

Series 670, 675, 690, 695 Product Overview

Features:

- Precision clamping for high production
- Adjustable collet-type bushing minimizes radial plunger movement
- Plunger has a flat surface for anti rotation
- Pre-load nut and hold open device included

Applications:

- Assembly
- Welding

670-1MBPLS



675-1MBPLS



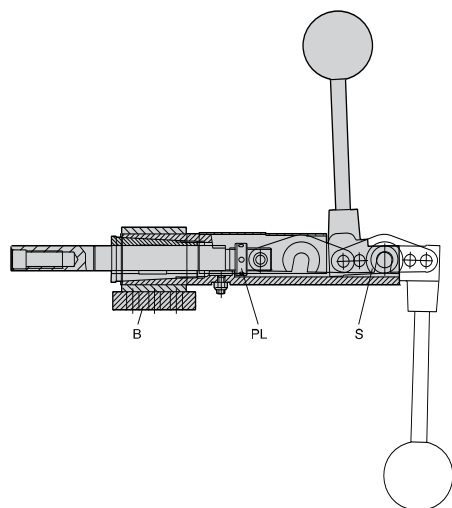
690-1MBPLS



695-1MBPLS ⓘ



Series 670, 675, 690, 695 Technical Information, Holding Capacities



Model	Max. Holding Capacity	Weight	Plunger Travel	Plunger Thread
670-1MBPLS	[2400 lbf] 10680 N	[4.2lb] 1,91 kg	[2.25] 57,2	M12
675-1MBPLS		[4.0lb] 1,81 kg	[1.10] 28	
690-1MBPLS	[5000 lbf] 22240 N	[8.2lb] 3,72kg	[3.00] 76,2	M16
695-1MBPLS ⓘ		[7.2lb] 3,27kg	[1.50] 38,1	

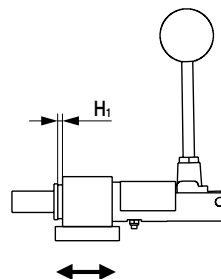
ⓘ This item is available upon request

The unique feature of these clamps is the collet-type bushing that can be adjusted to eliminate plunger end movement after long repeated use. The plunger also has a flat which prevents lateral movement and allows offset piloting and holding. The plunger is drilled and tapped for threaded spindles or custom fixturing.

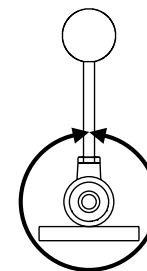
The adjustable pre-load nut (PL) can be used to lock the clamp against itself when not under pressure and therefore prevent opening when mounted vertically. The spring hold-open device (S) prevents the clamp from accidentally closing.

The mounting base (B) is supplied disassembled with the four models, to enable welding the base and the main assembly in any handle position.

Series 675 and 695 (shorter stroke) reach the over-center position only when clamping. Series 670 and 690 (longer stroke) lock in both the extended and retracted position.

