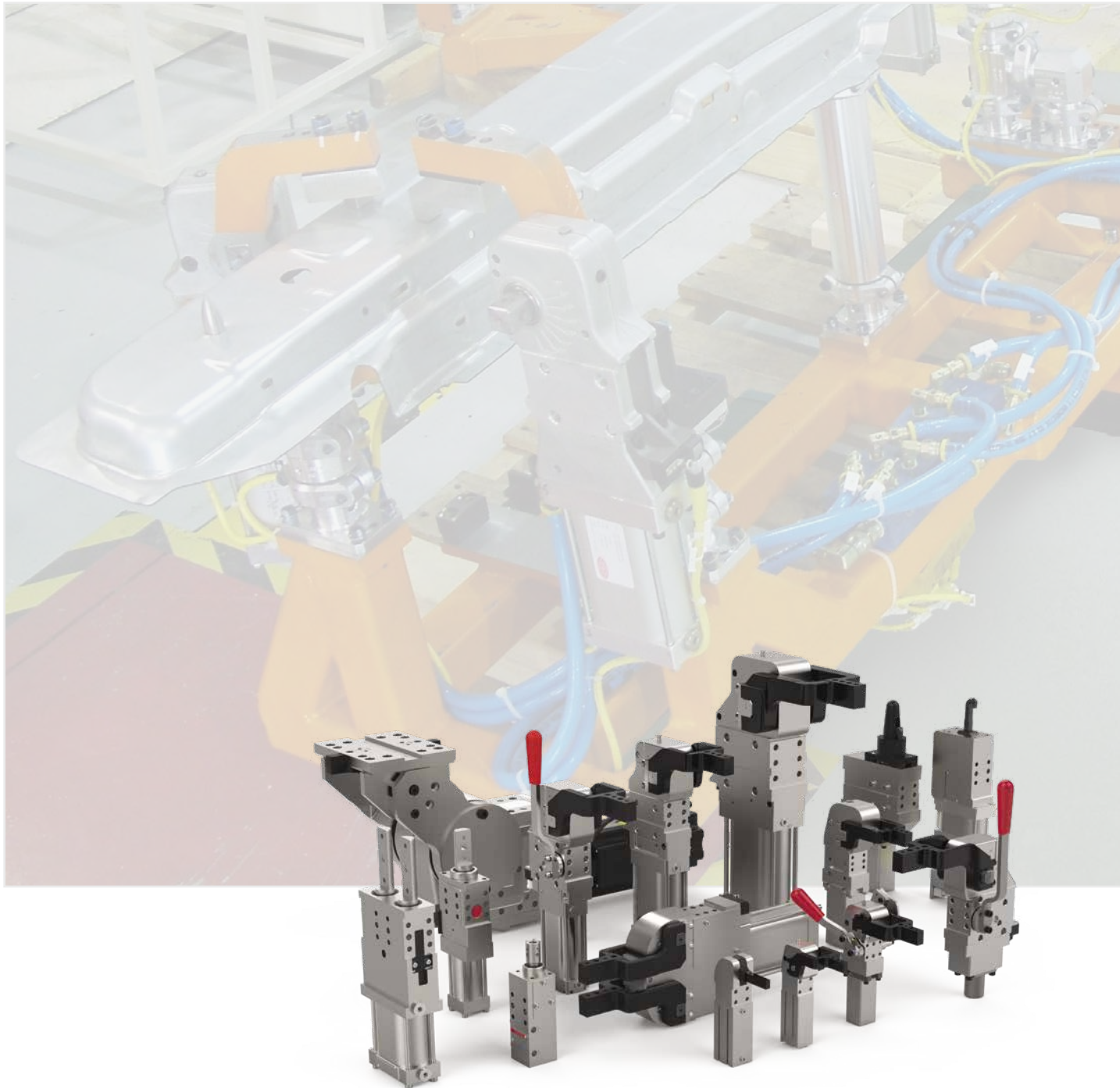


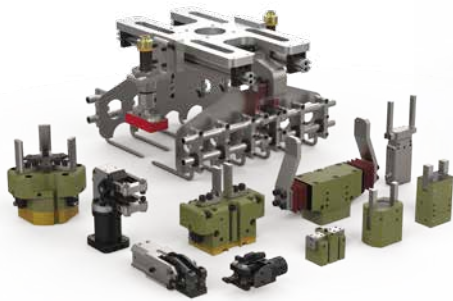
Visual Selection Guide

Clamping Technology | Vol.2: Power Clamping & Locating



ABOUT DESTACO

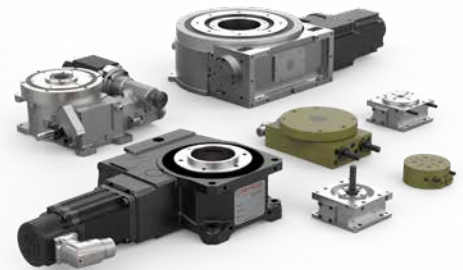
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Gripping Solutions



Linear Positioning Solutions



Rotary Positioning Solutions



Clamping Solutions



CRL Remote Handling Solutions



Robotic Tooling Solutions

Destaco, a Dover company, is a global leader in the design and manufacture of high-performance automation, workholding and remote-handling solutions. The company serves customers in a variety of end-markets, including the automotive, life sciences, consumer packaged goods, aerospace, industrial and nuclear sectors.

Built on a legacy of more than 100 years, Destaco offers a comprehensive portfolio of products designed to engineer precise movement, placement and control solutions that drive productivity and uptime for manufacturers around the world. The Destaco family of products consists of industry-leading brands such as Destaco Manual Clamps, Power Clamps, and End Effectors; CAMCO™ and Ferguson™ Indexers; Robohand™ Grippers; and CRL™ Manipulators and Transfer Ports.

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More information is available at destaco.com and dovercorporation.com



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Destaco has dedicated resources to design and build the next generation of products and solutions

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Pneumatic Power Clamps, Pin Clamps/Packages, and Pivot Units

Clamp with Confidence

Markets



Transportation



Aerospace



Food & Packaging



Industrial



Consumer Goods

Applications



Assembly



Welding



Fixture and Testing



White Goods/
Appliance



CNC/Machining



Electric Products



PNEUMATIC CLAMPING SOLUTIONS

Table of Contents



Pneumatic Power Clamps 10



Pin Clamps..... 30



Precision Guides..... 36



Pin Packages 40



Pivot Units..... 48

FEATURED NEW PRODUCTS

82M-3/TCC Series

Tolerance Compensation Power Clamps

- Tolerance compensation (TCC Series)
- Field adjustable arm opening angle
- Enclosed aluminum body
- Optional U-Arms and lateral arms available

See Pages 16-19



84A40/50 Series

Dual-Arm Tolerance Compensation Clamps

- Tolerance compensation
- 90° clamp arm motion
- Multiple clamp arm options
- High clamping force, compact size
- Enclosed aluminum body

See Page 29



82P25-2 Series

Pin Clamps

- Optional centering pin configurations from Ø8-22 mm
- Integrated sensing
- Aluminum body

See Page 30



86P30-5 Series

Single Pin Packages

- Available with 20 mm or 40 mm strokes
- Compact design
- Enclosed aluminum body

See Page 37



82P-720 and 85P50-800 Series

Tolerance Compensation Pin Clamps

- Tolerance compensation
- Two sizes available - 50 mm, 63 mm (82P-720)
- Integrated sensing
- Enclosed aluminum body

See Pages 32-34



85D5-2 Series

Double Pin Package

- Optional hand lever for manual control
- Sensors can be mounted on either side of unit
- Flexible hand lever mounting positions

See Pages 43



VV85G Series

Pneumatic Precision Guide

- 20 mm, 40 mm strokes
- Can be used in vertical or horizontal orientation
- Locks in extended and retracted position
- Completely enclosed, protected mechanism

See Page 35



98W Series

Electric Pivot Unit

- One-size fits all
- Field adjustable
- Constant torque
- Energy saving
- Interchangeable with standard pneumatic pivot units
- Flexible saddle arm and mounting capabilities

See Page 48

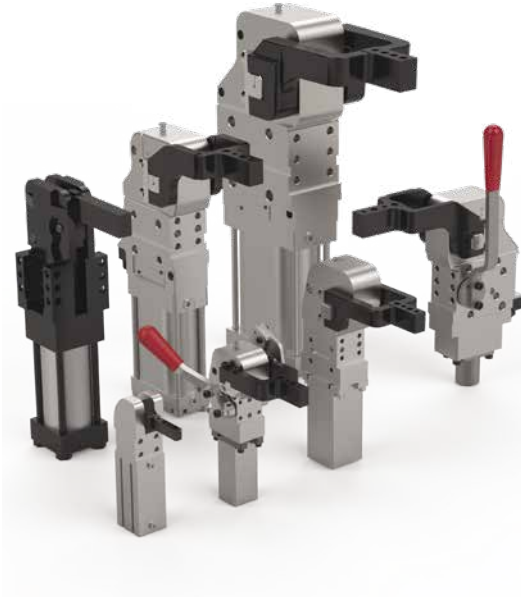


PNEUMATIC POWER CLAMPS

Sizing and Application Chart

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Series	Page PC-PPC-#	Holding Torque at 5 bar Nm [ft-lb]					Clamping Torque at 5 bar Nm [ft-lb]					Piston Diameter mm [in]						
		0 to 100 [0 to 74]	100 to 500 [74 to 369]	500 to 1000 [369 to 738]	1000 to 2000 [738 to 1475]	2000 to 4000 [1475 to 2950]	0 to 100 [0 to 74]	100 to 500 [74 to 369]	500 to 1000 [369 to 738]	1000 to 2000 [738 to 1475]	2000 to 4000 [1475 to 2950]	Less than 25 [0.98]	25 [0.98]	32 [1.26]	40 [1.57]	50 [1.97]	63 [2.48]	80 [3.15]
81L	10	●					●				●							
82L-4	11	●					●				●	●						
82L-3E	12	●	●				●	●			●	●	●					
TCC-2	16	●	●				●	●						●	●			
82M-3E	18	●		●	●		●	●					●	●	●			
52H-3E	20				●													
870/871	25	●					●							●				
860/861	26		●					●							●			
890/891	26				●			●									●	
1000/1001	26				●			●									●	●
82D	27	●					●	●						●			●	
84A	29	●	●				●	●						●	●			



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PNEUMATIC POWER CLAMPS

Sizing and Application Chart

Material	Weight		Suitable Application Areas										Features					
	Kg	[lbs]	Welding	Assembly	Dirty Environment	End Effectors	Machining	Duty Cycle	Adjustable Opening Angle	Inductive Sensors Available	Dual Arms	Tolerance Compensating	Manual Version Available	Center Arm	Lateral Arms	Toggle Locking		
Aluminum	0 to 2	[0 to 4.41]	●	●	●	●	●	○	○					✓		✓		
Steel	2 to 4	[4.41 to 8.82]	●	●	●	●	●	●	●	✓	✓		✓	✓	✓	✓		
	4 to 6	[8.82 to 13.23]	●	●	●	●	●	●	●	✓	✓			✓	✓	✓		
	6 to 8	[13.23 to 17.64]	●	●	●	●	●	●	●	✓	✓	✓		✓	✓	✓		
	More than 8	[17.64]	●	●	●	●	●	●	●	✓	✓		✓	✓	✓	✓		
	0 to 0,5	[0 to 31]	●	●	●	●	●	○	○					✓		✓		
	0,5 to 1,0	[31 to 61]	●	●	●	●	●	○	○					✓		✓		
	1,0 to 2,0	[61 to 122]	●	●	●	●	●	○	○					✓		✓		
	More than 2,0	[122]	●	●	●	●	●	○	○					✓		✓		
			⊗	○	○	○	○	○	○					✓		✓		
			○	○	○	○	○	○	○					✓		✓		
			○	○	○	○	○	○	○	✓	✓			✓		✓		
			○	○	○	○	○	○	○	✓	✓			✓		✓		
			○	○	○	○	○	○	○	✓	✓			✓		✓		
			○	○	○	○	○	○	○					✓		✓		
			○	○	○	○	○	○	○					✓		✓		
			○	○	○	○	○	○	○					✓		✓		
			○	○	○	○	○	○	○	✓	✓					✓		
			○	○	○	○	○	○	○	✓	✓	✓		✓		✓		

● Excellent/High ○ Fair/Medium ● Poor/Low ⊗ Not Recommended

PNEUMATIC PIN CLAMPS AND PIN PACKAGES

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Sizing and Application Chart

Pin Clamps



Series	Page #	Clamping Torque at 5 bar [72 psi] N [lbf]	Piston Ø mm [in]	Material	Weight Kg [lb]	Air Consumption per Double Stroke at 5 bar [72 psi] dm ³ [in ³]	Applications	Features
82P25-2	30	0 to 1000 [0 to 225]	25 [0.98]	Aluminum	0 to 2 [0 to 4.41]	0 to 0,5 [0 to 31]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle	Inductive Sensors, Dual Hooks, Centering Pins, Toggle Locking, Self Locking
82P30-3	31	1000 to 2000 [225 to 450]	30 [1.18]	Steel	2 to 4 [4.41 to 8.82]	0,5 to 1,0 [31 to 61]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle	Inductive Sensors, Dual Hooks, Centering Pins, Toggle Locking, Self Locking
82P35-3	31	2000 to 4000 [450 to 899]	35 [1.38]	Aluminum	0 to 2 [0 to 4.41]	0 to 0,5 [0 to 31]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle	Inductive Sensors, Dual Hooks, Centering Pins, Toggle Locking, Self Locking
82P50-720	32		50 [1.97]	Aluminum	0 to 2 [0 to 4.41]	0 to 0,5 [0 to 31]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle	Inductive Sensors, Dual Hooks, Centering Pins, Toggle Locking, Self Locking
82P63-720	32		63 [2.48]	Aluminum	0 to 2 [0 to 4.41]	0 to 0,5 [0 to 31]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle	Inductive Sensors, Dual Hooks, Centering Pins, Toggle Locking, Self Locking
82P50-1800	34		50 [1.97]	Aluminum	0 to 2 [0 to 4.41]	0 to 0,5 [0 to 31]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle	Inductive Sensors, Dual Hooks, Centering Pins, Toggle Locking, Self Locking
82U50-3	38		50 [1.97]	Aluminum	0 to 2 [0 to 4.41]	0 to 0,5 [0 to 31]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle	Inductive Sensors, Dual Hooks, Centering Pins, Toggle Locking, Self Locking

● Excellent/High ○ Fair/Medium ● Poor/Low ⊗ Not Recommended

Precision Guides



Series	Page #	Stroke mm [in]	Lifting Force N [lbf]	Holding Force N [lbf]	Weight Kg [lb]	Air Consumption per Double Stroke at 5 bar [72 psi] dm ³ [in ³]	Applications
VV85G-15020	36	20 [0.79]	0 to 500 [0 to 112.4]	0 to 4000 [0 to 899]	13,2 [29.1]	0,7 [42.7]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle
VV85G-15040	36	40 [1.57]	0 to 500 [0 to 112.4]	0 to 4000 [0 to 899]	13,2 [29.1]	0,7 [42.7]	Welding, Assembly, Dirty Environment, End Effectors, Machining, Duty Cycle

● Excellent/High ○ Fair/Medium ● Poor/Low ⊗ Not Recommended

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ELECTRIC AND PNEUMATIC PIVOT UNITS

Sizing and Application Chart

Pin Packages



Series	Page #	Pushing Force at 5 bar [72 psi] N [lbf]		Retracting Force at 5 bar [72 psi] N [lbf]		Piston Ø mm [in]	Stroke mm [in]	Weight Kg [lb]	Applica- tions	Features
		0 to 500 [0 to 112]	500 to 1000 [112 to 225]	1000 to 2000 [225 to 450]	2000 to 3000 [450 to 674]					
86P30-5	39	●			●		20 [0.79]	0 to 2 [0 to 4.41]	Welding	Toggle Locking (Extended)
86P40-2	40		●			●	40 [1.57]	2 to 4 [4.41 to 8.82]	Assembly	
86P60-2	40			●			60 [2.36]	4 to 6 [8.82 to 13.23]	Machining	
56H40-2	42						80 [3.15]	6 to 8 [13.23 to 17.64]	Duty Cycle	
85P5-1	44		●			●				Dual Pin
85D5-2	45			●		●				Ceramic Coated Pin
86D40-1	46	●				●				
86D60-1	46		●							
56D60-1	47									

● Excellent/High ○ Fair/Medium ● Poor/Low ⊗ Not Recommended

Pivot Units



Series	Page #	Maximum Torque at 5 bar [72 psi] Nm [lb-ft]			Cylinder Ø mm [in]	Power	Opening Angle°	Weight Kg [lb]	Applica- tions	Features
		≤92°	>90° to ≤121°	>121°						
98W	48	●*					25 to 50 [55.12 to 110.23]	Welding	Infinite Adj. Opening Angle	Adjustable Opening Angle
RCM100	50	●					50 to 75 [110.23 to 165.35]	Fixture/Testing	Sensors	Brake
RCM125	50	●					75 to 100 [165.35 to 220.46]	Food and Packaging	Locking	
RCM160	50	●						Duty Cycle		
RCM200	50	●								
RFM100	50	●								
RFM125	50	●								
RFM160	50	●								
RFM200	50	●								

*Max. Torque at 400 VAC

● Excellent/High ○ Fair/Medium ● Poor/Low ⊗ Not Recommended

81L

Pneumatic Power Clamps | Miniature

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81L **12-1** **01** **00**

Size	Description
12-1	12 mm Cylinder (M5 Port)
16-1	16 mm Cylinder (M5 Port)
20-1	20 mm Cylinder (M5 Port)
25-1	20 mm Cylinder (M5 Port)

Arm Style	Description
01	Clamping arm, horizontal
41	Clamping arm, vertical

Design	Description
00	Standard design

See below for further details



12

Max Holding Torque
25 Nm [18.4 ft-lb]
Max Clamping Torque
4,5 Nm [3.3 ft-lb]
at 5 bar [72 psi]

