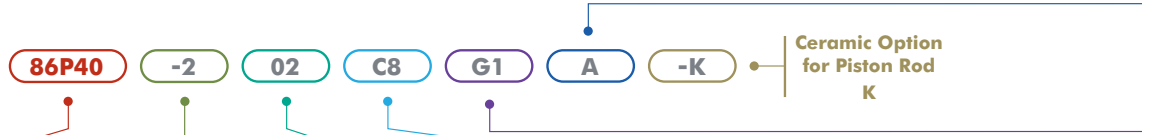


86P40/86P60

Pneumatic Pin Package | Single Shaft | Ordering and Technical Information

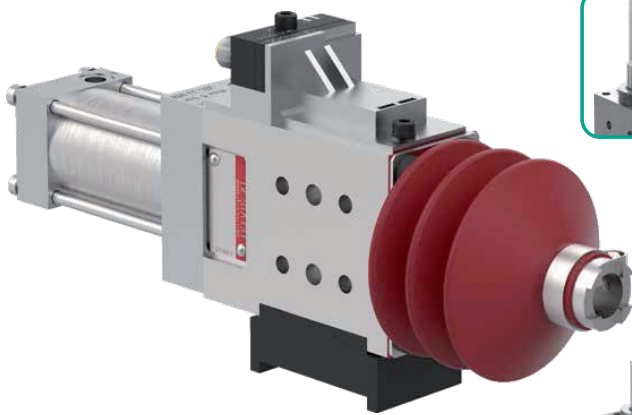
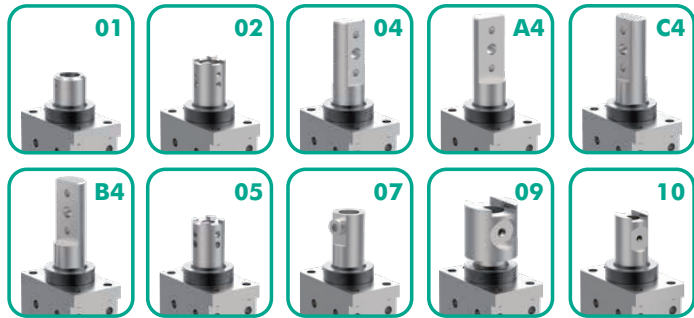


Base Model	Description
86P40	40 mm Cylinder (G1/8 Port)
86P60	63 mm Cylinder (G1/4 Port)

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:	A, B, 2, 4	C, 6	F, 8	A, B, 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]		

Dimensions and technical information are subject to change without notice

86P40/86P60

Pneumatic Pin Package | Single Shaft | Ordering and Technical Information

Accessories

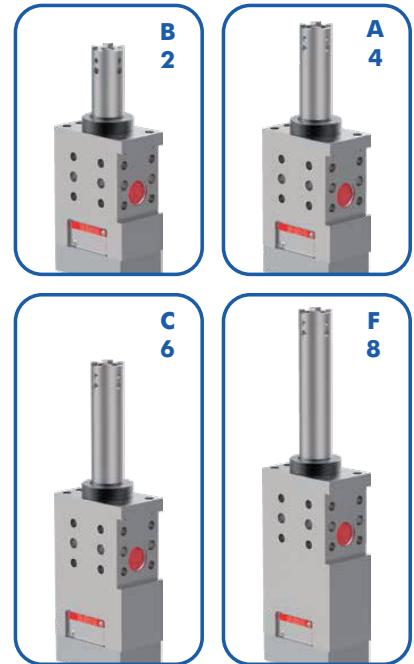
Accessories	Description
00	No Accessories
H1	Adaptor (86P0-20000H1)
E1	External Guide for A, B (82ZB-009-2, Ceramic 82ZB-181-1)
E2	External Guide for C (82ZB-090-1, Ceramic 82ZB-105-1)
E4	External Guide for F (82ZB-180-1, Ceramic 82ZB-179-1)
J1	External Guide for A, B (82ZB-184-1, Ceramic 82ZB-183-1) + Adaptor (86P0-20000H1)
F1	Bellows for piston rods 02, 05, 07, 10 in strokes A, B, 2, 4 (82ZB-013-3)
G1	Bellows F1 + Adaptor H1 for piston rods 02, 05, 07, 10 in strokes A, B, 2, 4



