

BRAUER®

CLAMPING PRODUCTS

Including Hoist Rings and Lever Handles



www.brauer.co.uk



INTRODUCTION

Since 1926, Brauer has been providing industry with the finest quality products, expert technical support, on time deliveries and unparalleled customer service. Our brands are now recognised world-wide as products of the **highest quality**, and the breadth of our product portfolio provides our customers with tooling solutions for a wide variety of problems.

Brauer continues to be committed to bringing new innovative tooling products to the market place. This new clamping products catalog updates our long standing, and successful range of clamping products which have led the market for over 50 years.

Our team of highly talented engineers is backed by the latest computer aided design facilities including three dimensional feature based parametric solid modelling.

At Brauer, we continue to be motivated by working with our customers in providing innovative solutions for their particular tooling requirements.

To view the complete tooling portfolio manufactured by Brauer, please consult our web site at www.brauerclampsusa.com or www.brauer.co.uk.

If, after considering our standard range of products, you are unable to find a solution, then please consult our sales team who will be pleased to progress the design and manufacture of a **custom** designed item to meet your particular needs.

CLAMPING PRODUCTS



BRAUER®

DAWSON ROAD, MOUNT FARM, MILTON KEYNES ENGLAND MK1 1JP

TELEPHONE: 00 44 (0)1908 374022 FAX: 00 44 (0)1908 641628

E-MAIL: sales@brauer.co.uk

www.brauer.co.uk

CAD FORMATS FOR BRAUER CLAMPS

The Brauer range of clamping products are available for design engineers in a number of CAD formats direct from:

www.brauer.co.uk



3D:

- 3D Studio Max
- All Plan
- AutoCad (dwg)
- ACIS (.sat)
- Beckercad
- Caddy
- Catia v4
- Catia v5
- CIP
- DXF
- 3D Studio Max
- All Plan
- AutoCad (dwg)
- ACIS (.sat)
- Beckercad
- Caddy
- Catia v4
- Catia v5
- CIP
- DXF
- DWG
- EMS
- Google Sketchup
- Iges
- Inventor
- JT
- MDT (dwg)
- Megacadsat
- Metafile
- NUPAS
- One Space Modelling
- PARACAD
- Parasoid
- PRO
- Solidedge
- Solidworks
- SAT
- STEP
- STEPAP
- STL
- Think 3
- Tribon
- U3D
- Unigraphics
- VRML
- VX
- XGL
- & in many more packages



Web Home Page

SPECIAL OR CUSTOM MADE PRODUCTS

If none of the standard products shown in this catalogue meets your needs, our engineers are available to modify a standard clamp or to work with you in developing a design to suit your needs.

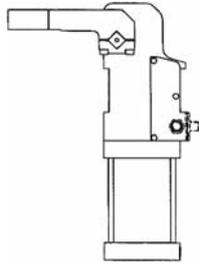
COMMITTED TO: • QUALITY • INNOVATION • SERVICE

BRAUER CLAMPING PRODUCTS ARE MANUFACTURED IN MILTON KEYNES, ENGLAND

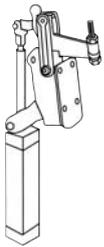
© Brauer • The mark 'BRAUER' is a registered trade mark of Brauer.

The 'Orange Grip' is a registered trade mark of Brauer. No part of this publication may be reproduced in any form (including photocopying or storing in any medium by electronic means) without the written permission of Brauer. Brauer reserves the right to change the design or specification of the products shown in this catalogue without prior notification.

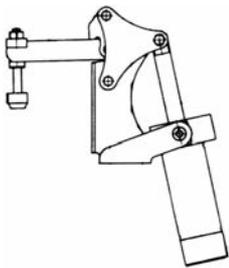
INDEX	Page
TECHNICAL INFORMATION	2-3
NUMERICAL INDEX	4
	182-183



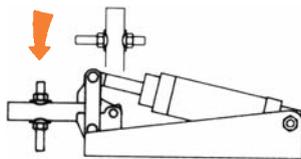
PNEUMATIC POWER CLAMPS	5
BPC 25	6
BPC 32	7



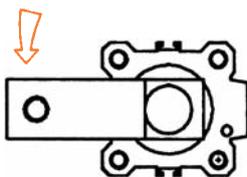
HEAVY DUTY PNEUMATIC POWER CLAMPS	8
VA300BX	9
VA700CX	9
VA1200CX	10
VA2400CX	10



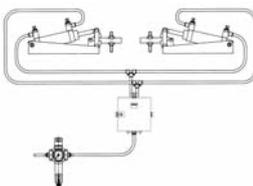
PNEUMATIC VERTICAL SLIM-LINE TOGGLE CLAMPS	11
V100VX	12
V200VX	12
V300VX	12



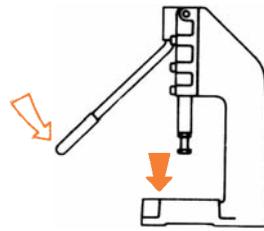
PNEUMATIC VERTICAL & PUSH-PULL CLAMPS	13		
V75X	14	V1750X	16
V150X	14	V2000X	17
V250X	15	P600X	17
V450X	15	P1200X	18
V750X	16	P2500X	18



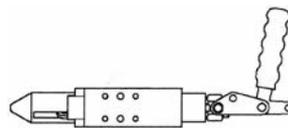
PNEUMATIC SWING CLAMPS	19
PNS25	20
PNS32	20
PNS40	20
PNS50	21
PNS63	21



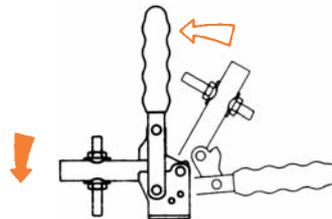
PNEUMATIC ACCESSORIES	22
Stroke Sensing Kit	23



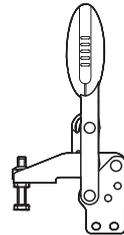
TOGGLE PRESSES – MANUAL, PNEUMATIC & RACK & PINION	24		
P600PR	25	RPP2	28
P1200R	25	P600XPR	29
P2500PR	26	P1200XPR	29
TPR1	26	P2500XPR	30
TPR2	27	PNDP1	30
TPR3	27	PNPR1	31
RPP1	28		



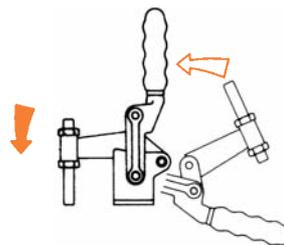
PIN & BODY LOCATION CLAMPS	32
PC25.0	33
PC35.0	33
PC40.0	33
BC25.0	33
BC40.0	33



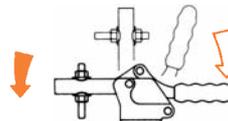
VERTICAL CLAMPS	34		
V70	35	V150/2BSS	41
V70/2BTSS	35	V200	42
V30/2B	35	V250	44
V75	36	V250/1BSS	45
V75/1BSS	36	V250/2BSS	46
V75/2B	36	V300	47
V75/2BSS	37	V350	50
V100	37	V450	52
V150	39	V550	54
V150/1BSS	40		



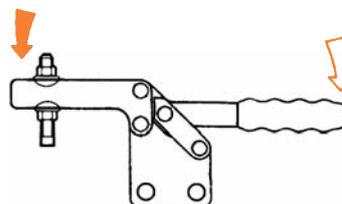
BLACK OXIDIZED NITRO CARBURIZED VERTICAL CLAMPS	57		
V90/2BK	58	V90/1BK	59
V150/2BK	58	V150/1BK	59
V250/2BK	58	V250/1BK	59
V350/2BK	58	V350/1BK	59
V450/2BK	58	V450/1BK	59



HEAVY-DUTY VERTICAL CLAMPS	60
VA300	61
VA700	64
VA1200	68
VA2400	72



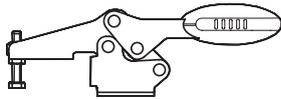
HORIZONTAL CLAMPS	76		
H50	77	H150/1BSS	81
H50/2BSS	77	H150/2BSS	82
H75	79	H250	83
H75/1BSS	79	H350	85
H75/2BSS	80	H450	86
H150	81	H700	87



ADDITIONAL HORIZONTAL CLAMPING PRODUCTS	88
H100	89
H200	91
H300	92

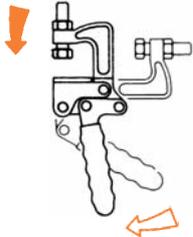
Denotes stainless steel versions

BLACK OXIDIZED NITRO CARBURIZED HORIZONTAL CLAMPS 93



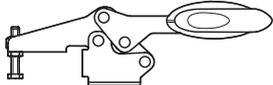
H50/2BK 94	H75/1BK 95
H80/2BK 94	H150/1BK 95
H150/2BK 94	H250/1BK 95
H250/2BK 94	H350/1BK 95
H350/2BK 94	H450/1BK 95
H450/2BK 94	

PULL-BACK CLAMP 96



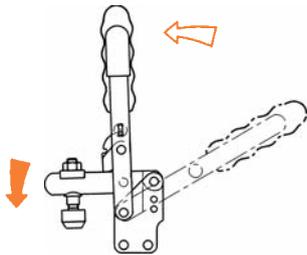
TC79 97
TC345 97

POSITIVE LOCKING CLAMPS SAFETY INTERLOCK+ 98



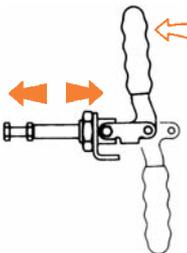
V150/2BKL 99	H150/2BKL 101
V250/2BKL 99	H250/2BKL 101
V350/2BKL 99	H350/2BKL 101
V450/2BKL 99	H450/2BKL 101
V150/1BKL 100	H150/1BKL 102
V250/1BKL 100	H250/1BKL 102
V350/1BKL 100	H350/1BKL 102
V450/1BKL 100	H450/1BKL 102

POSITIVE LOCKING CLAMPS 103



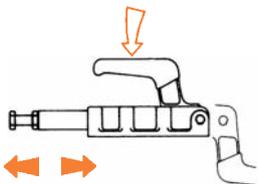
V250 104
V350 104
H350 107

PUSH-PULL CLAMPS 108



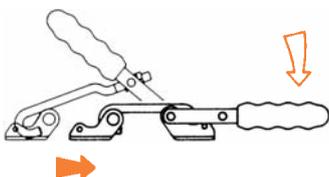
P50 109	P400 112	P1150 Precision114
P50SS 109	P400SS 112	P2250 Precision114
P6015 109	P650 113	P1150L Precision115
P605 110	P350 Slimline 113	P2250L Precision115
P250 110	P550 Slimline 113	P750 Precision115
P450 110	P100SS 111	Slimline 114
P100 111	P200 111	SP700 Precision114
P100SS 111	P200SS 112	Base Accessories 115
P200 111		
P200SS 112		

HEAVY-DUTY & LONG-HANDLED PUSH-PULL CLAMPS 116



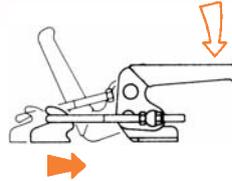
P600 117	P600L 119
P1200 117	P1200L 119
P2500 118	P2500L 120
P5000 118	P5000L 120

HOOK CLAMPS 121



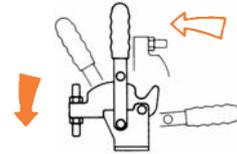
LH200 122
LH200SS 122
LH400 122
LH400SS 123
LH700 123
LH700SS 123

LATCH CLAMPS – HORIZONTAL & VERTICAL 124



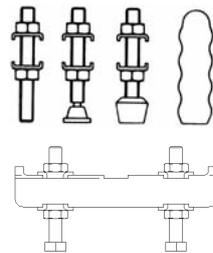
LU200H 125	LU2000H 127	LU200V 129
LU200HSS 125	LU4000H 127	LU200VSS 129
LU400H 125	LU323 128	LU400V 130
LU400HSS 126	LU331 128	LU400VSS 130
LU700H 126	LU341 128	LU700V 130
LU700HSS 126	LU375 129	LU700VSS 131

VERTICAL CAM CLAMPS 132



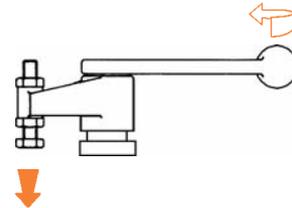
CV75 133
CV250 133
CV350 133

TOGGLE CLAMPING ACCESSORIES 134



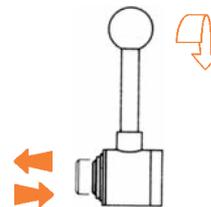
T Bar Assemblies 135	Neoprene Setscrew Covers 136
Front Mounting Brackets 135	Neoprene Pads (Spindle) 136
Mounting Brackets 135	Plastic Covers 137
Setscrews 135	Flanged Washers 137
Plain Spindles 136	Spindle Retainers 137
Swivel Foot Spindles 136	Plastic Grips 137
Neoprene Tipped Spindles 136	

HEAVY-DUTY CAM CLAMPS 138



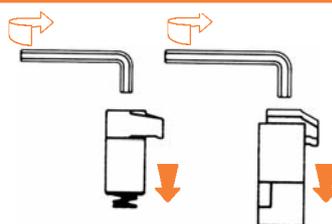
CR4000 140	CP1500 143
CR5000 140	CP2000 143
CS300 141	CP3000 143
CS800 141	CP1500L 144
CS1200 142	CP2000L 144
Cam Swing Blocks 142	CP3000L 144

CAM PUSH/CAM PULL CLAMPS 145



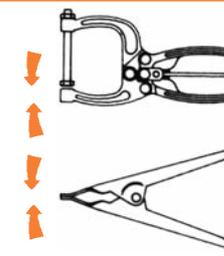
CP1005 146
CP1006 146
CP1007 146
CP1008 146

SWING CLAMPS & SWING CLAMP ASSEMBLIES 147



1016-08 148	1015-08 150
1016-10 148	1015-10 150
1016-12 149	1015-12 150
1016-16 149	1015-16 150

TOGGLE PLIERS & CLIP CLAMPS 151



P0 152	P4 154
P1 152	P4B 154
P1A 152	P1C/P2C 154
P1B 152	P3C/P4C 154
P2 153	CC510 155
P3 153	CC610 155
P3A 153	CC701 155
P3B 153	

CLAMP LEVERS 156



Soft Touch Levers 157	Non-adjustable Clamp Levers 168
Die Cast Zinc Levers 158	Tension Levers 169
Stainless Steel Levers 160	Flat Tension Levers 173
Plastic Handle Levers 162	Steel Clamp Levers 175
Coloured Clamp Levers 166	
	HOIST RINGS 177
	Hoist Rings 177
	Swivel Eyebolt 181

Denotes stainless steel versions

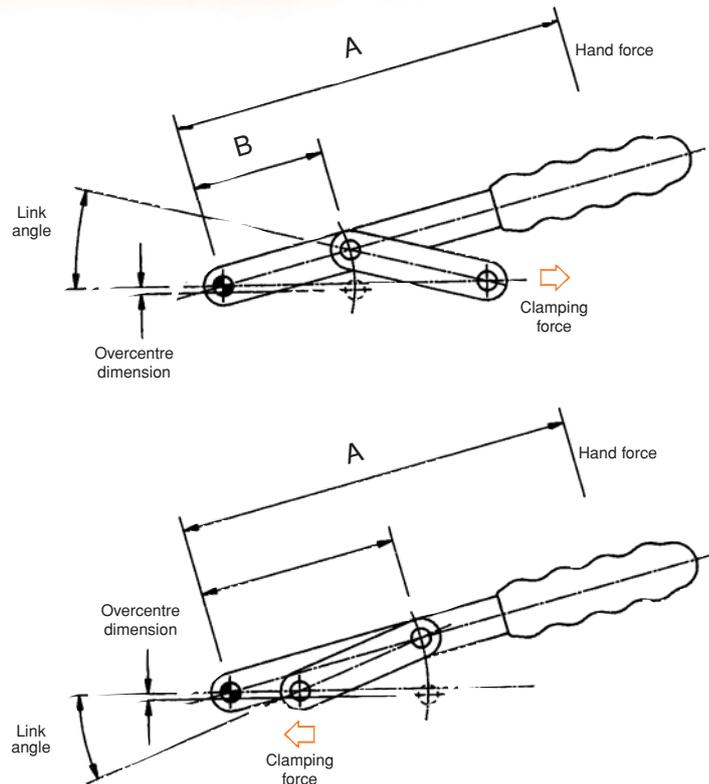
The toggle mechanism in a clamp has three functions:

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

The multiplication of input (hand) force to output (clamping) force is created firstly by the leverage of handle length (A) to link length (B), and secondly by the three pivots of the toggle being pushed into alignment.

For example, a clamp with a handle to link leverage of 3 can multiply its hand force to clamping force as follows:

link angle	toggle multiplier	handle leverage multiplier	overall force multiplier
2.0°	14	3	42
1.0°	28	3	84
0.5°	57	3	171
0.25°	114	3	342
0.12°	342	3	1026
0.0°	infinity	-	limited by the elasticity of the clamp



The model numbering system describes the clamp type and strength as shown in the example below:

V 350 / 2 B

CLAMP SERIES	V = vertical H = horizontal P = straight line (push-pull) action
HOLDING FORCE	(daN)
BASE TYPE	/1 = straight /2 = flanged /3 = front mounting
ARM TYPE	A = straight B = adjustable spindle position C = fixed spindle position

Note: an 'X' within the model number denotes a pneumatic clamp

Clamping Force — is that which will result from the quoted Hand Force. Clamps with a fixed clamping position have a single Clamping Force quoted. Those where the threaded spindle may be positioned at any point along an arm (arm type B) and those with solid arms to be cut and welded as required (arm type A) have clamping forces quoted at the inner and outer ends of the arm.

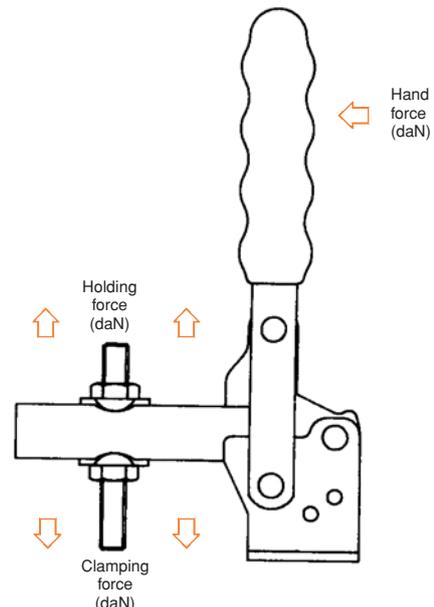
Holding Force — is that which the clamp can withstand after being closed without damage to the clamp and without the toggle unlocking due to distortion of the clamp.

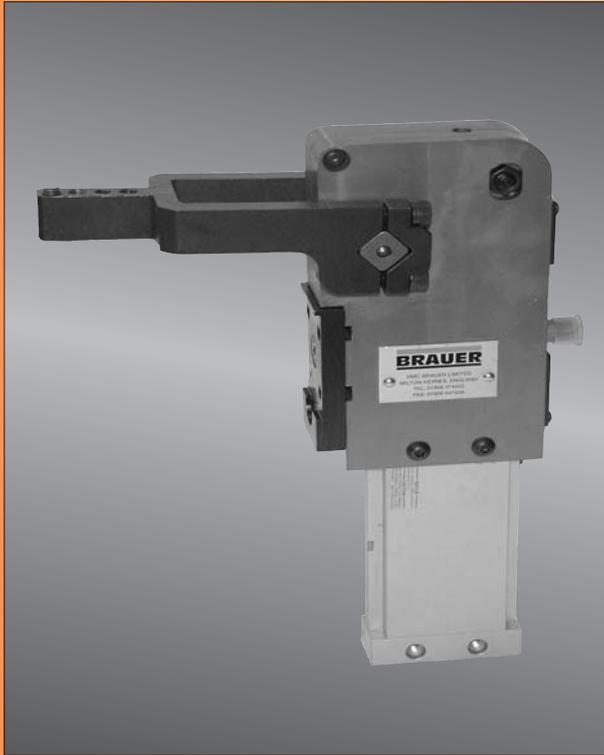
The overcentre dimension is carefully chosen in relation to the elasticity of the clamp to maximise clamping force while ensuring that the clamp locks closed even under vibration or intermittent loading.

Hand Force — has been chosen as being that which might be applied in frequent operation.

Forces are given in decaNewtons (daN)

- 1 daN = approximately 1kg.
- = approximately 2.2 lb.



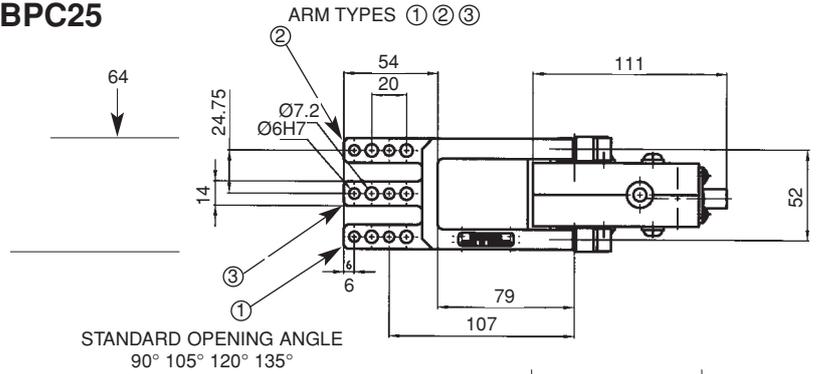


PNEUMATIC COMPACT POWER CLAMPS

- New compact, slim body design, with oval cylinder
- Fully enclosed patented mechanism
- Steel or aluminium body construction
- Self positioning clamping arm featuring weld immune integrated sensing
- 3D CAD formats including dwg, IGES, ACIS and Catia
- Cycle tested through 5 million cycles

PNEUMATIC POWER CLAMPS - UK AND INTERNATIONAL PATENTS PENDING

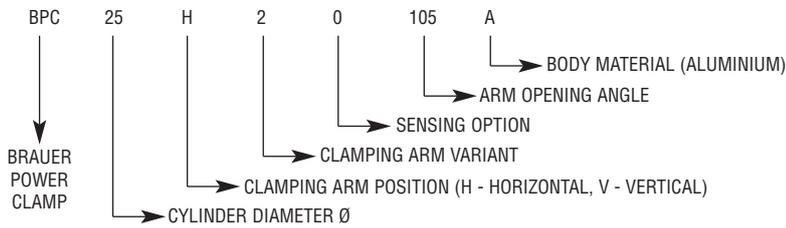
MODEL BPC25



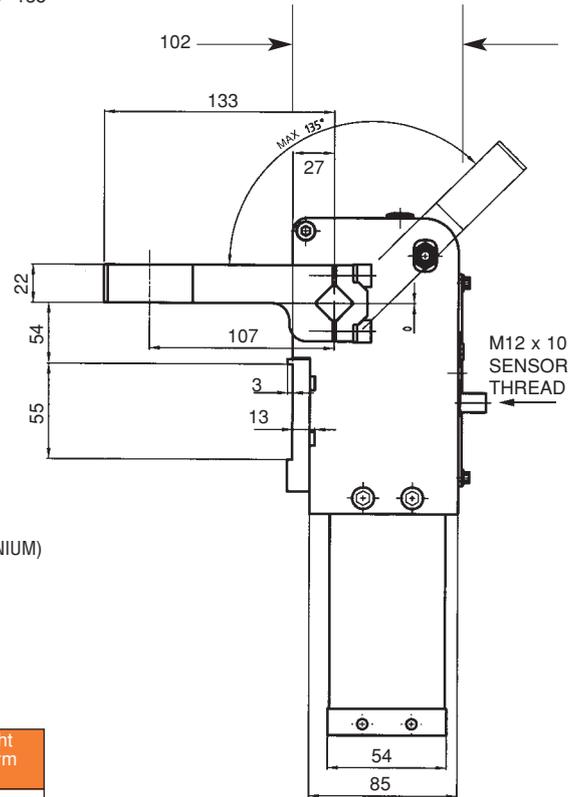
Features

- Mounting face hole patterns can be modified to suit customer requirements.
- Enclosed body.
- No reduction of clamping torque as clamp locks.
- Flat, 'slim line' construction.
- Variety of arm types.
- Opening angles up to 135°.
- Long service life.
- Air cylinders max. 8 bar with oil free dry running design.
- Reed switches on cylinder (magnetic piston) (R).
- Sensing Options:
 ... O = without sensing
 ... I = supplied with inductive sensing 10-30V weld immune and isolated

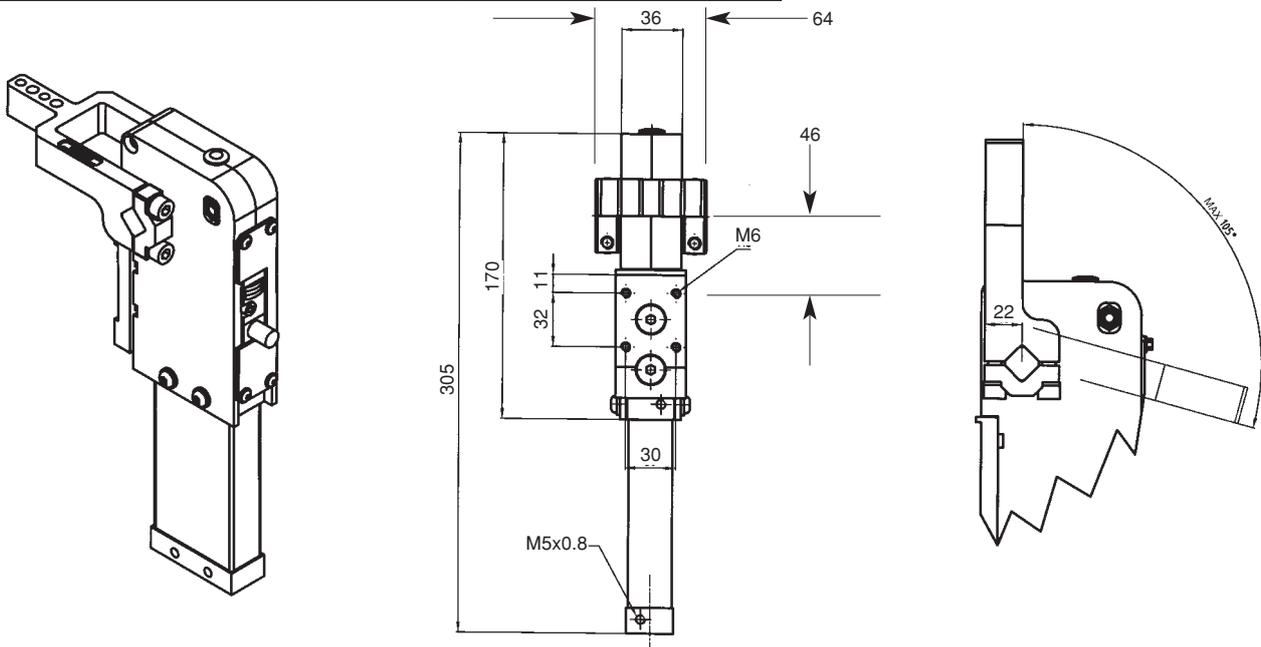
ORDER EXAMPLE



Type	Holding moment Max (Nm)	Clamping moment at 5 bar	Piston Ø	Cylinder Port	Weight inc. arm [kg]
BPC 25	200 Nm	65 Nm	25	M5	2.4

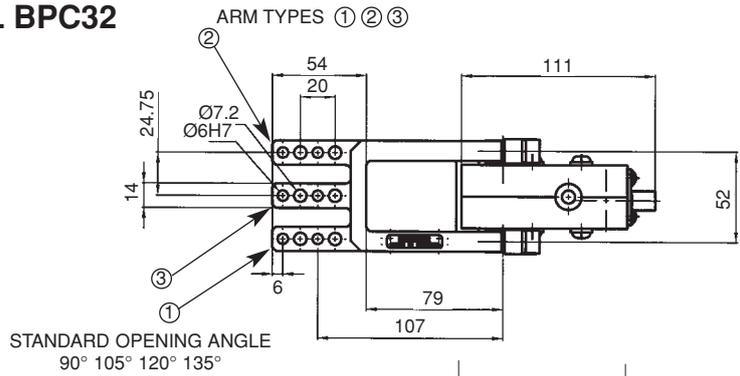


CLAMPING PRODUCTS



PNEUMATIC POWER CLAMPS - UK AND INTERNATIONAL PATENTS PENDING

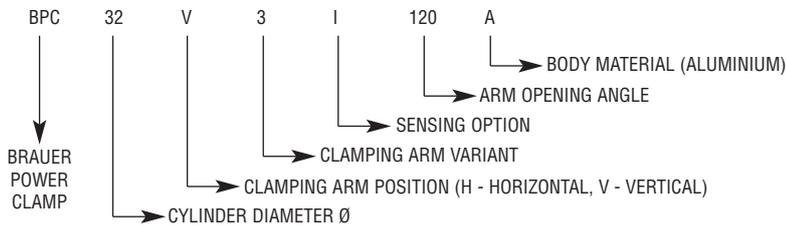
MODEL BPC32



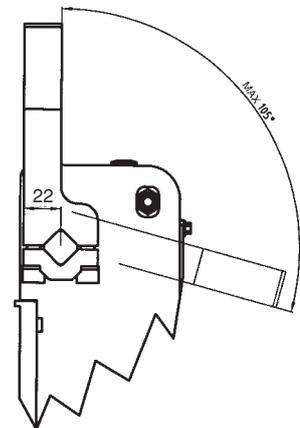
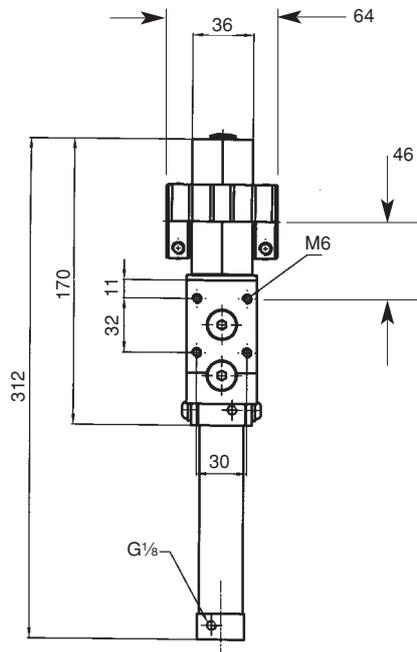
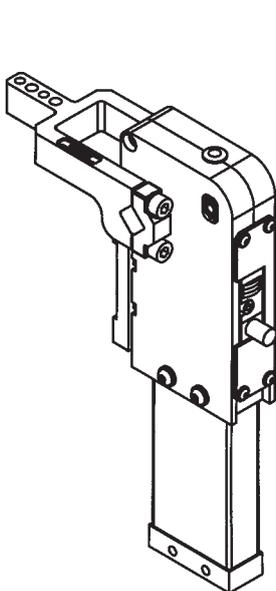
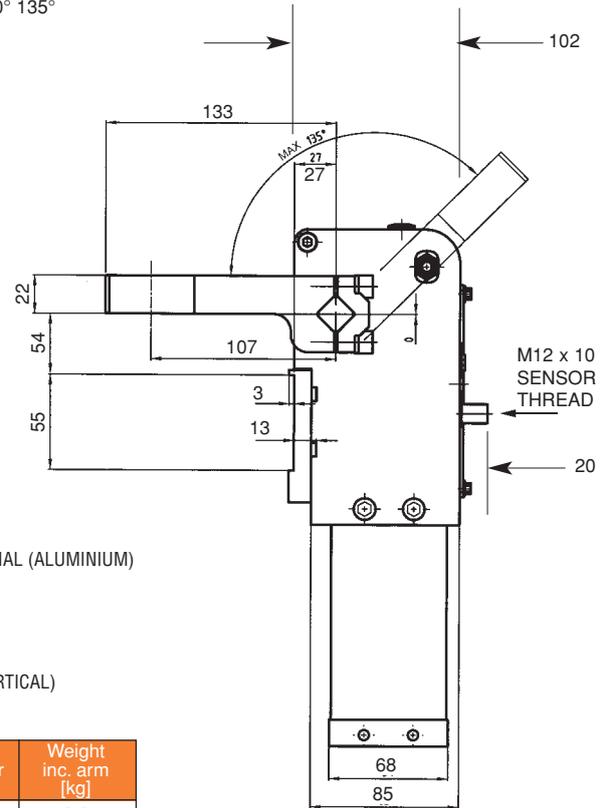
Features

- Mounting face hole patterns can be modified to suit customer requirements.
- Enclosed body.
- No reduction of clamping torque as clamp locks.
- Flat, 'slim line' construction.
- Variety of arm types.
- Opening angles up to 135°.
- Long service life.
- Air cylinders max. 8 bar with oil free dry running design.
- Reed switches on cylinder (magnetic piston) (R).
- Sensing Options:
 ... O = without sensing
 ... I = supplied with inductive sensing 10-30V weld immune and isolated

ORDER EXAMPLE



Type	Holding moment Max (Nm)	Clamping moment at 5 bar	Piston Ø	Cylinder Port	Weight inc. arm [kg]
BPC 32	400 Nm	140 Nm	32	G1/8	2.6





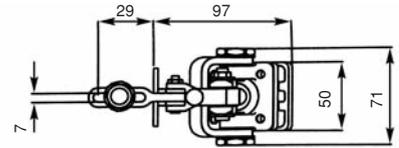
VA HEAVY DUTY PNEUMATIC POWER CLAMPS

- Pneumatic powered version of Brauer's acclaimed VA heavy duty range
- Arm types shown are standard
- All leading pneumatic cylinders including SMC, ASCO Joucoumatic, etc can be fitted

VA HEAVY-DUTY PNEUMATIC POWER CLAMPS

PNEUMATIC POWER CLAMP MODEL VA 300BX

Specifications	VA300 BX
WEIGHTS (Kg)	2.20 Kg
CLAMPING FORCE (daN)	↓ 42 ↓ 54
HOLDING FORCE (daN)	↑ 250 ↑ 350



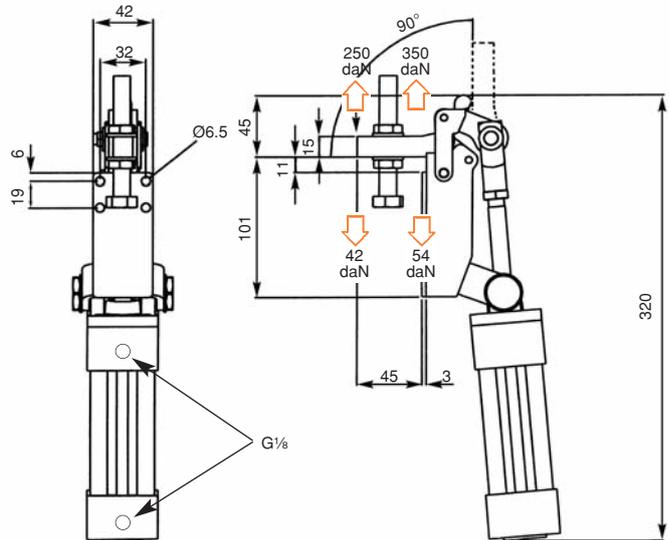
Arm:
The spindle is adjustable along the arm.

Base:
Front mounting.

Nominal holding force:
250-350 daN.

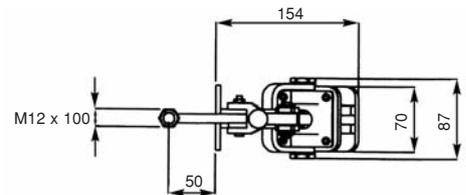
Weight:
2.20 Kg.

Stroke sensing:
SK/10.



PNEUMATIC POWER CLAMP MODEL VA 700CX

Specifications	VA700 CX
WEIGHTS (Kg)	4.50 Kg
CLAMPING FORCE (daN)	↓ 170
HOLDING FORCE (daN)	↑ 600



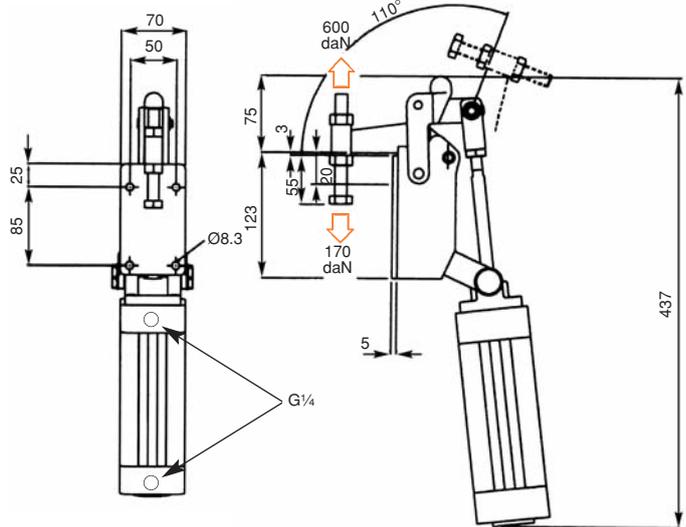
Arm:
The spindle is in a fixed position.

Base:
Front mounting.

Nominal holding force:
700 daN.

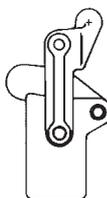
Weight:
4.50 Kg.

Stroke sensing:
SK/10.

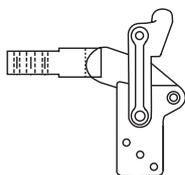


ALTERNATIVE ARM TYPES CAN BE SUPPLIED

CYLINDERS WITH SCRAPER SEALS ARE AVAILABLE ON REQUEST



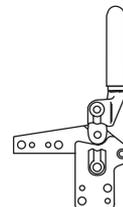
SPECIAL VA2400T



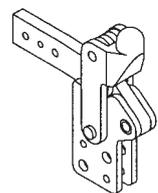
SPECIAL VA1200



SPECIAL VA2400/1A



SPECIAL VA700/1A



SPECIAL VA700

VA HEAVY-DUTY PNEUMATIC POWER CLAMPS

PNEUMATIC POWER CLAMP MODEL VA 1200CX

Specifications	VA1200 CX
WEIGHTS (Kg)	5.75 Kg
CLAMPING FORCE (daN)	170
HOLDING FORCE (daN)	800



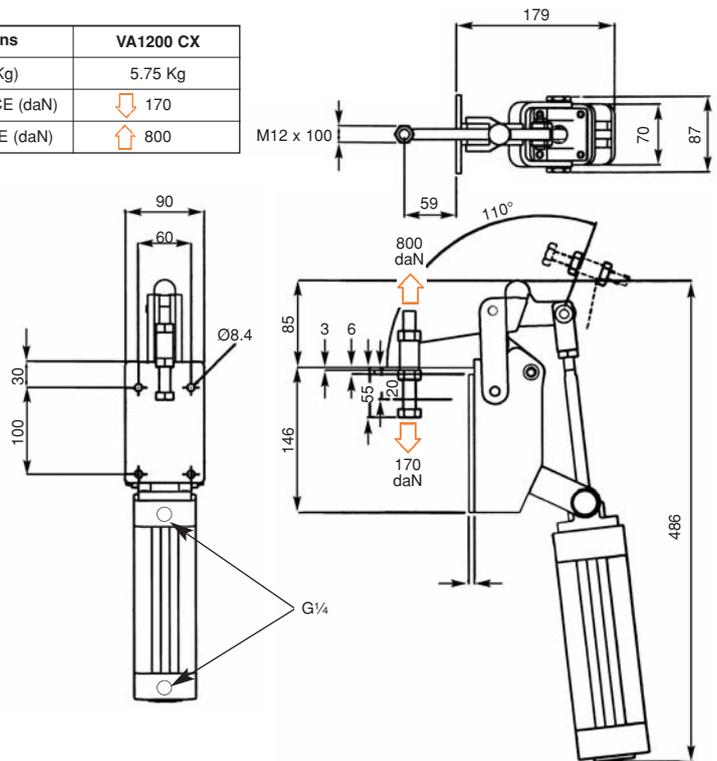
Arm:
The spindle is in a fixed position.

Base:
Front mounting.

Nominal holding force:
1200 daN.

Weight:
5.75 Kg.

Stroke sensing:
SK/10.



PNEUMATIC POWER CLAMP MODEL VA 2400CX

Specifications	VA2400 CX
WEIGHTS (Kg)	8.65 Kg
CLAMPING FORCE (daN)	185
HOLDING FORCE (daN)	1500



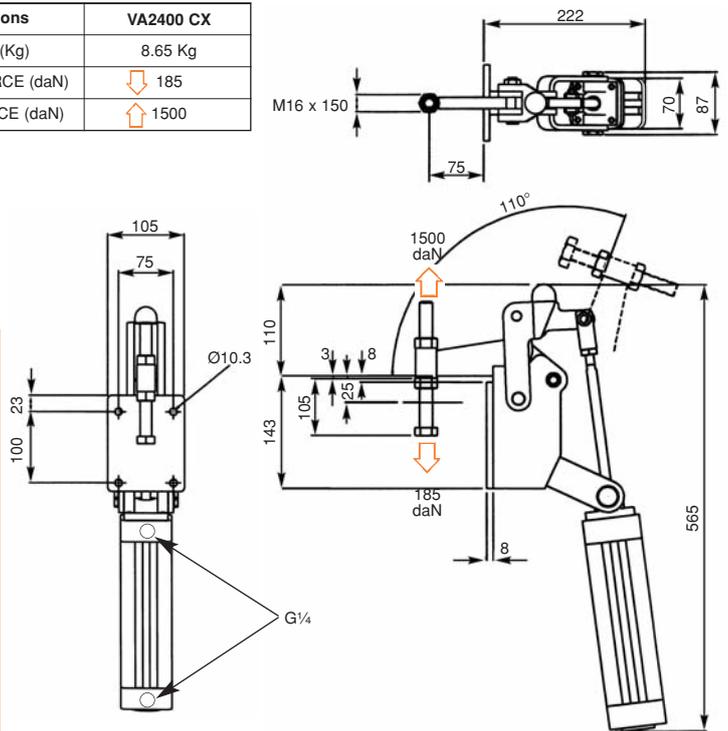
Arm:
The spindle is in a fixed position.

Base:
Front mounting.

Nominal holding force:
2400 daN.

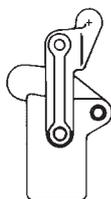
Weight:
8.65 Kg.

Stroke sensing:
SK/10.

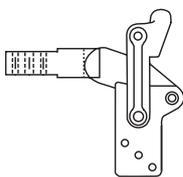


CLAMPING PRODUCTS

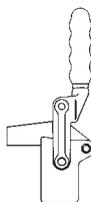
ALTERNATIVE ARM TYPES CAN BE SUPPLIED



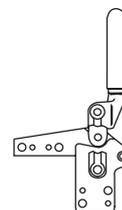
SPECIAL VA2400T



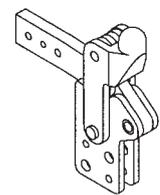
SPECIAL VA1200



SPECIAL VA2400/1A



SPECIAL VA700/1A



SPECIAL VA700



PNEUMATIC VERTICAL SLIM-LINE TOGGLE CLAMPS

- Space saving design
- Can be mounted vertically or horizontally
- Fitted with double-acting Norgren or Festo pneumatic cylinders
- Replaceable cylinders
- Magnetic piston for sensor-position monitoring
- Adjustable speed
- Clamp zinc-plated and passivated
- Stainless steel rivets running in case-hardened bushes
- Bearings pre-greased
- Complete with heat-treated, zinc-plated pressure screws

PNEUMATIC SLIM LINE TOGGLE CLAMP

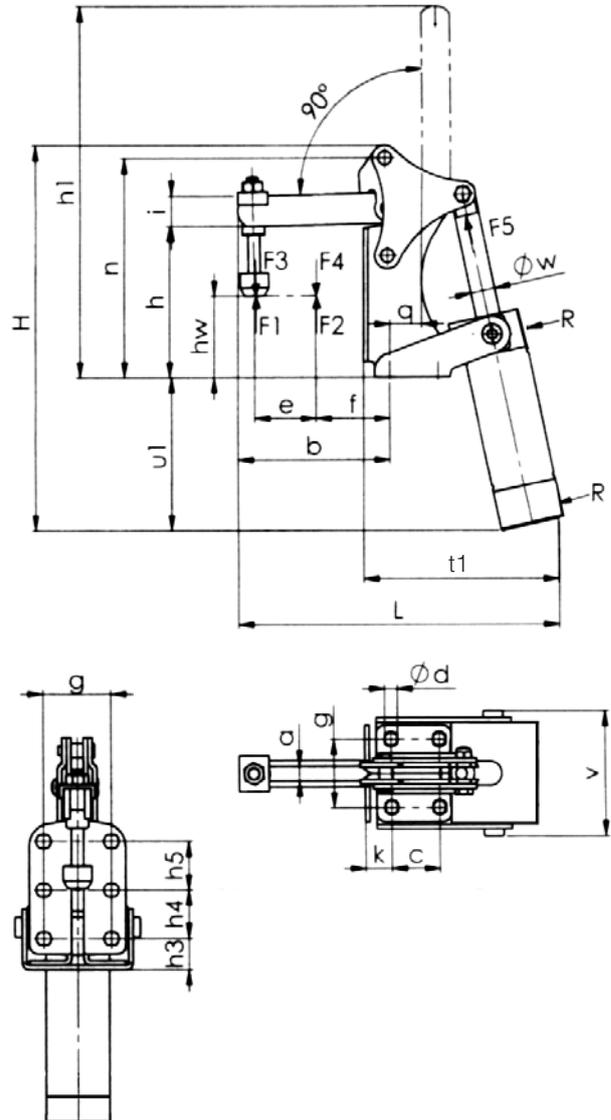


Arm:
The spindle is adjustable along the arm.

Base:
Flange mounting and front flange mounting.

Operating Pressure range:
2-6 bar (30-88 psig)

Supplied complete with:
Set screw, sliders, nuts & neoprene cover.

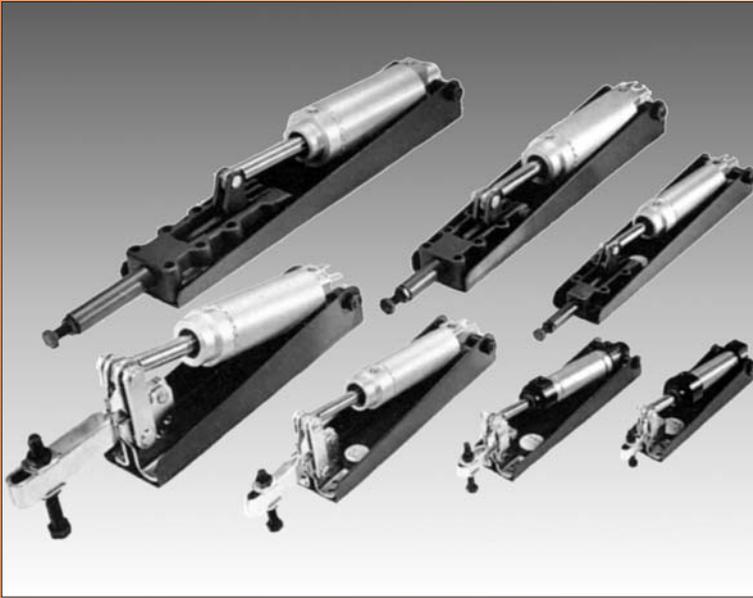


STROKE SENSING SWITCH		
PART NO.	CYLINDER STROKE	CYLINDER PISTON DIA.
SK/11 Ø25	42	25
SK/11 Ø32	52	32
SK/11 Ø40	62	40

MODEL	F1(kN)	F2(kN)	F3(kN)	F4(kN)	F5(kN)	Vn*	HEIGHT	WIDTH	SCREW	WGT(g)	a	b
V100VX	1.0	1.2	0.7	1.0	0.30	0.26	170	130	M6x35	800	6	40
V200VX	1.4	2.5	0.6	1.1	0.50	0.35	205	160	M8x45	1100	8	65
V300VX	2.0	3.0	1.5	2.2	0.75	0.80	260	220	M8x65	1600	10	85

MODEL	c	dia. d	e	f	g	h	h1	h3	h4	h5	hw	i	k	n	q	t1	u1	v	dia.w
V100VX	12.5	5.5	27	24	27	65	145	16	12.5	12.5	37-46	12	16	94	8	90	70	62	10
V200VX	16	6.5	42	30	25.4	72	185	18	16	-	38-50	18	16	108	13	105	90	70	12
V300VX	32	8.5	52	40	45	100	240	22	32	32	50-79	20	18	144	20	135	105	85	16

MODEL	H	L	R
V100VX	215	90	M5
V200VX	275	105	G½
V300VX	319	133	G½



PNEUMATIC VERTICAL AND PUSH-PULL CLAMPS

- **Features and Specifications:**

Vertical models V75X, V150X, V250X and V450X are of zinc plated pressed steel construction and have compact cylinders without tie-rods. The heavier duty models V750X, V1750X and V2000X are of fabricated construction with tie-roded cylinders.

The main components of push-pull models P600X, P1200X and P2500X are machined castings for precision of operation and for durability. The plungers are of steel, their precision ground diameter running in a close-toleranced hole in the s.g. iron base casting.

- **Installation:**

While the cylinders of models V75X, V150X, V250X, V450X, P600X, P1200X and P2500X can be operated with dry air, air lubrication will extend cylinder life on these models and is a requirement for models V750X, V1750X and V2000X.

The air pressure operating range of pneumatic clamps is 30-90 psi.

PNEUMATIC VERTICAL AND PUSH-PULL CLAMPS

PNEUMATIC VERTICAL CLAMPS

MODEL V75X



Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
75 daN

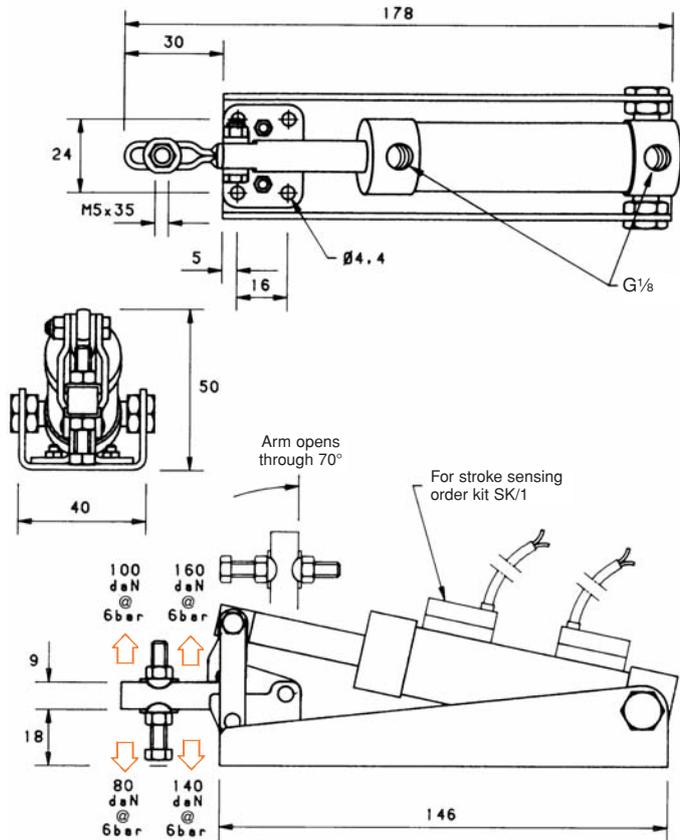
Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
40.

Swept volume per cycle:
0.02 L (1.2 cu. in.)

Weight:
0.40 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
FW05/10 Flanged washers.
For stroke sensing order SK/1 Sensing Kit.
See "Accessories" for other items.



PNEUMATIC VERTICAL CLAMPS

MODEL V150X



Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
150 daN

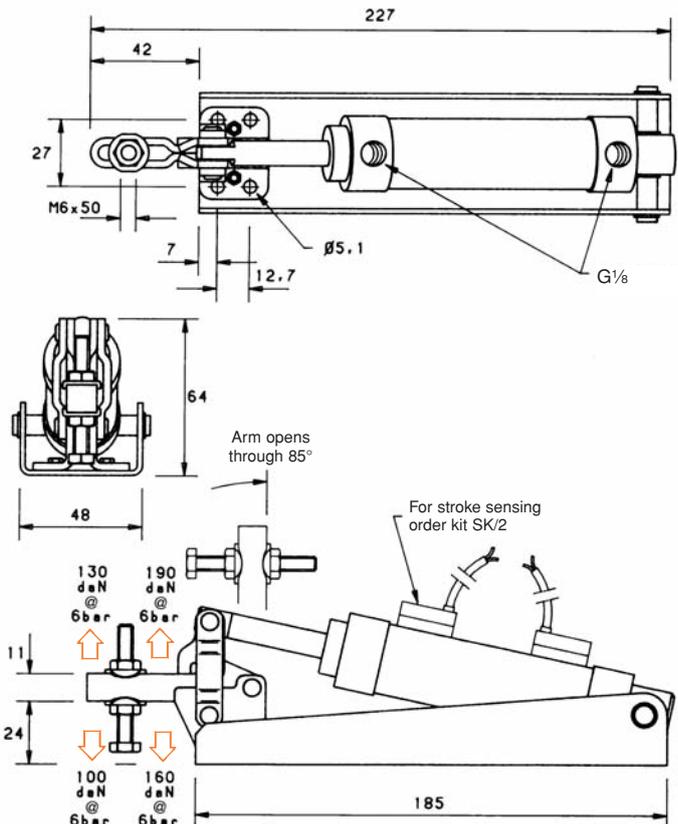
Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
60.

Swept volume per cycle:
0.04 L³ (2.4 cu. in.)

Weight:
0.65 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
FW06/12 Flanged washers.
For stroke sensing order SK/2 Sensing Kit.
See "Accessories" for other items.



PNEUMATIC VERTICAL AND PUSH-PULL CLAMPS

PNEUMATIC VERTICAL CLAMPS

MODEL V250X



Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
250 daN

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
55.

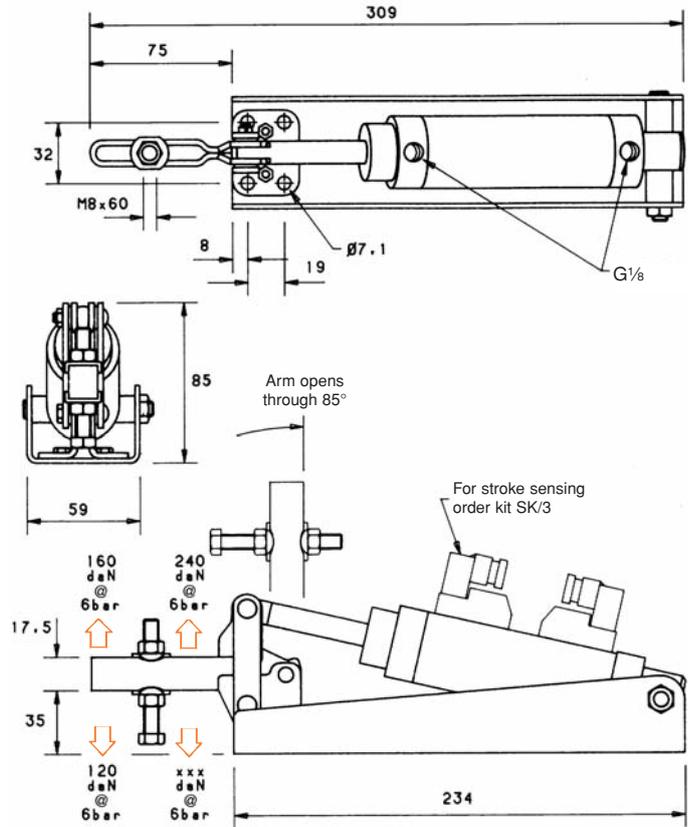
Swept volume per cycle:
0.09 L³ (5.5 cu. in.)

Weight:
1.20 Kg

Supplied complete with:
MB0860 Setscrew & nuts
FW08/15 Flanged washers.

For stroke sensing order
SK/3 Sensing Kit.

See "Accessories" for other items.



PNEUMATIC VERTICAL CLAMPS

MODEL V450X



Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
450 daN

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
55.

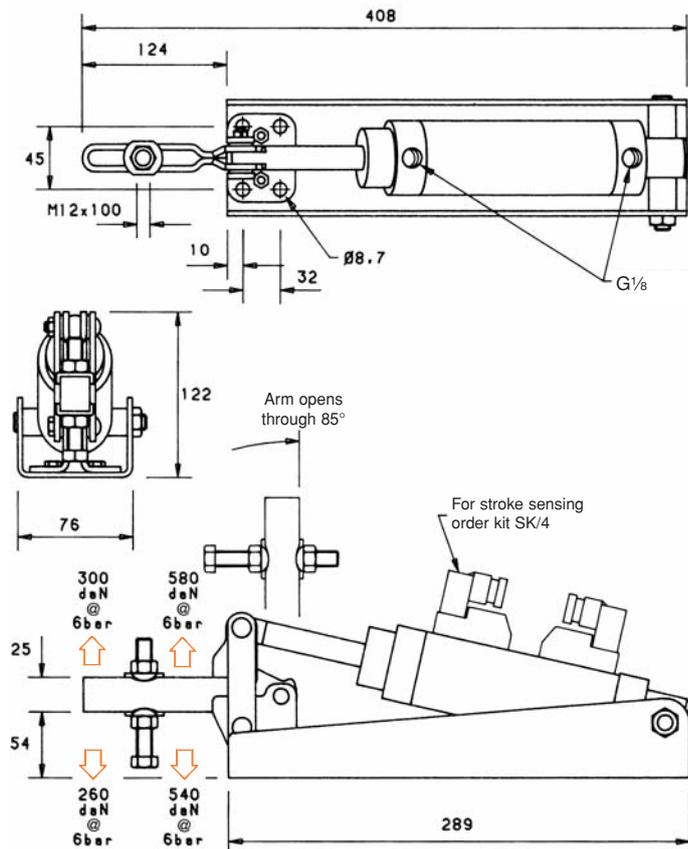
Swept volume per cycle:
0.27 L³ (16.8 cu. in.)

Weight:
2.75 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
FW12/23 Flanged washers.

For stroke sensing order
SK/4 Sensing Kit.

See "Accessories" for other items.



PNEUMATIC VERTICAL AND PUSH-PULL CLAMPS

PNEUMATIC VERTICAL CLAMPS

MODEL V750X



Arm:
Solid — no spindle supplied.

Base:
Front mounting.

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

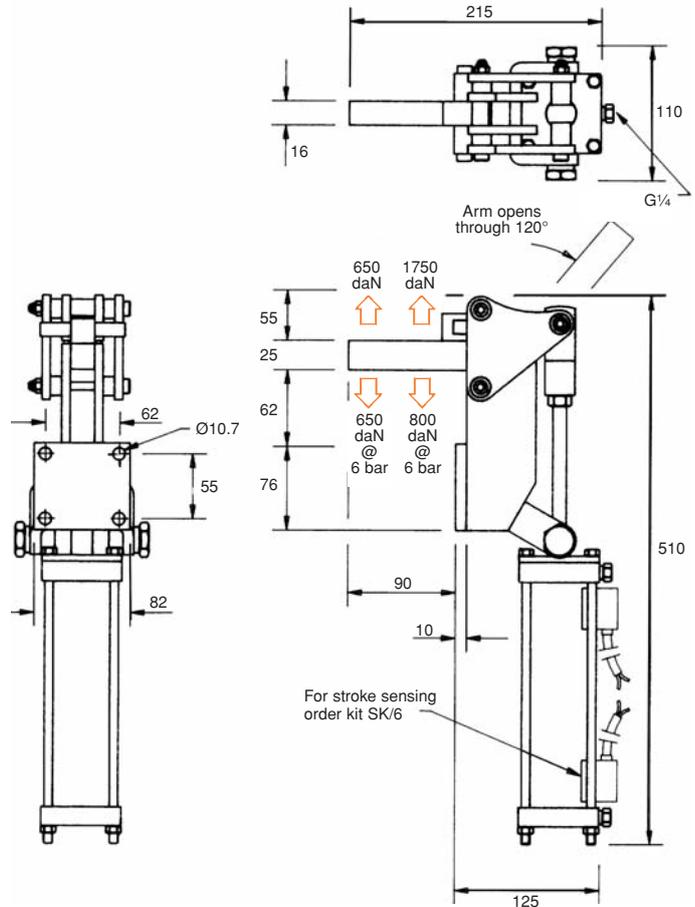
Max. cycles/min. at 6 bar:
30.

Swept volume per cycle:
0.27 L³ (16.5 cu. in.)

Nominal Holding Force:
750 daN

Weight:
3.85 Kg

For stroke sensing order SK/6 Sensing Kit.
See "Accessories" for other items.



PNEUMATIC VERTICAL CLAMPS

MODEL V1750X

CLAMPING PRODUCTS



Arm:
Solid — no spindle supplied.

Base:
Front mounting.

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

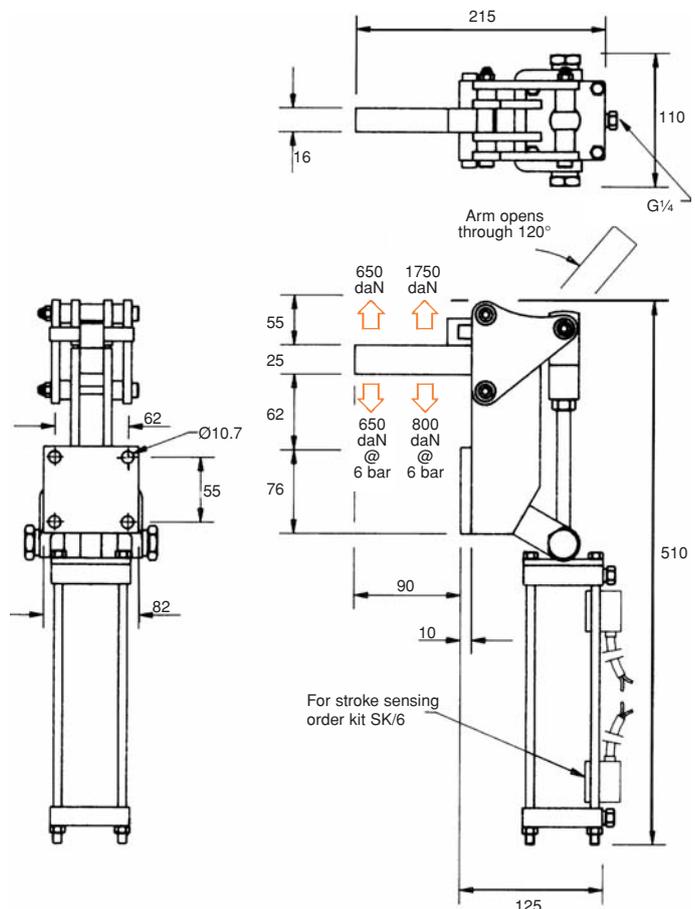
Max. cycles/min. at 6 bar:
15.

Swept volume per cycle:
0.75 L³ (45.7 cu. in.)

Nominal Holding Force:
1750 daN

Weight:
6.80 Kg

For stroke sensing order SK/6 Sensing Kit.
See "Accessories" for other items.



PNEUMATIC VERTICAL AND PUSH-PULL CLAMPS

PNEUMATIC VERTICAL CLAMPS

MODEL V2000X



Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
2000 daN

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
10.

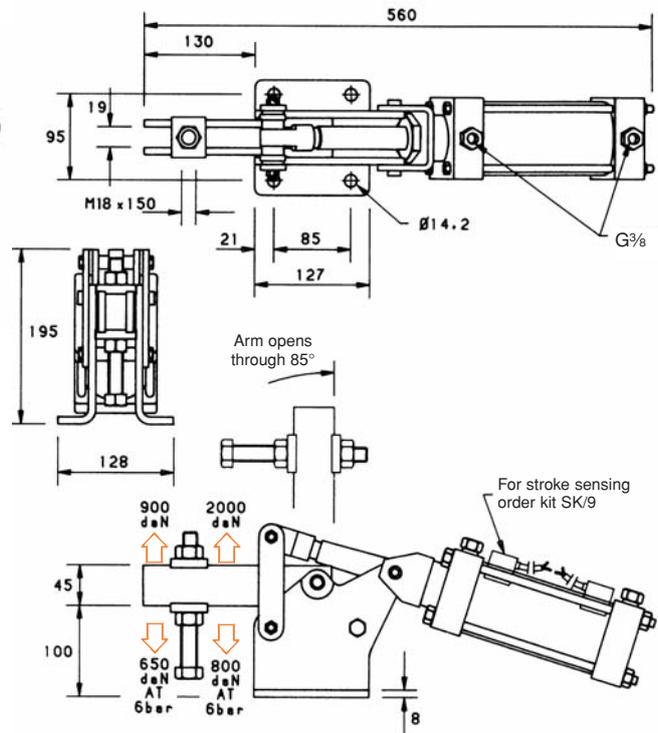
Swept volume per cycle:
0.76 L³ (46.4 cu. in.)

Weight:
10.30 Kg

Supplied complete with:
MB18 Setscrew & nuts.
Flanged washers.

For stroke sensing order SK/9 Sensing Kit.

See "Accessories" for other items.



PNEUMATIC PUSH-PULL CLAMPS

MODEL P600X



Plunger:
Locks in fully extended position only.

Base:
Body mounting.

Nominal Holding Force:
600 daN

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
60.

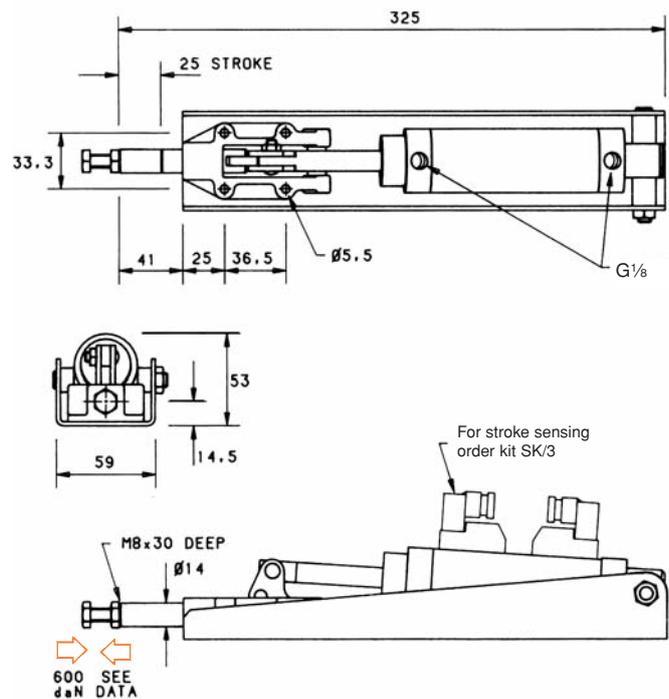
Swept volume per cycle:
0.09 L³ (5.5 cu. in.)

Weight:
1.45 Kg

Supplied complete with:
MB0840 Setscrew & nut.

For stroke sensing order SK/3 Sensing Kit.

See "Accessories" for other items.



DATA

With 6 bar air supply pressure the output force is:	daN
Fully retracted	20
5 mm extended	32
10 mm "	43
15 mm "	65
20 mm "	87
22 mm "	100
24 mm "	150
Fully extended	253

PNEUMATIC VERTICAL AND PUSH-PULL CLAMPS

PNEUMATIC PUSH-PULL CLAMPS

MODEL P1200X



Plunger:
Locks in fully extended position only.

Base:
Body mounting.

Nominal Holding Force:
1200 daN

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
50.

Swept volume per cycle:
0.28 L³ (16.8 cu. in.)

Weight:
3.70 Kg

Supplied complete with:
MB1050 Setscrew & nut.

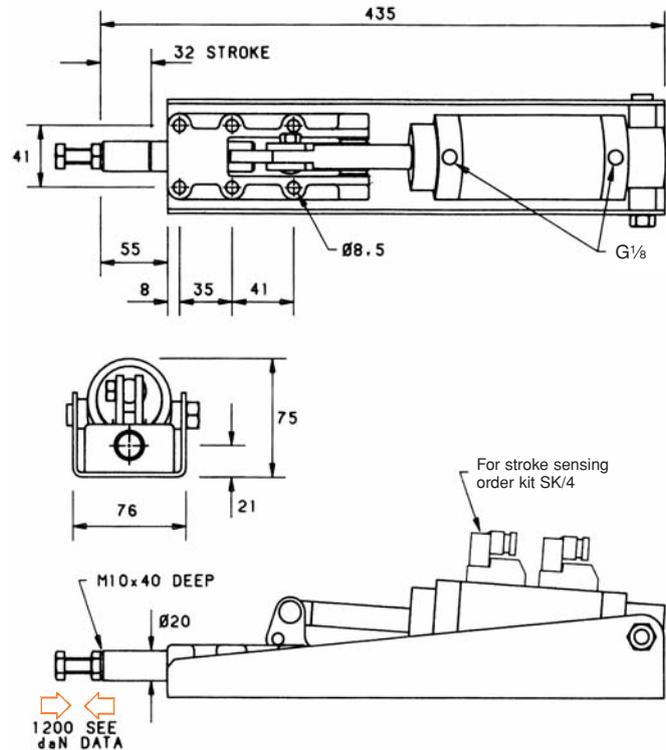
For stroke sensing order SK/4 Sensing Kit.

See "Accessories" for other items.

DATA

With 6 bar air supply pressure the output force is: daN

Fully retracted	110
5 mm extended	120
10 mm "	140
15 mm "	165
20 mm "	195
25 mm "	230
27 mm "	255
29 mm "	300
31 mm "	430
Fully extended	1150



PNEUMATIC PUSH-PULL CLAMPS

MODEL P2500X



Plunger:
Locks in fully extended position only.

Base:
Body mounting.

Nominal Holding Force:
2500 daN

Operating pressure range:
2-6 bar (30-88 p.s.i.g.)

Max. cycles/min. at 6 bar:
45.

Swept volume per cycle:
0.6 L³ (36.6 cu. in.)

Weight:
7.40 Kg

Supplied complete with:
MB1250 Setscrew & nut.

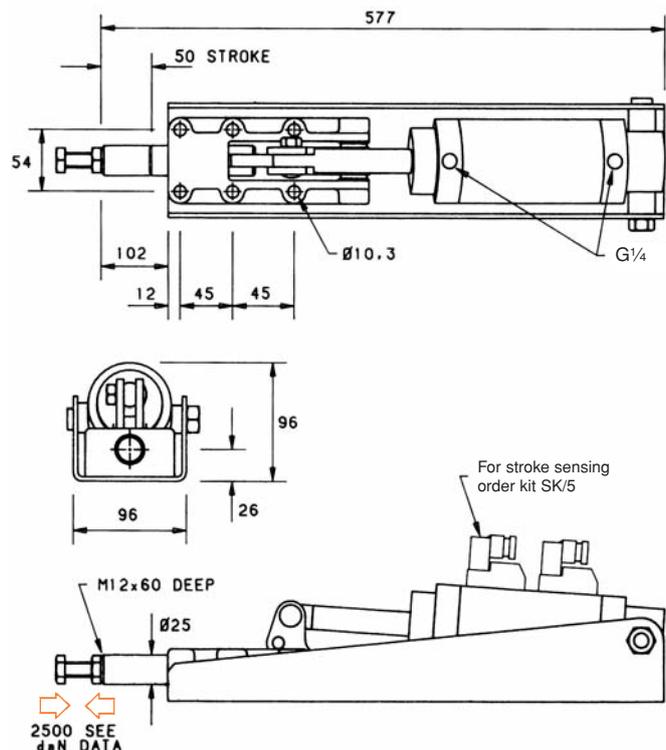
For stroke sensing order SK/5 Sensing Kit.

See "Accessories" for other items.

DATA

With 6 bar air supply pressure the output force is: daN

Fully retracted	130
5 mm extended	140
10 mm "	160
15 mm "	175
20 mm "	200
25 mm "	210
30 mm "	245
35 mm "	265
40 mm "	325
45 mm "	420
47 mm "	490
49 mm "	700
Fully extended	1450





PNEUMATIC SWING CLAMPS

- 90° Swing angle over workpiece
- Holding forces from 20 daN to 280 daN
- Clamping strokes of 10mm and 20mm
- Operating pressure range 2-10 bar

PNEUMATIC SWING CLAMPS

PNEUMATIC SWING CLAMP

MODELS **PNS25-10C** (clockwise)

PNS25-10A (anti-clockwise)



Maximum holding force:
20 daN.

Operating pressure range:
2-10 bar.

Rotary stroke:
9.5mm.

Clamping stroke:
10mm.

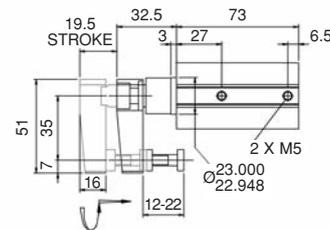
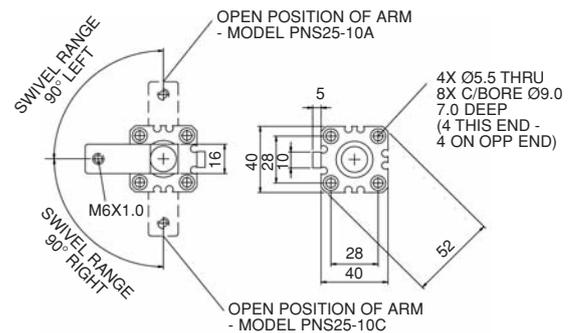
Swept volume per cycle:
0.012 L.

Weight:
0.32 Kg.

Supplied complete with:
Arm, spindle & nut.

Options:

SK/8 : Stroke sensing kit.



PNEUMATIC SWING CLAMP

MODELS **PNS32-10C** (clockwise)

PNS32-10A (anti-clockwise)



Maximum holding force:
60 daN.

Operating pressure range:
2-10 bar.

Rotary stroke:
15mm.

Clamping stroke:
10mm.

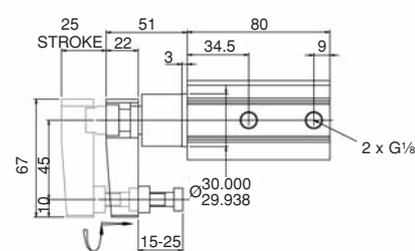
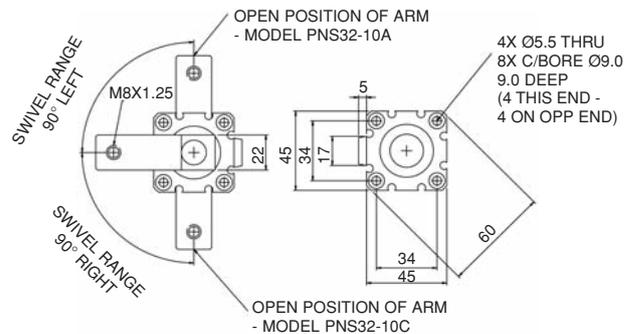
Swept volume per cycle:
0.035 L.

Weight:
0.7 Kg.

Supplied complete with:
Arm, spindle & nut.

Options:

SK/8 : Stroke sensing kit.



PNEUMATIC SWING CLAMP

MODELS **PNS40-20C** (clockwise)

PNS40-20A (anti-clockwise)



Maximum holding force:
105 daN.

Operating pressure range:
2-10 bar.

Rotary stroke:
15mm.

Clamping stroke:
20mm.

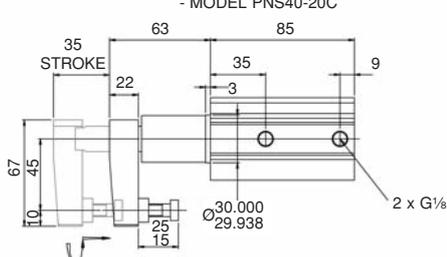
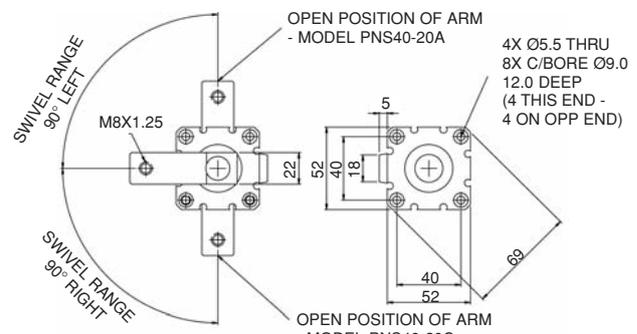
Swept volume per cycle:
0.06 L.

Weight:
0.84 Kg.

Supplied complete with:
Arm, spindle & nut.

Options:

SK/8 : Stroke sensing kit.



PNEUMATIC SWING CLAMPS

PNEUMATIC SWING CLAMP

MODELS **PNS50-20C** (clockwise)

PNS50-20A (anti-clockwise)



Options:

SK/8 : Stroke sensing kit.

Maximum holding force:

160 daN.

Operating pressure

range:
2-10 bar.

