Parker
Pneumatic

Stainless steel pneumatic cylinders

Series P1S

According to ISO

Catalogue 9127005082GB-ul

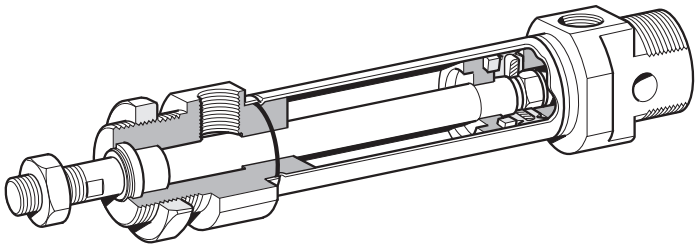
Home

Smooth, hygienic exterior design.

White food-adapted grease.

Ø10-Ø25, ISO 6432

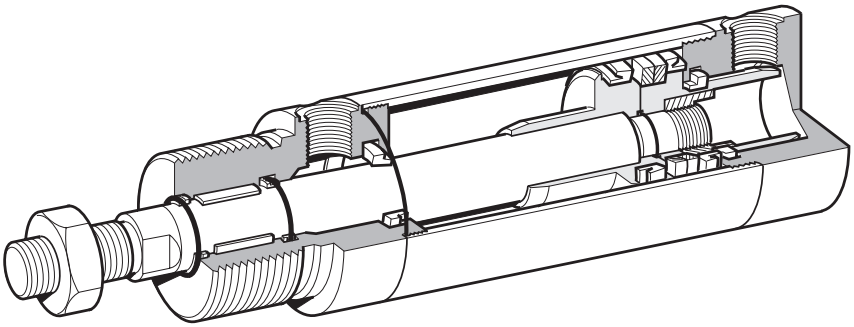
Fixed end-cushioning for the Ø10-Ø25. Adjustable pneumatic cushioning for the Ø20-Ø25.



Ø32-Ø63, ISO 6431

Magnetic piston as standard.

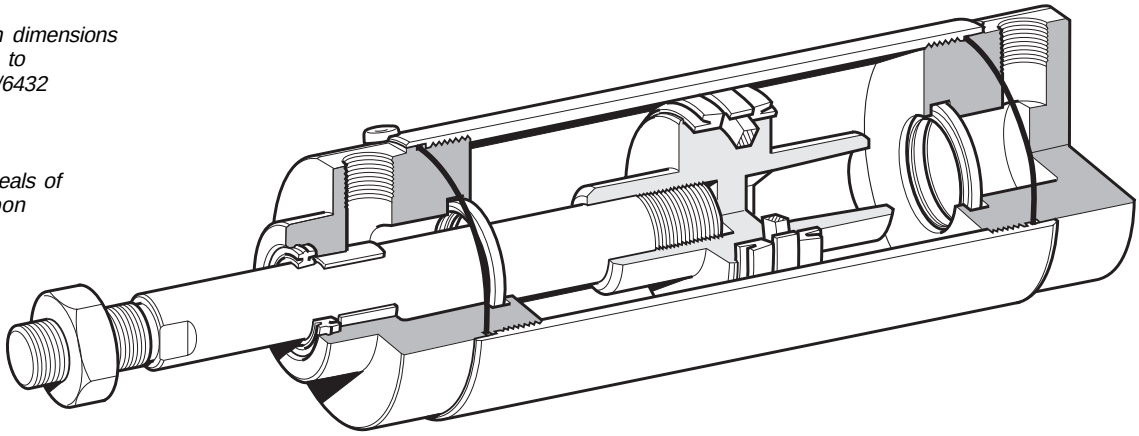
Adjustable pneumatic cushioning for the Ø32-Ø125. Mechanically secured cushioning screws.



Ø80-Ø125, ISO 6431

Installation dimensions according to ISO 6431/6432

External seals of fluorocarbon rubber



Stainless steel cylinders

Parker Pneumatic's range of stainless steel cylinders has been specially designed for use in difficult environments. Hygienic design, external seals of fluorianted rubber and prelubrication with our food-industry-compatible grease make the cylinders particularly suitable for food industry use.

All cylinders have magnetic pistons for proximity position sensing. Fixing dimensions to ISO 6431/6432 simplify installation and make the cylinders physically interchangeable throughout the world.

ISO 6432

The cylinders are available in two versions. One with fixed end-cushioning and is available in 10, 12, 16, 20 and 25 mm diameters. A single-acting version with spring return in the negative direction, is available in the same diameters.

One version has adjustable pneumatic end-cushioning and is available in 20 and 25 mm diameters.

ISO 6431-cylinders

The ISO cylinders are double-acting round cylinders with several types of cylinder mountings as standard. The cylinders are available in 32 to 125 mm diameters, incorporating adjustable end-cushioning. As with the ISO 6432 it is designed to comply with hygiene requirements in accordance with the EU Machine Directive.

The cylinder can be dismantled to facilitate service and maintenance.

= Products suitable for the food industry.

Stainless steel construction
The cylinders are made for use in particularly demanding environments. The piston rod, cylinder tube and end covers are all of stainless steel.

Effective end-cushioning
A version of ISO 6432 Ø10-Ø25 incorporates fixed end-cushioning, while the cylinders Ø20-Ø125 have pneumatic end-cushioning with adjusting screws for exact setting, permitting heavier loads and higher speeds for short cycle times.

Smooth external design
The end covers have no recesses or other grooves that could collect dirt or liquid. Cleaning is easy and effective.

Dry operation
Particular attention has been paid to the design of the cylinders' scraper rings, piston rod bearings and piston rod seals. Self-lubricating materials permit regular washing/degreasing of the piston rod. This is important in applications where hygiene and cleaning must be of high standard.

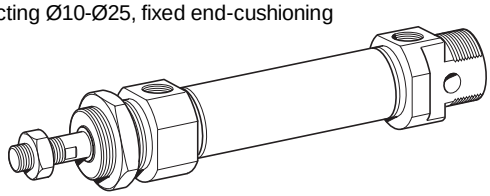
Proximity position sensing
All cylinders in normal temperature design are fitted with a magnet for proximity position sensing. Electronic type sensors and reed switches are available. They are supplied with either flying lead or cable plug connector.

Complete range of mountings
A complete range of stainless steel mounting accessories with ISO dimensions is available.

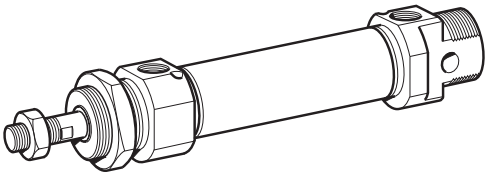
Variants
In addition to the basic design, several standard variants of these stainless steel cylinders are available to fulfill more demanding requirements in terms of performance and environmental conditions:

Cylinders with special stroke lengths
Cylinders with extended piston rods
Through piston rods (not Ø32-Ø63)
Single-acting cylinders with spring return, (Ø10-Ø25)
High-temperature versions for operation in temperature range
Ø10 to Ø16 mm from -10 °C to +120 °C (not magnetic pistons)
Ø20 to Ø125 mm from -10 °C to +150 °C (not magnetic pistons)
Low-temperature versions for operation in temperature range from -40 °C to +60 °C (not magnetic pistons, not Ø32-Ø63)
Cylinders with different mounts (Ø32-Ø125)

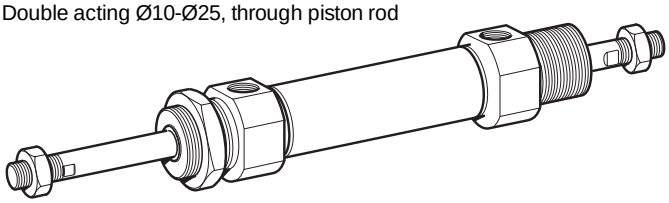
Double acting Ø10-Ø25, fixed end-cushioning



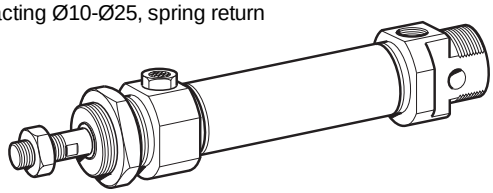
Double acting Ø20-Ø25, adjustable end-cushioning



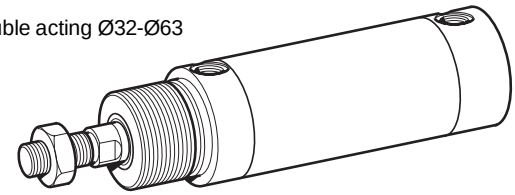
Double acting Ø10-Ø25, through piston rod



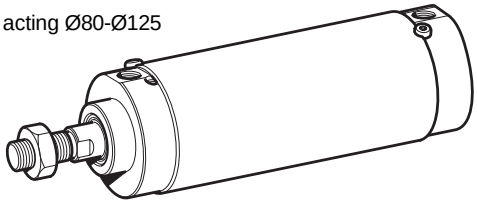
Single acting Ø10-Ø25, spring return



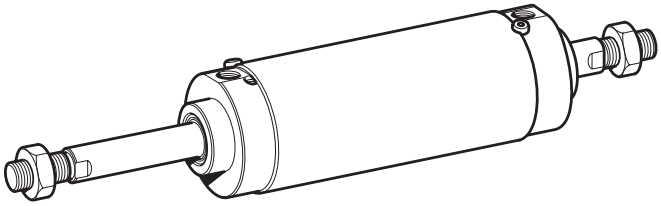
Double acting Ø32-Ø63



Double acting Ø80-Ø125



Double acting Ø80-Ø125, through piston rod



Main data: P1S-S, ISO 6432

Cylinder designation	Cylinder bore	area	Piston rod bore	area	thread	Total mass at 0 mm stroke	addition per 10 mm stroke	Air consump-tion	Conn. thread
	mm	cm^2	mm	cm^2		kg	kg	litres	
Double acting with fixed end-cushioning									
P1S-S 010 D	10	0,78	4	0,13	M4	0,04	0,003	0,0100 [1)]	M5
P1S-S 012 D	12	1,13	6	0,28	M6	0,07	0,004	0,0139 [1)]	M5
P1S-S 016 D	16	2,01	6	0,28	M6	0,09	0,005	0,0262 [1)]	M5
P1S-S 020 D	20	3,14	8	0,50	M8	0,18	0,007	0,0405 [1)]	G1/8
P1S-S 025 D	25	4,91	10	0,78	M10x1,25	0,25	0,011	0,0633 [1)]	G1/8
Double acting with adjustable end-cushioning									
P1S-S 020 M	20	3,14	8	0,50	M8	0,18	0,007	0,0405 [1)]	G1/8
P1S-S 025 M	25	4,91	10	0,78	M10x1,25	0,25	0,011	0,0633 [1)]	G1/8
Single acting:									
P1S-S 010 SS	10	0,78	4	0,13	M4	0,04	0,003	0,0055 [1)]	M5
P1S-S 012 SS	12	1,13	6	0,28	M6	0,08	0,004	0,0079 [1)]	M5
P1S-S 016 SS	16	2,01	6	0,28	M6	0,10	0,005	0,0141 [1)]	M5
P1S-S 020 SS	20	3,14	8	0,50	M8	0,18	0,007	0,0220 [1)]	G1/8
P1S-S 025 SS	25	4,91	10	0,78	M10x1,25	0,26	0,011	0,0344 [1)]	G1/8

1)Free air consumption per 10 mm stroke length for a double stroke at 600 kPa (6 bar)

Cylinder forces

Indicated cylinder forces are theoretical and should be reduced according to the working conditions.

