

# P1D Pneumatic Cylinders

According to ISO 15552

The innovative P1D, a **future-proof** generation of **ISO** cylinders.



## P1D ISO Cylinder family

The P1D series is a future-proof generation of ISO cylinders. P1D complies with the current ISO 15552 previous standard ISO 6431, VDMA 24562 installation dimension standards.

The cylinders are double-acting, magnetic as standard for use with sensors and feature a new design of air cushioning. Available in Ø32mm – Ø125mm bore size the full P1D range includes:-

**P1D-S series.** This series is the ultimate in ISO pneumatic cylinders and is suitable for virtually any application. Options include the tie rod design, smooth profile, ultra clean cylinders for use in the food industry and all the variants including through rod and piston rod locking versions.

**P1D-B series.** This series features a profile design and is the basic ISO cylinder for simple applications where no special options are required. This series is suitable for general industrial applications

All mounting and sensor options are common to all P1D cylinders.



## Design Variants

### P1D-S Standard Cylinders

The P1D-S series is the premier in ISO pneumatic cylinders. With various piston rod materials, seal options and supported by a full range of ISO mountings the P1D-S series is suitable for a wide range of applications.



### P1D-B Basic Cylinders

The P1D-B series features a profile design and is the value line ISO cylinder for basic applications where no special options are required. This series is suitable for general industrial applications and is supported by a full range of ISO mountings.



### P1D-C Ultra Clean Cylinders

This series offers an ultra clean external design of cylinders that are suitable for applications that require a clean profile. With particular design features for the food and packaging industries this product can also be used for applications on vehicles, in sawmills and bag-filling industries where a clean design is important.



### P1D-C Pro Clean Cylinders

This series of clean design cylinders offers two T slots within one face of the tube allowing the possibility to add sensors. The position of the T slots can be specified on any single face using the order code key. These cylinders have a clean design but are intended for applications where sensors are required.



### P1D-T Large Bore Cylinders

The P1D-T range of tie rod cylinders is intended for use in a wide range of applications. Careful design and high quality manufacture throughout ensure long service life and optimum economy. Mounting dimensions fully in accordance with ISO 15552 (ISO 6431 and CETOP RP52P) greatly simplifies installation and world-wide interchangeability.



### P1D-X High and Low Temperature Cylinders

For extreme conditions these cylinders for high and low temperatures have materials and sealing systems specially designed for their particular temperature ranges. End covers and pistons are made entirely from metal, to give optimum function at **high** or **low** temperature in combination with seals made from specially tested materials and special grease.



### P1D-L Rod Locking Cylinders

P1D-L is a series of extremely compact rod lock cylinders for demanding applications. This version allows the piston rod to be locked in any position but can also be used as a brake (limits apply) thanks to the rigid design. With helical grooves on the precision clamping sleeves the locking function allows for applications where the piston rod is exposed to liquids and contamination.



## Design Variants

### P1D-T Tie Rod Cylinders

The P1D is available in a tie-rod version, based on the same high level technology. This future-proof cylinder is the perfect choice wherever a tie-rod cylinder is needed. The P1D Tie-Rod uses "drop-in" P1D sensors. An ingenious multi-jointed adapter fixes the sensors in any chosen position along the stroke.



### Through Piston Rod Cylinders

All P1D cylinders in all bores, Ø32-125 mm, are available with a through rod. Cylinders with a through rod can take higher side forces thanks to the double support for the piston rod. In addition, this design makes it easier to install external position sensors.



### P1D-T 3 and 4 Position Cylinders

By installing two cylinders with the same or different stroke, it is possible to build a working unit with three or four positions. This type of unit is available as factory-fitted P1D tie-rod cylinders (P1D-T) in all bores, Ø32-125 mm. Other P1D cylinders can be flange mounted back-to-back with a standard mounting



### P1D-T Tandem Cylinders

The P1D is also available as a tandem cylinder, i.e. two cylinders connected in series. This cylinder unit has almost twice the force, which is a great advantage in restricted spaces. Tandem cylinders are available as tie-rod cylinders, P1D-T, in all bores Ø32-125 mm.



### P1D-V with valve built on

P1D Standard can be ordered with a factory-fitted valve and piping. The valve is the robust and compact Viking series, with product code P2L-A (for cylinder bores 32-63), P2L-B (for cylinder bores 80-100) and P2L-D (for cylinder bore 125).



### Alternative Piston Rod Materials

All P1D cylinders in all bores, Ø32-125 mm, can be ordered with the following piston rod materials:

- Steel, hard chromed
- Stainless steel, roller polished (standard)
- Acid-proof steel, roller polished
- Stainless steel, hard chromed



### Operation with Dry Piston Rod

In many applications, primarily in the food industry, the cylinders are cleaned frequently. This means that the film of grease on the piston rod is washed off, which puts special demands on the materials and the design of the piston rod seal system (scraper ring and piston rod seal). A piston rod seal system specially designed for dry rod operation is available as an option for this type of application, for all bores of P1D cylinders. The system has a specially designed L-shaped seal and the material is self-lubricating, high molecular weight plastics (HDPE).



## P1D-S Standard Cylinders

The P1D-S series is the premier in ISO pneumatic cylinders. With various piston rod materials, seal options and supported by a full range of ISO mountings the P1D-S series is suitable for a wide range of applications.

- Available in 32 to 125 mm bores
- PUR seals for long service life
- Drop-in sensors
- Corrosion resistant design
- Magnetic piston as standard
- Lubricated with food grade grease



### Operating information

Working pressure:	Max 10 bar
Seals / Temperature options	
Standard:	-20°C to +80°C
Cylinders for low pressure hydraulic operation:	Ø32-125mm
ATEX approval:	CE Ex IIGD c T4 120°C

For more information see [www.parker.com/euro\\_pneumatic](http://www.parker.com/euro_pneumatic)

## P1D Standard - Double acting

### Ø32mm - (G<sup>1</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-S032MS-0025
40	P1D-S032MS-0040
50	P1D-S032MS-0050
80	P1D-S032MS-0080
100	P1D-S032MS-0100
125	P1D-S032MS-0125
160	P1D-S032MS-0160
200	P1D-S032MS-0200
250	P1D-S032MS-0250
320	P1D-S032MS-0320
400	P1D-S032MS-0400
500	P1D-S032MS-0500

### Ø40mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-S040MS-0025
40	P1D-S040MS-0040
50	P1D-S040MS-0050
80	P1D-S040MS-0080
100	P1D-S040MS-0100
125	P1D-S040MS-0125
160	P1D-S040MS-0160
200	P1D-S040MS-0200
250	P1D-S040MS-0250
320	P1D-S040MS-0320
400	P1D-S040MS-0400
500	P1D-S040MS-0500

### Ø50mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-S050MS-0025
40	P1D-S050MS-0040
50	P1D-S050MS-0050
80	P1D-S050MS-0080
100	P1D-S050MS-0100
125	P1D-S050MS-0125
160	P1D-S050MS-0160
200	P1D-S050MS-0200
250	P1D-S050MS-0250
320	P1D-S050MS-0320
400	P1D-S050MS-0400
500	P1D-S050MS-0500

### Ø63mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-S063MS-0025
40	P1D-S063MS-0040
50	P1D-S063MS-0050
80	P1D-S063MS-0080
100	P1D-S063MS-0100
125	P1D-S063MS-0125
160	P1D-S063MS-0160
200	P1D-S063MS-0200
250	P1D-S063MS-0250
320	P1D-S063MS-0320
400	P1D-S063MS-0400
500	P1D-S063MS-0500

### Ø80mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-S080MS-0025
40	P1D-S080MS-0040
50	P1D-S080MS-0050
80	P1D-S080MS-0080
100	P1D-S080MS-0100
125	P1D-S080MS-0125
160	P1D-S080MS-0160
200	P1D-S080MS-0200
250	P1D-S080MS-0250
320	P1D-S080MS-0320
400	P1D-S080MS-0400
500	P1D-S080MS-0500

### Ø100mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-S100MS-0025
40	P1D-S100MS-0040
50	P1D-S100MS-0050
80	P1D-S100MS-0080
100	P1D-S100MS-0100
125	P1D-S100MS-0125
160	P1D-S100MS-0160
200	P1D-S100MS-0200
250	P1D-S100MS-0250
320	P1D-S100MS-0320
400	P1D-S100MS-0400
500	P1D-S100MS-0500

### Ø125mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-S125MS-0025
40	P1D-S125MS-0040
50	P1D-S125MS-0050
80	P1D-S125MS-0080
100	P1D-S125MS-0100
125	P1D-S125MS-0125
160	P1D-S125MS-0160
200	P1D-S125MS-0200
250	P1D-S125MS-0250
320	P1D-S125MS-0320
400	P1D-S125MS-0400
500	P1D-S125MS-0500

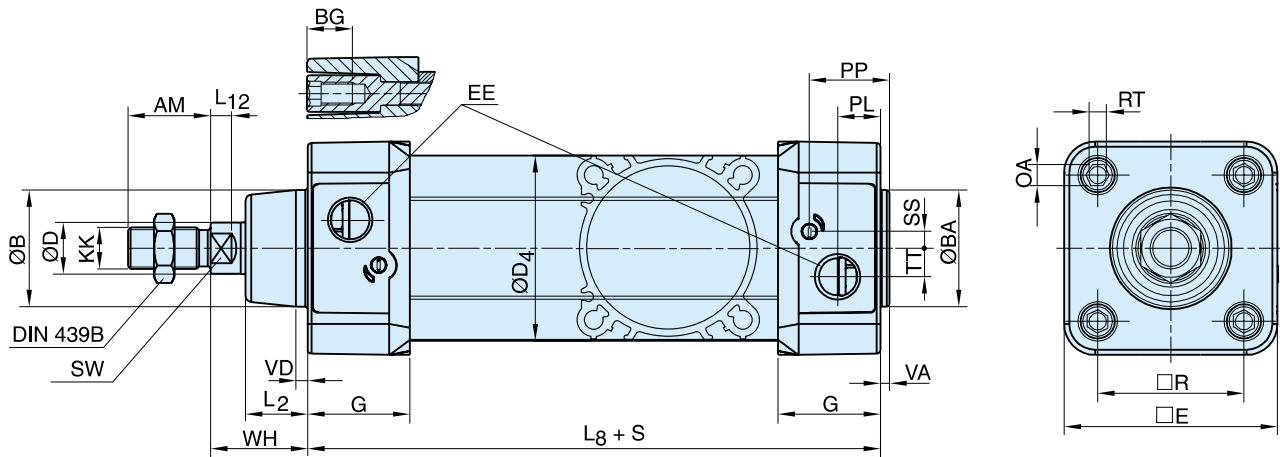
The cylinders are supplied complete with a zinc plated steel piston rod nut.

### Sensors



For sensors see page 78.

P1D-S Series dimensions



Dimensions

Cylinder bore mm	AM mm	B mm	BA mm	BG mm	D mm	D4 mm	E mm	EE mm	G mm	KK	L2 mm	L8 mm	L12 mm
32	22	30	30	16	12	45,0	50,0	G1/8	28,5	M10x1,25	16,0	94	6,0
40	24	35	35	16	16	52,0	57,4	G1/4	33,0	M12x1,25	19,0	105	6,5
50	32	40	40	16	20	60,7	69,4	G1/4	33,5	M16x1,5	24,0	106	8,0
63	32	45	45	16	20	71,5	82,4	G3/8	39,5	M16x1,5	24,0	121	8,0
80	40	45	45	17	25	86,7	99,4	G3/8	39,5	M20x1,5	30,0	128	10,0
100	40	55	55	17	25	106,7	116,0	G1/2	44,5	M20x1,5	32,4	138	14,0
125	54	60	60	20	32	134,0	139,0	G1/2	51,0	M27x2	45,0	160	18,0

Cylinder bore mm	OA mm	PL mm	PP mm	R mm	RT mm	SS mm	SW mm	TT mm	VA mm	VD mm	WH mm
32	6,0	13,0	21,8	32,5	M6	4,0	10	4,5	3,5	4,5	26
40	6,0	14,0	21,9	38,0	M6	8,0	13	5,5	3,5	4,5	30
50	8,0	14,0	23,0	46,5	M8	4,0	17	7,5	3,5	5,0	37
63	8,0	16,4	27,4	56,5	M8	6,5	17	11,0	3,5	5,0	37
80	6,0	16,0	30,5	72,0	M10	0	22	15,0	3,5	4,0	46
100	6,0	18,0	35,8	89,0	M10	0	22	20,0	3,5	4,0	51
125	8,0	28,0	40,5	110,0	M12	0	27	17,5	5,5	6,0	65

S=Stroke

Tolerances

Cylinder bore mm	B	BA	L <sub>3</sub> mm	L <sub>9</sub> mm	R mm	Stroke tolerance up to stroke 500 mm	Stroke tolerance for stroke over 500 mm
32	d11	d11	±0,4	±2	±0,5	+0,3/+2,0	+0,3/+3,0
40	d11	d11	±0,7	±2	±0,5	+0,3/+2,0	+0,3/+3,0
50	d11	d11	±0,7	±2	±0,6	+0,3/+2,0	+0,3/+3,0
63	d11	d11	±0,8	±2	±0,7	+0,3/+2,0	+0,3/+3,0
80	d11	d11	±0,8	±3	±0,7	+0,3/+2,0	+0,3/+3,0
100	d11	d11	±1,0	±3	±0,7	+0,3/+2,0	+0,3/+3,0
125	d11	d11	±1,0	±3	±1,1	+0,3/+2,0	+0,3/+3,0

**Cylinder mountings**

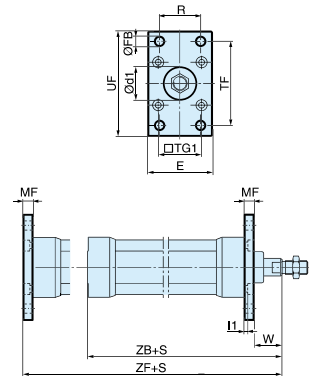
**Flange MF1/MF2**



Intended for fixed mounting of cylinder. Flange can be fitted to front or rear end cover of cylinder.

Materials  
 Flange: Surface-treated steel  
 Mounting screws acc. to DIN 6912: Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder.



According to ISO MF1/MF2, VDMA 24 562, AFNOR

Cyl. bore mm	d1 mm	FB mm	TG1 mm	E mm	R mm	MF mm	TF mm	UF mm	l1 mm	W* mm	ZF* mm	ZB* mm	Weight Kg	Order code
32	30	7	32,5	45	32	10	64	80	5,0	16	130	123,5	0,23	<b>P1C-4KMB</b>
40	35	9	38,0	52	36	10	72	90	5,0	20	145	138,5	0,28	<b>P1C-4LMB</b>
50	40	9	46,5	65	45	12	90	110	6,5	25	155	146,5	0,53	<b>P1C-4MMB</b>
63	45	9	56,5	75	50	12	100	120	6,5	25	170	161,5	0,71	<b>P1C-4NMB</b>
80	45	12	72,0	95	63	16	126	150	8,0	30	190	177,5	1,59	<b>P1C-4PMB</b>
100	55	14	89,0	115	75	16	150	170	8,0	35	205	192,5	2,19	<b>P1C-4QMB</b>
125	60	16	110,0	140	90	20	180	205	10,5	45	245	230,5	3,78	<b>P1C-4RMB</b>

S = Stroke length

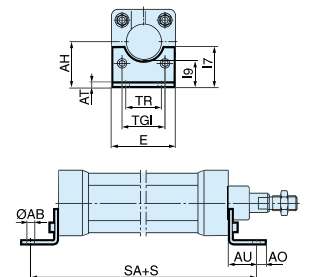
**Foot brackets MS1**



Intended for fixed mounting of cylinder. Foot bracket can be fitted to front and rear end covers of cylinder.

Material:  
 Foot bracket: Surface treated steel  
 Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied in pairs with mounting screws for attachment to cylinder.



According to ISO MS1, VDMA 24 562, AFNOR

Cyl. bore mm	AB mm	TG1 mm	E mm	TR mm	AO mm	AU mm	AH mm	I7 mm	AT mm	I9 mm	SA* mm	Weight Kg	Order code
32	7	32,5	45	32	10	24	32	30	4,5	17,0	142	0,06	<b>P1C-4KMF</b>
40	9	38,0	52	36	8	28	36	30	4,5	18,5	161	0,08	<b>P1C-4LMF</b>
50	9	46,5	65	45	13	32	45	36	5,5	25,0	170	0,16	<b>P1C-4MMF</b>
63	9	56,5	75	50	13	32	50	35	5,5	27,5	185	0,25	<b>P1C-4NMF</b>
80	12	72,0	95	63	14	41	63	49	6,5	40,5	210	0,50	<b>P1C-4PMF</b>
100	14	89,0	115	75	15	41	71	54	6,5	43,5	220	0,85	<b>P1C-4QMF</b>
125	16	110,0	140	90	22	45	90	71	8,0	60,0	250	1,48	<b>P1C-4RMF</b>

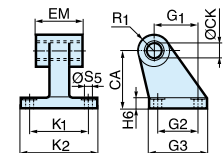
S = Stroke length

**Pivot bracket with rigid bearing AB7**



Intended for flexible mounting of cylinder. The pivot bracket can be combined with clevis bracket MP2.

Materials  
 Pivot bracket: Surface-treated aluminium, black  
 Bearing: Sintered oil-bronze bushing



According to CETOP RP 107 P, VDMA 24 562, AFNOR

Cyl. bore mm	CK mm	S5 mm	K1 mm	K2 mm	G1 mm	G2 mm	EM mm	G3 mm	CA mm	H6 mm	R1 mm	Weight Kg	Order code
32	10	6,6	38	51	21	18	25,5	31	32	8	10,0	0,06	<b>P1C-4KMD</b>
40	12	6,6	41	54	24	22	27,0	35	36	10	11,0	0,08	<b>P1C-4LMD</b>
50	12	9,0	50	65	33	30	31,0	45	45	12	13,0	0,15	<b>P1C-4MMD</b>
63	16	9,0	52	67	37	35	39,0	50	50	12	15,0	0,20	<b>P1C-4NMD</b>
80	16	11,0	66	86	47	40	49,0	60	63	14	15,0	0,33	<b>P1C-4PMD</b>
100	20	11,0	76	96	55	50	59,0	70	71	15	19,0	0,49	<b>P1C-4QMD</b>
125	25	14,0	94	124	70	60	69,0	90	90	20	22,5	1,02	<b>P1C-4RMD</b>

**Cylinder mountings**

**Swivel eye bracket MP6**

Intended for use together with clevis bracket GA



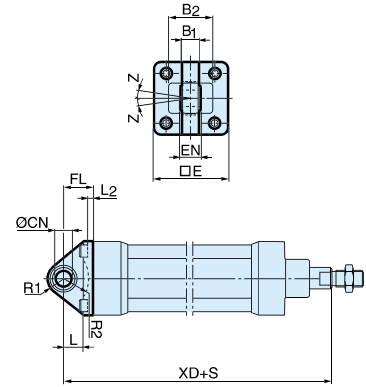
Material  
Bracket: Surface-treated aluminium, black  
Swivel bearing acc. to DIN 648K: Hardened steel

Supplied complete with mounting screws for attachment to cylinder.

According to VDMA 24 562, AFNOR

Cyl. bore mm	E mm	B1 mm	B2 mm	EN mm	R1 mm	R2 mm	FL mm	I2 mm	L mm	CN H7 mm	XD* mm	Z mm	Weight Kg	Order code
32	45	10,5	-	14	16	-	22	5,5	12	10	142	4°	0,08	<b>P1C-4KMSA</b>
40	52	12,0	-	16	18	-	25	5,5	15	12	160	4°	0,11	<b>P1C-4LMSA</b>
50	65	15,0	51	21	21	19	27	6,5	15	16	170	4°	0,20	<b>P1C-4MMSA</b>
63	75	15,0	-	21	23	-	32	6,5	20	16	190	4°	0,27	<b>P1C-4NMSA</b>
80	95	18,0	-	25	29	-	36	10,0	20	20	210	4°	0,52	<b>P1C-4PMSA</b>
100	115	18,0	-	25	31	-	41	10,0	25	20	230	4°	0,72	<b>P1C-4QMSA</b>
125	140	25,0	-	37	40	-	50	10,0	30	30	275	4°	1,53	<b>P1C-4RMSA</b>

S = Stroke length \* Does not apply to cylinders with lock unit.



**Clevis bracket MP2**

Intended for flexible mounting of cylinder. Clevis bracket MP2 can be combined with clevis bracket MP4.



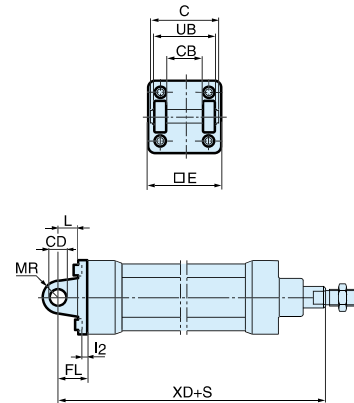
Materials  
Clevis bracket: Surface-treated aluminium, black  
Pin: Surface hardened steel  
Circlips according to DIN 471: Spring steel  
Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder.

According to ISO MP2, VDMA 24 562, AFNOR

Cyl. bore mm	C mm	E mm	UB h14 mm	CB H14 mm	FL ±0,2 mm	L mm	I2 mm	CD H9 mm	MR mm	XD* mm	Weight Kg	Order code
32	53	45	45	26	22	13	5,5	10	10	142	0,08	<b>P1C-4KMT</b>
40	60	52	52	28	25	16	5,5	12	12	160	0,11	<b>P1C-4LMT</b>
50	68	65	60	32	27	16	6,5	12	12	170	0,14	<b>P1C-4MMT</b>
63	78	75	70	40	32	21	6,5	16	16	190	0,29	<b>P1C-4NMT</b>
80	98	95	90	50	36	22	10,0	16	16	210	0,36	<b>P1C-4PMT</b>
100	118	115	110	60	41	27	10,0	20	20	230	0,64	<b>P1C-4QMT</b>
125	139	140	130	70	50	30	10,0	25	25	275	1,17	<b>P1C-4RMT</b>

S = Stroke length \* Does not apply to cylinders with lock unit



**Cylinder mountings**

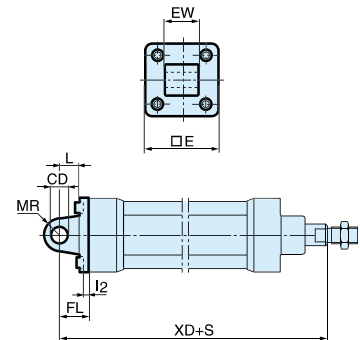
**Clevis bracket MP4**



Intended for flexible mounting of cylinder. Clevis bracket MP4 can be combined with clevis bracket MP2.

Materials  
 Clevis bracket: Surface-treated aluminium, black  
 Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder.



According to ISO MP4, VDMA 24 562, AFNOR

Cyl. bore mm	E mm	EW mm	FL mm	L mm ±0,2	I2 mm	CD mm	MR H9 mm	XD* mm	Weight Kg	Order code
32	45	26	22	13	5,5	10	10	142	0,09	<b>P1C-4KME</b>
40	52	28	25	16	5,5	12	12	160	0,13	<b>P1C-4LME</b>
50	65	32	27	16	6,5	12	12	170	0,17	<b>P1C-4MME</b>
63	75	40	32	21	6,5	16	16	190	0,36	<b>P1C-4NME</b>
80	95	50	36	22	10,0	16	16	210	0,46	<b>P1C-4PME</b>
100	115	60	41	27	10,0	20	20	230	0,83	<b>P1C-4QME</b>
125	140	70	50	30	10,0	25	25	275	1,53	<b>P1C-4RME</b>

S = Stroke length \* Does not apply to cylinders with lock unit.

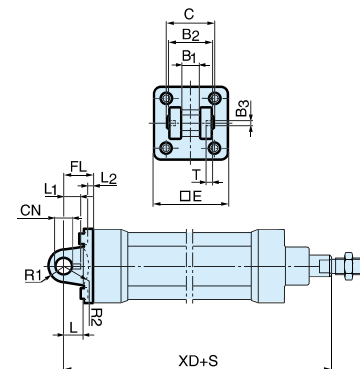
**Clevis bracket AB6**



Intended for flexible mounting of cylinder. Clevis bracket GA can be combined with pivot bracket with swivel bearing, swivel eye bracket and swivel rod eye.

Materials  
 Clevis bracket: Surface-treated aluminium  
 Pin: Surface hardened steel  
 Locking pin: Spring steel  
 Circlips according to DIN 471: Spring steel  
 Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder.