Rotary stroke:

19mm.

Clamping stroke:

20mm.

Swept volume per cycle:

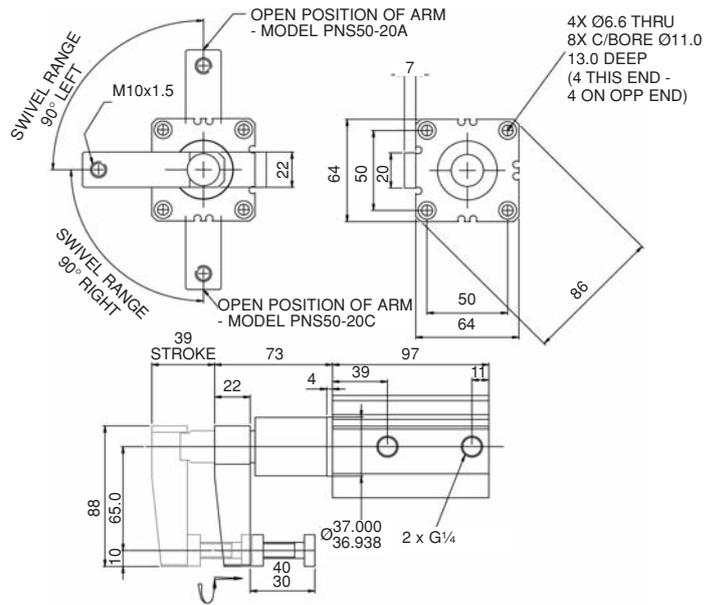
0.14 L.

Weight:

1.45 Kg.

Supplied complete with:

Arm, spindle & nut.



PNEUMATIC SWING CLAMP

MODELS **PNS63-20C** (clockwise)

PNS63-20A (anti-clockwise)



Options:

SK/12 : Stroke sensing kit.

Maximum holding force:

280 daN.

Operating pressure

range:
2-10 bar.

Rotary stroke:

19mm.

Clamping stroke:

20mm.

Swept volume per cycle:

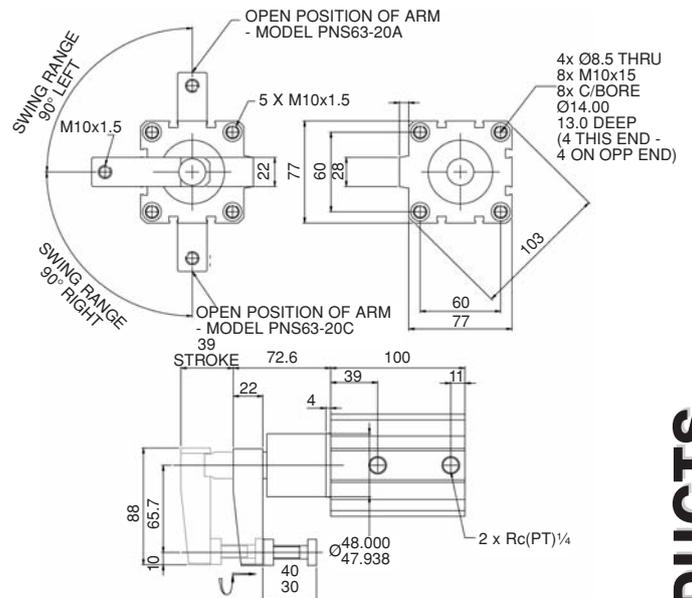
0.24 L.

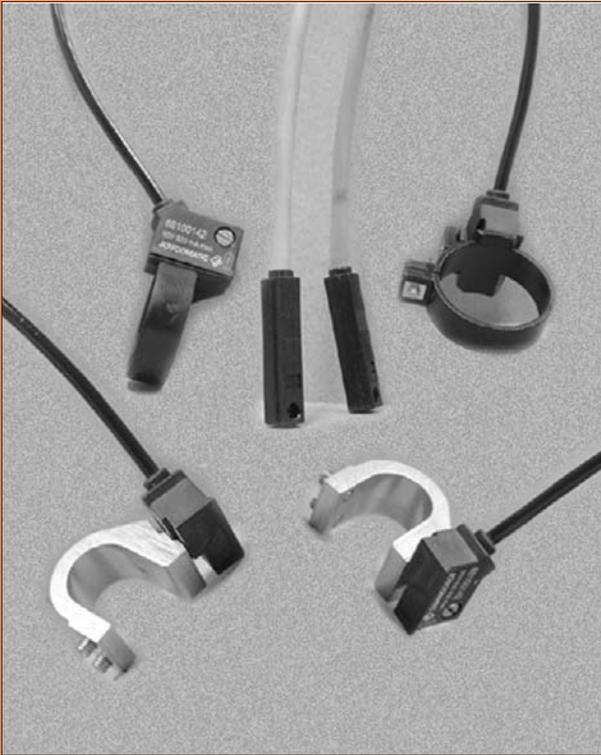
Weight:

1.87 Kg.

Supplied complete with:

Arm, spindle & nut.

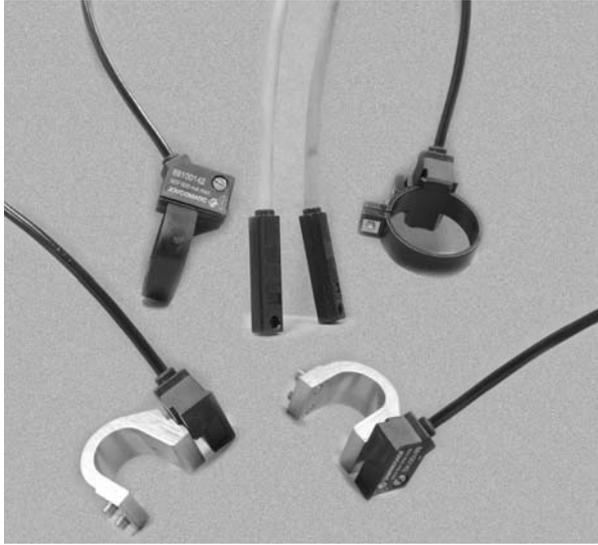




PNEUMATIC ACCESSORIES

PNEUMATIC ACCESSORIES

STROKE SENSING KITS



KIT NUMBER	USED CLAMP MODEL
SK/1	V75X
SK/2	V150X
SK/3	V250X, P600X
SK/4	V450X, P1200X
SK/5	P2500X
SK/6	V750X, V1750X
SK/8	PNS25-10A, PNS25-10C PNS32-10A, PNS32-10C PNS40-20A, PNS40-20C PNS50-20A, PNS50-20C
SK/9	V2000X
SK/10	VA300BX, VA700CX VA1200CX, VA2400CX
SK/11	V100VX, V200VX, V300VX
SK/12	PNS63-20A, PNS63-20C

NOTE: EACH SK KIT INCLUDES 2 INDIVIDUAL SENSORS



.....
TOGGLE PRESSES
MANUAL, PNEUMATIC & RACK
AND PINION

TOGGLE HAND PRESSES

TOGGLE HAND PRESS

MODEL P600PR



DATA

With 14 daN handle force the output force is:	
Fully retracted	470 daN
5 mm extended	110
10 mm "	70
15 mm "	75
20 mm "	80
25 mm "	85
30 mm "	146
31 mm "	190
Fully extended	580

Type:
Bench mounted manual toggle press.

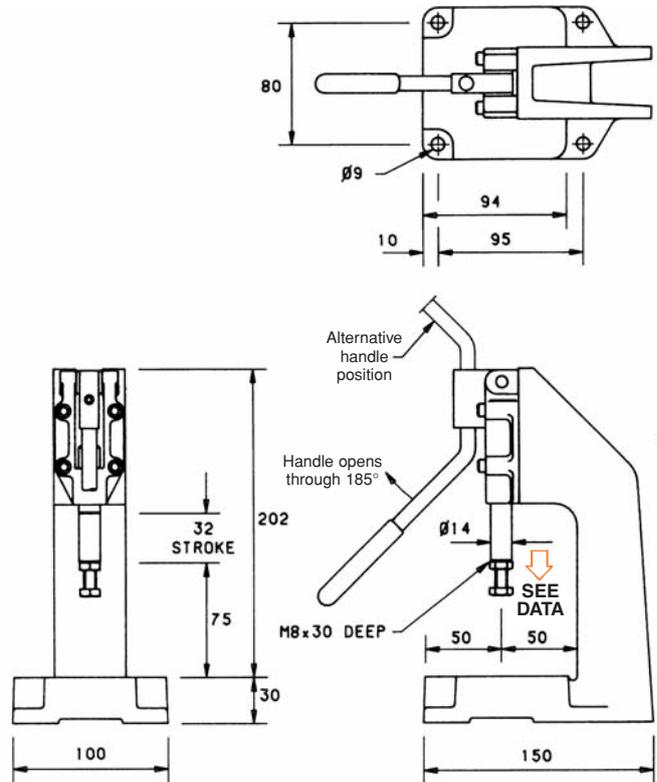
Nominal holding force:
600 daN.

Weight:
3.60 kg.

Quality Features:

- S.G. Iron framecasting.
- precision ground steel plunger.
- fixed height work head.

All toggle presses achieve their maximum force at the end of the stroke. Therefore Brauer toggle presses are best employed where the full force of the press is only used over a short length at the end of the working stroke; e.g. when punching, riveting, embossing, gluing, etc.



TOGGLE HAND PRESS

MODEL P1200PR



DATA

With 15 daN handle force the output force is:	
Fully retracted	705 daN
5 mm extended	167
10 mm "	90
15 mm "	73
20 mm "	70
25 mm "	72
30 mm "	85
35 mm "	100
40 mm "	110
45 mm "	150
48 mm "	220
49 mm "	290
Fully extended	930

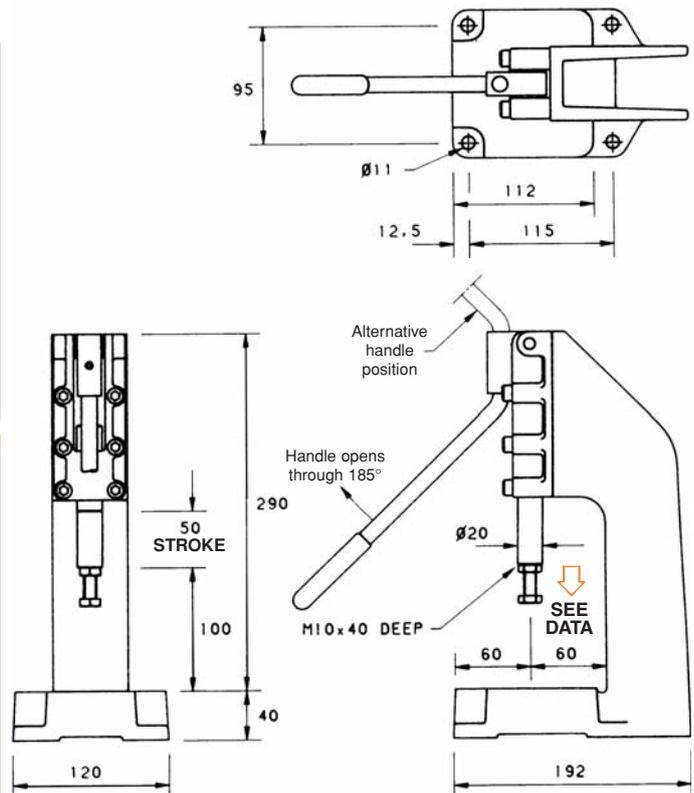
Type:
Bench mounted manual toggle press.

Nominal holding force:
1200 daN.

Weight:
7.35 kg.

Quality Features:

- S.G. Iron framecasting.
- precision ground steel plunger.
- fixed height work head.



TOGGLE HAND PRESSES

TOGGLE HAND PRESSES

MODEL P2500PR



DATA

With 17 daN handle force the output force is:

daN	mm
1000	Fully retracted
100	10 mm extended
72	20 mm
60	30 mm
70	40 mm
88	50 mm
118	60 mm
190	70 mm
230	72 mm
353	74 mm
1100	Fully extended

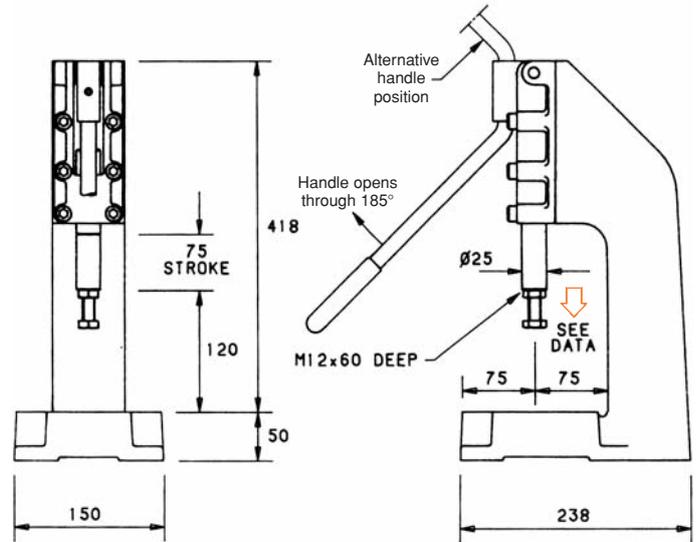
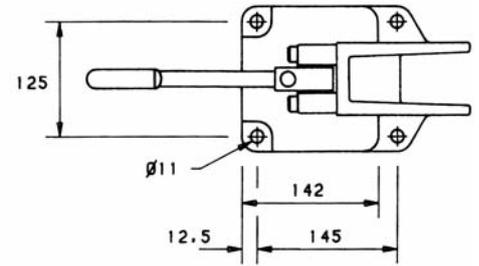
Type:
Bench mounted manual toggle press.

Nominal holding force:
2500 daN.

Weight:
15.50 kg.

Quality Features:

- S.G. Iron framecasting.
- precision ground steel plunger.
- fixed height work head.



TOGGLE HAND PRESSES

MODEL TPR 1



DATA

With 13 daN handle force the output force is:

daN	mm
48	Fully retracted
45	5 mm extended
42	10 mm
42	15 mm
45	20 mm
49	25 mm
54	30 mm
75	35 mm
102	38 mm
143	39 mm
500	Fully extended

Optional Extras: please mention when ordering
Table Bore 12^{H7} mm TB
Stroke Counter Z

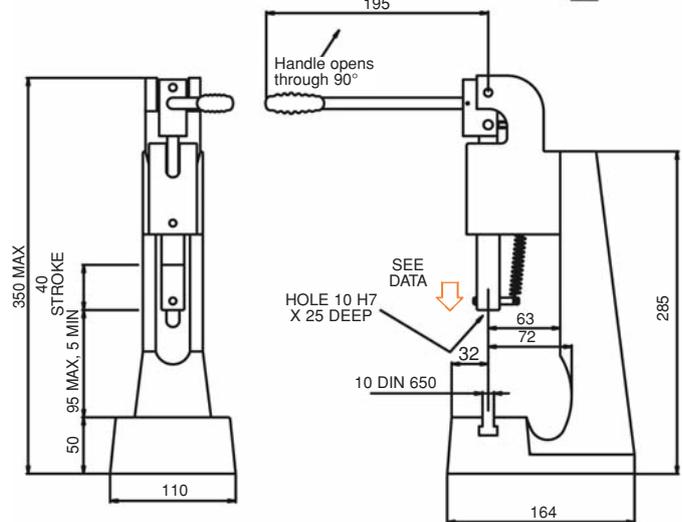
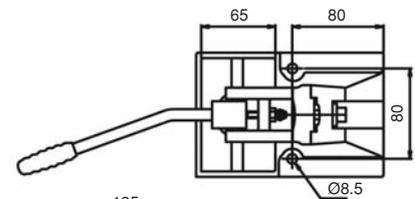
Type:
Bench mounted toggle press

Nominal holding force:
500 daN

Weight:
10 kg

Quality Features:

- hardened, ground ram.
- long-design, honed ram.
- ground table, with T-slot.
- adjustable working head height.



TOGGLE HAND PRESSES

TOGGLE HAND PRESSES

MODEL TPR 2



DATA

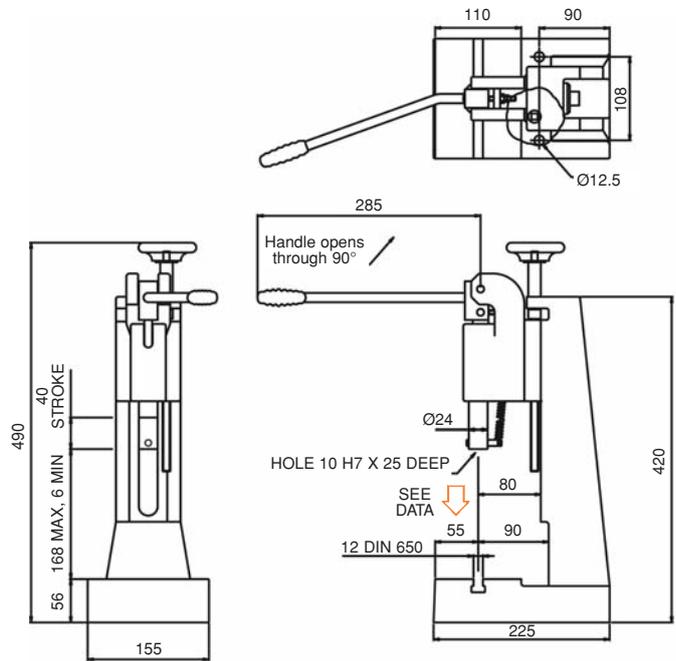
With 15 daN handle force the output force is:

daN	mm
Fully retracted	76
5 mm extended	74
10 mm "	65
15 mm "	65
20 mm "	72
25 mm "	80
30 mm "	98
35 mm "	125
38 mm "	200
39 mm "	255
Fully extended	750

Optional Extras: please mention when ordering
 Table Bore 12^{H7}mm TB
 Stroke Counter Z

Type: Bench mounted toggle press
Nominal holding force: 750 daN
Weight: 19 kg
Quality Features:

- hardened, ground ram.
- long-design, honed ram.
- ground table, with T-slot.
- adjustable working head height.



TOGGLE HAND PRESSES

MODEL TPR 3



DATA

With 20 daN handle force the output force is:

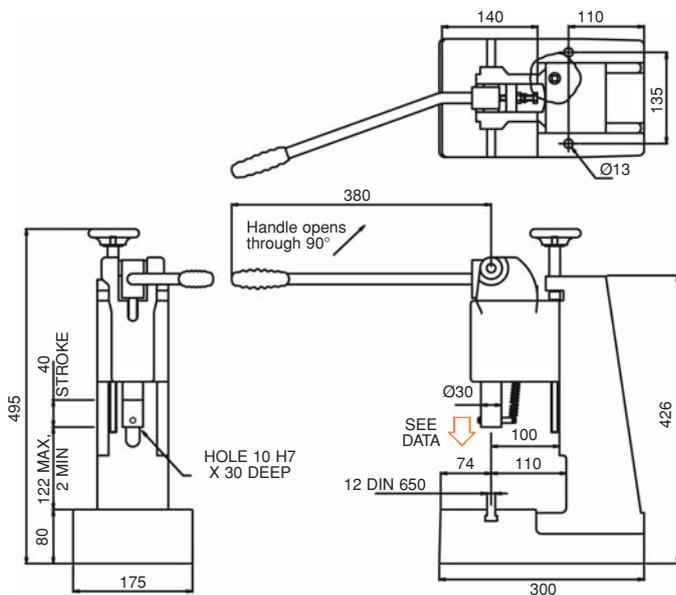
daN	mm
Fully retracted	145
5 mm extended	135
10 mm "	130
15 mm "	130
20 mm "	130
25 mm "	140
30 mm "	160
35 mm "	230
38 mm "	325
39 mm "	440
Fully extended	1400

Optional Extras: please mention when ordering
 Table Bore 12^{H7} mm TB
 Stroke Counter Z

Type: Bench mounted toggle press
Nominal holding force: 1400 daN
Weight: 39 kg
Quality Features:

- hardened, ground ram.
- long-design, honed ram.
- ground table, with T-slot.
- adjustable working head height.

The **extra powerful** hand toggle presses in the TPR 3 series are especially suited to the often changing demands found in tool making and general workshops. Their high capacity up to 15 kN allow for flexible use in various applications.



RACK & PINION HAND PRESSES

RACK & PINION PRESSES

MODEL RPP 1



DATA

With 18 daN handle force the output force is 150 daN

Capacity	kN	1,5
	kgf	150
Working Stroke	mm	43
Clearance	mm	63
Table Size	mm	100x65
T-Slot width to DIN 650	mm	10
Ram Bore Øx depth	mm	10 ^{H7} x25
Ram Ø	mm	20
Space required	mm	110x160
Weight	kg	8,5

Optional Extras: please mention when ordering

Table Bore 12 ^{H7}	mm	TB
Micrometer Screw Gauge		MICRO
Stroke Counter		Z

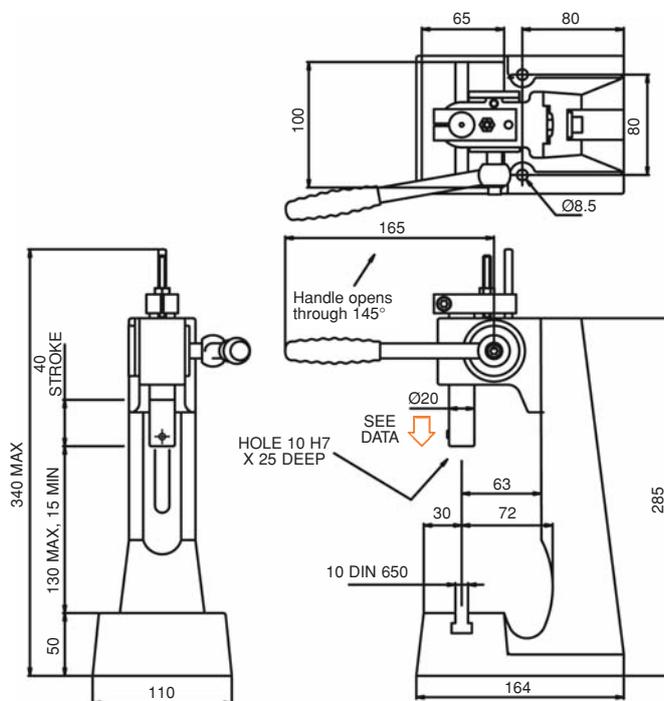
Type:

Bench mounted rack and pinion press

Quality Features:

- anti-twist ram.
- stroke adjustment by means of adjustment screw, or micrometer screw.
- hand lever adjustable through 360°.
- long, honed ram guide.
- ground table, with T-slot.

All Brauer rack and pinion presses apply their pressing force constantly throughout the entire working stroke. The direct transmission of force through the lever allows the operator to sense the load being applied. The optional micrometer stop for stroke adjustment allows high precision work.



RACK & PINION PRESSES

MODEL RPP 2



DATA

With 20 daN handle force the output force is 150 daN

Capacity	kN	2,5
	kgf	250
Working Stroke	mm	50
Clearance	mm	80
Table Size	mm	155x115
T-Slot width to DIN 650	mm	12
Ram Bore Øx depth	mm	10 ^{H7} x25
Ram Ø	mm	20
Space required	mm	155x220
Weight	kg	21

Optional Extras: please mention when ordering

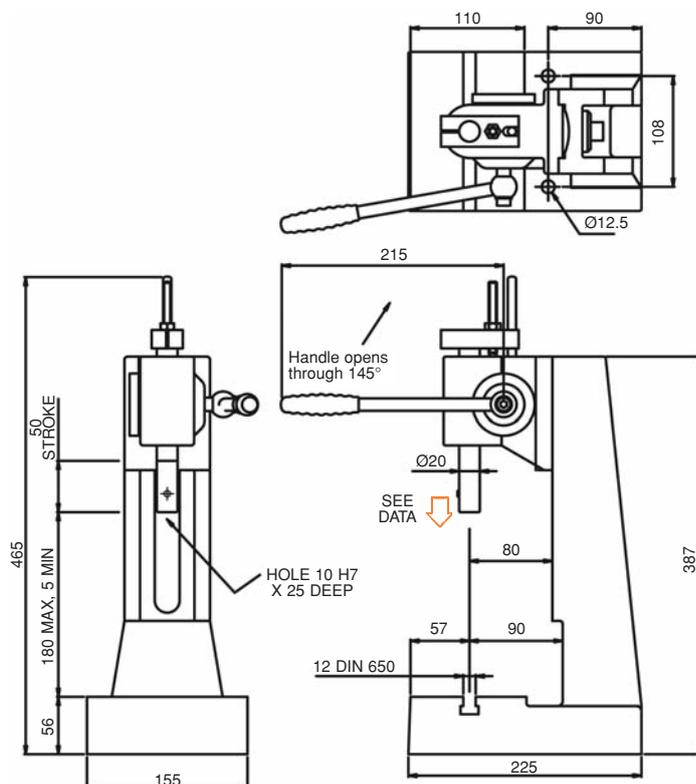
Table Bore 12 ^{H7}	mm	TB
Micrometer Screw Gauge		MICRO
Stroke Counter		Z

Type:

Bench mounted rack and pinion press

Quality Features:

- anti-twist ram.
- stroke adjustment by means of adjustment screw, or micrometer screw.
- hand lever adjustable through 360°.
- long, honed ram guide.
- ground table, with T-slot.



TOGGLE HAND PRESSES

PNEUMATIC TOGGLE PRESS

MODEL P600XPR



DATA

With 6 bar air supply pressure the output force is:	
Fully retracted	20 daN
5 mm extended	32
10 mm "	43
15 mm "	65
20 mm "	87
22 mm "	100
24 mm "	150
Fully extended	253

Type:
Bench mounted pneumatic toggle press.

Nominal holding force:
600 daN.

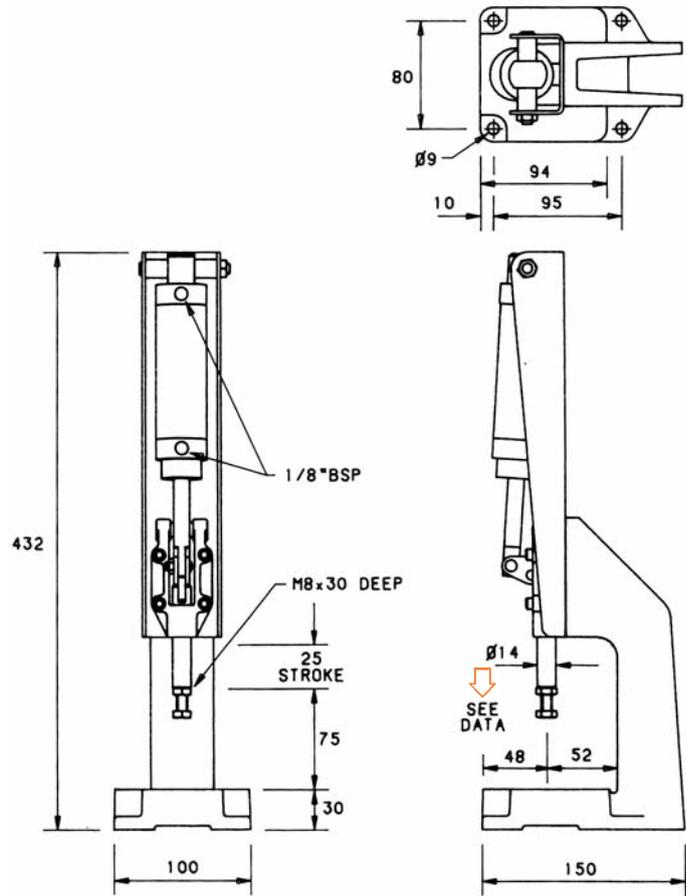
Operating pressure range:
2-6 bar (30-88p.s.i.g.)

Max. cycles/min. @ 6 bar:
60

Swept volume per cycle:
0.09 L³ (5.49 cu. in.)

For stroke sensing order SK/3 Sensing Kit

Weight:
5.25 kg.



PNEUMATIC TOGGLE PRESS

MODEL P1200XPR



DATA

With 6 bar air supply pressure the output force is:	
Fully retracted	110 daN
5 mm extended	120
10 mm "	140
15 mm "	165
20 mm "	195
25 mm "	230
27 mm "	255
29 mm "	300
31 mm "	430
Fully extended	1150

Type:
Bench mounted pneumatic toggle press.

Nominal holding force:
1200 daN.

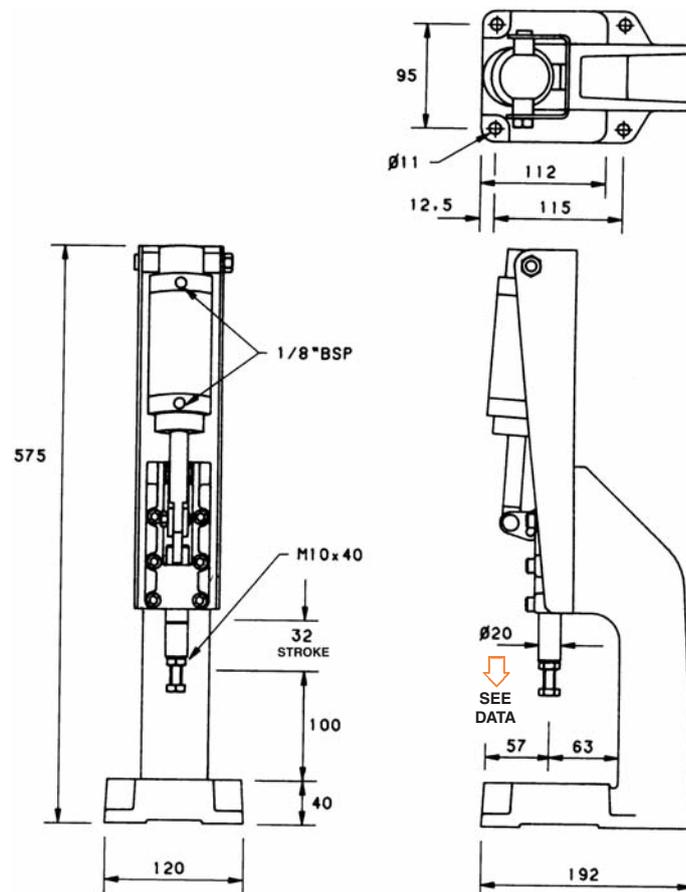
Operating pressure range:
2-6 bar (30-88p.s.i.g.)

Max. cycles/min. @ 6 bar:
50

Swept volume per cycle:
0.28 L³ (16.80 cu. in.)

For stroke sensing order SK/4 Sensing Kit

Weight:
9.85 kg.



PNEUMATIC PRESSES

PNEUMATIC TOGGLE PRESS

MODEL P2500XPR



With 6 bar air supply pressure the output force is:

Fully retracted	130 daN
5 mm extended	140
10 mm	160
15 mm	175
20 mm	200
25 mm	210
30 mm	245
35 mm	265
40 mm	325
45 mm	420
47 mm	490
49 mm	700
Fully extended	1450

Type:
Bench mounted pneumatic toggle press.

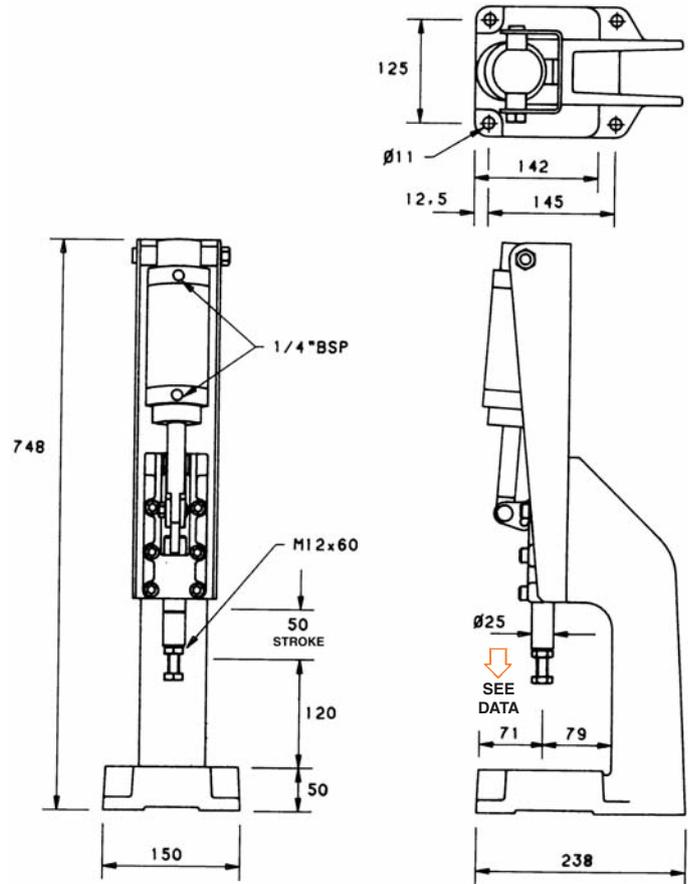
Nominal holding force:
2500 daN.

Operating pressure range:
2-6 bar (30-88p.s.i.g.)

Max. cycles/min. @ 6 bar:
45

Swept volume per cycle:
0.6 L³ (36.6 cu. in)
For stroke sensing order SK/5 Sensing Kit

Weight:
19.05 kg.



DIRECT ACTING PNEUMATIC PRESS

MODEL PNDP 1

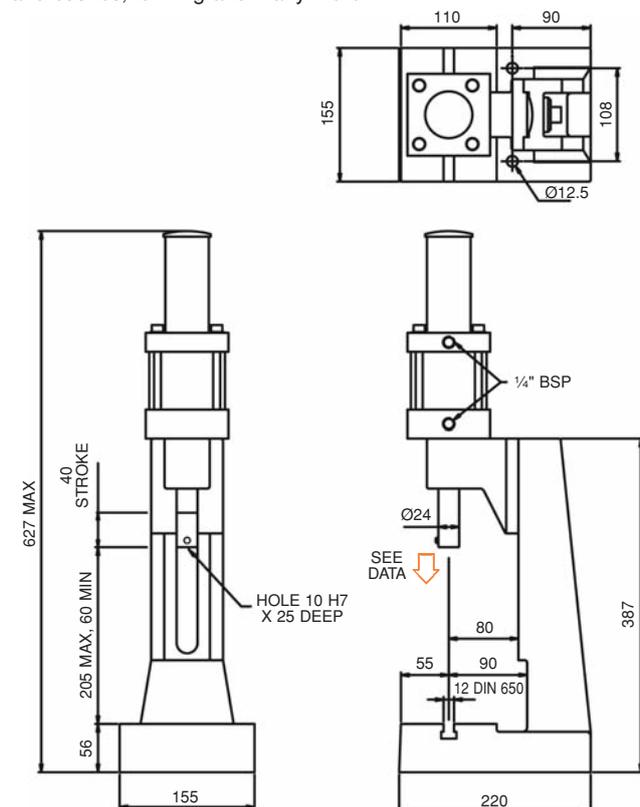


Capacity at 6 bar	kN	2,5
	kgf	250
Working Stroke	mm	40
Clearance	mm	80
Table Size	mm	208x48
T-Slot width to DIN 650	mm	12
Ram Bore	mm	12 ^{H7} x25
Ram Ø	mm	24
Space required	mm	155x220
Port Size		R 1/4"
Air Consumption/cm Stroke	l	0,6
Weight	kg	18,5

Quality Features:

- anti-twist ram.
- stroke adjustable through a length of 30 mm to an accuracy of 0,05 mm.
- long, honed ram guide.
- ground table, with T-slot.

All Brauer direct acting pneumatic presses apply their pressing force constantly throughout the entire working stroke. They offer a wide variety of uses e.g. pressing in and out of dowels, bearings, and bushes, forming and many more.



PNEUMATIC PRESSES

PNEUMATIC TOGGLE PRESS

MODEL PNPR 1

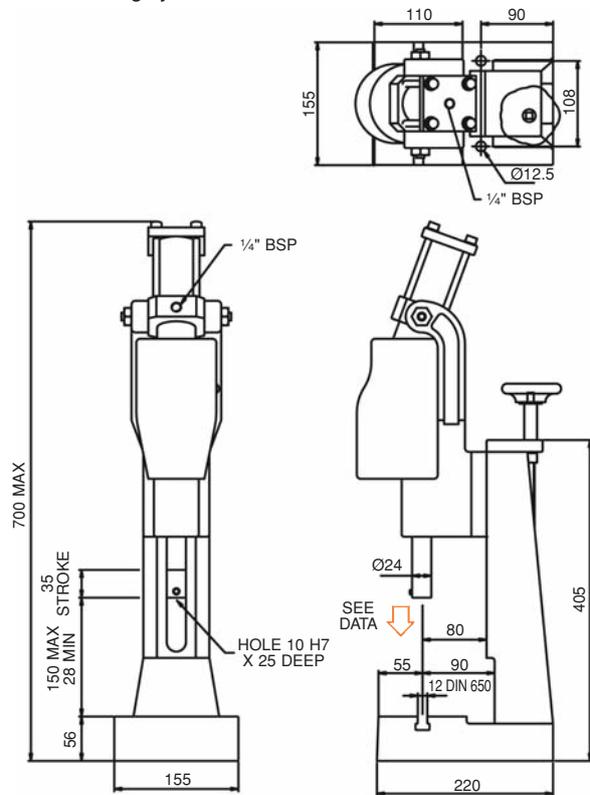


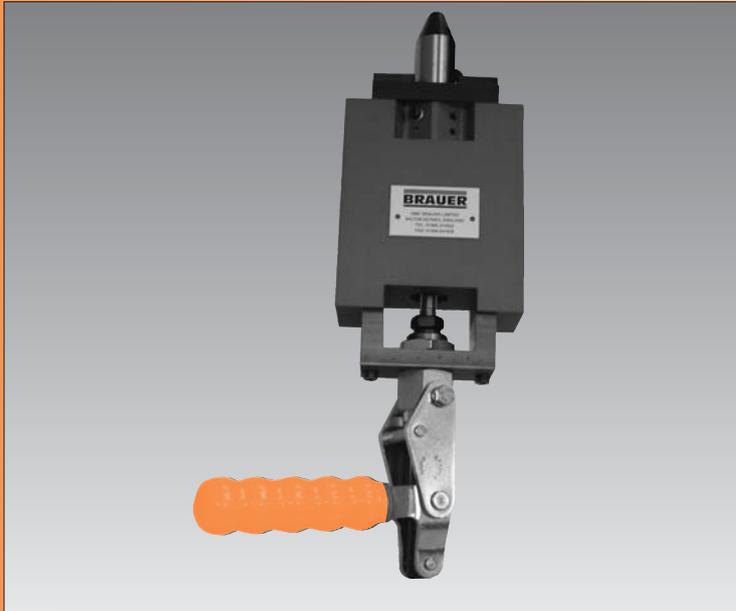
With 6 bar air supply pressure the output force is:	daN
Fully retracted	110
5 mm extended	120
10 mm "	130
15 mm "	140
20 mm "	155
25 mm "	170
30 mm "	220
33 mm "	290
34 mm "	360
Fully extended	600
Air Consumption/cm Stroke	l 0,26
Weight	kg 22

Quality Features:

- the working height of the press head is easily set by means of the height mechanism on all pneumatic toggle action presses.
- hardened, ground ram.
- ground table, with T-slot.

All Brauer pneumatic toggle presses are employed where the full force of the press is only needed at the end of the stroke. The toggle action results in high force with a low air and therefore energy consumption of the double acting cylinder.





PIN AND BODY LOCATION CLAMPS

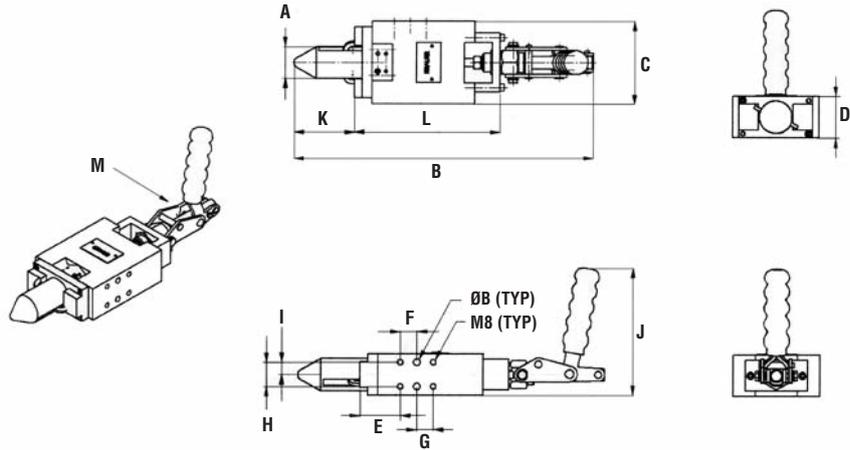
- Used for locating any fabrication, frame or automotive body in an exact position
- Diameter of Location Pin Ø25 Ø35 Ø40
- Internal clamping fingers which extend out from Locating Pin
- Finger adjustment to accommodate differing material thicknesses

PIN LOCATION CLAMPS

• Metric dimensions shown for global specification.



Model #	Dimensions (mm)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
PC25.0	25	347	105	51	49	20	20	30	15	157	51	181	P400
PC35.0	35	370	105	51	49	20	20	30	15	157	74	181	P400
PC40.0	40	371	105	51	49	20	20	30	15	157	74	181	P400

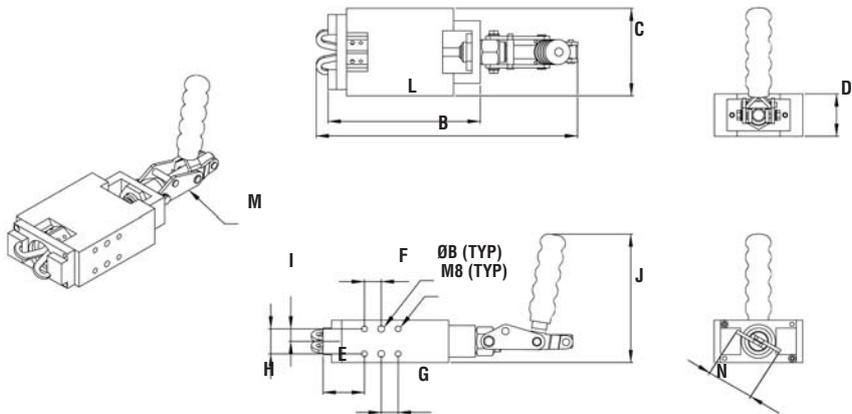


BODY LOCATION CLAMPS

• Metric dimensions shown for global specification.



Model #	Dimensions (mm)												
	B	C	D	E	F	G	H	I	J	L	M	N	
BC25.0	305	105	51	49	20	20	30	15	157	181	P400	37	
BC40.0	310	105	51	49	20	20	30	15	157	181	P400	37	





VERTICAL CLAMPS

- **Features:**

Vertical clamps are the most popular type of toggle clamp, the arm and handle rotating in the same direction when applied and retracted, and high clamping and holding forces being generated.

A comfortable, cushioned PVC handle grip is fitted to all Vertical clamps.

Models V75, V150, V250, V350, V450 and V550 feature a base which accurately guides the clamping arm, and a closed end to the arm for rigidity of construction and to retain the spindle or setscrew if it should loosen.

The angles through which the clamping arm and handle open can be altered by re-positioning or removing the stop pin.

- **Specification:**

The main components are of zinc plated and passivated steel.

Rivets are of stainless steel, which burnishes and work-hardens with use, the rivets rotating in hardened bushes in the larger clamps. Setscrews are of chemi-black coated steel.

VERTICAL CLAMPS

V70 SERIES

MODEL V70/2BT

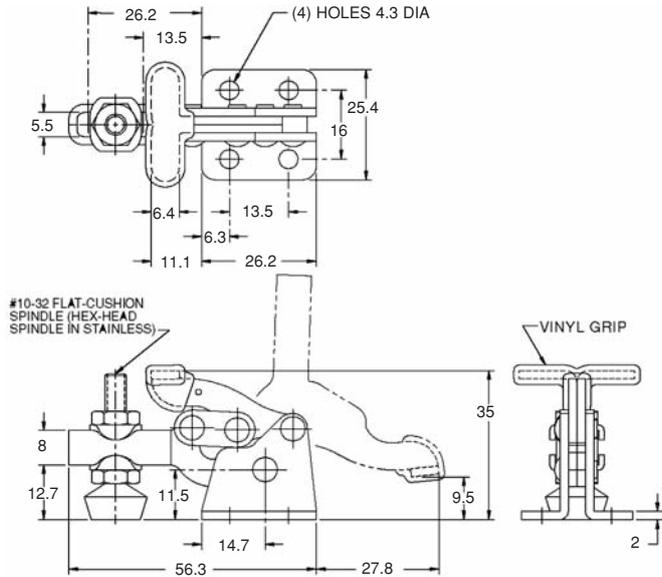


Holding Force:
70 daN

T-Handle:
Miniature hold-down clamp with a unique finger-grip T-handle. Open arm allows spindle adjustment. Arm opens 92° while handle moves 175°.

Shipping weight:
0.1 Kg

Supplied with:
#10-32 flat-cushion spindle
16112-FC.
2 TW flanged washers.



V70 SERIES

MODEL V70/2BTSS

**STAINLESS
STEEL**



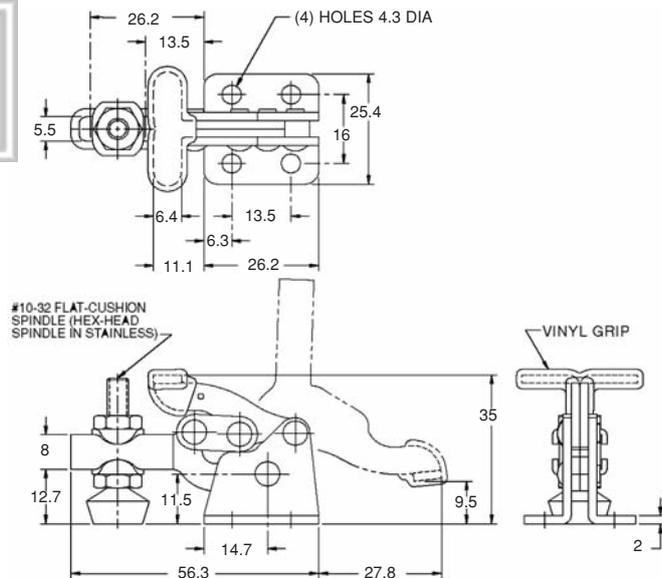
Holding Force:
70 daN

T-Handle:
Miniature hold-down clamp with a unique finger-grip T-handle. Open arm allows spindle adjustment. Arm opens 92° while handle moves 175°.

Shipping weight:
0.1 Kg

Supplied with:
#10-32 flat-cushion spindle
16112-FC.
2 TW flanged washers.

Material: BS 304 S15



V30 SERIES

MODEL V30/2B



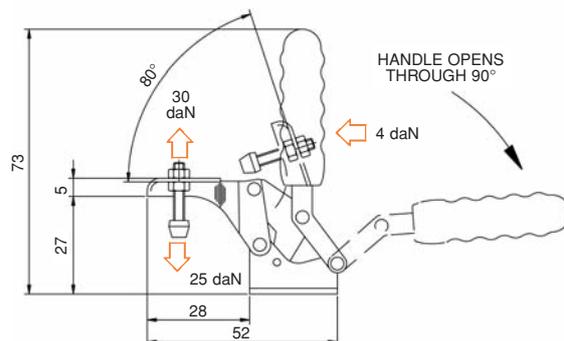
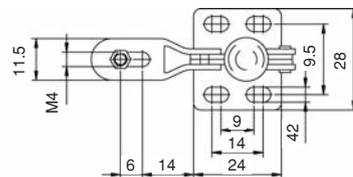
Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
30 daN

Weight:
0.04 Kg

Supplied with:
MB0442 Setscrew & nut.



VERTICAL CLAMPS

V75 SERIES

MODEL V75/1B



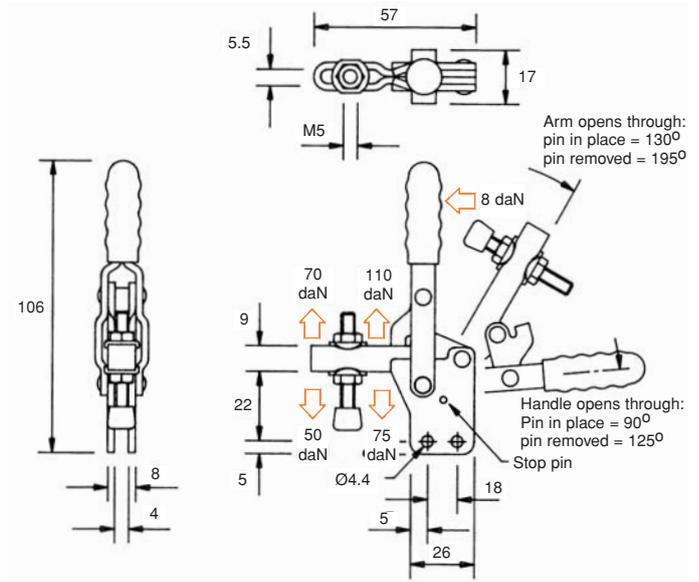
Arm:
The spindle position is adjustable along the arm.

Base:
Straight.

Nominal Holding Force:
75 daN

Weight:
0.05 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.
FW05/10 Flanged washers.
See "Accessories" for other items.



V75 SERIES

MODEL V75/1BSS



Arm:
The spindle position is adjustable along the arm.

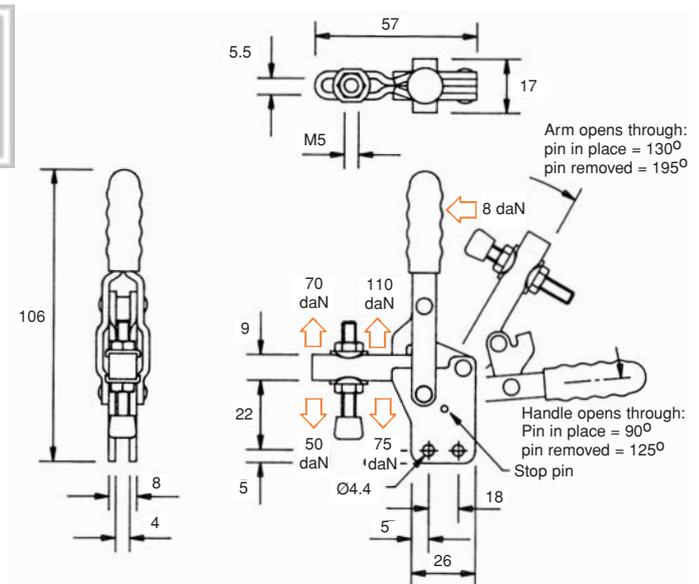
Base:
Straight.

Nominal Holding Force:
75 daN

Weight:
0.05 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.
FW05/10 Flanged washers.

Material: BS 304 S15



V75 SERIES

MODEL V75/2B



for front mounting use bracket Model FM1



Arm:
The spindle position is adjustable along the arm.

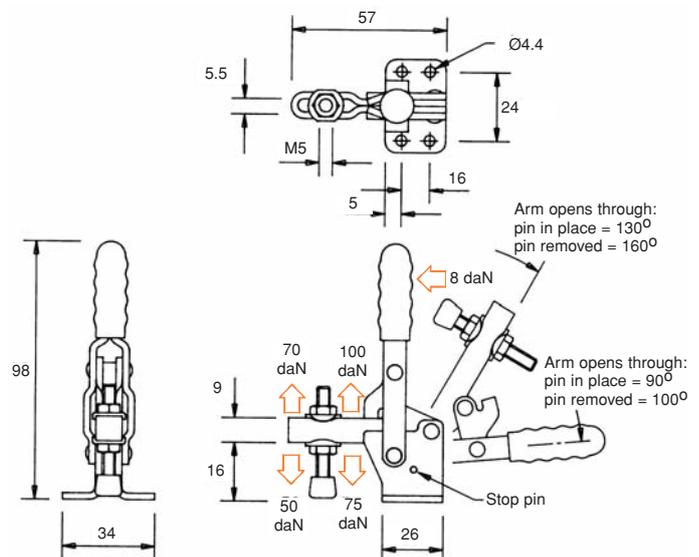
Base:
Flanged.

Nominal Holding Force:
75 daN

Weight:
0.05 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.
FW05/10 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V100 SERIES
MODEL V100/2B



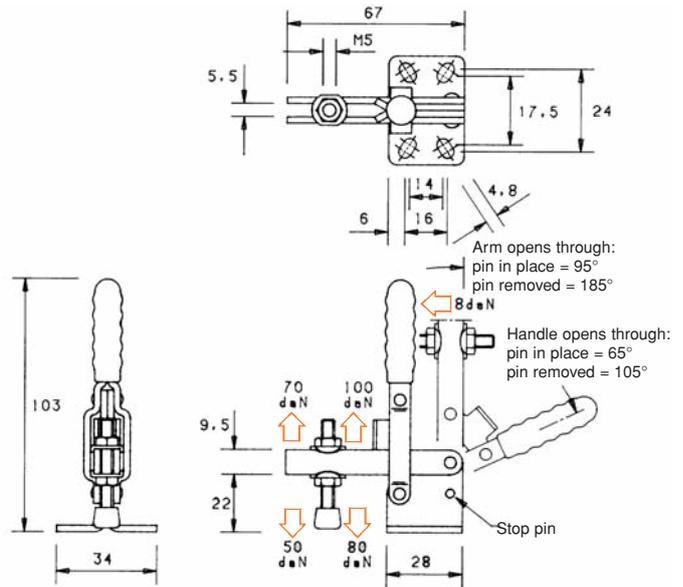
Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
100 daN

Weight:
0.10 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.
FW05/10 Flanged washers.
See "Accessories" for other items.



V100 SERIES
MODEL V100/2C



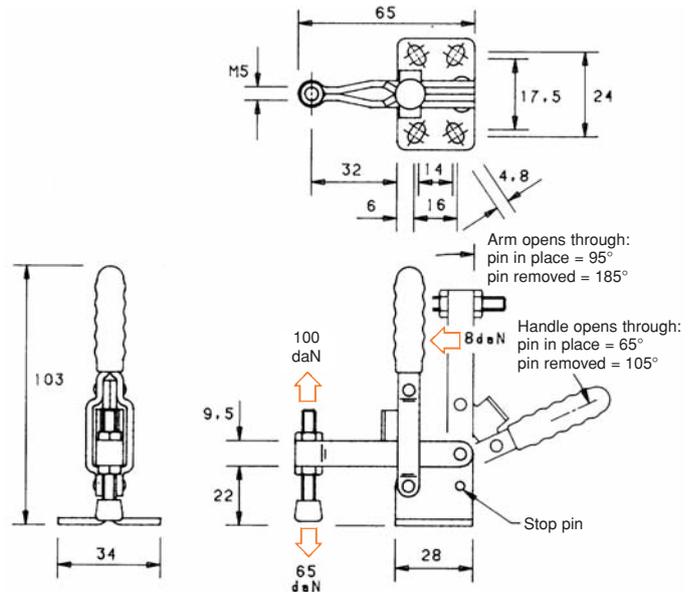
Arm:
The spindle is in a fixed position.

Base:
Flanged.

Nominal Holding Force:
100 daN

Weight:
0.10 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.
See "Accessories" for other items.



V100 SERIES
MODEL V100/3B



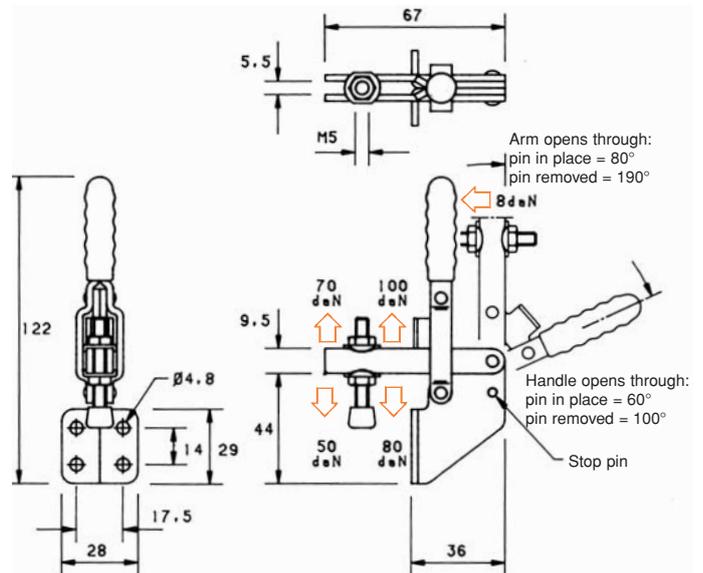
Arm:
The spindle position is adjustable along the arm.

Base:
Front mounting.

Nominal Holding Force:
100 daN

Weight:
0.11 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.
FW05/10 Flanged washers.
See "Accessories" for other items.



VERTICAL CLAMPS

V100 SERIES MODEL V100/3C



Arm:
The spindle is in a fixed position.

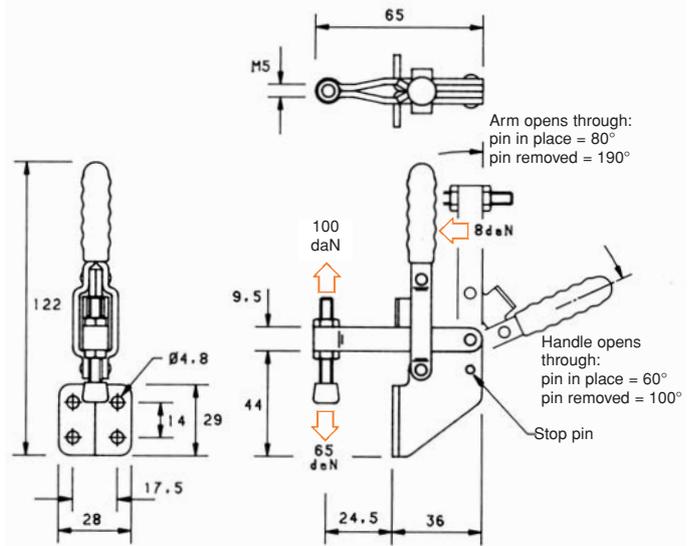
Base:
Front mounting.

Nominal Holding Force:
100 daN

Weight:
0.11 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.

See "Accessories" for other items.



V150 SERIES MODEL V150/1B



Arm:
The spindle position is adjustable along the arm.

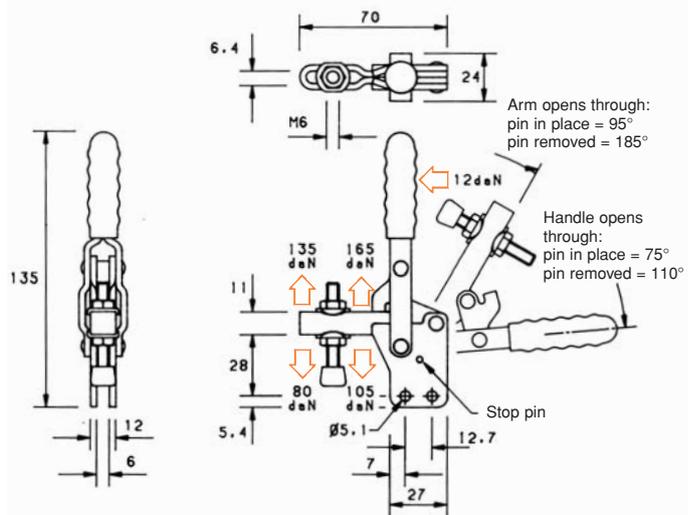
Base:
Straight.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
FW06/12 Flanged washers.

See "Accessories" for other items.



V150 SERIES MODEL V150/1BL



Arm:
The spindle position is adjustable along the arm. 15mm added to arm length over V150/1B model.

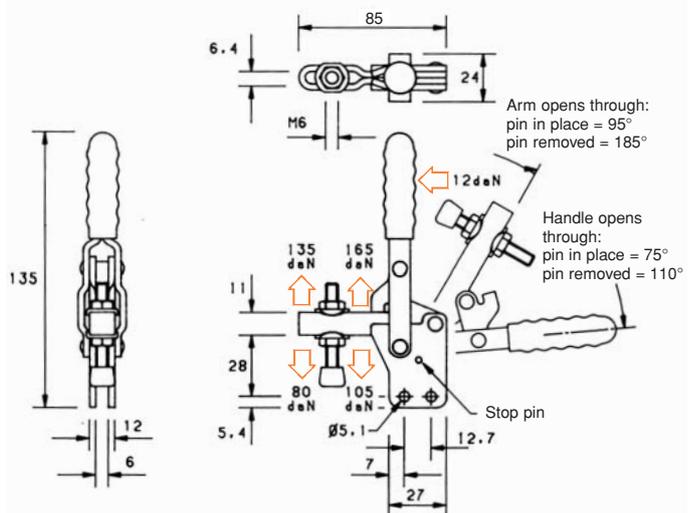
Base:
Straight.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
FW06/12 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V150 SERIES
MODEL V150/1BSS

STAINLESS
STEEL



Arm:
The spindle position is adjustable along the arm.

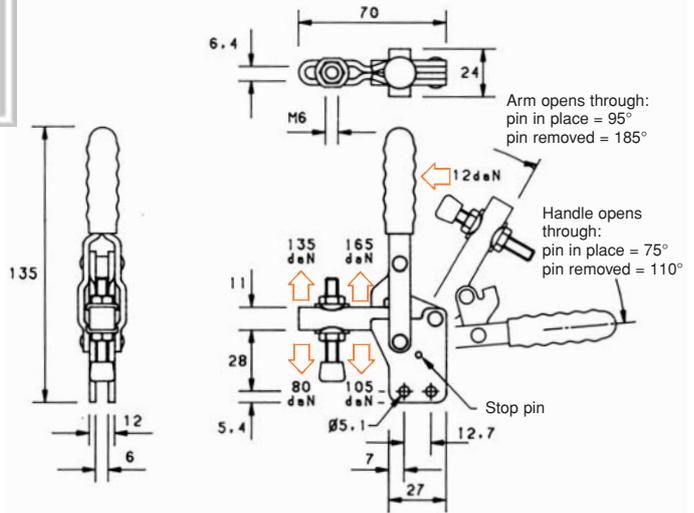
Base:
Straight.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.

Material: BS 304 S15



V150 SERIES
MODEL V150/1C



Arm:
The spindle is in a fixed position.

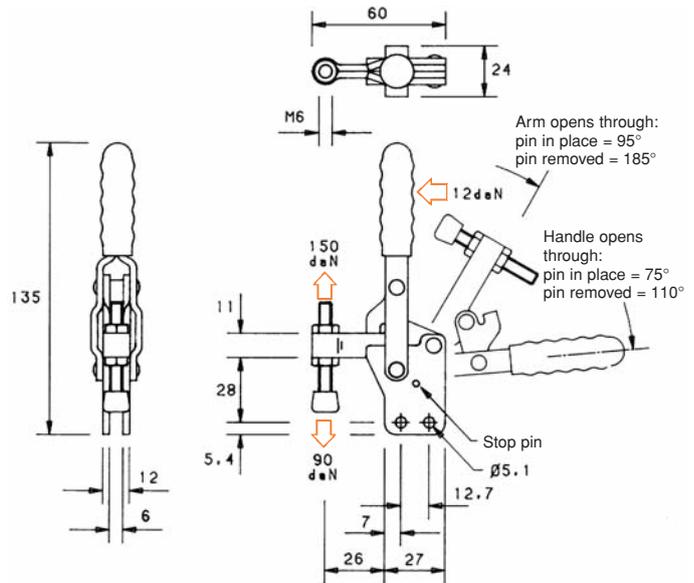
Base:
Straight.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.

See "Accessories" for other items.



V150 SERIES
MODEL V150/2B



Arm:
The spindle position is adjustable along the arm.

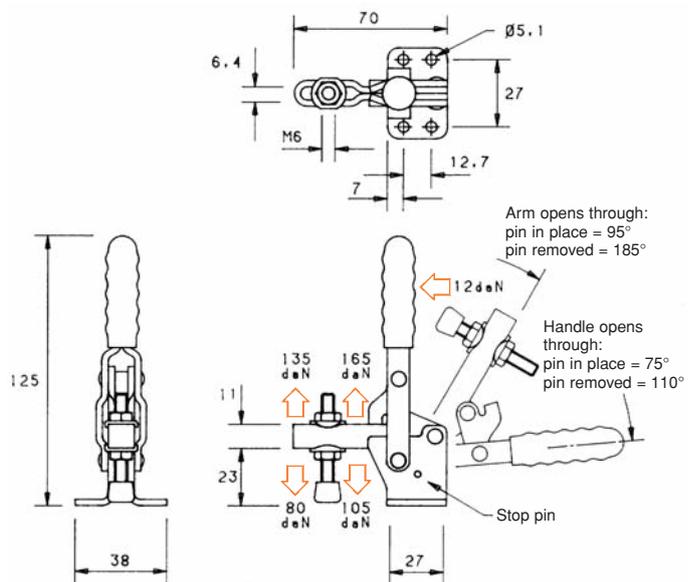
Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
FW06/12 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V150 SERIES

MODEL V150/2BL



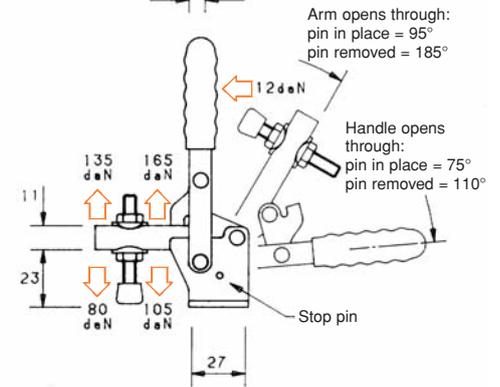
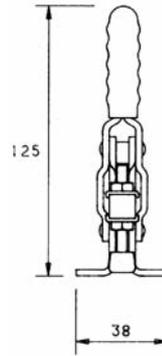
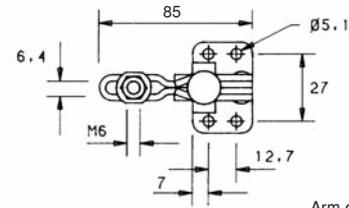
Arm:
The spindle position is adjustable along the arm. 15mm added to arm length over V150/2B model.

Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
FW06/12 Flanged washers.
See "Accessories" for other items.



V150 SERIES

MODEL V150/2BSS



Arm:
The spindle position is adjustable along the arm.

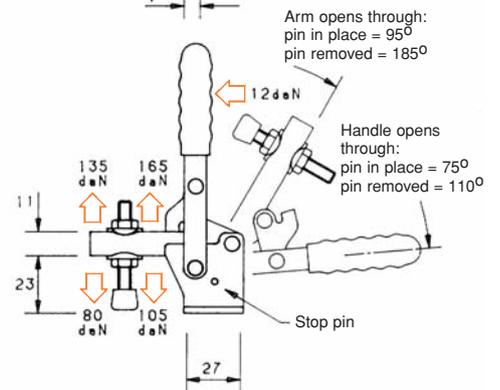
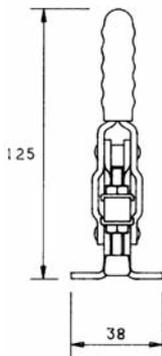
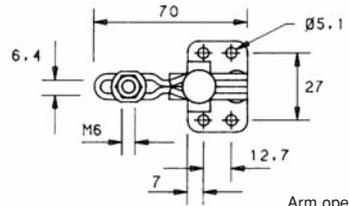
Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
Setscrew & nuts.
Neoprene cover.
Flanged washers.

Material:
BS 304 S15



V150 SERIES

MODEL V150/2C



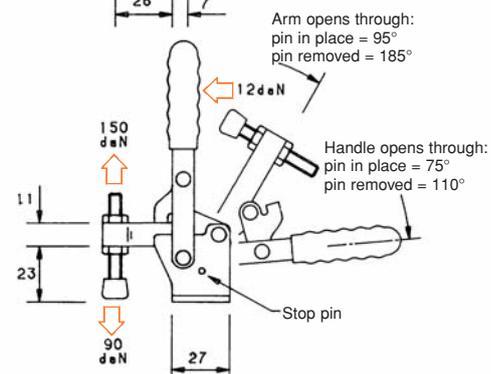
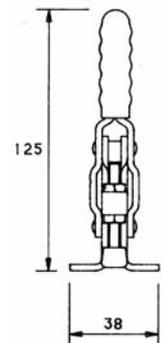
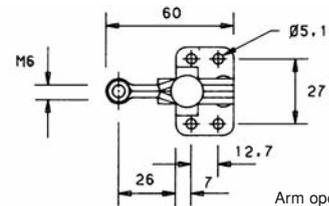
Arm:
The spindle is in a fixed position.

Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
See "Accessories" for other items.



VERTICAL CLAMPS

V200 SERIES

MODEL V200/1B



Arm:
The spindle is in a fixed position.

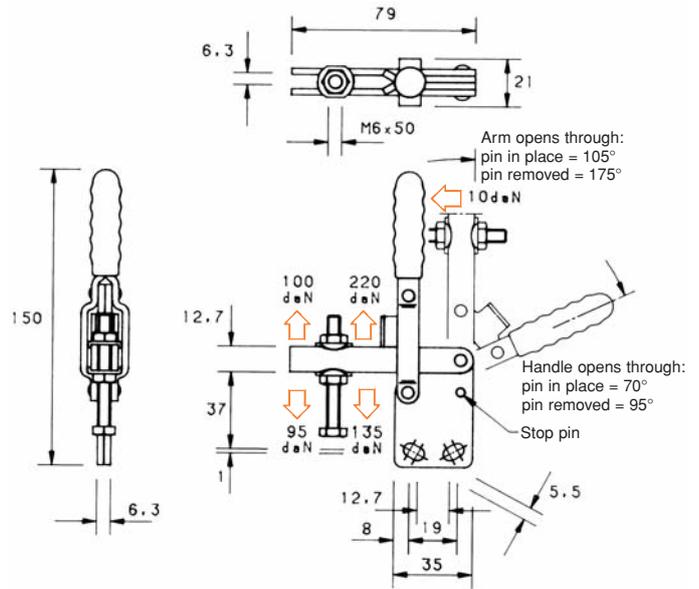
Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.15 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.

See "Accessories" for other items.



V200 SERIES

MODEL V200/1C



Arm:
The spindle is in a fixed position.

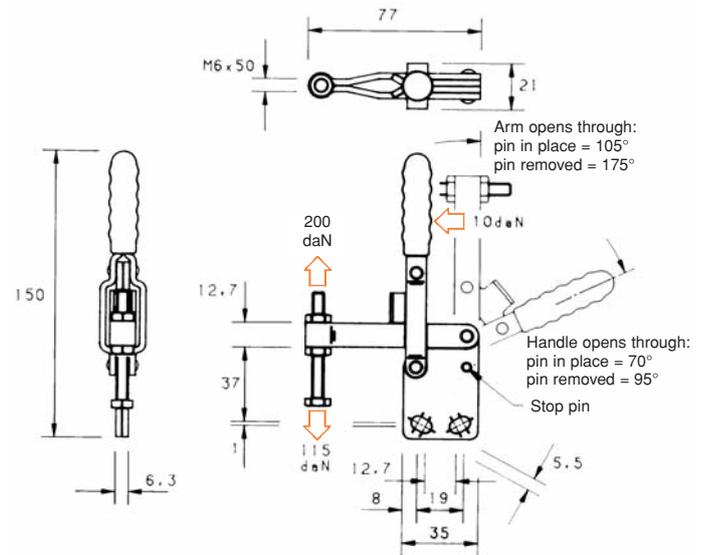
Base:
Straight.

Nominal Holding Force:
200 daN

Weight:
0.20 Kg

Supplied complete with:
MB0650 Setscrew & nuts.

See "Accessories" for other items.



V200 SERIES

MODEL V200/2B



Arm:
The spindle position is adjustable along the arm.

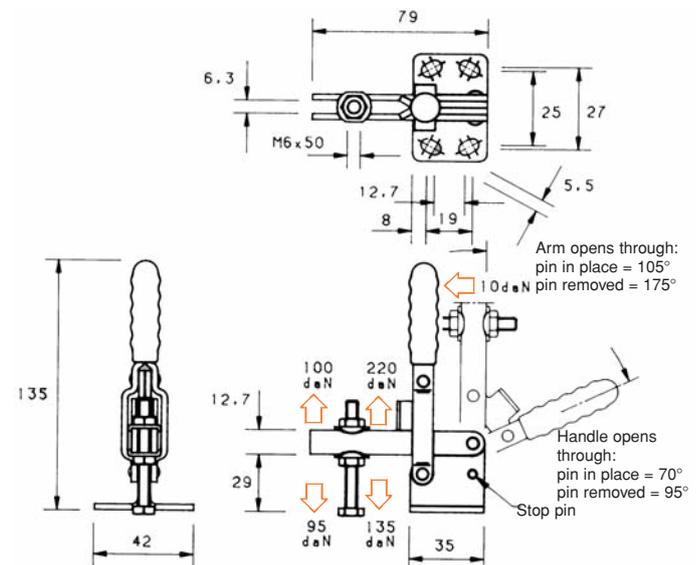
Base:
Flanged.

Nominal Holding Force:
200 daN

Weight:
0.20 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
FW06/12 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V200 SERIES

MODEL V200/2C



Arm:
The spindle is in a fixed position.

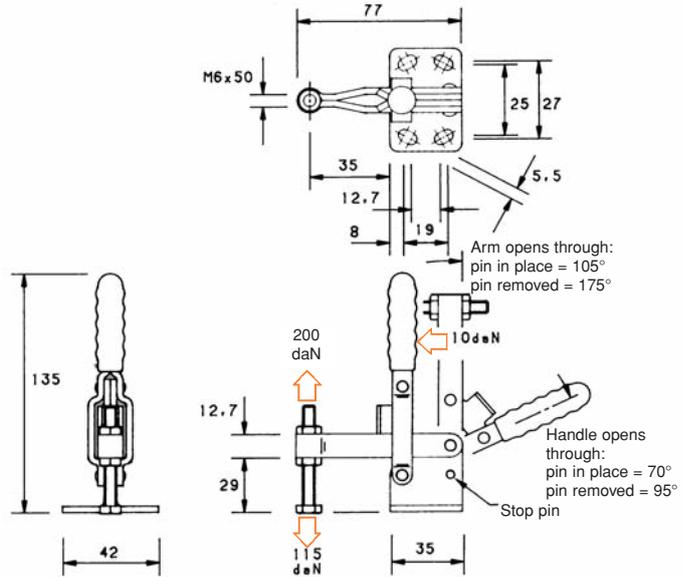
Base:
Flanged.

Nominal Holding Force:
200 daN

Weight:
0.20 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
FW06/12 Flanged washers.

See "Accessories" for other items.



V200 SERIES

MODEL V200/3B



Arm:
The spindle position is adjustable along the arm.

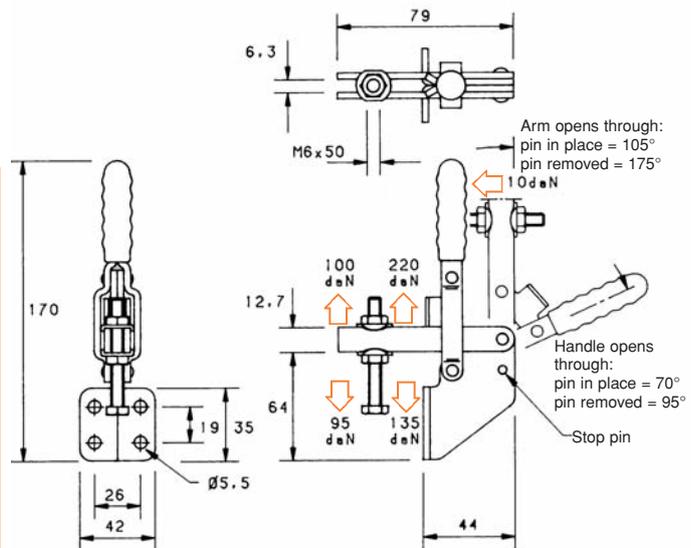
Base:
Front mounting.

Nominal Holding Force:
200 daN

Weight:
0.25 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
FW06/12 Flanged washers.

See "Accessories" for other items.



V200 SERIES

MODEL V200/3C



Arm:
The spindle is in a fixed position.

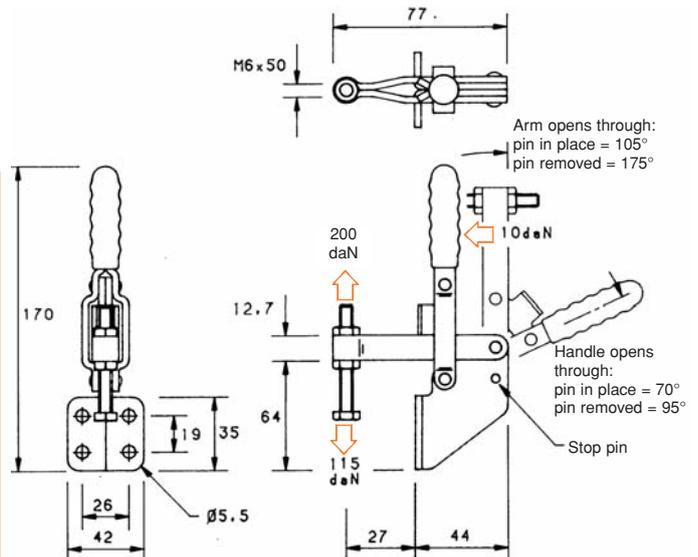
Base:
Front mounting.

