

Tolerance Compensating Hook Pin Clamps

01/28/2025



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PC-HPC-11

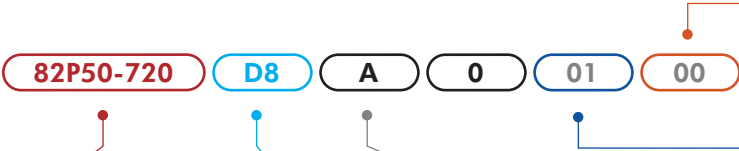
Tolerance Compensating Hook Pin Clamps

01/28/2025

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82P50/82P63

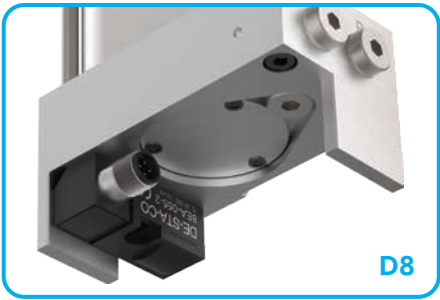
Pneumatic Pin Clamp | Tolerance Compensating | Ordering and Technical Information



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 [in³]	0,66 [40.28]	0,92 [56.14]
Opening @ 6 bar	liter [in³]	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**

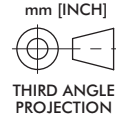
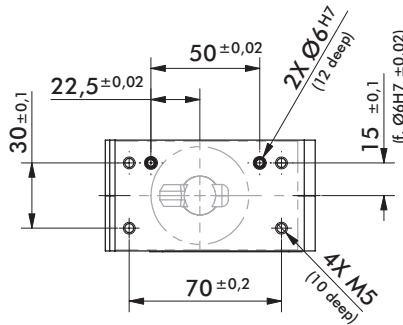
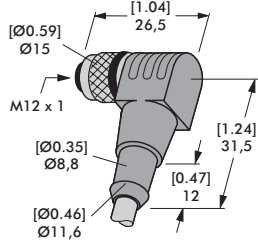


82P50

Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications

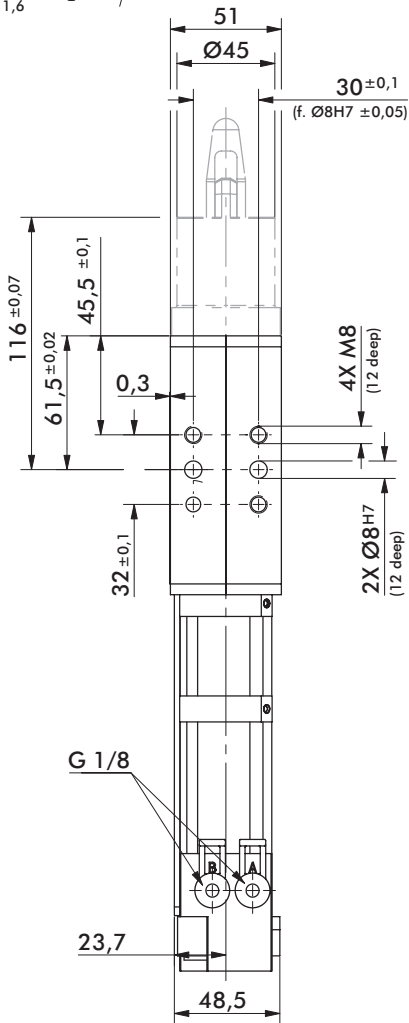
Sensor Cables Order separately

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

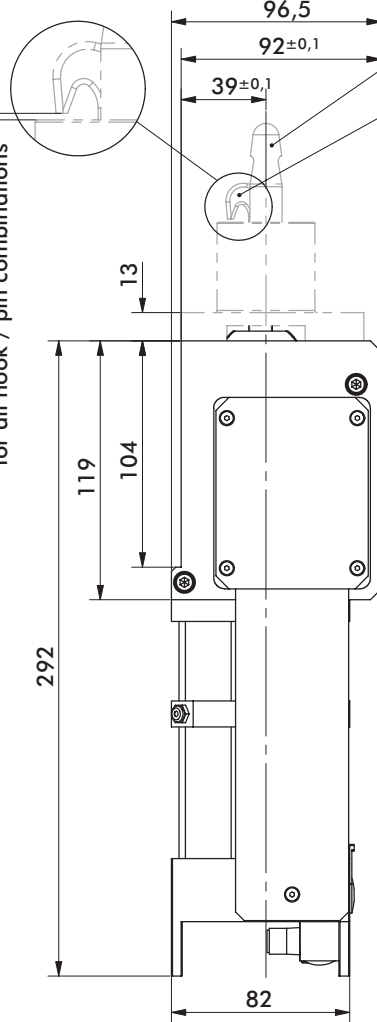


See page 14 for Centering Pin dimensions

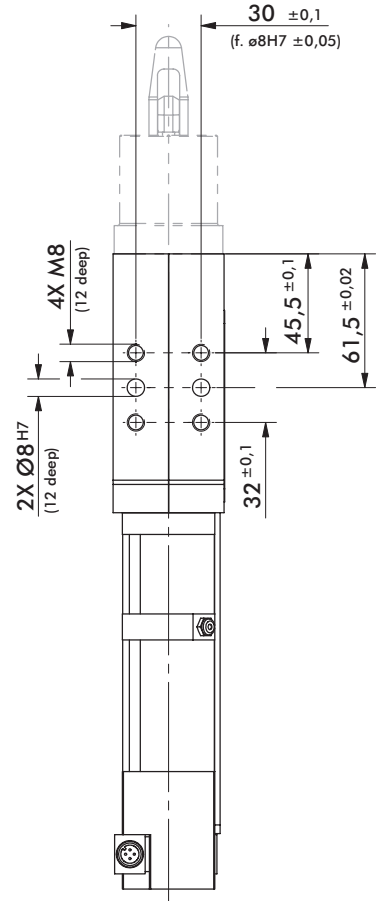
See page 18 for Clamp Hook specifications



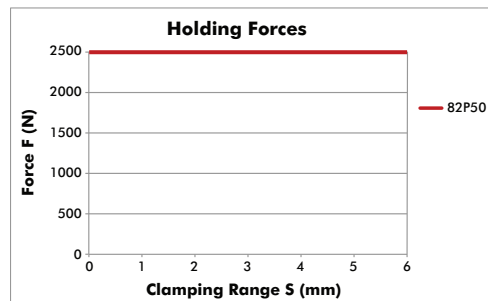
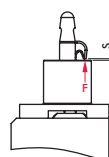
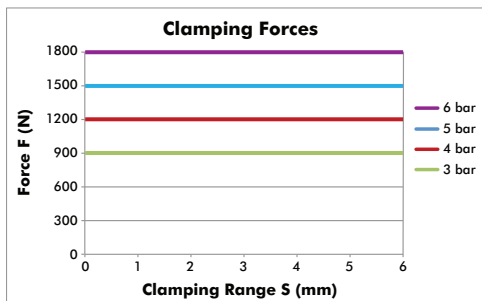
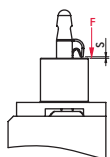
0 - 6 mm clamping range for all hook / pin combinations



30 ±0.1 (f. Ø8H7 ±0.05)

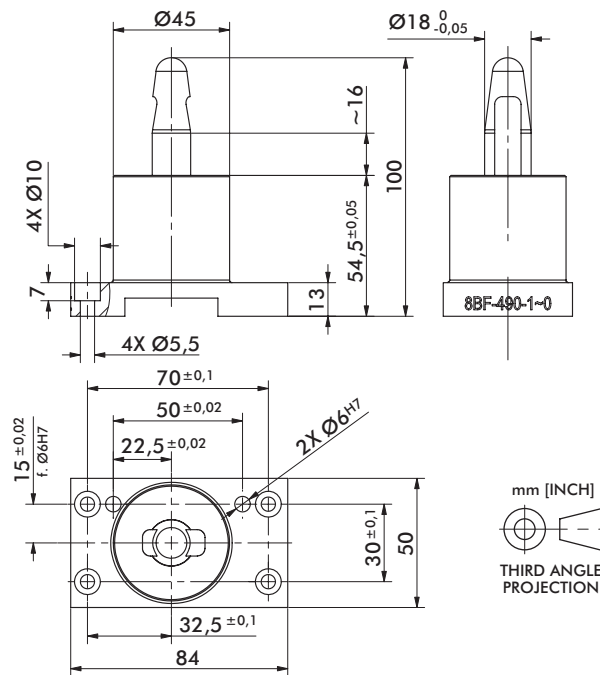


Operation with oil-free air is permissible.