According to VDMA 24 562, AFNOR

Cyl. bore mm	C mm	E mm	B2 mm d12	B1 mm H14	T mm	B3 mm	R2 mm	L1 mm	FL mm ±0,2	I2 mm	L mm	CN F7 mm	R1 mm	XD* mm	Weight Kg	Order code
32	41	45	34	14	3	3,3	17	11,5	22	5,5	12	10	11	142	0,09	<b>P1C-4KMCA</b>
40	48	52	40	16	4	4,3	20	12,0	25	5,5	15	12	13	160	0,13	<b>P1C-4LMCA</b>
50	54	65	45	21	4	4,3	22	14,0	27	6,5	17	16	18	170	0,17	<b>P1C-4MMCA</b>
63	60	75	51	21	4	4,3	25	14,0	32	6,5	20	16	18	190	0,36	<b>P1C-4NMCA</b>
80	75	95	65	25	4	4,3	30	16,0	36	10,0	20	20	22	210	0,58	<b>P1C-4PMCA</b>
100	85	115	75	25	4	4,3	32	16,0	41	10,0	25	20	22	230	0,89	<b>P1C-4QMCA</b>
125	110	140	97	37	6	6,3	42	24,0	50	10,0	30	30	30	275	1,75	<b>P1C-4RMCA</b>

S = Stroke length \* Does not apply to cylinders with lock unit.

**Stainless steel Pin Set AB6**

Cyl. bore mm	Weight Kg	Order code
32	0,05	<b>9301054311</b>
40	0,06	<b>9301054312</b>
50	0,07	<b>9301054313</b>
63	0,07	<b>9301054314</b>
80	0,17	<b>9301054315</b>
100	0,31	<b>9301054316</b>
125	0,54	<b>9301054317</b>

Materials  
 Pin: Stainless steel  
 Locking pin: Stainless steel  
 Circlips according to DIN 471: Stainless steel

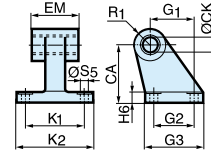
**Cylinder mountings**

**Pivot bracket with swivel bearing AB5**



Intended for use together with clevis bracket GA.

Material  
 Pivot bracket: Surface-treated steel, black  
 Swivel bearing acc. to DIN 648K: Hardened steel



According to VDMA 24 562, AFNOR

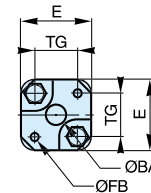
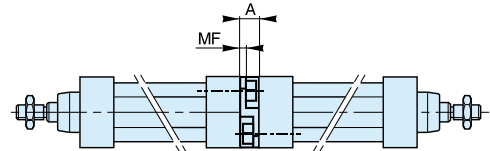
Cyl. bore mm	CN H7 mm	S5 H13 mm	K1 JS14 mm	K2 mm	EU mm	G1 JS14 mm	G2 JS14 mm	EN mm	G3 mm	CH JS15 mm	H6 mm	ER mm	Z	Weight Kg	Order code
32	10	6,6	38	51	10,5	21	18	14	31	32	10	16	4°	0,18	<b>P1C-4KMA</b>
40	12	6,6	41	54	12,0	24	22	16	35	36	10	18	4°	0,25	<b>P1C-4LMA</b>
50	16	9,0	50	65	15,0	33	30	21	45	45	12	21	4°	0,47	<b>P1C-4MMA</b>
63	16	9,0	52	67	15,0	37	35	21	50	50	12	23	4°	0,57	<b>P1C-4NMA</b>
80	20	11,0	66	86	18,0	47	40	25	60	63	14	28	4°	1,05	<b>P1C-4PMA</b>
100	20	11,0	76	96	18,0	55	50	25	70	71	15	30	4°	1,42	<b>P1C-4QMA</b>
125	30	14,0	94	124	25,0	70	60	37	90	90	20	40	4°	3,10	<b>P1C-4RMA</b>

**3 and 4 positions flange**



Mounting kit for back to back mounted cylinders, 3 and 4 position cylinders.

Material:  
 Mounting: Aluminium  
 Mounting screws: Zinc-plated steel 8.8



Cyl. bore mm	E mm	TG mm	ØFB mm	MF mm	A mm	ØBA mm	Weight Kg	Order code
32	50	32,5	6,5	5	16	30	0,060	<b>P1E-6KB0</b>
40	60	38,0	6,5	5	16	35	0,078	<b>P1E-6LB0</b>
50	66	46,5	8,5	6	20	40	0,162	<b>P1E-6MB0</b>
63	80	56,5	8,5	6	20	45	0,194	<b>P1E-6NB0</b>
80	100	72,0	10,5	8	25	45	0,450	<b>P1E-6PB0</b>
100	118	89,0	10,5	8	25	55	0,672	<b>P1E-6QB0</b>

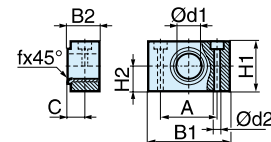
**Pivot brackets AT4 for MT4**

Intended for use together with central trunnion MT4.



Material  
 Pivot bracket: Surface-treated aluminium  
 Bearing acc. to DIN 1850 C: Sintered oil-bronze bushing

Supplied in pairs.



According to ISO, VDMA 24 562, AFNOR

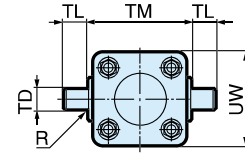
Cyl. bore mm	B1 mm	B2 mm	A mm	C mm	d1 mm	d2 H13 mm	H1 mm	H2 mm	fx45° min	Weight Kg	Order code
32	46	18,0	32	10,5	12	6,6	30	15	1,0	0,04*	<b>9301054261</b>
40	55	21,0	36	12,0	16	9,0	36	18	1,6	0,07*	<b>9301054262</b>
50	55	21,0	36	12,0	16	9,0	36	18	1,6	0,07*	<b>9301054262</b>
63	65	23,0	42	13,0	20	11,0	40	20	1,6	0,12*	<b>9301054264</b>
80	65	23,0	42	13,0	20	11,0	40	20	1,6	0,12*	<b>9301054264</b>
100	75	28,5	50	16,0	25	14,0	50	25	2,0	0,21*	<b>9301054266</b>
125	75	28,5	50	16,0	25	14,0	50	25	2,0	0,21*	<b>9301054266</b>

**Cylinder mountings**

**Centre trunnion MT4 for P1D-S**



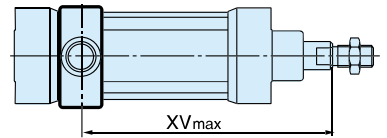
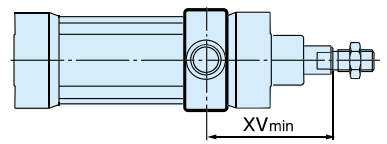
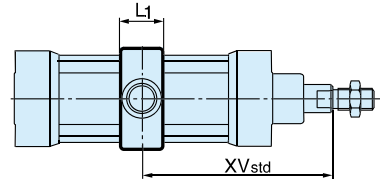
Intended for articulated mounting of cylinder. This mounting is available for P1D-S and P1D-T.  
The trunnion is factory-fitted in the centre of the cylinder or at an optional location specified by the XV-measure – Combined with pivot bracket for MT4.  
Material:  
Trunnion: zinc plated steel



**Centre trunnion MT4 for P1D-T**



**Trunnion centred**  
The central trunnion for the P1D-S and P1D-T is ordered with letter D in position 17 (no dimension specified in positions 18-20).  
**Trunnion with optional location**  
The central trunnion for the P1D-S and P1D-T is ordered with letter G in position 17 and desired XV-measure (3-digit measure in mm) in positions 18-20.  
**Trunnion loose**  
P1D-S can also be ordered with the centre trunnion loosely fitted to the cylinder (not fixed in position). This allows the position to be established at the time of installation.  
Ordered with letter G in position 17 and 000 in positions 18-20.



According to ISO MT4, VDMA 24 562, AFNOR

Cyl. bore mm	TM	TL	TD	R	UW	UW	L1	L1	X1*	XV*	XV*	X2*	X2*
	h14 mm	h14 mm	e9 mm	mm	P1D-S mm	P1D-T mm	P1D-S mm	P1D-T mm	mm	P1D-S min mm	P1D-T min mm	P1D-S mm	P1D-T mm
32	50	12	12	1,0	52	46	18	15	73,0	89	62	57	84
40	63	16	16	1,6	59	59	20	20	82,5	95	73	70	92
50	75	16	16	1,6	71	69	20	20	90,0	113	81	67	99
63	90	20	20	1,6	84	84	26	25	97,5	118	90	78	106
80	110	20	20	1,6	105	102	26	25	110,0	132	98	88	122
100	132	25	25	2,0	129	125	32	30	120,0	140	111	100	129
125	160	25	25	2,0	159	155	33	32	145,0	168	132	122	158

XVstd = X1 + Stroke length/2, XVmax = X2 + Stroke length

\* Does not apply to cylinders with lock unit.

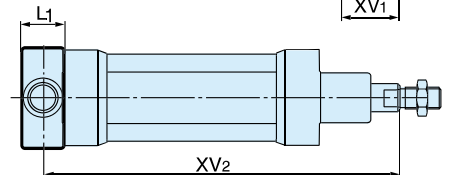
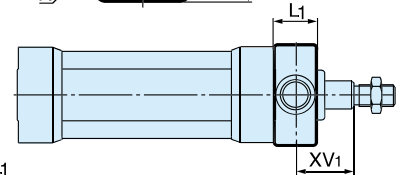
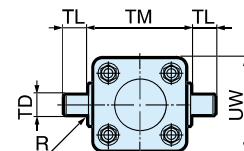
**Flange mounted trunnion MT5/MT6**



Intended for articulated mounting of cylinder. This trunnion can be flange mounted on the front or rear end cover of all P1D cylinders. At your choice, you can order a complete cylinder with factory-fitted flange mounted trunnion  
Individual trunnions have order code as shown below.

Material:  
Trunnion: zinc plated steel  
Screws: zinc plated steel, 8.8

Delivered complete with mounting screws for attachment to the cylinder



According to ISO MT4, VDMA 24 562, AFNOR

Cyl. bore mm	TM	TL	TD	R	UW	L1	XV <sub>1</sub> *	X*	Y	Weight Kg	Order code
	h14 mm	h14 mm	e9 mm	mm	mm	mm	mm	mm	mm		
32	50	12	12	1,0	46	14	19,5	126,5	11	0,17	<b>P1D-4KMYF</b>
40	63	16	16	1,6	59	19	21,0	144,0	14	0,43	<b>P1D-4LMYF</b>
50	75	16	16	1,6	69	19	28,0	152,0	20	0,55	<b>P1D-4MMYF</b>
63	90	20	20	1,6	84	24	25,5	169,5	20	1,10	<b>P1D-4NMYF</b>
80	110	20	20	1,6	102	24	34,5	185,5	26	1,66	<b>P1D-4PMYF</b>
100	132	25	25	2,0	125	29	37,0	203,0	31	3,00	<b>P1D-4QMYF</b>

XV<sub>2</sub> = X + Stroke length \* Does not apply to cylinders with lock unit.

To fit a flange mounted trunnion at the front end cover of a P1D cylinder with lock unit, the piston rod must be extended. This is to provide the same WH dimensions as for the P1D base cylinder with dimension Y.

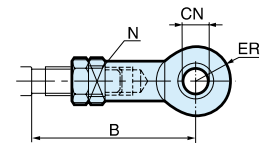
Piston rod mountings

Swivel rod eye AP6

Intended for articulated mounting of the cylinder.



Material:  
Swivel rod eye, nut: galvanized steel.  
Swivel bearing according to DIN 648K: Hardened steel.

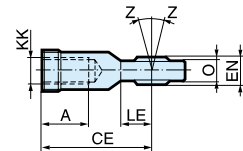


Stainless steel swivel rod eye AP6

Stainless-steel swivel rod eye for articulated mounting of eye cylinder.



Materials  
Swivel rod eye: Stainless steel  
Swivel bearing according to DIN 648K: Stainless steel  
Use stainless steel nut with stainless steel swivel rod eye.



ISO 8139

Cyl.- dia. mm	A mm	B min mm	B max mm	CE mm	CN H9 mm	EN h12 mm	ER mm	KK	LE	N* min mm	O mm	Z mm	Weight kg	Order code	Order code
														Galvanised Steel	Stainless Steel
32	20	48,0	55	43	10	14	14	M10x1,25	15	17	10,5	12°	0,08	<b>P1C-4KRS</b>	<b>P1S-4JRT</b>
40	22	56,0	62	50	12	16	16	M12x1,25	17	19	12,0	12°	0,12	<b>P1C-4LRS</b>	<b>P1S-4LRT</b>
50	28	72,0	80	64	16	21	21	M16x1,5	22	22	15,0	15°	0,25	<b>P1C-4MRS</b>	<b>P1S-4MRT</b>
63	28	72,0	80	64	16	21	21	M16x1,5	22	22	15,0	15°	0,25	<b>P1C-4MRS</b>	<b>P1S-4MRT</b>
80	33	87,0	97	77	20	25	25	M20x1,5	26	32	18,0	15°	0,46	<b>P1C-4PRS</b>	<b>P1S-4PRT</b>
100	33	87,0	97	77	20	25	25	M20x1,5	26	32	18,0	15°	0,46	<b>P1C-4PRS</b>	<b>P1S-4PRT</b>
125	51	123,5	137	110	30	37	35	M27x2	36	41	25,0	15°	1,28	<b>P1C-4RRS</b>	<b>P1S-4RRT</b>

\*key grip

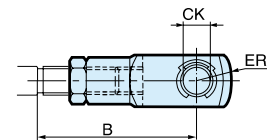
Clevis AP2

Intended for articulated mounting of the cylinder.



Material:  
Clevis and clip galvanized steel.  
Pin: Hardened steel

Supplied complete with axle.

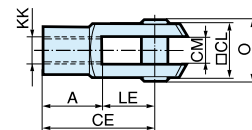


Stainless steel Clevis AP2

Stainless-steel clevis for articulated mounting of cylinder.



Material  
Clevis: Stainless steel  
Pin: Stainless steel  
Circlips according to DIN 471: Stainless steel  
Use stainless steel nut with stainless steel swivel rod eye.



ISO 8140

Cyl.- dia. mm	A mm	B min mm	B max mm	CE mm	CK mm	CL h11/E9 mm	CM mm	ER mm	KK	LE mm	O mm	Weight kg	Order code	Order code
													Galvanised Steel	Stainless Steel
32	20	45,0	52	40	10	20	10	16	M10x1,25	20	28,0	0,09	<b>P1C-4KRC</b>	<b>P1S-4JRD</b>
40	24	54,0	60	48	12	24	12	19	M12x1,25	24	32,0	0,15	<b>P1C-4LRC</b>	<b>P1S-4LRD</b>
50	32	72,0	80	64	16	32	16	25	M16x1,5	32	41,5	0,35	<b>P1C-4MRC</b>	<b>P1S-4MRD</b>
63	32	72,0	80	64	16	32	16	25	M16x1,5	32	41,5	0,35	<b>P1C-4MRC</b>	<b>P1S-4MRD</b>
80	40	90,0	100	80	20	40	20	32	M20x1,5	40	50,0	0,75	<b>P1C-4PRC</b>	<b>P1S-4PRD</b>
100	40	90,0	100	80	20	40	20	32	M20x1,5	40	50,0	0,75	<b>P1C-4PRC</b>	<b>P1S-4PRD</b>
125	56	123,5	137	110	30	55	30	45	M27x2,0	54,0	72,0	2,10	<b>P1C-4RRC</b>	<b>P1S-4RRD</b>

**Piston rod mountings**

**Flexo coupling PM5**



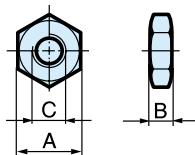
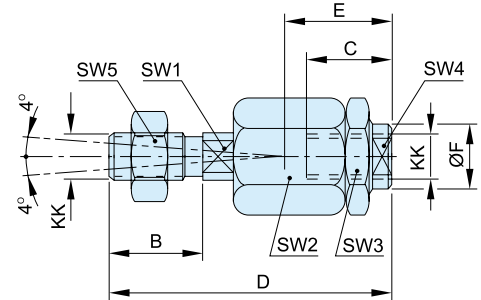
Flexo coupling for articulated mounting of piston rod. Flexo fitting is intended to take up axial angle errors within a range of ±4°.

Material  
Flexo coupling, nut: Zinc-plated steel

Supplied complete with galvanized adjustment nut.

Cyl. bore Ø mm	Weight kg	Order code
32	0,23	<b>P1C-4KRF</b>
40	0,23	<b>P1C-4LRF</b>
50	0,65	<b>P1C-4MRF</b>
63	0,65	<b>P1C-4MRF</b>
80	0,71	<b>P1C-4PRF</b>
100	0,71	<b>P1C-4PRF</b>
125	1,60	<b>P1C-4RRF</b>

Cyl. bore mm	KK mm	B mm	C mm	D mm	E mm	ØF mm	SW1 mm	SW2 mm	SW3 mm	SW4 mm	SW5 mm
32	M10x1.25	20	23	73	31	21	12	30	30	19	17
40	M12x1.25	24	23	77	31	21	12	30	30	19	19
50	M16x1.5	32	32	108	45	33.5	19	41	41	30	24
63	M16x1.5	32	32	108	45	33.5	19	41	41	30	24
80	M20x1.5	40	42	122	56	33.5	19	41	41	30	30
100	M20x1.5	40	42	122	56	33.5	19	41	41	30	30
125	M27x2	54	48	147	51	39	24	55	55	32	41



According to DIN 439 B

Cyl. bore mm	A mm	B mm	C	Weight Kg	Order code
32	17	5,0	M10x1,25	0,007	<b>P14-4KRPZ</b>
40	19	6,0	M12x1,25	0,010	<b>P14-4LRPZ</b>
50	24	8,0	M16x1,5	0,021	<b>P14-4MRPZ</b>
63	24	8,0	M16x1,5	0,021	<b>P14-4MRPZ</b>
80	30	10,0	M20x1,5	0,040	<b>P14-4PRPZ</b>
100	30	10,0	M20x1,5	0,040	<b>P14-4PRPZ</b>
125	30	10,0	M27x2	0,100	<b>P14-4RRPZ</b>
32	17	5,0	M10x1,25	0,007	<b>P14-4KRPS</b>
40	19	6,0	M12x1,25	0,010	<b>P14-4LRPS</b>
50	24	8,0	M16x1,5	0,021	<b>P14-4MRPS</b>
63	24	8,0	M16x1,5	0,021	<b>P14-4MRPS</b>
80	30	10,0	M20x1,5	0,040	<b>P14-4PRPS</b>
100	30	10,0	M20x1,5	0,040	<b>P14-4PRPS</b>
125	30	10,0	M27x2	0,100	<b>P14-4RRPS</b>
32	17	5,0	M10x1,25	0,007	<b>P14-4KRPX</b>
40	19	6,0	M12x1,25	0,010	<b>P14-4LRPX</b>
50	24	8,0	M16x1,5	0,021	<b>P14-4MRPX</b>
63	24	8,0	M16x1,5	0,021	<b>P14-4MRPX</b>
80	30	10,0	M20x1,5	0,040	<b>P14-4PRPX</b>
100	30	10,0	M20x1,5	0,040	<b>P14-4PRPX</b>
125	30	10,0	M27x2	0,100	<b>P14-4RRPX</b>

Supplied as pack of 10 off, Weight per item

**Nut MR9**



Intended for fixed mounting of accessories to the piston rod.  
Material: Zinc-plated steel

All P1D cylinders are delivered with a zinc-plated steel piston rod nut, except P1D Ultra Clean, which is delivered with a stainless steel piston rod nut instead.

**Stainless steel nut**



Intended for fixed mounting of accessories to the piston rod.

Material: Stainless steel A2

All P1D cylinders are delivered with a zinc-plated steel piston rod nut, except P1D Ultra Clean, which is delivered with a stainless steel piston rod nut instead.

**Acid-proof nut**



Intended for fixed mounting of accessories to the piston rod.

Material: Acid-proof steel A4

Cylinders with acid-proof piston rod are supplied with nut of acid-proof steel

**Sealing plugs**



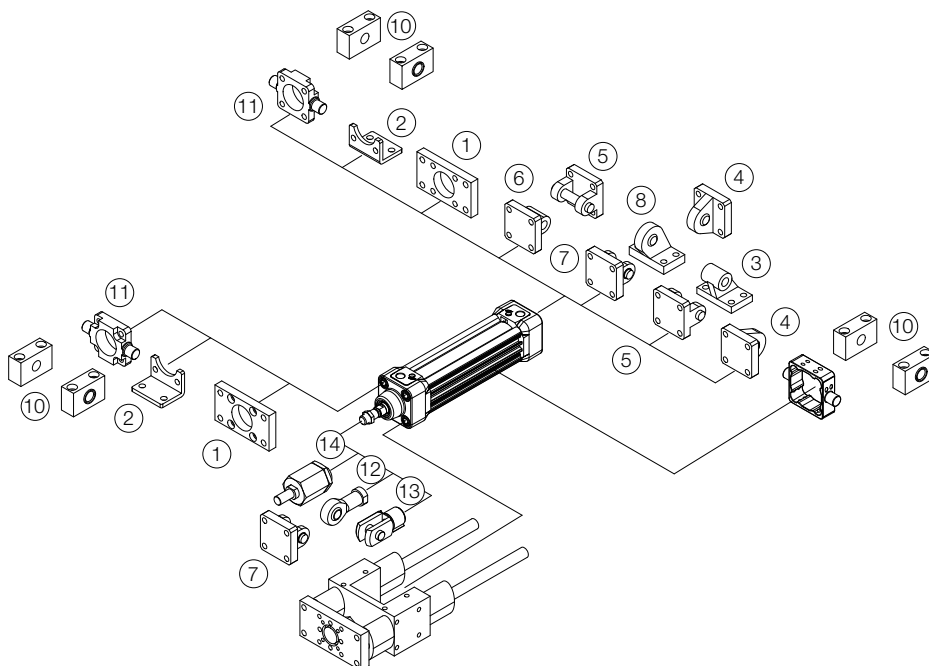
Set of 4 threaded plugs to be fitted in unused end cover screws. A rubber gasket is supplied with every plug. The seal off function is equal to IP67. The plugs can be used for all P1D cylinders to avoid collecting dirt and fluids in the end cover screw recesses.

Material:  
Plug Polyamid PA  
Gasket Nitrile rubber

4 pcs per pack

Cyl.	Weight Kg	Order code
32	0,01	<b>460104801</b>
40	0,01	<b>460104801</b>
50	0,02	<b>460104802</b>
63	0,02	<b>460104802</b>
80	0,02	<b>460104803</b>
100	0,02	<b>460104803</b>
125	0,03	<b>460104804</b>

	Flange MF1/MF2 <sup>1</sup>	Foot brackets MS1 <sup>2</sup>	Pivot bracket with rigid bearing AB7 <sup>3</sup>	Swivel eye bracket <sup>4</sup> MP6	Clevis bracket MP2 <sup>5</sup>
Ø 32	P1C-4KMB	P1C-4KMF	P1C-4KMD	P1C-4KMSA	P1C-4KMT
Ø 40	P1C-4LMB	P1C-4LMF	P1C-4LMD	P1C-4LMSA	P1C-4LMT
Ø 50	P1C-4MMB	P1C-4MMF	P1C-4MMD	P1C-4MMSA	P1C-4MMT
Ø 63	P1C-4NMB	P1C-4NMF	P1C-4NMD	P1C-4NMSA	P1C-4NMT
Ø 80	P1C-4PMB	P1C-4PMF	P1C-4PMD	P1C-4PMSA	P1C-4PMT
Ø 100	P1C-4QMB	P1C-4QMF	P1C-4QMD	P1C-4QMSA	P1C-4QMT
Ø 125	P1C-4RMB	P1C-4RMF	P1C-4RMD	P1C-4RMSA	P1C-4RMT
	Clevis bracket MP4 <sup>6</sup>	Clevis bracket AB6 <sup>7</sup>	Pivot bracket with swivel bearing AB5 <sup>8</sup>	3 and 4 positions flange	Pivot brackets AT4 <sup>10</sup> for MT4
Ø 32	P1C-4KME	P1C-4KMCA	P1C-4KMA	P1E-6KB0	9301054261
Ø 40	P1C-4LME	P1C-4LMCA	P1C-4LMA	P1E-6LB0	9301054262
Ø 50	P1C-4MME	P1C-4MMCA	P1C-4MMA	P1E-6MB0	9301054262
Ø 63	P1C-4NME	P1C-4NMCA	P1C-4NMA	P1E-6NB0	9301054264
Ø 80	P1C-4PME	P1C-4PMCA	P1C-4PMA	P1E-6PB0	9301054264
Ø 100	P1C-4QME	P1C-4QMCA	P1C-4QMA	P1E-6QB0	9301054266
Ø 125	P1C-4RME	P1C-4RMCA	P1C-4RMA		9301054266
	Flange mounting trunnion MT5/MT6 <sup>11</sup>	Swivel rod eye AP6 <sup>12</sup>	Clevis AP2 <sup>13</sup>	Flexo coupling PM5 <sup>14</sup>	Nut MR9
Ø 32	P1D-4KMYF	P1C-4KRS	P1C-4KRC	P1C-4KRF	9128985601
Ø 40	P1D-4LMYF	P1C-4LRS	P1C-4LRC	P1C-4LRF	0261109910
Ø 50	P1D-4MMYF	P1C-4MRS	P1C-4MRC	P1C-4MRF	9128985603
Ø 63	P1D-4NMYF	P1C-4MRS	P1C-4MRC	P1C-4MRF	9128985603
Ø 80	P1D-4PMYF	P1C-4PRS	P1C-4PRC	P1C-4PRF	0261109911
Ø 100	P1D-4QMYF	P1C-4PRS	P1C-4PRC	P1C-4PRF	0261109911
Ø 125		P1C-4RRS	P1C-4RRC	P1C-4RRF	0261109912



# P1D-B Pneumatic Cylinders

According to ISO 15552



**P1D-B series.** This series features a profile design and is the basic ISO cylinder for simple applications where no special options are required. This series is suitable for general industrial applications

- Available in 32 to 125 mm bores
- PUR seals for long service life
- Drop-in sensors
- Corrosion resistant design
- Magnetic piston as standard
- Lubricated with food grade grease



## P1D-B Basic Cylinders

The P1D-B series features a profile design and is the value line ISO cylinder for basic applications where no special options are required. This series is suitable for general industrial applications and is supported by a full range of ISO mountings.