Nominal Holding Force:
200 daN

Weight:
0.25 Kg

Supplied complete with:
MB0650 Setscrew & nuts.

See "Accessories" for other items.



VERTICAL CLAMPS

V250 SERIES

MODEL V250/1BSS

**STAINLESS
STEEL**



Arm:
The spindle position is adjustable along the arm.

Base:
Straight.

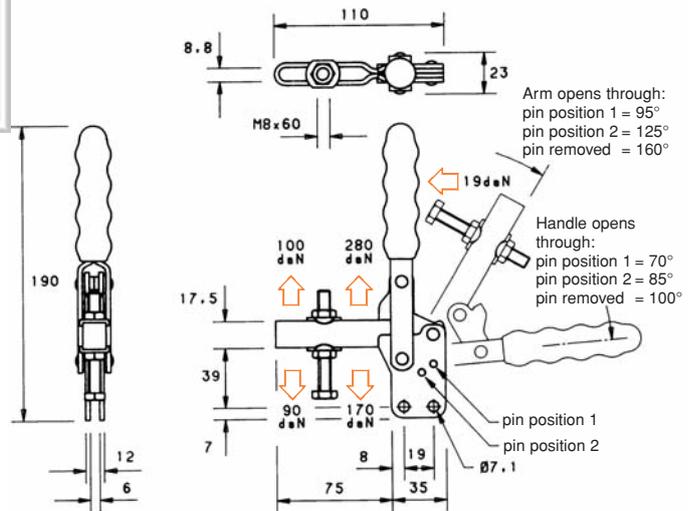
Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.

Material:
BS 304 S15

See "Accessories" for other items.



V250 SERIES

MODEL V250/1C



Arm:
The spindle is in a fixed position.

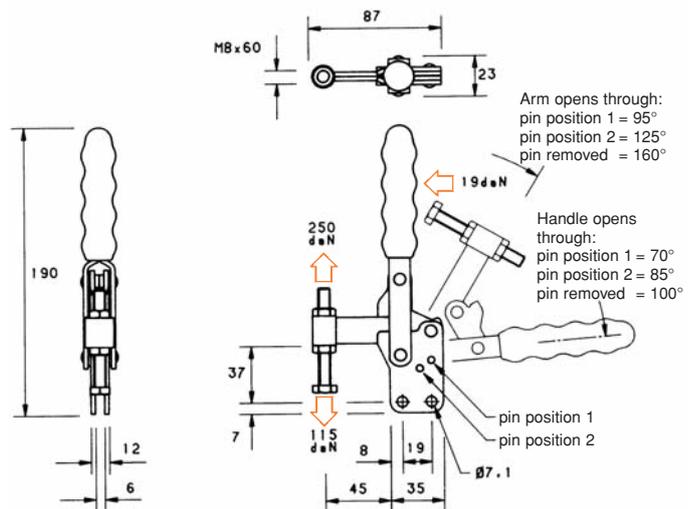
Base:
Straight.

Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
MB0860 Setscrew & nuts.

See "Accessories" for other items.



V250 SERIES

MODEL V250/2A



Arm:
2-piece "solid" arm with spindle retainer supplied loose for welding in the desired position.

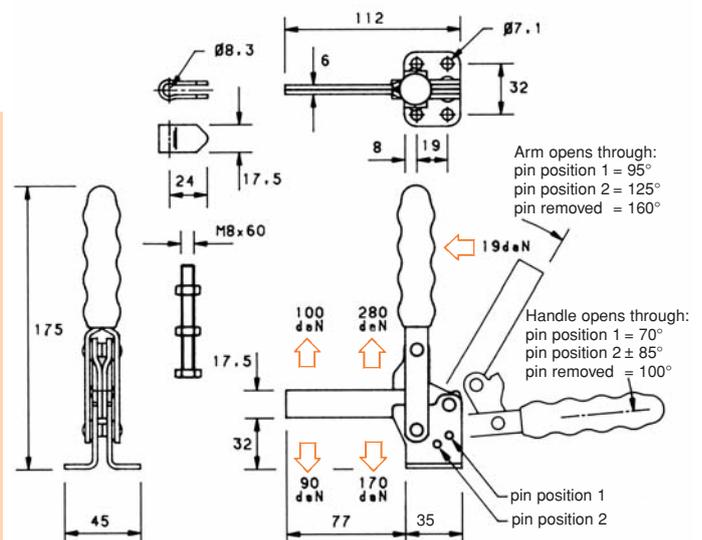
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.

See "Accessories" for other items.



VERTICAL CLAMPS

V250 SERIES

MODEL V250/2AL



Arm:
Solid arm with spindle retainer supplied loose for welding in the desired position. 10mm added to arm length over V250/2A model.

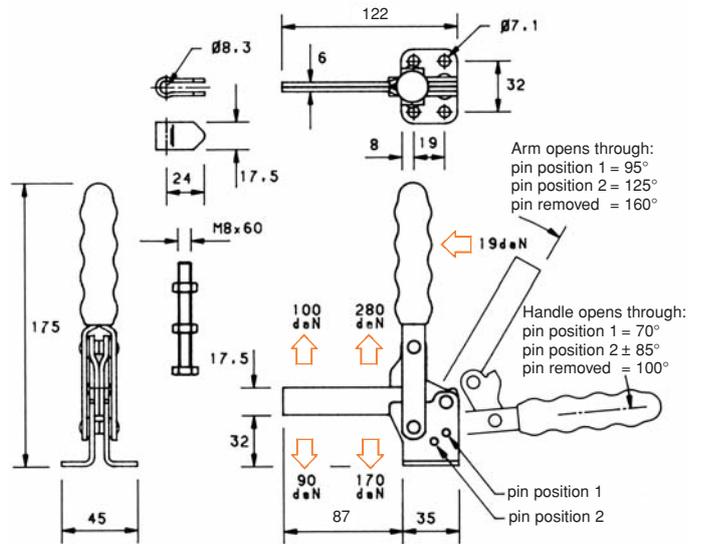
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.38 Kg

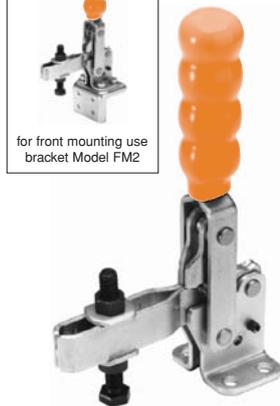
Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.

See "Accessories" for other items.



V250 SERIES

MODEL V250/2B



Arm:
The spindle position is adjustable along the arm.

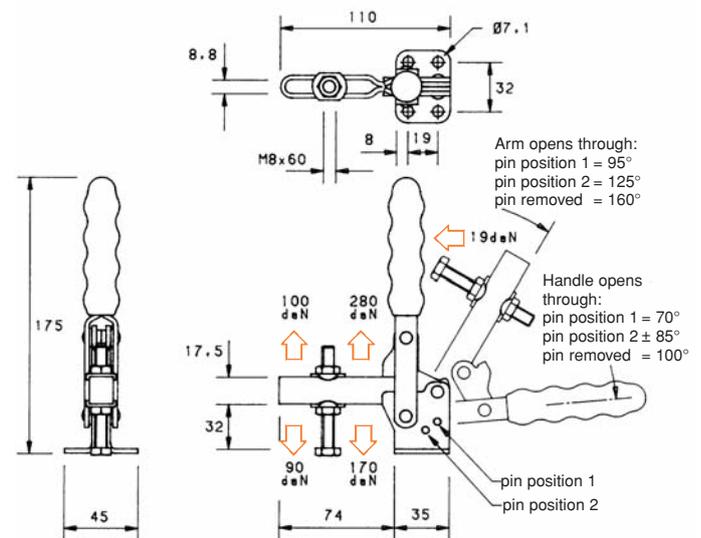
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.

See "Accessories" for other items.



V250 SERIES

MODEL V250/2BSS



Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

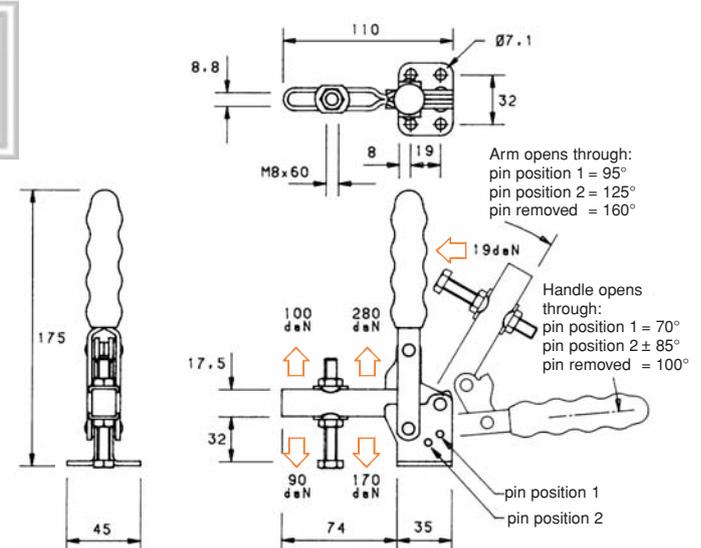
Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
Setscrew & nuts.
Flanged washers.

Material:
BS 304 S15

See "Accessories" for other items.



VERTICAL CLAMPS

V250 SERIES

MODEL V250/2C



for front mounting use
bracket Model FM2



Arm:
The spindle is in a fixed position.

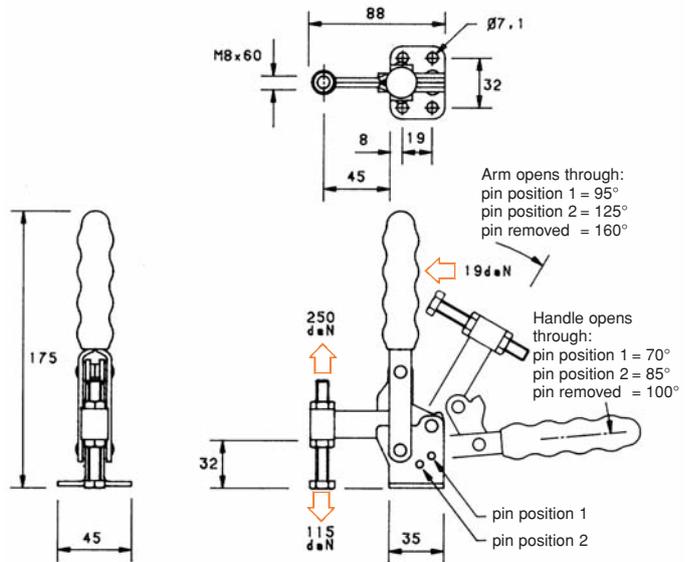
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
MB0860 Setscrew & nuts.

See "Accessories" for other items.



V300 SERIES

MODEL V300/1A



Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

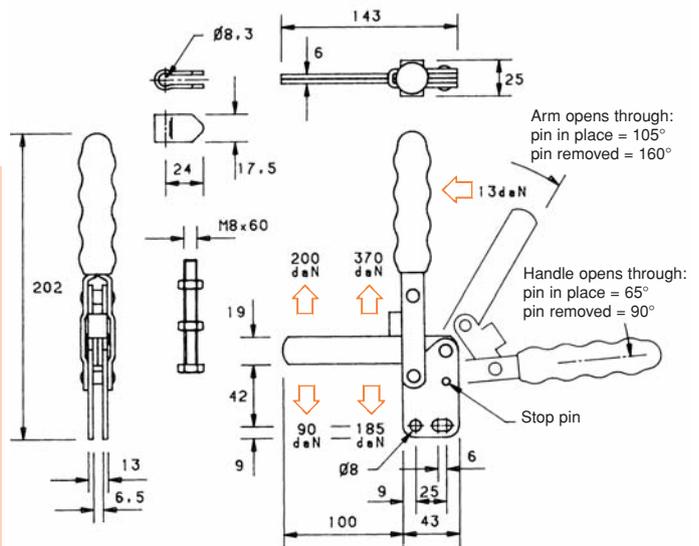
Base:
Straight.

Nominal Holding Force:
300 daN

Weight:
0.48 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.

See "Accessories" for other items.



V300 SERIES

MODEL V300/1B



for "T" Bar Accessory
order Model T250



Arm:
The spindle position is adjustable along the arm.

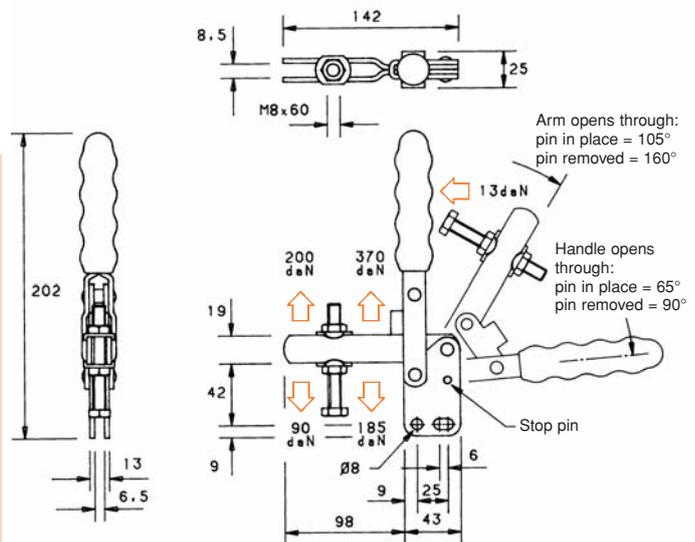
Base:
Straight.

Nominal Holding Force:
300 daN

Weight:
0.48 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V300 SERIES

MODEL V300/2C



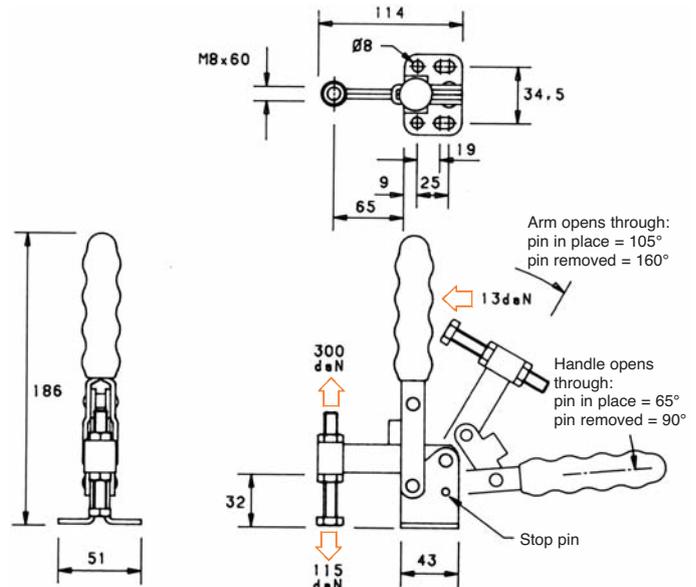
Arm:
The spindle is in a fixed position.

Base:
Flanged.

Nominal Holding Force:
300 daN

Weight:
0.48 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
See "Accessories" for other items.



V300 SERIES

MODEL V300/3A



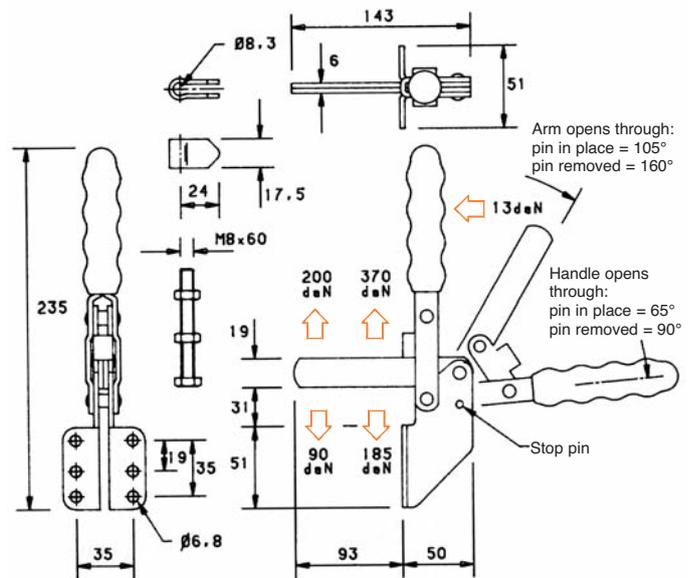
Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

Base:
Front mounting.

Nominal Holding Force:
300 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.
See "Accessories" for other items.



V300 SERIES

MODEL V300/3B



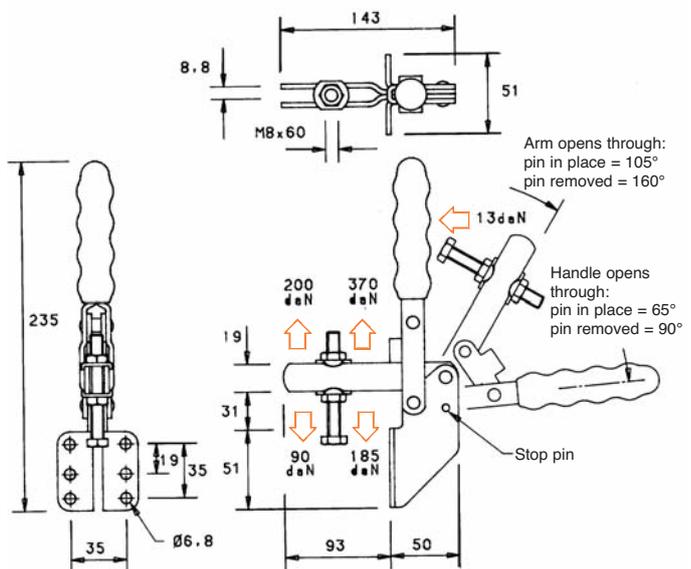
Arm:
The spindle position is adjustable along the arm.

Base:
Front mounting.

Nominal Holding Force:
300 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.
See "Accessories" for other items.



VERTICAL CLAMPS

V300 SERIES

MODEL V300/3C



Arm:
The spindle is in a fixed position.

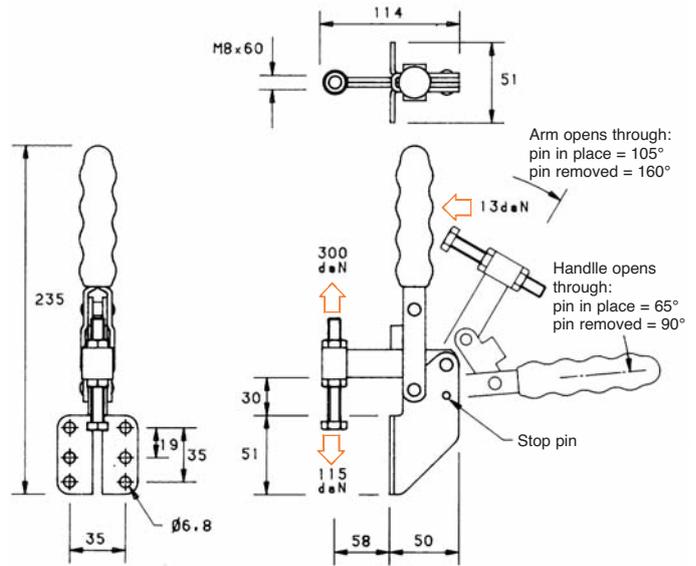
Base:
Front mounting.

Nominal Holding Force:
300 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.

See "Accessories" for other items.



V350 SERIES

MODEL V350/1A



Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

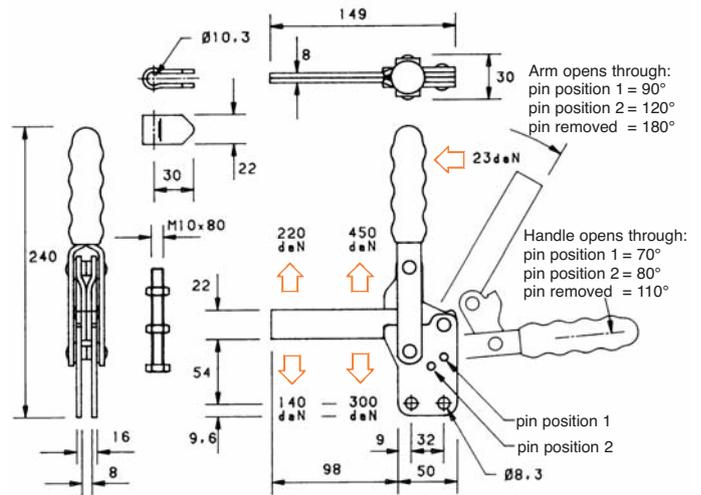
Base:
Straight.

Nominal Holding Force:
350 daN

Weight:
0.80 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
R/10 Spindle retainer.

See "Accessories" for other items.



V350 SERIES

MODEL V350/1B



for "T" Bar Accessory
order Model T350



Arm:
The spindle position is adjustable along the arm.

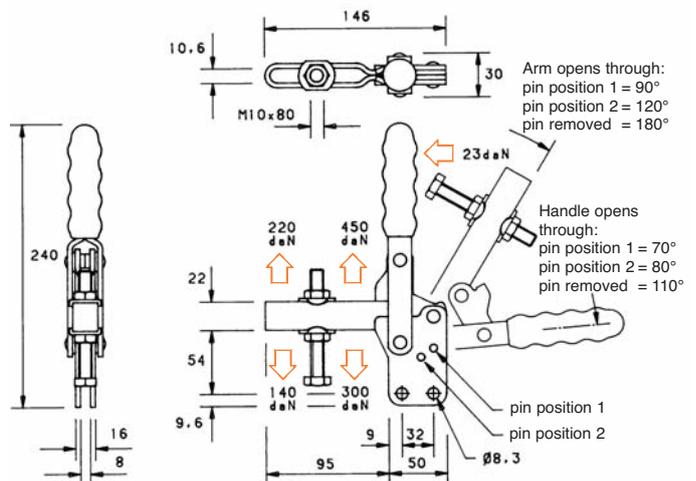
Base:
Straight.

Nominal Holding Force:
350 daN

Weight:
0.80 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
FW10/20 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V350 SERIES

MODEL V350/1C



Arm:
The spindle is in a fixed position.

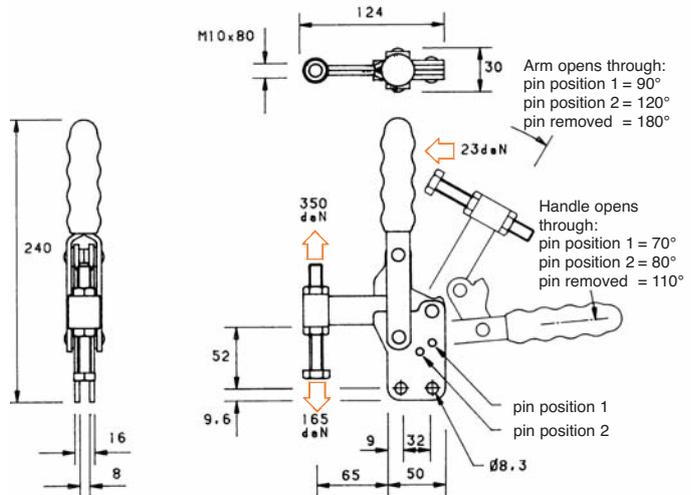
Base:
Straight.

Nominal Holding Force:
350 daN

Weight:
0.75 Kg

Supplied complete with:
MB1080 Setscrew & nuts.

See "Accessories" for other items.



V350 SERIES

MODEL V350/2A



for front mounting use
bracket Model FM3



Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

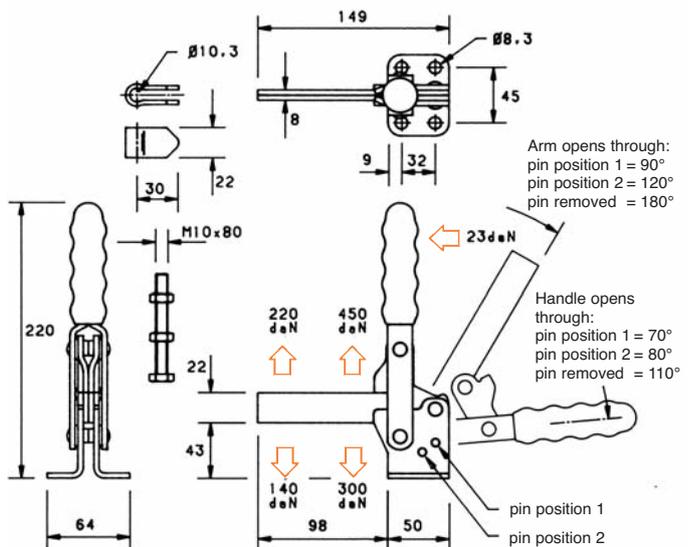
Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.80 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
R/10 Spindle retainer.

See "Accessories" for other items.

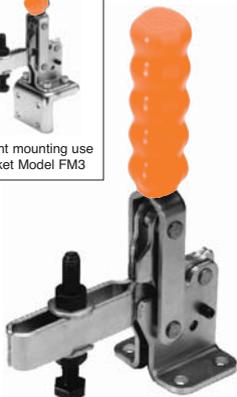


V350 SERIES

MODEL V350/2B



for front mounting use
bracket Model FM3



Arm:
The spindle position is adjustable along the arm.

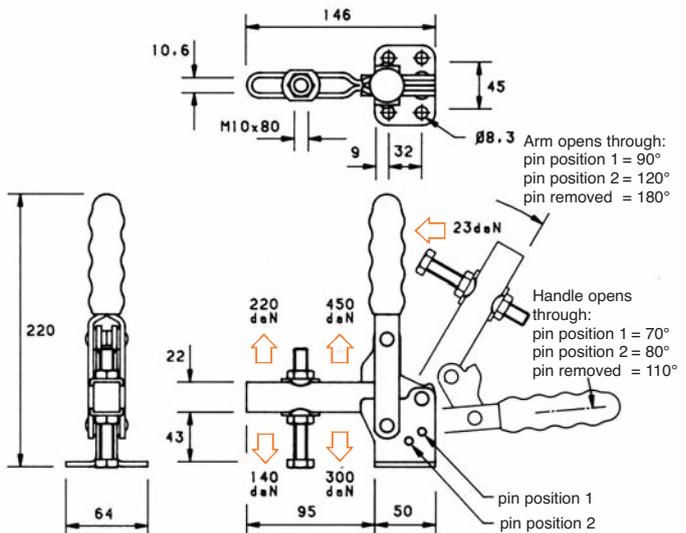
Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.80 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
FW10/20 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V350 SERIES

MODEL V350/2C



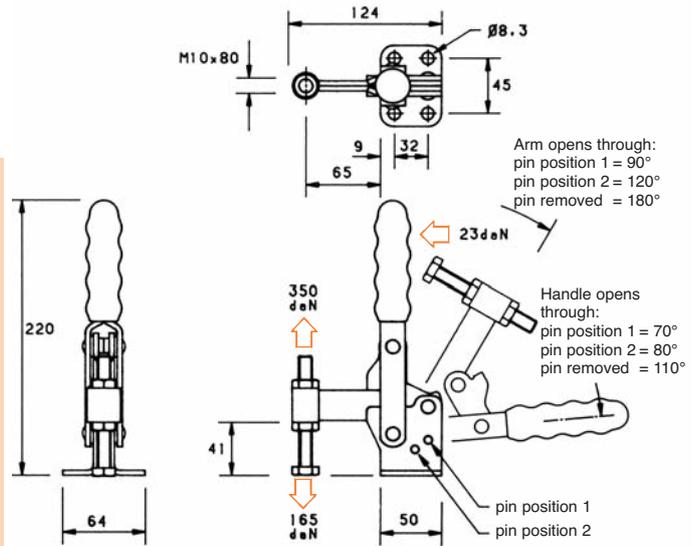
Arm:
The spindle is in a fixed position.

Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.75 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
See "Accessories" for other items.



V450 SERIES

MODEL V450/1A



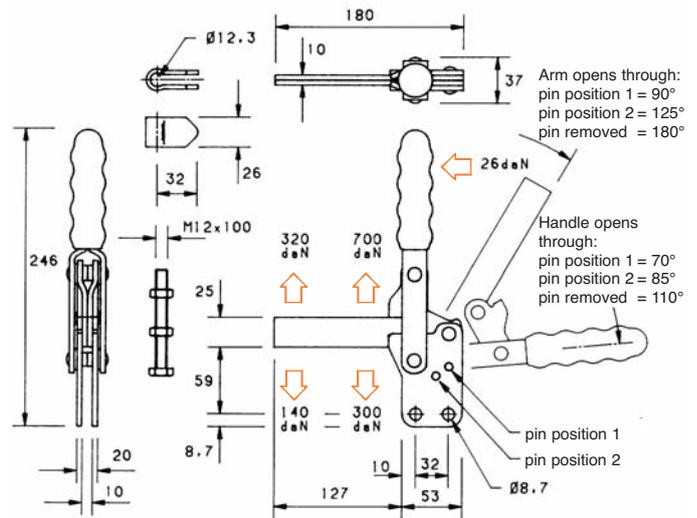
Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

Base:
Straight.

Nominal Holding Force:
450 daN

Weight:
1.25 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
R/12 Spindle retainer.
See "Accessories" for other items.



V450 SERIES

MODEL V450/1B



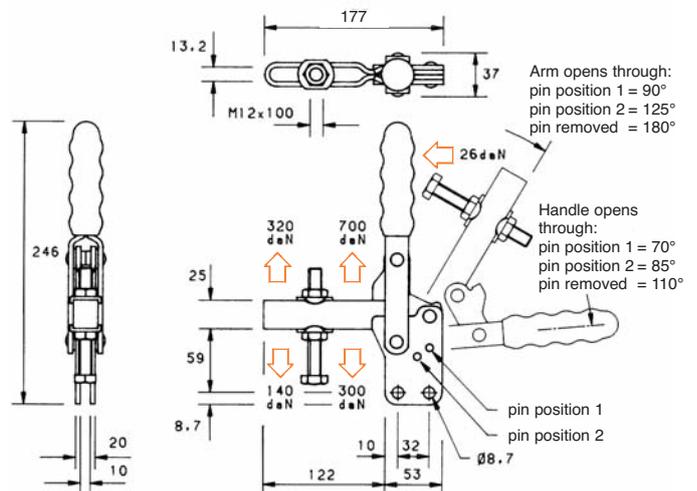
Arm:
The spindle position is adjustable along the arm.

Base:
Straight.

Nominal Holding Force:
450 daN

Weight:
1.35 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
FW12/23 Flanged washers.
See "Accessories" for other items.



VERTICAL CLAMPS

V450 SERIES

MODEL V450/1C



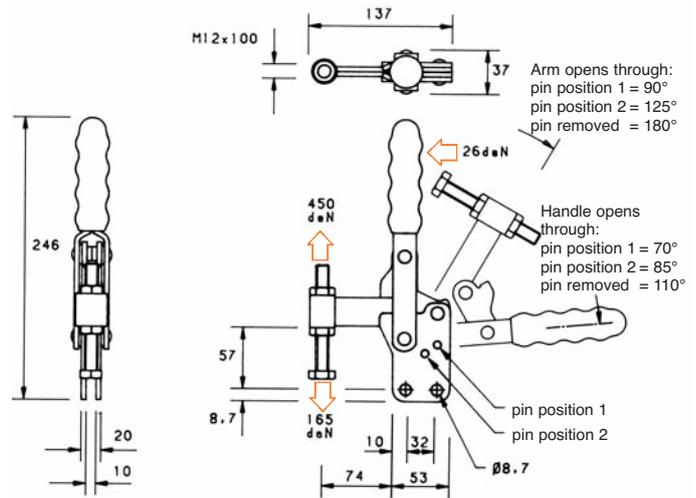
Arm:
The spindle is in a fixed position.

Base:
Straight.

Nominal Holding Force:
450 daN

Weight:
1.30 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
See "Accessories" for other items.

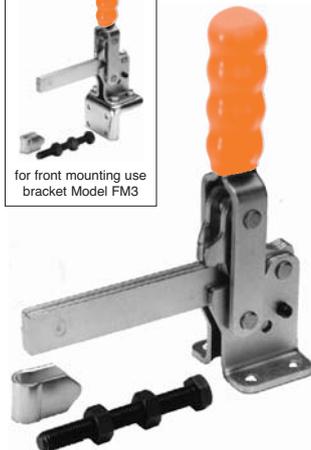


V450 SERIES

MODEL V450/2A



for front mounting use bracket Model FM3



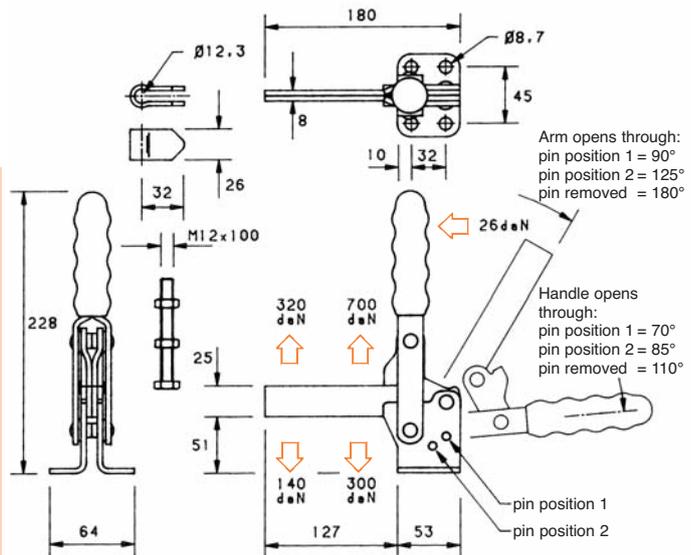
Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

Base:
Flanged.

Nominal Holding Force:
450 daN

Weight:
1.25 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
R/12 Spindle retainer.
See "Accessories" for other items.



V450 SERIES

MODEL V450/2B



for front mounting use bracket Model FM3



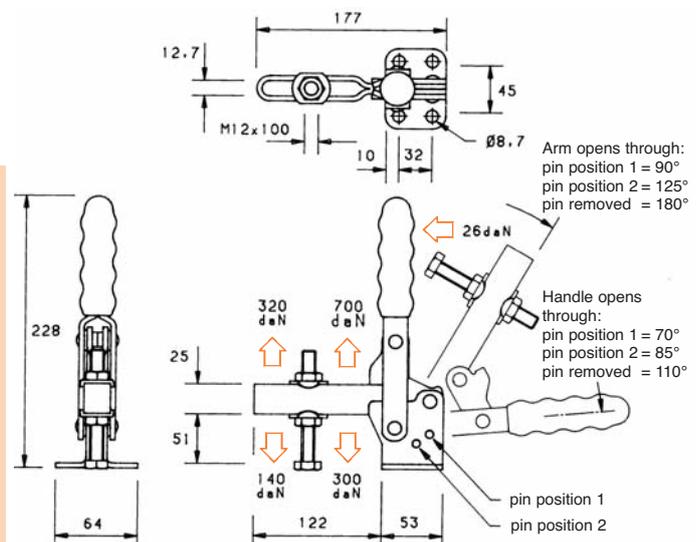
Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
450 daN

Weight:
1.35 Kg

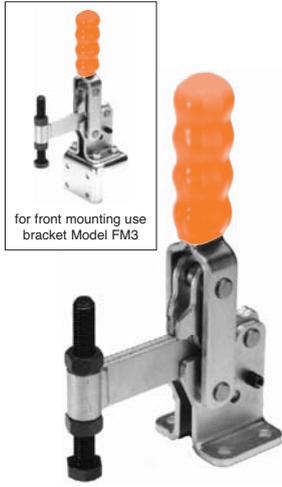
Supplied complete with:
MB12100 Setscrew & nuts.
FW12/23 Flanged washers.
See "Accessories" for other items.



VERTICAL CLAMPS

V450 SERIES

MODEL V450/2C



for front mounting use
bracket Model FM3

Arm:

The spindle is in a fixed position.

Base:

Flanged.

Nominal Holding Force:

450 daN

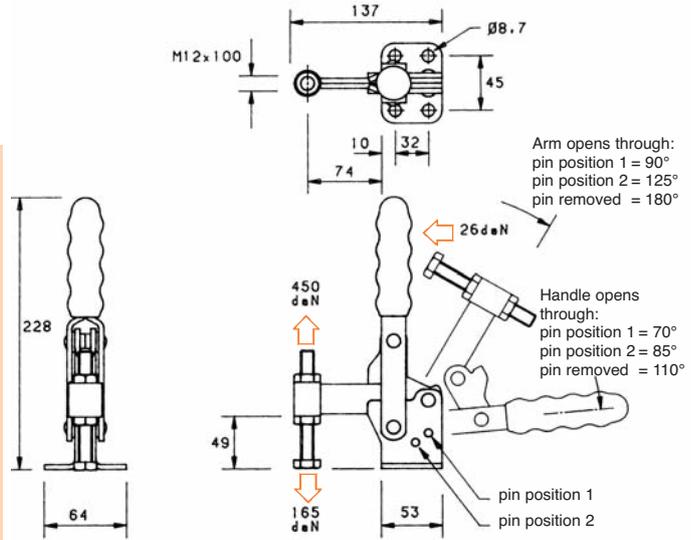
Weight:

1.30 Kg

Supplied complete with:

MB12100 Setscrew & nuts.

See "Accessories" for other items.



V550 SERIES

MODEL V550/1A



Arm:

Solid with spindle retainer supplied loose for welding in the desired position.

Base:

Straight.

Nominal Holding Force:

550 daN

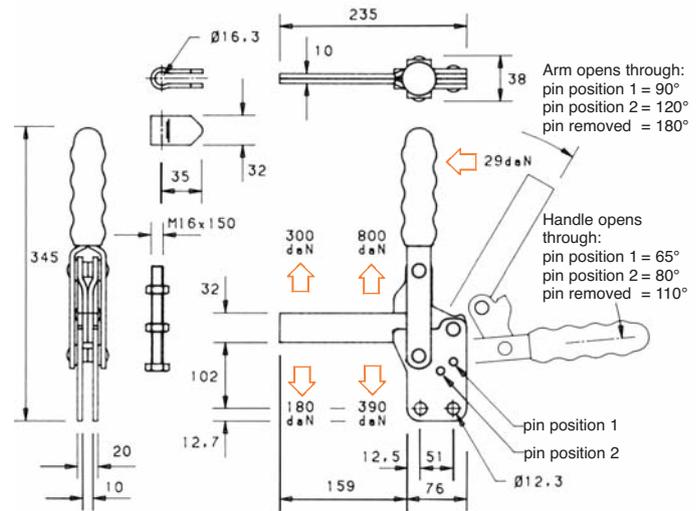
Weight:

2.20 Kg

Supplied complete with:

MB16150 Setscrew & nuts.
R/16 spindle retainer.

See "Accessories" for other items.



V550 SERIES

MODEL V550/1B



Arm:

The spindle is adjustable along the arm.

Base:

Straight.

Nominal Holding Force:

550 daN

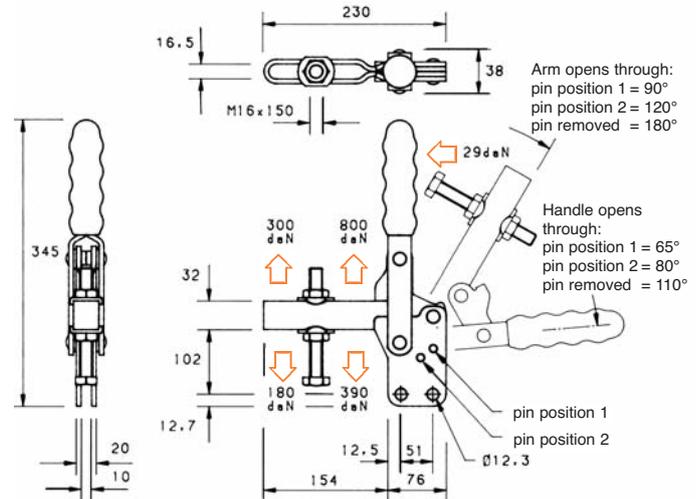
Weight:

2.40 Kg

Supplied complete with:

MB16150 Setscrew & nuts.
FW16/27 Flanged washers.

See "Accessories" for other items.



VERTICAL CLAMPS

V550 SERIES

MODEL V550/1C



Arm:
The spindle is in a fixed position.

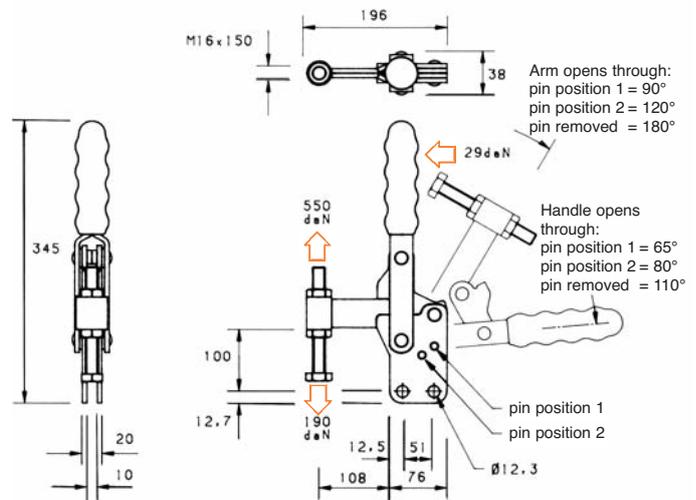
Base:
Straight.

Nominal Holding Force:
550 daN

Weight:
2.30 Kg

Supplied complete with:
MB16150 Setscrew & nuts.

See "Accessories" for other items.



V550 SERIES

MODEL V550/2A



Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

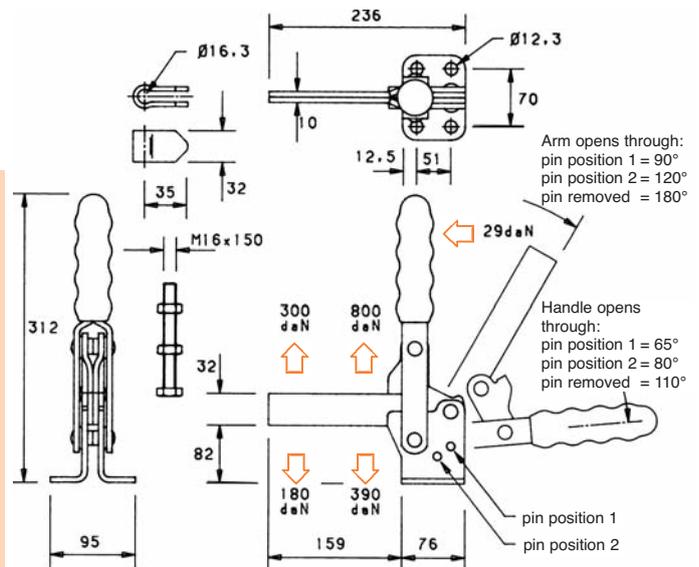
Base:
Flanged.

Nominal Holding Force:
550 daN

Weight:
2.20 Kg

Supplied complete with:
MB16150 Setscrew & nuts.
R/16 Spindle retainer.

See "Accessories" for other items.



V550 SERIES

MODEL V550/2B



Arm:
The spindle is adjustable along the arm.

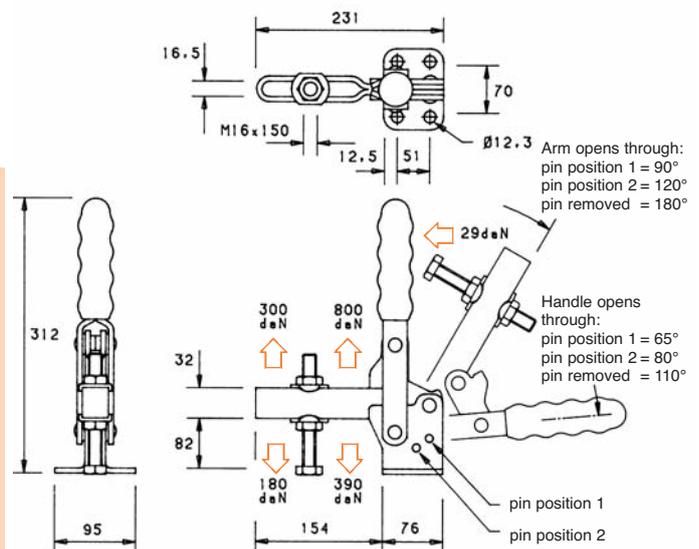
Base:
Flanged.

Nominal Holding Force:
550 daN

Weight:
2.40 Kg

Supplied complete with:
MB16150 Setscrew & nuts.
FW16/27 Flanged washer.

See "Accessories" for other items.



VERTICAL CLAMPS

V550 SERIES

MODEL V550/2C



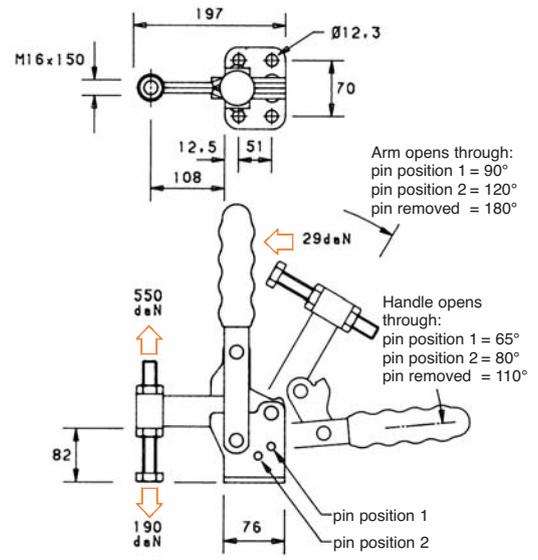
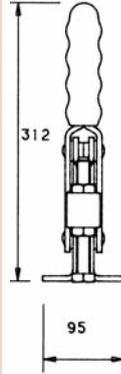
Arm:
The spindle is in a fixed position.

Base:
Flanged.

Nominal Holding Force:
550 daN

Weight:
2.30 Kg

Supplied complete with:
MB16150 Setscrew & nuts.
See "Accessories" for other items.





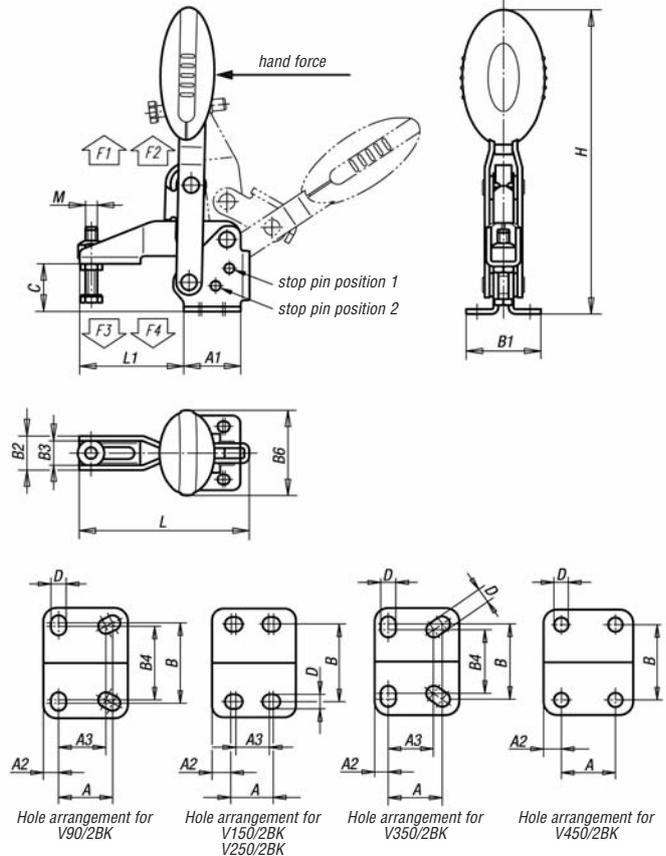
BLACK OXIDIZED NITRO CARBURIZED VERTICAL CLAMPS

- Steel construction with polyamide handle
- Nitro carburized and black oxidized finish
- High quality bushing tolerances

VERTICAL CLAMPS

VERTICAL MODELS

V90/2BK - V450/2BK



Material:
Steel, Polyamide handle.

Surface finish:
Nitro carburized and black oxidized.

Supplied complete with:
Setscrew and nuts as shown.

Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Supplied complete with:
Setscrew & Nut.

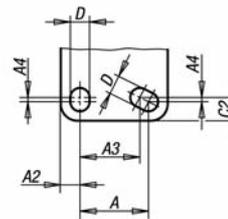
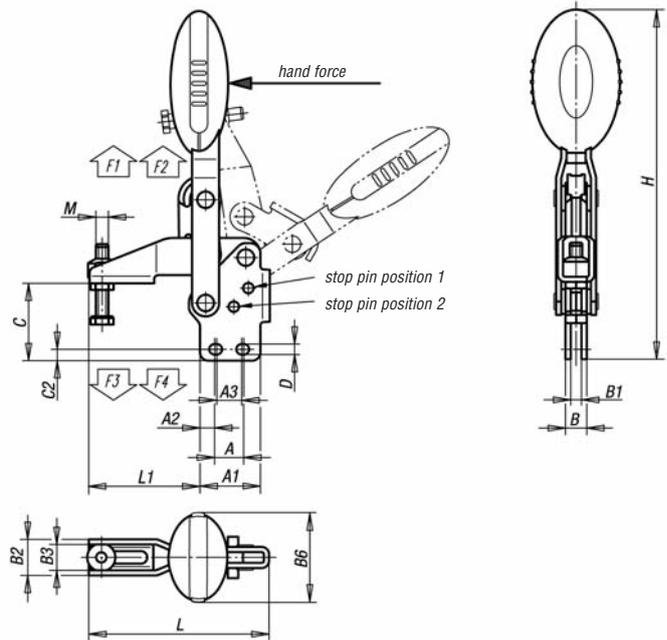
Order No	Arm opens through, Position 1	Arm opens through, Position 2	Arm opens through, pin removed	Handle opens through, Position 1	Handle opens through, Position 2	Handle opens through, pin removed	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F3 daN
V90/2BK	100°	-	131°	64°	-	77°	10	75	105	62	75
V150/2BK	56°	83°	156°	46°	56°	84°	16	135	165	92	105
V250/2BK	13°	93°	157°	16°	61°	86°	19	200	280	94	135
V350/2BK	6°	97°	175°	19°	59°	91°	25	250	450	150	280
V450/2BK	11°	88°	163°	24°	60°	91°	30	300	550	140	280

Order No	M	A	A1	A2	A3	B	B1	B2	B3	B4	B6	C	D	H	L	L1
V90/2BK	M5x25	16	25	4.5	14	24	33	13.2	9.1	22	22.5	19.1	4.5	108.5	63.5	35.0
V150/2BK	M6x35	14	29	7	12	27	38	17.5	12.4	-	43.5	24.7	5.5	156.2	86.5	53.0
V250/2BK	M8x45	21	39	9	19	32	45	20.6	15.5	-	41.5	32.7	6.8	183.9	107.0	62.0
V350/2BK	M10x55	32	50	8	27	45	64	25.5	18.4	38	47	38.7	9	222.9	153.0	95.0
V450/2BK	M12x70	32	53	10.5	-	45	63	28	20.9	-	47	46.7	8.8	242.4	173.5	113.5

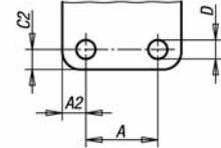
VERTICAL CLAMPS

VERTICAL MODELS

V90/1BK - V450/1BK



Hole arrangement for
V90/1BK
V350/1BK



Hole arrangement for
V450/1BK

Material:
Steel, Polyamide handle.

Surface finish:
Nitro carburized and black oxidized.

Arm:
The spindle position is adjustable along the arm.

Base:
Straight.

Supplied complete with:
Setscrew & Nut.

Order No	Arm opens through, Position 1	Arm opens through, Position 2	Arm opens through, pin removed	Handle opens through, Position 1	Handle opens through, Position 2	Handle opens through, pin removed	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F3 daN
V90/1BK	100°	-	131°	64°	-	77°	10	75	105	62	75
V150/1BK	56°	83°	156°	46°	56°	84°	16	135	165	92	105
V250/1BK	13°	93°	157°	26°	61°	86°	19	200	280	94	135
V350/1BK	6°	97°	175°	19°	59°	91°	25	250	450	150	280
V450/1BK	11°	88°	163°	24°	60°	91°	28	300	550	140	280

Order No	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	L	L1
V90/1BK	M5x25	16	25	4.5	14	1	8.1	4.1	13.2	9.1	22.5	30.8	5.5	4.5	120.3	63.5	35.0
V150/1BK	M6x35	14	29	7	12	-	10.2	5.2	17.5	12.4	43.5	37.6	5.5	5.5	169.1	86.5	53.0
V250/1BK	M8x45	21	39	9	19	-	10.2	5.2	20.6	15.5	41.5	49	6.5	6.8	200.1	107.0	62.0
V350/1BK	M10x55	32	50	8	27	3.5	14.1	7.1	25.5	18.4	47	62.3	13	9	247.4	153.0	95.0
V450/1BK	M12x70	32	53	10.5	-	-	14.1	7.1	28	20.9	47	69.8	9	8.8	265.5	173.5	113.5



VA SERIES HEAVY DUTY VERTICAL CLAMPS

- **Features:**

All VA series clamps are designed to be adaptable and durable, and to withstand abuse in heavy duty applications.

The new VA300 series helps fill the gap at the smaller end of the range. Only manufactured at Brauer, they have a phosphated corrosion resistant finish.

Models VA300S, VA700S, VA1200S and VA2400S comprise a basic toggle mechanism onto which can be welded at the desired angle the clamping arm and handle which can be specified as accessories. These models feature a swivel base which is welded at the desired angle to the mechanism, and then welded either directly to a fixture, or alternatively to a base which is offered as an accessory for bolt mounting.

Models VA300T, VA700T, VA1200T, and VA2400T share all the features of the above models, but with a straight base which can be directly bolt mounted or welded to a fixture, or alternatively to the accessory base for bolt mounting.

Models VA300T, VA700/1A, VA1200/1A and VA2400/1A are similar to the type 'T' models, but with a handle with a PVC grip fitted vertically, and a longer stub clamping arm which can be modified and the spindle retainer supplied welded in the desired position.

Models VA300T, VA700/2C, VA1200/2C and VA2400/2C feature a flanged base with holes for bolt mounting, a handle with PVC grip fitted vertically, and a fixed spindle or setscrew position which does not require welding.

- **Specification:**

The main components are of steel, the forked lower handles being precision alloy steel castings, and all axles of hardened steel running in either hardened bushes or directly in the close-toleranced holes of hardened parts. The clamps are finished chemi-black.

- **Installation:**

When welding the swivel base of the type 'S' models to the clamp mechanism ensure that the full length of the adjoining surfaces are welded. Ensure that welding spatter does not enter the slots which form the forward stop of the mechanism.

The handle pivot bolt may be adjusted if required to remove excess free play from the mechanism.

Frequent lubrication will extend the life of the clamp.

HEAVY-DUTY VERTICAL CLAMPS

VA300 SERIES
MODEL VA300/S



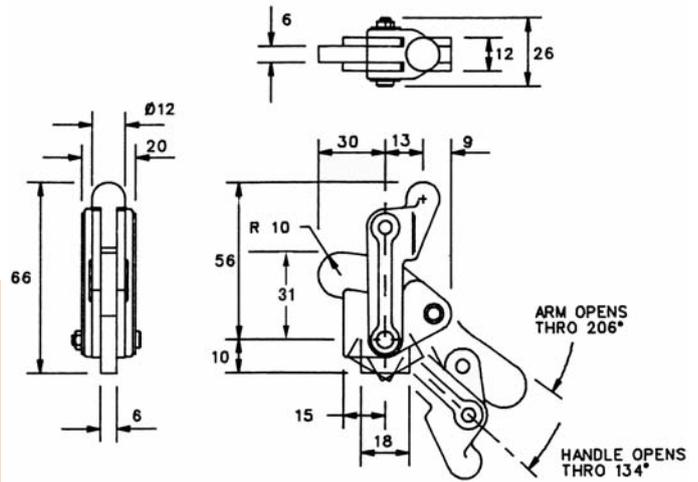
Arm:
Stub nose for welded extension.

Base:
Swivel for welding in the desired position.

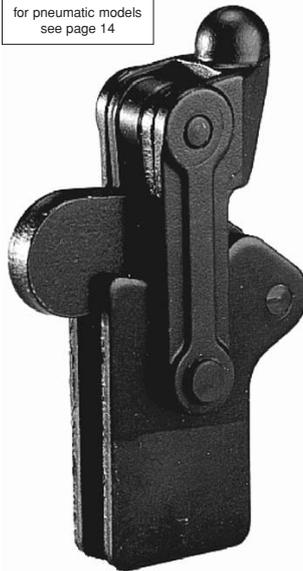
Nominal Holding Force:
300 daN

Weight:
0.15 Kg

See "Accessories" for other items.



VA300 SERIES
MODEL VA300/T



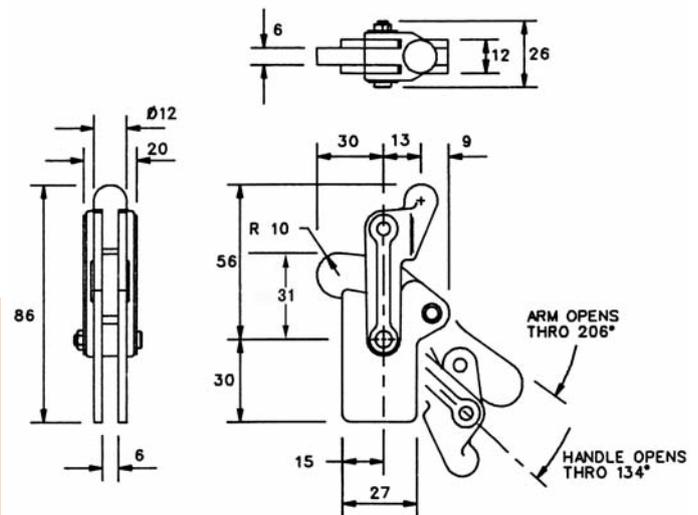
Arm:
Stub nose for welded extension.

Base:
Straight.

Nominal Holding Force:
300 daN

Weight:
0.15 Kg

See "Accessories" for other items.



HEAVY-DUTY VERTICAL CLAMPS

VA300 SERIES
MODEL VA300/2S



for pneumatic models
see page 14



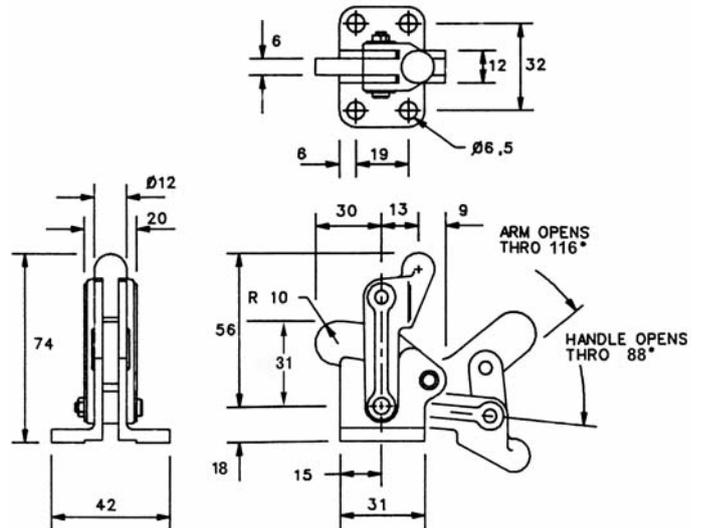
Arm:
Stub nose for welded extension.

Base:
Flanged.

Nominal Holding Force:
300 daN

Weight:
0.20 Kg

See "Accessories" for other items.



VA300 SERIES
MODEL VA300/1B



for pneumatic models
see page 14



Arm:
The spindle is adjustable along the arm.

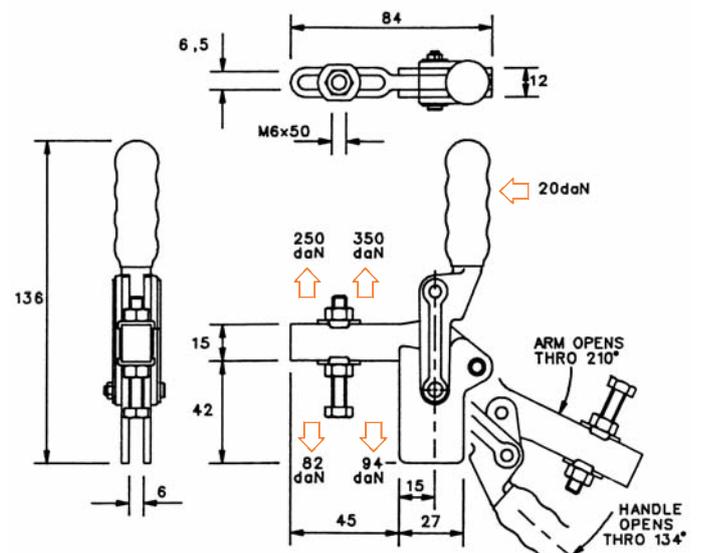
Base:
Straight.

Nominal Holding Force:
300 daN

Weight:
0.25 Kg

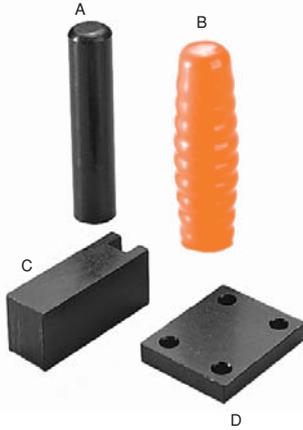
Supplied complete with:
MB0650 Set screw & nuts.
FW 06/12 Flanged washer.

See "Accessories" for other items.



HEAVY-DUTY VERTICAL CLAMPS

VA300 SERIES ACCESSORIES

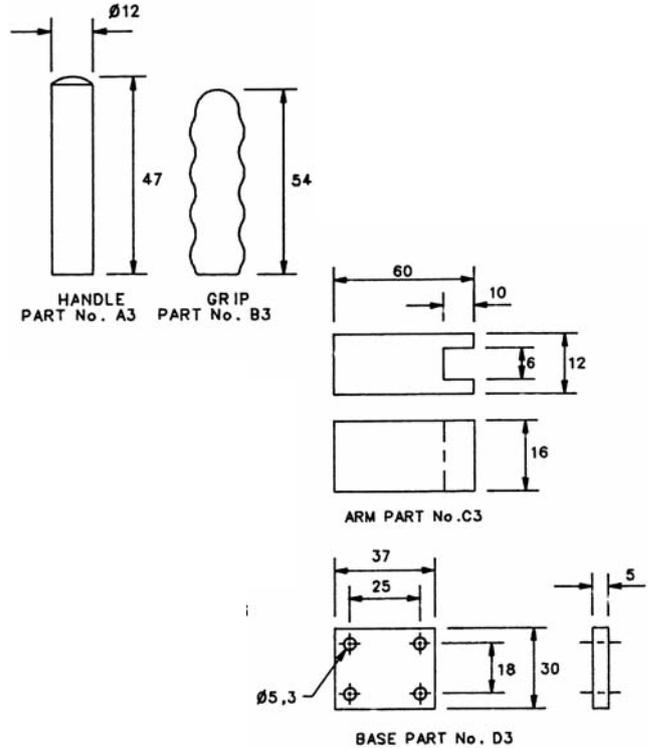


Model A3 Handle: Weight: 0.056 Kg
For welding at the desired angle to VA300S & VA300T.

Model B3 Grip: Weight: 0.011 Kg
To fit A3 handle.

Model C3 Arm: Weight: 0.083 Kg
For extending the stub arms of VA300S & VA300T.

Model D3 Base: Weight: 0.040 Kg
For bolt mounting VA300S & VA300T.

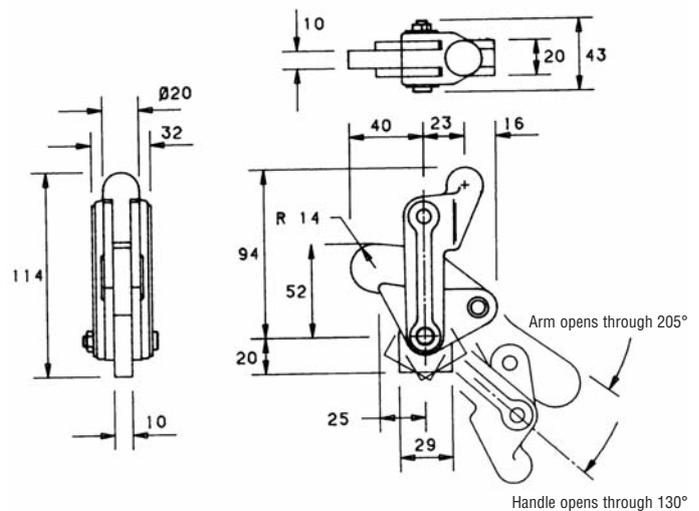


VA700 SERIES MODEL VA700S

CLAMPING PRODUCTS



Arm: Stub nose for welded extensions.
Base: Swivel for welding in the desired position.
Nominal Holding Force: 700 daN
Weight: 0.70 Kg
See "Features and installation information" page for installation instructions.
See "Accessories" for other items.



HEAVY-DUTY VERTICAL CLAMPS

VA700 SERIES MODEL VA700T



Arm:
Stub nose for welded
extensions.

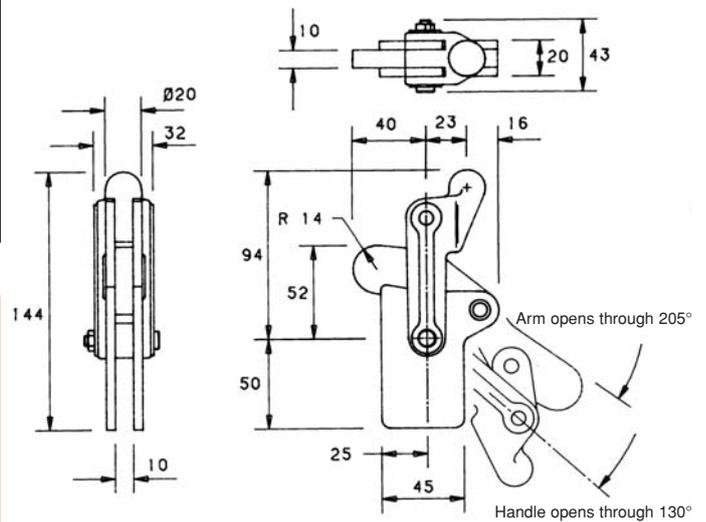
Base:
Straight.

Nominal Holding Force:
700 daN

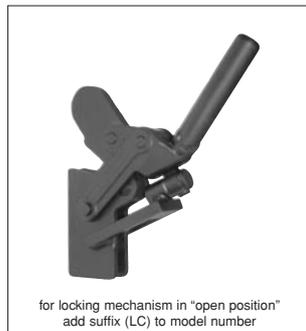
Weight:
0.80 Kg

See "Features and installation
information" page for installation
instructions.

See "Accessories" for other
items.



VA700 SERIES MODEL VA700/1A



Arm:
Solid arm.

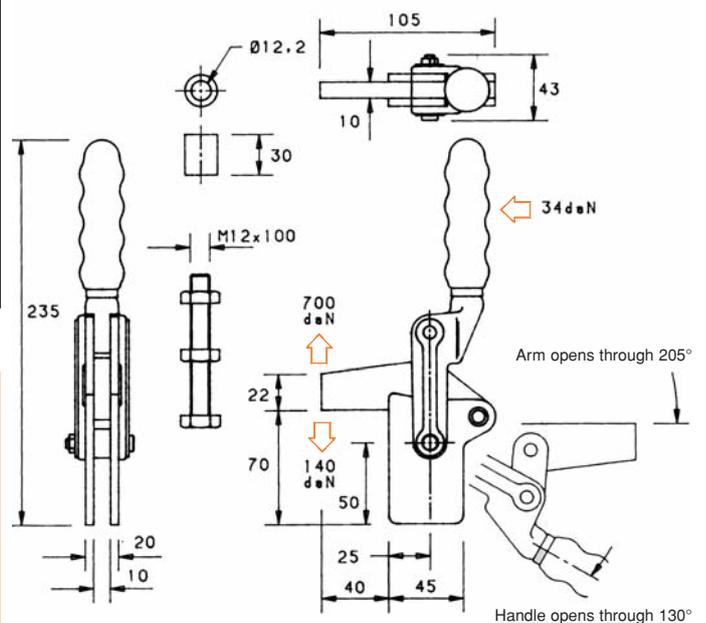
Base:
Straight.

Nominal Holding Force:
700 daN

Weight:
1.10 Kg

Supplied complete with:
Spindle retainer.
MB12100 Setscrew & nuts.

See "Accessories" for other
items.

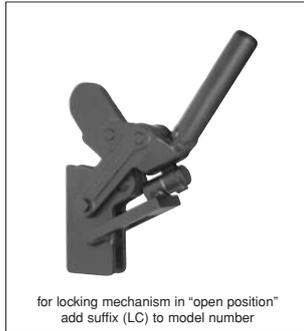


HEAVY-DUTY VERTICAL CLAMPS

VA700 SERIES MODEL VA700/2C



for pneumatic models
see page 14



for locking mechanism in "open position"
add suffix (LC) to model number



Arm:
The spindle is in a fixed position.

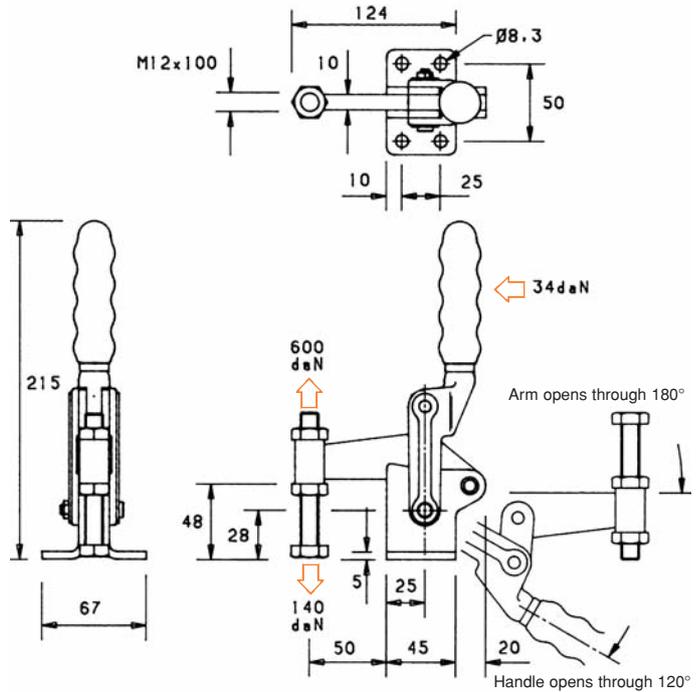
Base:
Flanged.

Nominal Holding Force:
700 daN

Weight:
1.25 Kg

Supplied complete with:
MB12100 Setscrew & nuts.

See "Accessories" for other items.



VA700 SERIES MODEL VA700TD



for pneumatic models
see page 14



for locking mechanism in "open position"
add suffix (LC) to model number



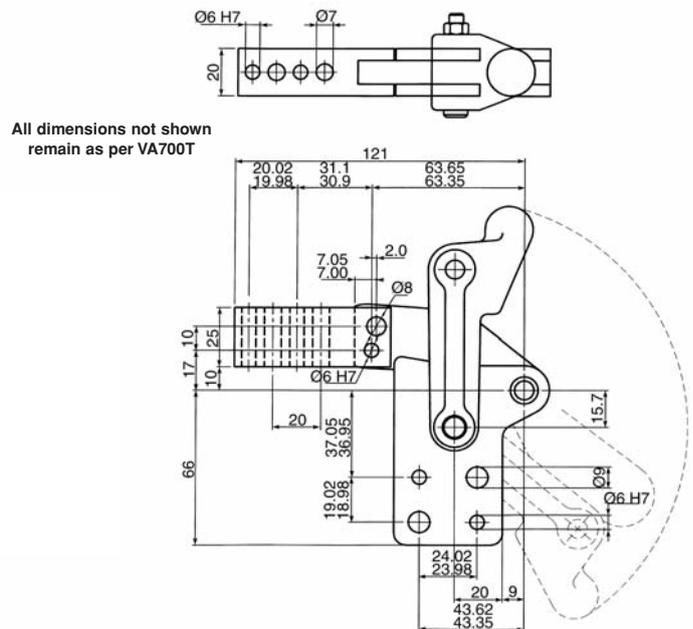
Arm:
Stub nose with mounting holes.

Base:
Straight with mounting holes.

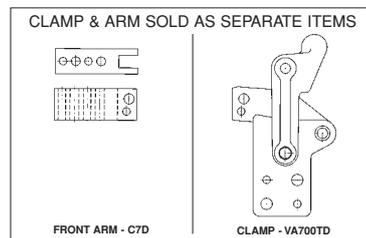
Nominal Holding Force:
700 daN

Weight:
1.01kg

See "Accessories" for other items.

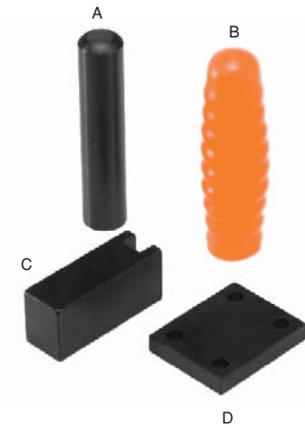


All dimensions not shown
remain as per VA700T



HEAVY-DUTY VERTICAL CLAMPS

VA700 SERIES ACCESSORIES

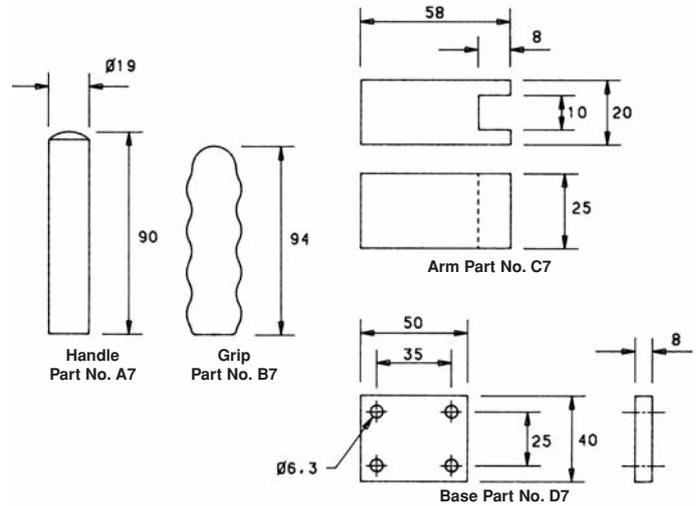


Model A7 Handle: Weight: 0.20 Kg
For welding at the desired angle to VA700S & VA700T.

Model B7 Grip: Weight: 0.01 Kg
To fit A7 handle.

Model C7 Arm: Weight: 0.21 Kg
For extending the stub arms of VA700S & VA700T.

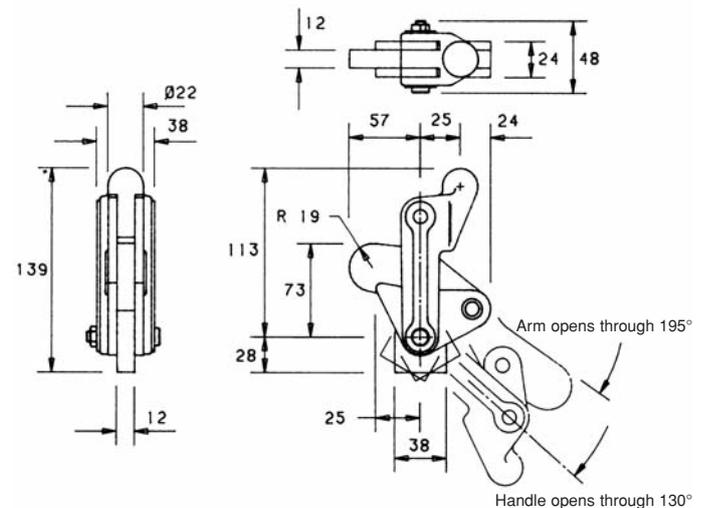
Model D7 Base: Weight: 0.11 Kg
For bolt mounting VA700S and VA700T.



VA1200 SERIES MODEL VA1200S



Arm: Stub nose for welded extensions.
Base: Swivel for welding in the desired position.
Nominal Holding Force: 1200 daN
Weight: 1.30 Kg
See "Accessories" for other items.