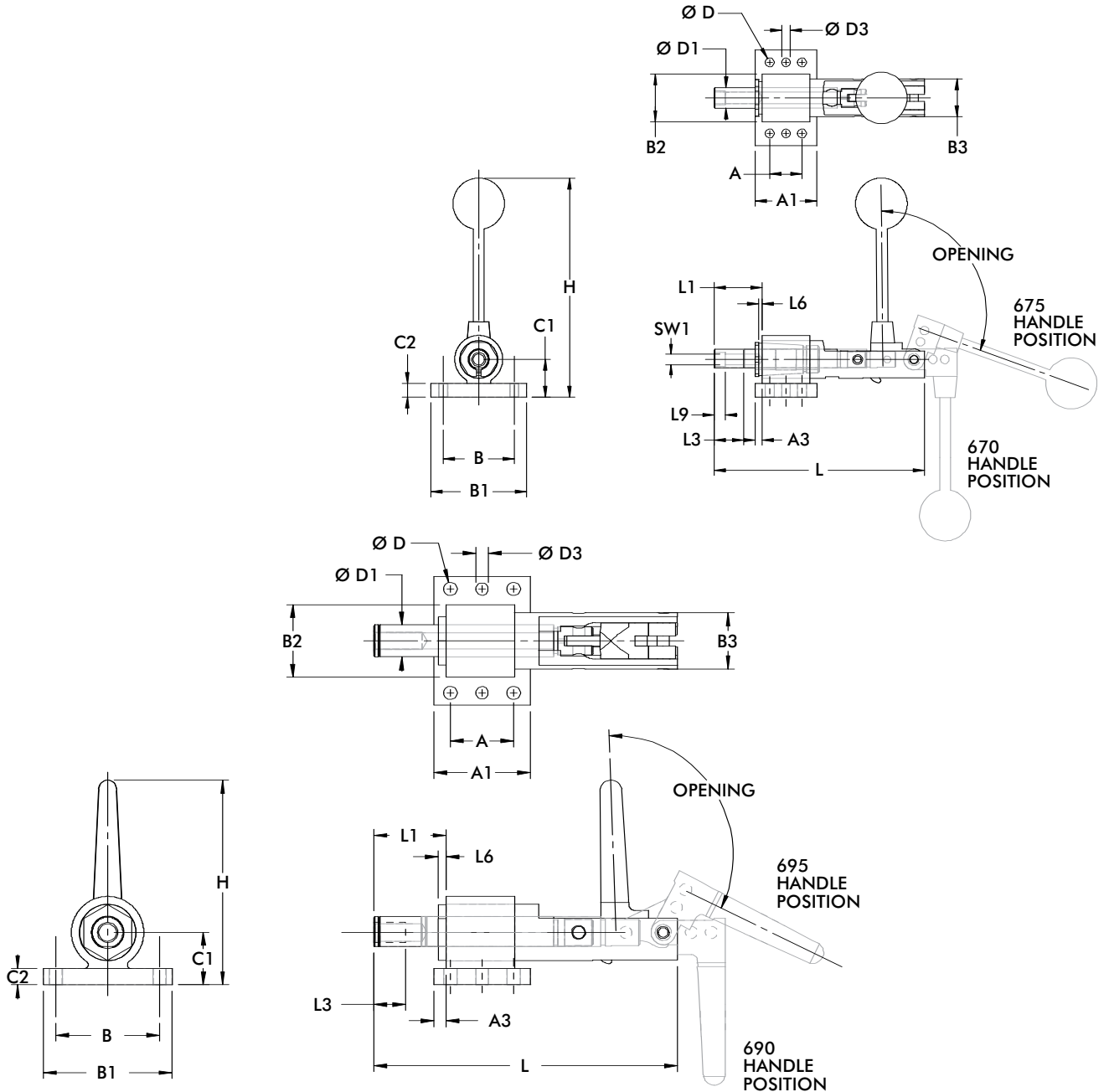


Welding range
H₁ axial 0-8mm



Welding range
radial 360°

Series 670, 675, 690, 695 Standard Clamp Dimensions



Model	A	A1	A3	B	B1	B2	B3	C1	C2	$\varnothing D$	$\varnothing D1$	$\varnothing D3$	H	L	L1	L3
670-1MBPLS	[1.18]	[2.24]	[0.25]	[2.60]	[3.50]	[1.75]	[1.38]	[1.37]		[0.33]	[0.75]	[0.31]	[8.11]	[10.55]	[2.97]	
675-1MBPLS	30	57	6.4	66	89	44.5	35	34.8		8.4	19	7.8	206	268	75.5	[1.38]
690-1MBPLS	[1.97]	[3.0]	[0.37]	[3.23]	[4.02]		[1.75]	[1.63]	[0.50]					195	44.4	
695-1MBPLS	50	76.2	9.5	82	102	-	44.4	41.3	12.7	[0.41]	[0.98]	[0.39]	[6.37]	338	93.7	[0.98]
										10.5	25	9.8	162	[9.45]	[3.69]	25
														240	93.7	

Model	L6	L9	SW1
670-1MBPLS		[0.41]	13H
675-1MBPLS		10.3	7
690-1MBPLS	0-8		
695-1MBPLS		-	-

Series 56H40-2 Product Overview

Features:

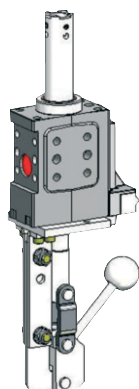
- Compact design
- Low weight
- High accuracy of positioning due to twin piston rod guide
- Lateral and front-face mounting areas
- Length of stroke: 20mm, 40mm or 60mm available
- Various mounting bases for centering pin incl. precision bore holes and grooves or integrated thread
- Inductive sensing module with LED display
- Toggle lock in extended position prevents unintended retracting of piston rod

Application:

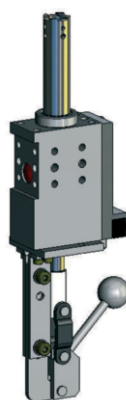
Accurate positioning of sheet metal parts in welding equipment and handling systems. At the end of the welding process, the pins are retracted from the pin holes. The component can thus be easily removed from the jig.

Key areas of application:

Automotive manufacturing, sheet processing industry, jig and general mechanical engineering.

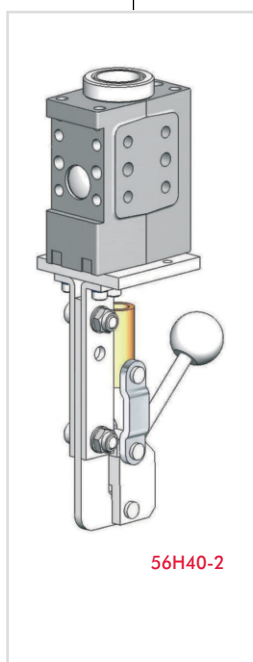


56H40-202C800A
stroke 40 mm and sensing kit

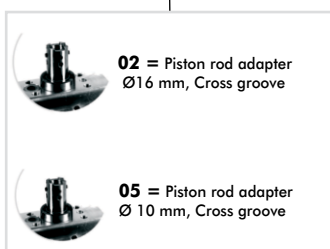


56H40-202C800C
stroke 60 mm and sensing kit

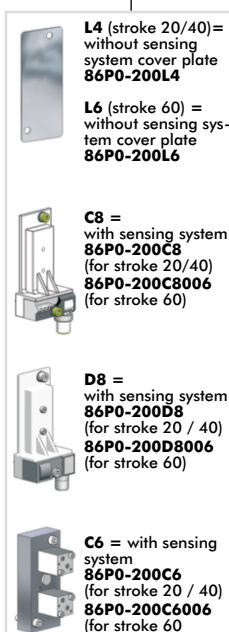
Order no. Example: **56H40-2 02 C8 00 A K** — **K** = ceramic coating plunger



