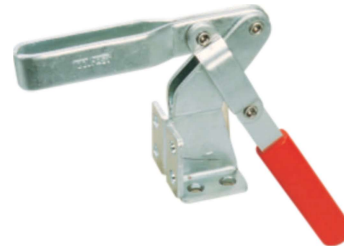
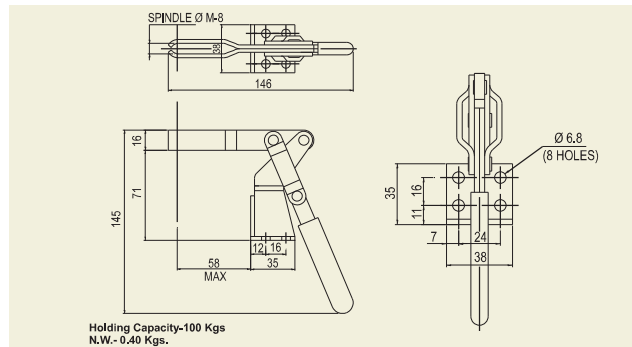
This model has vertical handle with a right angled dual mounting base which can be base flange mounted as well as front mounted on side wall of a fixture.



Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly complete with U-Flanged washers and lock nuts is provided as standard accessory with above clamps.

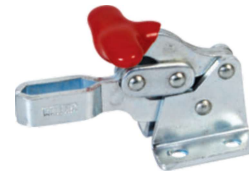
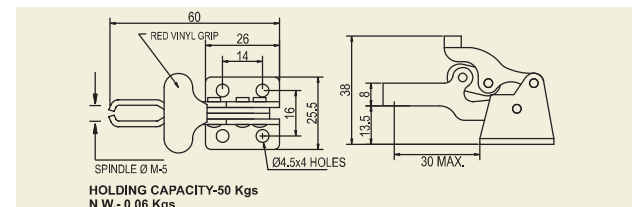
HOLD DOWN TOGGLE CLAMP - DROP HANDLE - Model DTC-70

These are low silhouette clamps with mounting flexibility of front as well as base mounting. Its unique design keeps the arm and handle clear for easy loading and unloading of parts.

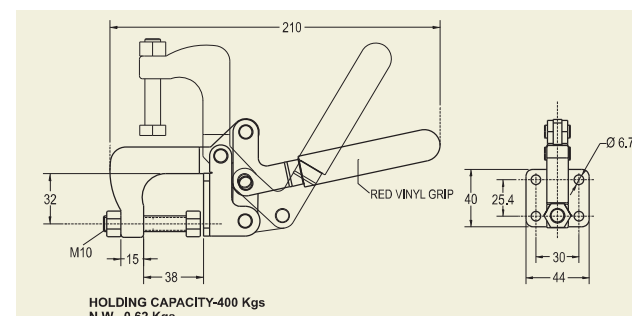


Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly complete with U-Flanged washers and lock nuts is provided as standard accessory with above clamps.

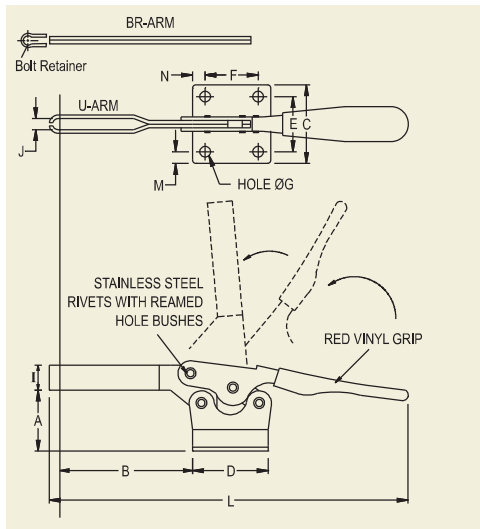
HOLD DOWN TOGGLE CLAMP - FORWARD HANDLE - Model FHTC-13



PULL BACK CLAMP - Model PBC-38



HOLD DOWN TOGGLE CLAMP - HORIZONTAL HANDLE - THUMB TYPE



Low height design of these hold down toggle clamps requires less overhead clearance as the handle remains in horizontal position while clamping.



U-ARM MODEL

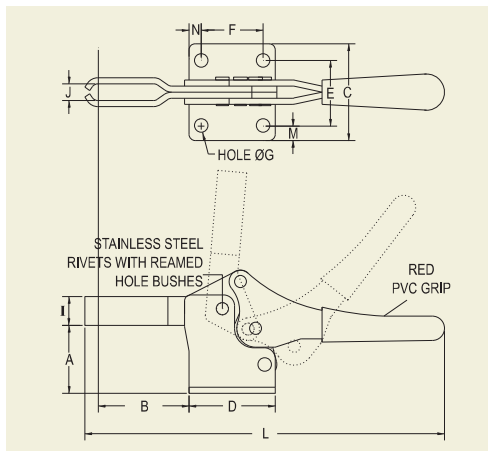


BR-ARM MODEL

MODEL	ARM TYPE	A	B MAX.	MOUNTING BASE							I	J SUITABLE FOR SPINDLE DIA	L	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	N	ØG					
HDTC-25	U-ARM	27	59	33	35	21	21	6	7	5.5Ø	12	M-6	150	150 Kgs.	0.15
HDTC-25-BR	BR-ARM		68												0.16
HDTC-27	U-ARM	27	59	33	35	22	24	5.5	5.5	4.5Ø	12	M-6	150	150 Kgs.	0.15
HDTC-27-BR	BR-ARM		70												0.16
HDTC-35	U-ARM	37	63	37	38	23	25	7	6.5	6.8Ø	13	M-8	172	250 Kgs.	0.26
HDTC-35-BR	BR-ARM		75												0.27
HDTC-35-HA (High Arm Model)	U-ARM	54	75	36	38	22.2	22.2	7	8	6.8Ø	13	M-8	172	250 Kgs.	0.30
HDTC-36	U-ARM	36	63	40	44	26	29	7	7.5	6.8Ø	13	M-8	173	250 Kgs.	0.27
HDTC-36-BR	BR-ARM		75												0.28

Standard Accessories provided with Clamp: Standard Hex. Head Clamping Spindle assembly complete with U-Flanged washers and lock nuts is provided as standard accessory with above clamps. Br-arm models are provided with bolt retainers along with clamping spindle assembly.

HOLD DOWN TOGGLE CLAMP - HORIZONTAL HANDLE - LONG TYPE



Low height design of these hold down toggle clamps requires less overhead clearance as the handle remains in horizontal position while clamping. BR Arm models are also available.



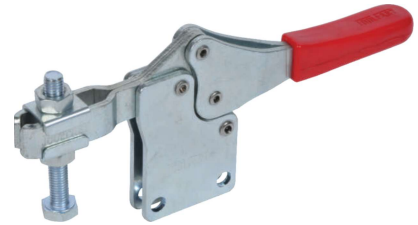
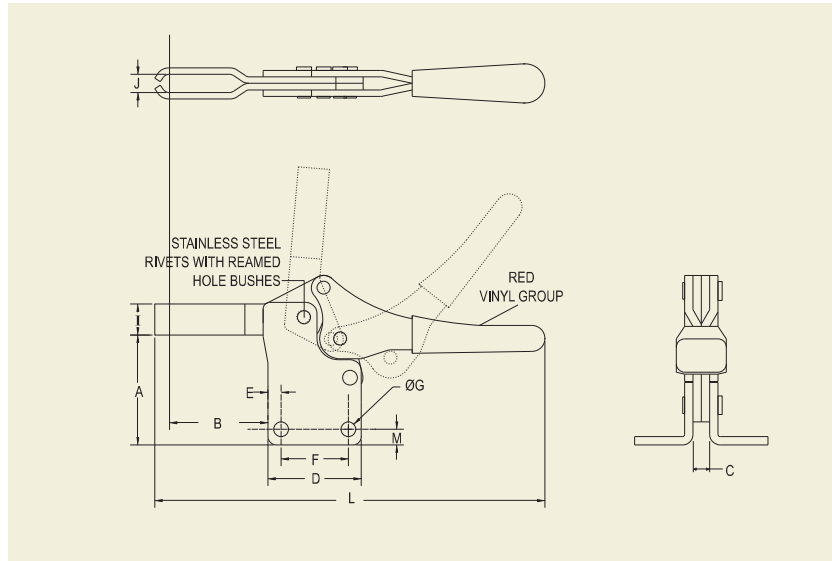
U-ARM MODEL



BR-ARM MODEL

MODEL	ARM TYPE	A	B MAX.	MOUNTING BASE							I	J SUITABLE FOR SPINDLE DIA	L	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	N	ØG					
HDTC-45	U-ARM	45	60	64	57	44	41	9.5	8	9Ø	19	M-10	238	500 Kgs.	0.74
HDTC-45-BR	BR-ARM		80												0.75
HDTC-46	U-ARM	46	106	55	57	38	40	8.5	8.5	8.3Ø	19	M-10	302	500 Kgs.	0.76
HDTC-46-BR	BR-ARM		120												0.78
HDTC-50	U-ARM	50	105	56	57	37	41	9.5	8	9Ø	19	M-10	285	500 Kgs.	0.80
HDTC-50-BR	BR-ARM		125												0.81
HDTC-57	U-ARM	61	142	62	65	40	45	11	10	8.3Ø	19	M-10	322	500 Kgs.	0.91
HDTC-57-BR	BR-ARM		160												0.93

HOLD DOWN TOGGLE CLAMP - HORIZONTAL HANDLE - BASE STRAIGHT



MODEL	ARM TYPE*	A	B MAX.	MOUNTING BASE						I	J SUITABLE FOR SPINDLE DIA	L	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	ØG					
HDTC-45-BS	U-ARM	67	60	8	57	8	41	9.5	9	19	M-10	238	500 Kgs.	0.74
HDTC-50-BS	U-ARM	67	105	8	57	8	41	9.5	9	19	M-10	285	500 Kgs.	0.80

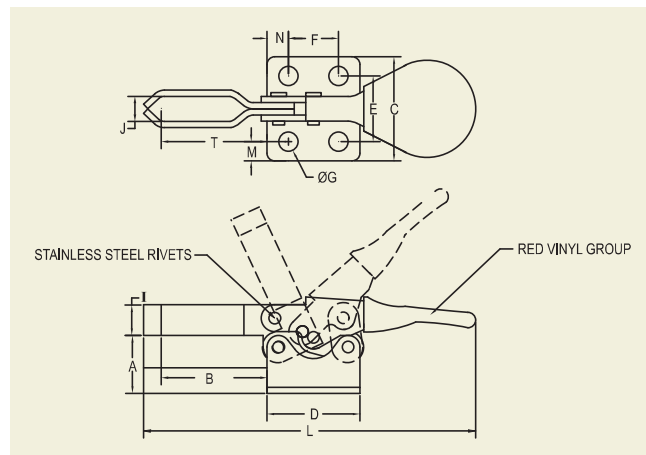
Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly is provided as standard accessory with all above clamps. U-Arm models are provided with 2 nos. U-Flanged Washers also along with clamping spindle assembly and BR-arm models are provided with bolt retainers along with clamping spindle assembly.