Cylinder designation	Cylinder bore	Theoretical cylinder force at 600 kPa (6 bar) exp. stroke	retraction stroke
	mm	N	N
Double acting			
P1S-S 010 D	10	47	39
P1S-S 012 D	12	67	50
P1S-S 016 D	16	120	103
P1S-S 020 D	20	188	158
P1S-S 025 D	25	294	247
P1S-S 020 M	20	188	158
P1S-S 025 M	25	294	247

Cylinder designation	Theoretical cylinder force at 600 kPa (6 bar) expanding stroke		spring retraction	
	Nmax	Nmin	Nmax	Nmin
Single acting				
P1S-S 010 SS - 10	38	36	11	9
P1S-S 010 SS - 15	38	36	11	9
P1S-S 010 SS - 25	39	36	11	8
P1S-S 010 SS - 40	38	34	13	9
P1S-S 010 SS - 50	39	34	13	8
P1S-S 010 SS - 80	39	34	13	8
P1S-S 012 SS - 10	53	51	16	14
P1S-S 012 SS - 15	53	51	16	14
P1S-S 012 SS - 25	55	51	16	12
P1S-S 012 SS - 40	52	48	19	15
P1S-S 012 SS - 50	53	48	19	14
P1S-S 012 SS - 80	55	48	19	12
P1S-S 016 SS - 10	102	99	21	18
P1S-S 016 SS - 15	103	99	21	17
P1S-S 016 SS - 25	105	99	21	15
P1S-S 016 SS - 40	106	95	25	14
P1S-S 016 SS - 50	108	95	25	12
P1S-S 016 SS - 80	107	95	25	13
P1S-S 020 SS - 10	163	161	27	25
P1S-S 020 SS - 15	164	161	27	24
P1S-S 020 SS - 25	167	161	27	21
P1S-S 020 SS - 40	166	159	29	22
P1S-S 020 SS - 50	168	159	29	20
P1S-S 020 SS - 80	170	161	27	18
P1S-S 025 SS - 10	256	253	41	38
P1S-S 025 SS - 15	258	253	41	36
P1S-S 025 SS - 25	262	253	41	32
P1S-S 025 SS - 40	261	250	44	33
P1S-S 025 SS - 50	264	250	44	30
P1S-S 025 SS - 80	264	251	43	30

Additional data

Working pressure	max 1000 kPa (10 bar)
Working temperature	max +80 °C
	min –20 °C
High-temperature version	max +150 °C
	min –10 °C
Low-temperture version	max +60 °C
	min –40 °C

Cushioning diagram

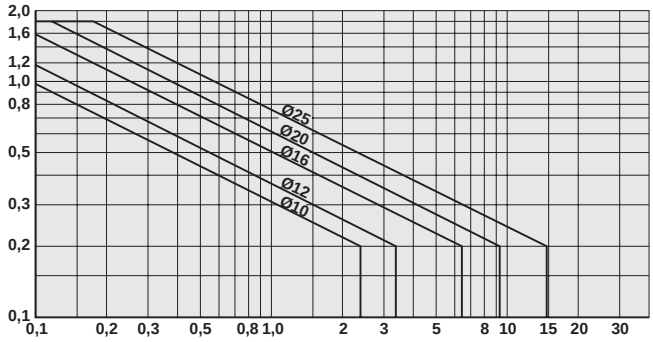
Use the diagram below to determine the necessary size of cylinder to provide the requisite cushioning performance. The maximum cushioning performance, as indicated in the diagram, is based on the following assumptions:

- Low load, i.e. low pressure drop across the piston
- Steady-state piston speed
- Correctly adjusted cushioning screw

The load is the sum of the internal and external friction, together with any gravity forces. At high relative loading it is recommended that, for a given speed, the load should be reduced by a factor of 2.5, or that, for a given mass, the speed should be reduced by a factor of 1.5. These factors apply in relation to the maximum performance as shown in the diagram.

Fixed end-cushioning

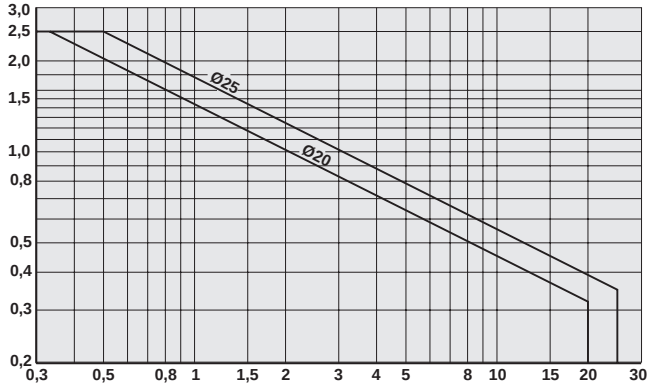
Speed [m/s]



Mass [kg]

Adjustable pneumatic end-cushioning

Speed [m/s]



Mass [kg]

Material specification Ø10-Ø25

Piston rod	Stainless steel, DIN X 10 CrNiS 18 9
Piston rod seal	Fluorocarbon rubber FPM
Piston rod bearing	Multilayer PTFE/steel
End covers	Stainless steel, DIN X 10 CrNiS 18 9
O-ring, internal	NBR
Cylinder barrel	Stainless steel, DIN X 5 CrNi 18 10
Piston, complete	NBR/steel
Magnet holder	Thermoplastic elastomer
Magnet	Plastic-coated magnetic material
Return spring	Surface-treated steel
Cushioning screw	Stainless steel, DIN X 10 CrNiS 18 9

Variants Ø10-Ø25:

Low-temperature version, type L

Piston rod seal	NBR
Piston, complete	NBR/steel

High-temperature version, type F

Piston rod seal	Fluorocarbon rubber, FPM
Piston complete, Ø10-Ø16	HNBR/steel
Piston complete, Ø20-Ø25	FPM/steel

Cylinders completely free from Teflon and copper, type N:

Piston rod bearing	PA plastic

Order key

P 1 S – S 0 1 6 M S – 0 0 2 5

Cylinder bore mm
010
012
016
020
025

	Cylinder version
S	Standard cylinder acc. to Cylinder type/Function

	Cylinder type/Function	
M		Double acting, adjustable cushioning Ø20 - Ø25 Not for sealing material type F and L
D		Double acting, fixed cushioning Ø10 - Ø25
F		Double acting, adjustable cushioning, through piston rod, Ø20 - Ø25 Not for sealing material type F and L
K		Double acting, fixed cushioning, through piston rod, Ø10 - Ø25
H		Double acting, adjustable cushioning, through piston rod (hollow), Ø20 - Ø25, max stroke 125 mm Not for sealing material type F and L
P		Double acting, fixed cushioning, through piston rod (hollow), Ø20 - Ø25, max stroke 125 mm
S		Single acting, fixed cushioning, spring return for retract stroke, Ø10 - Ø25

Stroke in mm
E.g. **0025** = 25 mm For standard stroke length and max length, see table below

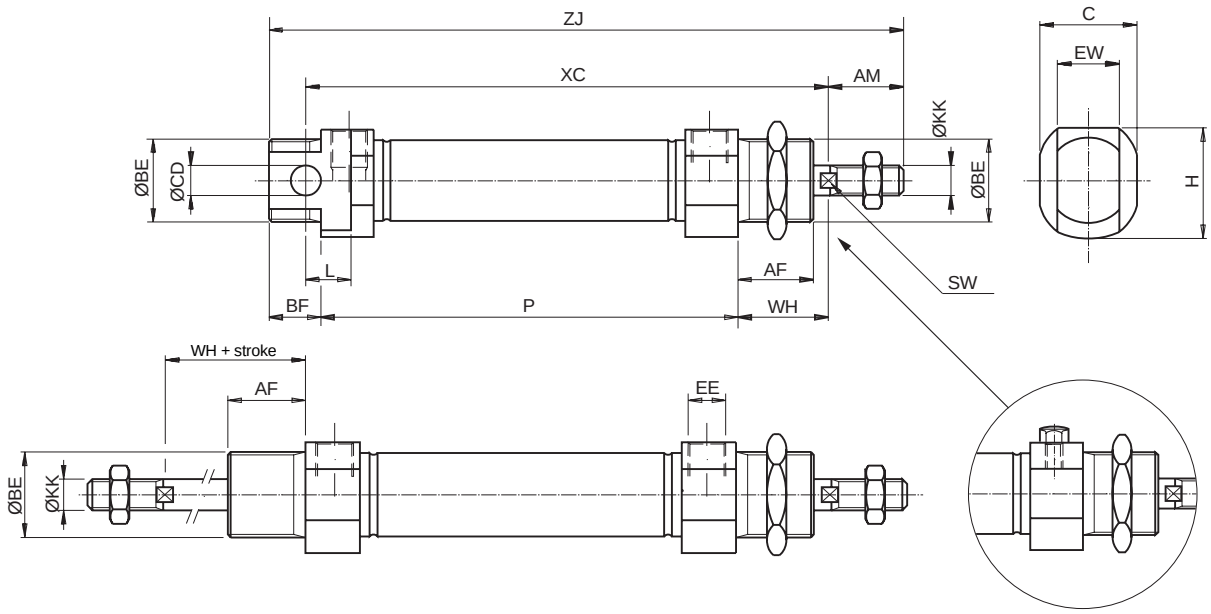
	Sealing material	
S		Standard, -20 °C to +80 °C Magnetic piston
F		High temperature, -10 °C to +120 °C Ø10 - Ø16 mm -10 °C to +150 °C Ø20 - Ø25 mm Non magnetic piston
L		Low temperature, -40 °C to +60 °C Non magnetic piston
N		Free from teflon and copper. Standard sealings, -20 °C to +60 °C Magnetic piston