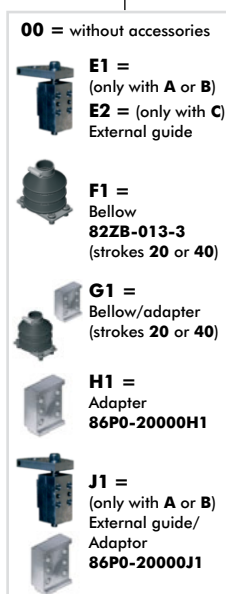
Base Model



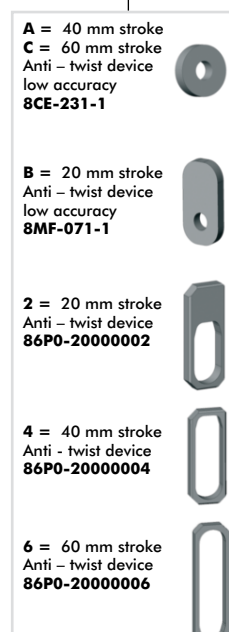
Piston rod adapter



Inductive sensing system

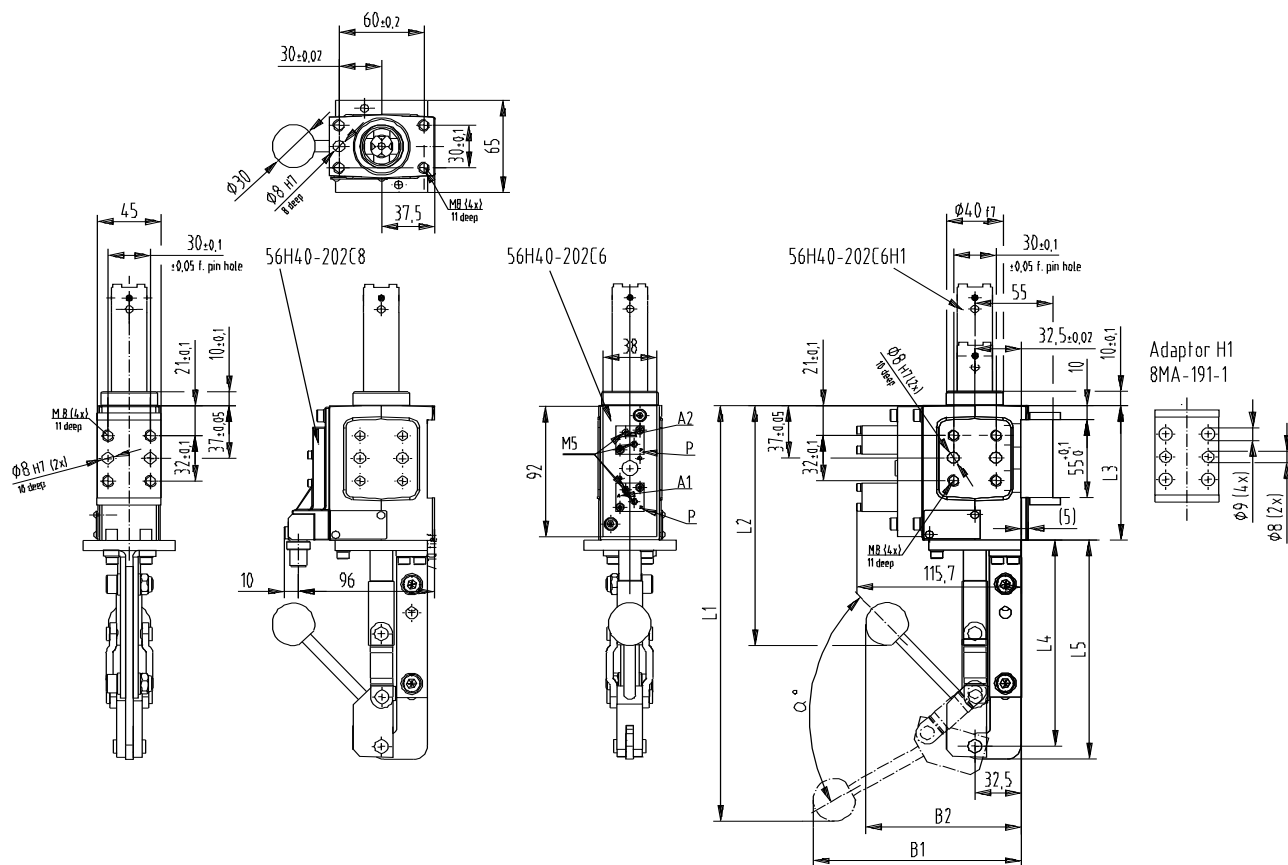


Accessories



Stroke

Series 56H40-2 Clamp Dimensions



Pneumatic Position Control System:

P = Compressed air connection for position control system

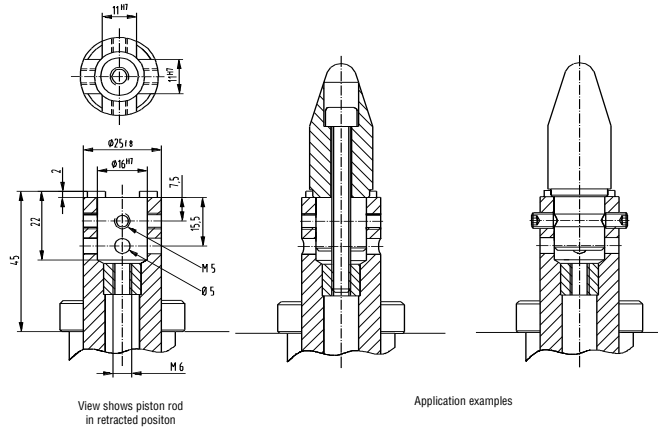
A1 = Control connection for retracted position
A2 = Control connection for extracted position