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

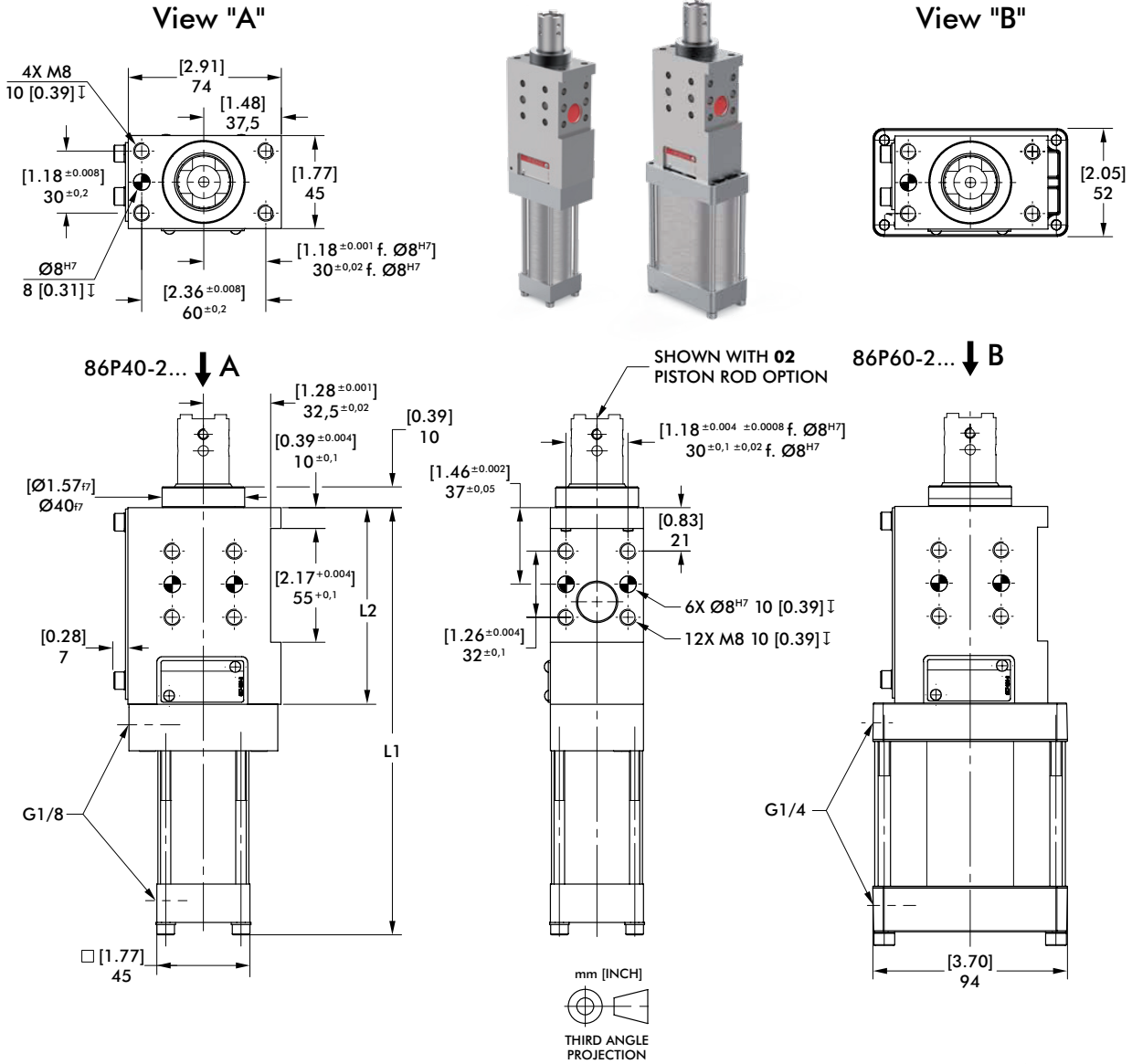
L4	Cover Plate for A, B, 2, 4 (86P0-200L4)
L6	Cover Plate for C, 6 (86P0-200L6)
L8	Cover Plate for F, 8 (86P0-200L8)
C8	Inductive Sensing System with M12x1 Connector for A, B, 2, 4 (86P0-200C8), for C, 6 (86P0-200C8006), for F, 8 (86P0-200C8008)
D8	Inductive Sensing System with 90° M12x1 Swivel Connector for A, B, 2, 4 (86P0-200D8), for C, 6 (86P0-200D8006), for F, 8 (86P0-200D8008)