Optional Accessories : User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

*** ABOVE BASE STRAIGHT MODELS ARE AVAILABLE WITH BR ARM ALSO ON REQUEST**

HOLD DOWN TOGGLE CLAMP - HORIZONTAL HANDLE - MINIATURE SERIES

These two models are miniature versions of horizontal handle clamps useful for light and miniature applications.

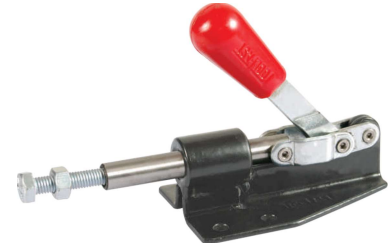
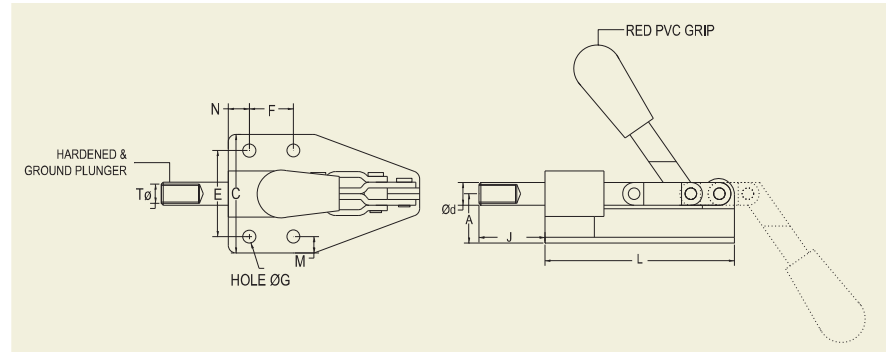


MODEL	ARM * TYPE	A	B MAX.	MOUNTING BASE							I	J SUITABLE FOR SPINDLE DIA	L	HOLDING CAPACITY	N. W. Kgs.
				C	D	E	F	M	N	ØG					
HDTC-8	U-ARM	8	16	24	24	16	14	4	5	Slot 7x4.5	6	M-4	68	25 Kgs.	0.03
HDTC-15	U-ARM	15	27	27	24	17	13	5	5.5	5Ø	8	M-6	86	50 Kgs.	0.055

PUSH / PULL ACTION TOGGLE CLAMP - FRONT BASE - STEEL FABRICATED BODY

'TOOLFAST' Push/Pull Action Toggle Clamps have a straight line action as the plunger moves in straight line forward & backward with easy to operate handle. The plunger moves forward and locks as the handle is moved forward and plunger also locks in retracted position when handle is moved backward. Hence these clamps can be used as push as well as pull action clamps. Hardened & ground plunger moves in precision machined bore.

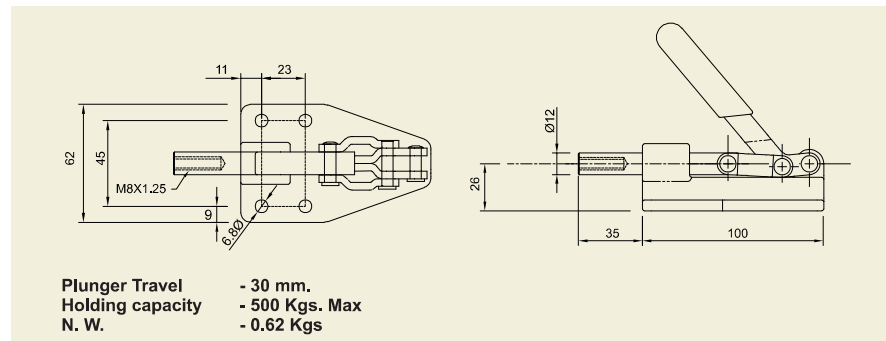
This model with front base is most popular because of its rigidity due to mounting base just under the load bearing surface of plunger movement.



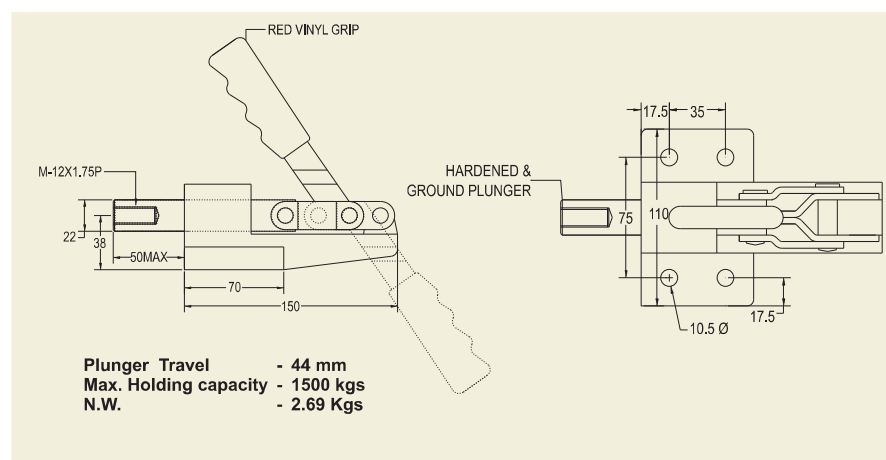
MODEL	PLUNGER Ø dØ	TØ	A	PLUNGER TRAVEL	MOUNTING BASE						J MAX.	L	HOLDING CAPACITY	N. W. Kgs.
					C	E	F	M	N	ØG				
PATC-9-FB	9Ø	M-5x0.8	15	28	50	36	20	7	8	5Ø	32	80	150 Kgs	0.18
PATC-12-FB	12Ø	M-8x1.25	26	30	62	45	23	8.5	11	6.8Ø	35	100	300 Kgs	0.47
PATC-16-FB	16Ø	M-10x1.5	30	36	80	60	28	10	14	8.5Ø	42	125	500 Kgs	0.92

PUSH / PULL ACTION TOGGLE CLAMP- FRONT BASE - HEAVY DUTY MODEL PATC-12-FB-HD

PATC-12-FB-HD is the heavy duty version of the most popular push / pull action toggle clamp PATC-12-FB. This heavy duty version has a holding capacity of 500 kgs max. All working dimensions being same as PATC-12-FB, it can simply replace it in a fixture if higher clamping force required



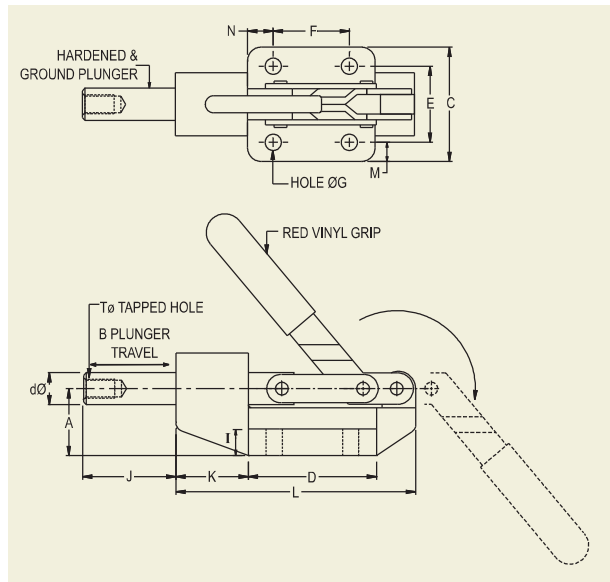
PUSH / PULL ACTION TOGGLE CLAMP - FRONT BASE - C.I. BODY - PATC-22-FB



Standard Accessories provided with Clamp:
Standard Hex. Head Clamping Spindle assembly is provided as standard accessory.

Optional Accessories:
User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

PUSH / PULL ACTION TOGGLE CLAMP - CENTRE BASE



'TOOLFAST' Push/Pull Action Toggle Clamp - Centre Base has its base at the centre and the bigger sizes have more centre height than the front base model to accommodate larger work pieces. Width of the mounting base is also less in this case which makes this type of push action clamp more compact. Other features of this clamp are same as in case of front base model.

