

series CCI



AVENTICS™

**AVENTICS Series CCI Compact
cylinders (ISO 21287)**


EMERSON™

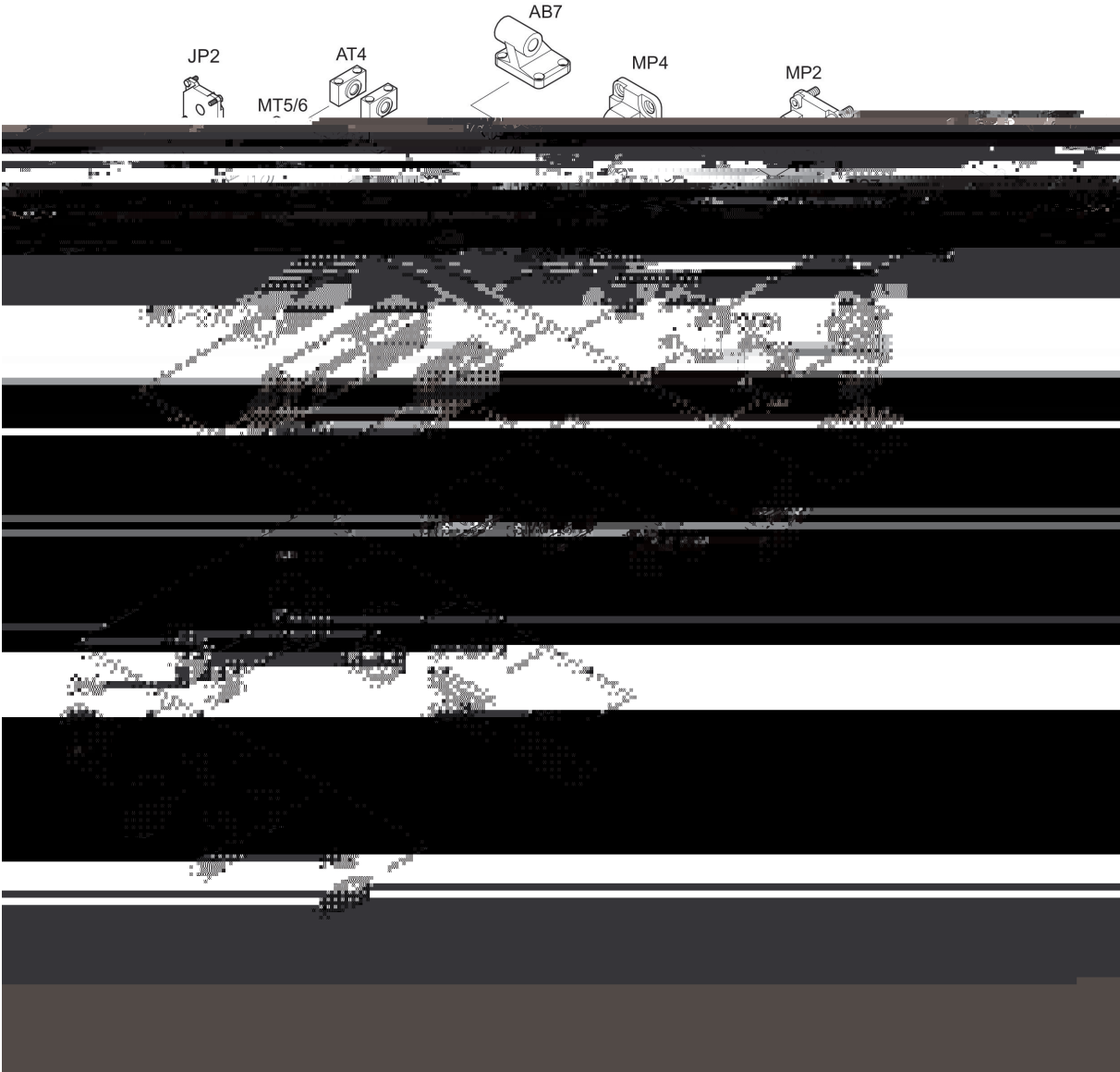
series CCI

The AVENTICS Series CCI (ISO 21287) cylinders stand for innovative, compact construction and an easy to clean design. The Series CCI (ISO 21287) is ideal for long strokes and increased requirements for optimized cycle times and moving masses. The sensors can be installed quickly and easily on all sides and over the entire cylinder lengths.

- Cylinder housing consists of a continuous aluminium profile, with pressed in front and rear cover.
- Easy to clean design preventing the accumulation of dirt
- Low length tolerance - up to 60% shorter than standard ISO profile cylinders, which makes the Series CCI (ISO 21287) ideally suited for compact machine designs
- Simple sensor assembly along the complete cylinder lengths
- Additional configurations possible - features such as special strokes, hollow piston rods, heat-resistant versions, or piston rod extensions can be selected – including documentation and CADs
- Available in piston diameters from 16 mm to 100 mm



Overview drawing



Product overview

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Compact cylinder ISO 21287, Series CCI, single-acting, retracted without pressure, Piston rod: internal thread

Standards: ISO 21287
: Compact cylinder
: Industry standard
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: Internal thread
Compressed air connection type: Internal thread
Functional principle: Single-acting, retracted without pressure

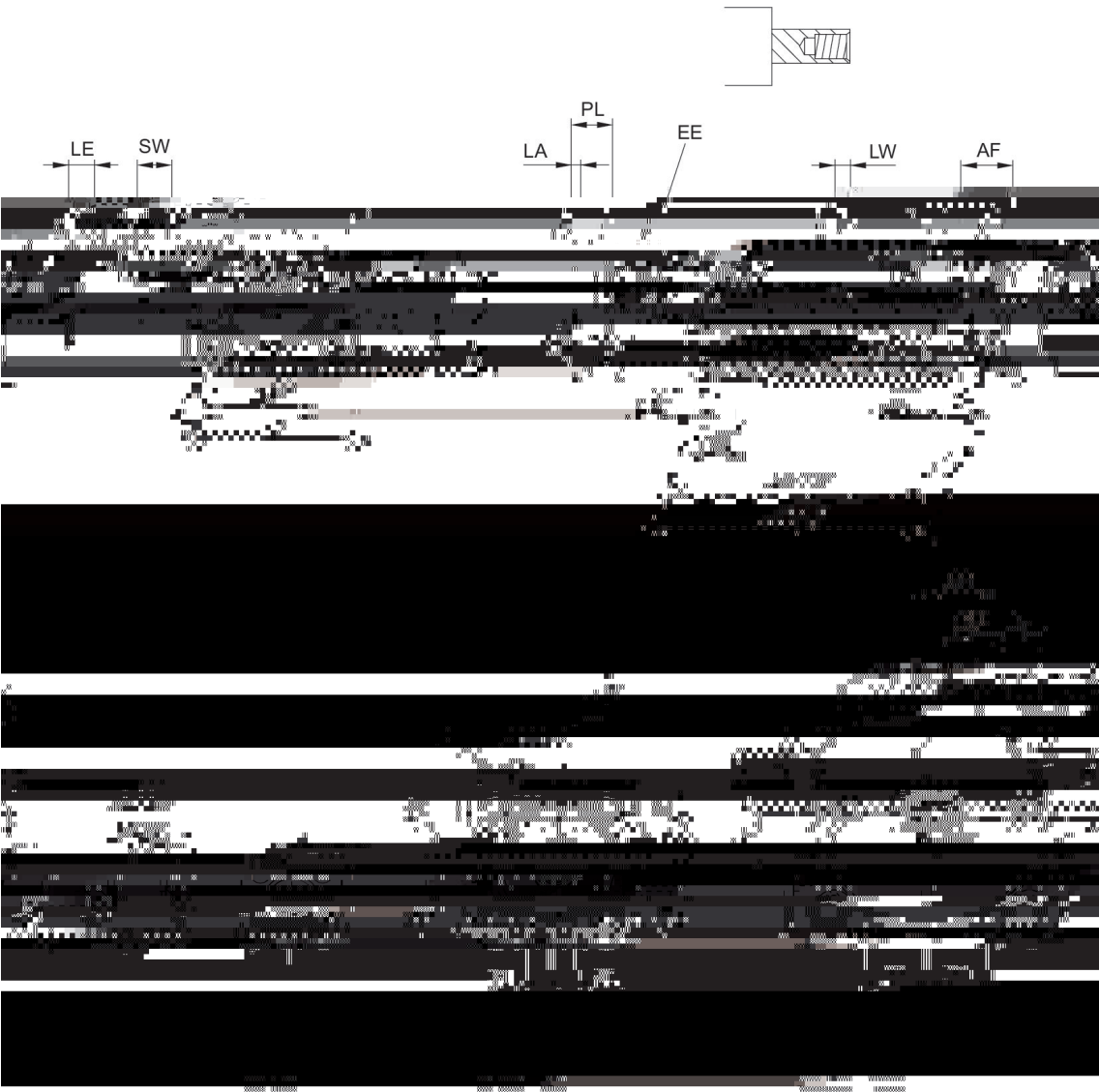


Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R422001392
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R422001402
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R422001412
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R422001422
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R422001432
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R422001393
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R422001403
20	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R422001413
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R422001423
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R422001433
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R422001394
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R422001404

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R422001414
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R422001424
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R422001434
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R422001395
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R422001405
32	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R422001415
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R422001425
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R422001435
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R422001396
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R422001406
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R422001416
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R422001426
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R422001436
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R422001397
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R422001407
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R422001417
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R422001427
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R422001437

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R422001398
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R422001408
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R422001418
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R422001428
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R422001438
80	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	3062	R422001399
80	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	3062	R422001409
80	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	3062	R422001419
80	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	3062	R422001429
80	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	3062	R422001439
100	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4733	R422001400
100	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4733	R422001410
100	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4733	R422001420
100	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4733	R422001430
100	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4733	R422001440

Dimensions



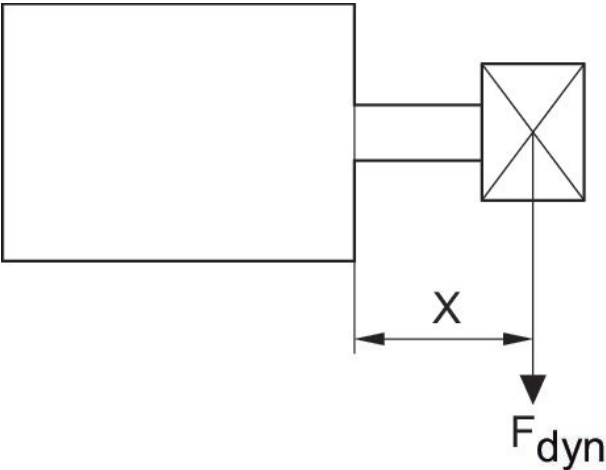
S = stroke

Piston Ø	AF	BG	DA H11	DT	E	EE	KF	KV	LA	LB
16	10	15	10	6	29.3	M5	M4	10	2.5	3.5
20	12	15.5	12	7.5	36.3	M5	M6	13	2.5	4.5
25	12	15.5	12	8	40.3	M5	M6	13	2.5	4.5
32	12	17	14	8.6	50	G 1/8	M8	17	2.5	5
40	12	17	14	9.2	58	G 1/8	M8	17	2.5	5
50	16	17	18	11	68.3	G 1/8	M10	19	2.5	5
63	16	17	18	11	80	G 1/8	M10	19	2.5	5
80	20	20	23	15	96	G 1/8	M12	24	3	5
100	20	20	28	15	116	G 1/8	M12	24	3	5

Piston Ø	LE	LJ	MM f8	PL	RR	RT 6H	SW	TG	WH	X1
16	4.5	0	8	8	3.3	M4	7	18	4,8 ±0,9	–
20	4.5	4.5	10	10	4.2	M5	8	22	5,6 ±0,9	4.2
25	4.5	4	10	10	4.2	M5	8	26	5,6 ±0,9	4.5
32	7.5	4.85	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5
40	7.5	9.85	12	12	5.1	M6	10	38	7,4 ±0,9	11
50	7.5	12	16	12	6.7	M8	13	46.5	8,4 ±0,9	13
63	7.5	14.8	16	12	6.7	M8	13	56.5	8,5 ±0,9	18
80	7.5	22	20	14	8.5	M10	16	72	9,8 ±1	18
100	7.5	27	25	16.5	8.5	M10	21	89	9,8 ±1	20

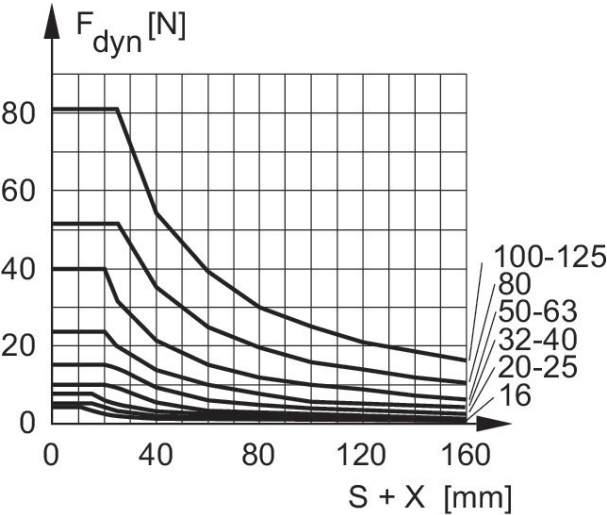
Piston Ø	X2	X3	ZA	ZB
16	–	–	34,9	39,7 ±0,8
20	–	–	37,3	43,6 ±0,8
25	–	–	39	44,5 ±0,9
32	–	–	44	51,4 ±1
40	–	–	45	52,4 ±1
50	4	13	45,5	53,6 ±1
63	12	21	49	57,4 ±1
80	16.5	25.5	54,7	64,4 ±1
100	20	29	67	76,7 ±1

Maximum admissible lateral force



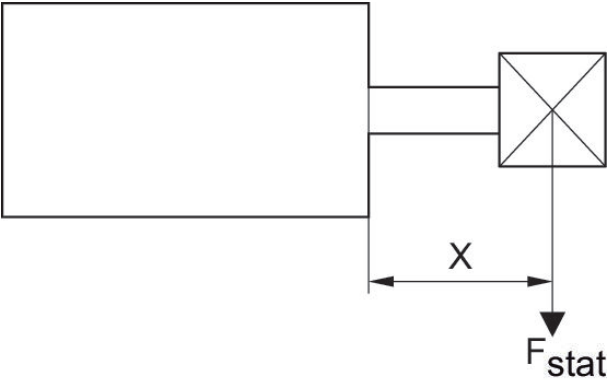
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



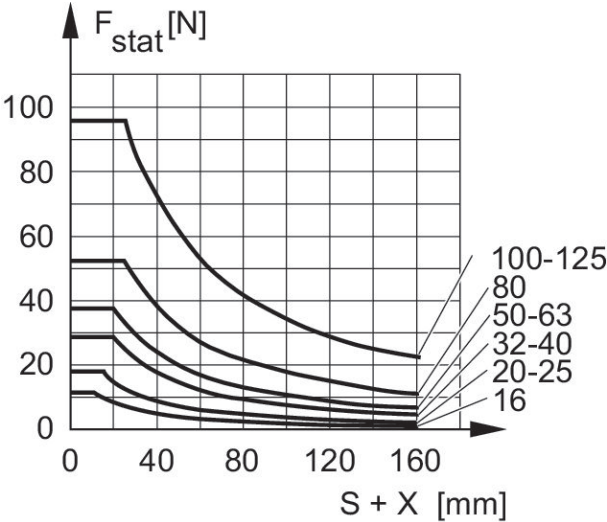
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



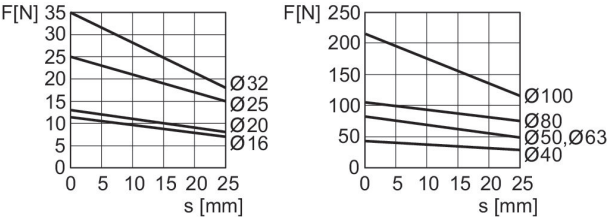
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Extracting piston force



F = spring return force, s = return stroke

Compact cylinder ISO 21287, Series CCI, single-acting, retracted without pressure, Piston rod: external thread

Standards: ISO 21287
: Compact cylinder
: Industry standard
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: External thread
Compressed air connection type: External thread
Functional principle: Single-acting, retracted without pressure

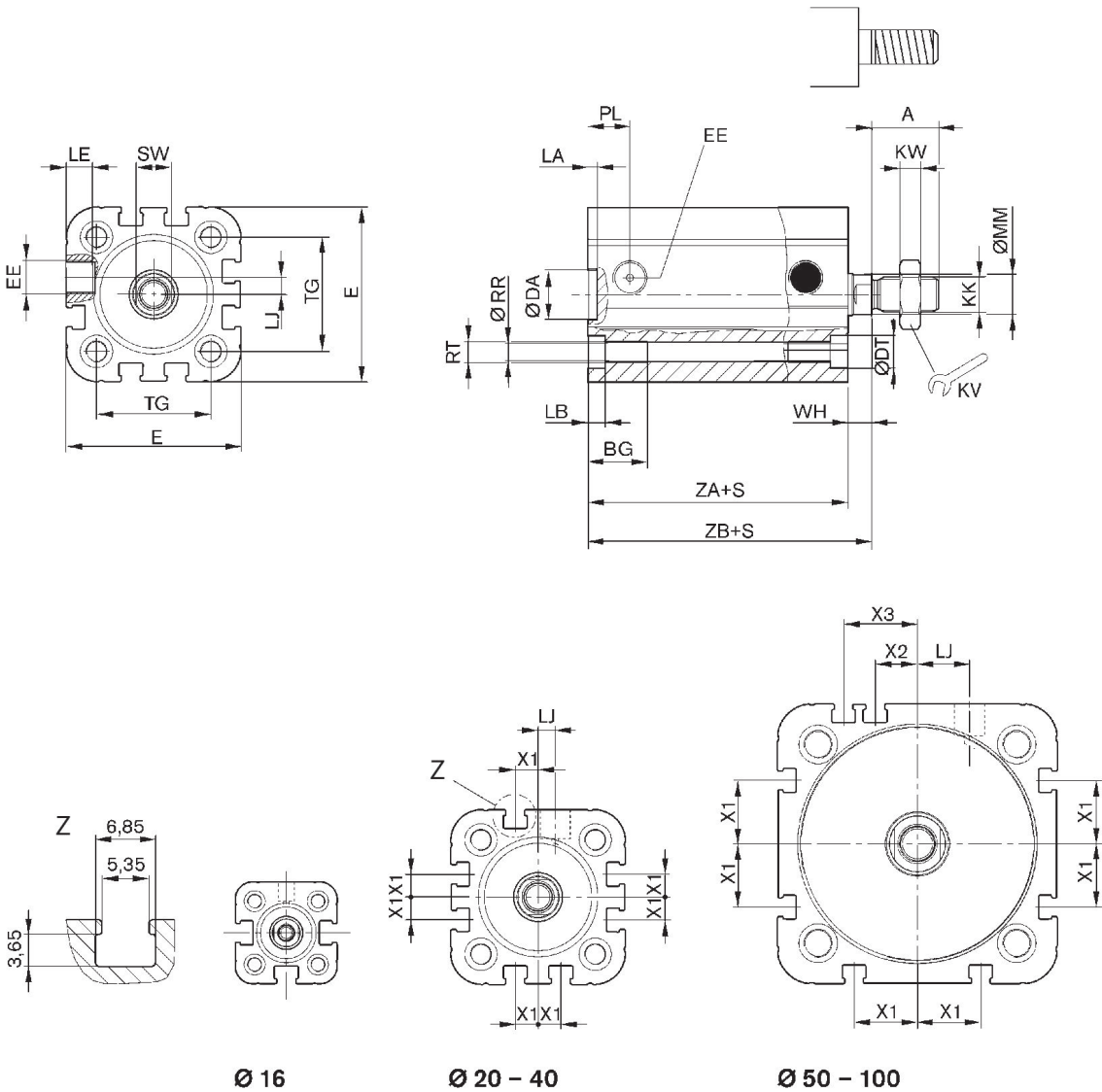


Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	115	R422001442
16	10	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	115	R422001452
16	15	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	115	R422001462
16	20	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	115	R422001472
16	25	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	115	R422001482
20	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	185	R422001443
20	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	185	R422001453
20	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	185	R422001463
20	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	185	R422001473
20	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	185	R422001483
25	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	284	R422001444
25	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	284	R422001454

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	284	R422001464
25	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	284	R422001474
25	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	284	R422001484
32	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R422001445
32	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R422001455
32	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R422001465
32	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R422001475
32	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R422001485
40	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R422001446
40	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R422001456
40	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R422001466
40	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R422001476
40	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R422001486
50	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1155	R422001447
50	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1155	R422001457
50	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1155	R422001467
50	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1155	R422001477
50	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1155	R422001487

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R422001448
63	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R422001458
63	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R422001468
63	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R422001478
63	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R422001488
80	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	3062	R422001449
80	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	3062	R422001459
80	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	3062	R422001469
80	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	3062	R422001479
80	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	3062	R422001489
100	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4733	R422001450
100	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4733	R422001460
100	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4733	R422001470
100	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4733	R422001480
100	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4733	R422001490

Dimensions



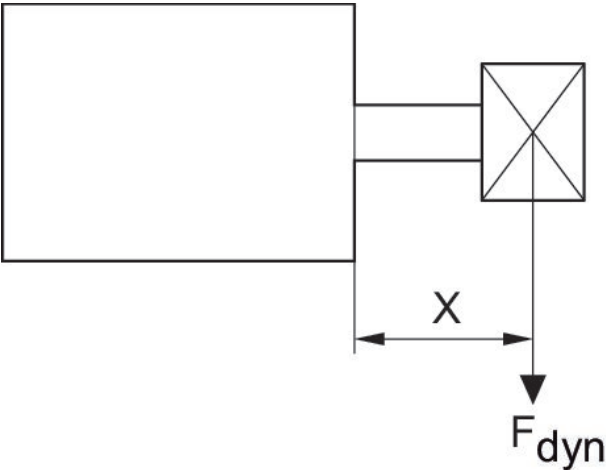
S = stroke

Piston Ø	A	BG	DA H11	DT	E	EE	KK	KV	KW	LA
16	12	15	10	6	29.3	M5	M6	10	3	2.5
20	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5
25	16	15.5	12	8	40.3	M5	M8	13	4	2.5
32	19	17	14	8.6	50	G 1/8	M10x1,25	17	5	2.5
40	19	17	14	9.2	58	G 1/8	M10x1,25	17	5	2.5
50	22	17	18	11	68.3	G 1/8	M12x1,25	19	6	2.5
63	22	17	18	11	80	G 1/8	M12x1,25	19	6	2.5
80	28	20	23	15	96	G 1/8	M16x1,5	24	8	3
100	28	20	28	15	116	G 1/8	M16x1,5	24	8	3

Piston Ø	LB	LE	LJ	MM f8	PL	RR	RT 6H	SW	TG	WH
16	3.5	4.5	0	8	8	3.3	M4	7	18	4,8 ±0,9
20	4.5	4.5	4.5	10	10	4.2	M5	8	22	5,6 ±0,9
25	4.5	4.5	4	10	10	4.2	M5	8	26	5,6 ±0,9
32	5	7.5	4.85	12	12	5.1	M6	10	32.5	7,4 ±0,9
40	5	7.5	9.85	12	12	5.1	M6	10	38	7,4 ±0,9
50	5	7.5	12	16	12	6.7	M8	13	46.5	8,4 ±0,9
63	5	7.5	14.8	16	12	6.7	M8	13	56.5	8,5 ±0,9
80	5	7.5	22	20	14	8.5	M10	16	72	9,8 ±1
100	5	7.5	27	25	16.5	8.5	M10	21	89	9,8 ±1

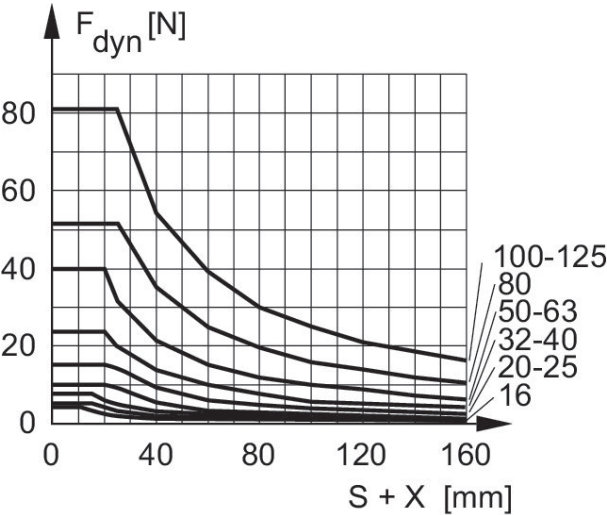
Piston Ø	X1	X2	X3	ZA	ZB
16	–	–	–	34,9	39,7 ±0,8
20	4.2	–	–	37,3	43,6 ±0,8
25	4.5	–	–	39	44,5 ±0,9
32	6.5	–	–	44	51,4 ±1
40	11	–	–	45	52,4 ±1
50	13	4	13	45,5	53,6 ±1
63	18	12	21	49	57,4 ±1
80	18	16.5	25.5	54,7	64,4 ±1
100	20	20	29	67	76,7 ±1

Maximum admissible lateral force



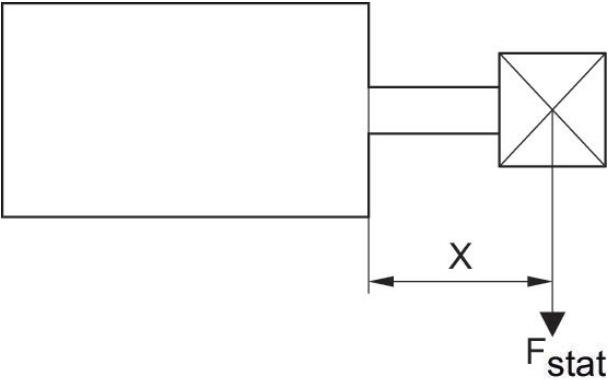
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



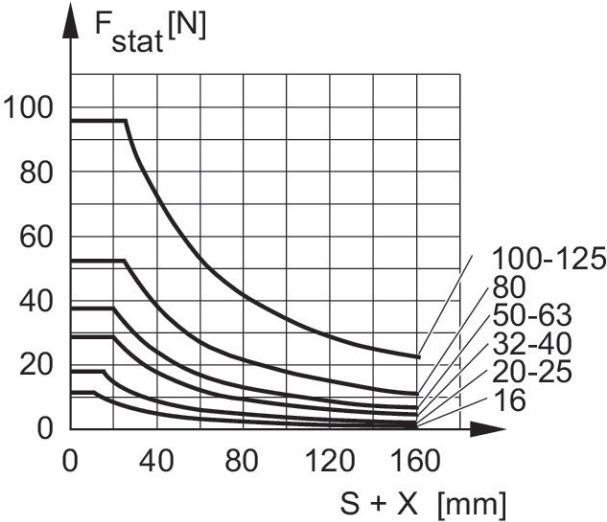
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



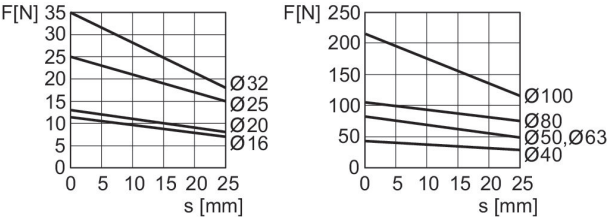
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Extracting piston force



F = spring return force, s = return stroke

Compact cylinder ISO 21287, Series CCI, single-acting, extended without pressure, Piston rod: internal thread

Standards: ISO 21287
: Compact cylinder
: Industry standard
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: Internal thread
Compressed air connection type: Internal thread
Functional principle: Single-acting, extended without pressure

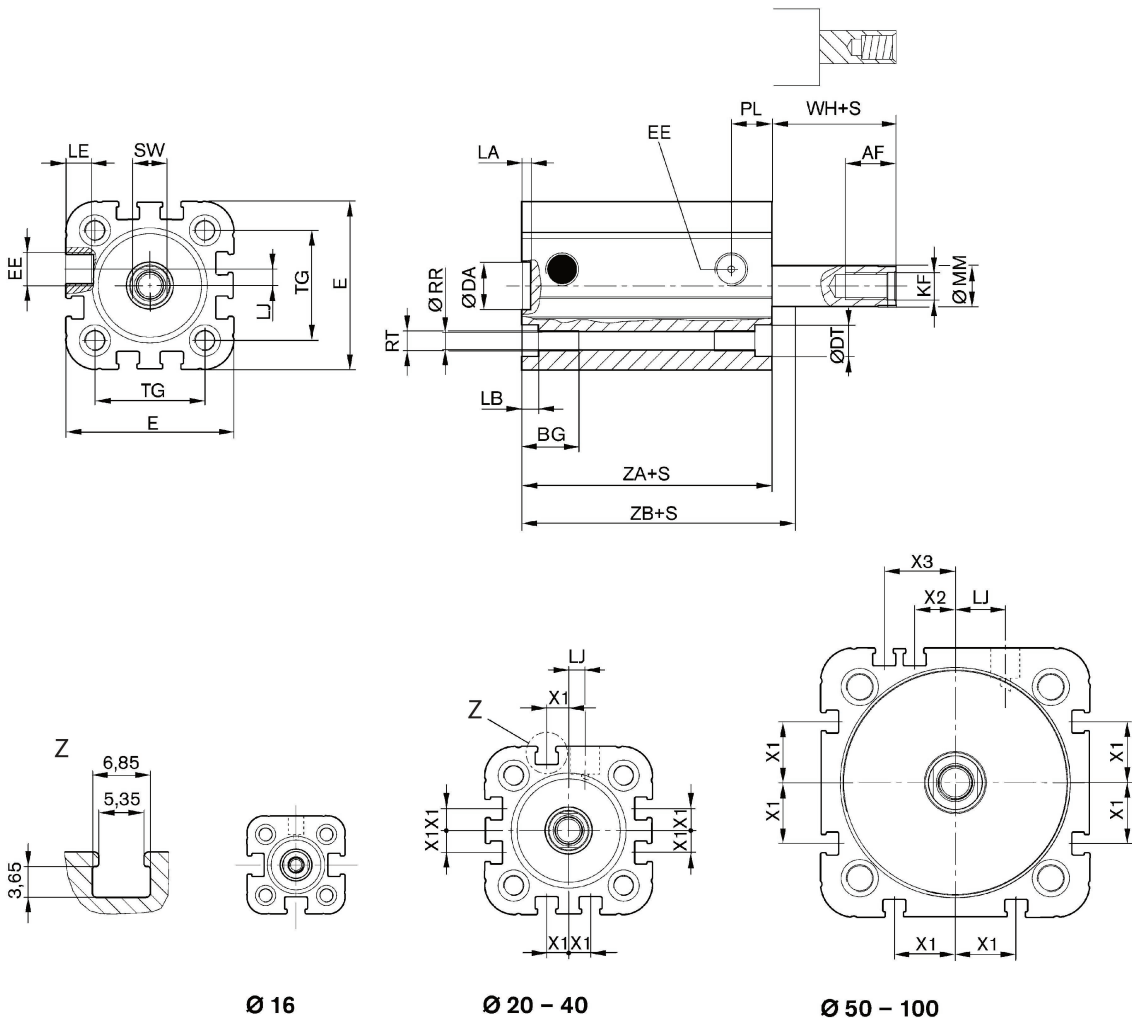


Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	127	12	R422001492
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	127	12	R422001502
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	127	12	R422001512
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	127	12	R422001522
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	127	12	R422001532
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	198	13	R422001493
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	198	13	R422001503
20	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	198	13	R422001513
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	198	13	R422001523
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	198	13	R422001533
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	309	25	R422001494
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	309	25	R422001504
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	309	25	R422001514