Dimensions and technical information are subject to change without notice

86P40-2/86P60-2

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications



Medium: Operation with oil free air is permissible

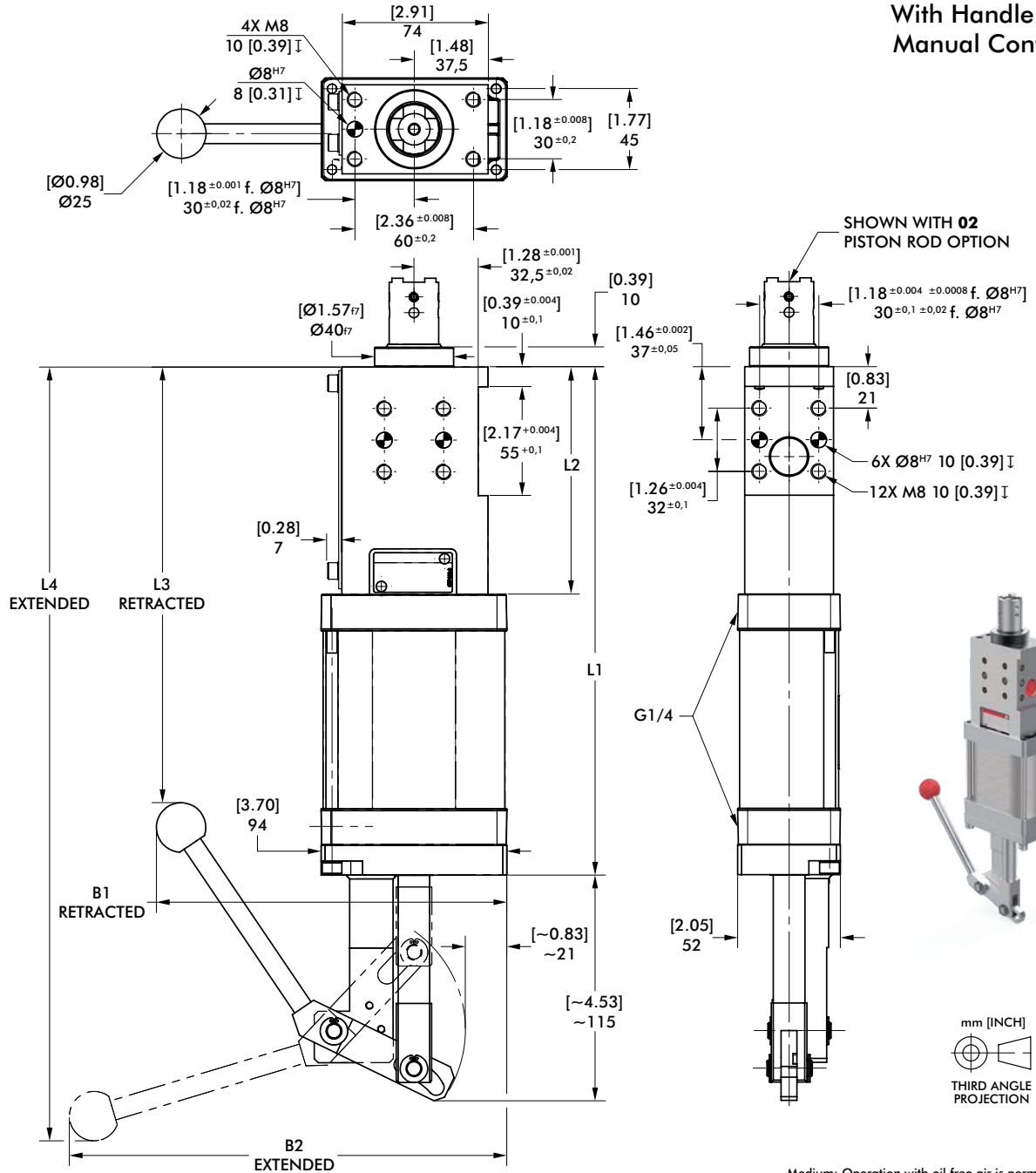
Base Model	Stroke Option	Stroke +2 [0.08] mm [in]	L1 mm [in]	L2 mm [in]	Pushing force at 5 bar N [lbs]	Retraction force at 5 bar N [lbs]	Max. operating pressure bar [psi]	Piston Ø mm [in]	Weight Kg [lbs]	Air consumption per double stroke at 5 bar dm ³ [ft ³]	
86P40	B, 2	20 [0.79]	207 [8.15]	95 [3.74]	620 [139]	520 [117]	6 [87]	40 [1.57]	1,6 [3.52]	0,5 [0.017]	
	A, 4	40 [1.57]		0,7 [0.025]							
	C, 6	60 [2.36]		115 [4.53]						2,0 [4.40]	0,9 [0.032]
	F, 8	80 [3.15]		135 [5.31]						2,4 [5.29]	1,0 [0.035]
86P60	B, 2	20 [0.79]	213 [8.39]	95 [3.74]	1550 [348]	1400 [315]	6 [87]	63 [2.48]	2,0 [4.40]	0,8 [0.028]	
	A, 4	40 [1.57]		1,4 [0.049]							
	C, 6	60 [2.36]		115 [4.53]						2,5 [5.51]	2,0 [0.070]
	F, a8	80 [3.15]		135 [5.31]						2,8 [6.17]	2,5 [0.088]

Dimensions and technical information are subject to change without notice

86P60H2

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

With Handle for Manual Control



Medium: Operation with oil free air is permissible

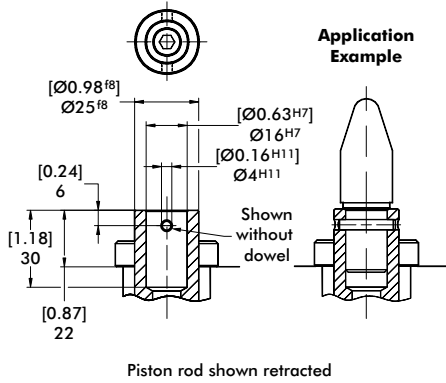
Base Model	Stroke Option	Stroke +2 [0.08] mm [in]	B1 (retracted) mm [in]	B2 (extended) mm [in]	L1 mm [in]	L2 mm [in]	L3 (retracted) mm [in]	L4 (extended) mm [in]	Weight Kg [lbs]
86P60H2	B, 2	20 [0.79]	177 [6.97]	216 [8.50]	217 [8.54]	95 [3.74]	179 [7.05]	253 [9.96]	2,3 [5.07]
	A, 4	40 [1.57]		229 [9.02]				306 [12.05]	
	C, 6	60 [2.36]		222 [8.74]				257 [10.12]	

Dimensions and technical information are subject to change without notice

86P40/86P60 PISTON RODS

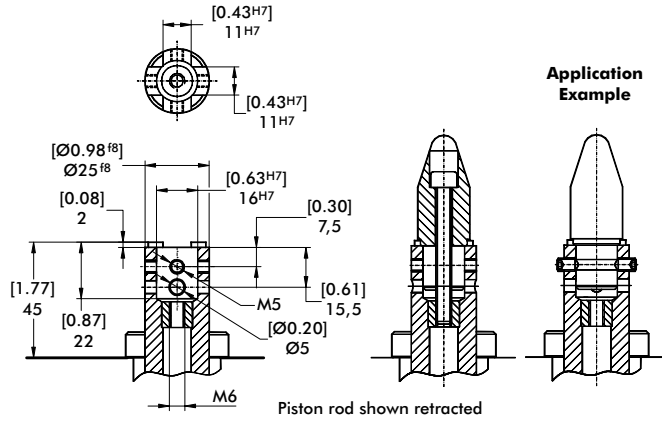
Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