Stroke length

● Standard stroke length in mm Non standard stroke length

Cylinder designation	Cylinder bore	10	15	20	25*	30	40	50*	80*	100*	125*	160*	200*	250*	320*	400*	500*
Double acting with fixed end-cushioning:																	
P1S-S 010 D	10	●	●	●	●	●	●	●	●	●	●						
P1S-S 012 D	12	●	●	●	●	●	●	●	●	●	●	●	●				
P1S-S 016 D	16	●	●	●	●	●	●	●	●	●	●	●	●				
P1S-S 020 D	20	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
P1S-S 025 D	25	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Double acting with adjustable end-cushioning:																	
P1S-S 020 M	20		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
P1S-S 025 M	25		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Single acting:																	
P1S-S 010 SS	10	●	●		●		●	●	●								
P1S-S 012 SS	12	●	●		●		●	●	●								
P1S-S 016 SS	16	●	●		●		●	●	●								
P1S-S 020 SS	20	●	●		●		●	●	●								
P1S-S 025 SS	25	●	●		●		●	●	●								

*Standard stroke length in mm according to ISO 4393



Dimensions

Cyl. bore mm	AM 0/-2 mm	BE	AF mm	BF mm	C mm	CDH9 mm	EE	EW mm	H mm	KK	L mm	SW mm	WH±1,2 mm
10	12	M12x1,25	12	10	14	4	M5	8	19	M4	6	–	16
12	16	M16x1,5	18	13	18	6	M5	12	19	M6	9	5	22
16	16	M16x1,5	18	13	18	6	M5	12	19	M6	9	5	22
20	20	M22x1,5	20	14	24	8	G1/8	16	29	M8	12	7	24
25	22	M22x1,5	22	14	28	8	G1/8	16	32	M10x1,25	12	9	28

Double acting cylinders

Cyl. bore mm	XC mm	ZJ mm	P mm
10	64 + stroke	84 + stroke	46 + stroke
12	75 + stroke	99 + stroke	48 + stroke
16	82 + stroke	104 + stroke	53 + stroke
20	95 + stroke	125 + stroke	67 + stroke
25	104 + stroke	132 + stroke	68 + stroke

Single acting with spring return, type SS

Stroke/	10	15	25	40	50	80	10	15	25	40	50	80	10	15	25	40	50	80
Cyl. bore	XC	XC	XC	XC	XC	XC	ZJ	ZJ	ZJ	ZJ	ZJ	ZJ	P	P	P	P	P	P
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
10	74	79	89	126	136	174	94	99	109	146	156	194	56	61	71	108	118	156
12	85	90	100	132	142	185	109	114	124	156	166	209	58	63	73	105	115	158
16	92	97	107	122	132	184	114	119	129	144	154	206	63	68	78	93	103	155
20	105	110	120	135	145	191	135	140	150	165	175	221	77	82	92	107	117	163
25	114	119	129	144	154	201	142	147	157	172	182	229	78	83	93	108	118	165

Length tolerances ±1 mm
Stroke length tolerances +1,5/0 mm

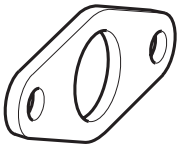
Cylinders are supplied complete with mounting and adjusting nuts.
Cylinders with through piston rod are supplied complete with two adjusting nuts and one mounting nut.

Refer to order code when ordering cylinders

See Order key on page 8

Cylinder mountings

Flange-MF8

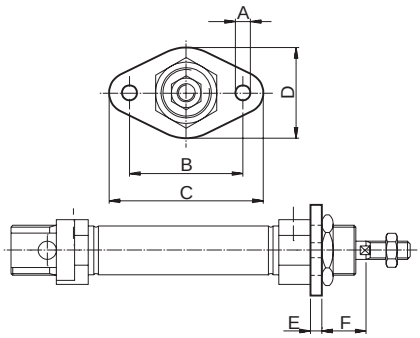


Intended for fixed attachment of the cylinder. The flange is designed for mounting on the front or rear end-covers.

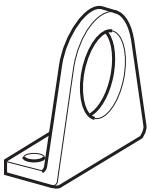
Material:
Stainless steel, DIN X 10 CrNiS 18 9

Type	Cyl. bore Ø mm	Weight kg	Order code
Flange-MF8	10	0,012	P1S-4CMB
	12-16	0,025	P1S-4DMB
	20-25	0,045	P1S-4HMB

Cylinder Ø mm	A mm	B mm	C mm	D mm	E mm	F mm
10	4,5	30	40	22	3	13
12-16	5,5	40	52	30	4	18
20	6,6	50	66	40	5	19
25	6,6	50	66	40	5	23



Foot-MS3

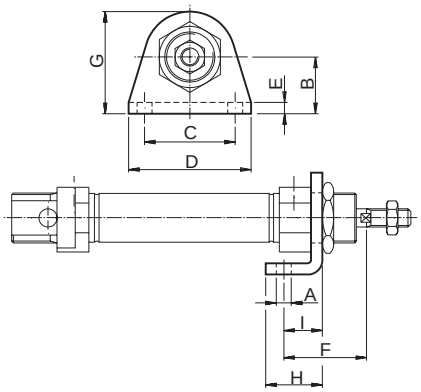


Intended for fixed attachement of the cylinder. The bracket is designed for mounting on the front or rear end-covers.

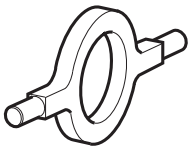
Material:
Stainless steel, DIN X 10 CrNiS 18 9

Type	Cyl. bore Ø mm	Weight kg	Order code
Foot-MS3	10	0,020	P1S-4CMF
	12-16	0,040	P1S-4DMF
	20-25	0,080	P1S-4HMF

Cylinder Ø mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm
10	4,5	16	25	35	3	24	26	16	11
12-16	5,5	20	32	42	4	32	32,5	20	14
20	6,5	25	40	54	5	36	45	25	17
25	6,5	25	40	54	5	40	45	25	17



Cover trunnion

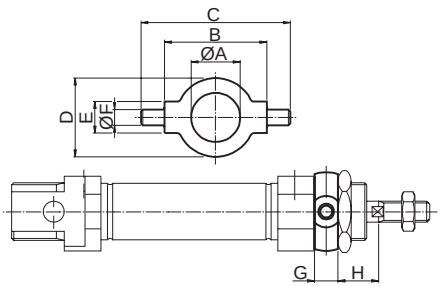


Intended for articulated mounting of the cylinder. The flange is designed for mounting on the front or rear end-covers.

Material:
Stainless steel, DIN X 10 CrNiS 18 9

Type	Cyl. bore Ø mm	Weight kg	Order code
Cover trunnion	10	0,014	P1A-4CMJ
	12-16	0,033	P1A-4DMJ
	20-25	0,037	P1A-4HMJ

Cylinder Ø mm	A mm	B h14 mm	C mm	D mm	E e9 mm	F mm	G mm	H mm
10	12,5	26	38	20	8	4	6	10
12-16	16,5	38	58	25	10	6	8	14
20	22,5	46	66	30	10	6	8	16
25	22,5	46	66	30	10	6	8	20



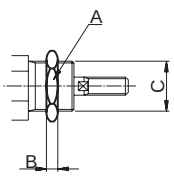
Mounting nut

Intended for fixed mounting of the cylinder.
Cylinders are supplied complete with one mounting nut.

Material:
Stainless steel, DIN X 5 CrNi 18 10

Type	Cyl. bore Ø mm	Weight kg	Order code
Mounting nut	10	0,009	9127385111
	12-16	0,018	9127385112
	20-25	0,042	9127385113

Cylinder Ø mm	A mm	B mm	C
10	16	3	M12x1,25
12-16	20	4	M16x1,50
20-25	27	5	M22x1,50



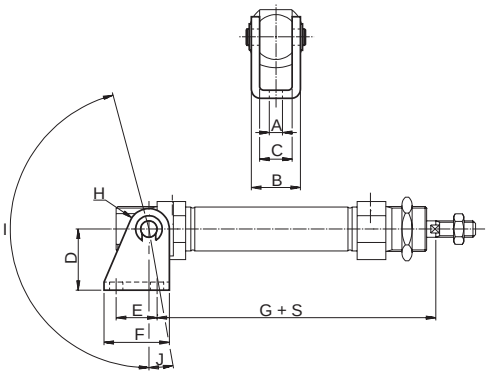
Cylinder mountings

Clevis bracket

Intended for articulated mounting of the cylinder. Supplied with shaft for mounting on the rear end cover.

Material:
Bracket: stainless steel, DIN X 5 CrNi 18 10
Pin: tempered stainless steel, DIN X 20 Cr 13
Locking rings: stainless steel, DIN X 5 CrNi 18 10

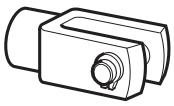
Cyl. bore Ø mm	Weight kg	Order code
10	0,020	**P1S-4CMT**
12-16	0,040	**P1S-4DMT**
20-25	0,080	**P1S-4HMT**



Cylinder Ø mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I °	J °
10	4,5	13	8	24	12,5	20	65,3	5	160	17
12	5,5	18	12	27	15	25	73	7	170	15
16	5,5	18	12	27	15	25	80	7	170	15
20	6,5	24	16	30	20	32	91	10	165	10
25	6,5	24	16	30	20	32	100	10	165	10

S=stroke

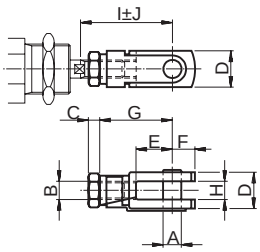
Clevis



According to ISO 8140
Intended for articulated mounting of the cylinder. This mounting is adjustable in the axial direction. Supplied complete with pin.