16

Max Holding Torque
60 Nm [44.3 ft-lb]
Max Clamping Torque
7 Nm [5.2 ft-lb]
at 5 bar [72 psi]

20

Max Holding Torque
100 Nm [73.8 ft-lb]
Max Clamping Torque
18 Nm [13.3 ft-lb]
at 5 bar [72 psi]

25

Max Holding Torque
100 Nm [73.8 ft-lb]
Max Clamping Torque
18 Nm [13.3 ft-lb]
at 5 bar [72 psi]

Accessories/Replacement Parts

Model	Seal Kits
81L12-1....	81L12-1-00
81L16-1....	81L16-1-00
81L20-1....	81L20-1-00
81L25-1....	81L20-1-00

Order No.
8EA-109-1
82ZB-004-1

Description (order separately)
Sensor, 3-wire cable, M8x1 connector, 3-pin
Adapter for mounting 81L20-1, 81L25-1 to 25mm dia. bar



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Enclosed Pneumatic Power Clamps | Miniature

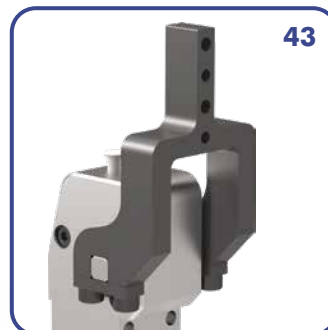
82L **16-4** **03** **0**

Size	Description
12-4	12 mm Cylinder (M5 Port)
16-4	16 mm Cylinder (M5 Port)
20-4	20 mm Cylinder (M5 Port)
25-4	25 mm Cylinder (M5 Port)

Arm Style	Description
00	No clamping arm
03	U-bar, central 90°
43	U-bar, central 180°

See below for further details

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



Model	Order No. for Arm
82L12-4...	8JG-401-1-01
82L16-4...	8JG-402-1-01
82L20-4...	8JG-403-1-01
82L25-4...	8JG-404-1-01



12

Max Holding Torque
35 Nm [25.8 ft-lb]
Max Clamping Torque
90° version: 10,4 Nm [7.7 ft-lb]
180° version: 8,7 Nm [6.4 ft-lb]
at 5 bar [72 psi]

16

Max Holding Torque
40 Nm [29.5 ft-lb]
Max Clamping Torque
12,4 Nm [9.1 ft-lb]
11 Nm [8.1 ft-lb]
at 5 bar [72 psi]

20

Max Holding Torque
50 Nm [36.9 ft-lb]
Max Clamping Torque
21 Nm [15.5 ft-lb]
19,3 Nm [14.2 ft-lb]
at 5 bar [72 psi]

25

Max Holding Torque
80 Nm [59.0 ft-lb]
Max Clamping Torque
31,8 Nm [23.4 ft-lb]
28,5 Nm [21.0 ft-lb]
at 5 bar [72 psi]

Accessories

Order No.	Description (order separately)
8EA-109-1	Sensor, 3-wire cable, M8x1 connector, 3-pin
8ZZB-004-1	Adapter for mounting 82L20-4, 82L25-4 to 25mm dia. bar

82L-3E

Enclosed Pneumatic Power Clamps | Lightweight Modular

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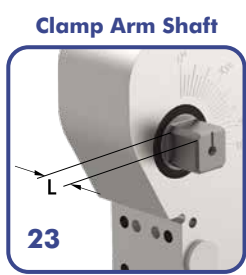
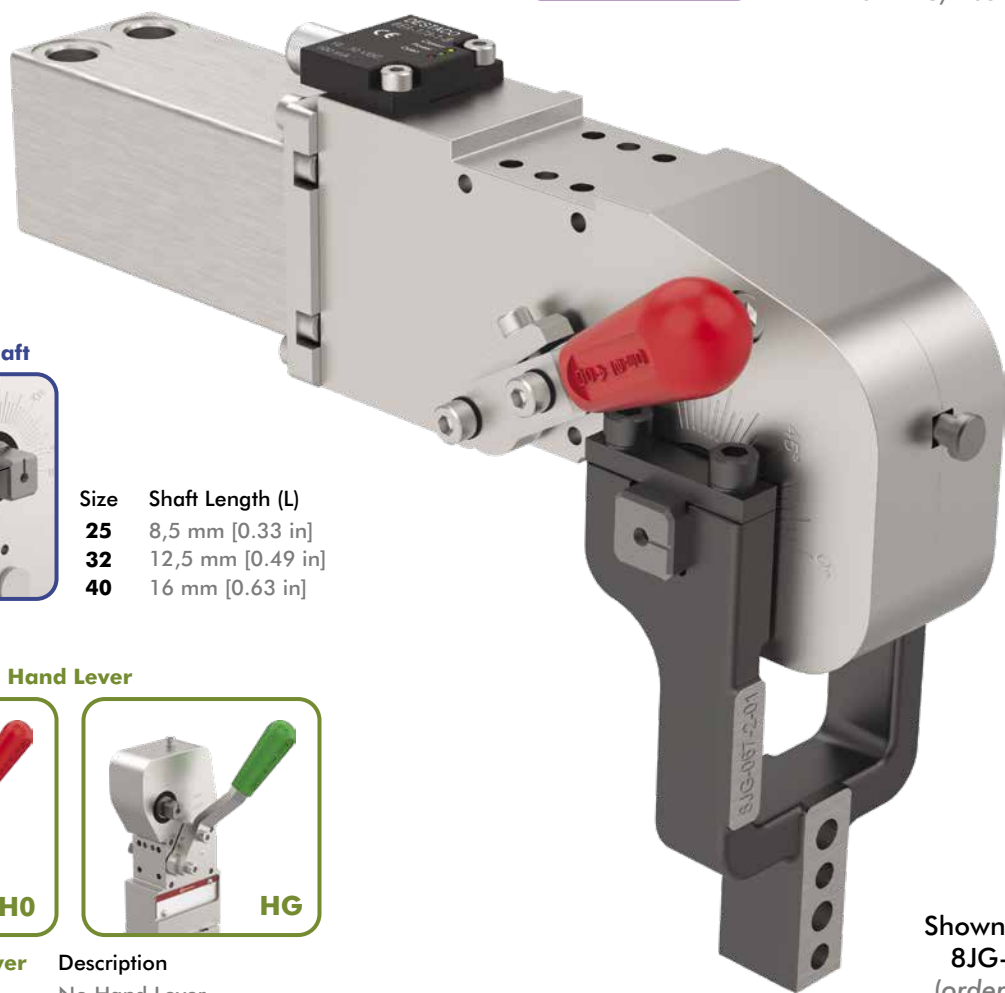
- 82L-3E
- 23
- H0
- 40
- B7

Clamp Arm Shaft
23
Description
for Arms
See below for further details

Hand Lever
00
H0
HG
Description
No Hand lever
Red Hand lever
Green Hand lever
See below for further details



Cylinder (Standard)
25 25 mm Cylinder (G1/8 Port)
2N 25 mm Cylinder (1/8-18 NPT Port)
32 32 mm Cylinder (G1/8 Port)
3N 32 mm Cylinder (1/8-18 NPT Port)
40 40 mm Cylinder (G1/4 Port)
4N 40 mm Cylinder (1/4-18 NPT Port)



Size	Shaft Length (L)
25	8,5 mm [0.33 in]
32	12,5 mm [0.49 in]
40	16 mm [0.63 in]



Hand Lever
00
H0
HG
Description
No Hand Lever
Red Hand Lever
Green Hand Lever

Shown with U-Arm
8JG-067-2-01
(order separately)



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82L-3E

Enclosed Pneumatic Power Clamps | Lightweight Modular

Sensor	Description
00	Without Sensing System
C8	Inductive Sensing System with In-Line M8x1 Connector (Size 25: 8EA-174-1-B, Size 32/40: 8EA-177-1-B)
B7	Inductive Sensing System with In-Line M12x1 Connector (Size 25: 8EA-175-1-B, Size 32/40: 8EA-178-1-B)
B8	Inductive Sensing System with M12x1 Connector with Cable (Size 25: 8EA-176-1-B, Size 32/40: 8EA-179-1-B)



C8



B7



B8



25/N

Max Holding Torque
75 Nm [55 ft-lb]
Max Clamping Torque
25 Nm [18 ft-lb]
at 5 bar [72 psi]

32/N

Max Holding Torque
180 Nm [133 ft-lb]
Max Clamping Torque
55 Nm [41 ft-lb]
at 5 bar [72 psi]

40/N

Max Holding Torque
380 Nm [280 ft-lb]
Max Clamping Torque
120 Nm [89 ft-lb]
at 5 bar [72 psi]

82L-3E ACCESSORIES

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Enclosed Pneumatic Power Clamps | Lightweight Modular

U-Type Offset Clamping Arms



Model	Order No. (1 clamp arm)
82L-3E....2.	8JG-647-3-01
82L-3E....2.	8JG-648-3-01

U-Type Central Clamping Arms



Model	Order No. (1 clamp arm)
82L-3E....2.	8JG-075-3-01
82L-3E....3.	8JG-065-2-01
82L-3E....4.	8JG-067-2-01

H- Clamping Arms



Model	Order No. (1 clamp arm)
82L-3E....3.	8JG-363-1-01
82L-3E....4.	8JG-364-1-01

Lateral Clamping Arms



Model	Order No. (1 clamp arm)
82L-3E....3.	8JG-066-1-01
82L-3E....4.	8JG-068-1-01

Counter-Support



Order No.	Fit for Model
BK-R25-82L25-1	82L-3E....2.
BK-R25-82L32-1	82L-3E....3.
BK-R25-82L40-1	82L-3E....4.

Hold Open Device



Order No.	Fit for Model
82ZB-036-1	82L-3E....2.
82ZB-037-1	82L-3E....3.
82ZB-038-1	82L-3E....4.



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82L-3E ACCESSORIES

Enclosed Pneumatic Power Clamps | Lightweight Modular

Clamping Arms		Order No. for Set 82L-3E23..2...	Order No. for Set 82L-3E23..3...	Order No. for Set 82L-3E23..4...						
U-Offset 90° Left/180° Right		8JG-647-3-01	--	--						
U-Offset 180° Left/90° Right		8JG-648-3-01	--	--						
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						
Sensor Cables (1 Connector Socket & 5 m [16.4 ft] cable)										
Connector Socket M8x1 Straight 4-pin		8EL-009-1	8EL-009-1	8EL-009-1						
Connector Socket M8x1 Angular 4-pin		8EL-007-1	8EL-007-1	8EL-007-1						
Connector Socket M12x1 Straight 5-pin		8EL-002-1	8EL-002-1	8EL-002-1						
Connector Socket M12x1 Angular 4-pin		8EL-003-1	8EL-003-1	8EL-003-1						
Shim for Clamping Arm		Order No.	A1	A2	D2	D3	B9	B10	B12	L10
		82ZB-SH4001		[0.004] 0,1						
		82ZB-SH4002		[0.008] 0,2						
		82ZB-SH4005	[1.65] 42	[0.02] 0,5	[0.26] 6,5	[0.28] 7	[0.24] 6	[0.79] 20	[0.79] 20	[0.46] 11,8
		82ZB-SH4010		[0.04] 1,0						
		82ZB-SH4020		[0.08] 2,0						
		82ZB-SH4050		[0.20] 5,0						
Spare Parts		Order No. for Set		Order No. for Set		Order No. for Set				
		82L-3E23..25..	82L-3E23..2N..	82L-3E23..32..	82L-3E23..3N..	82L-3E23..40..	82L-3E23..4N..			
Cylinder		82L-3E000025	82L-3E00002N	82L-3E000032	82L-3E00003N	82L-3E000040	82L-3E00004N			
Sensor Kit										
C8 Connector Plug, with In-Line M8x1		8EA-174-1-B		8EA-177-1-B						
B7 Connector Plug, with In-Line M12x1		8EA-175-1-B		8EA-178-1-B						
B8 Connector Plug, M12x1 with Cable		8EA-176-1-B		8EA-179-1-B						
Spare Parts		Order No. for Set		Order No. for Set		Order No. for Set				
		82L-3E23H02...	82L-3E23HG2...	82L-3E23H03...	82L-3E23HG3...	82L-3E23H04...	82L-3E23HG4...			
Hand Lever		8KB-031-1	8KB-091-1	8KB-031-1	8KB-091-1	8KB-032-1	8KB-092-1			

TCC-2

Enclosed Pneumatic Power Clamps | Heavy-Duty, Tolerance Compensation

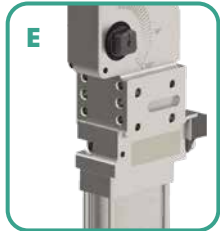
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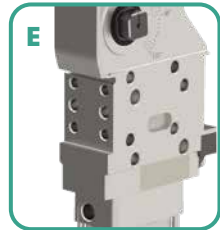
TCC-2 **E** **03** **00** **6A** **L8**

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		<i>See below for further details</i>		

Mounting



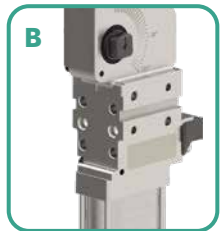
Size 40



Size 50



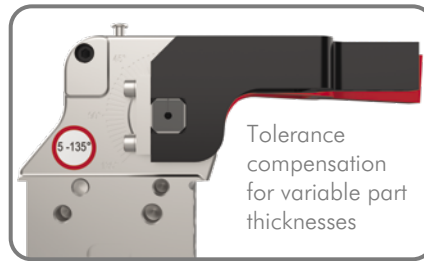
Size 63



Size 40 Only

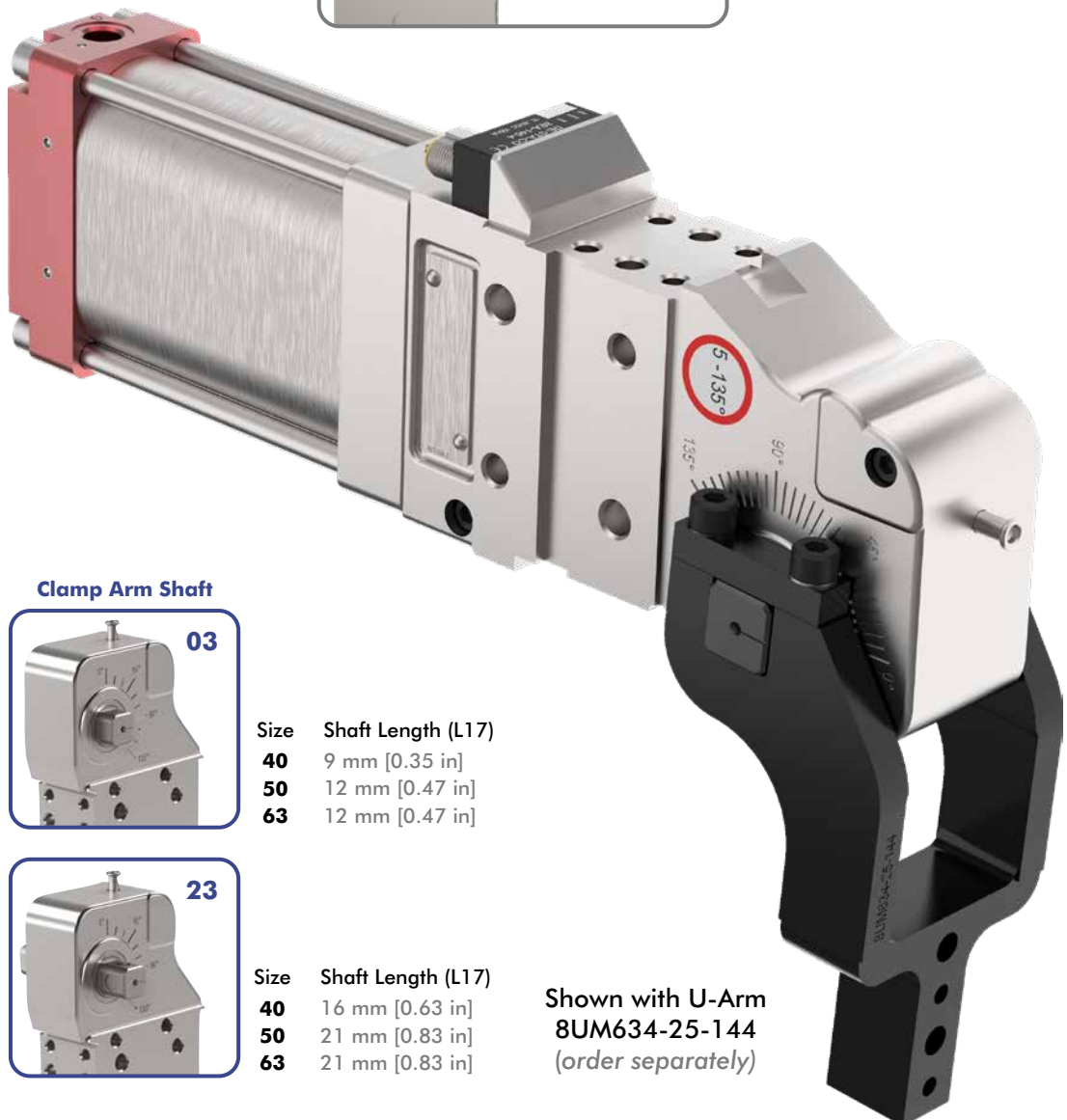


Size 63 Only



Tolerance compensation for variable part thicknesses

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



Clamp Arm Shaft



03

Size	Shaft Length (L17)
40	9 mm [0.35 in]
50	12 mm [0.47 in]
63	12 mm [0.47 in]



23

Size	Shaft Length (L17)
40	16 mm [0.63 in]
50	21 mm [0.83 in]
63	21 mm [0.83 in]

Shown with U-Arm
8UM634-25-144
(order separately)



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Enclosed Pneumatic Power Clamps | Heavy-Duty, Tolerance Compensation

Sensor	Description
00	Without Sensing System
L8*	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
N8*	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)

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

Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft] Cable



L8/N8



L9/N9



K8/K9



Cylinder (Standard)