Series 56H40-2 Technical Information

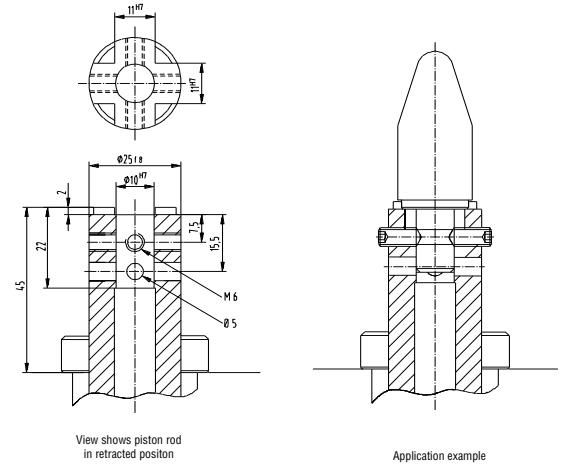
Model no.	Stroke +2 [mm]	Weight ~ [kg]	B1	B2	L1	L2	L3	L4	L5	W ~ °
56H40-2..2	20	2,0	182	140	312	138	95	166	175	40
56H40-2..4	40	2,0	182	140	312	138	95	146	155	75
56H40-2..6	60	2,5	133	157	385	182	115	146	155	90
56H40-2..B	20	2,0	182	140	312	138	95	166	175	40
56H40-2..A	40	2,0	182	140	312	138	95	146	155	75
56H40-2..C	60	2,5	133	157	385	182	115	146	155	90

Series 56H40-2 Standard Clamp Dimensions

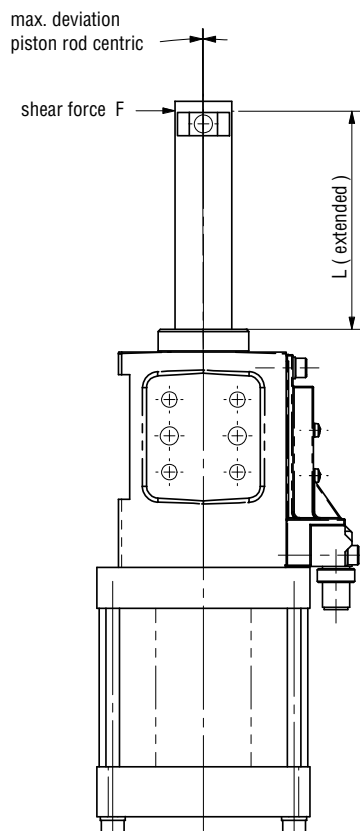
Piston Rod Model **-202** Detail mounting
base Ø16 mm for **56H40-2**



Piston Rod Model **-205** Detail mounting
base Ø10 mm for **56H40-2**



Max deflection for centering pin for 56H40-2



Model no.	Shear force N [lbs]	L mm [in]	Stroke mm [in]	Deviation mm [in]
56H40-2...B / 2	200 [45]	52 [2.0]	20 [0.08]	0,06 [0.002]
56H40-2...A / 4	200 [45]	70 [2.8]	40 [1.60]	0,09 [0.004]
56H40-2...C / 6	200 [45]	90 [3.5]	60 [2.40]	0,12 [0.007]

Caution: Generally we recommend using an external guide when the transverse force is more than 200 N [45 lbs]. Also independently of the stroke, less transverse forces, when the overall height $L2 > 120$ mm [4.7 in] ($L2$ = extended piston rod plus centering pin).

Series 52H50 Product Overview

Manual Clamp interchangeable with 82M-3 and 82M-6

Manual clamp with toggle lock mechanism is interchangeable with 82M-3 (Size 50 + 63) and 82M-6 in application and operating dimensions.

Application

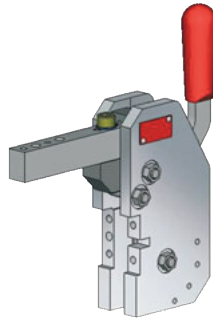
- Mainly in jigs for automotive prototype production

Technical features

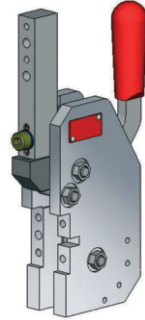
- Robust steel device
- Different clamping arm dimensions available
- Clamping arm mountable in horizontal or vertical position
- Compact design
- Opening angle adjustable by using hold open device
- Hold open device available