- Available in 32 to 125 mm bores
- PUR seals for long service life
- Drop-in sensors
- Corrosion resistant design
- Magnetic piston as standard
- Lubricated with food grade grease



### Operating information

Working pressure: Max 10 bar  
Standard Temperature: -20°C to +80°C

For more information see [www.parker.com/euro\\_pneumatic](http://www.parker.com/euro_pneumatic)

### P1D-B Basic - Double acting

#### Ø32mm - (G<sup>1</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-B032MS-0025
40	P1D-B032MS-0040
50	P1D-B032MS-0050
80	P1D-B032MS-0080
100	P1D-B032MS-0100
125	P1D-B032MS-0125
160	P1D-B032MS-0160
200	P1D-B032MS-0200
250	P1D-B032MS-0250
320	P1D-B032MS-0320
400	P1D-B032MS-0400
500	P1D-B032MS-0500

#### Ø63mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-B063MS-0025
40	P1D-B063MS-0040
50	P1D-B063MS-0050
80	P1D-B063MS-0080
100	P1D-B063MS-0100
125	P1D-B063MS-0125
160	P1D-B063MS-0160
200	P1D-B063MS-0200
250	P1D-B063MS-0250
320	P1D-B063MS-0320
400	P1D-B063MS-0400
500	P1D-B063MS-0500

#### Ø100mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-B100MS-0025
40	P1D-B100MS-0040
50	P1D-B100MS-0050
80	P1D-B100MS-0080
100	P1D-B100MS-0100
125	P1D-B100MS-0125
160	P1D-B100MS-0160
200	P1D-B100MS-0200
250	P1D-B100MS-0250
320	P1D-B100MS-0320
400	P1D-B100MS-0400
500	P1D-B100MS-0500

#### Ø40mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-B040MS-0025
40	P1D-B040MS-0040
50	P1D-B040MS-0050
80	P1D-B040MS-0080
100	P1D-B040MS-0100
125	P1D-B040MS-0125
160	P1D-B040MS-0160
200	P1D-B040MS-0200
250	P1D-B040MS-0250
320	P1D-B040MS-0320
400	P1D-B040MS-0400
500	P1D-B040MS-0500

#### Ø80mm - (G<sup>3</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-B080MS-0025
40	P1D-B080MS-0040
50	P1D-B080MS-0050
80	P1D-B080MS-0080
100	P1D-B080MS-0100
125	P1D-B080MS-0125
160	P1D-B080MS-0160
200	P1D-B080MS-0200
250	P1D-B080MS-0250
320	P1D-B080MS-0320
400	P1D-B080MS-0400
500	P1D-B080MS-0500

#### Ø125mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-B125MS-0025
40	P1D-B125MS-0040
50	P1D-B125MS-0050
80	P1D-B125MS-0080
100	P1D-B125MS-0100
125	P1D-B125MS-0125
160	P1D-B125MS-0160
200	P1D-B125MS-0200
250	P1D-B125MS-0250
320	P1D-B125MS-0320
400	P1D-B125MS-0400
500	P1D-B125MS-0500

#### Ø50mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-B050MS-0025
40	P1D-B050MS-0040
50	P1D-B050MS-0050
80	P1D-B050MS-0080
100	P1D-B050MS-0100
125	P1D-B050MS-0125
160	P1D-B050MS-0160
200	P1D-B050MS-0200
250	P1D-B050MS-0250
320	P1D-B050MS-0320
400	P1D-B050MS-0400
500	P1D-B050MS-0500

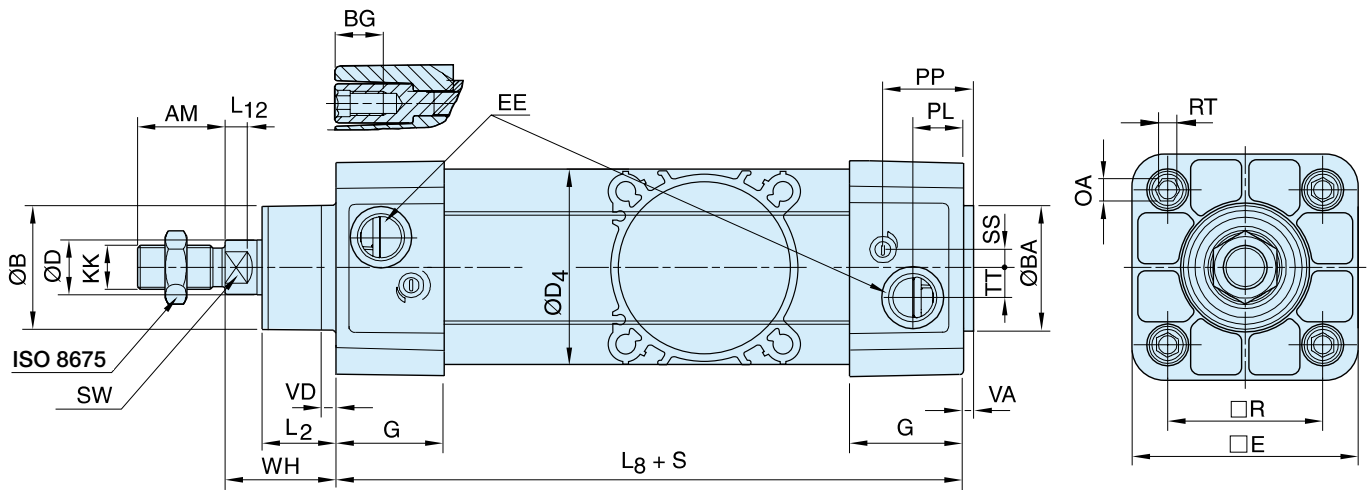
The cylinders are supplied complete with a zinc plated steel piston rod nut.

#### Sensors



For sensors see page 78.

P1D-B Series dimensions



Dimensions

Cylinder bore mm	AM mm	B mm	BA mm	BG mm	D mm	D4 mm	E mm	EE mm	G mm	KK	L2 mm	L8 mm	L12 mm
32	22	30	30	16	12	45,0	48,0	G1/8	28,5	M10x1,25	16,8	94	6,0
40	24	35	35	16	16	52,0	53,5	G1/4	33,0	M12x1,25	19,0	105	6,5
50	32	40	40	16	20	60,7	65,2	G1/4	33,5	M16x1,5	24,0	106	8,0
63	32	45	45	16	20	71,5	75,5	G3/8	39,5	M16x1,5	24,3	121	8,0
80	40	45	45	17	25	86,7	95,0	G3/8	39,5	M20x1,5	30,0	128	10,0
100	40	55	55	17	25	106,7	114,0	G1/2	44,5	M20x1,5	34,0	138	14,0
125	54	60	60	20	32	134,0	139,0	G1/2	51,0	M27x2	45,0	160	18,0

Cylinder bore mm	OA mm	PL mm	PP mm	R mm	RT	SS mm	SW mm	TT mm	VA mm	VD mm	WH mm
32	6,0	14,0	24,2	32,5	M6	5,5	10	4,2	3,5	4,5	26
40	6,0	16,0	27,5	38,0	M6	8,0	13	5,5	3,5	4,5	30
50	8,0	14,0	29,3	46,5	M8	9,0	17	7,5	3,5	4,5	37
63	8,0	16,6	30,8	56,5	M8	6,5	17	10,0	3,5	4,5	37
80	6,0	16,8	33,5	72,0	M10	0	22	11,5	3,5	4,5	46
100	6,0	20,5	37,5	89,0	M10	0	22	14,5	3,5	4,5	51
125	8,0	23,3	45,8	110,0	M12	0	27	15,0	5,5	6,5	65

S=Stroke

Tolerances

Cylinder bore mm	B	BA	L <sub>3</sub> mm	L <sub>9</sub> mm	R mm	Stroke tolerance up to stroke 500 mm	Stroke tolerance for stroke over 500 mm
32	d11	d11	±0,4	±2	±0,5	+0,3/+2,0	+0,3/+3,0
40	d11	d11	±0,7	±2	±0,5	+0,3/+2,0	+0,3/+3,0
50	d11	d11	±0,7	±2	±0,6	+0,3/+2,0	+0,3/+3,0
63	d11	d11	±0,8	±2	±0,7	+0,3/+2,0	+0,3/+3,0
80	d11	d11	±0,8	±3	±0,7	+0,3/+2,0	+0,3/+3,0
100	d11	d11	±1,0	±3	±0,7	+0,3/+2,0	+0,3/+3,0
125	d11	d11	±1,0	±3	±1,1	+0,3/+2,0	+0,3/+3,0

**Cylinder mountings**

**Flange MF1/MF2**



Intended for fixed mounting of cylinder. Flange can be fitted to front or rear end cover of cylinder.

Materials  
Flange: Surface-treated steel  
Mounting screws acc. to DIN 6912: Zinc-plated steel 8.8

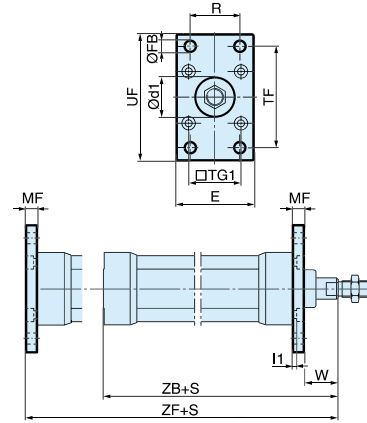
Supplied complete with mounting screws for attachment to cylinder.

According to ISO MF1/MF2, VDMA 24 562, AFNOR

Cyl. bore mm	d1 mm	FB mm	TG1 mm	E mm	R mm	MF JS14 mm	TF JS14 mm	UF JS14 mm	l1 mm	W mm	ZF mm	ZB mm
32	30	7	32,5	45	32	10	64	80	5,0	16	130	123,5
40	35	9	38,0	52	36	10	72	90	5,0	20	145	138,5
50	40	9	46,5	65	45	12	90	110	6,5	25	155	146,5
63	45	9	56,5	75	50	12	100	120	6,5	25	170	161,5
80	45	12	72,0	95	63	16	126	150	8,0	30	190	177,5
100	55	14	89,0	115	75	16	150	170	8,0	35	205	192,5
125	60	16	110,0	140	90	20	180	205	10,5	45	245	230,5

S = Stroke length

Cyl. bore Ø mm	Weight kg	Order code
32	0,23	<b>P1C-4KMB</b>
40	0,28	<b>P1C-4LMB</b>
50	0,53	<b>P1C-4MMB</b>
63	0,71	<b>P1C-4NMB</b>
80	1,59	<b>P1C-4PMB</b>
100	2,19	<b>P1C-4QMB</b>
125	3,78	<b>P1C-4RMB</b>



**Foot brackets MS1**



Intended for fixed mounting of cylinder. Foot bracket can be fitted to front and rear end covers of cylinder.

Material:  
Foot bracket: Surface treated steel  
Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied in pairs with mounting screws for attachment to cylinder.

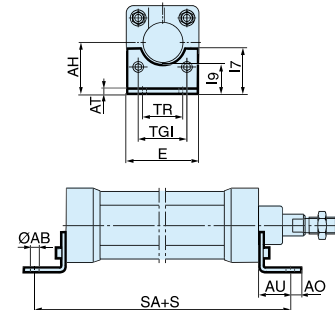
According to ISO MS1, VDMA 24 562, AFNOR

Cyl. bore mm	AB mm	TG1 mm	E mm	TR mm	AO mm	AU mm	AH mm	l7 mm	AT mm	l9 mm	SA mm
32	7	32,5	47	32	8	24	32	30	4,5	17,0	142
40	9	38,0	53	36	10	28	36	30	4,5	18,5	161
50	9	46,5	65	45	10	32	45	36	5,5	25,0	170
63	9	56,5	75	50	10	32	50	35	5,5	27,5	185
80	12	72,0	95	63	14	41	63	49	6,5	40,5	210
100	14	89,0	115	75	15	41	71	54	6,5	43,5	220
125	16	110,0	140	90	20	45	90	71	8,0	60,0	250

S = Stroke length

Cyl. bore Ø mm	Weight kg	Order code
32	0,06**	<b>P1C-4KMF</b>
40	0,08**	<b>P1C-4LMF</b>
50	0,16**	<b>P1C-4MMF</b>
63	0,25**	<b>P1C-4NMF</b>
80	0,50**	<b>P1C-4PMF</b>
100	0,85**	<b>P1C-4QMF</b>
125	1,48**	<b>P1C-4RMF</b>

\*\* Weight per item



**Pivot bracket with rigid bearing AB6**



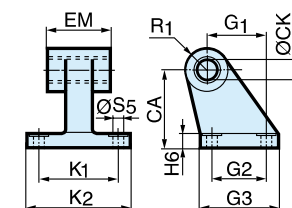
Intended for flexible mounting of cylinder. The pivot bracket can be combined with clevis bracket MP2.

Material:  
Pivot bracket: Aluminium  
Bearing: Sintered oil-bronze bushing

According to CETOP RP 107 P, VDMA 24 562, AFNOR

Cyl. bore mm	CK mm	S5 mm	K1 mm	K2 mm	G1 JS14 mm	G2 JS14 mm	EM mm	G3 mm	CA mm	H6 mm	R1 mm
32	10	6,6	38	51	21	18	25,5	31	32	8	10,0
40	12	6,6	41	54	24	22	27,0	35	36	10	11,0
50	12	9,0	50	65	33	30	31,0	45	45	12	13,0
63	16	9,0	52	67	37	35	39,0	50	50	12	15,0
80	16	11,0	66	86	47	40	49,0	60	63	14	15,0
100	20	11,0	76	96	55	50	59,0	70	71	15	19,0
125	25	14,0	94	124	70	60	69,0	90	90	20	22,5

Cyl. bore Ø mm	Weight kg	Order code
32	0,06	<b>P1C-4KMDB</b>
40	0,08	<b>P1C-4LMDB</b>
50	0,15	<b>P1C-4MMDB</b>
63	0,20	<b>P1C-4NMDB</b>
80	0,33	<b>P1C-4PMDB</b>
100	0,49	<b>P1C-4QMDB</b>
125	1,02	<b>P1C-4RMDB</b>



**Cylinder mountings**

**Swivel eye bracket MP6**

Intended for use together with clevis bracket GA



Material:  
Bracket: Aluminium  
Swivel bearing acc. to DIN 648K: Hardened steel

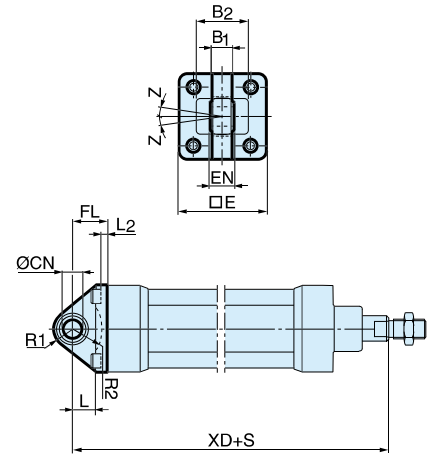
Supplied complete with mounting screws for attachment to cylinder.

Cyl. bore Ø mm	Weight kg	Order code
32	0,08	<b>PD23843</b>
40	0,11	<b>PD23844</b>
50	0,20	<b>PD23845</b>
63	0,27	<b>PD23846</b>
80	0,52	<b>PD23847</b>
100	0,72	<b>PD23848</b>
125	1,53	<b>PD23849</b>

According to VDMA 24 562, AFNOR

Cyl. bore mm	E mm	B1 mm	B2 mm	EN mm	R1 mm	R2 mm	FL mm	I2 mm	L mm	CN H7 mm	XD mm	Z °
32	47	10,5	-	14	16	12	22	6,0	12	10	142	4°
40	55	12,0	-	16	21	14	25	6,0	15	12	160	4°
50	65	12,0	51	16	23	16	27	7,0	15	12	170	4°
63	78	15,0	-	21	27	19	32	7,0	20	16	190	4°
80	95	15,0	-	21	29	21	36	10,0	20	16	210	4°
100	115	18,0	-	25	34	24	41	10,0	25	20	230	4°
125	140	22,0	-	31	40	30	50	10,5	30	25	275	4°

S = Stroke length



**Clevis bracket MP2**

Intended for flexible mounting of cylinder. Clevis bracket MP2 can be combined with clevis bracket MP4.



Material:  
Clevis bracket: Aluminium  
Pin: Surface hardened steel  
Circlips according to DIN 471: Spring steel  
Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

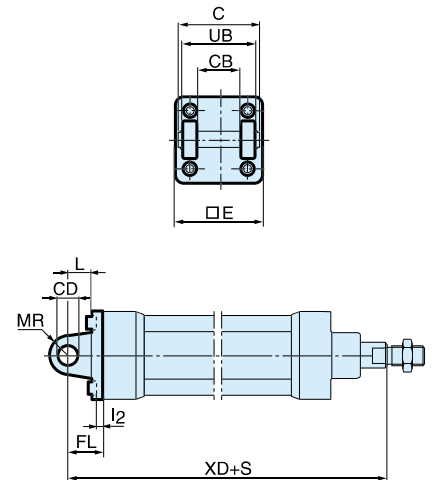
Supplied complete with mounting screws for attachment to cylinder.

Cyl. bore Ø mm	Weight kg	Order code
32	0,08	<b>P1C-4KMTB</b>
40	0,11	<b>P1C-4LMTB</b>
50	0,14	<b>P1C-4MMTB</b>
63	0,29	<b>P1C-4NMTB</b>
80	0,36	<b>P1C-4PMTB</b>
100	0,64	<b>P1C-4QMTB</b>
125	1,17	<b>P1C-4RMTB</b>

According to ISO MP2, VDMA 24 562, AFNOR

Cyl. bore mm	C mm	E mm	UB h14 mm	CB H14 mm	FL ±0,2 mm	L mm	I2 mm	CD H9 mm	MR mm	XD mm
32	53	47	45	26	22	13	6,0	10	10	142
40	60	55	52	28	25	16	6,0	12	12	160
50	68	65	60	32	27	16	7,0	12	12	170
63	78	78	70	40	32	21	7,0	16	16	190
80	98	95	90	50	36	22	10,0	16	16	210
100	118	115	110	60	41	27	10,5	20	20	230
125	139	140	130	70	50	30	10,5	25	25	275

S = Stroke length



**Cylinder mountings**

**Clevis bracket MP4**



Intended for flexible mounting of cylinder. Clevis bracket MP4 can be combined with clevis bracket MP2.

Material:  
Clevis bracket: Aluminium  
Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

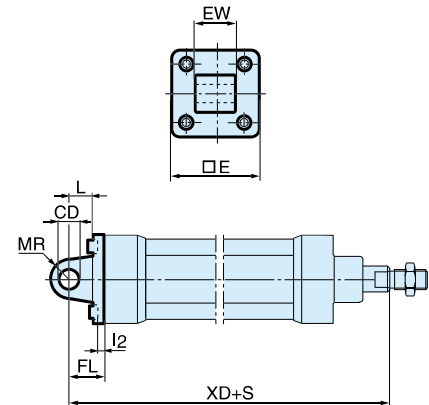
Supplied complete with mounting screws for attachment to cylinder.

Cyl. bore Ø mm	Weight kg	Order code
32	0,09	<b>PD23412</b>
40	0,13	<b>PD23413</b>
50	0,17	<b>PD23414</b>
63	0,36	<b>PD23415</b>
80	0,46	<b>PD23416</b>
100	0,83	<b>PD23417</b>
125	1,53	<b>PD23418</b>

According to ISO MP4, VDMA 24 562, AFNOR

Cyl. bore mm	E mm	EW mm	FL mm	L ±0,2 mm	I2 mm	CD mm	MR H9 mm	XD mm
32	47	26	22	13	6,0	10	10	142
40	55	28	25	16	6,0	12	12	160
50	65	32	27	16	7,0	12	12	170
63	78	40	32	21	7,0	16	16	190
80	95	50	36	22	10,0	16	16	210
100	115	60	41	27	10,5	20	20	230
125	140	70	50	30	10,5	25	25	275

S = Stroke length



**Clevis bracket AB6**



Intended for flexible mounting of cylinder. Clevis bracket GA can be combined with pivot bracket with swivel bearing, swivel eye bracket and swivel rod eye.

Material:  
Clevis bracket: Surface-treated aluminium  
Pin: Surface hardened steel  
Locking pin: Spring steel  
Circlips according to DIN 471: Spring steel  
Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

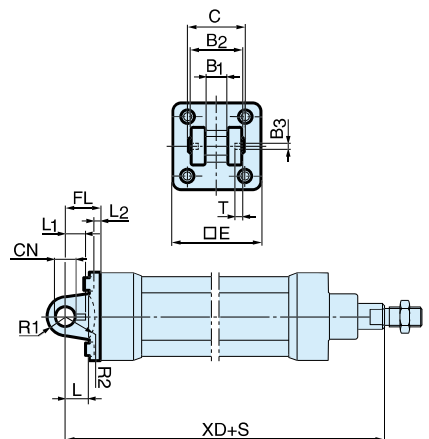
Supplied complete with mounting screws for attachment to cylinder.

Cyl. bore Ø mm	Weight kg	Order code
32	0,09	<b>P1C-4KMCB</b>
40	0,13	<b>P1C-4LMCB</b>
50	0,17	<b>P1C-4MMCB</b>
63	0,36	<b>P1C-4NMCB</b>
80	0,58	<b>P1C-4PMCB</b>
100	0,89	<b>P1C-4QMCB</b>
125	1,75	<b>P1C-4RMCB</b>

According to VDMA 24 562, AFNOR

Cyl. bore mm	C mm	E mm	B2 d12 mm	B1 H14 mm	T mm	B3 mm	R2 mm	L1 mm	FL ±0,2 mm	I2 mm	L mm	CN F7 mm	R1 mm	XD mm
32	41	45	34	14	3	3,3	17	11,5	22	5,5	12	10	11	142
40	48	55	40	16	4	4,3	20	12,0	25	5,5	15	12	13	160
50	54	65	45	21	4	4,3	22	14,0	27	6,5	17	16	18	170
63	60	75	51	21	4	4,3	25	14,0	32	6,5	20	16	18	190
80	75	95	65	25	4	4,3	30	16,0	36	10,0	20	20	22	210
100	85	115	75	25	4	4,3	32	16,0	41	10,0	25	20	22	230
125	110	140	97	37	6	6,3	42	24,0	50	10,0	30	30	30	275

S = Stroke length



**Cylinder mountings**

**Pivot bracket with swivel bearing AB5**



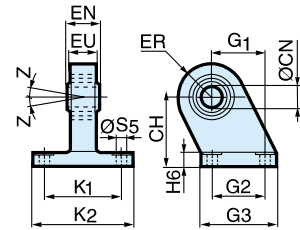
Intended for use together with clevis bracket GA.