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



Cylinder with Unlockable Return Valve

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



Cylinder with Internal Hold Open Device

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



Cylinder with Piston Rod Locking Device

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



40

Max Holding/
Clamping Torque
85 Nm [62.7 ft-lb]
at 5 bar [72 psi]



50

Max Holding/
Clamping Torque
175 Nm [129 ft-lb]
at 5 bar [72 psi]



63

Max Holding/
Clamping Torque
295 Nm [217.6 ft-lb]
at 5 bar [72 psi]

82M-3

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular

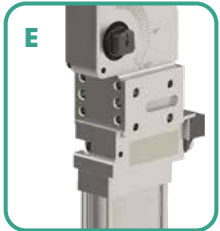
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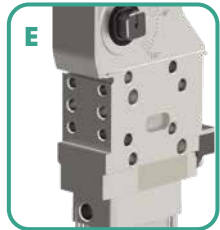
82M-3 **E** **23** **H0** **50** **L8**

Mounting	Description
E	Standard Mounting
B	Common Front Mount for Size 40 only (same mount pattern as size 50 & 63)
N	NAAMS Side Mounting for Size 40 & 63 only

Mounting



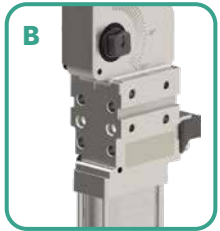
Size 40



Size 50



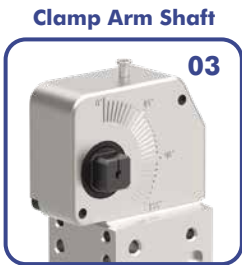
Size 63



Size 40 Only



Size 63 Only



Size	Shaft Length (L17)
40	9 mm [0.35 in]
50	12 mm [0.47 in]
63	12 mm [0.47 in]



Size	Shaft Length
40	9 mm [0.35 in]



Size	Shaft Length (L17)
40	16 mm [0.63 in]
50	21 mm [0.83 in]
63	21 mm [0.83 in]
80	32 mm [1.26 in]

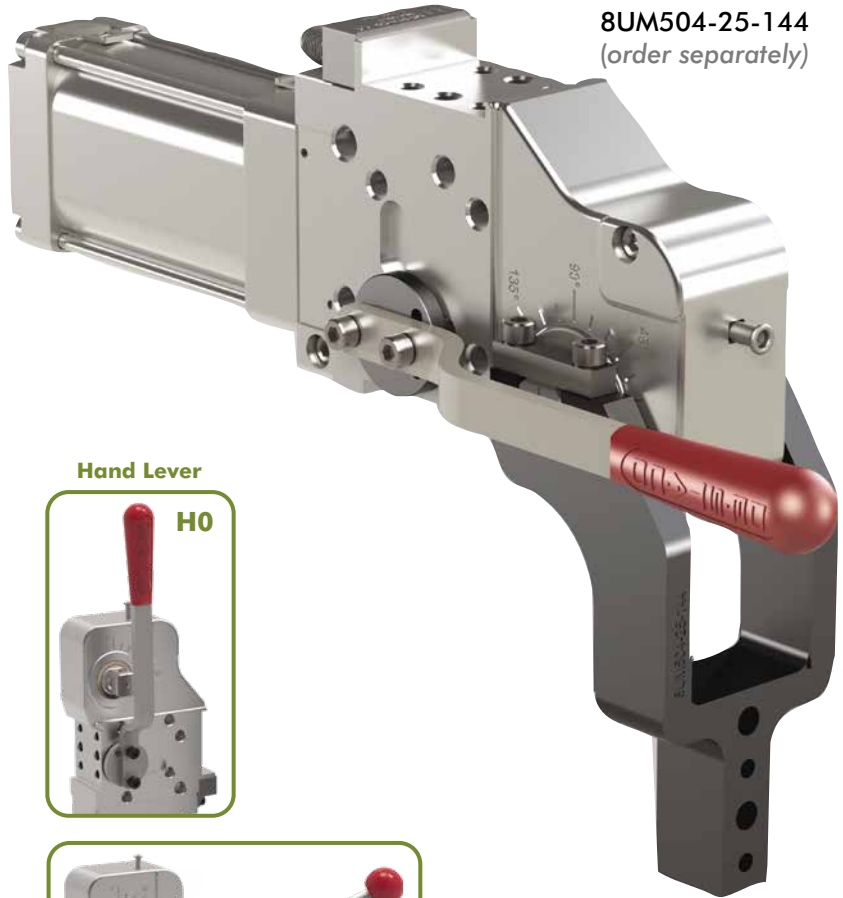
Size	Shaft Length (L17)
63	26 mm [1.02 in]

Clamp Arm Shaft	Description
03	for U-Arms
13	for U-Arms (required for 40 NAAMS N only)
23	for Lateral Arms
D0	for Lateral Arms (size 63 NAAMS N only)

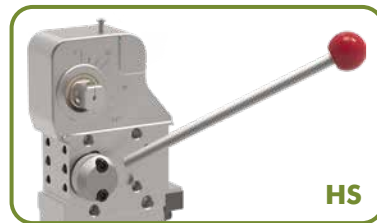
See below for further details

Handle	Description
00	No Hand lever
H0	Hand Lever
HS	Weldable

See below for further details



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



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

Replacement Hand Levers	Order No.
Standard	
82M-3E..H040..	8KB-097-1
82M-3E..H05...	8KB-098-1
82M-3E..H06..	8KB-099-1
82M-3E..H08..	8KB-100-1
Weldable	
82M-3E..HS40..	8KB-101-1
82M-3E..HS5...	8KB-102-1
82M-3E..HS6..	8KB-103-1
82M-3E..HS8..	8KB-104-1



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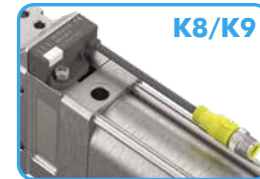
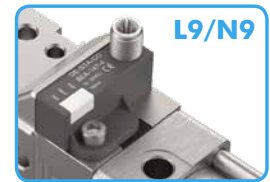
82M-3

Enclosed Pneumatic Power Clamps | Heavy-Duty Modular

Sensor	Description
00	Without Sensing System
L8	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
N8	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)

Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft] Cable



Cylinder - Standard

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



Cylinder with Internal Hold Open Device

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



40

Max Holding Torque
380 Nm [280 ft-lb]
Max Clamping Torque
120 Nm [89 ft-lb]
at 5 bar [72 psi]

50

Max Holding Torque
1300 Nm [959 ft-lb]
Max Clamping Torque
270 Nm [199 ft-lb]
at 5 bar [72 psi]

63

Max Holding Torque
1800 Nm [1328 ft-lb]
Max Clamping Torque
420 Nm [310 ft-lb]
at 5 bar [72 psi]

80

Max Holding Torque
3000 Nm [2213 ft-lb]
Max Clamping Torque
850 Nm [627 ft-lb]
at 5 bar [72 psi]

Locking Device for Hand Lever



Order No.	For Model
82ZB-162-1	82M-3E..H040..
82ZB-084-1	82M-3E..H05...
82ZB-039-1	82M-3E..H06...

Anti-Raming Device



Order No.	For Model
8AB-151-1	82M-3E...40..
8AB-152-1	82M-3E...5...
8AB-153-1	82M-3E...6...
8AB-154-1	82M-3E...8...

For models 82M-3E.....00
and 82M-3E.....L8 only.

Counter Support



Order No.	For Model
82ZB-190-1	82M-3N13..40..

52H-3

Enclosed Modular Manual Power Clamps | Heavy-Duty

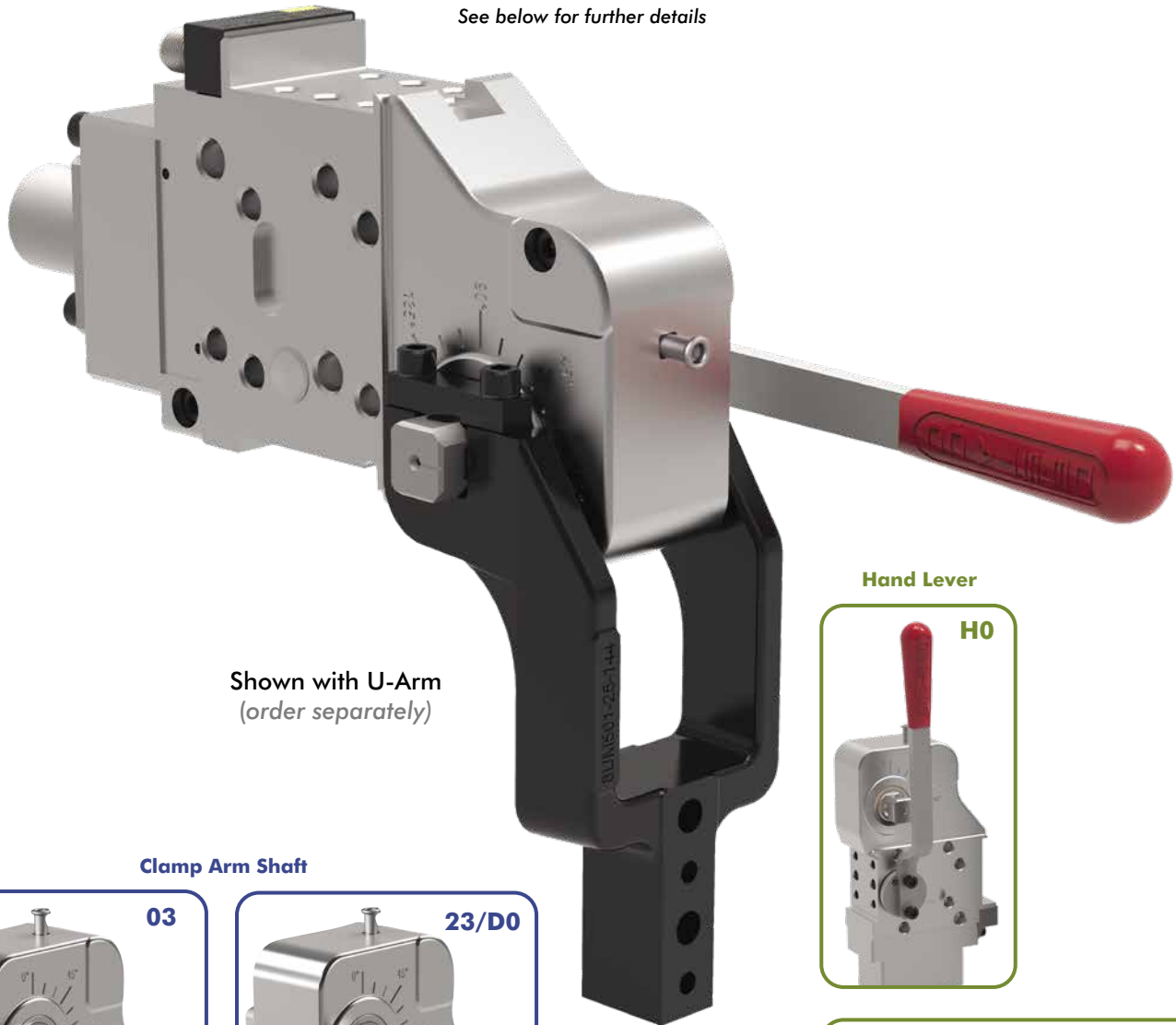
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52H-3 **E** **23** **H0** **50** **L8**

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)

Clamp Arm Shaft



03

Size Shaft Length (L17)
50 12 mm [0.47 in]
63 12 mm [0.47 in]



23/D0

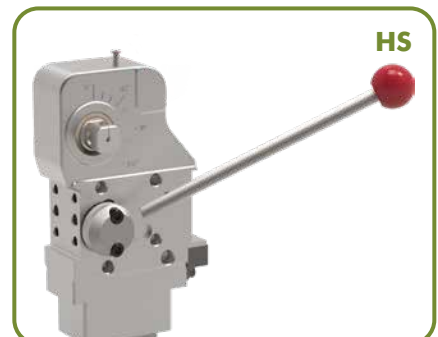
23
Size Shaft Length (L17)
50 21 mm [0.83 in]
63 21 mm [0.83 in]

D0
Size Shaft Length (L17)
D0 26 mm [1.02 in]

Hand Lever



H0



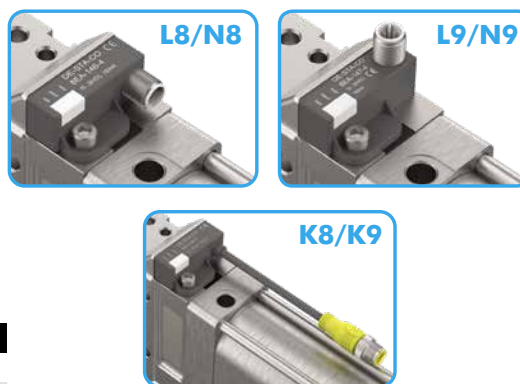
HS



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Enclosed Modular Manual Power Clamps | Heavy-Duty

Sensor	Description
00	Without Sensing System
L8	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
N8	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)



Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft] Cable

Size	Description
50	Size 50 mm
63	Size 63 mm

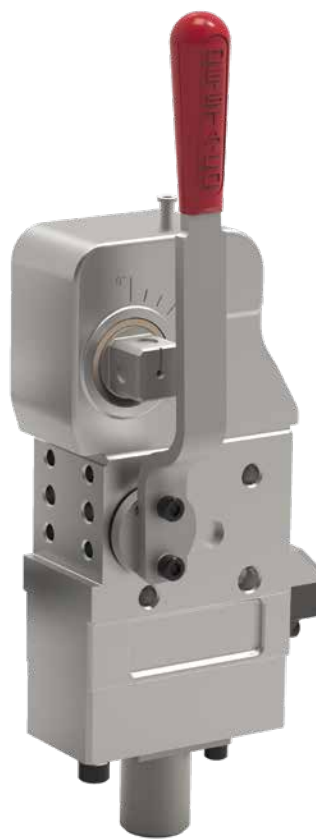


52H-3E..H.50/63
Modular manual clamp, interchangeable with 82M-3E...50/63



50

Max Holding Torque
1300 Nm [959 ft-lb]



63

Max Holding Torque
1800 Nm [1328 ft-lb]

Spare parts

Replacement	for Model	Order No.
Hand lever set	52H-3E...50	8KB-098-1
	52H-3E...63	8KB-099-1
Hand lever set (weldable)	52H-3E...50	8KB-102-1
	52H-3E...63	8KB-103-1

82M-3, 52H-3 CLAMP ARMS

Enclosed Modular Manual and Power Clamps

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U-Arms Center (Aluminum)

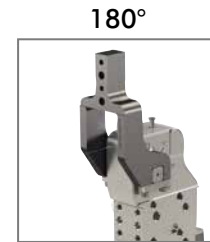
Fits 82M-3E...40..	Max. Opening	
	for 90°	for 180°
8UM404-00-117		105°
8UM404-15-117	135°	120°
8UM404-25-117		135°
8UM404-45-107	130°	

Fits 82M-3...5... and 52H-3E...5...	Max. Opening	
	for 90°	for 180°
8UM504-15-144		105°
8UM504-25-144	135°	120°
8UM504-45-144		135°



Fits 82M-3...6... and 52H-3E...6...	Max. Opening	
	for 90°	for 180°
8UM634-15-144		105°
8UM634-25-144	135°	120°
8UM634-45-144		135°
8UM631-75-204*		135°

Fits 82M-3...8...	Max. Opening	
	for 90°	for 180°
8JG-169-2-01*		105°
8UM801-45-204*	135°	135°



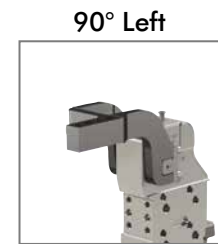
* only steel version available.

U-Arms Offset (Aluminum)

(•) = **L** for Left, **R** for Right

Fits 82M-3E...40..	Max. Opening	
	for 90°	for 180°
8U(•)404-00-117		105°
8U(•)404-15-117	135°	120°
8U(•)404-25-117		135°
8U(•)404-45-107	130°	

Fits 82M-3...5... and 52H-3E...5...	Max. Opening	
	for 90°	for 180°
8U(•)504-15-144		105°
8U(•)504-25-144	135°	120°
8U(•)504-45-144		135°



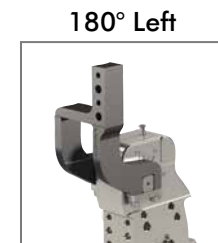
8UL...
8JG-170-2-01

8UR...
8JG-171-2-01

Fits 82M-3...6... and 52H-3E...6...	Max. Opening	
	for 90°	for 180°
8U(•)634-15-144		105°
8U(•)634-25-144	135°	120°
8U(•)634-45-144		135°
8U(•)631-75-204*		135°

Fits 82M-3...8...	Max. Opening	
	for 90°	for 180°
8JG-17(•)-2-01*	135°	105°

(•) = **0** for Left, **1** for Right



8UR...
8JG-171-2-01

8UL...
8JG-170-2-01

Note: 180° left uses same clamp arm as 90° right.
180° right uses same clamp arm as 90° left.

Lateral (Steel)

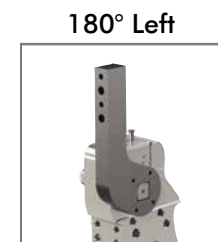
Fits 82M-3E...40..	Max. Opening	
	for 90°	for 180°
8S401-15-117	135°	120°

Fits 82M-3...5... and 52H-3E...5...	Max. Opening	
	for 90°	for 180°
8JG-070-1-01		135°
8S501-25-144	135°	135°



Fits 82M-3...6... and 52H-3E...6...	Max. Opening	
	for 90°	for 180°
8JG-080-1-01		135°
8S631-25-144	135°	135°
8S631-45-144		135°
8S631-75-204		135°

Fits 82M-3...8...	Max. Opening	
	for 90°	for 180°
8JG-1179-1-01		135°
8S801-45-204	135°	135°



Models with 2 lateral clamp arms requires 2 clamp arm sets.