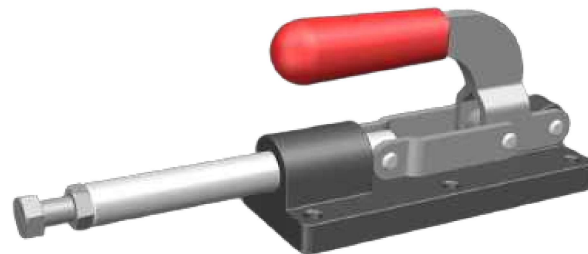
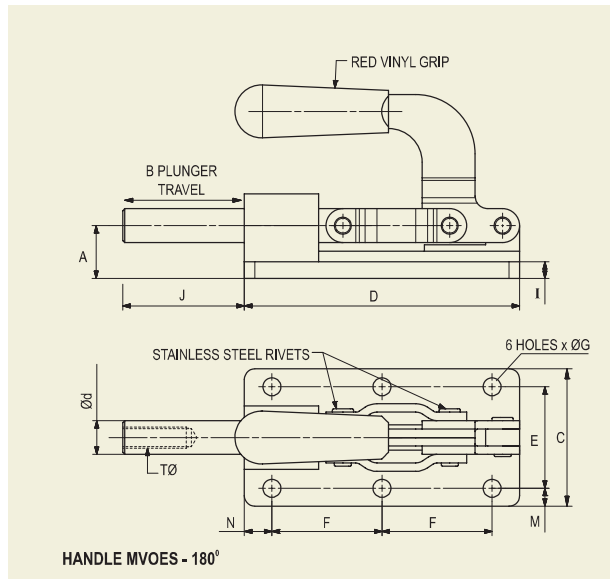


MODEL	PLUNGER DIA dØ	TØ	A	PLUNGER TRAVEL B	MOUNTING BASE							I	J MAX.	K	L	HOLDING CAPACITY	N. W. Kgs.
					C	D	E	F	M	N	ØG						
PATC-9-CB	9Ø	M-5x0.8	18	27	40	40	28	28	6	6	5.5Ø	5	27	20	79	100 Kgs.	0.21
PATC-12-CB	12Ø	M-8x1.25	26	30	55	55	35	35	10	10	6.8Ø	6	35	28	100	400 Kgs.	0.51
PATC-1238-CB	12Ø	M-8x1.25	26	30	55	55	38	38	8.5	8.5	6.8Ø	6	35	28	100	400 Kgs.	0.51
PATC-16-CB	16Ø	M-10x1.5	35	36	60	67	40	40	10	13.5	8.5Ø	7	43	38	125	600 Kgs.	1.00
PATC-1642-CB	16Ø	M-10x1.5	35	36	60	67	42	42	9	12.5	6.8Ø	7	43	38	125	600 Kgs.	1.00
PATC-22-CB	22Ø	M-12x1.75	45	60	75	75	50	50	12.5	12.5	10.5Ø	16	62	46	162	900 Kgs.	2.80

Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly is provided as standard accessory.

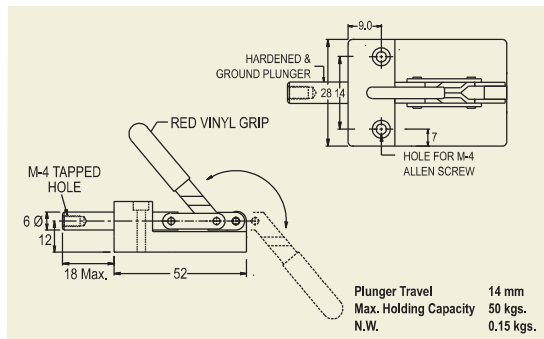
Optional Accessories : User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

PUSH / PULL ACTION TOGGLE CLAMP - LONG TRAVEL

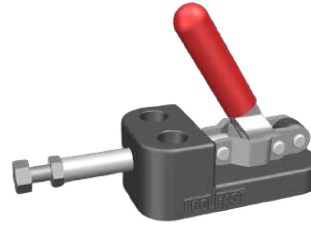


MODEL	PLUNGER DIA dØ	TØ	A	PLUNGER TRAVEL B	MOUNTING BASE							I	J MAX.	HOLDING CAPACITY	BODY	N. W. Kgs.
					C	D	E	F	M	N	ØG					
PATC-12-LT	12Ø	M-8	20	40	60	110	45	47	7.5	8	6.5Ø	6	41	600 Kgs.	STEEL	0.74
PATC-16-LT	16Ø	M-10	25	50	65	130	48	52	8.5	13	8.5Ø	8	58	800 Kgs.	STEEL	1.23
PATC-20-LT	20Ø	M-12	30	75	75	185	55	82.5	10	10	8.5Ø	10	92	1300 Kgs.	C.I.	2.81

PUSH / PULL ACTION TOGGLE CLAMP - MINIATURE MODEL - PATC - 6



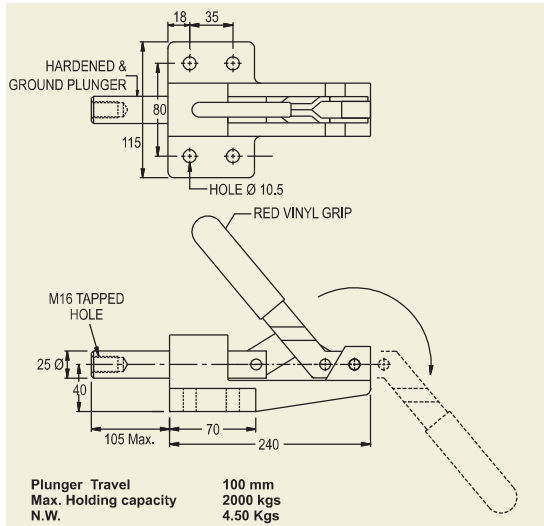
This is a Miniature Model of Push/Pull Action Toggle Clamp useful for light clamping where less space is available.



Standard Accessories provided with Clamp: Standard Hex. Head Clamping Spindle assembly is provided as standard accessory.

PUSH / PULL ACTION TOGGLE CLAMP - HEAVY DUTY - Model PATC-25

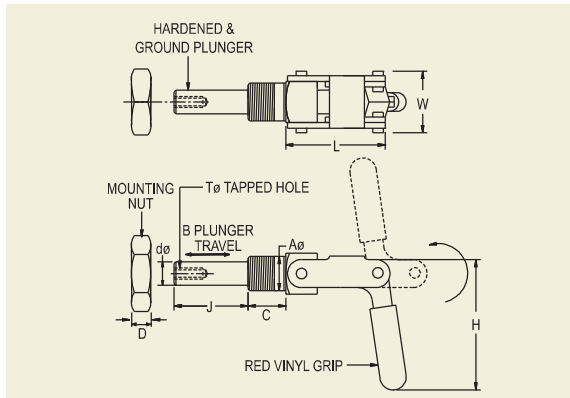
This is a Heavy Duty version of Push/Pull Action Toggle Clamp useful where high clamping force or long plunger travel is required.



Standard Accessories provided with Clamp: Standard Hex. Head Clamping Spindle assembly is provided as standard accessory.

PUSH / PULL ACTION TOGGLE CLAMP - FRONT MOUNTING TYPE

'TOOLFAST' Push/Pull Action Toggle Clamps - Front Mounting Type are simply flush mounted through a panel or plate by a hexagonal lock nut on the work piece side. Can also be mounted directly into a tapped hole without using the nut. Plunger is hardened & ground. These clamps can also be used as push as well as pull action clamps.

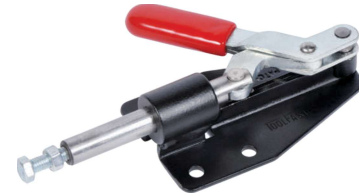
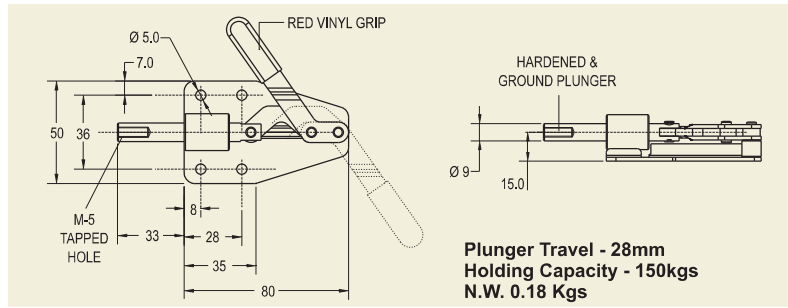


MODEL	PLUNGER DIA dØ	TØ TAPPED HOLE	MOUNTING THREAD SIZE AØ	PLUNGER TRAVEL B	C	D	J	L	W	H	HOLDING CAPACITY	N. W. Kgs.
PAFM-9	9	M-5 x 0.8 P	M-16 x 1.5 P	25	11	6	36	35	26	75	50 Kgs.	0.13
PAFM-12	12	M-8 x 1.25 P	M-20 x 1.5 P	36	16	8	41	50	31	103	100 Kgs.	0.32
PAFM-16	16	M-10 x 1.5 P	M-24 x 2.0 P	65	25	10	65	84	43	143	350 kgs.	0.86

Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly is provided as standard accessory.

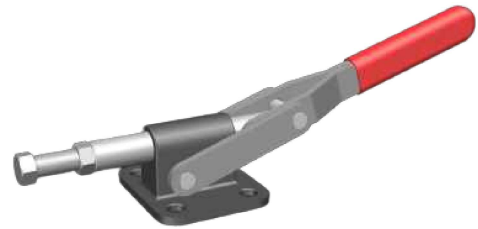
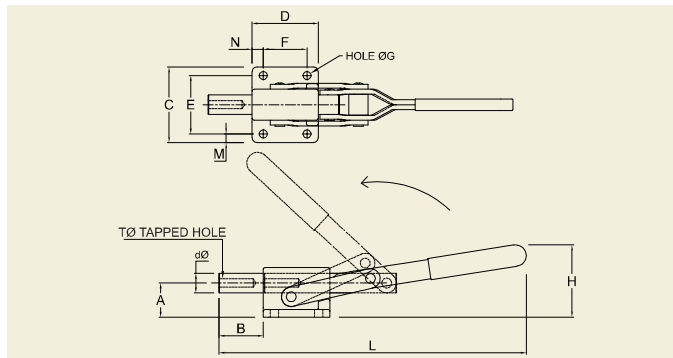
Optional Accessories : User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

PUSH / PULL ACTION TOGGLE CLAMP - SIDE HANDLE-PATC-9-FB-SH



PUSH / PULL ACTION TOGGLE CLAMP - REVERSE HANDLE

These Push / Pull Action Toggle clamps have reverse handle action as the plunger moves in pushing position when the handle is moved back towards the operator. Hence, these clamps are most suitable for operations where the operator has to keep hand away from the workpiece while locking the clamp.