Material:  
Pivot bracket: Surface-treated steel  
Swivel bearing acc. to DIN 648K: Hardened steel

According to VDMA 24 562, AFNOR

Cyl. bore mm	CN H7 mm	S5 H13 mm	K1 JS14 mm	K2 mm	EU mm	G1 JS14 mm	G2 JS14 mm	EN mm	G3 mm	CH JS15 mm	H6 mm	ER mm	Z °
32	10	6,6	38	51	10,5	21	18	14	31	32	10	16	4°
40	12	6,6	41	54	12,0	24	22	16	35	36	10	18	4°
50	16	9,0	50	65	15,0	33	30	21	45	45	12	21	4°
63	16	9,0	52	67	15,0	37	35	21	50	50	12	23	4°
80	20	11,0	66	86	18,0	47	40	25	60	63	14	28	4°
100	20	11,0	76	96	18,0	55	50	25	70	71	15	30	4°
125	30	14,0	94	124	25,0	70	60	37	90	90	20	40	4°

Cyl. bore Ø mm	Weight kg	Order code
32	0,18	<b>KC5130</b>
40	0,25	<b>KC5131</b>
50	0,47	<b>KC5132</b>
63	0,57	<b>KC5133</b>
80	1,05	<b>KC5134</b>
100	1,42	<b>KC5135</b>
125	3,10	<b>KC5136</b>



**3 and 4 positions flange**

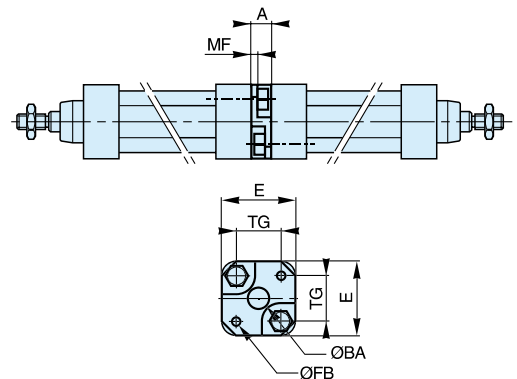


Mounting kit for back to back mounted cylinders, 3 and 4 position cylinders.

Material:  
Mounting: Aluminium  
Mounting screws: Zinc-plated steel 8.8

Cyl. bore mm	E mm	TG mm	ØFB mm	MF mm	A mm	ØBA mm
32	50	32,5	6,5	5	16	30
40	60	38,0	6,5	5	16	35
50	66	46,5	8,5	6	20	40
63	80	56,5	8,5	6	20	45
80	100	72,0	10,5	8	25	45
100	118	89,0	10,5	8	25	55

Cyl. bore Ø mm	Weight kg	Order code
32	0,09	<b>P1E-6KB0</b>
40	0,13	<b>P1E-6LB0</b>
50	0,17	<b>P1E-6MB0</b>
63	0,36	<b>P1E-6NB0</b>
80	0,46	<b>P1E-6PB0</b>
100	0,83	<b>P1E-6QB0</b>



**Pivot brackets AT4 for MT4**



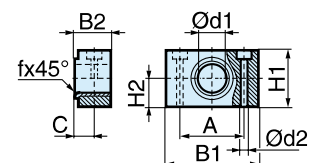
Intended for use together with centre trunnion MT4.

Material:  
Pivot bracket: Aluminium  
Bearing: Composite

Supplied in pairs.

Cyl. bore mm	B1 mm	B2 mm	A mm	C mm	d1 mm	d2 H13 mm	H1 mm	H2 mm	fx45° min
32	55	20	36	10,5	12	8,4	26	13	1,0
40	55	20	36	12,0	16	8,4	26	13	1,6
50	55	20	36	12,0	16	8,4	26	13	1,6
63	65	25	42	13,0	20	10,5	30	15	1,6
80	65	25	42	13,0	20	10,5	30	15	1,6
100	75	28	50	16,0	25	13,0	40	20	2,0
125	75	28	50	16,0	25	13,0	40	20	2,0

Cyl. bore Ø mm	Weight kg	Order code
32	0,06	<b>PD23381</b>
40	0,06	<b>PD23382</b>
50	0,06	<b>PD23382</b>
63	0,10	<b>PD23383</b>
80	0,10	<b>PD23383</b>
100	0,175	<b>PD23384</b>
125	0,175	<b>PD23384</b>



**Cylinder mountings**

**Centre trunnion MT4**



Intended for articulated mounting of cylinder. The trunnion is factory-fitted in the centre of the cylinder or at an optional location specified by the XV-measure - Combined with pivot bracket for MT4.

Material:  
Trunnion: Zinc plated steel

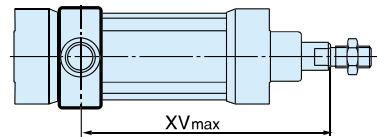
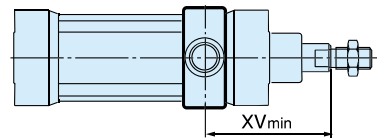
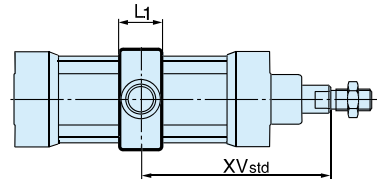
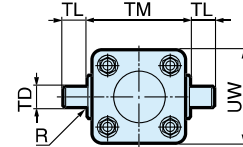
**Trunnion centred**

The central trunnion for the P1D-B is ordered with letter D in position 17 (no dimension specified in positions 18-20). e.g. P1D-B100MS-0500NDNNN

**Trunnion with optional location**

The central trunnion for the P1D-B is ordered with letter G in position 17 and desired XV-measure (3-digit measure in mm) in positions 18-20. e.g. P1D-B100MS-0500NG300  
Material: nodular graphite cast iron, passivated steel

Cyl. bore Ø mm	Weight kg	Order code
32	0,13	<b>See CD</b>
40	0,31	
50	0,37	
63	0,69	
80	0,89	
100	1,58	
125	2,60	



According to ISO MT4, VDMA 24 562, AFNOR

Cyl. bore mm	TM h14 mm	TL h14 mm	TD e9 mm	R mm	UW mm	L1 mm	X1* mm	XV <sub>min</sub> mm	X2 mm
32	50	12	12	1,0	52	18	73,0	89	57
40	63	16	16	1,6	59	20	82,5	95	70
50	75	16	16	1,6	71	20	90,0	113	67
63	90	20	20	1,6	84	26	97,5	118	78
80	110	20	20	1,6	105	26	110,0	132	88
100	132	25	25	2,0	129	32	120,0	140	100
125	160	25	25	2,0	159	33	145,0	168	122

XVstd = X1 + Stroke length/2, XVmax = X2 + Stroke length

**Flange mounted trunnion MT5/MT6**

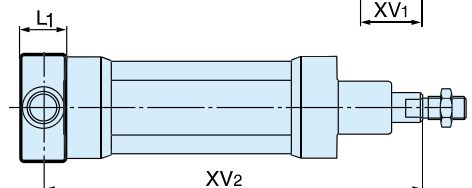
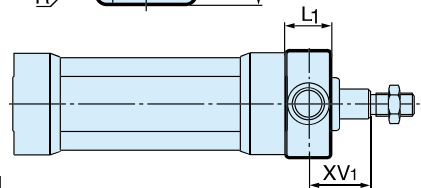
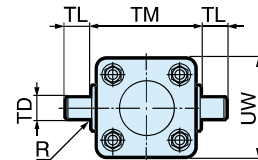


Intended for articulated mounting of cylinder. This trunnion can be flange mounted on the front or rear end cover of all P1D cylinders.  
Individual trunnions have order code as shown to the right.

Material:  
Trunnion: zinc plated steel  
Screws: zinc plated steel, 8.8

Delivered complete with mounting screws for attachment to the cylinder

Cyl. bore Ø mm	Weight kg	Order code
32	0,17	<b>P1D-4KMYF</b>
40	0,43	<b>P1D-4LMYF</b>
50	0,55	<b>P1D-4MMYF</b>
63	1,10	<b>P1D-4NMYF</b>
80	1,66	<b>P1D-4PMYF</b>
100	3,00	<b>P1D-4QMYF</b>



According to ISO MT4, VDMA 24 562, AFNOR

Cyl. bore mm	TM h14 mm	TL h14 mm	TD e9 mm	R mm	UW mm	L1 mm	XV <sub>1</sub> mm	X mm	Y mm
32	50	12	12	1,0	46	14	19,5	126,5	11
40	63	16	16	1,6	59	19	21,0	144,0	14
50	75	16	16	1,6	69	19	28,0	152,0	20
63	90	20	20	1,6	84	24	25,5	169,5	20
80	110	20	20	1,6	102	24	34,5	185,5	26
100	132	25	25	2,0	125	29	37,0	203,0	31

**Piston rod mountings**

**Swivel rod eye AP6**



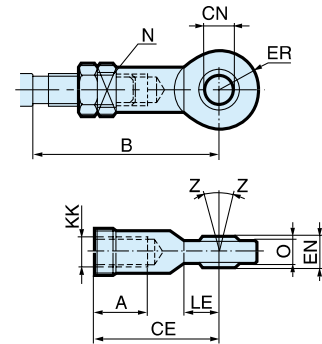
Swivel rod eye for articulated mounting of cylinder. Swivel rod eye can be combined with clevis bracket GA. Maintenance-free.

Material:  
Swivel rod eye: Zinc-plated steel  
Swivel bearing according to DIN 648K: Hardened steel

Cyl. bore Ø mm	Weight kg	Order code
32	0,08	<b>P1C-4KRS</b>
40	0,12	<b>P1C-4LRS</b>
50	0,25	<b>P1C-4MRS</b>
63	0,25	<b>P1C-4MRS</b>
80	0,46	<b>P1C-4PRS</b>
100	0,46	<b>P1C-4PRS</b>
125	1,28	<b>P1C-4RRS</b>

According to ISO 8139

Cyl. bore mm	A mm	B min mm	B max mm	CE mm	CN mm	EN h9 mm	ER h12 mm	KK mm	LE min mm	N mm	O mm	Z mm	°
32	20	48,0	55	43	10	14	14	M10x1,25	15	17	10,5	12°	
40	22	56,0	62	50	12	16	16	M12x1,25	17	19	12,0	12°	
50	28	72,0	80	64	16	21	21	M16x1,5	22	22	15,0	15°	
63	28	72,0	80	64	16	21	21	M16x1,5	22	22	15,0	15°	
80	33	87,0	97	77	20	25	25	M20x1,5	26	32	18,0	15°	
100	33	87,0	97	77	20	25	25	M20x1,5	26	32	18,0	15°	
125	51	123,5	137	110	30	37	35	M27x2	36	41	25,0	15°	



**Clevis AP2**



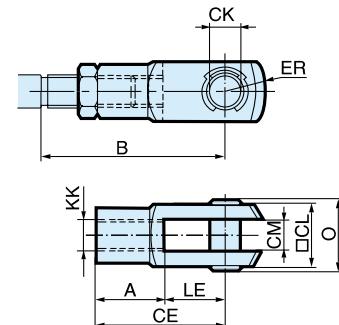
Clevis for articulated mounting of cylinder.

Material:  
Clevis, clip: Galvanized steel  
Pin: Hardened steel

Cyl. bore Ø mm	Weight kg	Order code
32	0,09	<b>P1C-4KRC</b>
40	0,15	<b>P1C-4LRC</b>
50	0,35	<b>P1C-4MRC</b>
63	0,35	<b>P1C-4MRC</b>
80	0,75	<b>P1C-4PRC</b>
100	0,75	<b>P1C-4PRC</b>
125	2,10	<b>P1C-4RRC</b>

According to ISO 8140

Cyl. bore mm	A mm	B min mm	B max mm	CE mm	CK h11/E9 mm	CL mm	CM mm	ER mm	KK mm	LE mm	O mm
32	20	45,0	52	40	10	20	10	16	M10x1,25	20	28,0
40	24	54,0	60	48	12	24	12	19	M12x1,25	24	32,0
50	32	72,0	80	64	16	32	16	25	M16x1,5	32	41,5
63	32	72,0	80	64	16	32	16	25	M16x1,5	32	41,5
80	40	90,0	100	80	20	40	20	32	M20x1,5	40	50,0
100	40	90,0	100	80	20	40	20	32	M20x1,5	40	50,0
125	56	123,5	137	110	30	55	30	45	M27x2	54	72,0



**Piston rod mountings**

**Flexo coupling PM5**



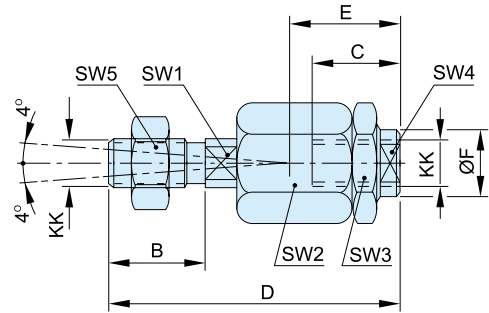
Flexo coupling for articulated mounting of piston rod. Flexo fitting is intended to take up axial angle errors within a range of  $\pm 4^\circ$ .

Material  
Flexo coupling, nut: Zinc-plated steel

Supplied complete with galvanized adjustment nut.

Cyl. bore Ø mm	Weight kg	Order code
32	0,23	<b>P1C-4KRF</b>
40	0,23	<b>P1C-4LRF</b>
50	0,65	<b>P1C-4MRF</b>
63	0,65	<b>P1C-4MRF</b>
80	0,71	<b>P1C-4PRF</b>
100	0,71	<b>P1C-4PRF</b>
125	1,60	<b>P1C-4RRF</b>

Cyl. bore mm	KK mm	B mm	C mm	D mm	E mm	ØF mm	SW1 mm	SW2 mm	SW3 mm	SW4 mm	SW5 mm
32	M10x1.25	20	23	73	31	21	12	30	30	19	17
40	M12x1.25	24	23	77	31	21	12	30	30	19	19
50	M16x1.5	32	32	108	45	33.5	19	41	41	30	24
63	M16x1.5	32	32	108	45	33.5	19	41	41	30	24
80	M20x1.5	40	42	122	56	33.5	19	41	41	30	30
100	M20x1.5	40	42	122	56	33.5	19	41	41	30	30
125	M27x2	54	48	147	51	39	24	55	55	32	41



**Nut MR9 \***



Intended for fixed mounting of accessories to the piston rod.  
Material: Zinc-plated steel  
Supplied as pack of 10 off

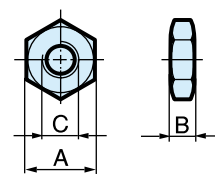
All P1D cylinders are delivered with a zinc-plated steel piston rod nut.

Cyl. bore Ø mm	Weight** kg	Order code
32	0,007	<b>P14-4KRPZ</b>
40	0,010	<b>P14-4LRPZ</b>
50	0,021	<b>P14-4MRPZ</b>
63	0,021	<b>P14-4MRPZ</b>
80	0,040	<b>P14-4PRPZ</b>
100	0,040	<b>P14-4PRPZ</b>
125	0,100	<b>P14-4RRPZ</b>

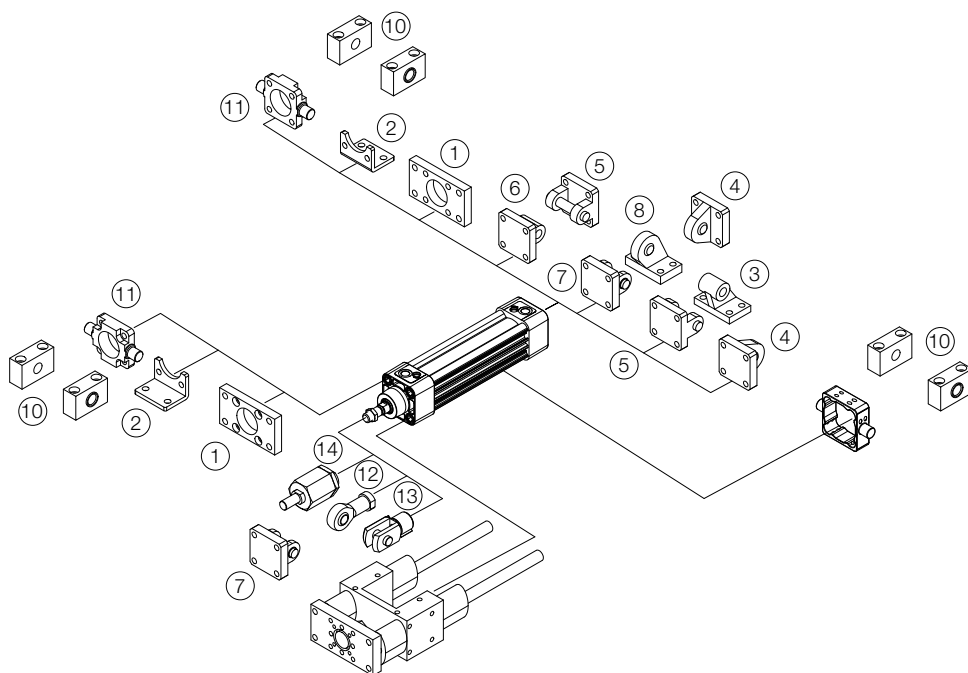
According to DIN 439 B

Cyl. bore mm	A mm	B mm	C
32	17	5,0	M10x1,25
40	19	6,0	M12x1,25
50	24	8,0	M16x1,5
63	24	8,0	M16x1,5
80	30	10,0	M20x1,5
100	30	10,0	M20x1,5
125	41	13,5	M27x2

\* Supplied as pack of 10 off  
\*\* Weight per item



	Flange MF1/MF2 <sup>1</sup>	Foot brackets MS1 <sup>2</sup>	Pivot bracket with rigid bearing AB7 <sup>3</sup>	Swivel eye bracket <sup>4</sup> MP6	Clevis bracket MP2 <sup>5</sup>
Ø 32	P1C-4KMB	P1C-4KMF	P1C-4KMDB	PD23843	P1C-4KMTB
Ø 40	P1C-4LMB	P1C-4LMF	P1C-4LMDB	PD23844	P1C-4LMTB
Ø 50	P1C-4MMB	P1C-4MMF	P1C-4MMDB	PD23845	P1C-4MMTB
Ø 63	P1C-4NMB	P1C-4NMF	P1C-4NMDB	PD23846	P1C-4NMTB
Ø 80	P1C-4PMB	P1C-4PMF	P1C-4PMDB	PD23847	P1C-4PMTB
Ø 100	P1C-4QMB	P1C-4QMF	P1C-4QMDB	PD23848	P1C-4QMTB
Ø 125	P1C-4RMB	P1C-4RMF	P1C-4RMDB	PD23849	P1C-4RMTB
	Clevis bracket MP4 <sup>6</sup>	Clevis bracket AB6 <sup>7</sup>	Pivot bracket with swivel bearing AB5 <sup>8</sup>	3 and 4 positions flange	Pivot brackets AT4 <sup>10</sup> for MT4
Ø 32	PD23412	P1C-4KMCB	KC5130	P1E-6KB0	PD23381
Ø 40	PD23413	P1C-4LMCB	KC5131	P1E-6LB0	PD23382
Ø 50	PD23414	P1C-4MMCB	KC5132	P1E-6MB0	PD23382
Ø 63	PD23415	P1C-4NMCB	KC5133	P1E-6NB0	PD23383
Ø 80	PD23416	P1C-4PMC	KC5134	P1E-6PB0	PD23383
Ø 100	PD23417	P1C-4QMCB	KC5135	P1E-6QB0	PD23384
Ø 125	PD23418	P1C-4RMCB	KC5136		PD23384
	Flange mounting <sup>11</sup> trunnion MT5/MT6	Swivel rod eye AP6 <sup>12</sup>	Clevis AP2 <sup>13</sup>	Flexo coupling PM5 <sup>14</sup>	Nut MR9
Ø 32	P1D-4KMYF	P1C-4KRS	P1C-4KRC	P1C-4KRF	P14-4KRPZ
Ø 40	P1D-4LMYF	P1C-4LRS	P1C-4LRC	P1C-4LRF	P14-4LRPZ
Ø 50	P1D-4MMYF	P1C-4MRS	P1C-4MRC	P1C-4MRF	P14-4MRPZ
Ø 63	P1D-4NMYF	P1C-4MRS	P1C-4MRC	P1C-4MRF	P14-4MRPZ
Ø 80	P1D-4PMYF	P1C-4PRS	P1C-4PRC	P1C-4PRF	P14-4PRPZ
Ø 100	P1D-4QMYF	P1C-4PRS	P1C-4PRC	P1C-4PRF	P14-4PRPZ
Ø 125		P1C-4RRS	P1C-4RRC	P1C-4RRF	P14-4RRPZ



## P1D-C Ultra Clean Cylinders

This series offers an ultra clean external design of cylinders that are suitable for applications that require a clean profile. With particular design features for the food and packaging industries this product can also be used for applications on vehicles, in sawmills and bag-filling industries where a clean design is important.



- Available in 32 to 125 mm bores
- PUR seals for long service life
- Corrosion resistant design
- Lubricated with food grade grease
- Available as non sensor version

### Operating information

Working pressure: Max 10 bar  
Working temperature: -20°C to +80°C

For more information see [www.parker.com/euro\\_pneumatic](http://www.parker.com/euro_pneumatic)

### P1D-C - Double acting

#### Ø32mm - (G<sup>1</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-C032MSN0025
40	P1D-C032MSN0040
50	P1D-C032MSN0050
80	P1D-C032MSN0080
100	P1D-C032MSN0100
125	P1D-C032MSN0125
160	P1D-C032MSN0160
200	P1D-C032MSN0200
250	P1D-C032MSN0250
320	P1D-C032MSN0320
400	P1D-C032MSN0400
500	P1D-C032MSN0500

#### Ø63mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-C063MSN0025
40	P1D-C063MSN0040
50	P1D-C063MSN0050
80	P1D-C063MSN0080
100	P1D-C063MSN0100
125	P1D-C063MSN0125
160	P1D-C063MSN0160
200	P1D-C063MSN0200
250	P1D-C063MSN0250
320	P1D-C063MSN0320
400	P1D-C063MSN0400
500	P1D-C063MSN0500

#### Ø100mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-C100MSN0025
40	P1D-C100MSN0040
50	P1D-C100MSN0050
80	P1D-C100MSN0080
100	P1D-C100MSN0100
125	P1D-C100MSN0125
160	P1D-C100MSN0160
200	P1D-C100MSN0200
250	P1D-C100MSN0250
320	P1D-C100MSN0320
400	P1D-C100MSN0400
500	P1D-C100MSN0500

#### Ø40mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-C040MSN0025
40	P1D-C040MSN0040
50	P1D-C040MSN0050
80	P1D-C040MSN0080
100	P1D-C040MSN0100
125	P1D-C040MSN0125
160	P1D-C040MSN0160
200	P1D-C040MSN0200
250	P1D-C040MSN0250
320	P1D-C040MSN0320
400	P1D-C040MSN0400
500	P1D-C040MSN0500

#### Ø80mm - (G<sup>3</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-C080MSN0025
40	P1D-C080MSN0040
50	P1D-C080MSN0050
80	P1D-C080MSN0080
100	P1D-C080MSN0100
125	P1D-C080MSN0125
160	P1D-C080MSN0160
200	P1D-C080MSN0200
250	P1D-C080MSN0250
320	P1D-C080MSN0320
400	P1D-C080MSN0400
500	P1D-C080MSN0500

#### Ø125mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-C125MSN0025
40	P1D-C125MSN0040
50	P1D-C125MSN0050
80	P1D-C125MSN0080
100	P1D-C125MSN0100
125	P1D-C125MSN0125
160	P1D-C125MSN0160
200	P1D-C125MSN0200
250	P1D-C125MSN0250
320	P1D-C125MSN0320
400	P1D-C125MSN0400
500	P1D-C125MSN0500

#### Ø50mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-C050MSN0025
40	P1D-C050MSN0040
50	P1D-C050MSN0050
80	P1D-C050MSN0080
100	P1D-C050MSN0100
125	P1D-C050MSN0125
160	P1D-C050MSN0160
200	P1D-C050MSN0200
250	P1D-C050MSN0250
320	P1D-C050MSN0320
400	P1D-C050MSN0400
500	P1D-C050MSN0500

The cylinders are supplied complete with a zinc plated steel piston rod nut.