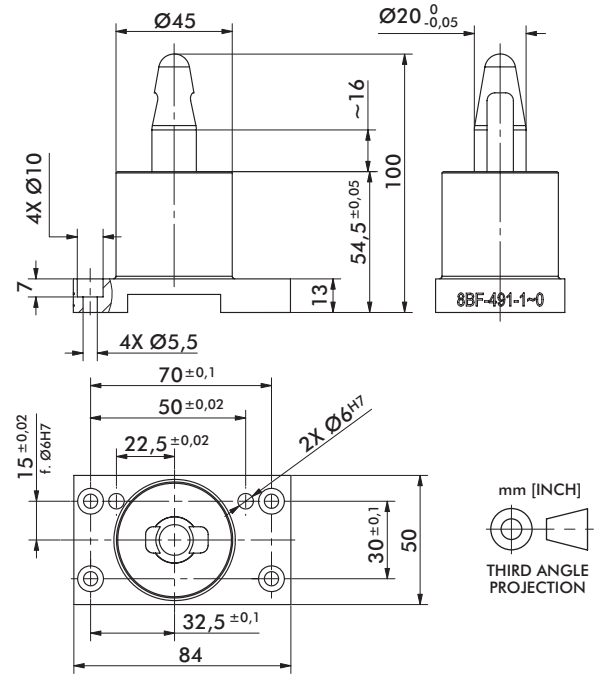


82P50 CENTERING PINS

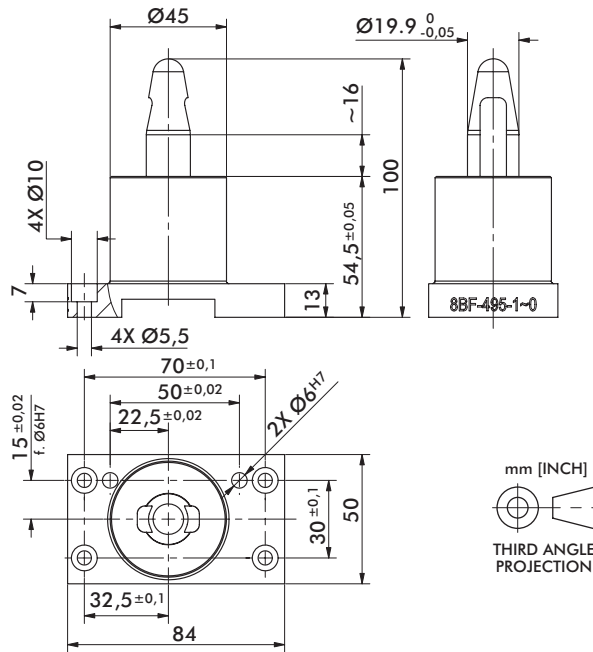
Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications



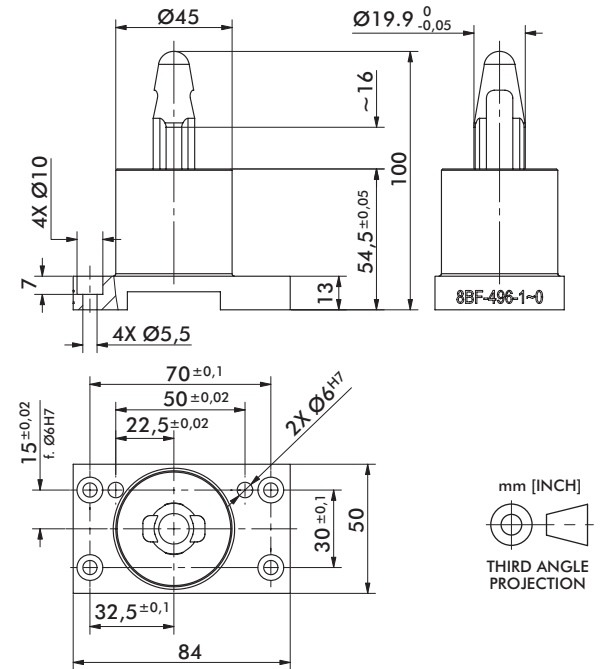
Specification	8BF-490-1
Weight	~0,60 kg
Diameter and Tolerance	Ø18 -0.05
Shape	Round



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



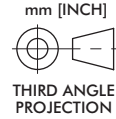
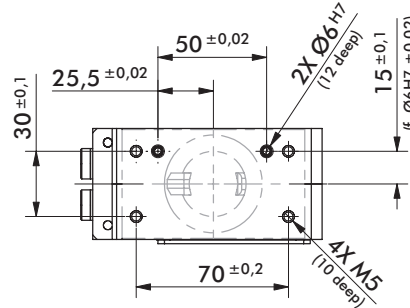
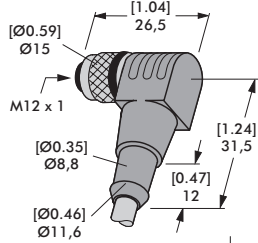
Specification	8BF-496-1
Weight	~0,60 kg
Diameter and Tolerance	Ø19,90 -0.05
Shape	Diamond

82P63

Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications

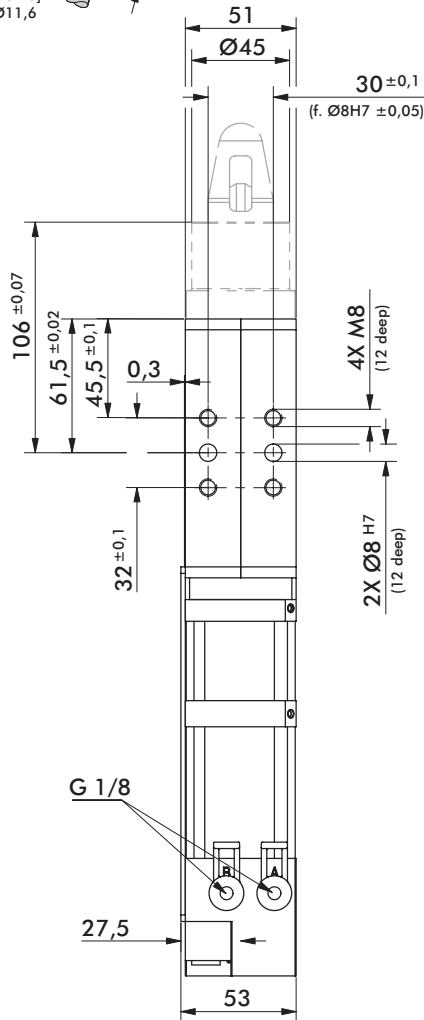
Sensor Cables Order separately

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

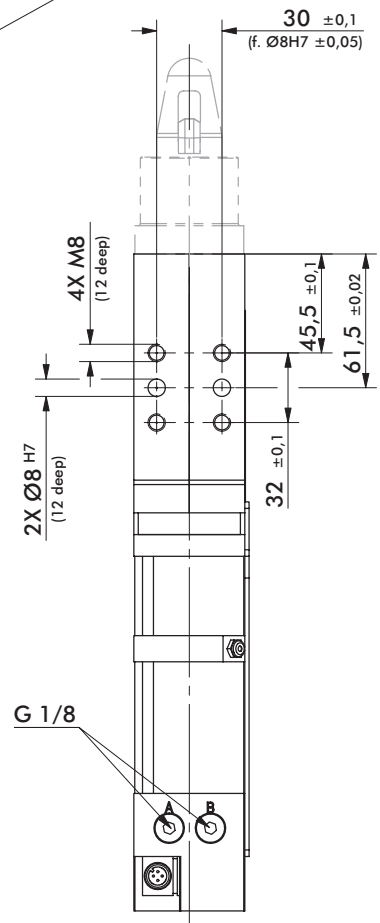
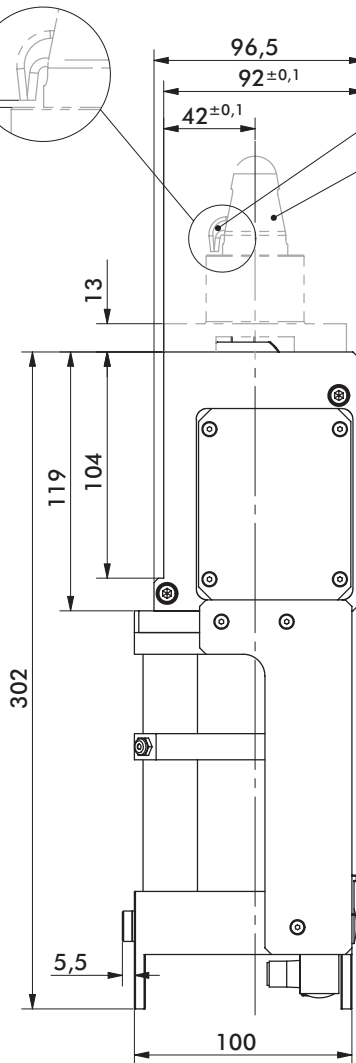


See page 18 for
Clamp Hook specifications

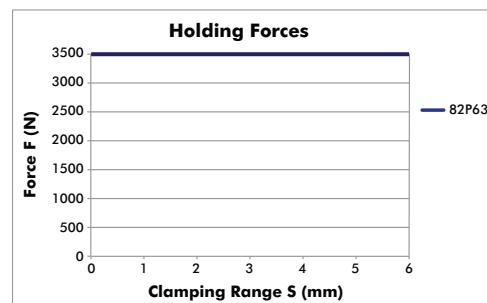
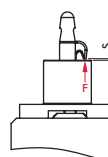
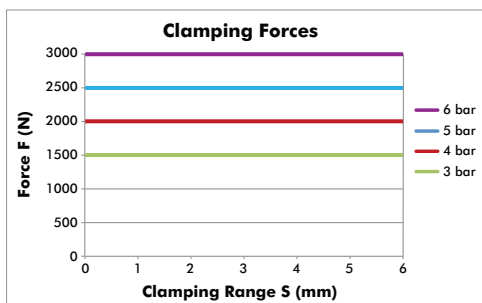
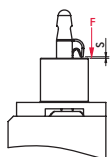
See page 16-17 for
Centering Pin dimensions



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

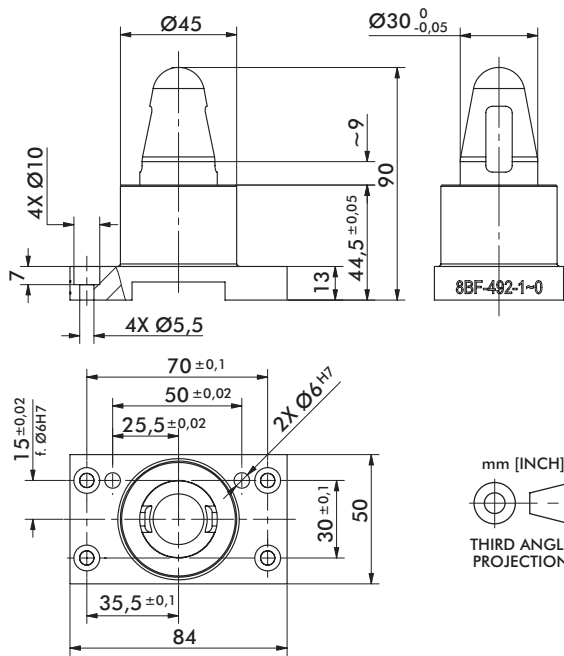


Operation with oil-free air is permissible.

