

Tolerance Compensating Hook Pin Clamps

01/28/2025



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Tolerance Compensating Hook Pin Clamps

PC-HPC-11

Tolerance Compensating Hook Pin Clamps

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82P50/82P63

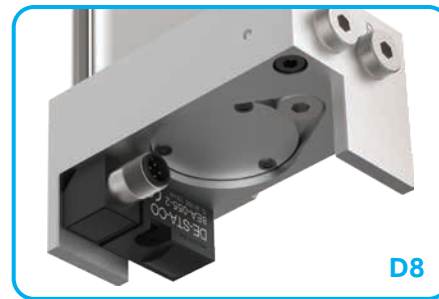
Pneumatic Pin Clamp | Tolerance Compensating | Ordering and Technical Information



Base Model	Description
82P50-720	50 mm Tandem Cylinder (G1/8 Port)
82P63-720	63 mm Tandem Cylinder (G1/8 Port)

Tolerance	Description
A	0-6 mm [0-0.236 in] tolerance compensation

Sensor	Description
D8	Inductive Sensing System with M12x1 Connector (8EA-151-1)



Specification	Unit	82P50	82P63
Clamping Force @ 5 bar	N [lbf]	1500 [337]	2500 [562]
Max. Operating Pressure	bar [psi]	6 [87]	6 [87]
Air Consumption			
Clamping @ 6 bar	liter [in ³]	0,66 [40.28]	0,92 [56.14]
Opening @ 6 bar	liter [in ³]	0,33 [20.13]	0,46 [28.07]
Weight	kg [lb]	3,2 [7.05]	3,9 [8.59]
Time:			
Clamping	sec	0.3	0.3
Opening	sec	0.3	0.3

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

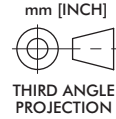
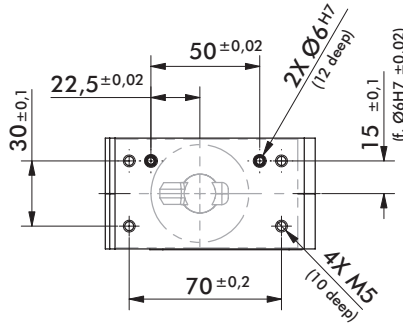
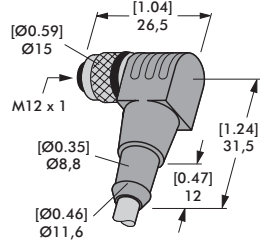


82P50

Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications

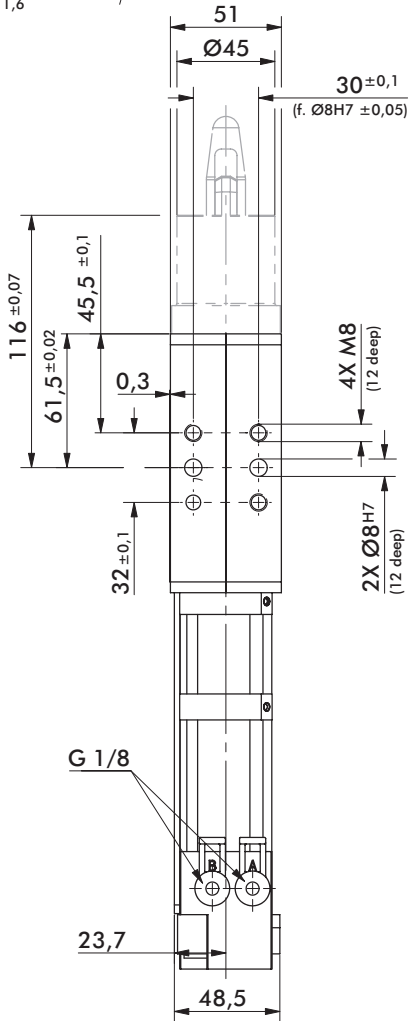
Sensor Cables Order separately

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

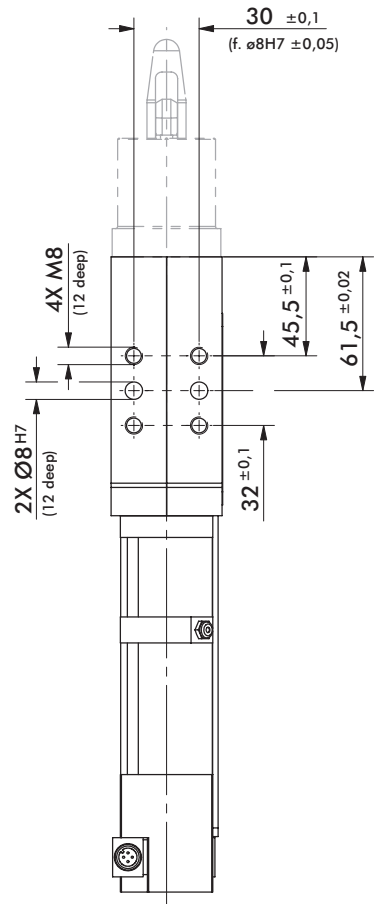
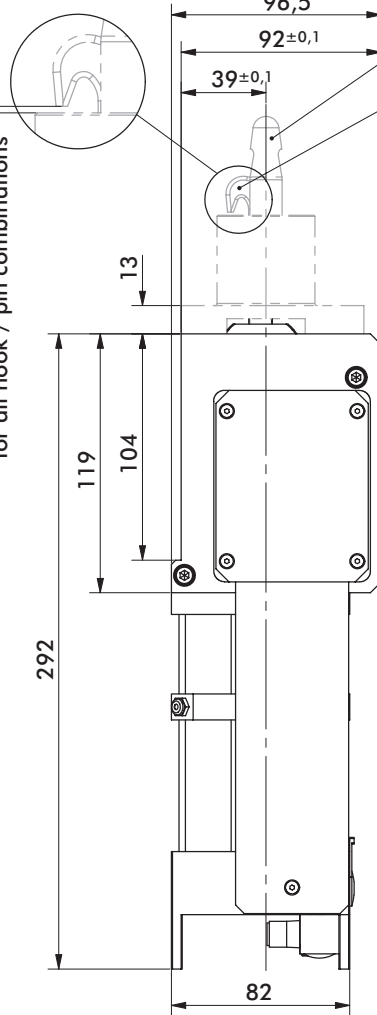


See page 14 for Centering Pin dimensions

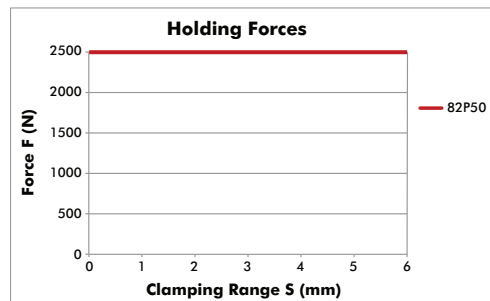
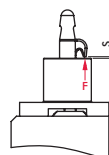
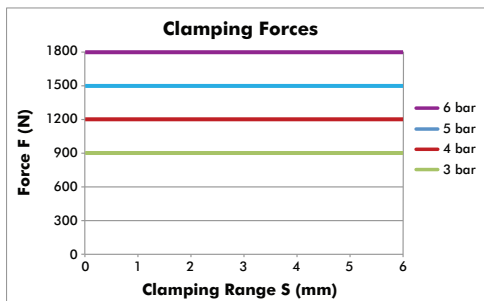
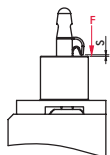
See page 18 for Clamp Hook specifications



0 - 6 mm clamping range for all hook / pin combinations

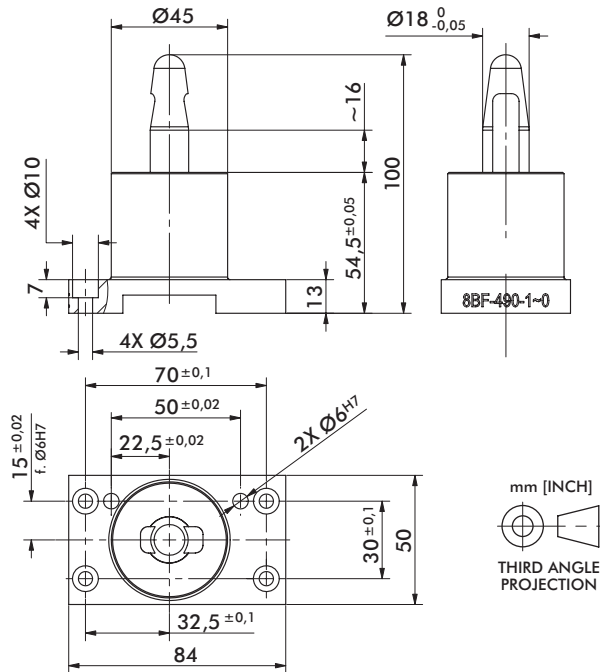


Operation with oil-free air is permissible.

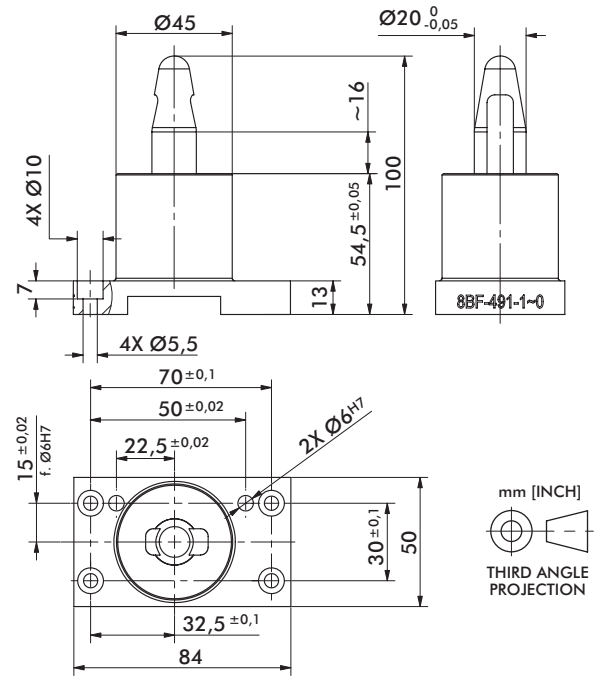


82P50 CENTERING PINS

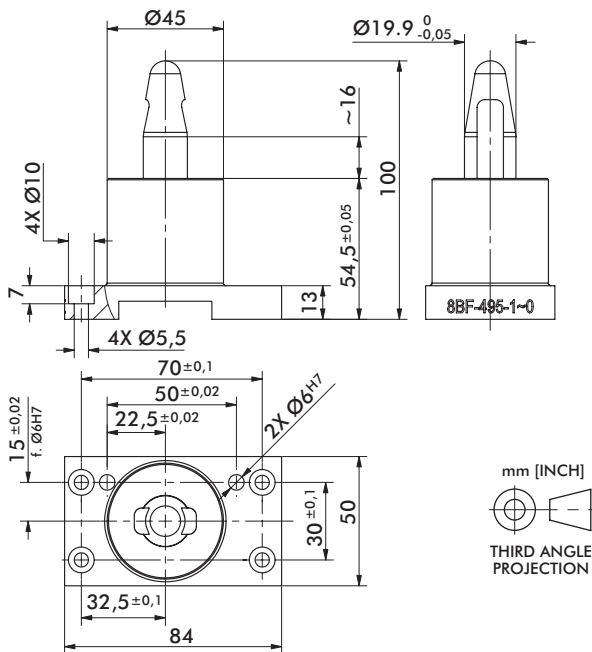
Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications



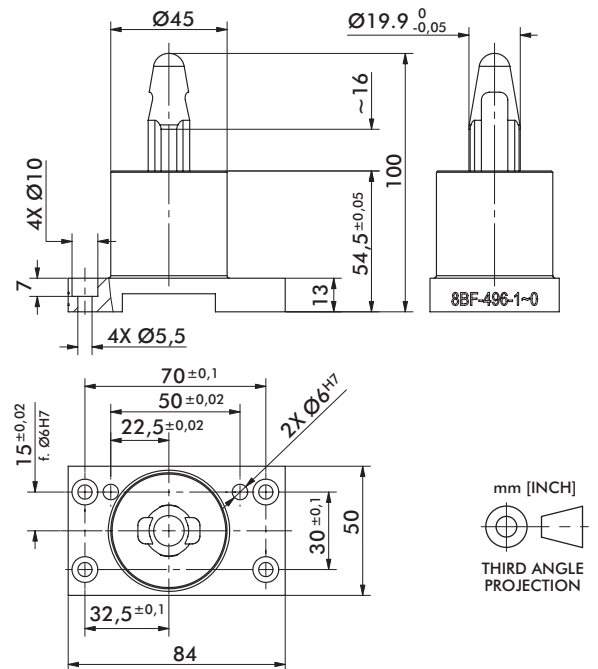
Specification	8BF-490-1
Weight	~0,60 kg
Diameter and Tolerance	Ø18 -0.05
Shape	Round



Specification	8BF-491-1
Weight	~0,60 kg
Diameter and Tolerance	Ø20 -0.05
Shape	Round



Specification	8BF-495-1
Weight	~0,60 kg
Diameter and Tolerance	Ø19,90 -0.05
Shape	Round



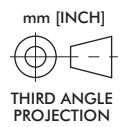
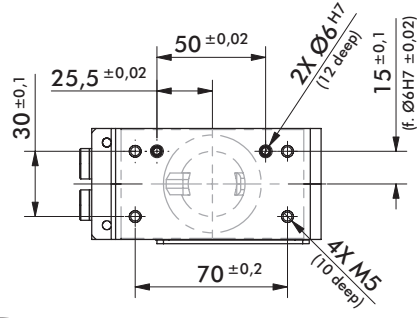
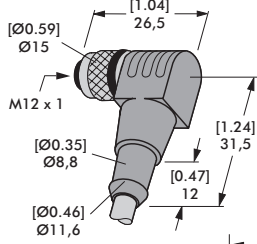
Specification	8BF-496-1
Weight	~0,60 kg
Diameter and Tolerance	Ø19,90 -0.05
Shape	Diamond

82P63

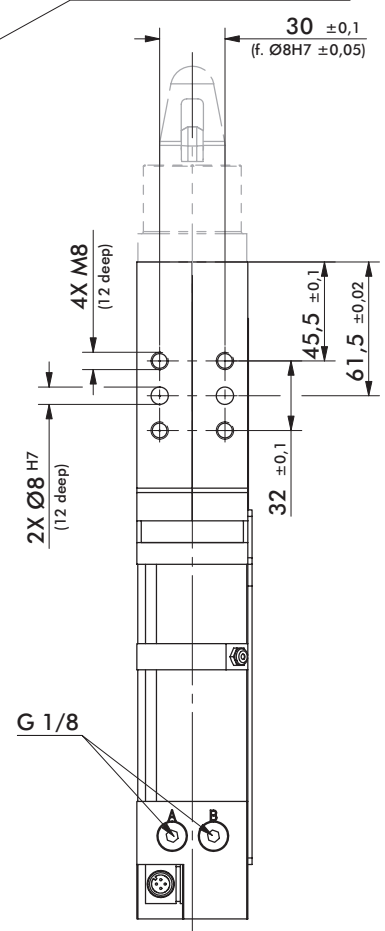
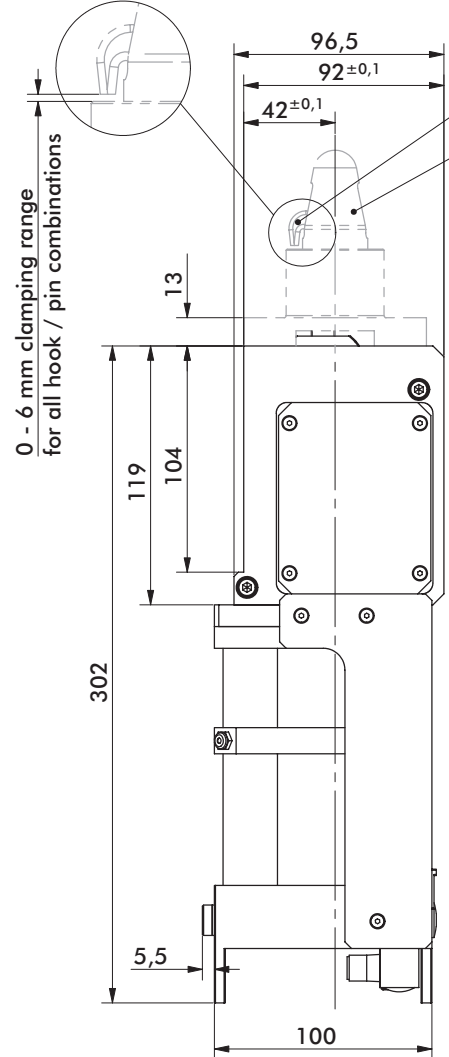
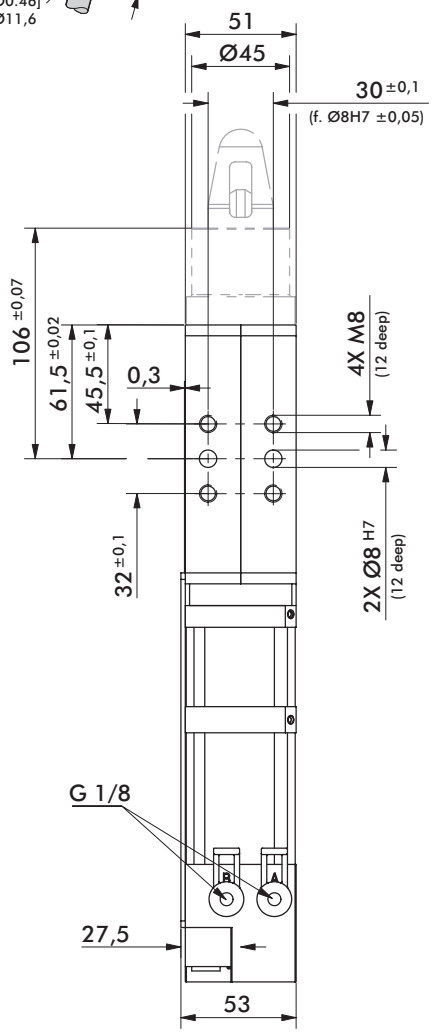
Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications

Sensor Cables Order separately

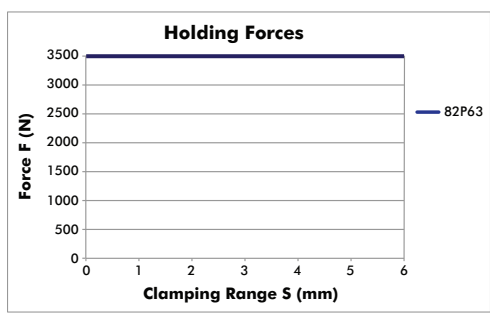
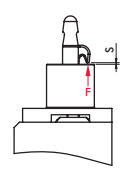
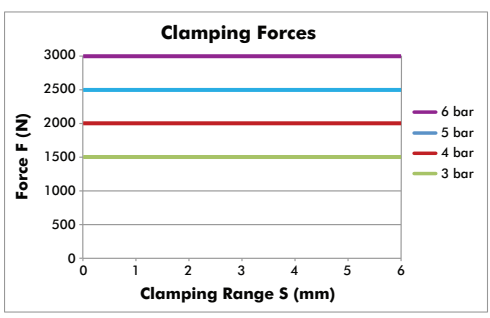
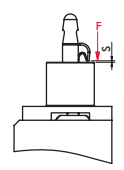
Description	Order no.
M12x1, Angular, 4-pin Connector with 5 m [16 ft.] Cable	8EL-003-1



See page 18 for Clamp Hook specifications
See page 16-17 for Centering Pin dimensions

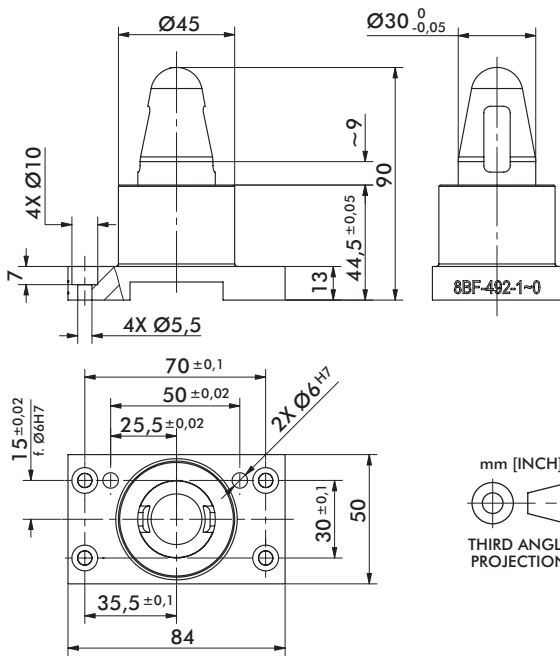


Operation with oil-free air is permissible.

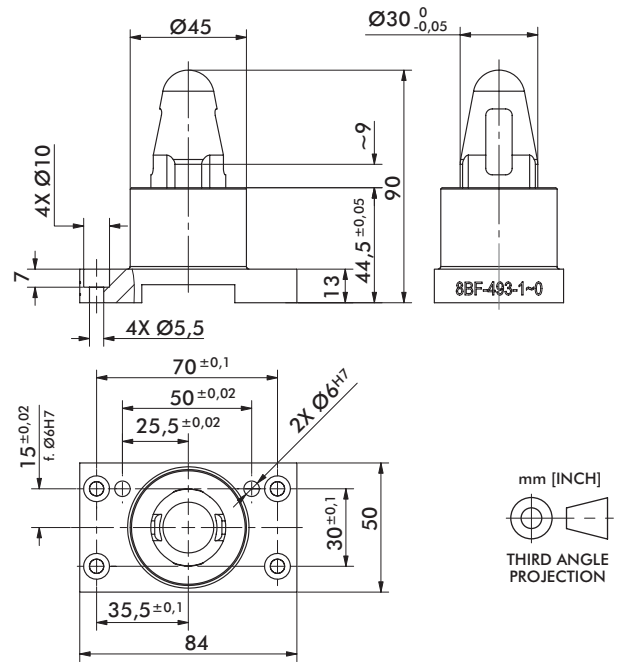


82P63 CENTERING PINS

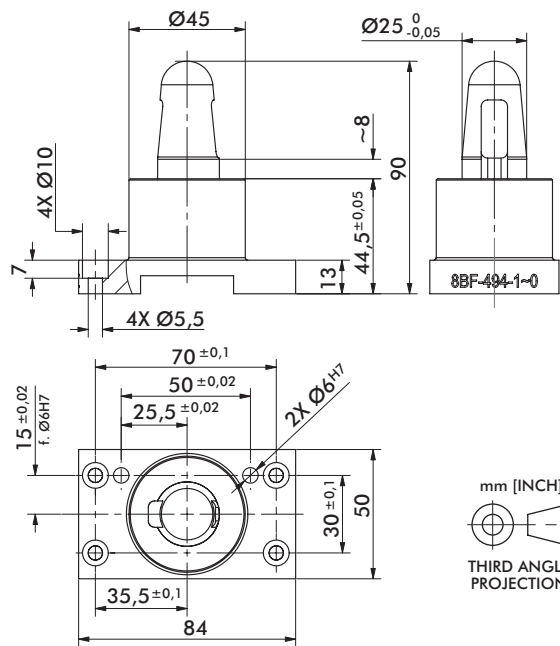
Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications



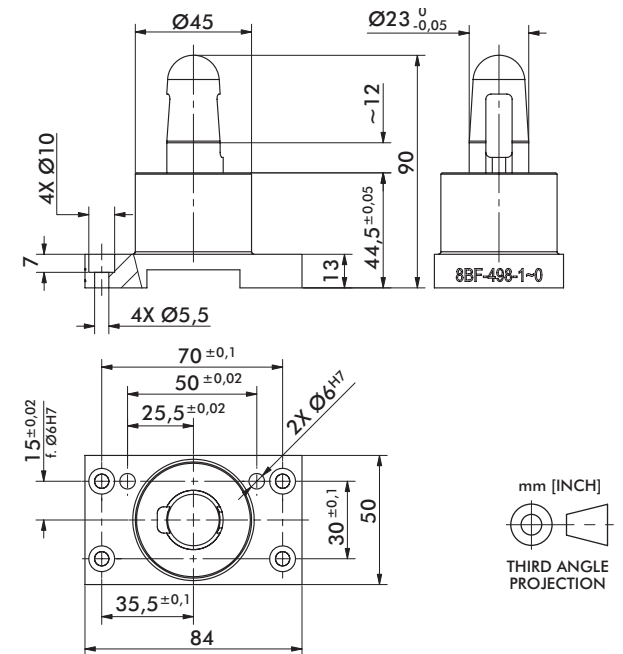
Specification	8BF-492-1
Weight	~0,57 kg
Diameter and Tolerance	Ø30 -0.05
Shape	Round



Specification	8BF-493-1
Weight	~0,57 kg
Diameter and Tolerance	Ø30 -0.05
Shape	Diamond



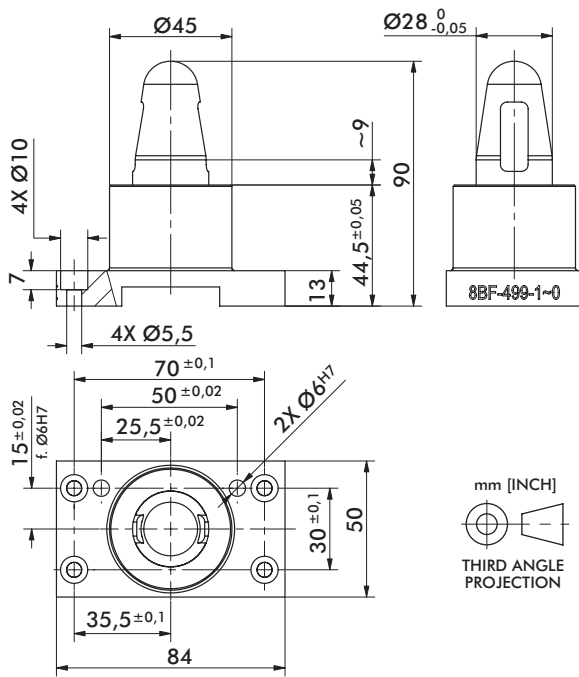
Specification	8BF-494-1
Weight	~0,54 kg
Diameter and Tolerance	Ø25 -0.05
Shape	Round



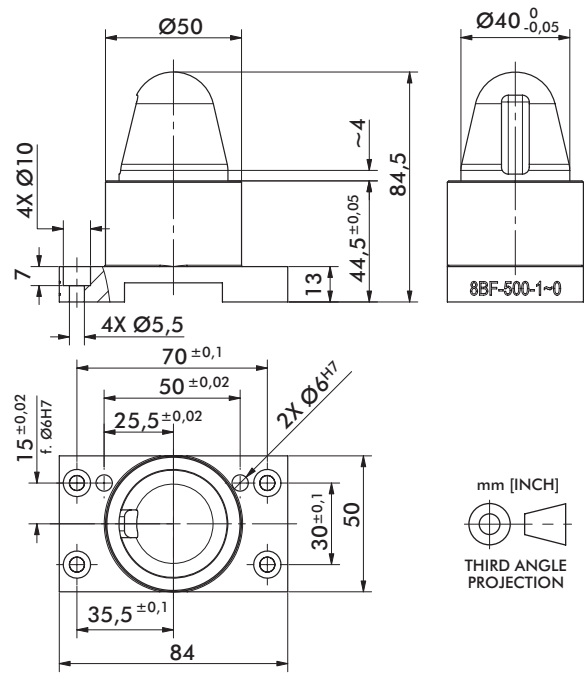
Specification	8BF-498-1
Weight	~0,53 kg
Diameter and Tolerance	Ø23 -0.05
Shape	Round

82P63 CENTERING PINS

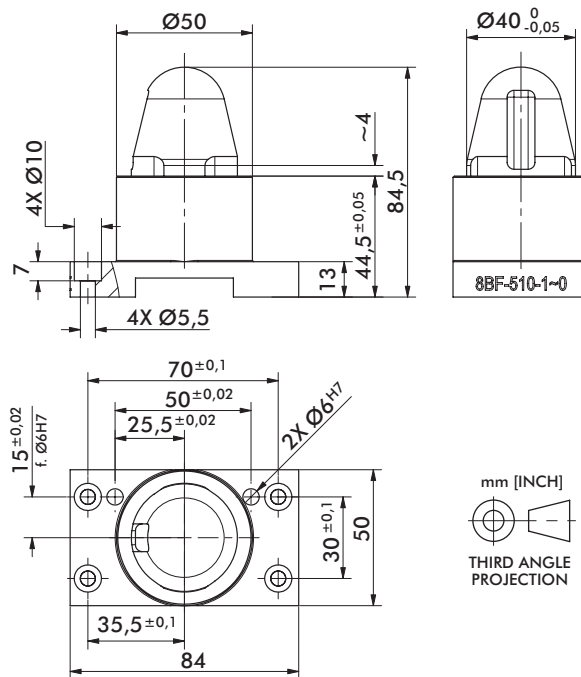
Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications



Specification	8BF-499-1
Weight	~0,56 kg
Diameter and Tolerance	Ø28 -0.05
Shape	Round



Specification	8BF-500-1
Weight	~0,68 kg
Diameter and Tolerance	Ø40 -0.05
Shape	Round

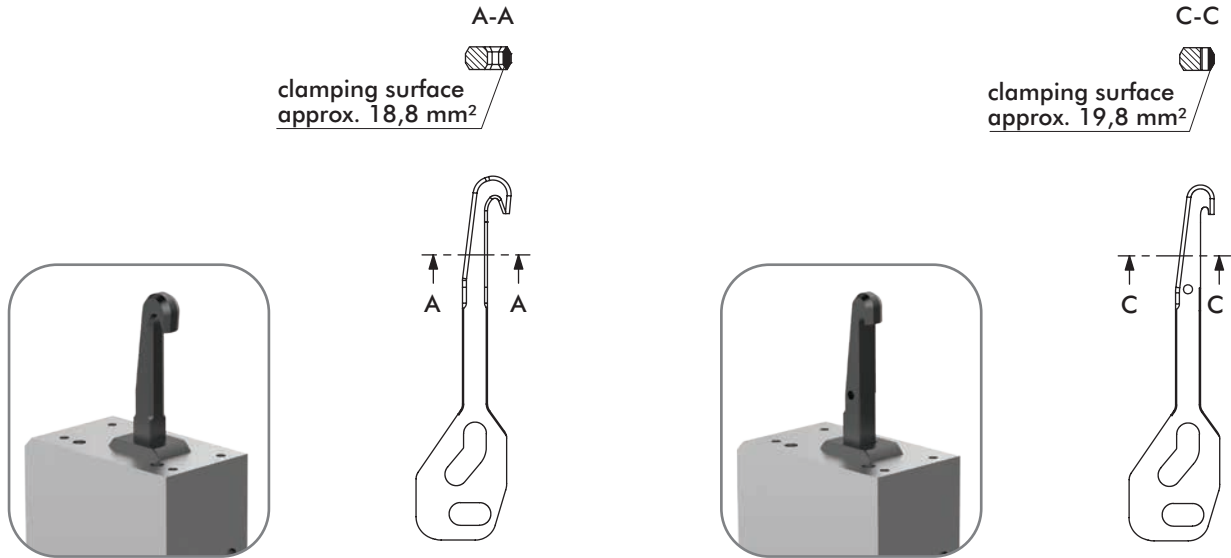


Specification	8BF-510-1
Weight	~0,68 kg
Diameter and Tolerance	Ø40 -0,05
Shape	Diamond

82P50/82P63 CLAMPING HOOKS

Pneumatic Pin Clamp | Tolerance Compensating | Surface Pressure of Clamping Hooks

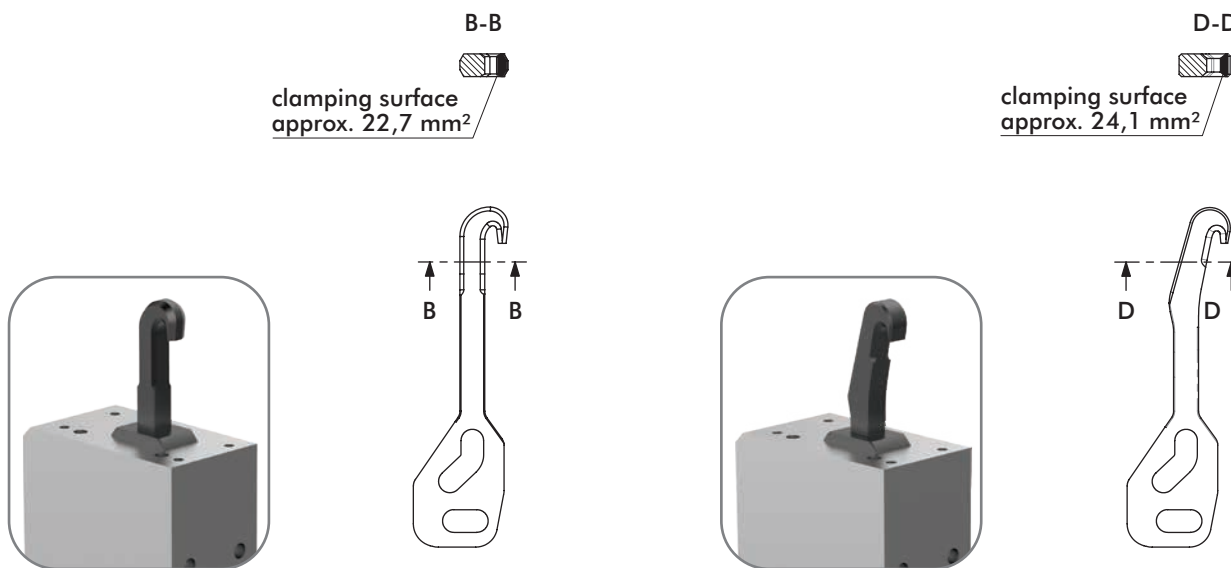
82P50



Specification	8JH-162-1			
Pressure [bar]	3.0	4.0	5.0	6.0
Clamping Force [N]	900	1200	1500	1800
Surface Pressure [N/mm ²]	48	64	80	96

Specification	8JH-164-1			
Pressure [bar]	3.0	4.0	5.0	6.0
Clamping Force [N]	900	1200	1500	1800
Surface Pressure [N/mm ²]	45	61	76	91

82P63



Specification	8JH-163-1			
Pressure [bar]	3.0	4.0	5.0	6.0
Clamping Force [N]	1500	2000	2500	3000
Surface Pressure [N/mm ²]	66	88	110	132

Specification	8JH-165-1			
Pressure [bar]	3.0	4.0	5.0	6.0
Clamping Force [N]	1500	2000	1500	1800
Surface Pressure [N/mm ²]	62	83	104	124


82P50-1732

Pneumatic Centering Pin Clamp | Tolerance Compensation | Ordering Information

82P50-1732 **K8** **B** **03** **XX**


Base Model	Description
82P50-1732	50 mm Tandem Cylinder

Sensor	Description
K8	PNP Sensor with M12x1 Cable Connector (8EA-158-4-B)