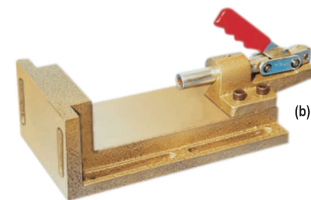
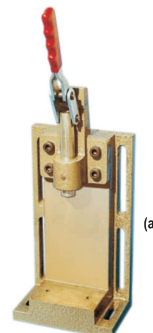
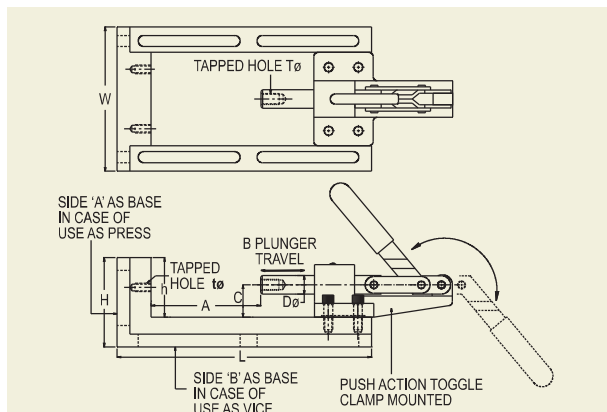
MODEL	PLUNGER DIA dØ	TØ	A	PLUNGER TRAVEL B	MOUNTING BASE							L	H	HOLDING CAPACITY	WEIGHT Kgs.
					C	D	E	F	M	N	ØG				
PAR-14	14Ø	M10 X 1.5	27	28	65	58	45	38	10	10	Ø8.5	221	70	1200 Kgs.	0.66
PAR-20	20Ø	M12 X 1.75	35	45	78	68	60	45	9	11.5	Ø8.5	315	72	2600 Kgs.	1.71

TOGGLE VICE CUM PRESS

'TOOLFAST' Toggle vice cum press is a multifunction quick action vice cum press having a unique design with precision machined body on which Push Action Toggle Clamp of suitable model is mounted to make it a very versatile tool.

Toggle Vice: When side 'B' is used as base, it can be used as a quick action vice as shown in picture (b) or you can make your own drill Jig on it

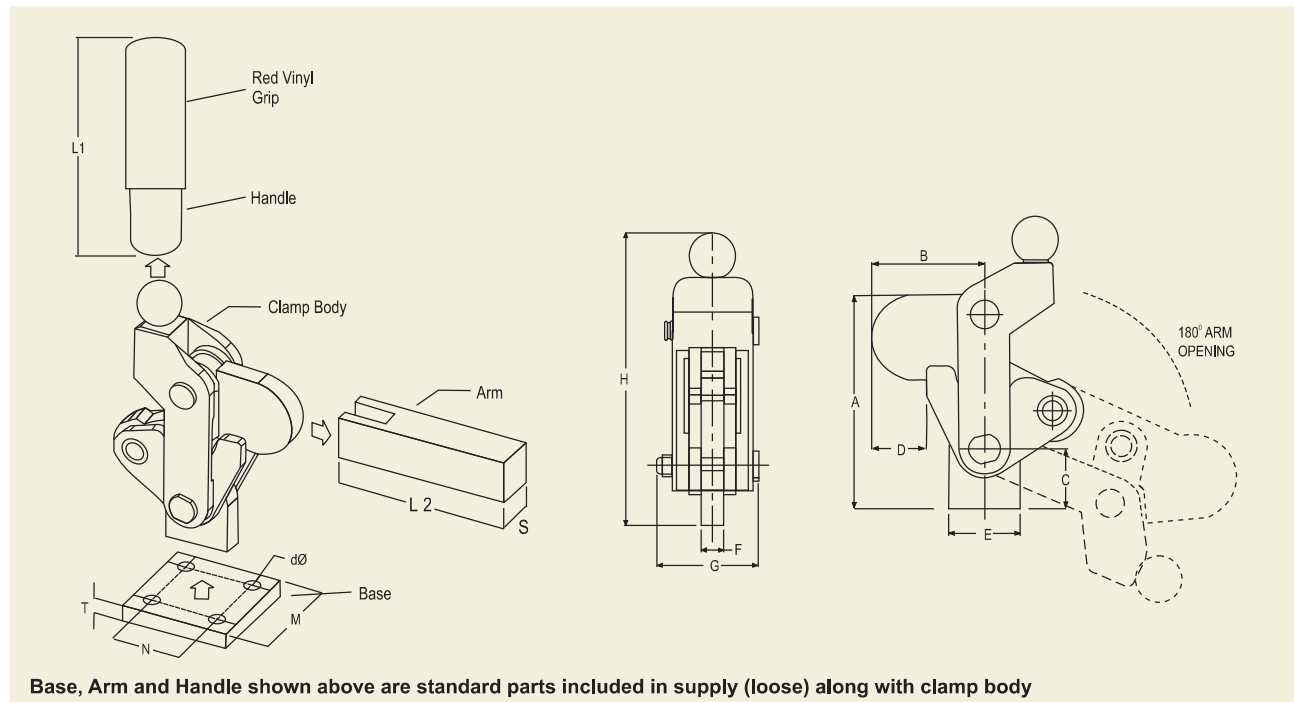
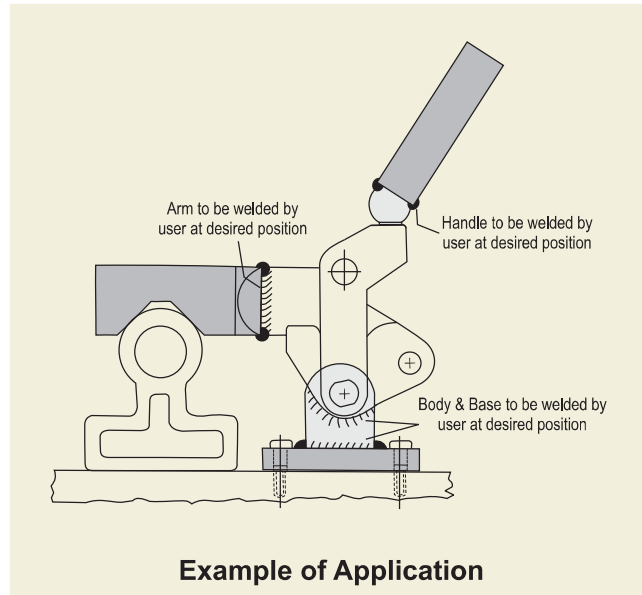
Toggle Press : When side 'A' is used as base, it can be used as a toggle press for light press operations as shown in picture (a)



MODEL	A	PLUNGER TRAVEL B	C	DØ	TØ	tØ	h	L	W	H	PUSH ACTION TOGGLE CLAMP MOUNTED	CAPACITY	N. W. Kgs.
TVP-12	100	30	26	12Ø	M-8	M-6	50	205	110	70	MODEL PATC-12-FB	600 Kgs.	3.7
TVP-16	120	36	30	16Ø	M-10	M-8	60	250	138	90	MODEL PATC-16-FB	1000 Kgs.	7.6
TVP-22	140	44	38	22Ø	M-12	M-10	70	300	170	105	MODEL PATC-22-FB	1500 Kgs.	15.0

HEAVY DUTY WELDABLE TOGGLE CLAMP - MODULAR DESIGN

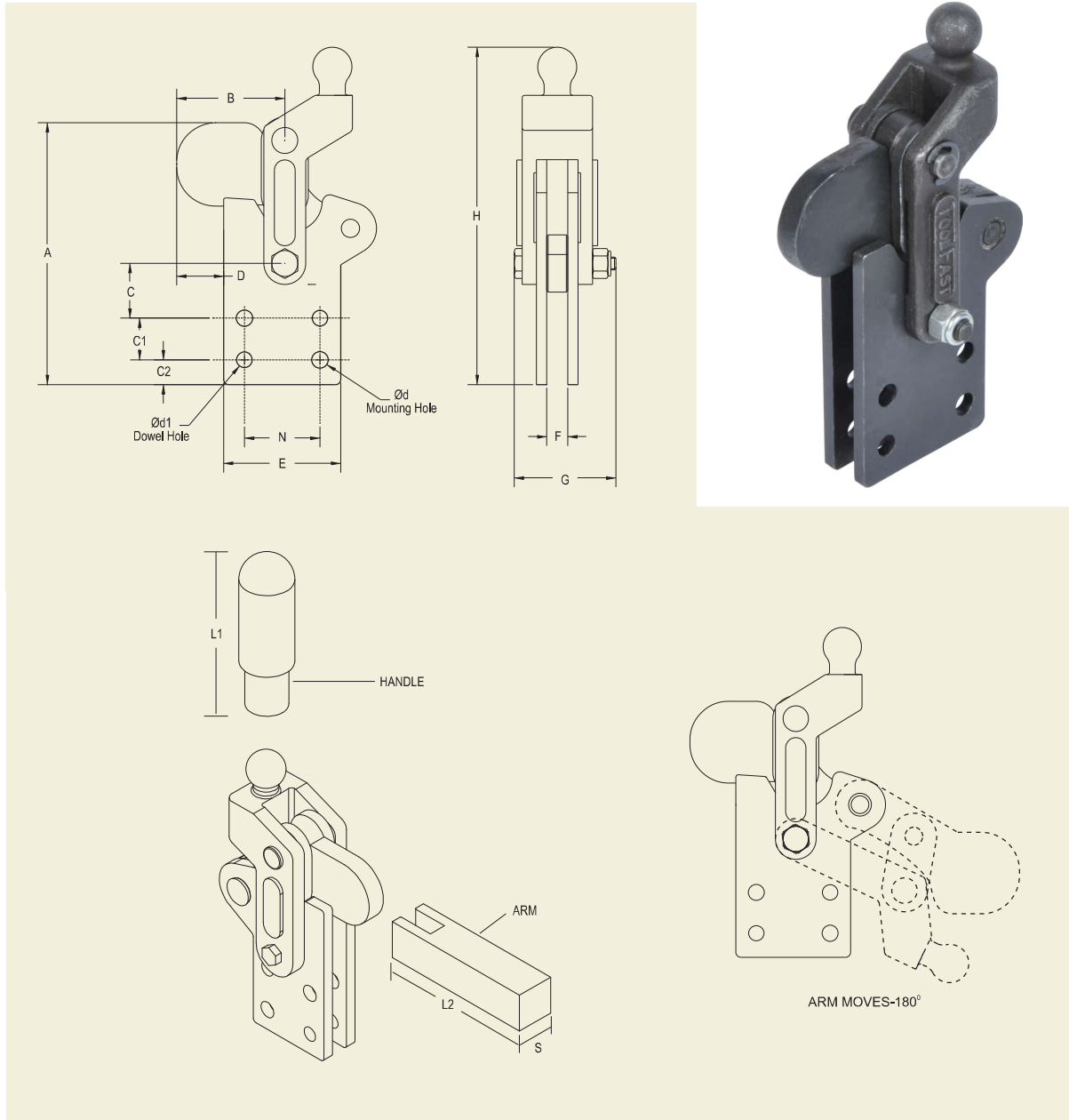
These are modular weldable clamps which allow the designer complete flexibility to position the base, clamp arm and handle and weld them in any desired position to suit the application. The base, arm and the pipe handle are supplied along with the clamp separately, to be welded by the user before use. The main body is made of accurately machined components having hardened and ground pivot pins and bushes.



