

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

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

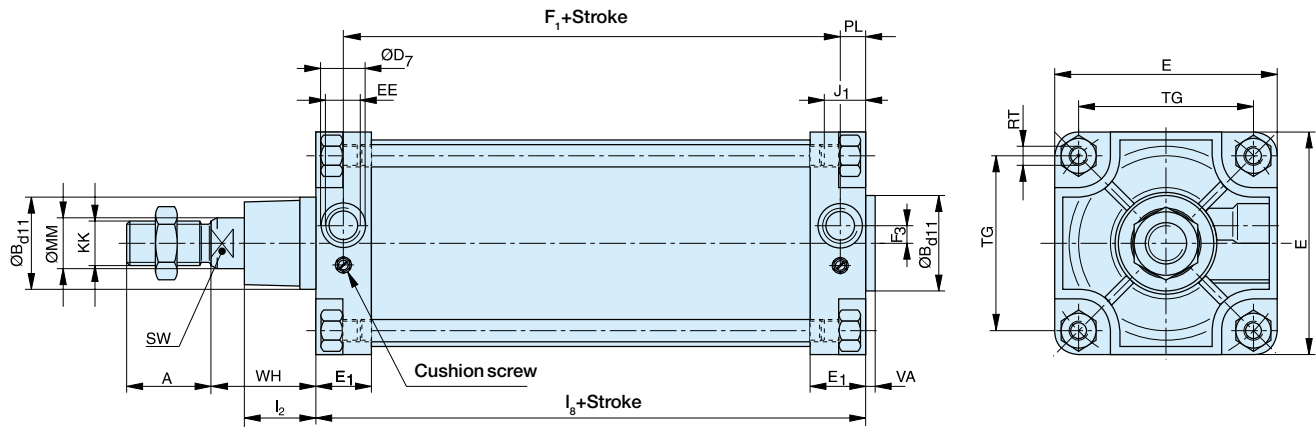
The cylinders are supplied complete with a zinc plated steel piston rod nut.

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 _{d11}	ØD ₇	E	E ₁	F ₁ + Stroke	F ₃	J ₁ max.	I ₂	I ₈ + 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 ₈ 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

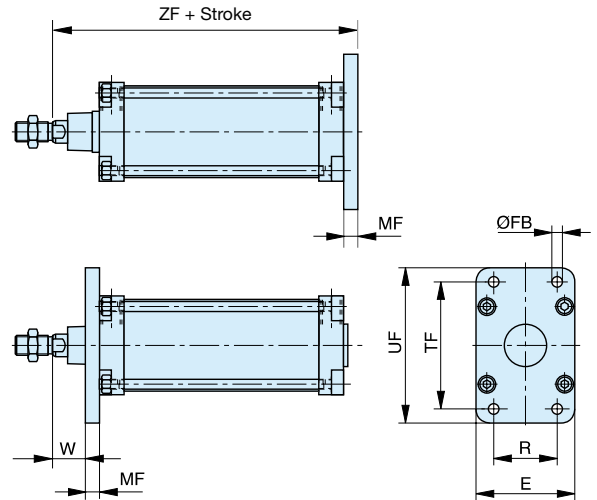
Flange MF1/MF2



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	PD23410
200	220	135	70	22	25	270	315	300	12.2	PD24924
250	280	165	80	26	25	330	380	330	19.2	PD25761
320	340	200	90	33	30	400	470	370	38.0	KL9140