Tolerance	Description
B	7 mm Tolerance Compensation

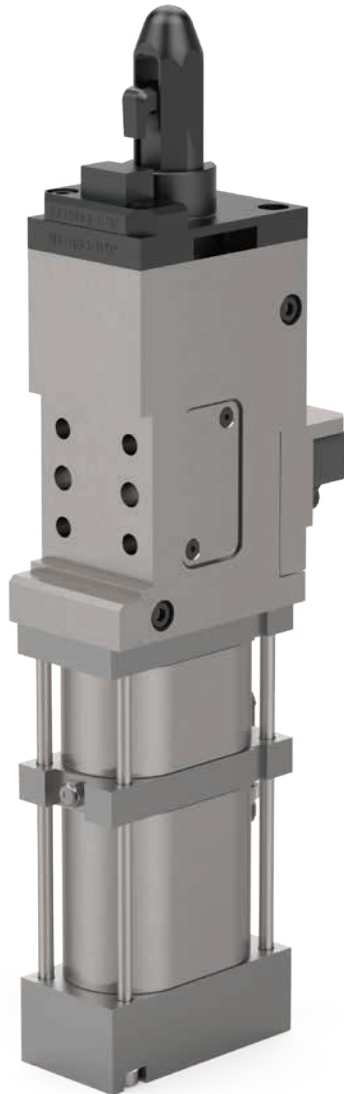
Clamping Hooks	for Component Thicknesses
03	1,5 – 8,5 [0.06 – 0.33]
09	2,5 – 9,5 [0.10 – 0.37]



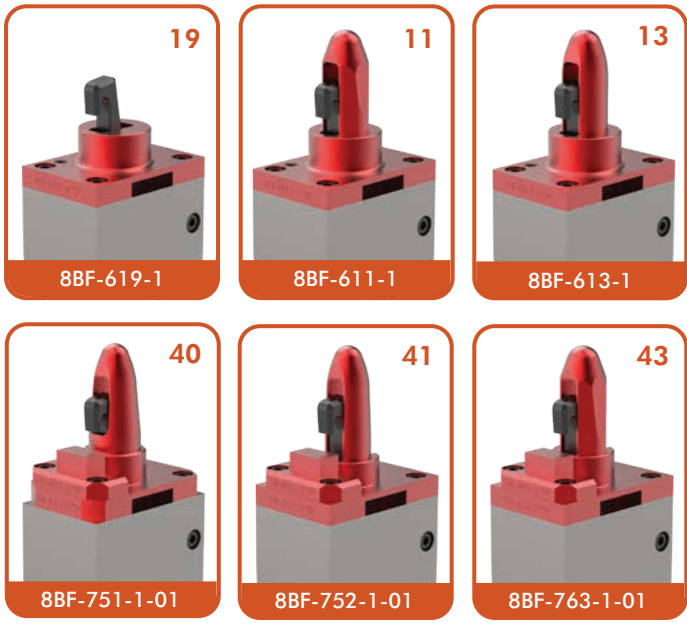
8JH-187-2

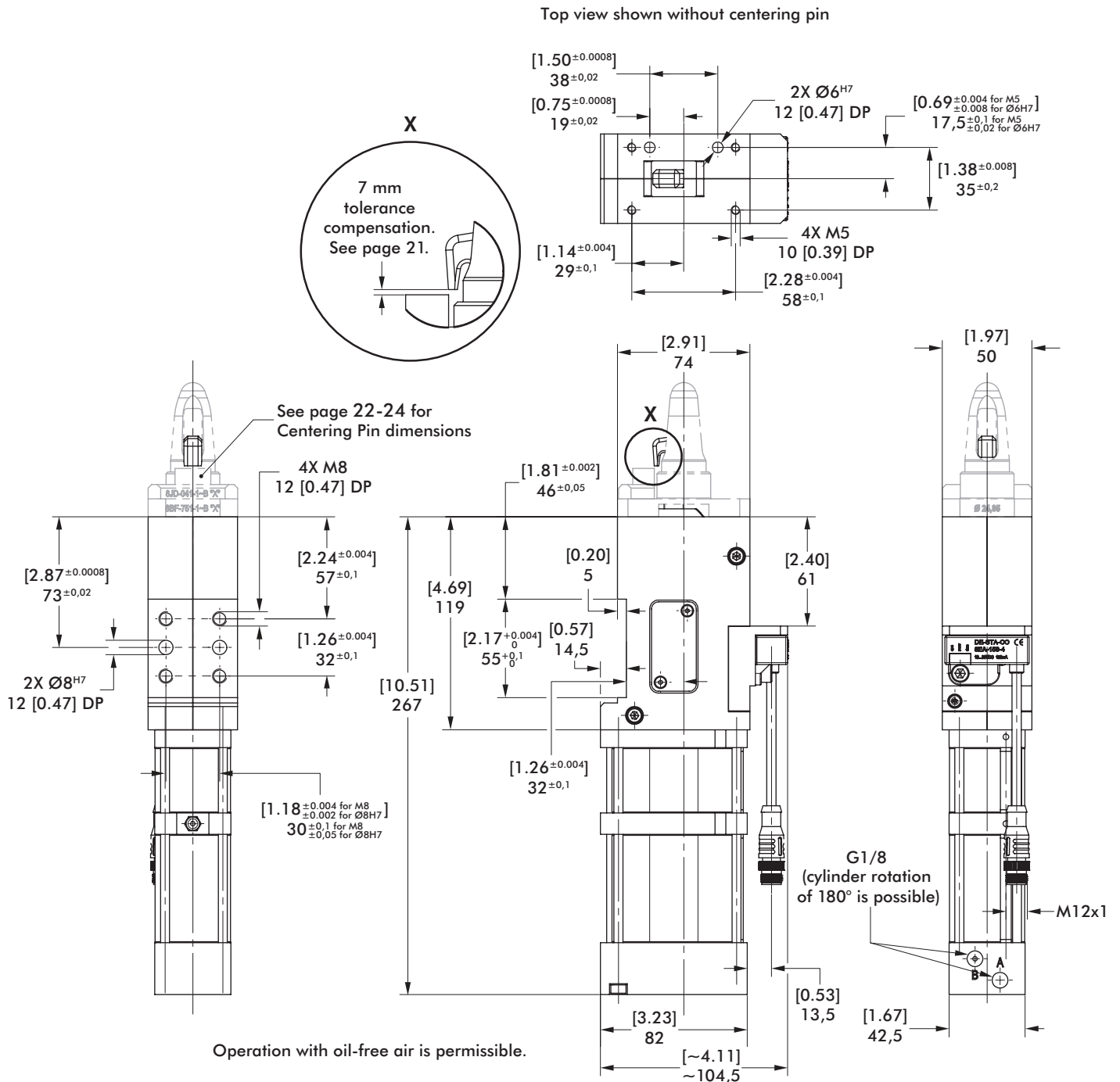


8JH-221-1

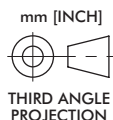


Centering Pin/Support	Pin Diameter and Tolerance	Centering Pin Shape	Component Material
19	N/A	Support Only	Steel/Aluminum
11	Ø 24,85 -0,05	Diamond Pin	Steel
13	Ø 22,00 -0,05	Diamond Pin	
40	Ø 24,85 -0,05	Round Pin	Aluminum
41	Ø 22,00 -0,05		
43	Ø 24,85 -0,05	Diamond Pin	





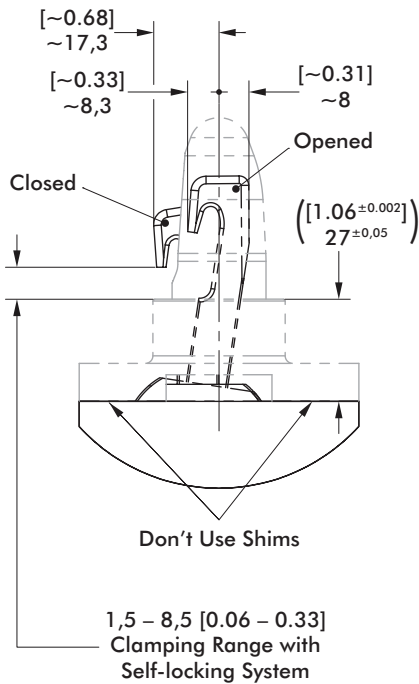
Specification	Unit	82P50-1732
Max. Clamping Force @ 5 bar [72psi]	N [lbf]	~1500 [~337]
Max. Operating Pressure	bar [psi]	6 [87]
Actuation Time: Open/Close	sec	0.3
Air Consumption @ 6 bar [87psi]:		
Clamping Stroke	liter [in ³]	0,66 [40.28]
Opening Stroke	liter [in ³]	0,33 [20.14]
Weight	kg [lb]	~2,6 [~5.73]



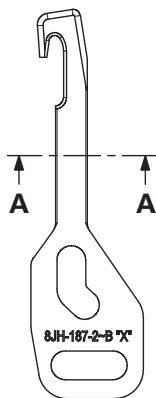
82P50-1732 CLAMPING HOOKS

Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

03 Clamping Hook



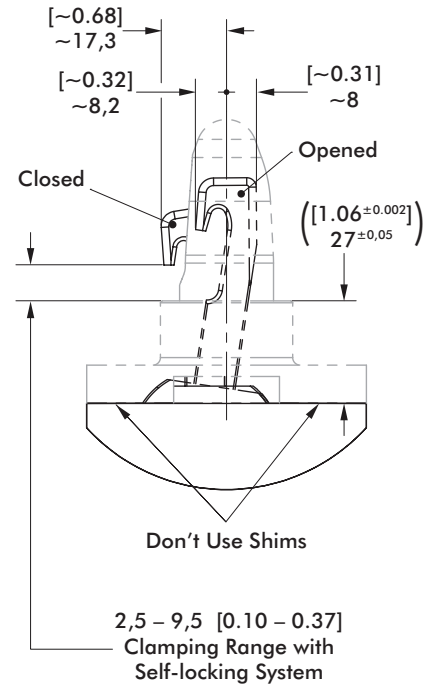
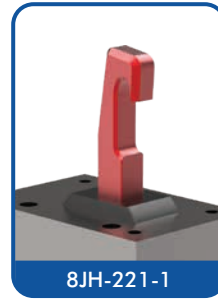
A-A
1:1



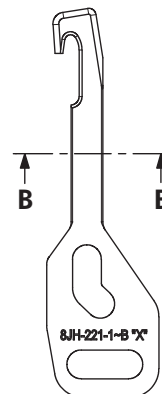
Surface Pressure of Clamping Hook

Specification	Units	8JH-187-2			
Pressure	[psi]	[44]	[58]	[72]	[87]
	bar	3,0	4,0	5,0	6,0
Clamping Force	[lbf]	[202]	[270]	[337]	[405]
	N	900	1200	1500	1800
Surface Pressure	[lbf/in ²]	[6516]	[8710]	[10871]	[13065]
	N/mm ²	45	60	75	90

09 Clamping Hook



B-B
1:1



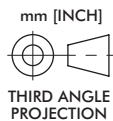
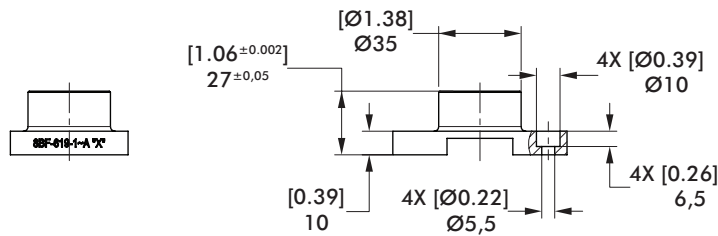
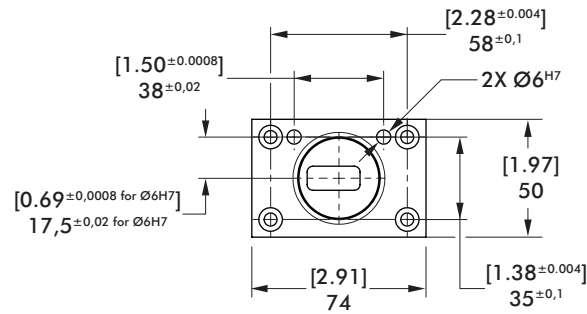
Surface Pressure of Clamping Hook