	MODEL	A	B	C	D	E	F	G	H	L1	M Sq.	N Sq.	T	dØ	L2	S Sq.	HOLDING CAPACITY	N. W. Kgs.
Now	WTC-100	59	30	19	15	20	6	29	84	50	35	20	6	5.5	50	12	200 Kgs	0.33
	WTC-200	75	42	21	18	24	8	39	104	82	45	29	6	7	75	20	500 Kgs.	0.81
	WTC-300	91	53	26	26	30	10	47	127	90	50	30	8	7	90	22	700 Kgs.	1.38
	WTC-500	106	59	32	30	36	12	55	152	114	63	40	9	9	100	25	1100 Kgs.	2.23
Now	WTC-1000	136	77	37	42	58	15	61	178	125	80	55	10	10.5	125	30	2500 Kgs	3.70

HEAVY DUTY WELDABLE TOGGLE CLAMP - MODULAR DESIGN - BASE STRAIGHT

These are straight base version of WTC series. All other features are same. Arm and handle are supplied loose alongwith the clamp which will be welded at desired position before use.



Arm and Handle shown above are standard parts included in supply (loose) along with clamp body.

	MODEL	A	B	C	D	E	F	G	H	dØ	d1Ø	C1	C2	N	L1	L2	S Sq.	HOLDING CAPACITY	N. W. Kgs.
New	WTC-100 BS	70	30	10	15	30	6	29	96	5.5	5	12	8.5	15	50	50	12	200 Kgs	0.30
	WTC-200 BS	101	42	21	18	45	8	39	130	6.3	6	16	9.5	26	82	75	20	500 Kgs.	0.82
	WTC-300 BS	122	53	20	26	50	10	47	158	9	8	25	12	30	90	90	22	700 Kgs.	1.40
	WTC-500 BS	132	59	23	30	53	12	55	178	9	8	25	10	35	114	100	25	1100 Kgs.	2.24
New	WTC-1000 BS	174	77	30	42	66	15	61	216	10.5	10	30	15	35	125	125	30	2500 Kgs	3.50

PULL ACTION CLAMP- LATCH TYPE - HORIZONTAL CUM VERTICAL

Pull Action Clamps are Latch type clamps used for sealing chambers, lids, doors of moulds, drums, containers or other vessels etc. Also suitable for clamping moulds in industries such as resin, fibre glass, chemical & food.

'TOOLFAST' Pull Action Clamp has a unique design which enables use of the same clamp as a horizontal pull action clamp as shown in figure (A) as well as a vertical pull action clamp as shown in figure (B) below by using two different holes H1 and H2 for pulling pin P to be located in.

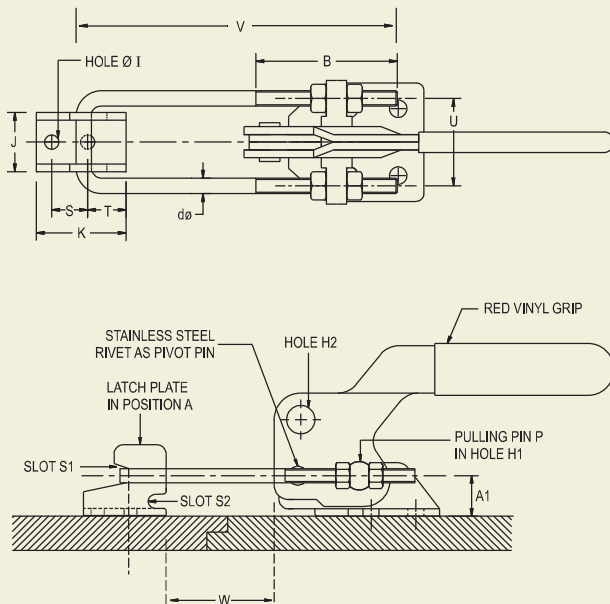
Clamp is supplied complete with U-bolt & Latch Plate.

**Same Clamp Can
Be Used For
Horizontal As well As
Vertical Locking**



Figure (A): PAC being used as Horizontal Pull Action Clamp

The pulling PIN P alongwith the U-Bolt is assembled using Hole H1 so that the Clamp is used for Horizontal Locking as shown below

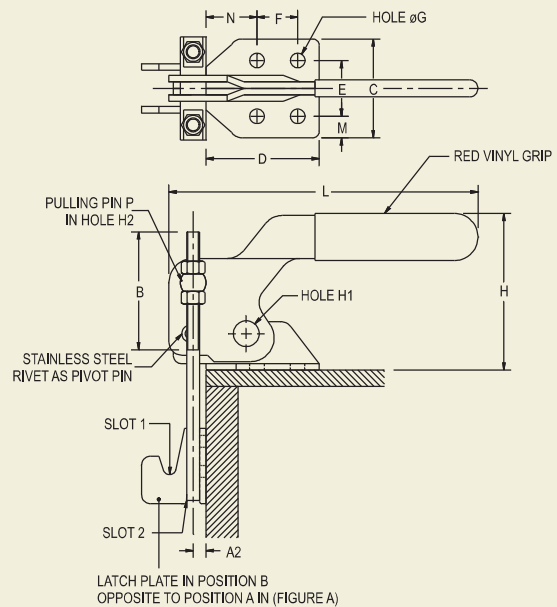


Locking is done when Adjustable U-Bolt is placed around the Slot S1 of Latch Plate in position A and the Handle is pulled down to reach the Lock Position

To ensure that the Clamp Locks positively, it is important that the Base of clamp and the Base of Latch Plate are properly aligned as shown above.

Figure (B): PAC being used as Vertical Pull Action Clamp

The pulling PIN P alongwith the U-Bolt is assembled using Hole H2 so that the Clamp is used for Vertical Locking as shown below.



Locking is done when Adjustable U-Bolt is placed around the Slot S2 of Latch Plate in position B and the Handle is pulled down to reach the Lock Position.

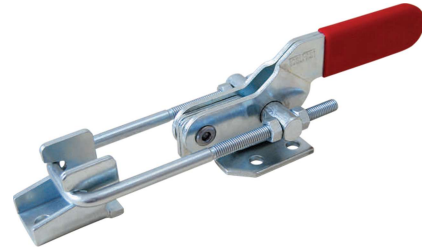
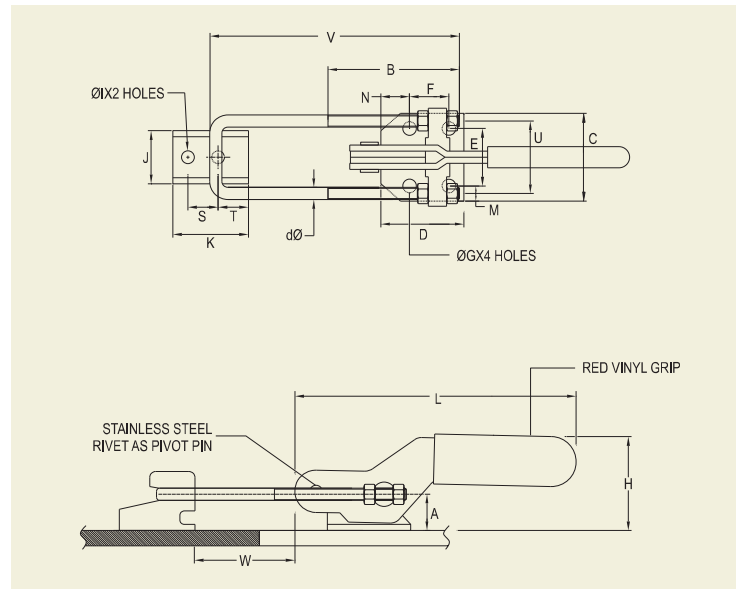
To ensure that the Clamp Locks positively, it is important that the Base of the Latch Plate is aligned with the Front Edge of the Clamp Base in perpendicular position as shown above.