HEAVY-DUTY VERTICAL CLAMPS

VA1200 SERIES

MODEL VA1200T



for pneumatic models
see page 15



for locking mechanism in "open position"
add suffix (LC) to model number

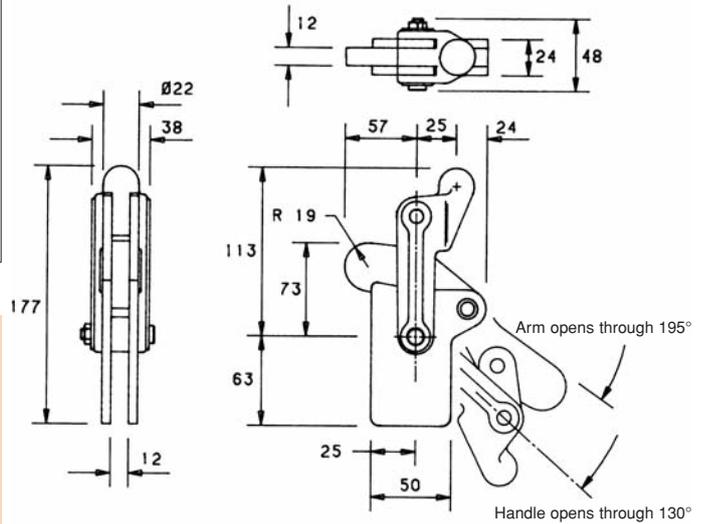
Arm:
Stub nose for welded
extensions.

Base:
Straight.

Nominal Holding Force:
1200 daN

Weight:
1.45 Kg

See "Accessories" for other
items.

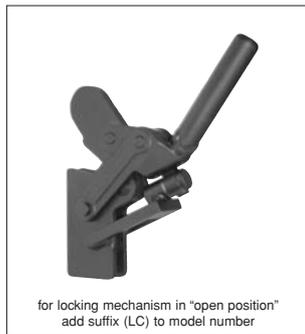


VA1200 SERIES

MODEL VA1200/1A



for pneumatic models
see page 15



for locking mechanism in "open position"
add suffix (LC) to model number

Arm:
Solid arm.

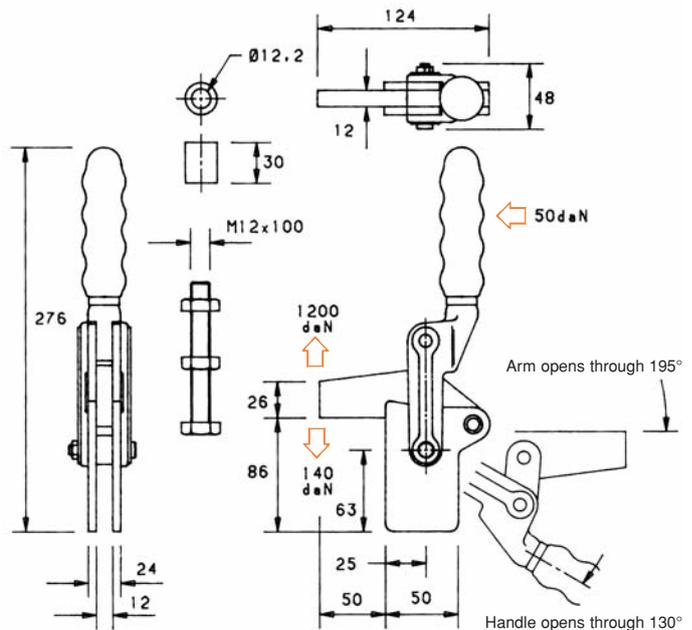
Base:
Straight.

Nominal Holding Force:
1200 daN

Weight:
1.80 Kg

Supplied complete with:
Spindle retainer.
MB12100 Setscrew & nuts.

See "Accessories" for other
items.



HEAVY-DUTY VERTICAL CLAMPS

VA1200 SERIES MODEL VA1200/2C



Arm:
The spindle is in a fixed position.

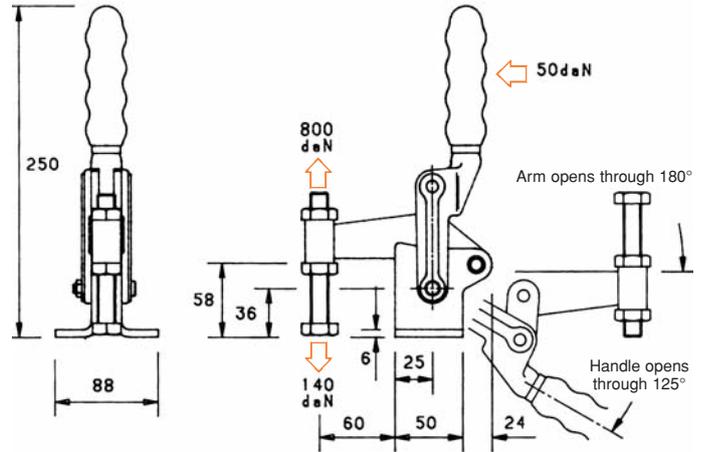
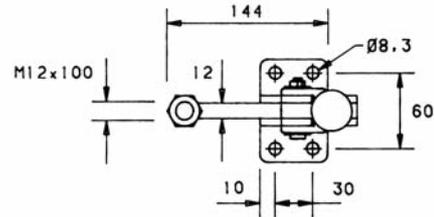
Base:
Flanged.

Nominal Holding Force:
1200 daN

Weight:
1.95 Kg

Supplied complete with:
MB12100 Setscrew & nuts.

See "Accessories" for other items.



VA1200 SERIES MODEL VA1200TD



Arm:
Stub nose with mounting holes.

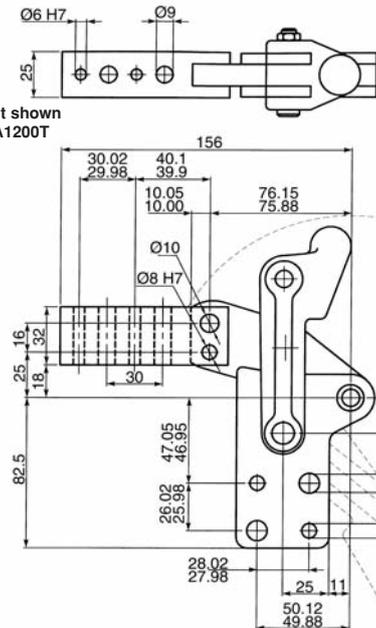
Base:
Straight with mounting holes.

Nominal Holding Force:
1200 daN

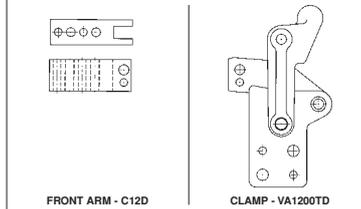
Weight:
1.87kg

See "Accessories" for other items.

All dimensions not shown
remain as per VA1200T



CLAMP & ARM SOLD AS SEPARATE ITEMS



HEAVY-DUTY VERTICAL CLAMPS

VA2400 SERIES

MODEL VA2400S



for pneumatic models
see page 15



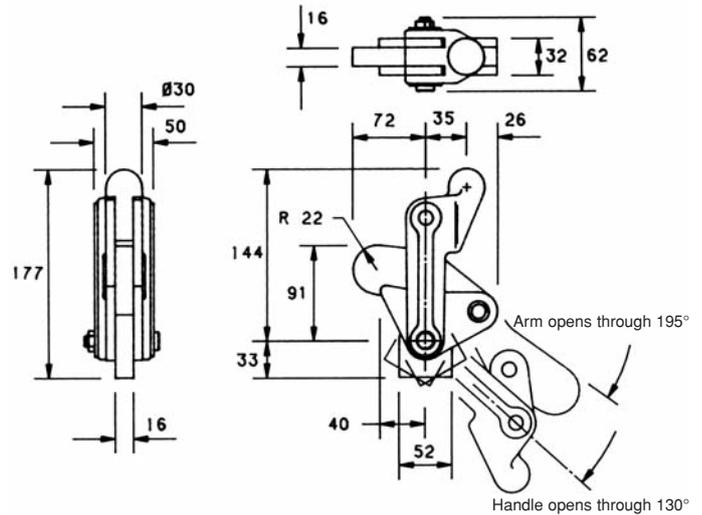
Arm:
Stub nose for welded extensions.

Base:
Swivel for welding in the desired position.

Nominal Holding Force:
2400 daN

Weight:
2.90 Kg

See "Accessories" for other items.



VA2400 SERIES

MODEL VA2400T



for pneumatic models
see page 15



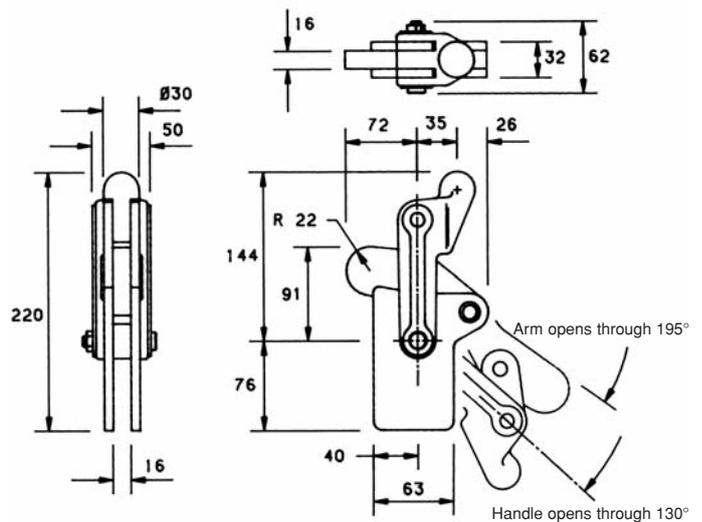
Arm:
Stub nose for welded extensions.

Base:
Straight.

Nominal Holding Force:
2400 daN

Weight:
3.20 Kg

See "Accessories" for other items.



HEAVY-DUTY VERTICAL CLAMPS

VA2400 SERIES
MODEL VA2400/1A



Arm:
Solid arm.

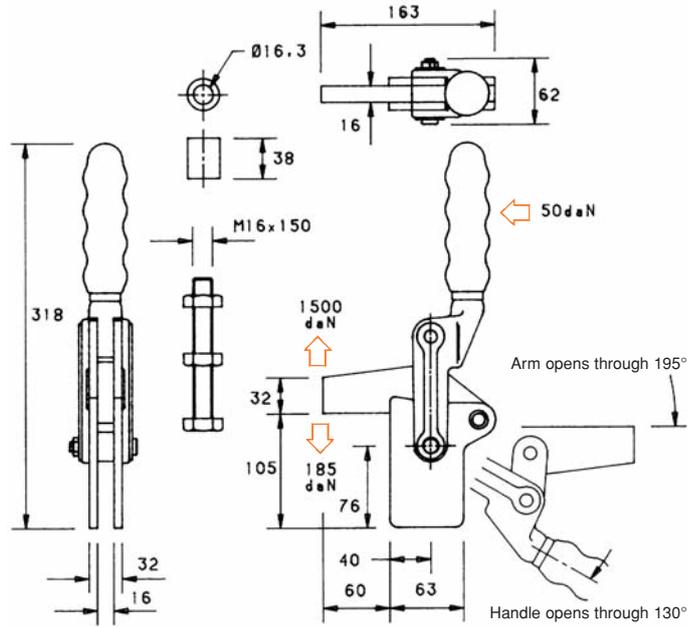
Base:
Straight.

Nominal Holding Force:
2400 daN

Weight:
3.75 Kg

Supplied complete with:
Spindle retainer.
MB16150 Setscrew & nuts.

See "Accessories" for other items.



VA2400 SERIES
MODEL VA2400/2C



Arm:
The spindle is in a fixed position.

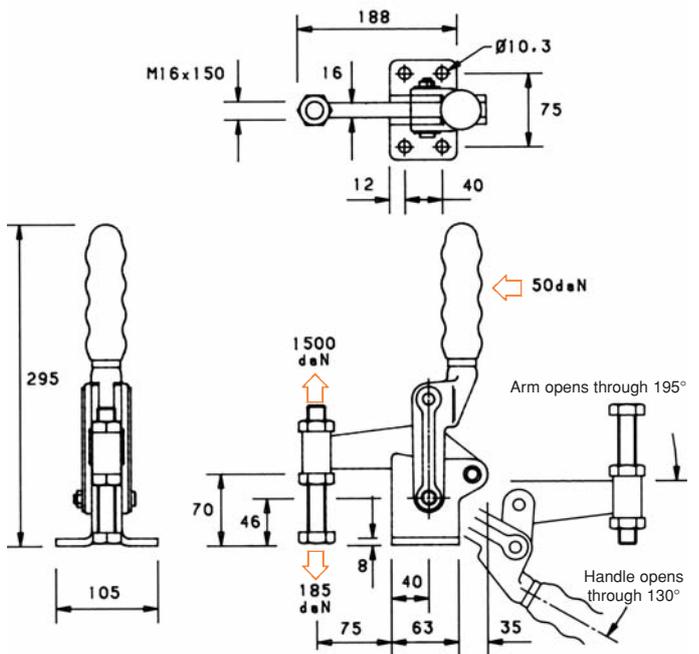
Base:
Flanged.

Nominal Holding Force:
2400 daN

Weight:
4.10 Kg

Supplied complete with:
MB16150 Setscrew & nuts.

See "Accessories" for other items.



HEAVY-DUTY VERTICAL CLAMPS

VA2400 SERIES
ACCESSORIES

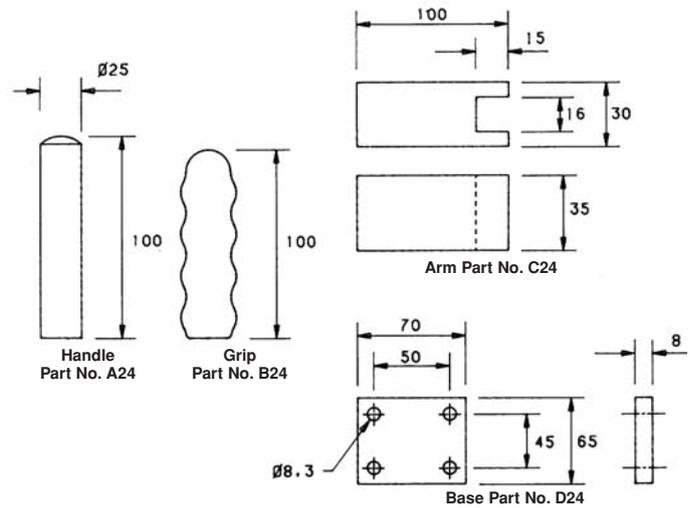


Model A24 Handle: **Weight:**
For welding at the
desired angle to
VA2400S & VA2400T.
0.39Kg

Model B24 Grip: **Weight:**
To fit A24 handle.
0.02 Kg

Model C24 Arm: **Weight:**
For extending the
stub arms of
VA2400S & VA2400T.
0.76 Kg

Model D24 Base: **Weight:**
For bolt mounting
VA2400S & VA2400T.
0.26 Kg





HORIZONTAL CLAMPS

- **Features:**

Horizontal clamps are used where height restrictions prevent the use of a Vertical clamp, or where the action of the clamping arm and handle rotating in opposite directions is more suitable.

The geometry of Brauer Horizontal clamps has been designed to ensure that the clamp opens and closes with a smooth and continuous action.

The side plates have been designed so as to provide a guard against mechanism finger trapping.

A comfortable, cushioned PVC handle grip is fitted to all Horizontal clamps.

Horizontal models except H700 and additional products have a closed end to the clamping arm for rigidity of construction and to retain the spindle or setscrew if it should loosen.

- **Specification:**

The main components are of zinc plated and passivated steel.

Rivets are of stainless steel which burnishes and work-hardens with use, the rivets of the larger clamps rotating in hardened bushes or directly in the close-toleranced holes of hardened parts.

HORIZONTAL CLAMPS

H50 SERIES MODEL H50/1B



Arm:
The spindle position is adjustable along the arm.

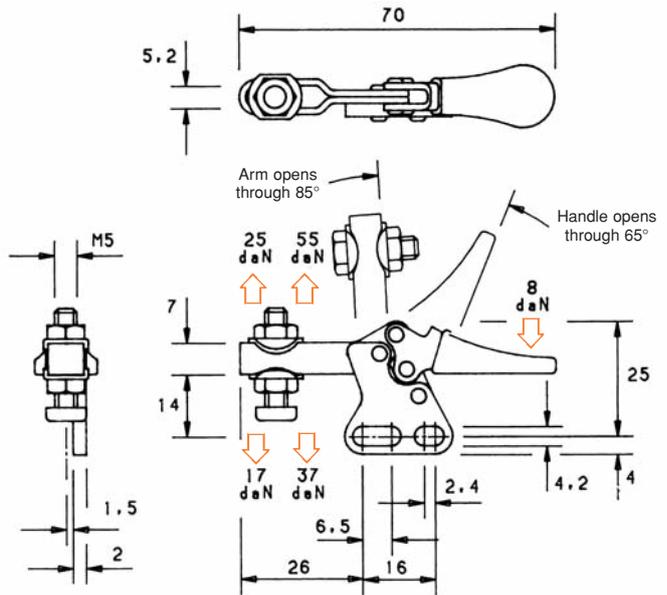
Base:
Straight.

Nominal Holding Force:
50 daN

Weight:
0.033 Kg

Supplied complete with:
MB0520 Setscrew & nuts.
FW05/09 Flanged washers.

See "Accessories" for other items.



H50 SERIES MODEL H50/2B



Arm:
The spindle position is adjustable along the arm.

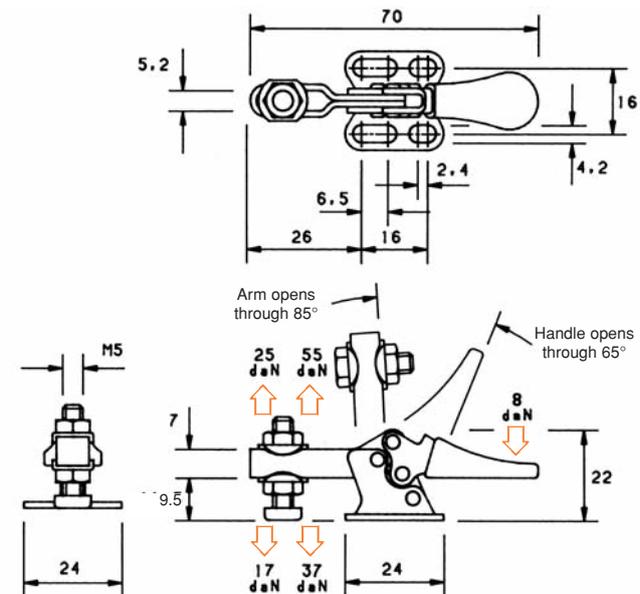
Base:
Flanged.

Nominal Holding Force:
50 daN

Weight:
0.036 Kg

Supplied complete with:
MB0520 Setscrew & nuts.
FW05/09 Flanged washers.

See "Accessories" for other items.



H50 SERIES MODEL H50/2BSS



Arm:
The spindle position is adjustable along the arm.

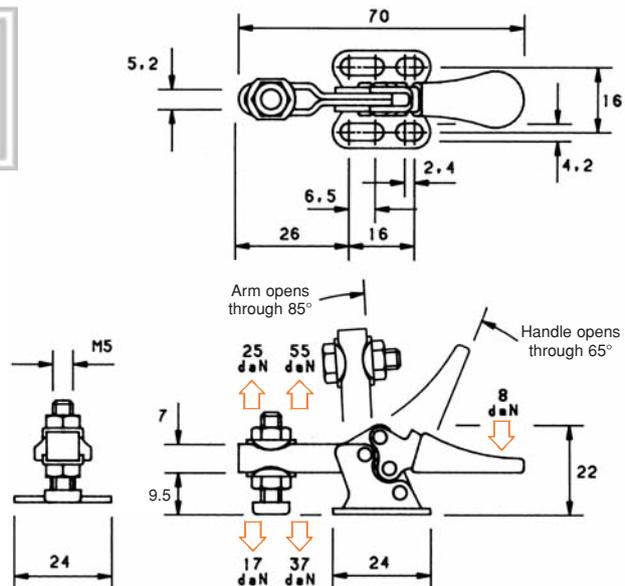
Base:
Flanged.

Nominal Holding Force:
50 daN

Weight:
0.036 Kg

Supplied complete with:
Setscrew & nuts.
Flanged washers.

Material:
BS 304 S15.



HORIZONTAL CLAMPS

H50 SERIES MODEL H50/2C



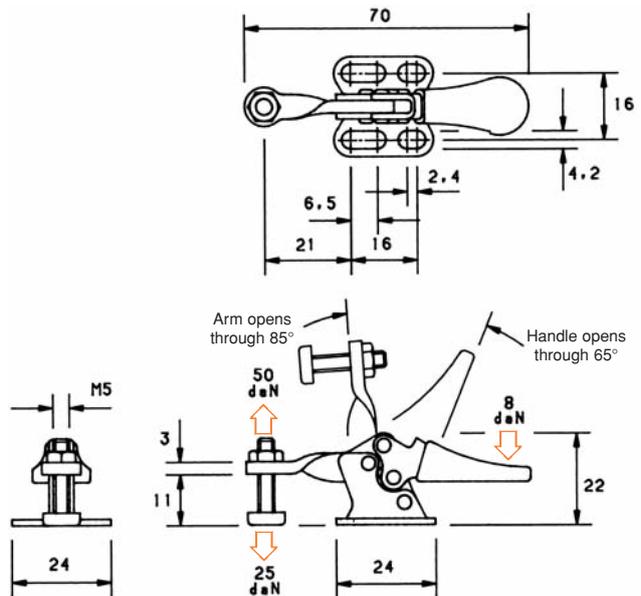
Arm:
The spindle is in a fixed position.

Base:
Flanged.

Nominal Holding Force:
50 daN

Weight:
0.025 Kg

Supplied complete with:
MB0520 Setscrew & nuts.
See "Accessories" for other items.



H50 SERIES MODEL H50/2BL



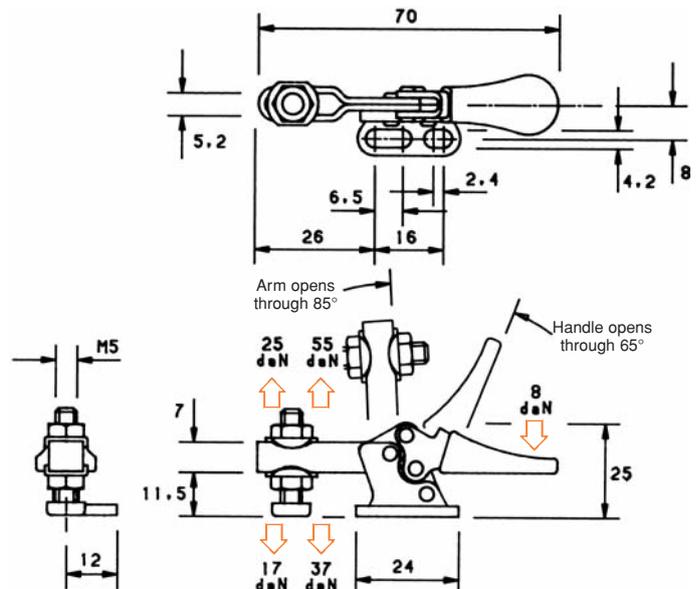
Arm:
The spindle position is adjustable along the arm.

Base:
Left hand flanged.

Nominal Holding Force:
50 daN

Weight:
0.02 Kg

Supplied complete with:
MB0520 Setscrew & nuts.
FW05/09 Flanged washers.
See "Accessories" for other items.



H50 SERIES MODEL H50/2BR



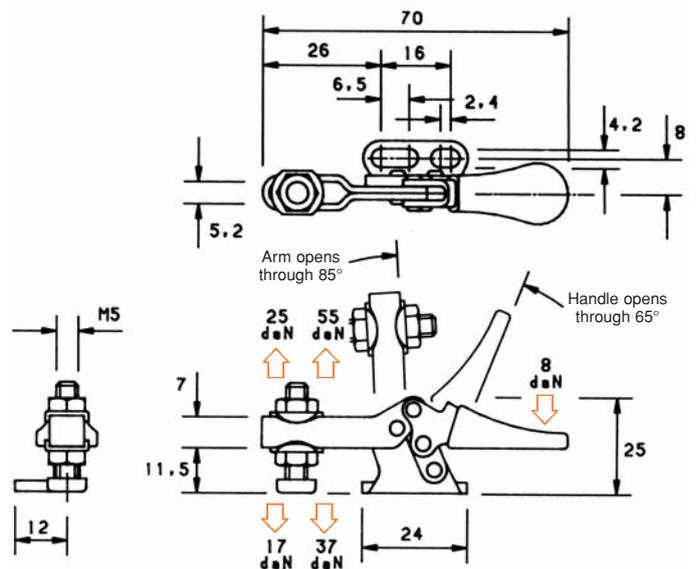
Arm:
The spindle position is adjustable along the arm.

Base:
Right hand flanged.

Nominal Holding Force:
50 daN

Weight:
0.02 Kg

Supplied complete with:
MB0520 Setscrew & nuts.
FW05/09 Flanged washers.
See "Accessories" for other items.



HORIZONTAL CLAMPS

H75 SERIES
MODEL H75/1B



Arm:
The spindle position is adjustable along the arm.

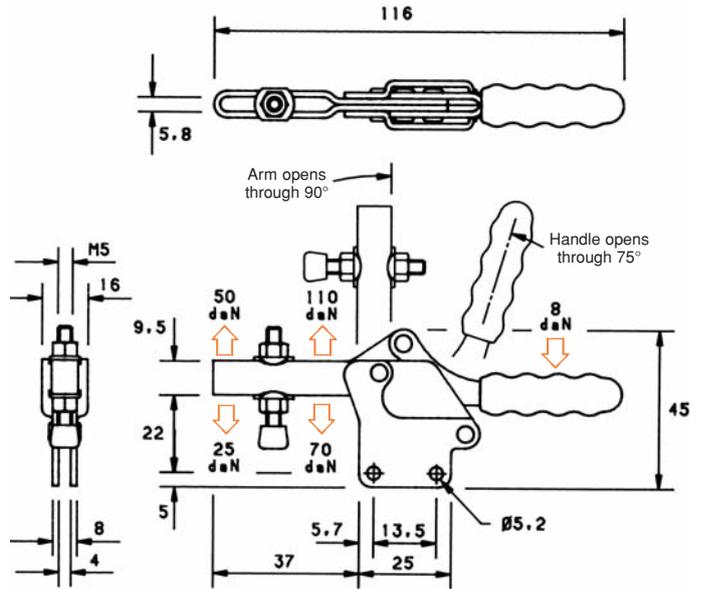
Base:
Straight.

Nominal Holding Force:
75 daN

Weight:
0.10 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
FW05/10 Flanged washers.
NC/05 Neoprene cover.

See "Accessories" for other items.



H75 SERIES
MODEL H75/1BSS

**STAINLESS
STEEL**



Arm:
The spindle position is adjustable along the arm.

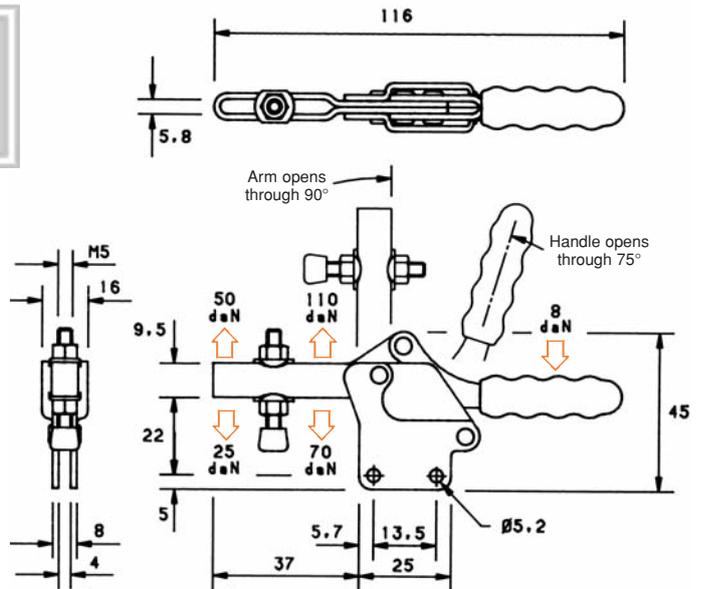
Base:
Straight.

Nominal Holding Force:
75 daN

Weight:
0.10 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
FW05/10 Flanged washers.
NC/05 Neoprene cover.

Material:
BS 304 S15.



H75 SERIES
MODEL H75/1C



Arm:
The spindle is in a fixed position.

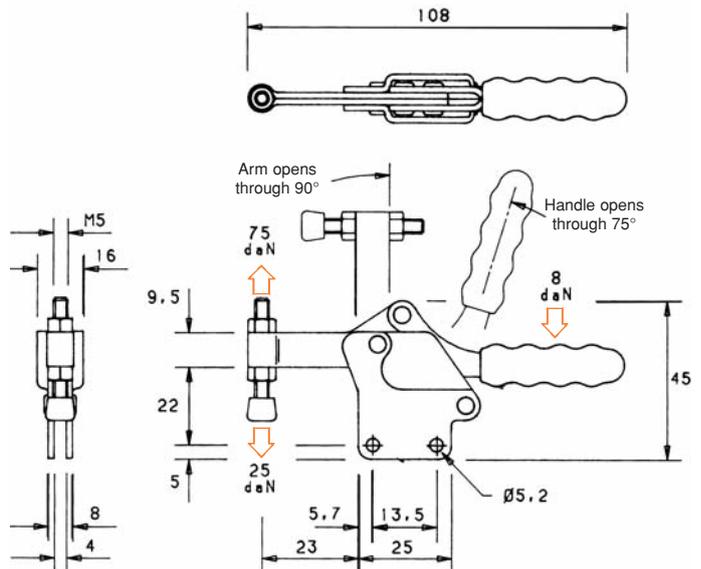
Base:
Straight.

Nominal Holding Force:
75 daN

Weight:
0.10 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/05 Neoprene cover.

See "Accessories" for other items.



HORIZONTAL CLAMPS

H75 SERIES

MODEL H75/2B



Arm:
The spindle position is adjustable along the arm.

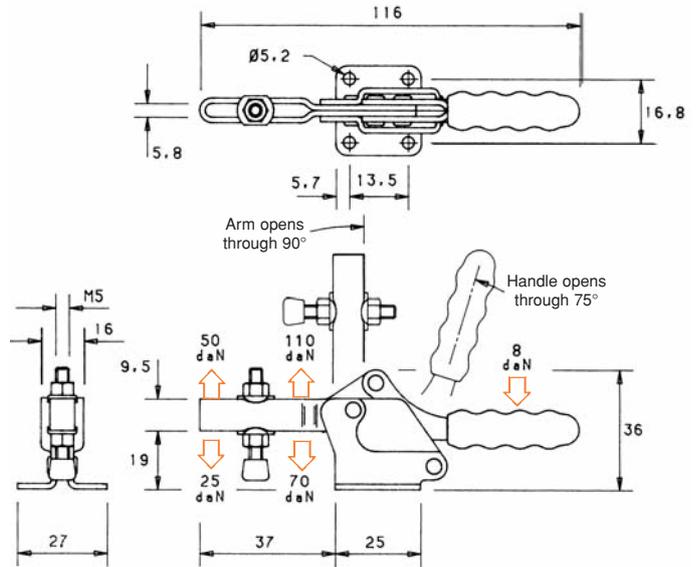
Base:
Flanged.

Nominal Holding Force:
75 daN

Weight:
0.10 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
FW05/10 Flanged washers.
NC/05 Neoprene cover.

See "Accessories" for other items.



H75 SERIES

MODEL H75/2BSS

**STAINLESS
STEEL**



Arm:
The spindle position is adjustable along the arm.

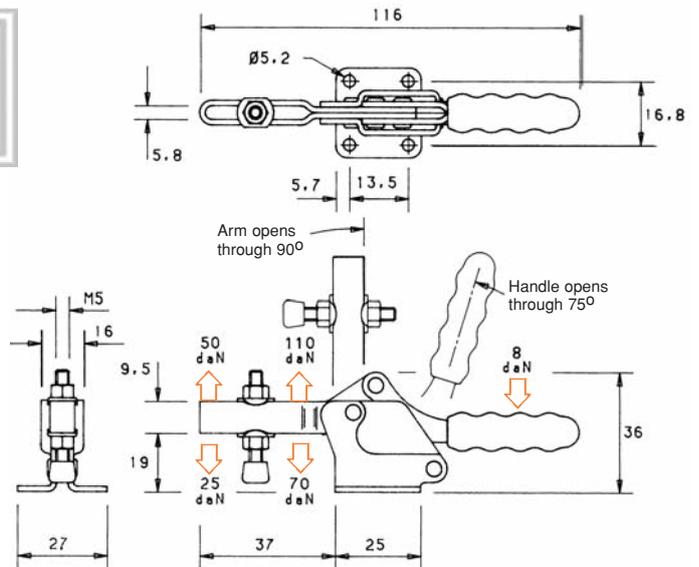
Base:
Flanged.

Nominal Holding Force:
75 daN

Weight:
0.10 Kg

Supplied complete with:
Setscrew & nuts.
Flanged washers.
Neoprene cover.

Material:
BS 304 S15.



H75 SERIES

MODEL H75/2C



Arm:
The spindle is in a fixed position.

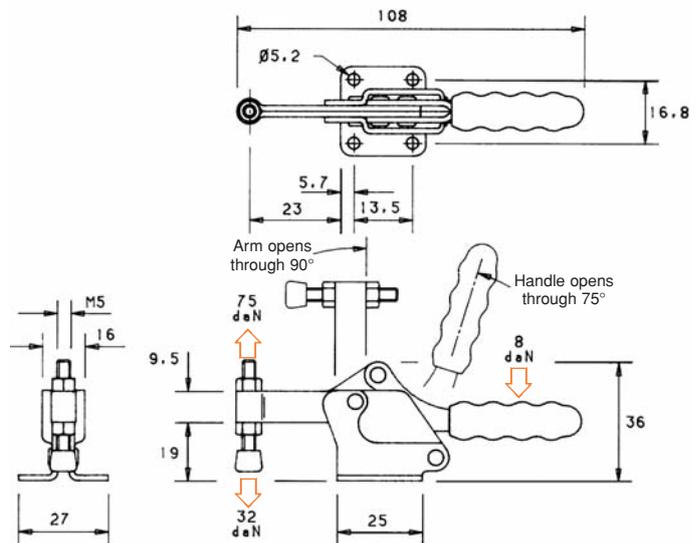
Base:
Flanged.

Nominal Holding Force:
75 daN

Weight:
0.10 Kg

Supplied complete with:
MB0535 Setscrew & nuts.
NC/Neoprene cover.

See "Accessories" for other items.



HORIZONTAL CLAMPS

H150 SERIES

MODEL H150/1B



Arm:

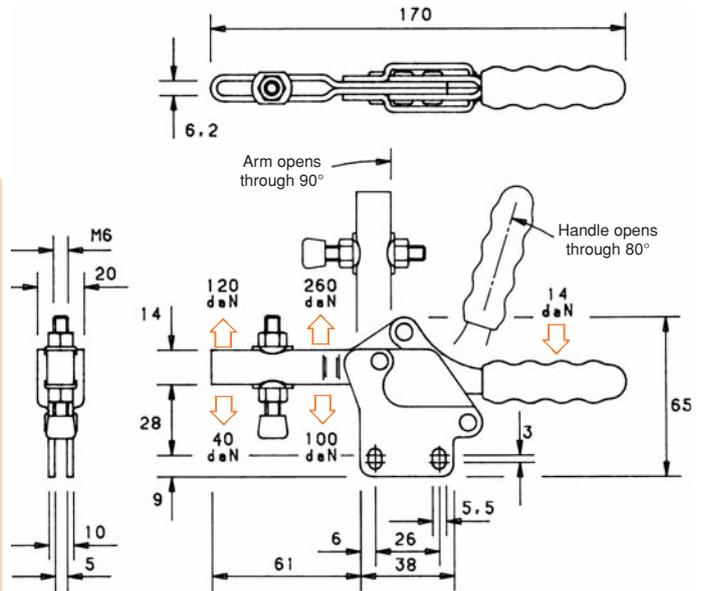
The spindle position is adjustable along the arm.

Base:
Straight.

Nominal Holding Force:
150 daN

Weight:
0.25 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
FW06/12 Flanged washers.
See "Accessories" for other items.



H150 SERIES

MODEL H150/1BSS

**STAINLESS
STEEL**



Arm:

The spindle position is adjustable along the arm.

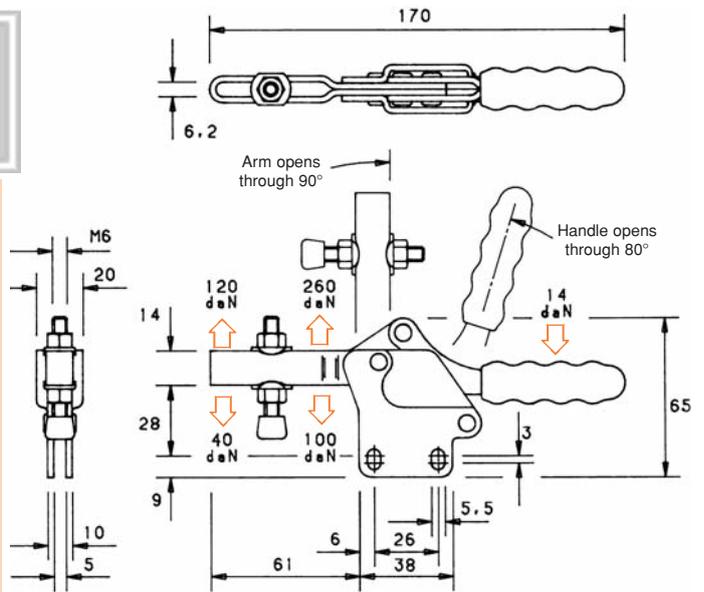
Base:
Straight.

Nominal Holding Force:
150 daN

Weight:
0.25 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
FW06/12 Flanged washers.

Material:
BS 304 S15.



H150 SERIES

MODEL H150/1C



Arm:

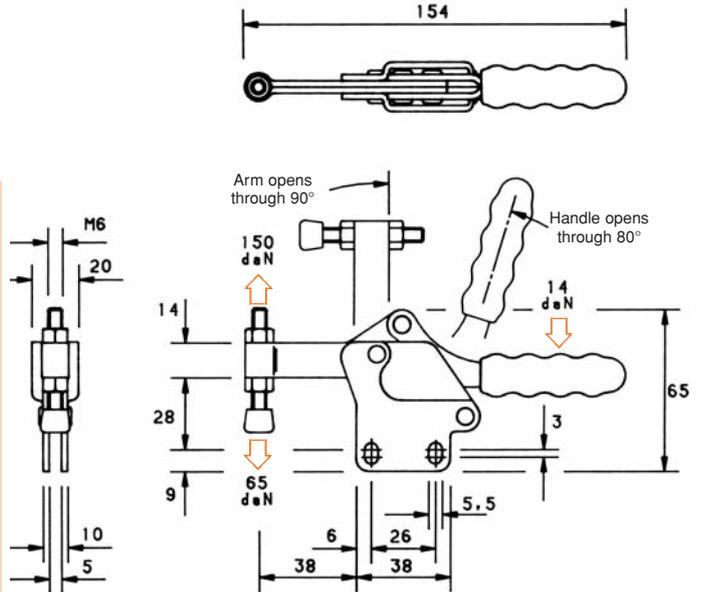
The spindle is in a fixed position.

Base:
Straight.

Nominal Holding Force:
150 daN

Weight:
0.25 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
See "Accessories" for other items.



HORIZONTAL CLAMPS

H150 SERIES MODEL H150/2B



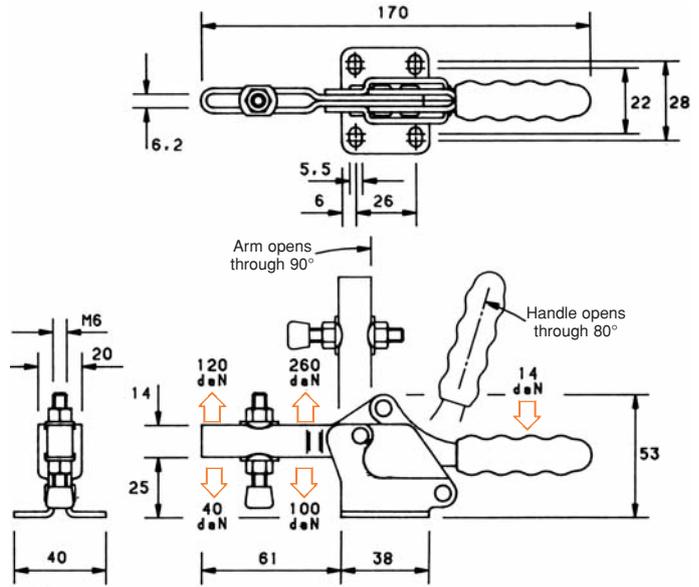
Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.25 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
FW06/12 Flanged washers.
See "Accessories" for other items.



H150 SERIES MODEL H150/2BSS

**STAINLESS
STEEL**



Arm:
The spindle position is adjustable along the arm.

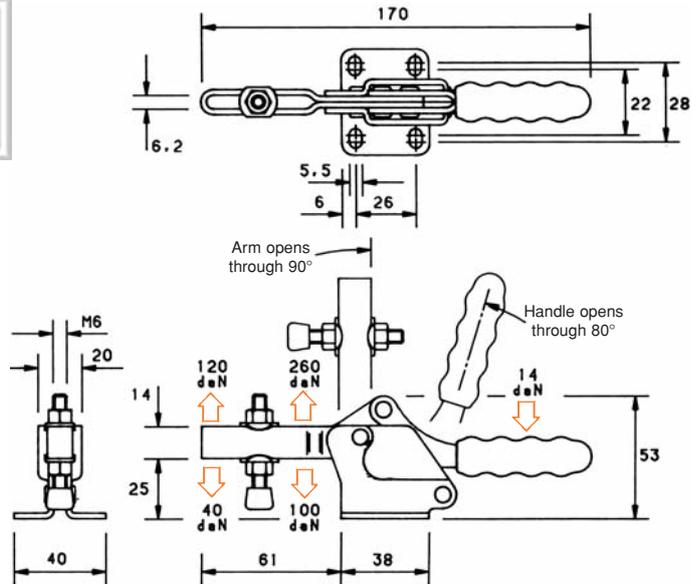
Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.10 Kg

Supplied complete with:
Setscrew & nuts.
Flanged washers.

Material:
BS 304 S15.



H150 SERIES MODEL H150/2C



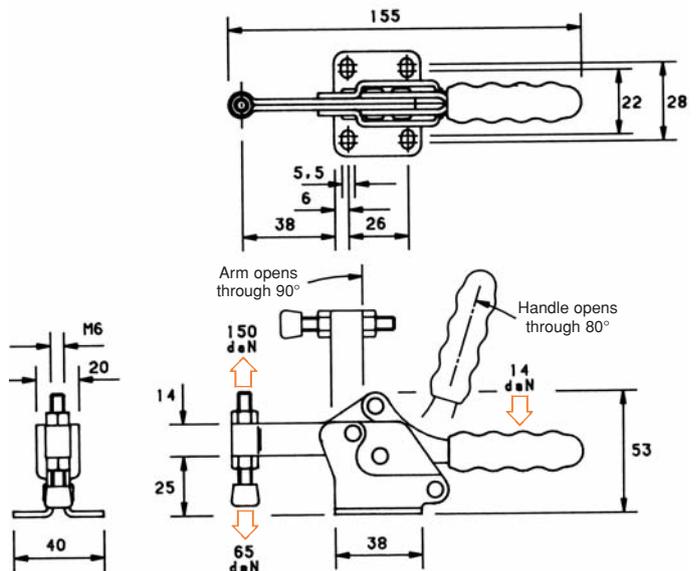
Arm:
The spindle is in a fixed position.

Base:
Flanged.

Nominal Holding Force:
150 daN

Weight:
0.25 Kg

Supplied complete with:
MB0650 Setscrew & nuts.
NC/06 Neoprene cover.
See "Accessories" for other items.



HORIZONTAL CLAMPS

H250 SERIES

MODEL H250/1A



Arm:
2-piece "solid" arm with spindle retainer supplied loose for welding in the desired position.

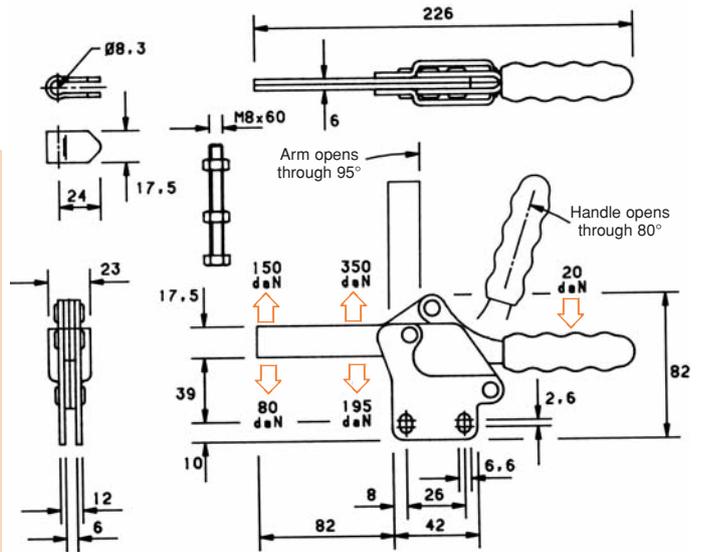
Base:
Straight.

Nominal Holding Force:
250 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.

See "Accessories" for other items.



H250 SERIES

MODEL H250/1AL



Arm:
Solid arm with spindle retainer supplied loose for welding in the desired position. 10mm added to arm length over H250/1A model.

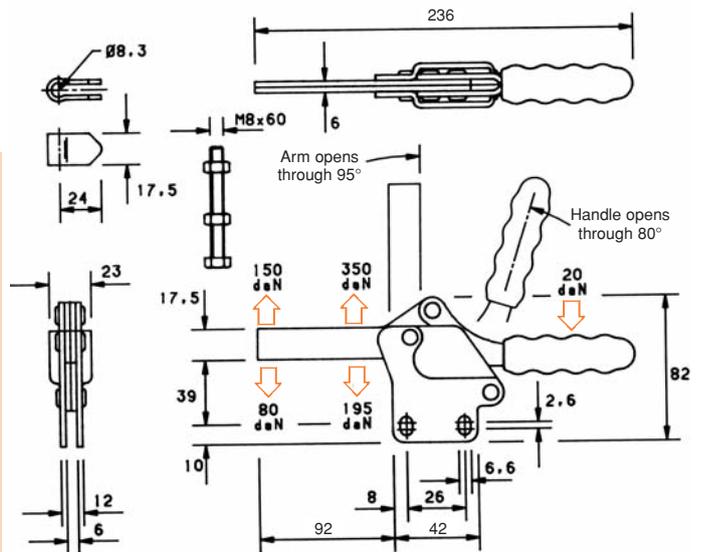
Base:
Straight.

Nominal Holding Force:
250 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.

See "Accessories" for other items.



H250 SERIES

MODEL H250/1B



Arm:
The spindle position is adjustable along the arm.

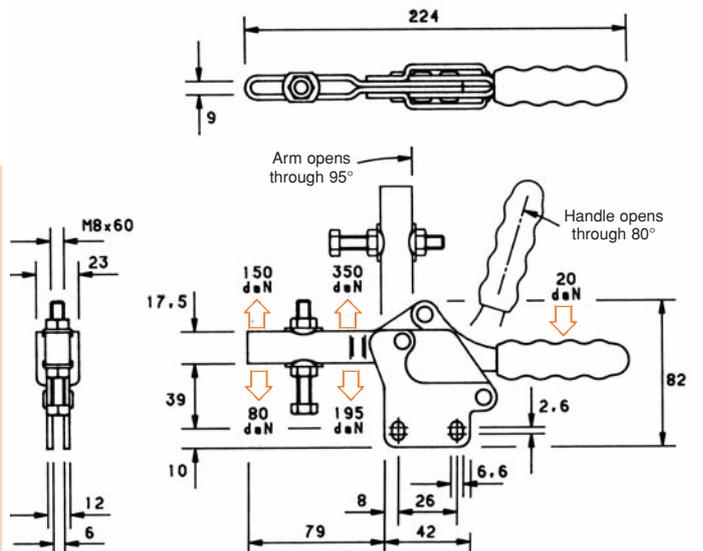
Base:
Straight.

Nominal Holding Force:
250 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.

See "Accessories" for other items.



HORIZONTAL CLAMPS

H250 SERIES MODEL H250/2A



Arm:
2-piece "solid" arm with spindle retainer supplied loose for welding in the desired position.

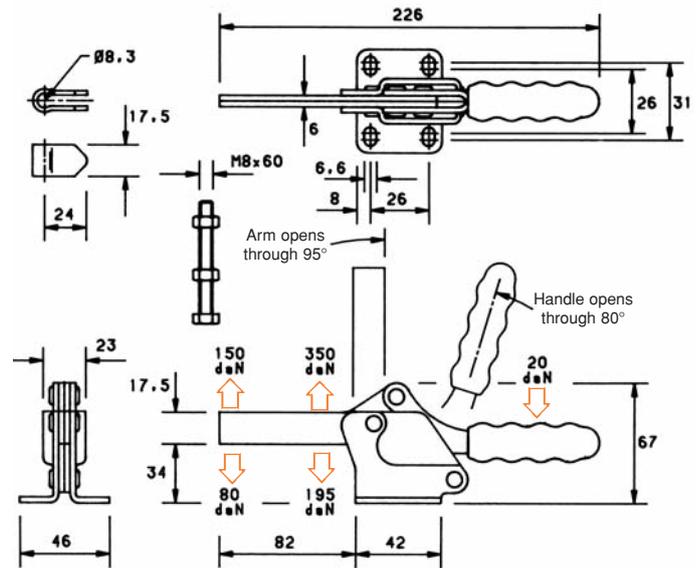
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.

See "Accessories" for other items.



H250 SERIES MODEL H250/2AL



Arm:
Solid arm with spindle retainer supplied loose for welding in the desired position. 10mm added to arm length over H250/2A model.

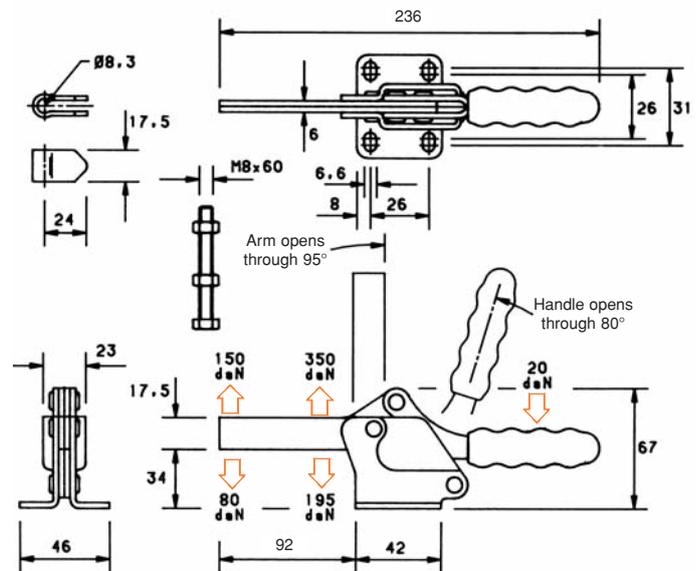
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
R/08 Spindle retainer.

See "Accessories" for other items.



H250 SERIES MODEL H250/2B



Arm:
The spindle position is adjustable along the arm.

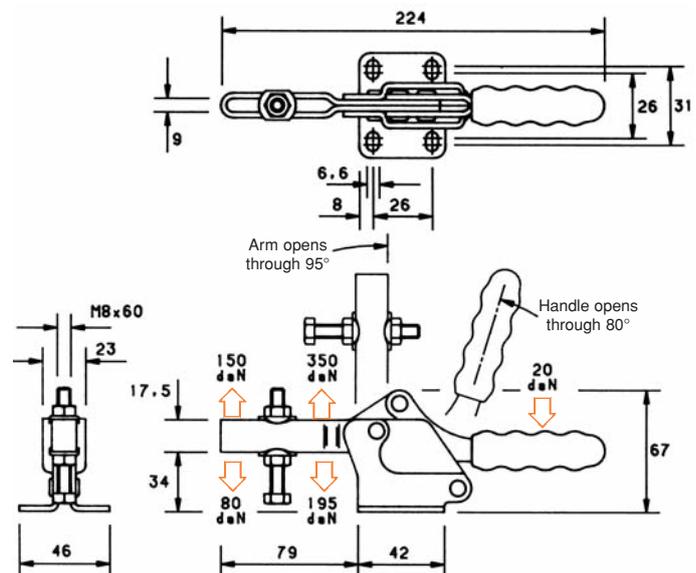
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.50 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.

See "Accessories" for other items.



HORIZONTAL CLAMPS

H350 SERIES

MODEL H350/1A



Arm:
2-piece "solid" arm with spindle retainer supplied loose for welding in the desired position.

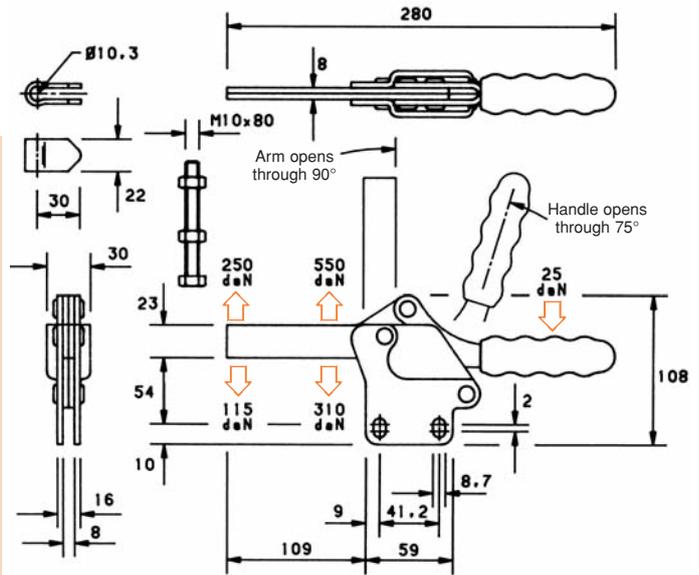
Base:
Straight.

Nominal Holding Force:
350 daN

Weight:
0.90 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
R/10 Spindle retainer.

See "Accessories" for other items.



H350 SERIES

MODEL H350/1B



for "T" Bar Accessory order Model T350



Arm:
The spindle position is adjustable along the arm.

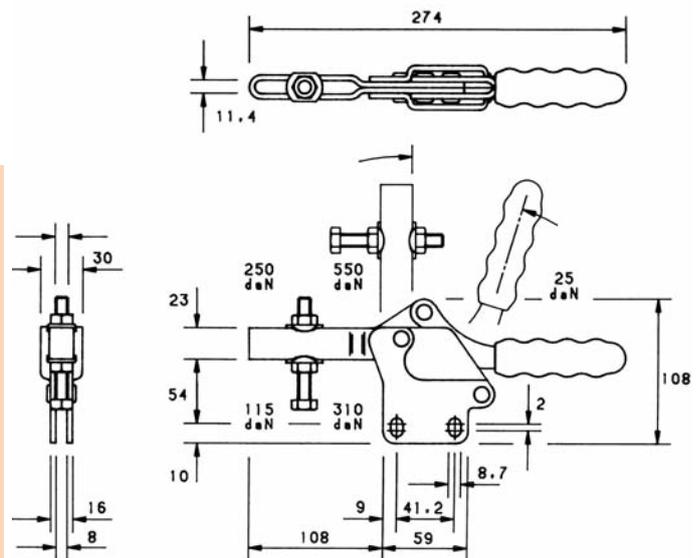
Base:
Straight.

Nominal Holding Force:
350 daN

Weight:
0.90 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
FW10/20 Flanged washers.

See "Accessories" for other items.



H350 SERIES

MODEL H350/2A



for front mounting use bracket Model FM3



Arm:
2-piece "solid" arm with spindle retainer supplied loose for welding in the desired position.

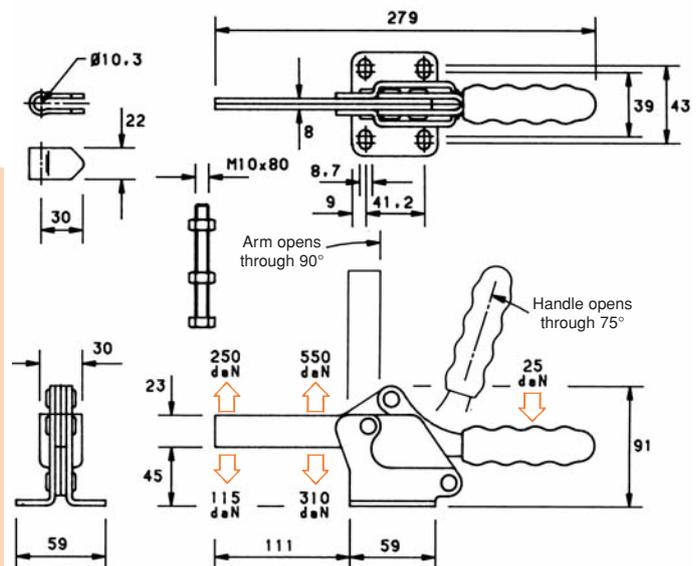
Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.90 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
R/10 Spindle retainer.

See "Accessories" for other items.



HORIZONTAL CLAMPS

H350 SERIES

MODEL H350/2B



Arm:
The spindle position is adjustable along the arm.

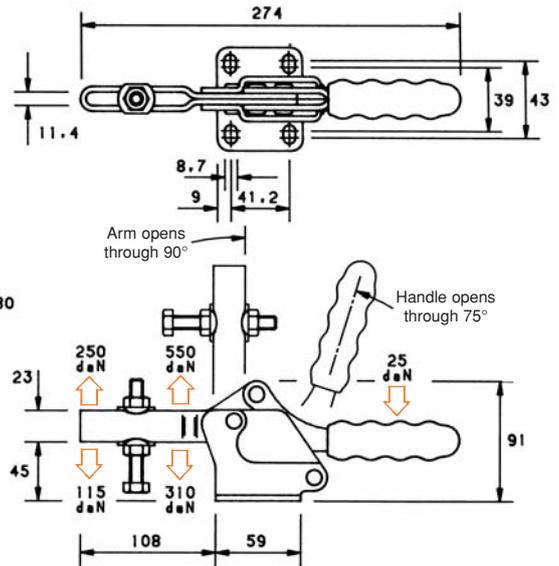
Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.90 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
FW10/20 Flanged washers.

See "Accessories" for other items.



H450 SERIES

MODEL H450/1A



Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

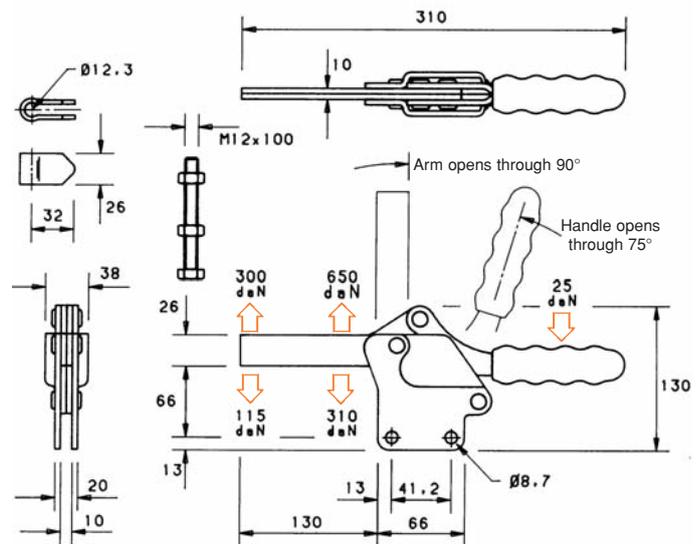
Base:
Straight.

Nominal Holding Force:
450 daN

Weight:
1.60 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
R/12 Spindle retainer.

See "Accessories" for other items.



H450 SERIES

MODEL H450/1B



Arm:
The spindle position is adjustable along the arm.

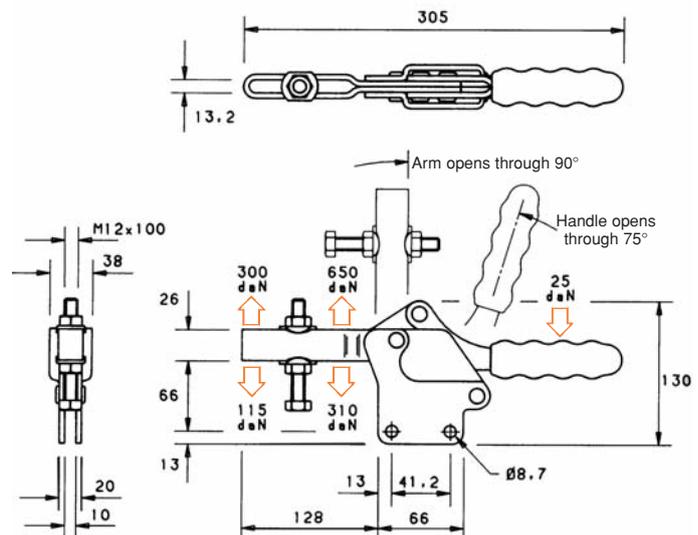
Base:
Straight.

Nominal Holding Force:
450 daN

Weight:
1.60 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
FW12/23 Flanged washers.

See "Accessories" for other items.



HORIZONTAL CLAMPS

H450 SERIES

MODEL H450/2A



for front mounting use bracket Model FM3



Arm:
Solid with spindle retainer supplied loose for welding in the desired position.

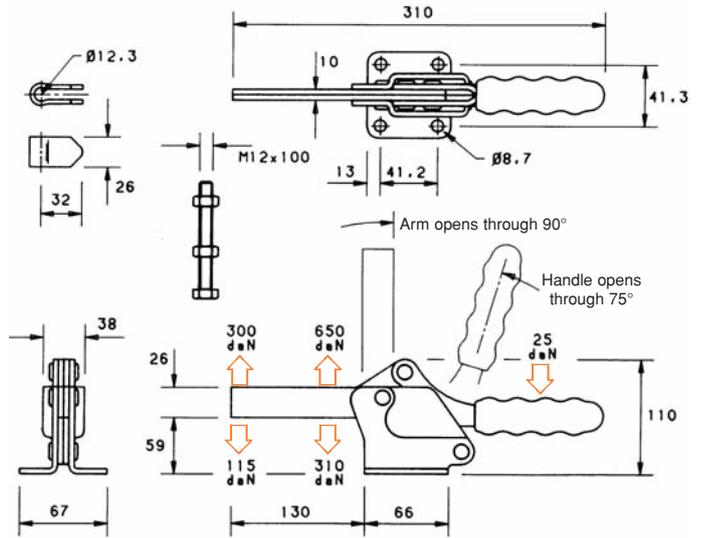
Base:
Flanged.

Nominal Holding Force:
450 daN

Weight:
1.60 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
R/12 Spindle retainer.

See "Accessories" for other items.



H450 SERIES

MODEL H450/2B



for front mounting use bracket Model FM3



Arm:
The spindle position is adjustable along the arm.

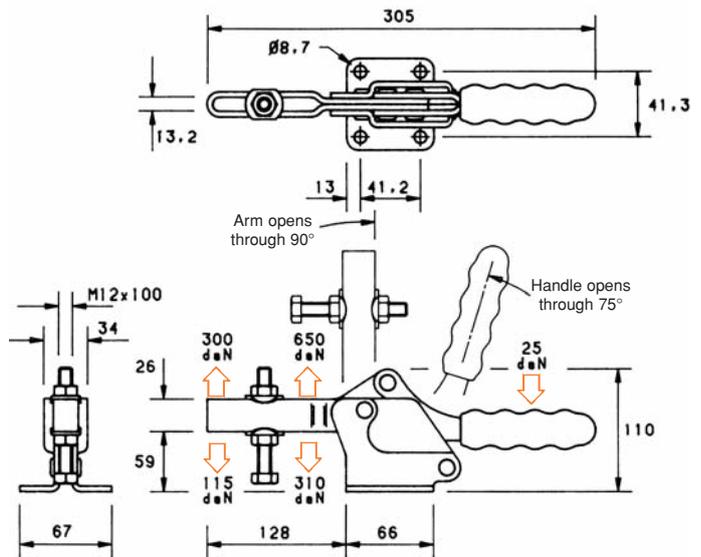
Base:
Flanged.

Nominal Holding Force:
450 daN

Weight:
1.60 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
FW12/23 Flanged washers.

See "Accessories" for other items.



H700 SERIES

MODEL H700



for "T" Bar Accessory order Model T450



Arm:
The spindle position is adjustable along the arm.

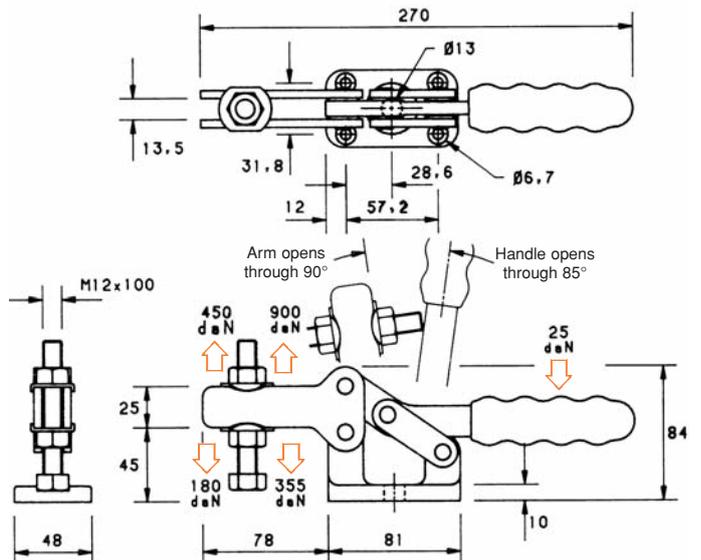
Base:
Flanged.

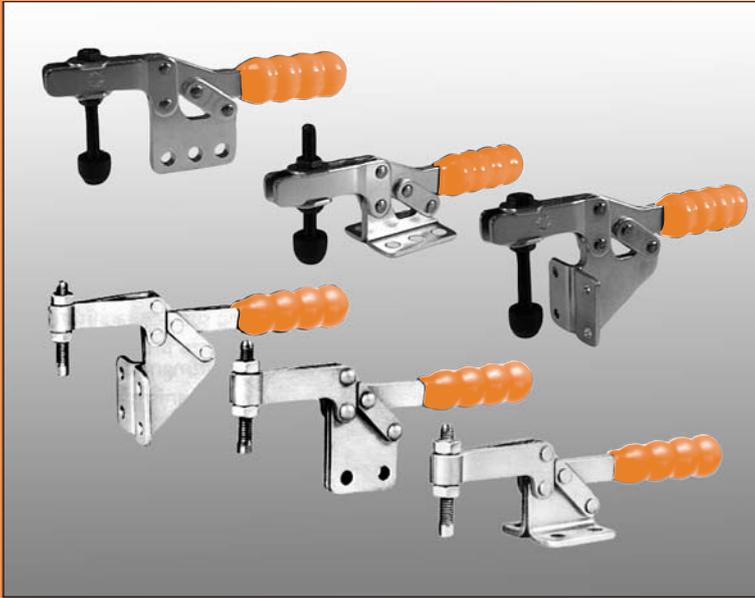
Nominal Holding Force:
700 daN

Weight:
1.15 Kg

Supplied complete with:
MB12100 Setscrew & nuts.
FW12/23 Flanged washers.
This heavy duty clamp features a cast steel base with central hole for optional "tee" bolt mounting.

See "Accessories" for other items.





.....
**ADDITIONAL HORIZONTAL
CLAMPING PRODUCTS**

ADDITIONAL HORIZONTAL CLAMPING PRODUCTS

MODEL H100/1B



Arm:
The spindle position is adjustable along the arm.

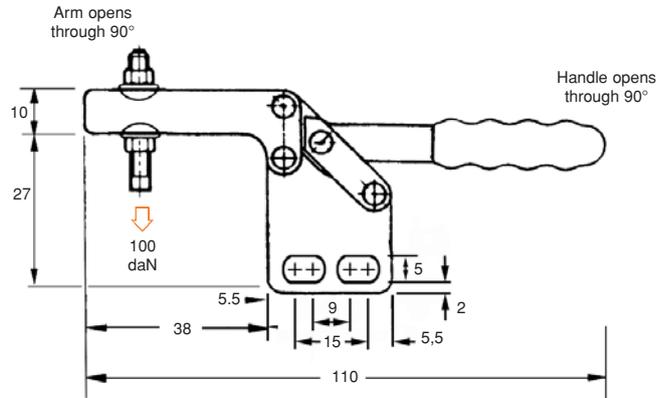
Base:
Straight.

Nominal Holding Force:
100 daN

Weight:
0.085 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H100/1C



Arm:
The spindle is in a fixed position.

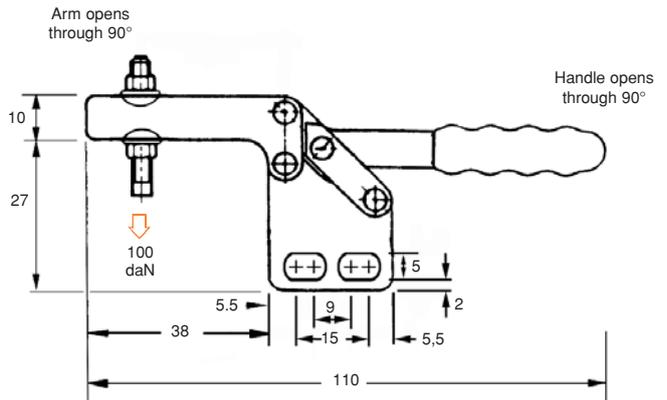
Base:
Straight.

Nominal Holding Force:
100 daN

Weight:
0.085 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H100/2B



Arm:
The spindle position is adjustable along the arm.

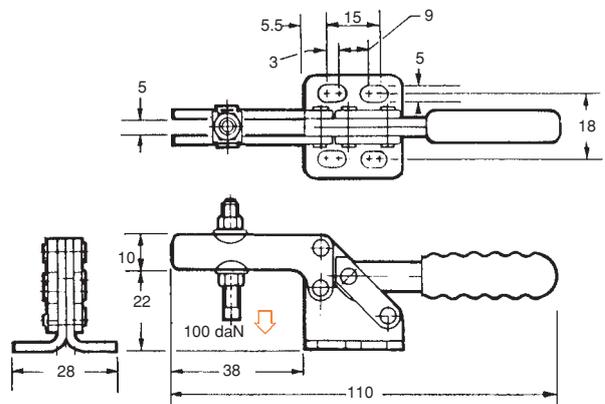
Base:
Flanged.

Nominal Holding Force:
100 daN

Weight:
0.085 kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



ADDITIONAL HORIZONTAL CLAMPING PRODUCTS

MODEL H100/2C



Arm:
The spindle is in a fixed position.

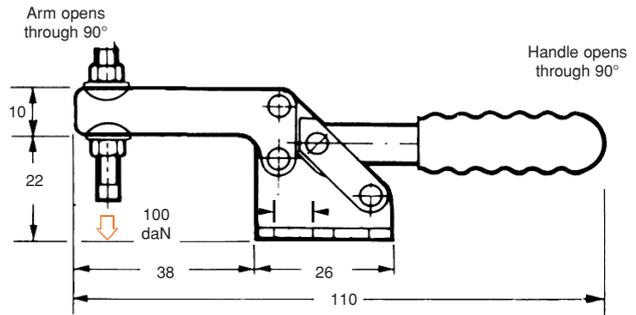
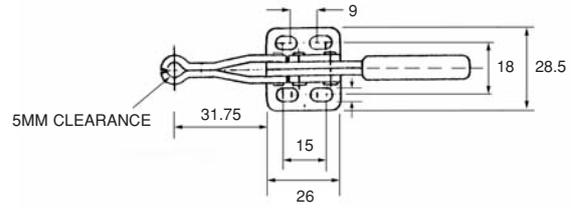
Base:
Flanged.

Nominal Holding Force:
100 daN

Weight:
0.085 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H100/3B



Arm:
The spindle position is adjustable along the arm.

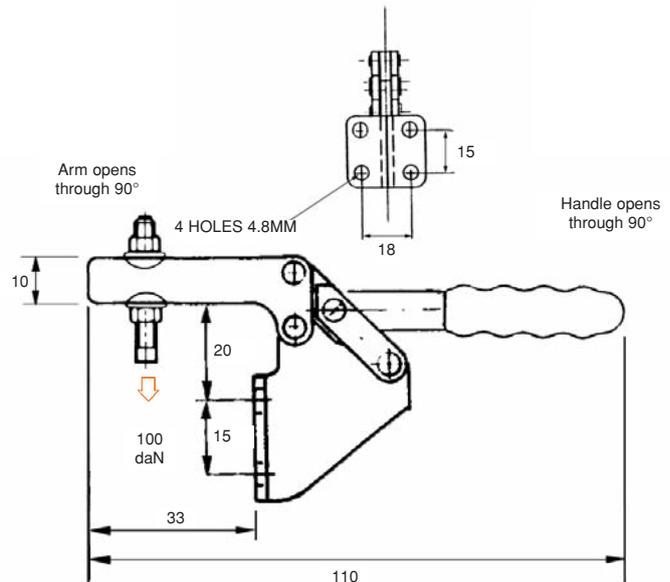
Base:
Front mounting.

Nominal Holding Force:
100 daN

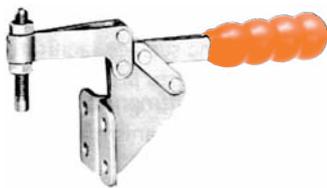
Weight:
0.085 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H100/3C



Arm:
The spindle is in a fixed position.

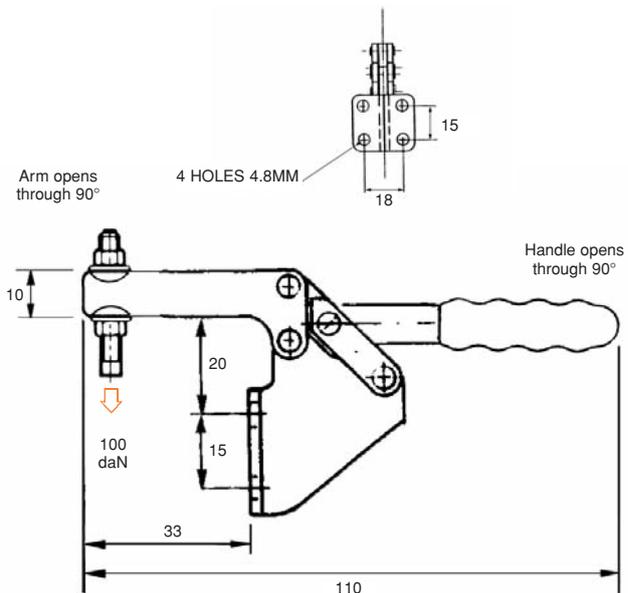
Base:
Front mounting.

Nominal Holding Force:
100 daN

Weight:
0.085 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



ADDITIONAL HORIZONTAL CLAMPING PRODUCTS

MODEL H200/1B



Arm:
The spindle position is adjustable along the arm.

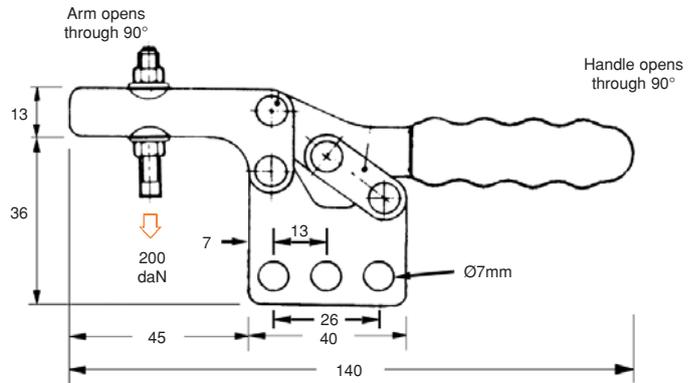
Base:
Straight.

Nominal Holding Force:
200 daN

Weight:
0.17 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H200/2B



Arm:
The spindle position is adjustable along the arm.