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82M-3, 52H-3 CLAMP ARMS

Enclosed Modular Manual and Power Clamps

Lateral Arms (NAAMS-Style) for 82M-3E and 52H-3E 50mm

9mm Thru Hole (6.00 H7 Dowel)

90mm [3.54"] Arm Length

Series	Arm Style	Model
50 Offset	▲ • 3256	B8JG-3256-1
25 Offset	▲ • 3246	B8JG-3246-1
0 Offset	▲ • 3236	B8JG-3236-1

120mm [4.72"] Arm Length

Series	Arm Style	Model
50 Offset	▲ • 3257	B8JG-3257-1
25 Offset	▲ • 3247	B8JG-3247-1
0 Offset	▲ • 3237	B8JG-3237-1

150mm [5.90"] Arm Length

Series	Arm Style	Model
50 Offset	▲ • 3258	B8JG-3258-1
25 Offset	▲ • 3248	B8JG-3248-1
0 Offset	▲ • 3238	B8JG-3238-1

11mm Thru Hole (8.00 F7 Dowel)

90mm [3.54"] Arm Length

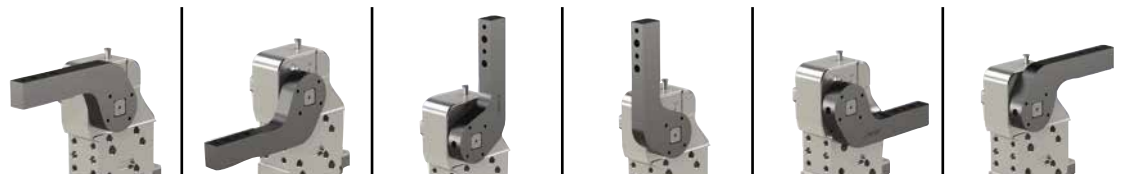
Series	Arm Style	Model
50 Offset	▲ • 1226	B8JG-1226-1
25 Offset	▲ • 1216	B8JG-1216-1
0 Offset	▲ • 1206	B8JG-1206-1

120mm [4.72"] Arm Length

Series	Arm Style	Model
50 Offset	▲ • 1227	B8JG-1227-1
25 Offset	▲ • 1217	B8JG-1217-1
0 Offset	▲ • 1207	B8JG-1207-1

150mm [5.90"] Arm Length

Series	Arm Style	Model
50 Offset	▲ • 1228	B8JG-1228-1
25 Offset	▲ • 1218	B8JG-1218-1
0 Offset	▲ • 1208	B8JG-1208-1



Arm Styles	Maximum Opening Angle (shown in locked position)					
1206-1208/3236-3238	135°	135°	100°	100°	N/A	N/A
1216-1218/3246-3248	135°	N/A	50°	125°	N/A	30°
1226-1228/3256-3258	125°	N/A	35°	135°	N/A	50°

Lateral Arms (NAAMS-Style) for 82M-3. and 52H-3E 63mm for 23 Clamp Arm Shaft Option

9mm Thru Hole (6.00 H7 Dowel)

135mm [5.31"] Arm Length

Series	Arm Style	Model
120 Offset	▲ 1543	B8JG-1543-1
70 Offset	▲ 1531	B8JG-1531-1
25 Offset	▲ 1519	B8JG-1519-1
0 Offset	▲ 1507	B8JG-1507-1

165mm [6.50"] Arm Length

Series	Arm Style	Model
120 Offset	▲ 1544	B8JG-1544-1
70 Offset	▲ 1532	B8JG-1532-1
25 Offset	▲ 1520	B8JG-1520-1
0 Offset	▲ 1508	B8JG-1508-1

195mm [7.68"] Arm Length

Series	Arm Style	Model
120 Offset	▲ 1545	B8JG-1545-1
70 Offset	▲ 1533	B8JG-1533-1
25 Offset	▲ 1521	B8JG-1521-1
0 Offset	▲ 1509	B8JG-1509-1

225mm [8.86"] Arm Length

Series	Arm Style	Model
120 Offset	▲ 1546	B8JG-1546-1
70 Offset	▲ 1534	B8JG-1534-1
25 Offset	▲ 1522	B8JG-1522-1
0 Offset	▲ 1510	B8JG-1510-1

255mm [10.04"] Arm Length

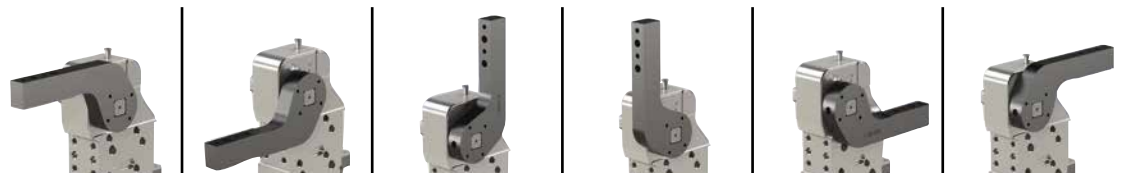
Series	Arm Style	Model
120 Offset	▲ 1547	B8JG-1547-1
70 Offset	▲ 1535	B8JG-1535-1
25 Offset	▲ 1523	B8JG-1523-1
0 Offset	▲ 1511	B8JG-1511-1

285mm [11.22"] Arm Length

Series	Arm Style	Model
120 Offset	▲ 1548	B8JG-1548-1
70 Offset	▲ 1536	B8JG-1536-1
25 Offset	▲ 1524	B8JG-1524-1
0 Offset	▲ 1512	B8JG-1512-1

▲ Common in North America

(•) STANDARD ARM OFFERING



Arm Styles	Maximum Opening Angle (shown in locked position)					
1510-1512/1507-1509	135°	135°	100°	100°	N/A	N/A
1522-1524/1519-1521	135°	N/A	50°	130°	N/A	40°
1534-1536/1531-1533	115°	N/A	25°	135°	N/A	75°
1546-1548/1543-1545	110°	N/A	20°	135°	N/A	85°

▲ Common in North America

(•) STANDARD ARM OFFERING

82M-3, 52H-3 CLAMP ARMS

Enclosed Modular Manual and Power Clamps

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Lateral Arms (NAAMS-Style) for **82M-3**. and **52H-3E**. 63mm for **D0** Clamp Arm Shaft Option
11mm Thru Hole (8.00 F7 Dowel)

135mm [5.31"] Arm Length			165mm [6.50"] Arm Length			195mm [7.68"] Arm Length		
Series	Arm Style	Model	Series	Arm Style	Model	Series	Arm Style	Model
120 Offset	▲ • 1043	B8JG-1043-1	120 Offset	▲ ⓘ 1044	B8JG-1044-1	120 Offset	▲ ⓘ 1045	B8JG-1045-1
70 Offset	▲ • 1031	B8JG-1031-1	70 Offset	▲ • 1032	B8JG-1032-1	70 Offset	▲ • 1033	B8JG-1033-1
25 Offset	▲ • 1019	B8JG-1019-1	25 Offset	▲ • 1020	B8JG-1020-1	25 Offset	▲ ⓘ 1021	B8JG-1021-1
0 Offset	▲ • 1007	B8JG-1007-1	0 Offset	▲ • 1008	B8JG-1008-1	0 Offset	▲ • 1009	B8JG-1009-1
225mm [8.86"] Arm Length			255mm [10.04"] Arm Length			285mm [11.22"] Arm Length		
Series	Arm Style	Model	Series	Arm Style	Model	Series	Arm Style	Model
120 Offset	▲ ⓘ 1046	B8JG-1046-1	120 Offset	▲ ⓘ 1047	B8JG-1047-1	120 Offset	▲ ⓘ 1048	B8JG-1048-1
70 Offset	▲ • 1034	B8JG-1034-1	70 Offset	▲ • 1035	B8JG-1035-1	70 Offset	▲ ⓘ 1036	B8JG-1036-1
25 Offset	▲ ⓘ 1022	B8JG-1022-1	25 Offset	▲ ⓘ 1023	B8JG-1023-1	25 Offset	▲ ⓘ 1024	B8JG-1024-1
0 Offset	▲ ⓘ 1010	B8JG-1010-1	0 Offset	▲ ⓘ 1011	B8JG-1011-1	0 Offset	▲ ⓘ 1012	B8JG-1012-1

Arm Styles	Maximum Opening Angle (shown in locked position)					
1010-1012/1007-1009	135°	135°	100°	100°	N/A	N/A
1022-1024/1019-1021	135°	N/A	50°	130°	N/A	40°
1034-1036/1031-1033	115°	N/A	25°	135°	N/A	75°
1046-1048/1043-1045	110°	N/A	20°	135°	N/A	85°

Lateral Arms (NAAMS-Style) for **82M-3E** 80mm

11mm Thru Hole (8.00 F7 Dowel)

155mm [6.10"] Arm Length			185mm [7.28"] Arm Length			215mm [8.46"] Arm Length		
Series	Arm Style	Model	Series	Arm Style	Model	Series	Arm Style	Model
120 Offset	▲ ⓘ 1170	B8JG-1170-1	120 Offset	▲ ⓘ 1171	B8JG-1171-1	120 Offset	▲ ⓘ 1172	B8JG-1172-1
70 Offset	▲ • 1150	B8JG-1150-1	70 Offset	▲ ⓘ 1151	B8JG-1151-1	70 Offset	▲ ⓘ 1152	B8JG-1152-1
25 Offset	▲ ⓘ 1130	B8JG-1130-1	25 Offset	▲ ⓘ 1131	B8JG-1131-1	25 Offset	▲ ⓘ 1132	B8JG-1132-1
0 Offset	▲ ⓘ 1110	B8JG-1110-1	0 Offset	▲ ⓘ 1111	B8JG-1111-1	0 Offset	▲ • 1112	B8JG-1112-1
245mm [9.65"] Arm Length			275mm [10.83"] Arm Length			305mm [12.00"] Arm Length		
Series	Arm Style	Model	Series	Arm Style	Model	Series	Arm Style	Model
120 Offset	▲ ⓘ 1173	B8JG-1173-1	120 Offset	▲ ⓘ 1174	B8JG-1174-1	120 Offset	▲ ⓘ 1175	B8JG-1175-1
70 Offset	▲ ⓘ 1153	B8JG-1153-1	70 Offset	▲ ⓘ 1154	B8JG-1154-1	70 Offset	▲ • 1155	B8JG-1155-1
25 Offset	▲ ⓘ 1133	B8JG-1133-1	25 Offset	▲ • 1134	B8JG-1134-1	25 Offset	▲ ⓘ 1135	B8JG-1135-1
0 Offset	▲ ⓘ 1113	B8JG-1113-1	0 Offset	▲ ⓘ 1114	B8JG-1114-1	0 Offset	▲ ⓘ 1115	B8JG-1115-1
335mm [13.19"] Arm Length			365mm [14.37"] Arm Length			395mm [15.55"] Arm Length		
Series	Arm Style	Model	Series	Arm Style	Model	Series	Arm Style	Model
120 Offset	▲ ⓘ 1176	B8JG-1176-1	120 Offset	▲ ⓘ 1177	B8JG-1177-1	120 Offset	▲ ⓘ 1178	B8JG-1178-1
70 Offset	▲ ⓘ 1156	B8JG-1156-1	70 Offset	▲ ⓘ 1157	B8JG-1157-1	70 Offset	▲ • 1158	B8JG-1158-1
25 Offset	▲ ⓘ 1136	B8JG-1136-1	25 Offset	▲ ⓘ 1137	B8JG-1137-1	25 Offset	▲ ⓘ 1138	B8JG-1138-1
0 Offset	▲ ⓘ 1116	B8JG-1116-1	0 Offset	▲ ⓘ 1117	B8JG-1117-1	0 Offset	▲ • 1118	B8JG-1118-1

Arm Styles	Maximum Opening Angle (shown in locked position)					
1110 - 1118	135°	135°	100°	100°	N/A	N/A
1130 - 1138	135°	N/A	60°	120°	N/A	30°
1150 - 1158	125°	N/A	35°	135°	N/A	55°
1170 - 1178	115°	N/A	25°	135°	N/A	80°

▲ Common in North America

(•) STANDARD ARM OFFERING

ⓘ NON-STANDARD ARM OFFERING (extended leadtimes apply)



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870-2, 871-2

Pneumatic Power Clamps

870-2

Base Model	Description
870-2	38,1 mm [1.5 in.] Cylinder with Vertical Clamp Arm
871-2	38,1 mm [1.5 in.] Cylinder 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 below for sensor specifications.



871-2

Max Holding Torque
260 Nm [192 ft-lb]
Max Clamping Torque
60 Nm [44 ft-lb]
at 5 bar [72 psi]



870-2

Max Holding Torque
260 Nm [192 ft-lb]
Max Clamping Torque
60 Nm [44 ft-lb]
at 5 bar [72 psi]

Sensors Order separately (2 pieces required)

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

860, 861, 890, 891, 1000, 1001

Pneumatic Power Clamps

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860

Base Model	Description
860	50,8 mm [2 in.] Cylinder with Vertical Clamp Arm
861	50,8 mm [2 in.] Cylinder with Horizontal Clamp Arm
890	63,5 mm [2.5 in.] Cylinder with Vertical Clamp Arm
891	63,5 mm [2.5 in.] Cylinder with Horizontal Clamp Arm
1000	82,5 mm [3.25 in.] Cylinder with Vertical Clamp Arm
1001	82,5 mm [3.25 in.] Cylinder 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 25 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 [280 ft-lb]
Max Clamping Torque
120 Nm [89 ft-lb]
at 5 bar [72 psi]

891

Max Holding Torque
1300 Nm [959 ft-lb]
Max Clamping Torque
270 Nm [199 ft-lb]
at 5 bar [72 psi]

1001

Max Holding Torque
1800 Nm [1328 ft-lb]
Max Clamping Torque
420 Nm [310 ft-lb]
at 5 bar [72 psi]

860

Max Holding Torque
380 Nm [280 ft-lb]
Max Clamping Torque
120 Nm [89 ft-lb]
at 5 bar [72 psi]

890

Max Holding Torque
1300 Nm [959 ft-lb]
Max Clamping Torque
270 Nm [199 ft-lb]
at 5 bar [72 psi]

1000

Max Holding Torque
1800 Nm [1328 ft-lb]
Max Clamping Torque
420 Nm [310 ft-lb]
at 5 bar [72 psi]



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82D40, 82D63

Enclosed Pneumatic Power Clamps | Dual Arm

Base Model	Description	Clamp Arms	Description
82D40-2	40 mm Cylinder (G1/4 Port)	B	Base model only. Order clamp arms separately.
82D63-5	63 mm Cylinder (G1/4 Port)		

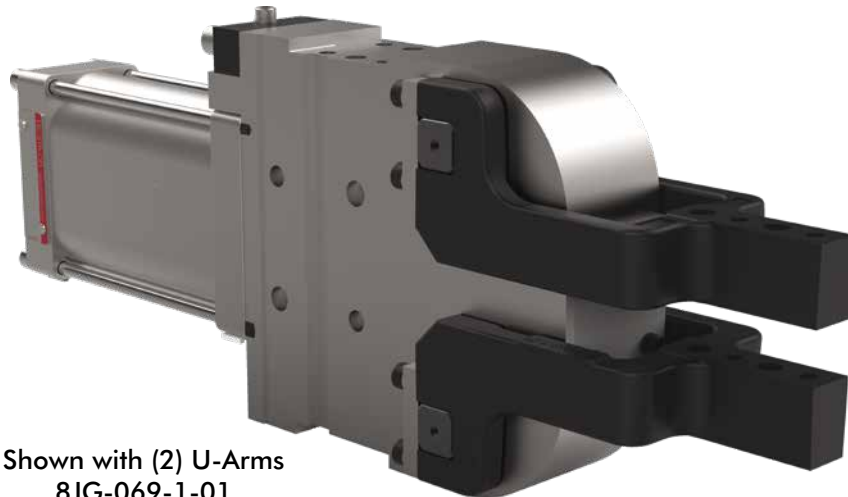
Hand Lever	Description
0	Hand Lever not available

Opening Angle	Opening Angle
0	180° (standard)
1	160°
2	140°
3	120°
4	100°
5	80°
6	60°
7	40°
8	20°

Reduced opening angles available upon request.