Specification	Units	8JH-221-1			
Pressure	[psi]	[44]	[58]	[72]	[87]
	bar	3,0	4,0	5,0	6,0
Clamping Force	[lbf]	[202]	[270]	[337]	[405]
	N	900	1200	1500	1800
Surface Pressure	[lbf/in ²]	[5941]	[7941]	[9912]	[11912]
	N/mm ²	41	54	68	81

82P50-1732 PIN SUPPORT AND CENTERING PIN

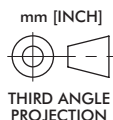
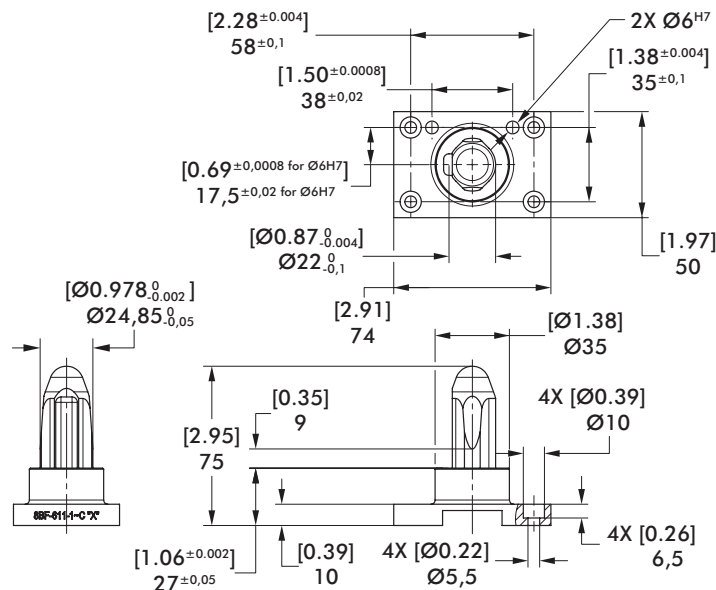
Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

19 Pin Support - Steel/Aluminum



Specification	Units	8BF-619-1
Weight	kg [lb]	~0,25 kg [~55 lb]

11 Centering Pin - Steel

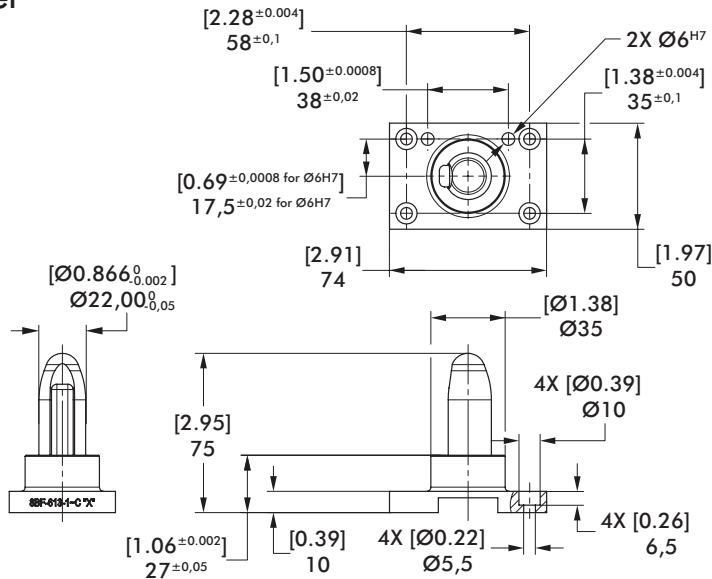


Specification	Units	8BF-611-1
Weight	kg [lb]	~0,33 [~0.73]
Diameter and Tolerance	mm [in]	Ø24,85 ^{-0,05} [Ø0.978 ^{-0,002}]
Shape		Diamond

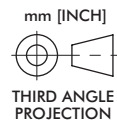
82P50-1732 CENTERING PINS

Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

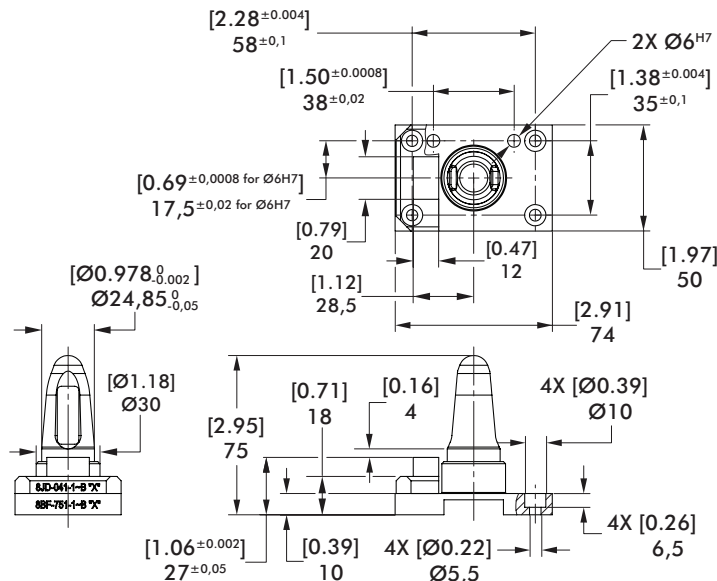
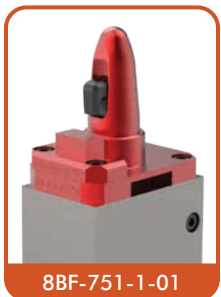
13 Centering Pin - Steel



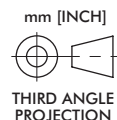
Specification	Units	8BF-613-1
Weight	kg [lb]	~0,32 [~0.71]
Diameter and Tolerance	mm [in]	Ø22,00 ^{-0,05} [Ø0.866 ^{-0.002}]
Shape		Round



40 Centering Pin - Aluminum



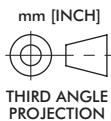
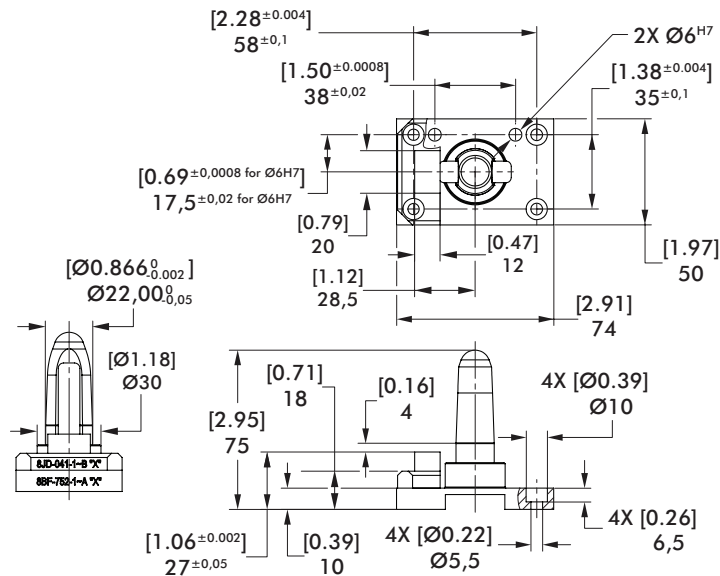
Specification	Units	8BF-751-1-01
Weight	kg [lb]	~0,33 [~0.73]
Diameter and Tolerance	mm [in]	Ø24,85 ^{-0,05} [Ø0.978 ^{-0.002}]
Shape		Round



82P50-1732 CENTERING PINS

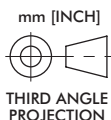
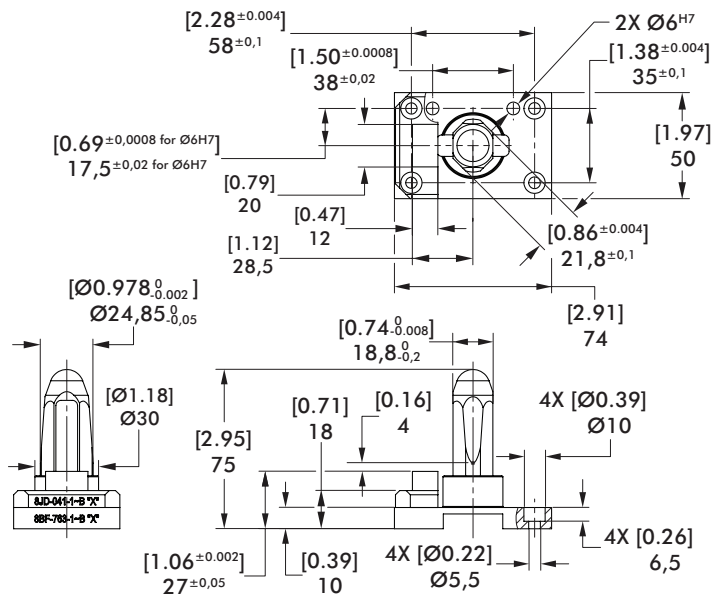
Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

41 Centering Pin - Aluminum



Specification	Units	8BF-752-1-01
Weight	kg [lb]	~0,32 [~0.71]
Diameter and Tolerance	mm [in]	Ø22,00 ^{-0,05} [Ø0.866 ^{-0,002}]
Shape		Round

43 Centering Pin - Aluminum

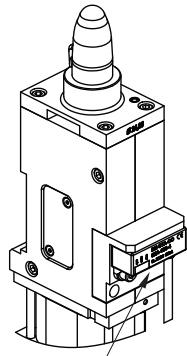
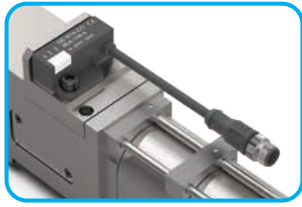


Specification	Units	8BF-763-1-01
Weight	kg [lb]	~0,35 [~0.77]
Diameter and Tolerance	mm [in]	Ø24,85 ^{-0,05} [Ø0.978 ^{-0,002}]
Shape		Diamond

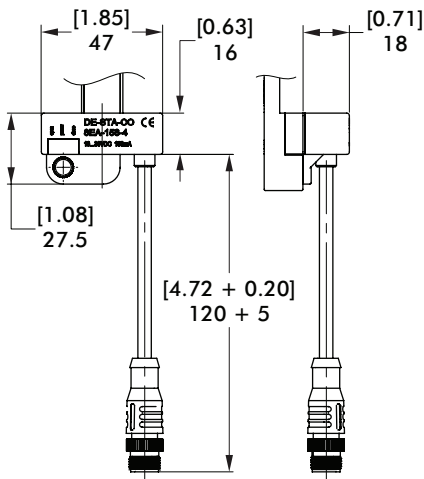
82P50-1732 SENSORS AND SPECIFICATIONS

Pneumatic Centering Pin Clamp | Tolerance Compensation | Technical Specifications

K8 Inductive Sensing System with Pigtail Connector



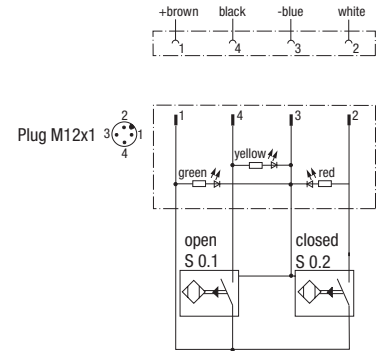
No adjustment of sensing system necessary!