MODEL	A1	A2	dØ	U	V	B THREAD LENGTH	W		MOUNTING BASE OF CLAMP								MOUNTING BASE OF LATCH PLATE					H	L	HOLDING CAPICITY	N. W. Kgs.
							Min.	Max.	C	D	E	F	M	N	GØ	J	K	S	T	IØ					
PAC-4-HV	13	4	4Ø	22	90	52	5	42	32	35	20	15	6	14	5Ø	15	30	12	12	5Ø	53	100	150 Kgs.	0.16	
PAC-6-HV	17	6	6Ø	34	128	68	5	55	46	54	26	19	10	19	6.8Ø	23	36	15	15	5.5Ø	75	152	400 Kgs.	0.49	
PAC-8-HV	24	8	8Ø	48	165	87	5	67	58	55	38	26	10	20	8.5Ø	35	50	20	20	8.5Ø	96	185	900 Kgs.	1.06	

ALSO AVAILABLE IN STAINLESS STEEL

PULL ACTION CLAMP - LATCH TYPE - HORIZONTAL

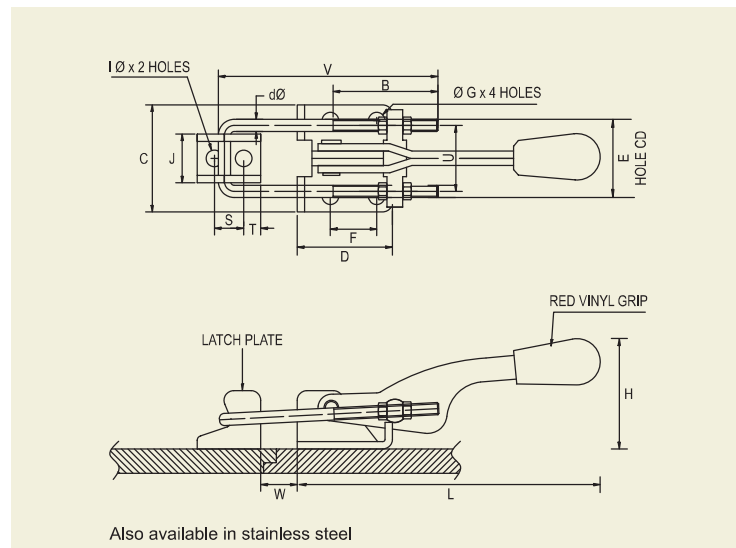
These are newly introduced models having same dimensions of mounting etc. as PAC-HV series given on previous page but with a modified low height handle suitable for only horizontal locking.



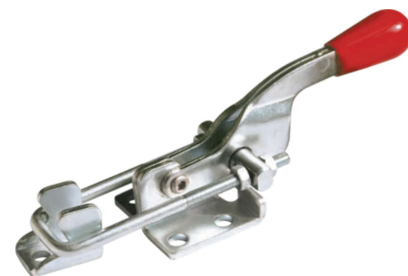
MODEL	A	dØ	U	V	B THREAD LENGTH	W		MOUNTING BASE OF CLAMP								MOUNTING BASE OF LATCH PLATE					H	L	HOLDING CAPACITY	N. W. Kgs.
						Min.	Max.	C	D	E	F	M	N	GØ	J	K	S	T	Ø					
PAC-4-H	13	4Ø	22	90	52	5	42	32	35	20	15	6	14	5Ø	15	30	12	12	5Ø	29	100	150 Kgs.	0.14	
PAC-6-H	17	6Ø	34	128	68	5	55	46	54	26	19	10	19	6.8Ø	23	36	15	15	5.5Ø	50	152	400 Kgs.	0.44	
PAC-8-H	24	8Ø	48	165	87	5	66	58	55	38	26	10	20	8.5Ø	35	50	20	20	8.5Ø	61	185	900 Kgs.	0.88	

ALSO AVAILABLE IN STAINLESS STEEL

HORIZONTAL LATCH CLAMP - MEDIUM DUTY

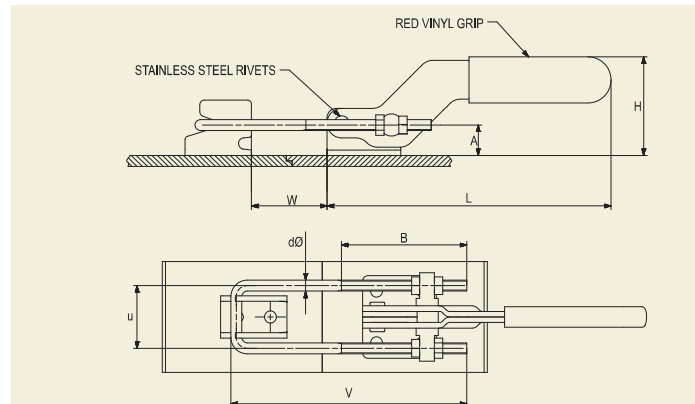


Also available in stainless steel

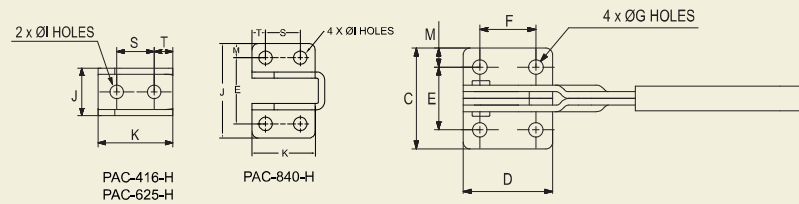


MODEL	dØ	U	V	B THREAD LENGTH	W		MOUNTING BASE OF CLAMP					MOUNTING BASE OF LATCH PLATE				H	L	HOLDING CAPICITY	N. W. Kgs.
					Min.	Max.	C	D	E	F	GØ	J	S	T	lØ				
PAC-5-H	5Ø	27	115	68	5	50	44	39	31	19	6.8Ø	20	12	7	6.8Ø	35	100	250 Kgs.	0.22
PAC-520-H	5Ø	27	115	68	5	50	44	39	32	20	6.5Ø	20	11	7.5	6.5Ø	35	100	250 Kgs.	0.22

PULL ACTION CLAMP LATCH TYPE - HORIZONTAL - NEW SERIES



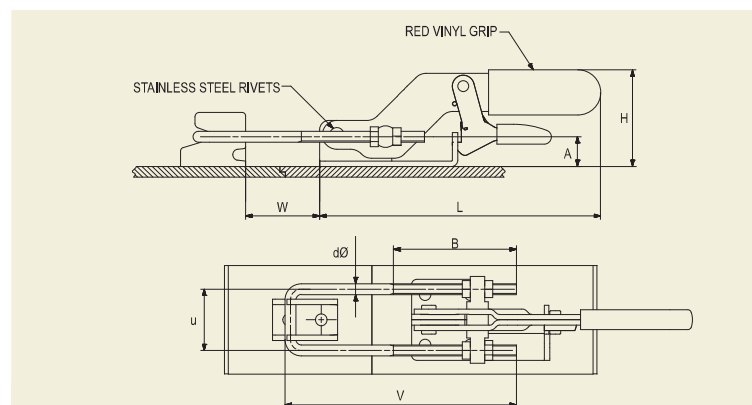
MOUNTING DIMENSIONS



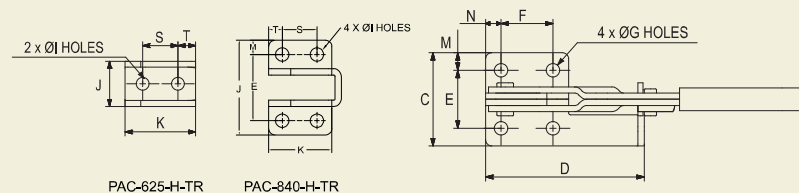
MODEL	A	dØ	U	V	B THREAD LENGTH	W		MOUNTING BASE OF CLAMP								MOUNTING BASE OF LATCH PLATE					H	L	HOLDING CAPACITY	N. W. Kgs.
						Min.	Max.	C	D	E	F	M	N	GØ	J	K	S	T	IØ					
PAC-416-H	15	4Ø	22	88	52	5	42	30	26	20	16	5	5	4.5Ø	15	30	11	9.5	4.5Ø	35	100	100 Kgs.	0.13	
PAC-625-H	17	6Ø	34	128	68	5	55	45	40	28	25	8.5	7.5	6.5Ø	23	36	18	9	6.5Ø	54	156	400 Kgs.	0.42	
PAC-840-H	26	8Ø	48	165	87	5	66	60	60	42	40	10	10	8.5Ø	60	40	22	8.5	8.5Ø	66	185	900 Kgs.	0.90	

ALSO AVAILABLE IN STAINLESS STEEL

PULL ACTION CLAMP LATCH TYPE - HORIZONTAL WITH TRIGGER LOCK



MOUNTING DIMENSIONS

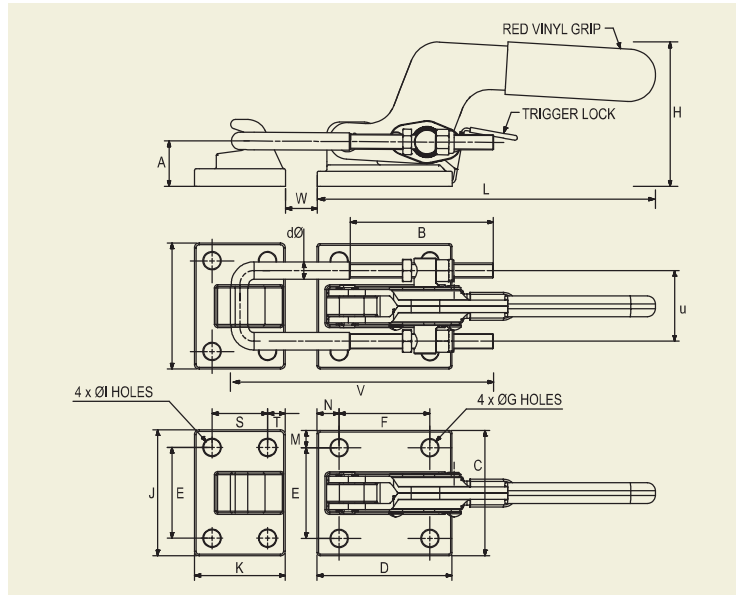


MODEL	A	dØ	U	V	B THREAD LENGTH	W		MOUNTING BASE OF CLAMP							MOUNTING BASE OF LATCH PLATE					H	L	HOLDING CAPICITY	N. W. Kgs.
						Min.	Max.	C	D	E	F	M	N	GØ	J	K	S	T	IØ				
PAC-625-H-TR	17	6Ø	34	128	68	5	55	45	76	28	25	8.5	7.5	6.5Ø	23	36	18	9	6.5Ø	54	156	400 Kgs.	0.43
PAC-840-H-TR	26	8Ø	48	165	87	5	66	60	94	42	40	10	10	8.5Ø	60	40	22	8.5	8.5Ø	66	185	900 Kqs.	0.92