Sensor	Description
C9	includes Sensing System with M12x1 Connector (8EA-024-2) Standard

Clamp Arm Shaft	Description
23	includes long drive shaft ends on both sides fit for all clamping arms (standard)



Shown with (2) U-Arms
8JG-069-1-01
(order separately)



82D63-5	82D40-2
Max Holding 400 Nm [295 ft-lb]	Max Holding 140 Nm [103 ft-lb]
Max Clamping Torque 120 Nm [88 ft-lb] at 5 bar [72 psi]	Max Clamping Torque 60 Nm [44 ft-lb] at 5 bar [72 psi]

U-type Central Clamping Arm



Model	Order No. (1 clamp arm)
82D40-223C900B	8JG-065-2-01
82D63-523C900B	8JG-069-1-01



Alternate
Clamp Arm
mounting
positions

Lateral Clamping Arm

Clamp Arm Variants

Left Side, Right Side, Both Sides



Model	Order No. (1 clamp arm)
82D40-223C900B	8JG-066-1-01
82D63-523C900B	8JG-070-1-01

82D ACCESSORIES

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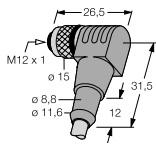


Enclosed Pneumatic Power Clamps | Dual Arm

Clamping Arms		Order No. for Set		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 you need 2 sets of clamping arms
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 socket
M12x1 straight, 5-pin



Connector socket
M12x1 angular, 4-pin

Sensor Cables (Order Separately)	
Order No.	Description
8EL-002-1	M12x1, Straight, 5-Pin Connector with 5 m [16 ft] Cable
8EL-003-1	M12x1, Angular, 4-Pin Connector with 5 m [16 ft] Cable

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

Shim Plates (for clamping arm)	Fit for model 82D40-2								Fit for model 82D63-5									
	Order No.	A1	A2	D2	D3	B9	B10	B12	L10	Order No.	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	15,8
	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 Set	
	82D40-2	82D63-5
Cylinder	8PW-016-1	8PW-067-1
Integrated sensing system C9 Connector plug M12x1	8EA-024-2	8EA-024-2



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84A40, 84A50

Enclosed Pneumatic Power Clamps | Dual Arm, Tolerance Compensation

84A **50-1** **A01** **L8**

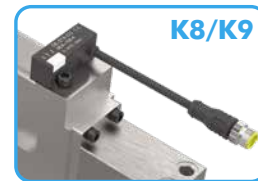
Size	Description
40-1	32 mm Cylinder (G1/8 Port)
50-1	50 mm Cylinder (G1/4 Port)

U-Arm Style	Description
000	Without Clamping Arms
A01	Double Tip, Surface Clamping
A02	Single Tip, Point Clamping
A03	Double Tip, Surface Clamping (Standard Profile 84A40 , Wide Profile 84A50)
A04	Double Tip, Surface Clamping, Wide Profile <i>for 84A50 only</i>



Shown with
A01 U-Arms

Sensor	Description
00	Without Sensing System
L8	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
N8	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)



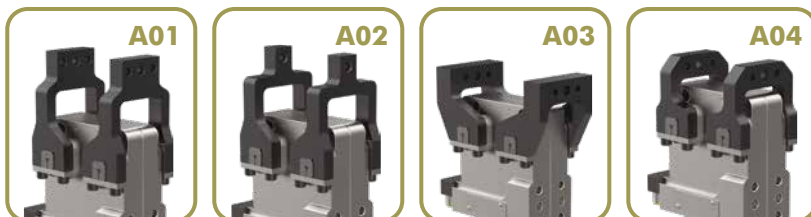
Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector w/5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector w/5 m [16 ft.] Cable

U-Arm Styles for 84A40



U-Arm Styles for 84A50



84A40-1

Max Holding/
Clamping Torque
29 Nm [21 ft-lb]
at 5 bar [72 psi]

84A50-1

Max Holding/
Clamping Torque
136 Nm [100 ft-lb]
at 5 bar [72 psi]

82P25-2

Pneumatic Pin Clamps

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82P25-2 - **00** **D8** **XX**

Size Description
82P25-2 25 mm Cylinder
(G1/8 and NPT 1/8 Ports)

Tip Description
00 without centering pin
08-22 with customer specified round
centering pin from Ø8-22 mm

Serial Number Description
XX Customer specified Base,
Clamping Hook and Centering Pin
*Must contact factory with specifications
to complete order number*



Sensor Description
D8 Inductive Sensing System with
M12x1 Connector (8EA-161-1)



Sensor Cables Order separately

Order No.	Description
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable



82P25-2XX

Max Clamping Force
550 N [124 lbf]
at 5 bar [72 psi]



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82P30-3/82P35-3

Pneumatic Pin Clamps



Clamping Hook

- 00
- D0

Description

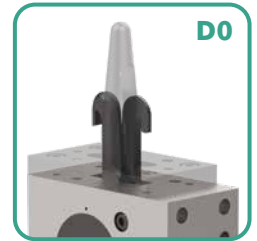
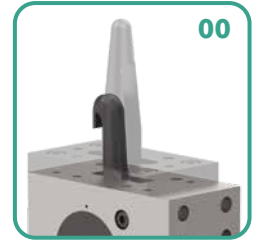
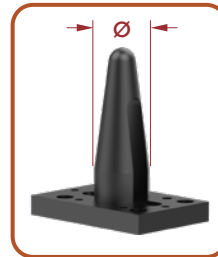
- 00 Single Hook (Standard)
- D0 Double Hook

Size	Description
30-3	30 mm Cylinder (G1/8 Port)
35-3	35 mm Cylinder (G1/8 Port)

Centering Pin

	Ø Range for 82P30-3
20	20,0 - 23,0 mm
25	23,1 - 28,0 mm
30	28,1 - 33,0 mm
	Ø Range for 82P35-3
40	33,1 - 45,0 mm

Order separately. 82P3X-3XX-XX,X
ex. 82P30-320-21,1



82P30-3

Max Clamping Force
2000 N [450 lbf]
at 6 bar [87 psi]

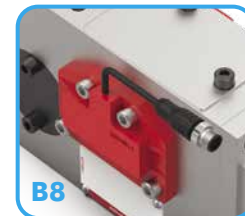
82P35-3

Max Clamping Force
3500 N [787 lbf]
at 6 bar [87 psi]

Sensor

Description

- 00 Without Sensing System
- C0 Inductive Sensing System with M8x1 Connector (8EA-012-2)
- B8 Inductive Sensing System with M12x1 Connector (8EA-030-1)



Sensor Cables

 Order separately

Order No.	Description
8EL-009-1	M8x1, Straight, 4-pin Connector with 5 m [16 ft.] Cable
8EL-007-1	M8x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

82P50-720, 82P63-720

Pneumatic Pin Clamps | Tolerance Compensation

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82P50-720 D8 A 0 01 00

Base Model

82P50-720
82P63-720

Description

50 mm Tandem Cylinder (G1/8 Port)
63 mm Tandem Cylinder (G1/8 Port)

Tolerance

A

Description

0-6 mm [0-0.236 in]
tolerance compensation

Sensor

Description

D8

Inductive Sensing System with
M12x1 Connector (8EA-151-1)



D8

Sensor Cables Order separately

Order No.	Description
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable



82P50-720

Max Clamping Force
1500 N [337 lbf]
at 5 bar [72 psi]

82P63-720

Max Clamping Force
2500 N [562 lbf]
at 5 bar [72 psi]



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82P50-720, 82P63-720

Pneumatic Pin Clamps | Tolerance Compensation

Hooks For 82P50
01 for Flange Hole
03 for Flat Hole



Hooks For 82P63
02 for Flange Hole
04 for Flat Hole



Centering Pin For 82P50 with Hook
00 None **01** or **03**
01 18 mm Round **01** or **03**
02 20 mm Round **01** or **03**
06 19,9 mm Round **01** or **03**
07 19,9 mm Diamond **01** or **03**



Centering Pin For 82P63 with Hook
00 None **02** or **04**
03 30 mm Round **02**
04 30 mm Diamond **02**
05 25 mm Round **02**
08 23 mm Round **02**
09 28 mm Round **02**
10 40 mm Round **04**
11 40 mm Diamond **04**



82P50-1800

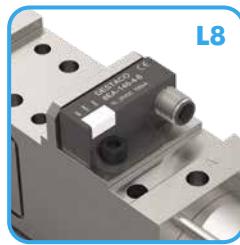
Pneumatic Centering Pin Clamp | Tolerance Compensation

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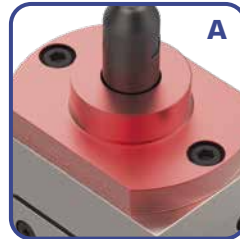


Base Model	Description
82P50-1800	Tolerance Compensation 0 - 5 mm [0 - 0.197 in]

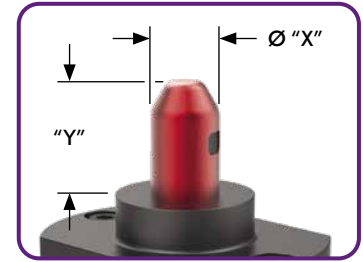
Sensor	Description
L8	PNP Sensor with M12x1 In-line Connector (8EA-146-4-B and 8EA-163-G)



Support Shape	Description
A	Standard
B	Flange Hole Down
D	Chamfered



Pin Diameter	Pin Ø "X" mm ^{-0,05}	Pin Height "Y" mm
01	15,8	
02	19,8	26
03	20,8	
04	29,8	38
05	15,5	26
06	29,8	38



CNOMO fixing
with adaptor
shown. Order
Separately:
8MA-538-1



82P50-1800

Max. Clamping Force
600 N [135 lbf]
bei 5 bar [72 psi]

Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

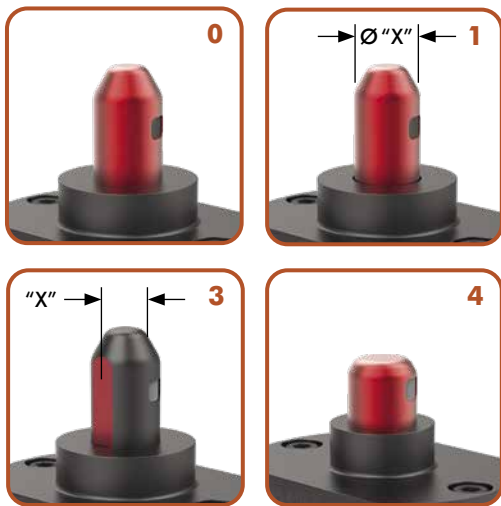


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82P50-1800

Pneumatic Centering Pin Clamp | Tolerance Compensation

Pin Shape	Description	Release Dimension "X"
0	Round	
1	Pin Clipping	"X" = Pin Ø minus 0.8 mm
3	Pin Release on Flat Parallel of Finger	Pin Ø Flat "X" Ø15,8 14,5 mm Ø29,8 21,0 mm
4	Door Case	



Support Height	Description
0	10 mm
1	50 mm
2	100 mm

Finger Shape	Desc.
0	Full
1	Hook

Configuration Compatibility Chart

Determine the most important option, then find compatible combination of options within each row.

Pin Diameter	Support Shape			Pin Shape				Support Height			Finger Shape	
	Standard A	Flange Hole Down B	Chamfer D	Round 0	Pin Clipping 1	Flat 3	Door Case 4	10 mm 0	50 mm 1	100 mm 2	Full 0	Hook 1
01 Ø15,8	•			•	•	•	•	•			•	
	•			•					•		•	
			•	•	•					•	•	
02 Ø19,8	•			•				•			•	
		•			•			•				•
03 Ø20,8	•			•						•	•	
	•				•					•		•
			•	•				•			•	•
04 Ø29,8	•			•	•			•			•	•
	•					•		•			•	
		•		•				•				•
05 Ø15,5	•			•				•			•	
06 Ø29,8		•				•		•				•

VV85G-150

Precision Guide

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VV85G-150

40

L8

Stroke	Description
20	20 mm Stroke
40	40 mm Stroke

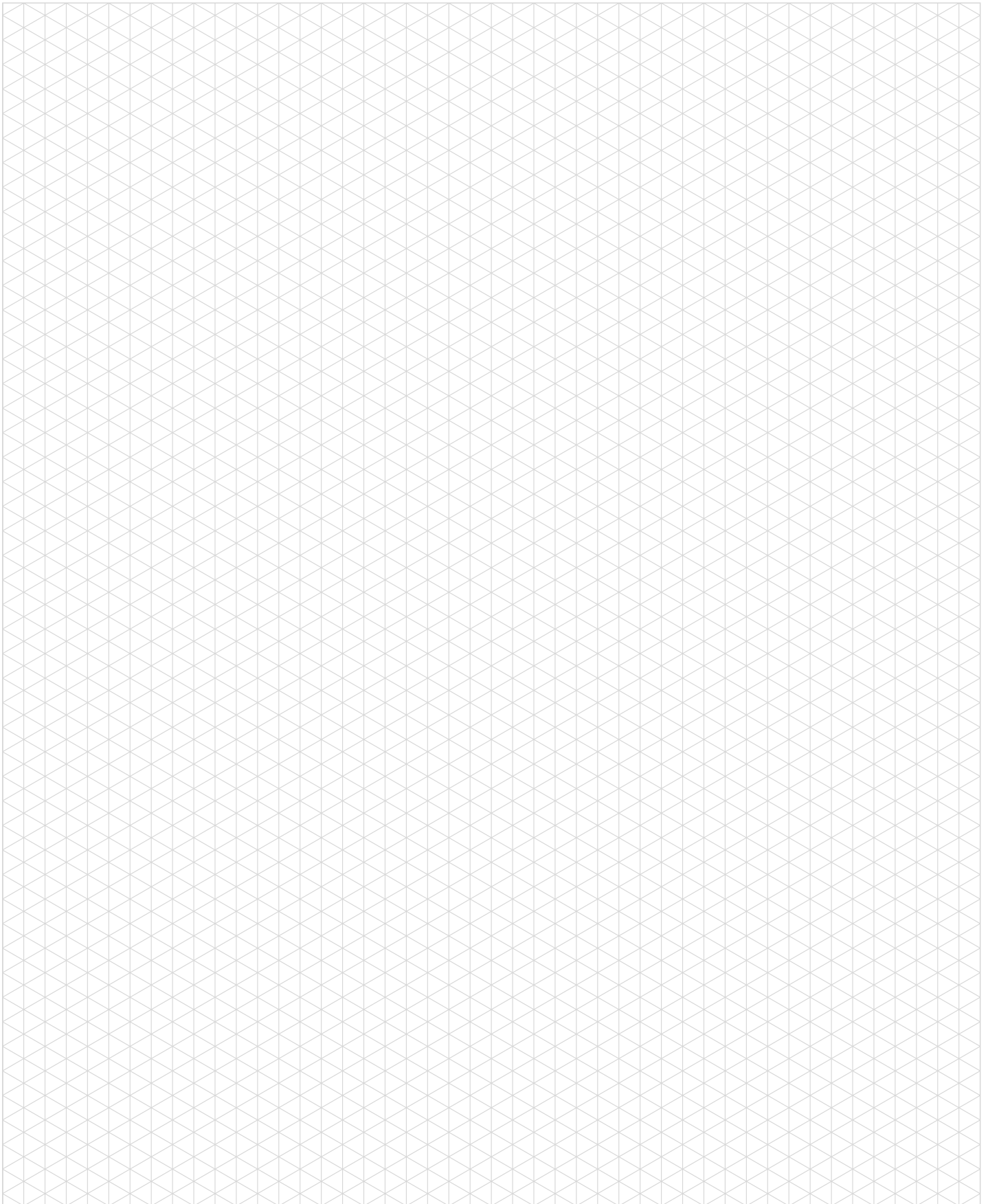
Sensor	Description
00	Without Sensing System
L8	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
N8	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)



Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

Model	Stroke mm [in]	Max. Load Nm [ft-lb] ±0,2 mm [0.008 in.]			Lifting Force N [lbf]	Holding Force N [lbf]	Weight Kg [lbs]	Air Consumption per double stroke at 5 bar [72 psi] dm³ [in³]
		Mtx	Mty	Mtz				
VV85G-15020**	20 [0.79]	[74]	[74]	[37]	500 [112]	[899] 4000	[29.1] 13,2	0,7 [42.7]
VV85G-15040**	40 [1.57]	100	100	50				1,1 [67.1]



82U50

Pneumatic Pin Clamp | Pallet Clamp

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82U50 - **300** **L1** **00**

Size	Description	Accessories	Description
300	Front, top or bottom mounting	00	No Accessories
330	Top or bottom mounting only		

Sensor	Description
L1	Without Sensing System
C8	Inductive Sensing System with M8x1 Connector (8EA-023-2)
B7	Inductive Sensing System, M12x1 Connector (8EA-060-1)
B8	Inductive Sensing System with M12x1 Cable Connector (8EA-031-1)



82U50-300

Max Holding/Clamping Force
4000 N [899 lbf] 5 bar [72 psi]

82U50-330

Max Holding/Clamping Force
4000 N [899 lbf] 5 bar [72 psi]

Sensor Cables Order separately

Order No.	Description
8EL-009-1	M8x1, Straight, 4-pin Connector with 5 m [16 ft.] Cable
8EL-007-1	M8x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable



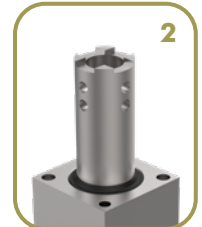
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86P30-5

Pneumatic Pin Package | Single Shaft

86P30-5	02	L8	00	4
			Accessories 00	
			Description No Accessories	
			Stroke 2	Description 20 mm Stroke
			4	40 mm Stroke

Piston Rod	Description
02	Ø16 mm M6 Threaded Inside Hole, Cross Groove
05	Ø10 mm M8 Threaded Inside Hole, Cross Groove



Sensor	Description
L8	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
N8	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)



Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

86P30-5

Stroke Option:	2, 4
Max Pushing Force at 5 bar [72 psi]:	340 N [76 lbf]
Max Retracting Force at 5 bar [72 psi]:	250 N [56 lbf]

86P40, 86P60

Pneumatic Pin Package | Single Shaft

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86P40 **-2** **02** **D8** **G1** **A** **-K**

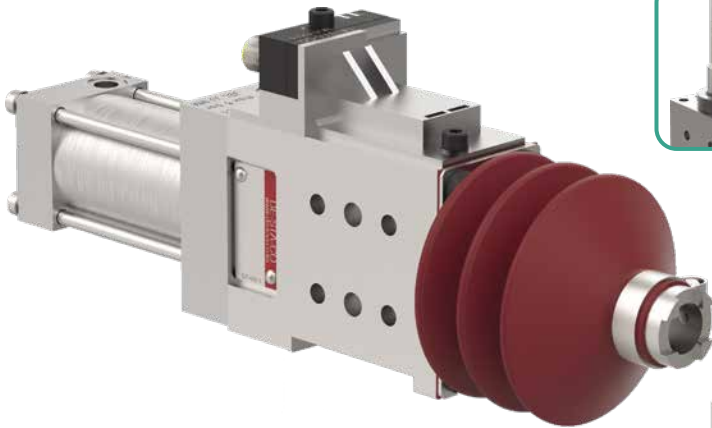
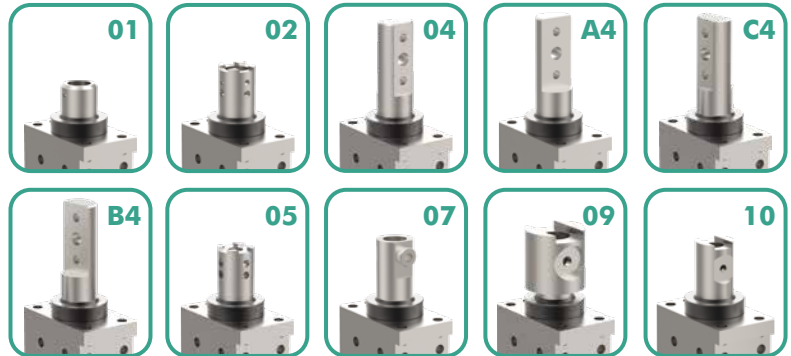
Ceramic Option
for Piston Rod
K

