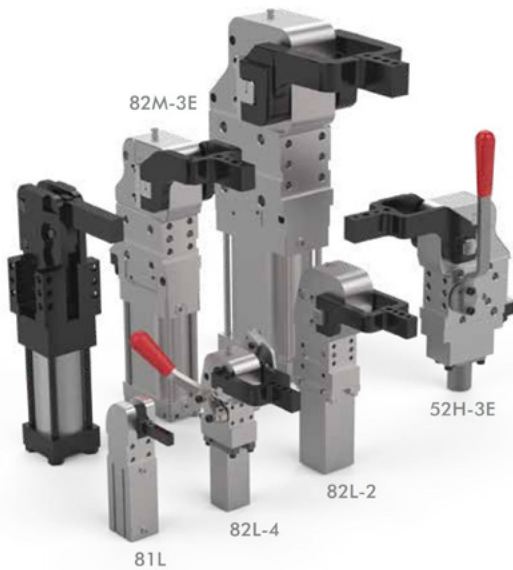


PNEUMATIC POWER CLAMPS

Sizing and Application Chart



Series	Page MC-PPC-#	Holding Torque at 5 bar Nm					Clamping Torque at 5 bar Nm					Piston Diameter mm						
		0 to 100	100 to 500	500 to 1000	1000 to 2000	2000 to 4000	0 to 100	100 to 500	500 to 1000	1000 to 2000	2000 to 4000	Less than 25	25	32	40	50	63	80
81L	3	●					●					●						
82L-4	7	●					●					●	●					
82L-2	15	●	●				●	●				●	●	●				
TCC-2	25	●					●								●	●		
82M-3E	29		●		●			●							●	●	●	
52H-3E	55				●													
870/871	65		●				●								●			
860/861	67			●				●								●		
890/891	67				●			●									●	
1000/1001	67				●				●								●	●
82D	69	●					●	●							●		●	

PNEUMATIC POWER CLAMPS

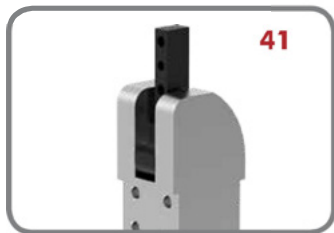
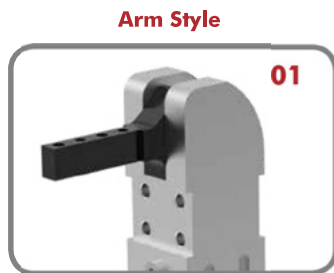
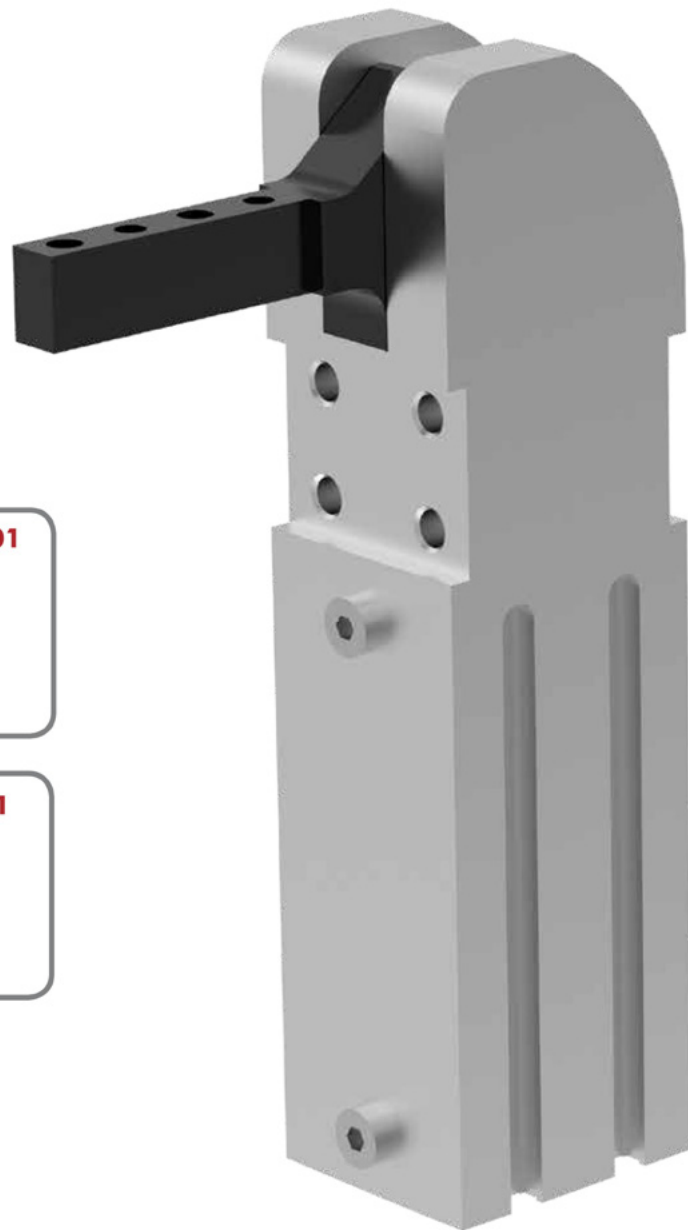
Sizing and Application Chart

Material	Weight Kg						Air Consumption per Double Stroke at 5 bar dm ³				Suitable Application Areas														
	0 to 2	2-4	4-6	6-8	More than 8	More than 8	0 to 0.5	0.50 to 1.00	1.00 to 2.00	More than 2.00	Welding	Assembly	Dirty Environment	End Effectors	Machining	Duty Cycle	Adjustable Opening Angle	Inductive Sensors Available	Dual Arms	Tolerance Compensation	Manual Version Available	Center Arm	Lateral Arms	Toggle Locking	
Aluminum	●						●				⊗	○	○	○	○	○							✓		✓
Steel	●						●				○	○	○	○	○		✓	✓				✓	✓	✓	✓
0 to 2	●	●					●	●			○	○	○	○	○	○	✓	✓				✓	✓	✓	✓
2-4	●	●	●				●	●	●		○	○	○	○	○	○	✓	✓		✓		✓	✓	✓	✓
4-6	●	●	●	●			●	●	●	●	○	○	○	○	○	○	✓	✓		✓		✓	✓	✓	✓
6-8	●	●	●	●	●		●	●	●	●	⊗	○	○	○	○	○	✓	✓				✓	✓	✓	✓
More than 8	●	●	●	●	●	●	●	●	●	●	⊗	○	○	○	○	○						✓	✓	✓	✓
0 to 0.5							●				⊗	○	○	○	○	○						✓	✓	✓	✓
0.50 to 1.00							●	●			⊗	○	○	○	○	○						✓	✓	✓	✓
1.00 to 2.00							●	●	●		⊗	○	○	○	○	○						✓	✓	✓	✓
More than 2.00							●	●	●	●	⊗	○	○	○	○	○						✓	✓	✓	✓
Welding											○	○	○	○	○	○									✓
Assembly											○	○	○	○	○	○									✓
Dirty Environment											○	○	○	○	○	○									✓
End Effectors											○	○	○	○	○	○									✓
Machining											○	○	○	○	○	○									✓
Duty Cycle											○	○	○	○	○	○									✓
Adjustable Opening Angle																	✓	✓							✓
Inductive Sensors Available																	✓	✓							✓
Dual Arms																			✓						✓
Tolerance Compensation																				✓					✓
Manual Version Available																					✓				✓
Center Arm																					✓				✓
Lateral Arms																					✓				✓
Toggle Locking																						✓			✓

81L SERIES

Pneumatic Power Clamps | Ordering Information

			81L	12-1	01	00		
Base Model	Size	Description			Arm Style	Description	Design	Description
	12-1	12mm Cylinder Bore Size			01	Clamping arm, horizontal	00	Standard design
	16-1	16mm Cylinder Bore Size			41	Clamping arm, vertical		
	20-1	20mm Cylinder Bore Size				<i>See below for further details</i>		
	25-1	25mm Cylinder Bore Size						



81L SERIES

Pneumatic Power Clamps | Ordering Information

Accessories

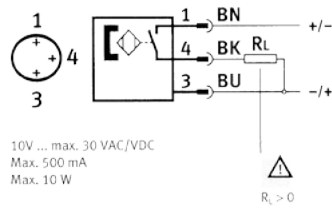
8EA-109-1

Description (order separately)

Sensor, 3-wire cable, M8x1 connector, 3-pin

82ZB-004-1

Adapter for mounting 81L20-1, 81L25-1 to 25mm dia. bar



12

Max Holding Torque
25 Nm
Max Clamping Torque
4,5 Nm at 5bar

16

Max Holding Torque
60 Nm
Max Clamping Torque
7,0 Nm at 5bar

20

Max Holding Torque
100 Nm
Max Clamping Torque
18 Nm at 5bar

25

Max Holding Torque
100 Nm
Max Clamping Torque
18 Nm at 5bar

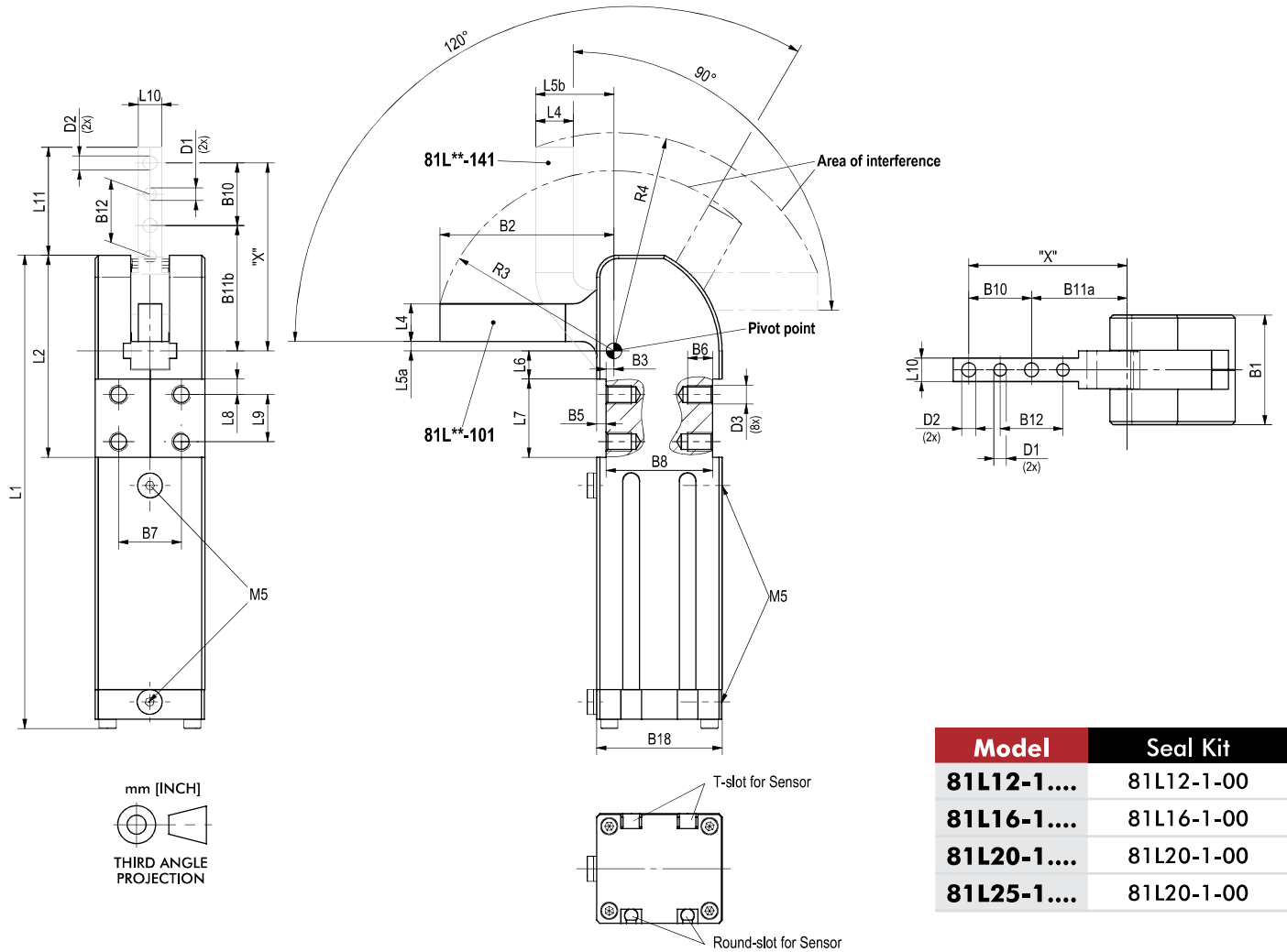
Dimensions and technical information are subject to change without notice

PC-PPC | 4



81L SERIES

Pneumatic Power Clamps | Dimensions and Seal Kits



Power by compressed air, max. 6 bar Operation with oil-free air is permissible.

Model	D1 Ø [H7]	D2 Ø	D3 Ø	B1	B2	B3 ±0,1	B5 ±0,2	B6	B7 ±0,1	B8 ±0,1	B10 ±0,2	B11a	B11b	B12
81L12-1....	[0.12] 3	[0.13] 3,3	M4	[0.94] 24	[1.57] 40	[0.10] 2,5	[0.06] 1,5	[0.24] 6	[0.59] 15	[0.98] 25	[0.35] 9	[1.06] 27	[1.24] 31,5	[0.35] 9
81L16-1....	[0.12] 3	[0.17] 4,3	M5	[1.12] 30	[1.97] 50	[0.08] 2	[0.08] 2	[0.19] 5	[0.79] 20	[1.02] 26	[0.59] 15	[1.18] 30	[1.56] 39,5	[0.59] 15
81L20-1....	[0.16] 4	[0.18] 4,5	M6	[1.38] 35	[2.12] 55,5	[0.10] 2,5	[0.12] 3	[0.28] 7	[0.79] 20	[1.34] 34	[0.79] 20	[1.20] 30,5	[1.57] 40	[0.79] 20
81L25-1....	[0.16] 4	[0.26] 6,5	M6	[1.38] 35	[2.58] 65,5	[0.10] 2,5	[0.12] 3	[0.28] 7	[0.79] 20	[1.34] 34	[0.79] 20	[1.59] 40,5	[1.97] 50	[0.79] 20

Model	B18	L1 ~	L2	L4	L5a	L5b	L6	L7 ±0,1	L8	L9	L10	L11	R3 ~	R4 ~
81L12-1....	[1.10] 28	[4.09] 104	[1.59] 40,5	[0.28] 7	[0.10] 2,5	[0.7] 17,5	[0.18] 4,5	[0.59] 15	[0.12] 3	[0.35] 9	[0.24] 6	[0.93] 23,5	[1.61] 41	[1.89] 48
81L16-1....	[1.18] 30	[4.69] 119	[1.95] 49,5	[0.35] 9	[0.09] 2,25	[0.8] 20,5	[0.23] 5,75	[0.79] 20	[0.16] 4	[0.47] 12	[0.31] 8	[1.41] 35,75	[2.00] 51	[2.48] 63
81L20-1....	[1.57] 40	[5.94] 151	[2.54] 64,5	[0.47] 12	[0.12] 3	[0.98] 25	[0.35] 9	[0.98] 25	[0.19] 5	[0.59] 15	[0.29] 7,5	[1.36] 34,5	[2.26] 57,5	[2.75] 70
81L25-1....	[1.57] 40	[5.94] 151	[2.54] 64,5	[0.47] 12	[0.12] 3	[0.98] 25	[0.35] 9	[0.98] 25	[0.19] 5	[0.59] 15	[0.47] 12	[1.75] 44,5	[2.64] 67	[3.11] 79



81L SERIES

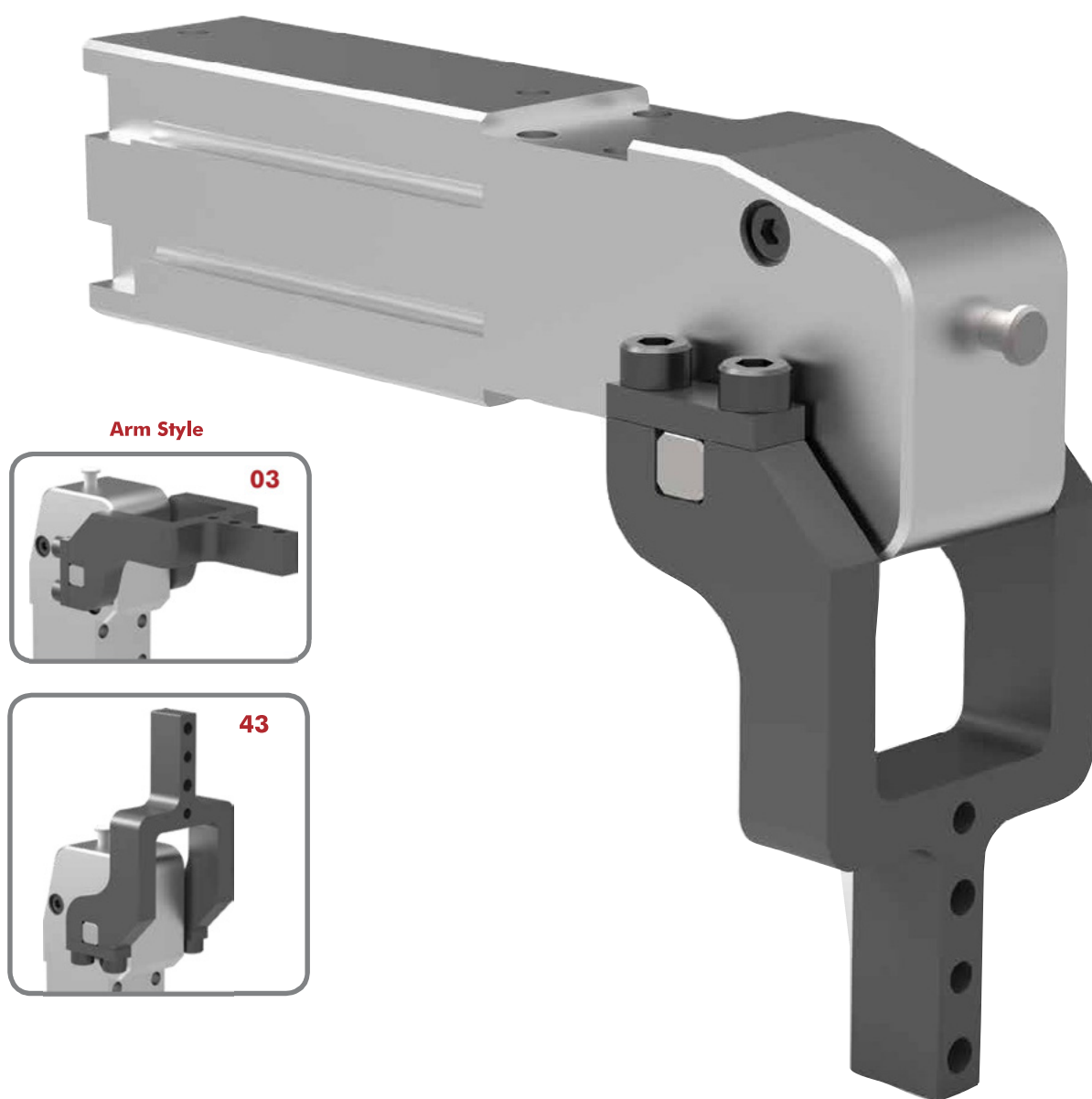
Pneumatic Power Clamps | Technical Specifications

Model	Max. Holding Torque Nm [lb ft]	Max. Clamping Torque at 5 bar [72 psi] Nm [lb ft]	Weight kg [lb]	Air Consumption per double stroke at 5 bar [72 psi] dm ³ [ft ³]	Max. Added Load (at Position, "X") g [oz]
81L12-101..	25 [18.4]	4,5 [3.3]	0,16 [0.4]	0,25 [0.01]	50 [1.8]
81L12-141..	20 [14.8]	4,5 [3.3]	0,17 [0.4]	0,25 [0.01]	50 [1.8]
81L16-101..	60 [44]	6,5 [4.8]	0,25 [0.6]	0,27 [0.01]	80 [2.8]
81L16-141..	40 [29.5]	7,0 [5.23]	0,27 [0.6]	0,26 [0.01]	80 [2.8]
81L20-101..	100 [73.8]	18 [13.3]	0,50 [1.1]	0,40 [0.02]	90 [3.2]
81L20-141..	80 [59]	17 [12.5]	0,52 [1.2]	0,35 [0.01]	90 [3.2]
81L25-101..	100 [73.8]	18 [13.3]	0,52 [1.2]	0,40 [0.02]	100 [3.5]
81L25-141..	80 [59]	17 [12.5]	0,54 [1.25]	0,35 [0.01]	100 [3.5]

82L..-4... SERIES

Pneumatic Power Clamps | Ordering Information

			82L	16-4	03	0		
			└───┬───┘		└───┘	└───┘		
Base Model	Size	Description			Arm Style	Description	Opening Angle	Description
	12-4	12mm Cylinder Bore Size			00	No clamping arm	0	105° (Standard)
	16-4	16mm Cylinder Bore Size			03	U-bar, central 90°	3	90°
	20-4	20mm Cylinder Bore Size			43	U-bar, central 180°	4	75°
	25-4	25mm Cylinder Bore Size				<i>See below for further details</i>	5	60°
							6	45°
							7	30°
							8	15°



82L..-4... SERIES

Pneumatic Power Clamps | Ordering Information

Accessories

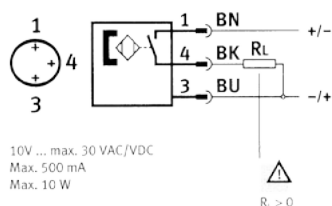
8EA-109-1

Description (order separately)