ALSO AVAILABLE IN STAINLESS STEEL

HORIZONTAL LATCH CLAMP - HEAVY DUTY MODEL PAC-10-H & PAC-10-H-TR with TRIGGER LOCK

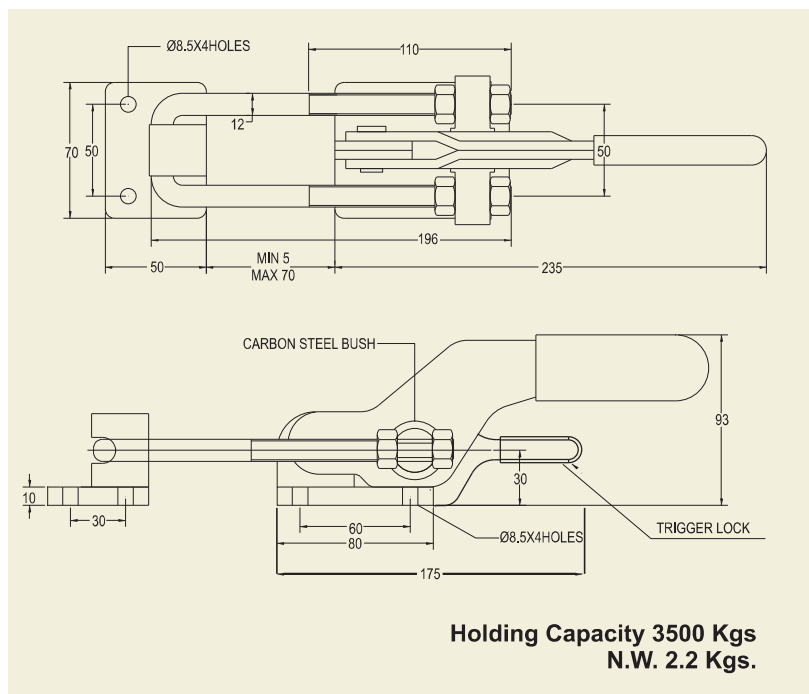
This model is for applications where heavy duty Latch type clamping is required. Clamp base and Latch plate are made of solid steel. Pulling pin is housed in carbon steel bush for extra rigidity. Also available TR model with an added advantage of trigger lock which enables the clamp to remain locked even in conditions of high vibration unless the trigger is pulled.



MODEL	A	dØ	U	V	B THREAD LENGTH	W Min. Max.	MOUNTING BASE OF CLAMP							MOUNTING BASE OF LATCH PLATE					H	L	HOLDING CAPACITY	N. W. Kgs.
							C	D	E	F	M	N	GØ	J	K	S	T	IØ				
PAC-10-H Without Trigger Lock	28.5	9.5Ø	44.5	158	66	5 25	79	85	57.2	57.2	10.9	13.9	10.5Ø	79	57	35	11	10.5Ø	91	213	3000 Kgs.	1.77
PAC-10-H-TR With Trigger Lock	28.5	9.5Ø	44.5	158	66	5 25	79	85	57.2	57.2	10.9	13.9	10.5Ø	79	57	35	11	10.5Ø	91	213	3000 Kgs.	1.82

HORIZONTAL LATCH CLAMP - HEAVY DUTY MODEL PAC-12-H & PAC-12-H-TR with TRIGGER LOCK

This model is for applications where heavy duty Latch type clamping is required. Clamp base and Latch plate are made of solid steel. Pulling pin is housed in carbon steel bush for extra rigidity. Also available TR model with an added advantage of trigger lock which enables the clamp to remain locked even in conditions of high vibration unless the trigger is pulled.





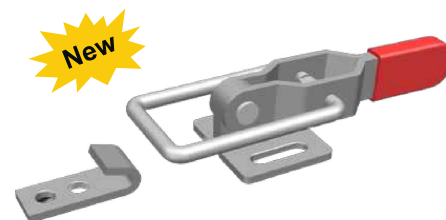
Above models are also available in Stainless Steel as model LC-50-S.S., LC-80-S.S and LC-100-S.S.

Technical drawing of the mounting base showing front, side, and detail views with dimensions:

- Front View:** Dimensions include $\varnothing D$ (hole diameter), A (total width), B (hole spacing), and $W1$ (flange width).
- Side View:** Dimensions include $\varnothing H$ (flange hole diameter), $L1$ (flange thickness), $L2$ (main body length), and $W2$ (main body width).
- Mounting Base Detail:** Dimensions include $\varnothing D$ (hole diameter), G (flange thickness), H (main body width), M (hole offset), and E (hole diameter).
- Bottom View:** Dimension c indicates the width of the base.
- Top View:** Dimension F indicates the distance from the front edge to the mounting hole.
- Labels:** "Hole to Insert Lock" points to the central hole in the side view. "MOUNTING BASE DETAIL" points to the detailed view of the mounting base.



Above models are also available in Stainless Steel as model LC-50-L-S.S. and LC-80-L-S.S.

[illegible]

Technical drawing of a 200 Kg Capacity Hand Lever. The drawing shows two views: a top view and a side view. The top view includes dimensions: 25, 55, 39-42, 160, 189, and a hole diameter of $\varnothing 6.5$. The side view includes dimensions: R5, 18, MIN. 45, MAX. 69, 40, 23, 36.5, and a hole diameter of $\varnothing 8$. Below the side view, the text reads: **Holding Capacity 200 Kgs**
N. W. - 0.41 Kgs



INTRODUCTION

Toggle Clamps with Pneumatic Operation have a Pneumatic cylinder mounted for operation only, the clamping force exerted comes from the toggle mechanism. Pneumatic operation has following advantages :

- ❑ High speed operation
- ❑ Any number of clamps can be operated simultaneously with the help of a switch.
- ❑ Clamps can be operated in any desired sequence automatically by controlling the cycle electrically.
- ❑ Clamps can be mounted at normally inaccessible position which are not in operator's reach for manual operation.
- ❑ Reed switch mounted pneumatic cylinders can be used if position sensing is required.

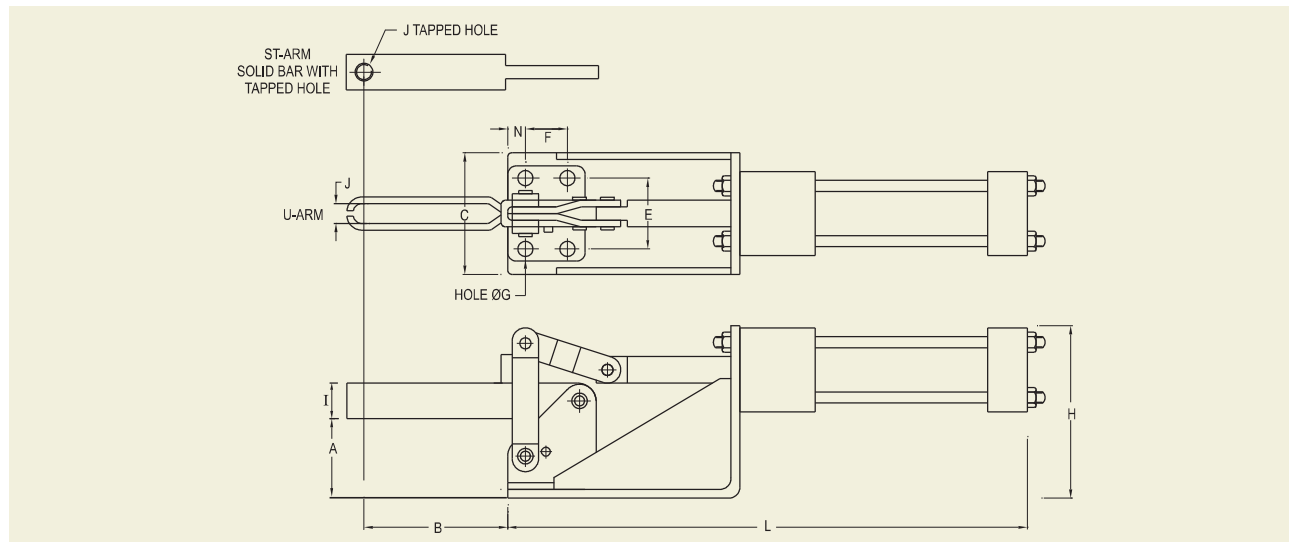
'TOOLFAST' Toggle Clamps with Pneumatic Operation are available in different sizes in both Hold Down Action and Push Action as given below.

HOLD DOWN TOGGLE CLAMP - PNEUMATIC OPERATION

'TOOLFAST' Hold Down Toggle Clamps with Pneumatic Operation are available in following sizes and following two types of arms :

U- Arm :- This is the most widely used type which permits to locate the clamping spindle anywhere along the length of the arm.

ST- Arm :- This is a solid bar with a tapped hole at the end. This arm can also be cut to any required length and hole can be made at any desired position or a separate clamping assembly can be welded at any desired point as per the application.