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	309	25	R422001524
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	309	25	R422001534
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	507	35	R422001495
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	507	35	R422001505
32	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	507	35	R422001515
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	507	35	R422001525
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	507	35	R422001535
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	792	43	R422001496
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	792	43	R422001506
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	792	43	R422001516
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	792	43	R422001526
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	792	43	R422001536
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1237	82	R422001497
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1237	82	R422001507
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1237	82	R422001517
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1237	82	R422001527
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1237	82	R422001537
63	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1964	82	R422001498

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1964	82	R422001508
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1964	82	R422001518
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1964	82	R422001528
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1964	82	R422001538
80	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3167	105	R422001499
80	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3167	105	R422001509
80	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3167	105	R422001519
80	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3167	105	R422001529
80	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3167	105	R422001539
100	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4948	215	R422001500
100	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4948	215	R422001510
100	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4948	215	R422001520
100	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4948	215	R422001530
100	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4948	215	R422001540

Dimensions



S = stroke

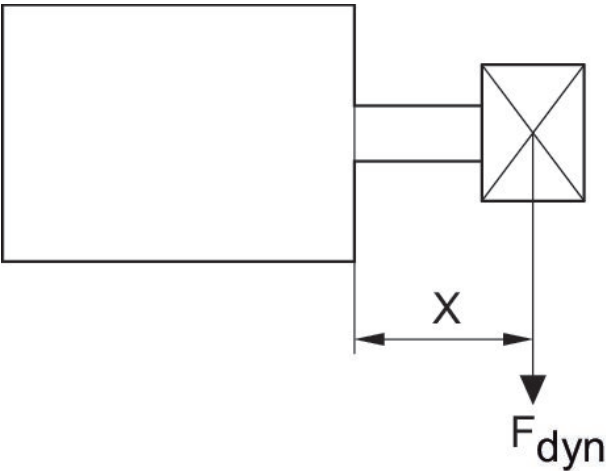
Piston Ø	AF	BG	DA H11	DT	E	EE	KF	LA	LB	LE
16	10	15	10	6	29.3	M5	M4	2.5	3.5	4.5
20	12	15.5	12	7.5	36.3	M5	M6	2.5	4.5	4.5
25	12	15.5	12	8	40.3	M5	M6	2.5	4.5	4.5
32	12	17	14	8.6	50	G 1/8	M8	2.5	5	7.5
40	12	17	14	9.2	58	G 1/8	M8	2.5	5	7.5
50	16	17	18	11	68.3	G 1/8	M10	2.5	5	7.5
63	16	17	18	11	80	G 1/8	M10	2.5	5	7.5
80	20	20	23	15	96	G 1/8	M12	3	5	7.5
100	20	20	28	15	116	G 1/8	M12	3	5	7.5

Piston Ø	LJ	MM f8	PL	RR	RT 6H	SW	TG	WH	X1	X2
16	0	8	8	3.3	M4	7	18	4,8 ±0,9	–	–
20	4.5	10	10	4.2	M5	8	22	5,6 ±0,9	4.2	–
25	4	10	10	4.2	M5	8	26	5,6 ±0,9	4.5	–

Piston Ø	LJ	MM f8	PL	RR	RT 6H	SW	TG	WH	X1	X2
32	4.85	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	–
40	9.85	12	12	5.1	M6	10	38	7,4 ±0,9	11	–
50	12	16	12	6.7	M8	13	46.5	8,4 ±0,9	13	4
63	14.8	16	12	6.7	M8	13	56.5	8,5 ±0,9	18	12
80	22	20	14	8.5	M10	16	72	9,8 ±1	18	16.5
100	27	25	16.5	8.5	M10	21	89	9,8 ±1	20	20

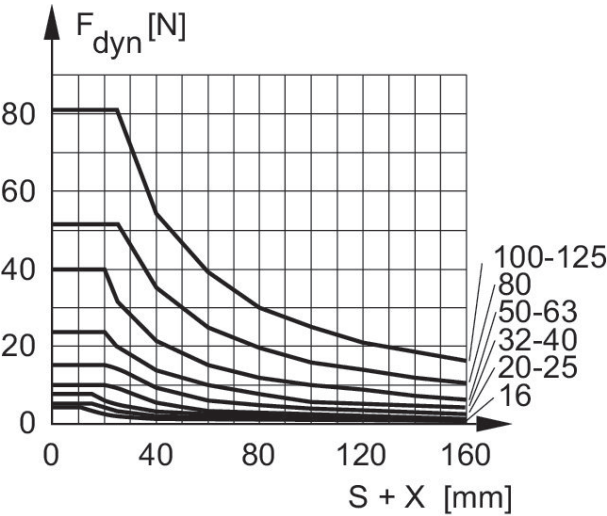
Piston Ø	X3	ZA	ZB
16	–	34,9 ±0,1	39,7 ±0,8
20	–	37,3 ±0,1	43,6 ±0,8
25	–	39 ±0,1	44,5 ±0,9
32	–	44 ±0,1	51,4 ±1
40	–	45 ±0,1	52,4 ±1
50	13	45,5 ±0,1	53,6 ±1
63	21	49 ±0,1	57,4 ±1
80	25.5	54,7 ±0,1	64,4 ±1
100	29	67 ±0,1	76,7 ±1

Maximum admissible lateral force



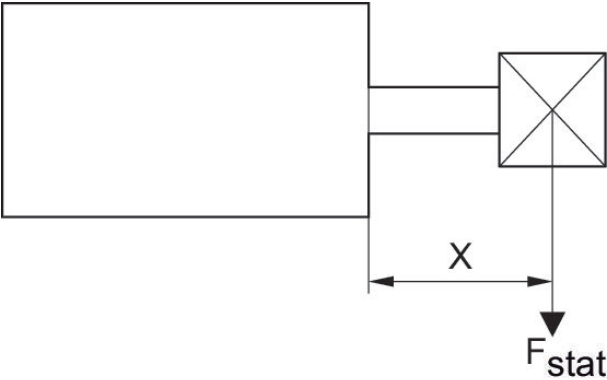
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



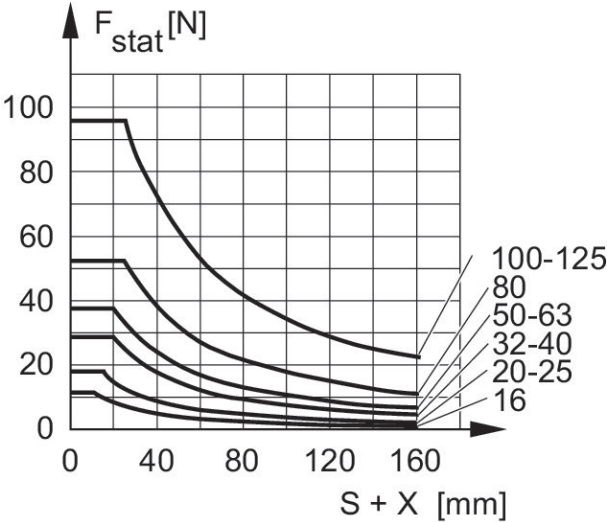
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



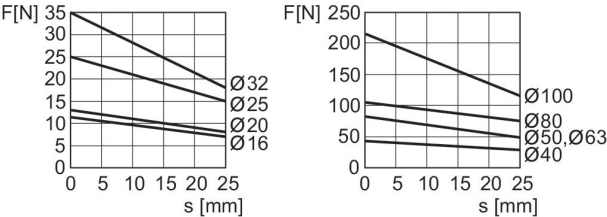
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Extracting piston force



F = spring return force, s = return stroke

Compact cylinder ISO 21287, Series CCI, single-acting, extended without pressure, Piston rod: external thread

Standards: ISO 21287
: Compact cylinder
: Industry standard
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: External thread
Compressed air connection type: Internal thread
Functional principle: Single-acting, extended without pressure

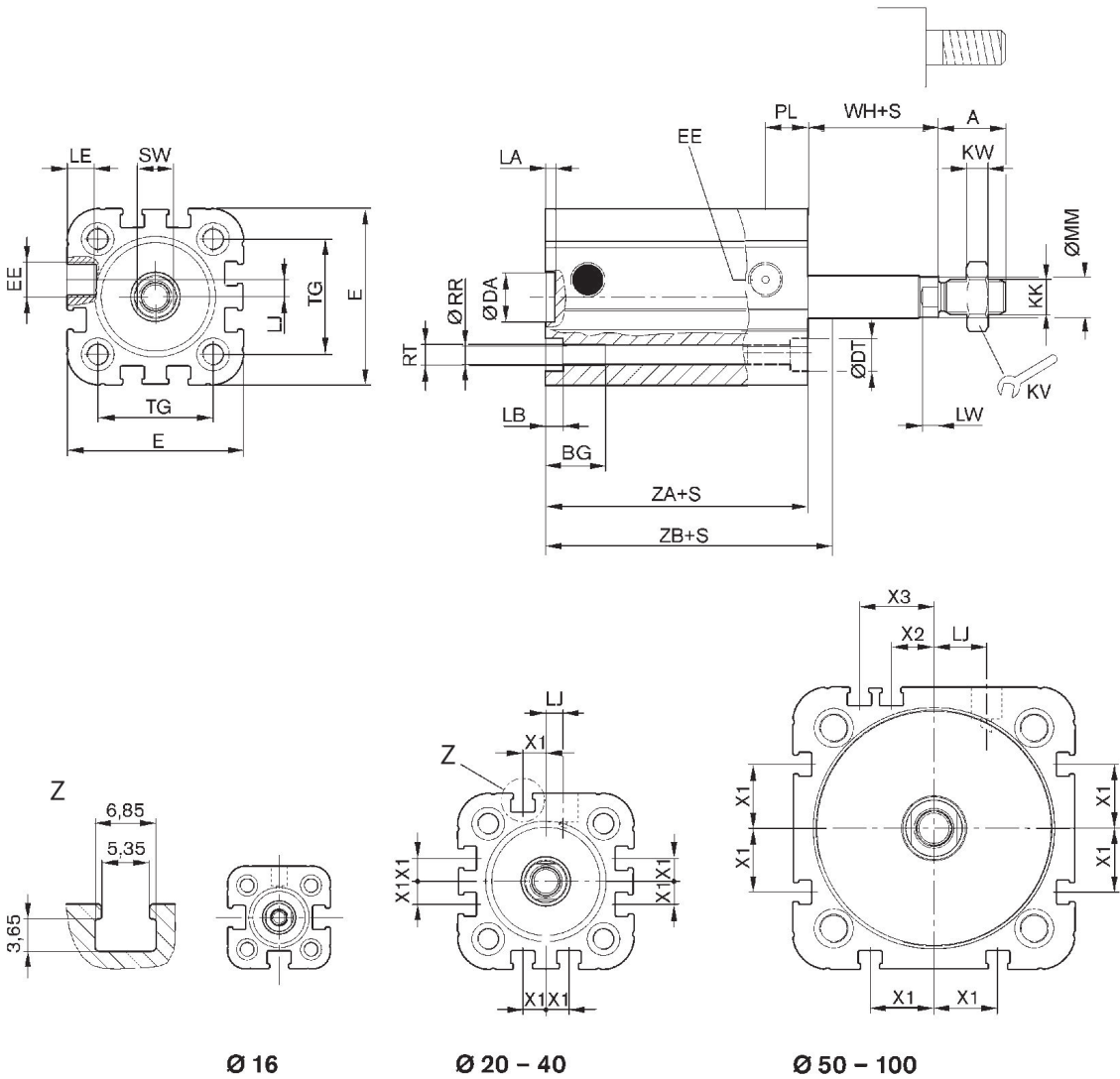


Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	127	12	R422001542
16	10	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	127	12	R422001552
16	15	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	127	12	R422001562
16	20	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	127	12	R422001572
16	25	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	127	12	R422001582
20	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	198	13	R422001543
20	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	198	13	R422001553
20	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	198	13	R422001563
20	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	198	13	R422001573
20	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	198	13	R422001583
25	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	309	25	R422001544
25	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	309	25	R422001554
25	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	309	25	R422001564

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	309	25	R422001574
25	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	309	25	R422001584
32	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	507	35	R422001545
32	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	507	35	R422001555
32	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	507	35	R422001565
32	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	507	35	R422001575
32	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	507	35	R422001585
40	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	792	43	R422001546
40	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	792	43	R422001556
40	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	792	43	R422001566
40	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	792	43	R422001576
40	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	792	43	R422001586
50	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1237	82	R422001547
50	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1237	82	R422001557
50	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1237	82	R422001567
50	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1237	82	R422001577
50	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1237	82	R422001587
63	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1964	82	R422001548

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
63	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1964	82	R422001558
63	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1964	82	R422001568
63	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1964	82	R422001578
63	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1964	82	R422001588
80	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3167	105	R422001549
80	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3167	105	R422001559
80	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3167	105	R422001569
80	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3167	105	R422001579
80	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3167	105	R422001589
100	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4948	215	R422001550
100	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4948	215	R422001560
100	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4948	215	R422001570
100	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4948	215	R422001580
100	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4948	215	R422001590

Dimensions



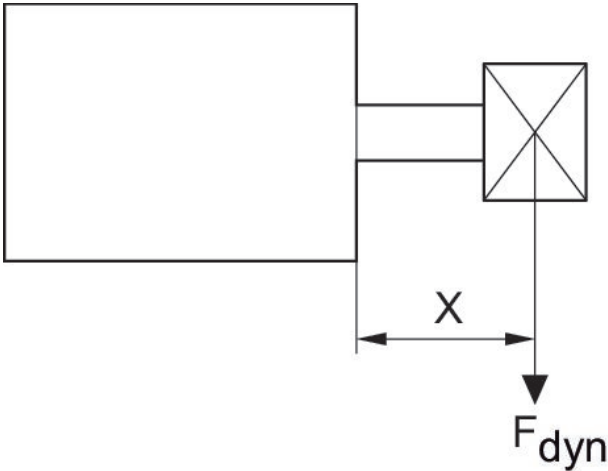
Piston Ø	A	BG	DA H11	DT	E	EE	KK	KV	KW	LA
16	12	15	10	6	29.3	M5	M6	10	3	2.5
20	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5
25	16	15.5	12	8	40.3	M5	M8	13	4	2.5
32	19	17	14	8.6	50	G 1/8	M10x1,25	17	5	2.5
40	19	17	14	9.2	58	G 1/8	M10x1,25	17	5	2.5
50	22	17	18	11	68.3	G 1/8	M12x1,25	19	6	2.5
63	22	17	18	11	80	G 1/8	M12x1,25	19	6	2.5
80	28	20	23	15	96	G 1/8	M16x1,5	24	8	3
100	28	20	28	15	116	G 1/8	M16x1,5	24	8	3

Piston Ø	LB	LE	LJ	LW	MM f8	PL	RR	RT 6H	SW	TG
16	3.5	4.5	0	4	8	8	3.3	M4	7	18
20	4.5	4.5	4.5	4	10	10	4.2	M5	8	22

Piston Ø	LB	LE	LJ	LW	MM f8	PL	RR	RT 6H	SW	TG
25	4.5	4.5	4	4	10	10	4.2	M5	8	26
32	5	7.5	4.85	4.5	12	12	5.1	M6	10	32.5
40	5	7.5	9.85	4.5	12	12	5.1	M6	10	38
50	5	7.5	12	6	16	12	6.7	M8	13	46.5
63	5	7.5	14.8	6	16	12	6.7	M8	13	56.5
80	5	7.5	22	7	20	14	8.5	M10	16	72
100	5	7.5	27	7	25	16.5	8.5	M10	21	89

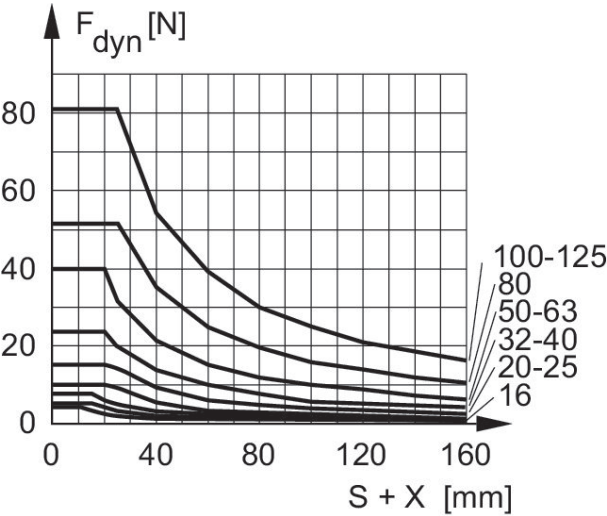
Piston Ø	WH	X1	X2	X3	ZA	ZB
16	4,8 ±0,9	–	–	–	34,9 ±0,1	39,7 ±0,8
20	5,6 ±0,9	4.2	–	–	37,3 ±0,1	43,6 ±0,8
25	5,6 ±0,9	4.5	–	–	39 ±0,1	44,5 ±0,9
32	7,4 ±0,9	6.5	–	–	44 ±0,1	51,4 ±1
40	7,4 ±0,9	11	–	–	45 ±0,1	52,4 ±1
50	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1
80	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1

Maximum admissible lateral force



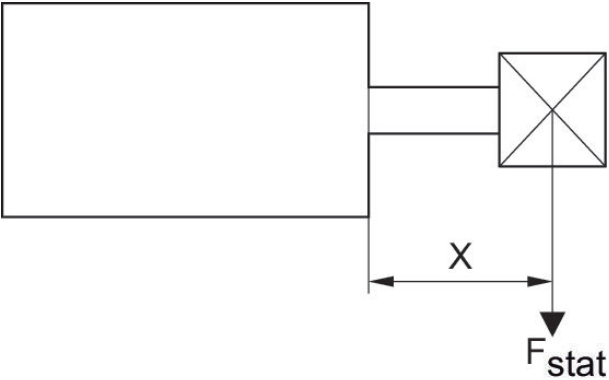
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



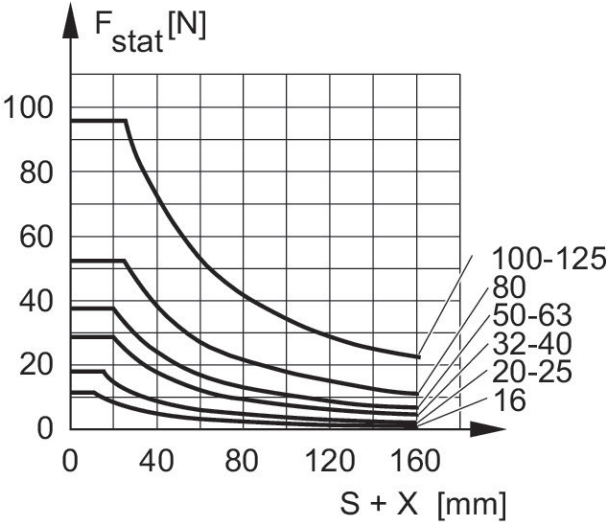
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



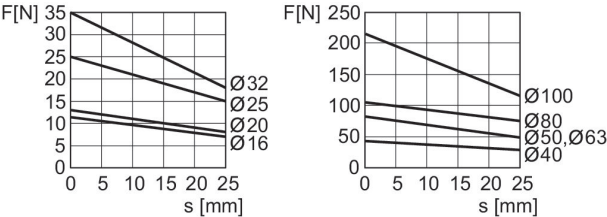
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Extracting piston force



F = spring return force, s = return stroke

Compact cylinder ISO 21287, Series CCI, single-acting, through piston rod, Piston rod: internal thread

Standards: ISO 21287
: Compact cylinder
: Industry standard
Piston rod: through
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: Internal thread
Compressed air connection type: Internal thread
Functional principle: Single-acting, retracted without pressure

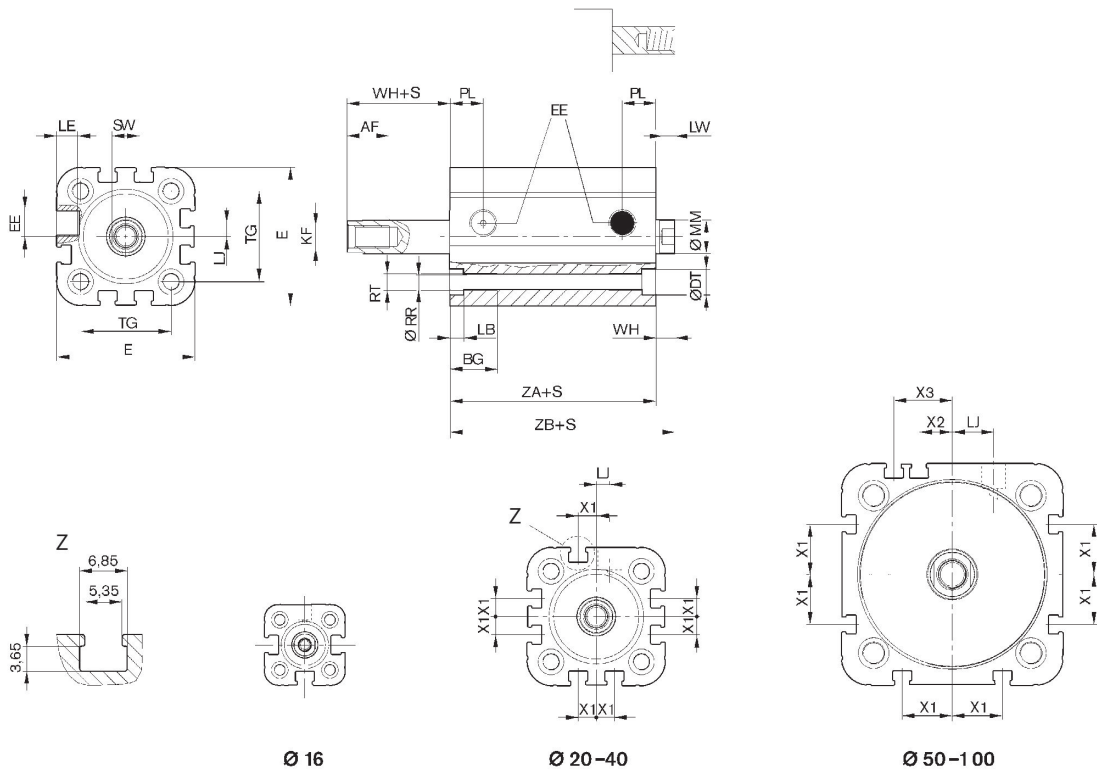


Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	83	R422001592
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	83	R422001602
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	83	R422001612
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	83	R422001622
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	83	R422001632
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	135	R422001593
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	135	R422001603
20	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	135	R422001613
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	135	R422001623
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	135	R422001633
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	235	R422001594
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	235	R422001604
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	235	R422001614

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	235	R422001624
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	235	R422001634
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	400	R422001595
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	400	R422001605
32	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	400	R422001615
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	400	R422001625
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	400	R422001635
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	677	R422001596
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	677	R422001606
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	677	R422001616
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	677	R422001626
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	677	R422001636
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1028	R422001597
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1028	R422001607
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1028	R422001617
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1028	R422001627
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1028	R422001637
63	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1745	R422001598

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1745	R422001608
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1745	R422001618
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1745	R422001628
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1745	R422001638
80	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	2864	R422001599
80	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	2864	R422001609
80	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	2864	R422001619
80	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	2864	R422001629
80	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	105	2864	R422001639
100	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4424	R422001600
100	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4424	R422001610
100	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4424	R422001620
100	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4424	R422001630
100	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	215	4424	R422001640

Dimensions

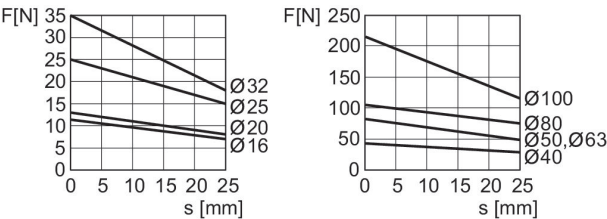


Piston Ø	AF	BG	DT	E	EE	KF	LB	LE	LJ	LW
16	10	15	6	29.3	M5	M4	3.5	4.5	–	4
20	12	15.5	7.5	36.3	M5	M6	4.5	4.5	4.5	4
25	12	15.5	8	40.3	M5	M6	4.5	4.5	4	4
32	12	17	8.6	50	G 1/8	M8	5	7.5	4.85	4.5
40	12	17	9.2	58	G 1/8	M8	5	7.5	9.85	4.5
50	16	17	11	68.3	G 1/8	M10	5	7.5	12	6
63	16	17	11	80	G 1/8	M10	5	7.5	14.8	6
80	20	20	15	96	G 1/8	M12	5	7.5	22	7
100	20	20	15	116	G 1/8	M12	5	7.5	27	7

Piston Ø	MM f8	PL	RR	RT 6H	SW	TG	WH	X1	X2	X3
16	8	8	3.3	M4	7	18	4,8 ±0,9	–	–	–
20	10	10	4.2	M5	8	22	5,6 ±0,9	4.2	–	–
25	10	10	4.2	M5	8	26	5,6 ±0,9	4.5	–	–
32	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	–	–
40	12	12	5.1	M6	10	38	7,4 ±0,9	11	–	–
50	16	12	6.7	M8	13	46.5	8,4 ±0,9	13	4	13
63	16	12	6.7	M8	13	56.5	8,5 ±0,9	18	12	21
80	20	14	8.5	M10	16	72	9,8 ±1	18	16.5	25.5
100	25	16.5	8.5	M10	21	89	9,8 ±1	20	20	29

Piston Ø	ZA	ZB
16	34,9 ±0,1	39,7 ±0,8
20	37,3 ±0,1	43,6 ±0,8
25	39 ±0,1	44,5 ±0,9
32	44 ±0,1	51,4 ±1
40	45 ±0,1	52,4 ±1
50	45,5 ±0,1	53,6 ±1
63	49 ±0,1	57,4 ±1
80	54,7 ±0,1	64,4 ±1
100	67 ±0,1	76,7 ±1

Extracting piston force



F = spring return force, s = return stroke

Compact cylinder ISO 21287, Series CCI, single-acting, through piston rod, Piston rod: external thread

Standards: ISO 21287
: Compact cylinder
: Industry standard
Piston rod: through
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: External thread
Compressed air connection type: Internal thread
Functional principle: Single-acting, retracted without pressure



Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	83	R422001642
16	10	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	83	R422001652
16	15	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	83	R422001662
16	20	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	83	R422001672
16	25	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	12	83	R422001682
20	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	135	R422001643
20	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	135	R422001653
20	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	135	R422001663
20	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	135	R422001673
20	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	13	135	R422001683
25	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	235	R422001644
25	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	235	R422001654
25	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	235	R422001664

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	235	R422001674
25	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	25	235	R422001684
32	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	400	R422001645
32	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	400	R422001655
32	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	400	R422001665
32	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	400	R422001675
32	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	400	R422001685
40	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	677	R422001646
40	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	677	R422001656
40	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	677	R422001666
40	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	677	R422001676
40	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	677	R422001686
50	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1028	R422001647
50	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1028	R422001657
50	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1028	R422001667
50	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1028	R422001677
50	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1028	R422001687
63	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1745	R422001648

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1745	R422001658
63	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1745	R422001668
63	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1745	R422001678
63	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1745	R422001688
80	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	2864	R422001649
80	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	2864	R422001659
80	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	2864	R422001669
80	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	2864	R422001679
80	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	105	2864	R422001689
100	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4424	R422001650
100	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4424	R422001660
100	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4424	R422001670
100	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4424	R422001680
100	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	215	4424	R422001690

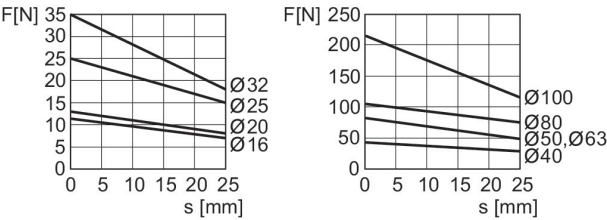
1) Hollow piston rod (to be generated by Internet configurator)
S = stroke

Piston Ø	LB	LE	LJ	LW	MM f8	PL	RR	RT 6H	SW	TG
16	3.5	4.5	0	4	8	8	3.3	M4	7	18
20	4.5	4.5	4.5	4	10	10	4.2	M5	8	22
25	4.5	4.5	4	4	10	10	4.2	M5	8	26

Piston Ø	LB	LE	LJ	LW	MM f8	PL	RR	RT 6H	SW	TG
32	5	7.5	4.85	4.5	12	12	5.1	M6	10	32.5
40	5	7.5	9.85	4.5	12	12	5.1	M6	10	38
50	5	7.5	12	6	16	12	6.7	M8	13	46.5
63	5	7.5	14.8	6	16	12	6.7	M8	13	56.5
80	5	7.5	22	7	20	14	8.5	M10	16	72
100	5	7.5	27	7	25	16.5	8.5	M10	21	89

Piston Ø	WH	X1	X2	X3	ZA	ZB
16	4,8 ±0,9	–	–	–	34,9 ±0,1	39,7 ±0,8
20	5,6 ±0,9	4.2	–	–	37,3 ±0,1	43,6 ±0,8
25	5,6 ±0,9	4.5	–	–	39 ±0,1	44,5 ±0,9
32	7,4 ±0,9	6.5	–	–	44 ±0,1	51,4 ±1
40	7,4 ±0,9	11	–	–	45 ±0,1	52,4 ±1
50	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1
80	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1

Extracting piston force



F = spring return force, s = return stroke

Compact cylinder ISO 21287, Series CCI, Double-acting, piston rod: internal thread

Standards: ISO 21287
: Compact cylinder
: Industry standard ATEX optional
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: Internal thread
Compressed air connection type: Internal thread
Functional principle: Double-acting
Certificates: ATEX optional



Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001002
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001012
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001022
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001032
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001042
16	30	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001052
16	40	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001062
16	50	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001072
16	60	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001082
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001003
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001013
20	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001023
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001033

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001043
20	30	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001053
20	40	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001063
20	50	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001073
20	60	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001083
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001004
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001014
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001024
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001034
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001044
25	30	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001054
25	40	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001064
25	50	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001074
25	60	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001084
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001005
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001015
32	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001025
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001035

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001045
32	30	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001055
32	40	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001065
32	50	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001075
32	60	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001085
32	80	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001095
32	100	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001105
32	125	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001115
32	150	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001125
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001006
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001016
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001026
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001036
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001046
40	30	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001056
40	40	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001066
40	50	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001076
40	60	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001086

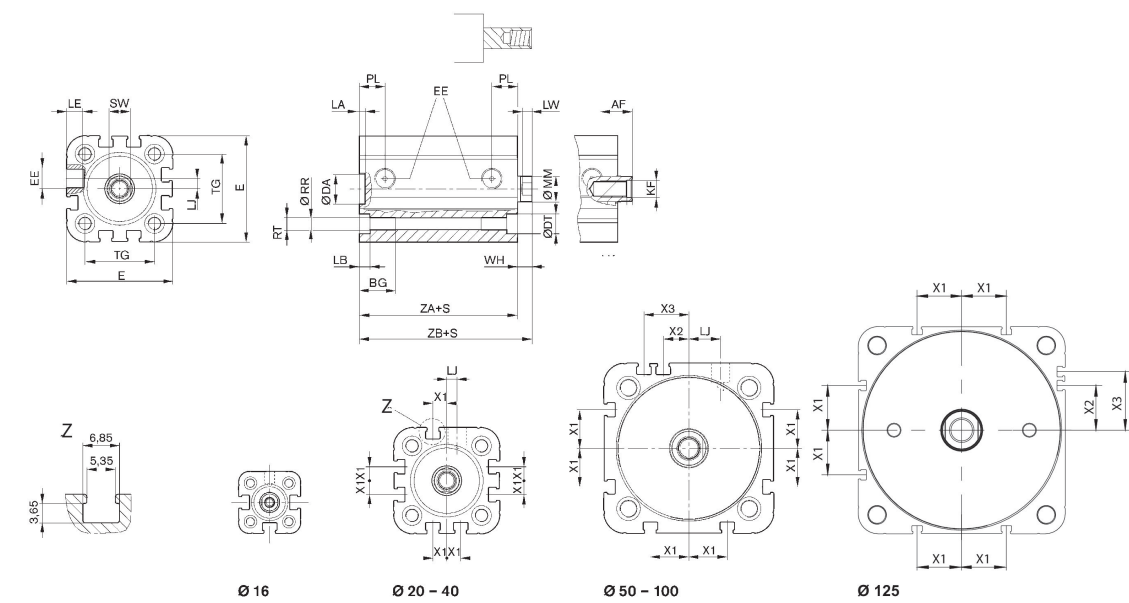
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
40	80	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001096
40	100	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001106
40	125	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001116
40	150	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001126
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001007
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001017
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001027
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001037
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001047
50	30	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001057
50	40	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001067
50	50	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001077
50	60	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001087
50	80	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001097
50	100	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001107
50	125	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001117
50	150	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001127
63	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001008

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001018
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001028
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001038
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001048
63	40	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001068
63	30	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001058
63	50	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001078
63	60	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001088
63	80	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001098
63	100	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001108
63	125	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001118
63	150	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R422001128
80	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001009
80	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001019
80	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001029
80	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001039
80	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001049
80	30	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001059

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
80	40	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001069
80	50	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001079
80	60	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001089
80	80	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001099
80	100	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001109
80	125	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001119
80	150	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001129
100	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001010
100	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001020
100	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001030
100	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001040
100	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001050
100	30	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001060
100	40	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001070
100	50	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001080
100	60	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001090
100	80	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001100
100	100	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001110

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
100	125	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001120
100	150	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	4145	R422001130
125	5	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636828
125	10	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636829
125	15	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636830
125	20	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636831
125	25	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636832
125	30	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636833
125	40	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636834
125	50	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636835
125	60	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636836
125	80	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636837
125	100	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636838
125	125	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636839
125	150	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636840

Dimensions



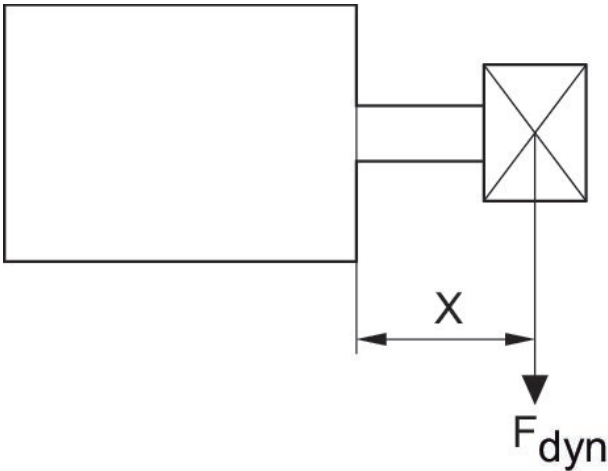
Piston Ø	AF	BG	DA H11	DT	E	EE	KF	LA	LB	LE
16	10	15	10	6	29.3	M5	M4	2.5	3.5	4.5
20	12	15.5	12	7.5	36.3	M5	M6	2.5	4.5	4.5
25	12	15.5	12	8	40.3	M5	M6	2.5	4.5	4.5
32	12	17	14	8.6	50	G 1/8	M8	2.5	5	7.5
40	12	17	14	9.2	58	G 1/8	M8	2.5	5	7.5
50	16	17	18	11	68.3	G 1/8	M10	2.5	5	7.5
63	16	17	18	11	80	G 1/8	M10	2.5	5	7.5
80	20	20	23	15	96	G 1/8	M12	3	5	7.5
100	20	20	28	15	116	G 1/8	M12	3	5	7.5
125	25	35	12	-	134.6	G 1/4	M16	2.6	-	???