Sensor, 3-wire cable, M8x1 connector, 3-pin

82ZB-004-1

Adapter for mounting 82L20-4, 82L25-4 to 25mm dia. bar



12

Max Holding Torque
35 Nm

Max Clamping Torque

90° version: 10,4 Nm at 5bar

180° version: 8,7 Nm at 5bar

16

Max Holding Torque
40 Nm

Max Clamping Torque

12,4 Nm at 5bar

11,0 Nm at 5bar

20

Max Holding Torque
50 Nm

Max Clamping Torque

21,0 Nm at 5bar

19,3 Nm at 5bar

25

Max Holding Torque
80 Nm

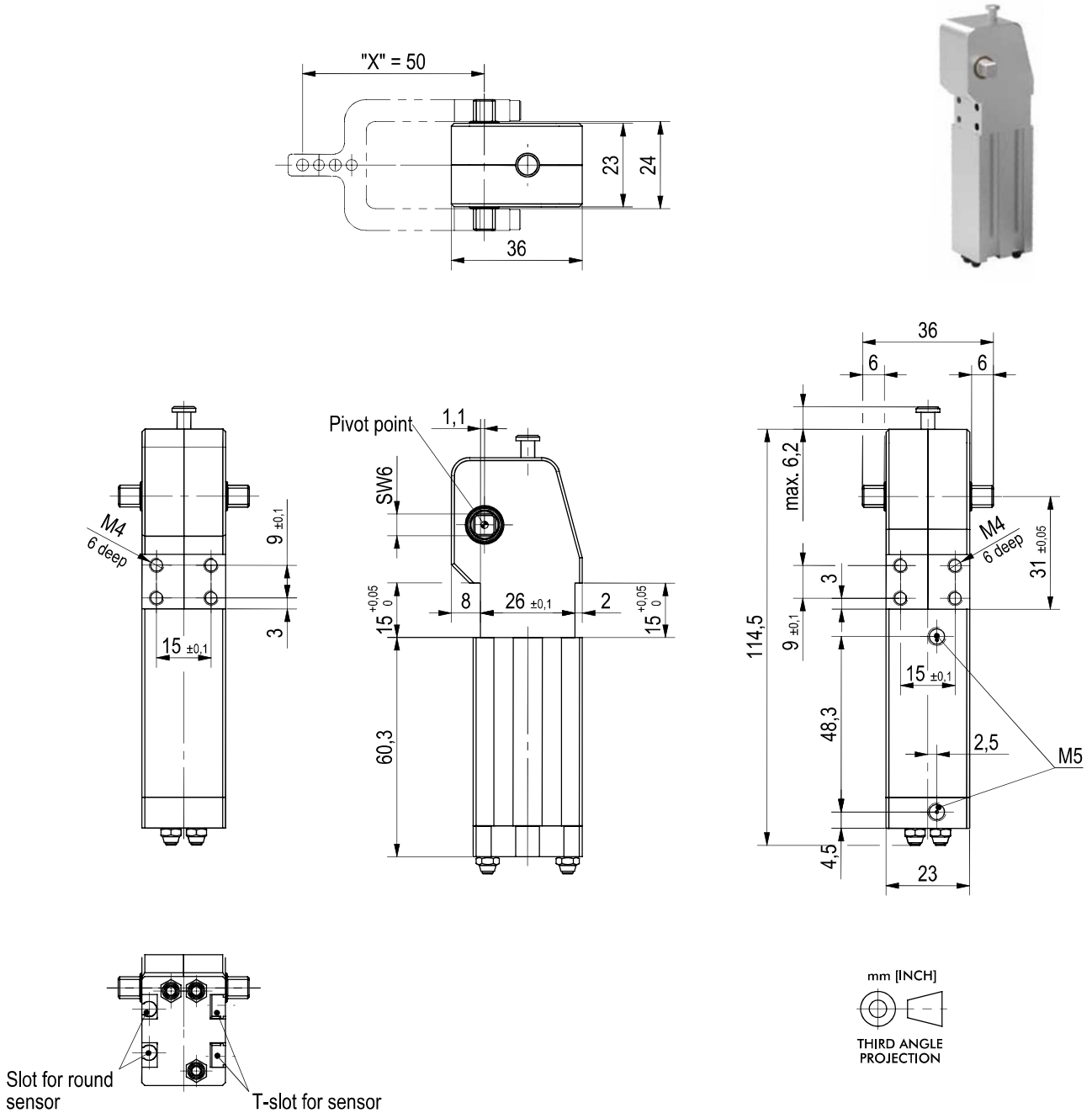
Max Clamping Torque

31,8 Nm at 5bar

28,5 Nm at 5bar

82L12-4 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications

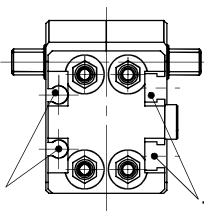
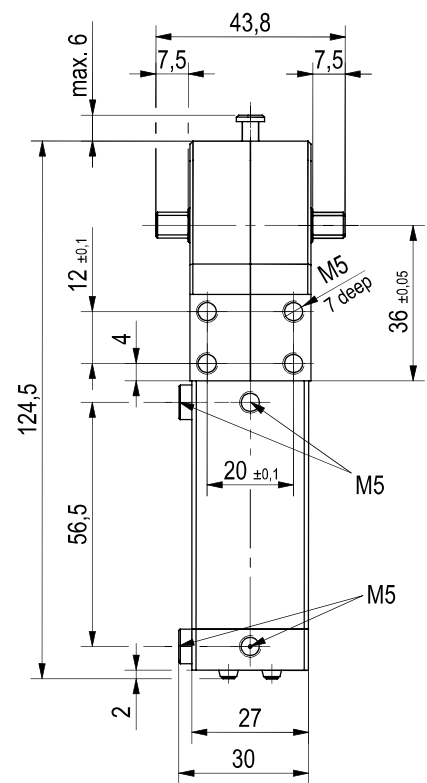
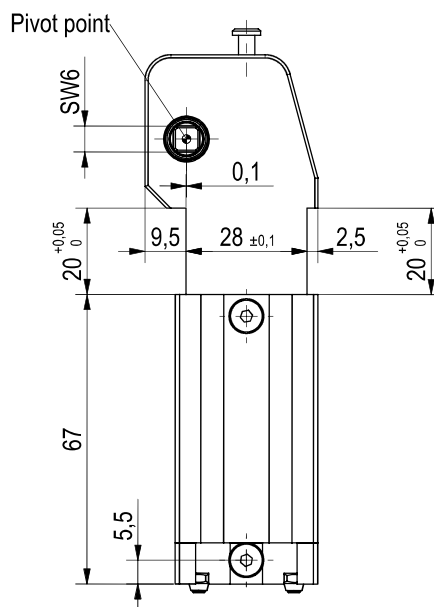
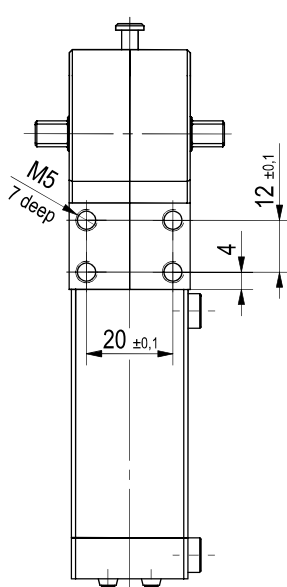
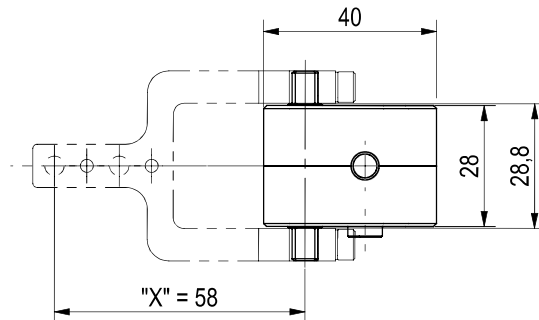


Power by compressed air, max. 6 bar Operation with oil-free air is permissible.

Model	Max. Holding Torque Nm [lb ft]	Max. Clamping Torque at 5 bar [72 psi] Nm [lb ft]	Weight [with arm] kg [lb]	Air Consumption per double stroke at 5 bar [72 psi] dm ³ [ft ³]	Max. Added Load (at Position "X") g [oz]
82L12-4030	35 [25.8]	10,4 [7.8]	0,23 [0.5]	0,25 [0.01]	50 [1.8]
82L12-4430	35 [25.8]	8,7 [6.4]	0,23 [0.5]	0,25 [0.01]	50 [1.8]

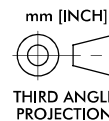
82L16-4 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications



Slot for round sensor

T-slot for sensor



Power by compressed air, max. 6 bar Operation with oil-free air is permissible.

Model	Max. Holding Torque Nm [lb ft]	Max. Clamping Torque at 5 bar [72 psi] Nm [lb ft]	Weight [with arm] kg [lb]	Air Consumption per double stroke at 5 bar [72 psi] dm ³ [ft ³]	Max. Added Load (at Position "X") g [oz]
82L16-4030	40 [29.5]	12,4 [9.4]	0,33 [0.7]	0,27 [0.01]	80 [2.8]
82L16-4430	40 [29.5]	11,0 [8.1]	0,33 [0.7]	0,27 [0.01]	80 [2.8]

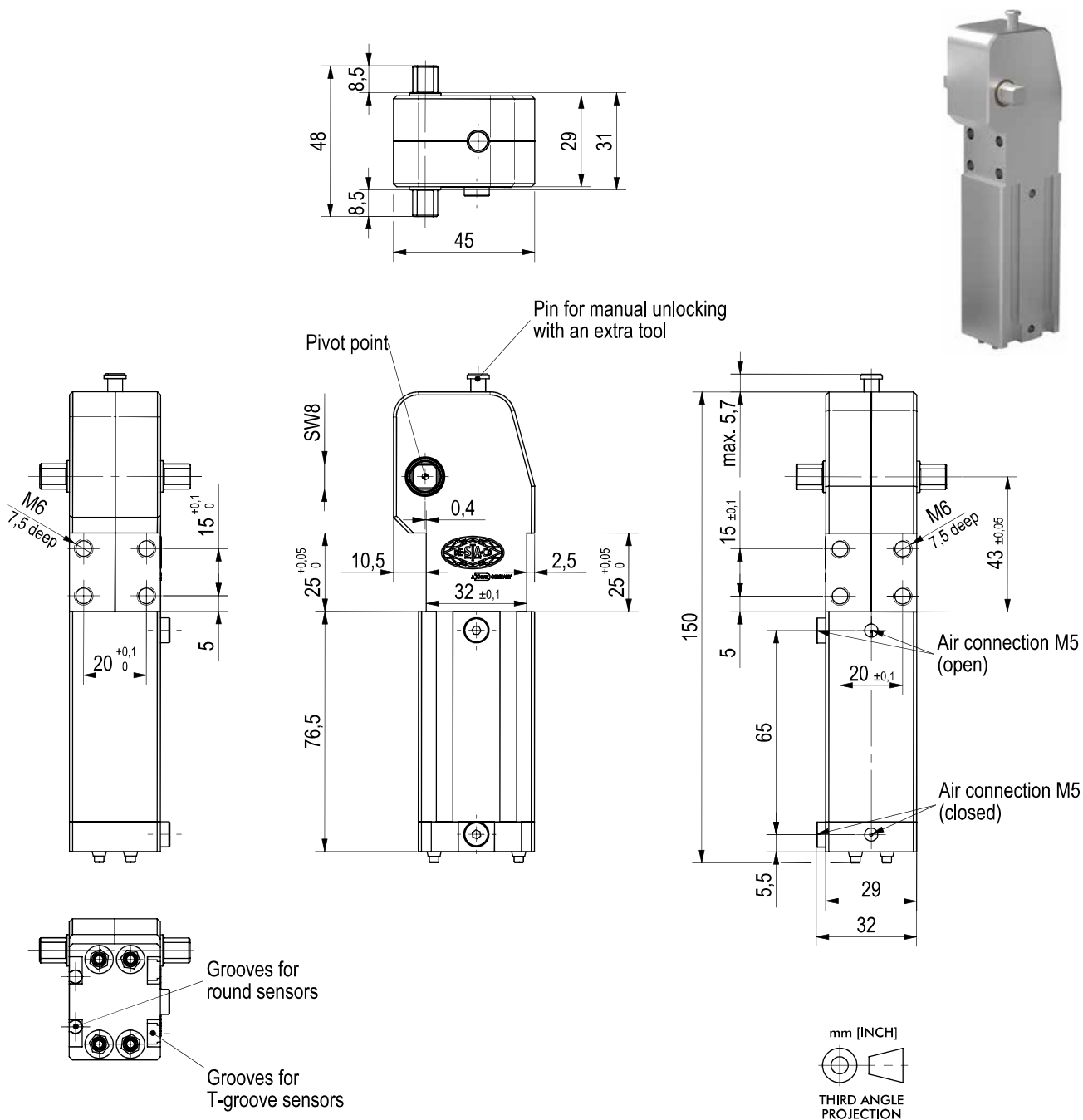
Dimensions and technical information are subject to change without notice

PC-PPC | 10



82L20-4 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications



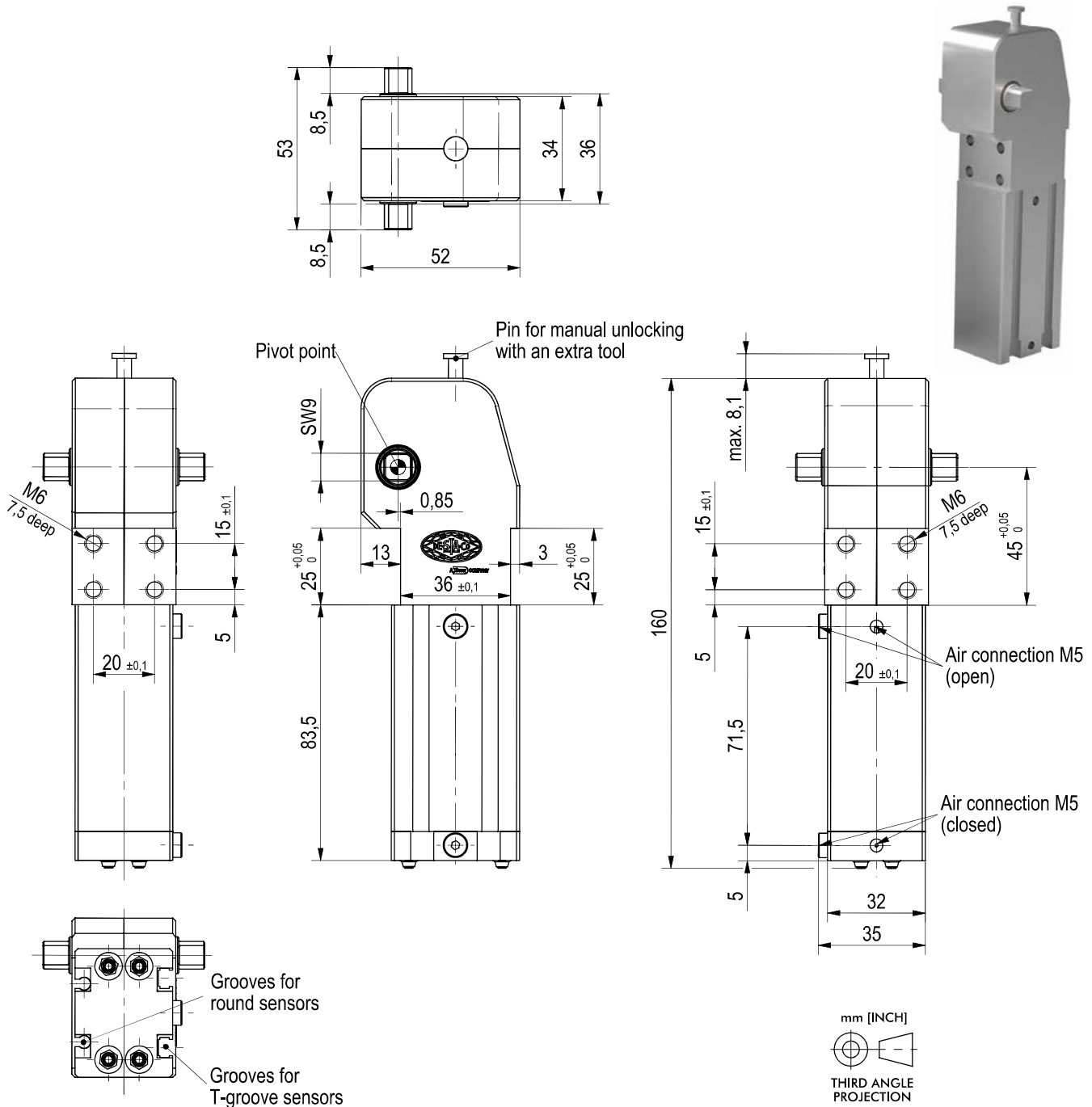
mm [INCH]
THIRD ANGLE PROJECTION

Power by compressed air, max. 6 bar Operation with oil-free air is permissible.

Model	Max. Holding Torque Nm [lb ft]	Max. Clamping Torque at 5 bar [72 psi] Nm [lb ft]	Weight [with arm] kg [lb]	Air Consumption per double stroke at 5 bar [72 psi] dm ³ [ft ³]	Max. Added Load (at Position "X") g [oz]
82L20-4030	50 [36.9]	21,0 [15.5]	0,42 [0.9]	0,35 [0.01]	90 [3.2]
82L20-4430	50 [36.9]	19,3 [14.3]	0,42 [0.9]	0,35 [0.01]	90 [3.2]

82L25-4 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications



Power by compressed air, max. 6 bar Operation with oil-free air is permissible.

Model	Max. Holding Torque Nm [lb ft]	Max. Clamping Torque at 5 bar [72 psi] Nm [lb ft]	Weight [with arm] kg [lb]	Air Consumption per double stroke at 5 bar [72 psi] dm ³ [ft ³]	Max. Added Load (at Position "X") g [oz]
82L25-4030	80 [59]	31,8 [23.5]	0,66 [1.5]	0,40 [0.01]	100 [3.5]
82L25-4430	80 [59]	28,5 [12.5]	0,66 [1.5]	0,40 [0.01]	100 [3.5]

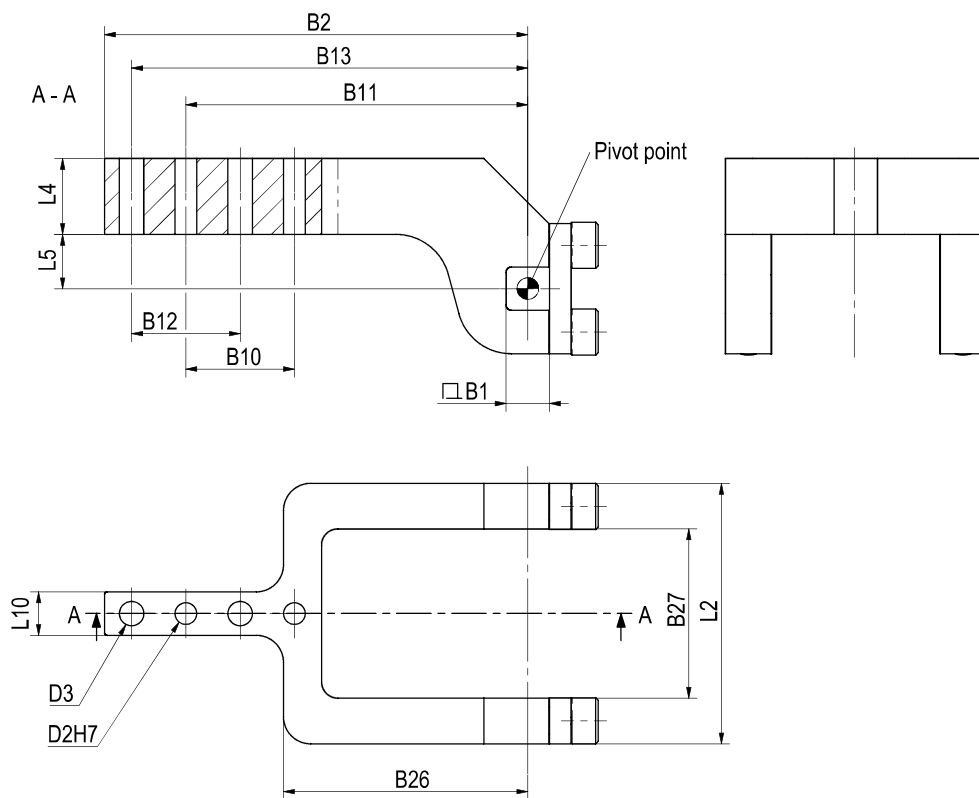
Dimensions and technical information are subject to change without notice

PC-PPC | 12



82L..-4... SERIES

Pneumatic Power Clamps | Clamp Arm Dimensions



Model	Order no. for Arm	Max. Opening angle	B1	B2	B10 ±0,02	B11 ±0,02	B12 ±0,1	B13 ±0,1	B26	B27	D2 H7	D3	L2	L4	L5	L10
82L12-4...	8JG-401-1-01	105°	6	54	9	45.5	9	50	38,5	24	3	3.3	36	7	10	6
82L16-4...	8JG-402-1-01	105°	6	63	15	50.5	15	58	36,5	29	3	4.5	44	9.5	10	10
82L20-4...	8JG-403-1-01	105°	8	78	20	63	20	73	45	31,2	4	4.5	48	14	10	8
82L25-4...	8JG-404-1-01	105°	9	81	20	66	20	76	48	36	4	6.4	53	16	10	12

82L..-2... SERIES

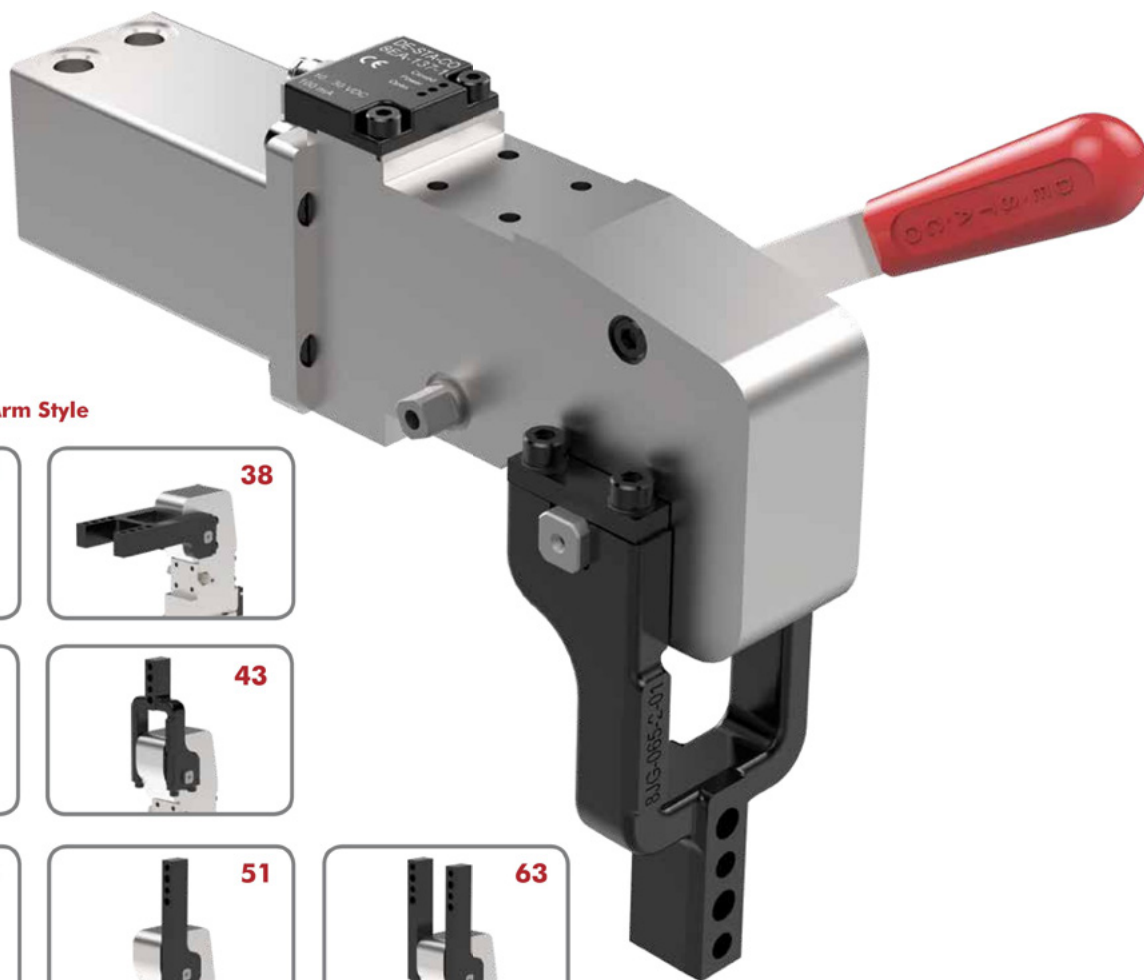
Pneumatic Power Clamps | Ordering Information



Base Model	Size	Description
	2G	Ø25 (G1/8) Cylinder Bore Size
	3G	Ø32 (G1/8) Cylinder Bore Size
	3N	Ø32 (1/8-18 NPT) Cylinder Bore Size
	4G	Ø40 (G1/4) Cylinder Bore Size
	4N	Ø40 (1/4-18 NPT) Cylinder Bore Size

Arm Style	Description
03	U-clamp arm, central 90°
11	Lateral clamp arm, left 90°
12	Lateral clamp arm, right 90°
23	2x lateral clamp arm 90°
38	H-clamp arm 90°
43	U-clamp arm, central 180°
51	Lateral clamp arm, left 180°
52	Lateral clamp arm, right 180°
63	2x lateral clamp arm 180°
78	H-clamp arm 180°