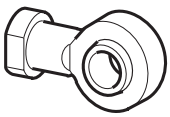
Material:
Stainless steel, DIN X 5 CrNi 18 10

Cyl. bore Ø mm	Weight kg	Order code
10	0,007	**P1S-4CRD**
12-16	0,022	**P1S-4DRD**
20	0,045	**P1S-4HRD**
25	0,095	**P1S-4JRD**



Cylinder Ø mm	A mm	B	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm
10	4	M4	2,2	8	8	5	16	4	22	2
12-16	6	M6	3,2	12	12	7	24	6	31	3
20	8	M8	4	16	16	10	32	8	40,5	3,5
25	10	M10x1,25	5	20	20	12	40	10	49	3

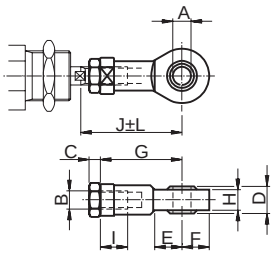
Swivel rod eye



According to ISO 8139
Intended for articulated mounting of the cylinder. This mounting is adjustable in the axial direction.

Material:
Swivel rod eye: stainless steel, DIN X 5 CrNi 18 10
Ball: hardened stainless steel, DIN X 5 CrNi 18 10

Cyl. bore Ø mm	Weight kg	Order code
10	0,017	**P1S-4CRT**
12-16	0,025	**P1S-4DRT**
20	0,045	**P1S-4HRT**
25	0,085	**P1S-4JRT**



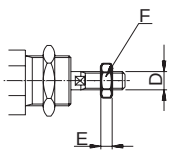
Cylinder Ø mm	A mm	B	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	K mm	L mm
10	5	M4	2,2	8	10	9	27	6	8	33	9	2
12-16	6	M6	3,2	9	10	10	30	6,8	9	38,5	11	1,5
20	8	M8	4	12	12	12	36	9	12	46	14	2
25	10	M10x1,25	5	14	14	14	43	10,5	15	52,5	17	2,5

Rod nut

Intended for fixed mounting on the piston rod. Cylinders are supplied complete with one rod nut. (cylinders with through piston rod are supplied with two rod nuts.)

Material:
Stainless steel, DIN X 5 CrNi 18 10

Cyl. bore Ø mm	Weight kg	Order code
10	0,001	**9127385121**
12-16	0,002	**9127385122**
20	0,005	**9127385123**
25	0,007	**9126725404**



Cylinder Ø mm	D	F mm	E mm
10	M4	7	2,2
12-16	M6	10	3,2
20	M8	13	4
25	M10x1,25	17	5

Reed switch sensors

The reed switch sensors incorporate a well-proven, universal-voltage, compact reed switch element, making them suitable for a wide range of applications. They can work with electronic control systems or conventional relay systems. No environment is too severe.

Technical data

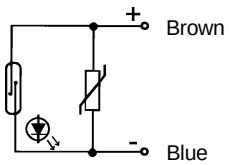
Design	Reed
Output	Making
Voltage range, P1A-2XRL	110 VAC/VDC
Voltage range, P1A-2XSH	60 VAC/VDC
Max voltage drop	2,8 V
Max load current	180 mA
Max breaking power (resistive)	10 W
Min actuating distance	5 mm
Hysteresis	2 mm
Repeatability accuracy	±0,2 mm
Max on/off switching frequency	500 Hz
Max on/off switching time	1 ms
Encapsulation, P1A-2XRL	IP 67
Encapsulation, P1A-2XSH	IP 65
Temperature range	–30 °C to +80 °C
Indication	LED
Shock resistance	30 g
Material, housing	Nylon 66
Material, mould	Epoxy
Cable	PVC 2x0,2 mm^2
Cable incl. female part connector	PVC 2x0,2 mm^2
Mounting	Mounting yoke
Material, mounting	Stainless steel
Material, screw	Stainless steel
Connector	Diam. 8 mm snap on

Ordering data

Order code	Cylinder bore mm	Output	Cable length	Weight kg
Reed sensors				
P1A-2XRL	10-25	making	3 m	0,055
P1A-2XSH	10-25	making	*	0,002
Mountngs for sensors				
P1A-2CCB	10			0,002
P1A-2DCB	12			0,0025
P1A-2FCB	16			0,003
P1A-2HCB	20			0,004
P1A-2JCB	25			0,005
Cable for sensors				
9126344341**			3 m	0,055
9126344342**			10 m	0,175

*) Cable shall be ordered separately.
**) Cable including female part connector, for sensor.

Reed sensor symbol



Electronic sensors

These sensors are of solid-state type, with no moving parts. Short-circuit and transient protection is incorporated as standard. The integral electronics make these sensors suitable for applications with very high switching frequencies.

Technical data

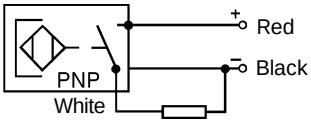
Design	Hall element
Output	PNP resp. NPN, N.O.
Voltage range	10-30 VDC
Max permissible ripple	10%
Max voltage drop	≤0,5 V at 100 mA
Max load current, P1A-2XMK, LK	150 mA
P1A-2XHK, EK, JH, FH	100 mA
Max breaking power (resistive)	6 W
Internal consumption	<30 mA at 30 V
Min actuating distance	5 mm
Hysteresis	1,1 - 1,3 mm
Repeatability accuracy	±0,1 mm
Max on/off switching frequency	1 kHz
Max on/off switching time	0,8/3,0 µs
Encapsulation, P1A-2XJH, FH	IP 65
Encapsulation, P1A-2XHK, EK, MK, LK	IP 67
Temperature range	–10 °C to +60 °C
Indication	LED
Shock resistance	40 g
Material, housing	Polyamid 11
Material, mould	Epoxy
Cable	PVC 3x0,15 mm^2
Cable incl. female part connector	PVC 3x0,15 mm^2
Connector	Diam. 8 mm snap on
Mounting	Mounting yoke
Material, mounting	Acetal/Stainless steel
Material, screw	Stainless steel

Ordering data

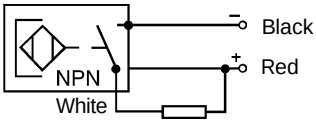
Order code	Cylinder bore mm	Output	Cable length	Weight kg
Electronic sensors				
P1A-2XMK, 90°	10-25	PNP, N.O.	2 m	0,040
P1A-2XLK, 90°	10-25	NPN, N.O.	2 m	0,040
P1A-2XHK	10-25	PNP, N.O.	2 m	0,010
P1A-2XEK	10-25	NPN, N.O.	2 m	0,010
P1A-2XJH	10-25	PNP, N.O.	*	0,015
P1A-2XFH	10-25	NPN, N.O.	*	0,015
Mountngs for sensors				
P1A-2CCC	10			0,005
P1A-2DCC	12			0,005
P1A-2FCC	16			0,008
P1A-2HCC	20			0,008
P1A-2JCC	25			0,010
Cable for sensors				
9126344341**			3 m	0,055
9126344342**			10 m	0,175