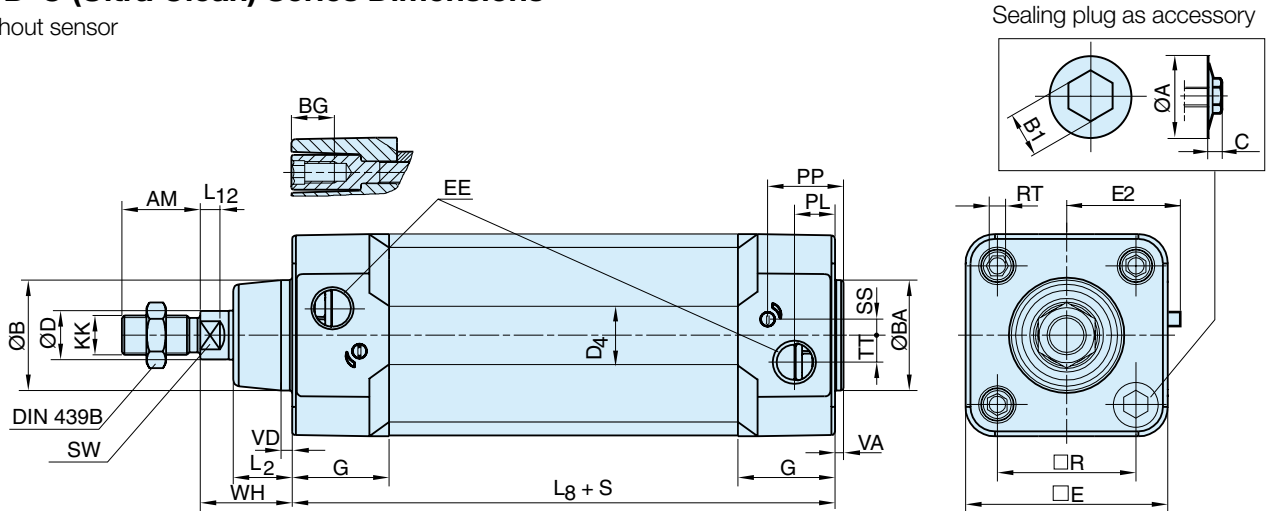
#### Sensors



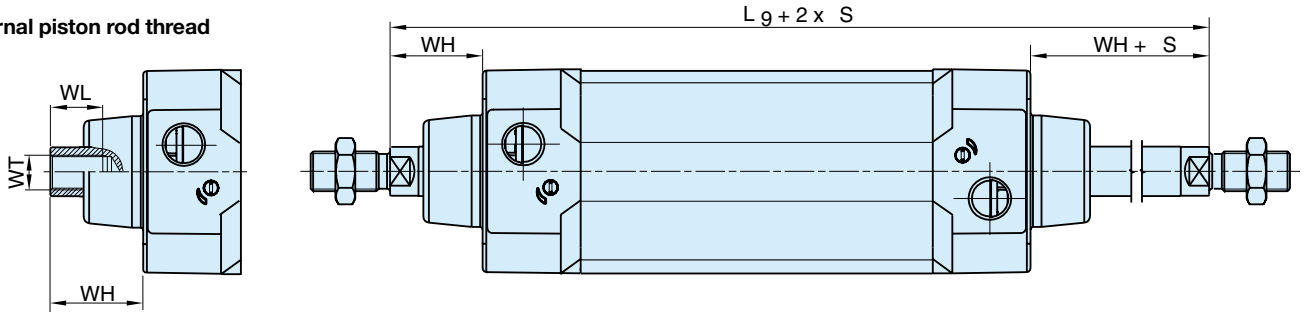
For sensors see page 78.

**P1D-C (Ultra Clean) Series Dimensions**

Without sensor



**Internal piston rod thread**



**Dimensions**

Cylinder bore mm	A mm	AM mm	B mm	B1 mm	BA mm	BG mm	C mm	D mm	D4 mm	E mm	EE mm	G mm	KK	L2 mm
32	15	22	30	8	30	16	5,2	12	45,0	50,0	G1/8	28,5	M10x1,25	16,0
40	15	24	35	8	35	16	5,2	16	52,0	57,4	G1/4	33,0	M12x1,25	19,0
50	18,5	32	40	10	40	16	6,7	20	60,7	69,4	G1/4	33,5	M16x1,5	24,0
63	18,5	32	45	10	45	16	6,7	20	71,5	82,4	G3/8	39,5	M16x1,5	24,0
80	21,5	40	45	11	45	17	7,8	25	86,7	99,4	G3/8	39,5	M20x1,5	30,0
100	21,5	40	55	11	55	17	7,8	25	106,7	116,0	G1/2	44,5	M20x1,5	32,4
125	24	54	60	13	60	20	9,3	32	134,0	139,0	G1/2	51,0	M27x2	45,0

Cylinder bore mm	L8 mm	L9 mm	L12 mm	PL mm	PP mm	R mm	RT	SS mm	SW mm	TT mm	VA mm	VD mm	WH mm	WL mm	WT
32	94	146	6,0	13,0	21,8	32,5	M6	4,0	10	4,5	3,5	4,5	26	21	M8x1
40	105	165	6,5	14,0	21,9	38,0	M6	8,0	13	5,5	3,5	4,5	30	23	M10x1,25
50	106	180	8,0	14,0	23,0	46,5	M8	4,0	17	7,5	3,5	5,0	37	31	M14x1,5
63	121	195	8,0	16,4	27,4	56,5	M8	6,5	17	11,0	3,5	5,0	37	31	M14x1,5
80	128	220	10,0	16,0	30,5	72,0	M10	0	22	15,0	3,5	4,0	46	39	M18x1,5
100	138	240	14,0	18,0	35,8	89,0	M10	0	22	20,0	3,5	4,0	51	39	M18x1,5
125	160	290	18,0	28,0	40,5	110,0	M12	0	27	17,5	5,5	6,0	65	53	M24x2

S=Stroke

**Tolerances**

Cylinder bore mm	B	BA	L <sub>8</sub> mm	L <sub>9</sub> mm	R mm	Stroke tolerance up to stroke 500 mm	Stroke tolerance for stroke over 500 mm
32	d11	d11	±0,4	±2	±0,5	+0,3/+2,0	+0,3/+3,0
40	d11	d11	±0,7	±2	±0,5	+0,3/+2,0	+0,3/+3,0
50	d11	d11	±0,7	±2	±0,6	+0,3/+2,0	+0,3/+3,0
63	d11	d11	±0,8	±2	±0,7	+0,3/+2,0	+0,3/+3,0
80	d11	d11	±0,8	±3	±0,7	+0,3/+2,0	+0,3/+3,0
100	d11	d11	±1,0	±3	±0,7	+0,3/+2,0	+0,3/+3,0
125	d11	d11	±1,0	±3	±1,1	+0,3/+2,0	+0,3/+3,0

**Cylinder mountings**

**Clean design  
centre trunnion MT4  
for P1D-C**



Intended for articulated mounting of P1D-C cylinders. The trunnion is factory-fitted in the centre of the cylinder or at an optional location specified by the XV-measure – see the order code key. Combined with pivot bracket for MT4. Max stroke length 700 mm. Longer stroke length on request.

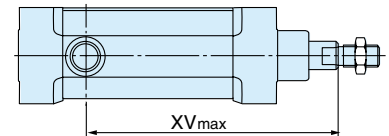
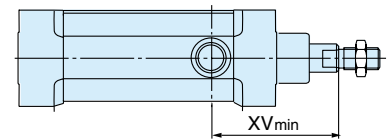
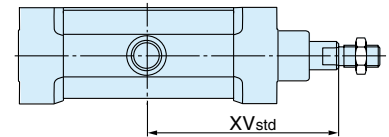
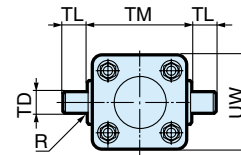
Material:  
Trunnion: stainless steel

**Trunnion centred**

The centre trunnion for P1D-C is ordered with letter D in position 17 (no dimension specified in positions 18-20).

**Trunnion with optional location**

The centre trunnion for P1D-C is ordered with letter G in position 17 and desired XV-measure (3-digit measure in mm) in positions 18-20.



According to ISO MT4, VDMA 24 562, AFNOR

Cyl. bore mm	TM h14 mm	TL h14 mm	TD e9 mm	R mm	UW mm	X1* mm	XVmin mm	X2 mm	Stroke min mm
32	50	12	12	1,0	52	73,0	69,5	76,0	0
40	63	16	16	1,6	59	82,5	78,0	86,5	0
50	75	16	16	1,6	71	90,0	85,5	94,5	0
63	90	20	20	1,6	84	97,5	103,5	91,0	15
80	110	20	20	1,6	105	110,0	112,5	107,0	10

$XVstd = X1 + \text{Stroke length}/2$ ,  $XVmax = X2 + \text{Stroke length}$

**For mountings refer to page 42.**

## P1D-C Pro Clean Cylinders

This series of clean design cylinders offers two T slots within one face of the tube allowing the possibility to add sensors. The position of the T slots can be specified on any single face using the order code key. These cylinders have a clean design but are intended for applications where sensors are required.

- Available in 32 to 125 mm bores
- PUR seals for long service life
- Corrosion resistant design
- Lubricated with food grade grease
- Available as a sensor version



### Operating information

Working pressure: Max 10 bar  
Working temperature: -20°C to +80°C

For more information see [www.parker.com/euro\\_pneumatic](http://www.parker.com/euro_pneumatic)

### P1D-C - Double acting

#### Ø32mm - (G<sup>1</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-C032MST0025
40	P1D-C032MST0040
50	P1D-C032MST0050
80	P1D-C032MST0080
100	P1D-C032MST0100
125	P1D-C032MST0125
160	P1D-C032MST0160
200	P1D-C032MST0200
250	P1D-C032MST0250
320	P1D-C032MST0320
400	P1D-C032MST0400
500	P1D-C032MST0500

#### Ø40mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-C040MST0025
40	P1D-C040MST0040
50	P1D-C040MST0050
80	P1D-C040MST0080
100	P1D-C040MST0100
125	P1D-C040MST0125
160	P1D-C040MST0160
200	P1D-C040MST0200
250	P1D-C040MST0250
320	P1D-C040MST0320
400	P1D-C040MST0400
500	P1D-C040MST0500

#### Ø50mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-C050MST0025
40	P1D-C050MST0040
50	P1D-C050MST0050
80	P1D-C050MST0080
100	P1D-C050MST0100
125	P1D-C050MST0125
160	P1D-C050MST0160
200	P1D-C050MST0200
250	P1D-C050MST0250
320	P1D-C050MST0320
400	P1D-C050MST0400
500	P1D-C050MST0500

#### Ø63mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-C063MST0025
40	P1D-C063MST0040
50	P1D-C063MST0050
80	P1D-C063MST0080
100	P1D-C063MST0100
125	P1D-C063MST0125
160	P1D-C063MST0160
200	P1D-C063MST0200
250	P1D-C063MST0250
320	P1D-C063MST0320
400	P1D-C063MST0400
500	P1D-C063MST0500

#### Ø80mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-C080MST0025
40	P1D-C080MST0040
50	P1D-C080MST0050
80	P1D-C080MST0080
100	P1D-C080MST0100
125	P1D-C080MST0125
160	P1D-C080MST0160
200	P1D-C080MST0200
250	P1D-C080MST0250
320	P1D-C080MST0320
400	P1D-C080MST0400
500	P1D-C080MST0500

#### Ø100mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-C100MST0025
40	P1D-C100MST0040
50	P1D-C100MST0050
80	P1D-C100MST0080
100	P1D-C100MST0100
125	P1D-C100MST0125
160	P1D-C100MST0160
200	P1D-C100MST0200
250	P1D-C100MST0250
320	P1D-C100MST0320
400	P1D-C100MST0400
500	P1D-C100MST0500

#### Ø125mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-C125MST0025
40	P1D-C125MST0040
50	P1D-C125MST0050
80	P1D-C125MST0080
100	P1D-C125MST0100
125	P1D-C125MST0125
160	P1D-C125MST0160
200	P1D-C125MST0200
250	P1D-C125MST0250
320	P1D-C125MST0320
400	P1D-C125MST0400
500	P1D-C125MST0500

For other T slots position, please contact Sales Office.

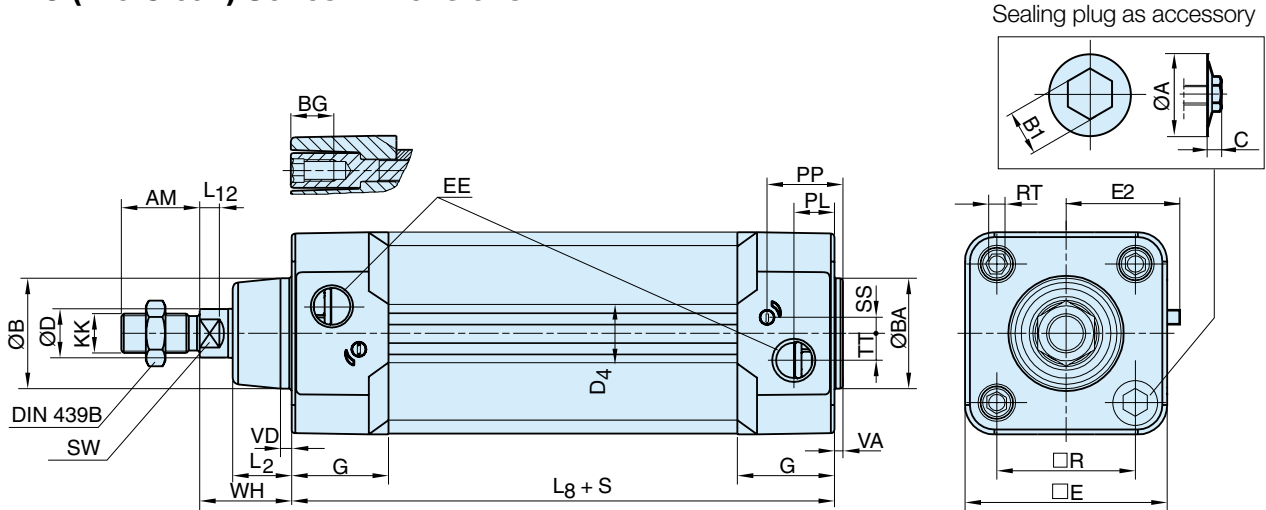
The cylinders are supplied complete with a zinc plated steel piston rod nut.

#### Sensors

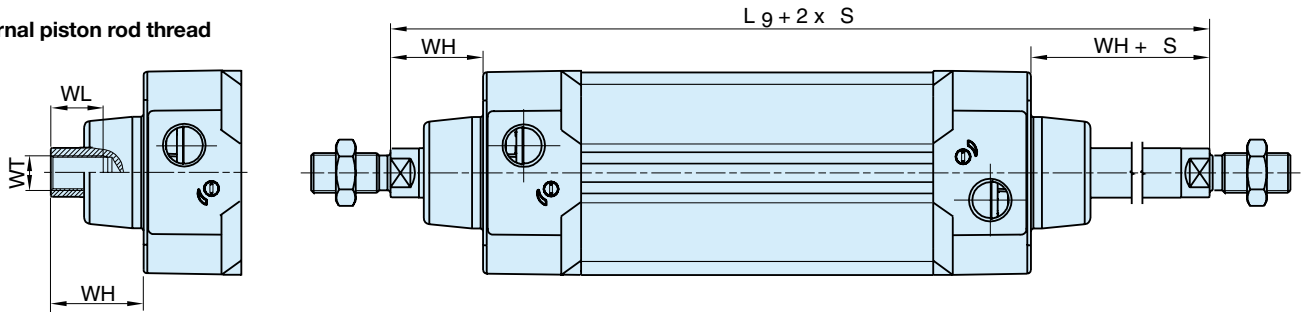


For sensors see page 78.

P1D-C (Pro Clean) Series Dimensions



Internal piston rod thread



Dimensions

Cylinder bore mm	A mm	AM mm	B mm	B1 mm	BA mm	BG mm	C mm	D mm	D4 mm	E mm	EE mm	G mm	KK	L2 mm
32	15	22	30	8	30	16	5,2	12	45,0	50,0	G1/8	28,5	M10x1,25	16,0
40	15	24	35	8	35	16	5,2	16	52,0	57,4	G1/4	33,0	M12x1,25	19,0
50	18,5	32	40	10	40	16	6,7	20	60,7	69,4	G1/4	33,5	M16x1,5	24,0
63	18,5	32	45	10	45	16	6,7	20	71,5	82,4	G3/8	39,5	M16x1,5	24,0
80	21,5	40	45	11	45	17	7,8	25	86,7	99,4	G3/8	39,5	M20x1,5	30,0
100	21,5	40	55	11	55	17	7,8	25	106,7	116,0	G1/2	44,5	M20x1,5	32,4
125	24	54	60	13	60	20	9,3	32	134,0	139,0	G1/2	51,0	M27x2	45,0

Cylinder bore mm	L8 mm	L9 mm	L12 mm	PL mm	PP mm	R mm	RT	SS mm	SW mm	TT mm	VA mm	VD mm	WH mm	WL mm	WT
32	94	146	6,0	13,0	21,8	32,5	M6	4,0	10	4,5	3,5	4,5	26	21	M8x1
40	105	165	6,5	14,0	21,9	38,0	M6	8,0	13	5,5	3,5	4,5	30	23	M10x1,25
50	106	180	8,0	14,0	23,0	46,5	M8	4,0	17	7,5	3,5	5,0	37	31	M14x1,5
63	121	195	8,0	16,4	27,4	56,5	M8	6,5	17	11,0	3,5	5,0	37	31	M14x1,5
80	128	220	10,0	16,0	30,5	72,0	M10	0	22	15,0	3,5	4,0	46	39	M18x1,5
100	138	240	14,0	18,0	35,8	89,0	M10	0	22	20,0	3,5	4,0	51	39	M18x1,5
125	160	290	18,0	28,0	40,5	110,0	M12	0	27	17,5	5,5	6,0	65	53	M24x2

S=Stroke

Tolerances

Cylinder bore mm	B	BA	L <sub>8</sub> mm	L <sub>9</sub> mm	R mm	Stroke tolerance up to stroke 500 mm	Stroke tolerance for stroke over 500 mm
32	d11	d11	±0,4	±2	±0,5	+0,3/+2,0	+0,3/+3,0
40	d11	d11	±0,7	±2	±0,5	+0,3/+2,0	+0,3/+3,0
50	d11	d11	±0,7	±2	±0,6	+0,3/+2,0	+0,3/+3,0
63	d11	d11	±0,8	±2	±0,7	+0,3/+2,0	+0,3/+3,0
80	d11	d11	±0,8	±3	±0,7	+0,3/+2,0	+0,3/+3,0
100	d11	d11	±1,0	±3	±0,7	+0,3/+2,0	+0,3/+3,0
125	d11	d11	±1,0	±3	±1,1	+0,3/+2,0	+0,3/+3,0

## Design Variants for P1D-C

### Alternative piston rod materials

All P1D cylinders in all bores, Ø32-125 mm, can be ordered with the following piston rod materials:

- Steel, chromed-plated
- Stainless steel, roller polished (standard)
- Acid-proof steel, roller polished
- Stainless steel, chromed-plated



### Through piston rod

All P1D cylinders in all bores, Ø32-125 mm, are available with a through rod. Cylinders with a through rod can take higher side forces thanks to the double support for the piston rod.



### Operation with dry piston rod

In many applications, primarily in the foodstuffs industry, the cylinders are cleaned frequently. This means that the film of grease on the piston rod is washed off, which puts special demands on the materials and the design of the piston rod seal system (scraper ring and piston rod seal). Parker Hannifin has developed a piston rod seal system specially designed for dry rod operation. This is available as options for this type of application, for all bores of P1D cylinders. The system has a specially designed L-shaped seal and the material is self-lubricating, high molecular weight plastics (HDPE) – the same system as in our P1S stainless steel cylinders.



### Alternative scraper materials

For use in applications where chemicals may affect the scraper in the front end cover, an option with a scraper in FPM rubber for better chemical resistance is available.

On request there is also a scraper in food approved polyurethane material.



# P1D-T Pneumatic Cylinders

According to  
ISO 15552



The P1D-T range of cylinders is intended for use in a wide range of applications. Careful design and high quality manufacture throughout ensure long service life and optimum economy. Mounting dimensions fully in accordance with ISO 15552 (ISO 6431 and CETOP RP52P) greatly simplifies installation and world-wide interchangeability.

- Bore sizes Ø160 - Ø320mm
- Stroke lengths 10mm - 2000mm
- Magnetic piston as standard
- Adjustable cushioning as standard
- High temperature versions
- ATEX version
- Special version on request



## P1D-T Large Bore Cylinders

The P1D-T range of tie rod cylinders is intended for use in a wide range of applications. Careful design and high quality manufacture throughout ensure long service life and optimum economy. Mounting dimensions fully in accordance with ISO 15552 (ISO 6431 and CETOP RP52P) greatly simplifies installation and world-wide interchangeability.

- Bore sizes Ø160 - Ø320mm
- Stroke lengths 10mm - 2000mm
- Magnetic piston as standard
- Adjustable cushioning as standard
- High temperature versions
- Special version on request

 **For ATEX specific products contact Sales Office**



### Operating information

Working pressure:	Max 10 bar
Seals / Temperature options	
Standard:	-20°C to +80°C
High temperature:	-10°C to +140°C
ATEX approval:	CE Ex IIGD c T4 120°C

For more information see [www.parker.com/euro\\_pneumatic](http://www.parker.com/euro_pneumatic)

### P1D-T - Double acting

#### Ø160mm

Stroke mm	Order code
50	P1D-T160MS-0050
80	P1D-T160MS-0080
100	P1D-T160MS-0100
125	P1D-T160MS-0125
160	P1D-T160MS-0160
200	P1D-T160MS-0200
250	P1D-T160MS-0250
320	P1D-T160MS-0320
400	P1D-T160MS-0400
500	P1D-T160MS-0500
800	P1D-T160MS-0800
1000	P1D-T160MS-1000

#### Ø200mm

Stroke mm	Order code
50	P1D-T200MS-0050
80	P1D-T200MS-0080
100	P1D-T200MS-0100
125	P1D-T200MS-0125
160	P1D-T200MS-0160
200	P1D-T200MS-0200
250	P1D-T200MS-0250
320	P1D-T200MS-0320
400	P1D-T200MS-0400
500	P1D-T200MS-0500
800	P1D-T200MS-0800
1000	P1D-T200MS-1000

#### Ø250mm

Stroke mm	Order code
50	P1D-T250MS-0050
80	P1D-T250MS-0080
100	P1D-T250MS-0100
125	P1D-T250MS-0125
160	P1D-T250MS-0160
200	P1D-T250MS-0200
250	P1D-T250MS-0250
320	P1D-T250MS-0320
400	P1D-T250MS-0400
500	P1D-T250MS-0500
800	P1D-T250MS-0800
1000	P1D-T250MS-1000

#### Ø320mm

Stroke mm	Order code
50	P1D-T320MS-0050
80	P1D-T320MS-0080
100	P1D-T320MS-0100
125	P1D-T320MS-0125
160	P1D-T320MS-0160
200	P1D-T320MS-0200
250	P1D-T320MS-0250
320	P1D-T320MS-0320
400	P1D-T320MS-0400
500	P1D-T320MS-0500
800	P1D-T320MS-0800
1000	P1D-T320MS-1000

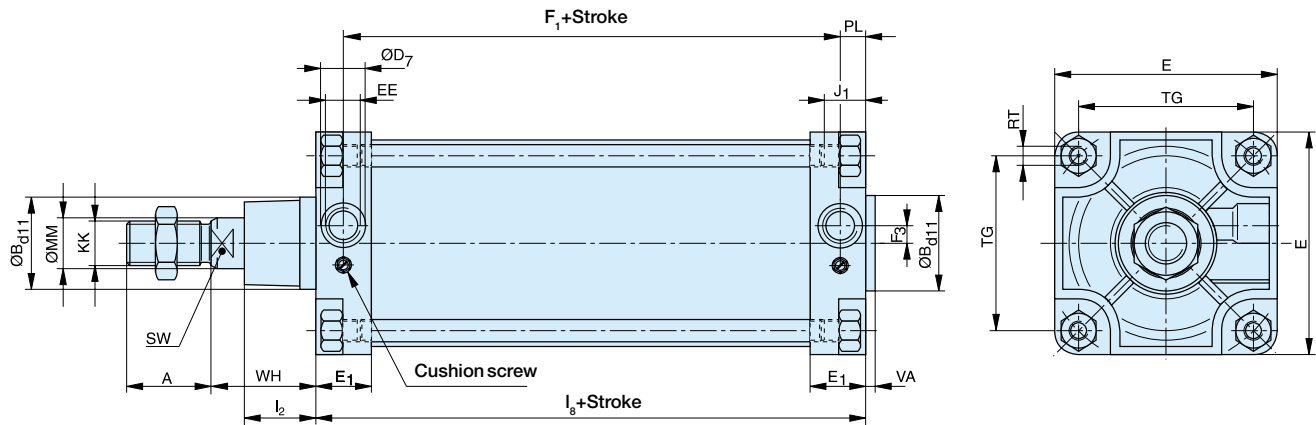
The cylinders are supplied complete with a zinc plated steel piston rod nut.

#### Sensors



For sensors see page 78.