See below for further details



Arm Style



82L..-2... SERIES

Pneumatic Power Clamps | Ordering Information

Hand Lever	Description
0	No Hand Lever
H	With Hand Lever

Base Model	Description
B	Power clamp without clamping arm. To be marked with an additional "B". Only with clamping arm "03"

Opening Angle	Description
0	105° (Standard)
3	90°
4	75°
5	60°
6	45°
7	30°
8	15°



Sensing	Description
00	No Sensing
C8	8EA-137-1 (M8x1)
B7	8EA-138-1 (M12x1)
B8	8EA-139-1 (M12x1)



2G

Max Holding Torque
75 Nm
Max Clamping Torque
25 Nm at 5bar

3G/N

Max Holding Torque
180 Nm
Max Clamping Torque
55 Nm at 5bar

4G/N

Max Holding Torque
380 Nm
Max Clamping Torque
120 Nm at 5bar

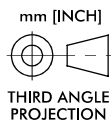
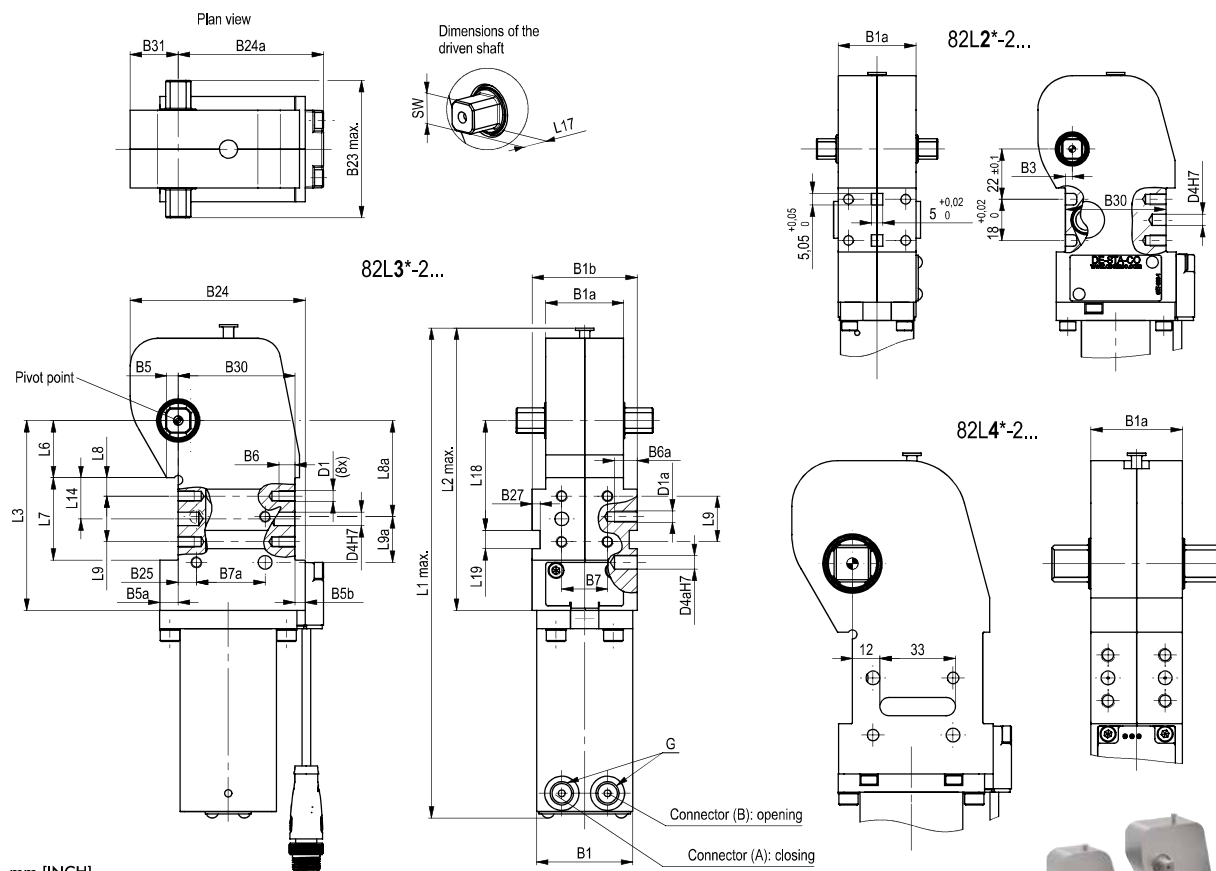
Dimensions and technical information are subject to change without notice

PC-PPC | 16



82L..-2... SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications



Power by compressed air, max. 6 bar
Operation with oil-free air is permissible.

Technical Information | Model without Hand Lever

Model	Max. holding torque Nm [lb ft]	Clamping torque at 5 bar [72 psi] Nm [lb ft]	Piston Ø mm	Weight kg [lbs]	Air consumption per double stroke at 5 bar [72 psi] dm3 [ft3]	Connection G
82L2G-2...	75 [55]	25 [18]	25	1,0 [2.20]	0,4 [0.01]	G1/8
82L3G-2... 82L3N-2...	180 [133]	55 [41]	32	1,3 [2.86]	0,8 [0.03]	G1/8 1/8-18 NPT
82L4G-2... 82L4N-2...	380 [280]	120 [89]	40	1,9 [4.18]	1,2 [0.04]	G1/4 1/4-18 NPT

Model	B1	B1a	B1b	B3	B5	B5a	B5b	B6	B6a	B7 ± 0,1	B7a** ± 0,1	B23 max.	B24	B24a	B25 +0,1	B27	B30 ± 0,1	B31
82L2G-2...	32	34	-	3	4	4	4,5	7	-	25	-	53	60,5	53,5	-	-	44	15
82L3.-2...	42	34	46	-	5	8	4,5	7	10	20	30	60	76,5	63,5	8	3,5	51	21
82L4.-2...	45	40	-	-	6,5	6	4,5	10	10	25	35	74	88	69,5	9	3,5	57	26,5

Model	D1	D1a	D4 H7	D4a H7	L1 max.	L2 max.	L3	L6 ± 0,05	L7 + 0,1	L8 ± 0,1	L8a ± 0,1	L9 ± 0,1	L9a** ± 0,1	L14 ± 0,1	L17	L18	L19	SW N9 h9
82L2G-2...	M5	M5	5	-	183,5	104,5	67	17	28	5	-	18	-	14	8,5	-	-	9
82L3.-2...	M5	M5	6	6	215	124	83	25	36	8	42	20	20	18	12,5	48	8	11
82L4.-2...	M6	M6	6	6	245	141	92	30	40	10	50	20	25	20	16	58,5	8	16

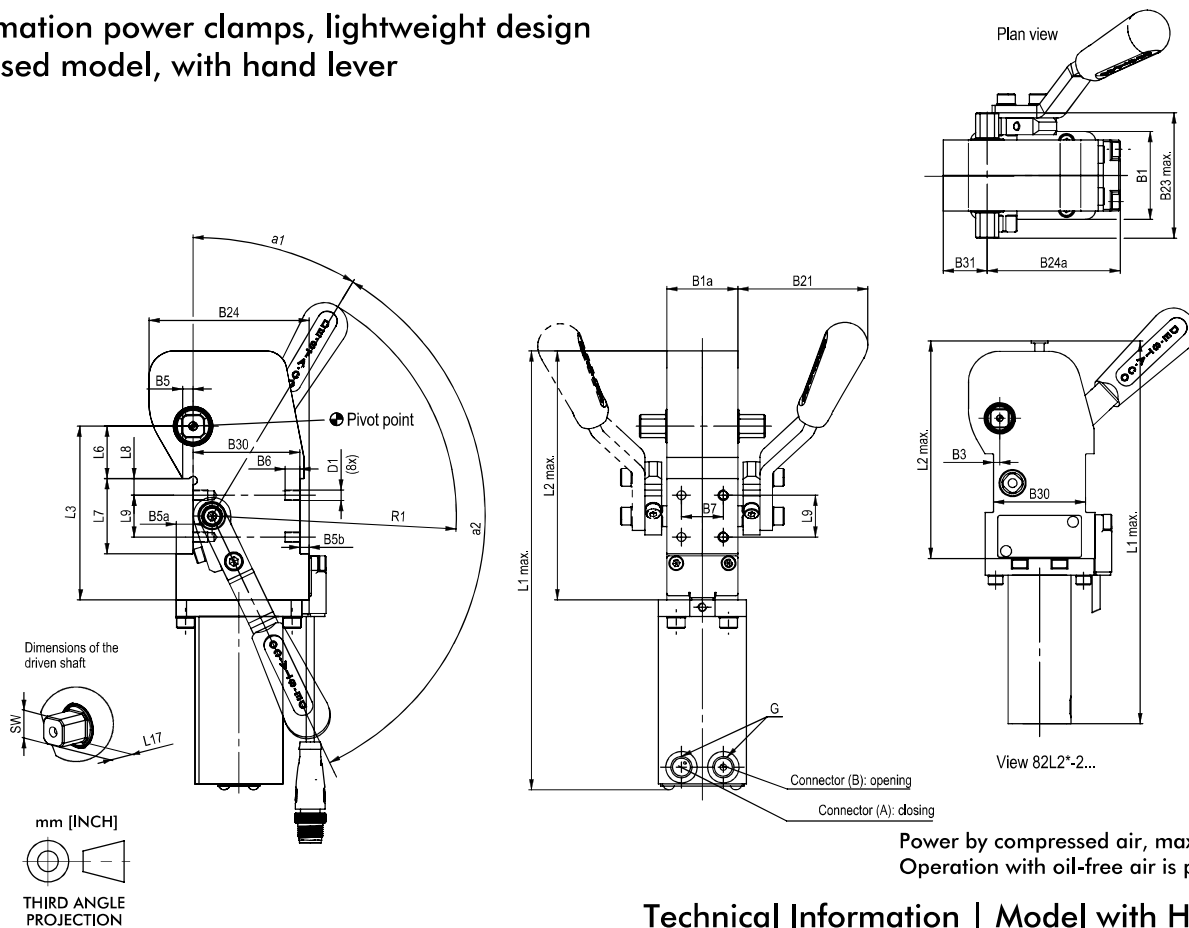
**Tolerance for distance to dowel hole ±0,02



82L..-2... SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications

Automation power clamps, lightweight design enclosed model, with hand lever



Power by compressed air, max. 6 bar
Operation with oil-free air is permissible.

Technical Information | Model with Hand Lever

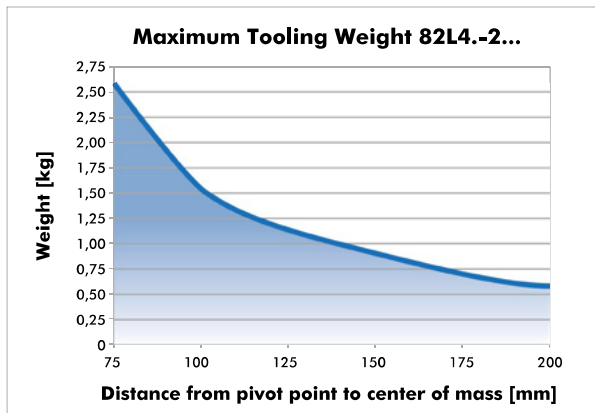
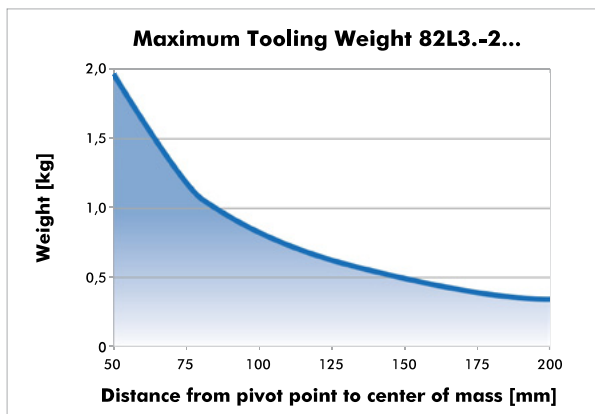
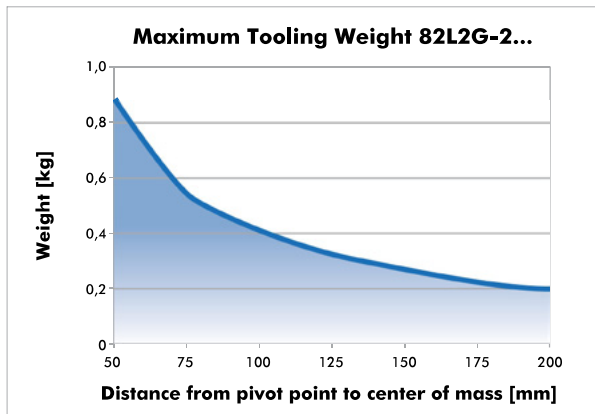
Model	Max. holding torque Nm [lb ft]	Clamping torque at 5 bar [72 psi] Nm [lb ft]	Piston Ø mm	Weight kg [lbs]	Opening angle	Air consumption per double stroke at 5 bar [72 psi] dm3 [ft3]	Connection G	B1	B1a	B3	B5	B5a
82L2G-2...	75 [55]	25 [18]	25	1,1 [2.42]	105°	0,4 [0.01]	G1/8	32	34	3	4	4
82L3G-2... 82L3N-2...	180 [133]	55 [41]	32	1,5 [3.30]		0,8 [0.03]	G1/8 1/8-18NPT	42	34	-	5	8
82L4G-2... 82L4N-2...	380 [280]	120 [89]	40	2,1 [4.62]		1,2 [0.04]	G1/4 1/4-18NPT	45	40	-	6,5	6

Model	B5b	B6	B7	B21	B23	B24	B24a	B30	B31	D1	L1	L2	L3	L6	L7	L8	L9	L17	SW	α1	α2	R1
			±0,1	~	max			±0,1			max.	max.		±0,05	+0,1	±0,1	±0,1	h9	~	~	~	
82L2G-2...	4,5	7	25	62	53	60,5	53,5	44	15	M5	183,5	104,5	67	17	28	5	18	8,5	9	36°	131°	117
82L3G-2... 82L3N-2...	4,5	7	20	62	60	76,5	63,5	51	21	M5	210	119	83	25	36	8	20	12,5	11	31°	124°	117
82L4G-2... 82L4N-2...	4,5	10	25	62	74	88	69,5	57	26,5	M6	241	137	92	30	40	10	20	16	16	31°	131°	117

Dimensions and technical information are subject to change without notice

82L2G-2, 82L3.-2, 82L4.-2 SERIES

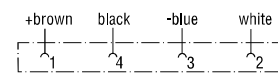
Pneumatic Power Clamps | Technical Specifications



Wiring diagram of electrical sensing system
Sensing system immune to interference from d.c. arc welding and a.c. arc welding

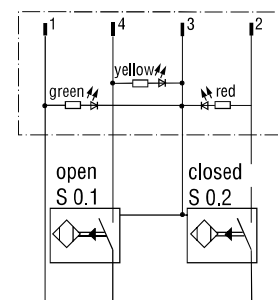
Inductive version: B8, B7, C8

Pin Assignment

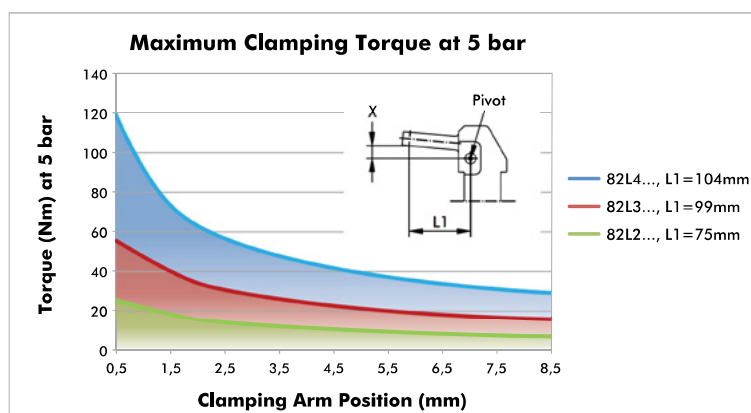


Plug M8x1

Plug M12x1



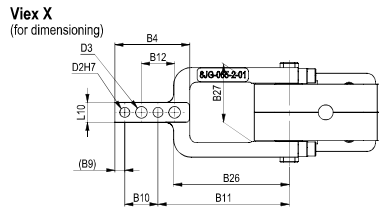
ATTENTION:
Calculation tool available. Please consult factory.



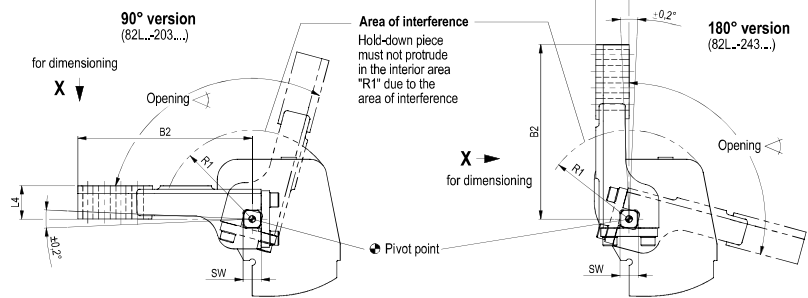
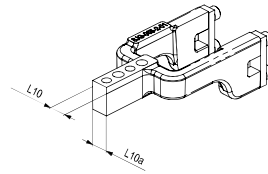
All data refers to a pneumatic pressure of 6 bar and to a opening and closing time of 1 second, as well as to the center of gravity of the complete construction directly attached to the clamp arm related to the fixed fulcrum.

82L2G-2, 82L3.-2, 82L4.-2 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications

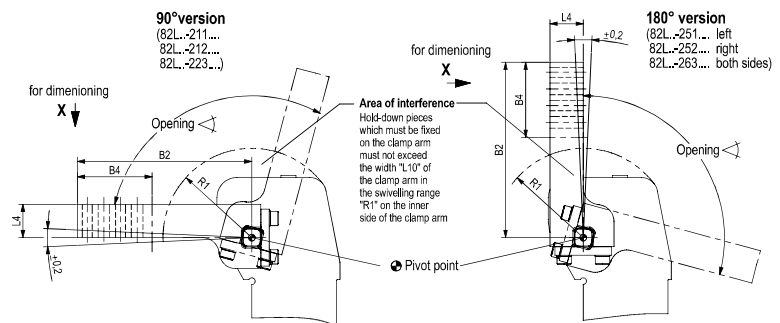
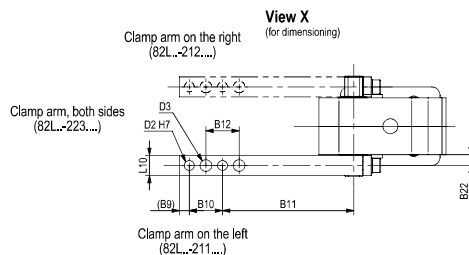


U-Type Central Clamping Arms



Model	Order no. for set of U-type central clamping arms	Opening angle for 90° Version	Opening angle for 180° Version	Weight [kg]	B2	B4	B9	B10	B11	B12	B26	B27	D2	D3	L4	L10	L10α	R1	SW J7
		max.	max.											H7					
82L2G-2...	8JG-075-3-01	105°	105°	0,3	93	45	8	20	65	20	58	36	4	6,5	20	12	-	45	9
82L3.-2...	8JG-065-2-01	105°	105°	0,37	105	45	6	20	79	20	69	35,1	6	7	20	12*	11,4	55	11
82L4.-2...	8JG-067-2-01	105°	105°	0,5	110	45	6	20	84	20	78	42,1	6	7	22	15*	14,3	58	16

Lateral Clamping Arms



Model	Order no. for set of Lateral clamping arms	Opening angle for 90° - Version	Opening angle for 180° - Version	Weight [kg]	B2	B4	B9	B10	B11	B12	B22	D2	D3	L4	L10	R1
		max.	max.													
82L3.-2...	8JG-066-1-01	105°	105°	0,25	105	45	6	20	79	20	6,5	6	7	20	12	55
82L4.-2...	8JG-068-1-01	105°	105°	0,3	92	45	6	20	66	20	8,5	6	7	22	15	58

Dimensions and technical information are subject to change without notice

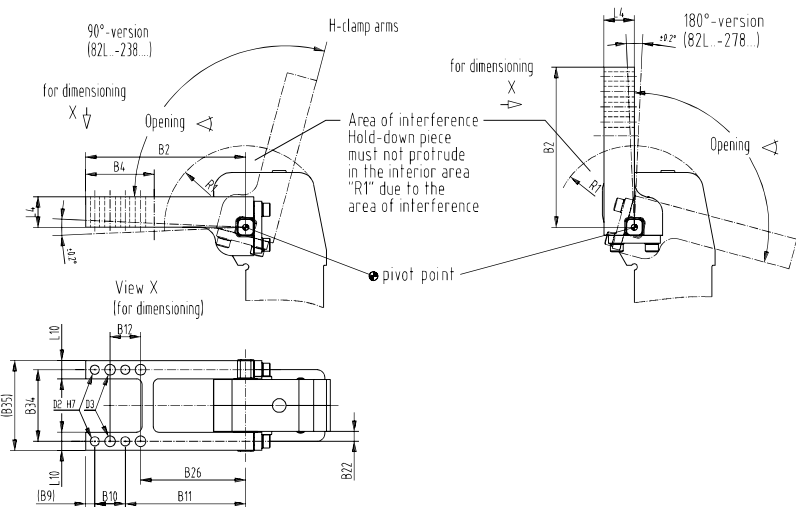
PC-PPC | 20



82L2G-2, 82L3.-2, 82L4.-2 SERIES

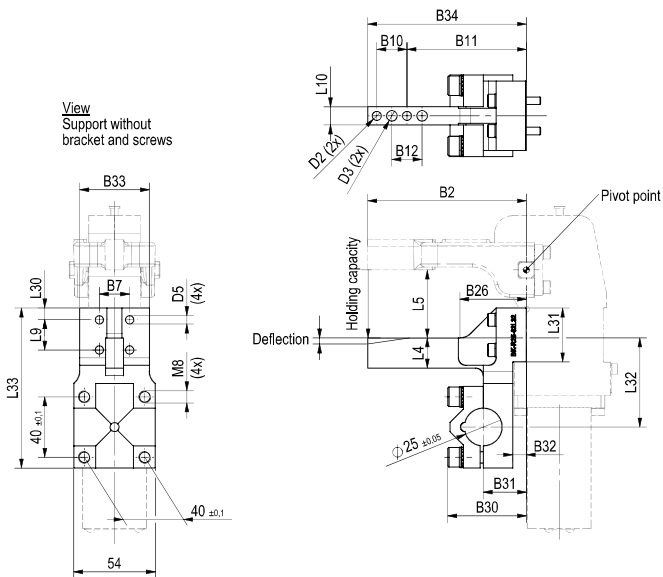
Pneumatic Power Clamps | Dimensions | Technical Specifications

H- Clamping Arms



Model	Order no. for set of H-clamping arms	Opening angle for 90° - angle for 180°		Weight [kg]	B2	B4	B9	B10	B11	B12	B26	B34	B35	D2	D3	L4	L10	R1
		max.	max.												H7			
82L3.-2.8...	8JG-363-1-01	105°	105°	0,52	105	45	6	20	79	20	69	47,1	59,1	6	7	20	12	55
82L4.-2.8...	8JG-364-1-01	105°	105°	0,77	110	45	6	20	84	20	78	57,1	72,1	6	7	22	15	58

Counter-Support



* = Tolerance for distance to dowel holes ±0,02
 ** = distance from pivot point

Model	Fit for Model	Holding Capacity max. [N]	Deflection [mm]	Weight [kg]	B2	B7*	B10	B11	B12	B26**	B30**	B31**	B32**
						±0,1	±0,02						
BK-R25-82L25-1	82L2_	914	0,2	0,4	93	25	20	62	20	42	55	31,5	11
BK-R25-82L32-1	82L3_	660	0,16	0,5	105	20	20	79	20	44	52	28,5	9
BK-R25-82L40-1	82L4_	2000	0,37	0,56	110	25	20	84	20	41	52	28,5	7,5