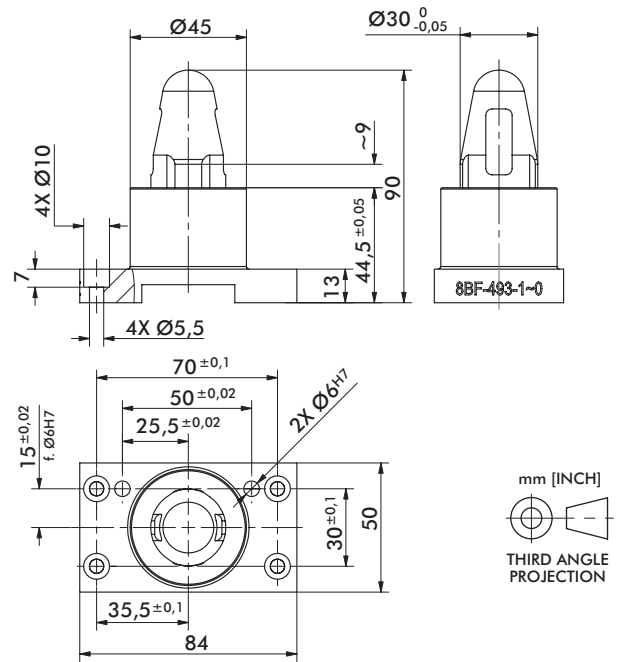


82P63 CENTERING PINS

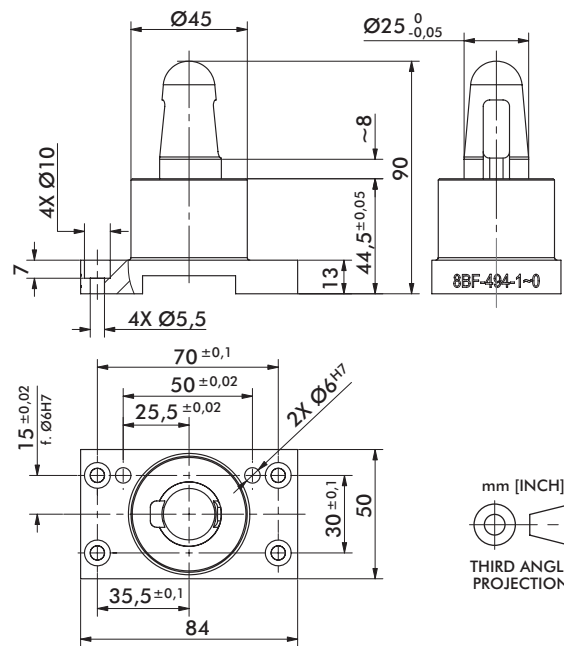
Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications



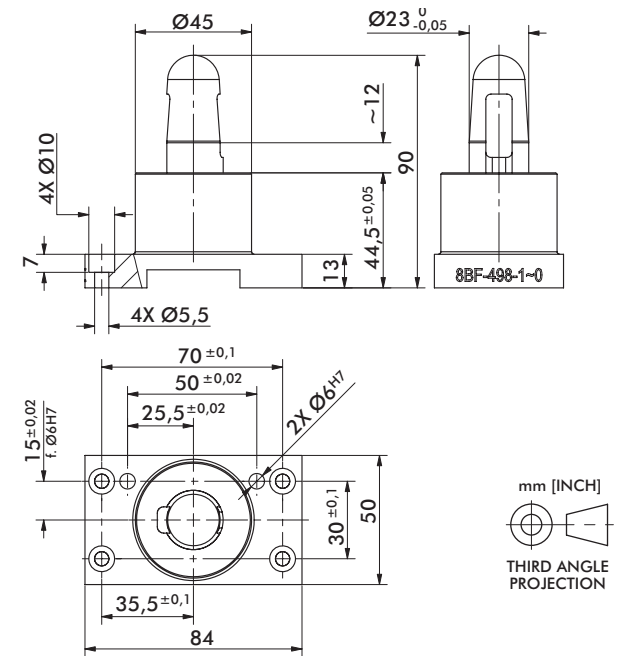
Specification	8BF-492-1
Weight	~0,57 kg
Diameter and Tolerance	Ø30 -0.05
Shape	Round



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



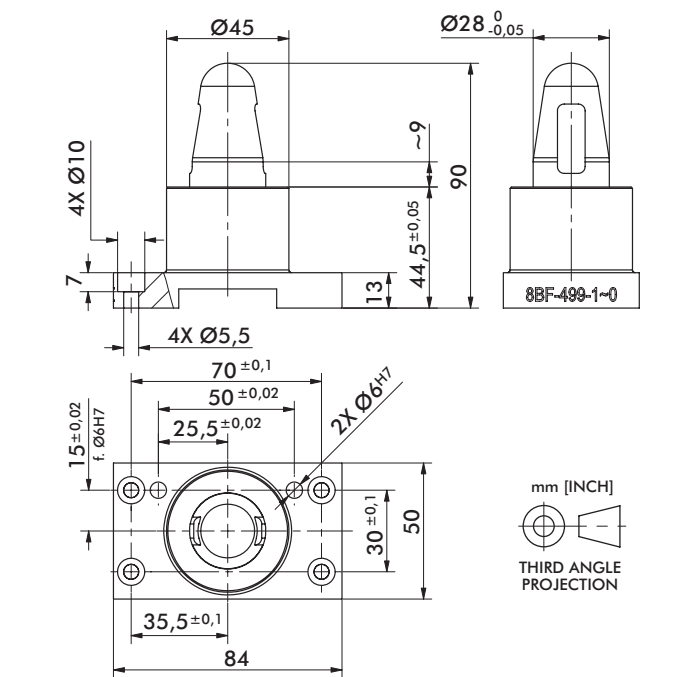
Specification	8BF-494-1
Weight	~0,54 kg
Diameter and Tolerance	Ø25 -0.05
Shape	Round



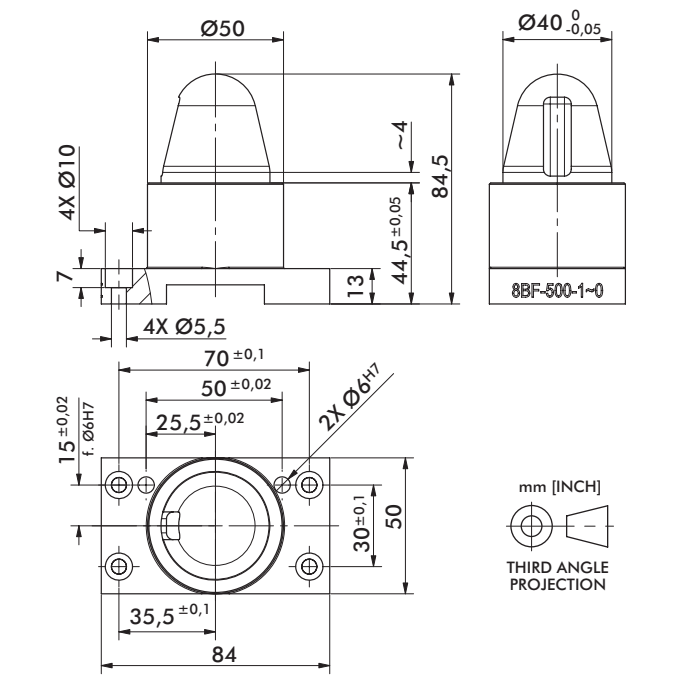
Specification	8BF-498-1
Weight	~0,53 kg
Diameter and Tolerance	Ø23 -0.05
Shape	Round

82P63 CENTERING PINS

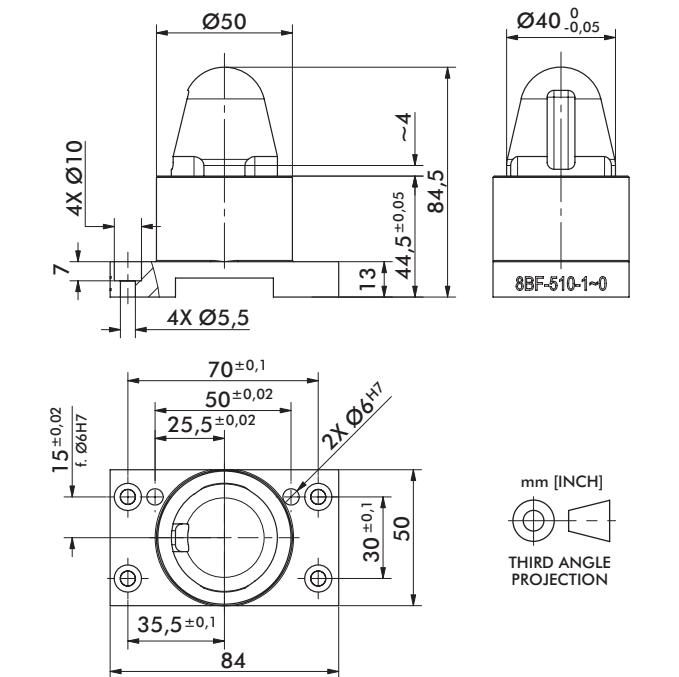
Pneumatic Pin Clamp | Tolerance Compensating | Dimensions and Technical Specifications