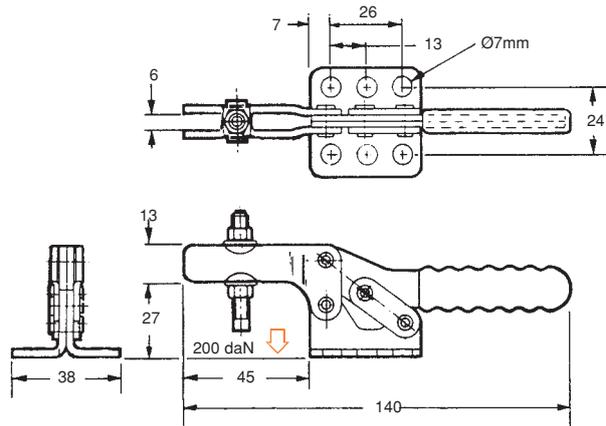
Base:
Flanged.

Nominal Holding Force:
200 daN

Weight:
0.17 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H200/3B



Arm:
The spindle position is adjustable along the arm.

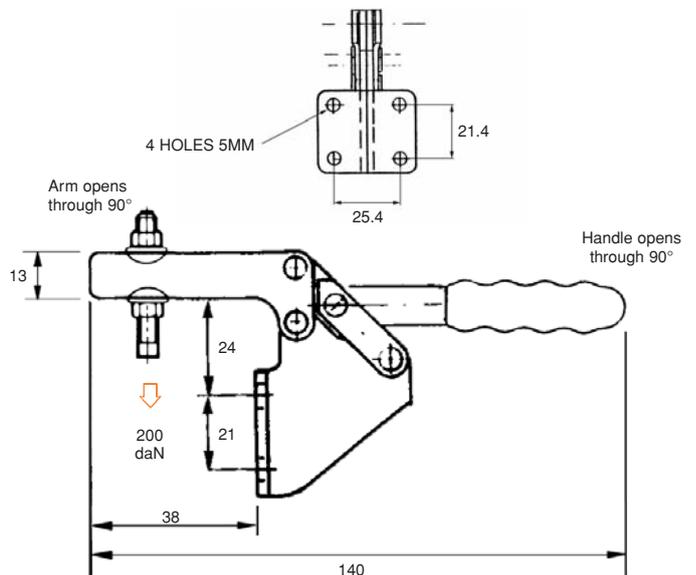
Base:
Front mounting.

Nominal Holding Force:
200 daN

Weight:
0.17 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



ADDITIONAL HORIZONTAL CLAMPING PRODUCTS

MODEL H300/1B



Arm:
The spindle position is adjustable along the arm.

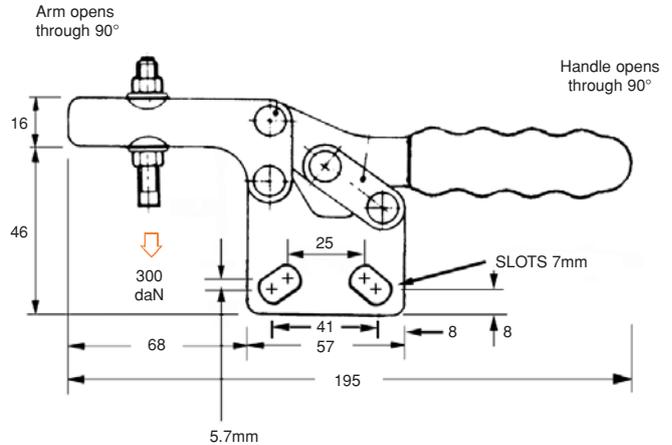
Base:
Straight.

Nominal Holding Force:
300 daN

Weight:
0.34 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H300/2B



Arm:
The spindle position is adjustable along the arm.

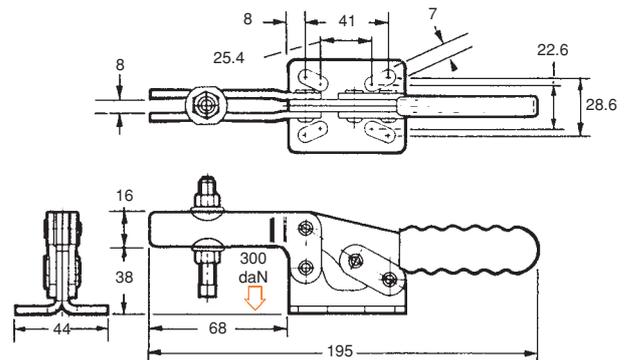
Base:
Flanged.

Nominal Holding Force:
300 daN

Weight:
0.34 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



MODEL H300/3B



Arm:
The spindle position is adjustable along the arm.

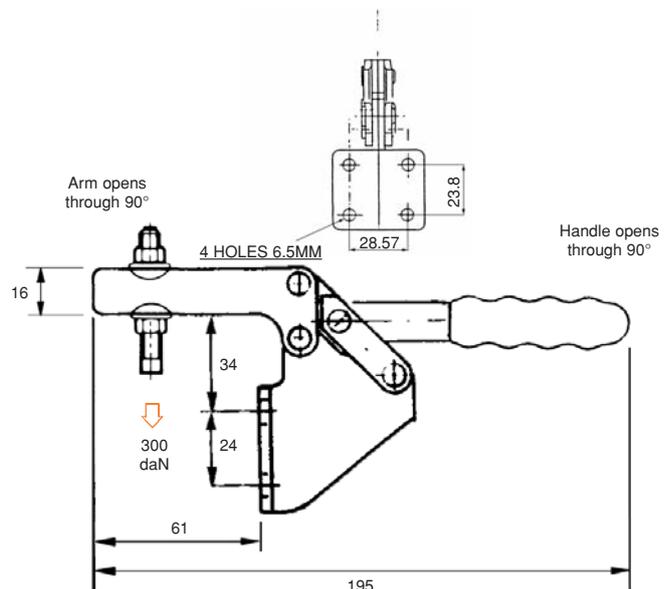
Base:
Front mounting.

Nominal Holding Force:
300 daN

Weight:
0.34 Kg

Supplied complete with:
standard spindle, nuts and flanged washers

See "Accessories" for other items.



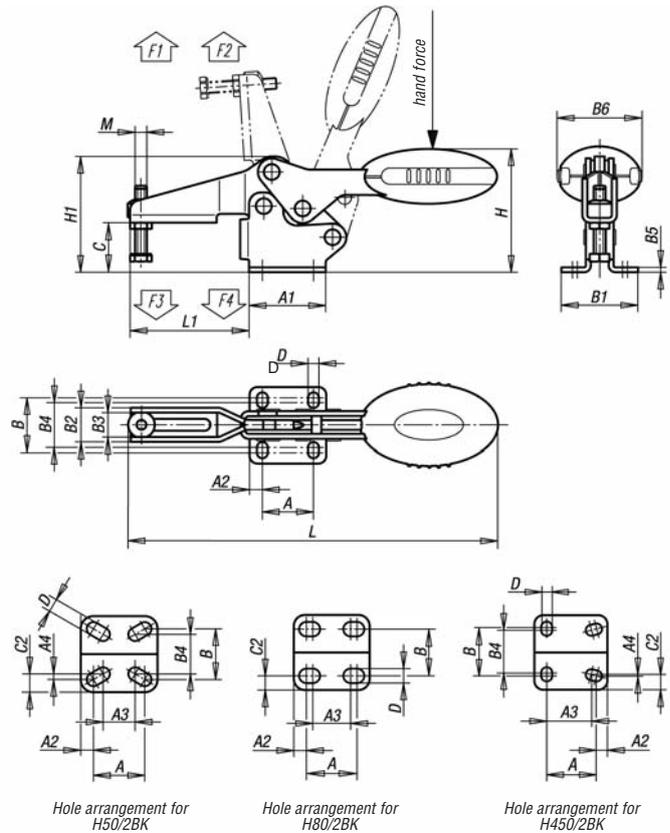


BLACK OXIDIZED NITRO CARBURIZED HORIZONTAL CLAMPS

- Steel construction with polyamide handle
- Nitro carburized and black oxidized finish
- High quality bushing tolerances

HORIZONTAL CLAMPS

HORIZONTAL MODELS
H50/2BK - H450/2BK



Material:

Steel, Polyamide handle.

Surface finish:

Nitro carburized and black oxidized.

Arm:

The spindle position is adjustable along the arm.

Base:

Flanged.

Supplied complete with:

Setscrew & Nut.

Order No	Arm opens through	Handle opens through	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F4 daN
H50/2BK	86°	69°	8	40	50	25	30
H80/2BK	86°	66°	10	65	90	55	62
H150/2BK	87°	68°	16	135	190	72	120
H250/2BK	88°	68°	20	200	280	83	140
H350/2BK	90°	71°	25	220	450	120	280
H450/2BK	88°	68°	28	240	550	100	280

Order No	M	A	A1	A2	A3	A4	B	B1	B2	B3	B4	B5	B6	C	C2	D	H	H1	L	L1
H50/2BK	M4x16	16	24	4	11.4	1.75	16	24	10.2	7.1	13.1	1.5	20	11.7	5.75	4.2	29.3	26.3	91.8	23.7
H80/2BK	M5x25	18	27	4.5	13.5	-	16.8	27	13.2	9.1	-	2	22.5	18	5.1	5.5	43.4	38.9	126.3	42.6
H150/2BK	M6x35	26	39	6.5	-	-	28	39	17.5	12.4	23	2.5	43.5	25.5	-	5.5	63.2	59.5	186.7	60.5
H250/2BK	M8x45	26	44	9	-	-	31	45	21	15.7	24	2.5	41.5	32.2	-	6.2	73.9	70	223.2	74.9
H350/2BK	M10x55	41.5	59	9	-	-	43	59	26	18.7	39	3.5	47	40	-	8.8	94.8	87.9	279.4	103.9
H450/2BK	M12x70	44	65	10	40	1	42	67	28	20.9	40	3.5	47	52.3	13.5	8.5	104.8	101.6	314.7	122

HORIZONTAL CLAMPS

HORIZONTAL MODELS
H75/1BK - H450/1BK



Material:

Steel, Polyamide handle.

Surface finish:

Nitro carburized and black oxidized.

Arm:

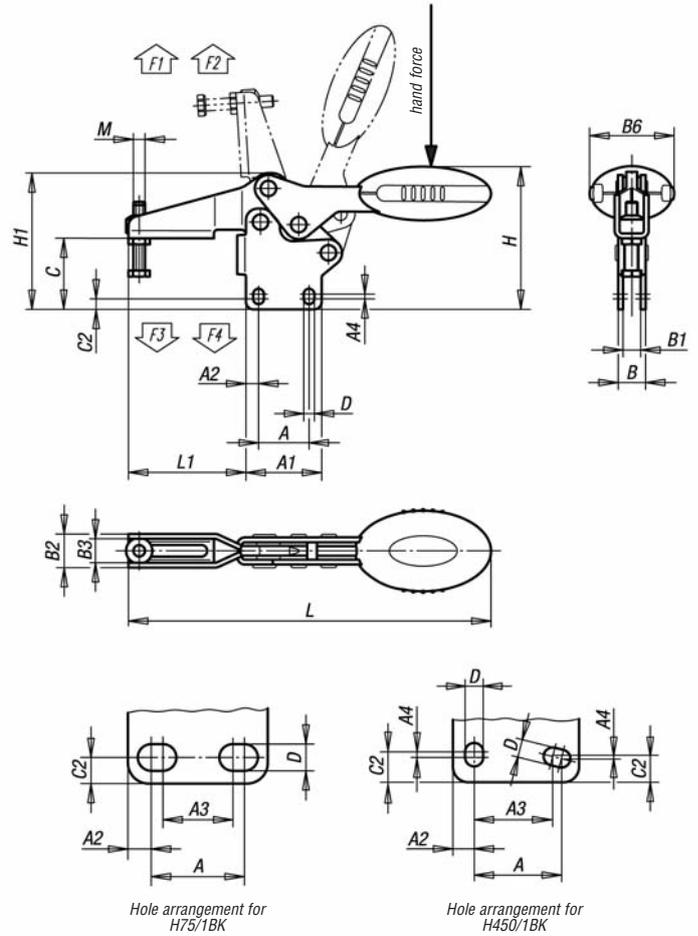
The spindle position is adjustable along the arm.

Base:

Straight.

Supplied complete with:

Setscrew & Nut.



Order No	Arm opens through	Handle opens through	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F4 daN
H75/1BK	86°	66°	10	65	90	55	62
H150/1BK	87°	68°	16	135	190	72	120
H250/1BK	88°	68°	20	200	280	83	140
H350/1BK	90°	71°	25	220	450	120	280
H450/1BK	88°	68°	28	240	550	100	280

Order No	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	H1	L	L1
H75/1BK	M5x25	18	27	4.5	13.5	-	8.1	4.1	13.2	9.1	22.5	26	5.1	5.5	51.8	47.7	125.7	41.8
H150/1BK	M6x35	26	39	6.5	-	2.5	14.1	9.1	17.5	12.4	43.5	37	5.5	5.5	74.2	71	186.8	60.5
H250/1BK	M8x45	26	44	9	-	3.5	14.1	9.1	21	15.7	41.5	46.5	7	6.2	88.2	84.4	223.2	74.9
H350/1BK	M10x55	41.5	59	9	-	2	16.2	9.2	26	18.7	47	59.6	8	8.8	114.4	107.5	279.3	103.9
H450/1BK	M12x70	44	65	11	40	1	16.2	67	28	20.9	47	75.9	13.5	8.5	128.4	125.2	314.7	122



PULL BACK CLAMP MODEL TC79 & TC345

- **Features:**

This clamp is unique in having an action similar to a wide-opening locking plier, but having a flanged body which can be fastened to the fixture or mould against which the work-piece or mould half is to be clamped.

A comfortable, cushioned PVC grip is fitted.

- **Specification:**

The pressed components are of zinc plated and passivated steel. The jaw is a machined casting which is also zinc plated and passivated. Rivets are of stainless steel.

PULL BACK CLAMPS

PULL BACK CLAMP
MODEL TC79



Arm:
The spindle is in a fixed position.

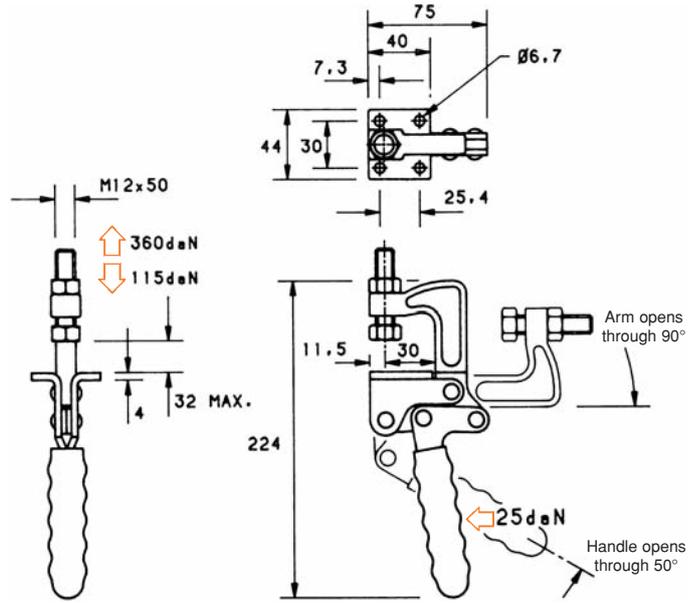
Base:
Flanged.

Nominal Holding Force:
360 daN

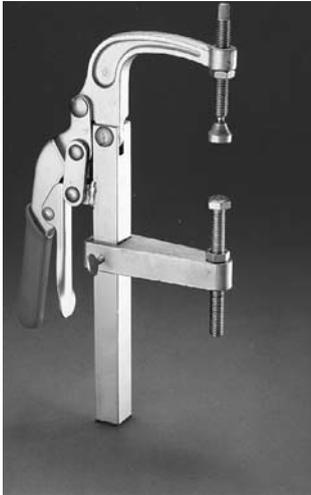
Weight:
0.50 Kg

Supplied complete with:
Setscrew & nuts.

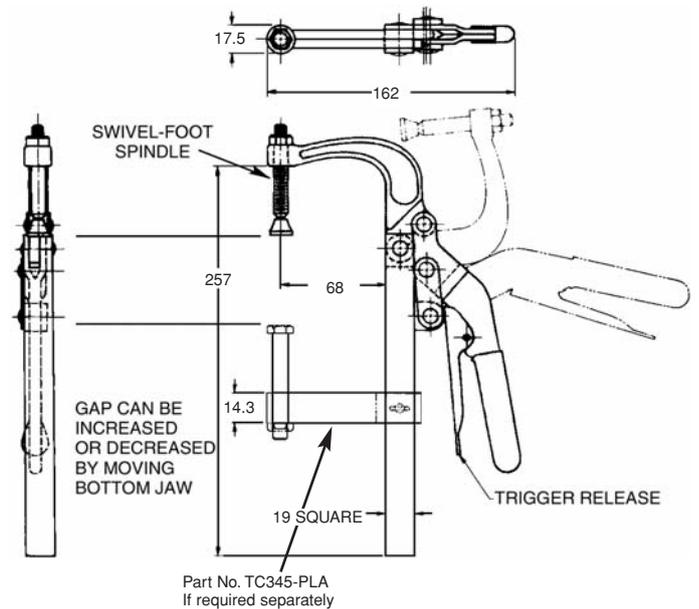
See "Accessories" for other items.



QUICK CLAMPING TOGGLE PLIERS



- multi-purpose rail clamp with forged steel clamping jaw.
- quick clamping and trigger release mechanism.
- 360 daN / 800 lb. clamping force from the toggle mechanism.
- comes supplied with lower jaw (part nos. TC345-PLA) which is also available separately.
- also supplied with SA-38314-SF swivel foot spindle.



Product Code	Opening mm	Depth mm	Rail mm	Weight kg
TC345	215	68.3	19 x 19	1.3



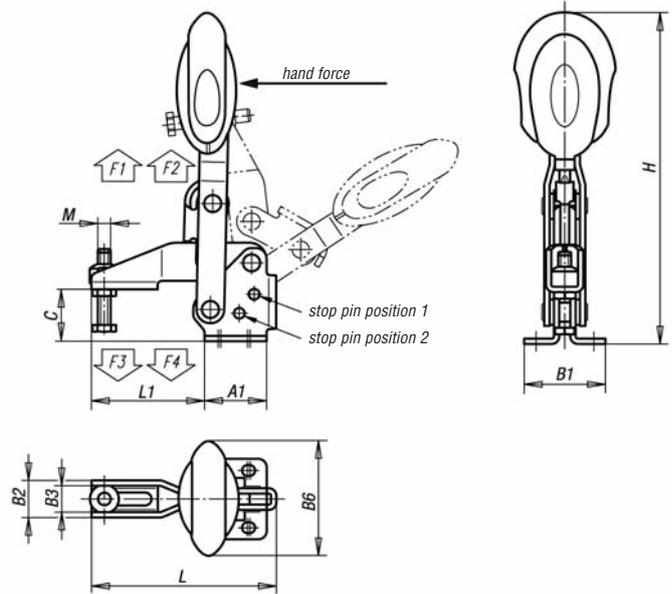
POSITIVE LOCKING CLAMPS SAFETY INTERLOCK +

- **New generation of Locking Toggle Clamps**
- **Nitro carburized & black oxidized finish**
- **Steel construction with polymide handle**
- **Unique Interlocking+ locking mechanism**

VERTICAL CLAMPS SAFETY INTERLOCK+

VERTICAL MODELS

V150/2BKL - V450/2BKL



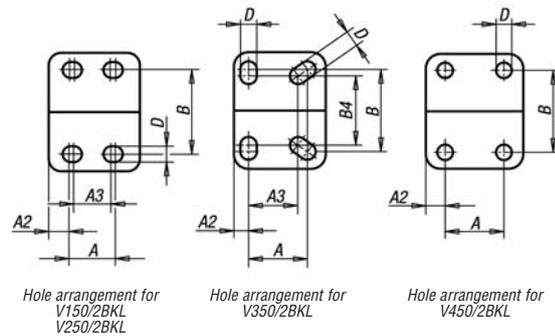
Material:
Steel, Polyamide handle, TPE unlocking bracket.

Surface finish:
Nitro carburized and black oxidized.

Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Supplied complete with:
Setscrew & Nut.



Includes an internal bar lock with automatic safety and maintenance free high quality swivel bushings

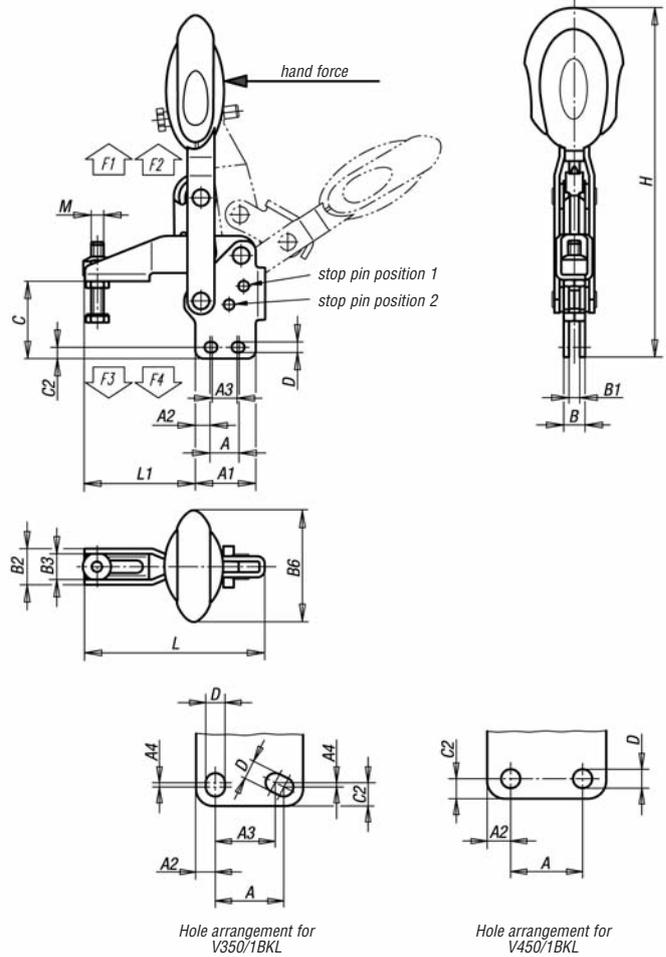
Order No	Arm opens through, Position 1	Arm opens through, Position 2	Arm opens through, pin removed	Handle opens through, Position 1	Handle opens through, Position 2	Handle opens through, pin removed	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F3 daN
V150/2BKL	56°	83°	156°	46°	56°	84°	16	135	165	92	105
V250/2BKL	13°	93°	157°	26°	61°	86°	19	200	280	94	135
V350/2BKL	6°	97°	175°	19°	59°	91°	25	250	450	150	280
V450/2BKL	11°	88°	163°	24°	60°	91°	30	300	550	140	280

Order No	M	A	A1	A2	A3	B	B1	B2	B3	B4	B6	C	D	H	L	L1
V150/2BKL	M6x35	14	29	7	12	27	38	17.5	12.4	-	53.4	24.7	5.5	162.9	86.5	53.0
V250/2BKL	M8x45	21	39	9	19	32	45	20.6	15.5	-	51.1	32.7	6.8	191.4	107.0	62.0
V350/2BKL	M10x55	32	50	8	27	45	64	25.5	18.4	38	56.5	38.7	9	230.5	153.0	95.0
V450/2BKL	M12x70	32	53	10.5	-	45	63	28	20.9	-	56.5	46.7	8.8	249.1	173.5	113.5

VERTICAL CLAMPS SAFETY INTERLOCK+

VERTICAL MODELS

V150/1BKL - V450/1BKL



Material:
Steel, with Polyamide handle, TPE unlocking bracket.

Surface finish:
Nitro carburized and black oxidized.

Arm:
The spindle position is adjustable along the arm.

Base:
Straight.

Supplied complete with:
Setscrew & Nut.

Includes an internal bar lock with automatic safety and maintenance free high quality swivel bushings

CLAMPING PRODUCTS

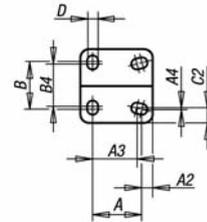
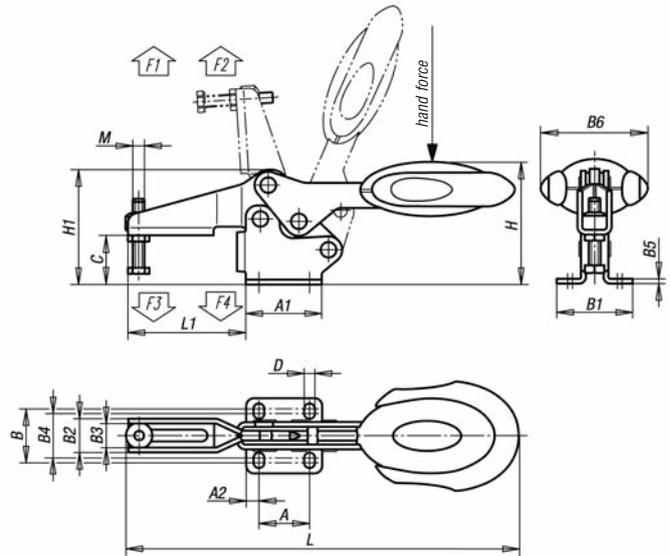
Order No	Arm opens through, Position 1	Arm opens through, Position 2	Arm opens through, pin removed	Handle opens through, Position 1	Handle opens through, Position 2	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F3 daN
V150/1BKL	56°	83°	156°	46°	56°	16	135	165	92	105
V250/1BKL	13°	93°	157°	26°	61°	19	200	280	94	135
V350/1BKL	6°	97°	175°	19°	59°	25	250	450	150	280
V450/1BKL	11°	88°	163°	24°	60°	28	300	550	140	280

Order No	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	L	L1
V150/1BKL	M6x35	14	29	7	12	-	10.2	5.2	17.5	12.4	53.4	37.6	5.5	5.5	175.7	86.5	53.0
V250/1BKL	M8x45	21	39	9	19	-	10.2	5.2	20.6	15.5	51.1	49	6.5	6.8	207.6	107.0	62.0
V350/1BKL	M10x55	32	50	8	27	3.5	14.1	7.1	25.5	18.4	56.5	62.3	13	9	254	153.0	95.0
V450/1BKL	M12x70	32	53	10.5	-	-	14.1	7.1	28	20.9	56.5	69.8	9	8.8	271.9	173.5	113.5

HORIZONTAL CLAMPS SAFETY INTERLOCK+

HORIZONTAL MODELS

H150/2BKL - H450/2BKL



Hole arrangement for H450/2BKL

Includes an internal bar lock with automatic safety and maintenance free high quality swivel bushings

Material:
Steel, with Polyamide handle, TPE unlocking bracket.

Surface finish:
Nitro carburized and black oxidized.

Arm:
The spindle position is adjustable along the arm.

Base:
Flanged.

Supplied complete with:
Setscrew & Nut.

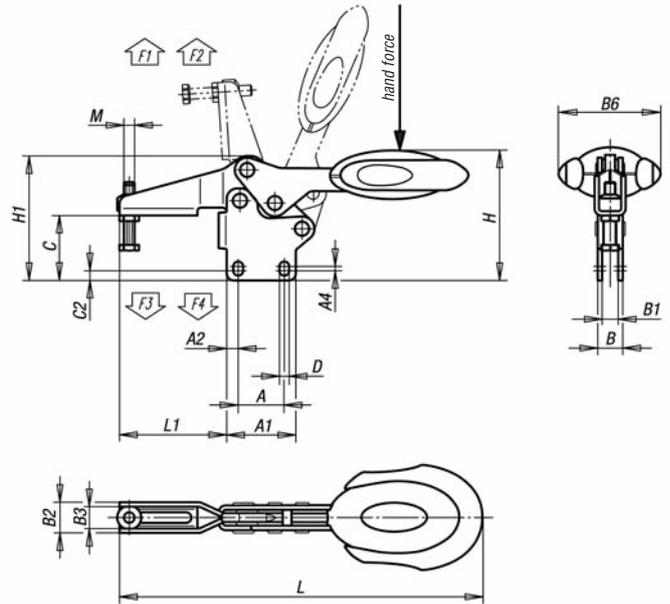
Order No	Arm opens through	Handle opens through	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F4 daN
H150/2BKL	87°	68°	16	135	190	72	120
H250/2BKL	88°	68°	20	200	280	83	140
H350/2BKL	90°	71°	25	220	450	120	280
H450/2BKL	88°	68°	28	240	550	100	280

Order No	M	A	A1	A2	A3	A4	B	B1	B2	B3	B4	B5	B6	C	C2	D	H	H1	L	L1
H150/2BKL	M6x35	26	39	6.5	-	-	28	39	17.5	12.4	23	2.5	43.5	25.5	-	5.5	63.2	59.5	186.7	60.5
H250/2BKL	M8x45	26	44	9	-	-	31	45	21	15.7	24	2.5	41.5	32.2	-	6.2	73.9	70	223.2	74.9
H350/2BKL	M10x55	41.5	59	9	-	-	43	59	26	18.7	39	3.5	47	40	-	8.8	94.8	87.9	279.4	103.9
H450/2BKL	M12x70	44	65	10	40	1	42	67	28	20.9	40	3.5	47	52.3	13.5	8.5	104.8	101.6	314.7	122

HORIZONTAL CLAMPS SAFETY INTERLOCK+

HORIZONTAL MODELS

H150/1BKL - H450/1BKL



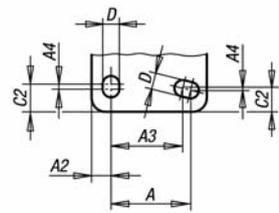
Material:
Steel, with Polyamide handle, TPE unlocking bracket.

Surface finish:
Nitro carburized and black oxidized.

Arm:
The spindle position is adjustable along the arm.

Base:
Straight.

Supplied complete with:
Setscrew & Nut.



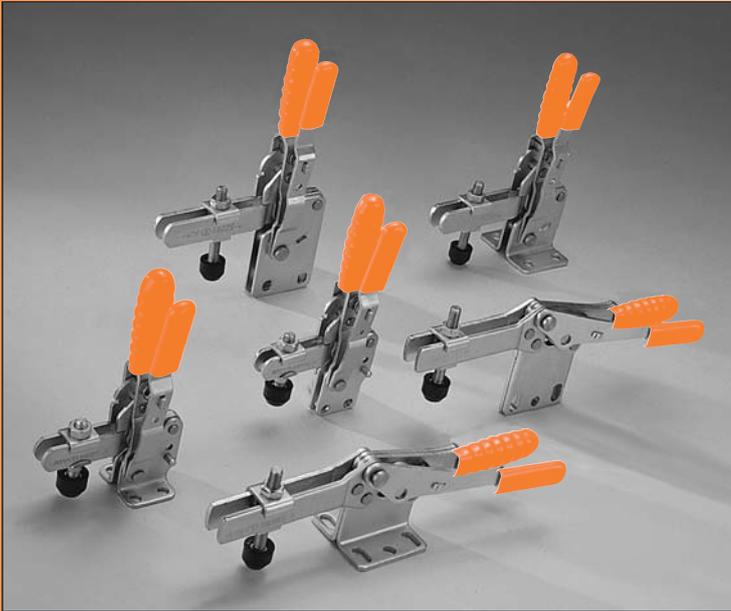
Hole arrangement for H450/1BKL

Includes an internal bar lock with automatic safety and maintenance free high quality swivel bushings

CLAMPING PRODUCTS

Order No	Arm opens through	Handle opens through	Handforce daN	Holdingforce F1 daN	Holdingforce F2 daN	Clampingforce F3 daN	Clampingforce F4 daN
H150/1BKL	87°	68°	16	135	190	72	120
H250/1BKL	88°	68°	20	200	280	83	140
H350/1BKL	90°	71°	25	220	450	120	280
H450/1BKL	88°	68°	28	240	550	100	280

Order No	M	A	A1	A2	A3	A4	B	B1	B2	B3	B6	C	C2	D	H	H1	L	L1
H150/1BKL	M6x35	26	39	6.5	-	2.5	14.1	9.1	17.5	12.4	43.5	37	5.5	5.5	74.2	71	186.8	60.5
H250/1BKL	M8x45	26	44	9	-	3.5	14.1	9.1	21	15.7	41.5	46.5	7	6.2	88.2	84.4	223.2	74.9
H350/1BKL	M10x55	41.5	59	9	-	2	16.2	9.2	26	18.7	47	59.6	8	8.8	114.4	107.5	279.3	103.9
H450/1BKL	M12x70	44	65	11	40	1	16.2	67	28	20.9	47	75.9	13.5	8.5	128.4	125.2	314.7	122



POSITIVE LOCKING CLAMPS

- Positive safety lock, in clamped and open position
- Unique mechanical locking mechanism
- Ideal for applications where the toggle clamp is used upside down or inverted
- Stainless steel rivets and hardened bushes for longer life

POSITIVE LOCKING CLAMPS

V250 SERIES

MODEL V250/2BBLC



Arm:
The spindle position is adjustable along the arm.

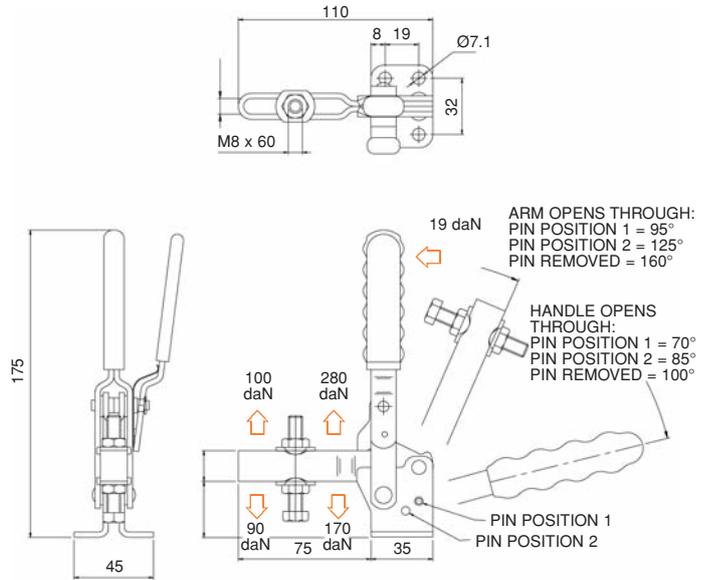
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.

See "Accessories" for other items.



V250 SERIES

MODEL V250/1BBLC



Arm:
The spindle position is adjustable along the arm.

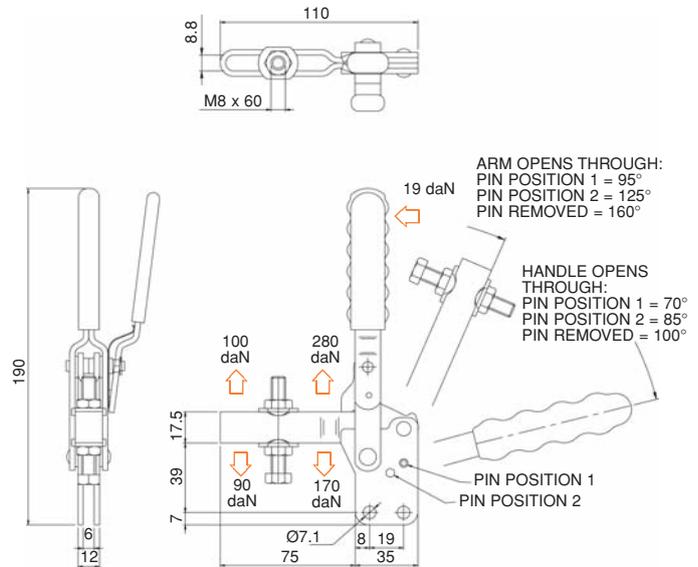
Base:
Straight.

Nominal Holding Force:
250 daN

Weight:
0.38 Kg

Supplied complete with:
MB0860 Setscrew & nuts.
FW08/15 Flanged washers.

See "Accessories" for other items.



V350 SERIES

MODEL V350/2BBLC



Arm:
The spindle position is adjustable along the arm.

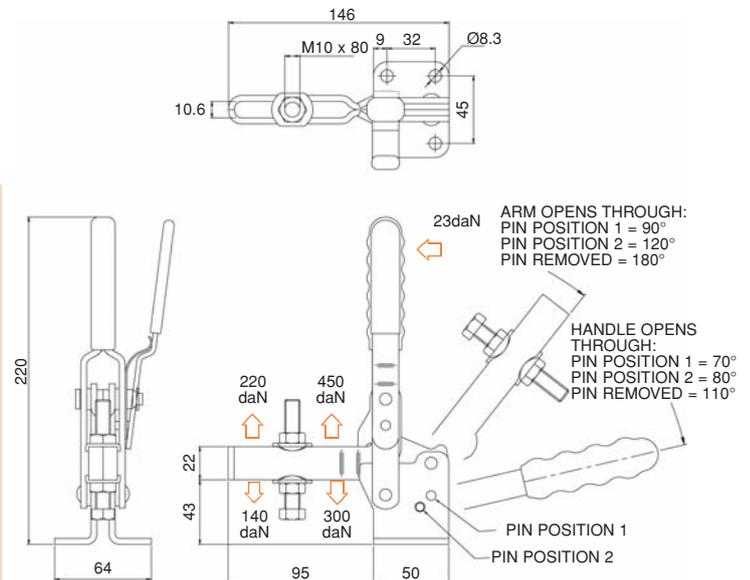
Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.8 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
FW10/20 Flanged washers.

See "Accessories" for other items.



POSITIVE LOCKING CLAMPS

V350 SERIES
MODEL V350/1BBLC



Arm:
The spindle position is adjustable along the arm.

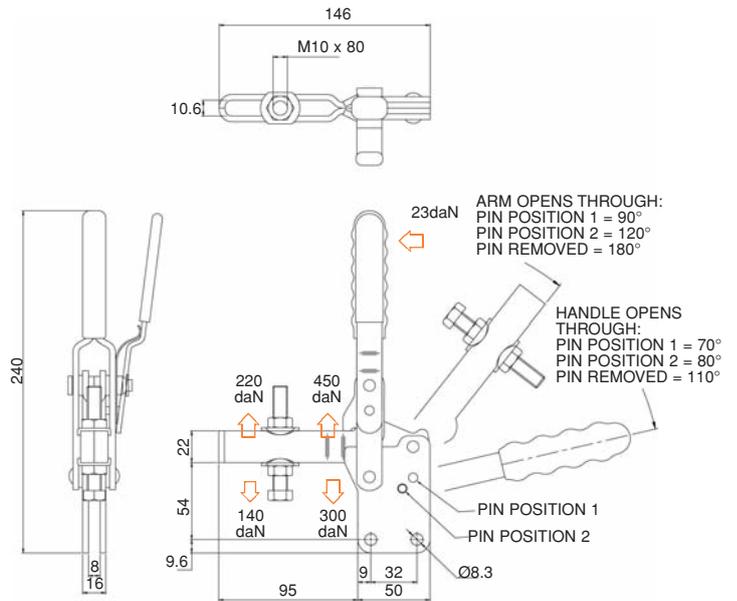
Base:
Straight.

Nominal Holding Force:
350 daN

Weight:
0.8 Kg

Supplied complete with:
MB1080 Setscrew & nuts.
FW10/20 Flanged washers.

See "Accessories" for other items.



V250 SERIES
MODEL V250/1BLC



Arm:
The spindle position is adjustable along the length of the arm.

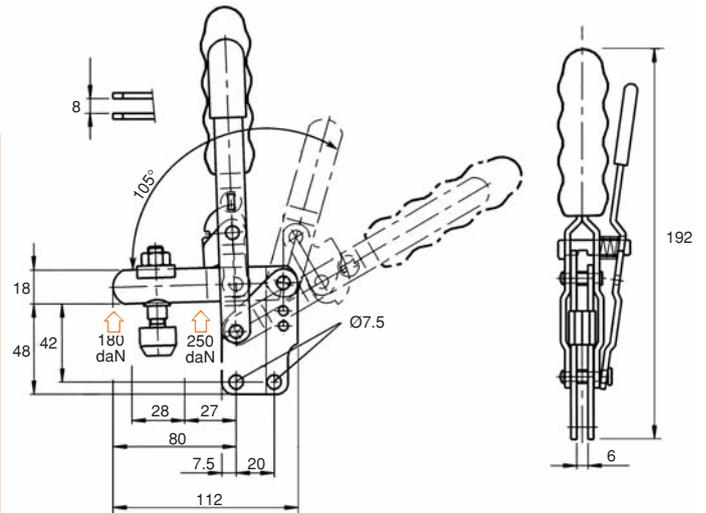
Base:
Straight.

Nominal Holding Force:
250 daN

Weight:
0.47 Kg

Supplied complete with:
Zinc plated screw, nut, washers and neoprene cover.

See "Accessories" for other items.



V250 SERIES
MODEL V250/2BLC



Arm:
The spindle position is adjustable along the length of the arm.

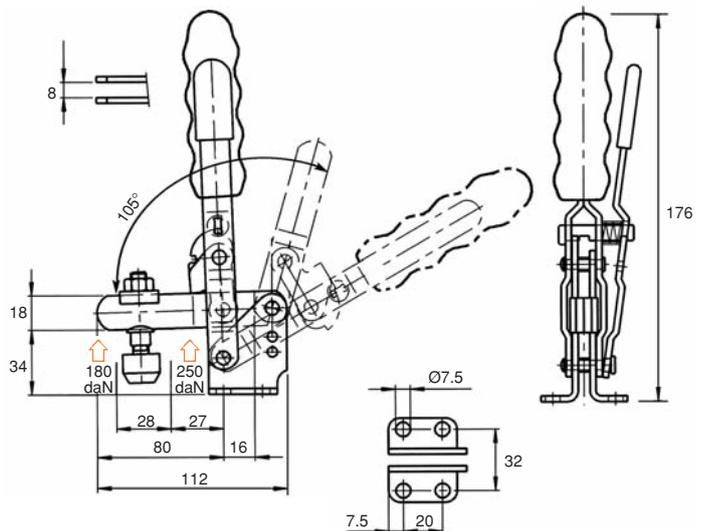
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.47 Kg

Supplied complete with:
Zinc plated screw, nut, washers and neoprene cover.

See "Accessories" for other items.



POSITIVE LOCKING CLAMPS

V250 SERIES

MODEL V250/3BLC



Arm:
The spindle position is adjustable along the length of the arm.

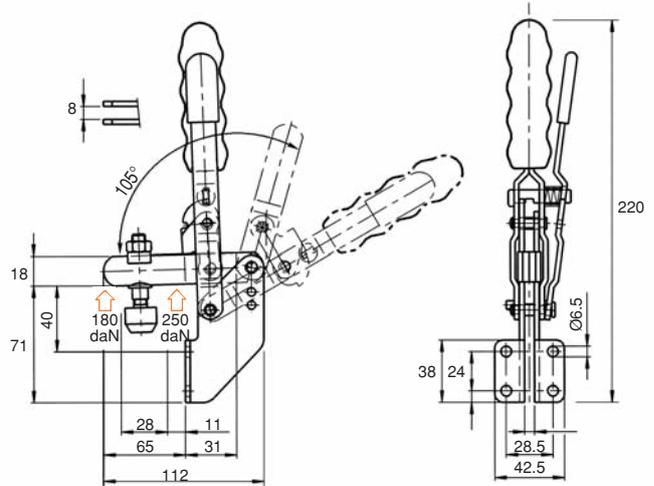
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.535 Kg

Supplied complete with:
Zinc plated screw, nut, washers and neoprene cover.

See "Accessories" for other items.



V350 SERIES

MODEL V350/1BLC



Arm:
The spindle position is adjustable along the length of the arm.

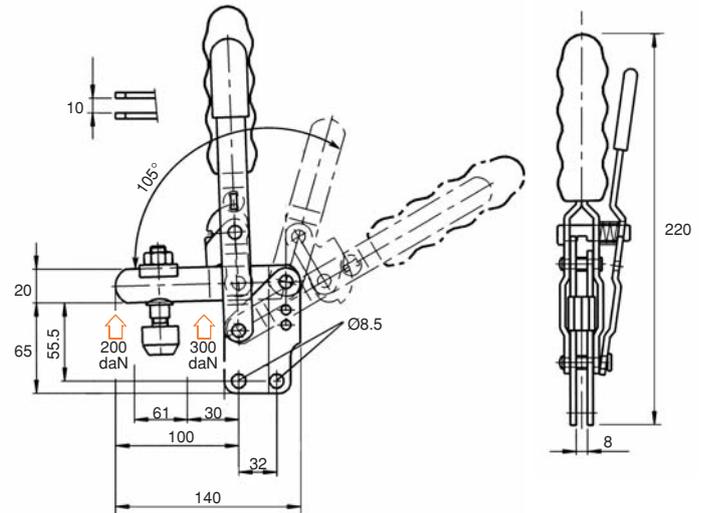
Base:
Straight.

Nominal Holding Force:
350 daN

Weight:
0.69 Kg

Supplied complete with:
Zinc plated screw, nut, washers and neoprene cover.

See "Accessories" for other items.



V350 SERIES

MODEL V350/2BLC



Arm:
The spindle position is adjustable along the length of the arm.

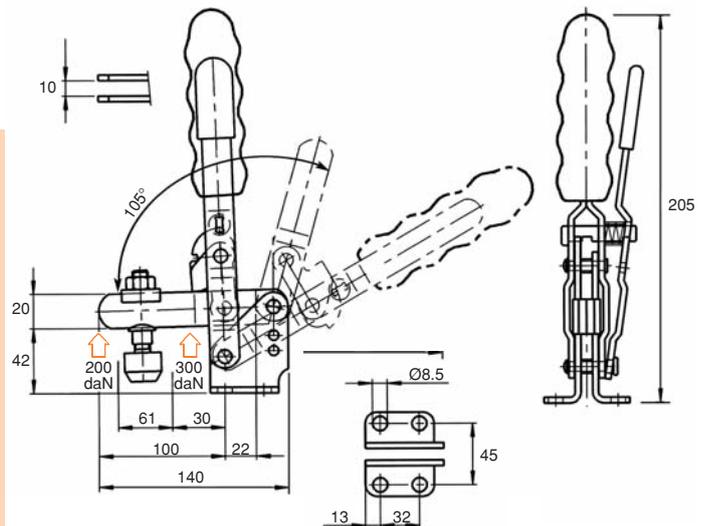
Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.69 Kg

Supplied complete with:
Zinc plated screw, nut, washers and neoprene cover.

See "Accessories" for other items.



POSITIVE LOCKING CLAMPS

H350 SERIES

MODEL H350/1BLC



Arm:

The spindle position is adjustable along the length of the arm.

Base:

Straight.

Nominal Holding Force:

350 daN

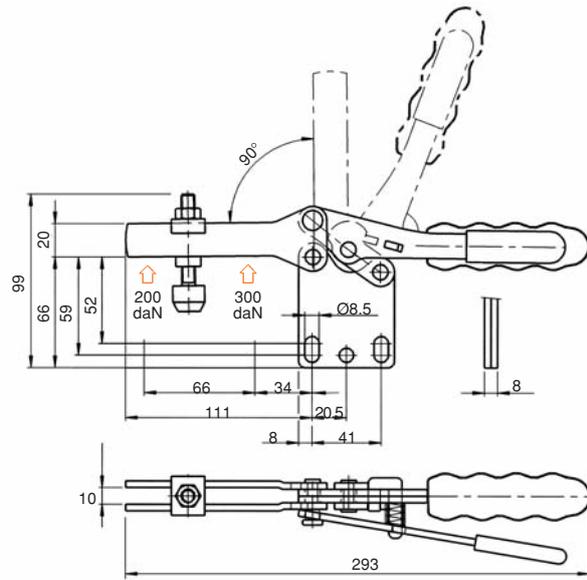
Weight:

0.8 Kg

Supplied complete with:

Zinc plated screw, nut, washers and neoprene cover.

See "Accessories" for other items.



H350 SERIES

MODEL H350/2BLC



Arm:

The spindle position is adjustable along the length of the arm.

Base:

Flanged.

Nominal Holding Force:

350 daN

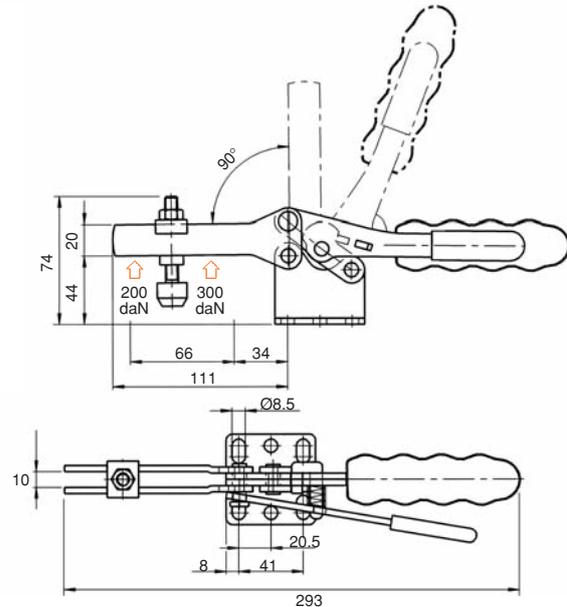
Weight:

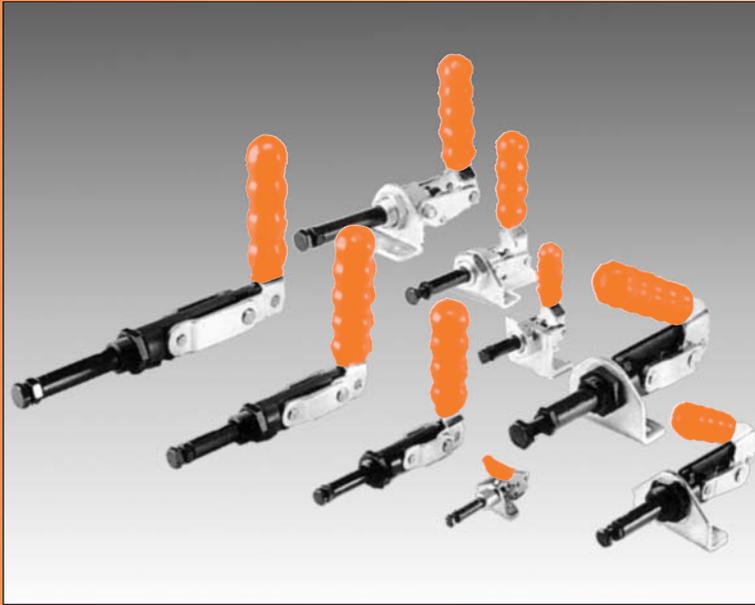
0.8 Kg

Supplied complete with:

Zinc plated screw, nut, washers and neoprene cover.

See "Accessories" for other items.





PUSH-PULL CLAMPS

- **Features:**

With the exception of model P50, which is a light duty base mounted clamp, these push-pull clamps are mounted either directly into a threaded or plain hole in a fixture, or can be mounted in a bracket which is either supplied with the clamp or offered as an accessory.

Nose mounting allows the clamp to be rotated to the required angle and locked by means of the locknut provided.

Models P100, P200 and P400 offer long strokes in light-duty clamps, while models P350, P550 and P750 are compact and robust, with their plunger movement tightly controlled.

A comfortable, cushioned PVC handle grip is fitted to all push-pull clamps.

- **Specification:**

The main components are of steel with either a zinc plated and passivated or manganese phosphated finish. All models are supplied with a steel setscrew and locknut finished chemi-black.

- **Installation:**

When mounting clamps ensure that the mechanism clears the mounting bracket or fixture.

PUSH-PULL CLAMPS

P50 SERIES MODEL P50



Plunger:
Locks at both extended & retracted ends of the stroke.

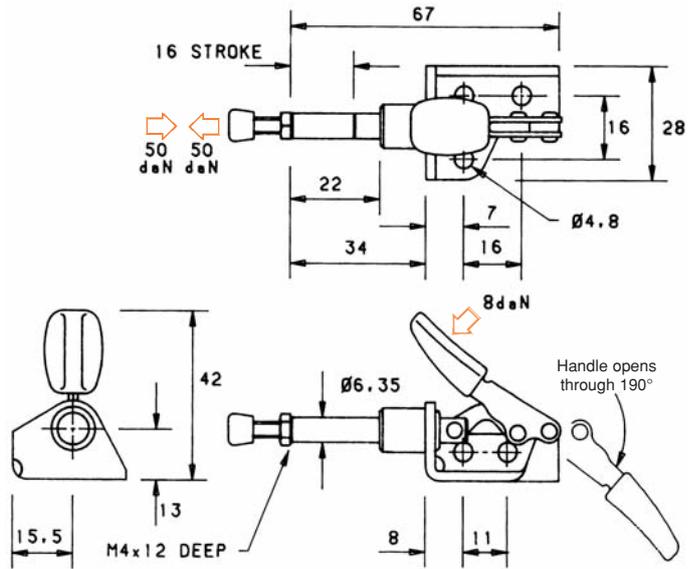
Base:
Fixed Flange with bottom or side mounting.

Nominal Holding Force:
50 daN

Weight:
0.05 Kg

Supplied complete with:
MB0420 Setscrew & nut.
NC/04 Neoprene cover.

See "Accessories" for other items.



P50 SERIES MODEL P50SS



Plunger:
Locks at both extended & retracted ends of the stroke.

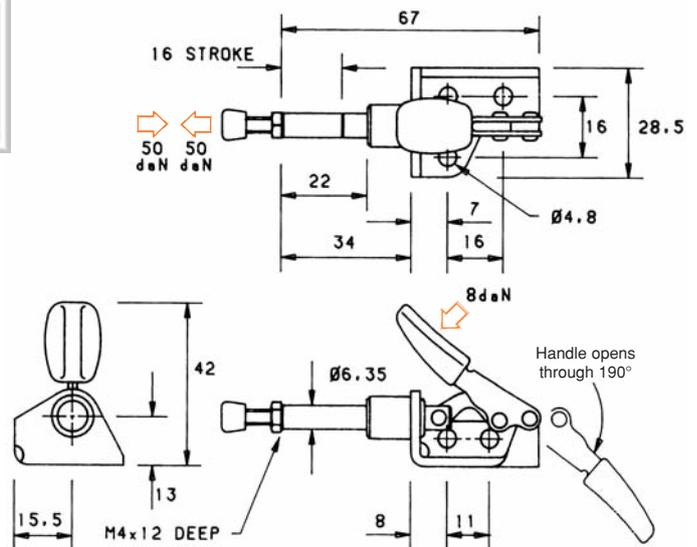
Base:
Fixed Flange with bottom or side mounting.

Nominal Holding Force:
50 daN

Weight:
0.05 Kg

Supplied complete with:
Setscrew & nut.
Neoprene cover.

Material:
BS 304 S15



P6015 SERIES MODEL P6015



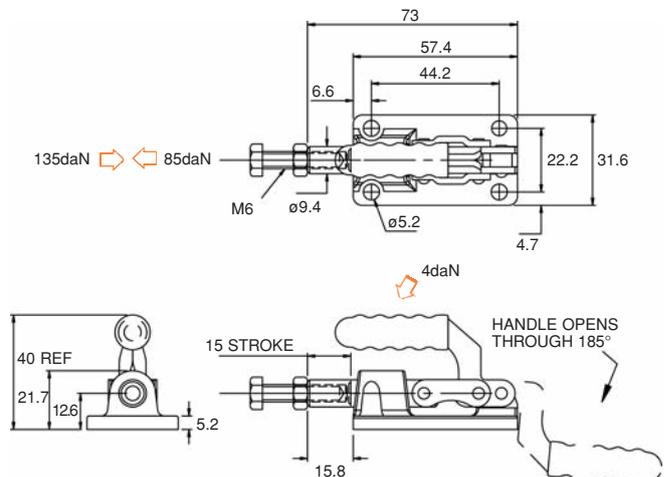
Plunger:
Locks at both extended & retracted ends of the stroke.

Base:
Body mounting.

Nominal Holding Force:
135 daN

Weight:
0.150 Kg

Supplied complete with:
MB0625 Setscrew & nut.



PUSH-PULL CLAMPS

P605 SERIES
MODEL P605



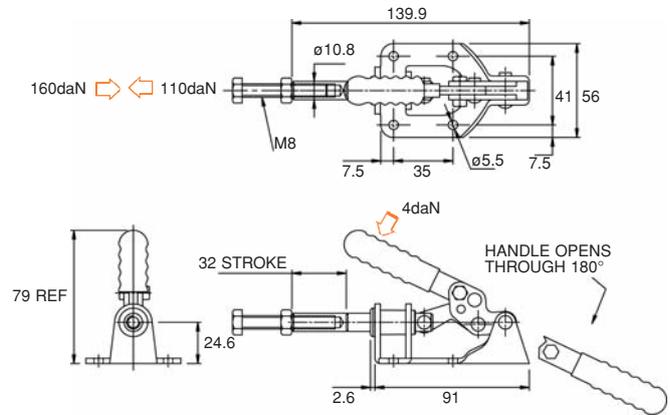
Plunger:
Locks at both extended & retracted ends of the stroke.

Base:
Body mounted fixed flange.

Nominal Holding Force:
160 daN

Weight:
0.30 Kg

Supplied complete with:
MB0840 Setscrew & nut.



P250 SERIES
MODEL P250



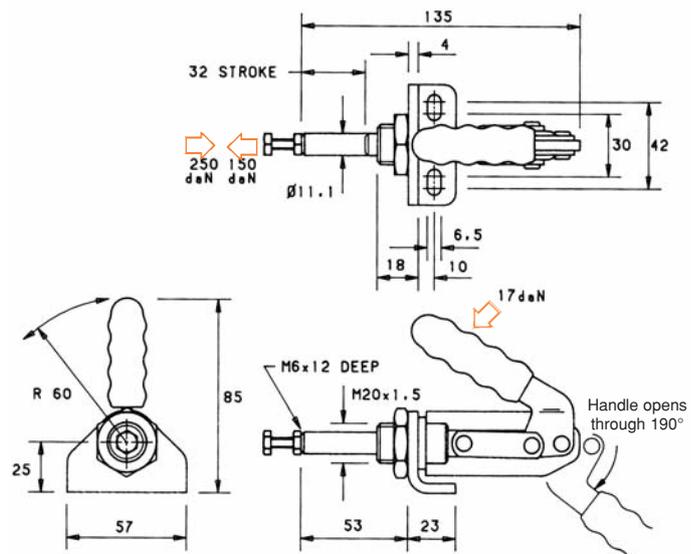
Plunger:
Locks at both extended & retracted ends of the stroke.

Base:
Nose or flange mounting.

Nominal Holding Force:
250 daN

Weight:
0.30 Kg

Supplied complete with:
MB0625 Setscrew & nut.
Mounting bracket & locknut.
See "Accessories" for alternative FM20 Mounting Bracket & other items.



P450 SERIES
MODEL P450



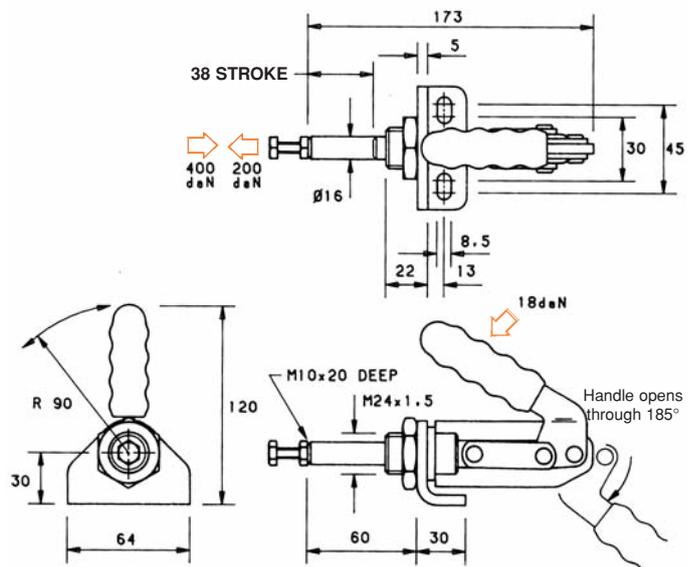
Plunger:
Locks at both extended & retracted ends of the stroke.

Base:
Nose or flange mounting.

Nominal Holding Force:
450 daN

Weight:
0.75 Kg

Supplied complete with:
MB1050 Setscrew & nut.
Mounting bracket & locknut.
See "Accessories" for alternative FM24 Mounting Bracket & other items.



PUSH-PULL CLAMPS

P100 SERIES MODEL P100



Plunger:
Locks at both extended & retracted ends of the stroke.

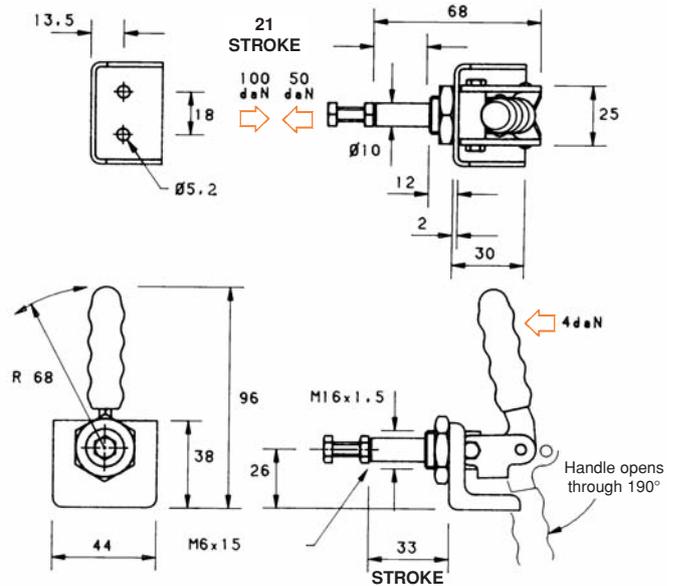
Base:
Nose or flange mounting.

Nominal Holding Force:
100 daN

Weight:
0.15 Kg

Supplied complete with:
MB0625 Setscrew & nut.
Mounting bracket & locknut.

See "Accessories" for
alternative FM16 Mounting
Bracket & other items.



P100 SERIES MODEL P100SS



Plunger:
Locks at both extended & retracted ends of the stroke.

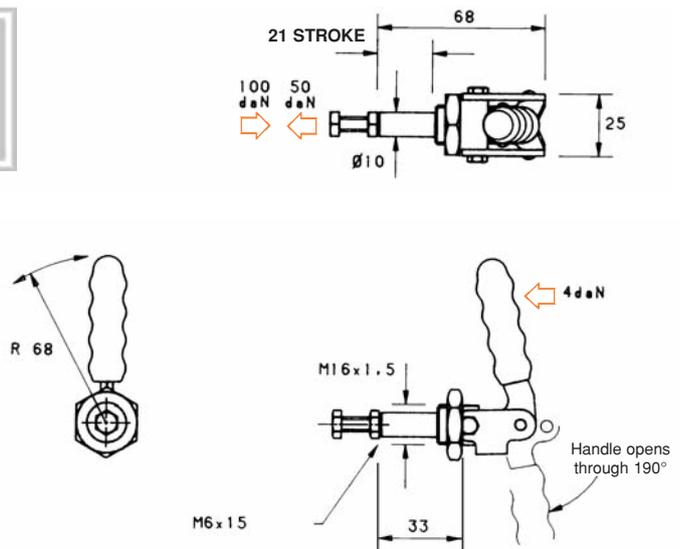
Base:
Nose or flange mounting.

Nominal Holding Force:
100 daN

Weight:
0.15 Kg

Supplied complete with:
Setscrew & nut.

Material:
BS 304 S15



P200 SERIES MODEL P200



Plunger:
Locks at both extended & retracted ends of the stroke.

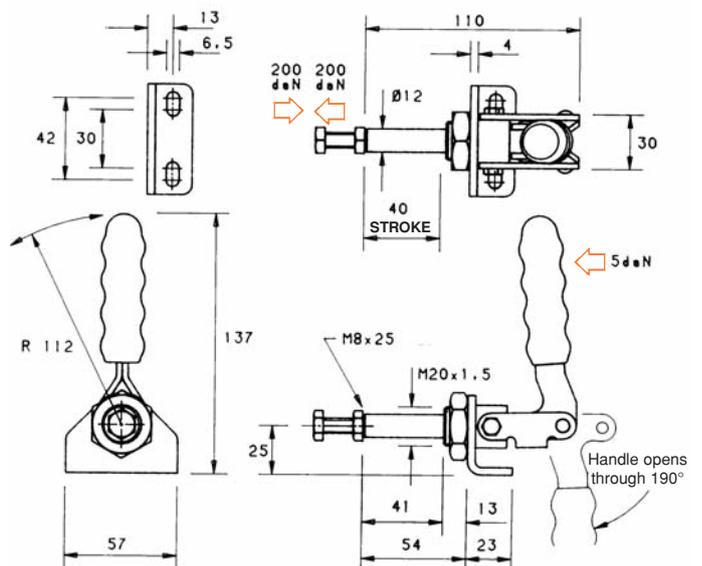
Base:
Nose or flange mounting.

Nominal Holding Force:
200 daN

Weight:
0.35 Kg

Supplied complete with:
MB0840 Setscrew & nut.
Mounting bracket & locknut.

See "Accessories" for
alternative FM20 Mounting
Bracket & other items.



PUSH-PULL CLAMPS

P200 SERIES
MODEL P200SS

**STAINLESS
STEEL**



Plunger:
Locks at both extended & retracted ends of the stroke.

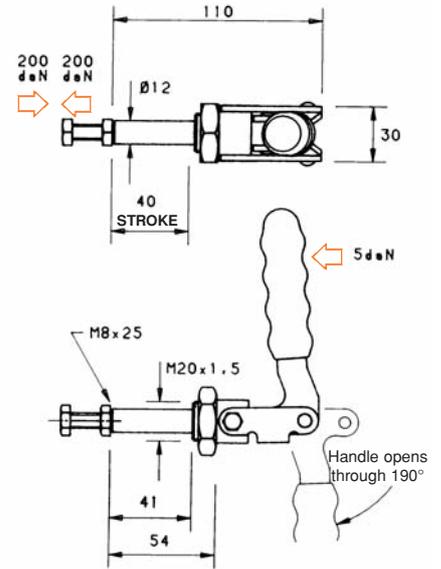
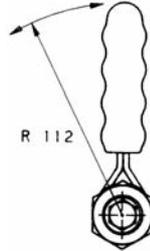
Base:
Nose or flange mounting.

Nominal Holding Force:
200 daN

Weight:
0.35 Kg

Supplied complete with:
Setscrew & nut.

Material:
BS 304 S15



P400 SERIES
MODEL P400



Plunger:
Locks at both extended & retracted ends of the stroke.

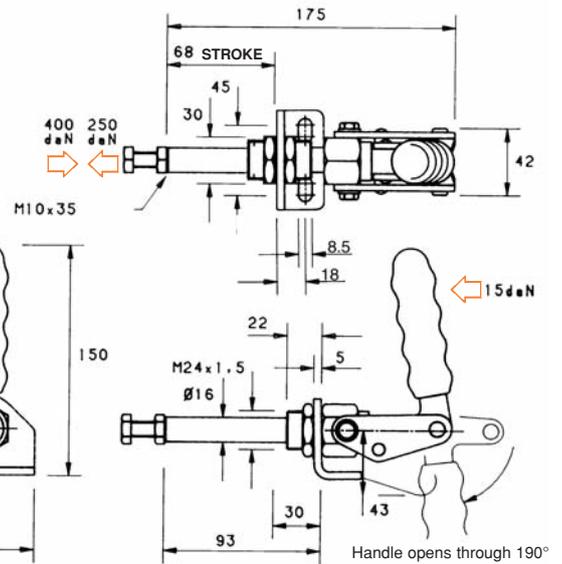
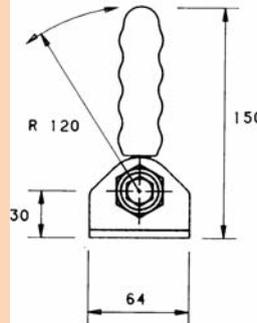
Base:
Nose or flange mounting.

Nominal Holding Force:
400 daN

Weight:
0.80 Kg

Supplied complete with:
MB1050 Setscrew & nut.
Mounting bracket & locknut.

See "Accessories" for
alternative FM24 Mounting
Bracket & other items.



P400 SERIES
MODEL P400SS

**STAINLESS
STEEL**



Plunger:
Locks at both extended & retracted ends of the stroke.

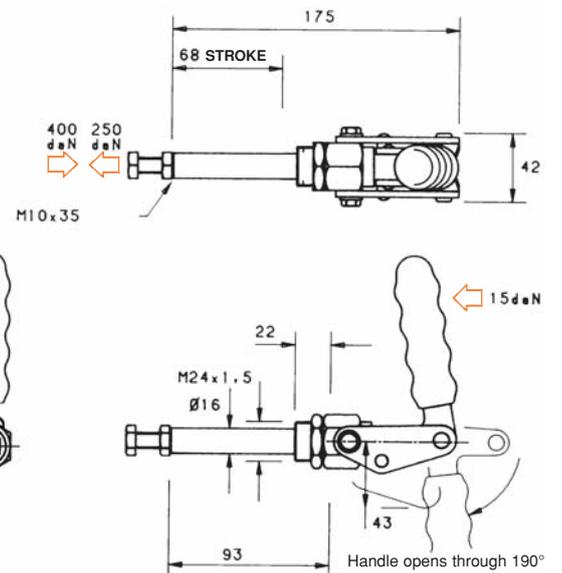
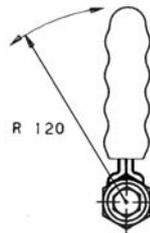
Base:
Nose or flange mounting.

Nominal Holding Force:
400 daN

Weight:
0.80 Kg

Supplied complete with:
Setscrew & nut.

Material:
BS 304 S15



PUSH-PULL CLAMPS

'SLIMLINE' PUSH-PULL CLAMPS

MODEL P750



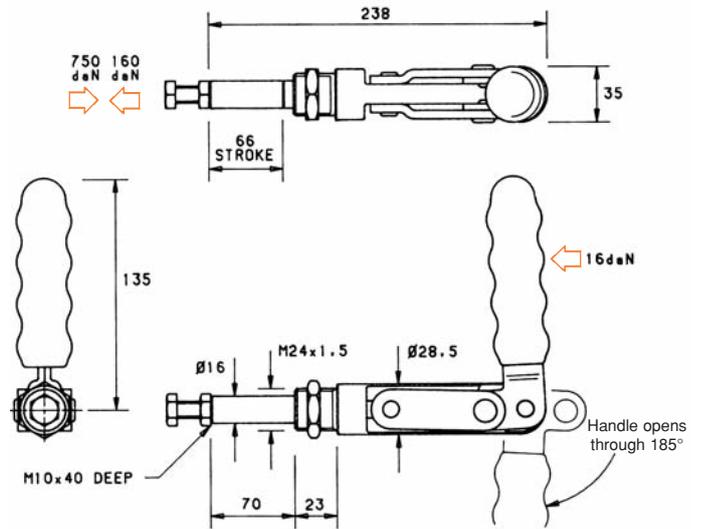
Plunger:
Locks at both extended & retracted ends of the stroke.

Base:
Nose mounting.

Nominal Holding Force:
750 daN

Weight:
1.00 Kg

Supplied complete with:
MB1050 Setscrew & nut.
See "Accessories" for FM24 Mounting Bracket & other items.



'PRECISION' PUSH-PULL CLAMP

MODEL SP700



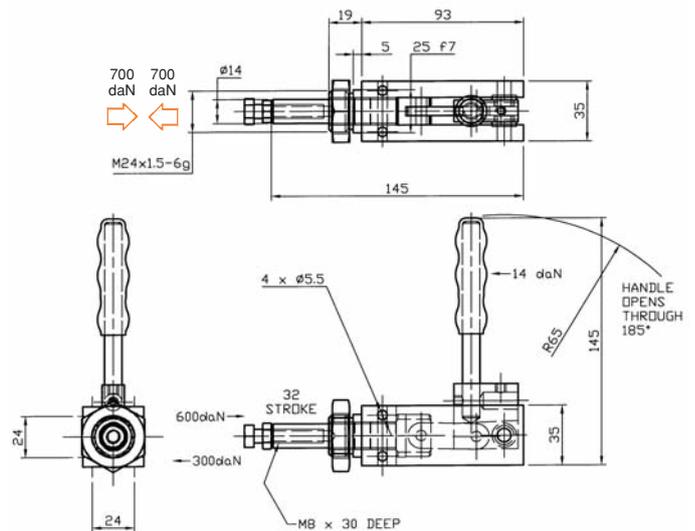
Plunger:
Ground steel precision self-locking at forward stroke position.

Base:
Carbon steel precision machined, nose mounting or body mounting.

Nominal Holding Force:
700 daN

Weight:
0.83 Kg

Supplied complete with:
MB0840 setscrew & nuts.



'PRECISION' PUSH-PULL CLAMP

MODEL P1150

P2250

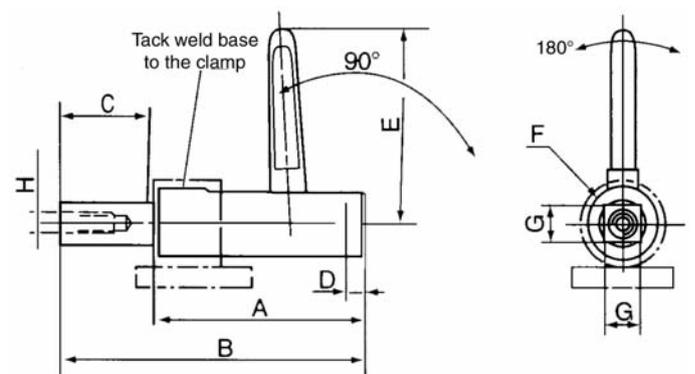


Piston:
Locks at the extended end of the stroke.

Base:
Fixed by using accessories overleaf.

Holding Force:
P1150 - 1 150 daN
P2250 - 2 250 daN

Weight:
P1150 - 1,150Kg
P2250 - 1,850Kg



MODEL	A	B	C	D	E	F	G	H
P1150	108	159	46	10	112	35	19	M12
P2250	141	212.5	55	14	127	45	24.8	M16

PUSH-PULL CLAMPS

'PRECISION' PUSH-PULL CLAMP

MODEL **P1150L**
P2250L

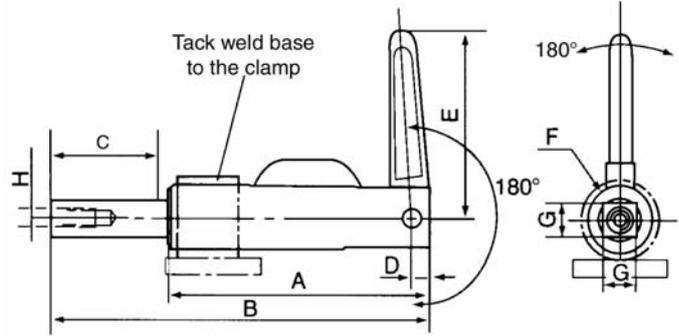


Piston:
Locks at the extended end of the stroke.

Base:
Fixed by using accessories overleaf.

Holding Force:
P1150L - 1 150 daN
P2250L - 2 250 daN

Weight:
P1150L - 1,150Kg
P2250L - 1,850Kg



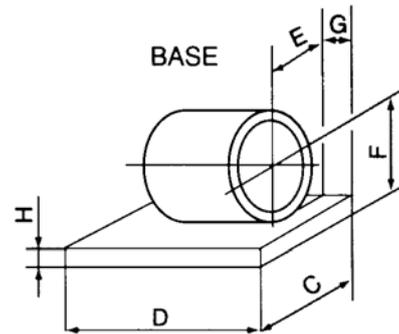
MODEL	A	B	C	D	E	F	G	H
P1150L	149.9	215.9	60	10	112	35	19	M12
P2250L	194	281	78	14	127	45	24.8	M16

BASE ACCESSORIES

MODEL **P1150, P1150L, P2250 & P2250L**



Weight of base:
1150B - 0.38Kg
2250B - 0.90Kg



BASE	C	D	E	F	G	H
1150B	70	50	35	30.1	6.5	7.6
2250B	90	70	45	40	7	12



HEAVY DUTY PUSH-PULL CLAMPS

- **Features:**

These clamps are of exceptionally robust construction featuring cast and machined handles and bases. The clamps are designed with a low plunger height and with the mechanism guarded within the base to avoid finger traps.

- Models P600, P1200, P2500 and P5000 have handles of normal length for clamping. The long handled 'L' versions (P600L, P1200L, P2500L, and P5000L) have their handles either to the front or rear of the clamp according to the application and produce high forces which make them suitable for clamping or for light work such as swaging, rivetting, press fitting components, etc. All models are fitted with a comfortable, cushioned PVC handle grip.

- **Specification:**

The bases of all models, and the handles of models P600, P1200, P2500 and P5000 are machined S.G. iron castings.

The handles of the 'L' versions are of steel bar and mount in housings which are either machined steel castings or machined from steel bar.

- The plungers are of steel, and their precision ground diameter runs in a close-toleranced hole in the base casting.