01 Ø16 mm Inside Hole



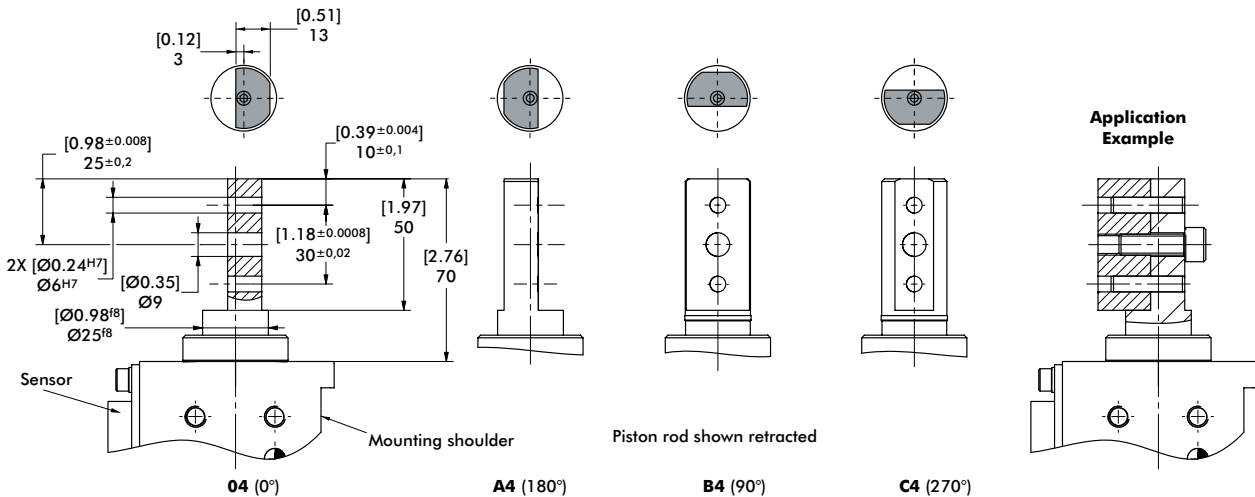
Piston rod shown retracted

02 Ø16 mm M6 Threaded Inside Hole, Cross Groove



Piston rod shown retracted

04, A4, B4, C4 NAAMS Standard



04 (0°)

A4 (180°)

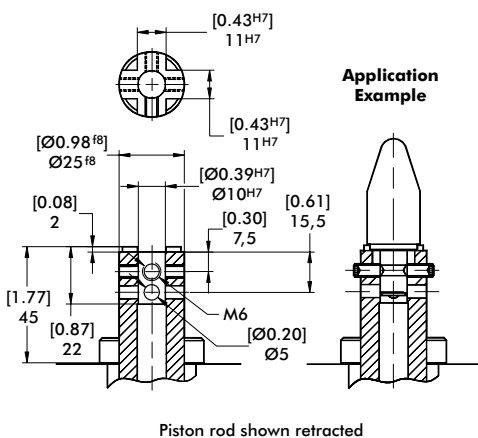
B4 (90°)

C4 (270°)