Electronic sensor symbol

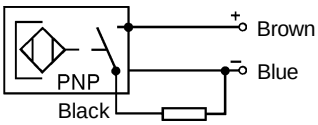
P1A-2XMK



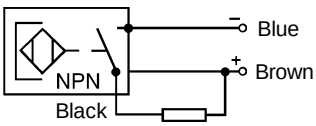
P1A-2XLK



P1A-2XHK,P1A-2XJH



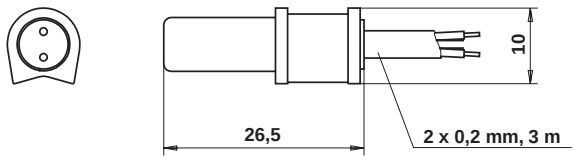
P1A-2XEK, P1A-2XFH



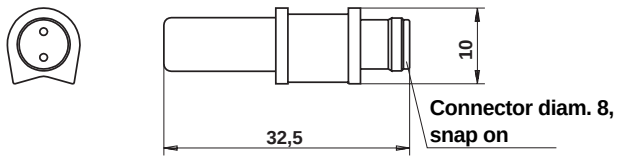
Dimensions

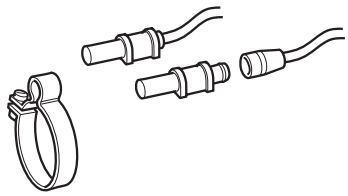
Reed sensors

P1A-2XRL



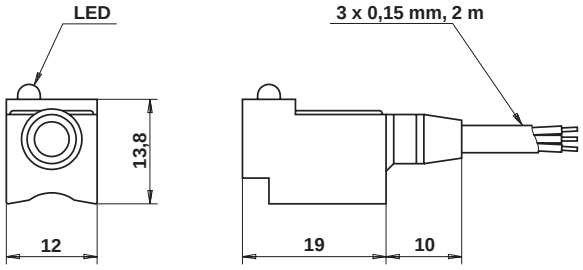
P1A-2XSH



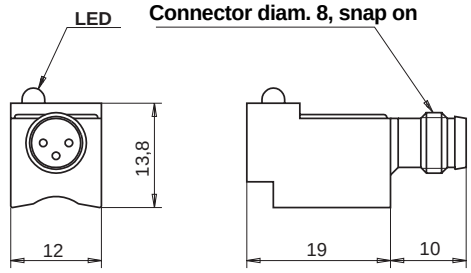


Electronic sensors

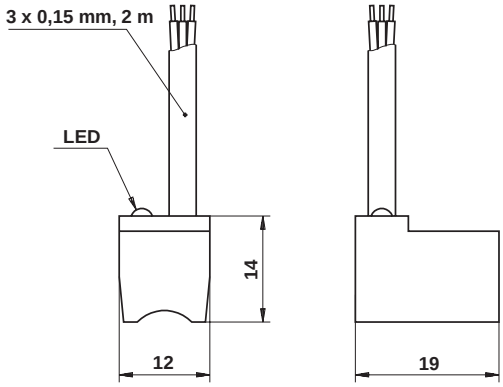
P1A-2XHK and P1A-2XEK

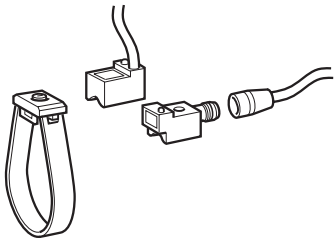


P1A-2XJH and P1A-2XFH



P1A-2XMK and P1A-2XLK





Main data: ISO 6431

Cylinder designation	Cylinder bore	area	Piston rod diam.	area	thread	Cushioning distance	Total mass at 0 mm stroke	addition per 10 mm stroke	Moving mass at 0 mm stroke	addition per 10 mm stroke	Air consumption	Conn. thread
	mm	cm^2	mm	cm^2		mm	kg	kg	kg	kg	litres	
P1S-•032 M	32	8,0	12	1,1	M10x1,25	15	0,59	0,026	0,10	0,009	0,105 1)	G1/8
P1S-•040 M	40	12,6	16	2,0	M12x1,25	18	0,99	0,036	0,19	0,016	0,162 1)	G1/4
P1S-• 050 M	50	19,6	20	3,1	M16x1,5	19	1,63	0,057	0,32	0,024	0,253 1)	G1/4
P1S-•063 M	63	31,2	20	3,1	M16x1,5	22	2,75	0,065	0,36	0,024	0,414 1)	G3/8
P1S-•080 M	80	50,3	25	4,9	M20x1,5	24	5,09	0,099	1,11	0,039	0,669 1)	G3/8
P1S-•100 M	100	78,5	25	4,9	M20x1,5	29	8,68	0,115	1,41	0,039	1,043 1)	G1/2
P1S-•125 M	125	122,7	32	8,0	M27x2	32	15,31	0,174	2,90	0,063	1,662 1)	G1/2

1)Free air consumption per 10 mm stroke length for a double stroke at 600 kPa (6 bar)

Cylinder forces

Indicated cylinder forces are theoretical and should be reduced in relation to working conditions.

Cylinder designation	Theoretical cylinder force at 600 kPa (6 bar) exp. stroke N	return stroke N
P1S-•032 M	480	415
P1S-•040 M	754	633
P1S-•050 M	1180	990
P1S-•063 M	1870	1680
P1S-•080 M	3016	2721
P1S-•100 M	4712	4417
P1S-•125 M	7363	6880

Additional data

Working pressure	max 1000 kPa (10 bar)
Working temperature	max +80 °C min –20 °C
High-temperature version	max +150 °C min –10 °C
Low-temperature version Ø80 - Ø125	max +40 °C min –40 °C

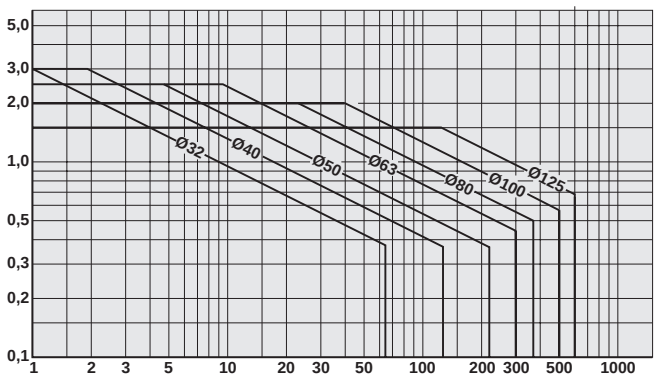
Cushioning diagram

Use the diagram below to determine the necessary size of cylinder to provide the requisite cushioning performance. The maximum cushioning performance, as indicated in the diagram, is based on the following assumptions:

–Low load, i.e. low pressure drop across the piston
–Steady-state piston speed
–Correctly adjusted cushioning screw

The load is the sum of the internal and external friction, together with any gravity forces. At high relative loading it is recommended that, for a given speed, the load should be reduced by a factor of 2.5, or that, for a given mass, the speed should be reduced by a factor of 1.5. These factors apply in relation to the maximum performance as shown in the diagram.

Speed [m/s]



Mass [kg]

Order key

P1S – D | 032 | M | S | – | 0025

	Cylinder version
A	Trunnion pegs in front end cover, only Ø80 - Ø125
B	Trunnion pegs in rear end cover, only Ø80 - Ø125
C	Threaded front end
D	Threaded front end + 4 mounting holes in rear end cover
E	4 mounting holes in front end cover, only Ø80 - Ø125
F	4 mounting holes in rear end cover
J	2 mounting holes in front end cover, only Ø80 - Ø125
K	2 mounting holes in rear end cover
L	4 mounting holes in front and rear end cover, only Ø80 - Ø125
M	4 mounting holes in front and 2 in rear end cover, only Ø80 - Ø125
Q	2 mounting holes in front and 4 in rear end cover, only Ø80 - Ø125
V	2 mounting holes in front and rear end cover, only Ø80 - Ø125

Cylinder bore mm
032
040
050
063
080
100
125

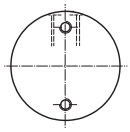
	Cylinder type/Function
M	Double acting, adjustable cushioning
F	Double acting, adjustable cushioning, through piston rod, only Ø80 - Ø125

Stroke in mm

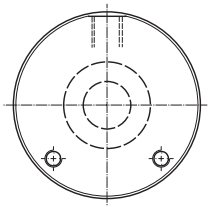
E.g. **0025** = 25 mm
For standard stroke length and max length, see table below

	Sealing material
S	Standard, -20 °C to +80 °C Magnetic piston
F	High temperature, -10 °C to +150 °C Non magnetic piston
L	Low temperature, -40 °C to +60 °C Non magnetic piston only Ø80 - Ø125
Q	Stainless steel scraper for piston rod -20 °C to +80 °C Magnetic piston only Ø80 - Ø125

Ø32 - Ø63
Cylinder version
K



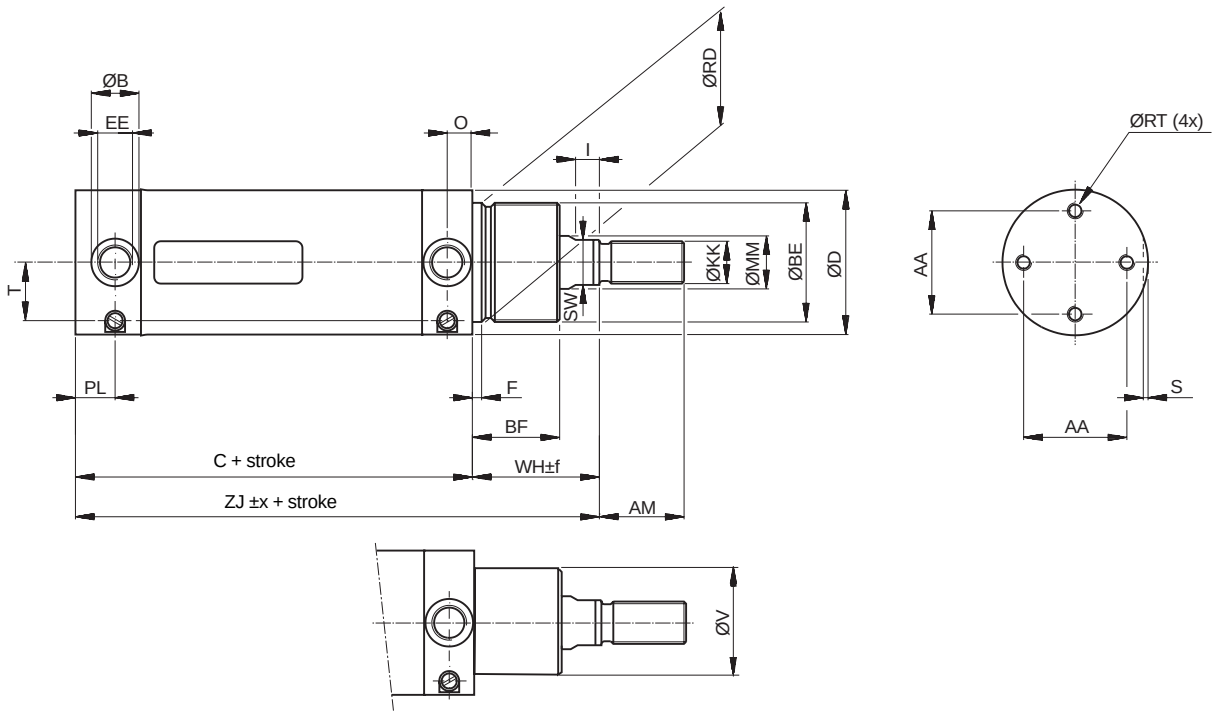
Ø80 - Ø125
Cylinder version
J, K, M, Q, V



Stroke length

Cylinder designation	Cylinder bore	● Standard stroke length in mm 25	50	80	100*	125	160	200	250	320	400	500 — Non standard stroke length
P1S-•032M	32	●	●	●	●	●	●	●	●	●	●	●
P1S-•040M	40	●	●	●	●	●	●	●	●	●	●	●
P1S-•050M	50	●	●	●	●	●	●	●	●	●	●	●
P1S-•063M	63	●	●	●	●	●	●	●	●	●	●	●
P1S-•080M	80	●	●	●	●	●	●	●	●	●	●	●
P1S-•100M	100	●	●	●	●	●	●	●	●	●	●	●
P1S-•125M	125	●	●	●	●	●	●	●	●	●	●	●

Standard stroke length in mm according to ISO 4393



Not threaded front end

Dimensions Ø32-Ø63

Cylinder designation	AA mm	AM mm	B mm	BF mm	BE	C mm	D mm	EE	F mm	I mm	KK	MM mm	O mm	PL mm	RD mm	RT mm
P1S-D 032 M	24,5	22	15	25	M30x1,5	88	36	G1/8	4,2	6	M10x1,25	12	8	13	30	M5
P1S-D 040 M	30	24	18	30	M38x1,5	97	44	G1/4	4,5	9	M12x1,25	16	9,5	15	38	M6
P1S-D 050 M	39	32	18	33	M45x1,5	101	55	G1/4	4,5	9	M16x1,5	20	9,5	15	45	M6
P1S-D 063 M	49	32	25	33	M45x1,5	117	68	G3/8	4,5	9	M16x1,5	20	13,3	20,5	45	M8