## P1D-T Series Dimensions



**Note:** for bore size 320mm, front air port in on the bottom of the axis of the cylinder and the cushioning screw on the top

## Dimension Table (mm)

Cyl. Ø	A	ØB <sub>d11</sub>	ØD <sub>7</sub>	E	E <sub>1</sub>	F <sub>1</sub> + Stroke	F <sub>3</sub>	J <sub>1</sub> max.	L <sub>2</sub>	L <sub>8</sub> + Stroke	EE	KK	MM	PL	RT	SW	TG	VA	WH
160	72	65	33	180	45	130	11	23	50	180	G3/4	M36x2	40	25	M16	36	140	6	80
200	72	75	33	220	45	130	15	23	60	180	G3/4	M36x2	40	25	M16	36	175	6	95
250	84	90	40	280	64	136	21	27	70	200	G1	M42x2	50	32	M20	46	220	10	105
320	96	110	-	340	56	164	-20*/20	28	89,5	220	G1	M48x2	63	28	M24	55	270	10	120

## Weight (mass) kg

Cylinder version	Cylinder Diameter							
	Ø160		Ø200		Ø250		Ø320	
	1*	2*	1*	2*	1*	2*	1*	2*
Standard Type P1D-T	12.500	2.050	20.000	2.200	35.000	4.000	66.000	6.000

\* 1 = Weight for cylinder with 100 mm stroke  
2 = Weight for further 100 mm stroke length

## Tolerances

Cylinder bore mm	L <sub>8</sub> mm	TG mm	Stroke tolerance up to stroke 500 mm	Stroke tolerance for stroke over 500 mm
160	±1,1	±1,1	+0,3/+2,0	+0,3/+3,0
200	±1,6	±1,1	+0,3/+2,0	+0,3/+3,0
250	±1,6	±1,5	+0,3/+2,0	+0,3/+3,0
320	±2,2	±1,5	+0,3/+2,0	+0,3/+3,0

**Cylinder mountings**

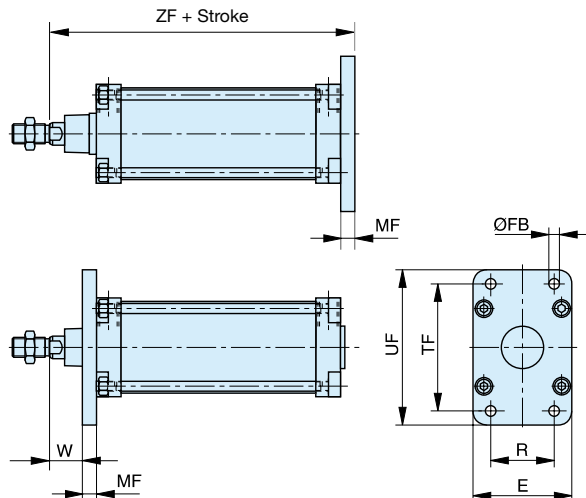
**Flange MF1/MF2**



Intended for fixed mounting of cylinder. Flange can be fitted to front or rear end cover of cylinder.

Materials  
 Flange: Passivated steel  
 Mounting screws acc. to DIN 6912:  
 Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder.



According to ISO MF1/MF2, VDMA 24 562, AFNOR

Cyl. Ø mm	E mm	R mm	W mm	ØFB mm	MF mm	TF mm	UF mm	ZF mm	Weight kg	Order code
160	180	115	60	18	20	230	275	280	7.2	<b>PD23410</b>
200	220	135	70	22	25	270	315	300	12.2	<b>PD24924</b>
250	280	165	80	26	25	330	380	330	19.2	<b>PD25761</b>
320	340	200	90	33	30	400	470	370	38.0	<b>KL9140</b>

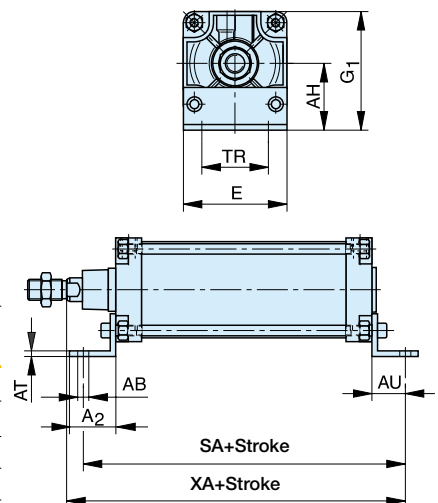
**Foot brackets MS1**



Intended for fixed mounting of cylinder. Foot bracket can be fitted to front and rear end covers of cylinder.

Materials  
 Foot bracket: Passivated steel  
 Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied in pairs with mounting screws for attachment to cylinder.



According to ISO MS1, VDMA 24 562, AFNOR

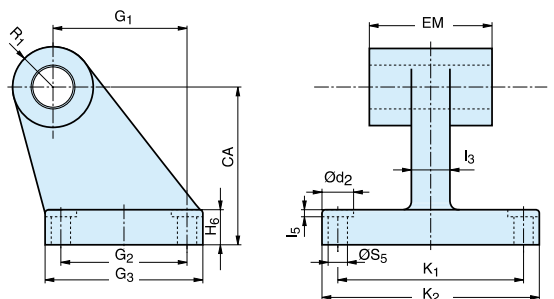
Cyl. Ø mm	A <sub>2</sub> mm	E mm	G <sub>1</sub> mm	AB mm	AH mm	AT mm	AU mm	SA + stroke	TR	XA + stroke	Weight kg	Order code
160	80	180	205	18	115	8	60	300	115	320	3.8	<b>PD22027</b>
200	100	220	245	22	135	9	70	320	135	345	5.0	<b>PD24792</b>
250	110	280	305	26	165	10	75	350	165	380	9.7	<b>PD25758</b>
320	125	340	370	33	200	23	85	390	200	470	17.0	<b>KL9139</b>

**Pivot bracket with rigid bearing AB7**



Intended for flexible mounting of cylinder. The pivot bracket can be combined with clevis bracket MP2.

Materials  
 Pivot bracket: Ø 160-200: cast aluminium  
 Ø 250-320: cast steel



According to CETOP RP 107 P, VDMA 24 562, AFNOR

Cyl. Ø mm	Ød <sub>2</sub> mm	l <sub>3</sub> mm	l <sub>5</sub> mm	G <sub>1</sub> mm	G <sub>2</sub> mm	G <sub>3</sub> mm	H <sub>6</sub> mm	K <sub>1</sub> mm	K <sub>2</sub> mm	R <sub>1</sub> mm	ØS <sub>5</sub> mm	CA mm	EM mm	Weight kg	Order code
160	20	36	4.0	97	88	126	25	118	156	31.5	14.0	115	90	6.5	<b>P1C-4SMDB</b>
200	26	40	4.0	105	90	130	30	122	162	31.5	18.0	135	90	8.0	<b>P1C-4TMDB</b>
250	33	45	4.5	128	110	160	35	150	200	40	22.0	165	110	13.5	<b>P1C-4UMDC</b>
320	-	55	-	150	122	186	40	170	234	45	26.0	200	120	21.9	<b>P1C-4VMDC</b>

Cylinder mountings

Swivel eye bracket MP6

Intended for use together with clevis bracket GA

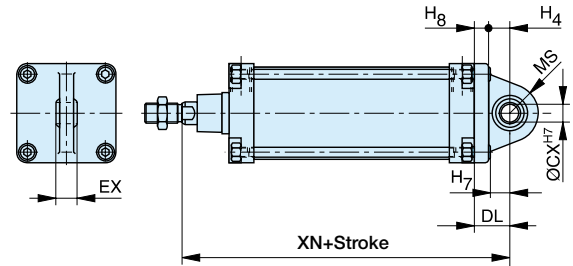


Material  
Bracket: Cast aluminium  
Swivel bearing acc. to DIN 648K: Hardened steel

Supplied complete with mounting screws for attachment to cylinder.

According to VDMA 24 562, AFNOR

Cyl. Ø mm	H <sub>4</sub> mm	H <sub>7</sub> mm	H <sub>8</sub> mm	Ø CX <sup>H7</sup> mm	DL mm	EX mm	MS mm	XN + stroke mm	Weight kg	Order code
160	35	28.5	20	30	55	37	48	315	2.6	<b>PD23850</b>
200	36	33	24	35	60	43	47	335	11.3	<b>PD25766</b>
250	42	39	28	40	70	49	53	375	19.0	<b>PD25760</b>
320	50	26	30	50	80	60	63	420	30.3	<b>KL9136</b>



Clevis bracket MP2

Intended for flexible mounting of cylinder. Clevis bracket MP2 can be combined with clevis bracket MP4.

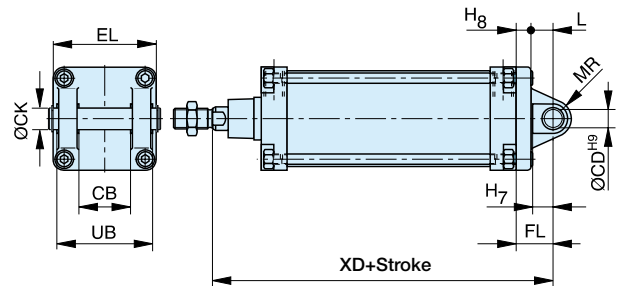


Materials  
Clevis bracket: Cast aluminium  
Pin: Hardened steel  
Circlips according to DIN 471: Spring steel  
Mounting screws acc. to DIN 912:  
Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder

According to ISO MP2, VDMA 24 562, AFNOR

Cyl. Ø mm	H <sub>7</sub> mm	H <sub>8</sub> mm	L mm	EL mm	CD <sup>H9</sup> mm	CB mm	FL mm	MR mm	UB mm	XD + stroke mm	CK <sup>H9</sup> mm	Weight kg	Order code
160	28.5	20	35	172	30	90	55	30	170	315	30	2.6	<b>P1C-4SMTB</b>
200	28.5	25	35	172	30	90	60	31	170	335	30	4.1	<b>P1C-4TMTB</b>
250	25.0	25	45	202	40	110	70	41	200	375	40	7.1	<b>P1C-4UMTB</b>
320	26.0	30	50	222	45	120	80	54	220	420	45	31.0	<b>P1C-4VMTB</b>



Clevis bracket MP4

Intended for flexible mounting of cylinder. Clevis bracket MP4 can be combined with clevis bracket MP2.

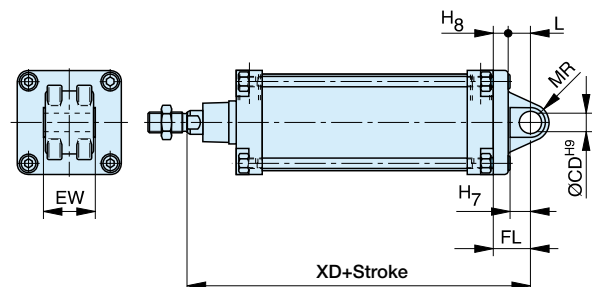


Materials  
Clevis bracket: Cast aluminium  
Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder.

According to ISO MP4, VDMA 24 562, AFNOR

Cyl. Ø mm	H <sub>7</sub> mm	H <sub>8</sub> mm	L mm	CD <sup>H9</sup> mm	EW mm	FL mm	MR mm	XD + stroke mm	Weight kg	Order code
160	28.5	20	35	30	90	55	30	315	2.7	<b>PD22628</b>
200	28.5	25	35	30	90	60	31	335	4.2	<b>PD24999</b>
250	25.0	25	45	40	110	70	41	375	15.7	<b>PD25759</b>
320	26.0	30	50	45	120	80	46	420	33.0	<b>KL9135</b>

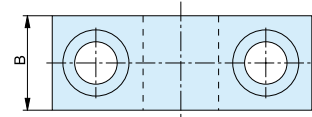
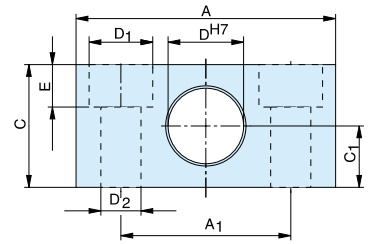


**Cylinder mountings**

**Pivot brackets AT4 for MT4** Intended for use together with central trunnion MT4.



Material  
 Pivot bracket: Ø160-250 mm – Anodized aluminium  
 Ø 320 mm – steel  
 Bearing acc. to DIN 1850 C  
 Supplied in pairs.



According to ISO, VDMA 24 562, AFNOR

Cyl. Ø	A	A <sub>1</sub>	B	C	C <sub>1</sub>	ØD <sup>H7</sup>	ØD <sub>1</sub>	ØD <sub>2</sub>	E	Weight	Order code
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	
160	92	60	35	60	30	32	26	18	17.0	0.35	<b>PD24425</b>
200	92	60	35	60	30	32	26	18	17.0	0.35	<b>PD24425</b>
250	140	90	40	70	35	40	33	22	21.5	0.50	<b>PD25763</b>
320	150	100	60	80	40	50	40	26	21.5	6.70	<b>KL9130</b>

**Centre trunnion MT4 for P1D-T**



Intended for articulated mounting of cylinder. The trunnion is factory-fitted in the centre of the cylinder or at an optional location specified by the XV-measure - Combined with pivot bracket for MT4.

Material:  
 Trunnion: Zinc plated steel

**Trunnion centred**

The central trunnion for the P1D-T is ordered with letter D in position 17 (no dimension specified in positions 18-20). e.g. P1D-T160MS-0500NDNNN

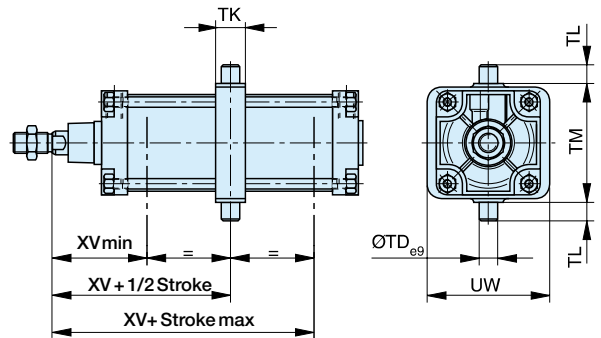
**Trunnion with optional location**

The central trunnion for the P1D-T is ordered with letter G in position 17 and desired XV-measure (3-digit measure in mm) in positions 18-20. e.g. P1D-T160MS-0500NG300  
 Material: nodular graphite cast iron, passivated steel

According to ISO MT4, VDMA 24 562, AFNOR

Cyl. Ø	TD <sub>e9</sub>	TK	TL	TM	UW	XV	XV <sub>min</sub>	XV <sub>max</sub>	Weight	Order code
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	
160	32	45	32	200	210	150	170	190	6.1	*
200	32	50	32	250	245	165	185	205	8.1	*
250	40	55	40	320	320	195	205	210	14.8	*
320	50	65	50	400	350	210	230	250	16.0	*

\* Please consult Sales Office.



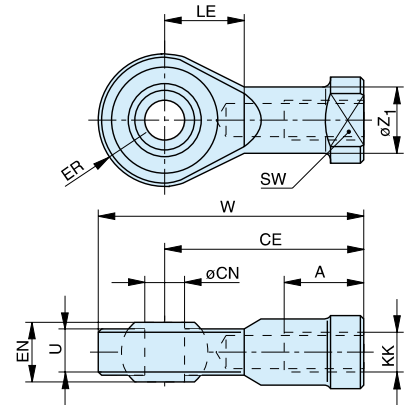
**Piston rod mountings**

**Swivel rod eye AP6**



Intended for articulated mounting of the cylinder.  
Maintenance-free PTFE.

Material:  
Swivel rod eye, nut: galvanized steel.  
Swivel bearing according to DIN 648K: Hardened steel.



ISO 8139

Cyl. Ø mm	CNH <sup>7</sup> mm	LE mm	U mm	EN mm	ER mm	W mm	A mm	CE mm	KK mm	ØZ <sub>1</sub> mm	SW mm	Weight kg	Order code
							max.	max.	min.				
160	35	41	28	43	40	165	56	125	M36x2	46	50	1.6	<b>KY6863</b>
200	35	41	28	43	40	165	56	125	M36x2	46	50	1.6	<b>KY6863</b>
250	40	46	33	49	45	187	60	142	M42x2	53	55	3.5	<b>KY6864</b>
320	50	59	45	60	58	218	65	160	M48x2	65	65	5.2	<b>KL9132</b>

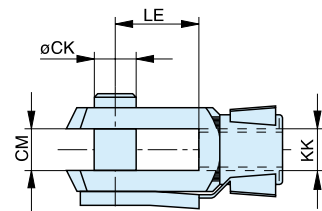
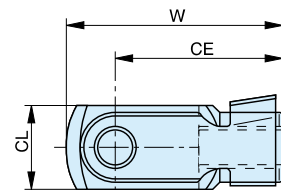
**Clevis AP2**



Intended for articulated mounting of the cylinder.

Material:  
Clevis and clip galvanized steel.  
Pin: Hardened steel

Supplied complete with axle.



Cyl. Ø mm	ØCK mm	LE mm	CM mm	CL mm	W mm	CE mm	KK mm	Weight kg	Order code
						max.			
160	35	72	36	70	188	144	M36x2	2.9	<b>KY6867</b>
200	35	72	36	70	188	144	M36x2	2.9	<b>KY6867</b>
250	40	84	40	85	245	168	M42x2	6.0	<b>KY6868</b>
320	50	96	50	90	250	192	M48x2	7.9	<b>KL9131</b>

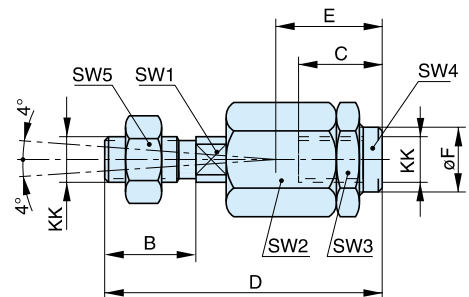
**Flexo coupling PM5**



Flexo coupling for articulated mounting of piston rod.  
Flexo fitting is intended to take up axial angle errors within a range of ±4°.

Material  
Flexo coupling, nut: Zinc-plated steel  
Socket: Hardened steel

Supplied complete with galvanized adjustment nut.



Cyl. Ø mm	KK mm	B mm	C mm	D mm	E mm	ØF mm	SW1 mm	SW2 mm	SW3 mm	SW4 mm	SW5 mm	Weight kg	Order code
160	M36x2	72	50	241	110	56	36	75	75	50	55	5.1	<b>KY1139</b>
200	M36x2	72	50	241	110	56	36	75	75	50	55	5.1	<b>KY1139</b>
250	M42x2	82	88	271	120	-	36	80	80	60	65	7.9	<b>KY1140</b>
320	M48x2	82	88	271	120	-	42	80	80	60	75	7.9	<b>KL9133</b>

	<b>Flange MF1/MF2</b>	<b>Foot brackets MS1</b>	<b>Pivot bracket with rigid bearing AB7</b>	<b>Swivel eye bracket MP6</b>	<b>Clevis bracket MP2</b>
Ø 160	<b>PD23410</b>	<b>PD22027</b>	<b>P1C-4SMDB</b>	<b>PD23850</b>	<b>P1C-4SMTB</b>
Ø 200	<b>PD24924</b>	<b>PD24792</b>	<b>P1C-4TMDB</b>	<b>PD25766</b>	<b>P1C-4TMTB</b>
Ø 250	<b>PD25761</b>	<b>PD25758</b>	<b>P1C-4UMDC</b>	<b>PD25760</b>	<b>P1C-4UMTB</b>
Ø 320	<b>KL9140</b>	<b>KL9139</b>	<b>P1C-4VMDC</b>	<b>KL9136</b>	<b>P1C-4VMTB</b>

	<b>Clevis bracket MP4</b>	<b>Pivot brackets AT4 for MT4</b>	<b>Swivel rod eye AP6</b>	<b>Clevis AP2</b>	<b>Flexo coupling PM5</b>
Ø 160	<b>PD22628</b>	<b>PD24425</b>	<b>KY6863</b>	<b>KY6867</b>	<b>KY1139</b>
Ø 200	<b>PD24999</b>	<b>PD24425</b>	<b>KY6863</b>	<b>KY6867</b>	<b>KY1139</b>
Ø 250	<b>PD25759</b>	<b>PD25763</b>	<b>KY6864</b>	<b>KY6868</b>	<b>KY1140</b>
Ø 320	<b>KL9135</b>	<b>KL9130</b>	<b>KL9132</b>	<b>KL9131</b>	<b>KL9133</b>



# P1D-X Pneumatic Cylinders

According to  
ISO 15552



## High and Low Temperature Cylinders

**P1D-X series** contains cylinder versions for high and low temperature. These versions have material and sealing systems specially designed for their particular temperature ranges. End covers and pistons are made entirely from metal, to give optimum function at **high** or **low** temperature in combination with seals made from specially tested materials and special grease.

- Conforms to ISO 15552.
- Bore 32-125 mm.
- Double acting.
- Stainless steel piston rod.
- Robust and corrosion resistant.
- Adjustable air cushioning.
- Retained stainless steel cushioning screws.
- Wide range of mountings and drop-in sensors



## P1D-X High and Low Temperature Cylinders

For extreme conditions these cylinders for high and low temperatures have materials and sealing systems specially designed for their particular temperature ranges. End covers and pistons are made entirely from metal, to give optimum function at **high** or **low** temperature in combination with seals made from specially tested materials and special grease.



- Conforms to ISO 15552.
- Bore 32-125 mm.
- Double acting.
- Stainless steel piston rod.
- Robust and corrosion resistant.
- Adjustable air cushioning.
- Retained stainless steel cushioning screws.
- Wide range of mountings and drop-in sensors

### Operating information

Working pressure:	Max 10 bar
Working temperature:	
High temp. version	<b>-10°C to +150°C</b>
Low temp. version	<b>-40°C to +80°C</b>

For more information see [www.parker.com/euro\\_pneumatic](http://www.parker.com/euro_pneumatic)

### P1D-X - Double acting - High temperature

#### Ø32mm - (G<sup>1</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-X032MF-0025
40	P1D-X032MF-0040
50	P1D-X032MF-0050
80	P1D-X032MF-0080
100	P1D-X032MF-0100
125	P1D-X032MF-0125
160	P1D-X032MF-0160
200	P1D-X032MF-0200
250	P1D-X032MF-0250
320	P1D-X032MF-0320
400	P1D-X032MF-0400
500	P1D-X032MF-0500

#### Ø40mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-X040MF-0025
40	P1D-X040MF-0040
50	P1D-X040MF-0050
80	P1D-X040MF-0080
100	P1D-X040MF-0100
125	P1D-X040MF-0125
160	P1D-X040MF-0160
200	P1D-X040MF-0200
250	P1D-X040MF-0250
320	P1D-X040MF-0320
400	P1D-X040MF-0400
500	P1D-X040MF-0500

#### Ø50mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-X050MF-0025
40	P1D-X050MF-0040
50	P1D-X050MF-0050
80	P1D-X050MF-0080
100	P1D-X050MF-0100
125	P1D-X050MF-0125
160	P1D-X050MF-0160
200	P1D-X050MF-0200
250	P1D-X050MF-0250
320	P1D-X050MF-0320
400	P1D-X050MF-0400
500	P1D-X050MF-0500

#### Ø63mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-X063MF-0025
40	P1D-X063MF-0040
50	P1D-X063MF-0050
80	P1D-X063MF-0080
100	P1D-X063MF-0100
125	P1D-X063MF-0125
160	P1D-X063MF-0160
200	P1D-X063MF-0200
250	P1D-X063MF-0250
320	P1D-X063MF-0320
400	P1D-X063MF-0400
500	P1D-X063MF-0500

#### Ø80mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-X080MF-0025
40	P1D-X080MF-0040
50	P1D-X080MF-0050
80	P1D-X080MF-0080
100	P1D-X080MF-0100
125	P1D-X080MF-0125
160	P1D-X080MF-0160
200	P1D-X080MF-0200
250	P1D-X080MF-0250
320	P1D-X080MF-0320
400	P1D-X080MF-0400
500	P1D-X080MF-0500

#### Ø100mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-X100MF-0025
40	P1D-X100MF-0040
50	P1D-X100MF-0050
80	P1D-X100MF-0080
100	P1D-X100MF-0100
125	P1D-X100MF-0125
160	P1D-X100MF-0160
200	P1D-X100MF-0200
250	P1D-X100MF-0250
320	P1D-X100MF-0320
400	P1D-X100MF-0400
500	P1D-X100MF-0500

#### Ø125mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-X125MF-0025
40	P1D-X125MF-0040
50	P1D-X125MF-0050
80	P1D-X125MF-0080
100	P1D-X125MF-0100
125	P1D-X125MF-0125
160	P1D-X125MF-0160
200	P1D-X125MF-0200
250	P1D-X125MF-0250
320	P1D-X125MF-0320
400	P1D-X125MF-0400
500	P1D-X125MF-0500

The cylinders are supplied complete with a zinc plated steel piston rod nut.

#### P1D-X High Temperature

Certain restrictions apply when choosing sensors due to the temperature range.

High temperature cylinders cannot be fitted with sensors. (the magnetic field strength in high temperatures is too low to ensure correct reliable sensor function).