8EA-158-4-B

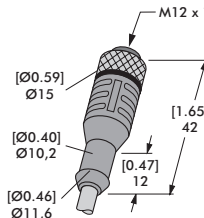
Inductive Sensor Wiring Diagram

Sensing system immune to interference from A.C./D.C. arc welding.

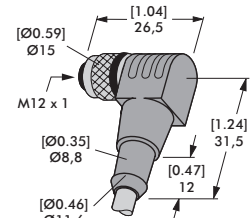


Sensor Cable Accessories

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

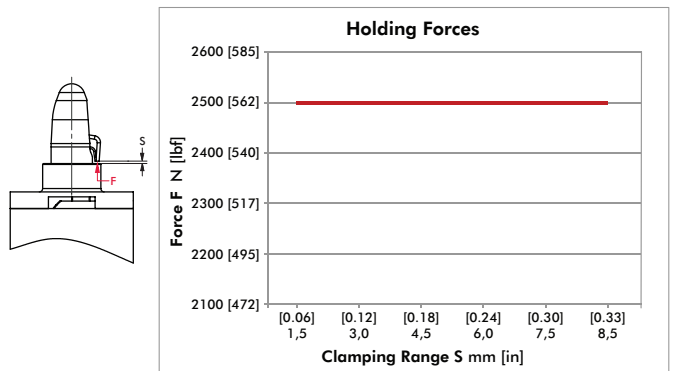
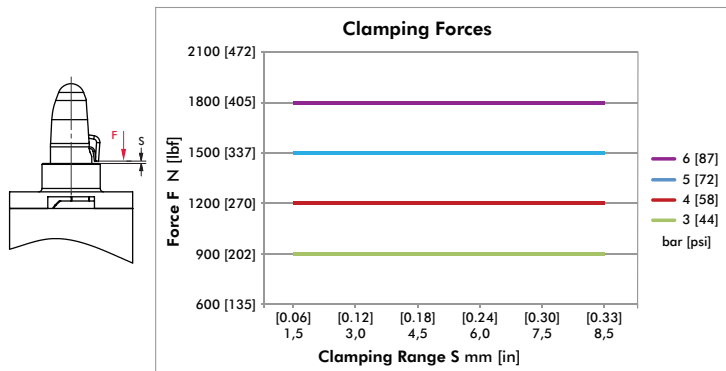


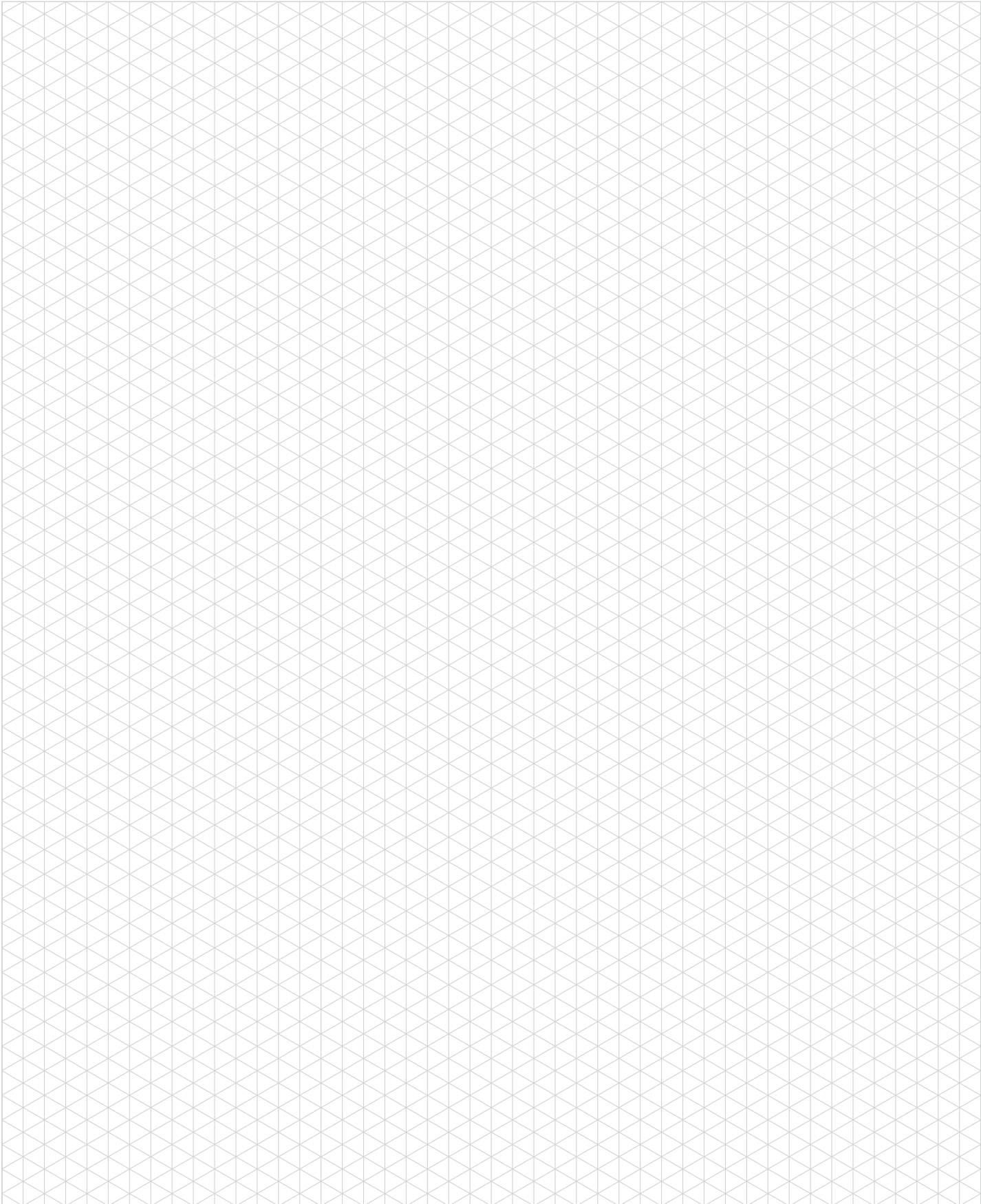
Straight Cable
8EL-002-1



Angular Cable
8EL-003-1

Clamping and Holding Forces





82P50-1800

Pneumatic Centering Pin Clamp | Tolerance Compensation | Ordering Information

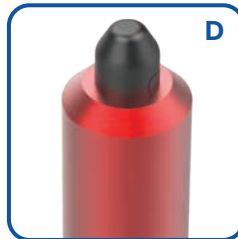
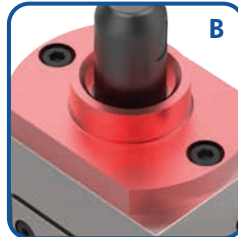
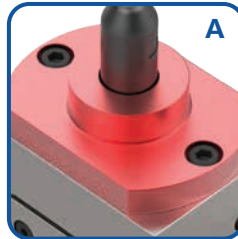


Base Model	Description
82P50-1800	Tolerance Compensation 0 - 5 mm [0 - 0.197 in]

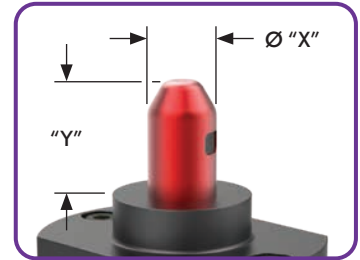
Sensor	Description
L8	PNP Sensor with M12x1 In-line Connector (8EA-146-4-B and 8EA-163-G)



Support Shape	Description
A	Standard
B	Flange Hole Down
D	Chamfered



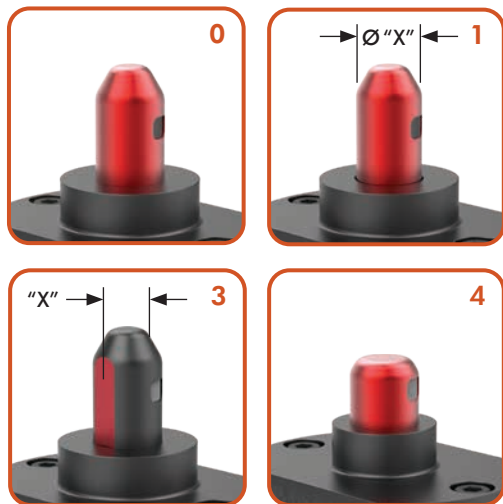
Pin Diameter	Pin Ø "X" mm ^{-0,05}	Pin Height "Y" mm
01	15,8	
02	19,8	26
03	20,8	
04	29,8	38
05	15,5	26
06	29,8	38



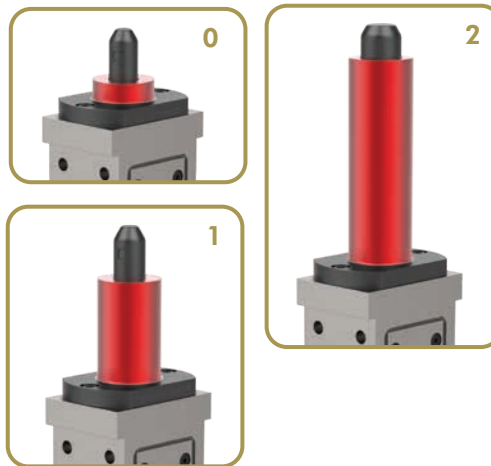
CNOMO fixing
with adaptor
shown. Order
Separately:
8MA-538-1



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



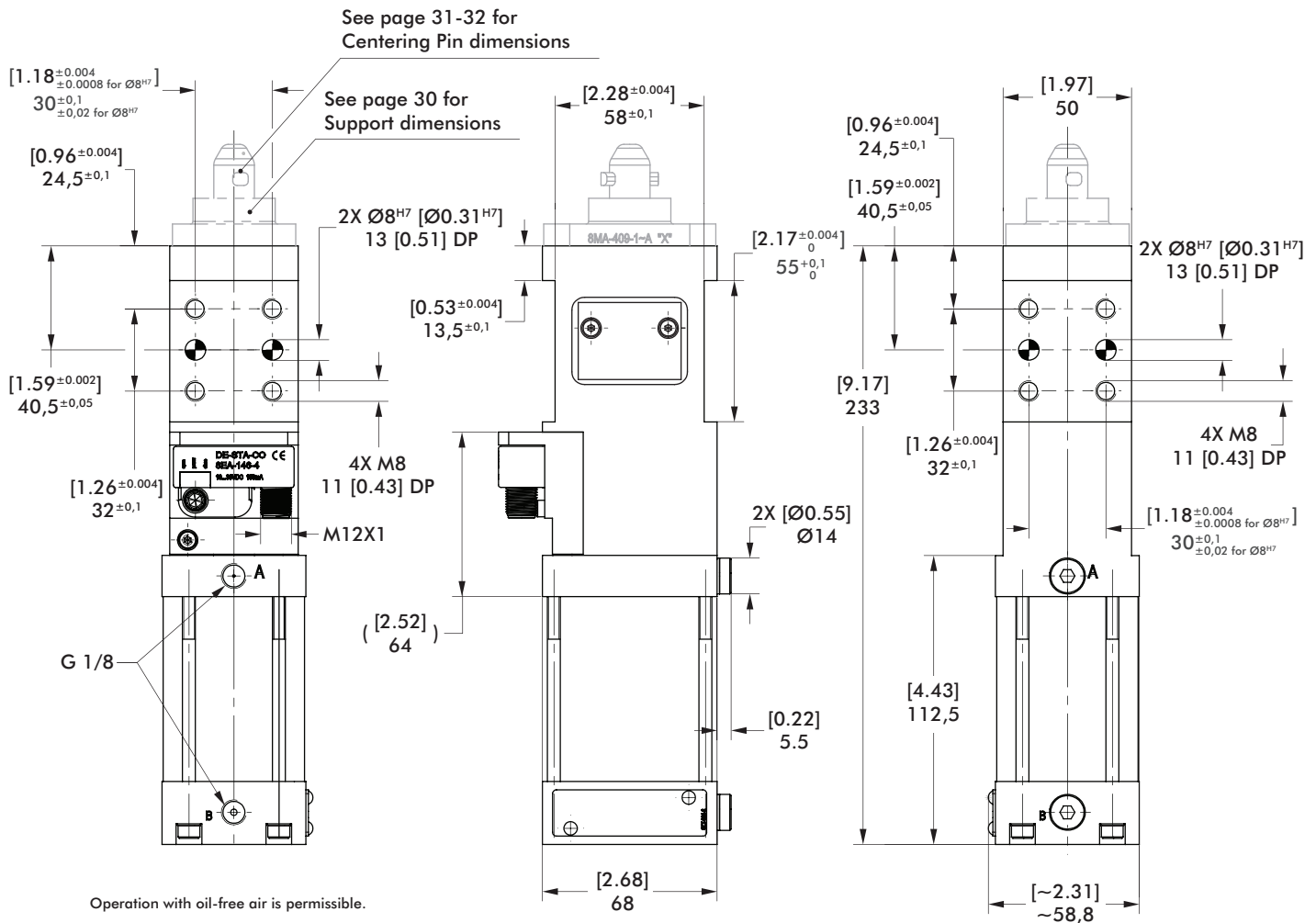
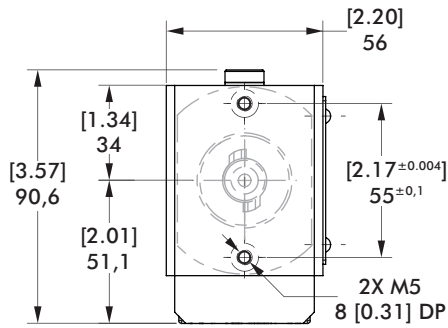
Configuration Compatibility Chart