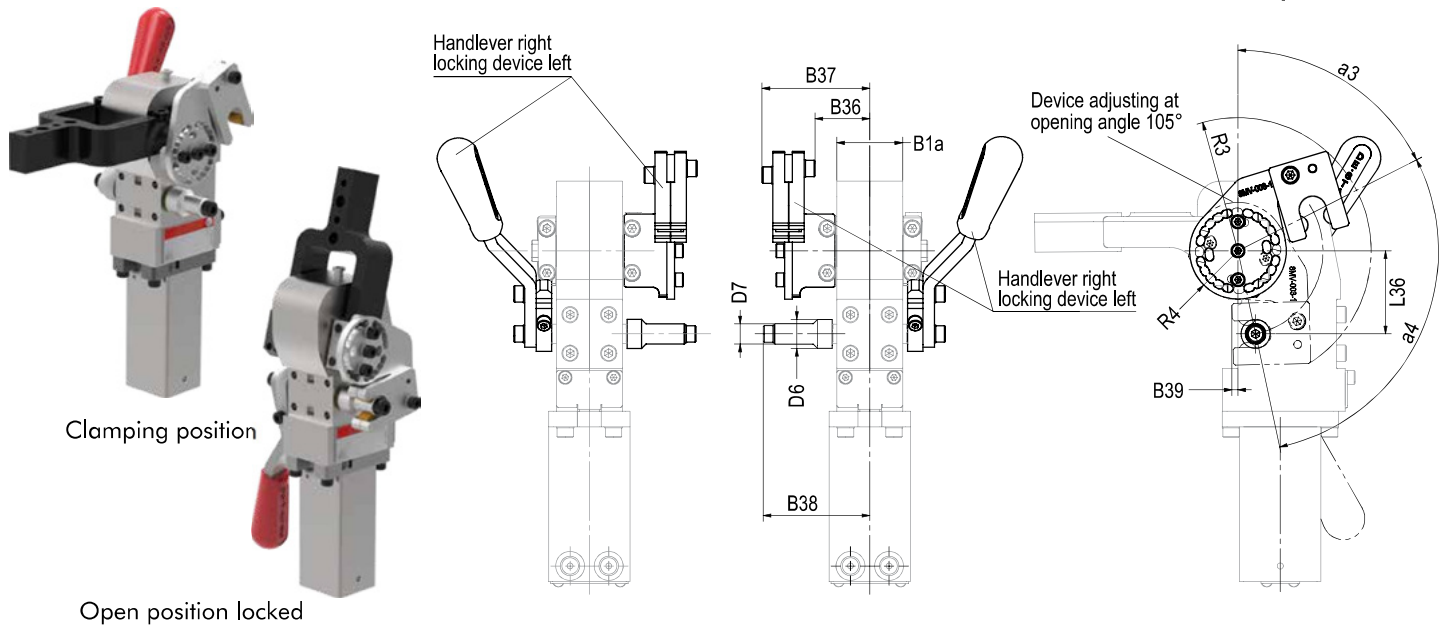
Model	B33	B34	D2	D3	D5	L4	L5	L9	L10	L30	L31	L32	L33
			∅ H7	∅	∅	±0,1		±0,1			-0,1		
BK-R25-82L25-1	35	90	4	6,5	5,5	20	45	18	12	4,95	27,9	50,9	106
BK-R25-82L32-1	46	105	6	7	5,5	20	45	20	12	7,85	35,7	59	106
BK-R25-82L40-1	40	110	6	7	6,6	22	45	20	15	9,85	39,7	66	108



82L2G-2, 82L3.-2, 82L4.-2 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications

Hold Open Device


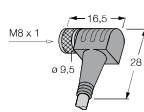

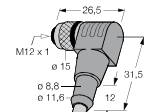


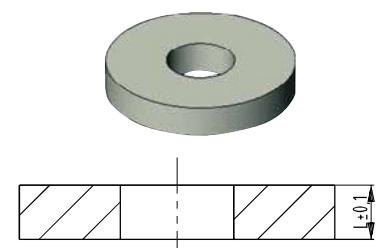
Model	Fit for Model	B1 α	B36	B37	B38	B39	D6	D7	L36	R3	R4	α 3	α 4
82ZB-036-1	82L2.-2....H..	34	25	47	47	3	15	10	31	53	18,5	63°	105°
82ZB-037-1	82L3.-2....H..	34	28	56	56	4	15	10,5	43	69	25	63°	105°
82ZB-038-1	82L4.-2....H..	40	30	58	58	3	15	10,5	50	76	27	63°	105°

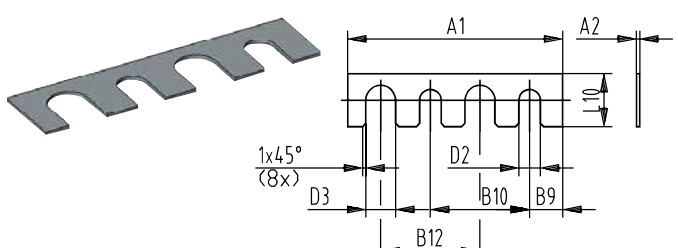
82L2G-2, 82L3.-2, 82L4.-2 ACCESSORIES

Pneumatic Power Clamps | For Use With or Without Hand Lever

Clamping Arms	Order No. for set 82L2G-2....0../ 82L2G-2....H..	Order No. for set 82L3.-2....0../ 82L3.-2....H..	Order No. for set 82L4.-2....0../ 82L4.-2....H..
U-central	8JG-075-3-01	8JG-065-2-01	8JG-067-2-01
Lateral	--	8JG-066-1-01	8JG-068-1-01
H-Shape	--	8JG-363-1-01	8JG-364-1-01

Connector cable (1 connector socket & 5 m cable)			
Connector socket M8x1 straight 4-pin		8EL-009-1	8EL-009-1
Connector socket M8x1 angular 4-pin		8EL-007-1	8EL-007-1
Connector socket M12x1 straight 5-pin		8EL-002-1	8EL-002-1
Connector socket M12x1 angular 4-pin		8EL-003-1	8EL-003-1

Opening angle limitation	Opening Angle	82L2G-2		82L3.-2		82L4.-2	
		Order No.	L ± 0,1	Order No.	L ± 0,1	Order No.	L ± 0,1
	15°	8CE-282-1	28,6	8CE-296-1	33,3	8CE-310-1	38,4
	30°	8CE-284-1	22	8CE-298-1	26,9	8CE-312-1	31
	45°	8CE-286-1	18,5	8CE-300-1	21,5	8CE-314-1	24,7
	60°	8CE-288-1	14	8CE-302-1	16,3	8CE-316-1	18,6
	75°	8CE-290-1	7,9	8CE-304-1	11	8CE-318-1	11
	90°	8CE-292-1	4,7	8CE-306-1	5,5	8CE-320-1	6,2

Shim for clamping arm	Order No.	A1	A2	D2	D3	B9	B10	B12	L10
	82ZB-SH4001		0,1						
	82ZB-SH4002		0,2						
	82ZB-SH4005	42	0,5	6,5	7	6	20	20	11,8
	82ZB-SH4010		1,0						
	82ZB-SH4020		2,0						
	82ZB-SH4050		5,0						

Spare Parts	Order No. for set		Order No. for set		Order No. for set	
	82L2G-2....0..	82L2G-2....H..	82L3.-2....0..	82L3.-2....H..	82L4.-2....0..	82L4.-2....H..
Cylinder	8PW-095-2		82L3G-2 (G port): 8PW-096-2 82L3N-2 (NPT port): 8PW-102-2		82L4G-2 (G port): 8PW-097-2 82L4N-2 (NPT port): 8PW-103-2	

Sensor Kit						
B8 Connector plug, M12x1, cable			8EA-139-1			
B7 Connector plug, M12x1, parallel with cylinder			8EA-138-1			
C8 Connector plug, M8x1, parallel with cylinder			8EA-137-1			
Hand Lever	--	8KB-031-1	--	8KB-031-1	--	8KB-032-1

82M AND TCC SERIES

Pneumatic Power Clamps | Product Overview

82M Series Enclosed Power Clamp

Shown with optional U-Arms and Cylinders with Internal Hold Open Device



80mm	63mm	50mm	40mm
Max Holding Torque 3000 Nm	Max Holding Torque 1800 Nm	Max Holding Torque 1300 Nm	Max Holding Torque 380 Nm
Max Clamping Torque 850 Nm at 5bar	Max Clamping Torque 420 Nm at 5bar	Max Clamping Torque 270 Nm at 5bar	Max Clamping Torque 120 Nm at 5bar



"B" Front Mount available for 82M and TCC size 40mm
Same mounting pattern as size 50 and 63mm



NAAMS Lateral Mounting available on 82M and TCC in addition to narrow, wide and NAAMS Clamp Arm Shafts

Ordering Information

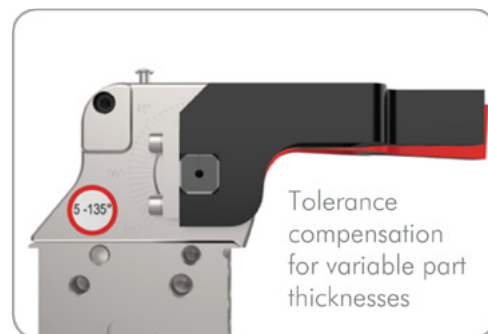
Dimensional Drawings

TCC Tolerance Compensating Power Clamp

Shown with optional U-Arms and Cylinders with Internal Hold Open Device



63mm	50mm	40mm
Max Holding Torque 295 Nm	Max Holding Torque 175 Nm	Max Holding Torque 85 Nm
Max Clamping Torque 295 Nm at 5bar	Max Clamping Torque 175 Nm at 5bar	Max Clamping Torque 85 Nm at 5bar



- Tolerance compensation for variable sheet metal thicknesses within three degrees of arm movement
- There is no need for shimming

Ordering Information

Dimensional Drawings



82M AND TCC SERIES

Pneumatic Power Clamps | Product Overview

Adjusting the Arm Opening Angle

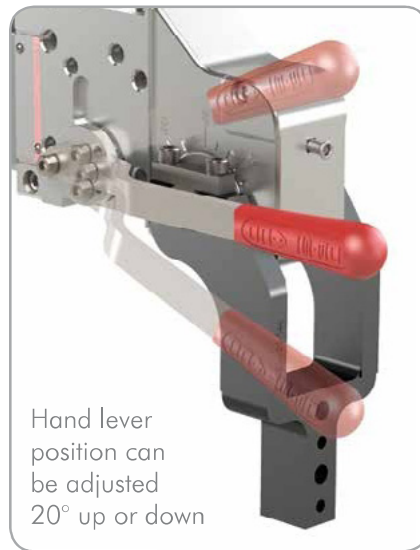


Easily adjust arm opening angle with an M5 Allen wrench.

- Move clamp arm to full open position.
- Using Allen wrench, release mechanism (leave Allen wrench in place).
- Move clamp arm to desired opening.
- Tighten to 20 Nm.

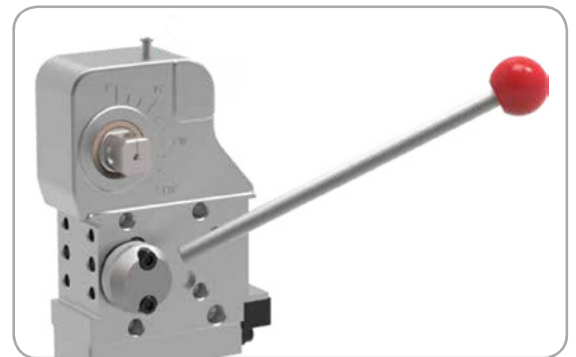
Enclosed Power Clamp Hand Lever (82M-3E Models Only)

Standard Adjustable Hand Lever



- Hand lever position is adjustable for improved ergonomics
- Handle can be mounted on the left or right side

Weldable Hand Lever



- Hand lever can be welded into a permanent position.
- Handle can be mounted on the left or right side

Dimensional Drawings

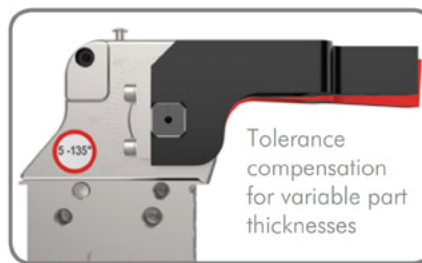
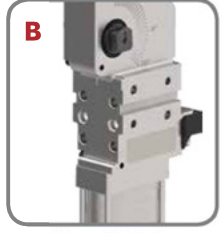
TCC-2 SERIES

Pneumatic Power Clamps with Tolerance Compensation | Ordering Information

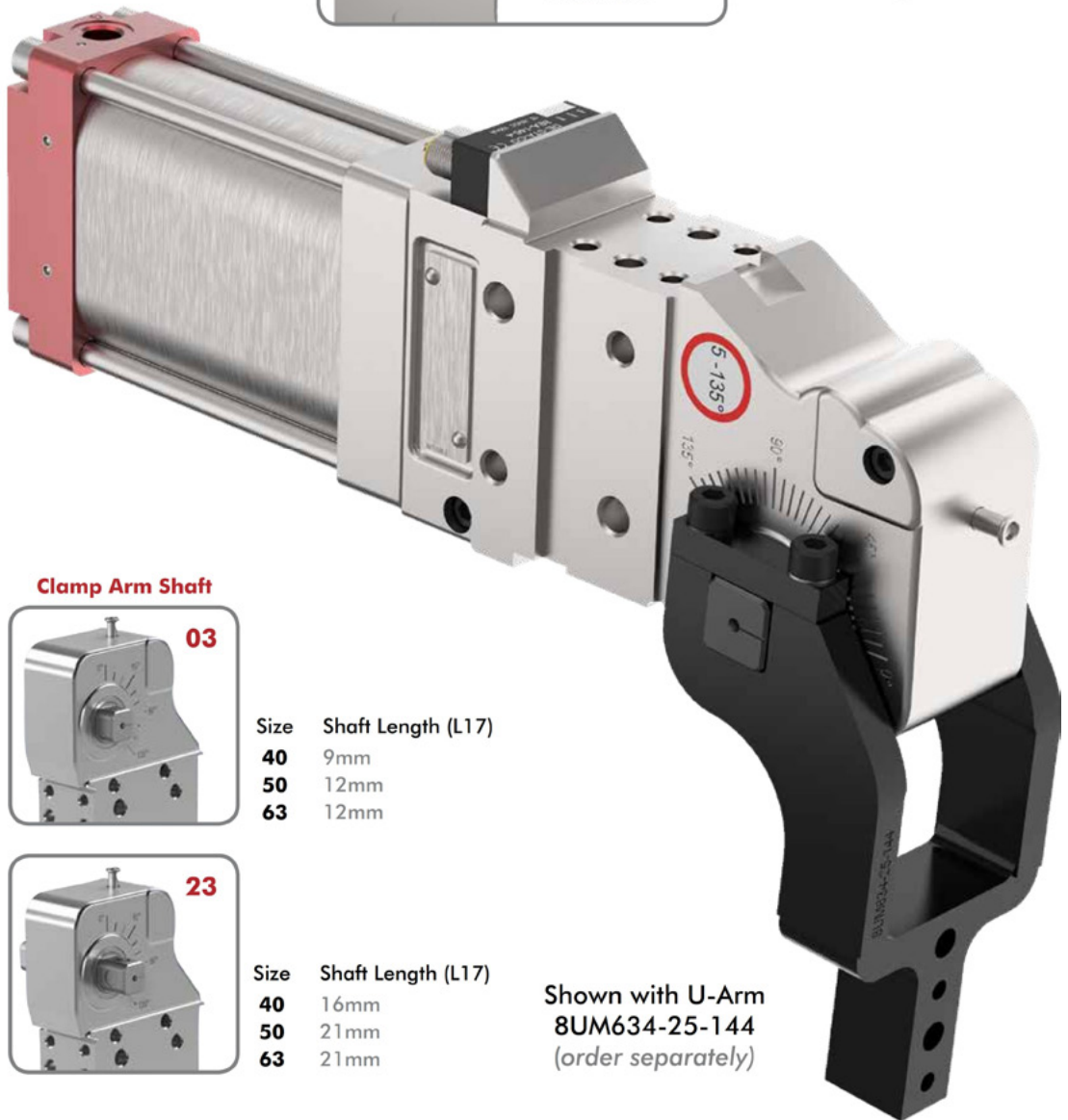
TCC-2 **E** **03** **00** **6A** **L8**

Base Model	Mounting	Description	Clamp Arm Shaft	Description	Handle	Description
	E	Standard Mounting	03	for U-Arms	00	No Hand lever
	B	Common Front Mount for Size 40 only (same mount pattern as size 50 & 63)	23	for Lateral Arms		
	N	NAAMS Side Mounting for Size 63 only	See below for further details			

Mounting



- Tolerance compensation for variable sheet metal thicknesses within three degrees of arm movement
- There is no need for shimming



Clamp Arm Shaft



Size	Shaft Length (L17)
40	9mm
50	12mm
63	12mm



Size	Shaft Length (L17)
40	16mm
50	21mm
63	21mm

TCC-2 SERIES

Pneumatic Power Clamps with Tolerance Compensation | Ordering Information

Sensor	Description
00	No sensor
L8*	PNP with In-line Connector (Replacement No.: 8EA-146-4)
N8*	NPN with In-line Connector (Replacement No.: 8EA-154-4)
L9	PNP with 90 deg Connection (Replacement No.: 8EA-147-4)
N9	NPN with 90 deg Connection (Replacement No.: 8EA-155-4)
K8	PNP with Cable Connection (Replacement No.: 8EA-158-4)
K9	NPN with Cable Connection (Replacement No.: 8EA-167-4)

*Not available for use with 4V, 5V, 6V cylinder option.



Cylinder - Standard

- 40** 40mm Cylinder - G1/8 Port
- 50** 50mm Cylinder - G1/4 Port
- 5N** 50mm Cylinder - 1/4-18 NPT Port
- 63** 63mm Cylinder - G1/4 Port
- 6N** 63mm Cylinder - 1/4-18 NPT Port



Cylinder with Unlockable Return Valve

- 4C** 40mm Cylinder - G1/8 Port
- 5C** 50mm Cylinder - G1/4 Port
- 5D** 50mm Cylinder - 1/4-18 NPT Port
- 6C** 63mm Cylinder - G1/4 Port
- 6D** 63mm Cylinder - 1/4-18 NPT Port



Cylinder with Internal Hold Open Device

- 4A** 40mm Cylinder - G1/8 Port
- 5A** 50mm Cylinder - G1/4 Port
- 5B** 50mm Cylinder - 1/4-18 NPT Port
- 6A** 63mm Cylinder - G1/4 Port
- 6B** 63mm Cylinder - 1/4-18 NPT Port



Cylinder with Piston Rod Locking Device

- 4V** 40mm Cylinder - G1/8 Port
- 5V** 50mm Cylinder - G1/4 Port
- 6V** 63mm Cylinder - G1/4 Port



40

Max Holding Torque
85 Nm
Max Clamping Torque
85 Nm at 5bar

50

Max Holding Torque
175 Nm
Max Clamping Torque
175 Nm at 5bar

63

Max Holding Torque
295 Nm
Max Clamping Torque
295 Nm at 5bar

Dimensions and technical information are subject to change without notice

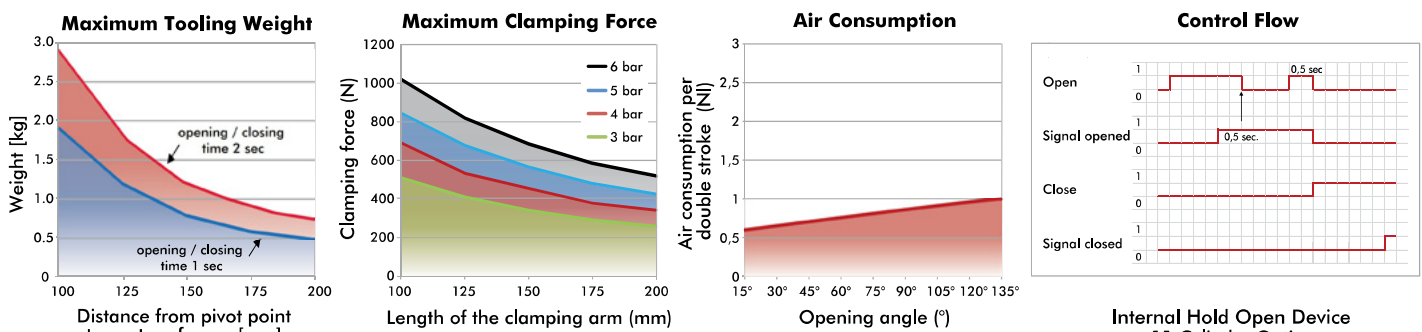
PC-PPC | 28



TCC-2 SERIES

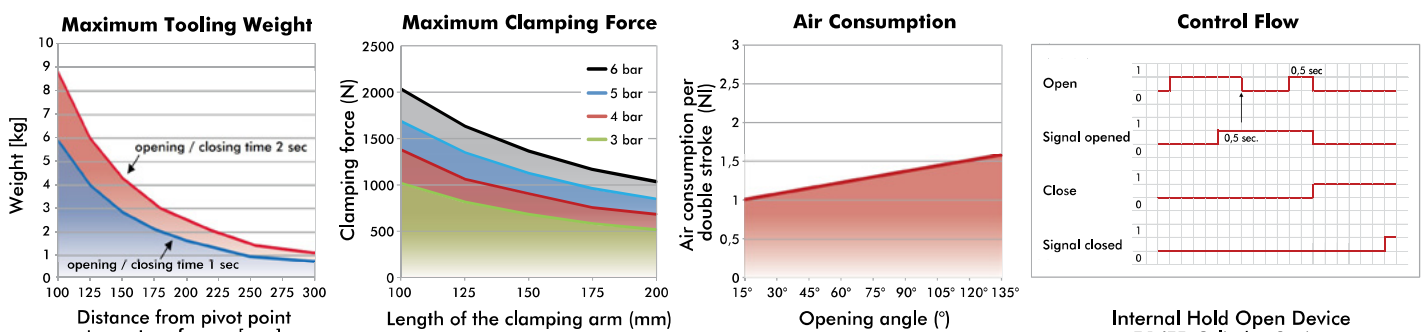
Pneumatic Power Clamps with Tolerance Compensation | Technical Specifications

Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
TCC-2.....40..	85	85	40	1,6	0,9
TCC-2.....4A..					
TCC-2.....4B..					
TCC-2.....4C..				1,7	
TCC-2.....4V..				1,6	



ATTENTION: Calculation tool available. Please consult factory.

Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
TCC-2E....50..	175	175	50	2,8	1,6
TCC-2E....5N..					
TCC-2E....5A..					
TCC-2E....5B..					
TCC-2E....5C..				3,0	
TCC-2E....5D..					
TCC-2E....5V..				2,9	



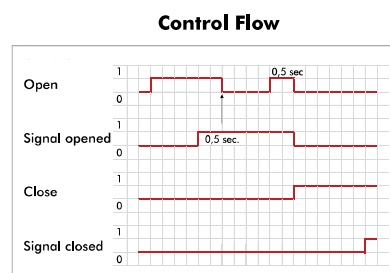
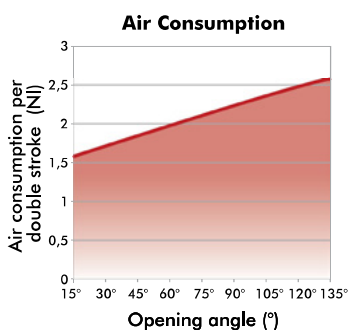
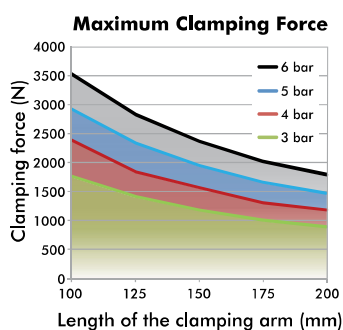
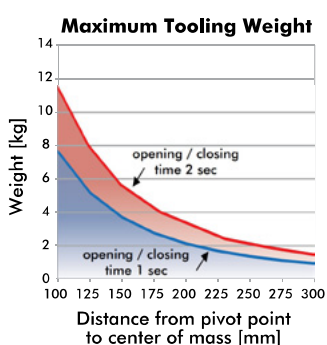
ATTENTION: Calculation tool available. Please consult factory.