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

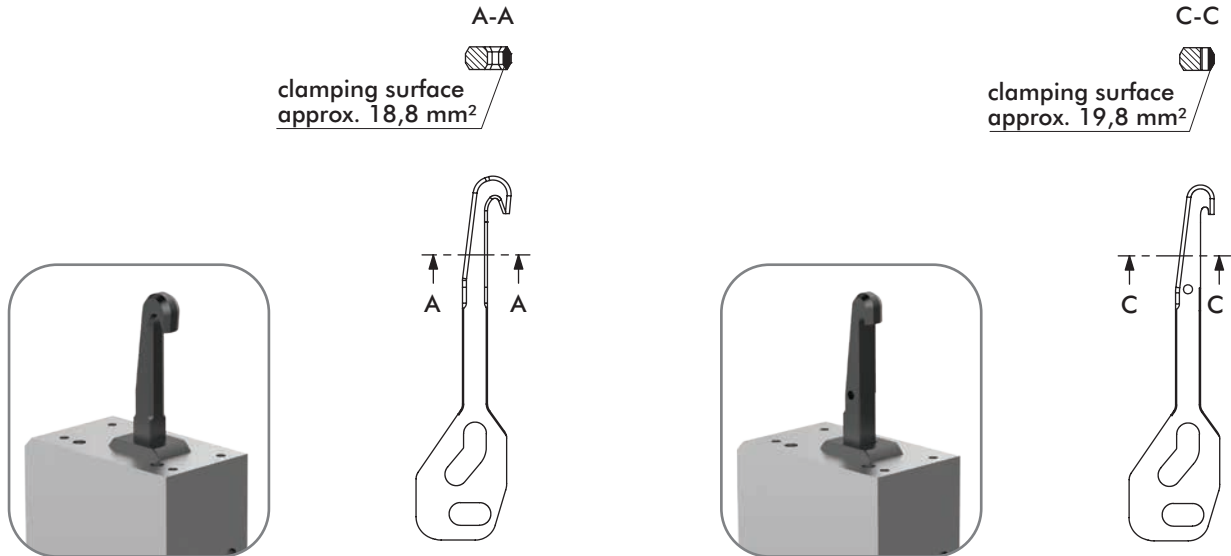


Specification	8BF-510-1
Weight	~0,68 kg
Diameter and Tolerance	Ø40 -0,05
Shape	Diamond

82P50/82P63 CLAMPING HOOKS

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

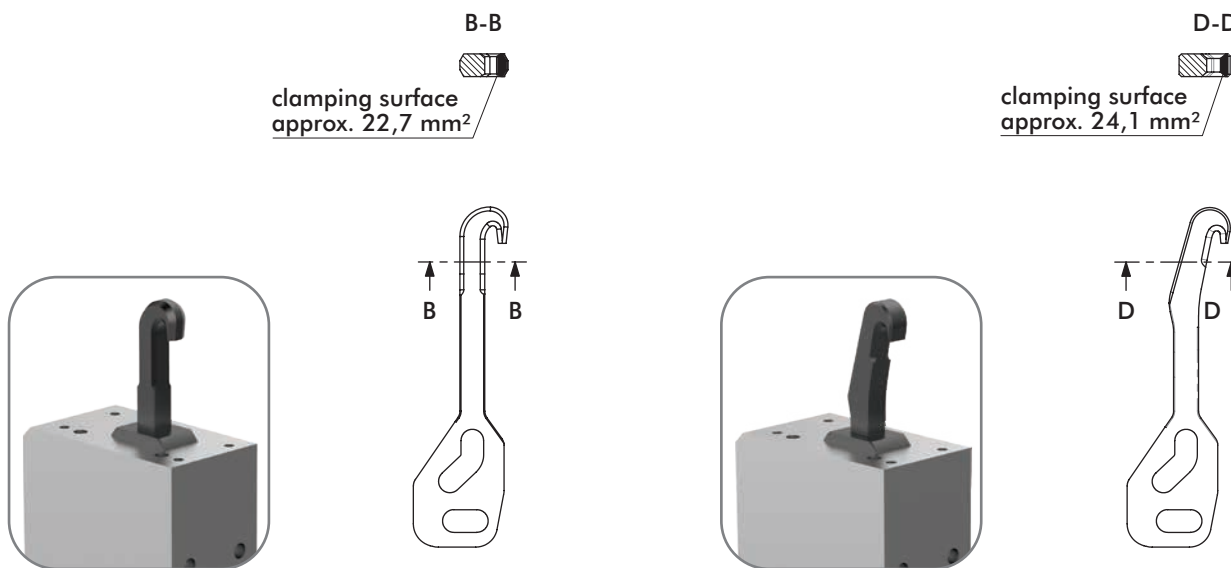
82P50



Specification	8JH-162-1			
Pressure [bar]	3.0	4.0	5.0	6.0
Clamping Force [N]	900	1200	1500	1800
Surface Pressure [N/mm²]	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/mm²]	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/mm²]	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/mm²]	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

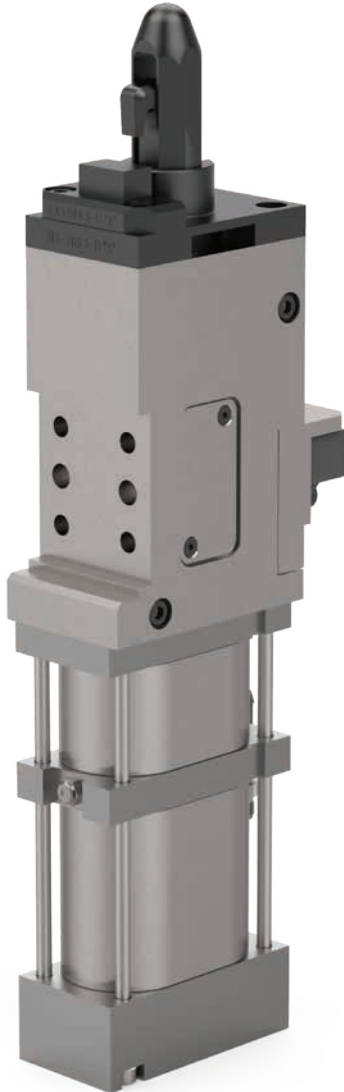
2,5 – 9,5 [0.10 – 0.37]

03

8JH-187-2

09

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	Round Pin	
40	Ø 24,85 -0,05		
41	Ø 22,00 -0,05		Aluminum
43	Ø 24,85 -0,05	Diamond Pin	

19

8BF-619-1

11

8BF-611-1

13

8BF-613-1

40

8BF-751-1-01

41

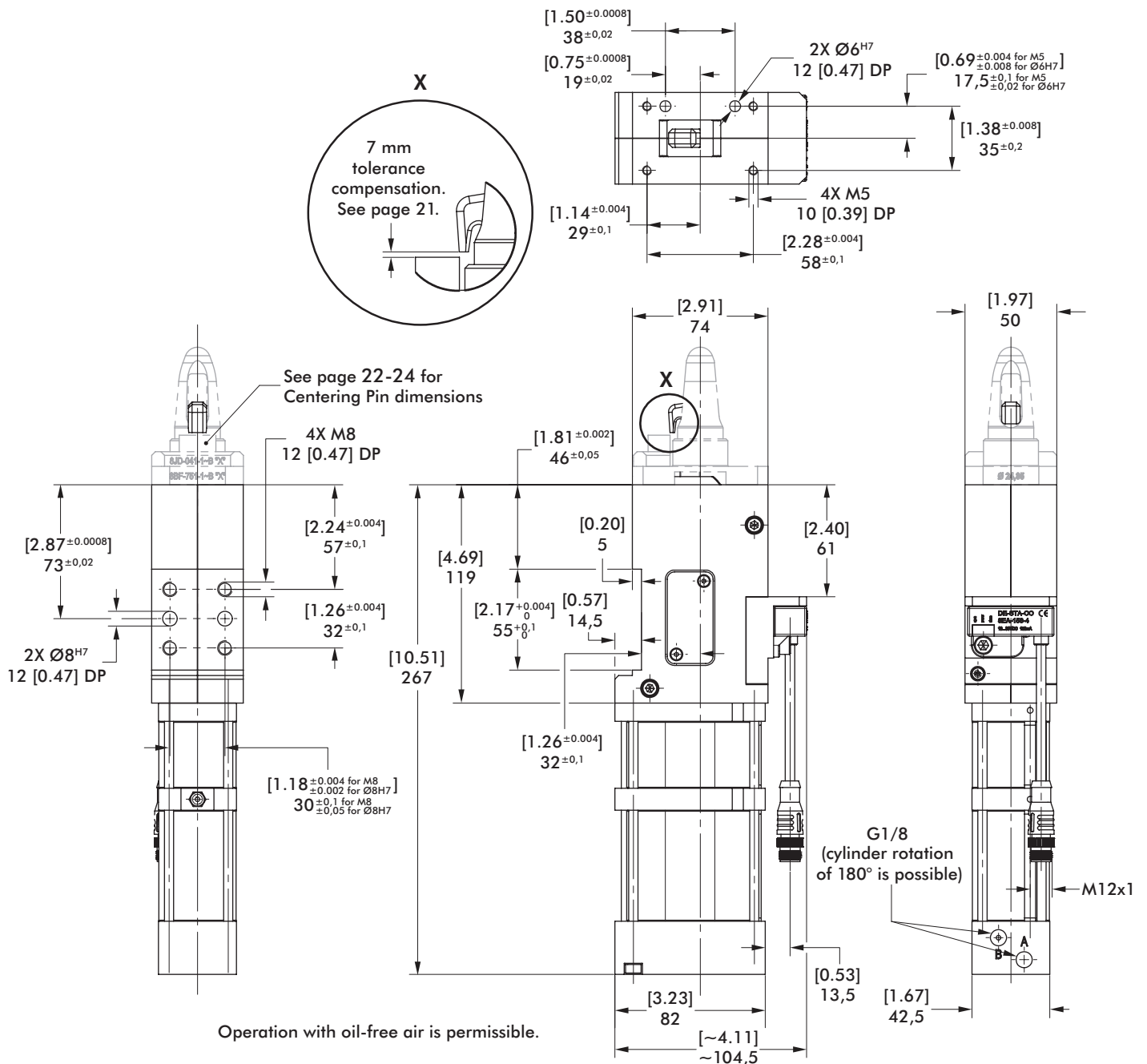
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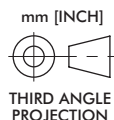
8BF-763-1-01

Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

Top view shown without centering pin



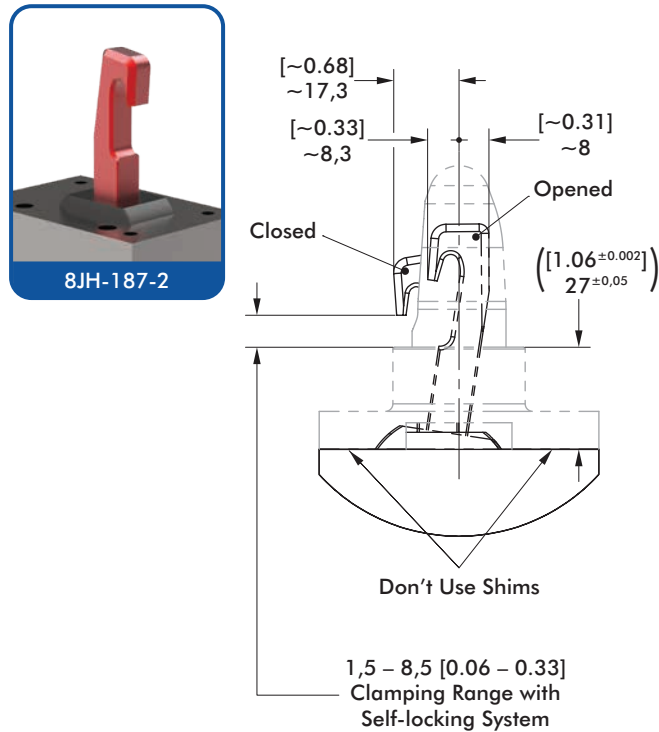
Specification	Unit	82P50-1732
Max. Clamping Force @ 5 bar [72psi]	N [lbf]	~1500 [~337]
Max. Operating Pressure	bar [psi]	6 [87]
Actuation Time: Open/Close	sec	0.3
Air Consumption @ 6 bar [87psi]:		
Clamping Stroke	liter [in³]	0,66 [40.28]
Opening Stroke		0,33 [20.14]
Weight	kg [lb]	~2,6 [~5.73]



82P50-1732 CLAMPING HOOKS

Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

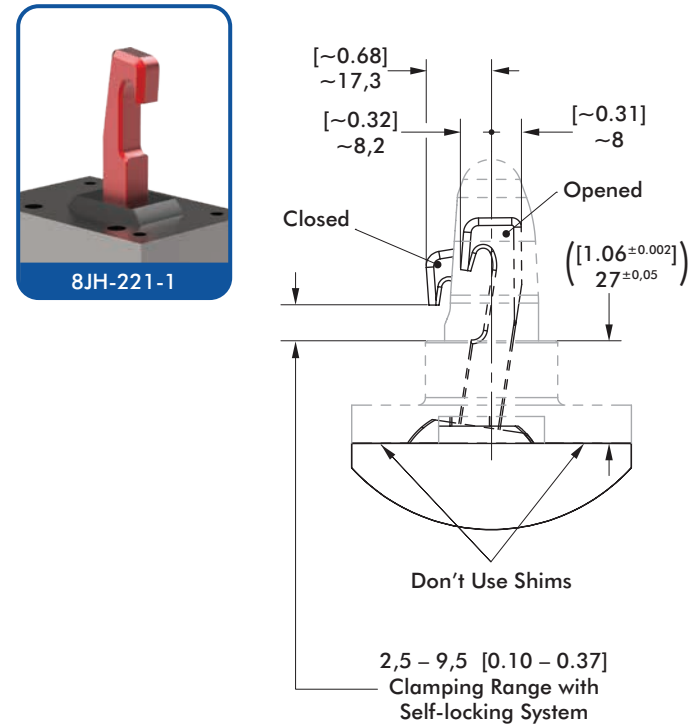
03 Clamping Hook



Surface Pressure of Clamping Hook

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

09 Clamping Hook



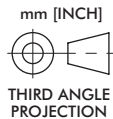
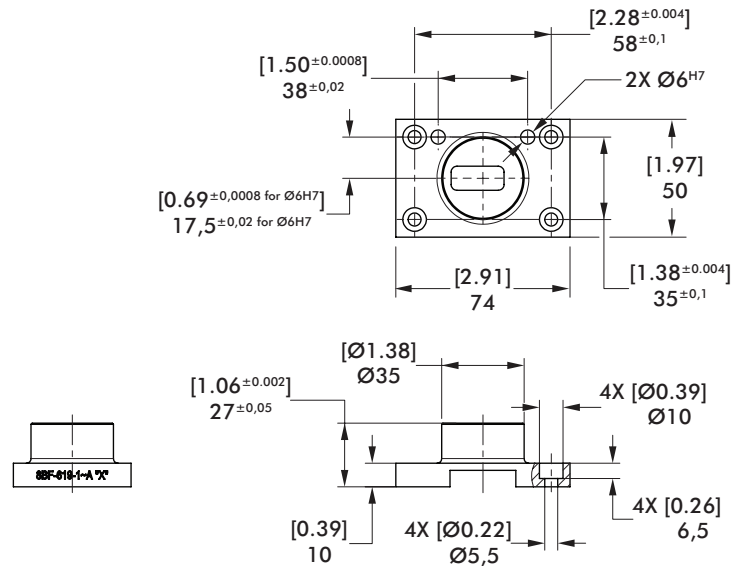
Surface Pressure of Clamping Hook

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

82P50-1732 PIN SUPPORT AND CENTERING PIN

Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

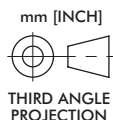
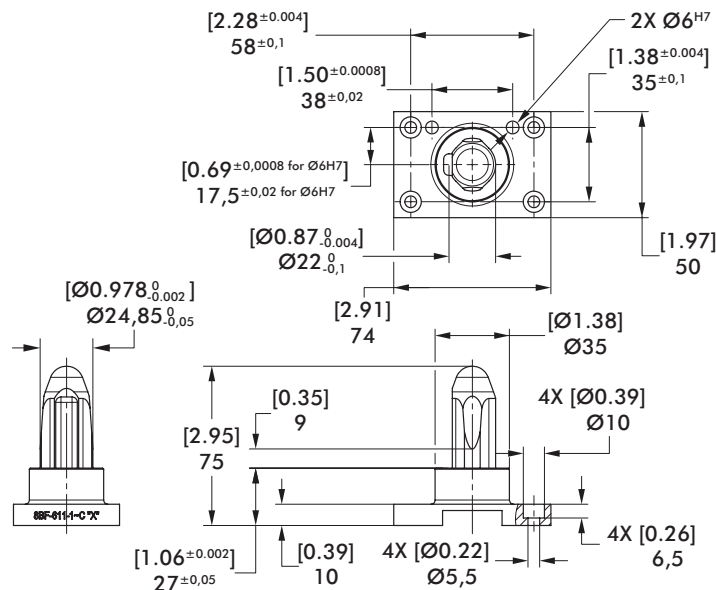
19 Pin Support - Steel/Aluminum



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



11 Centering Pin - Steel

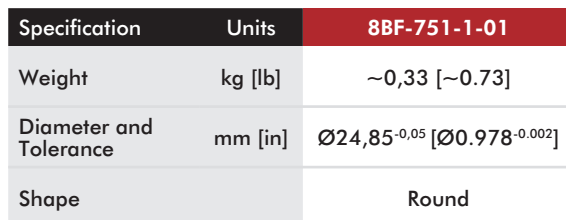
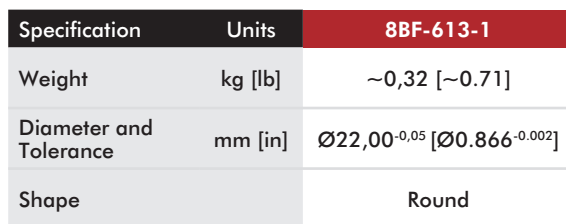


Specification	Units	8BF-611-1
Weight	kg [lb]	~0,33 [~0.73]
Diameter and Tolerance	mm [in]	Ø24,85 ^{+0,05} [Ø0.978 ^{+0,002}]
Shape		Diamond



Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

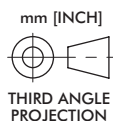
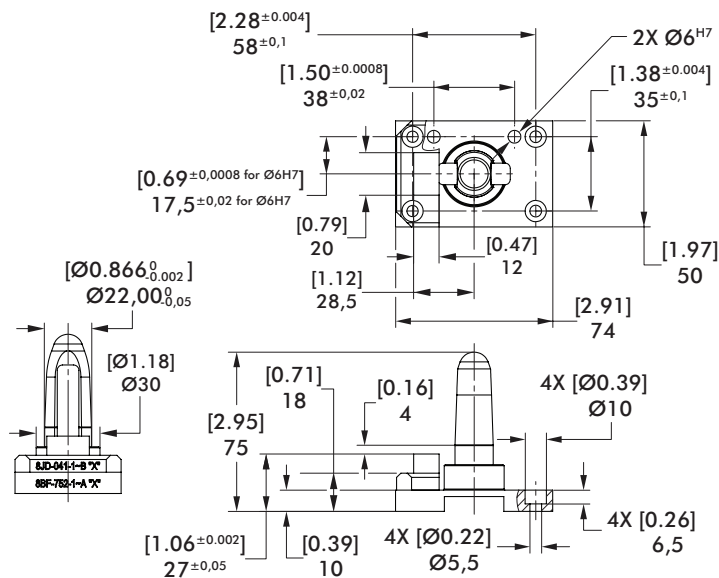
8BF-613-1