Piston Ø	LJ	LW	MM f8	PL	RR	RT 6H	SW	TG	WH	X1
16	0	4	8	8	3.3	M4	7	18	4,8 ±0,9	–
20	4.5	4	10	10	4.2	M5	8	22	5,6 ±0,9	4.2
25	4	4	10	10	4.2	M5	8	26	5,6 ±0,9	4.5
32	4.85	4.5	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5
40	9.85	4.5	12	12	5.1	M6	10	38	7,4 ±0,9	11
50	12	6	16	12	6.7	M8	13	46.5	8,4 ±0,9	13
63	14.8	6	16	12	6.7	M8	13	56.5	8,5 ±0,9	18
80	22	7	20	14	8.5	M10	16	72	9,8 ±1	18
100	27	7	25	16.5	8.5	M10	21	89	9,8 ±1	20
125	39	7.5	25	20.5	11.1	M12	21	110	11	29

Piston Ø	X2	X3	ZA ±0,1	ZB
16	–	–	34.9	39,7 ±0,8

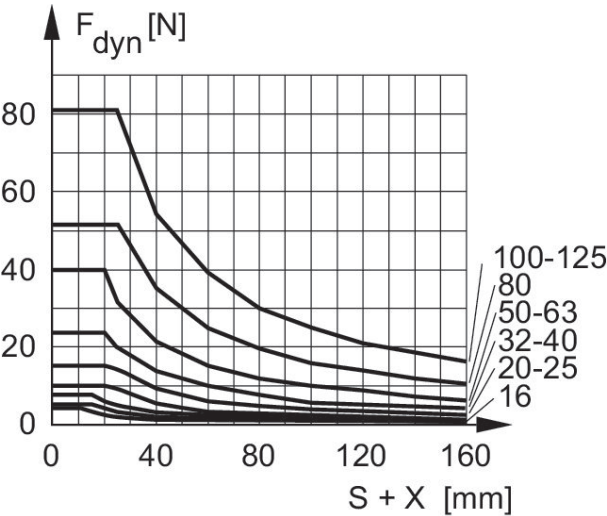
Piston Ø	X2	X3	ZA ±0,1	ZB
20	–	–	37.3	43,6 ±0,8
25	–	–	39	44,5 ±0,9
32	–	–	44	51,4 ±1
40	–	–	45	52,4 ±1
50	4	13	45.5	53,6 ±1
63	12	21	49	57,4 ±1
80	16.5	25.5	54.7	64,4 ±1
100	20	29	67	76,7 ±1
125	29	38	81	92

Maximum admissible lateral force



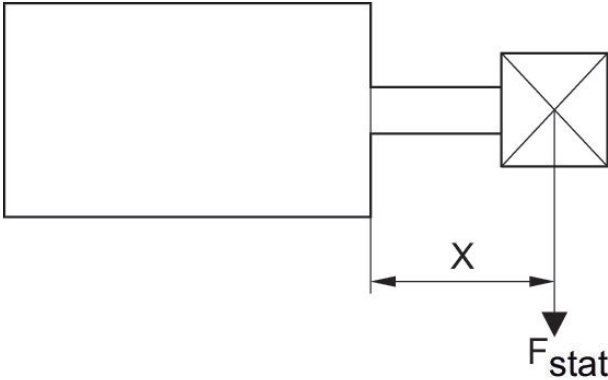
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



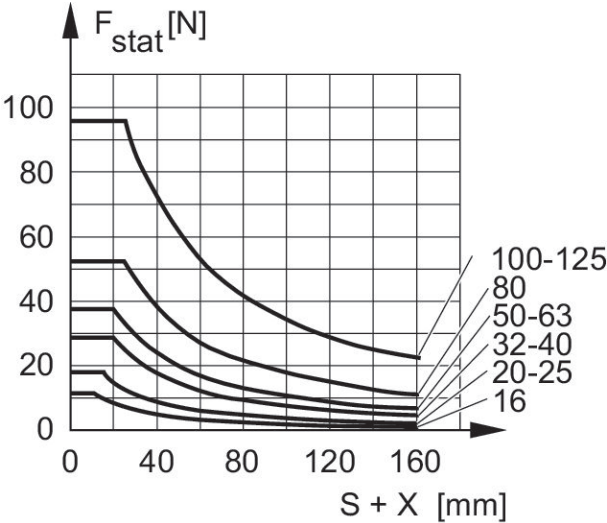
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force



F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Compact cylinder ISO 21287, Series CCI, Double-acting, piston rod: external thread

Standards: ISO 21287
: Compact cylinder
: Industry standard ATEX optional
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: External thread
Compressed air connection type: Internal thread
Functional principle: Double-acting
Certificates: ATEX optional



Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001132
16	10	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001142
16	15	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001152
16	20	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001162
16	25	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001172
16	30	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001182
16	40	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001192
16	50	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001202
16	60	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	95	127	R422001212
20	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001133
20	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001143
20	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001153
20	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001163

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
20	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001173
20	30	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001183
20	40	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001193
20	50	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001203
20	60	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R422001213
25	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001134
25	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001144
25	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001154
25	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001164
25	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001174
25	30	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001184
25	40	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001194
25	50	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001204
25	60	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R422001214
32	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001135
32	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001145
32	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001155
32	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001165

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
32	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001175
32	30	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001185
32	40	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001195
32	50	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001205
32	60	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001215
32	80	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001225
32	100	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001235
32	125	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001245
32	150	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R422001255
40	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001136
40	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001146
40	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001156
40	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001166
40	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001176
40	30	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001186
40	40	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001196
40	50	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001206
40	60	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001216

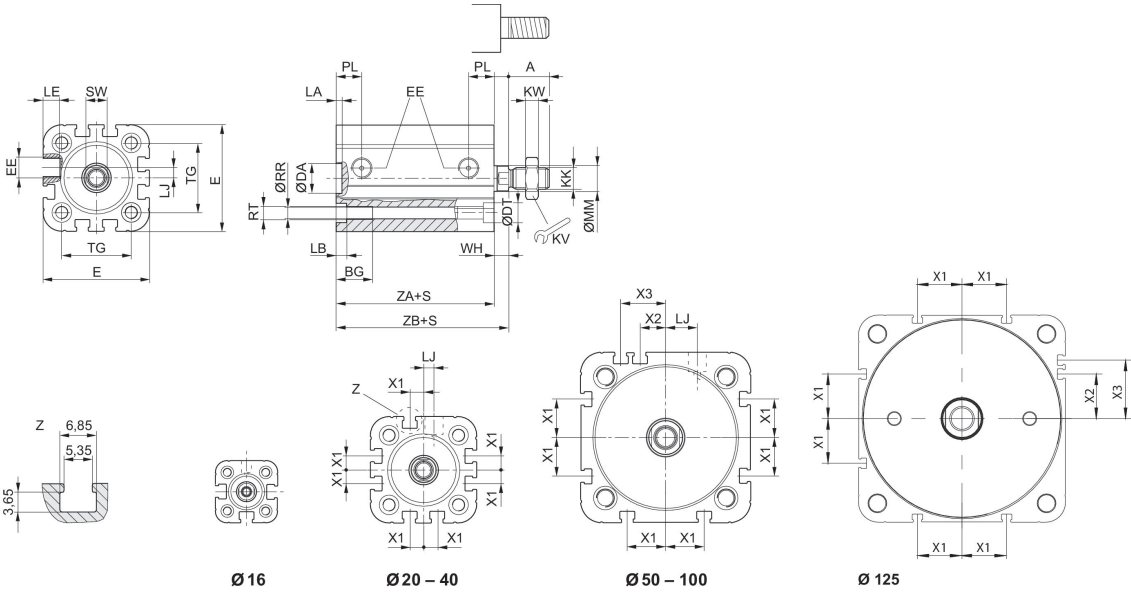
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
40	80	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001226
40	100	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001236
40	125	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001246
40	150	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R422001256
50	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001137
50	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001147
50	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001157
50	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001167
50	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001177
50	30	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001187
50	40	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001197
50	50	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001207
50	60	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001217
50	80	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001227
50	100	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001237
50	125	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001247
50	150	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R422001257
63	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001138

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001148
63	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001158
63	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001168
63	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001178
63	30	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001188
63	40	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001198
63	50	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001208
63	60	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001218
63	80	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001228
63	100	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001238
63	125	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001248
63	150	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R422001258
80	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001139
80	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001149
80	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001159
80	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001169
80	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001179
80	30	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001189

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
80	40	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001199
80	50	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001209
80	60	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001219
80	80	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001229
80	100	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001239
80	125	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001249
80	150	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R422001259
100	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001140
100	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001150
100	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001160
100	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001170
100	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001180
100	30	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001190
100	40	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001200
100	50	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001210
100	60	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001220
100	80	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001230
100	100	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001240

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
100	125	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001250
100	150	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R422001260
125	5	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636841
125	10	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636842
125	15	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636843
125	20	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636844
125	25	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636845
125	30	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636846
125	40	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636847
125	50	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636848
125	60	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636849
125	80	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636850
125	100	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636851
125	125	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636852
125	150	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636853

Dimensions



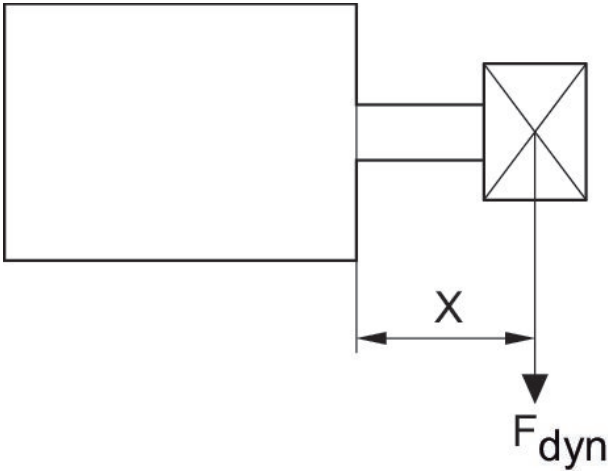
Piston Ø	A	BG	DA H11	DT	E	EE	KK	KV	KW	LA
16	12	15	10	6	29.3	M5	M6	10	3	2.5
20	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5
25	16	15.5	12	8	40.3	M5	M8	13	4	2.5
32	19	17	14	8.6	50	G 1/8	M10x1,25	17	5	2.5
40	19	17	14	9.2	58	G 1/8	M10x1,25	17	5	2.5
50	22	17	18	11	68.3	G 1/8	M12x1,25	19	6	2.5
63	22	17	18	11	80	G 1/8	M12x1,25	19	6	2.5
80	28	20	23	15	96	G 1/8	M16x1,5	24	8	3
100	28	20	28	15	116	G 1/8	M16x1,5	24	8	3
125	40	25	12	-	134.6	G 1/4	M20x1.5	30	10	2.6

Piston Ø	LB	LE	LJ	MM f8	PL	RR	RT 6H	SW	TG	WH
16	3.5	4.5	-	8	8	3.3	M4	7	18	4,8 ±0,9
20	4.5	4.5	4.5	10	10	4.2	M5	8	22	5,6 ±0,9
25	4.5	4.5	4	10	10	4.2	M5	8	26	5,6 ±0,9
32	5	7.5	4.85	12	12	5.1	M6	10	32.5	7,4 ±0,9
40	5	7.5	9.85	12	12	5.1	M6	10	38	7,4 ±0,9
50	5	7.5	12	16	12	6.7	M8	13	46.5	8,4 ±0,9
63	5	7.5	14.8	16	12	6.7	M8	13	56.5	8,5 ±0,9
80	5	7.5	22	20	14	8.5	M10	16	72	9,8 ±1
100	5	7.5	27	25	16.5	8.5	M10	21	89	9,8 ±1
125	-	???	39	25	20.5	11.1	M12	21	110	11

Piston Ø	X1	X2	X3	ZA	ZB
16	-	-	-	34,9 ±0,1	39,7 ±0,8
20	4.2	-	-	37,3 ±0,1	43,6 ±0,8

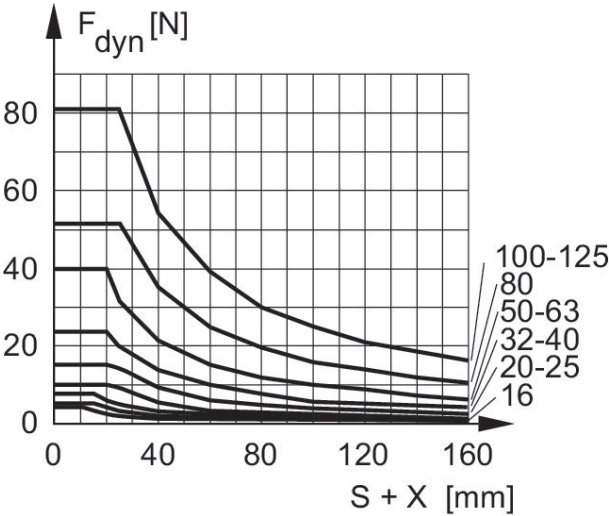
Piston Ø	X1	X2	X3	ZA	ZB
25	4.5	–	–	39 ±0,1	44,5 ±0,9
32	6.5	–	–	44 ±0,1	51,4 ±1
40	11	–	–	45 ±0,1	52,4 ±1
50	13	4	13	45,5 ±0,1	53,6 ±1
63	18	12	21	49 ±0,1	57,4 ±1
80	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100	20	20	29	67 ±0,1	76,7 ±1
125	29	29	38	81	92 ±1

Maximum admissible lateral force



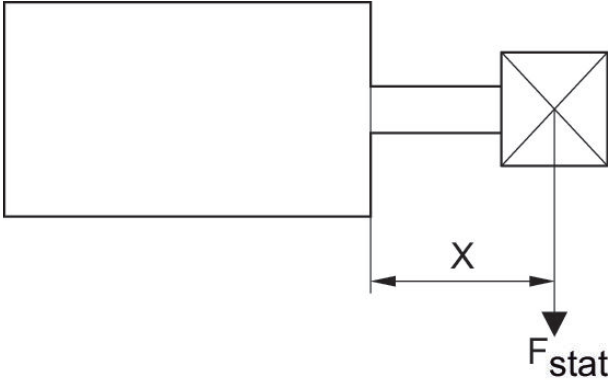
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



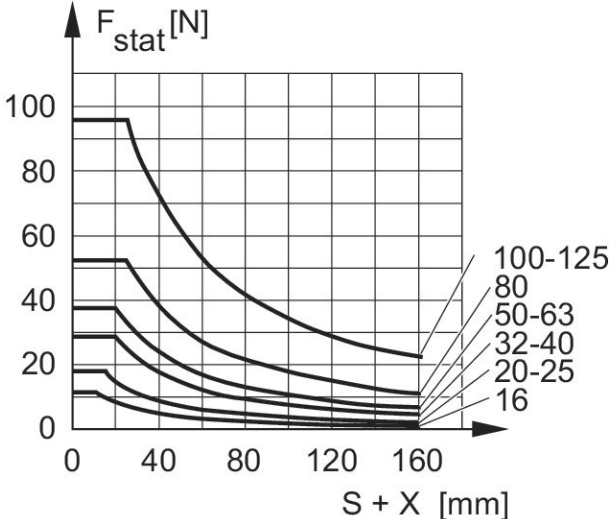
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

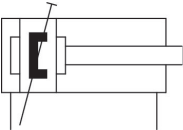
Maximum admissible lateral force



F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Compact cylinder ISO 21287, Series CCI, Double-acting, pneumatic adjustable cushioning, piston rod: internal thread

Standards: ISO 21287
: Compact cylinder
: Industry standard ATEX optional
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: with pneumatic cushioning
Piston rod thread - type: Internal thread
Compressed air connection type: Internal thread
Functional principle: Double-acting
Certificates: ATEX optional



Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
20	5	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654373
20	10	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654374
20	15	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654375
20	20	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654376
20	25	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654377
20	30	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654378
20	40	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654379
20	50	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654380
20	60	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R481654381
25	5	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654382
25	10	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654383
25	15	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654384

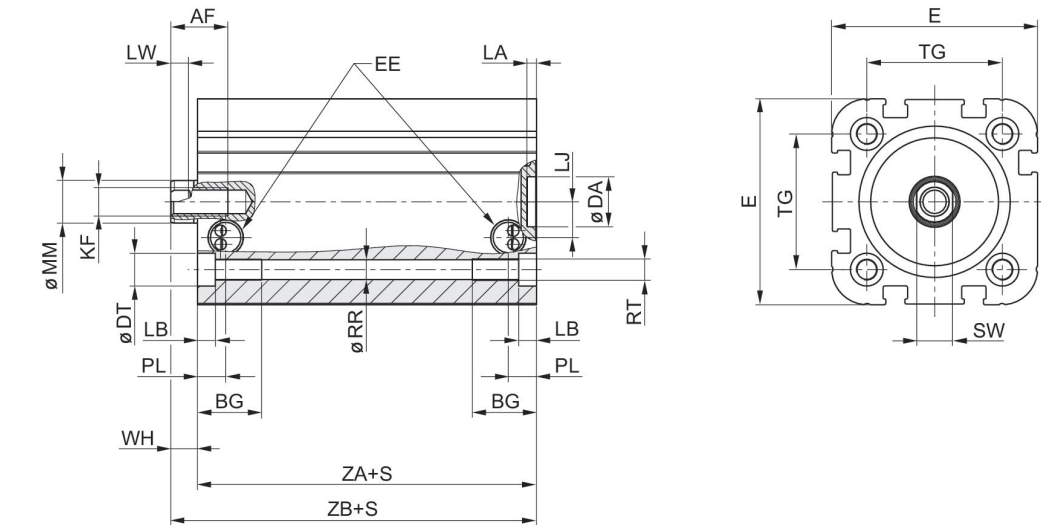
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	20	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654385
25	25	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654386
25	30	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654387
25	40	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654388
25	50	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654389
25	60	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R481654390
32	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654391
32	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654392
32	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654393
32	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654394
32	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654395
32	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654396
32	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654397
32	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654398
32	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654399
32	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654400
32	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654401
32	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654402

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
32	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R481654403
40	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654404
40	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654405
40	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654406
40	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654407
40	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654408
40	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654409
40	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654410
40	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654411
40	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654412
40	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654413
40	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654414
40	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654415
40	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R481654416
50	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654417
50	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654418
50	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654419
50	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654420

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
50	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654421
50	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654422
50	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654423
50	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654424
50	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654425
50	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654426
50	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654427
50	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654428
50	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R481654429
63	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654430
63	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654431
63	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654432
63	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654433
63	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654434
63	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654435
63	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654436
63	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654437
63	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654438

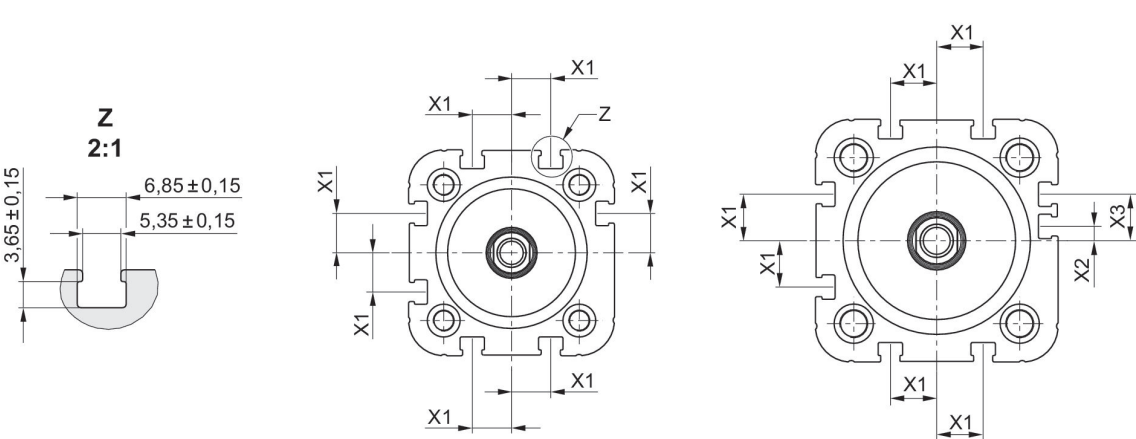
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654439
63	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654440
63	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654441
63	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10	Standard Industry Scraper	1827	1964	R481654442

Dimensions



CCI-PC Ø20-Ø40

CCI-PC Ø50-Ø63

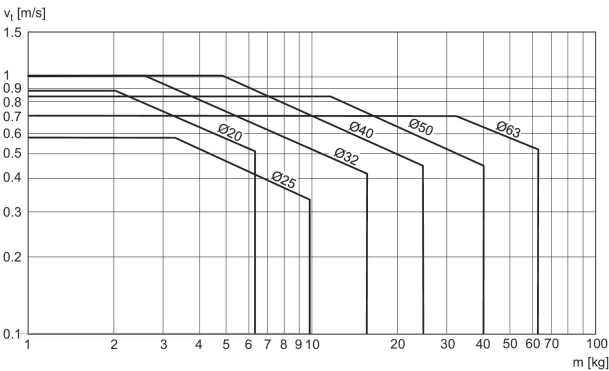


Piston Ø	AF	BG	DA H11	DT	E	EE	KF	LA	LB min.	LJ
20	12	15.5	12	7.5	36.3	M5	M6	2.5	4.5	4.5
25	12	15.5	12	8	40.3	M5	M6	2.5	4.5	4
32	12	17	14	8.6	50	G 1/8	M8	2.5	5	5
40	12	17	14	9.2	58	G 1/8	M8	2.5	5	10
50	16	17	18	11	68.3	G 1/8	M10	2.5	5	11.5
63	16	17	18	11	80	G 1/8	M10	2.5	5	15

Piston Ø	LW	MM f8	PL	RR min.	RT 6H	SW	TG	WH	X1	X2
20	3.7	10	8	4.2	M5	8	22 ±0.4	5.6 ±1.4	4.2	–
25	3.7	10	8	4.2	M5	8	26 ±0.4	5.6 ±1.4	4.5	–
32	5	12	11	5.1	M6	10	32.5 ±0.5	7.5 ±1.6	6.5	–
40	5	12	7.9	5.1	M6	10	38 ±0.5	7.5 ±1.6	11	–
50	5.7	16	8	6.7	M8	13	46.5 ±0.6	8 ±1.6	13	4
63	5.7	16	8.2	6.7	M8	13	56.5 ±0.7	8 ±1.6	18	12

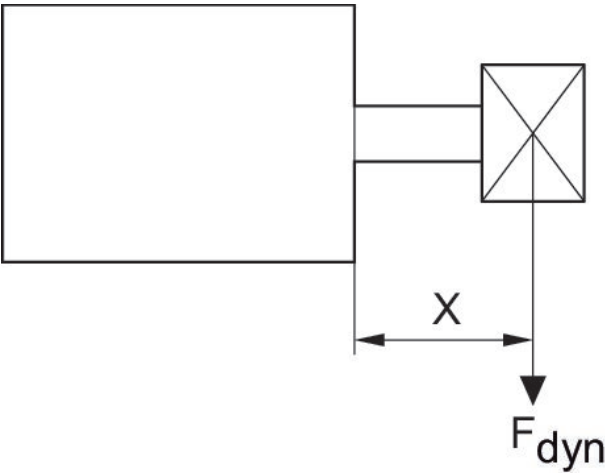
Piston Ø	X3	ZA ±0,1	ZB
20	–	37.3	42.9 ±0.8
25	–	39	44.6 ±0.9
32	–	44	51.5 ±1
40	–	45	52.1 ±1
50	13	45.5	53.1 ±1
63	21	49	57 ±1

Cushioning diagram



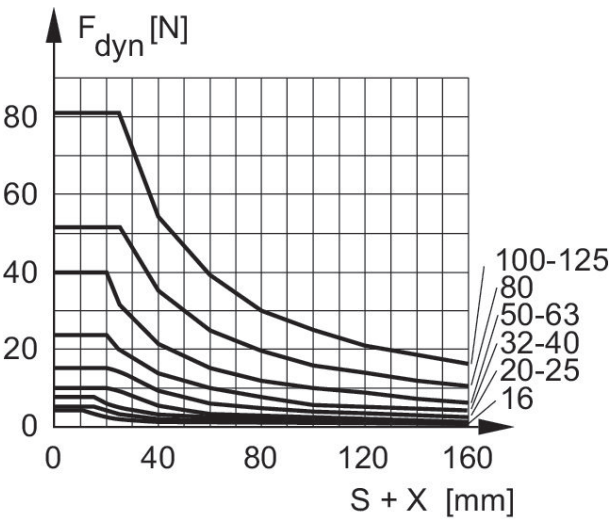
v_t = Piston velocity [m/s] m = Cushionable mass [kg]

Maximum admissible lateral force



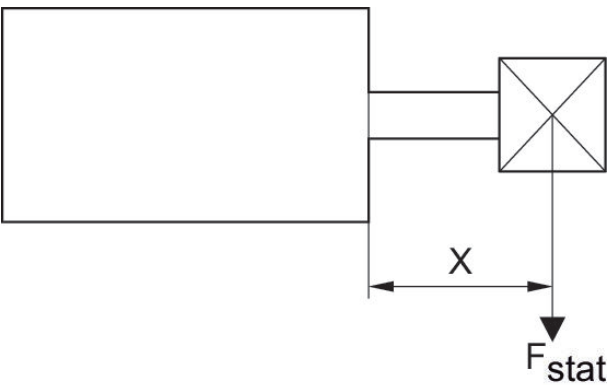
F_{dyn.} = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



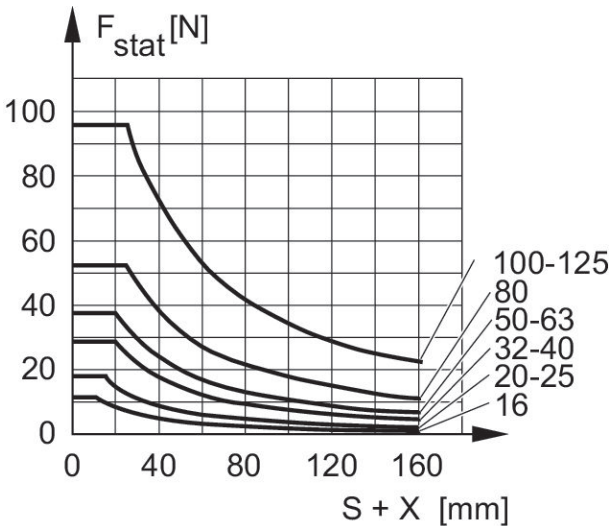
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

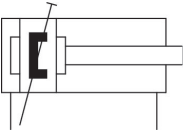
Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Compact cylinder ISO 21287, Series CCI, Double-acting, pneumatic adjustable cushioning, piston rod: external thread

Standards: ISO 21287
: Compact cylinder
: Industry standard ATEX optional
Piston rod: single
Magnetic piston: Piston with magnet
Cushioning: Pneumatically
Piston rod thread - type: External thread
Compressed air connection type: Internal thread
Functional principle: Double-acting
Certificates: ATEX optional



Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
20	5	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654443
20	10	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654444
20	15	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654445
20	20	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654446
20	25	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654447
20	30	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654448
20	40	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654449
20	50	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654450
20	60	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	148	198	R481654451
25	5	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654452
25	10	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654453
25	15	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654454

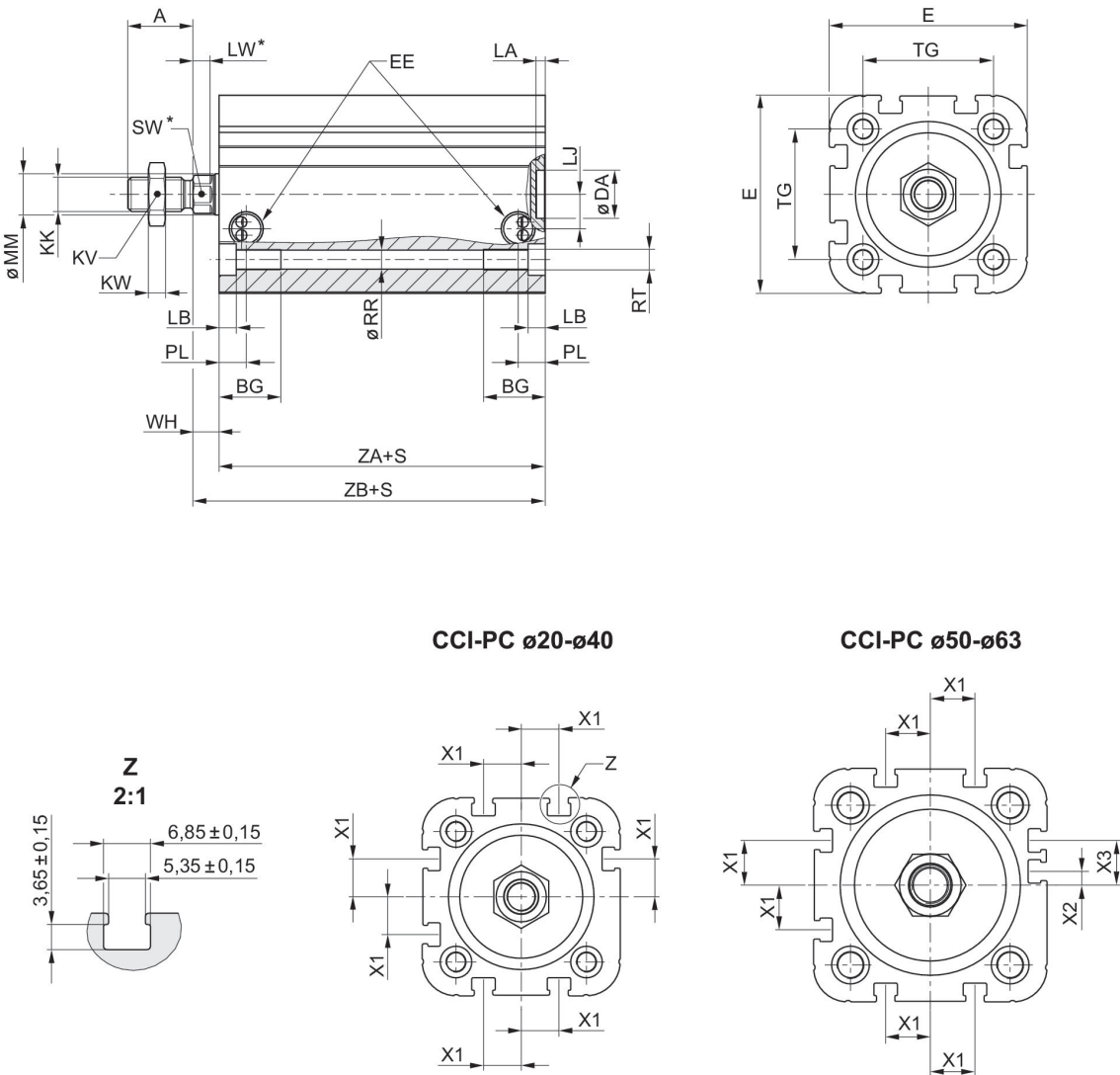
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
25	20	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654455
25	25	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654456
25	30	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654457
25	40	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654458
25	50	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654459
25	60	M5	Pneumatic pre-adjusted cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	260	309	R481654460
32	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654461
32	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654462
32	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654463
32	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654464
32	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654465
32	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654466
32	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654467
32	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654468
32	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654469
32	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654470
32	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654471
32	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654472

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
32	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R481654473
40	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654474
40	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654475
40	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654476
40	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654477
40	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654478
40	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654479
40	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654480
40	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654481
40	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654482
40	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654483
40	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654484
40	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654485
40	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R481654486
50	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654487
50	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654488
50	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654489
50	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654490

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
50	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654491
50	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654492
50	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654493
50	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654494
50	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654495
50	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654496
50	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654497
50	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654498
50	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R481654499
63	5	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654500
63	10	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654501
63	15	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654502
63	20	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654503
63	25	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654504
63	30	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654505
63	40	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654506
63	50	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654507
63	60	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654508

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	80	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654509
63	100	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654510
63	125	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654511
63	150	G 1/8	Pneumatic pre-adjusted cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R481654512

Dimensions

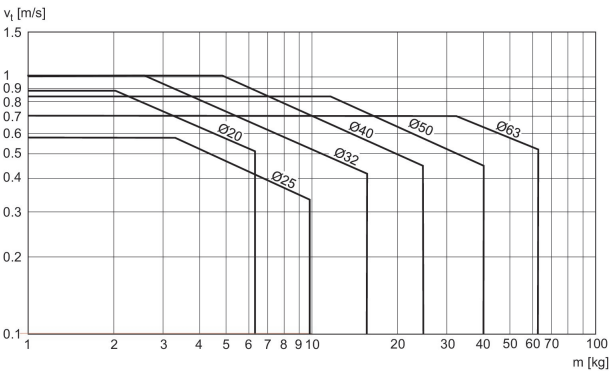


Piston Ø	A	BG	DA H11	DT	E	EE	KK	KV	KW	LA
20	16	15.5	12	7.5	36.3	M5	M8x1.25	13	4	2.5
25	16	15.5	12	8	40.3	M5	M8x1.25	13	4	2.5
32	19	17	14	8.6	50	G 1/8	M10x1.25	16	5	2.5
40	19	17	14	9.2	58	G 1/8	M10x1.25	16	5	2.5
50	22	17	18	11	68.3	G 1/8	M12x1.25	18	6	2.5
63	22	17	18	11	80	G 1/8	M12x1.25	18	6	2.5

Piston Ø	LB min.	LJ	MM f8	PL	RR min.	RT 6H	SW	TG	WH	X1
20	4.5	4.5	10	8	4.2	M5	8	22 ±0.4	5.6 ±1.4	4.2
25	4.5	4	10	8	4.2	M5	8	26 ±0.4	5.6 ±1.4	4.5
32	5	5	12	11	5.1	M6	10	32.5 ±0.5	7.5 ±1.6	6.5
40	5	10	12	7.9	5.1	M6	10	38 ±0.5	7.5 ±1.6	11
50	5	11.5	16	8	6.7	M8	13	46.5 ±0.6	8 ±1.6	13
63	5	15	16	8.2	6.7	M8	13	56.5 ±0.7	8 ±1.6	18

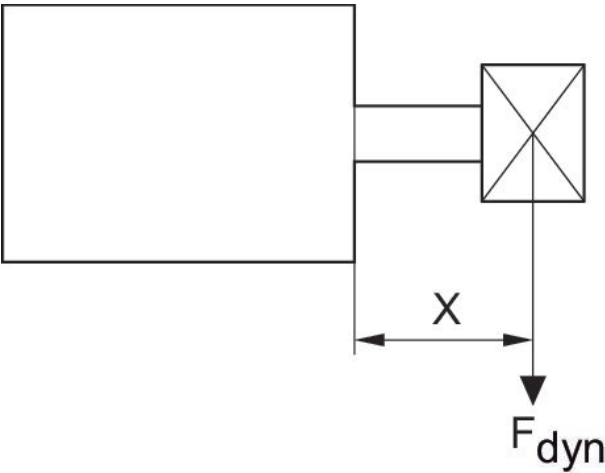
Piston Ø	X2	X3	ZA	ZB
20	–	–	37.3	42.9 ±0.8
25	–	–	39	44.6 ±0.9
32	–	–	44	51.5 ±1
40	–	–	45	52.1 ±1
50	4	13	45.5	53.1 ±1
63	12	21	49	57 ±1

Cushioning diagram



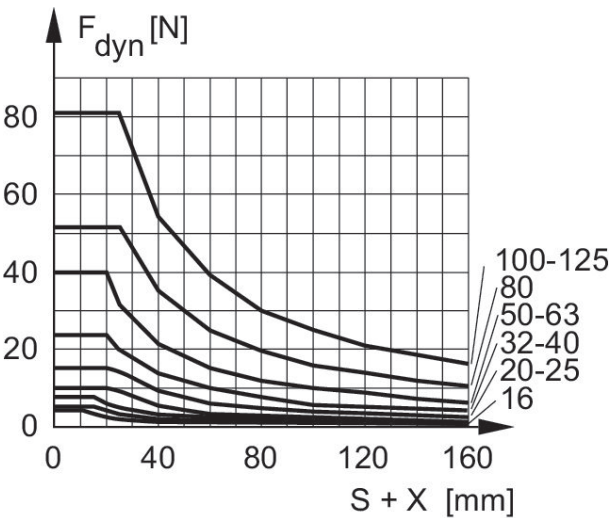
v_t = Piston velocity [m/s] m = Cushionable mass [kg]

Maximum admissible lateral force



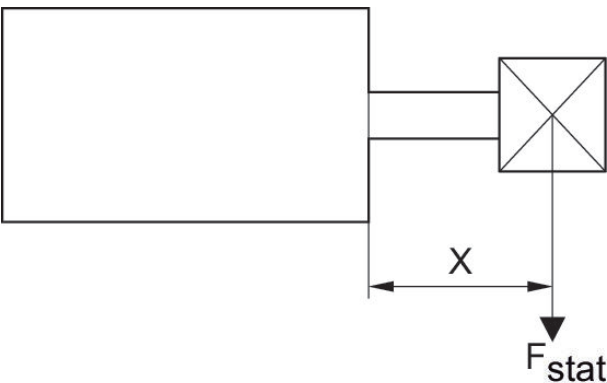
F_{dyn.} = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force



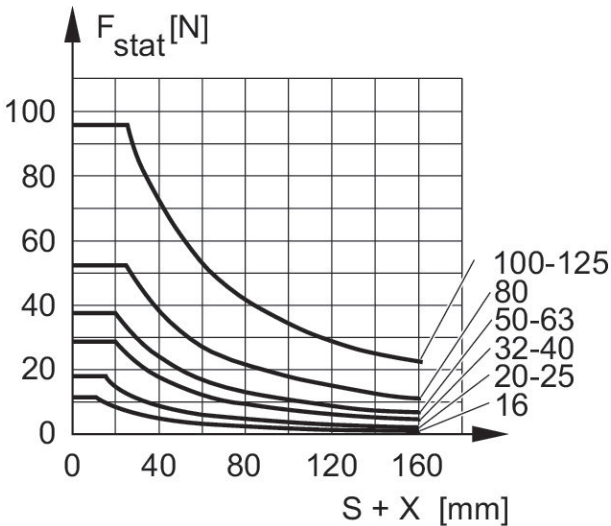
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



F_{stat} = static lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Compact cylinder ISO 21287, Series CCI, double-acting, through piston rod, Piston rod: internal thread

Standards: ISO 21287
: Compact cylinder
: Industry standard ATEX optional
Piston rod: through
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: Internal thread
Compressed air connection type: Internal thread
Functional principle: Double-acting
Certificates: ATEX optional



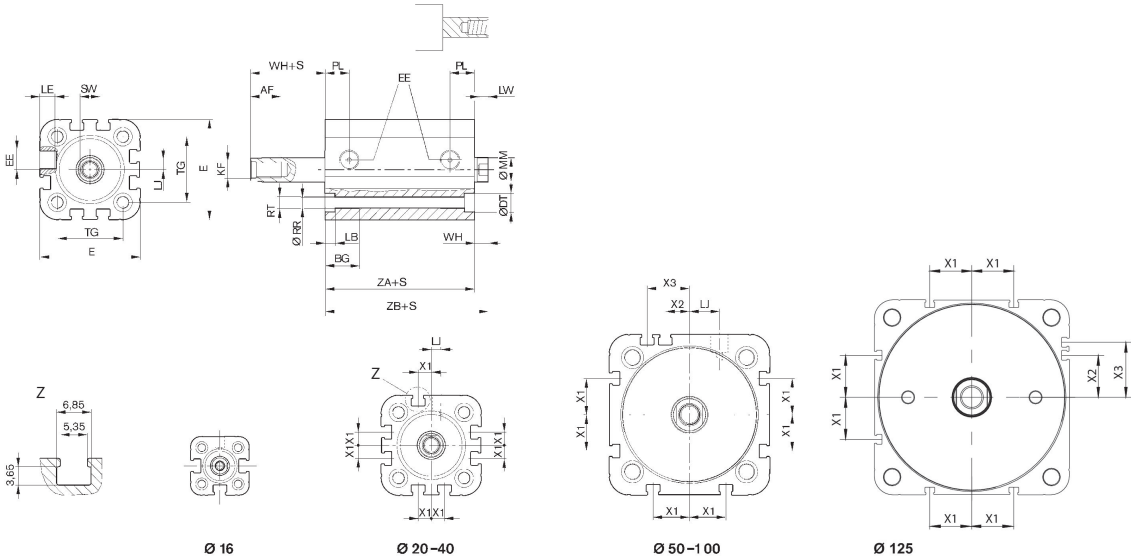
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	91	91	R422001692
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	91	91	R422001702
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	91	91	R422001712
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	91	91	R422001722
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	91	91	R422001732
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	137	137	R422001693
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	137	137	R422001703
20	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	137	137	R422001713
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	137	137	R422001723
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	137	137	R422001733
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	216	216	R422001694
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	216	216	R422001704

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	216	216	R422001714
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	216	216	R422001724
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	216	216	R422001734
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	364	364	R422001695
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	364	364	R422001705
32	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	364	364	R422001715
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	364	364	R422001725
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	364	364	R422001735
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	560	560	R422001696
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	560	560	R422001706
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	560	560	R422001716
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	560	560	R422001726
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	560	560	R422001736
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	871	871	R422001697
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	871	871	R422001707
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	871	871	R422001717
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	871	871	R422001727
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	871	871	R422001737

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
63	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1478	1478	R422001698
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1478	1478	R422001708
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1478	1478	R422001718
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1478	1478	R422001728
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1478	1478	R422001738
80	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2397	2397	R422001699
80	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2397	2397	R422001709
80	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2397	2397	R422001719
80	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2397	2397	R422001729
80	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2397	2397	R422001739
100	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	3886	R422001700
100	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	3886	R422001710
100	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	3886	R422001720
100	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	3886	R422001730
100	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	3886	3886	R422001740
125	5	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636854
125	10	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636855
125	15	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636856

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
125	20	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636857
125	25	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636858

Dimensions



Piston Ø	AF	BG	DT	E	EE	KF	LB	LE	LJ	LW
16	10	15	6	29.3	M5	M4	3.5	4.5	—	4
20	12	15.5	7.5	36.3	M5	M6	4.5	4.5	4.5	4
25	12	15.5	8	40.3	M5	M6	4.5	4.5	4	4
32	12	17	8.6	50	G 1/8	M8	5	7.5	4.85	4.5
40	12	17	9.2	58	G 1/8	M8	5	7.5	9.85	4.5
50	16	17	11	68.3	G 1/8	M10	5	7.5	12	6
63	16	17	11	80	G 1/8	M10	5	7.5	14.8	6
80	20	20	15	96	G 1/8	M12	5	7.5	22	7
100	20	20	15	116	G 1/8	M12	5	7.5	27	7
125	25	35	-	134.6	G 1/4	M16	-	???	39	7.5

Piston Ø	MM f8	PL	RR	RT 6H	SW	TG	WH	X1	X2	X3
16	8	8	3.3	M4	7	18	4,8 ±0,9	—	—	—
20	10	10	4.2	M5	8	22	5,6 ±0,9	4.2	—	—
25	10	10	4.2	M5	8	26	5,6 ±0,9	4.5	—	—
32	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	—	—
40	12	12	5.1	M6	10	38	7,4 ±0,9	11	—	—
50	16	12	6.7	M8	13	46.5	8,4 ±0,9	13	4	13

Piston Ø	MM f8	PL	RR	RT 6H	SW	TG	WH	X1	X2	X3
63	16	12	6.7	M8	13	56.5	8,5 ±0,9	18	12	21
80	20	14	8.5	M10	16	72	9,8 ±1	18	16.5	25.5
100	25	16.5	8.5	M10	21	89	9,8 ±1	20	20	29
125	25	20.5	11.1	M12	21	110	11	29	29	38

Piston Ø	ZA	ZB
16	34,9 ±0,1	39,7 ±0,8
20	37,3 ±0,1	43,6 ±0,8
25	39 ±0,1	44,5 ±0,9
32	44 ±0,1	51,4 ±1
40	45 ±0,1	52,4 ±1
50	45,5 ±0,1	53,6 ±1
63	49 ±0,1	57,4 ±1
80	54,7 ±0,1	64,4 ±1
100	67 ±0,1	76,7 ±1
125	81	92 ±1

Compact cylinder ISO 21287, Series CCI, double-acting, through piston rod, Piston rod: external thread

Standards: ISO 21287
: Compact cylinder
: Industry standard ATEX optional
Piston rod: through
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: External thread
Compressed air connection type: Internal thread
Functional principle: Double-acting
Certificates: ATEX optional



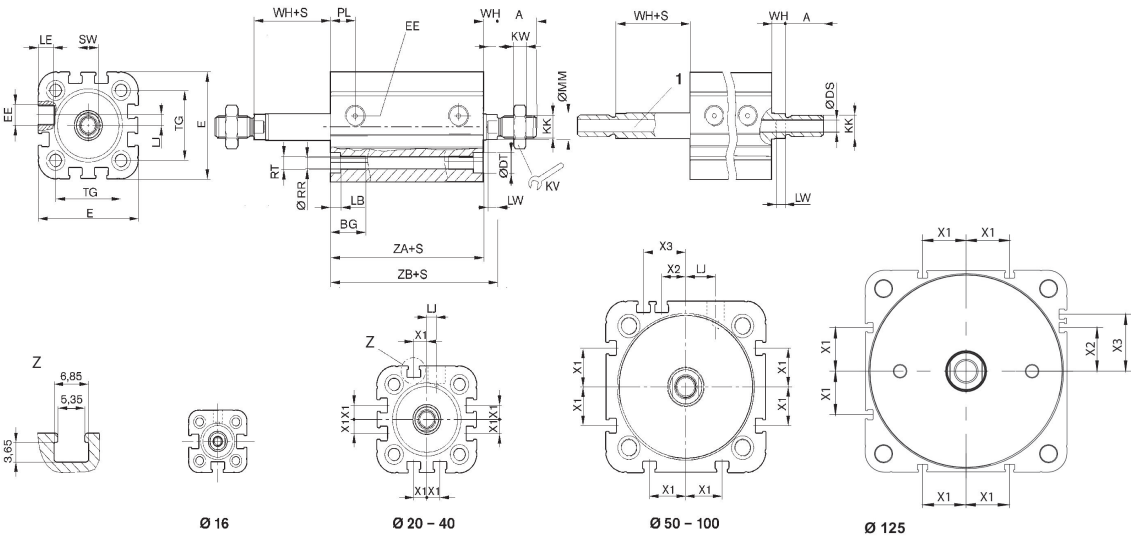
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	91	91	R422001742
16	10	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	91	91	R422001752
16	15	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	91	91	R422001762
16	20	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	91	91	R422001772
16	25	M5	Elastic cushioning	Piston with magnet	M6x1	Standard Industry Scraper	91	91	R422001782
20	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	137	137	R422001743
20	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	137	137	R422001753
20	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	137	137	R422001763
20	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	137	137	R422001773
20	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	137	137	R422001783
25	5	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	216	216	R422001744
25	10	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	216	216	R422001754

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
25	15	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	216	216	R422001764
25	20	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	216	216	R422001774
25	25	M5	Elastic cushioning	Piston with magnet	M8x1,25	Standard Industry Scraper	216	216	R422001784
32	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	364	364	R422001745
32	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	364	364	R422001755
32	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	364	364	R422001765
32	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	364	364	R422001775
32	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	364	364	R422001785
40	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	560	560	R422001746
40	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	560	560	R422001756
40	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	560	560	R422001766
40	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	560	560	R422001776
40	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	560	560	R422001786
50	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	871	871	R422001747
50	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	871	871	R422001757
50	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	871	871	R422001767
50	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	871	871	R422001777
50	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	871	871	R422001787

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
63	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1478	1478	R422001748
63	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1478	1478	R422001758
63	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1478	1478	R422001768
63	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1478	1478	R422001778
63	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1478	1478	R422001788
80	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2397	2397	R422001749
80	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2397	2397	R422001759
80	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2397	2397	R422001769
80	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2397	2397	R422001779
80	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2397	2397	R422001789
100	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3886	3886	R422001750
100	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3886	3886	R422001760
100	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3886	3886	R422001770
100	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3886	3886	R422001780
100	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	3886	3886	R422001790
125	5	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636859
125	10	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636860
125	15	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636861

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
125	20	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636862
125	25	G 1/4	Elastic cushioning	Piston with magnet	M20x1,5	Standard Industry Scraper	7422	7731	R481636863

Dimensions



Piston Ø	A	BG	Ø DS	DT	E	EE	KK Solid piston rod/hollow piston rod	KV	KW	LB
16	12	15	2	6	29.3	M5	M6 / M5	10	3	3.5
20	16	15.5	3.8	7.5	36.3	M5	M8 / G 1/8	13	4	4.5
25	16	15.5	3.8	8	40.3	M5	M8 / G 1/8	13	4	4.5
32	19	17	4.5	8.6	50	G 1/8	M10x1.25 / G 1/8	17	5	5
40	19	17	4.5	9.2	58	G 1/8	M10x1.25 / G 1/8	17	5	5
50	22	17	6	11	68.3	G 1/8	M12x1.25 / G 1/4	19	6	5
63	22	17	6	11	80	G 1/8	M12x1.25 / G 1/4	19	6	5
80	28	20	8	15	96	G 1/8	M16x1.5 / M16x1.5	24	8	5
100	28	20	8	15	116	G 1/8	M16x1.5 / M16x1.5	24	8	5
125	40	35	8	-	134.6	G 1/4	M20x1.5 / M20x1.5	30	10	-

Piston Ø	LE	LJ	LK	LW	MM f8	PL	RR	RT 6H	SW	TG
16	4.5	0	1.6	4	8	8	3.3	M4	7	18
20	4.5	4.5	2.5	4	10	10	4.2	M5	8	22
25	4.5	4	2.5	4	10	10	4.2	M5	8	26
32	7.5	4.85	2.5	4.5	12	12	5.1	M6	10	32.5
40	7.5	9.85	2.5	4.5	12	12	5.1	M6	10	38
50	7.5	12	3.5	6	16	12	6.7	M8	13	46.5
63	7.5	14.8	3.5	6	16	12	6.7	M8	13	56.5
80	7.5	22	3.5	7	20	14	8.5	M10	16	72
100	7.5	27	3.5	7	25	16.5	8.5	M10	21	89
125	???	39	???	7.5	25	20.5	11.1	M12	21	110

Piston Ø	WH	X1	X2	X3	ZA	ZB
16	4,8 ±0,9	–	–	–	34,9 ±0,1	39,7 ±0,8
20	5,6 ±0,9	4.2	–	–	37,3 ±0,1	43,6 ±0,8
25	5,6 ±0,9	4.5	–	–	39 ±0,1	44,5 ±0,9
32	7,4 ±0,9	6.5	–	–	44 ±0,1	51,4 ±1
40	7,4 ±0,9	11	–	–	45 ±0,1	52,4 ±1
50	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1
80	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1
125	11	29	29	38	81	92 ±1

Compact cylinder ISO 21287, Series CCI, double-acting, piston rod non-rotating, Piston rod: internal thread

Standards: ISO 21287
: Compact cylinder
: Industry standard ATEX optional
Piston rod: non-rotating, with front plate
Magnetic piston: Piston with magnet
Cushioning: Elastic cushioning
Piston rod thread - type: Internal thread
Compressed air connection type: Internal thread
Functional principle: Double-acting



Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001262
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001272
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001282
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001292
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001302
16	30	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001312
16	40	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001322
16	50	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001332
16	60	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R422001342
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001263
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001273
20	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001283

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001293
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001303
20	30	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001313
20	40	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001323
20	50	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001333
20	60	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R422001343
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001264
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001274
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001284
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001294
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001304
25	30	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001314
25	40	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001324
25	50	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001334
25	60	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R422001344
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001265
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001275
32	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001285

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001295
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001305
32	30	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001315
32	40	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001325
32	50	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001335
32	60	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001345
32	80	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001355
32	100	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001365
32	125	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001375
32	150	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R422001385
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001266
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001276
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001286
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001296
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001306
40	30	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001316
40	40	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001326
40	50	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001336

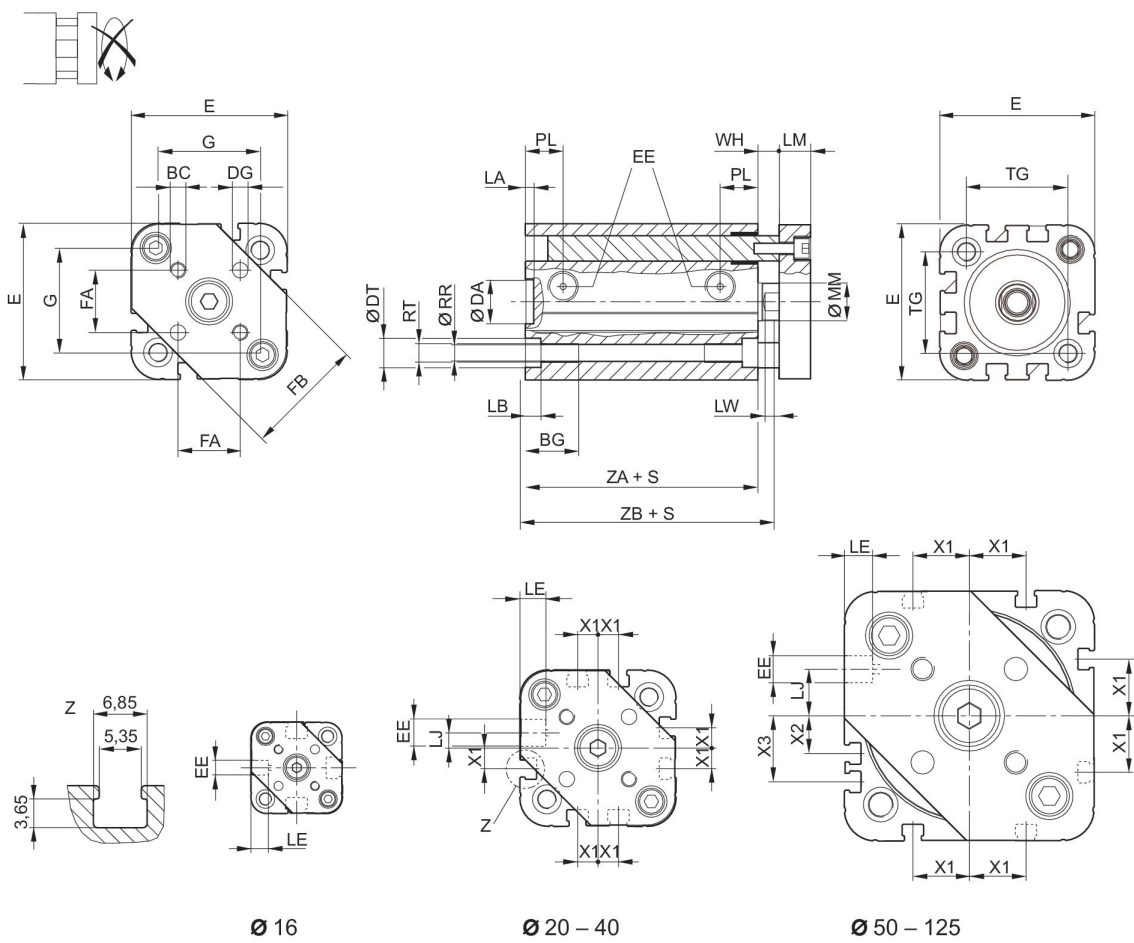
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
40	60	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001346
40	80	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001356
40	100	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001366
40	125	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001376
40	150	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R422001386
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001267
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001277
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001287
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001297
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001307
50	30	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001317
50	40	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001327
50	50	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001337
50	60	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001347
50	80	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001357
50	100	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001367
50	125	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001377
50	150	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R422001387

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing piston force [N]	Extract-ing piston force [N]	Part No.
63	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001268
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001278
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001288
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001298
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001308
63	30	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001318
63	40	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001328
63	50	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001338
63	60	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001348
63	80	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001358
63	100	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001368
63	125	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001378
63	150	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R422001388
80	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001269
80	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001279
80	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001289
80	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001299
80	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001309

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
80	30	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001319
80	40	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001329
80	50	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001339
80	60	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001349
80	80	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001359
80	100	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001369
80	125	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001379
80	150	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R422001389
100	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001270
100	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001280
100	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001290
100	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001300
100	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001310
100	30	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001320
100	40	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001330
100	50	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001340
100	60	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001350
100	80	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001360

Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet-ic piston	Piston rod thread	Scraper	Retract-ing pis-ton force [N]	Extract-ing pis-ton force [N]	Part No.
100	100	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001370
100	125	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001380
100	150	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R422001390
125	5	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636864
125	10	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636865
125	15	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636866
125	20	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636867
125	25	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636868
125	30	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636869
125	40	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636870
125	50	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636871
125	60	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636872
125	80	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636873
125	100	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636874
125	125	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636875
125	150	G 1/4	Elastic cushioning	Piston with magnet	M16	Standard Industry Scraper	7422	7731	R481636876

Dimensions



S = stroke
G = distance between the guide rods

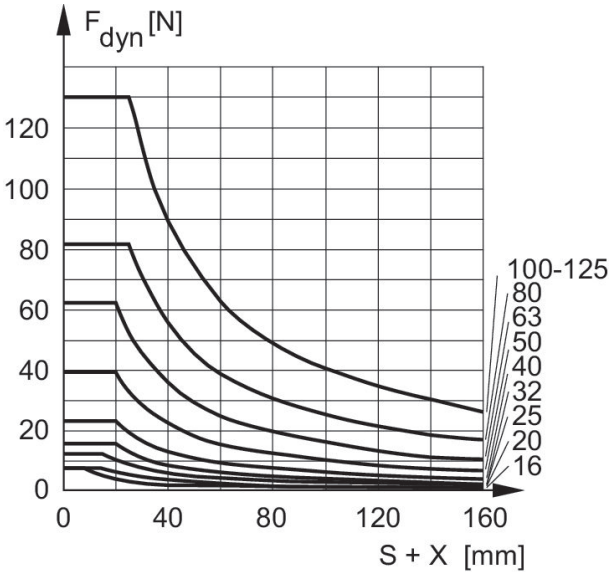
Piston Ø	BC	BG	DA H11	DG H13	DT	E	EE	FA	FB	G
16	M3	15	10	3	6	29.3	M5	9.9 ±0.1	20	19
20	M4	15.5	12	4	7.5	36.3	M5	12 ±0.1	24	25
25	M5	15.5	12	5	8	40.3	M5	15.6 ±0.1	30	27
32	M5	17	14	5	8.6	50	G 1/8	19.8 ±0.1	38	34
40	M5	17	14	5	9.2	58	G 1/8	23.3 ±0.1	44	42
50	M6	17	18	6	11	68.3	G 1/8	29.7 ±0.1	54	49
63	M6	17	18	6	11	80	G 1/8	35.4 ±0.1	62	60
80	M8	20	23	8	15	96	G 1/8	46 ±0.1	80	72
100	M10	20	28	10	15	116	G 1/8	56.6 ±0.1	100	92
125	M10	35	12	10	-	134.6	G 1/4	63.64 ±0.1	120	110