TCC-2 SERIES

Pneumatic Power Clamps with Tolerance Compensation | Technical Specifications

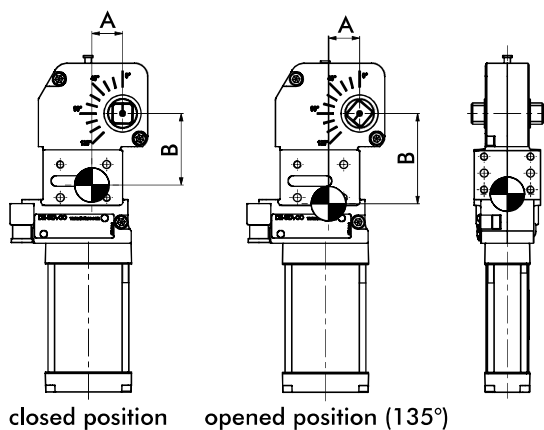
Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
TCC-2.....63..	295	295	63	3,8	2,6
TCC-2.....6N..				4,0	
TCC-2.....6A..					
TCC-2.....6B..					
TCC-2.....6C..					
TCC-2.....6D..					
TCC-2.....6V..	4,2				



Internal Hold Open Device
6A/6B Cylinder Option

ATTENTION: Calculation tool available. Please consult factory.

Center of Mass



Model	A		B		Weight
	Closed	Open	Closed	Open	
TCC-2E...40..	23	24	55	69	1,5
TCC-2B...40..	24	24	54	68	
TCC-2E...4A..	22	23	72	86	1,6
TCC-2B...4A..	23		85		
TCC-2E...4C..	25	26	77	89	1,7
TCC-2B...4C..	26		76	88	
TCC-2E...4V..	24	24	66	80	1,6
TCC-2B...4V..			79		
TCC-2E...50..	24	25	70	87	2,6
TCC-2E...5N..			83	99	
TCC-2E...5A..			83	99	
TCC-2E...5B..	27	27	96	110	3,0
TCC-2E...5C..			84	99	
TCC-2E...5D..			84	99	
TCC-2E...5V..	25	26	84	99	2,9
TCC-2.....63..	27	28	89	105	3,7
TCC-2.....6N..			98	114	
TCC-2.....6A..					
TCC-2.....6B..					
TCC-2.....6C..					
TCC-2.....6D..					
TCC-2.....6V..	28	28	103	119	3,9

Dimensions and technical information are subject to change without notice

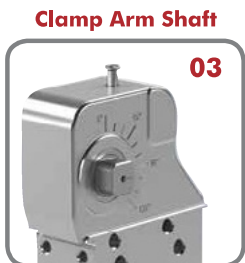
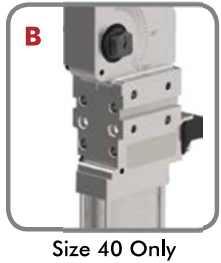
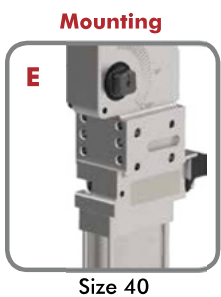
82M-3 SERIES

Pneumatic Power Clamps | Ordering Information

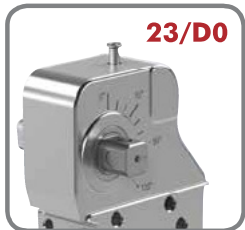
82M-3 **E** **23** **H0** **50** **L8** - **1** ← North America Only

Base Model	Mounting	Description	Clamp Arm Shaft	Description	Handle	Description
	E	Standard Mounting	03	for U-Arms	00	No Hand lever
	B	Common Front Mount for Size 40 only (same mount pattern as size 50 & 63)	23	for Lateral Arms	H0	Hand Lever
	N	NAAMS Side Mounting for Size 63 only	D0	for Lateral Arms (size 63 NAAMS only)	HS	Weldable

See below for further details

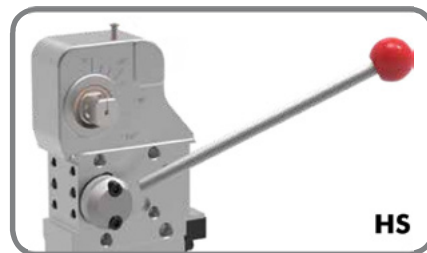


Size	Shaft Length (L17)
40	9mm
50	12mm
63	12mm

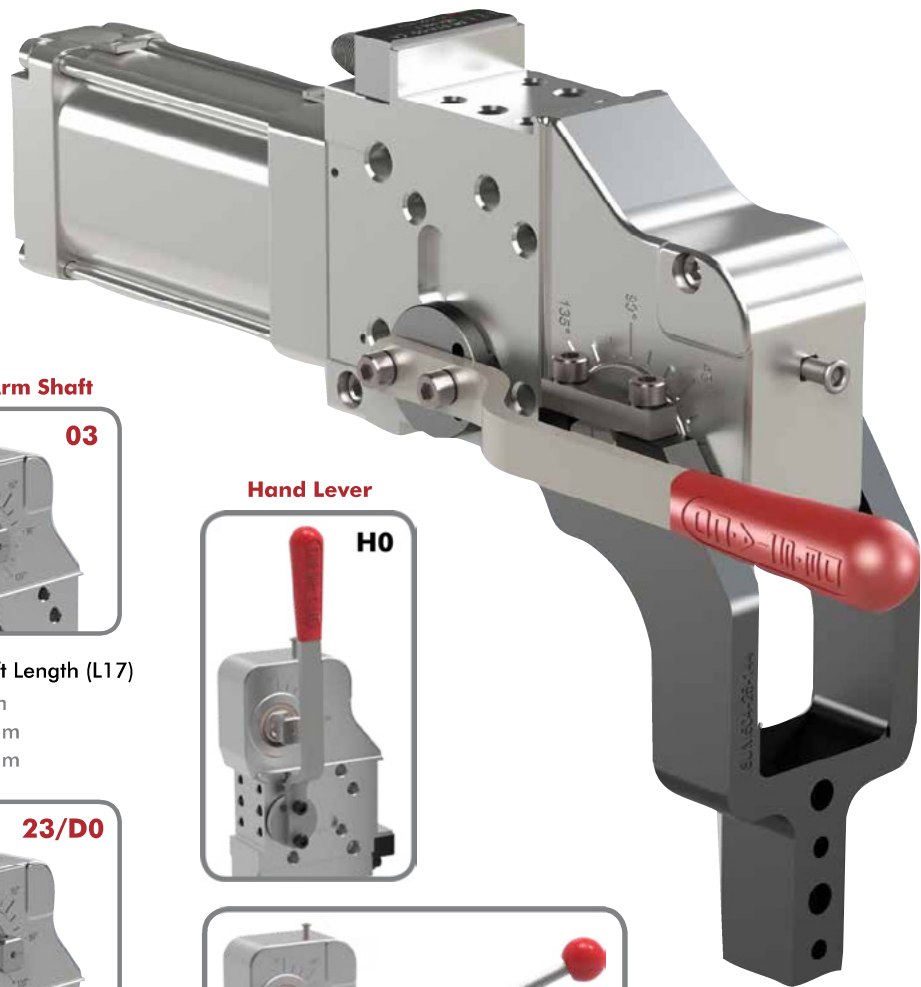


Size	Shaft Length (L17)
23	
40	16mm
50	21mm
63	21mm
80	32mm

Size	Shaft Length (L17)
D0	
63	26mm



Hand Lever	Description
00	No Hand Lever
H0	Standard Hand Lever (not compatible with cylinder options *A and *B)
HS	Weldable Hand Lever (not compatible with cylinder options *A and *B)



Shown with U-Arm
8UM504-25-144
(order separately)

82M-3 SERIES

Pneumatic Power Clamps | Ordering Information

Sensor	Description
00	No sensor
L8	PNP with In-line Connector (Replacement No.: 8EA-146-4)
N8	NPN with In-line Connector (Replacement No.: 8EA-154-4)
L9	PNP with 90 deg Connection (Replacement No.: 8EA-147-4)
N9	NPN with 90 deg Connection (Replacement No.: 8EA-155-4)
K8	PNP with Cable Connection (Replacement No.: 8EA-158-4)
K9	NPN with Cable Connection (Replacement No.: 8EA-167-4)



Cylinder - Standard

- 40** 40mm Cylinder - G1/8 Port
- 50** 50mm Cylinder - G1/4 Port
- 5N** 50mm Cylinder - 1/4-18 NPT Port
- 63** 63mm Cylinder - G1/4 Port
- 6N** 63mm Cylinder - 1/4-18 NPT Port
- 80** 80mm Cylinder - G1/4 Port
- 8N** 80mm Cylinder - 1/4-18 NPT Port



Cylinder with Internal Hold Open Device

- 4A** 40mm Cylinder - G1/8 Port
- 5A** 50mm Cylinder - G1/4 Port
- 5B** 50mm Cylinder - 1/4-18 NPT Port
- 6A** 63mm Cylinder - G1/4 Port
- 6B** 63mm Cylinder - 1/4-18 NPT Port
- 8A** 80mm Cylinder - G1/4 Port
- 8B** 80mm Cylinder - 1/4-18 NPT Port



40

Max Holding Torque
380 Nm
Max Clamping Torque
120 Nm at 5bar

50

Max Holding Torque
1300 Nm
Max Clamping Torque
270 Nm at 5bar

63

Max Holding Torque
1800 Nm
Max Clamping Torque
420 Nm at 5bar

80

Max Holding Torque
3000 Nm
Max Clamping Torque
850 Nm at 5bar

Dimensions and technical information are subject to change without notice

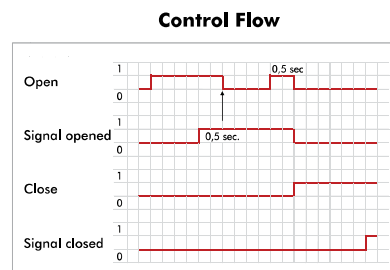
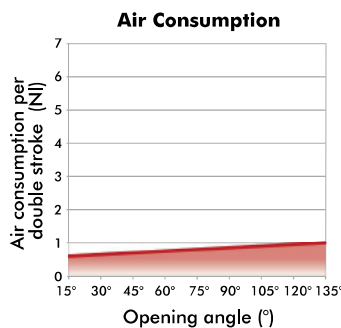
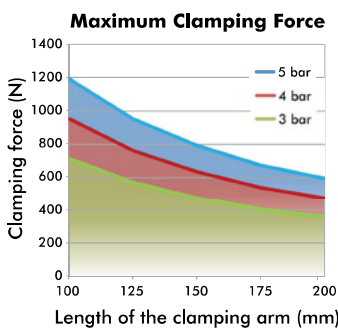
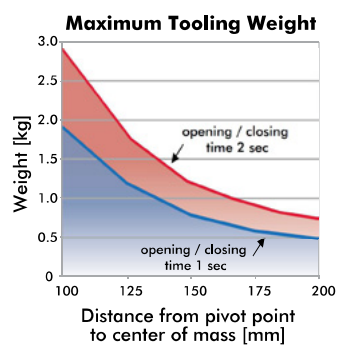
PC-PPC | 32



82M-3 SERIES

Pneumatic Power Clamps | Technical Specifications

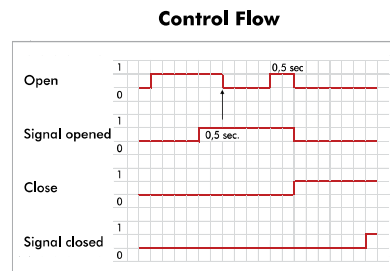
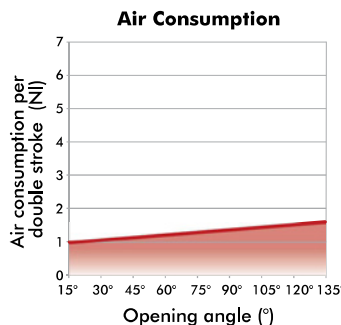
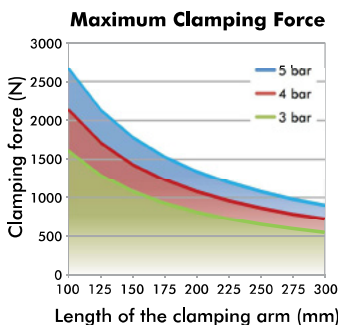
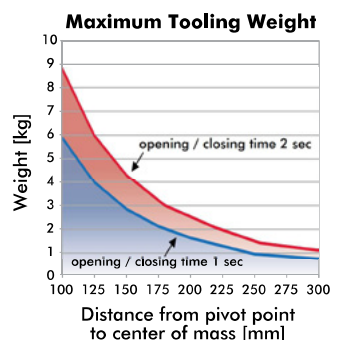
Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...4...	380	120	40	1,5	0,9
82M-3B...4...					



Internal Hold Open Device
4A Cylinder Option

ATTENTION: Calculation tool available. Please consult factory.

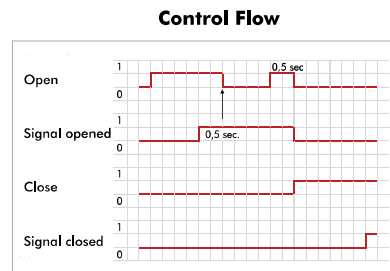
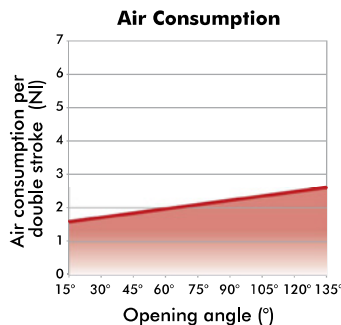
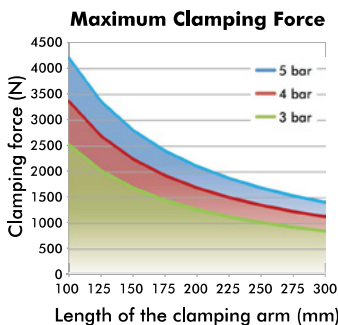
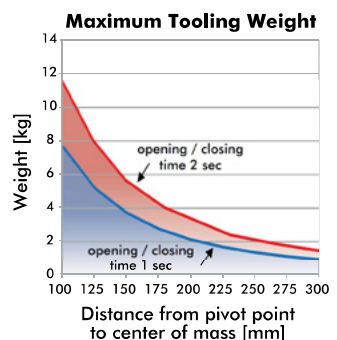
Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...5...	1300	270	50	2,8	1,6



Internal Hold Open Device
5A/5B Cylinder Option

ATTENTION: Calculation tool available. Please consult factory.

Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...6...	1800	420	63	3,8	2,6
82M-3N...6...					



Internal Hold Open Device
6A/6B Cylinder Option

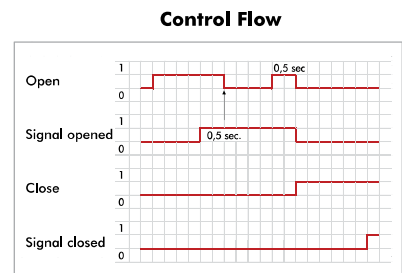
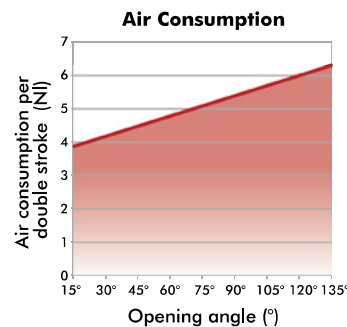
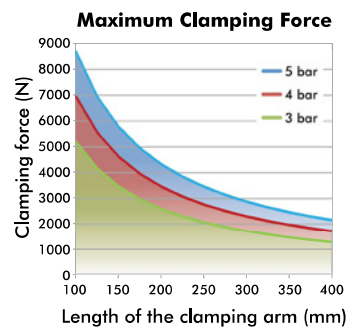
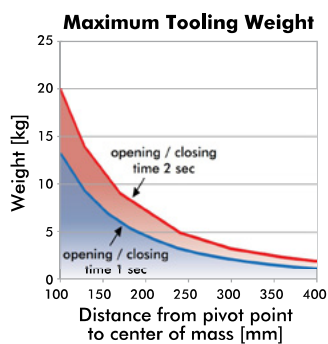
ATTENTION: Calculation tool available. Please consult factory.



82M-3 SERIES

Pneumatic Power Clamps | Technical Specifications

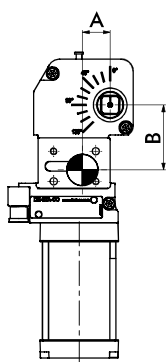
Model	Max. Holding Torque (Nm)	Clamping Torque at 5 bar (Nm)	Cylinder Ø (mm)	Weight (kg)	Air Consumption per double stroke at 5 bar (liter)
82M-3E...80..	3000	850	80	8,7	6,3
82M-3E...8N..				8,8	
82M-3E...8A..					
82M-3E...8B..					



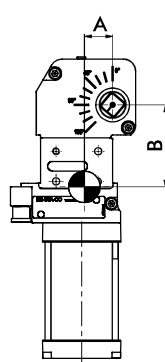
Internal Hold Open Device
8A/8B Cylinder Option

ATTENTION: Calculation tool available. Please consult factory.

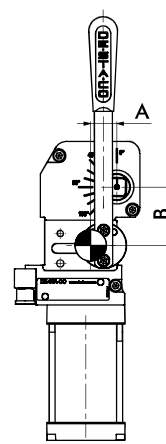
Center of Mass



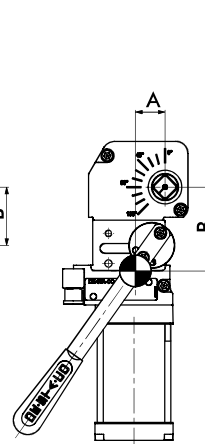
closed position



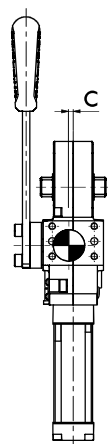
opened position (135°)



closed position



opened position (135°)



Model	Without Handle				Weight
	A		B		
	Closed	Open	Closed	Open	
82M-3E...40..	23		55	69	1,5
82M-3B...40..	24	24	54	68	
82M-3E...4A..	22		72	86	1,6
82M-3B...4A..	23	23	72	85	
82M-3E...50..			70	87	2,8
82M-3E...5N..	24	25	83	99	
82M-3E...5A..			83	99	
82M-3E...5B..			88	103	3,8
82M-3...63..	27	28	98	114	
82M-3...6N..			98	114	
82M-3...6A..			98	114	
82M-3...6B..			98	123	8,7
82M-3E...80..	36	37	104	129	
82M-3E...8N..			104	129	
82M-3E...8A..			104	129	
82M-3E...8B..			104	129	

Model	With Handle					Weight
	A		B		C	
	Closed	Open	Closed	Open		
82M-3E...40..	22	25	49	70	4	1,6
82M-3B...40..	24	27	46	67		
82M-3E...50..	23	30	62	85	3	3,1
82M-3E...5N..	26	30	80	102		
82M-3...6N..	26	30	80	102		
82M-3E...80..	35	38	93	122	2	9,2
82M-3E...8N..	35	38	93	122		

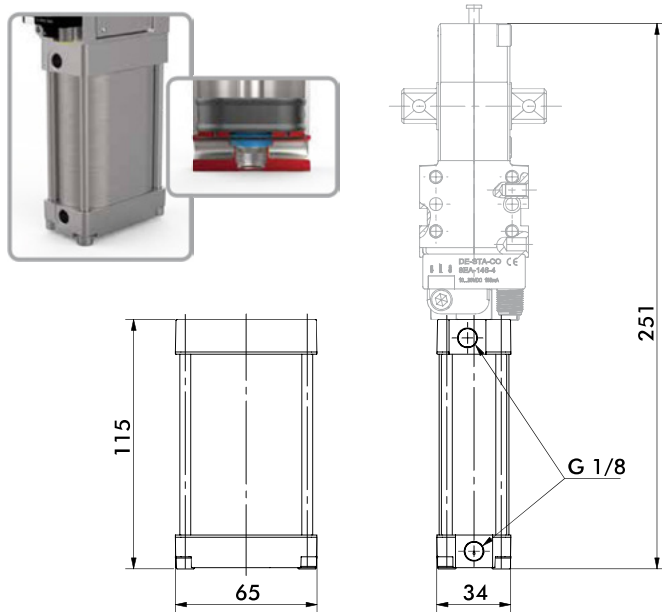
Dimensions and technical information are subject to change without notice

82M-3/TCC-2 SERIES 40MM

Pneumatic Power Clamps | Cylinder Options Dimension and Technical Specifications

82M-3/TCC-2.....40

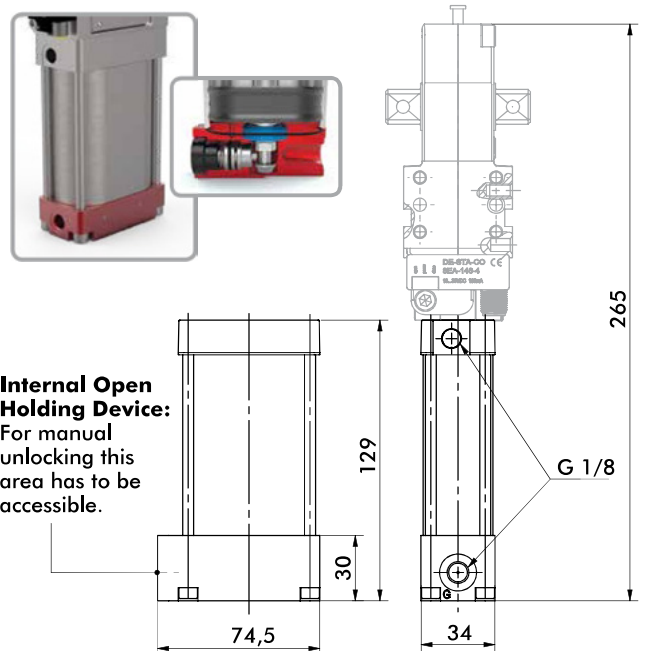
Standard Cylinder



82M-3/TCC-2.....4A

Cylinder with Internal Hold Open Device

Securely holds clamp in the open position.

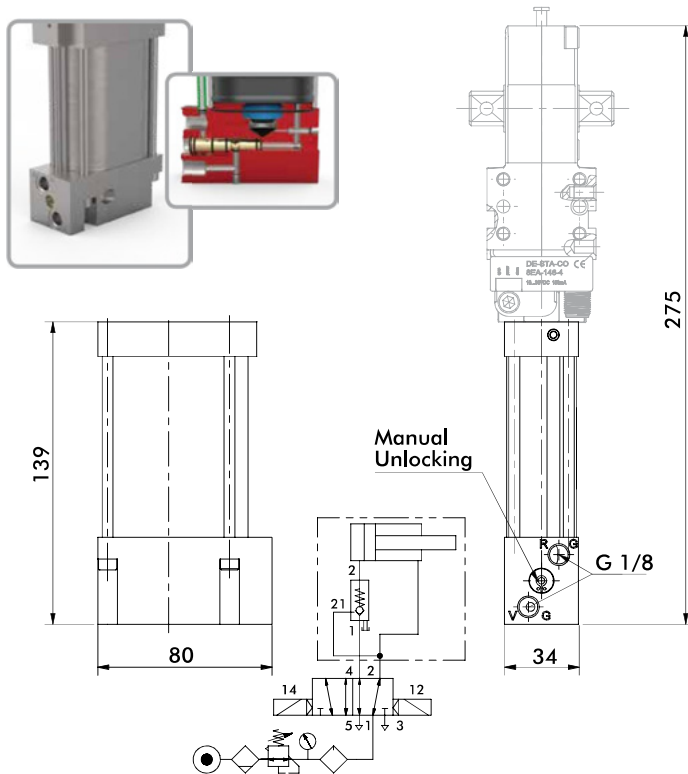


Internal Open Holding Device:
For manual unlocking this area has to be accessible.