## P1D-X - Double acting - Low temperature

### Ø32mm - (G<sup>1/8</sup>)

Stroke mm	Order code
25	P1D-X032ML-0025
40	P1D-X032ML-0040
50	P1D-X032ML-0050
80	P1D-X032ML-0080
100	P1D-X032ML-0100
125	P1D-X032ML-0125
160	P1D-X032ML-0160
200	P1D-X032ML-0200
250	P1D-X032ML-0250
320	P1D-X032ML-0320
400	P1D-X032ML-0400
500	P1D-X032ML-0500

### Ø63mm - (G<sup>3/8</sup>)

Stroke mm	Order code
25	P1D-X063ML-0025
40	P1D-X063ML-0040
50	P1D-X063ML-0050
80	P1D-X063ML-0080
100	P1D-X063ML-0100
125	P1D-X063ML-0125
160	P1D-X063ML-0160
200	P1D-X063ML-0200
250	P1D-X063ML-0250
320	P1D-X063ML-0320
400	P1D-X063ML-0400
500	P1D-X063ML-0500

### Ø100mm - (G<sup>1/2</sup>)

Stroke mm	Order code
25	P1D-X100ML-0025
40	P1D-X100ML-0040
50	P1D-X100ML-0050
80	P1D-X100ML-0080
100	P1D-X100ML-0100
125	P1D-X100ML-0125
160	P1D-X100ML-0160
200	P1D-X100ML-0200
250	P1D-X100ML-0250
320	P1D-X100ML-0320
400	P1D-X100ML-0400
500	P1D-X100ML-0500

### Ø40mm - (G<sup>1/4</sup>)

Stroke mm	Order code
25	P1D-X040ML-0025
40	P1D-X040ML-0040
50	P1D-X040ML-0050
80	P1D-X040ML-0080
100	P1D-X040ML-0100
125	P1D-X040ML-0125
160	P1D-X040ML-0160
200	P1D-X040ML-0200
250	P1D-X040ML-0250
320	P1D-X040ML-0320
400	P1D-X040ML-0400
500	P1D-X040ML-0500

### Ø80mm - (G<sup>3/4</sup>)

Stroke mm	Order code
25	P1D-X080ML-0025
40	P1D-X080ML-0040
50	P1D-X080ML-0050
80	P1D-X080ML-0080
100	P1D-X080ML-0100
125	P1D-X080ML-0125
160	P1D-X080ML-0160
200	P1D-X080ML-0200
250	P1D-X080ML-0250
320	P1D-X080ML-0320
400	P1D-X080ML-0400
500	P1D-X080ML-0500

### Ø125mm - (G<sup>1/2</sup>)

Stroke mm	Order code
25	P1D-X125ML-0025
40	P1D-X125ML-0040
50	P1D-X125ML-0050
80	P1D-X125ML-0080
100	P1D-X125ML-0100
125	P1D-X125ML-0125
160	P1D-X125ML-0160
200	P1D-X125ML-0200
250	P1D-X125ML-0250
320	P1D-X125ML-0320
400	P1D-X125ML-0400
500	P1D-X125ML-0500

### Ø50mm - (G<sup>1/4</sup>)

Stroke mm	Order code
25	P1D-X050ML-0025
40	P1D-X050ML-0040
50	P1D-X050ML-0050
80	P1D-X050ML-0080
100	P1D-X050ML-0100
125	P1D-X050ML-0125
160	P1D-X050ML-0160
200	P1D-X050ML-0200
250	P1D-X050ML-0250
320	P1D-X050ML-0320
400	P1D-X050ML-0400
500	P1D-X050ML-0500

The cylinders are supplied complete with a zinc plated steel piston rod nut.

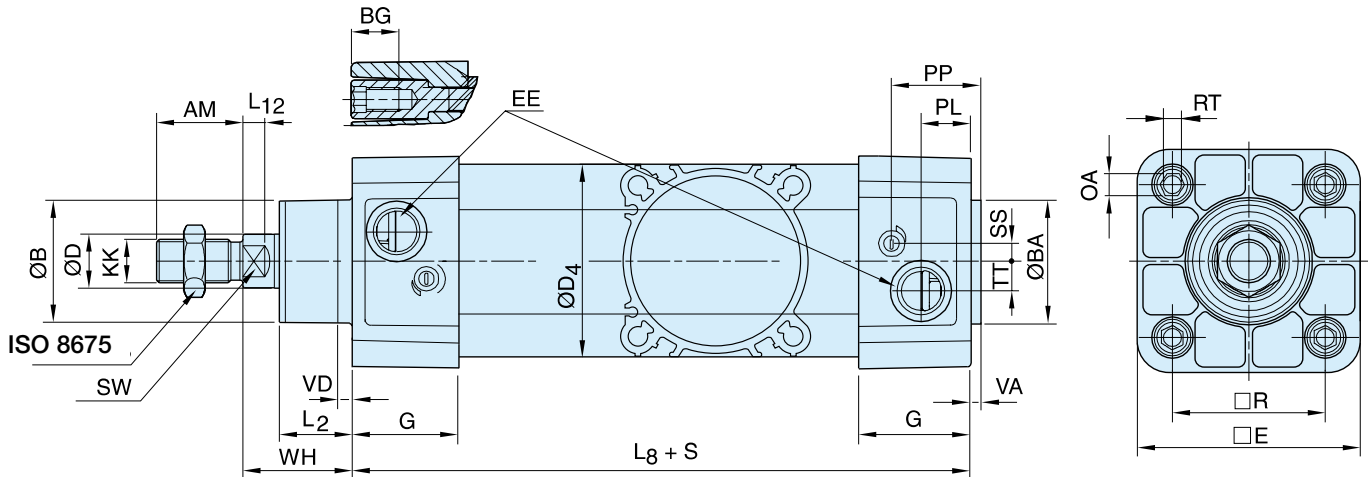
#### Sensors



For sensors see page 78.

The standard low temperature P1D-X version has a magnetic ring in the piston for proximity sensing but please note that these sensors are normally specified for full performance down to -25°C only.

**P1D-X Series Dimensions**



**Dimensions**

Cylinder bore mm	AM mm	B mm	BA mm	BG mm	D mm	D4 mm	E mm	EE mm	G mm	KK	L2 mm	L8 mm	L12 mm
32	22	30	30	16	12	45,0	48,0	G1/8	28,5	M10x1,25	16,8	94	6,0
40	24	35	35	16	16	52,0	53,5	G1/4	33,0	M12x1,25	19,0	105	6,5
50	32	40	40	16	20	60,7	65,2	G1/4	33,5	M16x1,5	24,0	106	8,0
63	32	45	45	16	20	71,5	75,5	G3/8	39,5	M16x1,5	24,3	121	8,0
80	40	45	45	17	25	86,7	95,0	G3/8	39,5	M20x1,5	30,0	128	10,0
100	40	55	55	17	25	106,7	114,0	G1/2	44,5	M20x1,5	34,0	138	14,0
125	54	60	60	20	32	134,0	139,0	G1/2	51,0	M27x2	45,0	160	18,0

Cylinder bore mm	OA mm	PL mm	PP mm	R mm	RT	SS mm	SW mm	TT mm	VA mm	VD mm	WH mm
32	6,0	14,0	24,2	32,5	M6	5,5	10	4,2	3,5	4,5	26
40	6,0	16,0	27,5	38,0	M6	8,0	13	5,5	3,5	4,5	30
50	8,0	14,0	29,3	46,5	M8	9,0	17	7,5	3,5	4,5	37
63	8,0	16,6	30,8	56,5	M8	6,5	17	10,0	3,5	4,5	37
80	6,0	16,8	33,5	72,0	M10	0	22	11,5	3,5	4,5	46
100	6,0	20,5	37,5	89,0	M10	0	22	14,5	3,5	4,5	51
125	8,0	23,3	45,8	110,0	M12	0	27	15,0	5,5	6,5	65

S=Stroke

**Tolerances**

Cylinder bore mm	B	BA	L <sub>3</sub> mm	L <sub>9</sub> mm	R mm	Stroke tolerance up to stroke 500 mm	Stroke tolerance for stroke over 500 mm
32	d11	d11	±0,4	±2	±0,5	+0,3/+2,0	+0,3/+3,0
40	d11	d11	±0,7	±2	±0,5	+0,3/+2,0	+0,3/+3,0
50	d11	d11	±0,7	±2	±0,6	+0,3/+2,0	+0,3/+3,0
63	d11	d11	±0,8	±2	±0,7	+0,3/+2,0	+0,3/+3,0
80	d11	d11	±0,8	±3	±0,7	+0,3/+2,0	+0,3/+3,0
100	d11	d11	±1,0	±3	±0,7	+0,3/+2,0	+0,3/+3,0
125	d11	d11	±1,0	±3	±1,1	+0,3/+2,0	+0,3/+3,0

**For mountings refer to page 42.**

## P1D-L Rod Locking Cylinders

P1D-L is a series of extremely compact rod lock cylinders for demanding applications. This version allows the piston rod to be locked in any position but can also be used as a brake (limits apply) thanks to the rigid design. With helical grooves on the precision clamping sleeves the locking function allows for applications where the piston rod is exposed to liquids and contamination.

- Available in 32 to 125 mm bores
- PUR seals for long service life
- Drop-in sensors
- Corrosion resistant design
- Magnetic piston as standard
- Full range of ISO mountings
- Lubricated with food grade grease



### Operating information

Working pressure:	Max 10 bar
Working temperature:	-20°C to +80°C
Release pressure <sup>1)</sup>	Min 4 bar
ATEX approval:	CE Ex IIGD c T4 120°C

<sup>1)</sup> Signal pressure to inlet port of lock unit

For more information see [www.parker.com/euro\\_pneumatic](http://www.parker.com/euro_pneumatic)

### P1D-L Standard - Double acting

#### Ø32mm - (G<sup>1</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-L032MC-0025
40	P1D-L032MC-0040
50	P1D-L032MC-0050
80	P1D-L032MC-0080
100	P1D-L032MC-0100
125	P1D-L032MC-0125
160	P1D-L032MC-0160
200	P1D-L032MC-0200
250	P1D-L032MC-0250
320	P1D-L032MC-0320
400	P1D-L032MC-0400
500	P1D-L032MC-0500

#### Ø40mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-L040MC-0025
40	P1D-L040MC-0040
50	P1D-L040MC-0050
80	P1D-L040MC-0080
100	P1D-L040MC-0100
125	P1D-L040MC-0125
160	P1D-L040MC-0160
200	P1D-L040MC-0200
250	P1D-L040MC-0250
320	P1D-L040MC-0320
400	P1D-L040MC-0400
500	P1D-L040MC-0500

#### Ø50mm - (G<sup>1</sup>/<sub>4</sub>)

Stroke mm	Order code
25	P1D-L050MC-0025
40	P1D-L050MC-0040
50	P1D-L050MC-0050
80	P1D-L050MC-0080
100	P1D-L050MC-0100
125	P1D-L050MC-0125
160	P1D-L050MC-0160
200	P1D-L050MC-0200
250	P1D-L050MC-0250
320	P1D-L050MC-0320
400	P1D-L050MC-0400
500	P1D-L050MC-0500

#### Ø63mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-L063MC-0025
40	P1D-L063MC-0040
50	P1D-L063MC-0050
80	P1D-L063MC-0080
100	P1D-L063MC-0100
125	P1D-L063MC-0125
160	P1D-L063MC-0160
200	P1D-L063MC-0200
250	P1D-L063MC-0250
320	P1D-L063MC-0320
400	P1D-L063MC-0400
500	P1D-L063MC-0500

#### Ø80mm - (G<sup>3</sup>/<sub>8</sub>)

Stroke mm	Order code
25	P1D-L080MS-0025
40	P1D-L080MC-0040
50	P1D-L080MC-0050
80	P1D-L080MC-0080
100	P1D-L080MC-0100
125	P1D-L080MC-0125
160	P1D-L080MC-0160
200	P1D-L080MC-0200
250	P1D-L080MC-0250
320	P1D-L080MC-0320
400	P1D-L080MC-0400
500	P1D-L080MC-0500

#### Ø100mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-L100MC-0025
40	P1D-L100MC-0040
50	P1D-L100MC-0050
80	P1D-L100MC-0080
100	P1D-L100MC-0100
125	P1D-L100MC-0125
160	P1D-L100MC-0160
200	P1D-L100MC-0200
250	P1D-L100MC-0250
320	P1D-L100MC-0320
400	P1D-L100MC-0400
500	P1D-L100MC-0500

#### Ø125mm - (G<sup>1</sup>/<sub>2</sub>)

Stroke mm	Order code
25	P1D-L125MC-0025
40	P1D-L125MC-0040
50	P1D-L125MC-0050
80	P1D-L125MC-0080
100	P1D-L125MC-0100
125	P1D-L125MC-0125
160	P1D-L125MC-0160
200	P1D-L125MC-0200
250	P1D-L125MC-0250
320	P1D-L125MC-0320
400	P1D-L125MC-0400
500	P1D-L125MC-0500

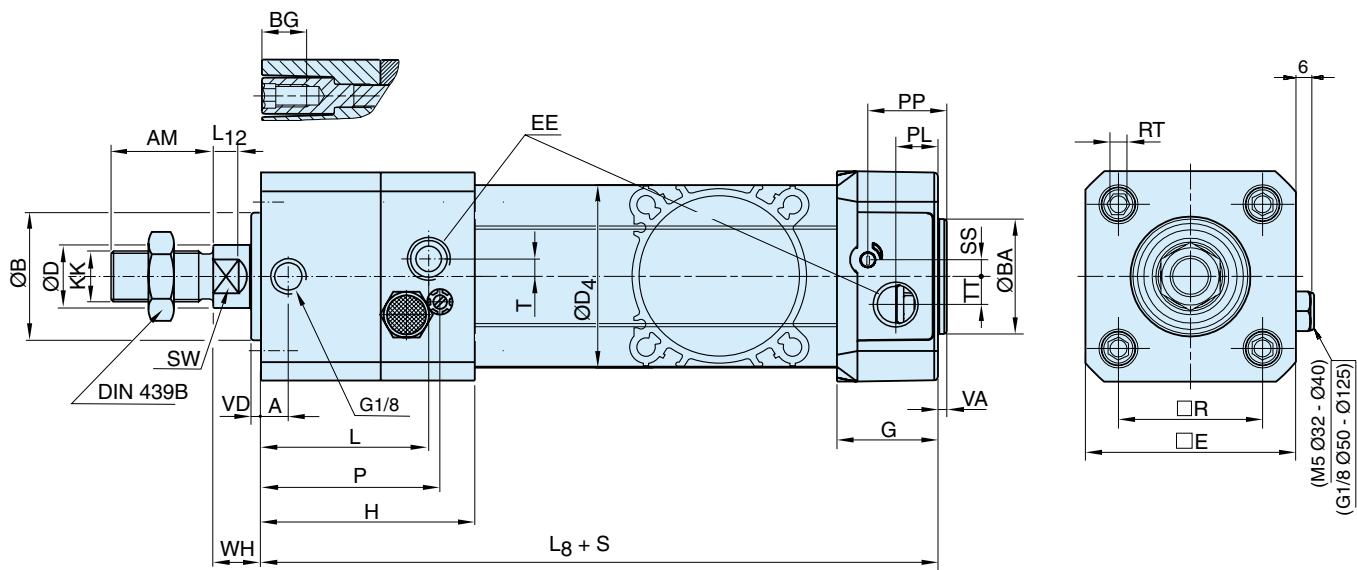
The cylinders are supplied complete with a zinc plated steel piston rod nut.

#### Sensors



For sensors see page 78.

P1D-L Series dimensions



Dimensions

Cylinder bore mm	A mm	AM mm	B mm	BA mm	BG mm	D mm	D4 mm	E mm	EE mm	G mm	H mm	KK mm	L mm
32	18,5	22	30	30	16	12	45,0	50,0	G1/8	28,5	71,0	M10x1,25	53,0
40	20,0	24	35	35	16	16	52,0	57,4	G1/4	33,0	76,5	M12x1,25	56,0
50	21,0	32	40	40	16	20	60,7	69,4	G1/4	33,5	80,0	M16x1,5	65,0
63	30,0	32	45	45	16	20	71,5	82,4	G3/8	39,5	96,0	M16x1,5	76,5
80	35,0	40	45	45	17	25	86,7	99,4	G3/8	39,5	110,0	M20x1,5	89,0
100	54,0	40	55	55	17	25	106,7	116,0	G1/2	44,5	132,0	M20x1,5	112,0
125	65,5	54	60	60	20	32	134,0	139,0	G1/2	51,0	144,5	M27x2	124,5

Cylinder bore mm	L8 mm	L12 mm	P mm	PL mm	PP mm	R mm	RT mm	SS mm	SW mm	T mm	TT mm	VA mm	VD mm	WH mm
32	137	6,0	63,0	13,0	21,8	32,5	M6	4,0	10	4,5	4,5	3,5	4,5	15
40	149	6,5	67,5	14,0	21,9	38,0	M6	8,0	13	3,0	5,5	3,5	4,5	16
50	153	8,0	71,0	14,0	23,0	46,5	M8	4,0	17	5,5	7,5	3,5	5,0	17
63	178	8,0	87,0	16,4	27,4	56,5	M8	6,5	17	3,0	11,0	3,5	5,0	17
80	199	10,0	101,0	16,0	30,5	72,0	M10	0	22	6,0	15,0	3,5	4,0	20
100	226	14,0	122,0	18,0	35,8	89,0	M10	0	22	6,0	20,0	3,5	4,0	20
125	254	18,0	134,5	28,0	40,5	110,0	M12	0	27	6,0	17,5	5,5	6,0	27

S=Stroke

Tolerances

Cylinder bore mm	B mm	BA mm	L <sub>3</sub> mm	L <sub>9</sub> mm	R mm	Stroke tolerance up to stroke 500 mm	Stroke tolerance for stroke over 500 mm
32	d11	d11	±0,4	±2	±0,5	+0,3/+2,0	+0,3/+3,0
40	d11	d11	±0,7	±2	±0,5	+0,3/+2,0	+0,3/+3,0
50	d11	d11	±0,7	±2	±0,6	+0,3/+2,0	+0,3/+3,0
63	d11	d11	±0,8	±2	±0,7	+0,3/+2,0	+0,3/+3,0
80	d11	d11	±0,8	±3	±0,7	+0,3/+2,0	+0,3/+3,0
100	d11	d11	±1,0	±3	±0,7	+0,3/+2,0	+0,3/+3,0
125	d11	d11	±1,0	±3	±1,1	+0,3/+2,0	+0,3/+3,0

For mountings refer to page 42.

## P1E Rod Guidance Module

Ball bearings are greased for life, for extra protection external wiper seals are fitted on each face of the unit.

Aluminium body provides 3 mounting faces.

Anti-rotation achieved by 4 integral bearings. Choice of linear ball bearings or plain PTFE coated bearings

Guide bars: Ball bearing versions stainless steel. Plain bearing version hard chrome plated.

Lubrication points.

Cylinder mounting conforms to ISO 6431 and DIN 24335 standard

Self aligning adaptor for ISO cylinder piston rod.

Mounting flange

**Installation on P1D with lock unit**  
If rotary control is to be retrofitted to a P1D with lock unit, the piston rod must be extended to provide the same WH dimensions as for the P1D base cylinder, as shown in the table below.

Cyl. dim mm	Piston rod extension on P1D with lock unit mm
32	11
40	14
50	20
63	20
80	26
100	31

### P1E with rod guidance modules

The P1D series cylinders can be equipped with an external guiding device to prevent the piston rod from turning. The factory fitted guide gives a guided piston movement and enables the cylinder to take up turning moments on the piston rod, as well as greater transverse forces. The rod guidance is available with plain bearings or linear ball bearings and with H or U style. The bracket, which has pre-drilled mounting holes, is connected to the piston rod by means of a flexo coupling, which prevents the build-up of stresses in the cylinder. P1D cylinders with guiding devices are available with bores from 32 to 100 mm, and standard stroke lengths from 25 to 250 mm. Special stroke lengths up to 500 mm can also be obtained. Separate guiding device kits can be supplied on request according to the order key below.

### Technical data

Working medium Dry, filtered compressed air  
Working temperature -20 °C to +80 °C

### Material specifications, guidance modules

Body Anodised aluminium  
Guide bars, H style Stainless steel for ball bearing  
chrome plated for plain bearing  
Front plate Anodised aluminium  
Guide bars, U style Stainless steel  
Front plate Zinc-plated steel  
Bearings Plain bearings  
Linear ball bearings

Other data as standard cylinder.

### Order key for separate guidance module

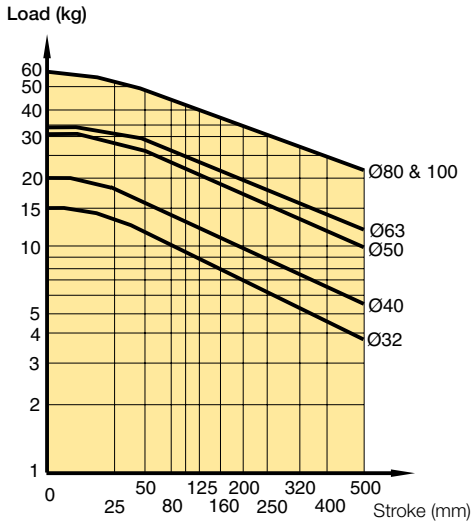
**P1E** - **4KRH** - **0100**

Bore size mm		Guide module type		Stroke length (mm)
<b>K</b>	32	<b>H</b>	H style, ball bearings	Same as for the cylinder e.g. <b>0100</b> = 100 mm.
<b>L</b>	40	<b>J</b>	H style, plain bearings	
<b>M</b>	50	<b>K</b>	U style, plain bearings	
<b>N</b>	63			
<b>P</b>	80			
<b>Q</b>	100			

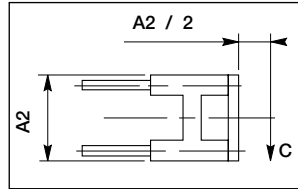
**Technical information 'H style'**

**Rod guide with ball bearings**

**Maximum load carried**

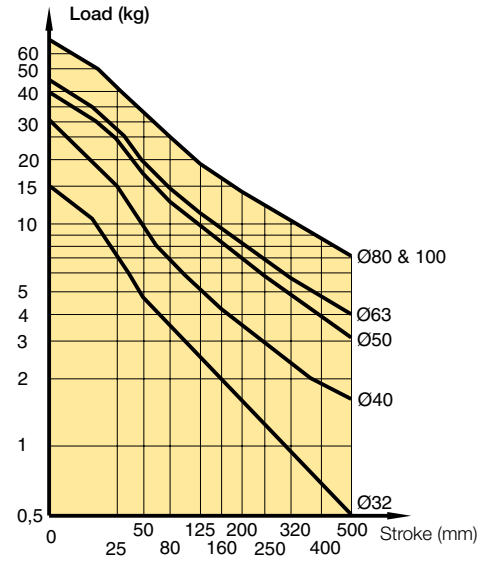


Graphs established at mid point of stroke

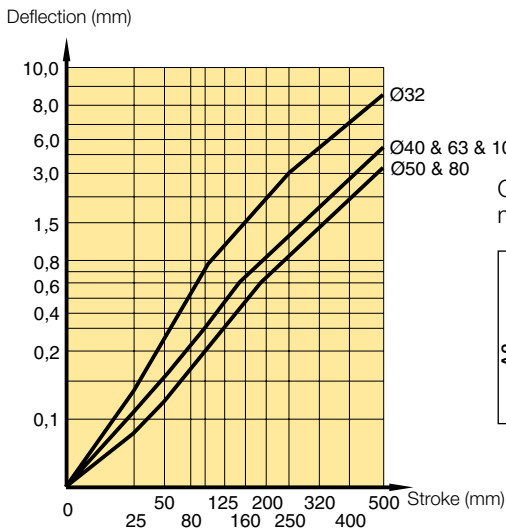


**Rod guide with plain bearings**

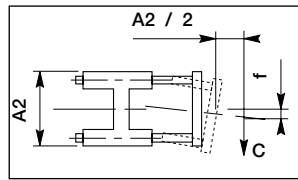
**Maximum load carried**



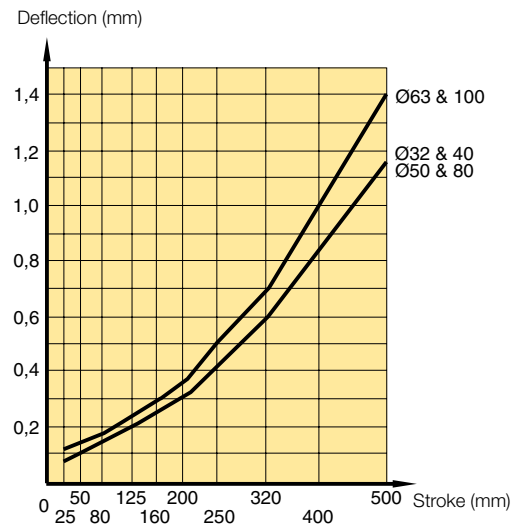
**Maximum deflection/max load**



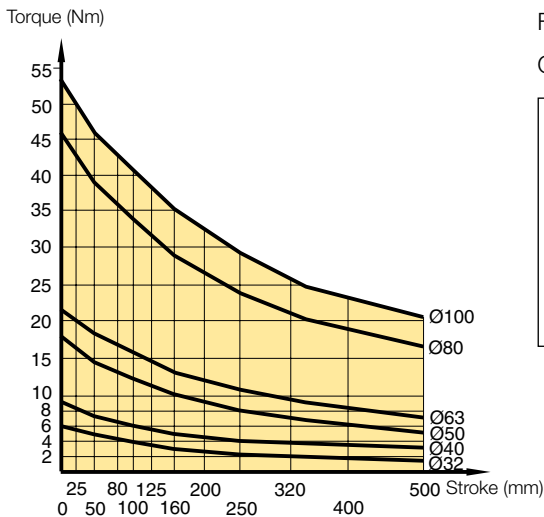
Graphs established at mid point of stroke