All axles are of hardened steel and run in either the S.G. iron of the handle, or in the close-toleranced holes of hardened parts.

All models are supplied with a steel setscrew finished chemi-black.

HEAVY-DUTY PUSH-PULL CLAMPS

MODEL P600



Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.

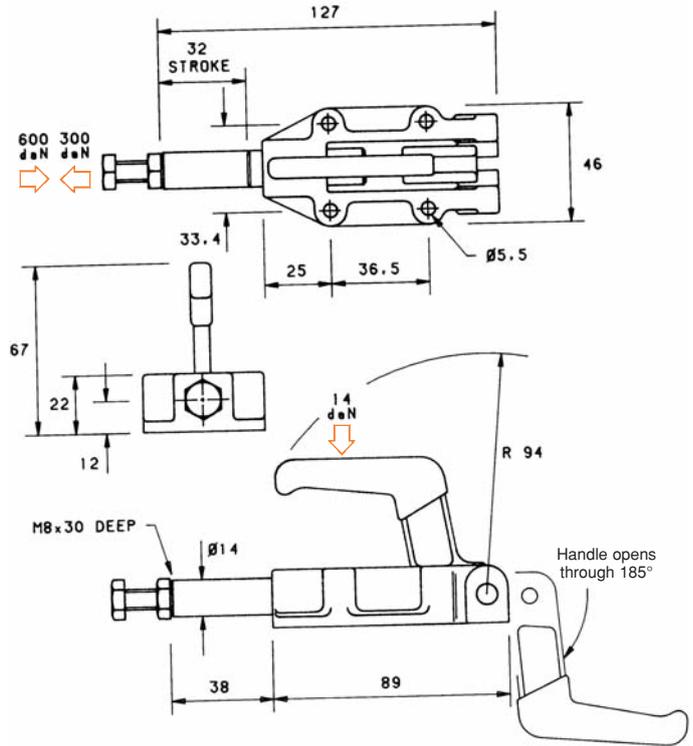
Base: SG Iron Casting.
Body mounting.

Nominal Holding Force:
600 daN

Weight:
0.45 Kg

Supplied complete with:
MB0840 Setscrew & nut.

See "Accessories" for other items.



MODEL P1200



Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.

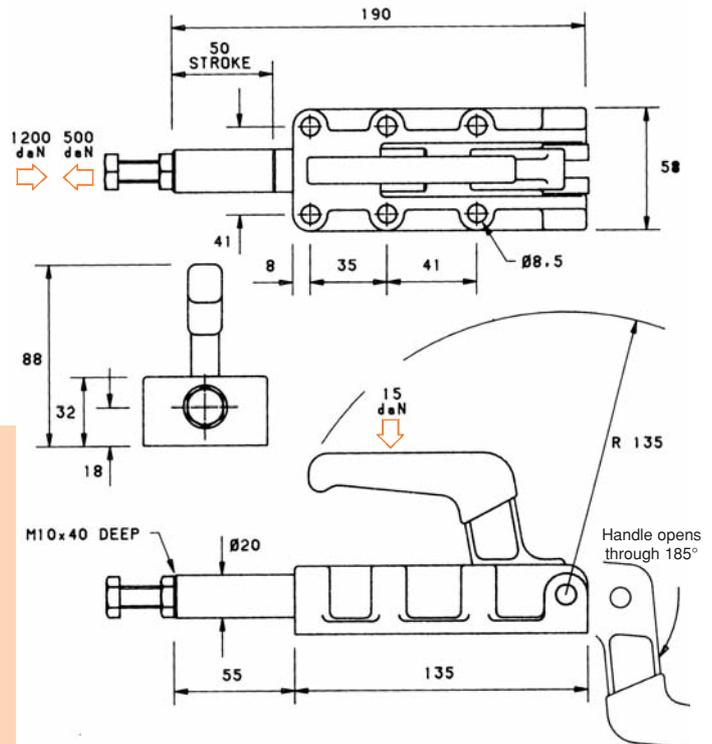
Base: SG Iron Casting.
Body mounting.

Nominal Holding Force:
1200 daN

Weight:
1.35 Kg

Supplied complete with:
MB1050 Setscrew & nut.

See "Accessories" for other items.

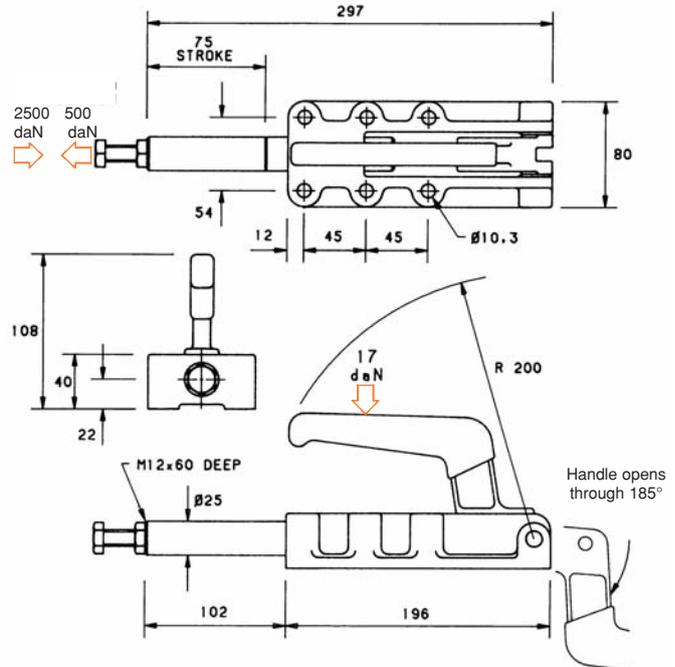


HEAVY-DUTY PUSH-PULL CLAMPS

MODEL P2500



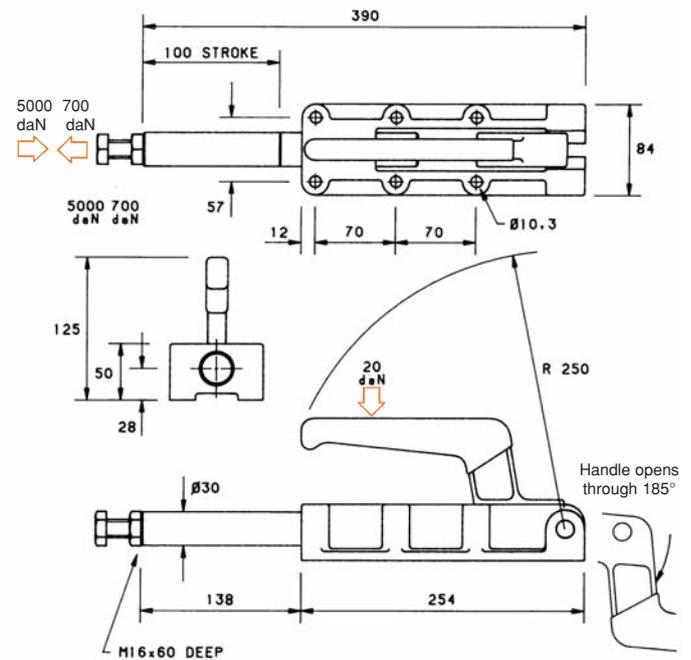
Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.
Base: SG Iron Casting.
Body mounting.
Nominal Holding Force:
2500 daN
Weight:
3.60 Kg
Supplied complete with:
MB1250 Setscrew & nut.
See "Accessories" for other items.



MODEL P5000

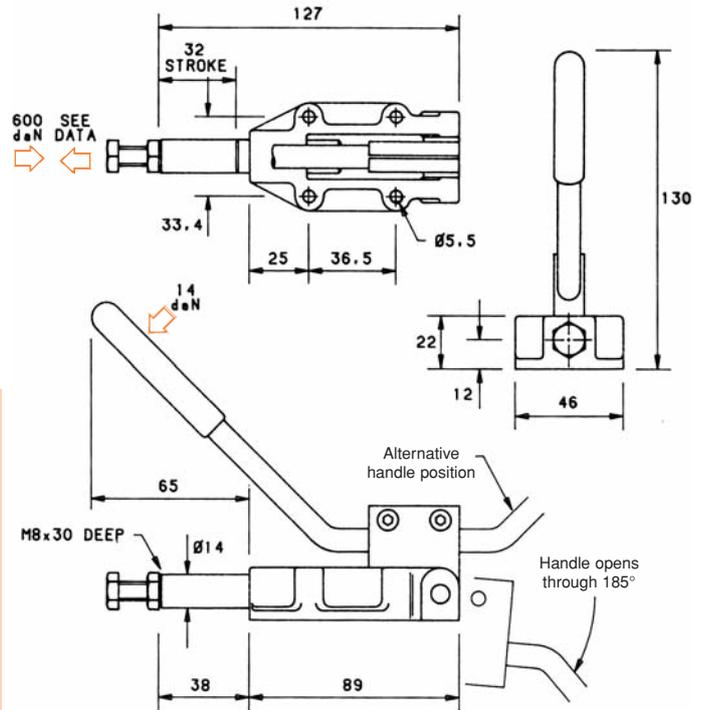
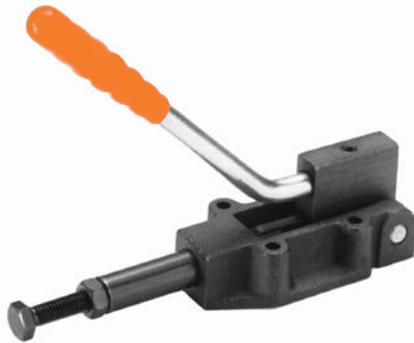


Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.
Base: SG Iron Casting.
Body mounting.
Nominal Holding Force:
5000 daN
Weight:
6.20 Kg
Supplied complete with:
MB1680 Setscrew & nut.
See "Accessories" for other items.



HEAVY-DUTY PUSH-PULL CLAMPS

MODEL P600L



Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.

Base: SG Iron Casting.
Body mounting.

Nominal Holding Force:
600 daN

Weight:
0.55 Kg

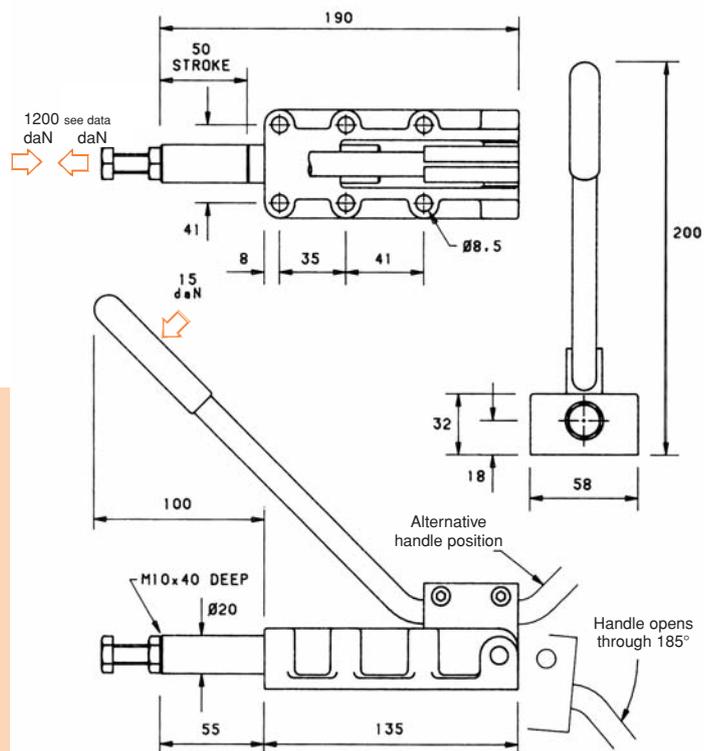
Supplied complete with:
MB0840 Setscrew & nut.

See "Accessories" for other items.

With 14 daN handle force the output force is:

Extension	daN
Fully retracted	470
5 mm extended	110
10 mm "	70
15 mm "	75
20 mm "	80
25 mm "	85
30 mm "	146
31 mm "	190
Fully extended	580

MODEL P1200L



Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.

Base: SG Iron Casting.
Body mounting.

Nominal Holding Force:
1200 daN

Weight:
1.60 Kg

Supplied complete with:
MB1050 Setscrew & nut.

See "Accessories" for other items.

With 15 daN handle force the output force is:

Extension	daN
Fully retracted	705
5 mm extended	167
10 mm "	90
15 mm "	73
20 mm "	70
25 mm "	72
30 mm "	85
35 mm "	100
40 mm "	110
45 mm "	150
48 mm "	220
49 mm "	290
Fully extended	930

HEAVY-DUTY PUSH-PULL CLAMPS

MODEL P2500L



Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.

Base: SG Iron Casting.
Body mounting.

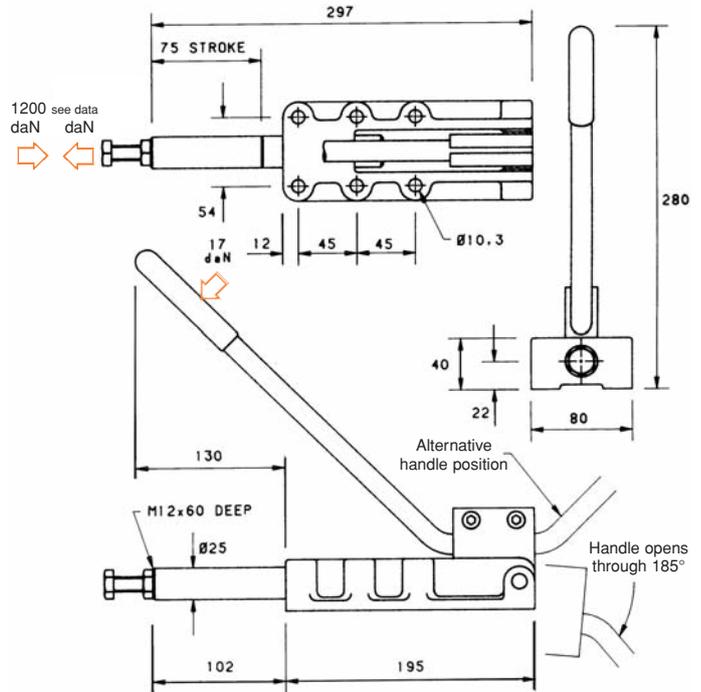
Nominal Holding Force:
2500 daN

Weight:
4.15 Kg

Supplied complete with:
MB1250 Setscrew & nut.

See "Accessories" for other items.

With 17 daN handle force the output force is:	daN
Fully retracted	1000
10 mm extended	100
20 mm "	72
30 mm "	60
40 mm "	70
50 mm "	88
60 mm "	118
70 mm "	190
72 mm "	230
74 mm "	353
Fully extended	1100



MODEL P5000L



Plunger: Ground Steel.
Locks at both extended & retracted ends of the stroke.

Base: SG Iron Casting.
Body mounting.

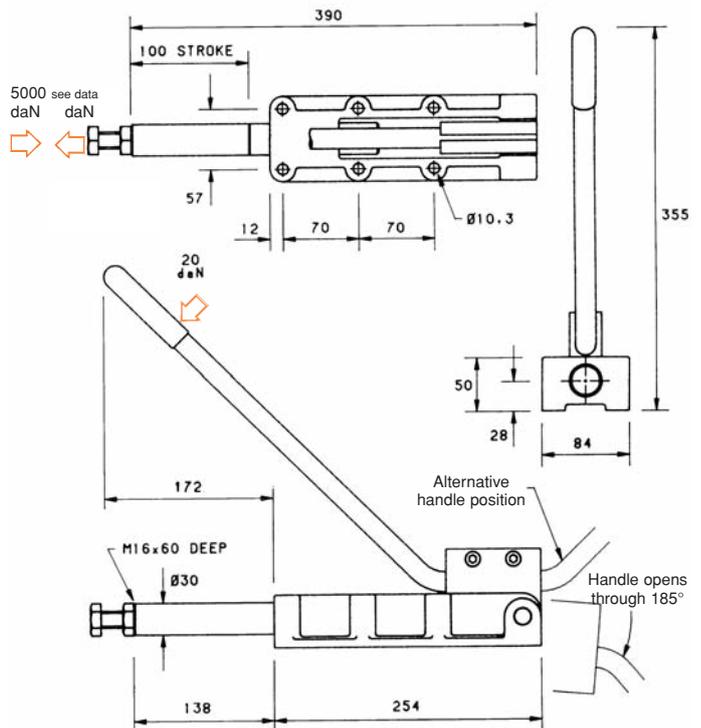
Nominal Holding Force:
5000 daN

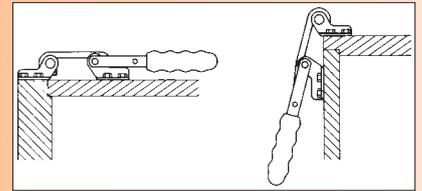
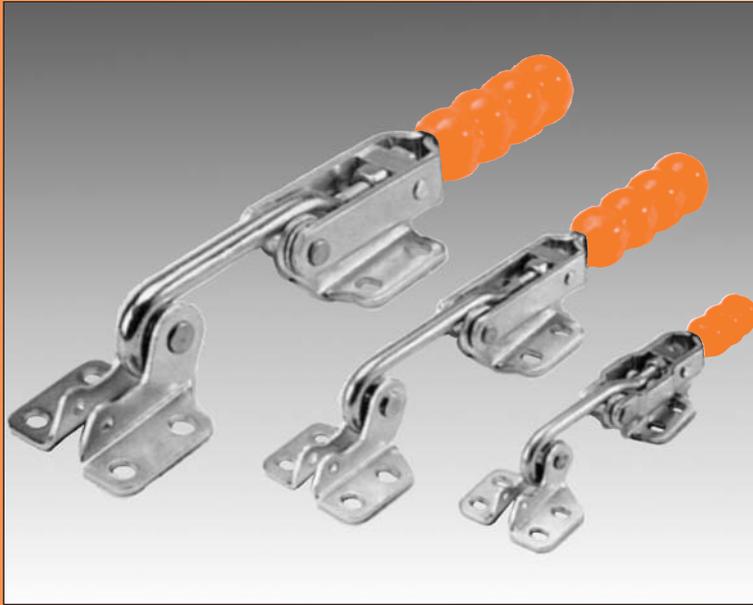
Weight:
7.10 Kg

Supplied complete with:
MB1680 Setscrew & nut.

See "Accessories" for other items.

With 20 daN handle force the output force is:	daN
Fully retracted	1100
10 mm extended	180
20 mm "	110
30 mm "	75
40 mm "	80
50 mm "	82
60 mm "	100
70 mm "	100
80 mm "	130
90 mm "	190
95 mm "	250
97 mm "	310
99 mm "	450
Fully extended	1210





HOOK CLAMPS

- **Features:**

The action of Hook clamps in pulling two parts together makes them suitable for applications such as closing and holding doors, lids, moulds, etc.

A benefit of Hook clamps is that while the clamp and the interface bracket it engages must be in alignment when viewed from the top, there is no such requirement when viewed from the side — the clamp will lock securely over centre regardless of the angle of the hook shown in the diagram above.

The hook may be engaged either directly to a bolt or pin on one of the parts to be pulled together, or to the latch bracket provided.

All Hook clamps are fitted with a comfortable, cushioned handle grip.

- **Specification:**

All components are of zinc plated and passivated steel, the hooks being of high tensile alloy steel.

- **Installation:**

These clamps generate high forces and should not be over adjusted as damage could result. The clamp and its latch bracket must be in alignment when viewed from the top.

HOOK CLAMPS

MODEL LH200



Nominal Holding Force:

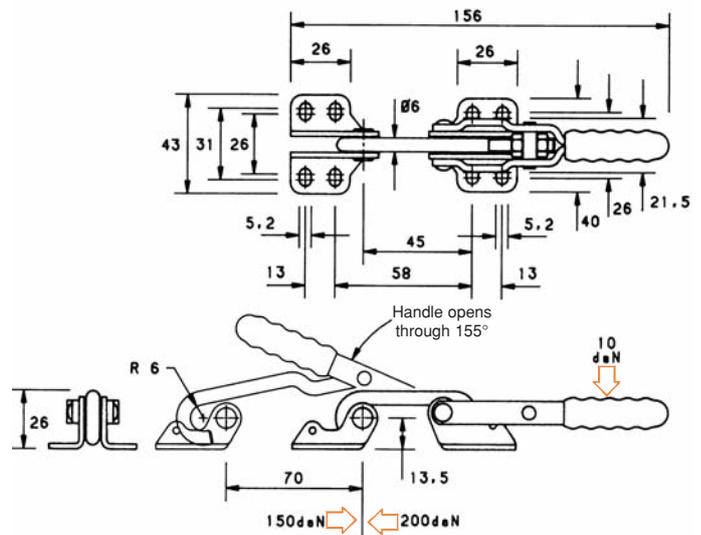
200 daN

Weight:

0.10 Kg

Supplied complete with:
Latch Bracket as shown.

See "Features and installation information" page for installation instructions.



MODEL LH200SS

**STAINLESS
STEEL**



Nominal Holding Force:

200 daN

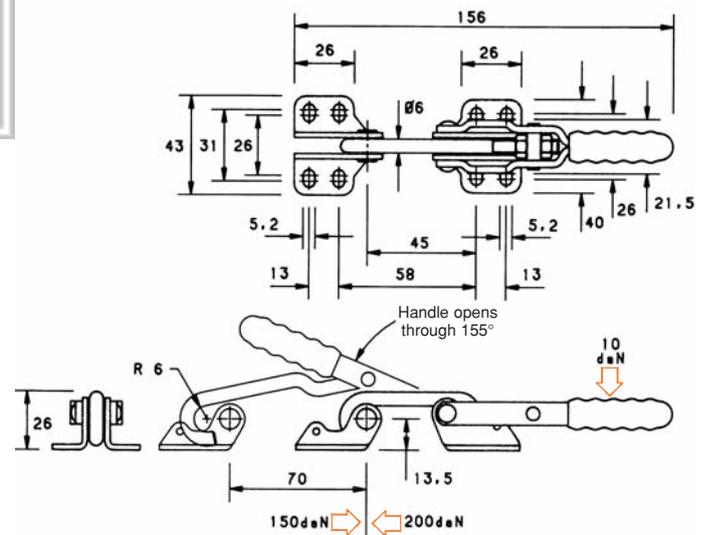
Weight:

0.10 Kg

Supplied complete with:
Latch Bracket as shown.

Material:
BS 304 S15

See "Features and installation information" page for installation instructions.



MODEL LH400



Nominal Holding Force:

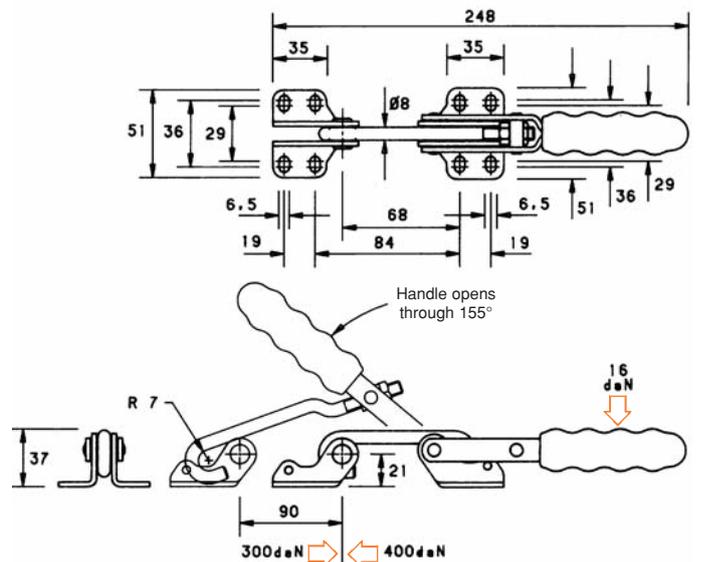
400 daN

Weight:

0.35 Kg

Supplied complete with:
Latch Bracket as shown.

See "Features and installation information" page for installation instructions.



HOOK CLAMPS

MODEL LH400SS

STAINLESS
STEEL



Nominal Holding Force:

400 daN

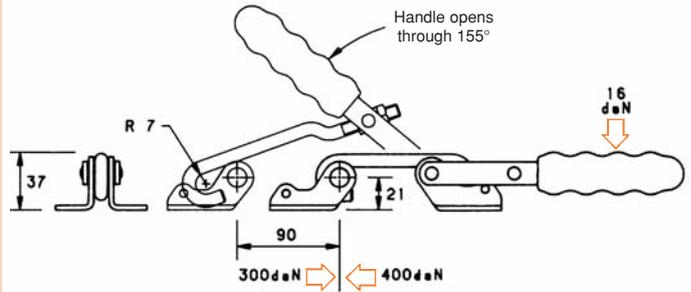
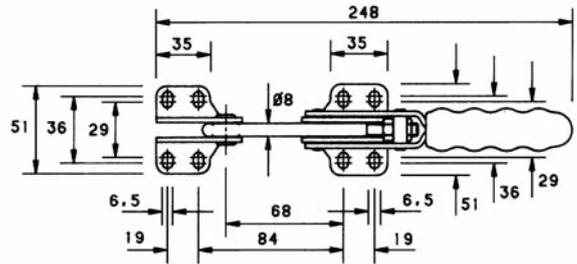
Weight:

0.35 Kg

Supplied complete with:
Latch Bracket as shown.

Material:
BS 304 S15

See "Features and installation information" page for installation instructions.



MODEL LH700



Nominal Holding Force:

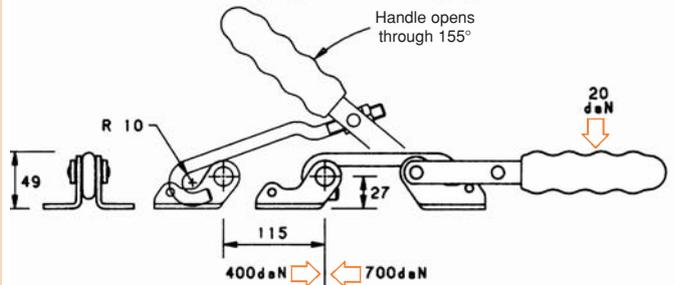
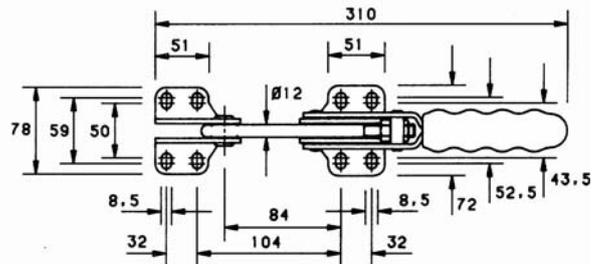
700 daN

Weight:

1.00 Kg

Supplied complete with:
Latch Bracket as shown.

See "Features and installation information" page for installation instructions.



MODEL LH700SS

STAINLESS
STEEL



Nominal Holding Force:

700 daN

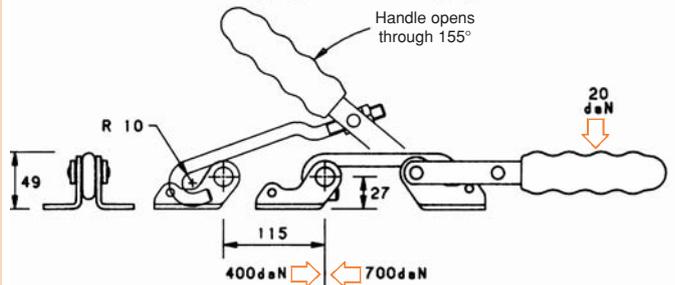
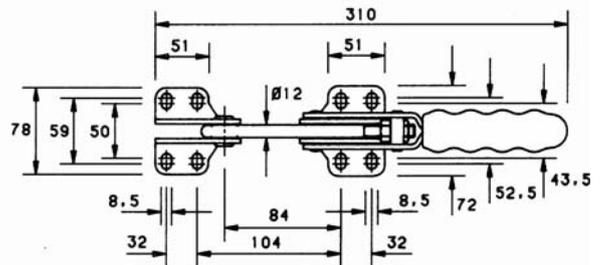
Weight:

1.00 Kg

Supplied complete with:
Latch Bracket as shown.

Material:
BS 304 S15

See "Features and installation information" page for installation instructions.





LATCH CLAMPS HORIZONTAL & VERTICAL

- **Features:**

Latch clamps are available in two configurations; horizontal as per bottom of the above photograph, with the clamp and latch bracket in the same plane (LU200H, LU400H, LU700H, LU2000H and LU4000H) or a vertical (corner) configuration as per top of the above photograph, the clamp and bracket being at right angles to each other (LU200V, LU400V, and LU700V).

All latch clamps are fitted with PVC handle grips.

- **Specification:**

The components of both variants of LU200, LU400 and LU700 clamps are of zinc plated and passivated steel, the rivet being of stainless steel and rotating in the close-toleranced hole of hardened parts or in hardened bushes. The handle and the trunnion which holds the 'U'-bolt are also hardened to resist wear.

Clamps LU2000H and LU4000H have precision cast steel bases and latch brackets and handles of S.G. iron.

- **Installation:**

It is important that the clamp and latch bracket of horizontal (H) variants are in alignment when viewed from both the top and the side to ensure that the clamp locks over centre correctly.

Vertical (V) variants should be in alignment when viewed from the top, and, when viewed from the side, the base of the latch bracket should be aligned with the flat front edge of the clamp base and at right angles to it. As illustrated in the top of the above photograph

The 'U' bolt should be adjusted to ensure an equal pull on either side.

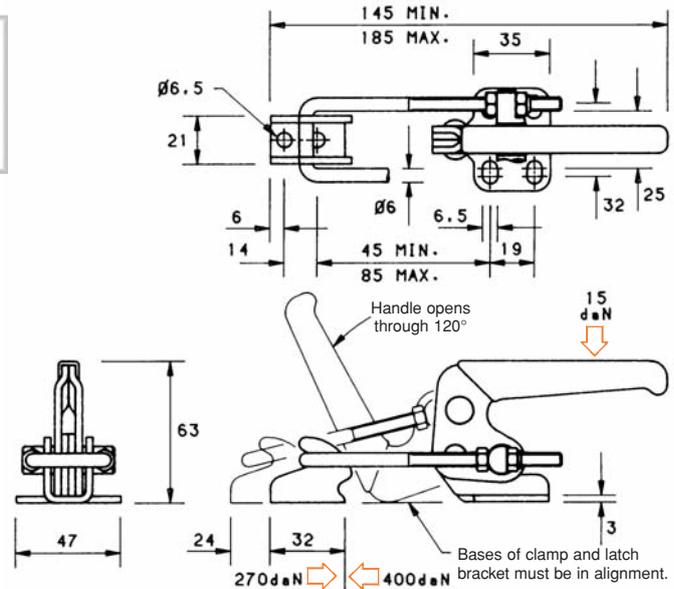
LATCH CLAMPS

HORIZONTAL
MODEL LU400HSS

**STAINLESS
STEEL**



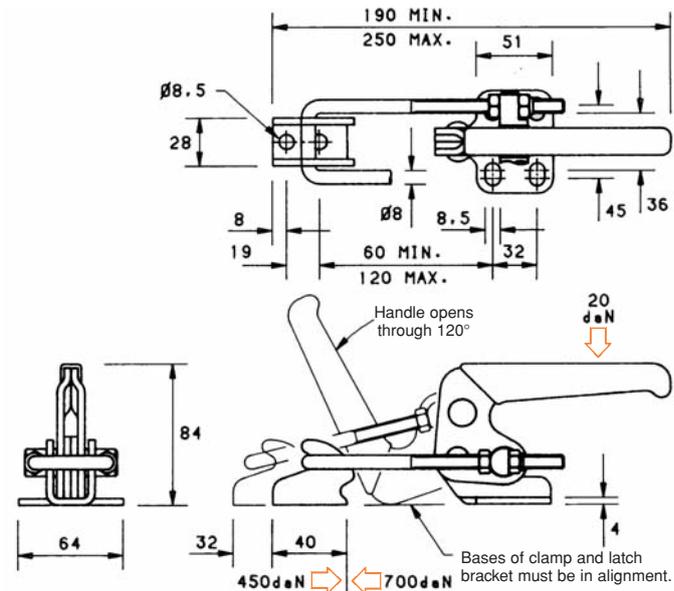
Nominal Holding Force:
400 daN
Weight:
0.25 Kg
Supplied complete with:
Latch Bracket as shown.
Material:
BS 304 S15.
See "Features and installation information" page for installation instructions.



HORIZONTAL
MODEL LU700H



Nominal Holding Force:
700 daN
Weight:
0.70 Kg
Supplied complete with:
Latch Bracket as shown.
See "Features and installation information" page for installation instructions.

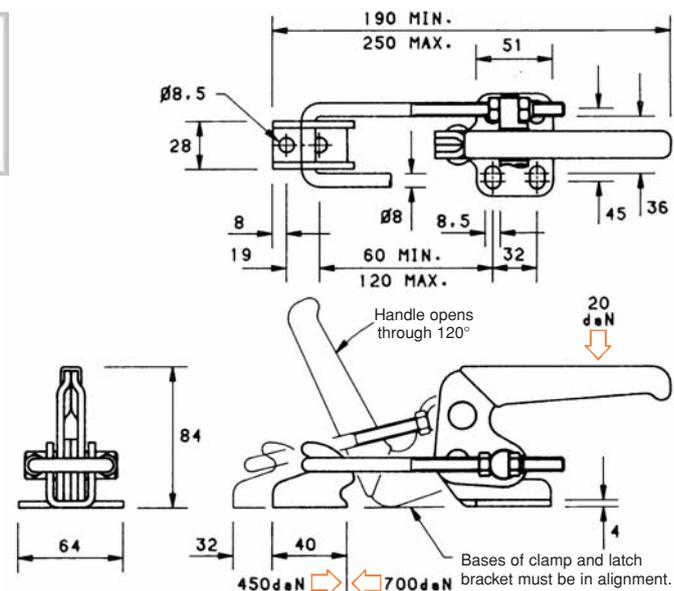


HORIZONTAL
MODEL LU700HSS

**STAINLESS
STEEL**



Nominal Holding Force:
700 daN
Weight:
0.70 Kg
Supplied complete with:
Latch Bracket as shown.
Material:
BS 304 S15.
See "Features and installation information" page for installation instructions.

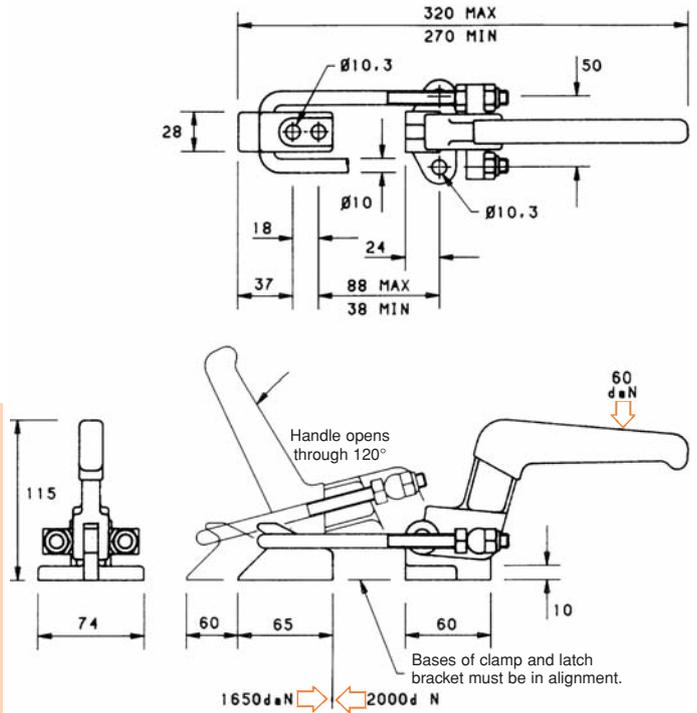


LATCH CLAMPS

HORIZONTAL
MODEL LU2000H



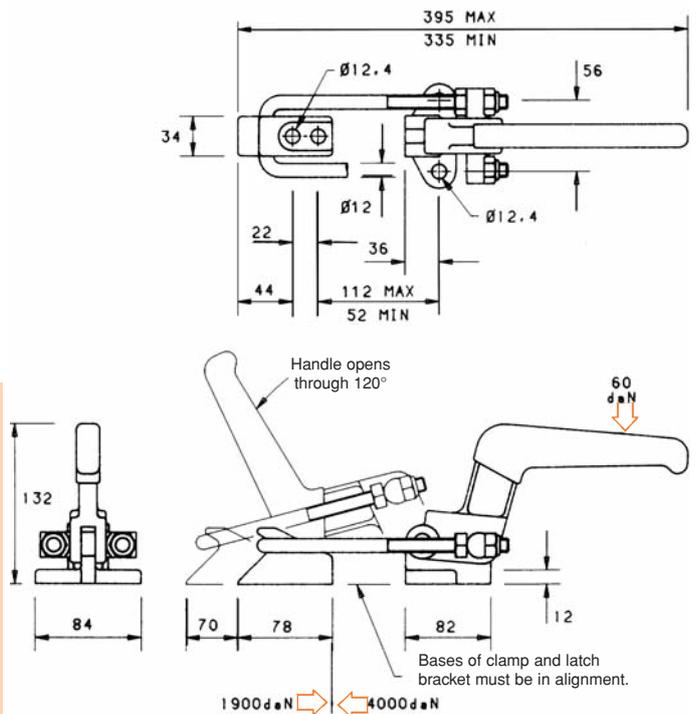
Nominal Holding Force:
2000 daN
Weight:
1.40 Kg
Supplied complete with:
Latch Bracket as shown.
See "Features and installation information" page for installation instructions.



HORIZONTAL
MODEL LU4000H



Nominal Holding Force:
4000 daN
Weight:
2.60 Kg
Supplied complete with:
Latch Bracket as shown.
See "Features and installation information" page for installation instructions.

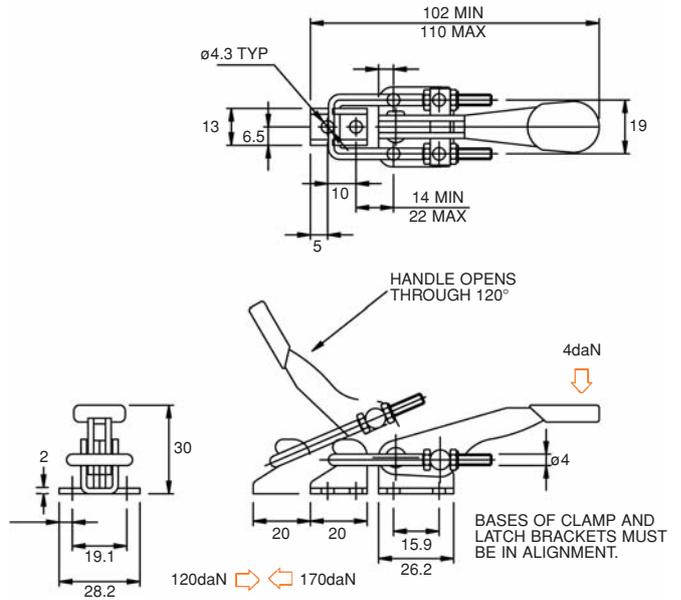


LATCH CLAMPS

HORIZONTAL
MODEL LU323



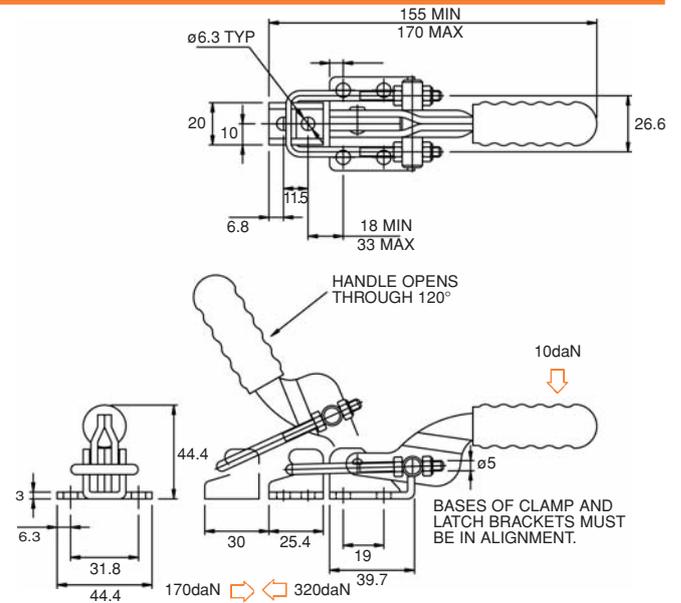
Nominal Holding Force:
170 daN
Weight:
0.16 Kg
Supplied complete with:
Latch Bracket as shown.



HORIZONTAL
MODEL LU331



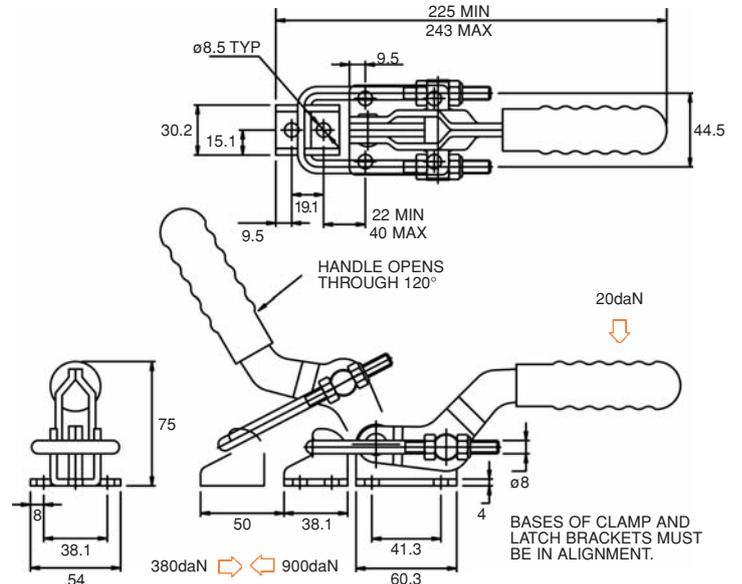
Nominal Holding Force:
320 daN
Weight:
0.23 Kg
Supplied complete with:
Latch Bracket as shown.



HORIZONTAL
MODEL LU341



Nominal Holding Force:
900 daN
Weight:
0.68 Kg
Supplied complete with:
Latch Bracket as shown.



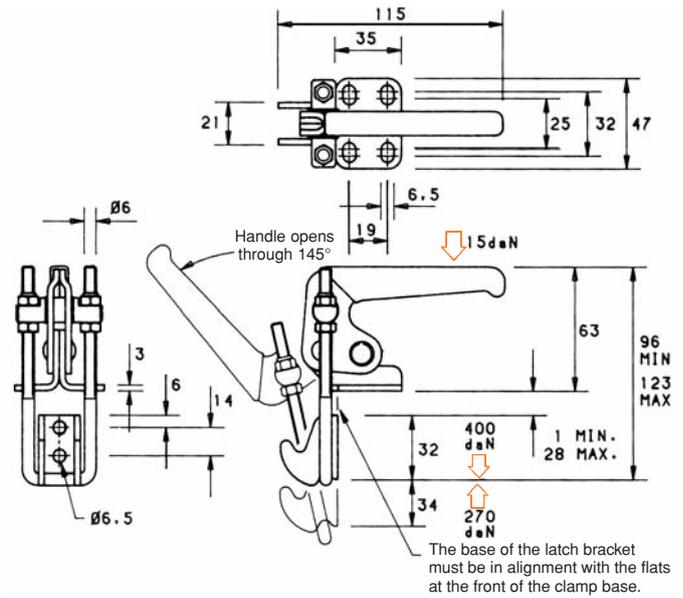
LATCH CLAMPS

VERTICAL

MODEL LU400V



Nominal Holding Force:
400 daN
Weight:
0.25 Kg
Supplied complete with:
Latch Bracket as shown.
See "Features and installation information" page for installation instructions.



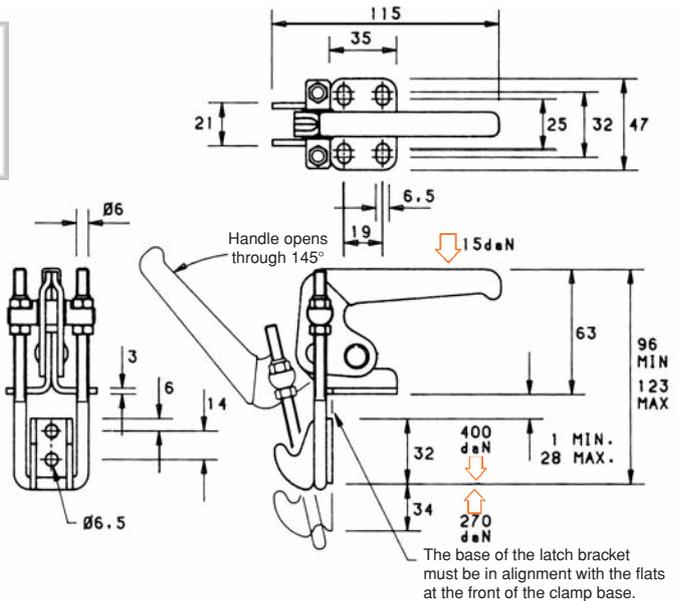
VERTICAL

MODEL LU400VSS

**STAINLESS
STEEL**



Nominal Holding Force:
400 daN
Weight:
0.25 Kg
Supplied complete with:
Latch Bracket as shown.
Material:
BS 304 S15.
See "Features and installation information" page for installation instructions.

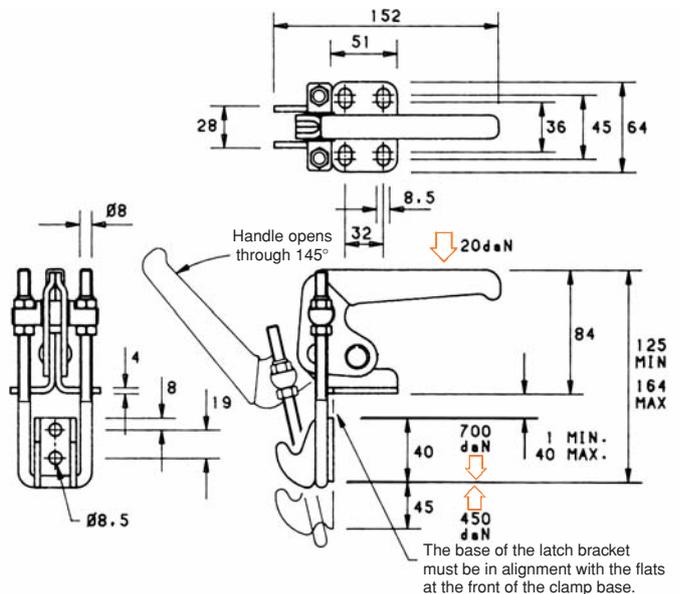


VERTICAL

MODEL LU700V



Nominal Holding Force:
700 daN
Weight:
0.70 Kg
Supplied complete with:
Latch Bracket as shown.
See "Features and installation information" page for installation instructions.



LATCH CLAMPS

VERTICAL
MODEL LU700VSS

STAINLESS
STEEL



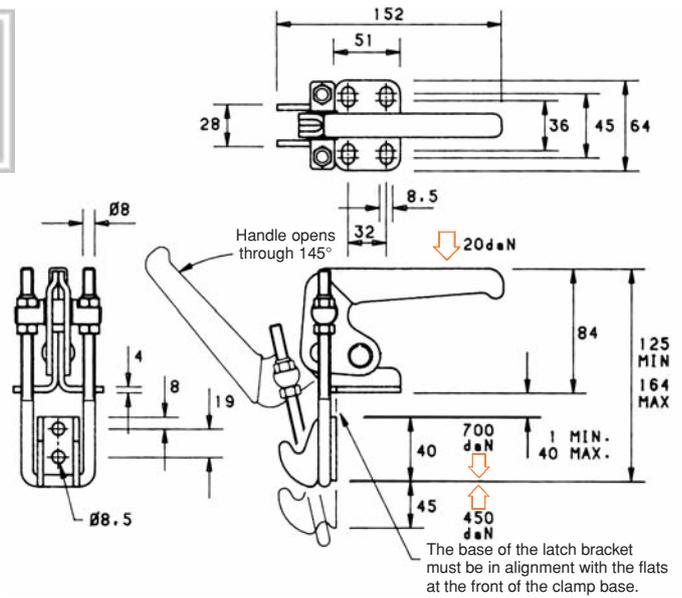
Nominal Holding Force:
700 daN

Weight:
0.70 Kg

Supplied complete with:
Latch Bracket as shown.

Material:
BS 304 S15.

See "Features and installation information" page for installation instructions.





VERTICAL CAM CLAMPS

- **Features:**

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 action allows components of differing thickness to be clamped without readjustment of the clamping spindle.

Model CV75 can clamp parts with thickness varying by up to 1.5mm, and models CV250 and CV350 thickness varying by up to 2mm.

A comfortable, cushioned PVC handle grip is fitted to all three models of cam clamp.

- **Specification:**

The main components are of zinc plated and passivated steel, the cam and its roller being case hardened to resist wear.

Rivets are of stainless steel, which burnishes and work-hardens with use, the rivets of models CV250 and CV350 rotating in hardened bushes. The setscrews are of steel with a chemi-black finish.

VERTICAL CAM CLAMPS

VERTICAL CAM CLAMPS

MODEL CV75



for front mounting use bracket Model FM1



Arm:
The spindle is in a fixed position.

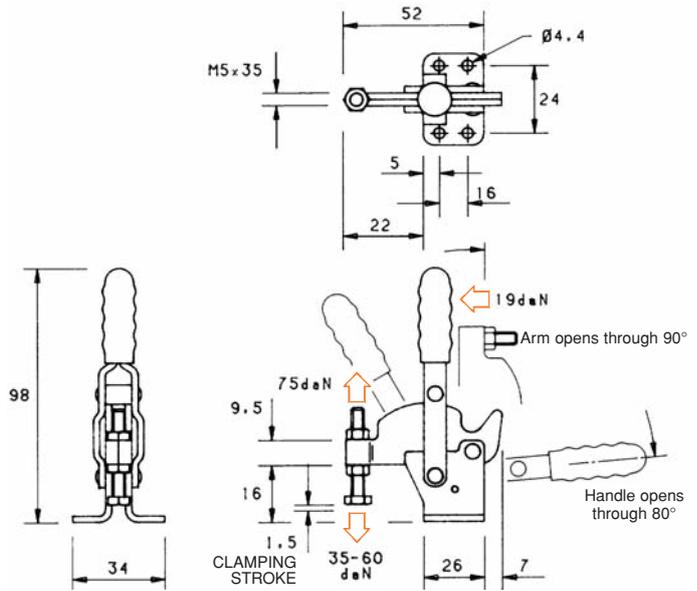
Base:
Flanged.

Nominal Holding Force:
75 daN

Weight:
0.05 Kg

Supplied complete with:
MB0535 Setscrew & nuts.

See "Accessories" for other items.



VERTICAL CAM CLAMPS

MODEL CV250



for front mounting use bracket Model FM2



Arm:
The spindle is in a fixed position.

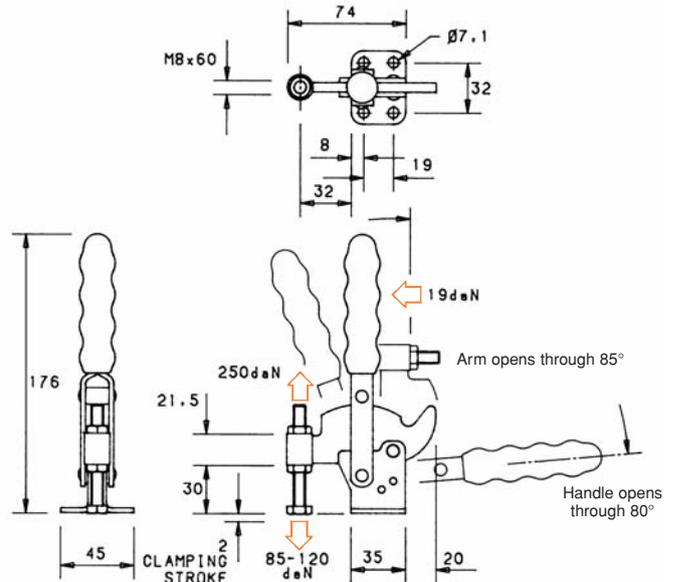
Base:
Flanged.

Nominal Holding Force:
250 daN

Weight:
0.35 Kg

Supplied complete with:
MB0860 Setscrew & nuts.

See "Accessories" for other items.



VERTICAL CAM CLAMPS

MODEL CV350



for front mounting use bracket Model FM3



Arm:
The spindle is in a fixed position.

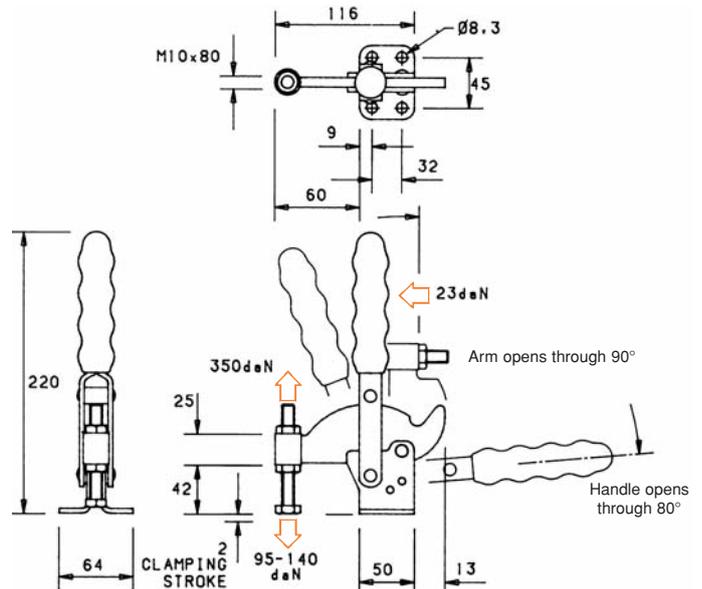
Base:
Flanged.

Nominal Holding Force:
350 daN

Weight:
0.70 Kg

Supplied complete with:
MB1080 Setscrew & nuts.

See "Accessories" for other items.





.....
**TOGGLE CLAMPING
ACCESSORIES**

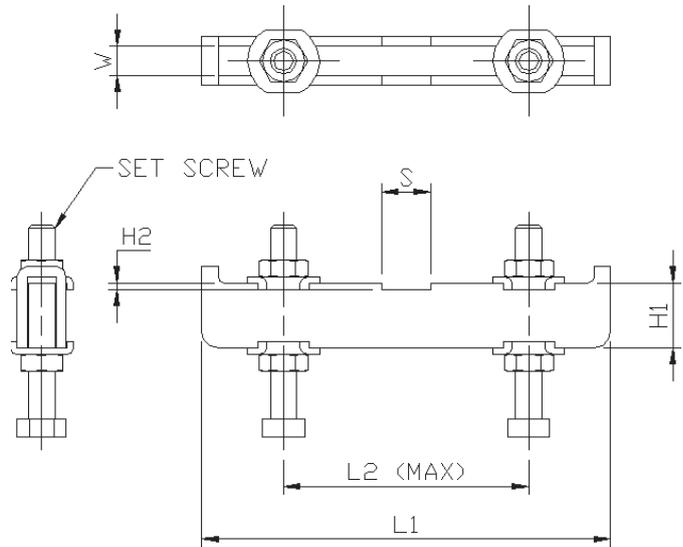
CLAMPING ACCESSORIES

'T' BAR ASSEMBLIES

MODELS T250, T350, T450



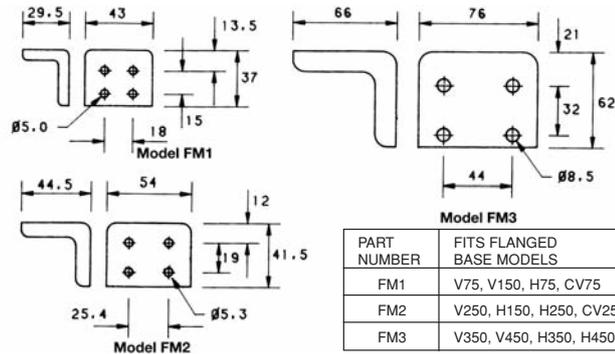
Neoprene tipped spindles, set screw covers or pads can also be used in conjunction with this 'T' Bar Assembly – see below.



MODEL	FOR USE WITH	SUPPLIE SET SCREW	L1	L2	H1	H2	S	W
T250	H250, V250, V300	MB0860	125	95	20	2	15	9
T350	H350, V350	MB1085	145	110	24	2	19.5	11
T450	H450, V450, H700	MB12100	200	160	25	2	23.3	13

FRONT MOUNTING BRACKETS

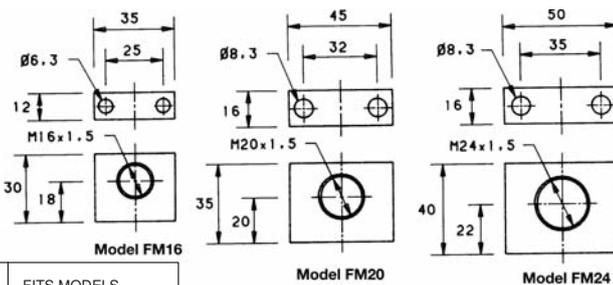
—VERTICAL AND HORIZONTAL CLAMPS



PART NUMBER	FITS FLANGED BASE MODELS
FM1	V75, V150, H75, CV75
FM2	V250, H150, H250, CV250
FM3	V350, V450, H350, H450, CV350

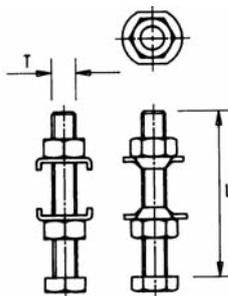
MOUNTING BRACKETS

—NOSE MOUNTING PUSH-PULL CLAMPS



PART NUMBER	FITS MODELS
FM16	P100, P350
FM20	P200, P250, P550
FM24	P400, P450, P750

SETSCREWS

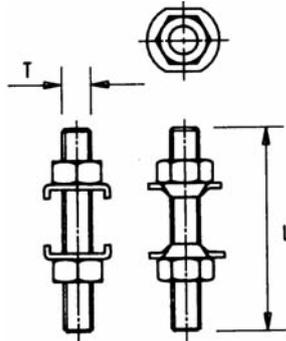


PART NUMBER	TH'D T	L	FITS MODELS
MB0520	M5	20	H50
MB0535	M5	35	V75, H75, V100, CV75, V75X
MB0650	M6	50	V150, V200, H150, V150X
MB0860	M8	60	V250, V300, CV250, H250, V250X
MB1080	M10	80	V350, H350, CV350
MB12100	M12	100	V450, V450X, H450, H700, VA700, VA1200
M16150	M16	150	V550, VA2400
MB0420	M4	20	P50** (INCLUDES NEOPRENE PAD)
MB0625	M6	25	P100, P250, P350**
MB0840	M8	40	P200, P550, P600, P600L, P600X**
MB1050	M10	50	P400, P450, P750, P1200, P1200L, P1200X**
MB1250	M12	50	P2500, P2500L, P2500X**
MB1680	M16	80	P5000, P5000L**

**DENOTES – SETSCREW SUPPLIED WITH ONE NUT ONLY

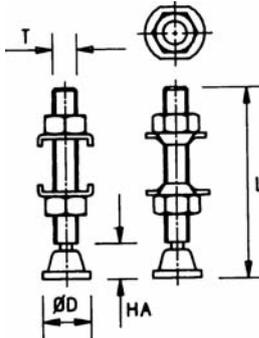
CLAMPING ACCESSORIES

PLAIN SPINDLES



PART NUMBER	TH'D T	L	FITS MODELS
M0525	M5	25	H50
M0535	M5	35	V75, H75, V100, CV75, V75X
M0650	M6	50	V150, V200, H150, P250, P350
M0865	M8	65	V250, V300, CV250, P300, P550 P600, P600L, P600X, P200
M1085	M10	85	V350, CV350, H350, P400, P450, P750, P1200, P1200L, P1200X
M12100	M12	100	V450, VA700, VA1200, H450, H700, V450X
M16150	M16	150	V550, VA2400

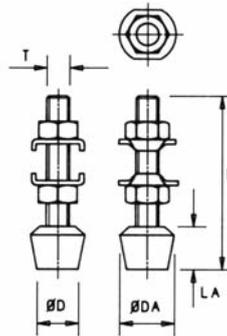
SWIVEL FOOT SPINDLES



PART NUMBER	TH'D T	L	ØD	HA	FITS MODELS
MS0535	M5	35	12	10	V75, H75, V100, CV75, V75X
MS0650	M6	50	12	10	V150, V200, H150, P250, P350
MS0865	M8	65	20	13	V250, V300, CV250, P300, P550, P600, P600L, P600X, P200
MS1085	M10	85	20	15	V350, CV350, H350, P400, P450, P750, P1200, P1200L, P1200X
MS12100	M12	100	25	20	V450, VA700, VA1200, H45C, H700, V450X
MS16150	M16	150	45	30	V550, VA2400

NEOPRENE TIPPED SPINDLES

MATERIAL: NEOPRENE
HARDNESS: 85 SHORE A
OPERATING TEMP: -20° +70°

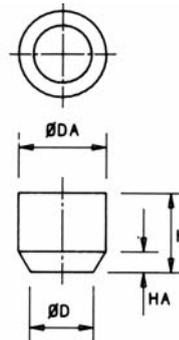


PART NUMBER	TH'D T	L	LA	ØD	ØDA	FITS CLAMP MODEL
NTS0432	M4	3	10	8	12	P50 (1)
NTS0538	M5	38	10	10	13	H50, V75, H75, V100, CV75, V75X
NTS0645	M6	45	13	11	16	V150, V200, H150, P100, P250, P350
NTS0865	M8	63	19	12	17	V250, V300, CV250, P200, P300, P550, P600, P600L, P600X
NTS1085	M10	86	20	22	27	V350, CV350, H350, P400, P450, P750, P1200, P1200L, P1200X
NTS12100	M12	100	35	22	32	V450, VA700, VA1200, H450, H700, V450X

(1) NO SLIDERS, ONE NUT ONLY

NEOPRENE SETSCREW COVERS

MATERIAL: NEOPRENE
HARDNESS: 85 SHORE A
OPERATING TEMP: -20° +70°

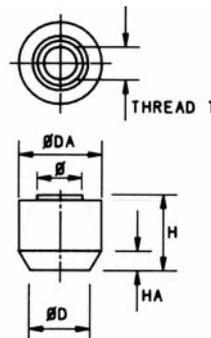


MATERIAL: NEOPRENE
HARDNESS: 85 SHORE A
OPERATING TEMP: -20 +70

PART NUMBER	H	HA	ØD	ØDA	FITS SCREW
NC/04	8	4	7	11	MB0420
NC/05	10	4	8	13	MB0525, MB0535
NC/06	12	4	11	15	MB0650
NC/08	15	6	13	19	MB0860
NC/10	18	7	16	23	MB1080
NC/12	20	7	19	26	MB1250, MB12100

NEOPRENE PADS

— TO FIT PLAIN SPINDLES
MATERIAL: NEOPRENE
HARDNESS: 85 SHORE A
OPERATING TEMP: -20° +70°



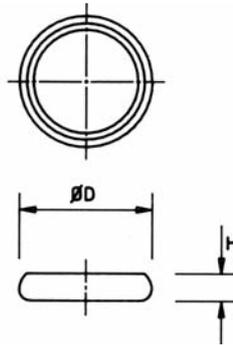
MATERIAL: NEOPRENE
HARDNESS: 85 SHORE A
OPERATING TEMP: -20 +70

PART NUMBER	TH'D T	H	HA	ØD	ØDA	Ø	FITS SPINDLE
NP/05	-	10	1	-	12	-	M0525, M0535
NP/06	M6	14	4	11	15	11	M0650
NP/08	M8	18	6	13	19	15	M0865
NP/10	M10	21	7	16	23	17	M1085
NP/12	M12	23	7	19	26	21	M12100

CLAMPING ACCESSORIES

PLASTIC COVERS

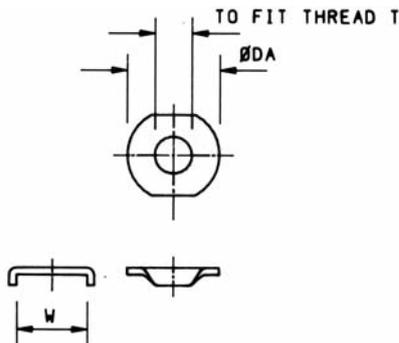
TO FIT SWIVEL FOOT SPINDLES



PART NUMBER	ØD	H	FITS SPINDLE
NPS/05/06	16	6	MS0535, MS0650
NPS/08/10	24	10	MS0865, MS1085
NPS/12	30	10	MS12100

MATERIAL: PVC
OPERATING TEMP RANGE: -35°C +60°C

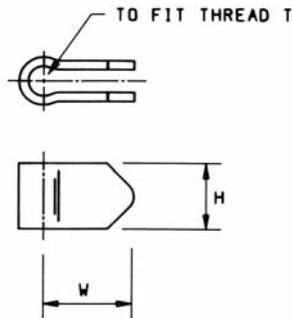
FLANGED WASHERS



PART NUMBER	TH'D T	W	ØDA	FITS CLAMP MODELS WITH TYPE B ARM
FW05/09	M5	9	13	H50
FW05/10	M5	10	15	H75, V75, V75X, V100
FW06/12	M6	12	18	H150, V150, V150X, V200
FW08/15	M8	15	22	H250, V250, V250X, V300
FW10/20	M10	20	26	H350, V350
FW12/23	M12	23	32	H450, V450, V450X, H700
FW16/27	M16	27	35	V550

SPINDLE RETAINERS

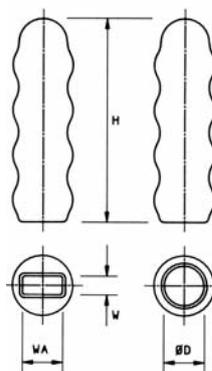
- TO FIT SPINDLES AND SETSCREWS



PART NUMBER	TH'D T	H	W	FITS CLAMP MODELS WITH TYPE A ARM
R/08	M8	17.5	24	V250, H250, V300
R/10	M10	22	30	V350, H350
R/12	M12	26	32	V450, H450
R/16	M16	32	35	V550

PLASTIC GRIPS

MATERIAL: PVC
OPERATING TEMP RANGE: -35°C +60°C



PART NUMBER	H	TO FIT HANDLE DIM'S			FITS CLAMP MODEL
		W	WA	ØD	
GR/01	45	4	8		H75, V75, CV75, V100, H100
GR/02	60	5	10		H150
GR/03	53	6	10		V150, LH200
GR/04	55	5	13		H200
GR/05	58	4	13		V200, P100
GR/06	85	6	15		V250, H250, CV250, V300, LH400, P200, P350
GR/07	65	6	16		H300
GR/08	60	5	13		P250
GR/09	105	8	17		V350, CV350, H350, P400, P450, P550, TC79
GR/10	95	10	22		V450, H450, LH700
GR/11	120	10	25		V550
GR/12	105	8	19		H700
GR/13	115	8	22		P750
BR/1	70		9.5		P600L
BR/2	75		12.7		P1200L
BR/3	100		16		P2500L
B7	90		19		VA700, P5000L
B12	100		22		VA1200
B24	100		25		VA2400



MAGNA FORCE HEAVY DUTY CAM CLAMPS

- A fraction of the cost of hydraulic system clamping
- Clamping forces from 300 daN to 5000 daN
- Rugged build quality, ideal for machine shops
- Significant cost benefits over clamps in repetitive machining
- Unique, patented range of manually operated cam clamps with advantages over hydraulic automated clamping systems

TECHNICAL INFORMATION

MAGNA FORCE CAM RAM CLAMPS

- All components are case hardened for toughness.
- Two stage cam gives 'daylight' for loading and unloading with fast plunger travel, and slow, high-force travel for clamping.
- The clamping sequence is as follows:
 - From the parked position the initial 20 degrees of rotation of the handle expands the clamp through its 'daylight' travel
 - A further 80 degrees of rotation expands the clamp through its 'clamping' travel.
- Indicator marks on the handle and base show the maximum allowable rotation for safe clamping, their alignment leaving 10 degrees overlap between the two mating cams. If the marks reach alignment the clamp should be adjusted to reduce the rotational travel between the handle and the base.
- The clamps feature a threaded bore which allows attachment of a set screw and locknut for pushing (compression) or a tie-rod for pulling.
- The plunger is keyed to the base to prevent its rotation to allow tightening of locknuts or, alignment of attached tools or fixtures:
- The clamps are available in both clockwise and counter-clockwise rotation variants.
- Both sizes of cam ram may be finally closed by a blow from a soft faced mallet if high clamping forces are required.
- Due to the shallow angle of the 'clamping' travel cam, there is no tendency for the clamp to unlock even under vibration.
- No positive stops on rotational movement are provided to give the following benefits:

If stops were provided the operator would not know if rotational movement of the handle had stopped because of proper clamping of the work piece or because a stop had been reached. He could believe the workpiece was firmly held when, in fact, the stop had been reached and the workpiece was not firmly held. Allowing over-stroking gives audible and visual warning that the work is not held.

- If the clamp is inadvertently over-stroked (the cams jump over their high points on to the next cam). The clamp can be reset by lifting the handle against its return spring and resetting its rotational position.

MAGNA FORCE CAM SWING CLAMPS

- All components are case hardened for toughness.
- The **clamp setting sequence** (see page 4) is as follows
 - From the parked position (fig. 1) the initial 80 degrees of rotation of the handle and arm together bring the arm over the workpiece (fig. 2).
 - The next 8 degrees of rotation moves the clamping arm vertically through fast 'daylight' travel (fig. 3).
 - To set for correct clamping position move handle a further 10 degrees (approx) and adjust spindle to make contact with workpiece (fig. 3a).
 - The final rotation to a maximum of 100 degrees moves the clamping arm through slow 'clamping' travel (fig. 4).
- Indicator marks on the handle and arm show the maximum rotational travel allowable for safe clamping, their alignment leaving 10 degrees overlap between the two mating cams (fig. 4a). If the marks reach alignment the spindle needs to be reset to reduce the rotational travel between handle and arm (fig. 5a).
- As with Cam Push Clamps, the two larger sizes 411/00 and 412/00 may be finally closed by a blow from a soft faced mallet
- if high clamping forces are required.
- Due to the shallow angle of the 'clamping' travel cam there is no tendency for the clamp to unlock, even under vibration.
- No positive stops on rotational movement are provided to give the following benefits:

If stops were provided the operator would not know if rotational movement of the handle had stopped because of proper clamping of the workpiece or because a stop had been reached – he could believe the workpiece was firmly held when, in fact, the stop had been reached and the workpiece was not firmly held. Allowing over-stroking gives audible and visual warning that the work is not held.

- If the clamp is inadvertently over-stroked (the cams jump over their high points onto the next cam) (fig. 5), the clamp can be reset by pushing the arm down against its return spring and resetting the rotational position of the handle (figs. 6+7).
- The clamps are available in both clockwise and counter-clockwise rotation variants.

MAGNA FORCE CAM PUSH CLAMPS

- All components are case hardened for toughness.
- Two stage cam gives 'daylight' for loading and unloading with fast plunger travel, and slow, high-force travel for clamping.
- The end of the fast travel/start of the clamping travel is clearly identifiable being when the handle is straight along the axis of the clamp.
- The load path being along the centre line of the clamp there is no tendency for the clamp to unlock, even under vibration.
- The plunger has a slot which engages the sides of the cam, to prevent its rotation to allow, tightening of locknut or, alignment of attached tools or fixtures.
- The larger two sizes of the short handled versions 401/00 and 402/00 may be finally closed by a blow from a soft faced mallet if high clamping forces are required.
- The long handled versions allow high clamping forces and easy release by hand, the handle being removable after clamping if it is in the way.
- The clamps have threaded bodies for hole mounting, and mounting brackets are supplied as standard.

MAGNA FORCE HEAVY-DUTY CAM CLAMPS

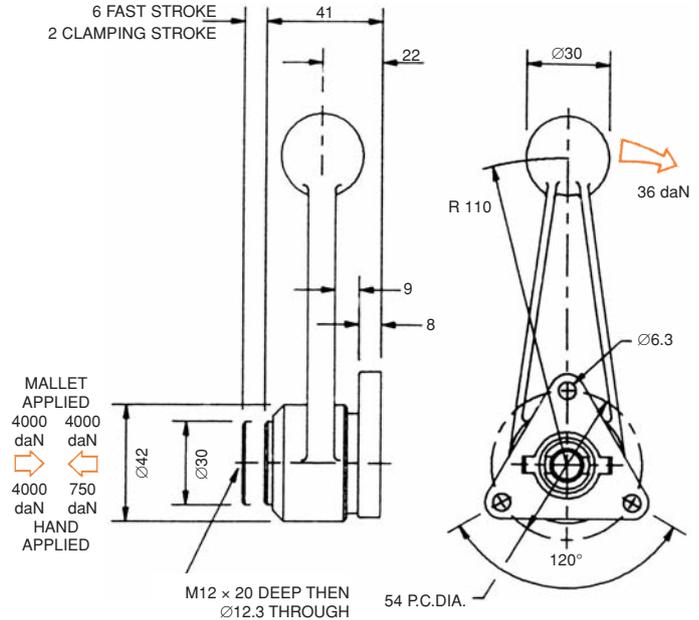
CAM RAM CLAMPS

MODELS **CR4000** (CLOCKWISE)

CR4000A (ANTI-CLOCKWISE)



Operating clamping force:
750 daN (hand applied),
4000 daN (mallet applied)
Weight:
0.55 Kg



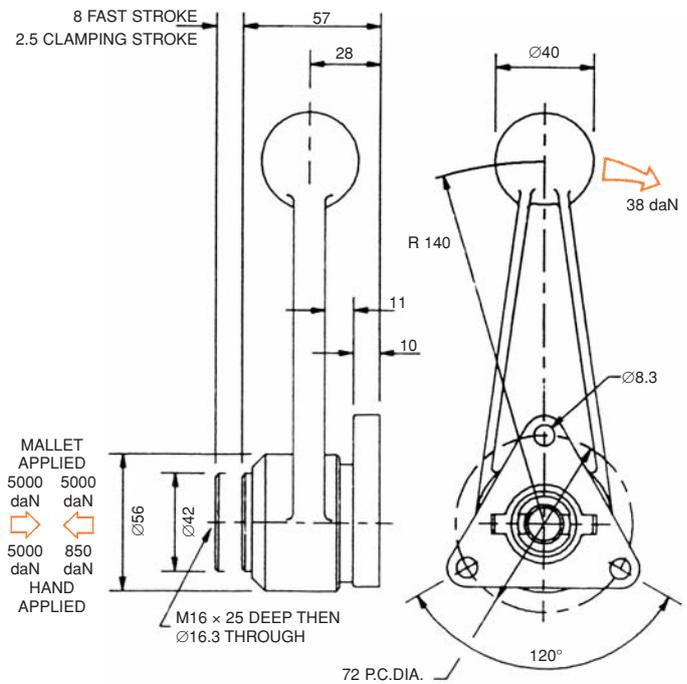
CAM RAM CLAMPS

MODELS **CR5000** (CLOCKWISE)

CR5000A (ANTI-CLOCKWISE)



Operating clamping force:
850 daN (hand applied),
5000 daN (mallet applied)
Weight:
1.3 Kg



TECHNICAL INFORMATION

Clamp No.	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
CR4000	36 daN	750 daN	4000 daN	6.0mm	2.0mm
CR4000A	36 daN	750 daN	4000 daN	6.0mm	2.0mm
CR5000	38 daN	850 daN	5000 daN	8.0mm	2.5mm
CR5000A	38 daN	850 daN	5000 daN	8.0mm	2.5mm

MAGNA FORCE HEAVY-DUTY CAM CLAMPS

CAM SWING CLAMPS

MODELS **CS300** (CLOCKWISE)

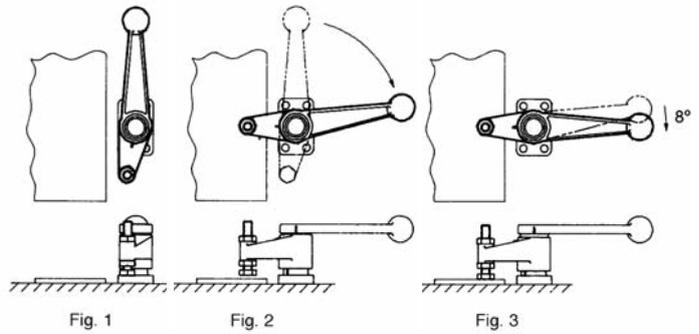
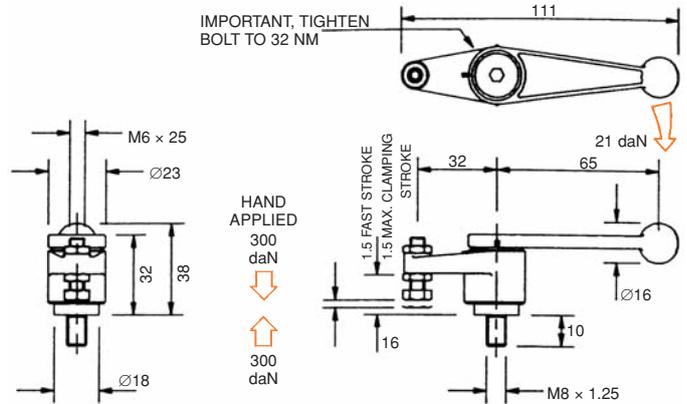
CS300A (ANTI-CLOCKWISE)



Operating clamping force:
300 daN (hand applied).