TCC-2.....4C

Cylinder with Unlock-able Return Valve

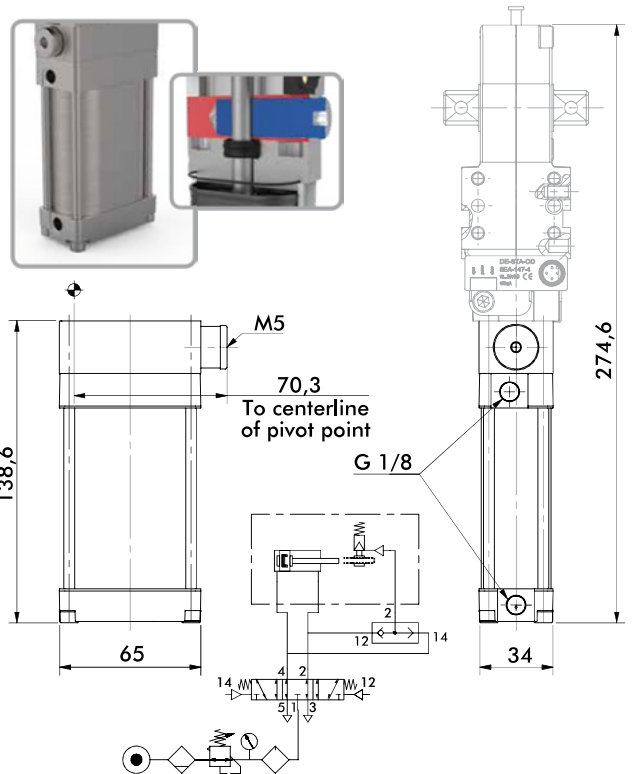
Pneumatically holds clamp arm in the closed position when air is released.



TCC-2.....4V

Cylinder with Rod Locking Device

Uses friction to clamp rod at any point between open and closed positions.

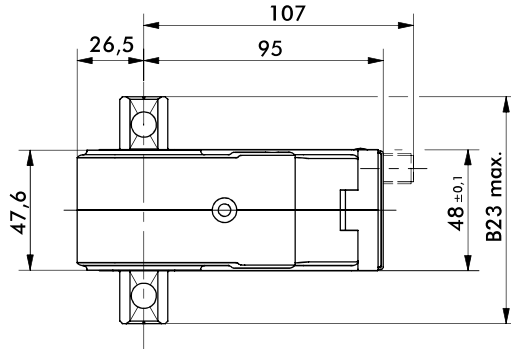


Dimensions and technical information are subject to change without notice

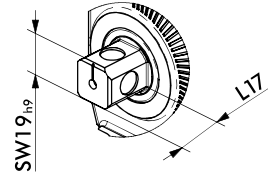
82M-3/TCC-2 SERIES 50MM

Pneumatic Power Clamps | Dimensions

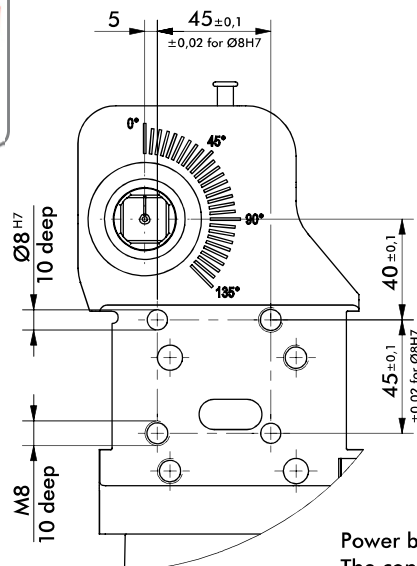
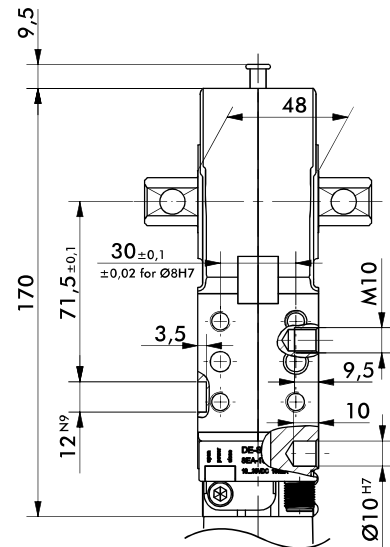
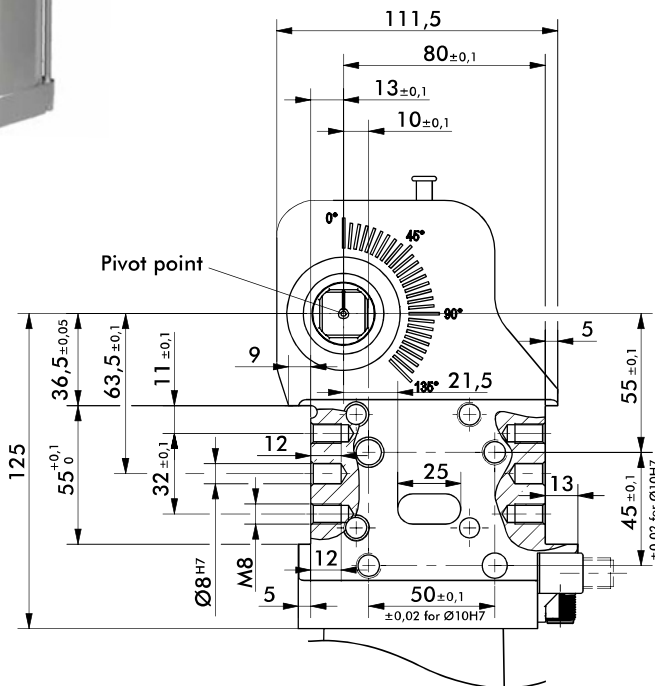
82M-3E/TCC-2E...5.



Dimensions of the driven shaft



Model	B23 Max.	L17
82M-3E03/TCC-2E03..5...	72	12
82M-3E23/TCC-2E23..5...	90	21



mm [INCH]



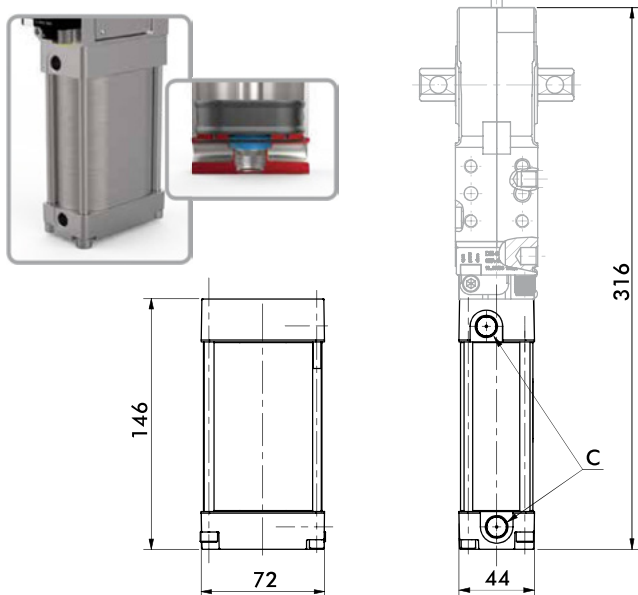
Power by compressed air, max. 6 bar operation with oil-free air is permissible. The connector socket and the cable are not supplied with the unit. Safe "holding/clamping" only under pressurization (for TCC models only).

82M-3/TCC-2 SERIES 50MM

Pneumatic Power Clamps | Cylinder Options Dimension and Technical Specifications

82M-3E/TCC-2E...50/5N

Standard Cylinder



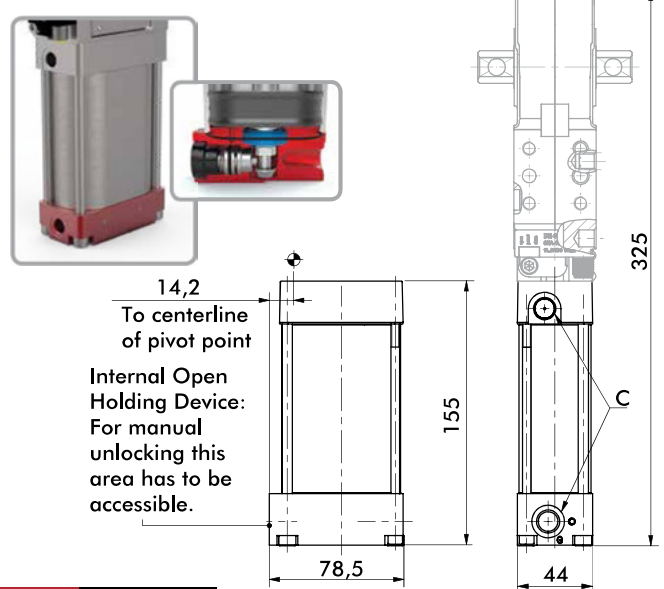
Ports	C
50	G1/4
5N	1/4-18 NPT

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

82M-3E/TCC-2E...5A/5B

Cylinder with Internal Hold Open Device

Securely holds clamp in the open position.



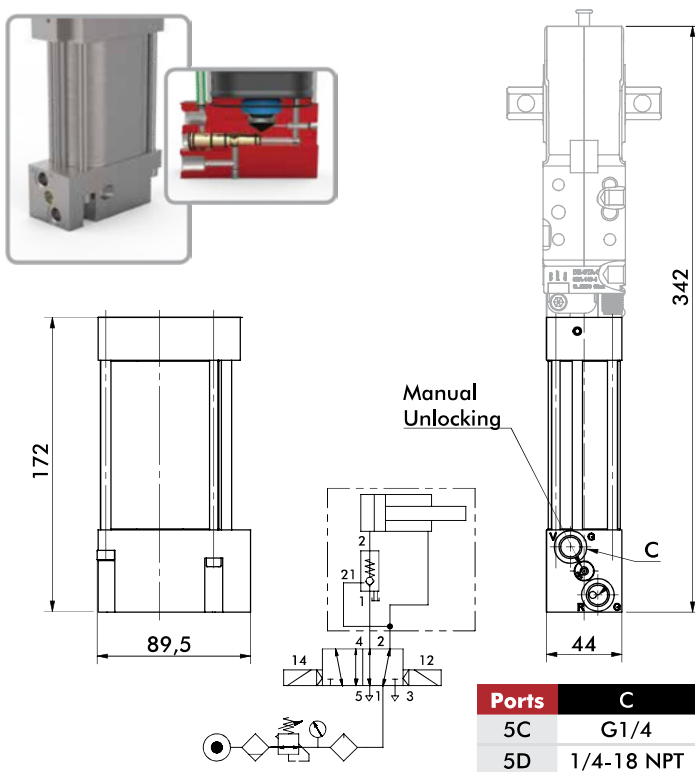
Ports	C
5A	G1/4
5B	1/4-18 NPT

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

TCC-2E...5C/5D

Cylinder with Unlock-able Return Valve

Pneumatically holds clamp arm in the closed position when air is released.

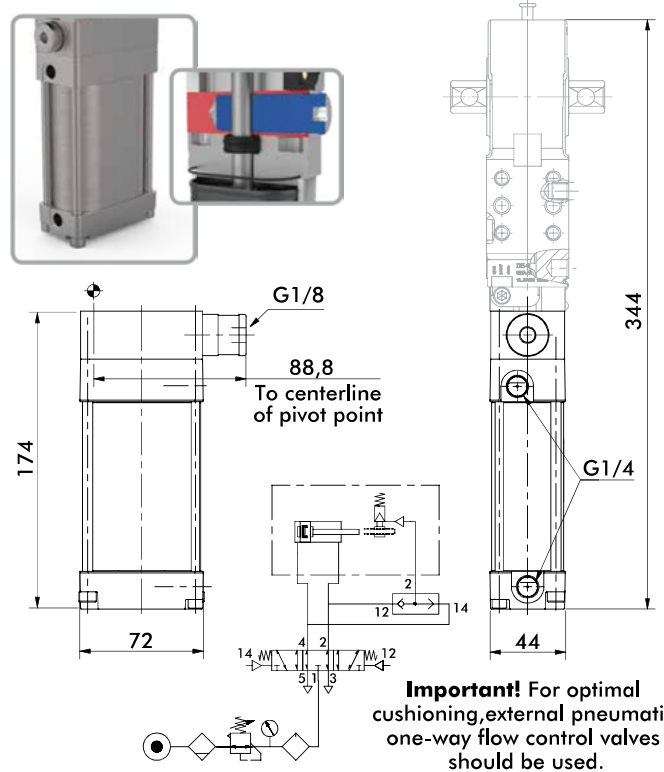


Ports	C
5C	G1/4
5D	1/4-18 NPT

TCC-2E...5V

Cylinder with Rod Locking Device

Uses friction to clamp rod at any point between open and closed positions.



Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

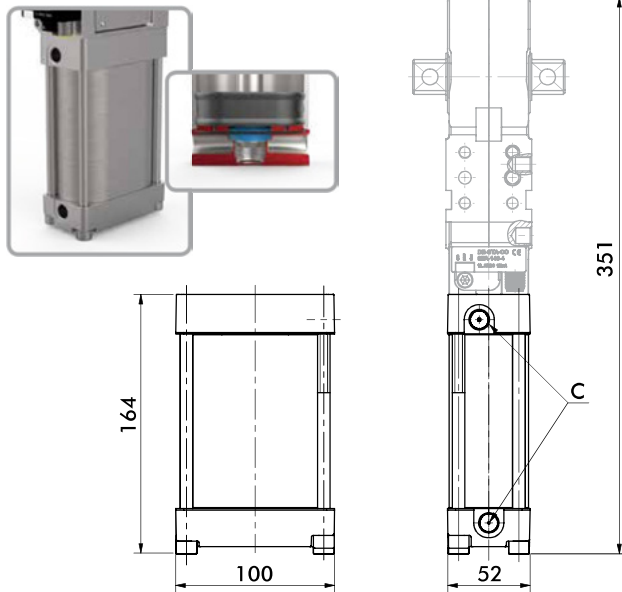
Dimensions and technical information are subject to change without notice

82M-3/TCC-2 SERIES 63MM

Pneumatic Power Clamps | Cylinder Options Dimension and Technical Specifications

82M-3/TCC-2.....63/6N

Standard Cylinder



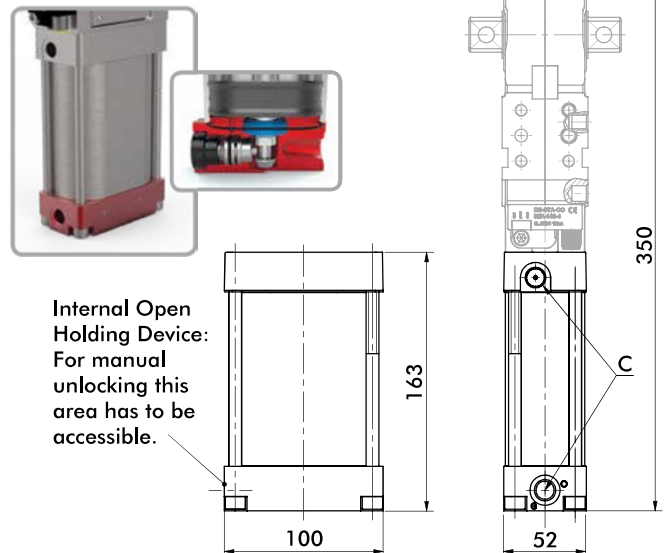
Ports	C
63	G1/4
6N	1/4-18 NPT

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

82M-3/TCC-2.....6A/6B

Cylinder with Internal Hold Open Device

Securely holds clamp in the open position.



Ports	C
6A	G1/4
6B	1/4-18 NPT

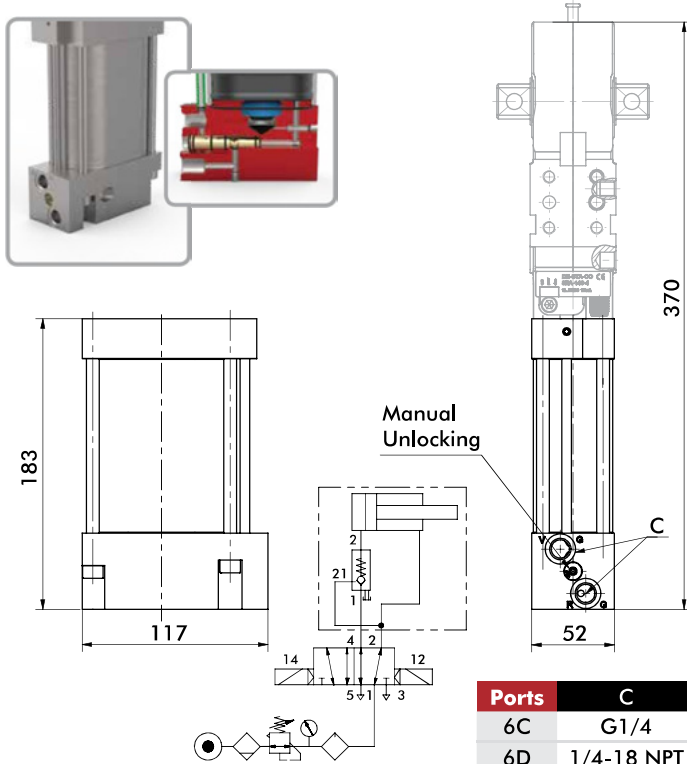
Internal Open Holding Device:
For manual unlocking this area has to be accessible.

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

TCC-2.....6C/6D

Cylinder with Unlock-able Return Valve

Pneumatically holds clamp arm in the closed position when air is released.

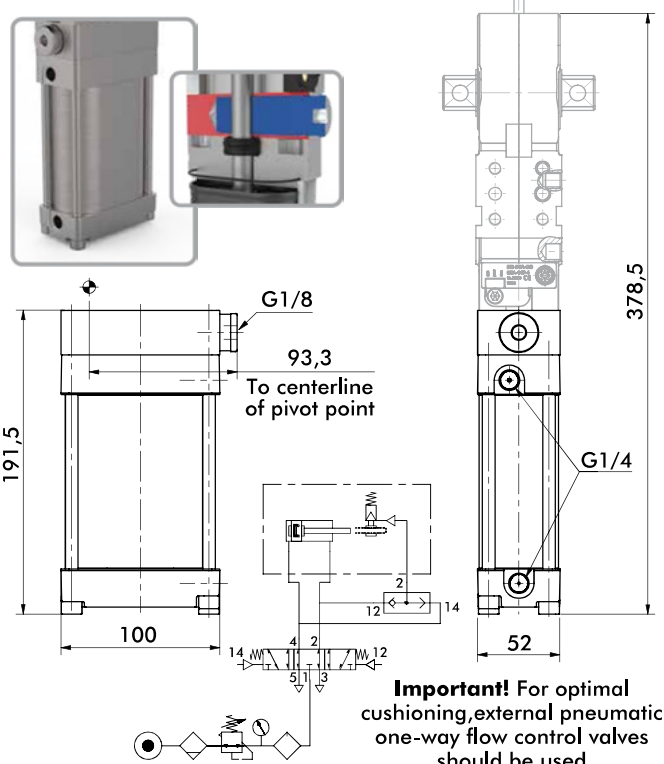


Ports	C
6C	G1/4
6D	1/4-18 NPT

TCC-2.....6V

Cylinder with Rod Locking Device

Uses friction to clamp rod at any point between open and closed positions.



Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

Dimensions and technical information are subject to change without notice

PC-PPC | 40

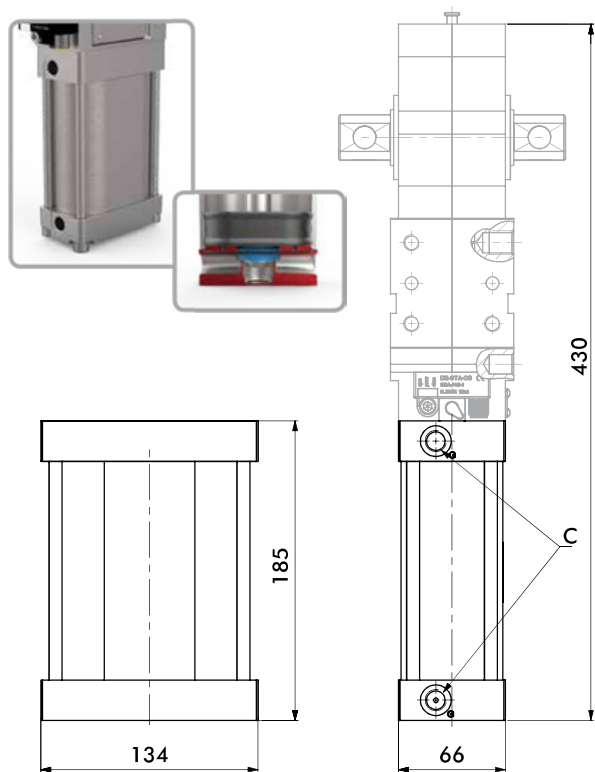


82M-3 SERIES 80MM

Pneumatic Power Clamps | Cylinder Options Dimension and Technical Specifications

82M-3E...80/8N

Standard Cylinder



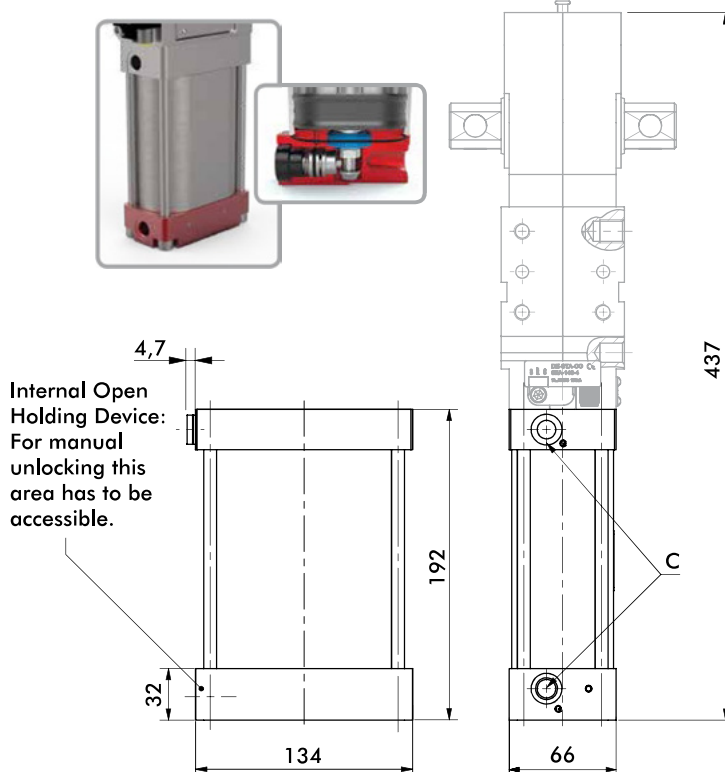
Ports	C
80	G1/4
8N	1/4-18 NPT

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

82M-3E...8A/8B

Cylinder with Internal Hold Open Device

Securely holds clamp in the open position.



Internal Open Holding Device:
For manual unlocking this area has to be accessible.