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

82P50-1800

Pneumatic Centering Pin Clamp | Dimensions and Specifications

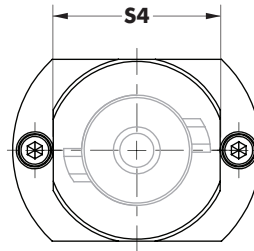
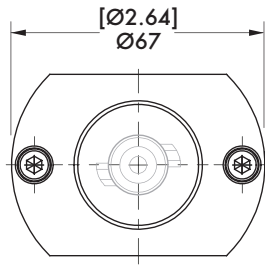
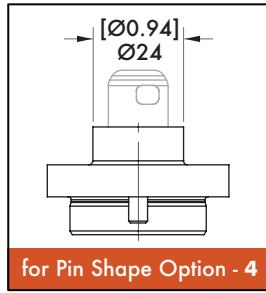


Specification	Unit	82P50-1800
Max. Clamping Force @ 5 bar	[lbf] N	[135] 600
Max. Operating Pressure	[psi] bar	[87] 6
Actuation Time: Open	sec	0.4
Close	sec	0.4
Air Consumption per Double Stroke @ 6 bar [87 psi]	[in ³] liter	[42.72] 0,7
Weight	[lb] kg	[5.73] 2,6

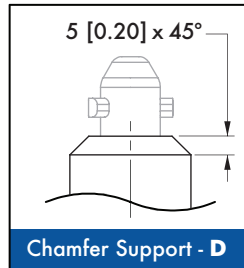
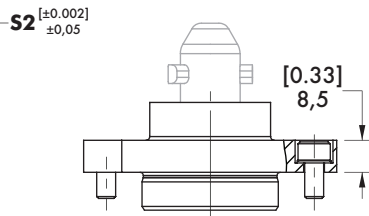
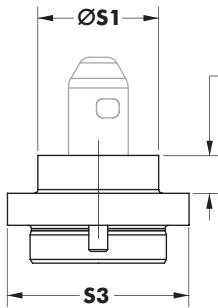
82P50-1800 CENTERING PIN SUPPORTS

Pneumatic Centering Pin Clamps | Dimension

A Standard Support/ D Chamfered Support



for Pin Diameter - 04

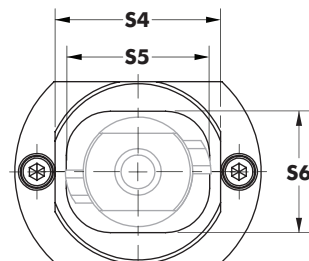
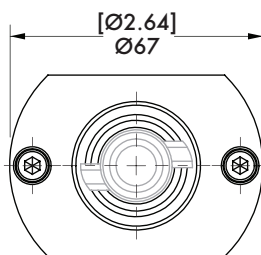


Chamfer Support Option D available for Pin Diameter 01 only.

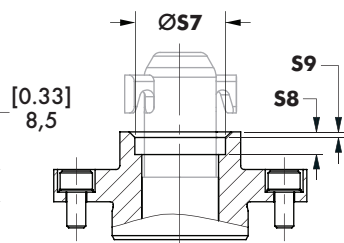
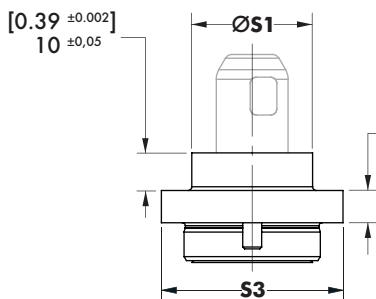


Pin Diameter	S1	S2 - Support Height			S3	S4
		0	1	2		
01						
02	32 [1.26]	10 [0.39]	--	--	48 [1.89]	--
03		--	--	100 [3.94]		
04	48 [1.89]	10 [0.39]	--	--	49 [1.93]	45 [1.77]
05	32 [1.26]		--	--	48 [1.89]	--

B Drop Down Support



for Pin Diameter - 04, 06

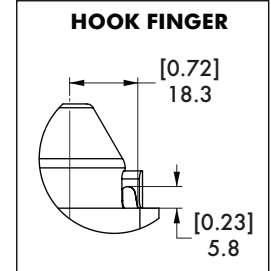
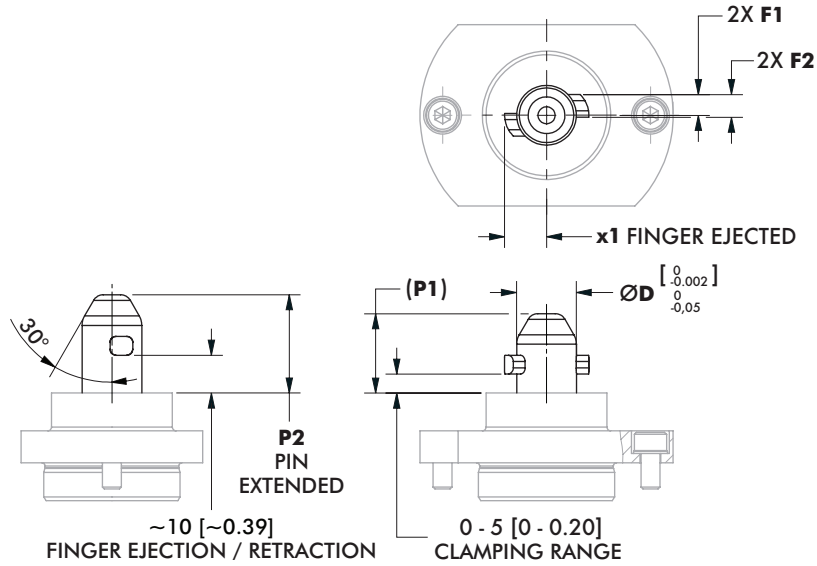


Pin Diameter	S1	S3	S4	S5	S6	S7	S8	S9
02	32 [1.26]	48 [1.89]	--	--	--	24 [0.94]	1,5 [0.06]	6 [0.24]
04	48 [1.89]	49 [1.93]	45 [1.77]	--	--	33,5 [1.32]	x 45°	
06				39 [1.54]	33 [1.30]	--	--	8 [0.31]

82P50-1800 CENTERING PINS

Pneumatic Centering Pin Clamps | Dimension

0 Standard Pin

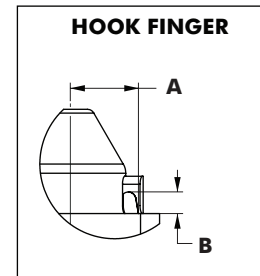
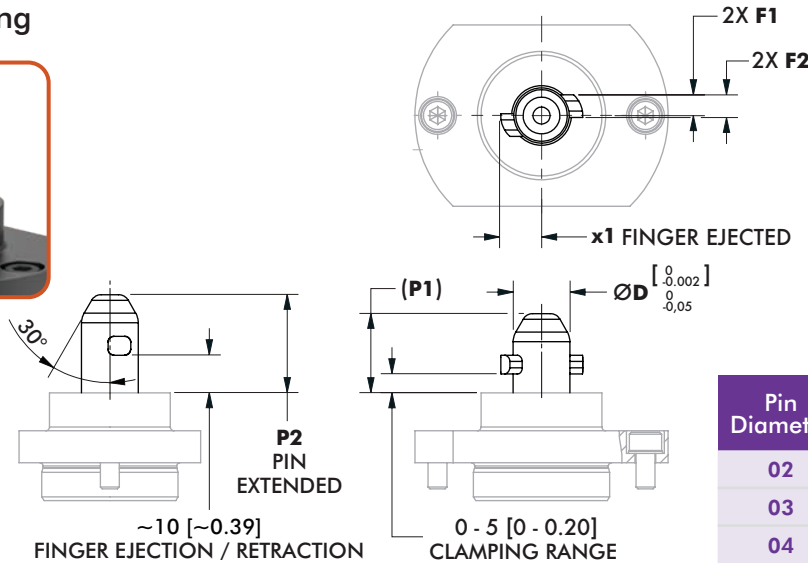


Pin Diameter	Support Shape
04	A, B

Pin Diameter	Support Shape	ØD	P1*	P2	F1	F2	x1
01	A, D	15,8 [0.62]			5,5 [0.22]	6 [0.24]	11,1 [0.44]
02	A	19,8 [0.78]	21 [0.83]	26 [1.02]	6,5 [0.26]	7 [0.28]	14,7 [0.58]
03	A	20,8 [0.82]					15,2 [0.60]
04	A, B	29,8 [1.17]	33 [1.30]	38 [1.50]	8,5 [0.33]	9 [0.35]	19,7 [0.78]
05	A	15,5 [0.61]	21 [0.83]	26 [1.02]	5,5 [0.22]	6 [0.24]	11,1 [0.44]

*retracted position at the start of clamping range (5 [0.20])

1 Pin Clipping



Pin Diameter	Support Shape	A	B
02	B	13,5 [0.53]	
03	A	13,6 [0.54]	6 [0.24]
04	A	18,3 [0.72]	5,8 [0.23]

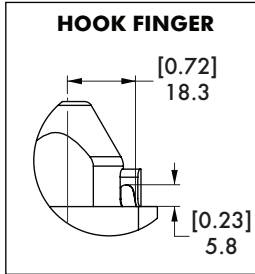
Pin Diameter	Support Shape	ØD	P1*	P2	F1	F2	x1
01	A, D	15 [0.59]			5,5 [0.22]	6 [0.24]	10,8 [0.43]
02	B	19 [0.75]	21 [0.83]	26 [1.02]	6,5 [0.26]	7 [0.28]	14,7 [0.58]
03	A	20 [0.79]					15,2 [0.60]
04	A	29 [1.14]	33 [1.30]	38 [1.50]	8,5 [0.33]	9 [0.35]	19,7 [0.78]

*retracted position at the start of clamping range (5 [0.20])