Piston Ø	LA	LB	LE	LJ	LM	LW	MM f8	PL	RR	RT 6H
16	2.5	3.5	4.5	—	6	4	8	8	3.3	M4
20	2.5	4.5	4.5	4.5	8	4	10	10	4.2	M5
25	2.5	4.5	4.5	4	8	4	10	10	4.2	M5

Piston Ø	LA	LB	LE	LJ	LM	LW	MM f8	PL	RR	RT 6H
32	2.5	5	7.5	4.85	10	4.5	12	12	5.1	M6
40	2.5	5	7.5	9.85	10	4.5	12	12	5.1	M6
50	2.5	5	7.5	12	12	6	16	12	6.7	M8
63	2.5	5	7.5	14.8	12	6	16	12	6.7	M8
80	3	5	7.5	22	14	7	20	14	8.5	M10
100	3	5	7.5	27	14	7	25	16.5	8.5	M10
125	2.6	-	???	39	18	7.5	25	20.5	11.1	M12

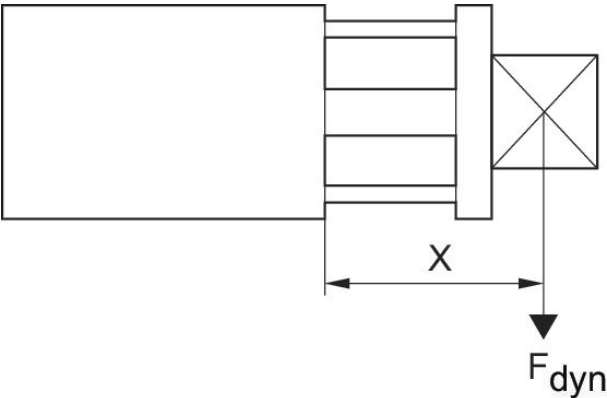
Piston Ø	TG	WH	X1	X2	X3	ZA ±0,1	ZB
16	18	4.8 ±0.9	—	—	—	34.9	39.7 ±0.8
20	22	5.6 ±0.9	4.2	—	—	37.3	43.6 ±0.8
25	26	5.6 ±0.9	4.5	—	—	39	44.5 ±0.9
32	32.5	7.4 ±0.9	6.5	—	—	44	51.4 ±1
40	38	7.4 ±0.9	11	—	—	45	52.4 ±1
50	46.5	8.4 ±0.9	13	4	13	45.5	53.6 ±1
63	56.5	8.5 ±0.9	18	12	21	49	57.4 ±1
80	72	9.8 ±1	18	16.5	25.5	54.7	64.4 ±1
100	89	9.8 ±1	20	20	29	67	76.7 ±1
125	110	11	29	29	38	81	92 ±1

Maximum admissible lateral force



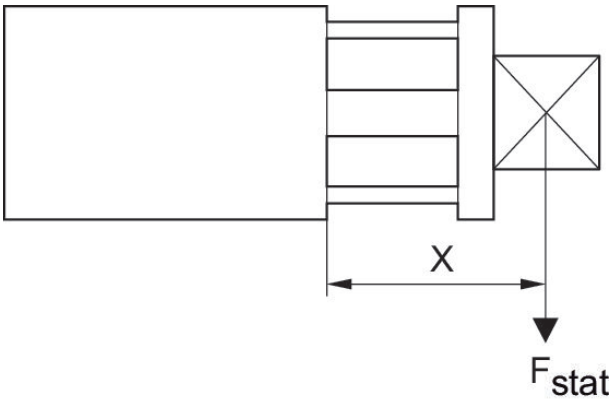
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Maximum admissible lateral force



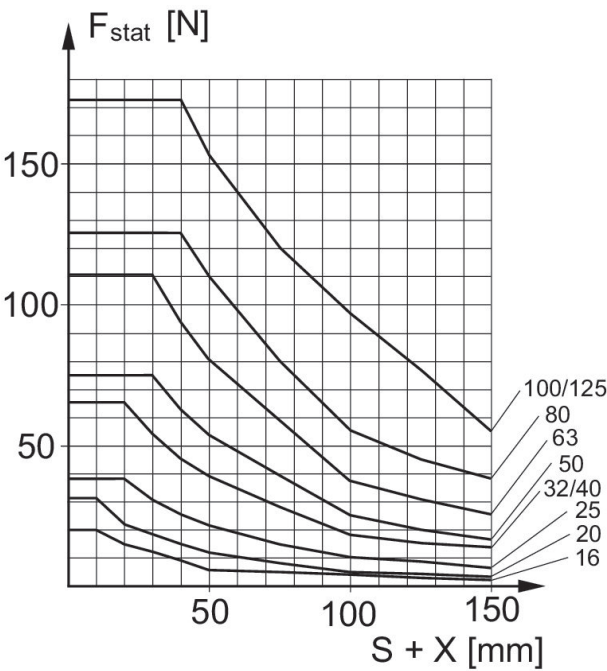
F_{dyn} = dynamic lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



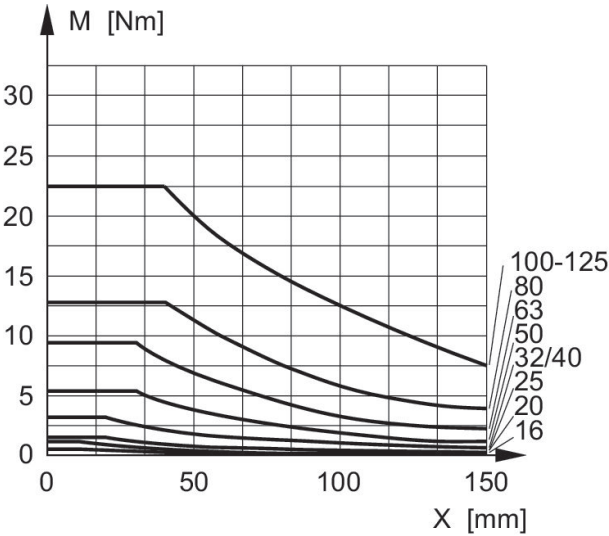
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover

Maximum admissible lateral force



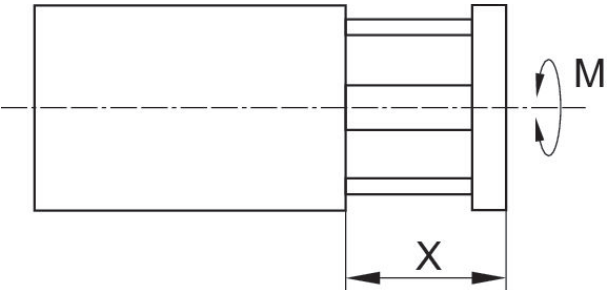
F_{stat} = static lateral force
 X = distance between force application point and cylinder cover
 S = stroke

Max. permissible torque



M = max. permissible torque
 X = spacing between torque contact surface and cylinder cover

Max. permissible torque



M = max. permissible torque
 X = distance between force application point and cylinder cover

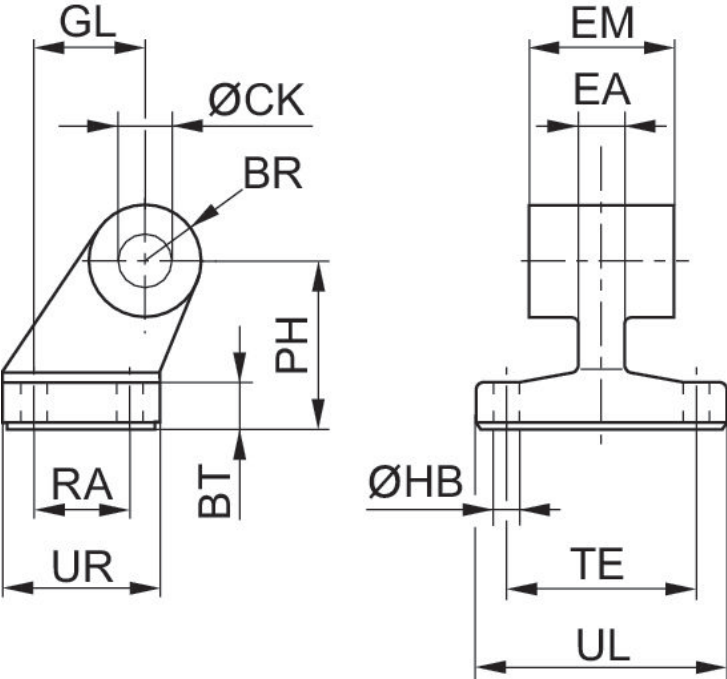
Bearing block AB7-HD, Series CM1

Standards: ISO 15552



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	ISO 15552	Nodular graphite iron	1825805275
40	12	ISO 15552	Nodular graphite iron	1825805276
50	12	ISO 15552	Nodular graphite iron	1825805277
63	16	ISO 15552	Nodular graphite iron	1825805278
80	16	ISO 15552	Nodular graphite iron	1825805279
100	20	ISO 15552	Nodular graphite iron	1825805280
125	25	ISO 15552	Nodular graphite iron	1825805281

Dimensions



Part No.	Piston Ø	BR	BT	Ø CK H9	Ø HB H13	EM	GL JS14	EA max.	PH JS15	RA JS14
1825805275	32	10	8	10	6.6	26 -0,2/-0,6	21	10	32	18
1825805276	40	11	10	12	6.6	28 -0,2/-0,6	24	12	36	22

Part No.	Piston Ø	BR	BT	Ø CK H9	Ø HB H13	EM	GL JS14	EA max.	PH JS15	RA JS14
1825805277	50	13	12	12	9	32 -0,2/-0,6	33	16	45	30
1825805278	63	15	12	16	9	40 -0,2/-0,6	37	16	50	35
1825805279	80	15	14	16	11	50 -0,2/-0,6	47	20	63	40
1825805280	100	19	15	20	11	60 -0,2/-0,6	55	20	71	50
1825805281	125	22,5	20	25	14	70 -0,5/-1,5	70	30	90	60
1825805282	160	31.5	25	30	14	90 -0,5/-1,5	97	36	115	88
1825805283	200	31.5	30	30	18	90 -0,5/-1,5	105	40	135	90
1825805284	250	40	35	40	22	110 -0,5/-1,5	128	45	165	110
5239013422	320	45	40	45	26	120 -0,5/-1,5	150	55	200	122

Part No.	TE JS14	UL max.	UR max.
1825805275	38	51	31
1825805276	41	54	35
1825805277	50	65	45
1825805278	52	67	50
1825805279	66	86	60
1825805280	76	96	70
1825805281	94	124	90
1825805282	118	156	126
1825805283	122	162	130
1825805284	150	200	160
5239013422	170	234	186

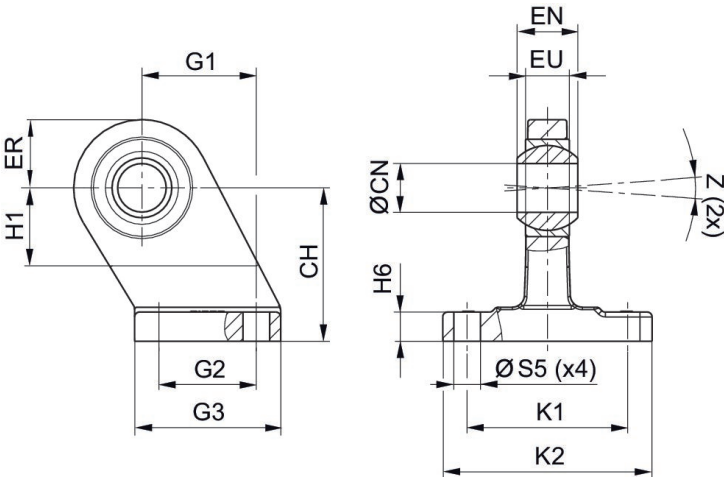
Bearing block CS7, Series CM1

Standards: VDMA 24562 part 2



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	VDMA 24562 part 2	Nodular graphite iron	1827001784
40	12	VDMA 24562 part 2	Nodular graphite iron	1827001785
50	16	VDMA 24562 part 2	Nodular graphite iron	1827001786
63	16	VDMA 24562 part 2	Nodular graphite iron	1827001787
80	20	VDMA 24562 part 2	Nodular graphite iron	1827001788
100	20	VDMA 24562 part 2	Nodular graphite iron	1827001789
125	30	VDMA 24562 part 2	Nodular graphite iron	1827001790

Dimensions



Piston Ø	Part No.	CH JS15	ØCN H7	EU max.	EN -1,0	ER max.	G1 JS14	G2 JS14	G3 max.	H1 min.
32	1827001784	32	10	10.5	14	16	21	18	31	16
40	1827001785	36	12	12	16	18	24	22	35	20
50	1827001786	45	16	15	21	21	33	30	45	22
63	1827001787	50	16	15	21	23	37	35	50	27
80	1827001788	63	20	18	25	28	47	40	60	31
100	1827001789	71	20	18	25	30	55	50	70	38
125	1827001790	90	30	25	37	40	70	60	90	40
160	1827001791	115	35	28	43	44	97	88	126	45

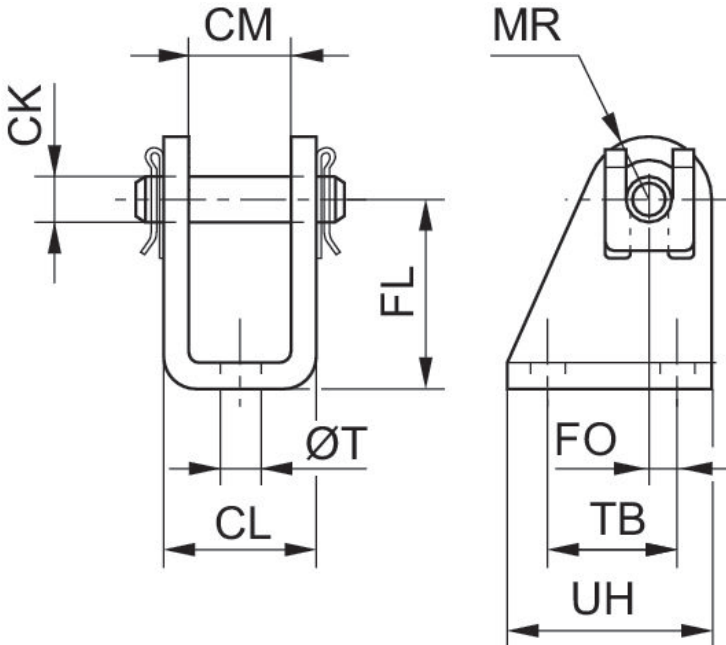
Piston Ø	Part No.	CH JS15	ØCN H7	EU max.	EN -1,0	ER max.	G1 JS14	G2 JS14	G3 max.	H1 min.
200	1827001792	135	35	28	43	47	105	90	130	45
250	1827001793	165	40	33	49	53	128	110	160	50
320	5239013442	200	50	45	60	63	150	122	186	60

Piston Ø	H6	K1 JS14	K2 max.	ØS5 H13	Z min.
32	9 ±1	38	51	6.6	4°
40	9 ±1	41	54	6.6	4°
50	11 ±1	50	65	9	4°
63	11 ±1	52	67	9	4°
80	12 ±1,5	66	86	11	4°
100	13 ±1,5	76	96	11	4°
125	17 ±1,5	94	124	14	4°
160	22 ±1,5	118	156	14	4°
200	27 ±2	122	162	18	4°
250	31 ±2	150	200	22	4°
320	36 ±2	170	234	26	4°

Clevis mounting AB3, Series CM1



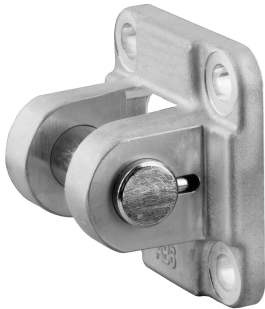
Piston diameter [mm]	Swivel bearing Ø [mm]	Material	Part No.
12, 16	6	Steel, chrome-plated	1827001446
20, 25	8	Steel, chrome-plated	1827001445



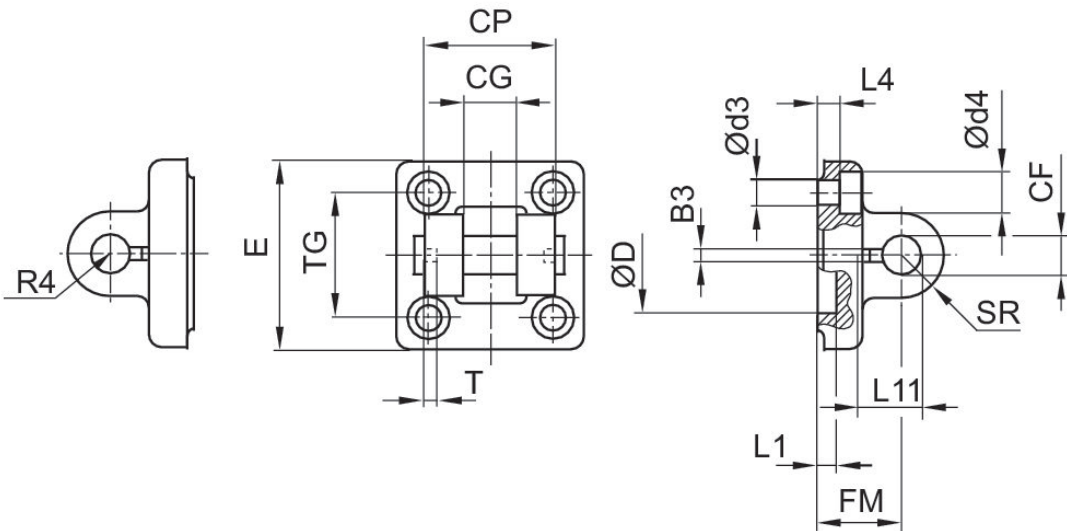
Piston Ø	Part No.	CM	Ø CK	CL	FL	FO	MR	Ø T	TB	UH
8, 10	1827001447	8,1	4	13,1	24	1,5	5	4,5	12,5	20
8, 10	3323410000	8	4	13	24	1,5	5	4.5	12	20
12, 16	1827001446	12,1	6	18,1	27	2,0	7	5,5	15	25
12, 16	3323416000	12	6	18	27	2,0	7	5.5	15	25
20, 25	1827001445	16,1	8	24,1	30	4,0	10	6,6	20	32
20, 25	3323420000	16	8	24	30	4,0	10	6.6	22	34
32	3323432000	26	10	36	32	6,0	12	6.6	24	36

Clevis mounting AB6, Series CM1

Standards: ISO 15552



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	ISO 15552	Aluminum	1827001593
40	12	ISO 15552	Aluminum	1827001594
50	16	ISO 15552	Aluminum	1827001595
63	16	ISO 15552	Aluminum	1827002024
80	20	ISO 15552	Aluminum	1827001597
100	20	ISO 15552	Aluminum	1827001598
125	30	ISO 15552	Aluminum	1827001599



Piston Ø	Part No.	B3 ±0,2	Ø CF F7	CG D10	CP d12	Ø d3	Ø d4	Ø D	E	FM ±0,2
32	1827001593	3.3	10	14	34	6.6	11	30	46	22
40	1827001594	4.3	12	16	40	6.6	11	35	52	25
50	1827001595	4.3	16	21	45	9	15	40	64	27

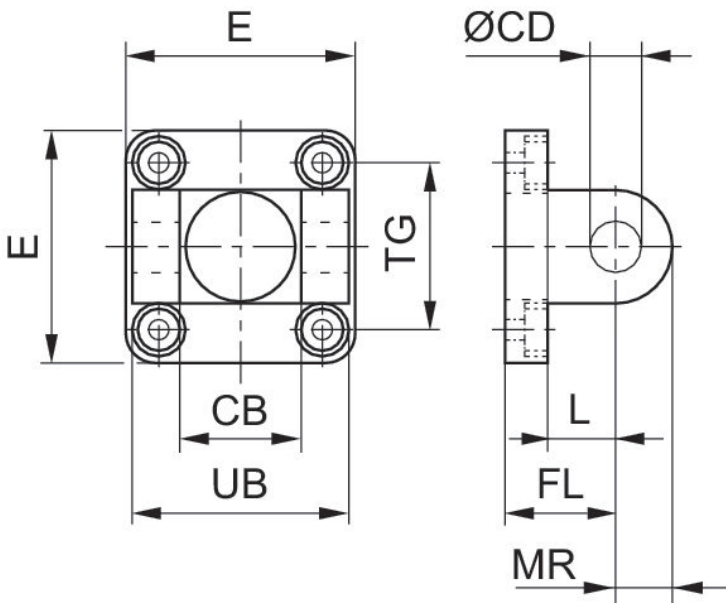
Piston Ø	Part No.	B3 ±0,2	Ø CF F7	CG D10	CP d12	Ø d3	Ø d4	Ø D	E	FM ±0,2
63	1827002024	4.3	16	21	51	9	15	45	74	32
80	1827001597	4.3	20	25	65	11	18	45	94	36
100	1827001598	4.3	20	25	75	11	18	55	113	41
125	1827001599	6.3	30	37	97	14	20	60	138	50
160	1827001600	6.3	35	43	122	18	26	65	180	55
200	1827001601	6.3	35	43	122	18	26	75	220	60
250	1827001602	8.3	40	49	125	22	33	90	280	70
320	5239013432	8.3	50	60	150	26	36	110	340	80

Piston Ø	L1 min.	L4 ±0,5	L11 –0,5	R4	SR	T ±0,2	TG
32	4.5	5.5	16.5	17	10	3	32,5 ±0,2
40	4.5	5.5	18	20	12	4	38 ±0,2
50	4.5	6.5	23	22	15	4	46,5 ±0,2
63	4.5	6.5	23	25	15	4	56,5 ±0,2
80	4.5	10	27	30	20	4	72 ±0,2
100	4.5	10	27	32	20	4	89 ±0,2
125	7	10	40	42	26	6	110 ±0,3
160	10	10	45	46	32.5	6	140 ±0,3
200	10	11	45	49	32.5	6	175 ±0,3
250	12	11	53	55	40	8	220 ±0,3
320	11	15	69	65	50	8	270 ±0,3

Clevis mounting MP2-HD, Series CM1



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	ISO 15552	Aluminum	1827001289
40	12	ISO 15552	Aluminum	1827001290
50	12	ISO 15552	Aluminum	1827001291
63	16	ISO 15552	Aluminum	1827001500
80	16	ISO 15552	Aluminum	1827001293
100	20	ISO 15552	Aluminum	1827001294
125	25	ISO 15552	Aluminum	1827004862



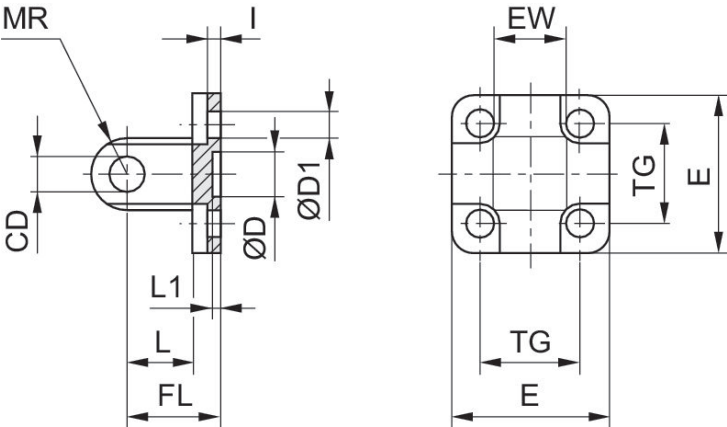
Piston Ø	Part No.	CB H14	Ø CD H9	E	FL ±0.2	L min.	MR max.	UB h13	TG
32	1827001289	26	10	47.5	22	12	10	45	32.5 ±0.2
40	1827001290	28	12	53.5	25	15	13	52	38 ±0.2
50	1827001291	32	12	64	27	15	13	60	46.5 ±0.2
63	1827001500	40	16	74	32	18	17	70	56.5 ±0.2
80	1827001293	50	16	94	36	20	17	90	72.0 ±0.2

Piston Ø	Part No.	CB H14	Ø CD H9	E	FL ±0.2	L min.	MR max.	UB h13	TG
100	1827001294	60	20	113.5	41	25	18	110	89.0 ±0.2
125	1827004862	70	25	138	50	30	26	130	110 ±0.3
160	1827004863	90	30	180	55	35	31	170	140 ±0.3
200	1827004864	90	30	220	60	35	31	170	175 ±0.3
250	1827004865	110	40	280	70	45	41	200	220 ±0.3
320	5239813402	120	45	350	80	50	45	220	270 ±0.3

Rear eye MP4-HD, suitable for robust mechanical engineering applications



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
16	6		Die-cast aluminum	1825805368
20	8	ISO 21287	Steel, chrome-plated	1827002300
25	8	ISO 21287	Steel, chrome-plated	1827002301
32	10	ISO 15552	Aluminum (forged)	1827001283
40	12	ISO 15552	Aluminum (forged)	1827001284
50	12	ISO 15552	Aluminum (forged)	1827001285
63	16	ISO 15552	Aluminum (forged)	1827020086
80	16	ISO 15552	Aluminum (forged)	1827001287
100	20	ISO 15552	Aluminum (forged)	1827001288
125	25	ISO 15552	Aluminum (forged)	1827004866



Piston Ø	Part No.	CD H9	Ø D	Ø D1	E	EW	FL ±0,2	I ±0,5	L min.	L1 min.
16	1825805368	6	10 H13	4.5	27	12 -0.2/-0.6	16	2.6	10	3
20	1827002300	8	12 H13	5.5	34	16 -0.2/-0.6	20	2.6	14	3
25	1827002301	8	12 H13	5.5	40	16 -0.2/-0.6	20	2.6	14	3
32	1827001283	10	30 H11	6.6	47.5	26 -0.2/-0.6	22	5.5	12	4.5
40	1827001284	12	35 H11	6.6	53.5	28 -0.2/-0.6	25	5.5	15	4.5
50	1827001285	12	40 H11	9	64	32 -0.2/-0.6	27	6.5	15	4.5

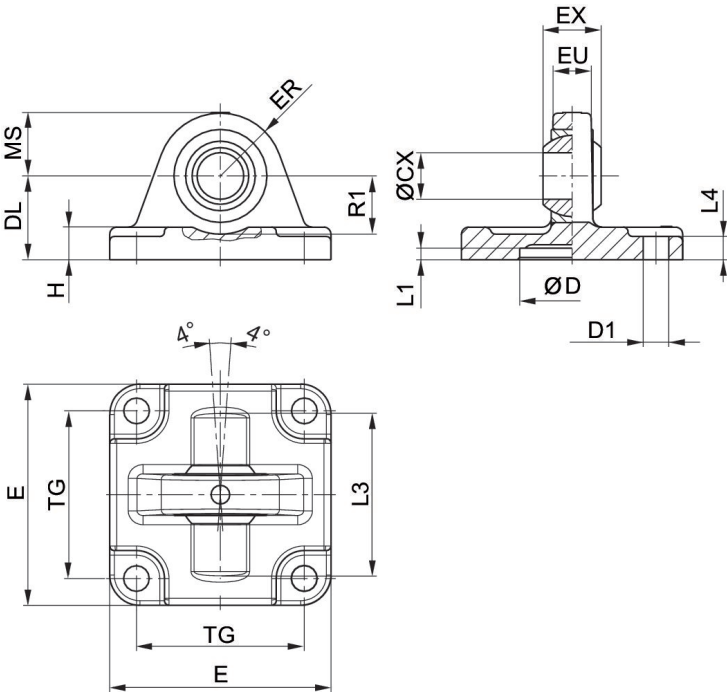
Piston Ø	Part No.	CD H9	Ø D	Ø D1	E	EW	FL ±0,2	I ±0,5	L min.	L1 min.
63	1827020086	16	45 H11	9	74	40 -0.2/-0.6	32	6.5	20	4.5
80	1827001287	16	45 H11	11	94	50 -0.2/-0.6	36	10	20	4.5
100	1827001288	20	55 H11	11	113.5	60 -0.2/-0.6	41	10	25	4.5
125	1827004866	25	60 H11	14	138	70 -0.5/-1.2	50	10	30	7
160	1827004867	30	65 H11	18	180	90 -0.5/-1.2	55	10	35	7
200	1827004868	30	75 H11	18	220	90 -0.5/-1.2	60	11	35	7
250	1827004869	40	90 H11	22	280	110 -0.5/-1.2	70	11	45	11
320	5239813412	45	110 H11	26	350	120 -0.5/-1.2	80	15	50	11

Piston Ø	MR max.	TG
16	6	18 ±0.2
20	8	22 ±0.4
25	8	26 ±0.4
32	10	32.5 ±0.2
40	12	38 ±0.2
50	12	46.5 ±0.2
63	16	56.5 ±0.2
80	16	72 ±0.2
100	20	89 ±0.2
125	26	110 ±0.3
160	31	140 ±0.3
200	31	175 ±0.3
250	41	220 ±0.3
320	45	270 ±0.3

Rear eye MP6, with ball joint and foot, aluminum



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	ISO 15552	Aluminum (forged)	1827001619
40	12	ISO 15552	Aluminum (forged)	1827001620
50	16	ISO 15552	Aluminum (forged)	1827001621
63	16	ISO 15552	Aluminum (forged)	1827020087
80	20	ISO 15552	Aluminum (forged)	1827001623
100	20	ISO 15552	Aluminum (forged)	1827001624
125	30	ISO 15552	Aluminum (forged)	1827001625



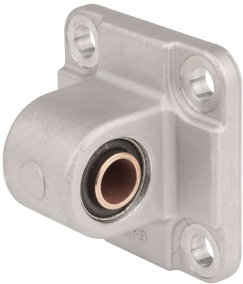
Scope of delivery: clevis incl. mounting screws

Piston Ø	Part No.	ØCX H7	ØD H11	ØD1 H13	DL ±0,2	E	EX -0,1	ER	EU	H
25	3663602000	10	18	5,5	20	40	9	14	8	6
32	3663603000	10	20	5.5	22	46	9	15	8	6