Application Example

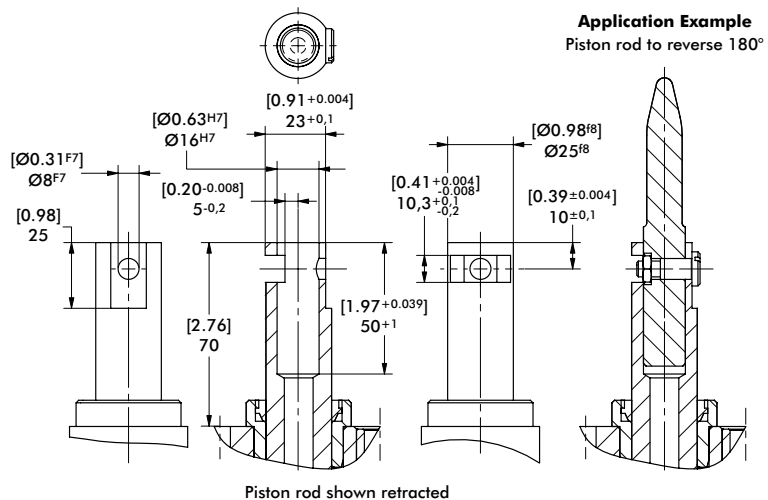
Piston rod shown retracted

05 Ø10 mm Inside Hole, Cross Groove



Piston rod shown retracted

07 Ø16 mm Inside Hole, NAAMS



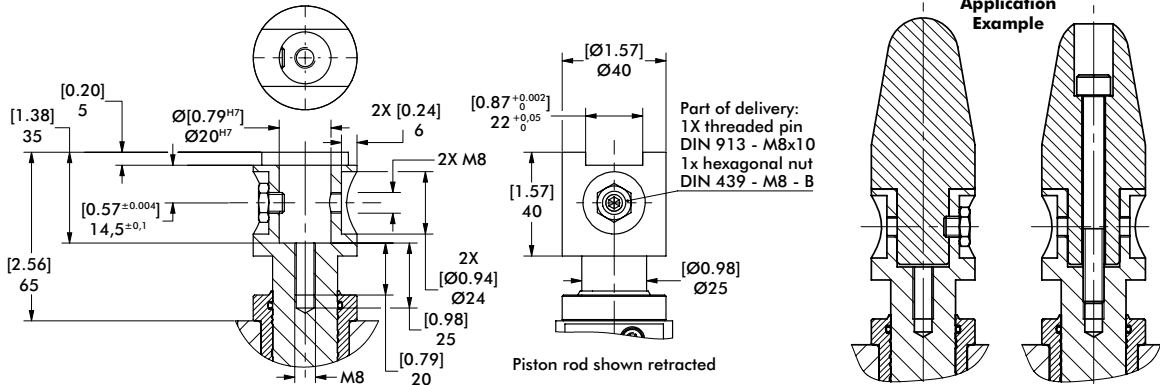
Piston rod shown retracted

Dimensions and technical information are subject to change without notice

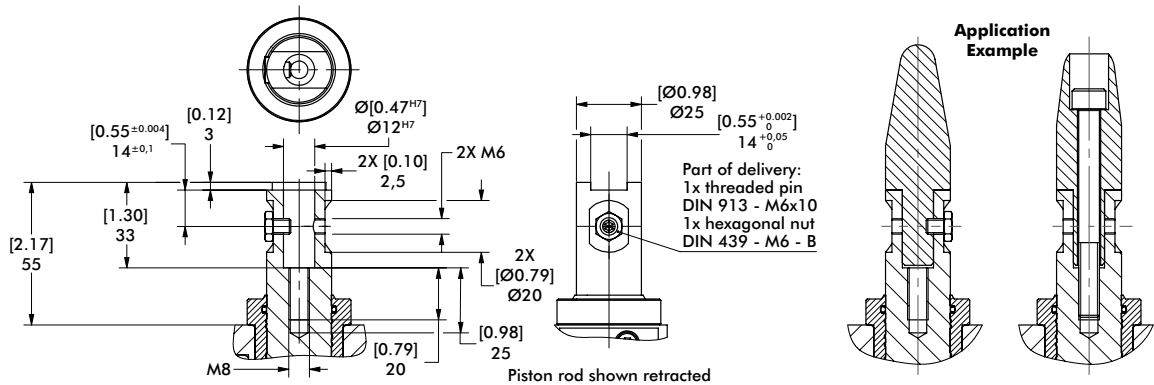
86P40/86P60 PISTON RODS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

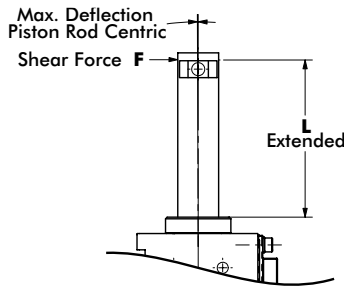
09 Ø20 mm Straight Groove



10 Ø12 mm Straight Groove



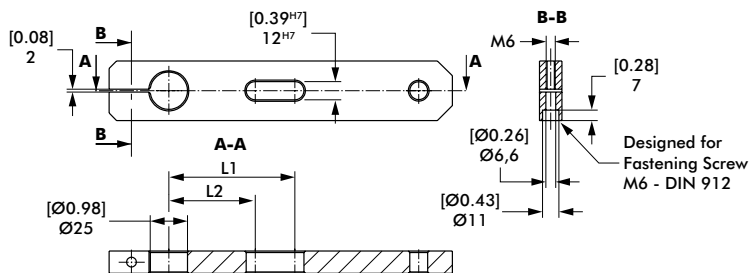
Max Deflection for Centering Pin



Model no.	Shear force N [lbs]	L mm [in]	Stroke mm [in]	Deflection mm [in]
86P40 / 60-2...B / 2	200 [45]	52 [2.05]	20 [0.79]	0,06 [0.002]
86P40 / 60-2...A / 4		70 [2.76]	40 [1.58]	0,09 [0.004]
86P40 / 60-2...C / 6		90 [3.54]	60 [2.36]	0,12 [0.005]
86P40 / 60-2...F / 8		115 [4.53]	80 [3.15]	0,15 [0.006]

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

Example application of an off-center centering pin (Example component shown below is to be made by the customer)



Model no.	L1 mm [in]	L2 mm [in]
86P40 / 60-2...E1	62 [2.44]	58 [2.28]
86P40 / 60-2...E2		
86P40 / 60-2...E4	84,5 [3.33]	80,5 [3.17]
86P40 / 60-2...J1*		

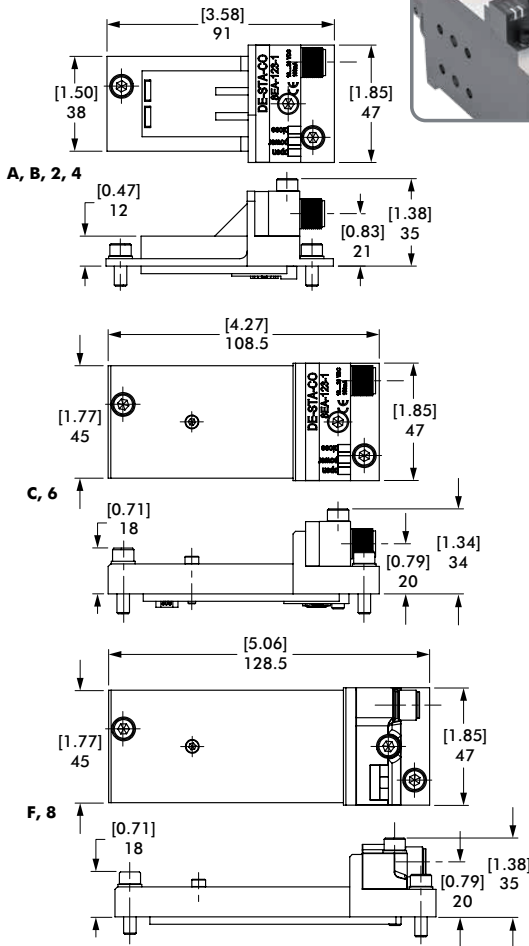
*J1 is not available with 60 or 80 mm strokes.