Base Model	Description
86P40	40 mm Cylinder (G1/8 Port)
86P60	63 mm Cylinder (G1/4 Port)

Hand Lever	Description
-2	No Handle
H2	Handle for Manual Control for 86P60 only (excludes F, 8 stroke option)



Piston Rod	Description
01	Ø16 mm Inside Hole (Standard)
02	Ø16 mm M6 Threaded Inside Hole, Cross Groove
04	NAAMS Standard
A4	NAAMS Standard Rotated 180°
B4	NAAMS Standard Rotated 90°
C4	NAAMS Standard Rotated 270°
05	Ø10 mm Inside Hole, Cross Groove
07	Ø16 mm Inside Hole, NAAMS
09	Ø20 mm Straight Groove
10	Ø12 mm Straight Groove



86P40

86P60

Stroke Option:	B, A, 2, 4	C, 6	F, 8	B, A, 2, 4	C, 6	F, 8
Max Pushing Force at 5 bar [72 psi]:		620 N [139 lbf]		1550 N [348 lbf]		
Max Retracting Force at 5 bar [72 psi]:		520 N [117 lbf]		1400 N [315 lbf]		



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86P40, 86P60

Pneumatic Pin Package | Single Shaft

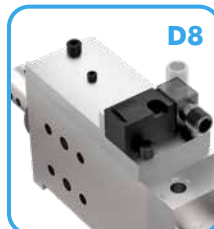
Accessories	Description
00	No Accessories
F1	Bellows for piston rods 02, 05, 07, 10 in strokes B, A, 2, 4 (82ZB-013-3)
R1	Guide Bushing for piston rods 01, 02, 05 (82ZB-192-1)



Stroke	Description
	Anti-Twist Device/Low Accuracy
B	20 mm Stroke (8MF-071-1)
A	40 mm Stroke (8CE-231-1)
C	60 mm Stroke (8CE-231-1)
F	80 mm Stroke (8CE-231-1)
	Anti-Twist Device
2	20 mm Stroke (86P0-20000002)
4	40 mm Stroke (86P0-20000004)
6	60 mm Stroke (86P0-20000006)
8	80 mm Stroke (86P0-20000008)



Sensor	Description
L4	Cover Plate for B, A, 2, 4 (86P0-200L4)
L6	Cover Plate for C, 6 (86P0-200L6)
L8	Cover Plate for F, 8 (86P0-200L8)
D8	Inductive Sensing System with 90° M12x1 Swivel Connector for B, A, 2, 4 (86P0-200D8), for C, 6 (86P0-200D8006), for F, 8 (86P0-200D8008)



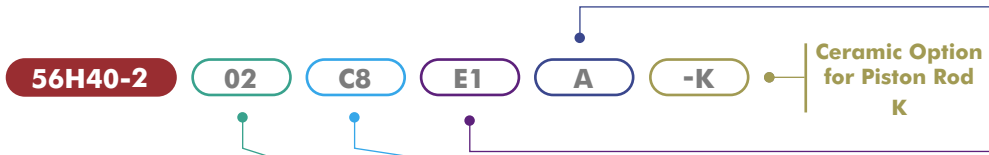
Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

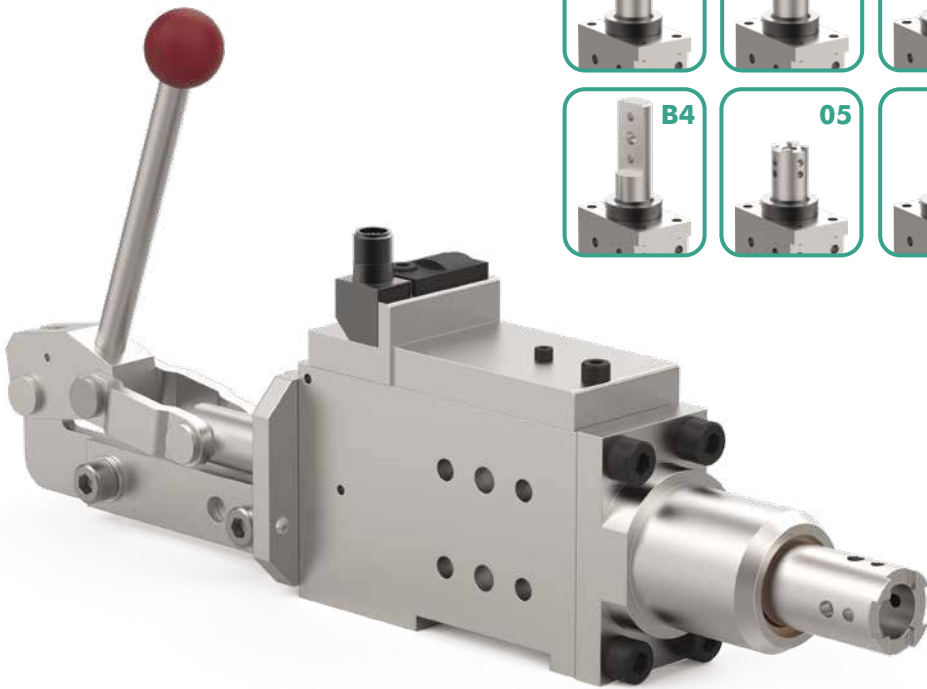
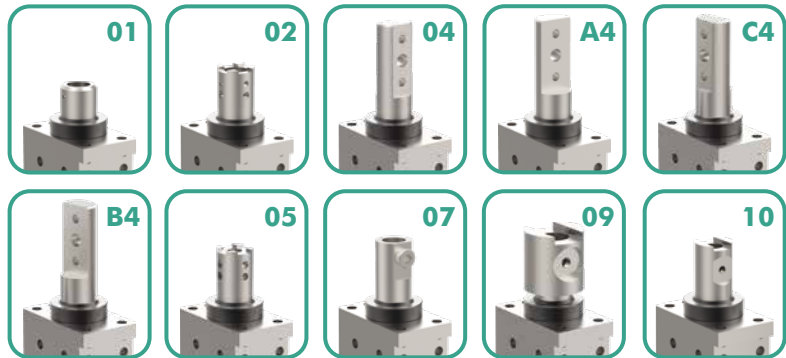
56H40-2

Manual Pin Package | Single Shaft

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Piston Rod	Description
01	Ø16 mm Inside Hole (Standard)
02	Ø16 mm M6 Threaded Inside Hole, Cross Groove
04	NAAMS Standard
A4	NAAMS Standard Rotated 180°
B4	NAAMS Standard Rotated 90°
C4	NAAMS Standard Rotated 270°
05	Ø10 mm Inside Hole, Cross Groove
07	Ø16 mm Inside Hole, NAAMS
09	Ø20 mm Straight Groove
10	Ø12 mm Straight Groove



56H40-2

Stroke Option: **B, A, 2, 4** **C, 6**



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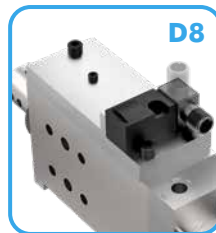
56H40-2

Manual Pin Package | Single Shaft

Accessories	Description
00	No Accessories
F1	Bellows for piston rods 02, 05, 07, 10 in strokes B, A, 2, 4 (82ZB-013-3)
R1	Guide Bushing for piston rods 01, 02, 05 (82ZB-192-1)



Sensor	Description
L4	Cover Plate for B, A, 2, 4 (86P0-200L4)
L6	Cover Plate for C, 6 (86P0-200L6)
D8	Inductive Sensing System with 90° M12x1 Swivel Connector for B, A, 2, 4 (86P0-200D8), for C, 6 (86P0-200D8006)



Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

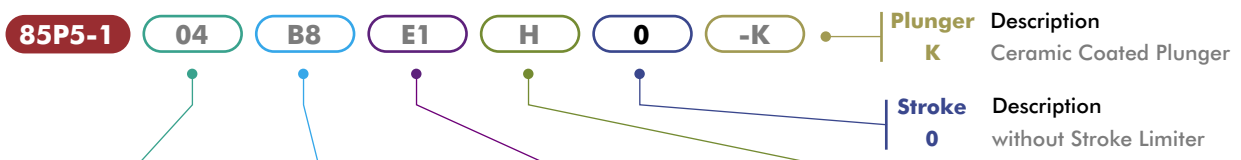
Stroke	Description
	Anti-Twist Device/Low Accuracy
B	20 mm Stroke (8MF-071-1)
A	40 mm Stroke (8CE-231-1)
C	60 mm Stroke (8CE-231-1)
	Anti-Twist Device
2	20 mm Stroke (86P0-20000002)
4	40 mm Stroke (86P0-20000004)
6	60 mm Stroke (86P0-20000006)



85P5-1

Pneumatic Pin Package | Single Shaft

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Piston Rod	Description
02	Ø16 mm M6 Threaded Inside Hole, Cross Groove
04	NAAMS Standard
A4	NAAMS Standard Rotated 180°
05	Ø10 mm Inside Hole, Cross Groove



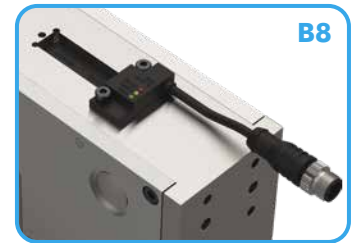
Accessories	Description
00	No Accessories
E1*	External Guide (82ZB-010-2) *External Guide can be mounted to front or sides of unit by customer.



Hand Lever	Description
0	No Hand Lever
H	Hand Lever *Hand Lever can be attached on either side of unit.

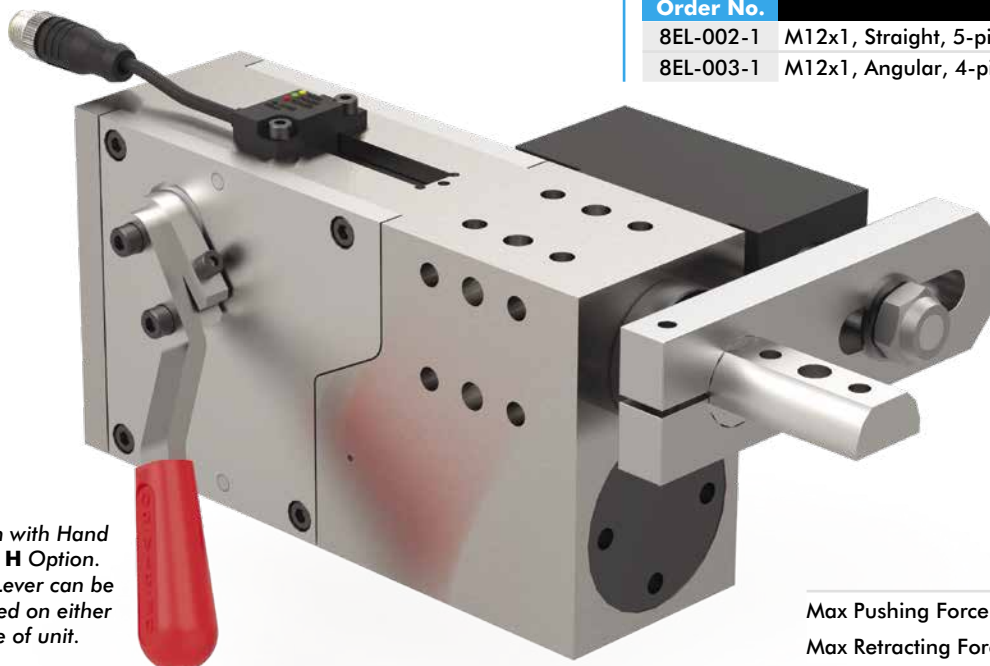


Sensor	Description
00	Without Sensing System
B8	Inductive Sensing System with M12x1 Cable Connector (8EA-033-2)



Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable



Shown with Hand Lever H Option. Hand Lever can be attached on either side of unit.

External Guide E1 option shown. Can be mounted to front or sides of unit by customer.

85P5-1

Max Pushing Force at 6 bar [87 psi]: 2000 N [449 lbf]
Max Retracting Force at 6 bar [87 psi]: 1000 N [225 lbf]



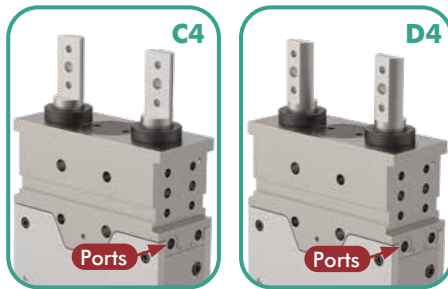
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85D5-2

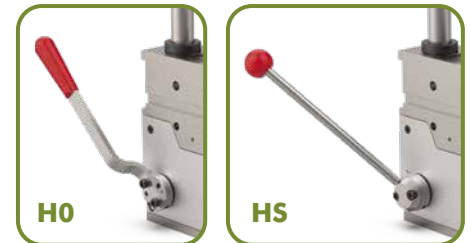
Pneumatic Pin Package | Dual Shaft

85D5-2 **C4** **L8** **10** **H0** **4** **Stroke** 4 **Description** 40 mm Stroke

Piston Rod	Description
C4	NAAMS Standard
D4	NAAMS Standard Rotated 180°

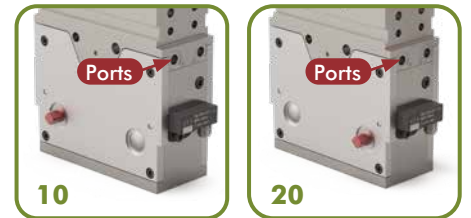


Hand Lever	Description
00	No Hand Lever
H0	Standard Hand Lever
HS	Weldable Hand Lever

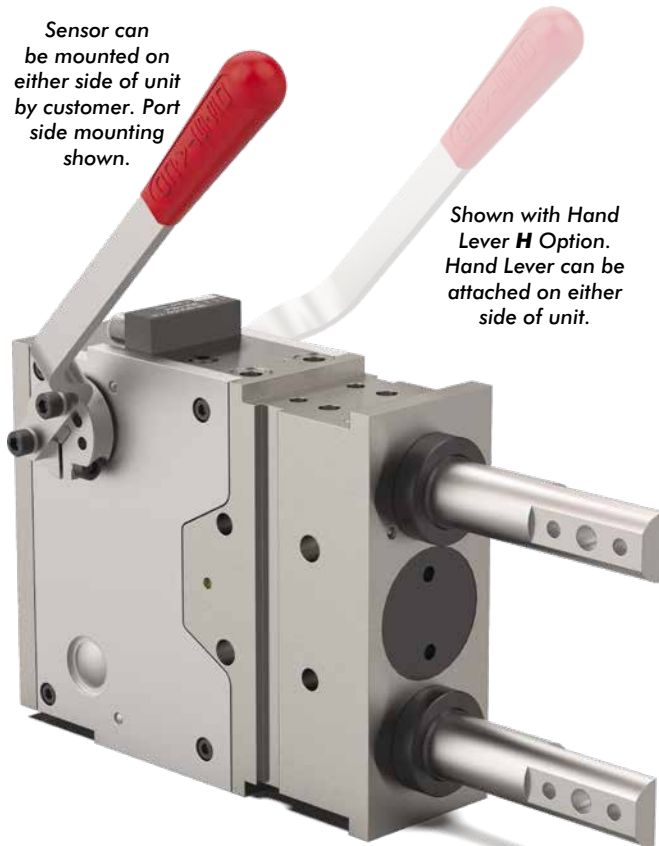


Hand Lever Shafts*	Description
10	Non-port side
20	Port side

*Hand Lever can be attached on either side of unit.



Sensor can be mounted on either side of unit by customer. Port side mounting shown.



Shown with Hand Lever H Option. Hand Lever can be attached on either side of unit.

85D5-2

Max Pushing Force at 6 bar [87 psi]: 3000 N [674 lbf]

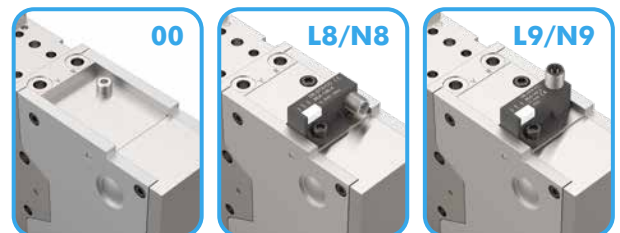
Max Retracting Force at 6 bar [87 psi]: 3000 N [674 lbf]

Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector with 5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable

Sensor	Description
00	Without Sensing System
L8	PNP Sensor with In-line M12x1 Connector (8EA-146-4-B)
N8	NPN Sensor with In-line M12x1 Connector (8EA-154-4-B)
L9	PNP Sensor with 90° M12x1 Connector (8EA-147-4-B)
N9	NPN Sensor with 90° M12x1 Connector (8EA-155-4-B)
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)
K9	NPN Sensor with M12x1 Cable Connector (8EA-167-4-B)

*Sensors can be mounted on opposite side by customer.