Ports	C
8A	G1/4
8B	1/4-18 NPT

Important! For optimal cushioning, external pneumatic one-way flow control valves should be used.

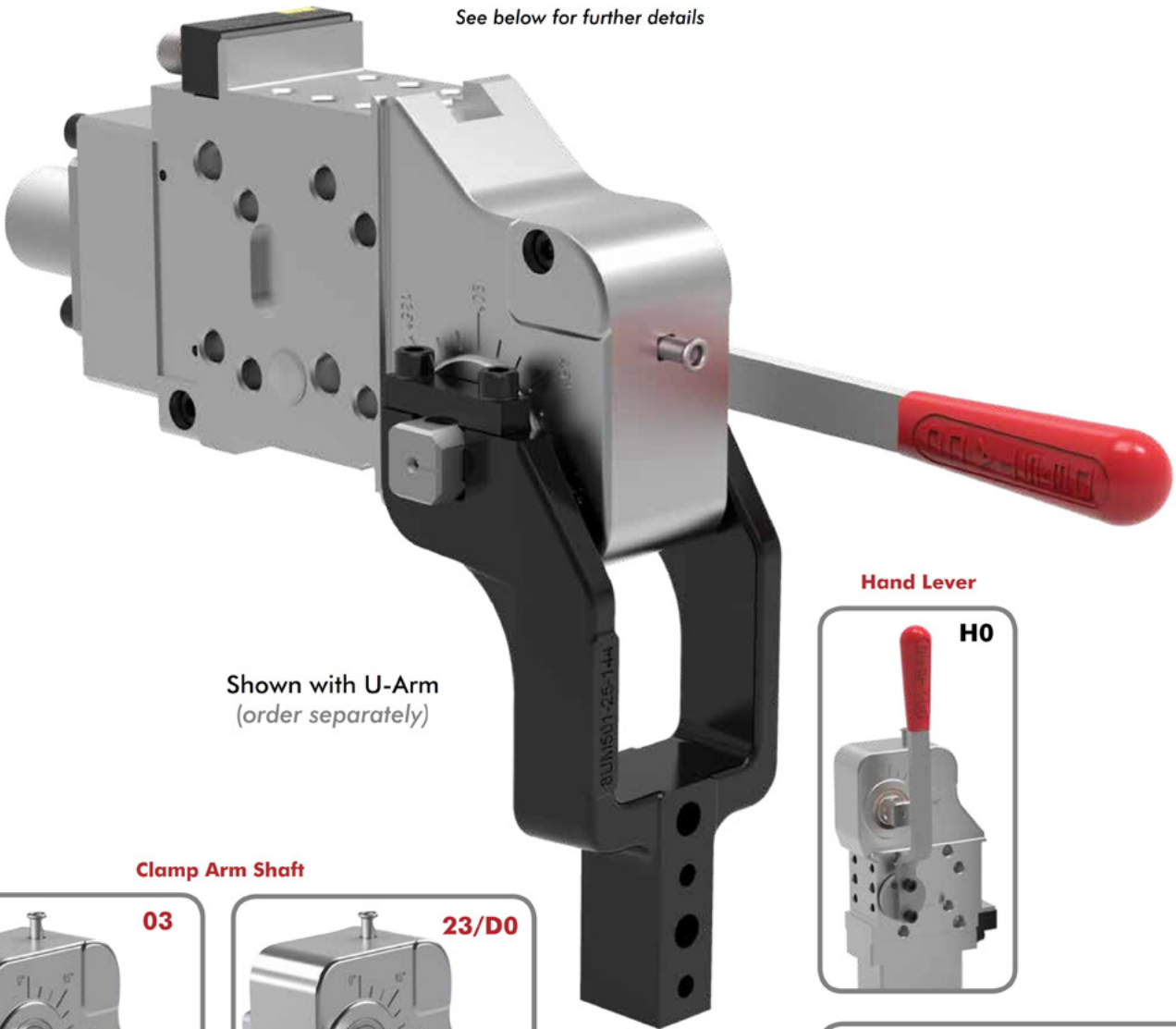
52H-3 SERIES

Pneumatic Power Clamps | Ordering Information

52H-3 **E** **23** **H0** **50** **L8**

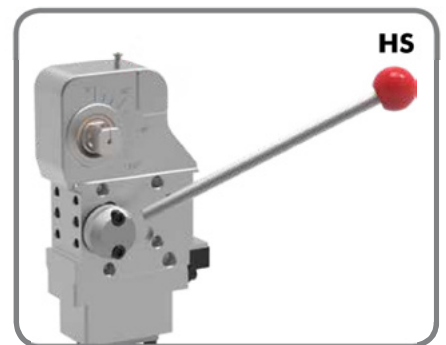
Base Model	Mounting	Description	Clamp Arm Shaft	Description	Handle	Description
	E	Standard	03	for U-Arms	H0	Hand lever
	N	NAAMS (Size 63 only)	23	for Lateral Arms	HS	Hand Lever (Weldable)
			D0	for Lateral Arms (size 63 only)		

See below for further details



Shown with U-Arm
(order separately)

Hand Lever



Clamp Arm Shaft



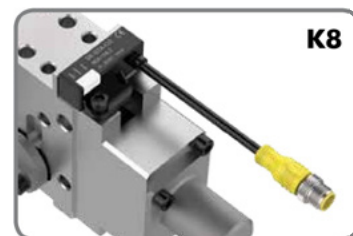
Size	Shaft Length (L17)
50	12mm
63	12mm

Size	Shaft Length (L17)
23	
50	21mm
63	21mm
D0	
Size	Shaft Length (L17)
D0	26mm

52H-3 SERIES

Pneumatic Power Clamps | Ordering Information

Sensor	Description
00	No sensor
L8	Sensor with In-line Connector (Replacement Order No.: 8EA-146-2)
L9	Sensor with 90 deg Connection (Replacement Order No.: 8EA-147-2)
K8	Sensor with Cable Connection (Replacement Order No.: 8EA-158-2)



Size	Description
50	Size 50mm
63	Size 63mm



50

Max Holding Torque
1300 Nm



63

Max Holding Torque
1800 Nm

52H-3...H.50/63
Modular manual
clamp, interchangeable
with 82M-3E...50/63

Dimensions and technical information are subject to change without notice

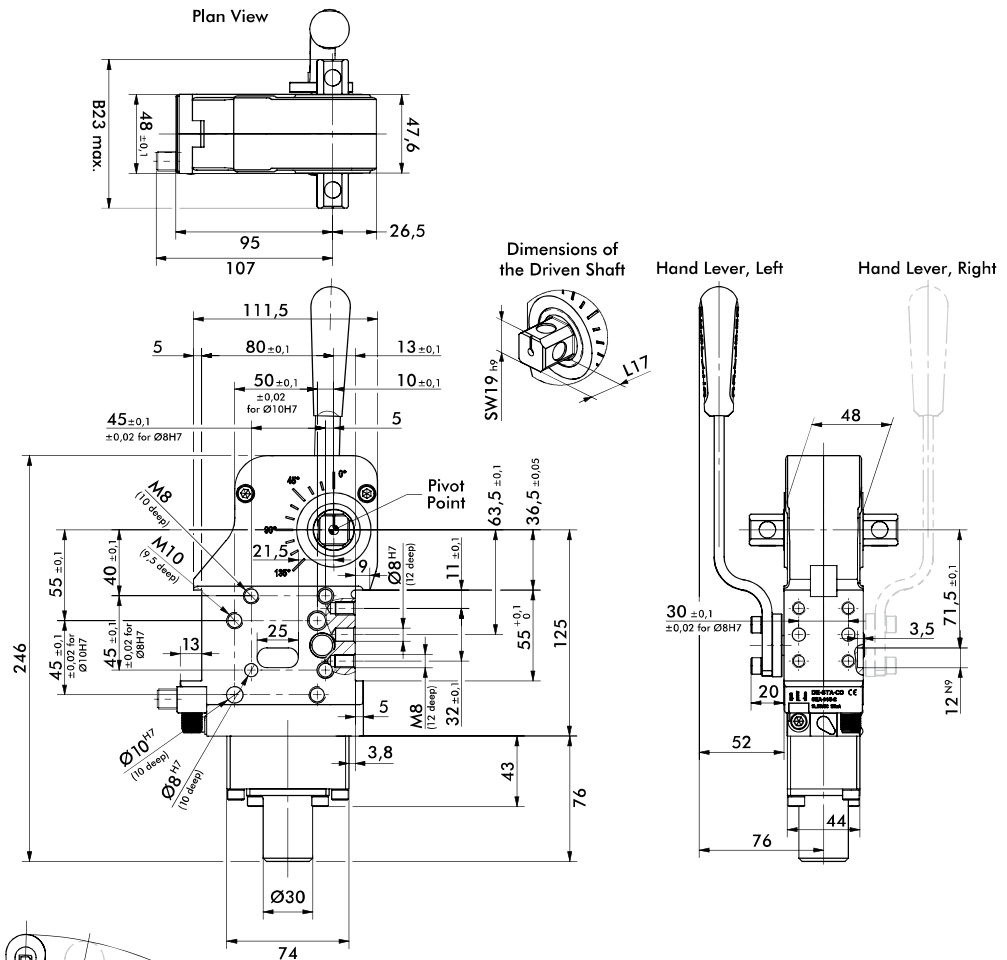
PC-PPC | 56



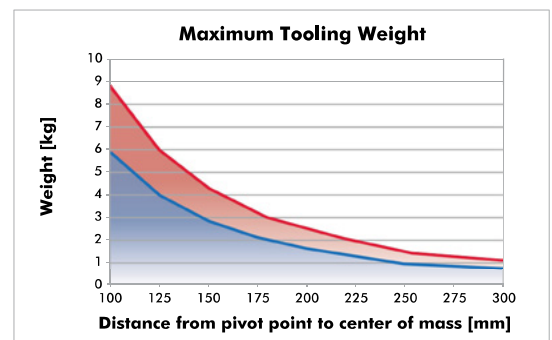
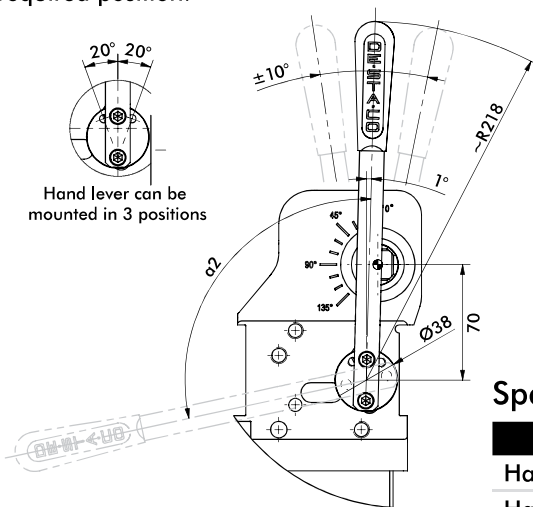
52H-3E 50MM

Pneumatic Power Clamps | Dimensions | Technical Specifications

Model	Max. Holding Torque (Nm)	Weight (kg)	B23 max.	L17	Swivel Angle $\alpha 2$ (with reference to opening angle of clamping arm)									
					0°	15°	30°	45°	60°	75°	90°	105°	120°	135°
52H-3E03H050..	1300	2,75	72	12	-1°	30°	39°	46°	53°	61°	70°	81°	92°	103°
52H-3E23H050..		2,79	90	21										



Notice!
The hand lever is supplied loose enclosed. Easy custom left hand or right hand mounting in required position.



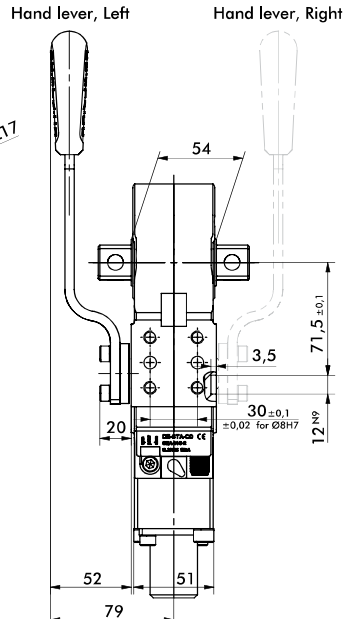
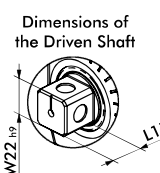
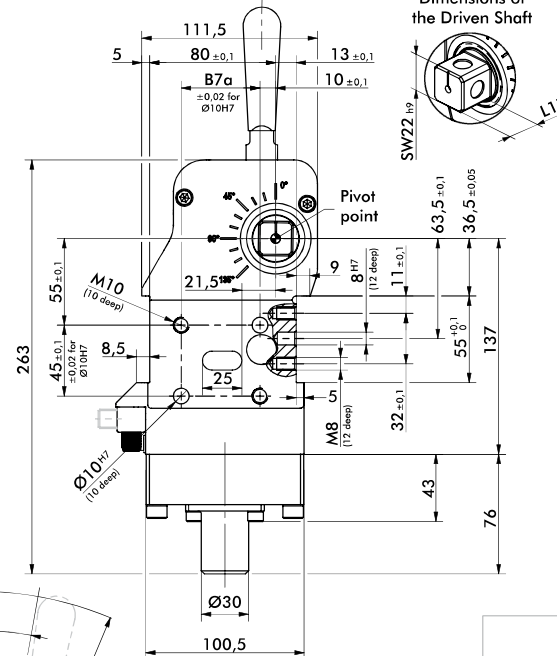
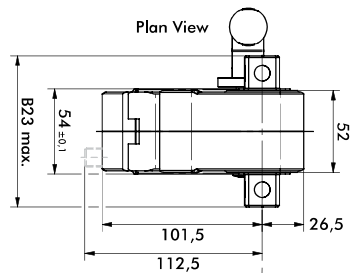
Spare parts

Specification	Base component	Order no.	Comment
Hand lever set	52H-3E...50	8KB-098-1	
Hand lever set (weldable)		8KB-102-1	
Sensor box		8EA-146-2 (L8)	Connector 180°
		8EA-147-2 (L9)	Connector 90°
		8EA-158-2 (K8)	Cable Connection

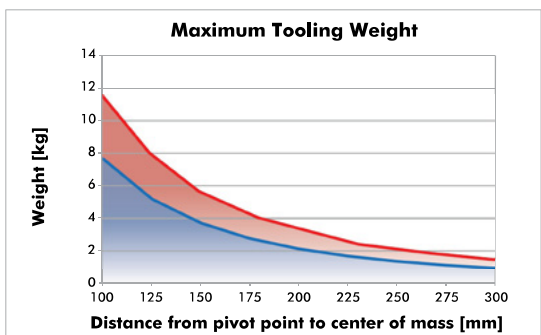
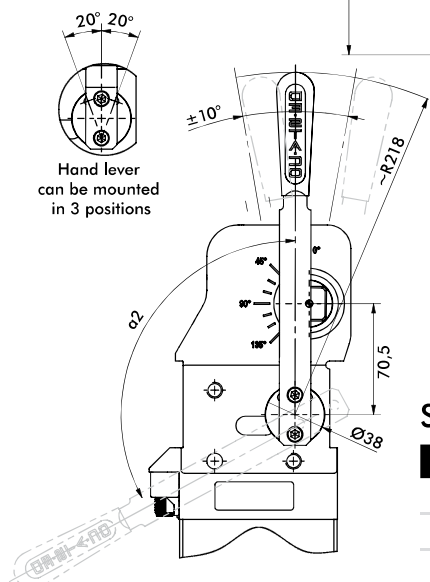
52H-3E 63MM

Pneumatic Power Clamps | Dimensions | Technical Specifications

Model	Max. Holding Torque (Nm)	Weight (kg)	B7a	B23 max.	L17	Swivel Angle $\alpha 2$ (with reference to opening angle of clamping arm)										
						0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	
52H-3E03H06...	1800	3,5	50	78	12											
52H-3N03H06...			55		21											
52H-3E23H06...		3,6	50	96	12	0°	30°	39°	47°	56°	66°	79°	94°	108°	119°	
52H-3N23H06...			55		21											
52H-3ND0H06...			55	106	26											



Notice!
The hand lever is supplied loose enclosed. Easy custom left hand or right hand mounting in required position.



Spare parts

Specification	Base component	Order no.	Comment
Hand lever set		8KB-099-1	
Hand lever set (weldable)		8KB-103-1	
Sensor box	52H-3E...63	8EA-146-2 (L8)	Connector 180°
		8EA-147-2 (L9)	Connector 90°
		8EA-158-2 (K8)	Cable Connection

870-2, 871-2 SERIES

Pneumatic Power Clamps | Ordering Information

870-2

Base Model	Description
870-2	With Clamping Arm in Vertical Position
871-2	With Clamping Arm in Horizontal Position

Sensors	Description (order separately)
BIM-IKE-AP	Magnetic Sensor, 2 pieces required
810151	Magnetic Sensor, 2 pieces required
810153	Magnetic Sensor, 2 pieces required
810155	Magnetic Sensor, 2 pieces required
810157	Magnetic Sensor, 2 pieces required

See page PC-PPC-66 for sensor specifications.



871-2

Max Holding Torque
260 Nm
Max Clamping Torque
60 Nm at 5bar



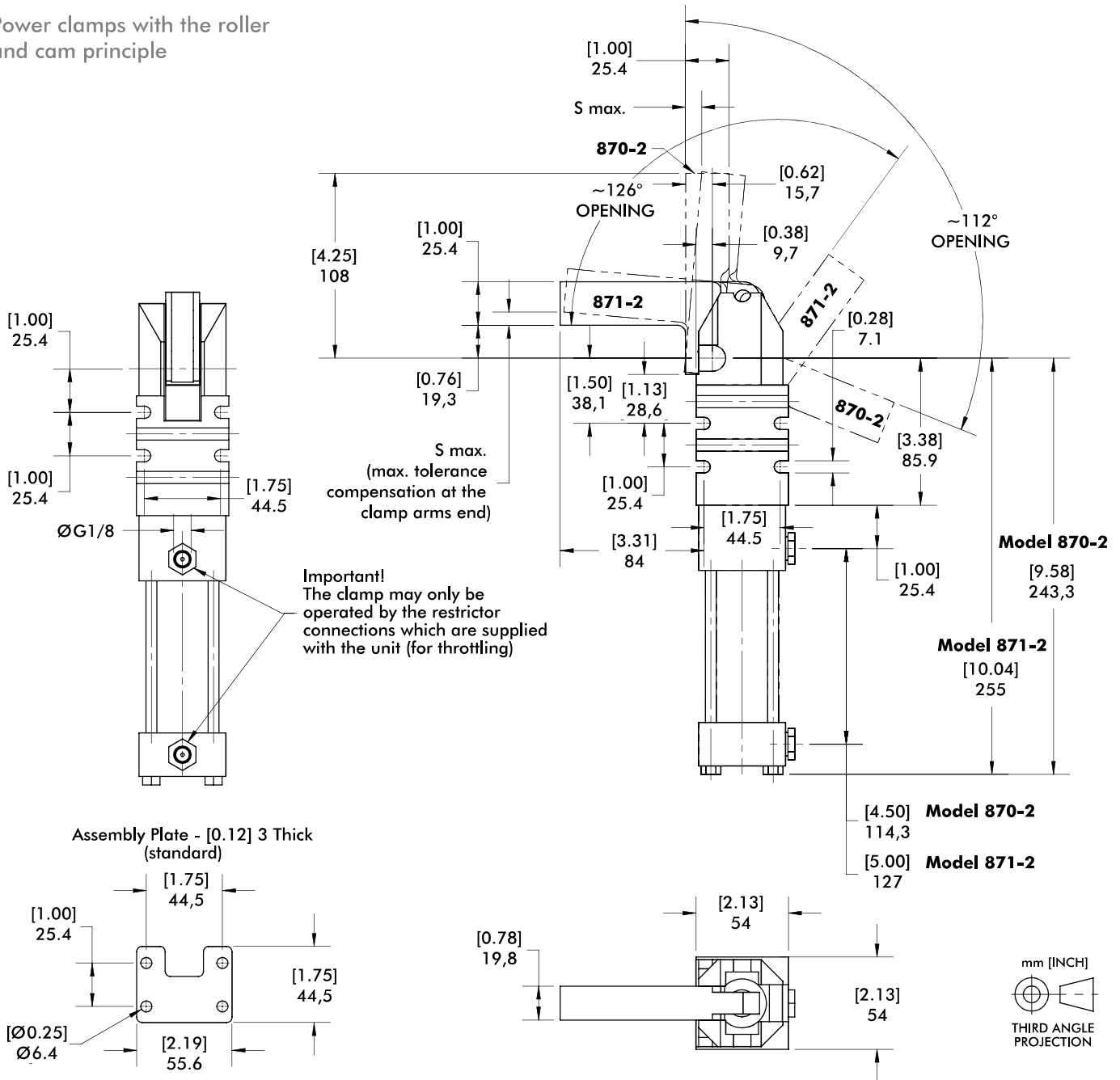
870-2

Max Holding Torque
260 Nm
Max Clamping Torque
60 Nm at 5bar

870-2, 871-2 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications

Power clamps with the roller and cam principle



Model	Connection	S Max. Max. Tolerance Compensation at the Clamp Arms End [ft lb] Nm	Max. Operating Pressure [psi] bar	Cylinder Ø [in.] mm	Opening Angle	Weight [lbs] kg	Air Consumption per double stroke at 5 bar dm ³ [ft ³]
870-2	G 1/8	[3] 4,5	[145] 10	[1.50] 38,1	112°	[6.60] 3	0,95 [0.03]
871-2		[3] 3,5			118°		

Sensor Options	Mount Style	Connector	Length	Function	Voltage	Max. Switching Current	Voltage Drop
BIM-IKE-AP	Tie Rod	No connector cord	2m [6.6 ft.]	PNP	10-30V DC	200mA	2.3V
810151				Reed	5-120V AC/DC	500mA	3.5V
810153			Reed	24-240V AC	4A	1.0V	
810155			PNP	6-24V DC	500mA	1.0V	
810157			NPN	6-24V DC	500mA	1.0V	

Dimensions and technical information are subject to change without notice

860, 861, 890, 891, 1000, 1001 SERIES

Pneumatic Power Clamps | Ordering Information

860

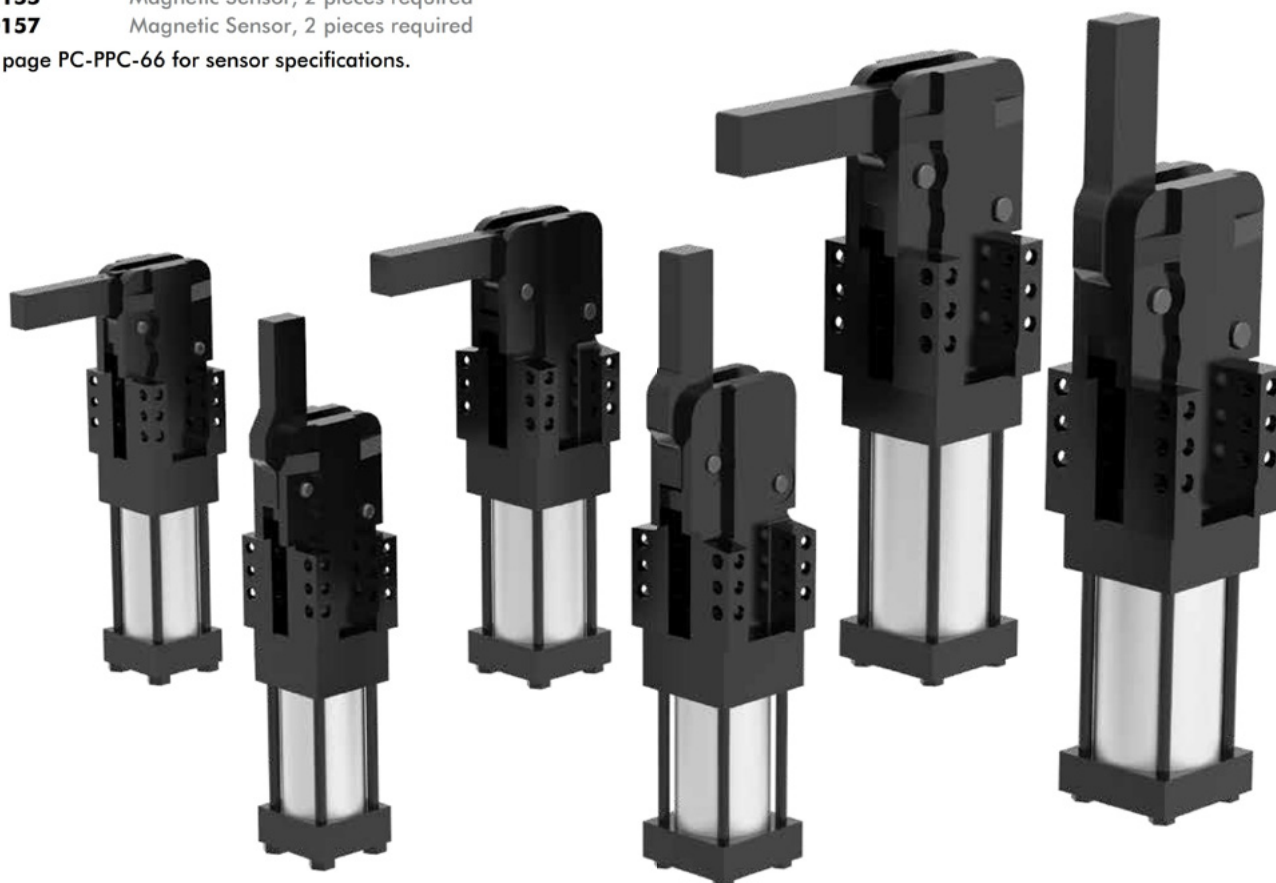
Base Model	Description
860	2 in. Cylinder Bore Size with Vertical Clamp Arm
861	2 in. Cylinder Bore Size with Horizontal Clamp Arm
890	2.5 in. mm Cylinder Bore Size with Vertical Clamp Arm
891	2.5 in. Cylinder Bore Size with Horizontal Clamp Arm
1000	3.25 in. Cylinder Bore Size with Vertical Clamp Arm
1001	3.25 in. Cylinder Bore Size with Horizontal Clamp Arm

Sensors	Description (order separately)
BIM-IKE-AP	Magnetic Sensor, 2 pieces required
810151	Magnetic Sensor, 2 pieces required
810153	Magnetic Sensor, 2 pieces required
810155	Magnetic Sensor, 2 pieces required
810157	Magnetic Sensor, 2 pieces required

See page PC-PPC-66 for sensor specifications.