82P50-1732 CENTERING PINS

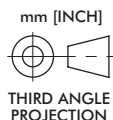
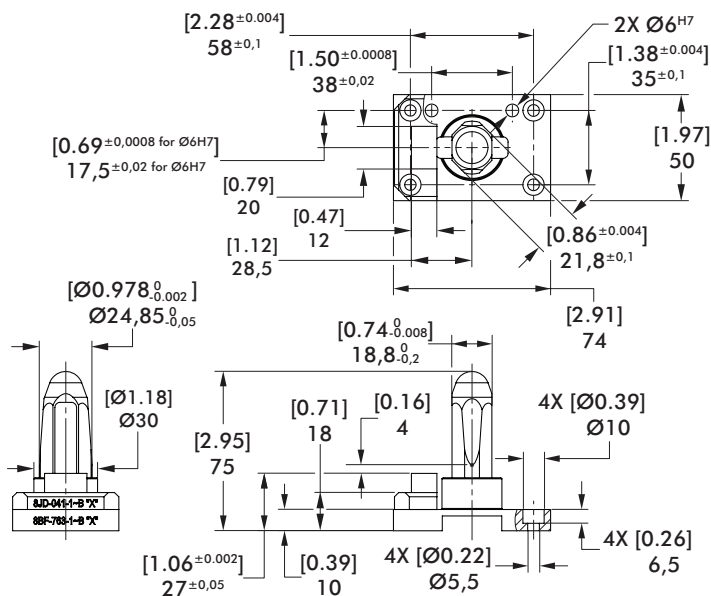
Pneumatic Centering Pin Clamp | Tolerance Compensation | Dimensions and Specifications

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

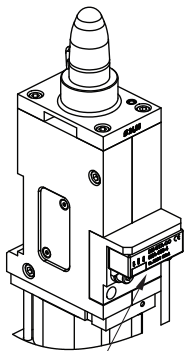
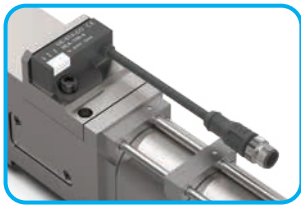


Specification	Units	8BF-763-1-01
Weight	kg [lb]	~0,35 [~0.77]
Diameter and Tolerance	mm [in]	Ø24,85 ^{-0,05} [Ø0.978 ^{-0.002}]
Shape		Diamond

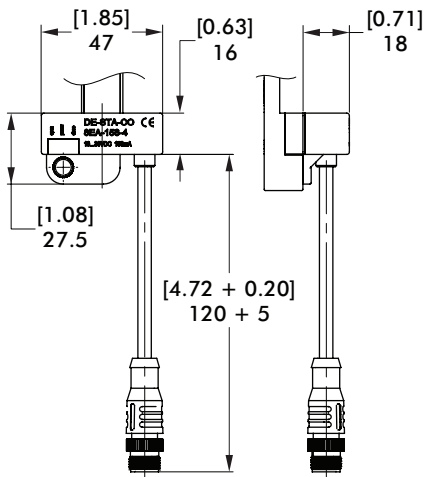
82P50-1732 SENSORS AND SPECIFICATIONS

Pneumatic Centering Pin Clamp | Tolerance Compensation | Technical Specifications

K8 Inductive Sensing System with Pigtail Connector



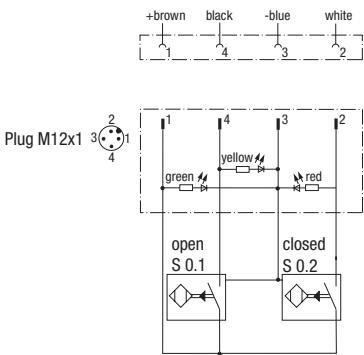
No adjustment of sensing system necessary!



8EA-158-4-B

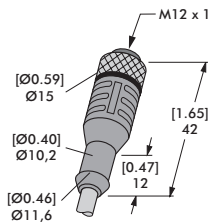
Inductive Sensor Wiring Diagram

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

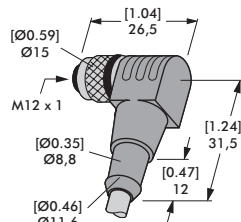


Sensor Cable Accessories

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

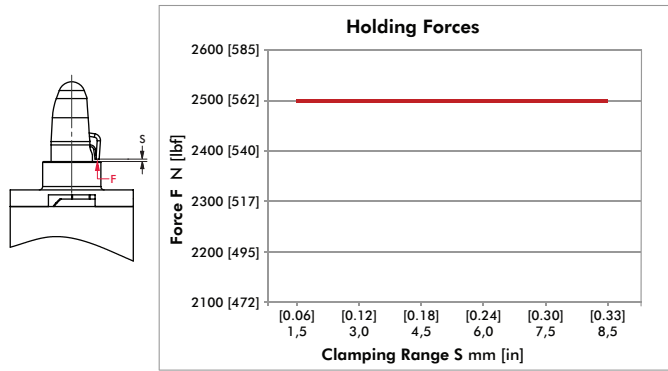
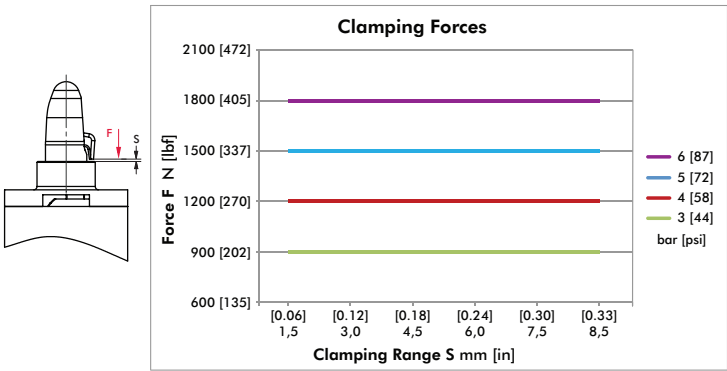


Straight Cable
8EL-002-1



Angular Cable
8EL-003-1

Clamping and Holding Forces





82P50-1800

Pneumatic Centering Pin Clamp | Tolerance Compensation | Ordering Information

82P50-1800

L8

A

01

0

0

0

Base Model

82P50-1800

Description

Tolerance Compensation
0 - 5 mm [0 - 0.197 in]

Sensor

L8

Description

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

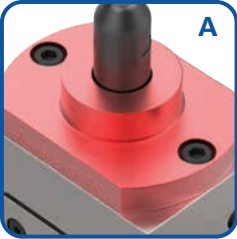


Support Shape

A

Description

Standard



B

Flange Hole Down

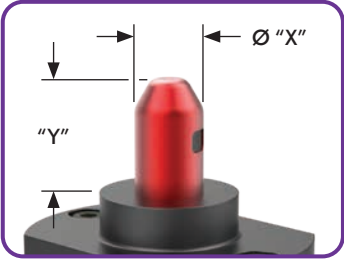


D

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



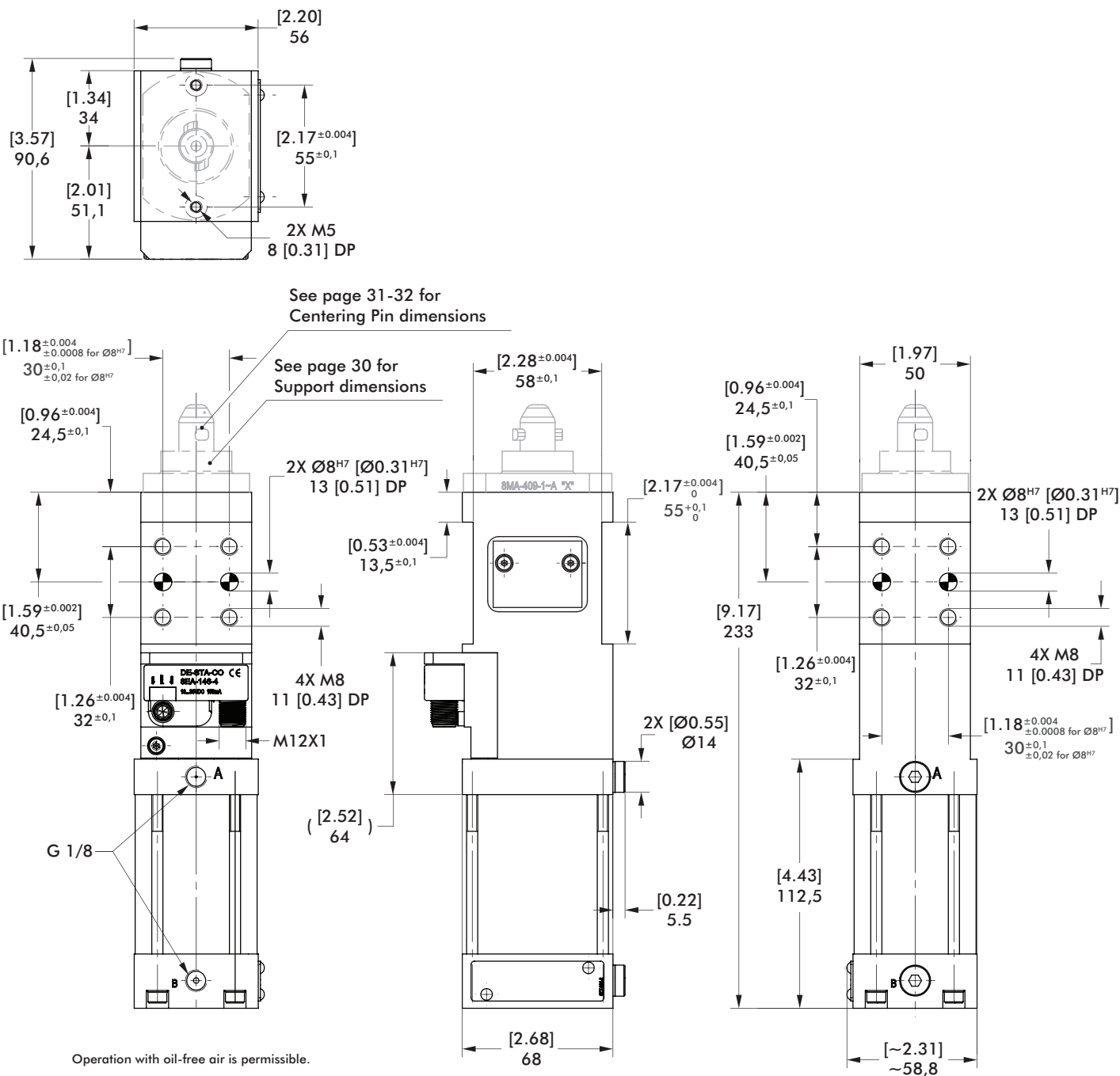
Configuration Compatibility Chart

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

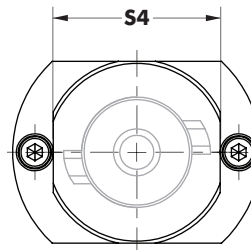
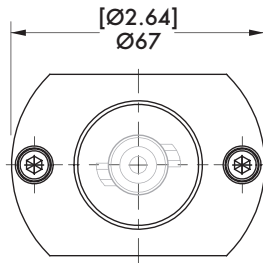
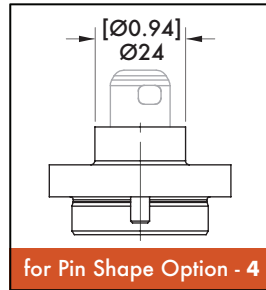