Technical data

- Standard opening angle 120°
- Holding capacity 160Nm
- Weight 5,0 kg



52H50-503-2-0
Clamping position horizontal



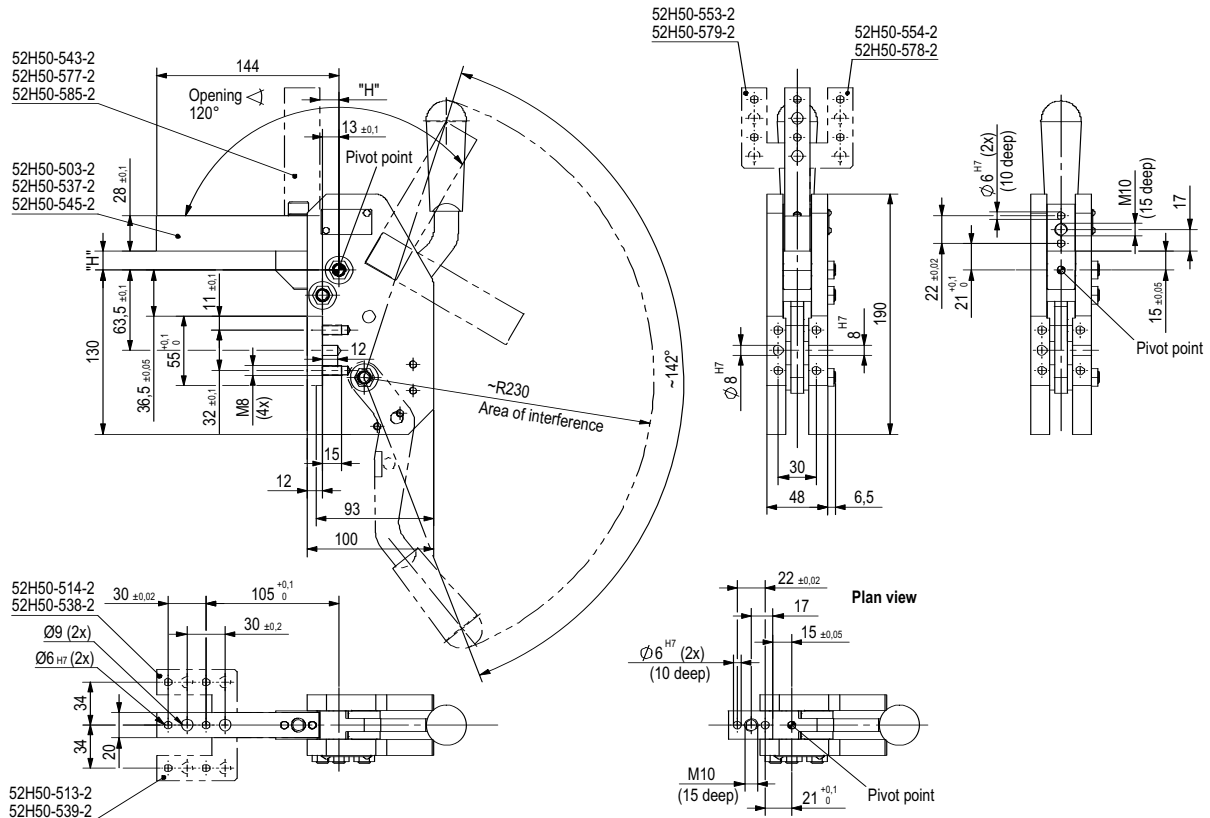
52H50-543-2-0
Clamping position vertical

Order no. Code for **52H50-5...**

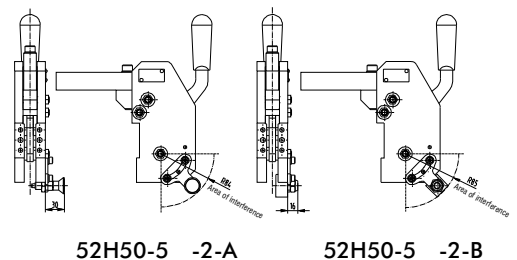
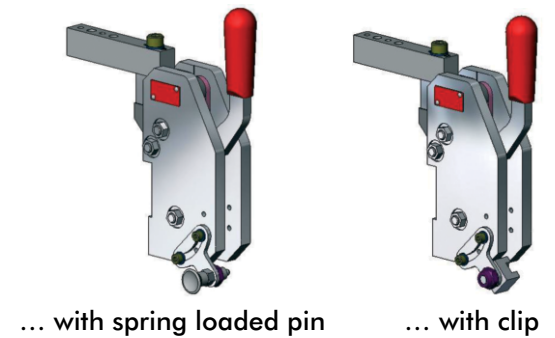
Example Order no.: **52H50 - 503 - 2 - A**

90° - Version 180° - Version Basic model	<table border="1"> <thead> <tr> <th></th> <th colspan="8">Clamp arms</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Horizontal</td> <td></td> <td></td> <td></td> <td colspan="5"></td> </tr> <tr> <td>503 (H = 15 mm)</td> <td>537 (H = 25 mm)</td> <td>545 (H = 45 mm)</td> <td colspan="5"></td> </tr> <tr> <td rowspan="2"></td> <td></td> <td></td> <td></td> <td></td> <td colspan="4"></td> </tr> <tr> <td>513 (H = 15 mm)</td> <td>539 (H = 25 mm)</td> <td>514 (H = 15 mm)</td> <td>538 (H = 25 mm)</td> <td colspan="4"></td> </tr> <tr> <td rowspan="2">Vertical</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>543 (H = 15 mm)</td> <td>577 (H = 25 mm)</td> <td>585 (H = 45 mm)</td> <td>553 (H = 15 mm)</td> <td>579 (H = 25 mm)</td> <td>554 (H = 15 mm)</td> <td>578 (H = 25 mm)</td> <td></td> </tr> </tbody> </table>		Clamp arms								Horizontal									503 (H = 15 mm)	537 (H = 25 mm)	545 (H = 45 mm)															513 (H = 15 mm)	539 (H = 25 mm)	514 (H = 15 mm)	538 (H = 25 mm)					Vertical									543 (H = 15 mm)	577 (H = 25 mm)	585 (H = 45 mm)	553 (H = 15 mm)	579 (H = 25 mm)	554 (H = 15 mm)	578 (H = 25 mm)		0 = without locking device A = locking device with spring loaded pin (two hand unlocking device) B = locking device with clip Locking device
	Clamp arms																																																													
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Series 52H50 Standard Dimensions



Model	Opening angle	Weight ~ (kg)	Holding capacity max. (Nm)	Clamping arm position	"H"
52H50-503-2- 52H50-543-2- 52H50-537-2- 52H50-577-2- 52H50-545-2- 52H50-585-2- 52H50-513-2- 52H50-553-2- 52H50-539-2- 52H50-579-2- 52H50-514-2- 52H50-554-2- 52H50-538-2- 52H50-578-2-	120°	5	160	central	15 25 45 15 25 15 25
				left	
				right	