Cylinder designation	S mm	SW mm	T mm	V mm	WH mm	ZJ mm	Mounting tolerances x mm	Mounting tolerances f mm	Stroke length 0-500 mm mm
P1S-D 032 M	1,5	10	12,2	26	35,5	123,5	1,2	2,5	+2
P1S-D 040 M	1,5	14	16,5	35	44	141	1	2,2	+2
P1S-D 050 M	1,5	17	22	41	47	148	0,9	2,3	+2
P1S-D 063 M	1,5	17	26	41	47	164	1,4	2,3	+2,5

Material specification Ø32-Ø63

Piston rod	Stainless steel, DIN X 2 CrNiMo 17 13 2
Piston rod nut	Stainless steel, DIN X 5 CrNi 18 10
Piston rod seal	UHMWPE-plastic/NBR
Scraper ring	UHMWPE-plastic/fluorocarbon rubber, FPM
Piston rod bearing	HDPE-plastic
End covers	Stainless steel, DIN X 5 CrNi 18 10
Cushioning screw	Stainless steel, DIN X 10 CrNiS 18 9
Cushioning screw lockings	Stainless steel, DIN X 5 CrNi 18 10
Cushioning sealing	NBR
O-ring, cushioning screw	Fluorocarbon, FPM
O-ring, internal	NBR
Cylinder barrel	Stainless steel, DIN X 5 CrNi 18 10
Piston	POM plastic
Piston seal	NBR
Piston nut	Zinc plated steel
Magnet	Plastic-coated magnetic material

Variants Ø32-Ø63:

High-temperature version, type F:

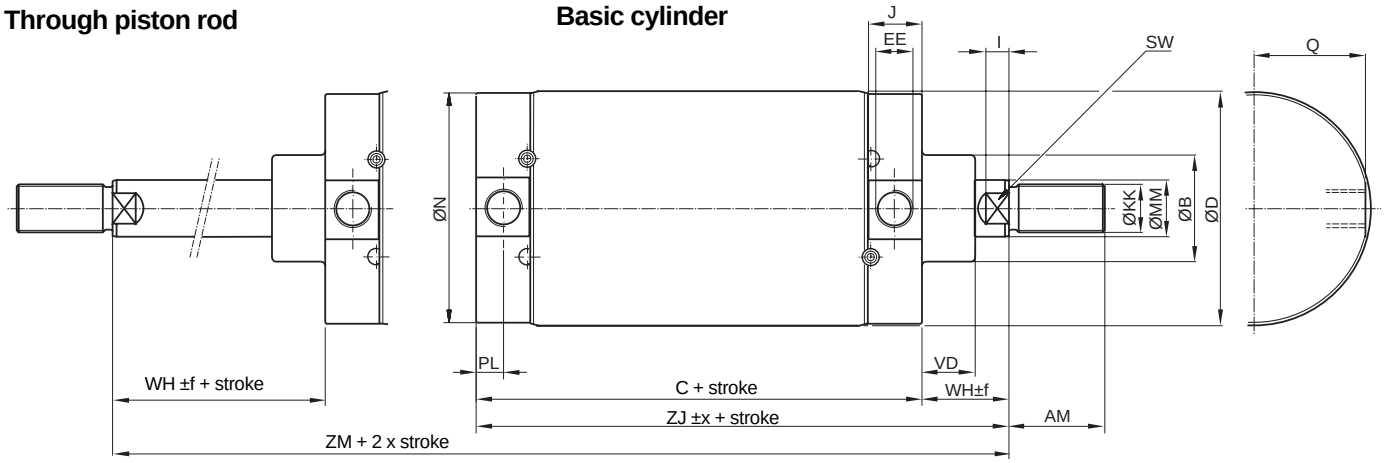
Sealings/scraper ring	Fluorocarbon rubber, FPM
Piston	Anodized aluminium

Refer to order code when ordering cylinders

See Order key on page 15

Through piston rod

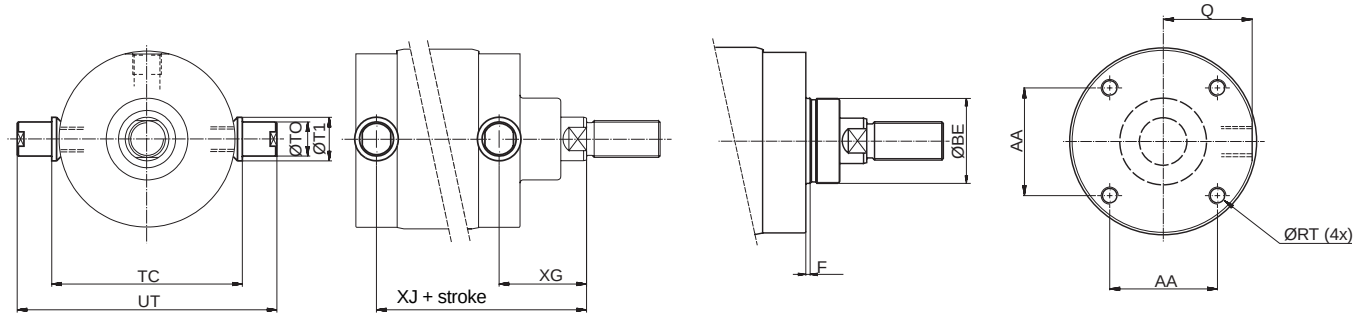
Basic cylinder



Trunnion pegs on front or rear end cover

Threaded front end

Mounting holes in the end covers



Dimensions Ø80-Ø125

Cylinder designation	AA mm	AM mm	B mm	BE	C mm	D mm	EE	F mm	KK	I mm	J mm	MM mm	N mm	PL mm	Q mm
P1S-•080 M	46	40	50	M50x1,5	141	86	G3/8	4	M20x1,5	10	24,5	25	84	12,5	40
P1S-•100 M	60	40	50	M50x1,5	158	106	G1/2	4	M20x1,5	8	30	25	104	15,5	49,5
P1S-•125 M	76	54	60	M60x2	183	132	G1/2	4	M27x2	13	30	32	129	15,5	62,5

Cylinder designation	RT	SW mm	TC mm	TO mm	T1 mm	UT mm	VD mm	WH mm	XG mm	X3 mm	ZJ mm	ZM mm	Mounting tol. x mm	Mounting tol. f mm	Stroke length 0-500 mm mm
P1S-•080 M	M8	21	98	20	25	125	19	37	49,5	165,5	178	215	1,5	2,5	+2,5
P1S-•100 M	M10	21	109	25	32	152	19	35	50,5	177,5	193	228	1,5	2,5	+2,5
P1S-•125 M	M12	27	134	25	32	177	24	47	63	214	230	277	2	2,5	+4

Material specification Ø80-Ø125

Piston rod	Stainless steel, DIN X 2 CrNiMo 17 13 2
Piston rod nut	Stainless steel, DIN X 5 CrNi 18 10
Piston rod seal	FPM
Scraper ring	PTFE
Piston rod bearing	Multilayer PTFE and steel
End covers	Stainless steel, DIN X 5 CrNi 18 10
Cushioning screw	Stainless steel, DIN X 10 CrNiS 18 9
Cushioning sealing	NBR
O-ring, cushioning screw	Fluorocarbon, FPM
O-ring, internal	NBR
Cylinder barrel	Stainless steel, DIN X 5 CrNi 18 10
Piston	Anodized aluminium
Piston seal	NBR
Piston bearing	UHMWPE-plastic
Piston nut	Zinc-plated steel
Magnetic band	Rubber-coated magnetic material

Variants Ø80-Ø125:

Low-temperature version, type L:

Sealings/scraper ring	NBR/PTFE

High-temperature version, type F:

Sealings/scraper ring	Fluorocarbon rubber, FPM/PTFE

Cylinders with steel scraper ring, type Q:

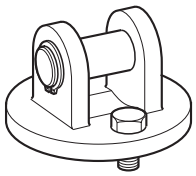
Sealings/scraper ring	NBR/Stainless steel

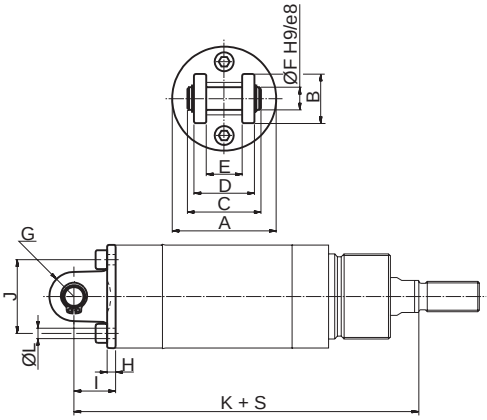
Refer to order code when ordering cylinders

See Order key on page 15

Cylinder mountings Ø32 - Ø63

Type	Description	Cyl. bore Ø mm	Weight kg	Order code
Clevis bracket MP4	Intended for articulated mounting of the cylinder versions D, F or K. The bracket is mounted at the rear end cover and is supplied complete with shaft, mounting screw and O-ring for a clean joint between end cover and bracket. Material: Stainless steel, DIN X 5 CrNi 18 10	32	0,09	**P1S-4KME**
		40	0,12	**P1S-4LME**
		50	0,19	**P1S-4MME**
		63	0,34	**P1S-4NME**

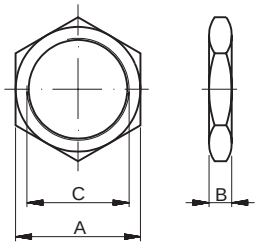




Cylinder Ø mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	K mm	L mm
32	35,5	20	33	26	15	10	10	4,5	18,5	25	142	5,5
40	43,5	24	35	28	17	12	12	4	19	30	160	6,5
50	54,5	26	39	32	17	12	13	4,5	22	39	170	6,5
63	67,5	34	47	40	22	16	17	6	26	49	190	8,6

S = Stroke

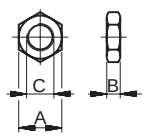
Mounting nut	Intended for fixed mounting of the cylinder via the neck.	32	0,03	**9127294401**
		40	0,06	**9127294402**
	Material: stainless steel, DIN X 5 CrNi 18 10	50-63	0,08	**9127294403**



Cylinder Ø mm	A mm	B mm	C
32	36	8	M30x1,5
40	46	10	M38x1,5
50	55	10	M45x1,5
63	55	10	M45x1,5