Weight:
0.20 Kg

Supplied complete with:
MB0625 Set screw & nuts.



CAM SWING CLAMPS

MODELS **CS800** (CLOCKWISE)

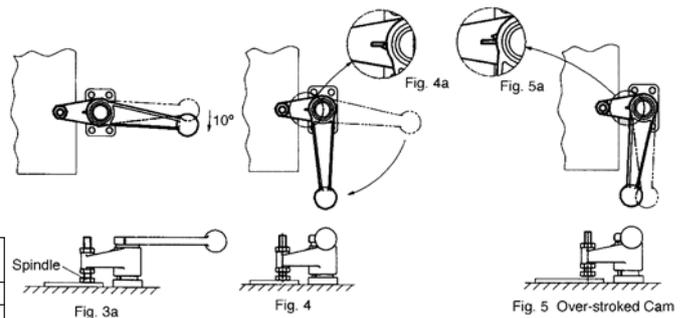
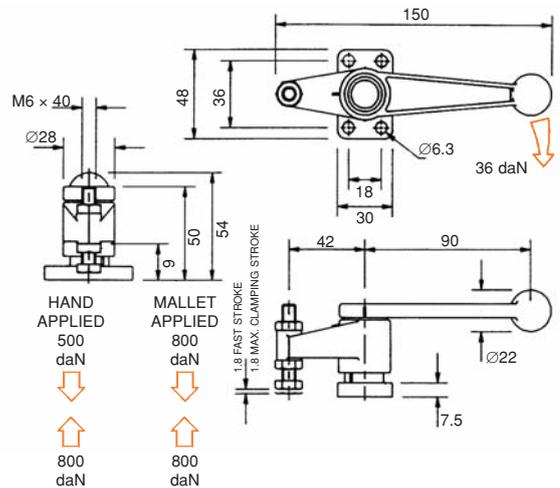
CS800A (ANTI-CLOCKWISE)



Operating clamping force:
500 daN (hand applied),
800 daN (mallet applied).

Weight:
0.40 Kg

Supplied complete with:
MB0840 Set screw & nuts.



TECHNICAL INFORMATION

Clamp No.	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
CS300	21 daN	300 daN	N/A	1.5mm	1.5mm
CS300A	21 daN	300 daN	N/A	1.5mm	1.5mm
CS800	36 daN	500 daN	800 daN	1.8mm	1.8mm
CS800A	36 daN	500 daN	800 daN	1.8mm	1.8mm

MAGNA FORCE HEAVY-DUTY CAM CLAMPS

CAM SWING CLAMPS

MODELS **CS1200** (CLOCKWISE)

CS1200A (ANTI-CLOCKWISE)



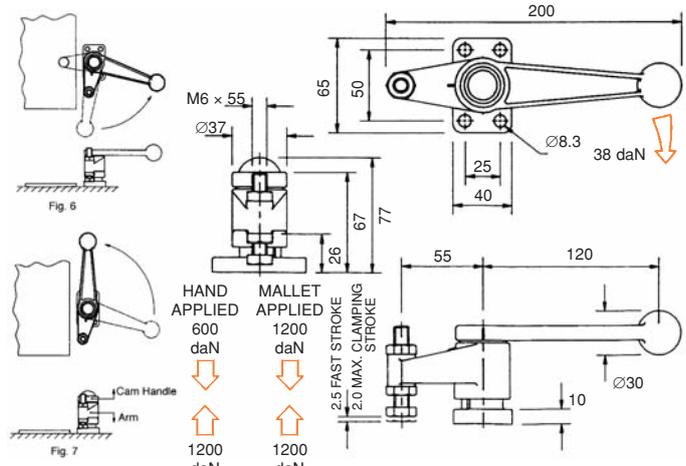
For Cam Swing Height Block Assemblies see below



Operating clamping force:
600 daN (hand applied),
1200 daN (mallet applied).

Weight:
0.90 Kg

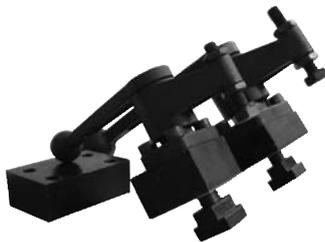
Supplied complete with:
MB1055 Set screw & nuts.



TECHNICAL INFORMATION

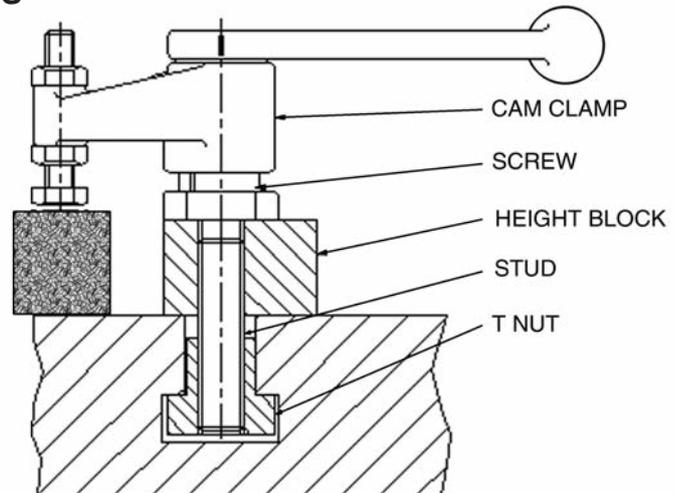
Clamp No.	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
CS1200	38 daN	600 daN	1200 daN	2.5mm	2.0mm
CS1200A	38 daN	600 daN	1200 daN	2.5mm	2.0mm

CAM SWING HEIGHT BLOCK ASSEMBLIES



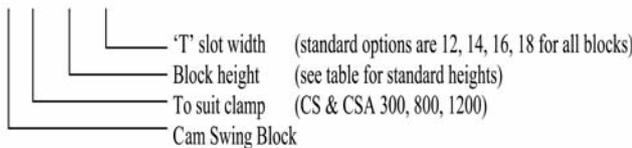
The height block assembly provides the user with a convenient method of setting the height of the Cam Swing Clamp when in operation. The act of locking the clamp onto the work piece also locks the block into position along the Tee Slot.

Note:
Clamp ordered separately

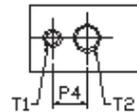


Example Part Code:

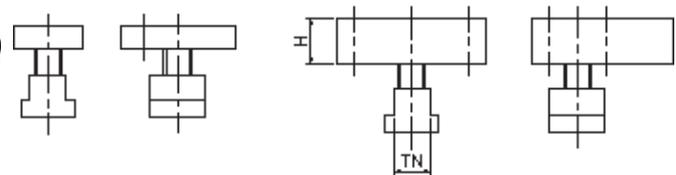
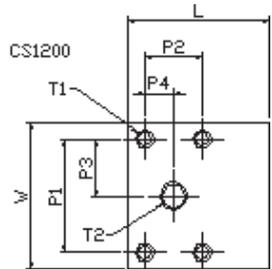
CSB1200-20-TN12



CS300 BLOCK



CS800 & CS1200 BLOCKS



To Suit Clamp	H	W	L	TN	P1	P2	P3	P4	T1	T2	Screw ×4
CS300	10, 20, 30, 40, 50	30	50	12, 14, 16, 18	N/A	N/A	N/A	15	M8×1.25	M12×1.25	N/A
CS800	12, 25, 40, 50	48	40	12, 14, 16, 18	36	18	18	9	M6×1.0	M12×1.25	M6×18
CS1200	20, 40, 60, 76	65	62	12, 14, 16, 18	50	25	25	12.5	M8×1.25	M12×1.25	M8×25

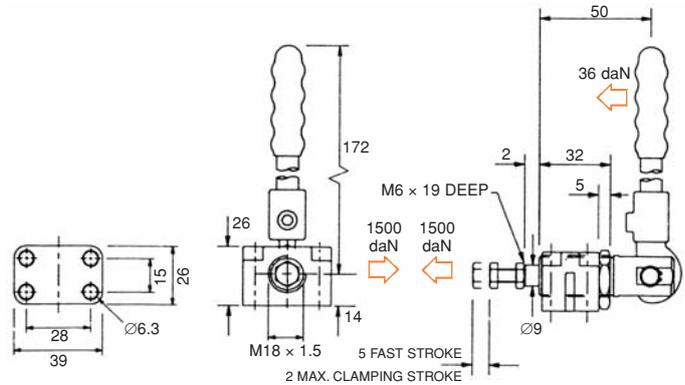
MAGNA FORCE HEAVY-DUTY CAM CLAMPS

CAM PUSH CLAMPS

MODELS CP1500L



Operating clamping force:
1500 daN
Weight:
0.35 Kg
Supplied complete with:
MB0625 Set screw & nuts.
CMB18 Mounting base & locknuts.

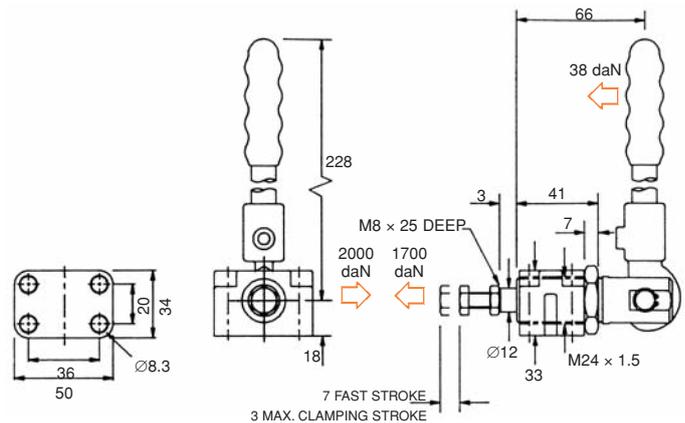


CAM PUSH CLAMPS

MODELS CP2000L



Operating clamping force:
1700 daN
Weight:
0.75 Kg
Supplied complete with:
MB0840 Set screw & nuts.
CMB24 Mounting base & locknuts.
Nominal holding force:
2000 daN



TECHNICAL INFORMATION

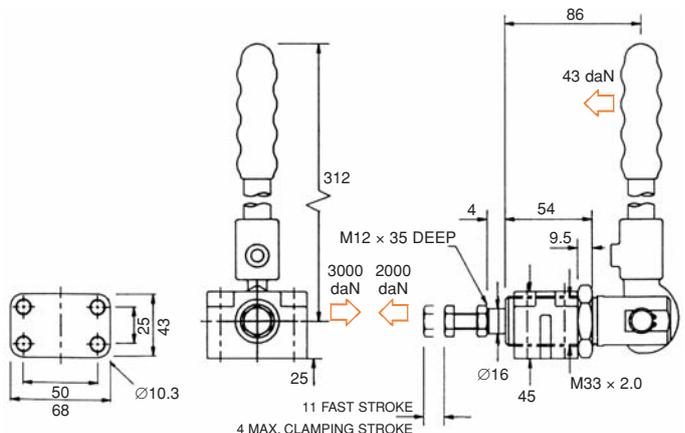
Clamp No.	Applied Handle Force (Hand Push)	Clamping Force	Clamping Force using Mallet Blows	Daylight Travel	Clamping Travel
CP1500L	36 daN	1500 daN	N/A	5.2mm	2.2mm
CP2000L	38 daN	1700 daN	N/A	7.0mm	3.0mm
CP3000L	43 daN	2000 daN	N/A	11.0mm	4.0mm

CAM PUSH CLAMPS

MODELS CP3000L



Operating clamping force:
2000 daN
Weight:
2.00 Kg
Supplied complete with:
MB1250 Set screw & nuts.
CMB33 Mounting base & locknuts.
Nominal holding force:
3000 daN





CAM PUSH/CAM PULL CLAMPS

- **Uses:**

The actima cylinder is used when the clamping space is limited. Its robust design and closed mechanism offer indisputable advantages. Actima lever cylinders are usually actuated by pushing. But when you turn the lever bush around, pulling can also actuate the cylinder.

- **Features:**

These clamps are offered in four configurations — push action or pull action in either right hand or left hand rotation. The approach travel is 10mm and does not allow for clamping. In the 2mm clamping travel, the lever remains locked in all positions. Consequently, workpieces can be fastened safely with tolerances of up to 1.5mm. The Actima lever cylinder can be fitted horizontally or vertically.

The mechanism is totally enclosed to avoid finger traps and the ingress of dirt or metal cuttings.

- **Specification:**

All external parts are finished black except the knob which is dull red plastic. The cam roller and the cam faces are case hardened to minimise wear.

- **Installation:**

It is essential that the clamps are installed to clamp on the 'clamping stroke'. Clamping on the 'fast travel' part of the stroke can result in the clamp releasing itself, and allowing the clamp to reach the end of its 'clamping stroke' does not ensure secure clamping.

Hand force only should be used in closing the clamps as over tightening with a hammer or lever can result in damage to the units.

CAM PUSH/CAM PULL CLAMPS

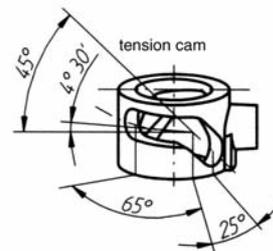
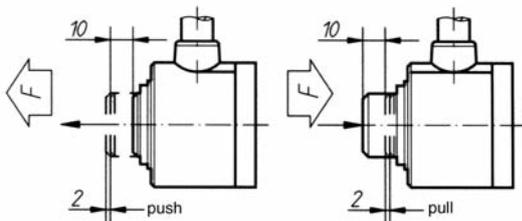
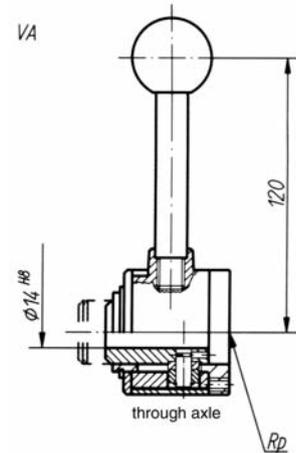
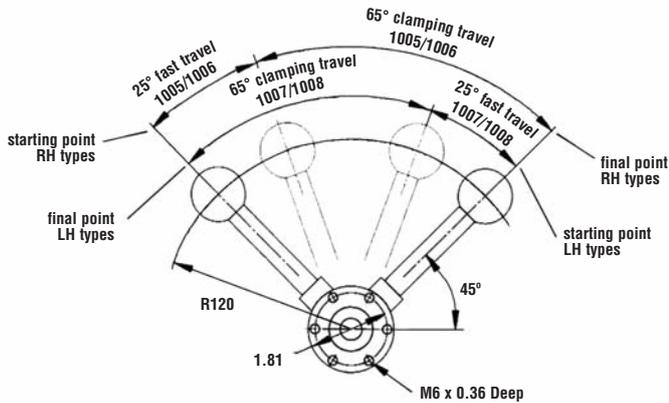
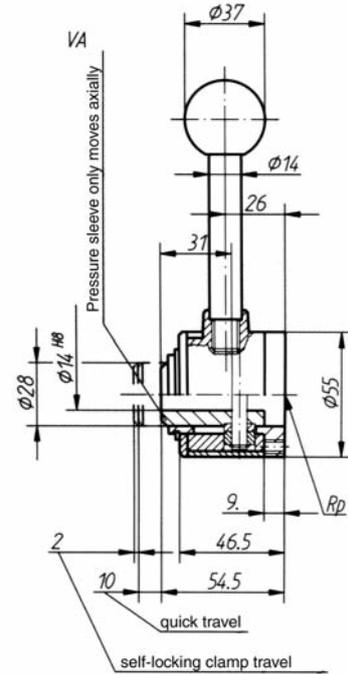
CAM PUSH/CAM PULL CLAMPS



Cam operated.
Right hand push.
Rear mounted.

TECHNICAL INFORMATION

Clamp No.	Nominal Holding Force	Weight Kg	Rotation
CP1005	500 daN	0.86 Kg	Push RH
CP1006	500 daN	0.86 Kg	Pull RH
CP1007	500 daN	0.86 Kg	Push LH
CP1008	500 daN	0.86 Kg	Pull LH





SWING CLAMPS, SWING CLAMP ASSEMBLIES AND HEAVY-DUTY HOOK CLAMPS

- **Features:**

High clamping forces are generated by tightening the socket head bolt making these clamps suitable for applications where secure clamping is required, such as in heavy machining operations, the clamping of heavy moulds, or the holding of lids on vessels, etc,

On release, the clamping arm tends to swing open through 90 degrees automatically, but sometimes requires opening by hand, leaving the clamp arm clear for unloading.

The 1015 series comprises the clamping arm and return spring, the user providing a mounting hole to the dimensions shown in the catalogue. The 1016 series comprises complete assemblies of clamping arm, clamping bolt, return spring and housing, ready for bolting to a fixture.

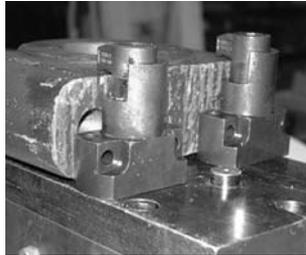
- **Specification:**

The 1015 clamping arm and, the 1016 assembly, are heat treated alloy steel precision castings machined to tight tolerances to ensure a positive and smooth action. All parts except the return spring are finished chemi-black.

SWING CLAMP ASSEMBLIES

SWING CLAMP ASSEMBLIES

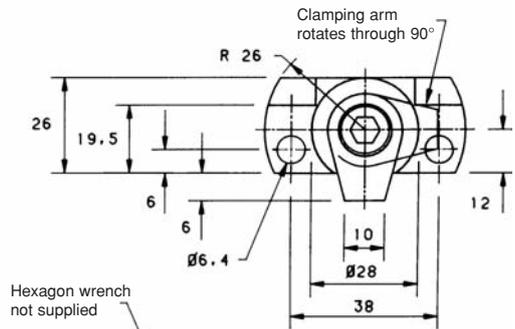
MODEL 1016-08



- Base or Front Mounted.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

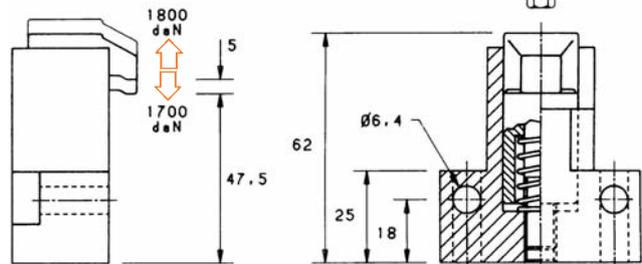
Nominal Holding Force:
1800 daN

Weight:
0.33 Kg



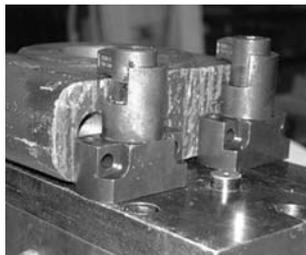
Hexagon wrench not supplied

30Nm MAX



SWING CLAMP ASSEMBLIES

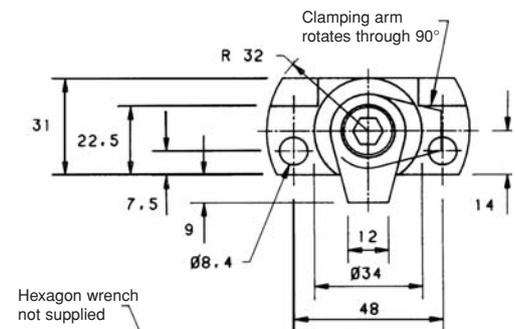
MODEL 1016-10



- Base or Front Mounted.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

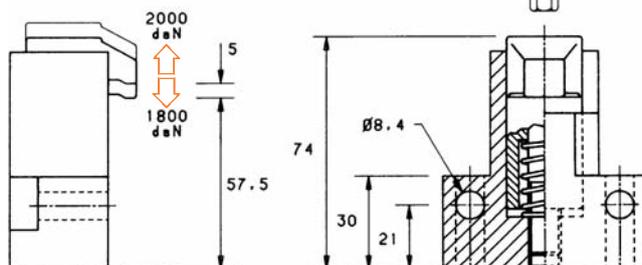
Nominal Holding Force:
2000 daN

Weight:
0.56 Kg



Hexagon wrench not supplied

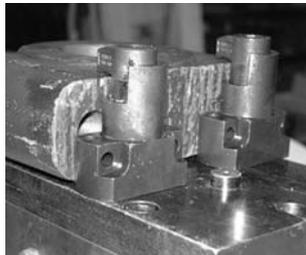
50Nm MAX



HEAVY-DUTY SWING CLAMPS

SWING CLAMP ASSEMBLIES

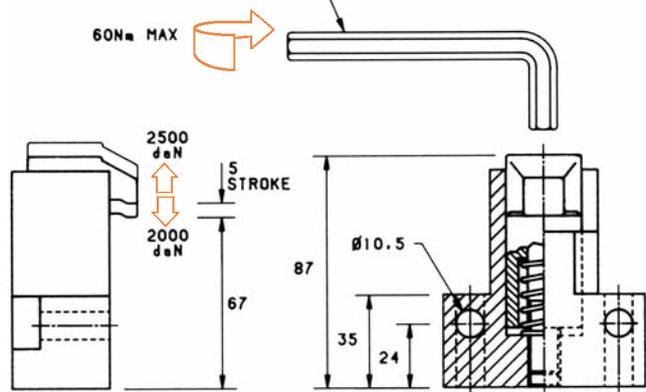
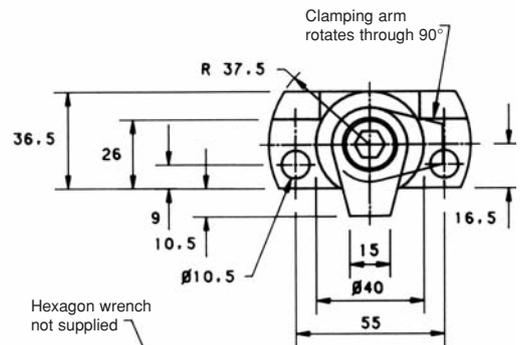
MODEL 1016-12



- Base or Front Mounted.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

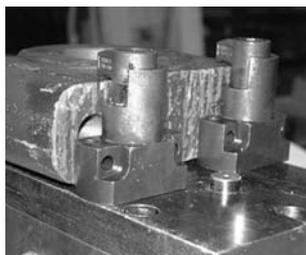
Nominal Holding Force:
2500 daN

Weight:
0.81 Kg



SWING CLAMP ASSEMBLIES

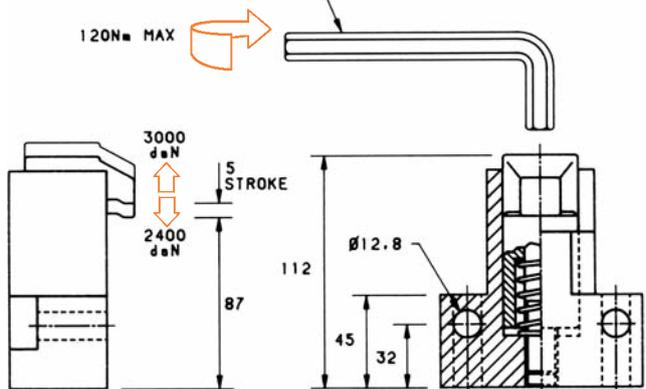
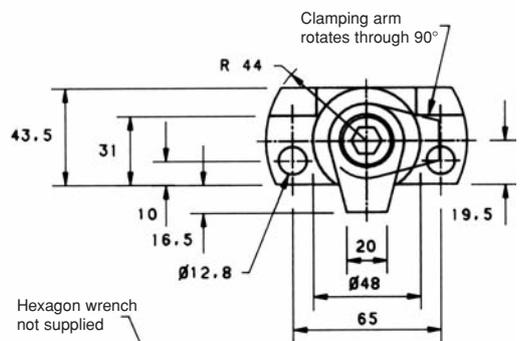
MODEL 1016-16



- Base or Front Mounted.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

Nominal Holding Force:
3000 daN

Weight:
1.60 Kg



HEAVY-DUTY SWING CLAMPS

SWING CLAMPS

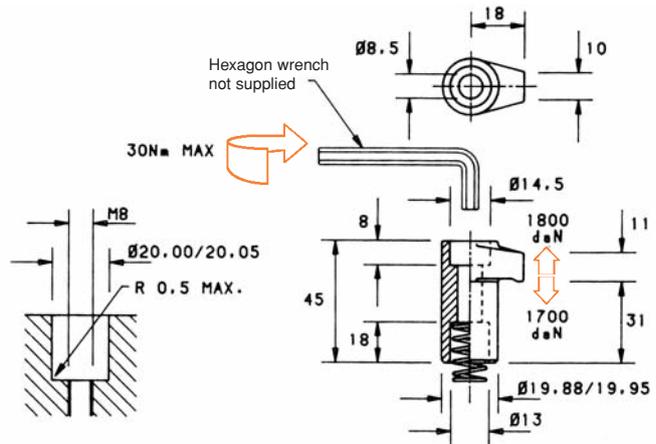
MODEL 1015-08



- Hole mounted by customer.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

Nominal Holding Force:
1800 daN

Weight:
0.08 Kg



SWING CLAMPS

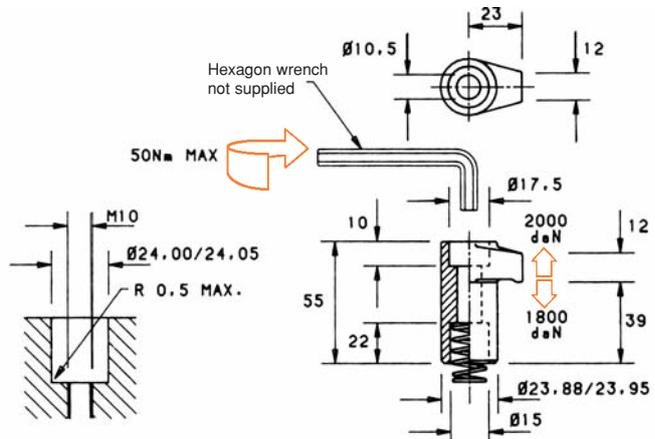
MODEL 1015-10



- Hole mounted by customer.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

Nominal Holding Force:
2000 daN

Weight:
0.15 Kg



SWING CLAMPS

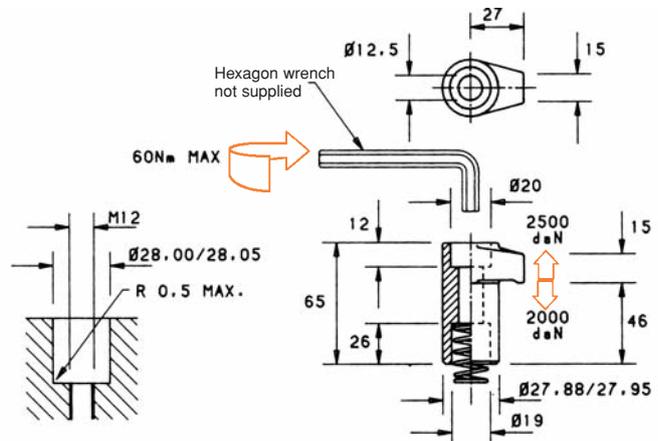
MODEL 1015-12



- Hole mounted by customer.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

Nominal Holding Force:
2500 daN

Weight:
0.23 Kg



SWING CLAMPS

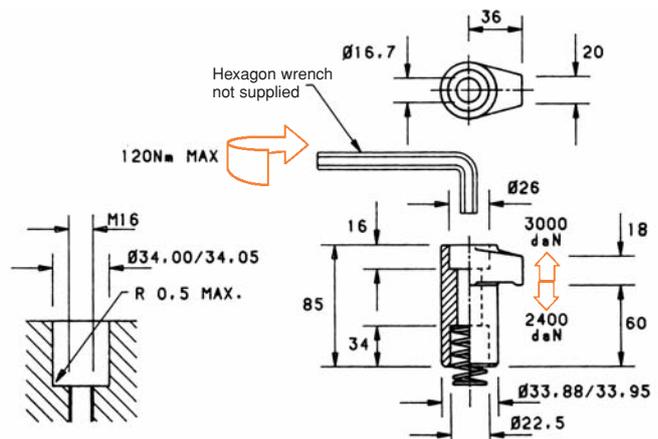
MODEL 1015-16



- Hole mounted by customer.
- Manually turned.
- Tightened & released by hexagonal key.
- Spring return.

Nominal Holding Force:
3000 daN

Weight:
0.44 Kg





TOGGLE PLIERS AND CLIP CLAMPS

- **Features:**

Toggle pliers, unlike 'G' or sash clamps, can have their clamping position pre-set for quick, repetitious clamping. The range of jaw openings and depths allow clamping over obstacles such as flanges, and the central release lever ensures easy opening.

Clip clamps are closed by means of a torsion spring and can clamp any thickness of material up to a maximum shown without having to be pre-set.

- **Specification:**

Toggle pliers models P0, P1A, P1B, P3A, P3B, P4 and P4B have jaws and handles made from machined alloy steel forgings and are finished zinc plated and passivated.

Models P1 and P3 have jaws and one handle made from machined alloy steel forgings, the other handle being a steel pressing. These two pliers have a black painted finish to the forgings, the pressed parts being finished chemi blacked.

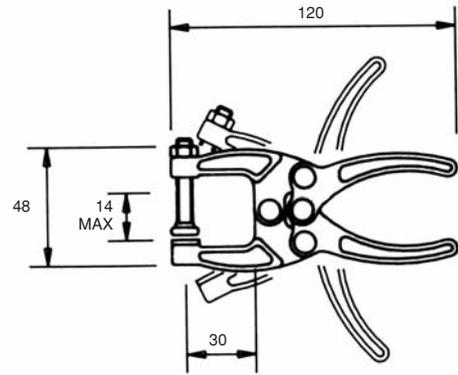
TOGGLE PLIERS AND CLIP CLAMPS

TOGGLE PLIERS MODEL P0



Spindle:
Plastic coated tip.
Nominal Holding Force:
150 daN
Weight:
0.10 Kg

150 daN ↑
100 daN ↓
100 daN ↓
150 daN ↑



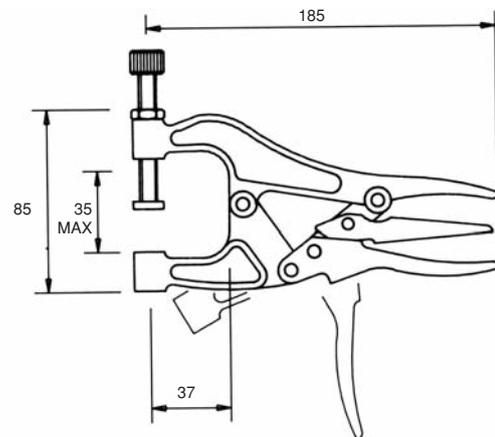
20 daN ↓
20 daN ↑

TOGGLE PLIERS MODEL P1



Spindle:
Steel copper plated.
Nominal Holding Force:
550 daN
Weight:
0.55 Kg

550 daN ↑
330 daN ↓
330 daN ↓
550 daN ↑



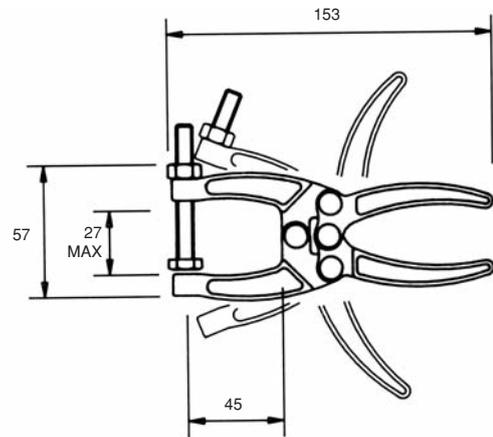
20 daN ↓
20 daN ↑

TOGGLE PLIERS MODEL P1A



Spindle:
Steel zinc plated.
Nominal Holding Force:
180 daN
Weight:
0.20 Kg

180 daN ↑
100 daN ↓
100 daN ↓
180 daN ↑



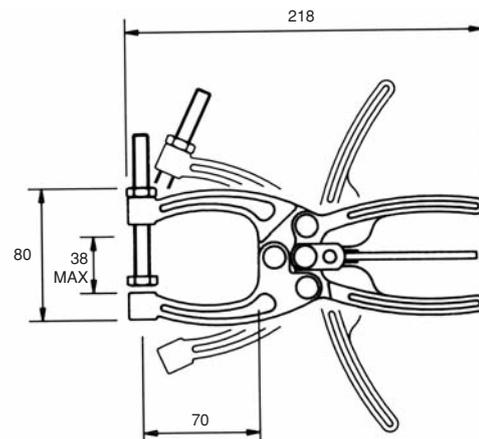
20 daN ↓
20 daN ↑

TOGGLE PLIERS MODEL P1B



Spindle:
Steel zinc plated.
Nominal Holding Force:
200 daN
Weight:
0.60 Kg

200 daN ↑
125 daN ↓
125 daN ↓
200 daN ↑



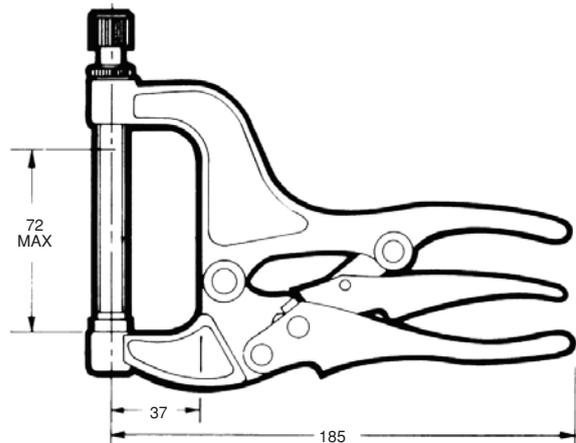
25 daN ↓
25 daN ↑

TOGGLE PLIERS AND CLIP CLAMPS

TOGGLE PLIERS MODEL P2



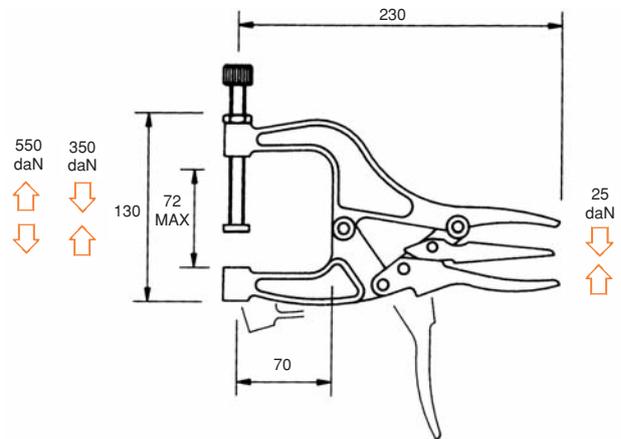
Spindle:
Steel copper plated.
Nominal Holding Force:
1000 daN
Weight:
0.65 kg



TOGGLE PLIERS MODEL P3



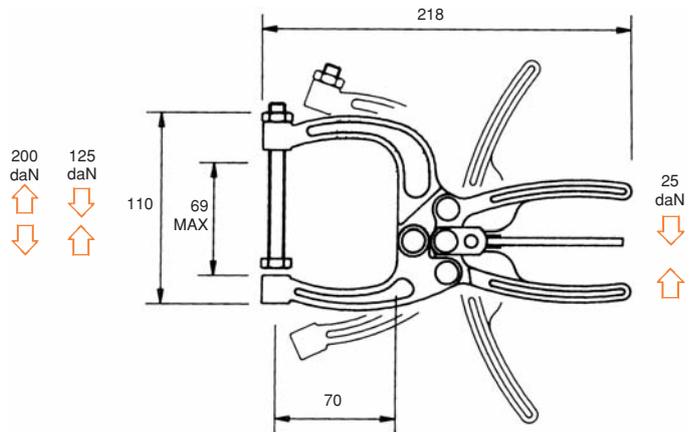
Spindle:
Steel copper plated.
Nominal Holding Force:
550 daN
Weight:
0.80 Kg



TOGGLE PLIERS MODEL P3A



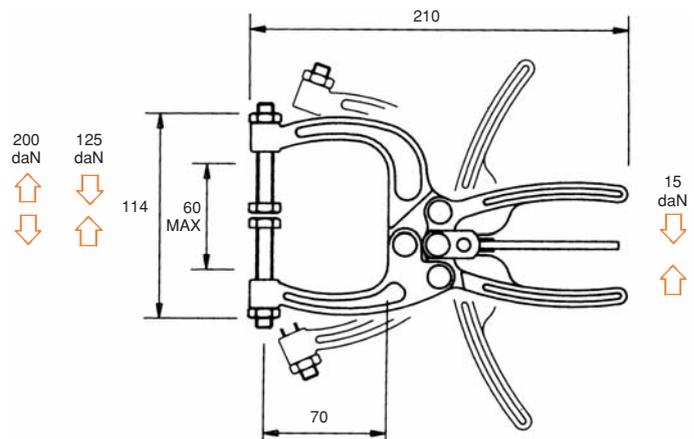
Spindle:
Steel zinc plated.
Nominal Holding Force:
200 daN
Weight:
0.65 Kg



TOGGLE PLIERS MODEL P3B



Spindles:
Steel zinc plated.
Nominal Holding Force:
200 daN
Weight:
0.70 Kg

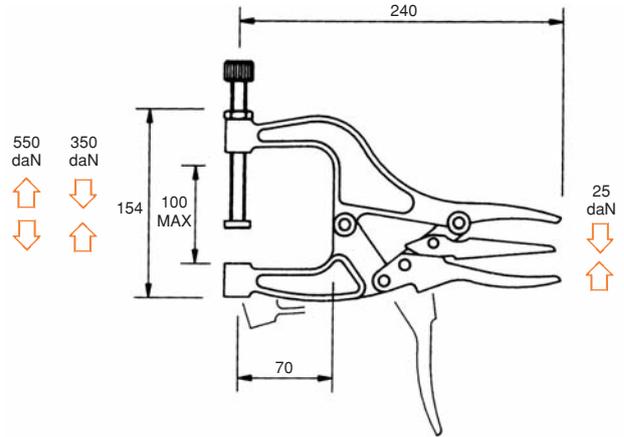


TOGGLE PLIERS AND CLIP CLAMPS

TOGGLE PLIERS MODEL P4



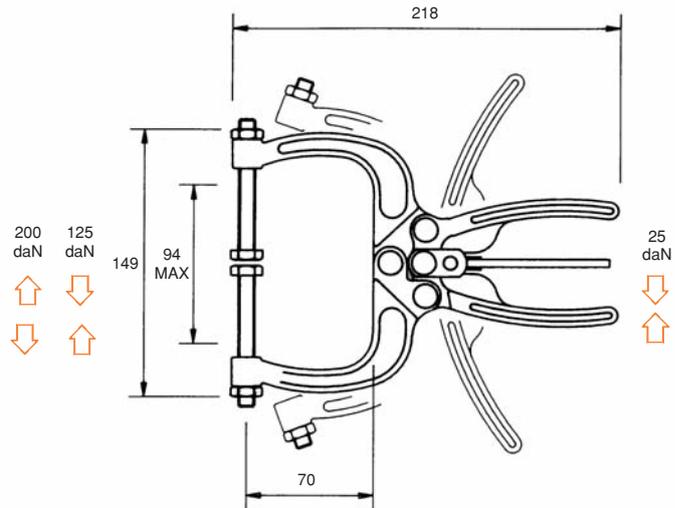
Spindle:
Steel zinc plated.
Nominal Holding Force:
200 daN
Weight:
0.75 Kg



TOGGLE PLIERS MODEL P4B



Spindles:
Steel zinc plated.
Nominal Holding Force:
200 daN
Weight:
0.75 Kg



CLAMPS WITH COPPER PLATED THREAD SHIELD MODELS P1C / P2C / P3C / P4C



1. specially designed thread shield.
2. copper plated to protect from weld spatter.

For dimensions and nominal holding forces see standard models above, except all spindle gaps reduce by 5mm.

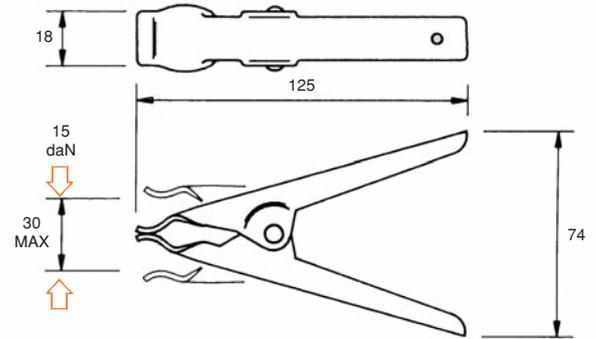
TOGGLE PLIERS AND CLIP CLAMPS

CLIP CLAMPS MODEL CC510



Gripping Force:
6 daN closed.
15 daN open.
Weight:
0.09 Kg

6 daN
↓
↑

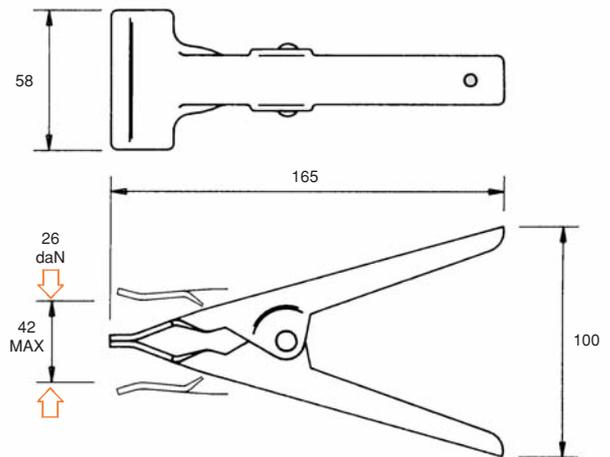


CLIP CLAMPS MODEL CC610



Gripping Force:
15 daN closed.
26 daN open.
Weight:
0.29 Kg

15 daN
↓
↑

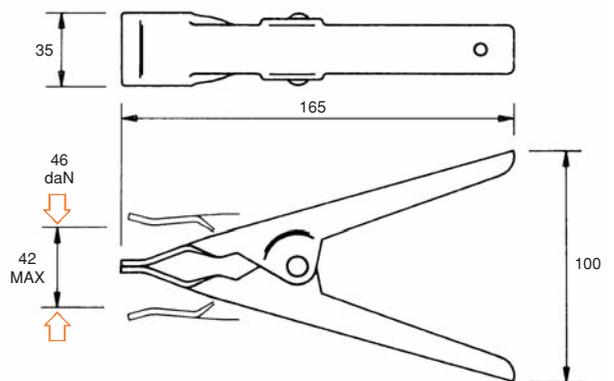


CLIP CLAMPS MODEL CC701



Gripping Force:
25 daN closed.
46 daN open.
Weight:
0.27 Kg

25 daN
↓
↑





CLAMP LEVERS

.....

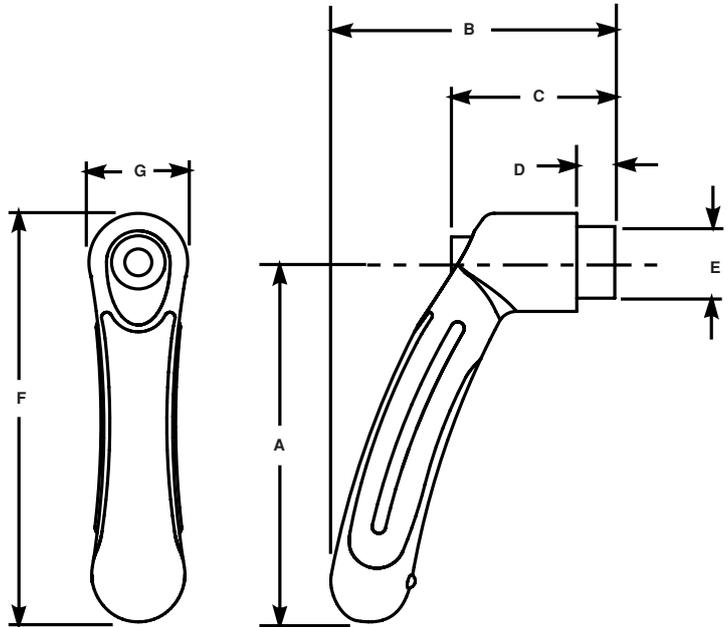
Soft Touch - Clamp levers



Material:

Manufactured in thermoplastic elastomer Soft Touch giving a unique tactile feel.

Available in custom colours, metric and imperial threads, stainless steel hardware and adjustment screw choices including hex heads for security applications.



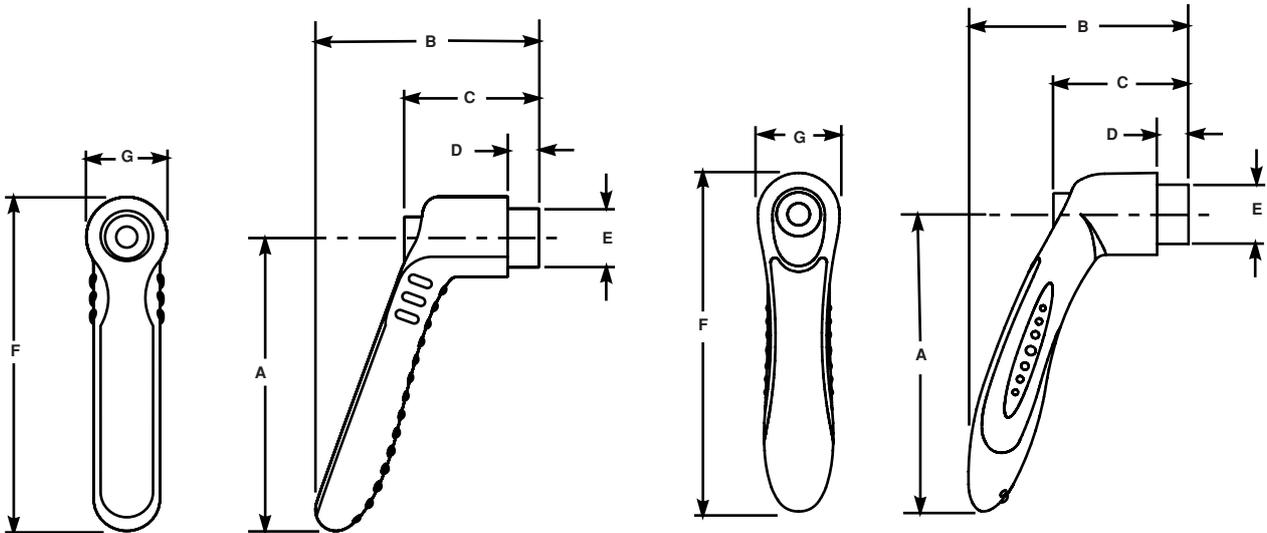
Dimensions in (mm)

PART NO.	A	B	C	D	E	F	G
PT-AXL-3-40	1.57 (40.00)	1.46 (37.00)	0.96 (24.50)	0.22 (5.50)	0.39 (10.00)	1.87 (47.50)	0.55 (14.00)
PT-AXL-3-65	2.56 (65.00)	1.99 (50.50)	1.12 (28.50)	0.26 (6.50)	0.49 (12.50)	2.91 (74.00)	0.75 (19.00)
PT-AXL-3-80	3.15 (80.00)	2.54 (64.50)	1.46 (37.00)	0.39 (10.00)	0.63 (16.00)	3.58 (91.00)	0.87 (22.00)
PT-AXL-3-95	3.74 (95.00)	2.94 (74.70)	1.69 (43.00)	0.39 (10.00)	0.75 (19.00)	4.25 (108.00)	1.02 (26.00)

Inserts and Studs

PART NO.	10-32	1/4-20	5/16-18	3/8-16	1/2-13	M6	M8	M10	M12
PT-CL-AXL-*-40	X	X				X			
PT-CL-AXL-*-65		X	X	X		X	X	X	
PT-CL-AXL-*-80			X	X			X	X	
PT-CL-AXL-*-95				X	X			X	X

Add -st to part number to indicate stud selection. Popular stud lengths are more readily available



Clamp Levers with internal thread



Material:

Handle in die cast zinc to DIN 1743, steel parts quality class 5.8

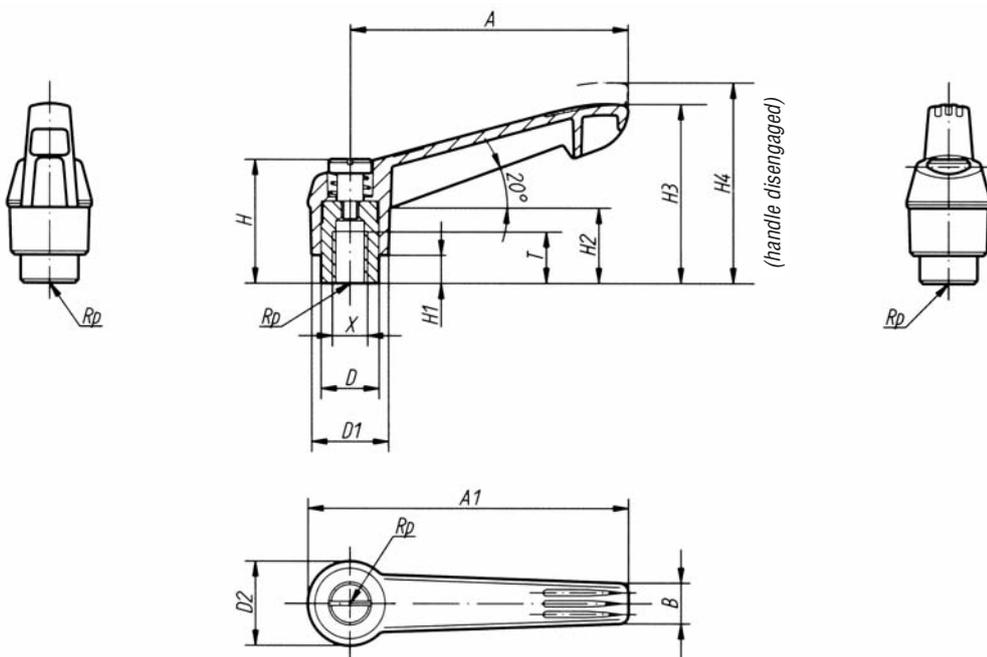
Surface finish:

Handle plastic-coated, steel parts black oxide finish

Note:

Standard colours are:
black satin finish, orange RAL 2004

Other colours available on request.
Other materials, surface finishes, special versions, etc. are available.



CLAMPING PRODUCTS

Clamp Levers with internal thread

Order No. black satin finish	Order No. orange	Size	Internal thread X*	T	D	D1	D2	H	H1**	H2	H3	H4	A	A1	B	No. of teeth	Approx. weight kg
50 104000 01	50 104000 02	1	M 4	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,030
50 105000 01	50 105000 02	1	M 5	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,030
50 106000 01	50 106000 02	1	M 6	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,030
50 206000 01	50 206000 02	2	M 6	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,070
50 208000 01	50 208000 02	2	M 8	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,070
50 308000 01	50 308000 02	3	M 8	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,110
50 310000 01	50 310000 02	3	M 10	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,110
50 410000 01	50 410000 02	4	M 10	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,190
50 412000 01	50 412000 02	4	M 12	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,190
50 512000 01	50 512000 02	5	M 12	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,300
50 516000 01	50 516000 02	5	M 16	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,300

Sample order: Clamp Lever 5031000001

*Other internal threads available on request **Dimension "H1" available in other lengths at extra charge

Clamp Levers with external thread



Material:

Handle in die cast zinc to DIN 1743, steel parts quality class 5.8

Surface finish:

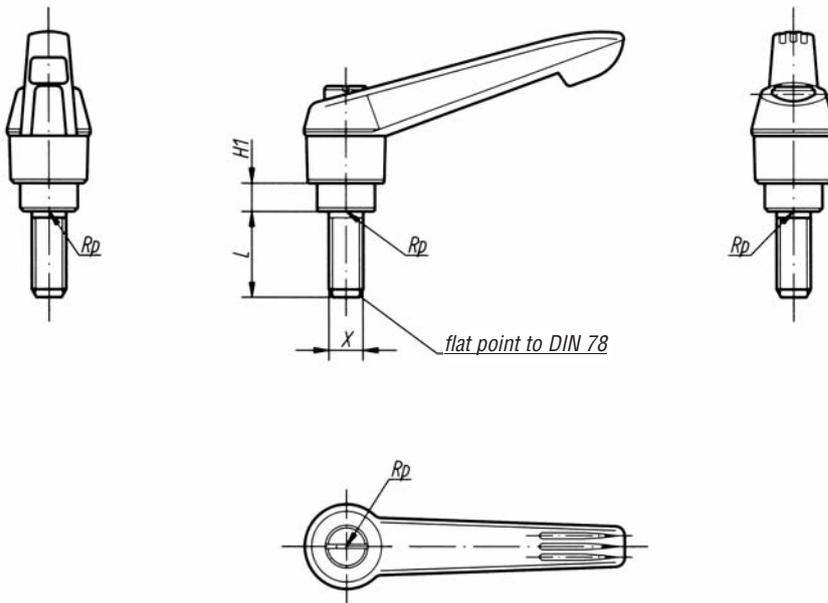
Handle plastic-coated, steel parts black oxide finish

Note:

Standard colours are:
black satin finish, orange RAL 2004

Other colours available on request.

Other materials, surface finishes, special versions, etc. are available.



disengage
by lifting



Clamp Levers with external thread

Order No. black satin finish	Order No. orange	Size	External thread X**	H1*	L = Screw length **													
50 105*** 01	50 105*** 02	1	M 5	4	10	15	20	25	30	35	40	45	50	-	-	-	-	-
50 106*** 01	50 106*** 02	1	M 6	4	10	15	20	25	30	35	40	45	50	-	-	-	-	-
50 206*** 01	50 206*** 02	2	M 6	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
50 208*** 01	50 208*** 02	2	M 8	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
50 210*** 01	50 210*** 02	2	M 10	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
50 310*** 01	50 310*** 02	3	M 10	10	-	15	20	25	30	35	40	45	50	55	60	-	-	-
50 410*** 01	50 410*** 02	4	M 10	10	-	-	20	25	30	35	40	45	50	55	60	70	80	90
50 412*** 01	50 412*** 02	4	M 12	10	-	-	20	25	30	35	40	45	50	55	60	70	80	90
50 512*** 01	50 512*** 02	5	M 12	12	-	-	-	25	30	35	40	45	50	55	60	70	80	90
50 516*** 01	50 516*** 02	5	M 16	12	-	-	-	25	30	35	40	45	50	55	60	70	80	90

Sample order: Clamp Lever 5031005002
(Length L)

*Dimension "H1" available in other lengths at extra charge
***Add the desired screw length here, e.g. 050 for L = 50 mm

**Other external threads and screw lengths available on request

Clamp Levers with internal thread, steel parts in stainless steel

ALSO AVAILABLE IN STAINLESS STEEL



Material:

Handle in die cast zinc to DIN 1743, steel parts in stainless steel, X 10 CrNiS 18 9 = 1.4305

Surface finish:

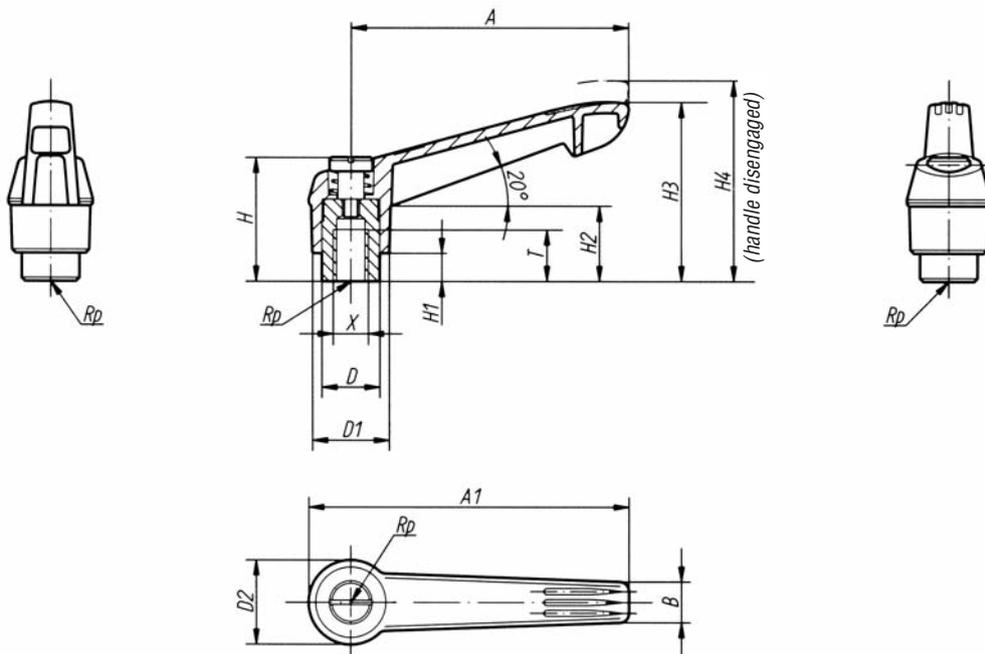
Handle plastic-coated, steel parts natural finish

Note:

Standard colours are:
black satin finish, orange RAL 2004

Other colours available on request.

Other materials, surface finishes, special versions, etc. are available.



disengage by lifting



CLAMPING PRODUCTS

Clamp Levers with internal thread, steel parts in stainless steel

Order No. black satin finish	Order No. orange	Size	Internal thread X*	T	D	D1	D2	H	H1**	H2	H3	H4	A	A1	B	No. of teeth	Approx. weight kg
50 105000 01 OS0	50 105000 02 OS0	1	M 5	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,030
50 106000 01 OS0	50 106000 02 OS0	1	M 6	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,030
50 206000 01 OS0	50 206000 02 OS0	2	M 6	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,070
50 208000 01 OS0	50 208000 02 OS0	2	M 8	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,070
50 308000 01 OS0	50 308000 02 OS0	3	M 8	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,110
50 310000 01 OS0	50 310000 02 OS0	3	M 10	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,110
50 410000 01 OS0	50 410000 02 OS0	4	M 10	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,190
50 412000 01 OS0	50 412000 02 OS0	4	M 12	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,190
50 512000 01 OS0	50 512000 02 OS0	5	M 12	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,300
50 516000 01 OS0	50 516000 02 OS0	5	M 16	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,300

Sample order: Clamp Lever 50310000010S0

*Other internal threads available on request

**Dimension "H1" available in other lengths at extra charge

Clamp Levers with external thread, steel parts in stainless steel



Material:

Handle in die cast zinc to DIN 1743, steel parts in stainless steel, X 10 CrNiS 18 9 = 1.4305

Surface finish:

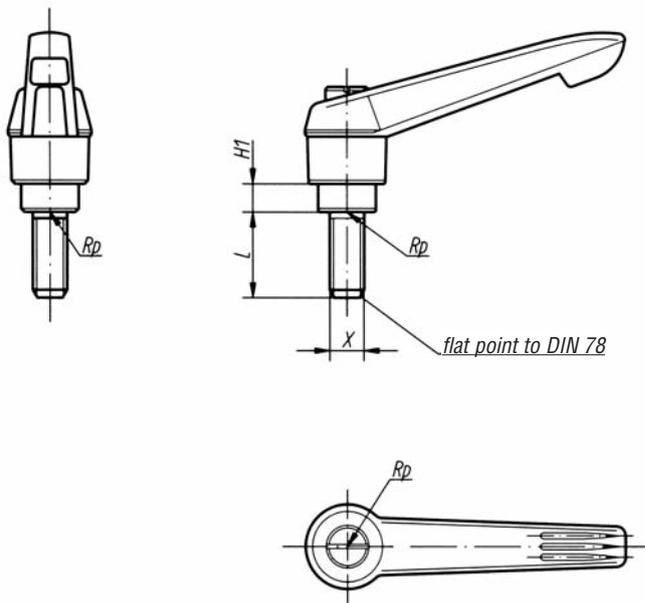
Handle plastic-coated, steel parts natural finish

Note:

Standard colours are:
black satin finish, orange RAL 2004

Other colours available on request.

Other materials, surface finishes, special versions, etc. are available.



disengage
by lifting



Clamp Levers with external thread, steel parts in stainless steel

Order No. black satin finish	Order No. orange	Size	External thread X**	H1*	L = Screw length **							
50 105*** 01 OS0 50 105*** 02 OS0		1	M 5	4	-	15	20	25	-	-	-	-
50 106*** 01 OS0 50 106*** 02 OS0		1	M 6	4	10	15	20	25	30	40	50	-
50 206*** 01 OS0 50 206*** 02 OS0		2	M 6	6,5	-	15	20	25	30	40	50	60
50 208*** 01 OS0 50 208*** 02 OS0		2	M 8	6,5	-	15	20	25	30	40	50	60
50 210*** 01 OS0 50 210*** 02 OS0		2	M 10	6,5	-	-	20	25	30	40	50	60
50 310*** 01 OS0 50 310*** 02 OS0		3	M 10	10	-	-	20	25	30	40	50	60
50 412*** 01 OS0 50 412*** 02 OS0		4	M 12	10	-	-	-	25	30	40	50	60
50 516*** 01 OS0 50 516*** 02 OS0		5	M 16	12	-	-	-	-	30	40	50	60

Sample order: Clamp Lever 50310050020S0
(Length L)

* Dimension "H1" available in other lengths at extra charge

**Other external threads and screw lengths available on request

*** Add the desired screw length here, e.g. 050 for L = 50 mm

Clamp Levers with internal thread and plastic handle



Material:

Handle in glass-fibre reinforced plastic with toothed wheel in die cast zinc, steel parts quality class 5.8

Surface finish:

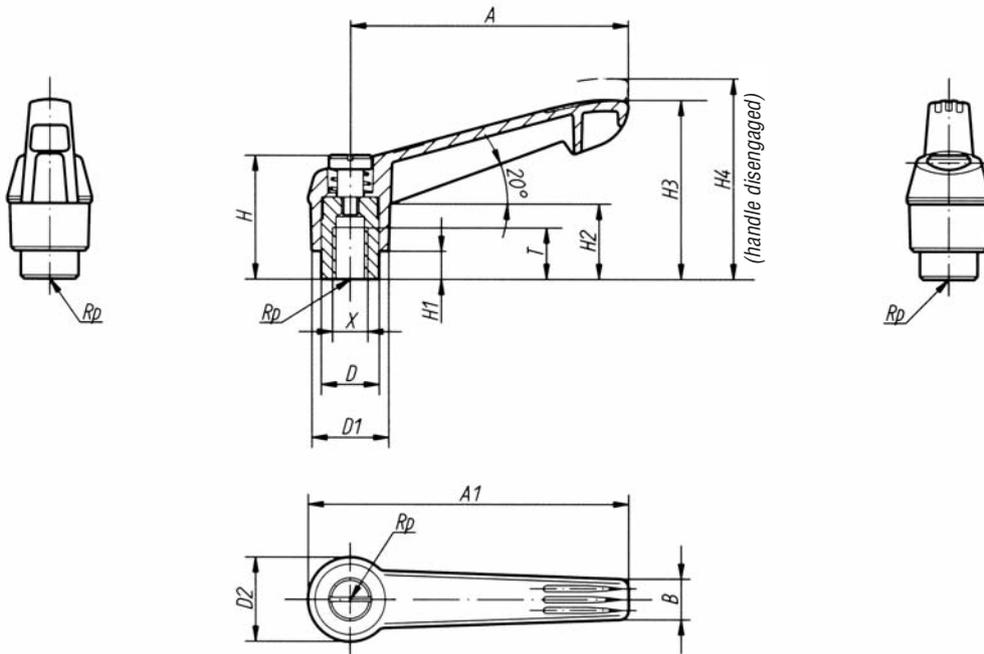
Steel parts black oxide finish

Note:

Standard colours are: anthracite grey RAL 7021, orange RAL 2004

Other colours available on request.

Other materials, surface finishes, special versions, etc. are available.



disengage by lifting

CLAMPING PRODUCTS

Clamp Levers with internal thread and plastic handle

Order No. anthracite grey	Order No. orange	Size	Internal thread X*	T	D	D1	D2	H	H1**	H2	H3	H4	A	A1	B	No. of teeth	Approx. weight kg
51 104000 90	51 104000 02	1	M 4	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,013
51 105000 90	51 105000 02	1	M 5	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,013
51 106000 90	51 106000 02	1	M 6	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,013
51 206000 90	51 206000 02	2	M 6	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,029
51 208000 90	51 208000 02	2	M 8	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,029
51 308000 90	51 308000 02	3	M 8	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,050
51 310000 90	51 310000 02	3	M 10	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,050
51 410000 90	51 410000 02	4	M 10	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,078
51 412000 90	51 412000 02	4	M 12	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,078
51 512000 90	51 512000 02	5	M 12	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,130
51 516000 90	51 516000 02	5	M 16	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,130

Sample order: Clamp Lever 5120800090

*Other internal threads available on request

**Dimension "H1" available in other lengths at extra charge

Clamp Levers with external thread and plastic handle



Material:

Handle in glass-fibre reinforced plastic with toothed wheel in die cast zinc, steel parts quality class 5.8

Surface finish:

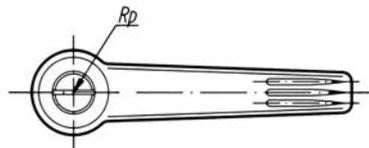
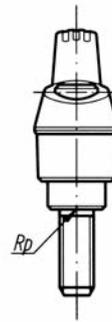
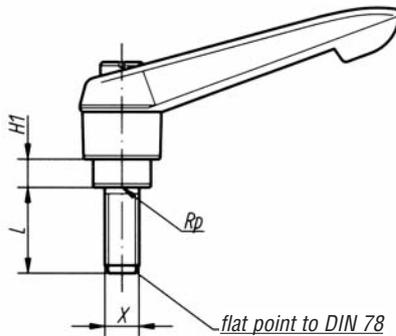
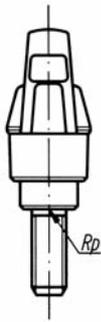
Steel parts black oxide finish

Note:

Standard colours are: anthracite grey RAL 7021, orange RAL 2004

Other colours available on request.

Other materials, surface finishes, special versions, etc. are available.



disengage
by lifting



Clamp Levers with external thread and plastic handle

Order No. anthracite grey	Order No. orange	Size	External thread X**	H1*	L = Screw length **													
51 105*** 90	51 105*** 02	1	M 5	4	10	15	20	25	30	35	40	45	50	-	-	-	-	-
51 106*** 90	51 106*** 02	1	M 6	4	10	15	20	25	30	35	40	45	50	-	-	-	-	-
51 206*** 90	51 206*** 02	2	M 6	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 208*** 90	51 208*** 02	2	M 8	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 210*** 90	51 210*** 02	2	M 10	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 310*** 90	51 310*** 02	3	M 10	10	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 410*** 90	51 410*** 02	4	M 10	10	-	-	20	25	30	35	40	45	50	55	60	70	80	90
51 412*** 90	51 412*** 02	4	M 12	10	-	-	20	25	30	35	40	45	50	55	60	70	80	90
51 512*** 90	51 512*** 02	5	M 12	12	-	-	-	25	30	35	40	45	50	55	60	70	80	90
51 516*** 90	51 516*** 02	5	M 16	12	-	-	-	25	30	35	40	45	50	55	60	70	80	90

Sample order: Clamp Lever 5141205002
(Length L)

*Dimension "H1" available in other lengths at extra charge
***Add the desired screw length here, e.g. 050 for L = 50 mm

**Other external threads and screw lengths available on request

Clamp Levers with internal thread and plastic handle, steel parts in stainless steel



Material:

Handle in glass-fibre reinforced plastic with toothed wheel in die cast zinc; steel parts in stainless steel, X 10 CrNiS 18 9 = 1.4305

Surface finish:

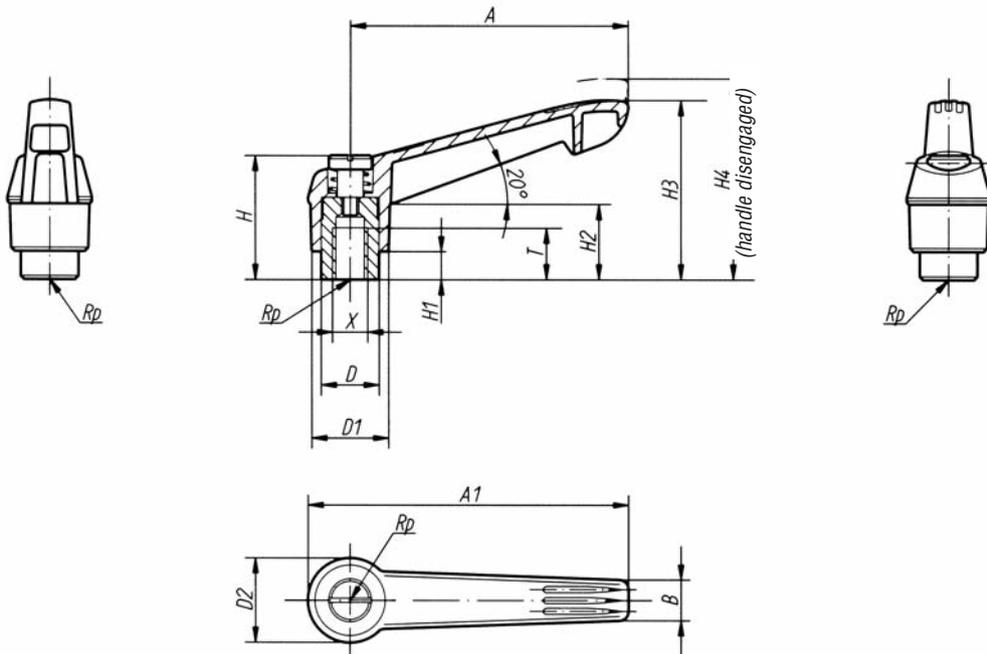
Steel parts natural finish

Note:

Standard colours are: anthracite grey RAL 7021, orange RAL 2004

For other colours are also available.

Other materials, surface finishes, special versions, etc. are available.



disengage
by lifting



CLAMPING PRODUCTS

Clamp Levers with internal thread and plastic handle, steel parts in stainless steel

Order No. anthracite grey	Order No. orange	Size	Internal thread X*	T	D	D1	D2	H	H1**	H2	H3	H4	A	A1	B	No. of teeth	Approx. weight kg
51 105000 90 0S0 51 105000 02 0S0		1	M 5	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,013
51 106000 90 0S0 51 106000 02 0S0		1	M 6	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	0,013
51 206000 90 0S0 51 206000 02 0S0		2	M 6	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,029
51 208000 90 0S0 51 208000 02 0S0		2	M 8	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	0,029
51 308000 90 0S0 51 308000 02 0S0		3	M 8	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,050
51 310000 90 0S0 51 310000 02 0S0		3	M 10	14	16	21,5	23	37,5	10	24	53	57	80	91,5	11	22	0,050
51 410000 90 0S0 51 410000 02 0S0		4	M 10	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,078
51 412000 90 0S0 51 412000 02 0S0		4	M 12	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	0,078
51 512000 90 0S0 51 512000 02 0S0		5	M 12	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,130
51 516000 90 0S0 51 516000 02 0S0		5	M 16	23	23	30	32,5	51	12	33	72,5	77,5	110	126,5	15,5	26	0,130

Sample order: Clamp Lever 51310000020S0

*Other internal threads available on request

**Dimension "H1" available in other lengths at extra charge

Clamp Levers with external thread and plastic handle, steel parts in stainless steel



Material:

Handle in glass-fibre reinforced plastic with toothed wheel in die cast zinc; steel parts in stainless steel, X 10 CrNiS 18 9 = 1.4305

Surface finish:

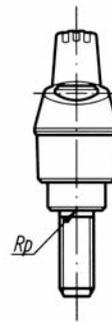
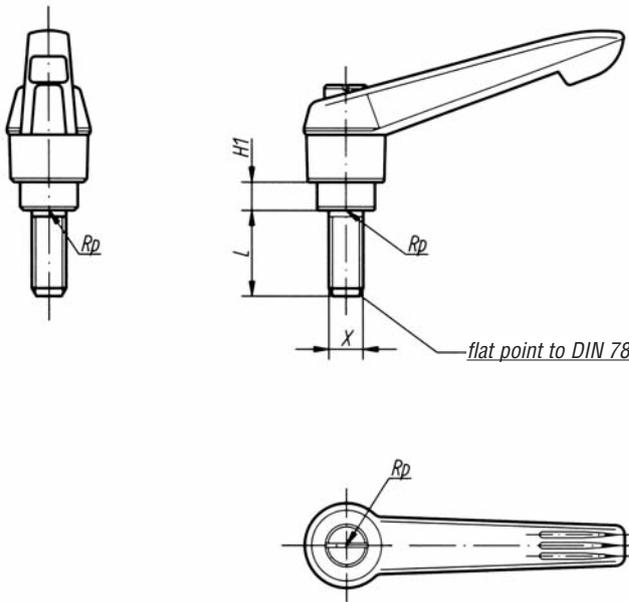
Steel parts natural finish

Note:

Standard colours are: anthracite grey RAL 7021, orange RAL 2004

For other colours are also available.

Other materials, surface finishes, special versions, etc. are available.



disengage by lifting



Clamp Levers with external thread and plastic handle, steel parts in stainless steel

Order No. anthracite grey	Order No. orange	Size	External thread X**	H1*	L = Screw length **								
51 105***	90 0S0 51 105***	02 OS0	1	M 5	4	–	15	20	25	–	–	–	–
51 106***	90 0S0 51 106***	02 OS0	1	M 6	4	10	15	20	25	30	40	50	–
51 206***	90 0S0 51 206***	02 OS0	2	M 6	6,5	–	15	20	25	30	40	50	60
51 208***	90 0S0 51 208***	02 OS0	2	M 8	6,5	–	15	20	25	30	40	50	60
51 210***	90 0S0 51 210***	02 OS0	2	M 10	6,5	–	–	20	25	30	40	50	60
51 310***	90 0S0 51 310***	02 OS0	3	M 10	10	–	–	20	25	30	40	50	60
51 412***	90 0S0 51 412***	02 OS0	4	M 12	10	–	–	–	25	30	40	50	60
51 516***	90 0S0 51 516***	02 OS0	5	M 16	12	–	–	–	–	30	40	50	60

Sample order: Clamp Lever 50310050020S0
(Length L)

* Dimension "H1" available in other lengths at extra char **Other external threads and screw lengths available on request
*** Add the desired screw length here, e.g. 050 for L = 50 mm

Coloured Clamp Levers with internal thread



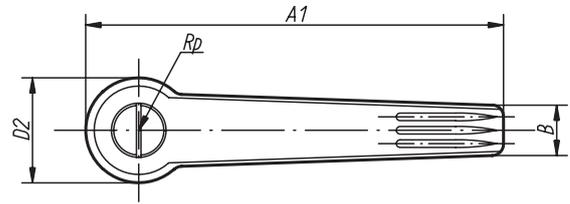
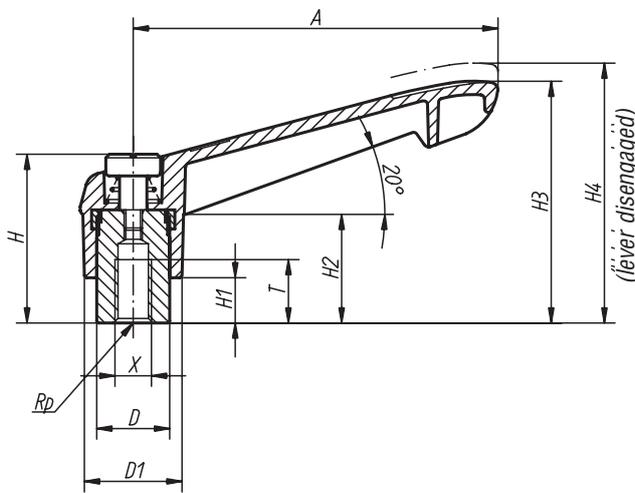
For many people the Clamp Lever represents the key to secure and comfortable gripping. This lever provides a future-oriented and powerful solution for almost any operating and clamping problem.