86D40, 86D60

Pneumatic Pin Package | Dual Shaft

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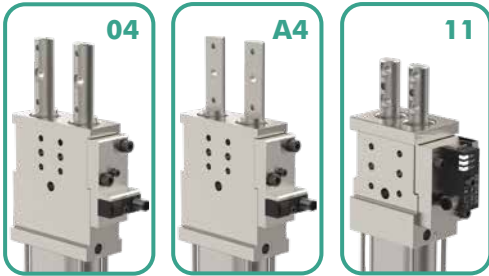
86D40 **-1** **A4** **D8** **00** **A** **K** **Plunger** Description
K Ceramic Option for Piston Rod

Base Model	Description
86D40	40 mm Cylinder (G1/8 Port)
86D60	63 mm Cylinder (G1/4 Port)



Hand Lever	Description
-1	No Hand Lever
H1	Handle for Manual Control (86D60 only)

Piston Rod	Description
04	NAAMS Standard
A4	NAAMS Standard Rotated 180°
11	Dual Bolt Mounting (86D40-1 Only)

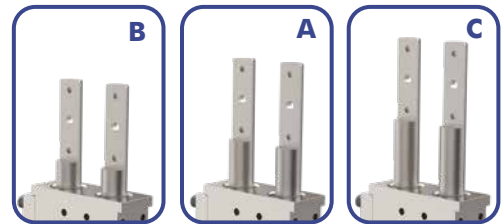


Accessories	Description
00	No Accessories
01	Locking Device for Retracted Position. Mountable on both sides (H1 only) (86D60H1000001)



Stroke	for 86D40
B	20 mm Stroke (86D40-1000000B)
A	40 mm Stroke (86D40-1000000A)

Stroke	for 86D60
B	20 mm Stroke (86D0-1000000B)
A	40 mm Stroke (86D0-1000000A)
C	60 mm Stroke (86D0-1000000C)



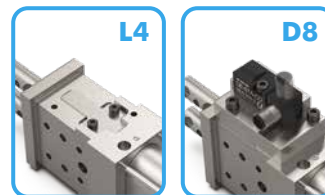
86D40 shown with sensor mounted on opposite side of unit.



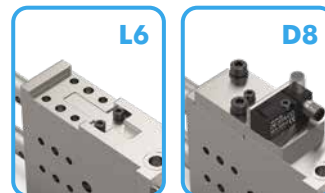
86D40-1 **86D60-1**

Max Pushing Force at 5 bar [72 psi]: 700 N [157 lbf] 1500 N [337 lbf]
Max Retracting Force at 5 bar [72 psi]: 600 N [135 lbf] 1100 N [247 lbf]

Sensor* for 86D40
L4 Cover Plate (86D0-100L4)
D8 with 90° M12x1 Swivel Connector (86D40-100D8)
*Sensors can be mounted on opposite side by customer.



Sensor* for 86D60
L6 Cover Plate (86D0-100L6)
D8 with 90° M12x1 Swivel Connector (86D0-100D8)
*Sensors can be mounted on opposite side by customer.



Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector w/5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector w/5 m [16 ft.] Cable



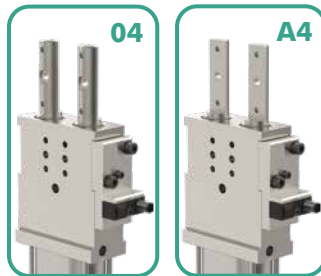
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56D60-1

Manual Pin Package | Dual Shaft

56D60-1 **04** **D8** **01** **A** **K** **Plunger** Description
K Ceramic Option for Piston Rod

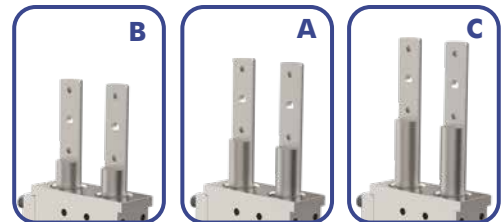
Piston Rod Description
04 NAAMS Standard
A4 NAAMS Standard Rotated 180°



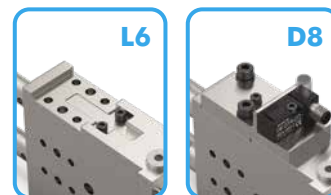
Accessories Description
00 No Accessories
01 Locking Device for Retracted Position. Mountable on both sides (86D60H1000001)



Stroke Description
B 20 mm Stroke (86D0-1000000B)
A 40 mm Stroke (86D0-1000000A)
C 60 mm Stroke (86D0-1000000C)



Sensor* Description
L6 Cover Plate (86D0-100L6)
D8 with 90° M12x1 Swivel Connector (86D0-100D8)
*Sensors can be mounted on opposite side by customer.



Sensor Cables Order separately

Order No.	Description
8EL-002-1	M12x1, Straight, 5-pin Connector w/5 m [16 ft.] Cable
8EL-003-1	M12x1, Angular, 4-pin Connector w/5 m [16 ft.] Cable

56D60-1

Stroke Option: **B, A, C**

98W

Electric Pivot Unit

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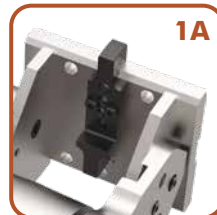
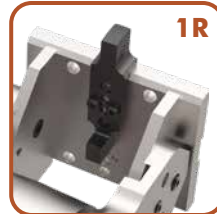
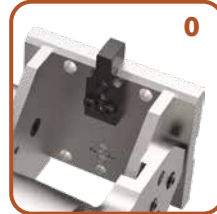
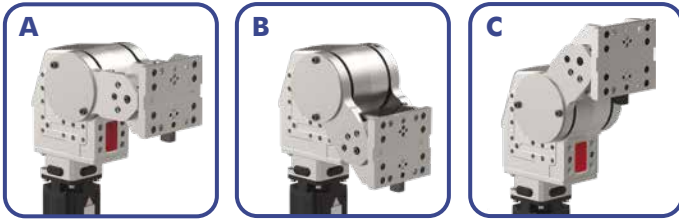


98W03-2 **10** **A** **0** - **00** - **0**

Motor Description
10 SEW 400V-Brake

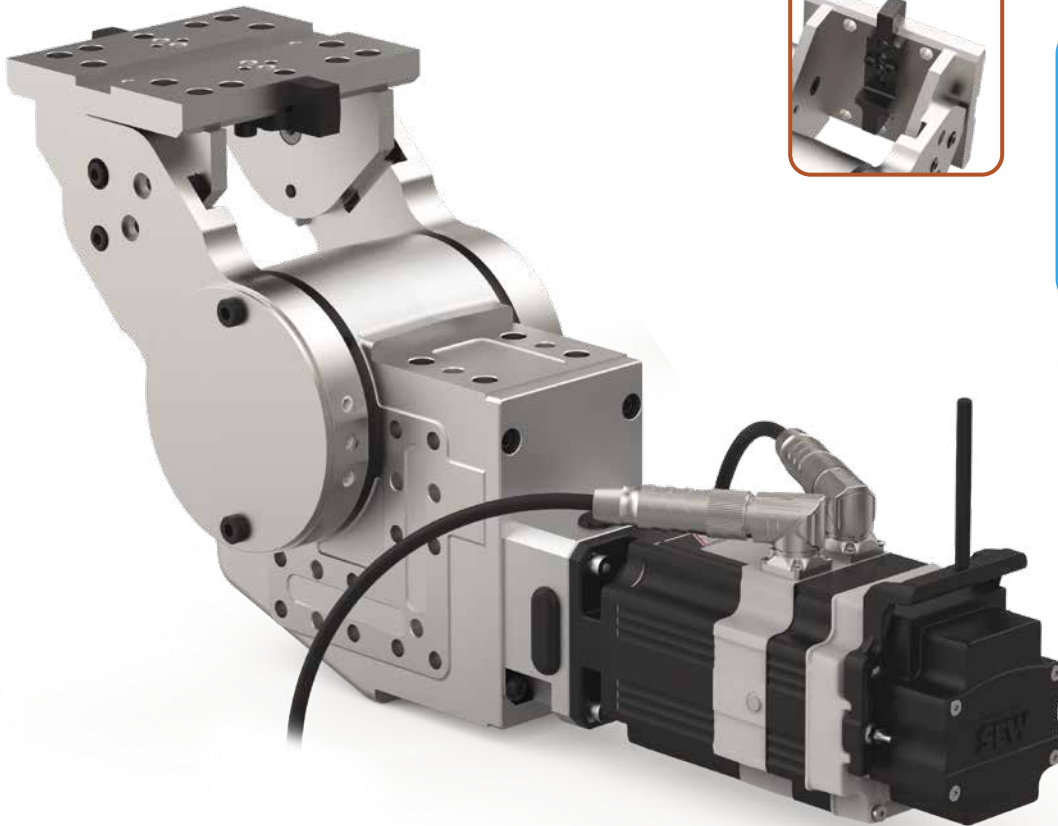
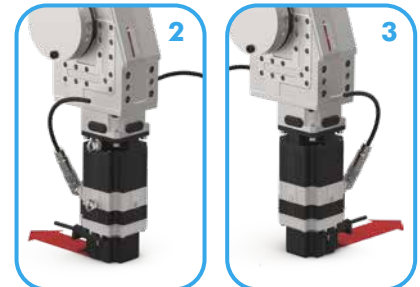
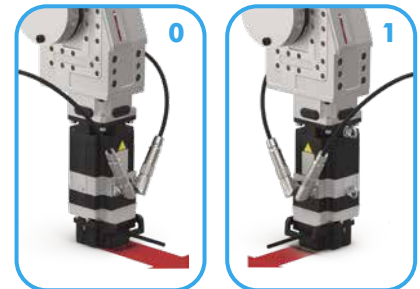
Hard Stop Description
0 Standard Stop
1R Audi-Standard Reference Position
1A Audi-Standard Working Position 0°

Swivel Arm Description
A Center of Pivot Point
B Below Pivot Point
C Above Pivot Point



Connections

- 0** Facing Back
- 1** Facing Left
- 2** Facing Front
- 3** Facing Right



98W03-210

Holding Torque:
2000 Nm [1475 ft-lb]

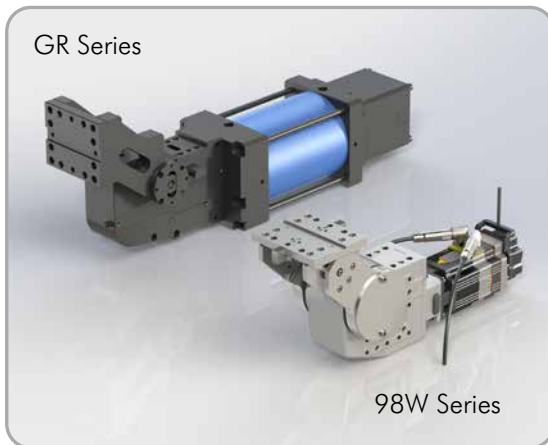


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98W

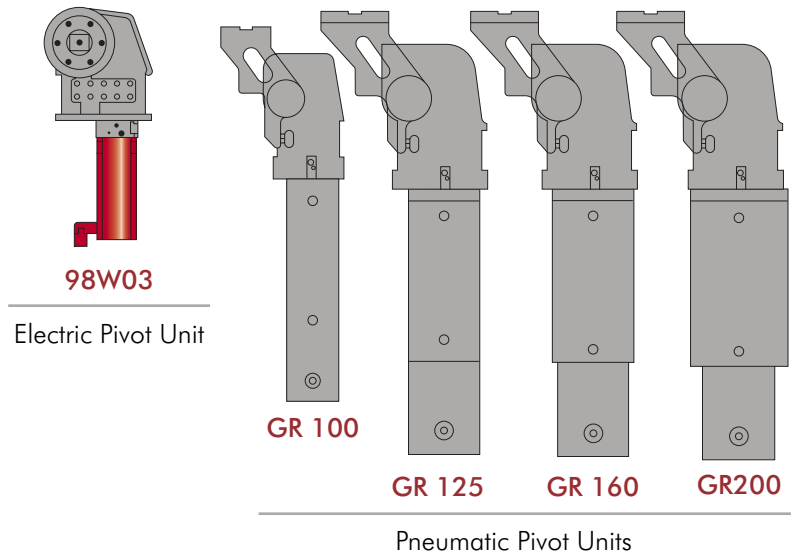
Electric Pivot Unit

Compact size and lightweight design



The 98W series electric pivot unit can share the same mounting pattern as the pneumatic pivot units, while providing greater energy savings with reduced size and weight.

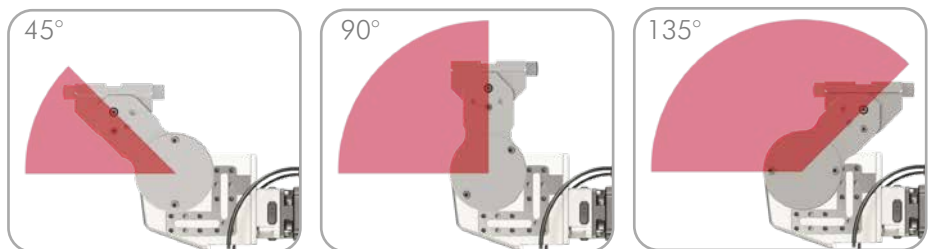
One electric pivot unit replaces four sizes of pneumatic pivot units



Easily adjustable saddle arm and mount

The saddle arm of the electric pivot unit can be adjusted into three different starting positions. Each starting position allows the saddle arm to be pivoted from 135° up to 210°.

Without the saddle arm, the pivot unit can be used as a rotate with 360° rotation.

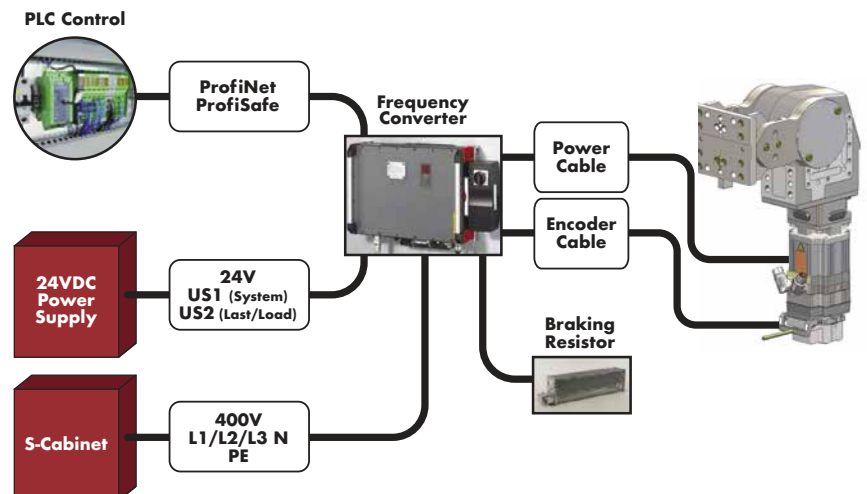


Application Example

98W Series shown with a holding fixture mounted to the saddle mount.



Operating Principle



RCM/RFM

Pneumatic Pivot Unit | Medium Duty

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full catalog pages
on products



RFM - **125** - **.2** - **129** - **V/LS** - **PX** - **P** - **N** - **X**

Base Description
RCM Standard
RFM Integrated Braking

Cylinder Description
100 100 mm Bore
125 125 mm Bore
160 160 mm Bore
200 200 mm Bore

Opening Angles					
100			125, 160, 200		
O	O/LS	V	V/VS	O	O/LS
		N/A			15°
		29°			30°
		45°			43°
		61°			61°
		77°			76°
92°	N/A	92°		91°	N/A
104°	N/A	104°		107°	N/A
121°	N/A	121°		N/A	129°

Opening angles are easily field adjustable.

Saddle Orientation Description
O Horizontal
V Vertical
O/LS Inverted Horizontal
V/LS Inverted Vertical



RFM125-V/LS
Pivot Unit with
Integrate (SBI)
Braking Unit
Shown

RCM Series



RCM100-O RCM125-O RCM160-O RCM200-O

RFM Series



RFM100-V RFM125-V RFM160-V RFM200-V

RCM125-O
Standard Pivot Unit
without Integrated
Braking Shown

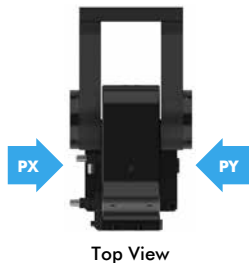


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Ports	Description
N	NPT Ports
G	G Port

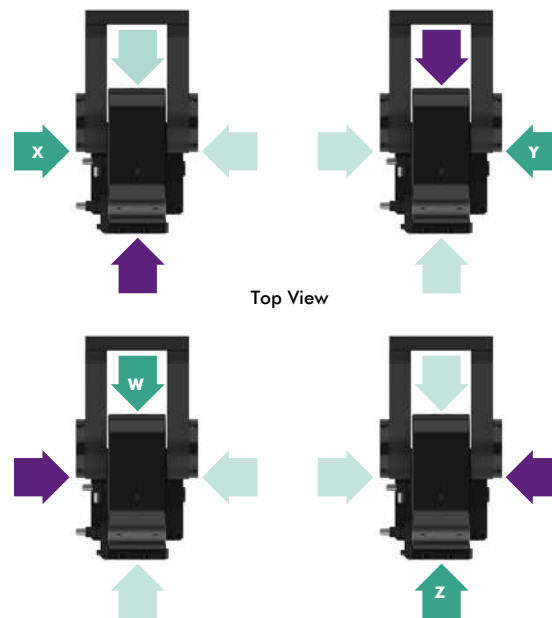
Proximity Switch Type	Description
0	No Proximity Switch
P	Pepper+Fuchs Proximity Switch

Proximity Switch Location	Description
P0	No Proximity Switch
PX	Proximity Switch on Left-Side
PY	Proximity Switch on Right-Side



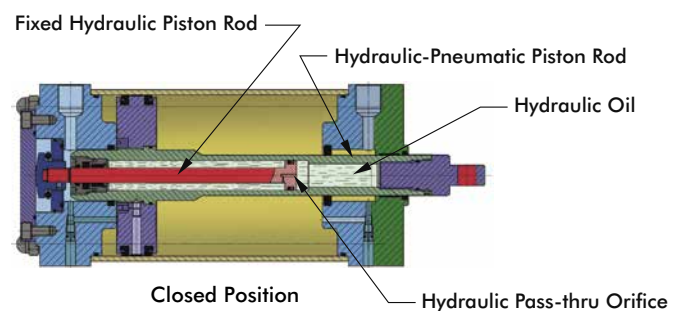
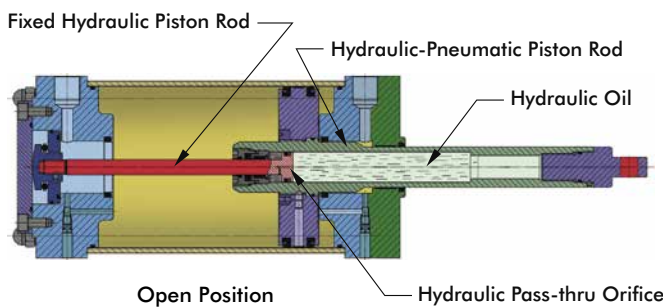
Cylinder Orientation	Description
X	Left-Facing Airport
Y	Right-Facing Airport
W	Front-Facing Airport
Z	Rear-Facing Airport