Specification	Unit	82P50-1800
Max. Clamping Force @ 5 bar	[lbf] N	[135] 600
Max. Operating Pressure	[psi] bar	[87] 6
Actuation Time: Open	sec	0.4
Close	sec	0.4
Air Consumption per Double Stroke @ 6 bar [87psi]	[in ³] liter	[42.72] 0,7
Weight	[lb] kg	[5.73] 2,6

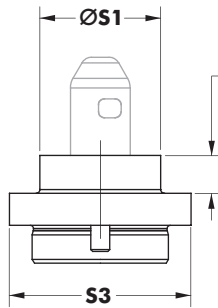
82P50-1800 CENTERING PIN SUPPORTS

Pneumatic Centering Pin Clamps | Dimension

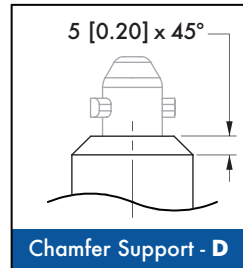
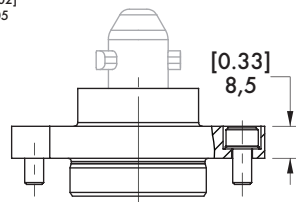
A Standard Support/ **D** Chamfered Support



for Pin Diameter - 04



S2 $\begin{matrix} [\pm 0.002] \\ \pm 0.05 \end{matrix}$

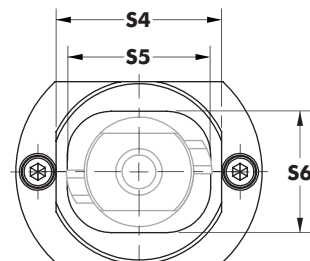
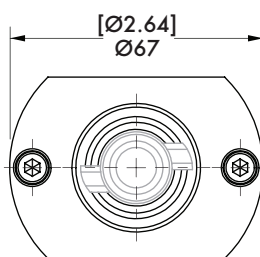


Chamfer Support Option **D** available for Pin Diameter **01** only.



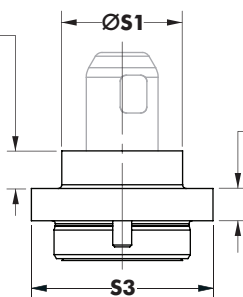
Pin Diameter	S1	S2 - Support Height			S3	S4
		0	1	2		
01						
02	32 [1.26]	10 [0.39]	--	--	48 [1.89]	--
03		--	--	100 [3.94]		
04	48 [1.89]	10 [0.39]	--	--	49 [1.93]	45 [1.77]
05	32 [1.26]		--	--	48 [1.89]	--

B Drop Down Support

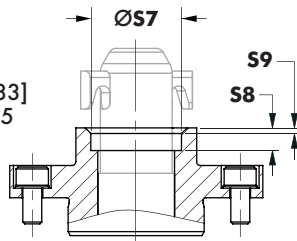


for Pin Diameter - 04, 06

[0.39 ± 0.002]
10 ± 0.05



[0.33]
8,5

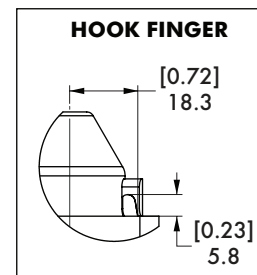
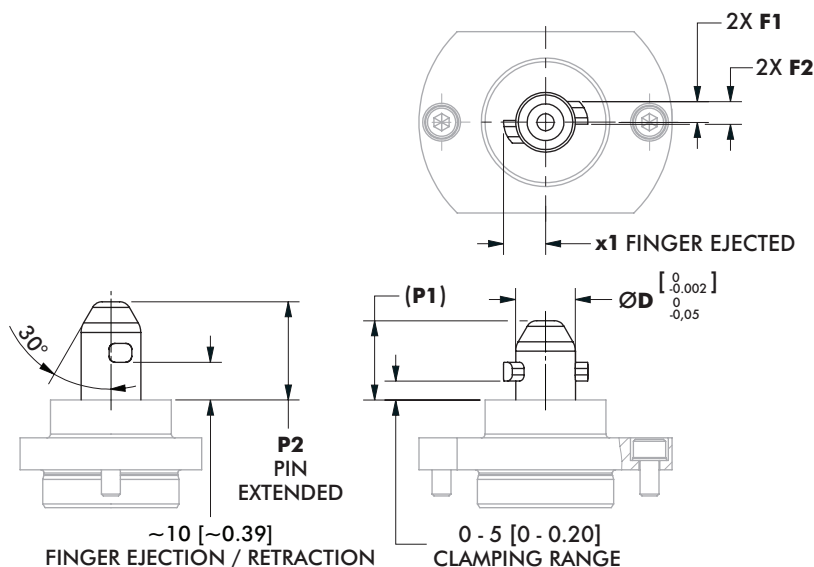


Pin Diameter	S1	S3	S4	S5	S6	S7	S8	S9
02	32 [1.26]	48 [1.89]	--	--	--	24 [0.94]	1,5 [0.06]	6 [0.24]
04	48 [1.89]	49 [1.93]	45 [1.77]	--	--	33,5 [1.32]	x 45°	
06				39 [1.54]	33 [1.30]	--	--	8 [0.31]

82P50-1800 CENTERING PINS

Pneumatic Centering Pin Clamps | Dimension

0 Standard Pin

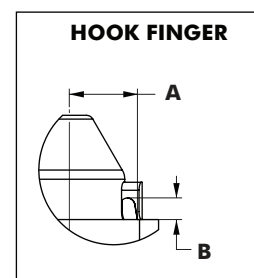
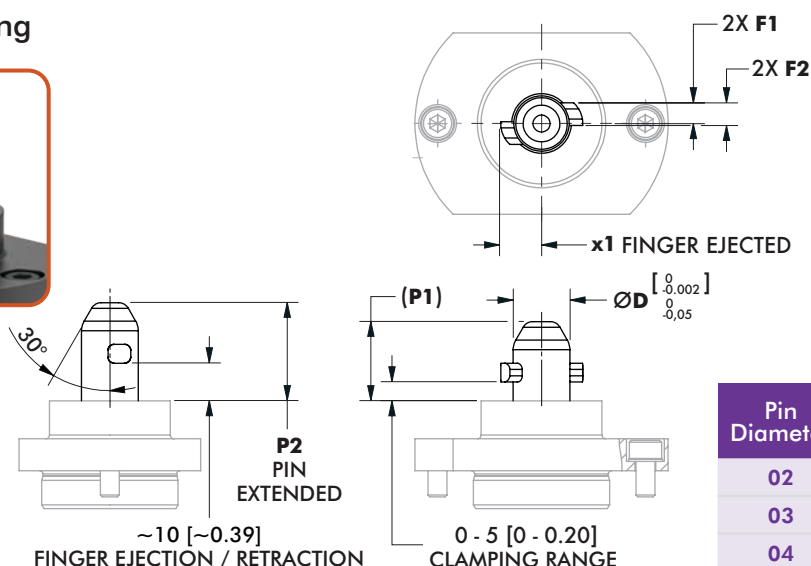


Pin Diameter	Support Shape
04	A, B

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]

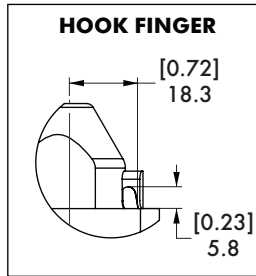
Pin Diameter	Support Shape	ØD	P1*	P2	F1	F2	x1
01	A, D	15 [0.59]			5,5 [0.22]	6 [0.24]	10,8 [0.43]
02	B	19 [0.75]	21 [0.83]	26 [1.02]	6,5 [0.26]	7 [0.28]	14,7 [0.58]
03	A	20 [0.79]					15,2 [0.60]
04	A	29 [1.14]	33 [1.30]	38 [1.50]	8,5 [0.33]	9 [0.35]	19,7 [0.78]