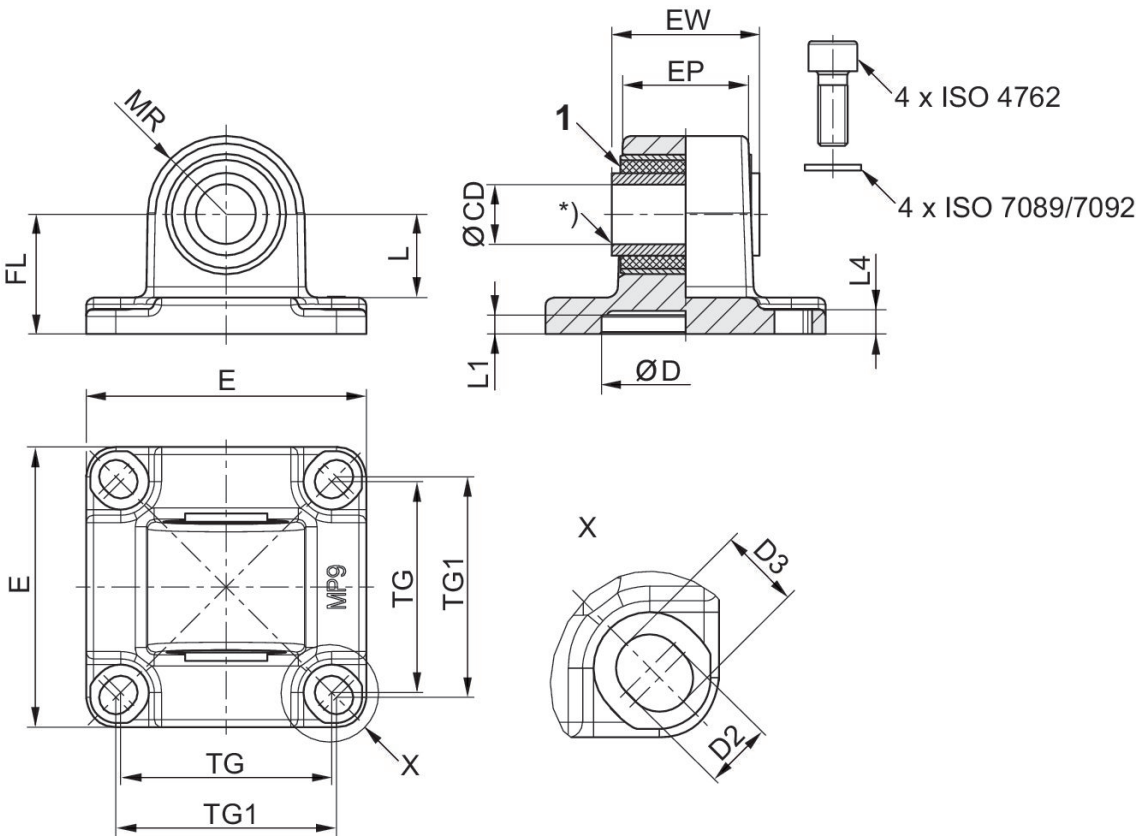
Piston Ø	Part No.	ØCX H7	ØD H11	ØD1 H13	DL ±0,2	E	EX -0,1	ER	EU	H
40	3663604000	12	30	6.6	28	55	12	17	9.5	8
52,5	3663605000	12	40	6,6	28	62	12	17	9.5	9
63	5220163442	10	–	7.5	29	45	14	15	10.5	8
75	3663606000	16	55	9	36	80	16	25	12,5	11
80	5220363442	12	–	10	26	65	16	18	12	10
80	3663608000	16	70	9	38	94	16	28	12,5	12
85, 95	5220463442	16	–	10	30	75	21	22	15	10
100	3663610000	20	90	11	43	114	20	35	16	15
115	5220563442	16	–	12	37.5	95	21	25	15	12

Piston Ø	L1 min.	L3	L4	MS -0,5	R1 min.	TG
25	3	–	3	14	–	26
32	0.5	42	6	15	16	32
40	0.5	48	8	17	16	32
52,5	0,5	55	9	17	18	46
63	–	–	–	–	–	33
75	0,5	70	11	25	21	59
80	–	–	–	–	–	49
80	0,5	80	12	28	21	73
85, 95	–	–	–	–	–	59
100	0,5	100	15	35	28	90
115	–	–	–	–	–	75

Rear eye MP9, with rubber bushing



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
25	10	ISO 21287	Die-cast aluminum	3683202000
40	12	ISO 15552	Aluminum	3683204000
63	16	ISO 15552	Aluminum	3683206000
100	20	ISO 15552	Aluminum	3683210000



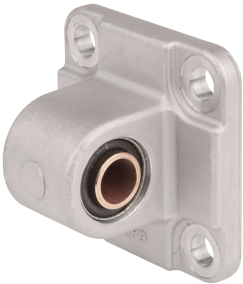
1) Rubber bushing

Piston Ø	Part No.	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	L 1)
25	3683202000	10	-	40	17.5	14,5	26	27	20	14.8
40	3683204000	-	12	53	27	23,5	38	40	25	16.3

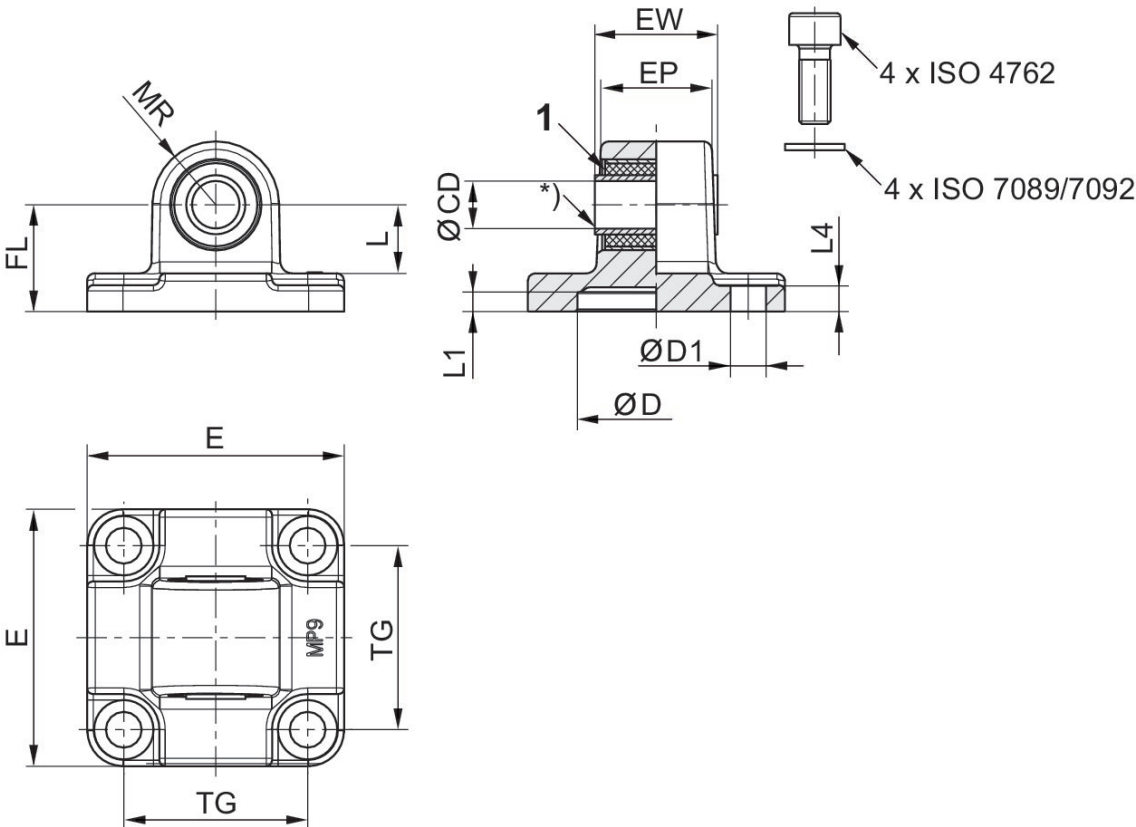
Piston Ø	Part No.	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	L 1)
63	3683206000	-	16	75	39.5	33.5	56.5	59	32	22.3
100	3683210000	-	20	114	59.5	54	89	90	41	25.8

Piston Ø	MR	L1	L4	D H11	D2 -0,2	D3 -0,2
25	12,5	3	3	18	5,5	6,2
40	15	5	5.5	35	6.6	8
63	21	5	6.5	45	–	–
100	25	5	10	55	11	11.7

Rear eye MP9, with rubber bushing



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	ISO 15552	Aluminum	3683203000
50	12	ISO 15552	Aluminum	3683205000
80	16	ISO 15552	Aluminum	3683208000
50	12		Aluminum	3663205000
80	16		Aluminum	3663208000
125	25	ISO 15552	Aluminum	R412015973

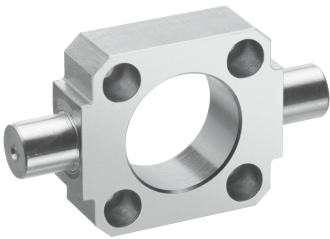


1) Rubber bushing

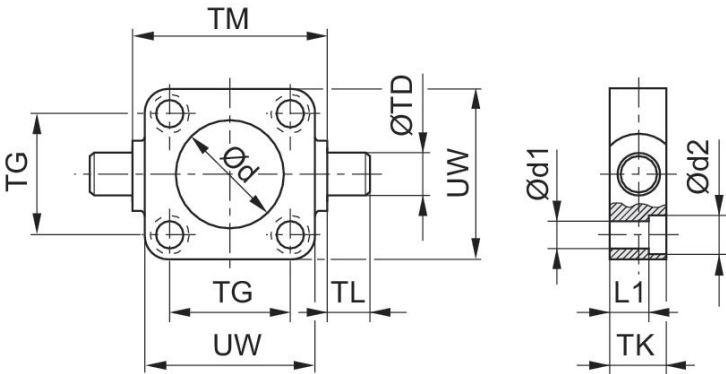
Piston Ø	Part No.	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	L 1)
32	3683203000	10	-	46	25.5	18,9	32.5	–	22	13.8
50	3683205000	-	12	65	31	28	46.5	–	27	17.3
50	3663205000		12	63	31		46		28	15.5
80	3663208000		16	95	49.5		73		38	20.5
80	3683208000	-	16	94.5	49.5	43	72	–	36	21.8
125	R412015973	-	25	138	69.5	60	110	–	50	33.8

Piston Ø	MR	L1	L4	D H11	D1 H13
32	12.5	5	5.5	30	6.6
50	16	5	6.5	40	9
50	18				
80	24				
80	22	5	10	45	11
125	34	7.5	10	60	13.5

Trunnion mounting MT5, MT6, Series CM1



Piston diameter [mm]	Material	Part No.
20	Nodular graphite iron	1825805360
25	Nodular graphite iron	1825805361
32	Nodular graphite iron	1827001609
40	Nodular graphite iron	1827001610
50	Nodular graphite iron	1827001611
63	Nodular graphite iron	1827002046
80	Nodular graphite iron	1827001613
100	Nodular graphite iron	1827001614
125	Nodular graphite iron	1827001615



Piston Ø	Part No.	Ø d H11	Ø d1	Ø d2	L1	TD e9	TG ±0,2	TK	TL h14	TM h14
20	1825805360	18	5.5	10	8	12	22	14	12	38
25	1825805361	22	5.5	10	8	12	26	14	12	42
25	R412026354	24	5.5	10	8	12	26	14	12	42
32	1825805362	32	6.6	10.5	7	12	32	14	12	52
32	1827001609	30	6.6	11	7.5	12	32.5	16	12	50
40	1825805363	46	6.6	11	12	16	42	19	16	63
40	1827001610	35	6.6	11	7.5	16	38	20	16	63
50	1825805364	53	9	14	10	16	50	19	16	75
50	1827001611	40	9	15	10	16	46.5	24	16	75

Piston Ø	Part No.	Ø d H11	Ø d1	Ø d2	L1	TD e9	TG ±0,2	TK	TL h14	TM h14
63	1825805365	69	9	15	15	20	62	24	20	90
63	1827002046	45	9	15	10	20	56.5	24	20	90
80	1825805366	87	11	18	13	20	82	24	20	110
80	1827001613	45	11	18	16	20	72	28	20	110
100	1825805367	55	11	18	18	25	103	29	25	132
100	1827001614	55	11	18	25.5	25	89	38	25	132
125	1827001615	60	14	20	34	25	110	46	25	160
160	1827001616	65	18	26	38	32	140	50	32	200
200	1827001617	75	18	26	40	32	175	60	32	250
250	1827001618	90	22	33	57	40	220	70	40	320

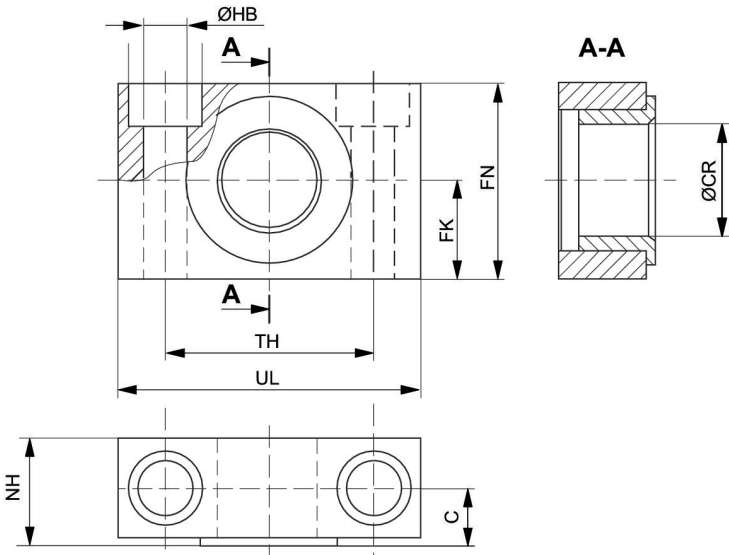
Piston Ø	UW
20	35
25	39
25	39
32	46
32	48
40	59
40	56
50	69
50	65
63	84
63	75
80	102
80	100
100	125
100	120
125	145
160	184
200	224
250	286

Bearing AT4, Series CM1

Standards: ISO 15552



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
20, 25, 32	12	ISO 15552	Steel, chrome-plated	1827001603
40, 50	16	ISO 15552	Steel, chrome-plated	1827001604
63, 80	20	ISO 15552	Steel, chrome-plated	1827001605
100, 125	25	ISO 15552	Steel, chrome-plated	1827001606



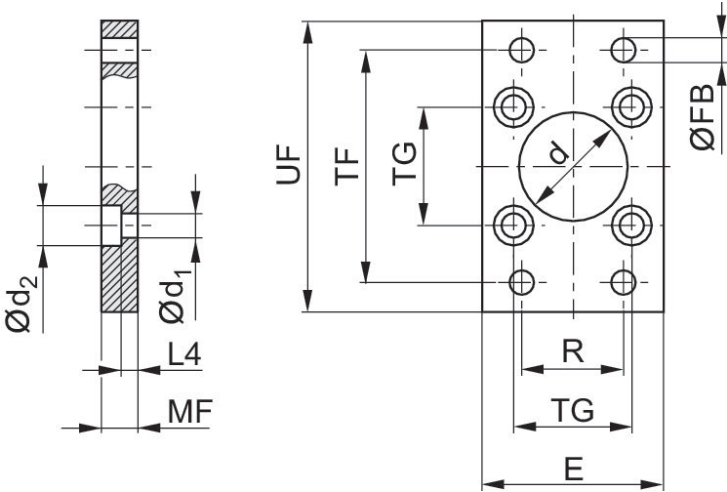
Piston Ø	Part No.	UL	NH	TH	C	CR H9	HB H13	FN	FK
20, 25, 32	1827001603	46	18	32 ±0,2	10.5	12	6.6	30	15 ±0,1
40, 50	1827001604	55	21	36 ±0,2	12	16	9	36	18 ±0,1
63, 80	1827001605	65	23	42 ±0,2	13	20	11	40	20 ±0,1
100, 125	1827001606	75	28.5	50 ±0,2	16	25	14	50	25 ±0,1
160, 200	1827001607	92	40	60 ±0,3	22.5	32	18	60	30 ±0,2
250	1827001608	140	50	90 ±0,3	27.5	40	22	70	35 ±0,2
320	R412018903	150	60	100	32.5	50	26	80	40

Flange mounting MF1, MF2, Series CM1

Standards: ISO 15552



Piston diameter [mm]	Standardization	Material	Part No.
32	ISO 15552	Steel, chrome-plated	1827001277
40	ISO 15552	Steel, chrome-plated	1827001278
50	ISO 15552	Steel, chrome-plated	1827001279
63	ISO 15552	Steel, chrome-plated	1827001499
80	ISO 15552	Steel, chrome-plated	1827001281
100	ISO 15552	Steel, chrome-plated	1827001282
125	ISO 15552	Steel, chrome-plated	1827004861



Piston Ø	Part No.	Ød H11	Ød1	Ød2	E max.	ØFB	L4	MF	R	TF
32	1827001277	30	6.6	11	50	7	4.5	10	32	64
40	1827001278	35	6.6	11	55	9	4.5	10	36	72
50	1827001279	40	9	15	65	9	6	12	45	90
63	1827001499	45	9	15	75	9	6	12	50	100
80	1827001281	45	11	18	100	12	9	16	63	126
100	1827001282	55	11	18	120	14	9	16	75	150
125	1827004861	60	14	20	140	16	10.5	20	90	180
160	1827001460	65	18	26	180	18	9.5	20	115	230

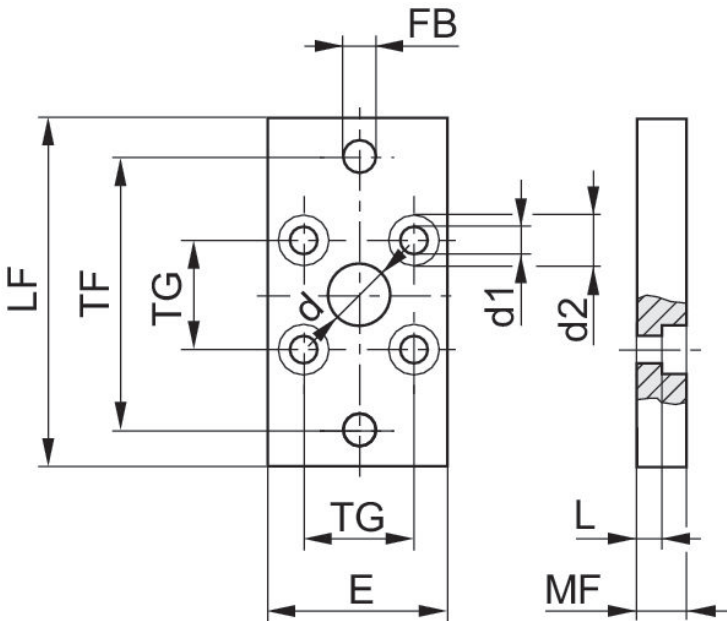
Piston Ø	Part No.	Ød H11	Ød1	Ød2	E max.	ØFB	L4	MF	R	TF
200	1827001461	75	18	26	220	22	12.5	25	135	270
250	1827001462	90	22	33	280	26	10.5	25	165	330
320	5239016012	110	26	40	350	33	15	30	200	270

Piston Ø	TG	UF
32	32,5 ±0,2	80
40	38 ±0,2	90
50	46,5 ±0,2	110
63	56,5 ±0,2	125
80	72 ±0,2	154
100	89 ±0,2	186
125	110 ±0,3	220
160	140 ±0,3	275
200	175 ±0,3	312
250	220 ±0,3	380
320	270 ±0,3	400

Flange mounting MF1, MF2, Series CM1



Piston diameter [mm]	Material	Part No.
16	Steel, chrome-plated	1821038241
20	Steel, chrome-plated	1827002292
25	Steel, chrome-plated	1827002293



Piston Ø	Part No.	Ød H11	Ød1	Ød2	E 1)	ØFB	L4	MF	TF	TG
16	1821038241	10	4.5	10	29	5.5	5.6	10	43	18
20	1827002292	12	5.5	10	36	6.6	4.6	10	55	22
25	1827002293	12	5.5	10	40	6.6	4.6	10	60	26

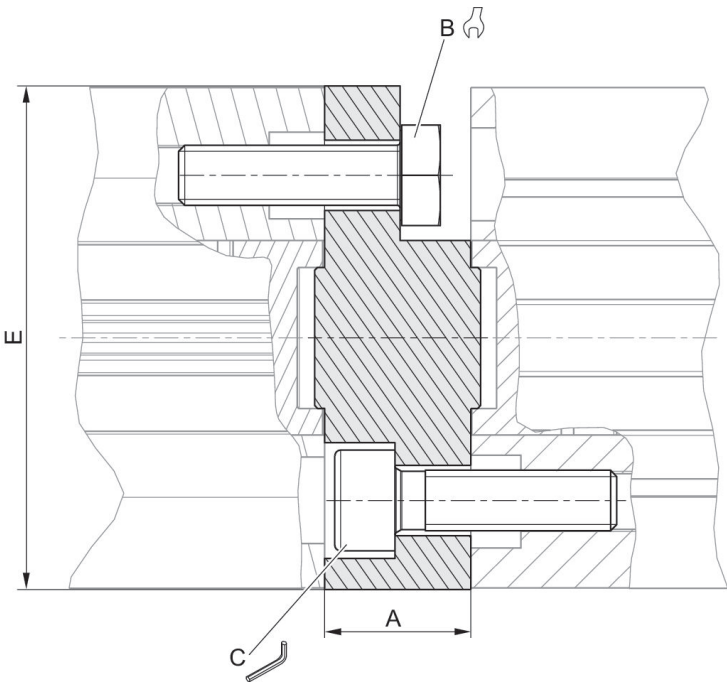
Piston Ø	UF
16	55
20	70
25	76

1) Max.

Intermediate flange JP2, Series CM1



Suitable piston Ø [mm]	Material		Part No.
16	Aluminum		1827020290
20	Aluminum		1827020267
25	Aluminum		1827020268
32	Aluminum		1827020269
40	Aluminum		1827020270
50	Aluminum		1827020271
63	Aluminum		1827020272
80	Aluminum		R412024535
100	Aluminum		R412024536



Piston Ø	Part No.	For series	A	B	C	Md [Nm] 1)	E
16	1827020290	CCI, KPZ	12.5	7	–	2.5	28.4

Piston Ø	Part No.	For series	A	B	C	Md [Nm] 1)	E
20	1827020267	CCI, KPZ	12.5	8	–	4	35
25	1827020268	CCI, KPZ	13	8	4	4	40
32	1827020269	CCI, KPZ	14.5	10	5	4	50
40	1827020270	CCI, KPZ	14.5	10	5	4	57.1
50	1827020271	CCI, KPZ	14.5	13	6	8	67.4
63	1827020272	CCI, KPZ	14.5	13	6	8	80
80	R412024535	KPZ	16.5	16	8	16	95
80	1827020273	CCI	16.5	16	–	16	98.4
100	R412024536	CCI	19.5	16	8	16	115
100	1827020274	KPZ	19.5	16	–	16	120

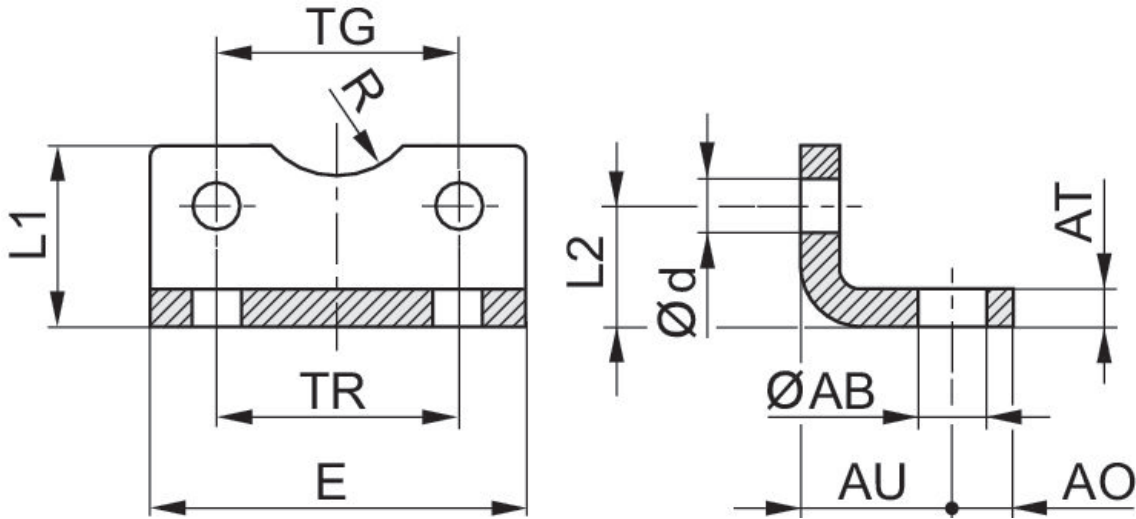
1) torque

Foot mounting MS1, Series CM1



Piston diameter [mm]	for series	Standardization	Material	Part No.
16	KPZ, CCI		Steel, chrome-plated	1821332053
20	KPZ, CCI		Steel, chrome-plated	1827002284
25	KPZ, CCI		Steel, chrome-plated	1827002285
32	PRA/TRB, CCI, CVI	ISO 15552	Steel, chrome-plated	1827001271
40	PRA/TRB, CCI, CVI	ISO 15552	Steel, chrome-plated	1827001272
50	PRA/TRB, CCI, CVI	ISO 15552	Steel, chrome-plated	1827001273
63	PRA/TRB, CCI, CVI	ISO 15552	Steel, chrome-plated	1827001498
80	PRA/TRB, CCI, CVI	ISO 15552	Steel, chrome-plated	1827001275
100	CCI, PRA/TRB, CVI	ISO 15552	Steel, chrome-plated	1827001276
125	PRA/TRB, CVI	ISO 15552	Steel, chrome-plated	1827001310

Dimensions



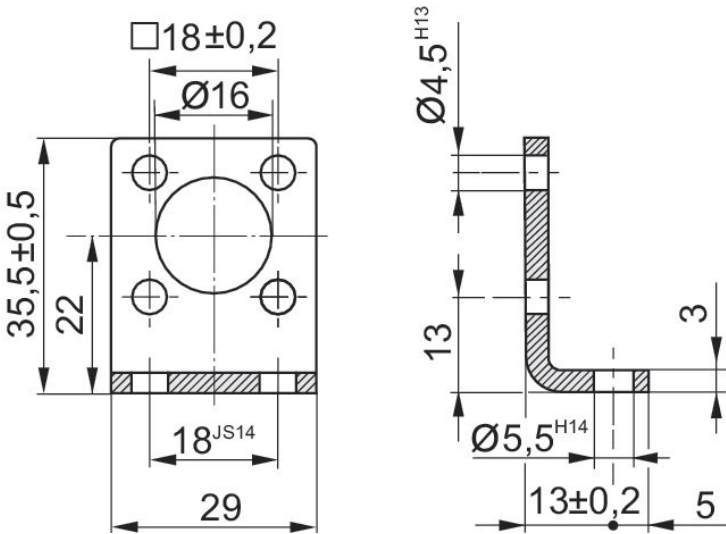
Piston Ø	Part No.	ØAB H14	AO	AT	AU ±0,2	Ød H13	E	L1	L2	R H15
20	1827002284	6.6	6	4 ±0,5	16	5.4	36	22	16	10
25	1827002285	6.6	6	4 ±0,5	16	5.4	40	23	17	11
32	1827002286	6.6	8	5 ±0,5	18	6.6	50	24	16	12

Piston Ø	Part No.	ØAB H14	AO	AT	AU ±0,2	Ød H13	E	L1	L2	R H15
32	1827001271	7	8	4 ±0,3	24	6.6	48	25	15,75	15
40	1827001272	10	10	4 ±0,3	28	6.6	56	26	17	17.5
50	1827001273	10	11	5 ±0,3	32	9	68	32	21.75	20
63	1827001498	10	13	5 ±0,3	32	9	78	34	21.75	22.5
80	1827001275	12	16	6 ±0,5	41	11	98	47	27	22.5
100	1827001276	14.5	19	6 ±0,5	41	11	117	52	26.5	27.5
125	1827001310	16.5	20	8 ±1,0	45	13.5	144	69	35	30
160	1827001457	18.5	23	10 ±1,0	60	17.5	185	100	45	32.5
200	1827001458	24	26	12 ±1,0	70	17.5	220	120	47.5	37.5
250	1827001459	28	33	20 ±1,0	75	22	280	135	55	45

Piston Ø	TG	TR JS14
20	22 ±0,2	22
25	26 ±0,2	26
32	32 ±0,2	32
32	32,5 ±0,2	32
40	38 ±0,2	36
50	46.5 ±0,2	45
63	56.5 ±0,2	50
80	72 ±0,2	63
100	89 ±0,2	75
125	110 ±0,3	90
160	140 ±0,3	115
200	175 ±0,3	135
250	220 ±0,3	165

1821332053

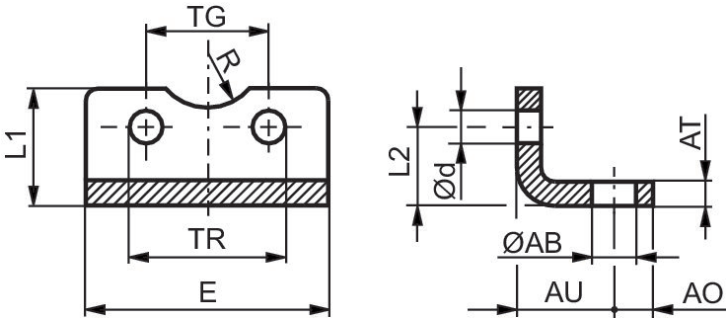
Dimensions



Foot mounting MS9, Series CM1



Piston diameter [mm]	Material	Part No.
32	Steel, chrome-plated	1827001018
40	Steel, chrome-plated	1827001019
50	Steel, chrome-plated	1827001020
63	Steel, chrome-plated	1827020085
80	Steel, chrome-plated	1827001022
100	Steel, chrome-plated	1827001023



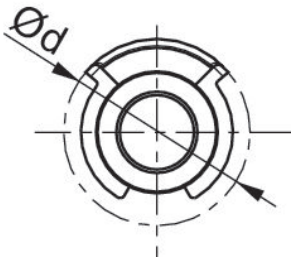
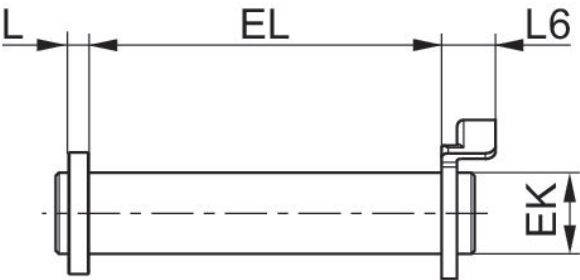
Piston Ø	Part No.	Ø AB H13	AO	AT	AU	Ø d	E	L1	L2	R
32	1827001018	7	12	5	18	6.6	79	30	15.8	15
40	1827001019	10	12	5	18	6.6	90	30	17	17.5
50	1827001020	10	14	5	21	9	110	35	21.7	20
63	1827020085	10	14	5	21	9	120	35	21.7	25
80	1827001022	12	13	5	27	11	153	50	27	22.5
100	1827001023	14.5	13	5	27	11	178	50	26.5	27.5

Piston Ø	TG ±0,1	TR JS14
32	32.5	65
40	38	75
50	46.5	90
63	56.5	100
80	72	128
100	89	148