Spare parts

Description	Order no.
Handle	250301

Accessories

Description	Order no.
Hold open device „A“	52H50-5-2-A
Hold open device „B“	52H50-5-2-B

Series 52H05-6 Product Overview

Modular Manual Clamp

Applications

Clamping, holding, gripping and positioning of metal sheets and other parts, mainly in jigs for prototype-shop

Features

- Compact closed aluminium body
- Toggle action mechanism with locking unit for open position
- Handlever can be welded in correct position
- Handlever can be mounted left or right side of body
- Interchangeable with pneumatic clamp 82M-3 (Size 63) and 82M-6

- Opening angle adjustable in 15° steps (15°–120°)
- Wide range of clamping arm variants
- Mounting areas of front, back and sides
- Inductive sensing module with LED display



52H05-623KAA

Modular manual clamp, interchangeable with 82M-3 (Size 63) and 82M-6

Model		Standard	Max. holding torque Nm	Drive shaft for clamping arm variant	Clamping position	Weight Kg
without sensing	with inductive sensing opening Connector M12x1					
52H05-623KAA	52H05-623KA1/ 52H05-623KA2	120°	1000	lateral, U-centric/ U-side	horizontal/ vertical	4,1
52H05-623SAA	52H05-623SA1/ 52H05-623KA2	120°	1000	lateral, U-centric/ U-side	horizontal/ vertical	4,1

Order numbering code for 52H05-6.....

Example Order no.: **52H05 - 623 K AA**

52H05-623

Basic model

K = with handlever welded.
Handlever-Set
8KB-053-1

S = Handlever weldable
Handlever-Set
8KB-052-1

Handlever

AA = without sensing
82M-000000AA
(8AB-066-2)

A1 = inductive sensing
82M-000000A1
Connector plug
M12x1, parallel
with cylinder

A2 = inductive sensing
82M-000000A2
Connector plug
M12x1, 90° swivel

Sensing system

Accessory
Two hand operation
82ZB-032-2

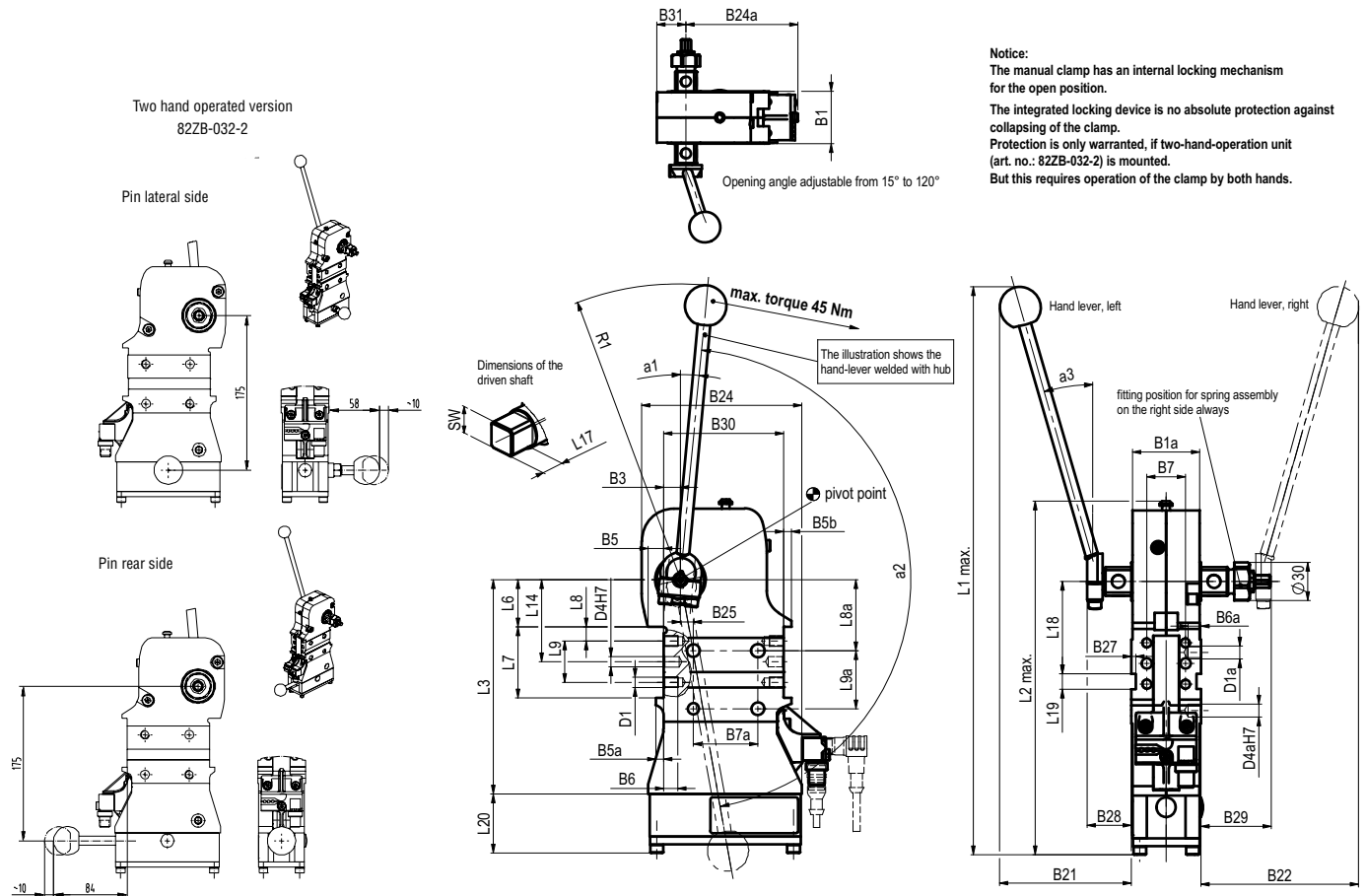
Assembly at hold open pin
is possible on rear side or
lateral side.