Dimensions and technical information are subject to change without notice

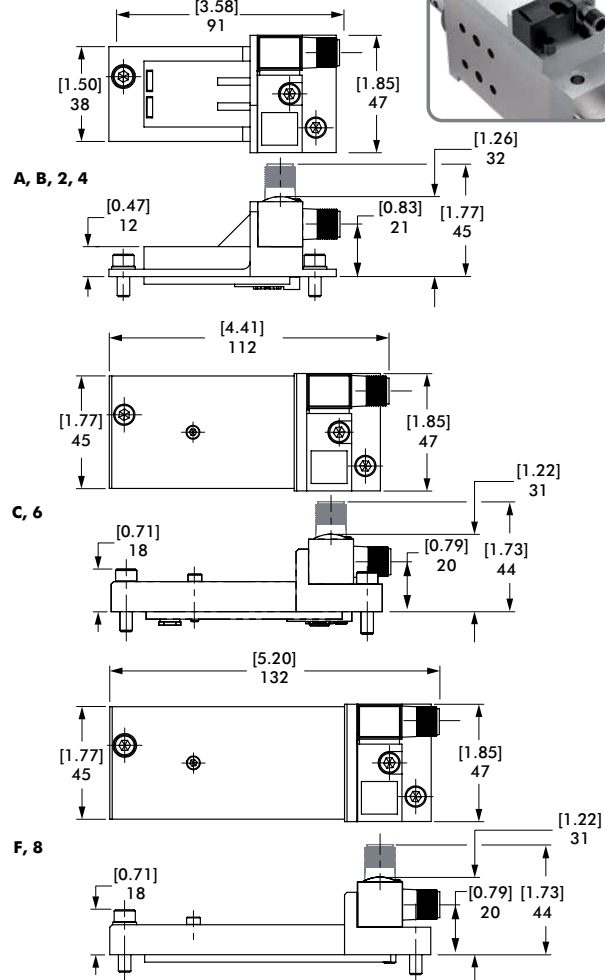
86P40/86P60 SENSORS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

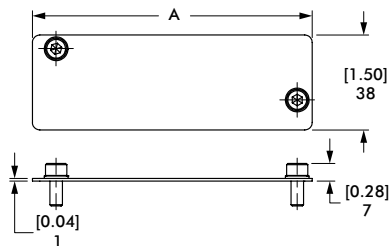
C8 Inductive Sensing System



D8 Inductive Sensing System with 90° Swivel Connector



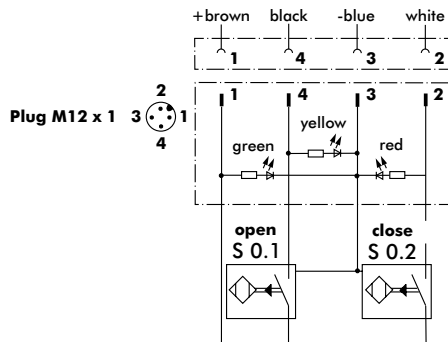
L4, L6, L8 Sensor Cover Plate



Cover Plate Option	Stroke Option	A mm [in]
L4	A, B, 2, 4	92 [3.62]
L6	C, 6	112 [4.41]
L8	F, 8	132 [5.20]

Inductive Sensor Wiring Diagram for C8, D8

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

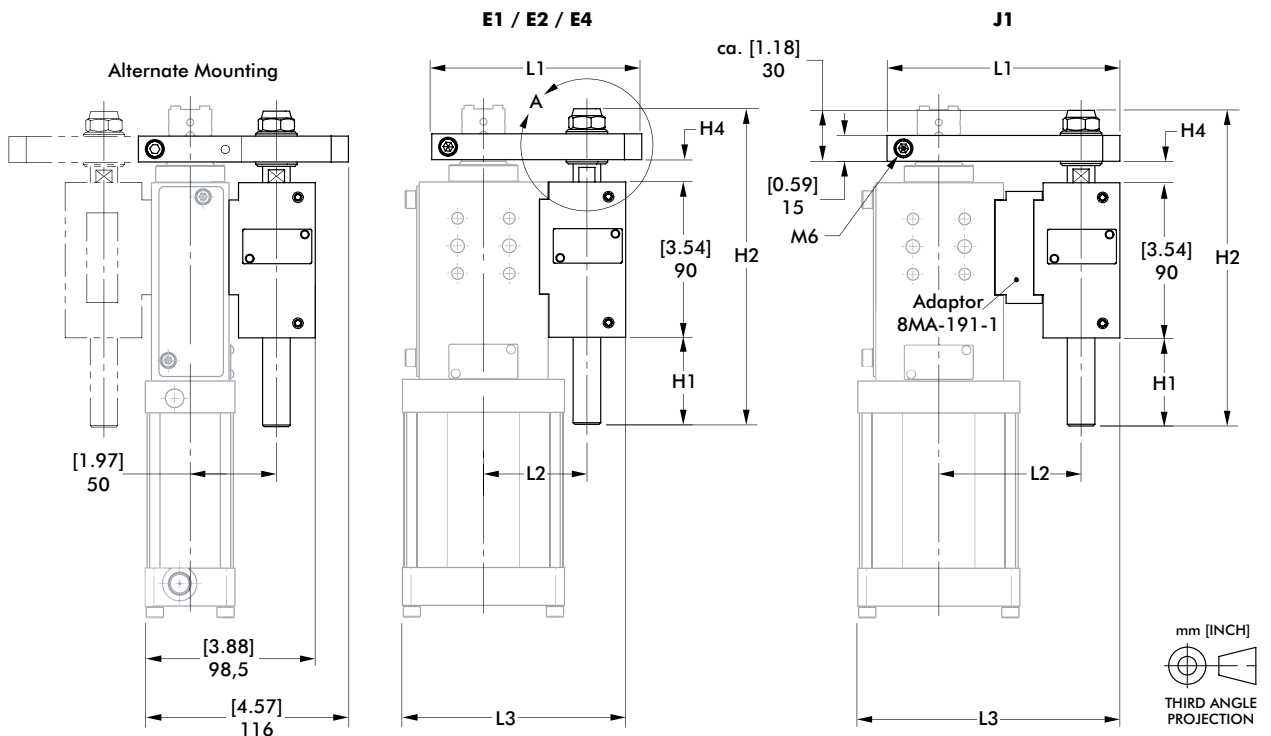
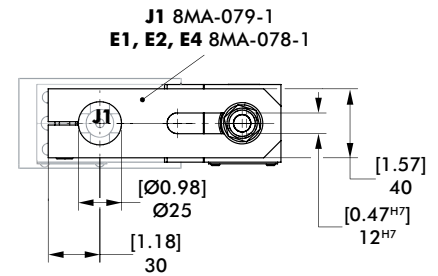
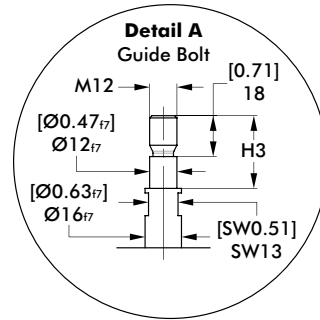