Cylinder mountings Ø32-Ø125

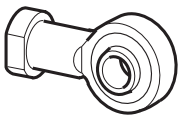
Rod nut	Intended for fixed mounting on the piston rod. Cylinders are supplied complete with one rod nut. (cylinders with through piston rods are supplied with two rod nuts.)	32	0,01	**9126725404**
		40	0,01	**9126725405**
		50-63	0,02	**9126725406**
		80-100	0,04	**0261109921**
	Material: Stainless steel, DIN X 5 CrNi 18 10	125	0,10	**0261109922**

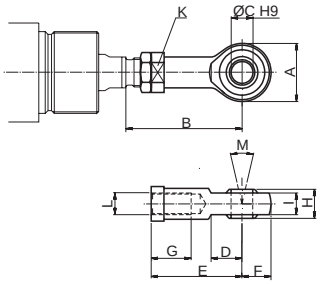


Cylinder Ø mm	A mm	B mm	C
32	17	5	M10x1,25
40	19	6	M12x1,25
50	24	8	M16x1,5
63	24	8	M16x1,5
80	30	10	M20x1,5
100	30	10	M20x1,5
125	41	13,5	M27x2

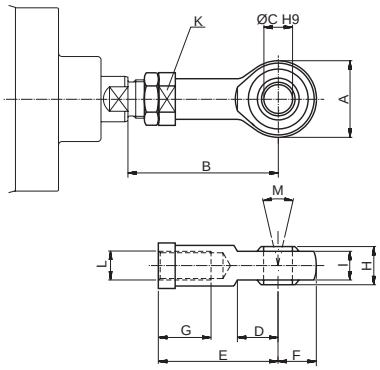
Cylinder mountings Ø32 - Ø125

Type	Description	Cyl. bore Ø mm	Weight kg	Order code
Swivel rod eye	According to ISO 8139 Intended for articulated mounting of the cylinder. This mounting is adjustable in the axial direction. Materal: Swivel rod eye: stainless steel, DIN X 5 CrNi 18 10 Ball: hardened stainless steel, DIN X 5 CrNi 18 10	32	0,08	**P1S-4JRT**
		40	0,12	**P1S-4LRT**
		50-63	0,25	**P1S-4MRT**
		80-100	0,46	**P1S-4PRT**
		125	1,28	**P1S-4RRT**

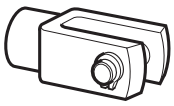


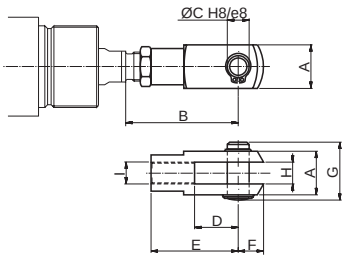


Cyl. Ø mm	A mm	B_{min} mm	B_{max} mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	K mm	L	M
32	28	48	55	10	15	43	14	20	14	10,5	17	M10x1,25	24°
40	32	56	62	12	17	50	16	22	16	12	19	M12x1,25	24°
50	42	72	80	16	22	64	21	28	21	15	22	M16x1,5	30°
63	42	72	80	16	22	64	21	28	21	15	22	M16x1,5	30°
80	50	87	97	20	26	77	25	33	25	18	32	M20x1,5	30°
100	50	87	97	20	26	77	25	33	25	18	32	M20x1,5	30°
125	70	123,5	137	30	36	110	35	51	37	25	41	M27x2	30°

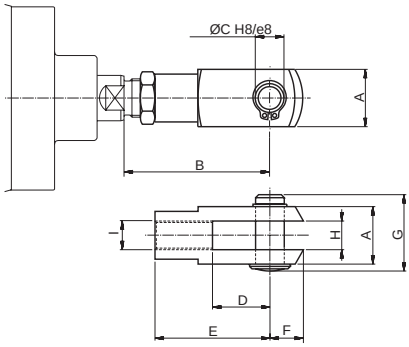


Type	Description	Cyl. bore Ø mm	Weight kg	Order code
Clevis	According to ISO 8140 Intended for articulated mounting of the cylinder. This mounting is adjustable in the axial direction. Supplied complete with pin. Material: Clevis: stainless steel, DIN X 10 CrNiS 18 9 Pin: stainless steel, DIN X 5 CrNi 18 10 Locking rings according to DIN 471	32	0,09	**P1S-4JRD**
		40	0,15	**P1S-4LRD**
		50-63	0,35	**P1S-4MRD**
		80-100	0,75	**P1S-4PRD**
		125	2,10	**P1S-4RRD**



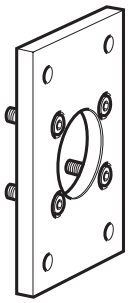


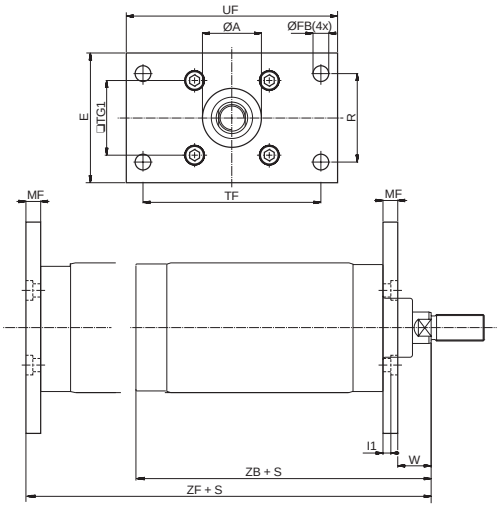
Cylinder Ø mm	A mm	B_{min} mm	B_{max} mm	C mm	D mm	E mm	F mm	G mm	H mm	I
32	20	45	52	10	20	40	16	28	10	M10x1,25
40	24	54	60	12	24	48	19	32	12	M12x1,25
50	32	72	80	16	32	64	25	42	16	M16x1,5
63	32	72	80	16	32	64	25	42	16	M16x1,5
80	40	90	100	20	40	80	32	50	20	M20x1,5
100	40	90	100	20	40	80	32	50	20	M20x1,5
125	55	123,5	137	30	54	110	45	72	30	M27x2



Cylinder mountings

Type	Description	Cyl. bore Ø mm	Weight kg	Order code
Flange MF1/MF2	Intended for fixed attachment of cylinder version D, E, F, L, M or Q. The flange is designed for mounting on the front or rear end covers. Material: Stainless steel, DIN X 5 CrNiMo 17 13 3	80 100 125	0,97 1,42 1,55	**P1S-4PMB** **P1S-4QMB** **P1S-4RMB**

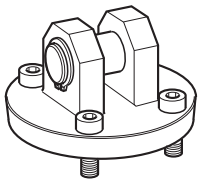


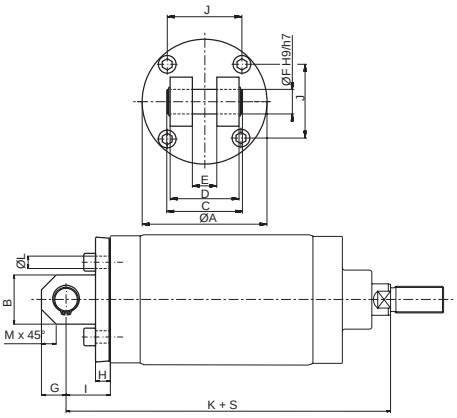


Cylinder Ø mm	A mm	FB mm	E mm	R mm	TF mm	TG1 mm	UF mm	MF mm	I1 mm	W mm	ZB mm	ZF mm
80	50,2	12	86	63	126	46	150	12	6	25	178	190
100	51	14	106	75	150	60	170	12	6	23	193	205
125	61	16	132	90	180	76	205	15	8	32	230	245

S = Stroke

Clevis bracket MP4	Intended for articulated mounting of cylinder versions D, F, L or Q. The bracket is mounted on the rear end cover and is supplied complete with shaft, mounting screw and O-ring for a clean joint between end cover and bracket. Material: Bracket: stainless steel, DIN X 5 CrNi 18 10 Pin: stainless steel, DIN X 5 CrNiMo 17 13 3	80 100 125	0,78 1,42 2,06	**P1S-4PME** **P1S-4QME** **P1S-4RME**

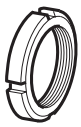


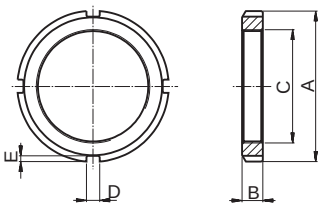


Cylinder Ø mm	A	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	K mm	L mm	M mm	mm
80		80	30	57	50	16	16	15	12	32	46	210	8,6	9
100		103	42	67	60	20	20	21	12	37	60	230	10,6	12
125		127	50	77	70	25	25	25	15	45	76	275	12,6	15

S = Stroke

Mounting nut	Intended for fixed mounting on the front end cover of cylinders according to cylinder version C or D. Material: Stainless steel, DIN X 5 CrNi 18 10	80-100 125	0,16 0,19	**9126461304** **9126461305**

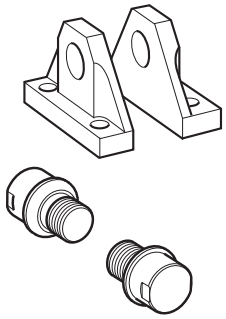


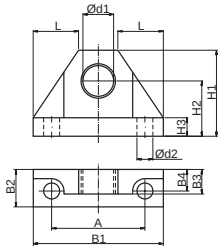


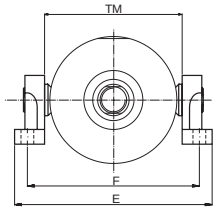
Cylinder Ø mm	A mm	B mm	C	D mm	E mm
80	70	11	M50x1,5	6	2,5
100	70	11	M50x1,5	6	2,5
125	80	11	M60x2	7	3

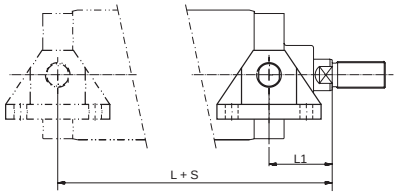
Cylinder mountings

Type	Description	Cyl. bore ∅ mm	Weight kg	Order code
Bearing bracket for trunnion pegs	Intended for articulated mounting of the cylinder. The trunnion pegs are factory mounted on the front or rear end cover and are combined with bearing brackets. Supplied in pairs. Material: Bearing brackets: stainless steel, DIN X 5 CrNi 18 10 Journal bearing: stainless steel, DIN X 5 CrNiMo 17 13 3/PTFE	80 100-125	0,90 1,30	**P1S-4PMW** **P1S-4QMW**