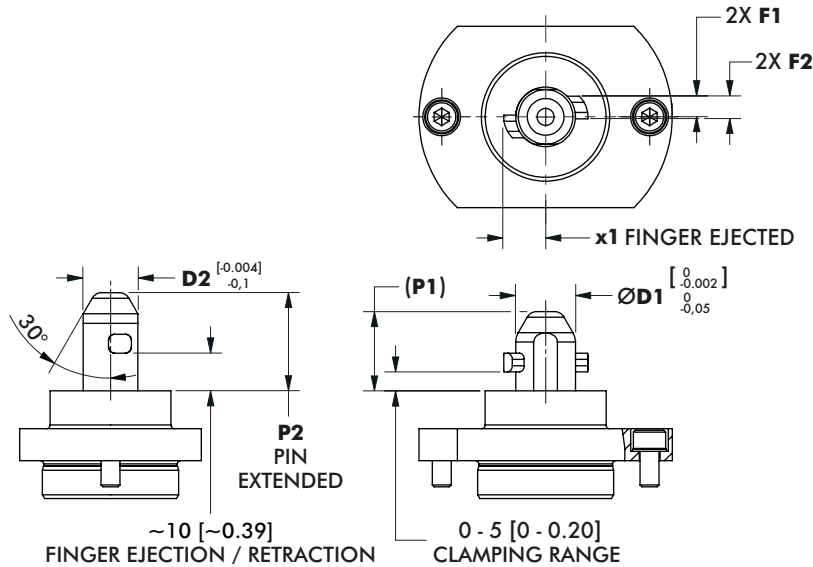
82P50-1800 CENTERING PINS

Pneumatic Centering Pin Clamps | Dimension

3 Pin Release on Flat Parallel of Finger



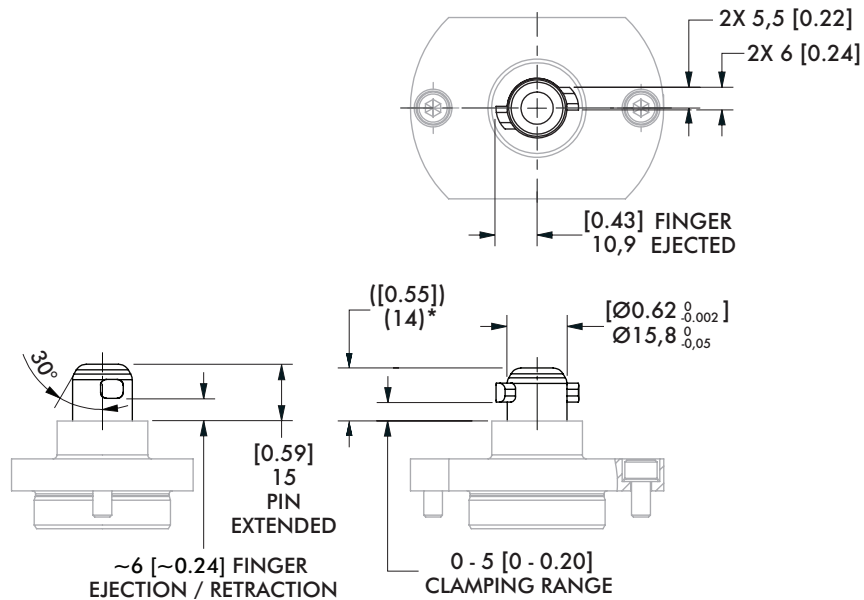
Pin Diameter	Support Shape
06	B



Pin Diameter	Support Shape	ØD1	D2	P1*	P2	F1	F2	x1
01	A, D	15,8 [0.62]	14,5 [0.57]	21 [0.83]	26 [1.02]	5,5 [0.22]	6 [0.24]	11,1 [0.44]
04	A	29,8 [1.17]	21 [0.83]	33 [1.30]	38 [1.50]	8,5 [0.33]	9 [0.35]	19,7 [0.78]
06	B							

*retracted position at the start of clamping range (5 [0.20])

4 Door Case



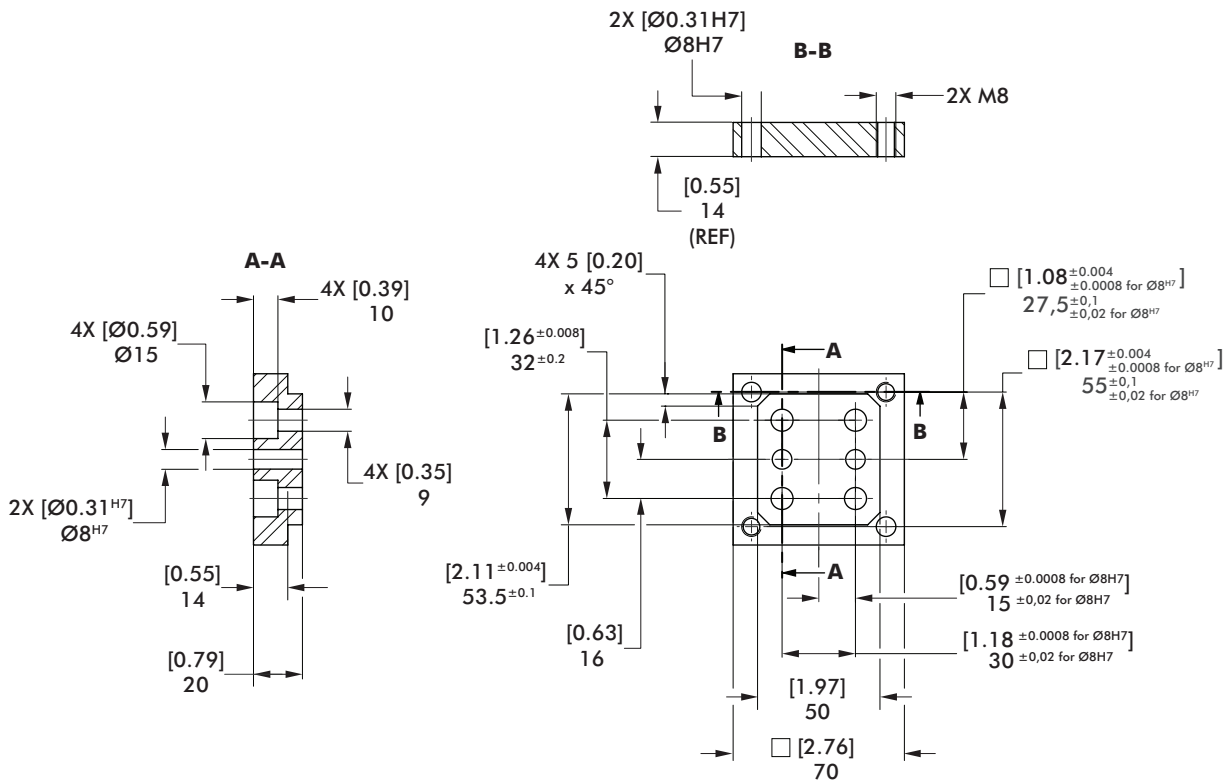
Pin Diameter	Support Shape
01	A

*retracted position at the start of clamping range (5 [0.20])

82P50-1800

Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and How To Order

CNOMO Adapter



Accessory

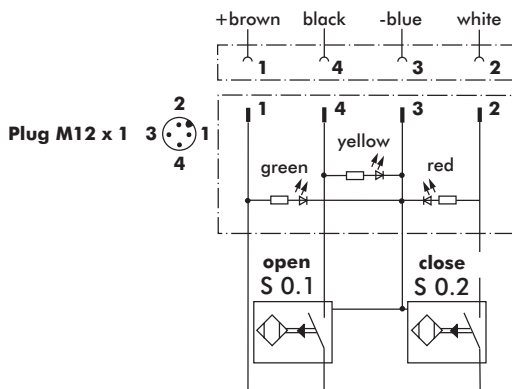
CNOMO Adapter

Order no.

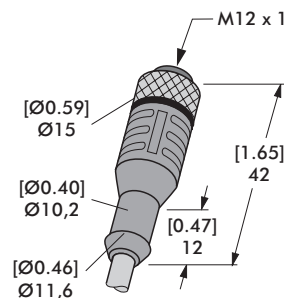
8MA-538-1

Inductive Sensor Wiring Diagram

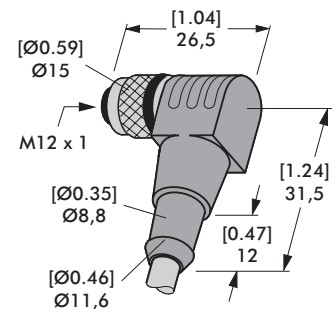
Sensing system immune to interference from AC / DC arc welding.



Sensor Cable Accessories



Straight Cable
8EL-002-1



Angular Cable
8EL-003-1

Sensor Cables (1 connector & 5m cable)

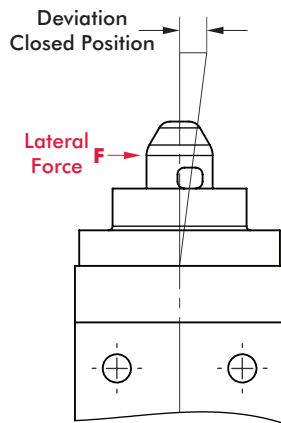
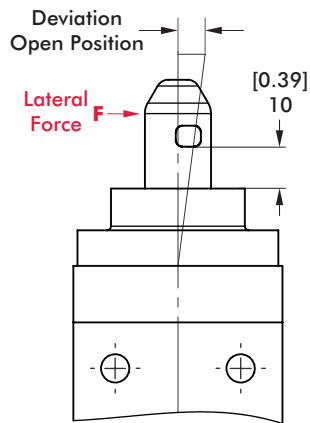
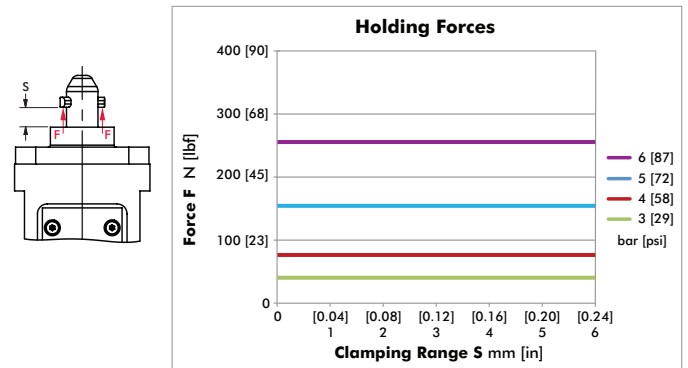
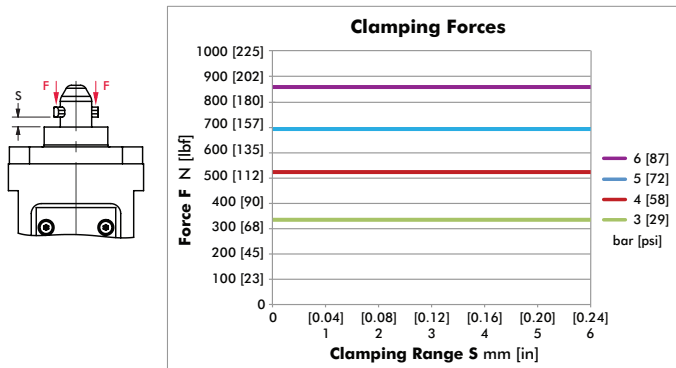
M12x1 connector, straight, 5-pin

M12x1 connector, 90° angular, 4-pin

Order no.

8EL-002-1

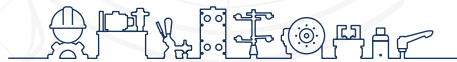
8EL-003-1



Max Deviation for Centering Pin

Deviation is at the maximum for support height 10 mm [0.39 in].
Higher supports have an increased guiding length.

Model no.	Position	Lateral Force F N [lbf]	Deviation ± mm [in]
82P50-1800	Open	100 [23]	0,032 [0.0013]
	Closed		0,023 [0.0009]



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