**Maximum deflection/max load**

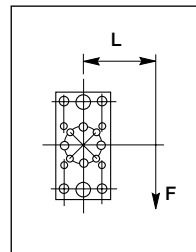


**Maximum permissible torque (Nm)**

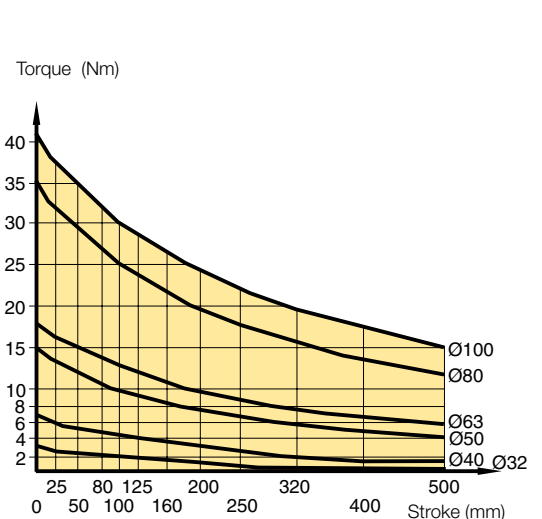


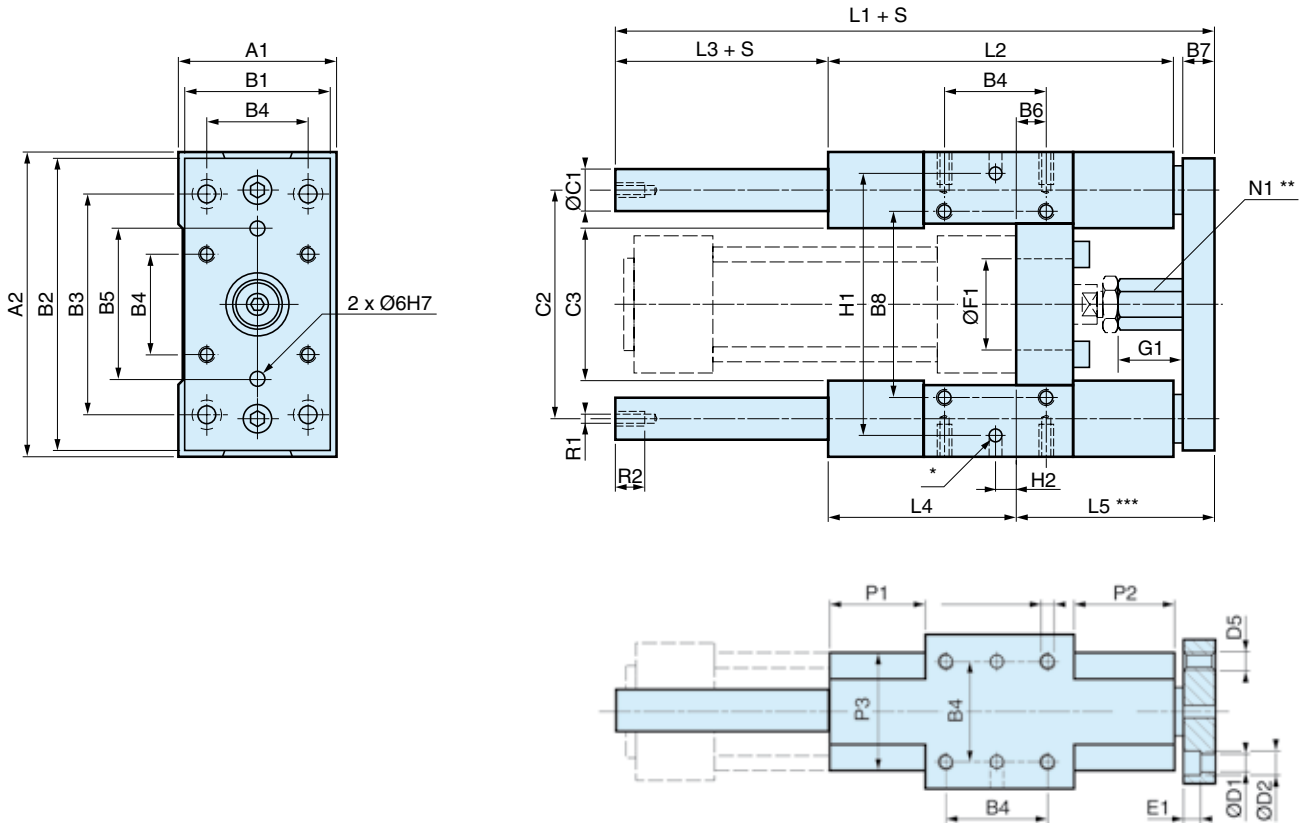
Formula:

$$C(\text{Nm}) = F(\text{N}) \times L(\text{m})$$



**Maximum permissible torque (Nm)**





**Dimensions, H style guidance modules**

Cyl. bore mm	A <sub>1</sub> mm	A <sub>2</sub> mm	B <sub>1</sub> mm	B <sub>2</sub> mm	B <sub>3</sub> mm	B <sub>4</sub> mm	B <sub>5</sub> mm	B <sub>6</sub> mm	B <sub>7</sub> mm	B <sub>8</sub> mm	ØC <sub>1</sub> mm	C <sub>2</sub> mm	C <sub>3</sub> mm	ØD <sub>1</sub> mm	ØD <sub>2</sub> mm	D <sub>5</sub>
32	50	97	45	90	78	32,5	50	4,2	12	61	12	73,5	50	6,6	11	M6
40	58	115	54	110	84	38,0	54	11,0	12	69	16	86,5	58	6,6	11	M6
50	70	137	63	130	100	46,5	72	18,8	15	85	20	103,5	70	8,4	15	M8
63	85	152	80	145	105	56,5	82	15,0	15	100	20	118,5	83	8,4	15	M8
80	105	189	100	180	130	72,0	106	21,0	20	130	25	147,0	102	10,5	18	M10
100	130	213	120	200	150	89,0	131	24,5	20	150	25	171,5	125	10,5	18	M10

Cyl. bore mm	E <sub>1</sub> mm	Ø F <sub>1</sub> <sup>+0,1/0</sup> G <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	L <sub>4</sub> mm	L <sub>5</sub> mm	N <sub>1</sub> mm	P <sub>1</sub> <sup>±1</sup> mm	P <sub>2</sub> <sup>±1</sup> mm	P <sub>3</sub> mm	R <sub>1</sub> mm	R <sub>2</sub> mm	W mm	mm
32	7	30	17	150	120	15	71	64	17	36	31	40	M6	11	5
40	7	35	24	170	130	25	71	74	17	36	36	44	M6	11	6
50	9	40	27	197	150	24	79	89	24	42	44	50	M8	16	8
63	9	45	27	222	180	24	109	89	24	58	44	60	M8	16	8
80	11	45	32	247	200	24	113	110	30	50	52	70	M10	16	10
100	11	55	32	267	220	24	128	115	30	49	51	70	M10	16	10

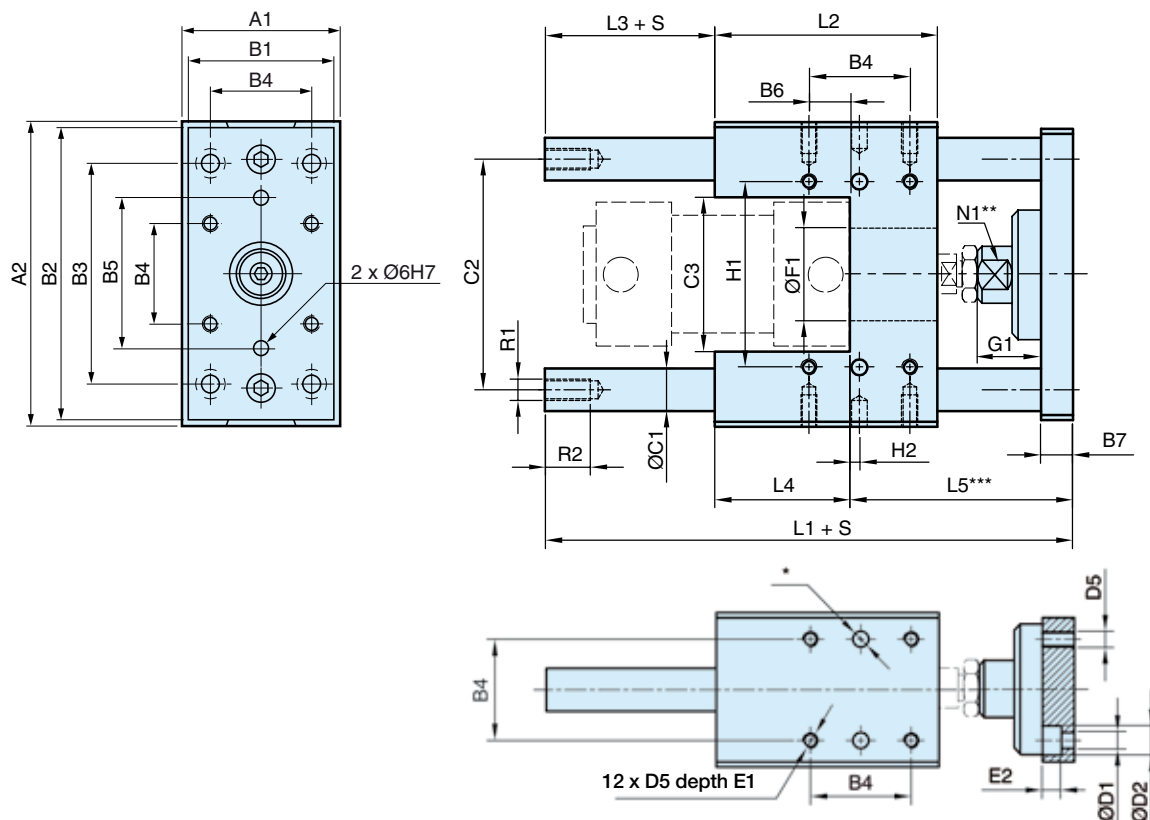
Cyl. bore mm	H <sub>1</sub> <sup>±0,05</sup> mm	H <sub>2</sub> mm	T mm	Weight at 0 mm stroke kg	Supplement weight per 10 mm stroke kg
32	81	11,7	12	0,970	0,018
40	99	8,0	12	1,550	0,032
50	119	4,2	16	2,560	0,050
63	132	13,0	16	3,570	0,050
80	166	15,0	20	6,530	0,078
100	190	20,5	20	8,760	0,078

S = Stroke length

\* 6 hole Ø6<sup>H7</sup>, depth 10<sup>+1/0</sup>

\*\* Hexagon profile

\*\*\* Min adjustment=0, max.=W



**Dimensions, U style guidance modules**

Cyl. bore. mm	A <sub>1</sub> mm	A <sub>2</sub> mm	B <sub>1</sub> mm	B <sub>2</sub> mm	B <sub>3</sub> mm	B <sub>4</sub> mm	B <sub>5</sub> mm	B <sub>6</sub> mm	B <sub>7</sub> mm	C <sub>1</sub> mm	C <sub>2</sub> mm	C <sub>3</sub> mm	D <sub>1</sub> mm	D <sub>2</sub> mm	D <sub>5</sub>
32	50	97	45	90	78	32,5	50	18,0	12	12	74	50	6,6	11	M6
40	58	115	54	110	84	38,0	54	15,5	12	16	87	58	6,6	11	M6
50	70	137	63	130	100	46,5	72	19,5	15	20	104	70	9,0	15	M8
63	85	152	80	145	105	56,5	82	29,5	15	20	119	85	9,0	15	M8
80	105	189	100	180	130	72,0	106	39,0	20	25	148	105	11,0	18	M10
100	130	213	120	200	150	89,0	131	53,5	20	25	172	130	11,0	18	M10

Cyl. bore. mm	E <sub>1</sub> mm	E <sub>2</sub> mm	Ø F <sub>1</sub> <sup>+0,1/0</sup> mm	G <sub>1</sub>	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	L <sub>4</sub> mm	L <sub>5</sub> mm	N <sub>1</sub> mm	R <sub>1</sub> mm	R <sub>2</sub>	H <sub>1</sub> <sup>±0,05</sup> mm	H <sub>2</sub> mm	W <sup>***</sup> mm
32	10	6,5	30	30	133	72	14	44	75	13	M6	11	61	1,75	5
40	10	6,5	35	36	149	84	12	51	86	15	M8	12	69	3,50	5
50	13	9,0	40	42	175	100	12	60	103	22	M8	12	85	3,75	5
63	13	9,0	45	42	190	115	12	75	103	22	M8	12	100	1,25	5
80	16	11,0	45	49	238	162	0	112	126	27	M10	16	130	3,00	6
100	16	11,0	55	49	249	167	6	112	131	27	M10	16	150	8,50	6

Cyl. bore mm	Weight at 0 mm stroke kg	Supplement weight per 10 mm stroke kg
32	0,970	0,018
40	1,550	0,315
50	2,560	0,493
63	3,570	0,493
80	6,530	0,770
100	8,760	0,770

S = Stroke length

\* 6 hole Ø6<sup>H7</sup>, depth 10<sup>+1/0</sup>

\*\* Width of jaw

\*\*\* Min adjustment=0, max.=W

# P8S-G sensors



The P1D sensors can easily be installed from the side in the sensor groove, at any position along the piston stroke. The sensors are completely recessed and thus mechanically protected. Choose between electronic or reed sensors and several cable lengths and 8 mm and M12 connectors. The same standard sensors are used for all P1D versions.

## Electronic sensors

The electronic sensors are "Solid State", i.e. they have no moving parts at all. They are provided with short-circuit protection and transient protection as standard. The built-in electronics make the sensors suitable for applications with high on and off switching frequency, and where very long service life is required.

## Reed sensors

The sensors are based on proven reed switches, which offer reliable function in many applications. Simple installation, a protected position on the cylinder and clear LED indication are important advantages of this range of sensors.

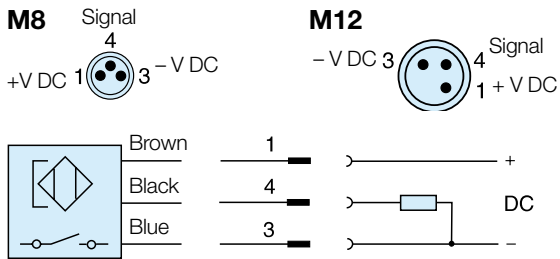
### Technical data

Design	GMR (Giant Magnetic Resistance) magneto-resistive function
Installation	From side, down into the sensor groove, so-called drop-in
Outputs	PNP, normally open (also available in NPN design, normally closed, on request)
Voltage range	10-30 VDC 10-18 V DC, ATEX sensor
Ripple	max 10%
Voltage drop	max 2,5 V
Load current	max 100 mA
Internal consumption	max 10 mA
Actuating distance	min 9 mm
Hysteresis	max 1,5 mm
Repeatability accuracy	max 0,2 mm
On/off switching frequency	max 5 kHz
On switching time	max 2 ms
Off switching time	max 2 ms
Encapsulation	IP 67 (EN 60529)
Temperature range	-25 °C to +75 °C -20 °C to +45 °C, ATEX sensor
Indication	LED, yellow
Material housing	PA 12
Material screw	Stainless steel
Cable	PVC or PUR 3x0.25 mm <sup>2</sup> see order code respectively

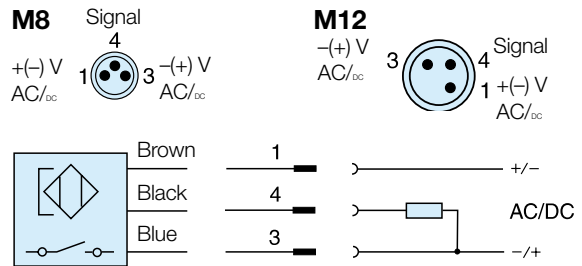
### Technical data

Design	Reed element
Mounting	From side, down into the sensor groove, so-called drop-in
Output	Normally open , or normally closed
Voltage range	10-30 V AC/DC or 10-120 V AC/DC 24-230 V AC/DC
Load current	max 500 mA for 10-30 V or max 100 mA for 10-120 V max 30 mA for 24-230 V
Breaking power (resistive)	max 6 W/VA
Actuating distance	min 9 mm
Hysteresis	max 1,5 mm
Repeatability accuracy	0,2 mm
On/off switching frequency	max 400 Hz
On switching time	max 1,5 ms
Off switching time	max 0,5 ms
Encapsulation	IP 67 (EN 60529)
Temperature range	-25 °C to +75 °C
Indication	LED, yellow
Material housing	PA12
Material screw	Stainless steel
Cable	PVC or PUR 3x0.14 mm <sup>2</sup> see order code respectively

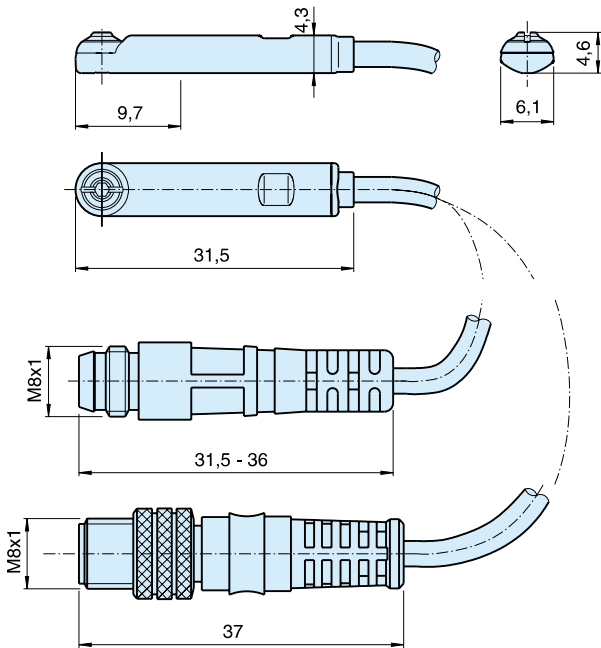
Electronic sensors



Reed sensors



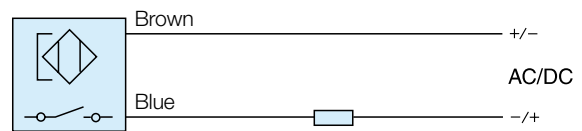
Sensor Dimensions



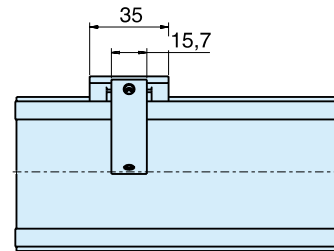
P8S-GCFPX



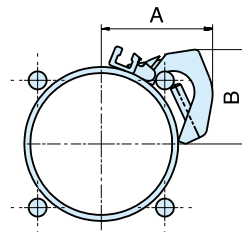
P8S-GRFLX / P8S-GRFLX2



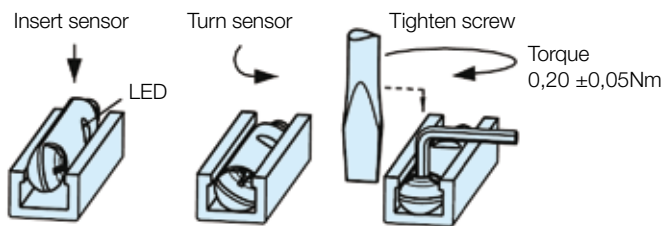
Sensor mounting - P1D-T 32 - 125mm  
 P8S-TMA0X



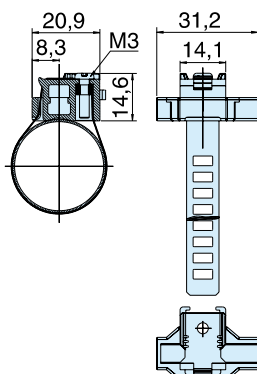
Cyl. bore mm	A mm	B mm
32	35	26
40	39	30
50	44	30
63	50	42
80	54	52
100	62	60
125	74	69



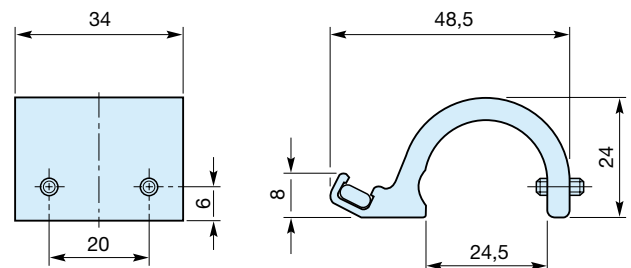
Sensor Installation - P1D-S / B / C / X  
 P1Q / P1P



Sensor mounting for P1A - P8S-TMC01



Sensor mounting - P1D-T 160 - 320mm  
 PD48956



Order code  
**PD48956**

## Ordering data

Output/function	Cable/connector	Weight kg	Order code
<b>Electronic sensors , 10-30 V DC</b>			
PNP type, normally open	0,27 m PUR-cable and 8 mm snap-in male connector	0,007	<b>P8S-GPSHX</b>
PNP type, normally open	0,27 m PUR-cable and M12 screw male connector	0,015	<b>P8S-GPMHX</b>
PNP type, normally open	3 m PVC-cable without connector	0,030	<b>P8S-GPFLX</b>
PNP type, normally open	10 m PVC-cable without connector	0,110	<b>P8S-GPFTX</b>
<b>Reed sensors , 10-30 V AC/DC</b>			
Normally open	0,27 m PUR-cable and 8 mm snap-in male connector	0,007	<b>P8S-GSSHX</b>
Normally open	0,27 m PUR-cable and M12 screw male connector	0,015	<b>P8S-GSMHX</b>
Normally open	3 m PVC-cable without connector	0,030	<b>P8S-GSFLX</b>
Normally open	10 m PVC-cable without connector	0,110	<b>P8S-GSFTX</b>
Normally closed	5m PVC-cable without connector <sup>(1)</sup>	0,050	<b>P8S-GCFPX</b>
<b>Reed sensors, 10-120 V AC/DC</b>			
Normally open	3 m PVC-cable without connector	0,030	<b>P8S-GRFLX</b>
<b>Reed sensorer, 24-230 V AC/DC</b>			
Normally open	3 m PVC-cable without connector	0,030	<b>P8S-GRFLX2</b>

1) Without LED

## Sensor mounting

Description	Weight kg	Order code
Sensor mounting for cylinder P1A cylinder bore Ø10 to Ø25 mm	0,07	<b>P8S-TMC01</b>
Double jointed adapter for cylinder P1D-T cylinder bore Ø32 to Ø125 mm	0,07	<b>P8S-TMA0X</b>
Sensor mounting for P1D-T 160 - 320mm	0,040	<b>PD48956</b>

## Connecting cables with one connector

The cables have an integral snap-in female connector.



Type of cable	Cable/connector	Weight kg	Order code
<b>Cables for sensors, complete with one female connector</b>			
Cable, Flex PVC	3 m, 8 mm Snap-in connector	0,07	<b>9126344341</b>
Cable, Flex PVC	10 m, 8 mm Snap-in connector	0,21	<b>9126344342</b>
Cable, Polyurethane	3 m, 8 mm Snap-in connector	0,01	<b>9126344345</b>
Cable, Polyurethane	10 m, 8 mm Snap-in connector	0,20	<b>9126344346</b>
Cable, Polyurethane	5 m, M12 screw connector	0,07	<b>9126344348</b>
Cable, Polyurethane	10 m, M12 screw connector	0,20	<b>9126344349</b>

## Male connectors for connecting cables

Cable connectors for producing your own connecting cables. The connectors can be quickly attached to the cable without special tools. Only the outer sheath of the cable is removed. The connectors are available for M8 and M12 screw connectors and meet protection class IP 65.



Connector	Weight kg	Order code
M8 screw connector	0,017	<b>P8CS0803J</b>
M12 screw connector	0,022	<b>P8CS1204J</b>



**For ATEX specific products  
contact Sales Office**