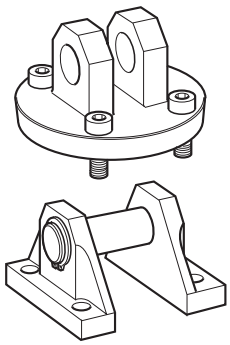


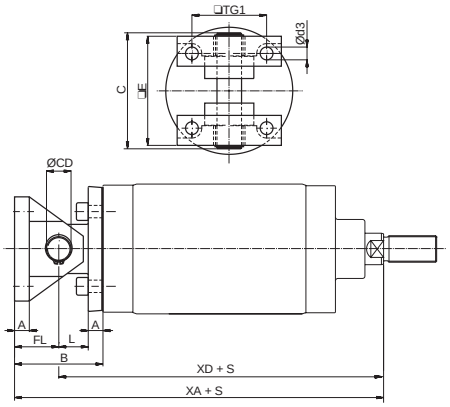
Cylinder Ø mm	A mm	B1 mm	B2 mm	B3 mm	B4 mm	d1 mm	d2 mm	H1 mm	H2 mm	H3 mm	L mm
80	60	90	28	15	15,5	20	11	58	37	12	34,5
100-125	76	106	30	20	17,5	25	13	70	45	15	40

Cylinder Ø mm	E mm	F mm	L1 mm	L2 mm	TM mm
80	154	129	49,5	165,5	98
100	169	144	50,5	177,5	109
125	194	169	63	214	134

S = Stroke

Combinated mounting MP2/MP4	Intended for articulated mounting of cylinder versions D, F, L or Q. The unit is mounted on the rear end cover and is combined with bearing brackets MP2 and is supplied complete with shaft, mounting screw and O-ring for a clean joint between end cover and bracket. Material: Bearing brackets: stainless steel, DIN X 5 CrNi 18 10 Journal bearing: stainless steel, Journal bearing: DIN X 5 CrNiMo 17 13 3/PTFE Bracket: stainless steel, DIN X 5 CrNi 18 10 Pin: stainless steel, DIN X 5 CrNiMo 17 13 3	80 100 125	1,29 2,33 3,30	**P1S-4PML** **P1S-4QML** **P1S-4RML**





Cylinder Ø mm	A mm	B mm	C mm	CD mm	d3 mm	E mm	FL mm	L mm	TG1 mm	XA mm	XD mm
80	12	64	82	16	9	74	32	20	46	242	210
100	12	74	98	20	11	90	37	25	60	267	230
125	15	90	118	25	13	110	45	30	76	320	275

S = Stroke

Reed switch sensors

The reed switch sensors incorporate a well-proven, universal-voltage, compact reed switch element, making them suitable for a wide range of applications. They can work with electronic control systems or conventional relay systems. No environment is too severe.

Technical data

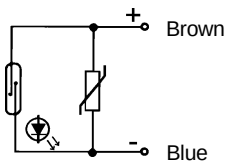
Specification	SR-D, 3 m SR-D, 10 m SRC-D
Design	Reed
Output	Making
Voltage range, SR-D	10-250 VAC/VDC
Voltage range, SRC-D	10-60 VAC/75 VDC
Voltage drop	max 2,2 V
Load currant	max 0,5 A min 2 mA
Breaking power (resistive)	max 30/20 VA/W
Actuating distance	min 15 mm
Hysteresis	1 mm
Repeatability accuracy	±0,1 mm
On/off switching frequency	max 500 Hz
On switching time	max 0,6 ms
Off switching time	max 0,05 ms
Encapsulation	IP 67
Temperature range	–25 °C to +80 °C
Indication	LED, yellow
Material housing	PEI
Material mould	Epoxy
Cable	PVC 2x0,25 mm^2
Weight cable excl. connector	28 g/m
Weight connector	1,8 g
Weight sensor incl. male part connector	5,8 g
Mounting	Mounting yoke
Material mounting	Anodised aluminium
Material, screw	Stainless steel
Connector	Diam. 8 mm, snap on

Ordering data

Order code	Cylinder bore mm	Output	Cable lenght	Weight kg
Reed sensors				
SR-D	32-125	making	3 m	0,088
SR-D	32-125	making	10 m	0,284
SRC-D	32-125	making	*	0,006
Mountings for sensors				
9126344381		32-63		0,020
9126344382		80-125		0,025

*) Cable shall be ordered separately.
**) Cable including female part connector, for sensor.

Reed sensor symbol



Electronic sensors

These sensors are of solid-state type, with no moving parts. Short-circuit and transient protection is incorporated as standard. The integral electronics make these sensors suitable for applications with very high switching frequencies.

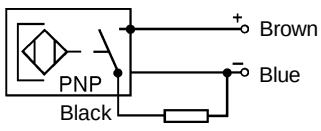
Technical data

Specification	SI-D, 3 m SI-D, 10 m SIC-D
Design	Hall element
Output	PNP, N. O.
Voltage range	10-30 VDC
Permissible ripple	max 5%
Voltage drop	max 1,6 V
Load currant	max 200 mA
Breaking power (resistive)	max 6 W
Capacitive load	max 0,33 µF
Internal consumption	10 mA
Actuating distance	min 6 mm
Hysteresis	0,8 mm
Repeatability accuracy	±0,01 mm
On/off switching frequency	max 500 Hz
On switching time	max 0,8 ms
Off switching time	max 0,04 ms
Encapsulation	IP 67
Temperature range	–25 °C to +80 °C
Indication	LED, gul
Material housing	PEI
Material mould	Epoxy
Cable	PVC 3x0,25 mm^2
Weight cable excl. connector	28 g/m
Weight connector	1,8 g
Weight sensor incl. male part connector	6 g
Connector	Diam. 8 mm, snap on
Mounting	Mounting yoke
Material mounting	Anodised aluminium
Material, screw	Stainless steel

Ordering data

Order code	Cylinder bore mm	Output	Cable lenght	Weight kg
Electronic sensors				
SI-D	32-125	PNP, N.O.	3 m	0,088
SI-D	32-125	PNP, N.O.	10 m	0,284
SIC-D	32-125	PNP, N.O.	*	0,006
Cable for sensors				
9126344341**		PVC	3 m	0,086
9126344342**		PVC	10 m	0,282
9126344343**		Superflex PVC	3 m	0,086
9126344344**		Superflex PVC	10 m	0,282
9126344345**		PUR	3 m	0,086
9126344346**		PUR	10 m	0,282

Electronic sensor symbol



Electronic sensors for ISO 6431

These sensors are of solid-state type, with no moving parts. Short-circuit and transient protection is incorporated as standard. The integral electronics make these sensors suitable for applications with very high switching frequencies.

Technical data

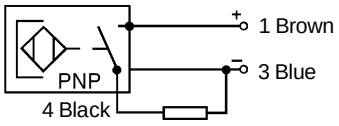
Specification	P1S-2XJH
Design	Hall element
Output	PNP, N.O.
Permissible ripple	10-30 VDC
Max rippel	max 15%
Voltage drop	≤2,5 V
Load current	≤200 mA
Breaking power (resistive)	max 5 W
Internal consumption	max 10 mA
Actuating distance	min 3,5 mm
Hysteresis	0,7 mm
Repeatability accuracy	±0,6 mm
On/off switching frequency	max 1 kHz
On/off switching time	max <0,5/20-50 ms
Encapsulation	IP 67
Temperaturomre range	–25 °C to +70 °C
Indication	LED
Shock resistance	40 g
Material housing	Stainles steel
Cable	PUR 3x0.25 mm^2
Weight cable excl. connector	24 g/m
Weight sensor incl. male part connector	13 g
Weight connector	4 g
Connector	M8 connector
Mounting	Mounting yoke
Material mounting	Stainless steel fluorocarbon rubber

Ordering data

Order code	Cylinder bore mm	Output	Cable lenght	Weight kg
Electronic sensors				
P1S-2XJH	32-125	PNP, N.O.	*	0,025
Mountings for sensors				
P1S-2KCC	32			0,015
P1S-2LCC	40			0,015
P1S-2MCC	50			0,015
P1S-2NCC	63			0,015
P1S-2PCC	80			0,015
P1S-2QCC	100			0,015
P1S-2RCC	125			0,015
Cable for sensors				
9126454822 **			3 m	0,076

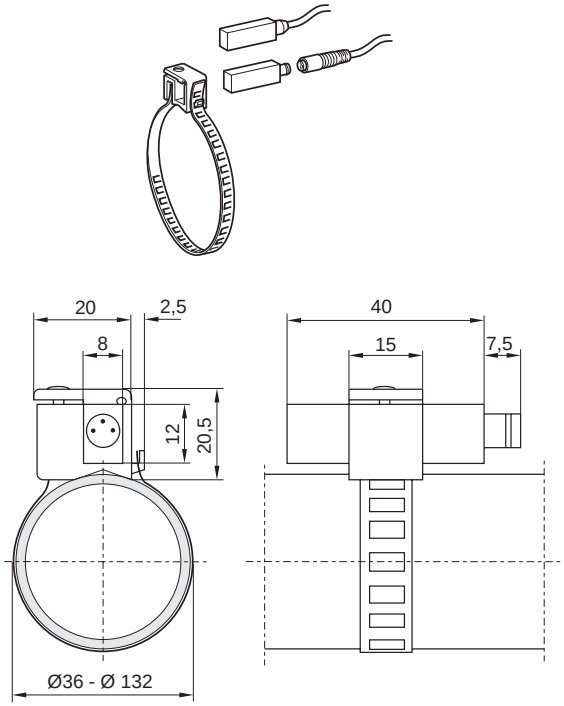
*) Cable shall be ordered separately.
**) Cable including female part connector, for sensor.

Electronic sensor symbol



Dimensions

Reed and electronic sensors SR-D, SRC-D, SI-D, SIC-D for ISO 6431



Electronic sensors P1S-2XJH for ISO 6431