Dimensions and technical information are subject to change without notice

86P40/86P60 OPTIONS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

J1, E1, E2, E4 External Guide



Base Model	External Guide Option	Stroke Option	L1 mm [in]	L2 mm [in]	L3 mm [in]	H1 (max.) mm [in]	H2 mm [in]	H3 mm [in]	H4 (min.) mm [in]
86P40 or 86P60	E1	A, B	120 [4.72]	60 [2.36]	130 [5.12]	47 [1.85]	183 [7.20]	32 [1.26]	16,5 [0.65]
	E1_-K*					55 [2.17]	195 [7.68]	35 [1.38]	17,5 [0.69]
	E2	C				67 [2.64]	203 [7.99]	32 [1.26]	16,5 [0.65]
	E2_-K*					109 [4.29]	250 [9.84]		18,5 [0.73]
	E4	F				131 [5.16]	270 [10.63]	35 [1.38]	16,5 [0.65]
	E4_-K*					133 [5.24]	273 [10.75]		17,5 [0.69]
	J1	A, B				47 [1.85]	183 [7.20]	32 [1.26]	16,5 [0.65]
J1_-K*	55 [2.17]		195 [7.68]	35 [1.38]	17,5 [0.69]				

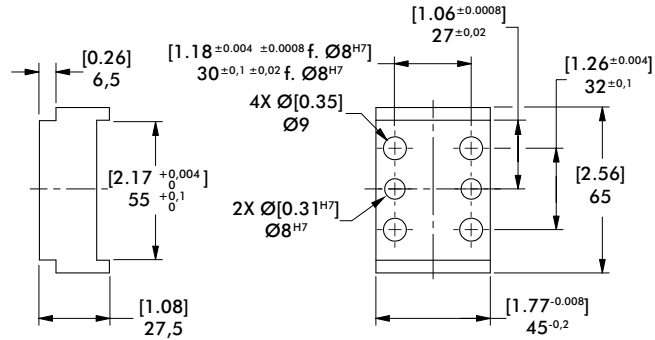
*Ceramic Option

Dimensions and technical information are subject to change without notice

86P40/86P60 OPTIONS

Pneumatic Pin Package | Single Shaft | Dimensions and Technical Specifications

H1 Adaptor



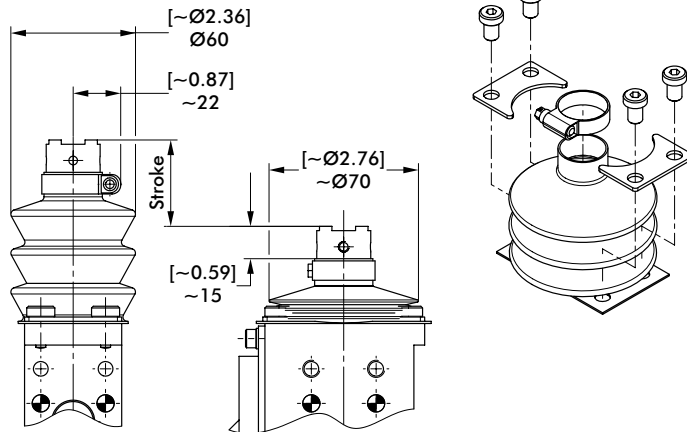
F1 Bellows (Piston Rod Cover)



extended



retracted

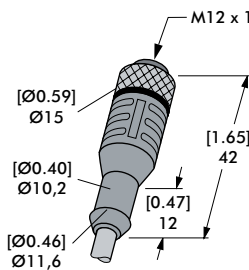


G1 Adaptor + Bellows

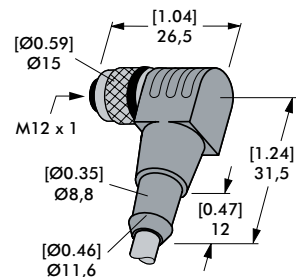
(See dimensions above)



Sensor Cable Accessories



Straight Cable
8EL-002-1



Angular Cable
8EL-003-1

Sensor Cables (1 connector & 5m cable)