Accessories

Series 52H05-6 Standard Dimensions

Spare parts

Specification	Base component	Order no.	Comment
Hand lever set (weldable)	52H05-6...	8KB-052-1	
Hand lever set welded	52H05-6...	8KB-053-1	
Complete sensor box for A1 sensing system	52H05-6...A1	82M-000000A1	Connector plug M12x1, parallel with cylinder
Box without sensors	52H05-6...AA	82M-000000AA	
Complete sensor box for A2 sensing system	52H05-6.....A2	82M-000000A2	Connector plug M12x1, 90° swivel



Model	B1	B3	B5	B5α	B5b	B6	B6α	B7*	B7α*	B22	B24	B24α	B25	B27	B28	B29	B30	B31	D1	D1α	
	±0,1	±0,1		±0,1							±0,1										
52H05-6230...	54	52	13	12	6	6	11	9	30	50	100	119	119	10	3,5	36	54	93	30	M8	M10

Model	D4	D4α	L1	L2	L3	L6	L7	L8	L8α	L9	L9α	L14	L17	L18	L19	L20	SW	α1	α2	α3	R1
	H7	H7	max	max		±0,05	+0,1	±0,1	±0,1	±0,1	±0,1	±0,1			N9		H9	~	max.	~	~
52H05-6230...	8	10	366	260	166	36,5	55	11	55	32	45	63,5	21	71,5	12	30	22	5°	160°	16°	240

Series 52H05-6 Clamping Arm Variants

Clamping arm design

U-type central clamping arm

Clamping position

Horizontal or Vertical



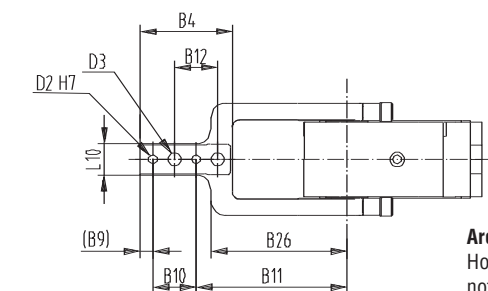
U-type central clamping arm,
horizontal clamping position

Technical data U-type central clamping arms

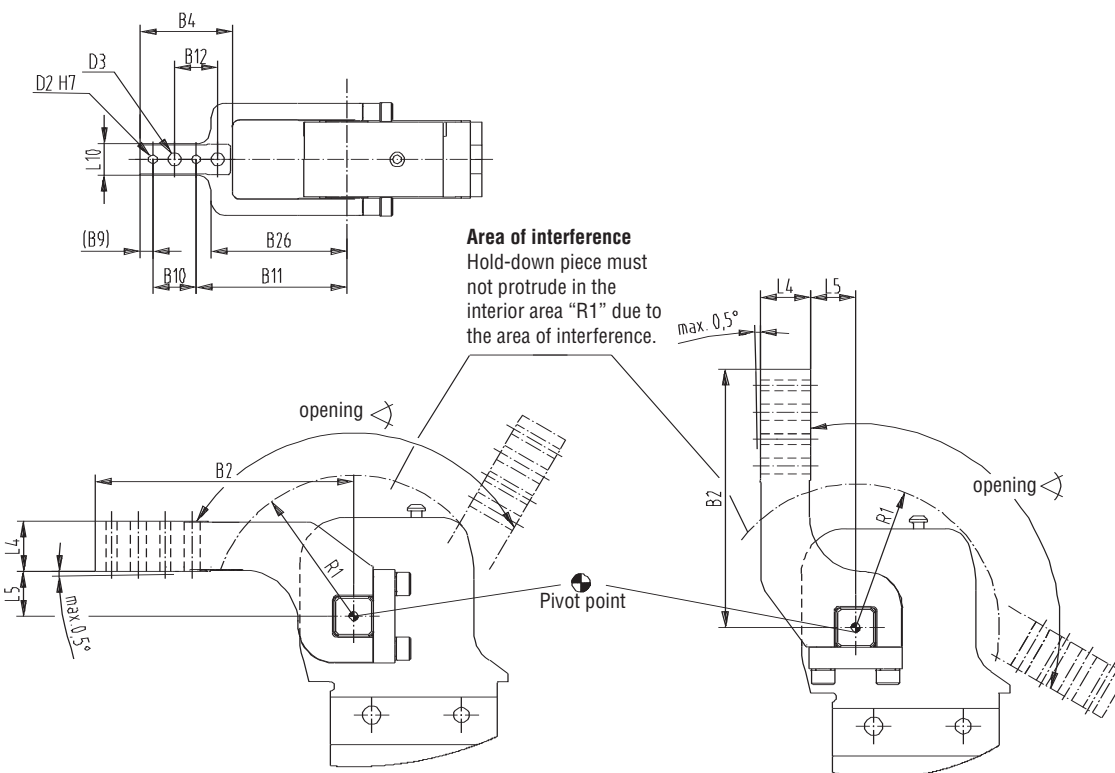
Model	Order no. for set of U-type central clamping arms	Max. opening angle for clamping position		Weight Kg	B2	B4	B9	B10	B11	B12	B26	D2	D3	L4	L5	L10	R1
		Horz.	Vert.														
52H05-6	8UM 631-15-144	120°	105°	1,1	144	64.3	9	30	105	30	95	6	9	28	15	20	80
	8UM 631-25-144	120°	120°	1,1	144	64.3	9	30	105	30	95	6	9	28	25	20	80
	8UM 631-45-144	120°	120°	1,3	144	64.3	9	30	105	30	95	6	9	28	45	20	80
	8UM 631-75-204	120°	120°	1,7	204	82	9	30	165	30	107	6	9	30	75	20	80