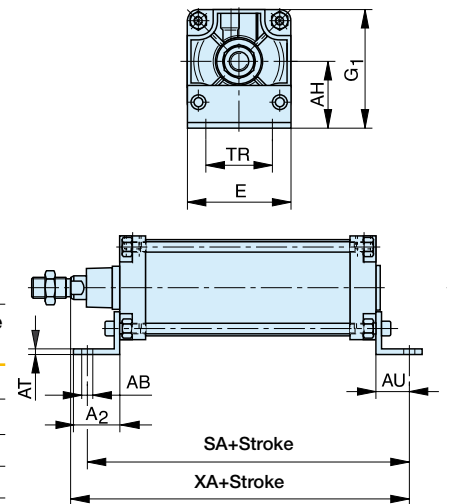
Foot brackets MS1



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

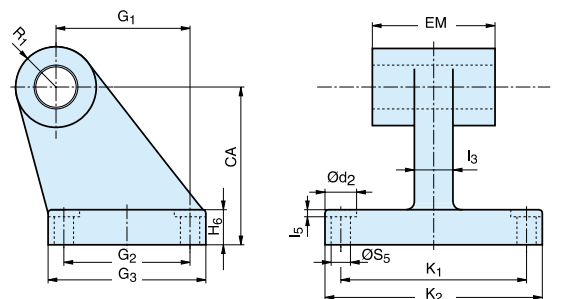
Cyl. Ø mm	A ₂ mm	E mm	G ₁ mm	AB mm	AH mm	AT mm	AU mm	SA + stroke	TR mm	XA + stroke	Weight kg	Order code
160	80	180	205	18	115	8	60	300	115	320	3.8	PD22027
200	100	220	245	22	135	9	70	320	135	345	5.0	PD24792
250	110	280	305	26	165	10	75	350	165	380	9.7	PD25758
320	125	340	370	33	200	23	85	390	200	470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

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 ₂ mm	l ₃ mm	l ₅ mm	G ₁ mm	G ₂ mm	G ₃ mm	H ₆ mm	K ₁ mm	K ₂ mm	R ₁ mm	ØS ₅ 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	P1C-4SMDB
200	26	40	4.0	105	90	130	30	122	162	31.5	18.0	135	90	8.0	P1C-4TMDB
250	33	45	4.5	128	110	160	35	150	200	40	22.0	165	110	13.5	P1C-4UMDC
320	-	55	-	150	122	186	40	170	234	45	26.0	200	120	21.9	P1C-4VMDC

Cylinder mountings

Swivel eye bracket MP6

Intended for use together with clevis bracket GA

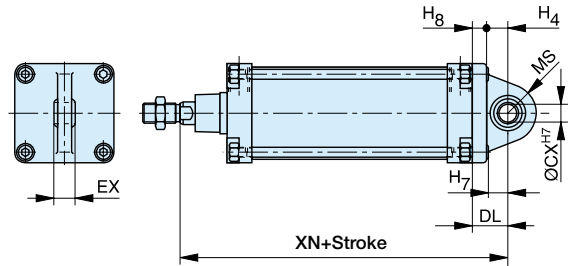


Material
 Bracket: Cast aluminium
 Swivel bearing acc. to DIN 648K: Hardened steel

Supplied complete with mounting screws for attachment to cylinder.

According to VDMA 24 562, AFNOR

Cyl. Ø mm	H ₄ mm	H ₇ mm	H ₈ mm	Ø CX ^{H7} 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	PD23850
200	36	33	24	35	60	43	47	335	11.3	PD25766
250	42	39	28	40	70	49	53	375	19.0	PD25760
320	50	26	30	50	80	60	63	420	30.3	KL9136



Clevis bracket MP2

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

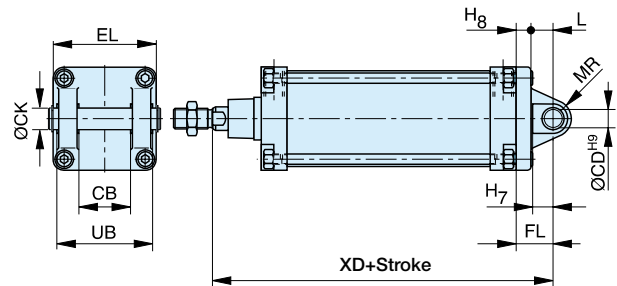


Materials
 Clevis bracket: Cast aluminium
 Pin: Hardened steel
 Circlips according to DIN 471: Spring steel
 Mounting screws acc. to DIN 912:
 Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder

According to ISO MP2, VDMA 24 562, AFNOR

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



Clevis bracket MP4

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

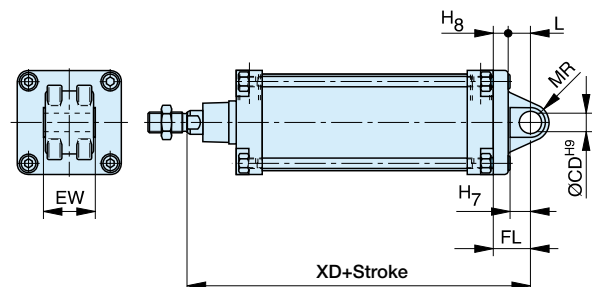


Materials
 Clevis bracket: Cast aluminium
 Mounting screws acc. to DIN 912: Zinc-plated steel 8.8

Supplied complete with mounting screws for attachment to cylinder.