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

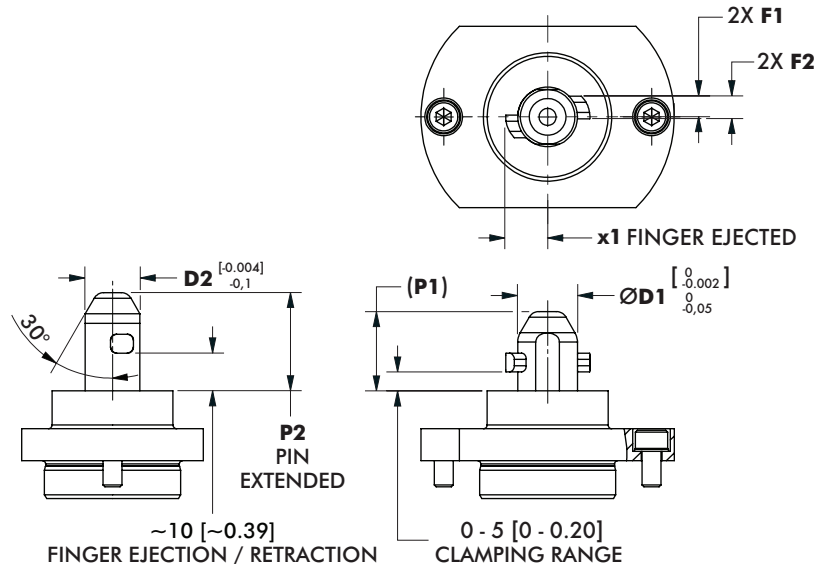
82P50-1800 CENTERING PINS

Pneumatic Centering Pin Clamps | Dimension

3 Pin Release on Flat Parallel of Finger



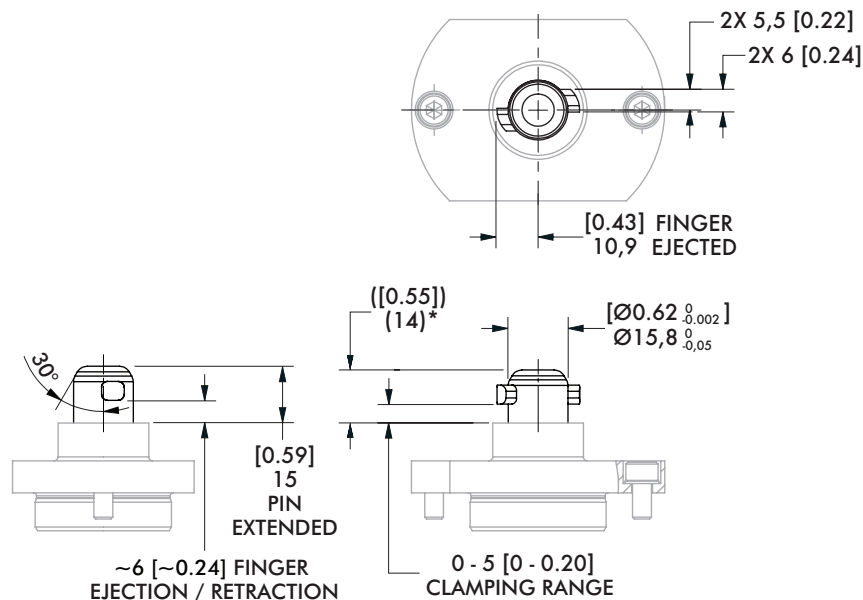
Pin Diameter	Support Shape
06	B



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



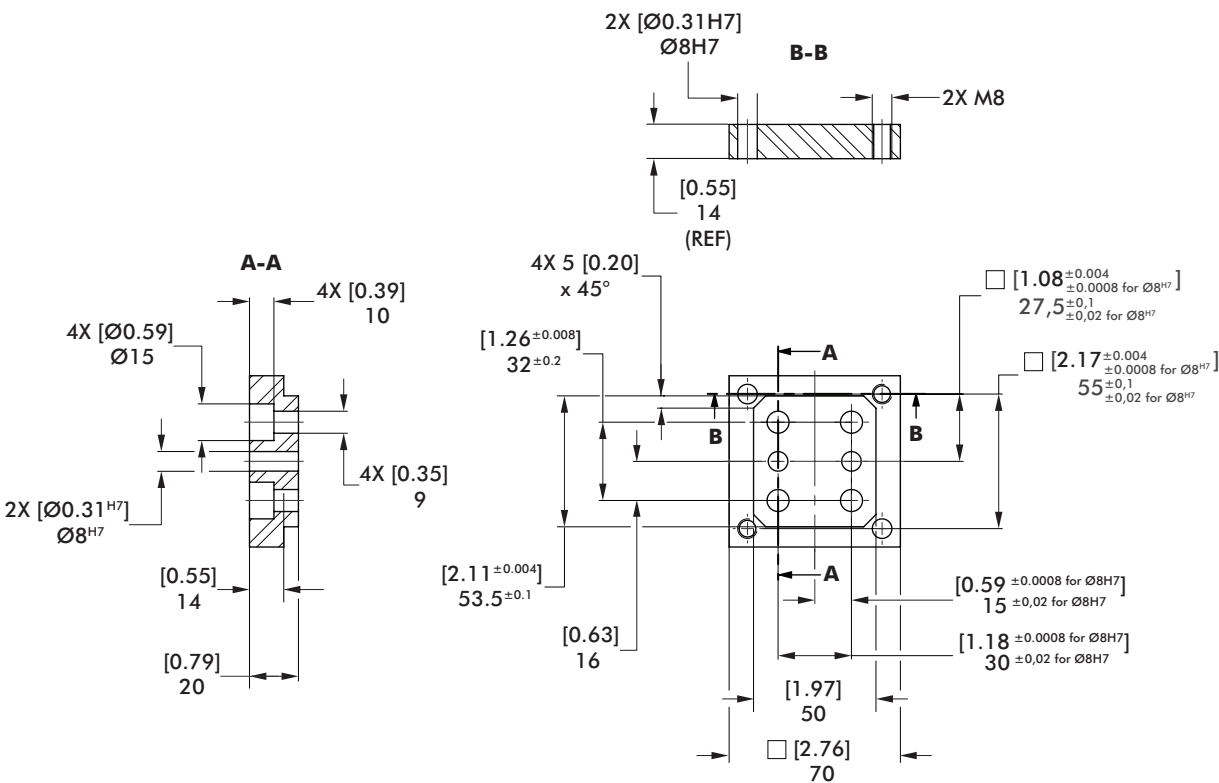
Pin Diameter	Support Shape
01	A

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

82P50-1800

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

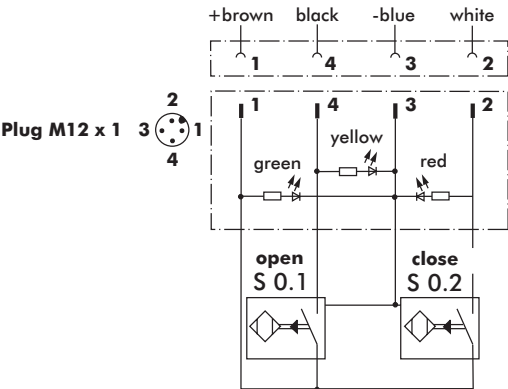
CNOMO Adapter



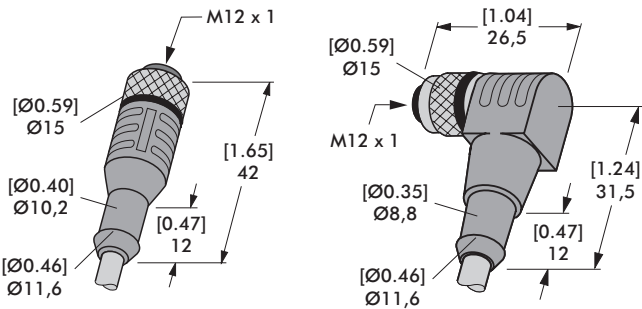
Accessory	Order no.
CNOMO Adapter	8MA-538-1

Inductive Sensor Wiring Diagram

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



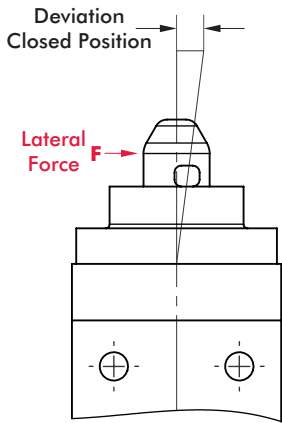
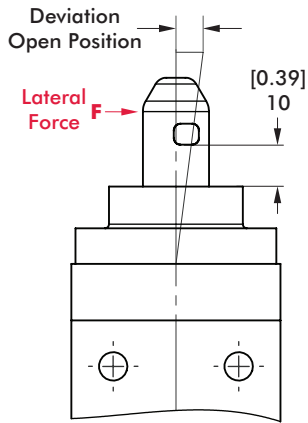
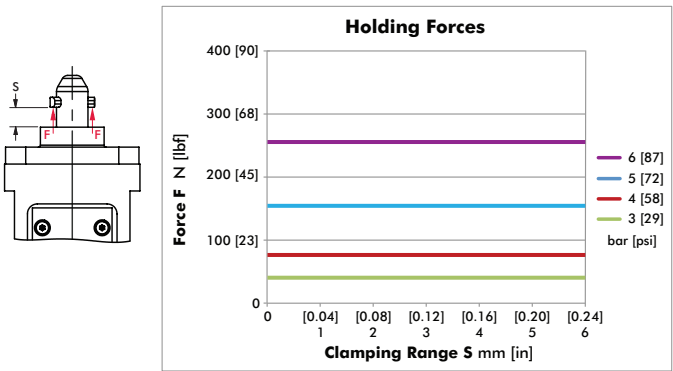
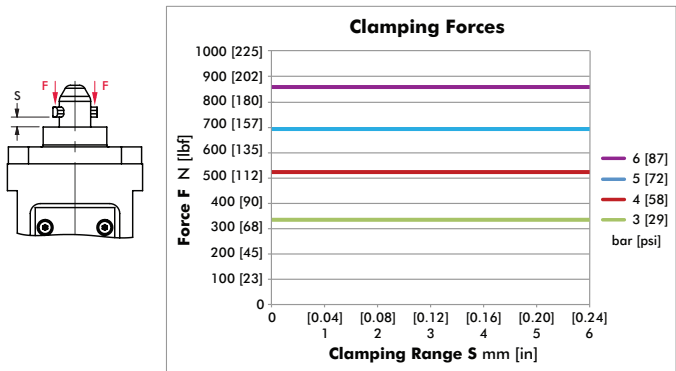
Sensor Cable Accessories



Straight Cable
8EL-002-1

Angular Cable
8EL-003-1

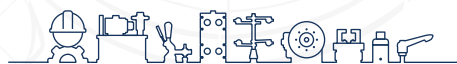
Sensor Cables (1 connector & 5m cable)	Order no.
M12x1 connector, straight, 5-pin	8EL-002-1
M12x1 connector, 90° angular, 4-pin	8EL-003-1



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 $\pm$ mm [in]
82P50-1800	Open	100 [23]	0,032 [0.0013]
	Closed		0,023 [0.0009]



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