Seal Kit	Description (order separately)
8610100	Seal Kit for Model 860, 861
8910100	Seal Kit for Model 890, 891
10010100	Seal Kit for Model 1000, 1001

Cylinder	Description (order separately)
865133-MR	Replacement Cylinder for Model 860
865132-MR	Replacement Cylinder for Model 861
895133-MR	Replacement Cylinder for Model 890
895132-MR	Replacement Cylinder for Model 891
1005134-MR	Replacement Cylinder for Model 1000
1005133-MR	Replacement Cylinder for Model 1001



861

Max Holding Torque
380 Nm
Max Clamping Torque
120 Nm at 5bar

891

Max Holding Torque
1300 Nm
Max Clamping Torque
270 Nm at 5bar

1001

Max Holding Torque
1800 Nm
Max Clamping Torque
420 Nm at 5bar

860

Max Holding Torque
380 Nm
Max Clamping Torque
120 Nm at 5bar

890

Max Holding Torque
1300 Nm
Max Clamping Torque
270 Nm at 5bar

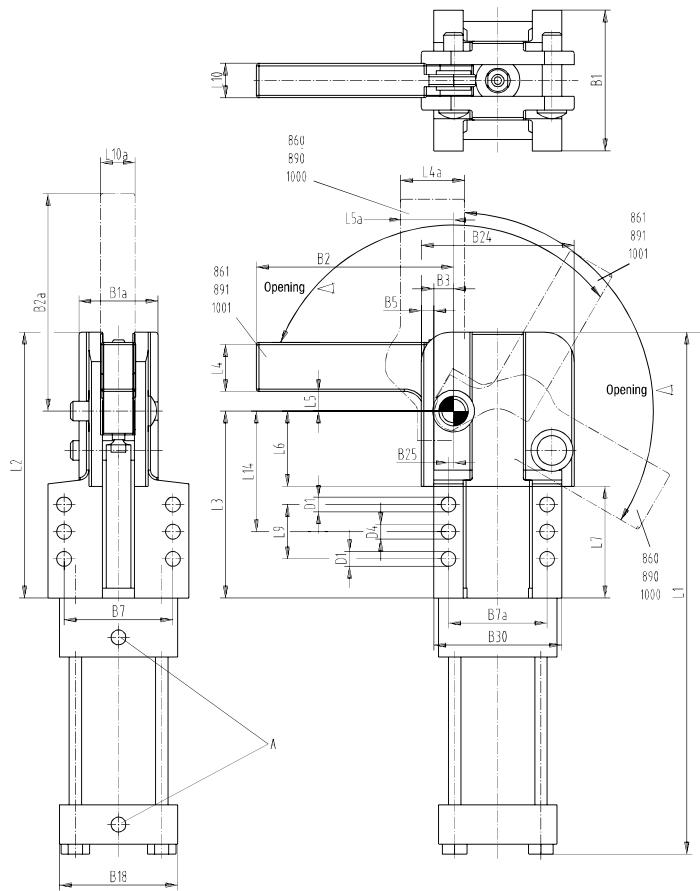
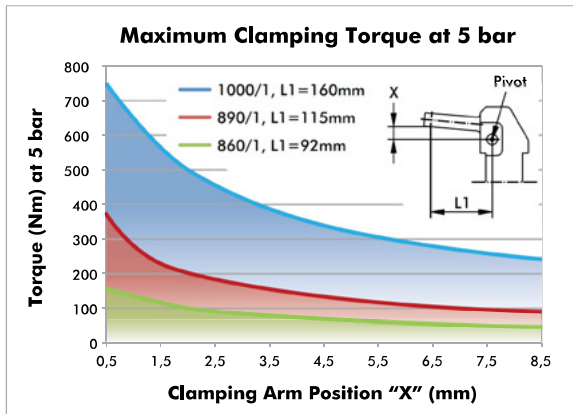
1000

Max Holding Torque
1800 Nm
Max Clamping Torque
420 Nm at 5bar

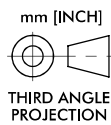


860, 861, 890, 891, 1000, 1001 SERIES

Pneumatic Power Clamps | Dimensions | Technical Specifications



Model	Cylinder Ø mm [in]	Opening Angle	Weight kg [lbs]
860	[2.00]	96°	[8.58]
861	50,8	119°	3,9
890	[2.50]	96°	[16.06]
891	63,5	119°	7,3
1000	[3.25]	96°	[29.70]
1001	82,5	119°	13,5



Power by compressed air, max. 6 bar
Operation with oil-free air is permissible.

Information vor machining of clamp arm: Steel 1.0726

Model	A	B1	B1A	B2	B2A	B3	B5	B7	B7A	B18	B24	B25	B30
860	G1/8	[2.94]	[1.75]	-	[5.44]	[0.41]	[0.25]	[2.31]	[2.19]	[2.5]	[3.31]	[0.09]	[2.81]
861		74,7	44,5	[4]	138,2								
890	G1/8	[3.56]	[2]	-	[6.57]	[0.5]	[0.31]	[2.76]	[2.5]	[3]	[3.87]	[0.13]	[3.25]
891		90,4	50,8	5.06	166,9								
1000	G1/8	[4.5]	[2.62]	-	[9]	[0.63]	[0.44]	[3.5]	[3.5]	[3.75]	[5.38]	[0.13]	[4.5]
1001		114,3	66,5	7	228,6								

Model	ØD1	ØD4	L1	L2	L3	L4	L4A	L5	L5a	L6	L7	L9	L10	L10a	L14
860	[0.34]	[0.31]	[12.44]	[5.75]	[4.06]	-	[1.12]	--	[0.69]	[1.44]	[2.5]	[1.25]	[0.62]	[0.62]	[2.5]
861	8,6	7,9	316	146,1	103,1	[1.13]	-	[0.4]	--						
890	[0.41]	[0.38]	[13.37]	[6.75]	[4.75]	-	[1.25]	-	[0.84]	[1.75]	[2.65]	[1.38]	[0.81]	[0.81]	[3.06]
891						10,4	9,7	339,6	171,5						
1000	[0.53]	[0.5]	[17.51]	[9.25]	[6.25]	-	[1.75]	-	[1.37]	[2.25]	[3.96]	[2]	[1]	[1]	[3.75]
1001						13,5	12,7	444,8	235						

Dimensions and technical information are subject to change without notice

PC-PPC | 68



82D40-2/82D63-5 SERIES

Pneumatic Power Clamps | Features and Benefits | Technical Information

Features:

- Compact, enclosed design
- Narrow design
- Adapts to various holding arm variants
- High accuracy of positioning due to internal holding arm stopper
- 2 lateral and 1 front mounting areas
- Low weight (aluminium body)
- Integrated inductive sensing module with LED display
- Cylinder diameter 40 mm or 64 mm

Application:

- Clamping, holding, gripping and positioning of metal sheets and other parts, mainly in jigs and handling systems.

Key areas of application:

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



- Automation power clamps, enclosed and narrow design for 2 clamping arms

Models: **82D40-2...**
82D63-5...

82D40-223C900
Base model with
2 U-clamping arms

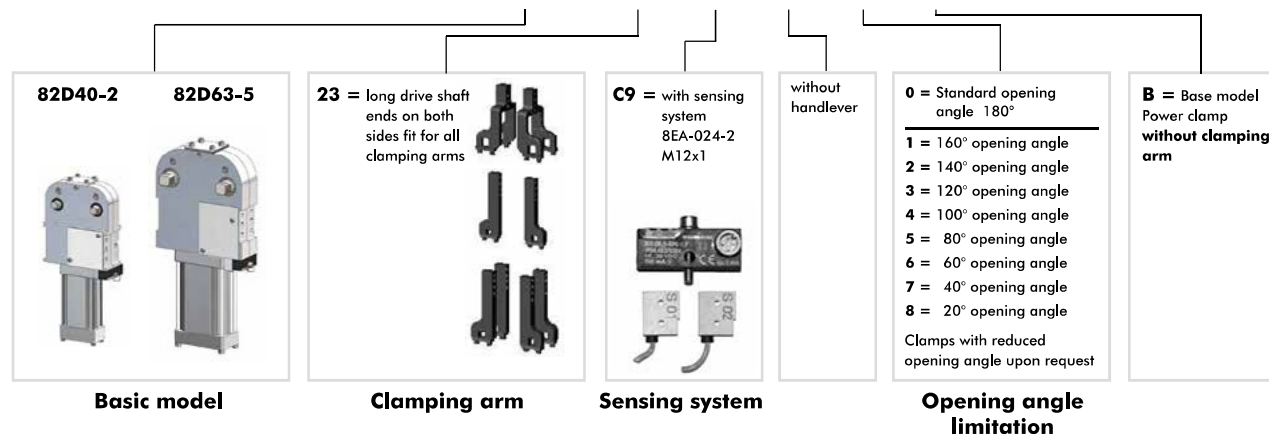
Technical Information

Model	Clamping position	Standard opening angle	Driveshaft	Max. holding torque Nm [lb ft]	Clamping torque at 5 bar Nm [lb ft]	Cylinder Ø mm [in]	Air consumption per double stroke at 5 bar dm ³ [ft ³]	Weight ~ kg [lbs]
82D40-223C900B	vertical	180°	lateral, both sides U-type clamping arms	55 [40]	55 [40]	40 [1.57]	1,2 [0.04]	2,5 [5.50]
82D63-523C900B	vertical	180°	lateral, both sides U-type clamping arms	120 [88]	120 [88]	63 [2.48]	3,8 [0.13]	4,5 [9.90]

Model	B1	B2	B3	L1	SW	G
82D40-223C900B	30	30	60	12,5	11	1/4
82D63-523C900B	47	47	94	21	19	1/4

How To Order

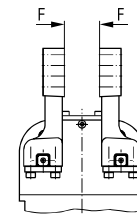
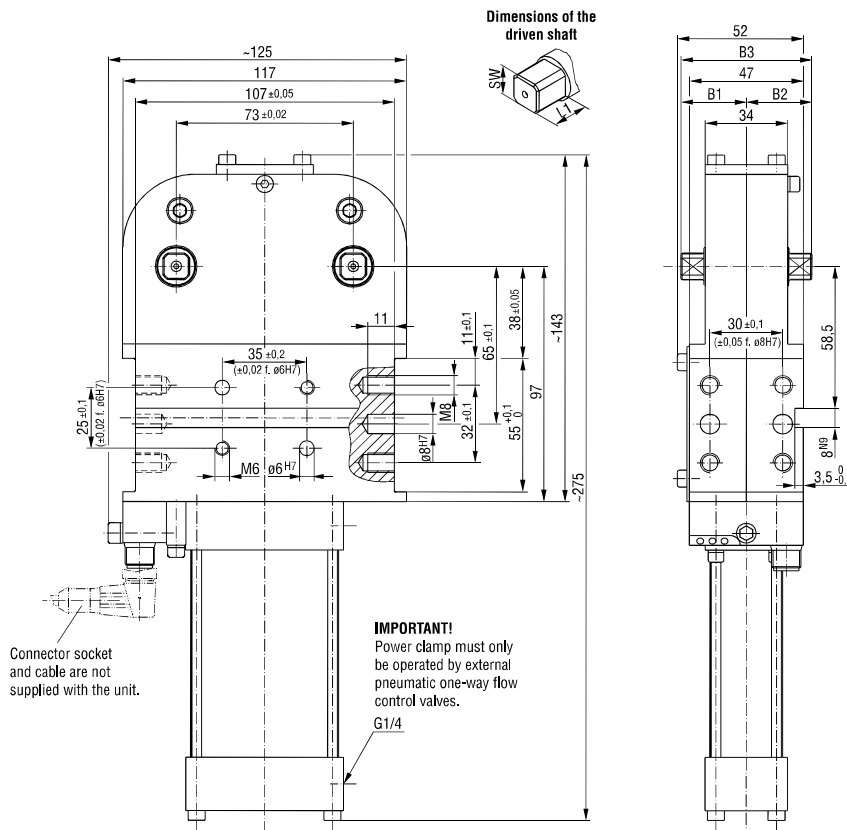
82D63-5 23 C9 0 0 B



82D40-2/82D63-5 SERIES

Pneumatic Power Clamps | Dimensions

82D40-223C900B

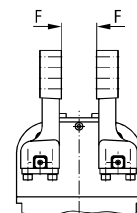
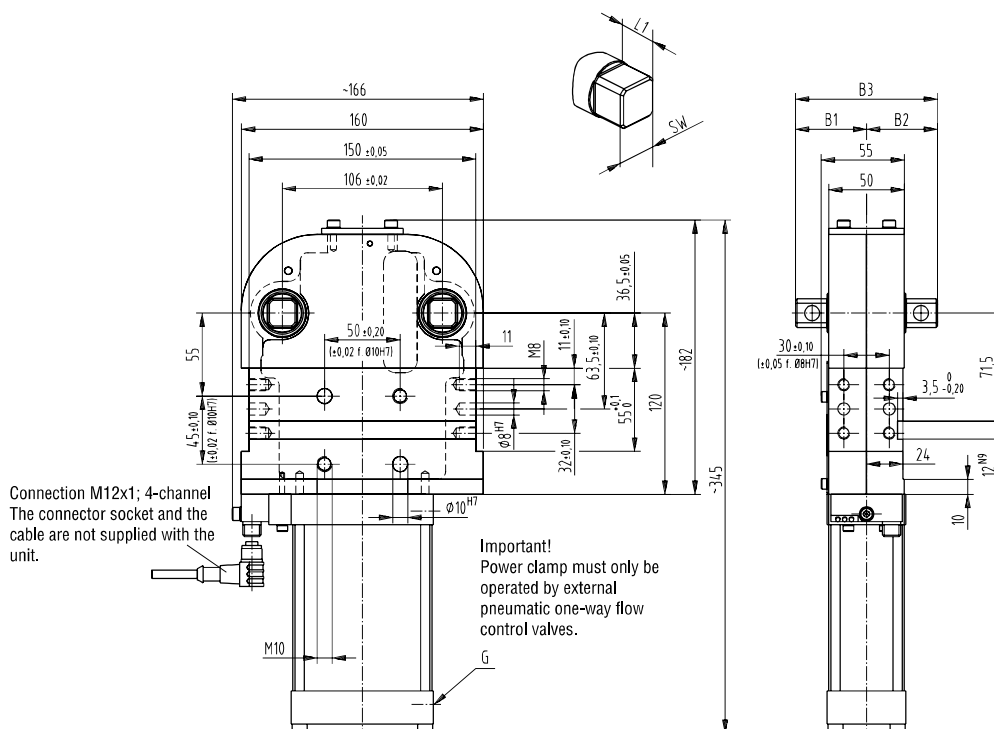


Safety notice:

The load on the clamping arms must always point towards the clamping direction. Single load of one arm is prohibited

Medium: air, max. 6 bar, operation with oil-free air is permissible

82D63-523C900B



Safety notice:

The load on the clamping arms must always point towards the clamping direction. Single load of one arm is prohibited

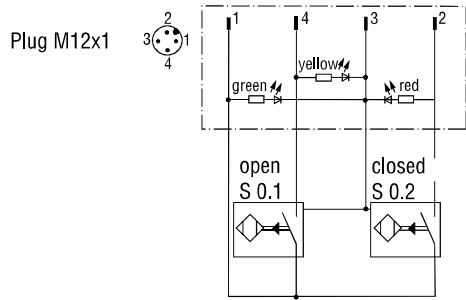
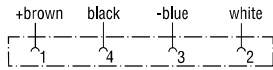
Medium: air, max. 6 bar, operation with oil-free air is permissible

82D40-2/82D63-5 SERIES

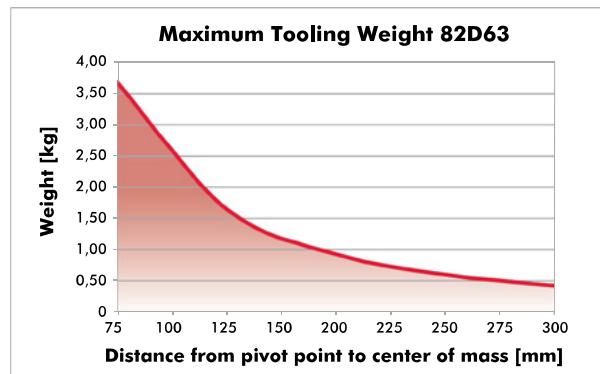
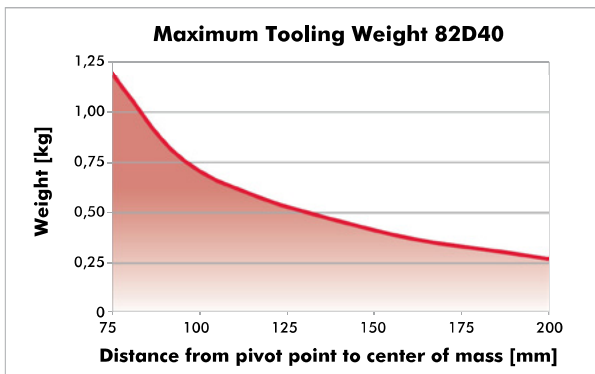
Pneumatic Power Clamps | Technical Specifications

Wiring diagram of electrical sensing system

Sensing system immune to interference from d.c. arc welding and a.c. arc welding

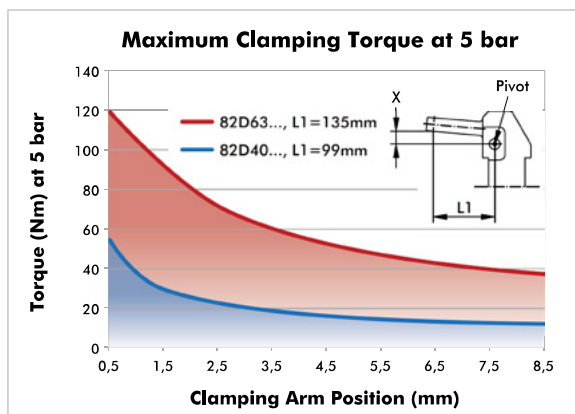


Concept guideline (with reference to axis of clamping arm rotation)



All details apply under an air pressure of 6 bar and opening and closure times of 1 second each

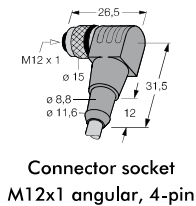
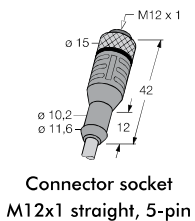
Diagram of clamping torque



82D40-2/82D63-5 ACCESSORIES

Pneumatic Power Clamps | Technical Specifications

Clamping Arms		Order no. for Structural component		Comment
Clamping are variant	Clamping position	82D40-223C900B	82D63-523C900B	
U-central	vertical	8JG-065-1-01	8JG-069-1-01	sets of U-type clamping arms consist of clamping arm, links and screws
lateral right/left	vertical	8JG-066-1-01¹⁾	8JG-070-1-01²⁾	sets of lateral clamping arms consist of 1) clamping arm, links and screws 2) clamping arm and set screws you need 2 sets of clamping arms
lateral both sides	vertical	8JG-066-1-01¹⁾	8JG-070-1-01²⁾	you need 4 sets of clamping arms



Connector Cable (includes 1 connector socket & 5 m cable)	Order no. for Structural component	
	82D40-223C900	82D63-523C900
Connector socket M12x1 straight, 5-pin	8EL-002-1	8EL-002-1
Connector socket M12x1 angular, 4-pin	8EL-003-1	8EL-003-1

Opening Angle Limiter	Order no. for Structural component			
	82D40-223C900		82D63-523C900	
Angle	Length	Order No.	Length	Order No.
180° (Standard)	11,4mm	8CE-342-1	14,4mm	8CE-362-1
160°	15,1mm	8CE-340-1	20,0mm	8CE-360-1
140°	18,5mm	8CE-338-1	24,8mm	8CE-358-1
120°	22,2mm	8CE-336-1	29,6mm	8CE-356-1
100°	25,8mm	8CE-334-1	34,3mm	8CE-354-1
80°	28,0mm	8CE-332-1	39,0mm	8CE-352-1
60°	33,0mm	8CE-330-1	43,8mm	8CE-350-1
40°	37,0mm	8CE-328-1	49,1mm	8CE-348-1
20°	41,8mm	8CE-326-1	56,2mm	8CE-346-1

Shim Plates (for clamping arm)	Fit for model 82D40-2									Fit for model 82D63-5								
	Model	A1	A2	D2	D3	B9	B10	B12	L10	Model	A1	A2	D2	D3	B9	B10	B12	L10
	82ZB-SH4001		0,1							82ZB-SH5001		0,1						
	82ZB-SH4002		0,2							82ZB-SH5002		0,2						
	82ZB-SH4005	42	0,5	6,5	7	6	20	20	12	82ZB-SH5005	65	0,5	6,5	9	10	30	30	16
	82ZB-SH4010		1,0							82ZB-SH5010		1,0						
	82ZB-SH4020		2,0							82ZB-SH5020		2,0						
	82ZB-SH4050		5,0							82ZB-SH5050		5,0						

Spare Parts	Order no. for Structural component	
	82D40-2	82D63-5
Cylinder	8PW-016-1	8PW-024-2
Integrated sensing system C9 Connector plug M12x1	8EA-024-2	8EA-024-2