U-type central clamping arms for 52H05-6

Horizontal clamping arm position



Vertical clamping arm position



Series 52H05-6 Clamping Arm Variants

Clamping arm design

Lateral / Left

Lateral / Right

Lateral / Both Sides

Clamping position

Horizontal or Vertical

Horizontal or Vertical

Horizontal or Vertical



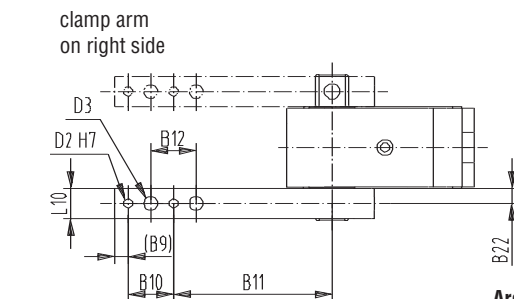
Lateral clamping arm,
horizontal clamping position

Technical data (lateral clamping arms)

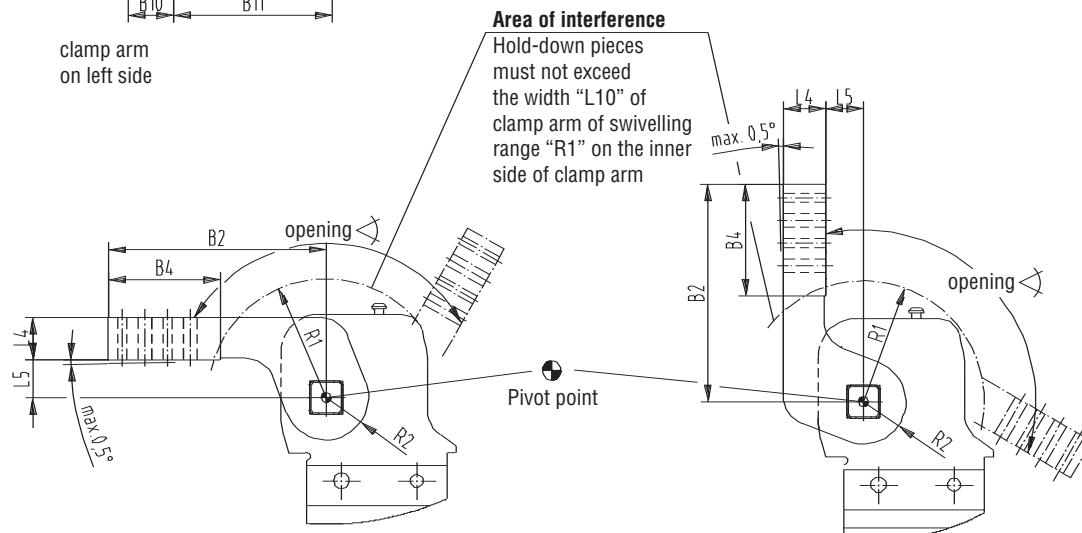
Model	Order no. for set of lateral clamping arms	Opening angle for clamping position		Weight Kg	B2	B4	B9	B10	B11	B12	B22	D2	D3	L4	L5	L10	R1	R2
		Horz.	Vert.									H7 Ø	Ø	±0,1	(-0,5° max.)			
52H05-6	8JG-080-1-01	120°	120°	0,9	144	74	9	30	105	30	10	6	9	28	15	20	80	28
	8S631-25-144	120°	120°	1	144	74	9	30	105	30	10	6	9	28	25	20	80	28
	8S631-75-204	120°	120°	1,5	204	78	9	30	165	30	10	6	9	30	75	20	80	28

Lateral clamping arms for 52H05-6

Horizontal clamping arm position



Vertical clamping arm position



Series 52H05-6 Clamping Arm Variants

Clamping arm design

U-type clamping arm, Left

U-type clamping arm, Right

Clamping position

Horizontal or Vertical

Horizontal or Vertical



U-type clamping arm, right, horizontal clamping position



Technical data (U-type clamping arms, left and right)

Order no. for set of U-type central clamping arms for 52H05-6		Max. opening angle for clamping position		Weight Kg	B2	B4	B9	B10	B11	B12	B26	D2	D3	L4	L5	L10	L13	R1
		Horz.	Vert.															
8UL631-15-144	8UR631-15-144	120°	105°	1,1	144	64.3	9	30	105	30	95	6	9	28	15	20	37	80
8UL631-25-144	8UR631-25-144	120°	120°	1,1	144	64.3	9	30	105	30	95	6	9	28	25	20	37	80
8UL631-45-144	8UR631-45-144	120°	120°	1,3	144	64.3	9	30	105	30	95	6	9	28	45	20	37	80
8UL631-75-204	8UR631-75-204	120°	120°	1,7	204	82	9	30	165	30	119	6	9	30	75	20	37	80

Lateral U-type clamping arms for 52H05-6

Horizontal clamping arm position

Vertical clamping arm position