MODEL	ARM TYPE*	A	B MAX.	MOUNTING BASE					I	J SUITABLE FOR SPINDLE DIA	L	H	HOLDING CAPACITY	N. W. Kgs.
				C	E	F	N	ØG						
POHD-35-U	U-ARM	36	65	60	32	19	8	6.8Ø	16	M-8	276	81	200 Kgs.	1.52
POHD-35-ST	ST-ARM													1.60
POHD-50-U	U-ARM	49	95	75	44	28	8.5	8.5Ø	18	M-10	345	104	400 Kgs.	2.57
POHD-50-ST	ST-ARM													2.67
POHD-85-U	U-ARM	85	135	110	70	50	12.5	10.5Ø	32	M-16	499	167	700 Kgs.	7.40
POHD-85-ST	ST-ARM													7.83

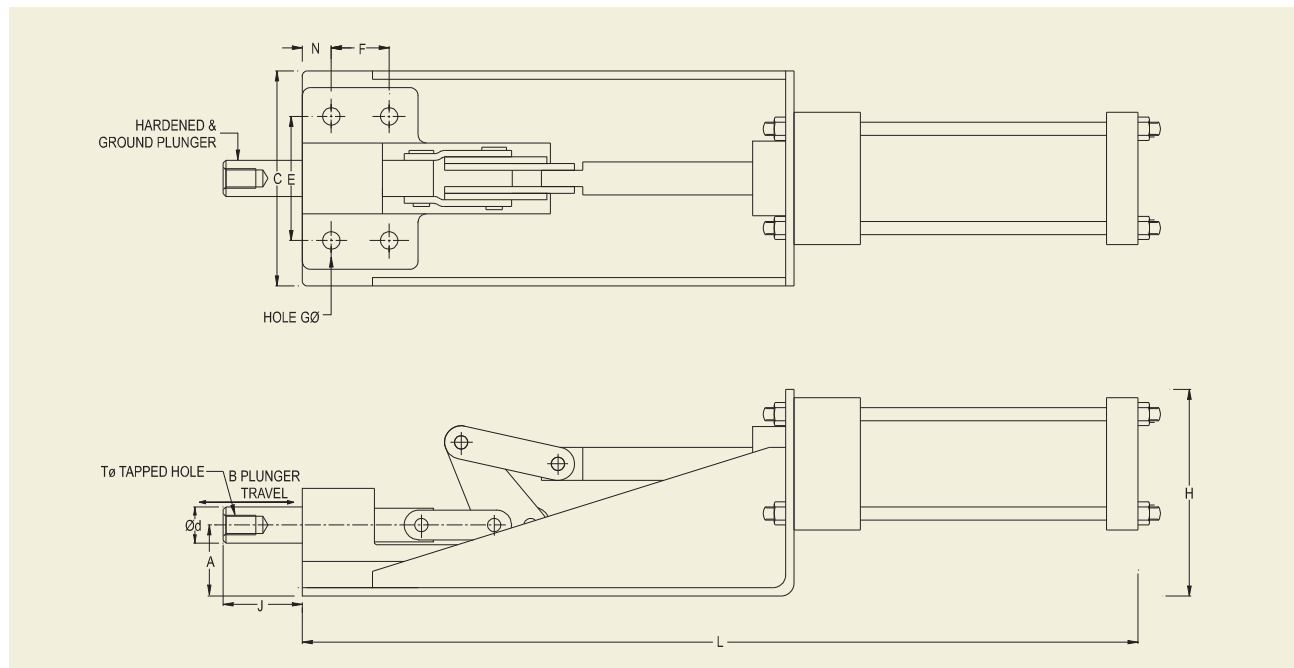
*Above models are also available in BR ARM.

Standard Accessories provided with Clamp : Standard Hex. Head Clamping Spindle assembly is provided as standard accessory with all above clamps. U-Arm models are provided with 2 nos. U-Flanged Washers also along with clamping spindle assembly.

Optional Accessories : User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

PUSH ACTION TOGGLE CLAMP - PNEUMATIC OPERATION

'TOOLFAST' Push Action Toggle Clamps with Pneumatic Operation are available in following sizes.



MODEL	PLUNGER Ø dØ	TØ	A	PLUNGER TRAVEL B	MOUNTING BASE					J MAX.	L	H	HOLDING CAPACITY	N. W. Kgs.
					C	E	F	N	ØG					
POPA-12	12Ø	M-8x1.25	30	20	80	45	23	11	6.8Ø	34	400	72	600 Kgs.	2.41
POPA-16	16Ø	M-10x1.5	34	25	95	60	28	14	8.5Ø	40	427	82	1000 Kgs.	3.15
POPA-22	22Ø	M-12x1.75	43	30	130	75	35	17.5	10.5Ø	48	549	121	1500 Kgs	8.30

Standard Accessories provided with Clamp: Standard Hex. Head Clamping Spindle assembly is provided as standard accessory.

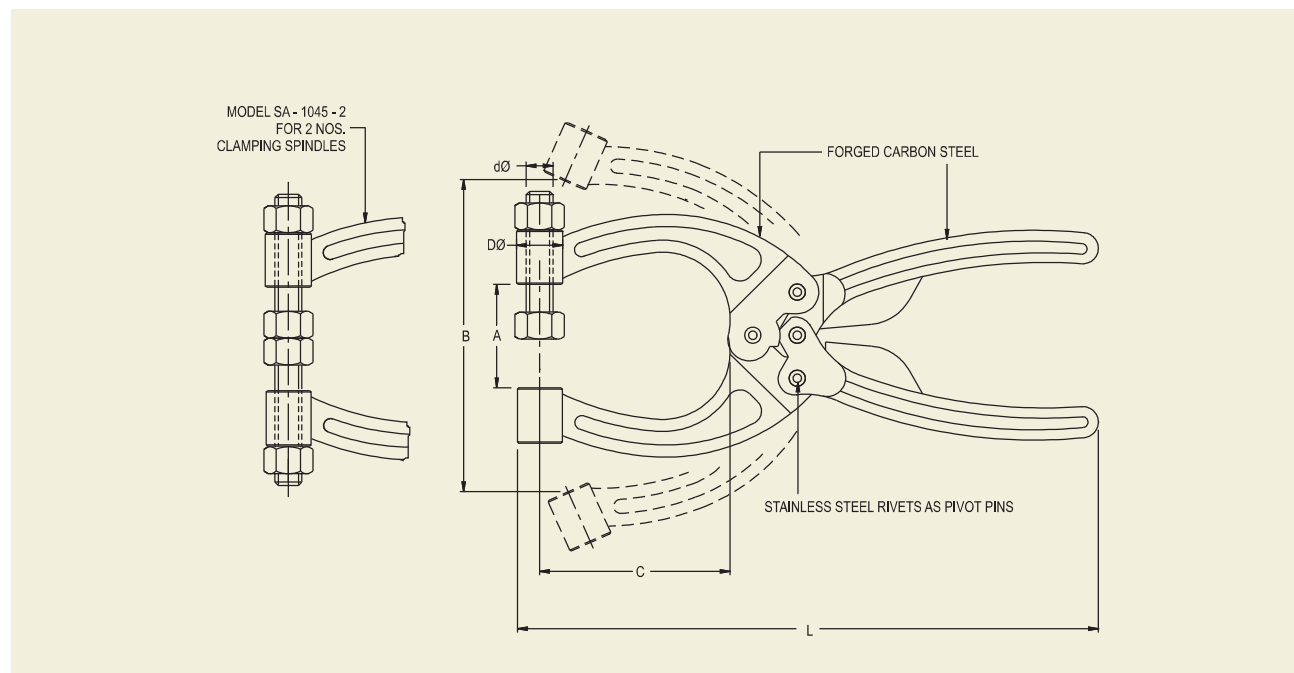
Optional Accessories: User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

2D / 3D CAD FILES AVAILABLE FOR ALL TOGGLE CLAMP MODELS ON REQUEST

SQUEEZE ACTION TOGGLE CLAMP

'TOOLFAST' Squeeze Action Toggle Clamps hold the work piece between two clamping jaws like a plier and lock in that position like a toggle clamp and stay locked until the handles are pulled apart. These clamps are precision machined carbon steel forgings which withstand the heat of welding temperature without distortion.

These are available in two different types, one allowing use of single clamping spindle and other allowing use of two clamping spindles.



MODEL	dØ CLAMPING SPINDLE	A	MAX. JAW OPENING B	C	DØ	L	HOLDING CAPACITY	N. W. Kgs.
SA-1045	M10 (1 No.)	45	85	70	19	220	400 Kgs.	0.70
SA-1045-2	M10 (2 Nos)	45	85	70	19	220	400 Kgs.	0.71

Standard Accessories provided with Clamp: Standard Hex. Head Clamping Spindle assembly is provided as standard accessory. 2nos. Spindle assemblies are provided with 2 spindle model.

Optional Accessories: User can select an optional clamping spindle assembly as per the application from the different types of clamping spindle assemblies shown on one of the following pages and order these separately.

CLAMPING SPINDLE ASSEMBLIES FOR TOGGLE CLAMPS

STANDARD ACCESSORIES

STANDARD HEX. HEAD SPINDLE ASSEMBLY : Suitable sizes of these spindle assemblies are provided as standard accessory with all toggle clamps.

U-FLANGED WASHERS : Set of U-Flanged Washers is provided as standard accessory with all U models of toggle clamps.



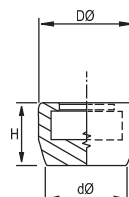
OPTIONAL ACCESSORIES

User can select an optional spindle accessories from following types and if required can order these separately.

RUBBER CAPS FOR STANDARD HEX. HEAD SPINDLE

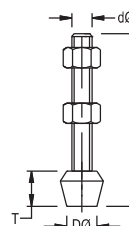
MODEL	DØ	dØ	H
RC-5	12	9	10
RC-6	15	12	10
RC-8	18	15	12
RC-10	23	19	15
RC-12	25	21	17
RC-16	32	27.5	21.5

Most convenient to convert the standard hex head spindle into rubber tip spindle by simply manually inserting the rubber cap onto the spindle hex.



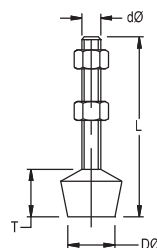
NYLON TIPPED SPINDLE ASSEMBLY

MODEL	THREAD SIZE dØ	L	T	DØ	N. W. Kgs.
NT-5-25	M-5	25	7	7Ø	0.01
NT-6-25	M-6	25	7	7Ø	0.01
NT-6-40	M-6	40	7	7Ø	0.01
NT-8-50	M-8	50	14	11Ø	0.03
NT-8-100	M-8	100	14	11Ø	0.04
NT-10-75	M-10	75	14	11Ø	0.06
NT-12-50	M-12	50	22	19Ø	0.07
NT-16-60	M-16	60	22	19Ø	0.17
NT-16-125	M-16	125	22	19Ø	0.23



NEOPRENE TIPPED SPINDLE ASSEMBLY

MODEL	THREAD SIZE dØ	L	T	DØ	N. W. Kgs.
NRT-5-45	M-5	45	12	12	0.02
NRT-6-50	M-6	50	15	15	0.02
NRT-8-60	M-8	60	20	20	0.04
NRT-10-90	M-10	90	22	22	0.08



SWIVAL FOOT SPINDLE ASSEMBLY

MODEL	THREAD SIZE dØ	L	T	DØ	N. W. Kgs.
SF-8-60	M-8	60	10	16	0.04
SF-10-80	M-10	80	13	20	0.08