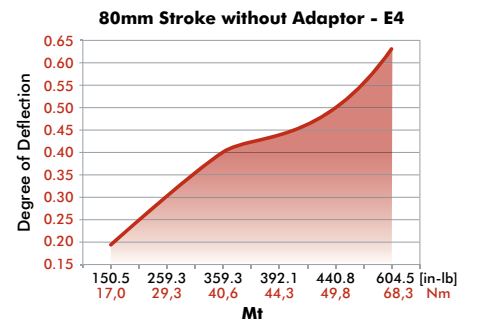
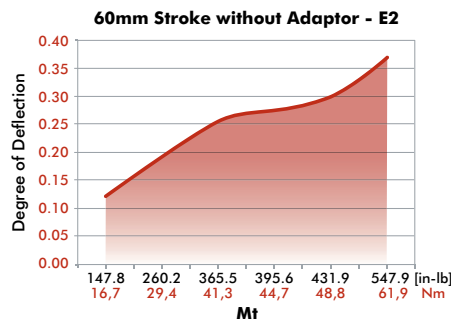
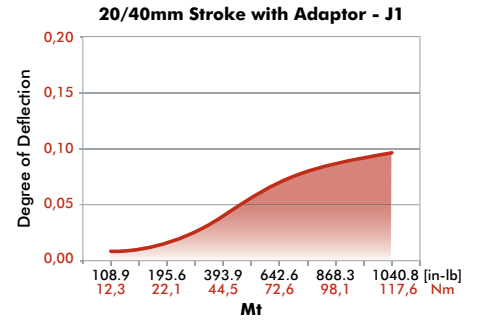
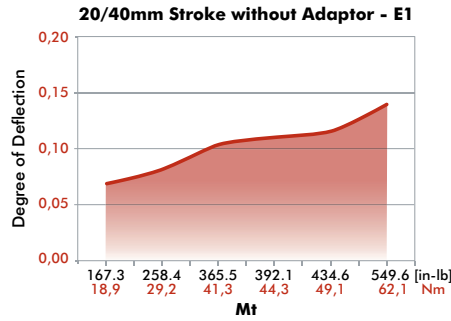
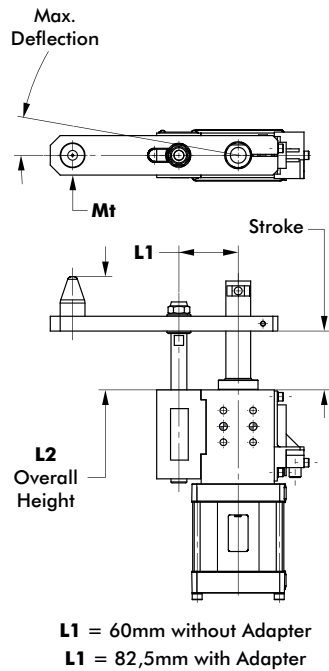
Sensor Cables (1 connector & 5m cable)	Order no.
M12x1 connector, straight, 5-pin	8EL-002-1
M12x1 connector, 90° angular, 4-pin	8EL-003-1

Dimensions and technical information are subject to change without notice

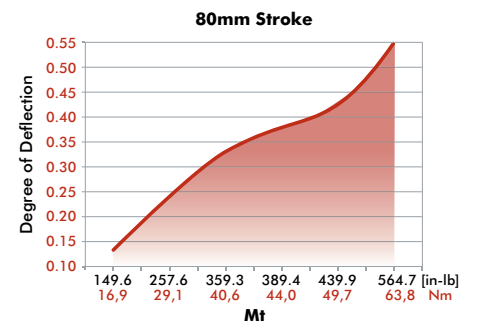
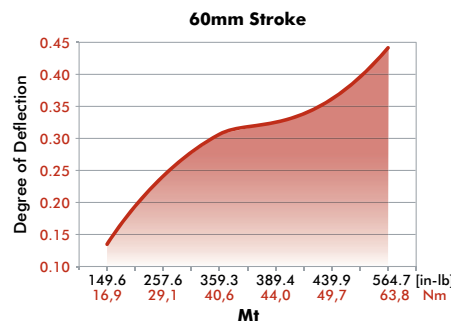
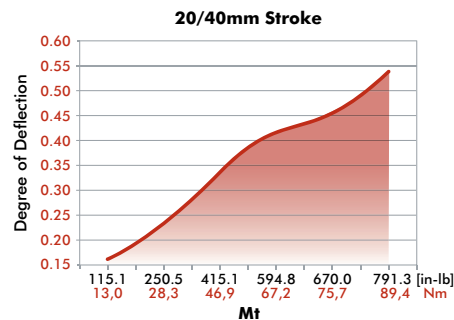
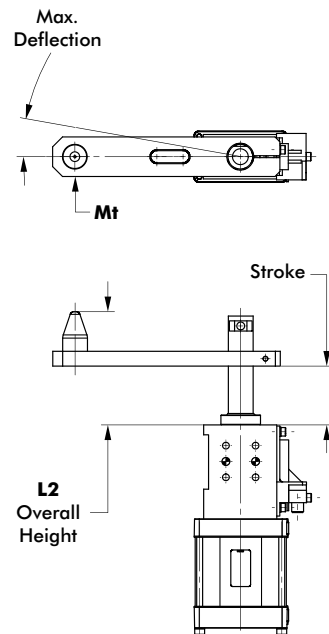
86P40/86P60

Pneumatic Pin Package | Single Shaft | Technical Specifications

Deflection with External Guide **E1, E2, E4, J1**



Deflection without External Guide



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

Dimensions and technical information are subject to change without notice