According to ISO MP4, VDMA 24 562, AFNOR

Cyl. Ø mm	H ₇ mm	H ₈ mm	L mm	CD ^{H9} 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	PD22628
200	28.5	25	35	30	90	60	31	335	4.2	PD24999
250	25.0	25	45	40	110	70	41	375	15.7	PD25759
320	26.0	30	50	45	120	80	46	420	33.0	KL9135

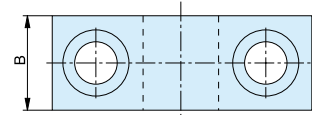
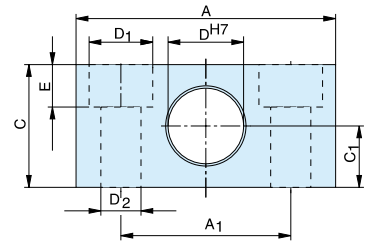


Cylinder mountings

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 ₁	B	C	C ₁	ØD ^{H7}	ØD ₁	ØD ₂	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	PD24425
200	92	60	35	60	30	32	26	18	17.0	0.35	PD24425
250	140	90	40	70	35	40	33	22	21.5	0.50	PD25763
320	150	100	60	80	40	50	40	26	21.5	6.70	KL9130

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

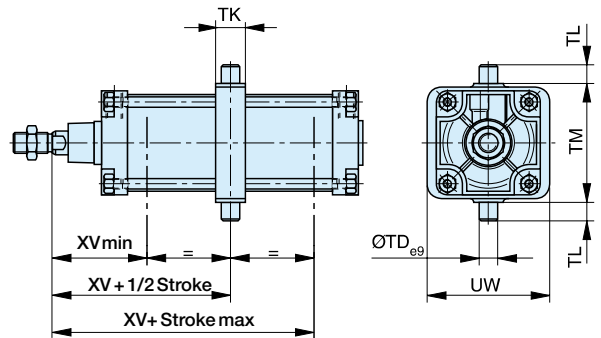
Trunnion with optional location

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 _{e9}	TK	TL	TM	UW	XV	XV _{min}	XV _{max}	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.



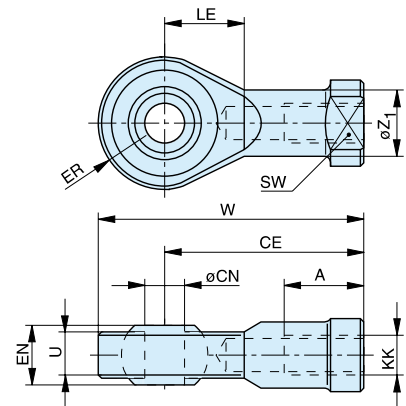
Piston rod mountings

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

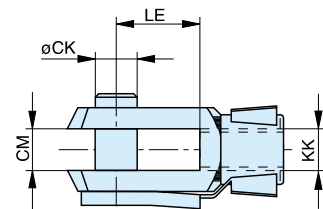
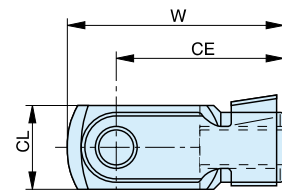
Clevis AP2



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	KY6867
200	35	72	36	70	188	144	M36x2	2.9	KY6867
250	40	84	40	85	245	168	M42x2	6.0	KY6868
320	50	96	50	90	250	192	M48x2	7.9	KL9131

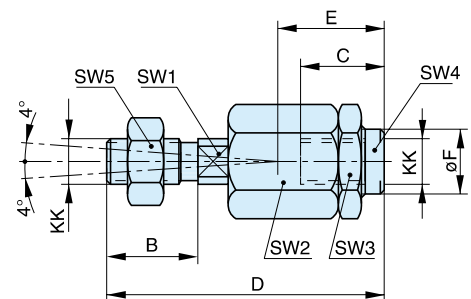
Flexo coupling PM5



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	KY1139
200	M36x2	72	50	241	110	56	36	75	75	50	55	5.1	KY1139
250	M42x2	82	88	271	120	-	36	80	80	60	65	7.9	KY1140
320	M48x2	82	88	271	120	-	42	80	80	60	75	7.9	KL9133

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

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