Bolts AA4, Series CM1



Piston diameter [mm]	Material	Surface	Part No.
32	Steel, chrome-plated	galvanized	1823120020
40	Steel, chrome-plated	galvanized	1823120021
50	Steel, chrome-plated	galvanized	1823120022
63	Steel, chrome-plated	galvanized	1823120023
80	Steel, chrome-plated	galvanized	1823120024
100	Steel, chrome-plated	galvanized	1823120025

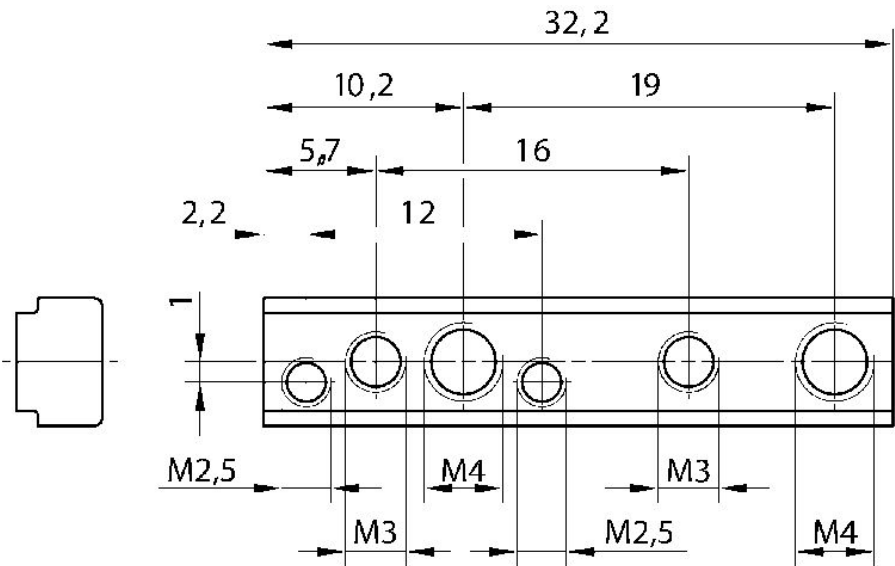
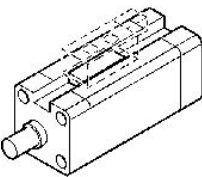


Piston Ø	Part No.	Ø d max.	EK e8	EL	L max.	L6 max.
32	1823120020	20	10	45.2 +0,3	3.5	9
40	1823120021	22	12	52.2 +0,3	4	9
50	1823120022	22	12	60.2 +0,3	4	9
63	1823120023	28	16	70.2 +0,3	4.5	11
80	1823120024	28	16	90.2 +0,3	4.5	11
100	1823120025	38	20	110.2 +0,3	5	11

Mounting kit



Part No.
1827020275



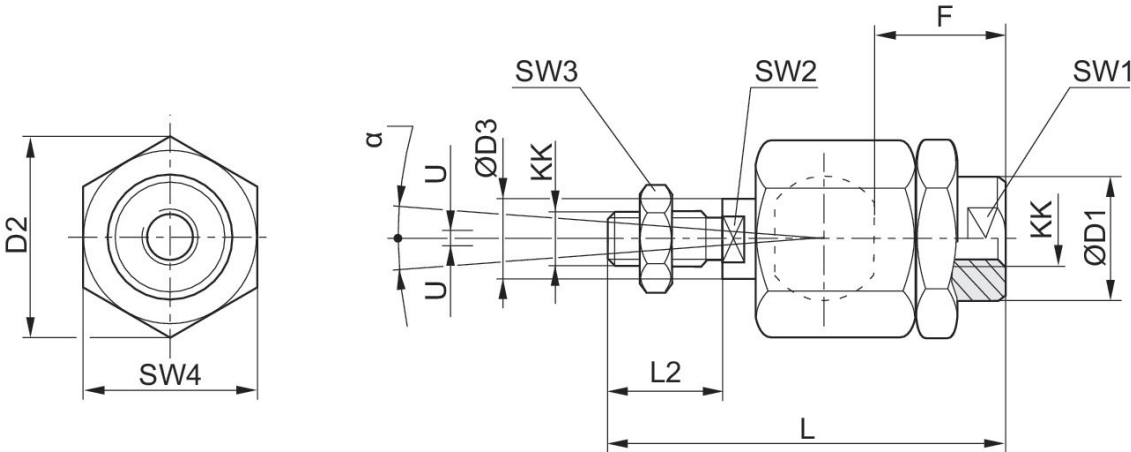
Part No.	Ø mm
1827020275	16–100

Flexible spherical coupling, Series PM5



Suitable piston rod thread	for series	Material	Part No.
M6x1	CCL-IC, CCI, MNI	Steel, chrome-plated	R412026140
M8x1,25	CCL-IC, CCI, MNI	Steel, chrome-plated	R412026141
M10x1,25	PRA/TRB, CCL-IC/-IS, CCI, SSI, KPZ, 167, CVI, RPC	Steel, chrome-plated	R412026142
M12x1,25	PRA/TRB, CCL-IC/-IS, CCI, SSI, KPZ, 167, CVI, RPC	Steel, chrome-plated	R412026143
M16x1,5	PRA/TRB, CCL-IC/-IS, CCI, KPZ, 167, CVI, RPC, RDC	Steel, chrome-plated	R412026144

Dimensions



* Radial joint

Part No.	KK	Ø D1	D2	Ø D3	F	L ±2	L2	SW1	SW2	SW3
1826409008	M4	12	13.5	4	13	33	8	12	3.2	7
R412007860	M5	8.5	14.8	6	12	38.5	13.5	7	5	8
R412026140	M6x1	8.5	14.5	6	11	36.5	11	7	5	10
R412026141	M8x1.25	12.5	19	8	21	58	21	11	7	13
R412026142	M10x1.25	22	32	14	23	74.5	23	19	12	17
R412026143	M12x1.25	22	32	14	24	75	24	19	12	19
R412026144	M16x1.5	32	45	22	30	103	30	30	20	24
R412026145	M20x1.5	32	45	22	40	119	40	30	20	30

Part No.	KK	Ø D1	D2	Ø D3	F	L ±2	L2	SW1	SW2	SW3
1826409006	M27x2	62	62	28	48	147	54	32	24	41
1826409007	M36x2	80	80	38	86	241	72	50	32	55
R412007729	M42x2	64	98	42	96	271	82	60	36	65

Part No.	SW4	U	α [°]	1)
1826409008	11	0,5	8	0.05-0.2
R412007860	13	0,5	8	0.05-0.2
R412026140	13	0,7	6	0.05-0.5
R412026141	17	0,7	8	0.05-0.5
R412026142	30	1	8	0.05-0.5
R412026143	30	1	7	0.05-0.5
R412026144	41	1	6	0.05-0.5
R412026145	41	1	6	0.05-0.5
1826409006	55	1	8	0.05-0.2
1826409007	75	1	8	0.05-0.2
R412007729	85	1	8	0.05-0.2

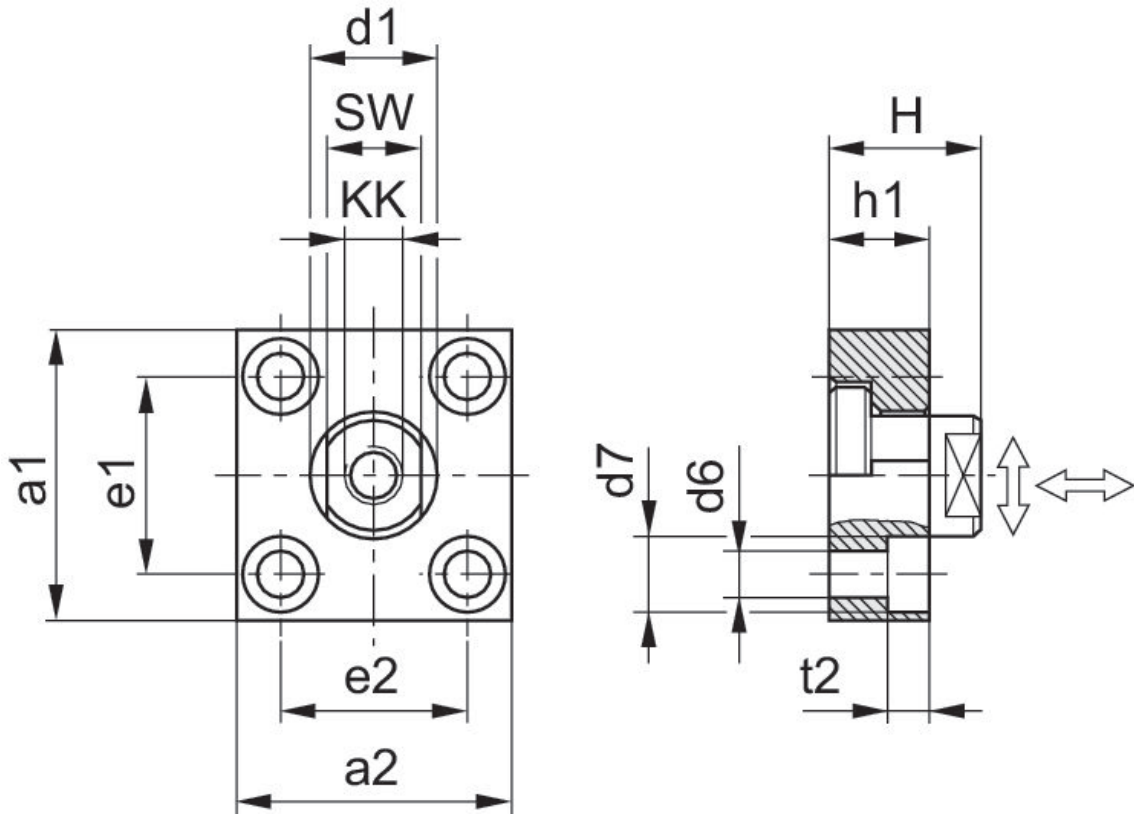
1) Axial play

Flexible plate coupling, Series PM7



Suitable piston rod thread	for series	Material	Part No.
M10x1,25	PRA/TRB, CCL-IC/-IS, CCI, SSI, KPZ, 167, RPC	Steel, chrome-plated	1827001629
M12x1,25	PRA/TRB, CCL-IC/-IS, CCI, SSI, KPZ, 167, RPC	Steel, chrome-plated	1827001630
M16x1,5	PRA/TRB, CCL-IC/-IS, CCI, SSI, KPZ, 167, RPC	Steel, chrome-plated	1827001631

Dimensions

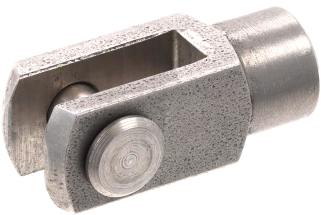


KK	Part No.	a1	a2	d1 h11	d6 H13	d7 H13	e1 H13	e2	h1	t2
M10x1.25	1827001629	60	37	20	6.6	11	36 ±0,15	23 ±0,15	15	7
M12x1.25	1827001630	60	56	25	9	15	42 ±0,2	38 ±0,2	20	9

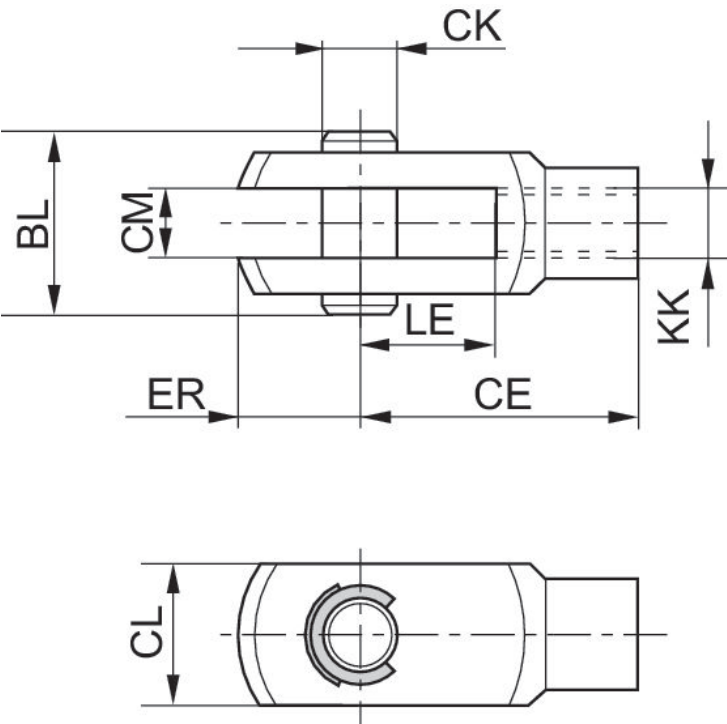
KK	Part No.	a1	a2	d1 h11	d6 H13	d7 H13	e1 H13	e2	h1	t2
M16x1.5	1827001631	80	80	30	11	18	58 ±0,2	58 ±0,2	20	11
M20x1.5	1827001632	90	90	40	14	20	65 ±0,3	65 ±0,3	20	13
M27x2	1827001633	90	90	40	14	20	65 ±0,3	65 ±0,3	20	13
M36x2	1827001634	125	125	60	18	26	90 ±0,3	90 ±0,3	30	17

KK	H	SW	Tightening torque for the coupling pin Ma ± 5%	Axial play min./max.	Radial play min./max.
M10x1.25	24	17	17 Nm	0,4 - 0,8 mm	1,9 - 2,3 mm
M12x1.25	30	19	29 Nm	0,4 - 0,8 mm	1,9 - 2,3 mm
M16x1.5	32	24	71 Nm	0,4 - 0,8 mm	1,9 - 2,3 mm
M20x1.5	35	36	138 Nm	0,4 - 0,8 mm	1,9 - 2,3 mm
M27x2	35	36	350 Nm	0,4 - 20,31 mm	1,9 - 2,3 mm
M36x2	55	50	1080 Nm	0,4 - 0,95 mm	2,8 - 3,4 mm

Rod clevis with lock washer, Series AP2



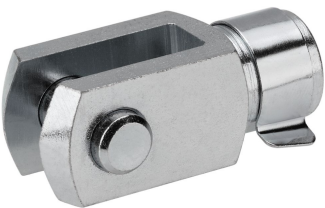
Suitable piston rod thread	for series	Material	Part No.
M4	SSI, ICM	Stainless Steel	3330510000
M6	CSL-RD, SSI, ICM	Stainless Steel	3330516000
M8	CCL-IC, CSL-RD, CCI, ICM	Stainless Steel	3330520000
M10x1,25	CCL-IS, CCL-IC, CCI, CSL-RD, SSI, ICM, ICS-D2, 167	Stainless Steel	3590502000
M12x1,25	CCL-IS, CCL-IC, CCI, SSI, 167, ICS-D2	Stainless Steel	3590504000
M16x1,5	CCL-IS, ICS-D2, 167	Stainless Steel	3590505000



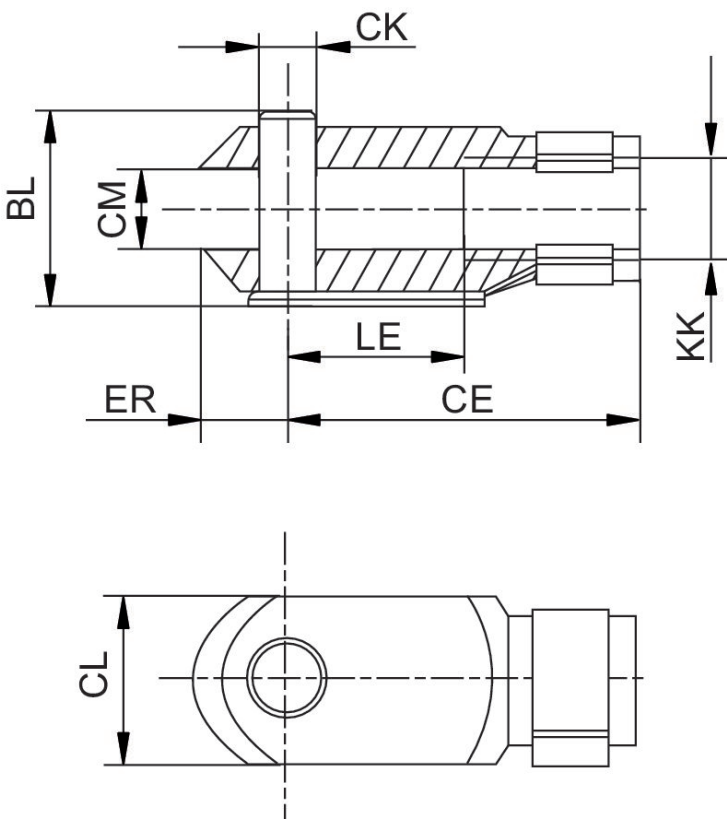
KK	Part No.	CE	CK e8	CL	CM B12	ER	BL	LE
M4	3330510000	16	4	10	5	6	15	8
M6	3330516000	24	6	12	6	7	17	12
M8	3330520000	32	8	16	8	10	22	16

KK	Part No.	CE	CK e8	CL	CM B12	ER	BL	LE
M10x1,25	3590502000	40	10	20	10	12	26	20
M12x1,25	3590504000	48	12	24	12	14	31	24
M16x1,5	3590505000	64	16	32	16	19	39	32
M20x1,5	3590508000	80	20	40	20	20	49	40

Rod clevis AP2, Series CM2



Suitable piston rod thread	for series	Material	Part No.
M6	CCI, MNI, ICM, KHZ	Steel, chrome-plated	1822122009
M8	CCI, MNI, ICM, KHZ	Steel, chrome-plated	1822122010
M10x1,25	PRA, TRB, CCI, MNI, ICM, KPZ, 167, CVI, RPC, RDC	Steel, chrome-plated	1822122024
M12x1,25	PRA, TRB, CCI, KPZ, 167, CVI, RPC, 102	Steel, chrome-plated	1822122025
M16x1,5	PRA, TRB, CCI, KPZ, 167, CVI, RPC, RDC, 102	Steel, chrome-plated	1822122005



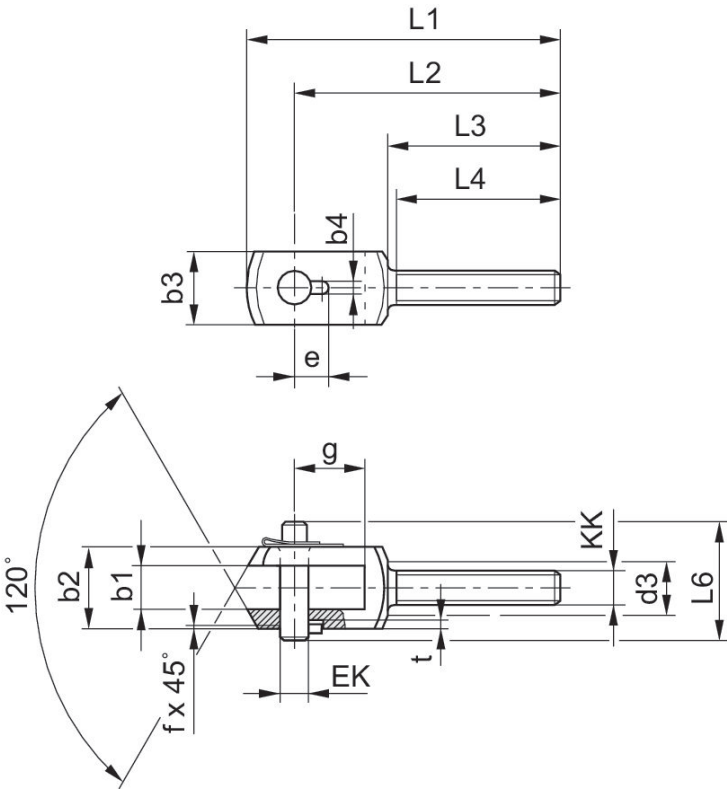
KK	Part No.	BL	CE	ØCK e11	CL	CM	ØD1	ER	LE
M4	1822122028	11	16	4	8	4	8	5	8

KK	Part No.	BL	CE	ØCK e11	CL	CM	ØD1	ER	LE
M6	1822122009	16	24	6	12	6	10	7	12
M8	1822122010	21,5	32	8	16	8	14	10	16
M10x1,25	1822122024	26	40	10	20	10	18	12	20
M12x1,25	1822122025	31	48	12	24	12	20	14	24
M16x1,5	1822122005	39	64	16	32	16	26	19	32
M20x1,5	1822122004	50	80	20	40	20	34	20	40
M10	8958000122	26	40	10	20	10	18	12	20
M12	8958000132	31	48	12	24	12	20	14	24
M48x2	8958019332	122	192	50	96	50	82	73	96
M5	1822122008	13.5	20	5	10	5	9	6	10

Rod clevis, Series PM6



for series	Swivel bearing Ø [mm]		Material	Part No.
AP6	14		Steel, chrome-plated	1822122032
AP6	16		Steel, chrome-plated	1822122033
AP6	21		Steel, chrome-plated	1822122034



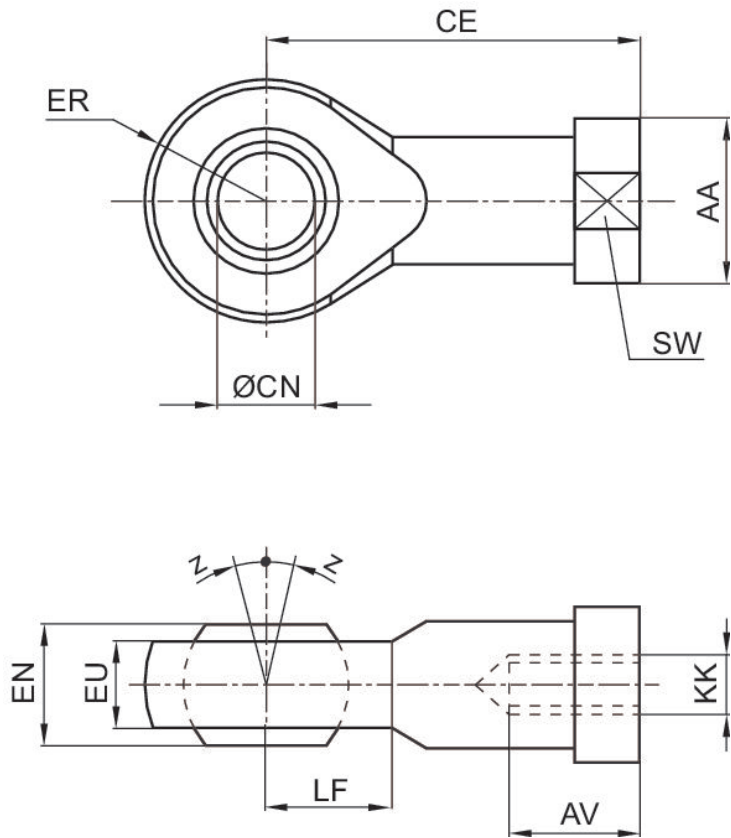
KK	Part No.	b1 B12	b2 d12	b3	b4 +0,2	d3	e +0,3	EK	f	g
14	1822122032	14	28	20	3.3	17	11.5	10	0.7	20
16	1822122033	16	30	25	4.3	19	12	12	1	26
21	1822122034	21	40	35	4.3	24	14	16	1	31
25	1822122035	25	50	40	4.3	30	16	20	1	43
30	1822122036	37	67	60	6.3	38	24	30	1.5	54

KK	L1	L2	L3	L4 +1	L6	t +0,2
14	90	78	53	50	35	3
16	108	92	58	55	39	3
21	129	108	65	62	50	3
25	156	131	73	69	60	3
30	200	168	98	92	77	5

Ball eye rod end AP6, galvanized Steel



Suitable piston rod thread	for series	Swivel bearing Ø [mm]	Material	Part No.
M6	MNI, CCI, SSI	6	Steel, chrome-plated	1822124001
M8	MNI, CCI, SSI, KPZ	8	Steel, chrome-plated	1822124002
M10x1,25	PRA, TRB, MNI, CCI, SSI, RPC, KPZ, 167, CVI, RDC	10	Steel, chrome-plated	1822124003
M12x1,25	PRA, TRB, CCI, SSI, RPC, KPZ, 167, CVI, 102	12	Steel, chrome-plated	1822124004
M16x1,5	PRA, TRB, CCI, SSI, RPC, KPZ, 167, CVI, RDC, 102	16	Steel, chrome-plated	1822124005



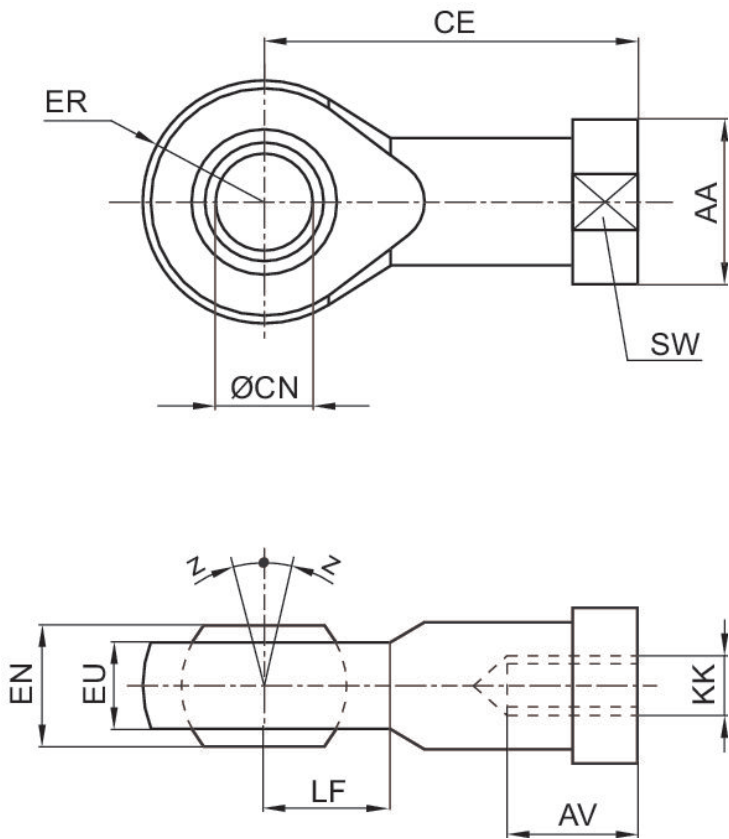
KK	Part No.	AA	AV min.	CE	Ø CN H7	EN -0,1	ER	EU max.	LF	SW
M4	1822124000	12	8	27	5	8	9	7.5	9	9
M6	1822124001	13	9	30	6	9	10	7.5	10	11
M8	1822124002	16	12	36	8	12	12	9.5	12	14
M10	8958206402	19	20	43	10	14	14	10.5	13	17
M12	8958208852	22	22	50	12	16	16	12	16	19
M10x1,25	1822124003	19	15	43	10	14	14	11.5	14	17
M12x1,25	1822124004	22	18	50	12	16	16	12.5	16	19
M16x1,5	1822124005	27	24	64	16	21	21	15.5	21	22
M20x1,5	1822124006	34	30	77	20	25	25	18.5	25	30
M24x2	8958208002	42	36	94	25	31	30	23	30	36
M27x2	1822124013	50	45	110	30	37	35	27	35	41
M36x2	1822124008	60	56	125	35	43	40	32	40	50
M42x2	1822124009	69	60	142	40	49	45.5	37	45	55
M48x2	8958208842	75	65	160	50	60	58	45	60	65

KK	Z [°] max.
M4	4
M6	4
M8	4
M10	6
M12	13
M10x1,25	4
M12x1,25	4
M16x1,5	4
M20x1,5	4
M24x2	15
M27x2	4
M36x2	4
M42x2	4
M48x2	6

Ball eye rod end AP6, stainless Steel



Suitable piston rod thread	for series	Swivel bearing Ø [mm]	Material	Part No.
M10x1,25	CCL-IS, CCL-IC, SSI, CSL-RD, ICM, ICS-D2	10	Stainless Steel	8958209032
M12x1,25	CCL-IS, CCL-IC, SSI, ICS-D2	12	Stainless Steel	8958209042
M16x1,5	CCL-IS, CCL-IC, SSI, ICS-D2	16	Stainless Steel	8958209052



KK	Part No.	AA	AV min.	CE	Ø CN H7	EN -0,1	ER	EU max.	LF	SW
M4	8958209002	11	8	27	5	8	9	6	9	9
M6	8958209012	13	9	30	6	9	10	6,75	10	11
M8	8958209022	16	12	36	8	12	12	9	12	14

KK	Part No.	AA	AV min.	CE	Ø CN H7	EN –0,1	ER	EU max.	LF	SW
M10x1,25	8958209032	19	15	43	10	14	14	10.5	14	17
M12x1,25	8958209042	22	18	50	12	16	16	12	16	19
M16x1,5	8958209052	27	24	64	16	21	21	15	21	22
M20x1,5	8958209062	34	30	77	20	25	25	18	25	30
M27x2	8958209072	50	45	110	30	37	35	25	35	41

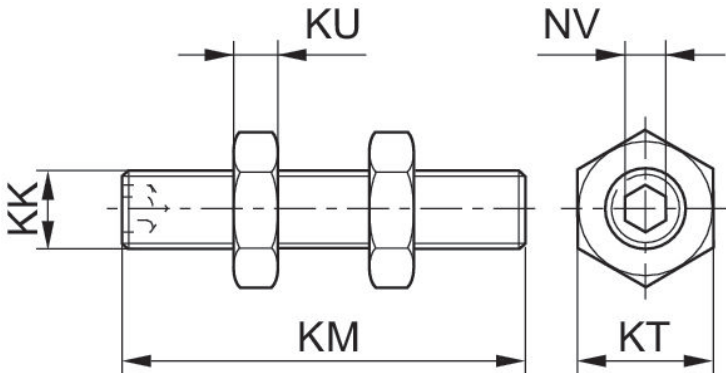
KK	Z [°] max.
M4	6,5
M6	6,5
M8	6,5
M10x1,25	6,5
M12x1,25	6,5
M16x1,5	7,5
M20x1,5	7,5
M27x2	7,5

Piston rod extension, series CM2

For series: KHZ SSI



Thread size	Material	Part No.
M6	Stainless Steel	2701432000
M8	Stainless Steel	2701450000
M10	Stainless Steel	2701463000

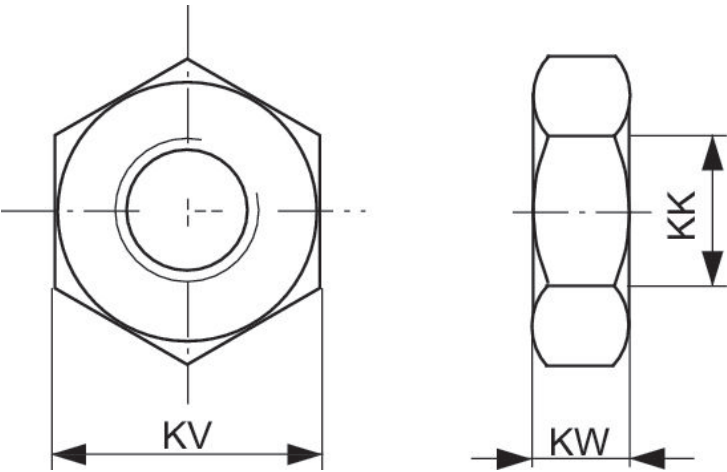


KK	Part No.	KM	KT	KU	NV
M3	2701412000	20	5.5	1.8	1.5
M5	2701420000	25	8	2.7	2.5
M6	2701432000	30	10	3.2	3
M8	2701450000	35	13	4	4
M10	2701463000	40	16	5	5