■ Air Port
■ Air Ports Plugged
■ Cushion Adjustment



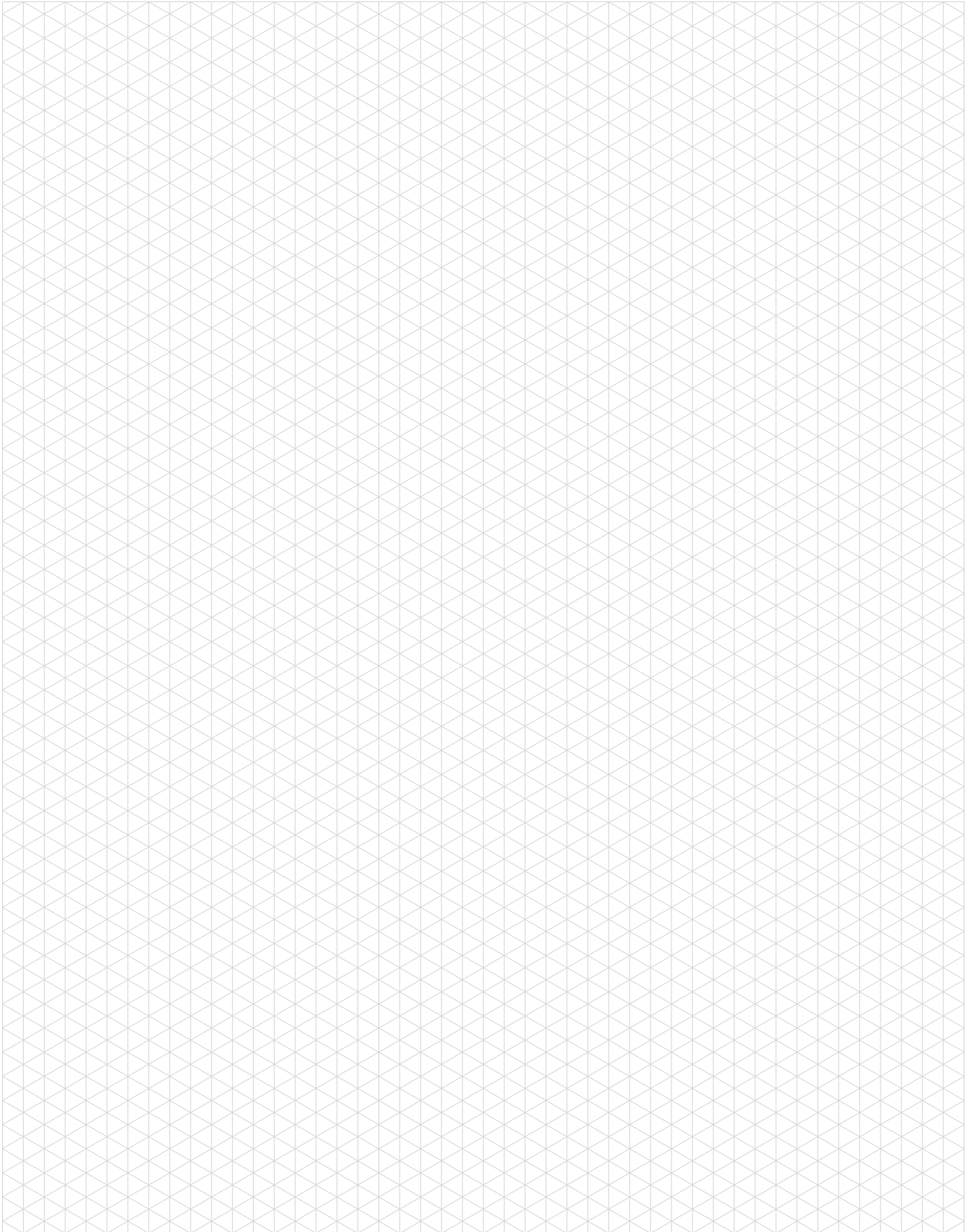
Cylinder Operating Principle

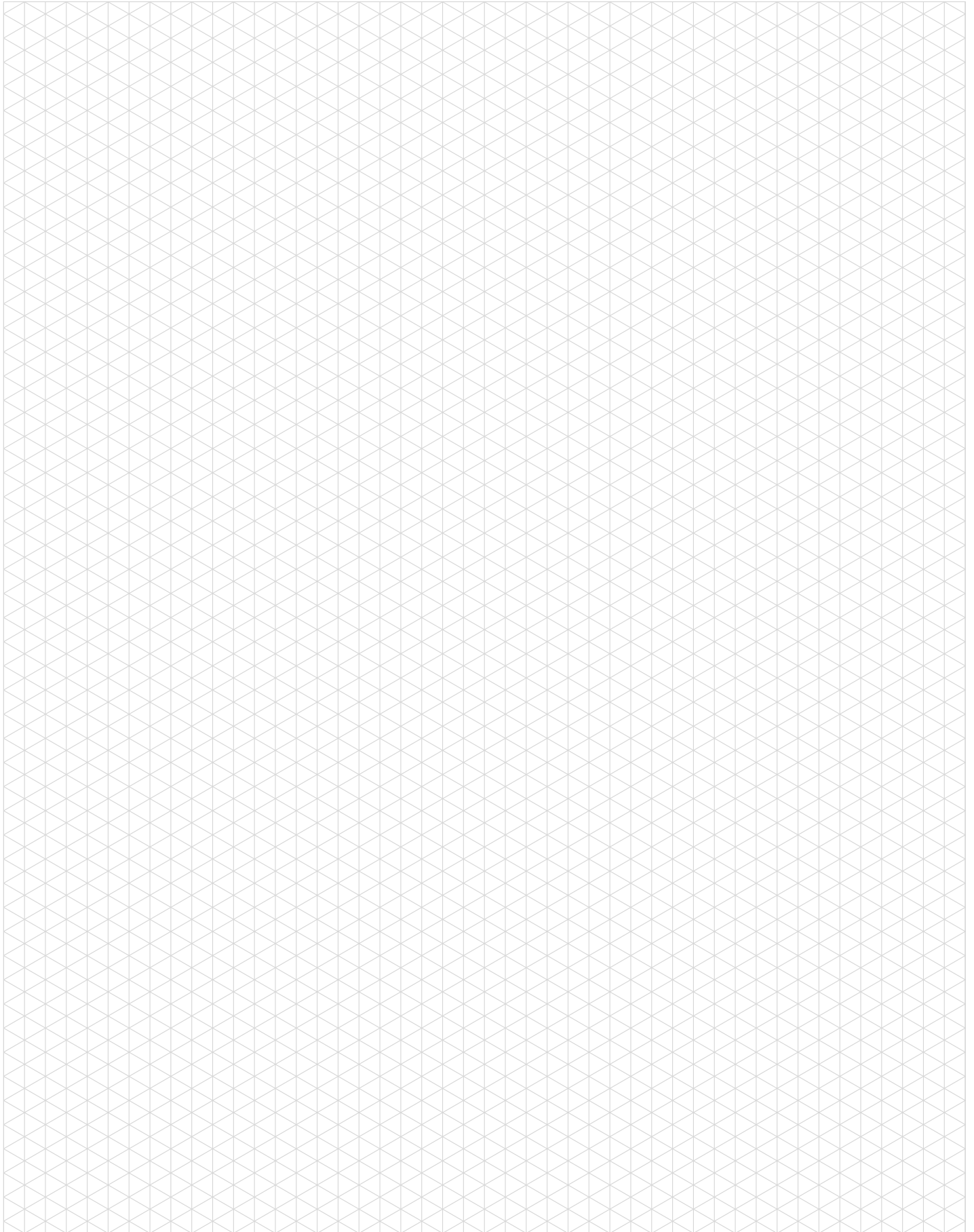
The RCM/RFM series pivot units uses a combined pneumatic and hydraulic cylinder, using a hydraulic/pneumatic piston rod within the standard pneumatic cylinder structure. This will allow for standard pneumatic operation while providing motion control in heavy duty applications during opening and closing positioning.



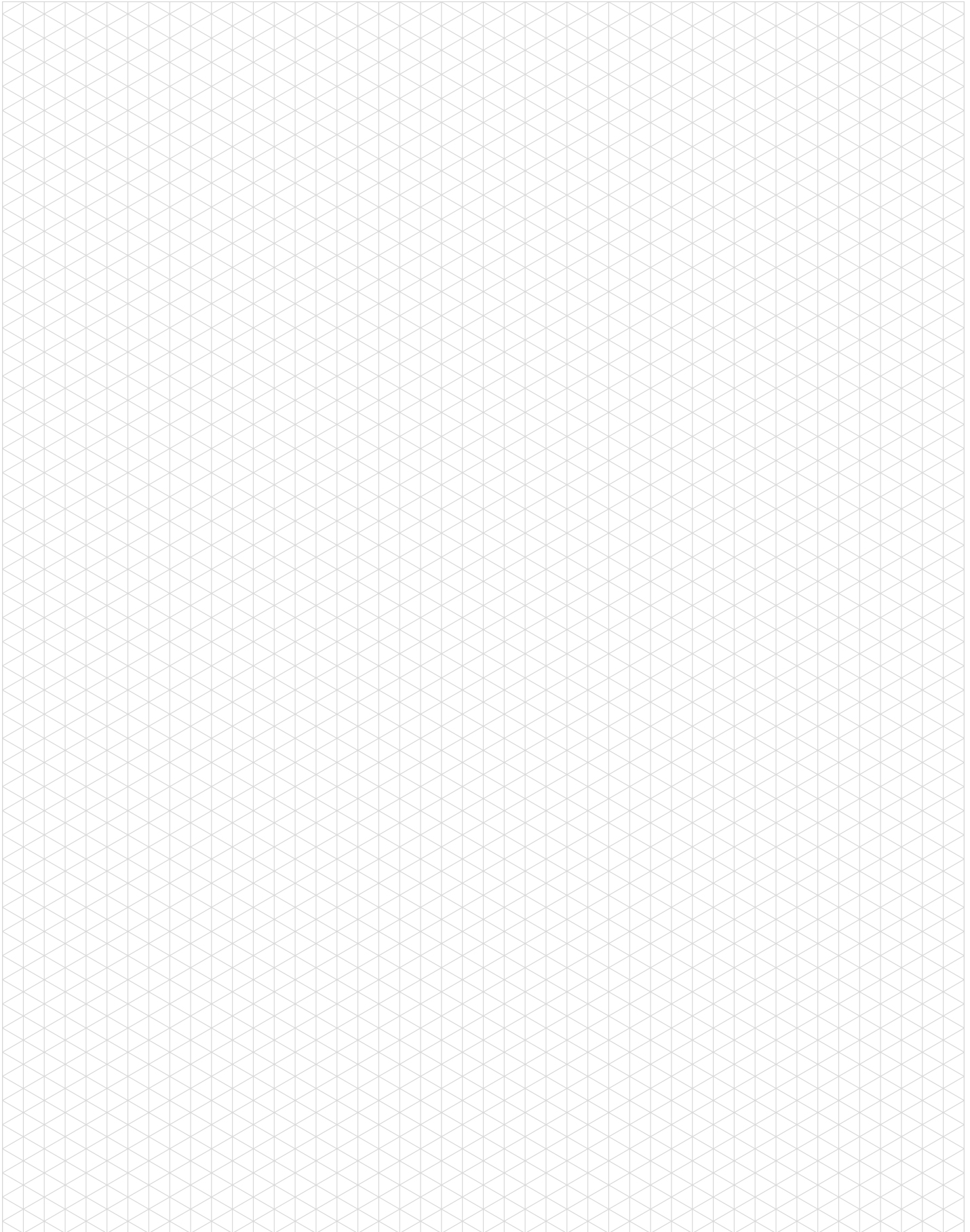
Specifications	Units	100	125	160	200
Max Torque by Load [5 bar] Opening Angle $\leq 92^\circ$	Nm [ft-lbs]	150 [111]	240 [117]	410 [302]	660 [487]
Max Torque by Load [5 bar] Opening Angle $> 92^\circ / \leq 121^\circ$	Nm [ft-lbs]	110 [81]	180 [133]	300 [211]	480 [354]
Max Torque by Load [5 bar] Opening angle $> 121^\circ$	Nm [ft-lbs]	55 [41]	65 [48]	100 [74]	175 [129]
Holding Moment	Nm [ft-lbs]	2000 [1475]	3500 [2581]		
RCM Weight	kg [lbs]	27 [60]	61 [134]	74 [163]	81 [178]
RFM Weight	kg [lbs]	30 [66]	64 [141]	77 [169]	84 [185]

NOTES





NOTES

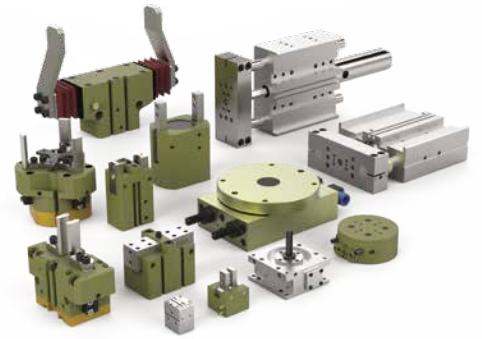


OUR PORTFOLIO OF PRODUCTS



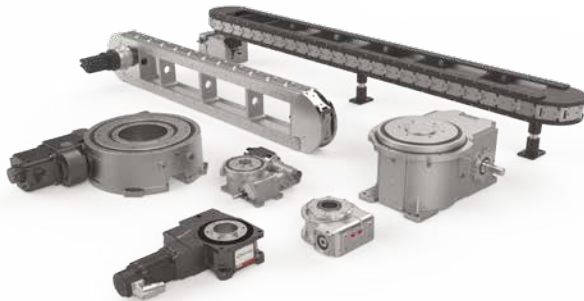
End Effectors (EE)

- Tool Changers
- End-of-Arm Tooling
- Vacuum Products
- Palletizing Solutions



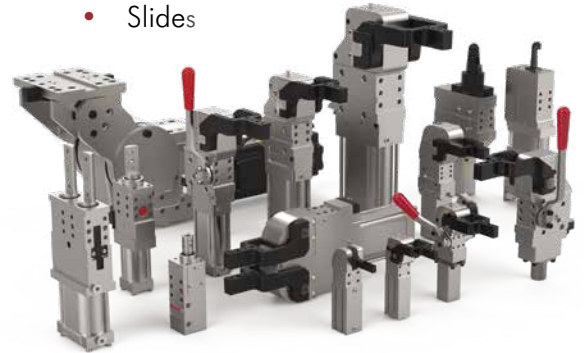
Grippers (GR)

- Electric Grippers
- Pneumatic and Sheet Metal Grippers
- Rotates
- Slides



Indexers (IN)

- Precision Conveyors
- Dial Indexers
- Shaft and Flange Indexers
- Part Handlers



Power Clamps (PC)

- Power Clamps
- Pin Clamps and Packages
- Pivot Units
- Power Cylinders



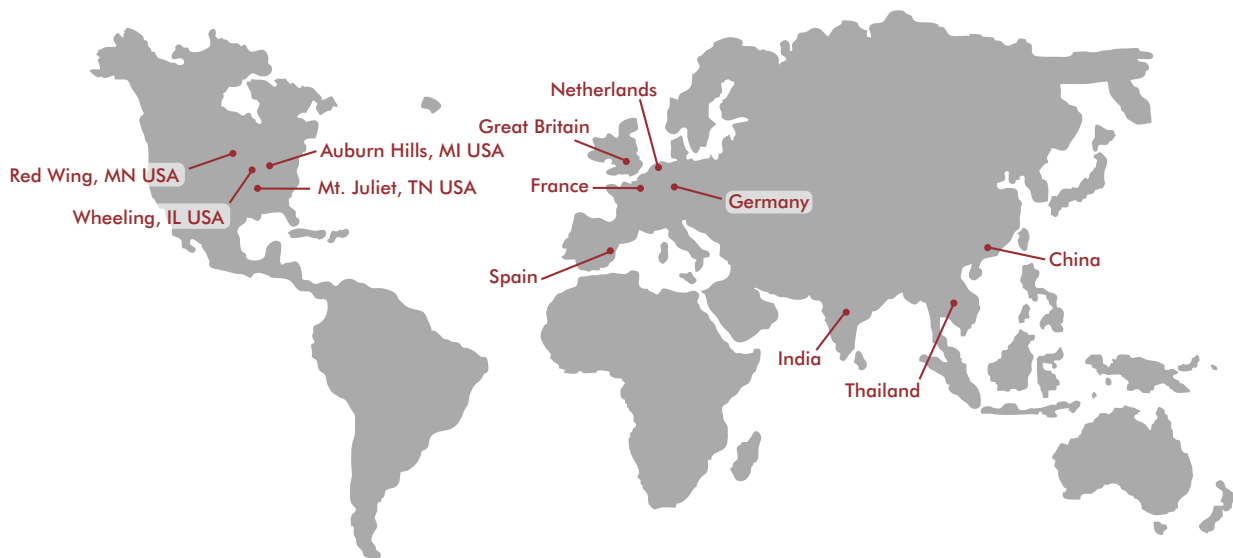
Manual Clamps (MC)

- Hold Down
- Squeeze Action
- Plunger, Hook and Latch
- Pneumatic Toggle and Swing



Sheet Metal Grippers (SM)

- Accelerate® Press Room
- Cam Type
- Toggle Lock



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