Material, surface finish:

Lever in glass-fibre reinforced plastic, toothed wheel in die cast zinc, steel parts 5.8 black oxide finish or stainless steel, X 10 CrNiS 18 9 = 1.4305 natural finish

Note:

Other internal threads X available on request. Dimension H1 available in other lengths on request at extra cost.



anthracite grey $\Delta\Delta = 90$



RAL 7021

signal green $\Delta\Delta = 86$



RAL 6032

traffic red $\Delta\Delta = 84$



RAL 3020

bright yellow $\Delta\Delta = 16$



RAL 1021

traffic blue $\Delta\Delta = 87$



RAL 5017

Clamp Levers with internal thread

Order No. steel	Order No. stainless steel	Size	X	T	D	D1	D2	H	H1	H2	H3	H4	A	A1	B	No. of teeth	Approx. weight g
51 104000 $\Delta\Delta$	-	1	M4	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	13
51 105000 $\Delta\Delta$	51 105000 $\Delta\Delta$ OSO	1	M5	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	13
51 106000 $\Delta\Delta$	51 106000 $\Delta\Delta$ OSO	1	M6	9	10	13	14,5	24	4	15	29,5	33,5	40	47	7,5	16	13
51 206000 $\Delta\Delta$	51 206000 $\Delta\Delta$ OSO	2	M6	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	30
51 208000 $\Delta\Delta$	51 208000 $\Delta\Delta$ OSO	2	M8	12	13,5	18	19,5	29	6,5	17,5	41	45	65	75	9,5	20	30
51 308000 $\Delta\Delta$	51 308000 $\Delta\Delta$ OSO	3	M8	14	16	21,5	23	37,5	10	24	53	57	80	92	11	22	52
51 310000 $\Delta\Delta$	51 310000 $\Delta\Delta$ OSO	3	M10	14	16	21,5	23	37,5	10	24	53	57	80	92	11	22	52
51 410000 $\Delta\Delta$	51 410000 $\Delta\Delta$ OSO	4	M10	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	82
51 412000 $\Delta\Delta$	51 412000 $\Delta\Delta$ OSO	4	M12	17	19	25,5	27,5	42,5	10	27	61	65	95	109	13	24	82
51 512000 $\Delta\Delta$	51 512000 $\Delta\Delta$ OSO	5	M12	23	23	30	32,5	51	12	33	72,5	77,5	110	127	15,5	26	136
51 516000 $\Delta\Delta$	51 516000 $\Delta\Delta$ OSO	5	M16	23	23	30	32,5	51	12	33	72,5	77,5	110	127	15,5	26	136

Sample order: Clamp Lever 51412 000 86 OSO (clamp lever signal green)

$\Delta\Delta$ Add the desired colour of the clamp lever here

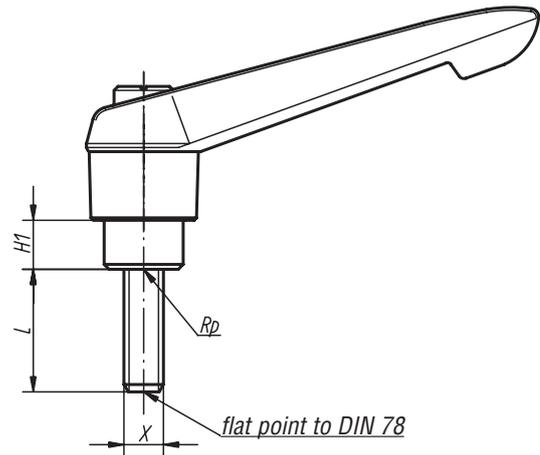
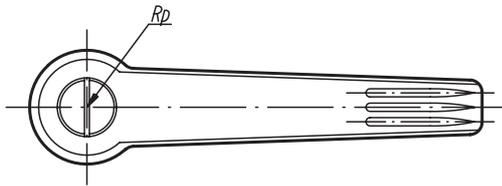
Coloured Clamp Levers with external thread



Note:

Other external threads X and screw lengths available on request. Dimension H1 available in other lengths on request at extra cost.

Material specification, missing dimensions and colour coding on previous page.



Clamp Levers with external thread in stainless steel

Order No. stainless steel	Size	X	H1	L = Screw length											
51 105 *** $\Delta\Delta$ OSO	1	M 5	4	-	15	20	25	-	-	-	-	-	-	-	-
51 106 *** $\Delta\Delta$ OSO	1	M 6	4	10	15	20	25	30	40	50	-	-	-	-	-
51 206 *** $\Delta\Delta$ OSO	2	M6	6,5	-	15	20	25	30	40	50	60	-	-	-	-
51 208 *** $\Delta\Delta$ OSO	2	M 8	6,5	-	15	20	25	30	40	50	60	-	-	-	-
51 210 *** $\Delta\Delta$ OSO	2	M 10	6,5	-	-	20	25	30	40	50	60	-	-	-	-
51 310 *** $\Delta\Delta$ OSO	3	M 10	10	-	-	20	25	30	40	50	60	-	-	-	-
51 412 *** $\Delta\Delta$ OSO	4	M 12	10	-	-	-	25	30	40	50	60	-	-	-	-
51 516 *** $\Delta\Delta$ OSO	5	M 16	12	-	-	-	-	30	40	50	60	-	-	-	-

Clamp Levers with external thread in steel

Order No. steel	Size	X	H1	L = Screw length													
51 105 *** $\Delta\Delta$	1	M 5	4	10	15	20	25	30	35	40	45	50	-	-	-	-	-
51 106 *** $\Delta\Delta$	1	M 6	4	10	15	20	25	30	35	40	45	50	-	-	-	-	-
51 206 *** $\Delta\Delta$	2	M6	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 208 *** $\Delta\Delta$	2	M 8	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 210 *** $\Delta\Delta$	2	M 10	6,5	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 310 *** $\Delta\Delta$	3	M 10	10	-	15	20	25	30	35	40	45	50	55	60	-	-	-
51 410 *** $\Delta\Delta$	4	M 10	10	-	-	20	25	30	35	40	45	50	55	60	70	80	90
51 412 *** $\Delta\Delta$	4	M 12	10	-	-	20	25	30	35	40	45	50	55	60	70	80	90
51 512 *** $\Delta\Delta$	5	M 12	12	-	-	-	25	30	35	40	45	50	55	60	70	80	90
51 516 *** $\Delta\Delta$	5	M 16	12	-	-	-	25	30	35	40	45	50	55	60	70	80	90

Sample order: Clamp Lever 51 310 $\Delta\Delta$ 90 (clamp lever anthracite grey)
(length L)

$\Delta\Delta$ Add the desired clamp lever colour here
***Add the desired screw length here, e.g. 040 for L = 40 mm

Non-adjustable clamp levers



Material:

Handle in glass-fibre reinforced plastic, steel parts quality class 5.8

Surface finish:

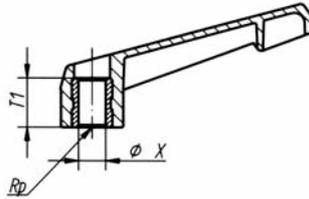
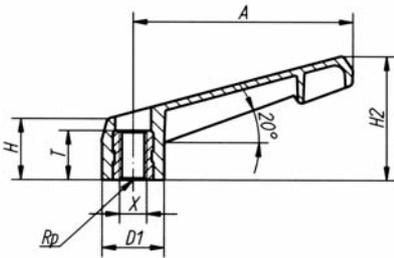
Handle in anthracite grey, steel parts yellow chromated

Note:

Other materials, surface finishes, special versions, etc. are available. Non-Adjustable Clamp Levers can be used for simple applications. Generally there must be enough space so that the lever can be turned 360°.

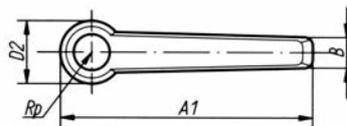
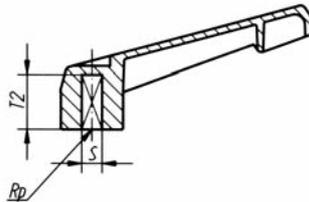
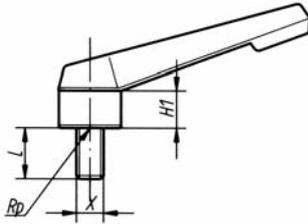
Non-Adjustable Clamp Levers with internal thread

Non-Adjustable Clamp Levers with locating hole



Non-Adjustable Clamp Levers with external thread

Non-Adjustable Clamp Levers with square socket



Non-Adjustable Clamp Levers

Order No.	Internal thread		Approx. weight g	Size	D1	D2	H	H1	H2	A	A1	B
	X	T										
20 104000 90	M 4	10	11	1	13,8	14	17	11	27	40	47	8
20 105000 90	M 5	10	10	1	13,8	14	17	11	27	40	47	8
20 106000 90	M 6	10	10	1	13,8	14	17	11	27	40	47	8
20 208000 90	M 8	14	20	2	18,3	18,5	18	11	36,5	65	75	9
20 310000 90	M 10	14	41	3	21,8	22	22	14	45	80	91	11
20 412000 90	M 12	18	65	4	25,8	26	26	17	54	95	108	13
20 516000 90	M 16	18	105	5	30,8	31	31	21	63	110	126	16

Order No.	External thread		Approx. weight g	Order No.	Locating hole		Approx. weight g	Order No.	Square socket		Approx. weight g	Size	D1	D2	H	H1	H2	A	A1	B
	X	L = Screw length			X ^{H9}	T1			S ^{H11}	T2										
20 105*** 90	M 5	20	14	20 105002 90	5	13	5	1	13,8	14	17	11	27	40	47	8				
20 106*** 90	M 6	20	15	20 106001 90	6	10	10	-	-	-	-	1	13,8	14	17	11	27	40	47	8
20 208*** 90	M 8	15	29	20 208001 90	8	14	19	20 206002 90	6	16	10	2	18,3	18,5	18	11	36,5	65	75	9
20 310*** 90	M 10	30	65	20 310001 90	10	14	38	20 308002 90	8	18	15	3	21,8	22	22	14	45	80	91	11
20 412*** 90	M 12	30	102	20 412001 90	12	18	62	20 410002 90	10	20	24	4	25,8	26	26	17	54	95	108	13
20 516*** 90	M 16	40	195	20 516001 90	16	18	102	20 512002 90	12	26	40	5	30,8	31	31	21	63	110	126	16

Sample order: Non-Adjustable Clamp Lever 2020802090

*** Add the desired screw length here, e.g. 020 for L = 20 mm

Tension Levers with internal thread



Material:

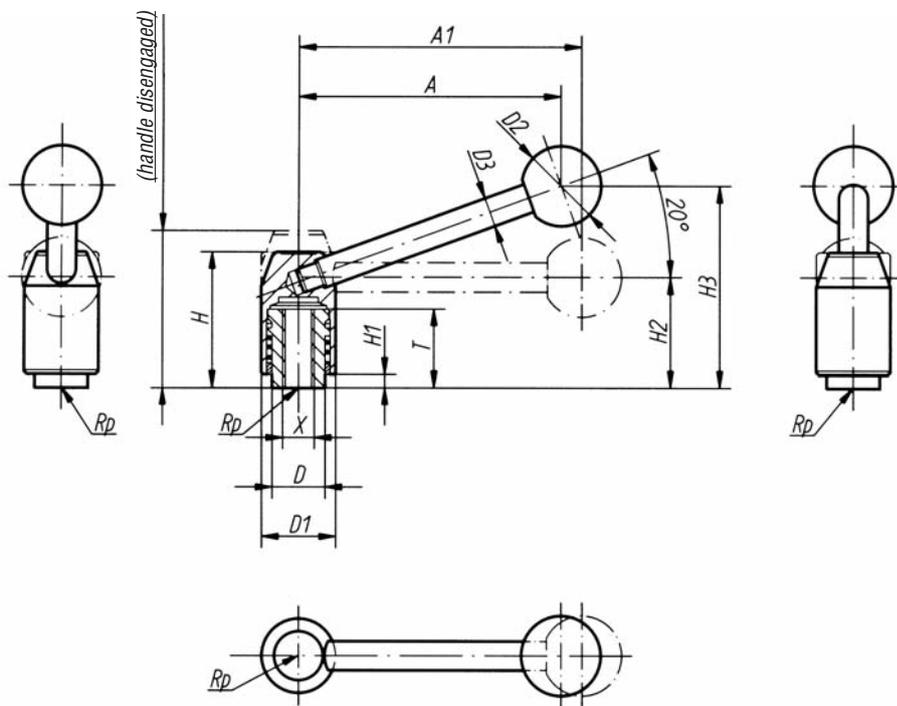
Steel parts quality class 5.8, black plastic ball knob

Surface finish:

Black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.



Tension Levers with internal thread

Order No. black oxide finish 0 degrees	Order No. black oxide finish 20 degrees	Size	Internal thread X*	T	D	D1	D2	D3	H	H1**	H2	H3	H4	A**	A1**	No. of teeth	Approx. weight kg
05 108000 00	05 108000 20	1	M 8	23	17	24	25	10	44	4	36,5	64	49	81	87	28	0,170
05 110000 00	05 110000 20	1	M 10	23	17	24	25	10	44	4	36,5	64	49	81	87	28	0,170
05 210000 00	05 210000 20	2	M 10	26	20	28	30	11	51	5	41,5	76	49	98	106	30	0,260
05 212000 00	05 212000 20	2	M 12	26	20	28	30	11	51	5	41,5	76	57	98	106	30	0,260
05 312000 00	05 312000 20	3	M 12	30	24	33	32	12	57	5	46	87	64	118	128	35	0,400
05 316000 00	05 316000 20	3	M 16	30	24	33	32	12	57	5	46	87	64	118	128	35	0,400
05 416000 00	05 416000 20	4	M 16	35	30	41	37	14	67	6	55	100	75	136	147	38	0,670
05 420000 00	05 420000 20	4	M 20	35	30	41	37	14	67	6	55	100	75	136	147	38	0,670
05 424000 00	05 424000 20	4	M 24	35	30	41	37	14	67	6	55	100	75	136	147	38	1,000

Sample order: Tension Lever 0531200020

*Other internal threads available on request **Dimension "H1", "A" and "A1" available in other lengths at extra charge

Tension Levers with external thread



Material:

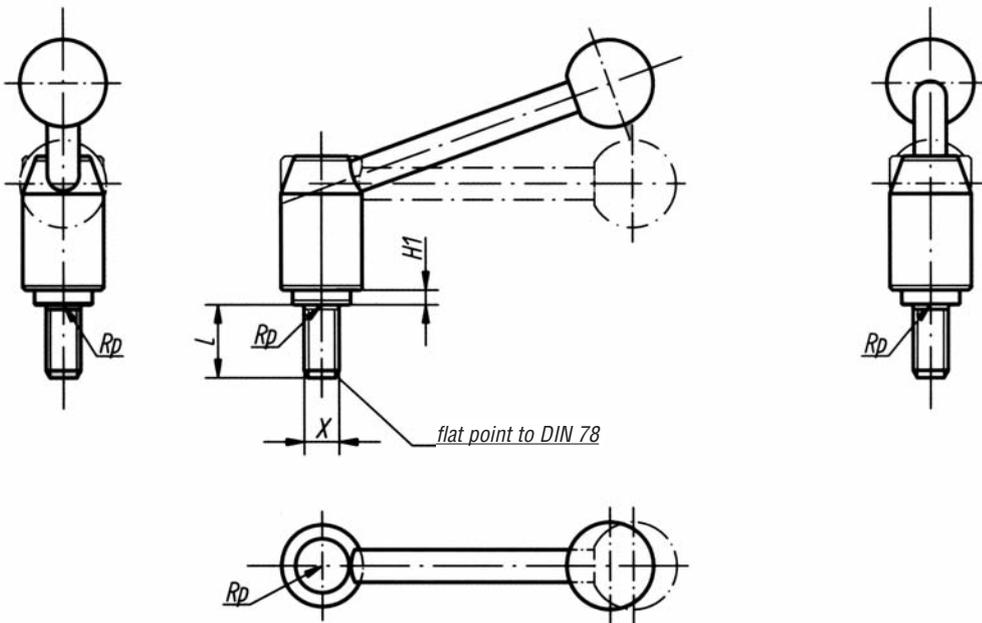
Steel parts quality class 5.8, black plastic ball knob

Surface finish:

Black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.



disengage
by lifting

CLAMPING PRODUCTS

Clamp Levers with external thread and plastic handle, steel parts in stainless steel

Order No. black oxide finish 0 degrees	Order No. black oxide finish 20 degrees	Size	External thread X**	H1*	L = Screw length **										
05 108*** 00	05 108*** 20	1	M 8	4	15	20	25	30	40	50	60	-	-	-	
05 110*** 00	05 110*** 20	1	M 10	4	15	20	25	30	40	50	60	-	-	-	
05 112*** 00	05 112*** 20	1	M 12	4	15	20	25	30	40	50	60	-	-	-	
05 212*** 00	05 212*** 20	2	M 12	5	-	20	25	30	40	50	60	-	-	-	
05 312*** 00	05 312*** 20	3	M 12	5	-	20	25	30	40	50	60	70	80	90	
05 316*** 00	05 316*** 20	3	M 16	5	-	20	25	30	40	50	60	70	80	90	
05 416*** 00	05 416*** 20	4	M 16	6	-	-	-	30	40	50	60	70	80	90	
05 420*** 00	05 420*** 20	4	M 20	6	-	-	-	30	40	50	60	70	80	90	
05 424*** 00	05 424*** 20	4	M 24	6	-	-	-	30	40	50	60	70	80	90	

Sample order: Tension Lever 0541605000
(Length L)

* Dimension "H1" available in other lengths at extra charge **Other external threads and screw lengths available on request
*** Add the desired screw length here, e.g. 050 for L = 50 mm

Tension Levers with internal thread



Material:

Steel parts quality class 5.8, black plastic ball knob

Surface finish:

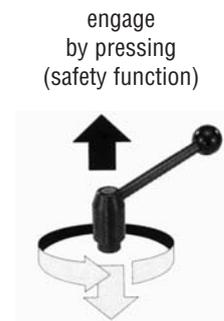
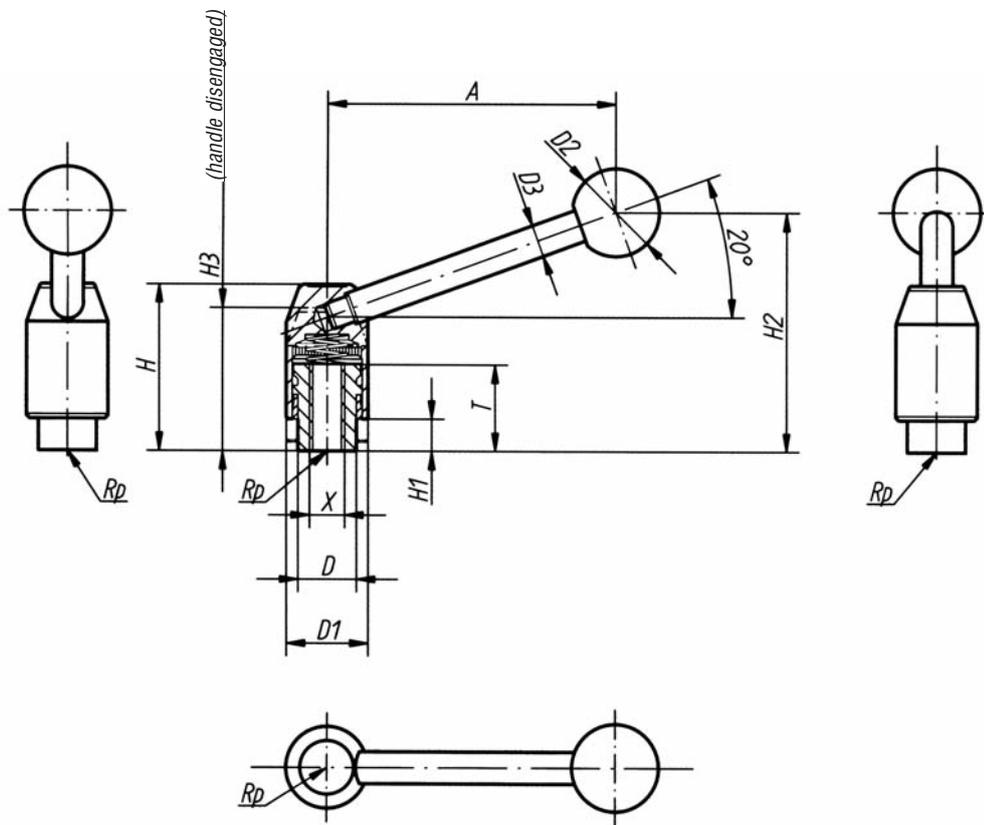
Black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.

Method of operation:

To operate Safety Tension Levers, press the handle down until the teeth are fully engaged. The object concerned can now be clamped or released. Spring pressure releases the locking mechanism immediately, thereby restoring the safety function (handle can be turned effortlessly).



Safety Tension Levers with internal thread

Order No. black oxide finish	Size	Internal thread X	T	D	D1	D2	D3	H	H1*	H2	H3	A*	No. of teeth	Approx. weight kg
06 108000 20	1	M 8	23	17	24	25	10	49	9	69	44	81	28	0,160
06 110000 20	1	M 10	23	17	24	25	10	49	9	69	44	81	28	0,160
06 210000 20	2	M 10	26	20	28	30	11	57	11	82	44	99	30	0,250
06 212000 20	2	M 12	26	20	28	30	11	57	11	82	51	99	30	0,250
06 312000 20	3	M 12	30	24	33	32	12	64	12	94	57	118	35	0,370
06 316000 20	3	M 16	30	24	33	32	12	64	12	94	57	118	35	0,370

Sample order: Safety Tension Lever 0621000020

Dimensions "H1", "A" and "A1" available in other lengths at extra charge

Tension Levers with external thread



Material:

Steel parts quality class 5.8, black plastic ball knob

Surface finish:

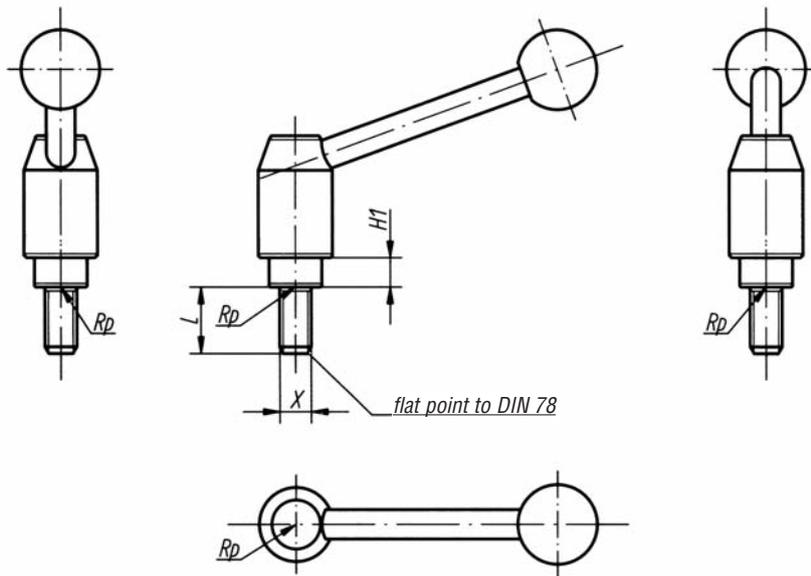
Black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.

Method of operation:

To operate Safety Tension Levers, press the handle down until the teeth are fully engaged. The object concerned can now be clamped or released. Spring pressure releases the locking mechanism immediately, thereby restoring the safety function (handle can be turned effortlessly).



engage
by pressing
(safety function)



Safety Tension Levers with external thread

Order No. black oxide finish	Size	External thread X**	H1*	L = Screw length **					
06 108*** 20	1	M 8	9	20	25	30	40	50	60
06 110*** 20	1	M 10	9	20	25	30	40	50	60
06 112*** 20	1	M 12	9	20	25	30	40	50	60
06 212*** 20	2	M 12	11	20	25	30	40	50	60
06 312*** 20	3	M 12	12	20	25	30	40	50	60
06 316*** 20	3	M 16	12	20	25	30	40	50	60

Sample order: Safety Tension Lever 0631605020
(Length L)

* Dimension "H1" available in other lengths at extra charge
 ** Other external threads and screw lengths available on request
 *** Add the desired screw length here, e.g. 050 for L = 50 mm

Flat Tension Levers with internal thread



Material:

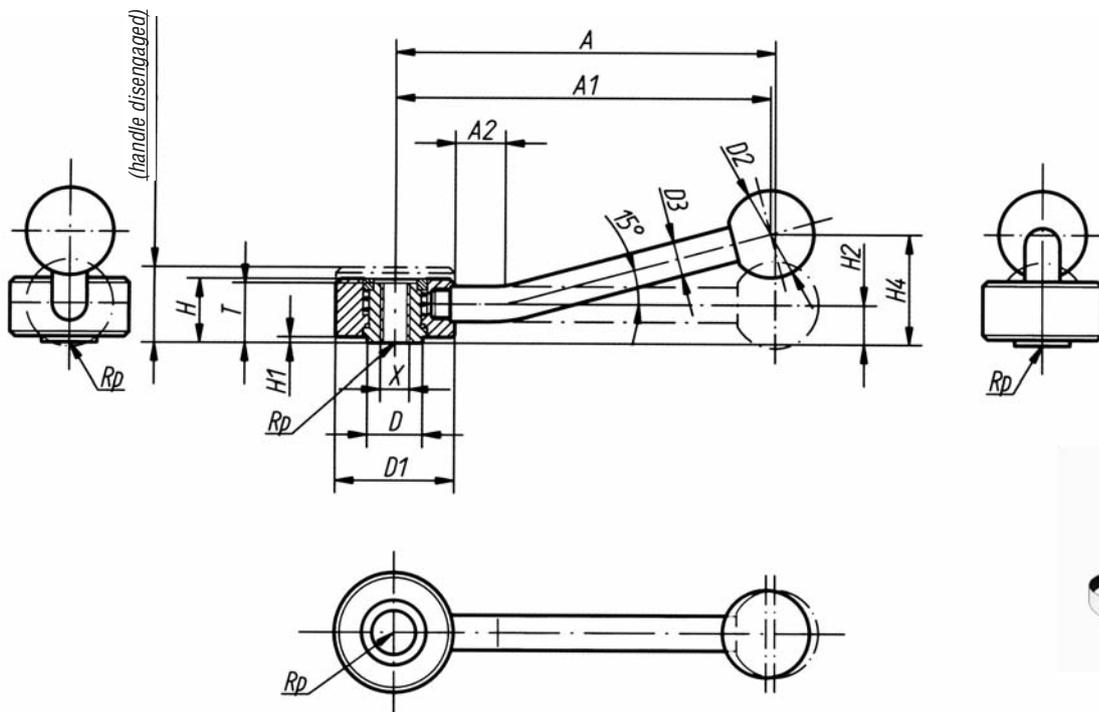
Steel parts quality class 5.8, black plastic ball knob

Surface finish:

Black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.



disengage
by lifting

Flat Tension Levers with internal thread

Order No. black oxide finish 0 degrees	Order No. black oxide finish 15 degrees	Size	Internal thread X*	T	D	D1	D2	D3	H	H1**	H2	H3	H4	A**	A1**	A2	No. of teeth	Approx. weight kg
07 106000 00	07 106000 15	1	M 6	18	13,5	33	25	10	19	2	12	23	29	102	100	15	26	0,160
07 108000 00	07 108000 15	1	M 8	18	13,5	33	25	10	19	2	12	23	29	102	100	15	26	0,160
07 210000 00	07 210000 15	2	M 10	21	19	41	30	12	22	2	13,5	26	38	130	127	15	30	0,290
07 212000 00	07 212000 15	2	M 12	21	19	41	30	12	22	2	13,5	26	38	130	127	15	30	0,290
07 312000 00	07 312000 15	3	M 12	27	23	45	37	14	28	2	17	33	48	148	145	15	36	0,450
07 316000 00	07 316000 15	3	M 16	27	23	45	37	14	28	2	17	33	48	148	145	15	36	0,450

Sample order: Flat Tension Lever 0710600000

*Other internal threads available on request **Dimensions "H1", "A" and "A1" available in other lengths at extra charge

Flat Tension Levers with external thread



Material:

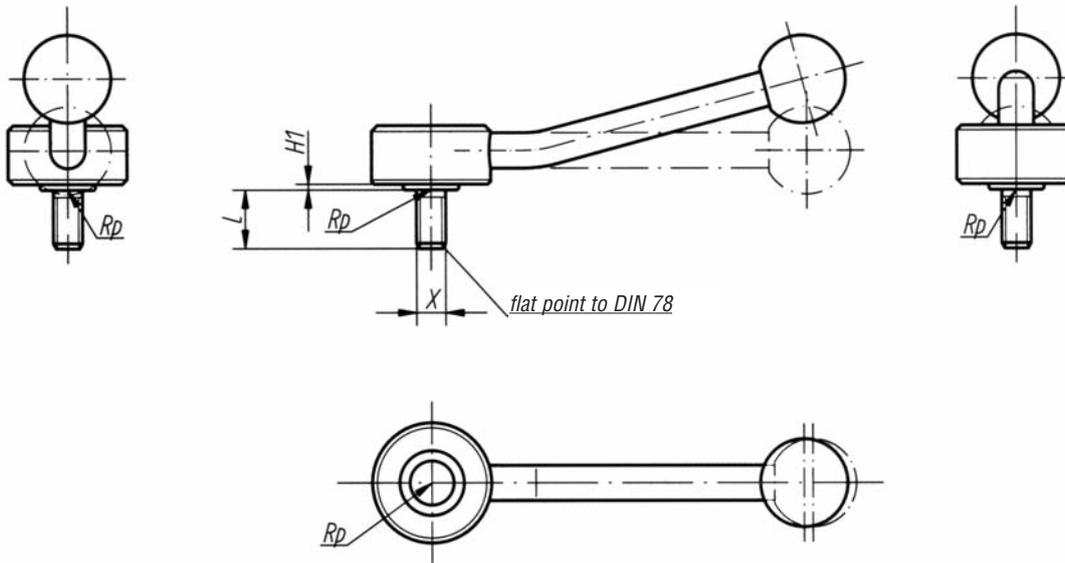
Steel parts quality class 5.8, black plastic ball knob

Surface finish:

Black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.



disengage
by lifting



CLAMPING PRODUCTS

Flat Tension Levers with external thread

Order No. black oxide finish 0 degrees	Order No. black oxide finish 15 degrees	Size	External thread X**	H1*	L = Screw length **						
07 108*** 00	07 108*** 15	1	M 8	2	15	20	25	30	40	50	60
07 110*** 00	07 110*** 15	1	M 10	2	15	20	25	30	40	50	60
07 210*** 00	07 210*** 15	2	M 10	2	-	20	25	30	40	50	60
07 212*** 00	07 212*** 15	2	M 12	2	-	20	25	30	40	50	60
07 312*** 00	07 312*** 15	3	M 12	2	-	20	25	30	40	50	60
07 316*** 00	07 316*** 15	3	M 16	2	-	20	25	30	40	50	60

Sample order: Flat Tension Lever 0731605015
(Length L)

*Dimension "H1" available in other lengths at extra charge
** Other external threads and screw lengths available on request
*** Add the desired screw length here, e.g. 050 for L = 50 mm

Steel Clamp Levers with internal thread



Material:

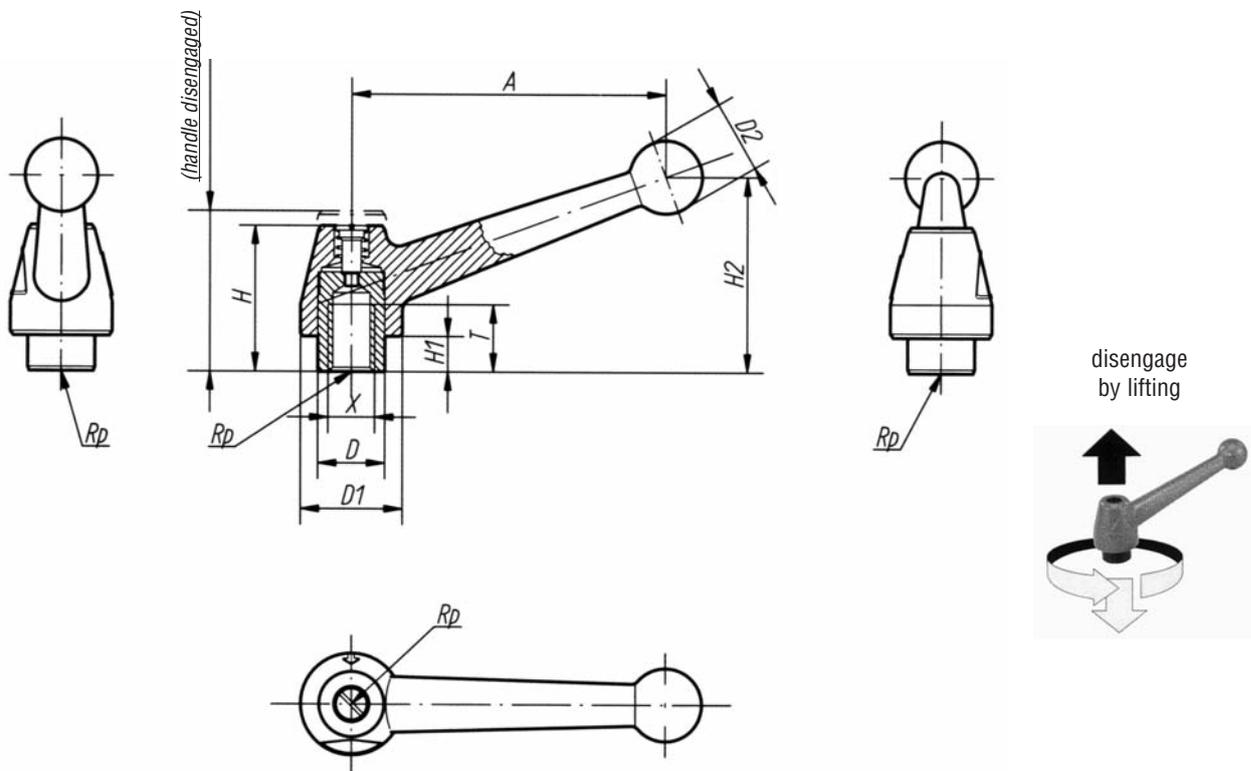
Steel handle in C 35 drop forged steel, all other steel parts quality class 5.8

Surface finish:

Handle painted silver-grey with hammertone finish, steel black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.



Steel Clamp Levers with internal thread

Order No. silver-grey hammertone finish	Size	Internal thread X*	T	D	D1	D2	H	H1**	H2	H3	A	No. of teeth	Approx. weight kg
03 108000	1	M 8	17	19	28	20	44	12	54	49	83	24	0,230
03 110000	1	M 10	17	19	28	20	44	12	54	49	83	24	0,230
03 112000	1	M 12	17	19	28	20	44	12	54	49	83	24	0,230
03 212000	2	M 12	23	23	35	25	50	12	69	56	108	26	0,440
03 216000	2	M 16	23	23	35	25	50	12	69	56	108	26	0,440
03 316000	3	M 16	27	30	43	30	58,5	12	78	65	132	36	0,730
03 320000	3	M 20	27	30	43	30	58,5	12	78	65	132	36	0,730

Sample order: Steel Clamp Lever 03216000

*Other internal threads available on request

**Dimension "H1" available in other lengths at extra charge

Steel Clamp Levers with external thread



Material:

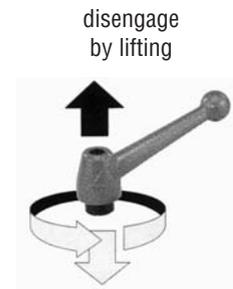
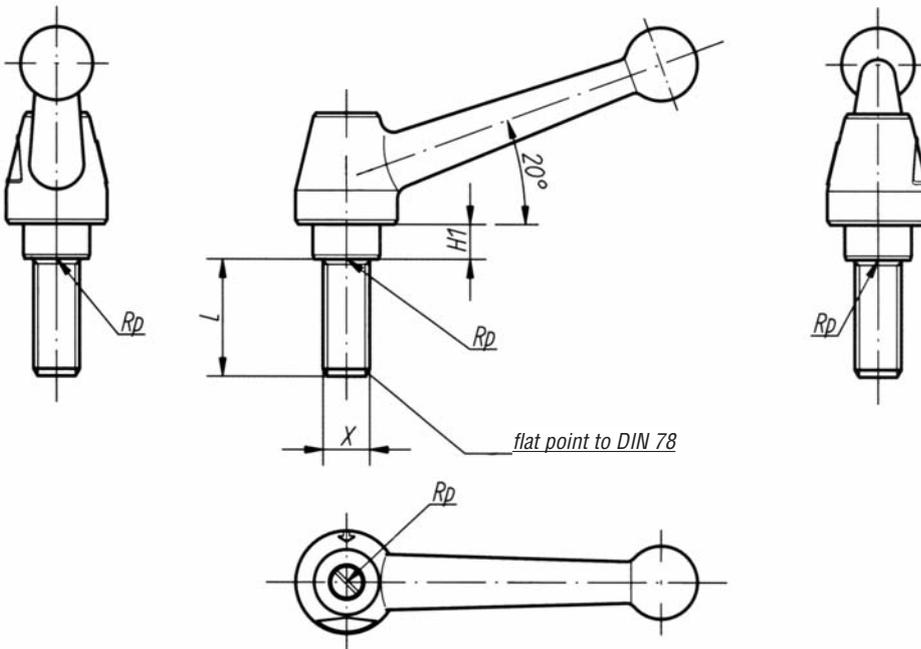
Steel handle in C 35 drop forged steel, all other steel parts quality class 5.8

Surface finish:

Handle painted silver-grey with hammertone finish, steel black oxide finish

Note:

Other materials, surface finishes, special versions, etc. are available.



CLAMPING PRODUCTS

Steel Clamp Levers with external thread

Order No. silver-grey hammertone finish	Size	External thread X**	H1*	L = Screw length **											
03 110***	1	M 10	12	20	25	30	35	40	45	50	55	60	70	80	90
03 112***	1	M 12	12	20	25	30	35	40	45	50	55	60	70	80	90
03 212***	2	M 12	12	-	25	30	35	40	45	50	55	60	70	80	90
03 216***	2	M 16	12	-	25	30	35	40	45	50	55	60	70	80	90
03 316***	3	M 16	12	-	-	30	-	40	-	50	-	60	70	80	90
03 320***	3	M 20	12	-	-	30	-	40	-	50	-	60	70	80	90

Sample order: Steel Clamp Lever 03216030
(Length L)

* Dimension "H1" available in other lengths at extra charge
 *** Add the desired screw length here, e.g. 030 for L = 30 mm
 **Other external threads and screw lengths available on request



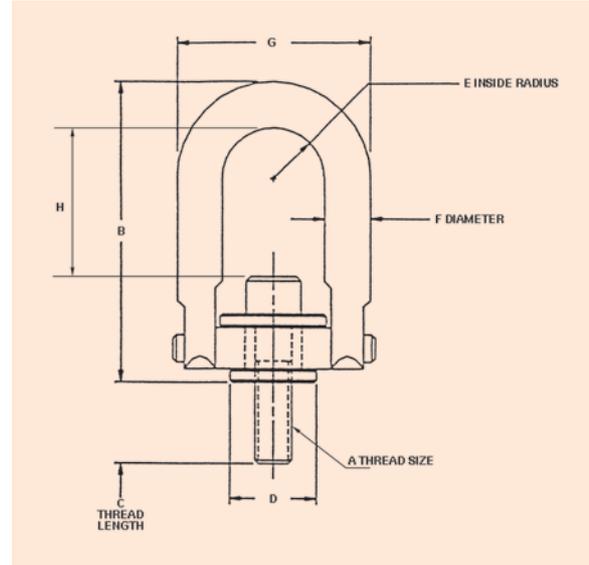
HOIST RINGS

- **Material is certified alloy steel**
- **Components are machined prior to manufacture to remove surface defects**
- **Components are heat treated and certified to manufacturing specifications**
- **All hoist rings are pull-tested and certified to 200% of rated load capacity**
- **All hoist rings are designed for 5:1 strength factor**

HOIST RINGS - Centre Pull Style

- Full Swivel and Pivot Action
- Rated at 5:1 Strength Factor
- Material: Alloy Steel
- Finish: Black Oxide (Except Washer)
- Clevis, Bolt, Pins, Base, Washer and Bushing are magnetic particle inspected
- Washer: Zinc Plated with clear conversion coating
- Proof Tested to 200% of Rated Load Capacity
- All products are CE marked

Available with Envirolox™ protective finish.



Metric Centre-Pull Hoist Rings

THREAD SIZE A	LOAD ¹ CAPACITY (Kg)	STD. CLEVIS		LONG CLEVIS		ENVIROLOX PART NUMBER ⁴	THREAD LENGTH					STD. CLEVIS H	LONG CLEVIS H	TORQUE ² (Kg m.)	WT. (Kg)
		PART NUMBER	B	PART NUMBER	B		C	D	E	F	G				
M8x1.25	400	23456	67.8	—	—	23356	12.5	19.0	10.9	9.7	46.7	32	—	1.0	.17
M10x1.50	450	23458	67.8	—	—	23358	17.5	19.0	10.9	9.7	46.7	30	—	1.7	.17
M12x1.75	1050	23462	121.4	23562	170.7	23362	19.0	38.1	22.4	19.0	89.4	60.5	108	3.8	1.08
M16x2.0	1900	23465	121.4	23565	170.7	23365	29.0	38.1	22.4	19.0	89.4	56.5	106	8.2	1.12
M20x2.5	1250	23468	121.4	23568	170.7	23368	34.0	38.1	22.4	19.0	89.4	52.5	101	13.6	1.19
M20x2.5	3000	23471	165.6	23571	206.0	23371	32.0	58.7	35.6	25.4	130.6	73	101	13.6	3.03
M24x3.0	4200	23474	165.6	23574	206.0	23374	37.0	58.7	35.6	25.4	130.6	69	111	31.0	3.10
M30x3.5	7000	23478	221.7	—	—	23378	41.9	81.0	44.5	31.7	165.1	107.4	—	60.0	6.3
M30x3.5	7000	23479	21.7	—	—	23379	61.7	81.0	44.5	31.7	165.1	107.4	—	60.0	6.4
M36x4.0	11000	23483	316.7	—	—	23383	63.5	106.4	57.2	44.4	217.2	166.5	—	100.0	15.5
M42x4.5	12500	23484	316.7	—	—	23384	68.0	106.4	57.2	44.4	217.2	160.5	—	100.0	16.0
M48x5.0	13500	23485	316.7	—	—	23385	88.0	106.4	57.2	44.4	217.2	154.5	—	100.0	16.8
M64x6.0	22500	23488	419.1	—	—	23388	96.0	146.0	76.2	57.15	297.6	210	—	290.0	40.0

Replacement Bolt Kits³

PART NUMBER	WT. (Kg)
23656	.01
23658	.01
23662	.03
23665	.05
23668	.09
23671	.10
23674	.18
23678	.36
23679	.41
23683	.69
23684	1.25
23685	1.5
23688	7

All dimensions are in millimetres.

¹ Stated load capacity is based upon specific thread torques shown in chart.

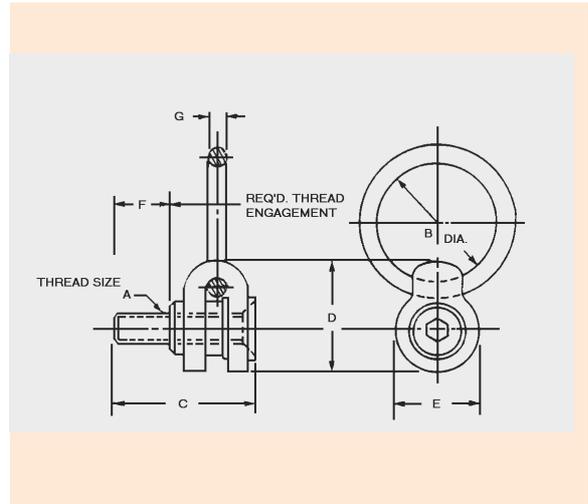
² It is recommended that these torques be used when installing hoist rings.

³ Replacement Bolt Kit contains bolt and retaining ring. Bolt Kits for Envirolox Hoist Rings available upon request.

⁴ Available from stock as Standard Clevis.

HOIST RINGS - Side Pull Style

- Convenient Part Handling
- Rated at 5:1 strength factor
- Bushing: Zinc plated silver passivate
- Material: Alloy Steel
- Clevis, Ring, Bushing and Cap Screw are magnetic particle inspected
- Available with Envirolox Protective Finish upon request.
- Clevis is x-rayed
- Finish: Black Oxide
- Proof Tested to 200% of Rated Load Capacity
- All products are **CE** marked



Metric Side-Pull Hoist Rings

PART NUMBER	LOAD ¹ CAPACITY (Kg)	A	B	C	D	E	F	G	THREAD ² TORQUE (Kg m.)	WT. (Kg)
47351	325	M 8 X 1.25	50.8	61	50.8	38.1	16	9.5	0.43	0.12
47352	500	M 10 X 1.50	50.8	63	50.8	38.1	20	9.5	0.60	0.12
47353	725	M 12 X 1.75	76.2	85	81	60.3	24	15.9	2.00	1.47
47354	1400	M 16 X 2.0	76.2	94	81	60.3	31	15.9	3.50	1.47
47355	2290	M 20 X 2.5	101.6	133	125.4	95.3	40	25.4	7.00	5.10
47356	3050	M 24 X 3.0	101.6	147	125.4	95.3	47	25.4	12.50	5.22
47357	4850	M 30 X 3.5	127.0	173.8	173.0	117.5	43.6	31.7	34.6	12.61

Replacement Bolts

PART NUMBER	THREAD SIZE	WT. (Kg)
47391	M 8	0.02
47392	M 10	0.03
47393	M 12	0.07
47394	M 16	0.14
47395	M 20	0.32
47396	M 24	0.53
47397	M 30	1.03

All dimensions are in millimetres.

¹ Stated load capacity is based upon specific thread torques shown in charts.

² It is recommended that these torques be used when installing hoist rings.

The Envirolox™ Protective Finish

The Envirolox™ Protective Finish is a *proprietary coating that helps to prevent rusting and other environmental hazards from affecting the Hoist Rings*. This coating is *environmentally friendly* and is proven to be *effective in extreme conditions*. Envirolox Protective Finish is available as a standard on Centre-Pull Style Hoist Rings. It is also available on the Side-Pull Style Hoist Rings upon special request. It is not recommended for the Swivel Eyebolt or the SP 2000 products.

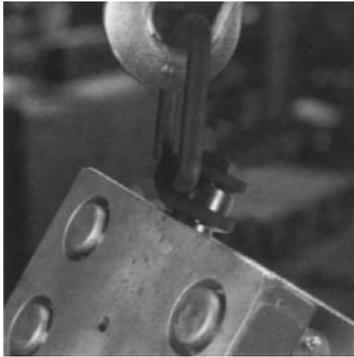
- Available as standard on Centre-Pull Style Hoist Rings
- Available upon request for Side-Pull Style
- Prevents rusting
- Environmentally safe



HOIST RINGS - Side Pull 2000 Style

The SP2000 Side-Pull Style Hoist Ring is ideal for flipping fixtures, dies and moulds. The hoist ring is low profile and has a unique bolt retention design. The oversized forged bale easily adapts to larger hoist hooks. Its relatively light weight makes it easier to handle than similar hoist rings and the installation is conveniently done with external wrenching (47581, 47582) or internal/external wrenching (all other sizes). All parts are made in the USA.

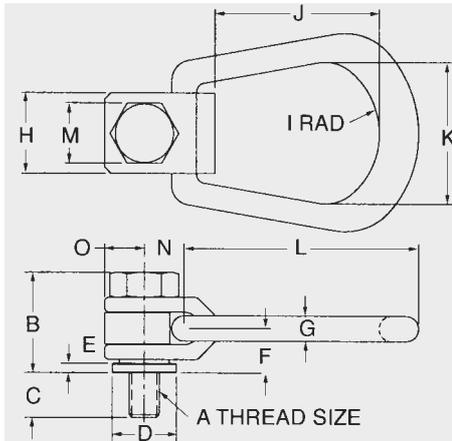
- Can be used for top lifts
- Full swivel and pivot action
- Rated at 5:1 strength factor
- All products are **CE** marked
- Material: Alloy Steel
- Finish: Black Oxide
- Proof Tested to 200% of Rated Load Capacity



SIDE PULL APPLICATION

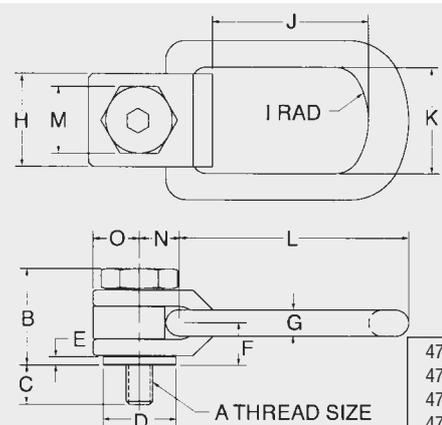


TOP PULL APPLICATION



47581
47582

EXTERNAL WRENCH MOUNTING



47583
47584
47585
47586
47587
47588
47589

INTERNAL/EXTERNAL WRENCH MOUNTING

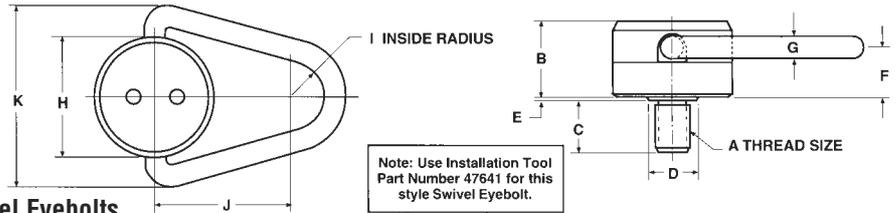
Metric SP2000 Side-Pull Hoist Rings

PART NUMBER (Kg)	LOAD CAPACITY	THREAD SIZE															HEX SIZE	WT. (Kg)
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
47581	325	M 8 X 1.25	33	16	21	3	14	8	25	25	52	44	76	19	13	13	—	.25
47582	500	M 10 X 1.5	33	20	21	3	14	8	25	25	52	44	76	19	13	13	—	.25
47583	725	M 12 X 1.75	48	24	35	4	21	13	44	38	75	51	110	32	19	22	6	1
47584	1400	M 16 X 2	48	32	35	4	21	13	44	38	75	51	110	32	19	22	8	1
47585	2290	M 20 X 2.5	59	40	48	6	26	16	57	51	102	67	145	44	25	29	10	2
47586	3050	M 24 X 3	59	48	48	6	26	16	57	51	102	67	145	44	25	29	12	2
47587	4850	M 30 X 3.5	90	60	83	9	42	27	95	76	196	111	265	76	49	48	19	9
47588	7500	M36 X 4	90	72	83	9	42	27	95	76	196	111	265	76	49	48	19	9
47589	10000	M48 X 5	90	96	83	9	42	27	95	76	196	111	265	76	49	48	19	10

SWIVEL EYEBOLT

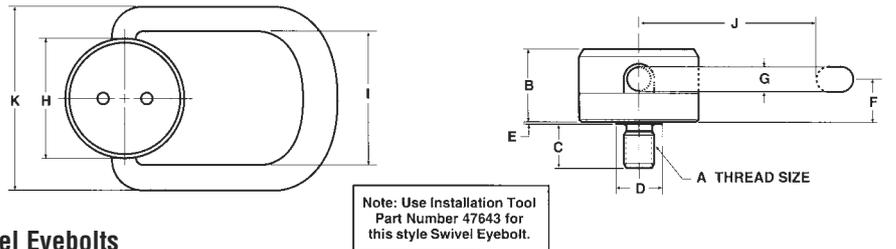
The Swivel Eyebolt lifting product has a full swivel and pivoting action that allows for the flipping and turning of the part without unhooking. The patented tamper resistant design is ideal for permanent mounting on OEM applications or on moulds, dies and fixtures.

- Tamper resistant design
- Swivels 360°, Pivots 180°
- Eliminates bending (of eyebolt) problem
- Forged, oversized, one-piece lift ring
- Rated at 5:1 strength factor
- All products are **CE** marked
- Load capacities to 2000Kg
- Economically priced
- Material: Alloy steel or 316 stainless steel
- Finish: Black oxide or passivated (SS)



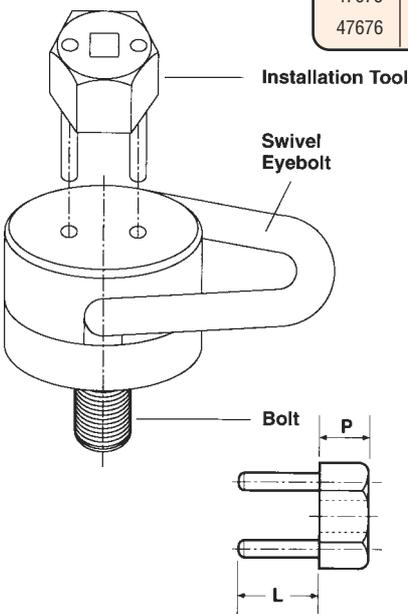
Metric Swivel Eyebolts

PART NUMBER		LOAD CAPACITY(Kg)		THREAD SIZE A	B	C	D	E	F	G	H	I	J	K
ALLOY STEEL	STAINLESS STEEL	ALLOY STEEL	STAINLESS STEEL											
47671	47681	500	250	M10 X 1.5	27.8	14.6	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7
47672	47682	700	350	M12 X 1.75	27.8	19.1	19.1	1.2	17.9	7.9	44.5	12.7	50.8	66.7



Metric Swivel Eyebolts

PART NUMBER		LOAD CAPACITY(Kg)		THREAD SIZE A	B	C	D	E	F	G	H	I	J	K
ALLOY STEEL	STAINLESS STEEL	ALLOY STEEL	STAINLESS STEEL											
47675	47683	1500	750	M16 X 2.0	38.5	23.8	22.2	.8	22.6	12.7	63.5	70.0	88.9	96.8
47676	47684	2000	1000	M20 X 2.5	38.5	30.2	25.4	.8	22.6	12.7	63.5	70.0	88.9	96.8



Installation Tool Information

INSTALLATION TOOL PART NUMBER	PIN LENGTH L (mm)	HEAD THICKNESS P (mm)	HEX SIZE Q (in)	SQUARE DRIVE R (in)
47641	17.5	14	5/16	1/4
47643	28.5	16.5	1/4	3/8

Installation Tool Information

SWIVEL EYEBOLT PART NUMBER	INSTALLATION TOOL PART NUMBER	RECOMMENDED TORQUE	MAXIMUM COUNTERSINK DIAMETER N
47671	47641	10 N•m	13mm
47672	47641	25 N•m	16mm
47681	47641	10 N•m	13mm
47682	47641	25 N•m	16mm
47675	47643	50 N•m	19mm
47676	47643	80 N•m	22mm
47683	47643	50 N•m	19mm
47684	47643	80 N•m	22mm

TO PREVENT BINDING, THE MOUNTING HOLE COUNTERSINK SHOULD NOT EXCEED 'N' DIMENSION

Clamp Model	Page	Clamp Model	Page						
BC25.0	33	H300/1B	92	P600PR	25	V150/2C	41	VA300/S	61
BC40.0	33	H300/2B	92	P600X	17	V150X	41	VA300/T	61
BPC25	6	H300/3B	92	P600XPR	29	V200/1B	42	VA300/2S	62
BPC32	7	H350/1A	85	P605	110	V200/1C	42	VA300/1B	62
CC510	155	H350/1B	85	P650	113	V200/2B	42	VA300/2B	63
CC610	155	H350/1BK	95	P750	114	V200/2C	43	VA300/2BT	63
CC701	155	H350/1BKl	102	P1150	114	V200/3B	43	VA700CX	9
CP1005	146	H350/1BLc	107	P1150L	115	V200/3C	43	VA700S	64
CP1006	146	H350/2A	85	P1200	117	V200VX	12	VA700T	65
CP1007	146	H350/2B	86	P1200L	119	V250/1A	44	VA700/1A	65
CP1008	146	H350/2BK	94	P1200PR	25	V250/1AL	44	VA700/2C	66
CP1500	143	H350/2BKl	101	P1200X	18	V250/1B	46	VA700/TD	66
CP2000	143	H350/2BLc	107	P1200XPR	29	V250/1BSS	45	VA700/TP	67
CP3000	143	H450/1A	86	P2250	114	V250/1BBLC	104	VA700/TV	67
CP1500L	144	H450/1B	86	P2250L	115	V250/1BK	59	VA1200CX	10
CP2000L	144	H450/1BK	95	P2500	118	V250/1BKl	100	VA1200S	68
CP3000L	144	H450/1BKl	102	P2500L	120	V250/1BLc	105	VA1200T	69
CR4000	140	H450/2A	87	P2500PR	26	V250/1C	45	VA1200/1A	69
CR4000A	140	H450/2B	87	P2500X	18	V250/2A	45	VA1200/2C	70
CR5000	140	H450/2BK	94	P2500XPR	30	V250/2AL	46	VA1200/TD	70
CR5000A	140	H450/2BKl	101	P5000	118	V250/2B	46	VA1200/TP	69
CS300	141	H700	87	P5000L	120	V250/2BBLC	104	VA2400CX	10
CS300A	141	LH200	122	P6015	109	V250/2BSS	46	VA2400S	72
CS800	141	LH200SS	122	PC25.0	33	V250/2BK	58	VA2400T	72
CS800A	141	LH400	122	PC35.0	33	V250/2BKl	99	VA2400/1A	74
CS1200	142	LH400SS	123	PC40.0	33	V250/2BLc	105	VA2400/2C	74
CS1200A	142	LH700	123	PNDP1	30	V250/2C	47	VA2400/TD	73
CV75	133	LH700SS	123	PNPR1	31	V250/3BLc	106	VA2400/TP	73
CV250	133	LU200H	125	PNS25-10C	20	V250X	15	1015-08	150
CV350	133	LU200HSS	125	PNS25-10A	20	V300/1A	47	1015-10	150
H50/1B	77	LU323	128	PNS32-10C	20	V300/1B	47	1015-12	150
H50/2B	77	LU331	128	PNS32-10A	20	V300/1C	48	1015-16	150
H50/2BSS	77	LU341	128	PNS40-20C	20	V300/2A	48	1016-08	148
H50/2BK	94	LU375	129	PNS40-20A	20	V300/2B	48	1016-10	148
H50/2BL	78	LU400H	125	PNS50-20C	21	V300/2C	49	1016-12	149
H50/2BR	78	LU400HSS	126	PNS50-20A	21	V300/3A	49	1016-16	149
H50/2C	78	LU700H	126	PNS63-20C	21	V300/3B	49		
H75/1B	79	LU700HSS	126	PNS63-20A	21	V300/3C	50	Clamp Levers	
H75/1BSS	79	LU2000H	127	RPP1	28	V300VX	12	PT-AXL-3-40	157
H75/1BK	95	LU4000H	127	RPP2	28	V350/1A	50	PT-AXL-3-65	157
H75/1C	79	LU200V	129	SP700	114	V350/1B	50	PT-AXL-3-80	157
H75/2B	80	LU200VSS	129	TC345	97	V350/1BBLC	105	PT-AXL-3-95	157
H75/2BSS	80	LU400V	130	TC79	97	V350/1BK	59	PT-CL-AXL-*-40	157
H75/2C	80	LU400VSS	130	TPR1	26	V350/1BKl	100	PT-CL-AXL-*-65	157
H80/2BK	94	LU700V	130	TPR2	27	V350/1BLc	106	PT-CL-AXL-*-80	157
H100/1B	89	LU700VSS	131	TPR3	27	V350/1C	51	PT-CL-AXL-*-95	157
H100/1C	89	P0	152	V30/2B	35	V350/2A	51	03 108000	175
H100/2B	89	P1	152	V70/2BT	35	V350/2B	51	03 110***	176
H100/2C	90	P1A	152	V70/2BTSS	35	V350/2BBLC	104	03 110000	175
H100/3B	90	P1B	152	V75/1B	36	V350/2BK	58	03 112***	176
H100/3C	90	P1C	154	V75/1BSS	36	V350/2BKl	99	03 12000	175
H150/1B	81	P2	153	V75/2B	36	V350/2BLc	106	03 212***	176
H150/1BSS	81	P2C	154	V75/2BSS	37	V350/2BLC	106	03 212000	175
H150/1BK	95	P3	153	V75X	14	V350/2C	52	03 216***	176
H150/1BKl	102	P3A	153	V90/1BK	59	V450/1A	52	03 216000	175
H150/1C	81	P3B	153	V90/2BK	58	V450/1B	52	03 316***	176
H150/2B	82	P3C	154	V100/1B	37	V450/1BK	59	03 316000	175
H150/2BSS	82	P4	154	V100/1C	37	V450/1BKl	100	03 320***	176
H150/2BK	94	P4B	154	V100/2B	38	V450/1C	53	03 320000	175
H150/2BKl	101	P4C	154	V100/2C	38	V450/2A	53	05 108*** 00	170
H150/2C	82	P50	109	V100/3B	38	V450/2B	53	05 108000 20	169
H200/1B	91	P50SS	109	V100/3C	39	V450/2BK	58	05 108*** 20	170
H200/2B	91	P100	111	V100VX	12	V450/2BKl	99	05 108000 20	169
H200/3B	91	P100SS	111	V150/1B	39	V450/2C	54	05 110*** 00	170
H250/1A	83	P200	111	V150/1BK	59	V450X	15	05 110000 20	169
H250/1AL	83	P200SS	112	V150/1BKl	59	V550/1A	54	05 110000 20	169
H250/1B	83	P250	110	V150/1BL	39	V550/1B	54	05 112*** 00	170
H250/1BK	95	P350	113	V150/1BLc	39	V550/1C	55	05 112*** 20	170
H250/1BKl	102	P400	112	V150/1BSS	40	V550/2A	55	05 210000 00	169
H250/2A	84	P400SS	112	V150/1C	40	V550/2B	55	05 210000 20	169
H250/2AL	84	P450	110	V150/2B	40	V550/2C	56	05 212*** 00	170
H250/2B	84	P550	113	V150/2BK	58	V750X	16	05 212*** 20	170
H250/2BK	94	P600	117	V150/2BKl	99	V1750X	16	05 212000 20	169
H250/2BKl	101	P600L	119	V150/2BL	41	V2000X	17	05 312*** 00	170
				V150/2BSS	41	VA300BX	9	05 312000 00	169

Clamp Model	Page	Clamp Model	Page	Clamp Model	Page	Clamp Model	Page	Clamp Model	Page
05 312*** 20	170	50 106000 01 OSO	160	51 106 *** ΔΔ	167	51 412000 90 OSO	164	M1085	136
05 312000 20	169	50 106*** 02	159	51 106000 ΔΔ	166	51 512 *** ΔΔ	167	M12100	116
05 316*** 00	170	50 106000 02	158	51 106 ***ΔΔ OSO	167	51 512000 ΔΔ	166	M16150	136
05 316000 00	169	50 106*** 02 OSO	161	51 106000 ΔΔ OSO	166	51 512000 ΔΔ OSO	166	MB0420	135
05 316*** 20	170	50 106000 02 OSO	160	51 106*** 02	163	51 512*** 02	163	MB0520	135
05 316000 20	169	50 206*** 01	159	51 106000 02	162	51 512000 02	162	MB0535	135
05 416*** 00	170	50 206000 01	158	51 106*** 02 OSO	165	51 512000 02 OSO	164	MB0625	135
05 416000 00	169	50 206*** 01 OSO	161	51 106000 02 OSO	164	51 512*** 90	163	MB0650	135
05 416*** 20	170	50 206000 01 OSO	160	51 106*** 90	163	51 512000 90	162	MB0840	135
05 416000 20	169	50 206*** 02	159	51 106000 90	162	51 512000 90 OSO	164	MB0860	135
05 420*** 00	170	50 206000 02	158	51 106*** 90 OSO	165	51 516 *** ΔΔ	167	MB1050	135
05 420000 00	169	50 206*** 02 OSO	161	51 106000 90 OSO	164	51 516000 ΔΔ	166	MB1080	135
05 420*** 20	170	50 206000 02 OSO	160	51 206 *** ΔΔ	167	51 516 ***ΔΔ OSO	167	MB1250	135
05 420000 20	169	50 208*** 01	159	51 206000 ΔΔ	166	51 516000 ΔΔ OSO	166	MB12100	135
05 424*** 00	170	50 208000 01	158	51 206 ***ΔΔ OSO	167	51 516*** 02	163	MB1680	135
05 424000 00	169	50 208*** 01 OSO	161	51 206000 ΔΔ OSO	166	51 516000 02	162	MS0535	136
05 424*** 20	170	50 208000 01 OSO	160	51 206*** 02	163	51 516*** 02 OSO	165	MS0650	136
05 424000 20	169	50 208*** 02	159	51 206000 02	162	51 516000 02 OSO	164	MS0865	136
06 108*** 20	172	50 208000 02	158	51 206*** 02 OSO	165	51 516*** 90	163	MS1085	136
06 108000 20	171	50 208*** 02 OSO	161	51 206000 02 OSO	164	51 516*** 90 OSO	165	MS12100	136
06 110*** 20	172	50 208000 02 OSO	160	51 206*** 90	163	51 516000 90	162	MS16150	135
06 110000 20	171	50 210*** 01	159	51 206000 90	162	51 516*** 90 OSO	165	MS2500	136
06 112*** 20	172	50 210*** 01 OSO	161	51 206*** 90 OSO	165	51 516000 90 OSO	164	MS2500	136
06 210000 20	171	50 210*** 02	159	51 206000 90 OSO	164			MS2500	136
06 212*** 20	172	50 210*** 02 OSO	161	51 208 *** ΔΔ	167	Accessories		MS2500	136
06 212000 20	171	50 308000 01	158	51 208000 ΔΔ	166	A3	64	MS2500	136
06 312*** 20	172	50 308000 01 OSO	160	51 208 ***ΔΔ OSO	167	A7	68	NC/04	136
06 312000 20	171	50 308000 02	158	51 208000 ΔΔ OSO	166	A12	71	NC/05	136
06 316*** 20	172	50 308000 02 OSO	160	51 208*** 02	163	A24	75	NC/06	136
06 316000 20	171	50 310*** 01	159	51 208000 02	162	B3	64	NC/08	136
07 106000 00	173	50 310000 01	158	51 208*** 02 OSO	165	B7	68/137	NC/10	136
07 106000 15	173	50 310*** 01 OSO	161	51 208000 02 OSO	164	B12	71/137	NC/12	136
07 108*** 00	174	50 310000 01 OSO	160	51 208*** 90	163	B24	75/137	NP/05	136
07 108000 00	173	50 310*** 02	159	51 208000 90	162	BR/1	137	NP/06	136
07 108*** 15	174	50 310000 02	158	51 208*** 90 OSO	165	BR/2	137	NP/08	136
07 108000 15	173	50 310*** 02 OSO	161	51 208000 90 OSO	164	BR/3	137	NP/10	136
07 110*** 00	174	50 310000 02 OSO	160	51 210 *** ΔΔ	167	C3	64	NP/12	136
07 110*** 15	174	50 410*** 01	159	51 210 ***ΔΔ OSO	167	C7	68	NPS/05/06	137
07 210*** 00	174	50 410000 01	158	51 210*** 02	163	C12	71	NPS/08/10	137
07 210000 00	173	50 410000 01 OSO	160	51 210*** 02 OSO	165	C24	75	NPS/12	137
07 210*** 15	174	50 410*** 02	159	51 210*** 90	163	CSB300	142	NTS0432	136
07 210000 15	173	50 410000 02	158	51 210*** 90 OSO	165	CSB800	142	NTS0538	136
07 212*** 00	174	50 410000 02 OSO	160	51 308000 ΔΔ	166	CSB1200	142	NTS0645	136
07 212000 00	173	50 412*** 01	159	51 308000 ΔΔ OSO	166	D3	64	NTS0865	136
07 212*** 15	174	50 412000 01	158	51 308000 02	162	D7	68	NTS1085	136
07 212000 15	173	50 412*** 01 OSO	161	51 308000 02 OSO	164	D12	71	NTS12100	136
07 312*** 00	174	50 412000 01 OSO	160	51 308000 90	162	D24	75	1150B	115
07 312000 00	173	50 412*** 02	159	51 308000 90 OSO	164	FM1	135	2250B	115
07 312*** 15	174	50 412000 02	158	51 310 *** ΔΔ	167	FM2	135	R/08	137
07 312000 15	173	50 412*** 02 OSO	161	51 310000 ΔΔ	166	FM3	135	R/10	137
07 316*** 00	174	50 412000 02 OSO	160	51 310 ***ΔΔ OSO	167	FM16	135	R/12	137
07 316000 00	173	50 512*** 01	159	51 310000 ΔΔ OSO	166	FM20	135	R/16	137
07 316*** 15	174	50 512000 01	158	51 310*** 02	163	FM24	135	SK/1	23
07 316000 15	173	50 512000 01 OSO	160	51 310*** 02 OSO	165	FW05/09	137	SK/2	23
20 104000 90	168	50 512*** 02	159	51 310*** 02 OSO	164	FW05/10	137	SK/3	23
20 105*** 90	168	50 512000 02	158	51 310*** 90	163	FW06/12	137	SK/4	23
20 105000 90	168	50 512000 02 OSO	160	51 310*** 90 OSO	165	FW08/15	137	SK/5	23
20 106*** 90	168	50 516*** 01	159	51 310000 90	162	FW10/20	137	SK/6	23
20 106000 90	168	50 516000 01	158	51 310*** 90 OSO	165	FW12/23	137	SK/8	23
20 208*** 90	168	50 516*** 01 OSO	161	51 310000 90 OSO	164	FW16/27	137	SK/9	23
20 208000 90	168	50 516000 01 OSO	160	51 410 *** ΔΔ	167	GR/01	137	SK/10	23
20 310*** 90	168	50 516*** 02	159	51 410000 ΔΔ	166	GR/02	137	SK/11	23
20 310000 90	168	50 516000 02	158	51 410000 ΔΔ OSO	166	GR/03	137	SK/12	23
20 412*** 90	168	50 516000 02 OSO	160	51 410*** 02	163	GR/04	137	T250	135
20 412000 90	168	50 516*** 02 OSO	161	51 410000 02	162	GR/05	137	T350	135
20 516*** 90	168	51 104000 ΔΔ	166	51 410000 02 OSO	164	GR/06	137	T450	135
20 516000 90	168	51 104000 02	162	51 410*** 90	163	GR/07	137		
50 104000 01	158	51 104000 90	162	51 410000 90	162	GR/08	137		
50 104000 02	158	51 105 *** ΔΔ	167	51 410000 90 OSO	164	GR/09	137		
50 105*** 01	159	51 105000 ΔΔ	166	51 412 *** ΔΔ	167	GR/10	137		
50 105000 01	158	51 105 ***ΔΔ OSO	166	51 412000 ΔΔ	164	GR/11	137		
50 105000 01 OSO	160	51 105*** 02	163	51 412 ***ΔΔ OSO	167	GR/12	137		
50 105*** 02	159	51 105000 02	162	51 412000 ΔΔ OSO	166	GR/13	137		
50 105000 02	158	51 105*** 02 OSO	165	51 412*** 02	163	M0525	136		
50 105*** 02 OSO	161	51 105000 02 OSO	164	51 412000 02	162	M0535	136		
50 105000 02 OSO	160	51 105*** 90	163	51 412*** 02 OSO	165	M0650	136		
50 106*** 01	159	51 105000 90	162	51 412000 02 OSO	164	M0865	136		
50 106000 01	158	51 105000 90 OSO	165	51 412*** 90	163				
50 106*** 01 OSO	161	51 105000 90 OSO	164	51 412000 90	162				
				51 412*** 90 OSO	165				

BRAUER®

Manufacturers of AIRMOVERS

See our web site for the full product range, including stainless steel models.

AM10
Fixed Gap Airmovers



MATERIALS: Zinc Alloy
I.D. 10mm **WEIGHT:** 0.100Kg
STANDARD GAP: 0.05mm

AM35
Fixed Gap Airmover



MATERIALS: Zinc Alloy & Alumin.
I.D. 35mm **WEIGHT:** 0.19Kg
STANDARD GAP: 0.05mm

AM40
Fixed Gap Airmover



MATERIALS: Zinc Alloy
WEIGHT: 0.9Kg
STANDARD GAP: 0.05mm

AM75
Fixed Gap Airmover



MATERIALS: Zinc Alloy
WEIGHT: 2.7Kg
STANDARD GAP: 0.05mm

AM125
Fixed Gap Airmovers



MATERIALS: Aluminium Alloy
I.D. 125mm **WEIGHT:** 7.55Kg
STANDARD GAP: 0.15mm

AM20A
Adjustable Airmover



MATERIALS: Aluminium Alloy
I.D. 20mm **WEIGHT:** 0.13Kg
STANDARD GAP: Adjustable

AM35A
Adjustable Airmover



MATERIALS: Aluminium Alloy
I.D. 35mm **WEIGHT:** 0.28Kg
STANDARD GAP: Adjustable

SS10A
Stainless Steel Airmover



MATERIALS: Stainless Steel
I.D. 10mm **WEIGHT:** 0.13Kg
STANDARD GAP: Adjustable

AA10A - Acetal
Adjustable Airmover



MATERIALS: Acetal Copolymer
I.D. 10mm **WEIGHT:** 0.05Kg
STANDARD GAP: Adjustable

Ring Blade



MATERIALS: Aluminium & S.steel
STANDARD GAP: 0.05mm
DBA at: 5.5 bar is 80

EV8
Extractor Ventilator



MATERIALS: GRP
WEIGHT: 7Kg
DBA at: 5.5 bar is 75

DP175
Liquid Drum Pump



MATERIALS: Stainless Steel/Nylon
WEIGHT: 1.6Kg
DBA at: 5.5 bar is 92

CG4
Cold Air Gun



MATERIALS: Stainless Steel
WEIGHT: 1.7Kg
DBA at: 5.5 bar is 80

AG32LC
Blow Gun



MATERIALS: Aluminium alloy
WEIGHT: 0.54Kg
STANDARD GAP: Adjustable

SE150 - Strip
(Air Curtain) Airmover



MAT: Alumin./Zinc plated steel
WEIGHT: 0.3Kg
STANDARD GAP: 0.05-0.10mm

Airmiser Nozzles



MATERIALS: Aluminium alloy
WEIGHT: 0.025Kg
STANDARD GAP: 0.15

For further details contact

BRAUER®

TELEPHONE: 00 44 (0)1908 374022

E-mail: sales@brauer.co.uk Web: www.brauer.co.uk

BRAUER[®]

Manufacturers of **WHEELS AND CASTORS**

See our web site for the full product range, including stainless steel models.

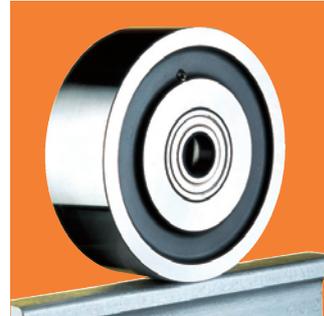
WG Series



Special Pivoting Castors



Steel Flat Tread Rail Wheels



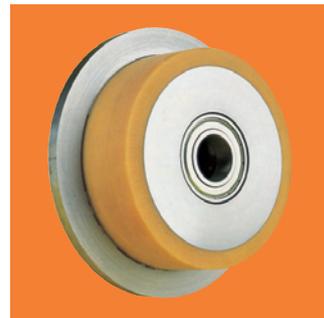
Polyurethane Press-on Band Tyred Wheels



Polyurethane Tyred Wheels



Polyurethane Tyred Single Flanged Rail Wheels



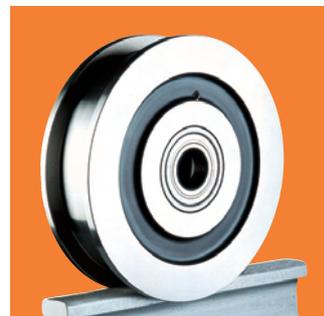
Steel Single Flanged Rail Wheel



Single Flanged 'I' Beam & Channel Wheels



Steel Double Flanged Rail Wheels



For further details contact

BRAUER[®]

TELEPHONE: 00 44 (0)1908 374022

E-mail: sales@brauer.co.uk Web: www.brauer.co.uk

OTHER



PRODUCTS

BRAUER[®] WHEELS AND CASTORS

HMC



HMC BRAUER - WHEELS AND CASTORS

www.brauer.co.uk

BRAUER[®]



AIRMOVERS
(AIR AMPLIFIERS)



BS EN 9001:2000

BRAUER[®]



MACHINE ACCESSORIES

www.brauer.co.uk

BRAUER[®]



TOOLING COMPONENTS

www.brauer.co.uk

For further details contact



TEL: 00 44 (0)1908 374022 FAX: 00 44 (0)1908 641628
E-mail: sales@brauer.co.uk Web: www.brauer.co.uk

Authorised Dealer stamp