Piston rod nut MR9



Thread size	Material	Part No.
M6	Steel, chrome-plated	1823300033
M8	Steel, chrome-plated	1823300034
M10x1,25	Steel, chrome-plated	1823A00020
M12x1,25	Steel, chrome-plated	8103190344
M16x1,5	Steel, chrome-plated	1823300030
M8	Stainless Steel	3330320000
M10x1,25	Stainless Steel	3590302000
M12x1,25	Stainless Steel	3590304000
M16x1,5	Stainless Steel	3590305000

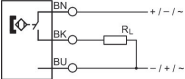


KK	Part No.	KV	KW
M4	1823300033	10	3.2
M6	1823300034	13	4
M8	1823A00021	19	6
M10	8103190344	19	6
M10x1,25	1823300030	24	8
M20x1,5	1823300031	30	10
M27x2	1823A00029	41	13.5

KK	Part No.	KV	KW
M36x2	8103190414	50	16
M42x2	8103190424	60	21
M6	8103190644	10	3.2
M8	8103190164	13	4
M10x1,25	8103190464	17	5
M4	3330310000	7	2.2
M12x1,25	3590304000	19	6
M16x1,5	3590305000	24	8
M20x1,5	3590308000	30	10
M20x1,5	8103040344	30	10
M24x2	8103190394	36	12
M48x2	8103190434	65	25
M10x1,25	2990600303	17	5
M12x1,25	2990600304	19	6
M16x1,5	2990600305	24	8
M20x1,5	2990600308	30	10
M27x2	2990600312	41	13.5
M36x2	2990600316	50	16
M42x2	2990600325	60	21

Sensors, Series ST6, open cable ends, 3-pin, Reed

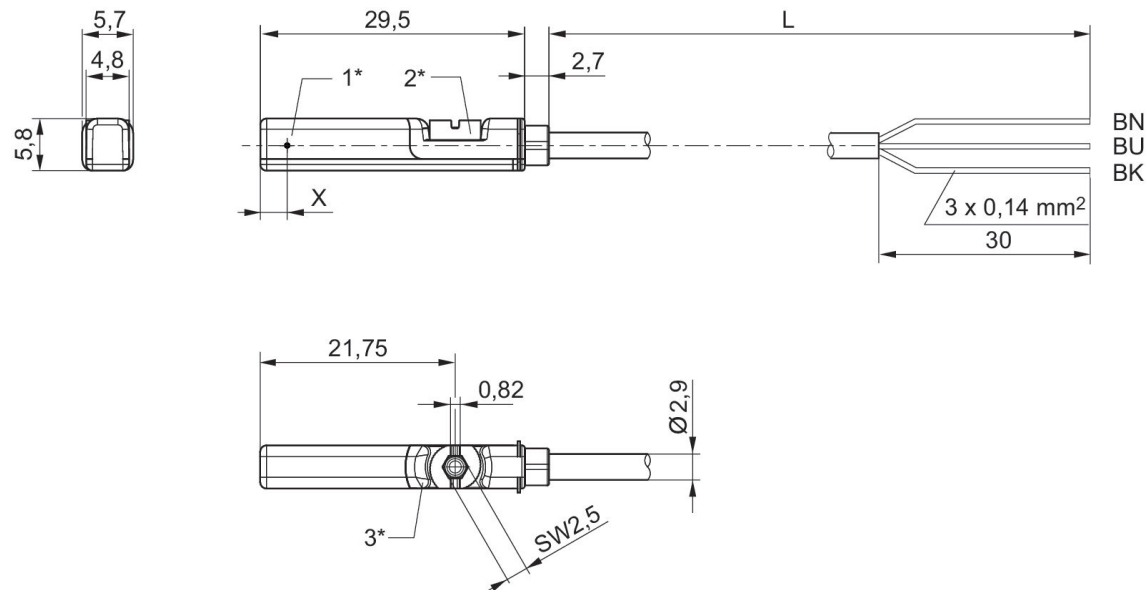
For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: without wire end ferrule, tin-plated
Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
PRA, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, 167, C12P, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.13	0.13	10	230	10	230	Protected against polarity reversal	3	R412022866
PRA, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, 167, C12P, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.13	0.13	10	230	10	230	Protected against polarity reversal	5	R412027170
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.3	0.5	10	30	10	30	Protected against polarity reversal	3	R412022869
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.3	0.5	10	30	10	30	Protected against polarity reversal	5	R412022870

Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switch- ing cur- rent [A]	Max. AC switch- ing cur- rent [A]	Min. operat- ing volt- age DC [V DC]	Max. operat- ing volt- age DC [V DC]	Min. operat- ing volt- age AC [V AC]	Max. opera- tional volt- age AC [V AC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL- IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Red Pol	urethane	0.3	0.5	10	30	10	30	Pro- tected against polarity reversal	10	R412022871
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL- IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	urethane	0.13		10	30			short cir- cuit re- sistant, Pro- tected against polarity reversal	3	R412022853
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL- IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	urethane	0.13		10	30			short cir- cuit re- sistant, Pro- tected against polarity reversal	5	R412022855
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL- IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	urethane	0.13		10	30			short cir- cuit re- sistant, Pro- tected against polarity reversal	10	R412022857
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL- IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	NP	urethane	0.13		10	30			short cir- cuit re- sistant, Pro- tected against polarity reversal	3	R412022849
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL- IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	NP	urethane	0.13		10	30			short cir- cuit re- sistant, Pro- tected against polarity reversal	5	R412022850

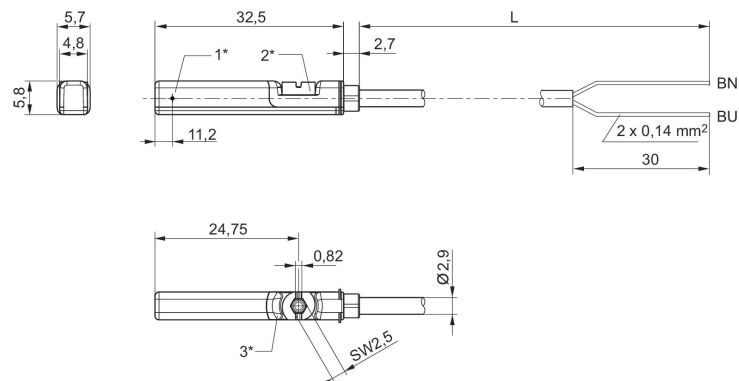
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length BN = brown, BK = black, BU = blue
X = electronic: 11.6 mm

R412022866, R412027170

Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length BN=brown, BU=blue

Sensors, Series ST6, plug M8

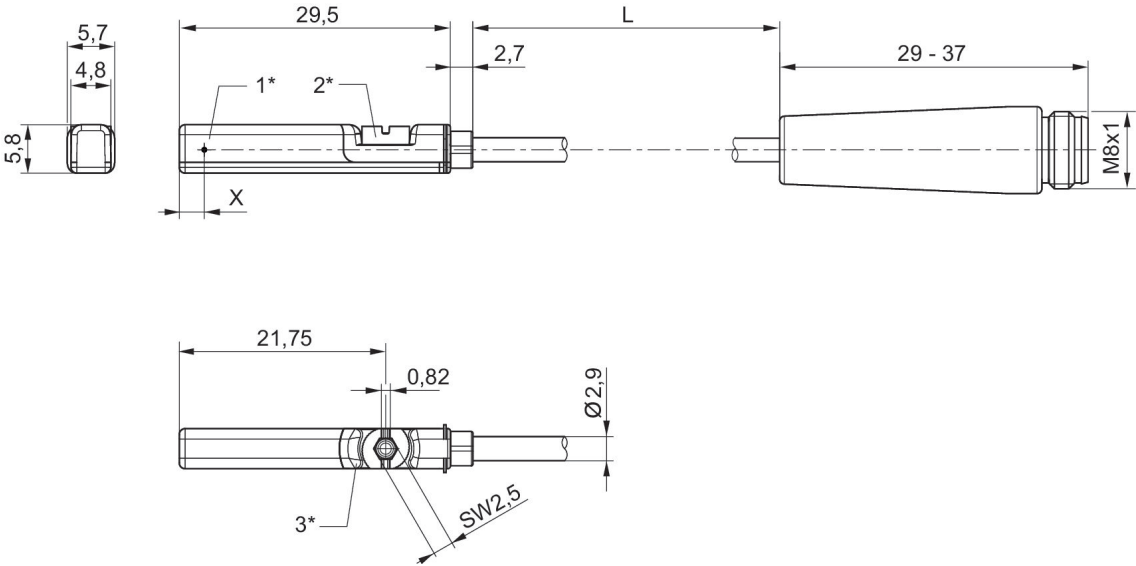
For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: Plug
Electrical connection 2, thread size: M8
Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
Electrical connection 2, number of poles: 3-pin



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.13	0.13	10	30	10	30	Protected against polarity reversal	0.3	R412022868
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.13	0.13	10	30	10	30	Protected against polarity reversal	0.3	R412027172
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.3	0.5	10	30	10	30	Protected against polarity reversal	0.3	R412022872
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	0.3	R412022858
PRA, PRE, CCI, KPZ	TRB, ITS, CCL-IS, MNI	NPN	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	0.3	R412022851

Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
SSI, GPC, CVI	CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR									tected against polarity reversal		

Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

Sensors, Series ST6, plug M12x1

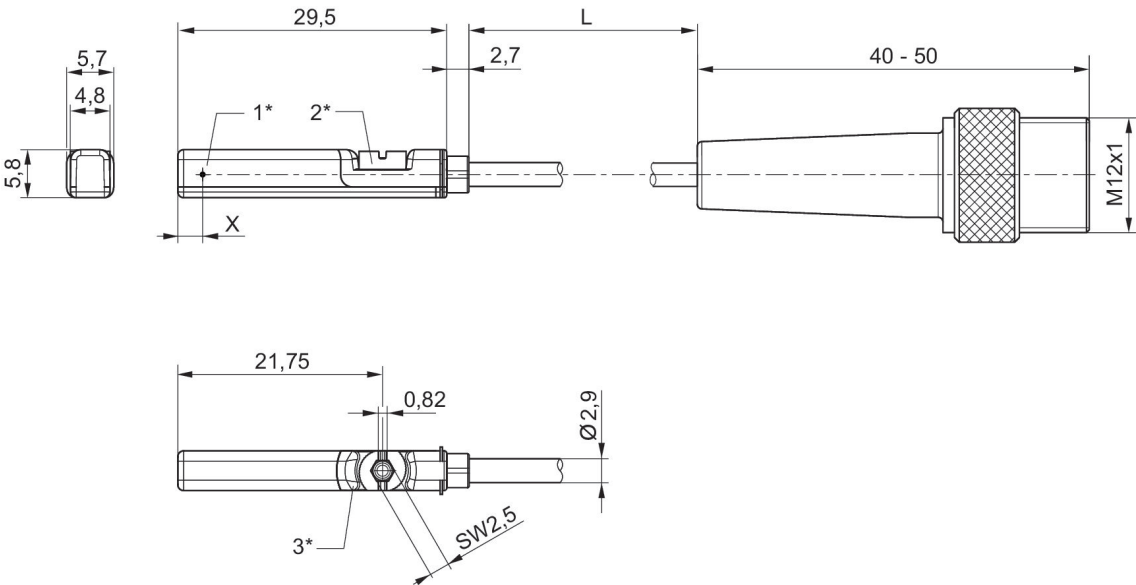
For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: Plug
Electrical connection 2, thread size: M12
Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
Electrical connection 2, number of poles: 3-pin



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.13	0.13	10	30	10	30	Protected against polarity reversal	0.3	R412027171
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.3	0.5	10	30	10	30	Protected against polarity reversal	0.3	R412022876
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	0.1	R412022879
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	0.3	R412022863
PRA, PRE, CCI, KPZ	TRB, ITS, CCL-IS, MNI	electronic PNP	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	3	R412022877

Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
SSI, GPC, CVI	CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR									tected against polarity reversal		
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	5	R412022878

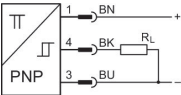
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = PNP: 11,6 mm, reed: 8,3 mm

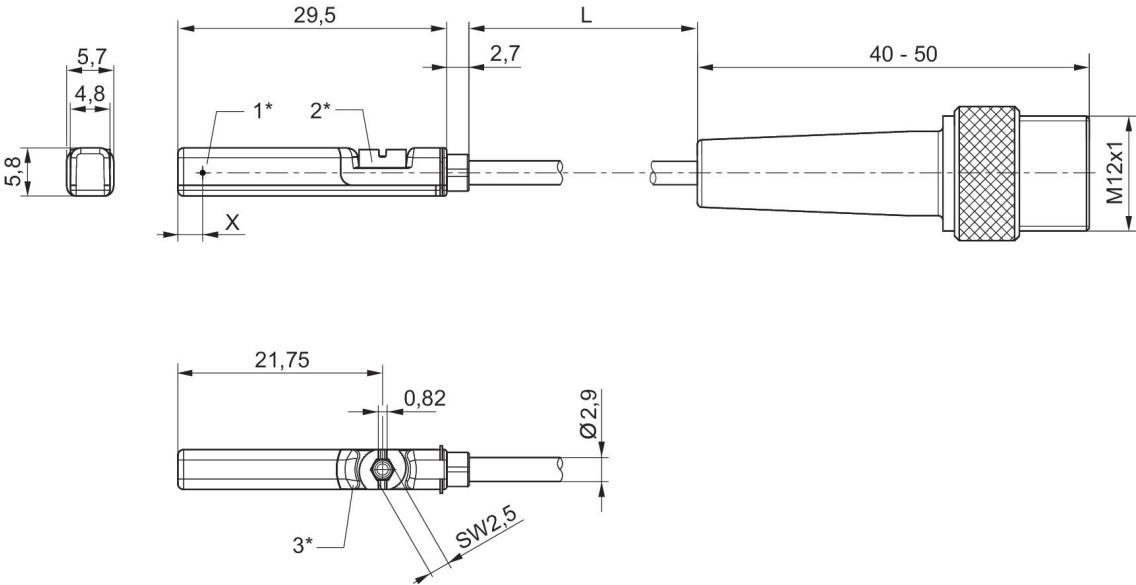
Sensors, Series ST6, plug M12x1, ATEX

For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: Plug
Electrical connection 2, thread size: M12
Certificates: ATEX CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
Electrical connection 2, number of poles: 3-pin



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	PNP	Polyurethane	0.1	10	30	short circuit resistant, Protected against polarity reversal	0.3	R412022864

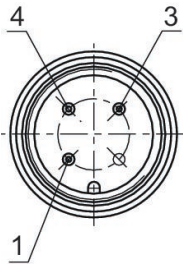
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = PNP: 11,6 mm, reed: 8,3 mm

R412022864

Pin assignments



Pin	Allocation
1	(+)
3	(-)
4	(OUT)

Sensors, Series ST6, plug M8x1, with knurled screw

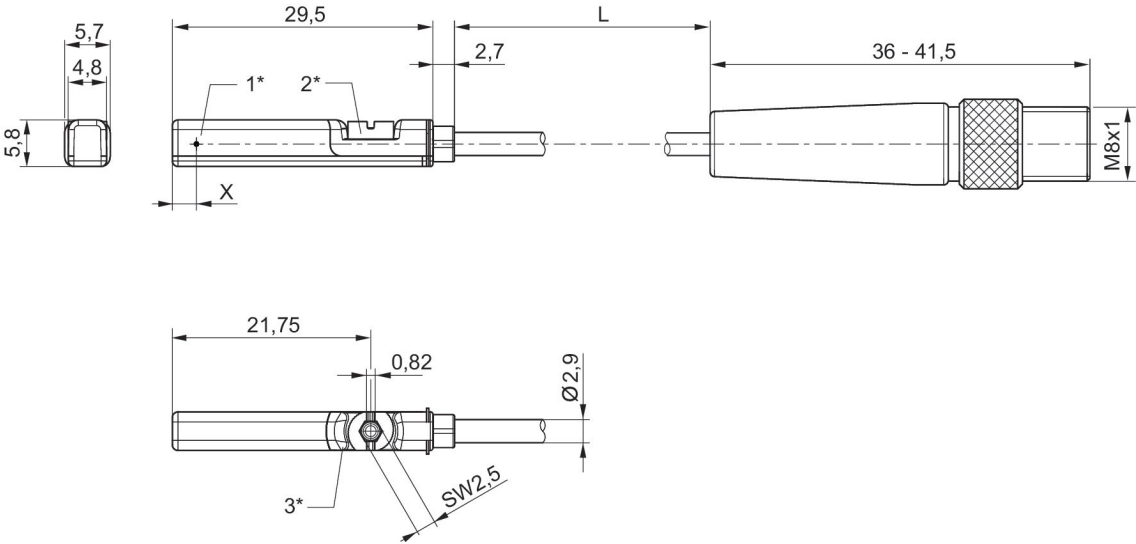
For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: Plug
Certificates: CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
Electrical connection 2, number of poles: 3-pin



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.3	0.5	10	30	10	30	Protected against polarity reversal	0.3	R412022873
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyvinyl chloride	0.3	0.5	10	30	10	30	Protected against polarity reversal	0.3	R412022875
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	Reed	Polyurethane	0.3	0.5	10	30	10	30	Protected against polarity reversal	0.5	R412022874
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	0.3	R412022859
PRA, PRE, CCI, KPZ	TRB, ITS, CCL-IS, MNI	electron-ic PNP	Polyvinyl chloride	0.13		10	30			short circuit resistant, Pro-	0.3	R412022862

Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
SSI, GPC, CVI	CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR									tected against polarity reversal		
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	electronic PNP	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	0.5	R412022861
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	NPN	Polyurethane	0.13		10	30			short circuit resistant, Protected against polarity reversal	0.3	R412022852

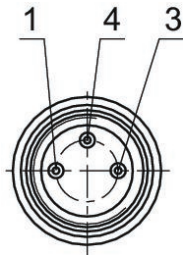
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

R412022873, R412022875, R412022874, R412022859, R412022862, R412022861, R412022852

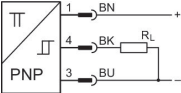
Pin assignment M8x1 (3-pin)



Pin	Allocation
1	(+)
3	(-)
4	(OUT)

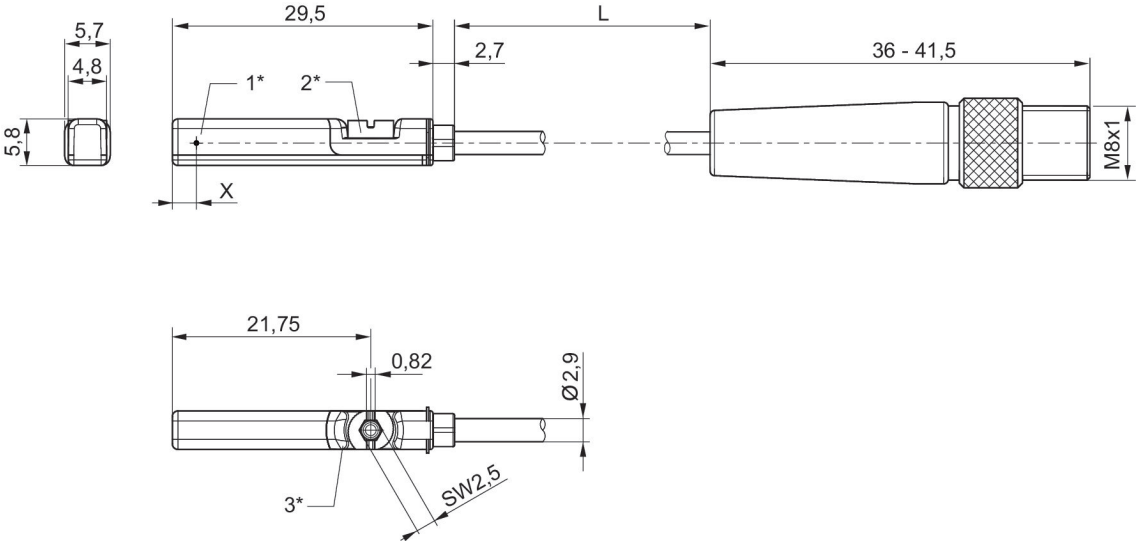
Sensors, Series ST6, plug M8x1, ATEX

For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: Plug
Electrical connection 2, thread size: M8
Certificates: ATEX CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)
Electrical connection 2, number of poles: 3-pin



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	PNP	Polyurethane	0.1	10	30	short circuit resistant, Protected against polarity reversal	0.3	R412022860

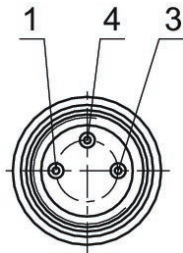
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

R412022860

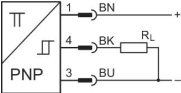
Pin assignment M8x1 (3-pin)



Pin	Allocation
1	(+)
3	(-)
4	(OUT)

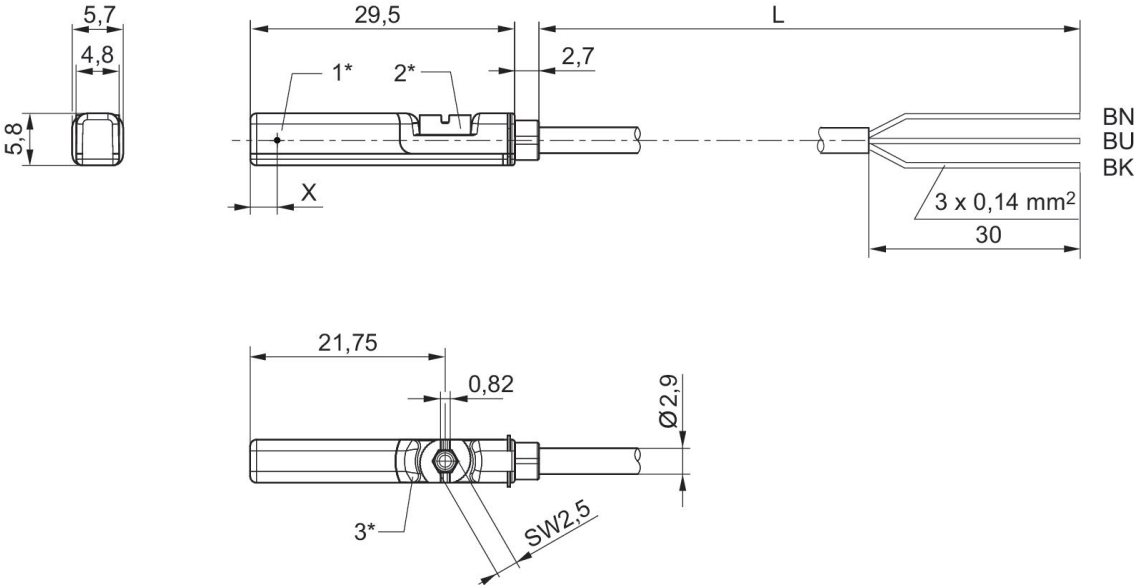
Sensors, Series ST6, ATEX

For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: open cable ends
Certificates: ATEX CE declaration of conformity cULus RoHS UL (Underwriters Laboratories)



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	PNP	Polyurethane	0.1	10	30	short circuit resistant, Protected against polarity reversal	3	R412022854
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR	PNP	Polyurethane	0.1	10	30	short circuit resistant, Protected against polarity reversal	5	R412022856

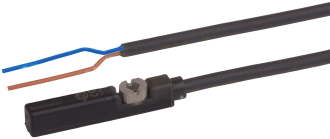
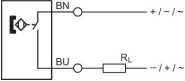
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length BN = brown, BK = black, BU = blue
X = electronic: 11.6 mm

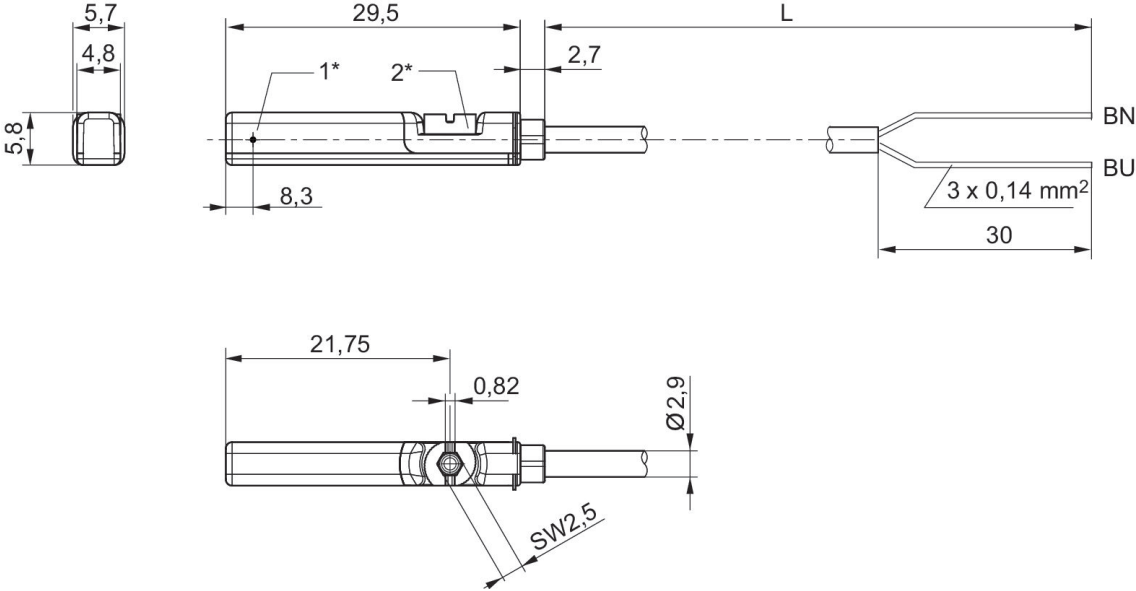
Sensor, Series ST6-HT

For series: PRA PRE CCI KPZ
Electrical connection 2, type: open cable ends
Temperature resistance: Heat resistant
Certificates: RoHS UL (Underwriters Laboratories)



Direct mounting for series	Indirect mounting for series	Switch descr.	Cable sheath	Max. DC switching current [A]	Max. AC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Min. operating voltage AC [V AC]	Max. operational voltage AC [V AC]	Version	Cable length L [m]	Part No.
PRA, PRE, CCI, KPZ	TRB, ITS, MNI, CSL-RD, RPC	Reed	Polyurethane	0.13	0.13	0	30	0	30	Protected against polarity reversal	3	R412022865
PRA, PRE, CCI, KPZ	TRB, ITS, MNI, CSL-RD, RPC	Reed	Polyurethane	0.13	0.13	0	30	0	30	Protected against polarity reversal	10	R412022867

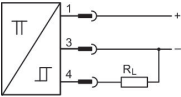
Dimensions



1* = switching point 2* = locking screw
L = cable length BN=brown, BU=blue

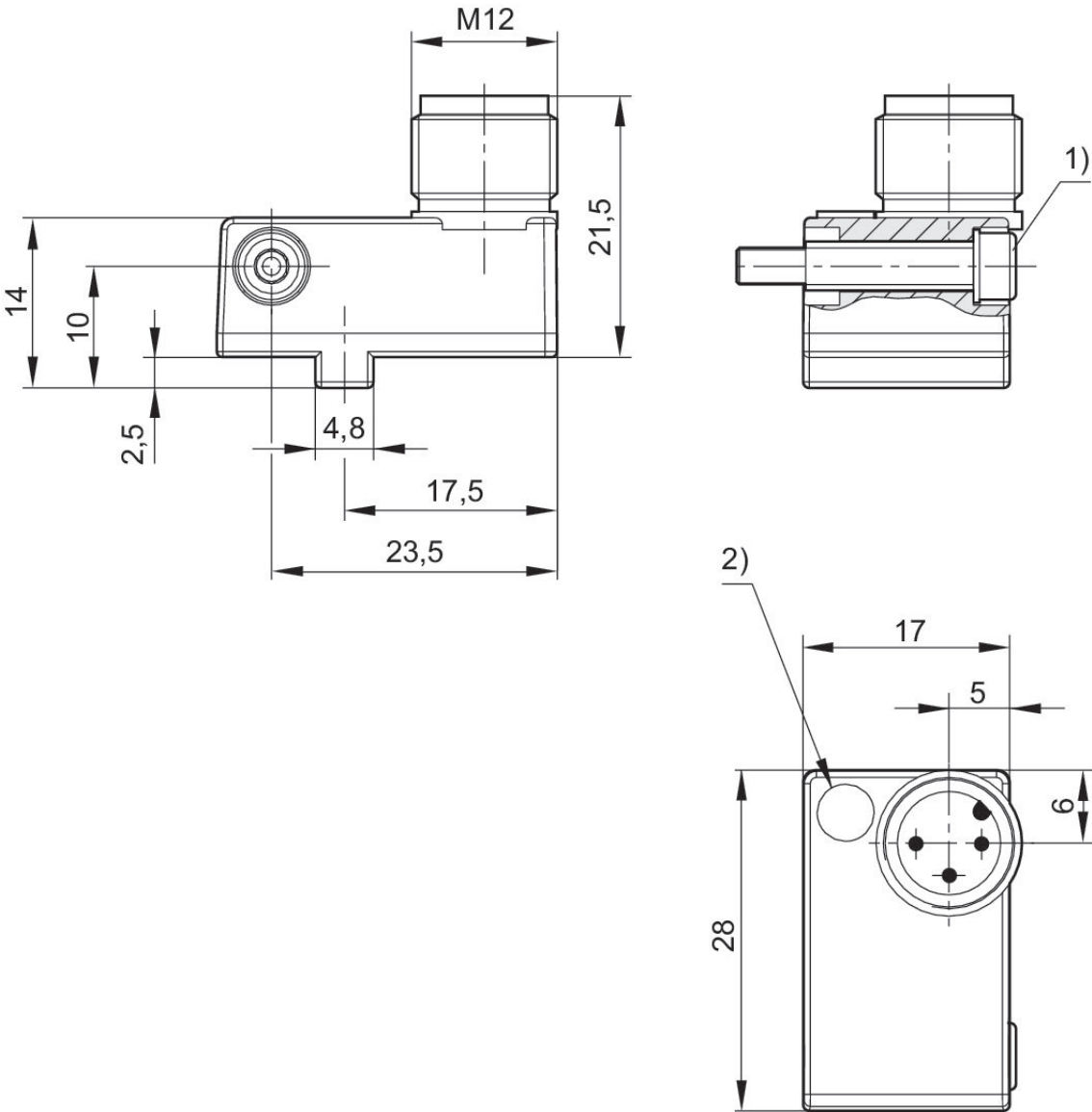
Sensor, Series SN3

Electrical connection 2, type: Plug
Electrical connection 2, thread size: M12
Electrical connection 2, number of poles: 3-pin



Indirect mount- ing for series	Switch descr.	Operational voltage	Electrical con- nection size	Electrical connec- tion number of poles	Part No.
PRA, PRE, CCI, KPZ, KHZ, FLT, GPC, CVI	PNP	10-30 V DC	M12	3-pin	0830100438

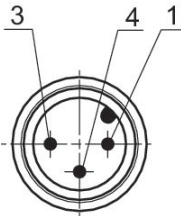
Dimensions



1) Clamping screw
2) LED
Pin assignments: 1 = (+), 3 = (-), 4 = (OUT), EN 60947-5-2:1998

0830100438

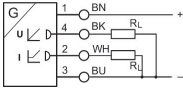
Pin assignments



Pin	Allocation
1	(+)
3	(-)
4	(OUT) EN 60947-5-2:1998

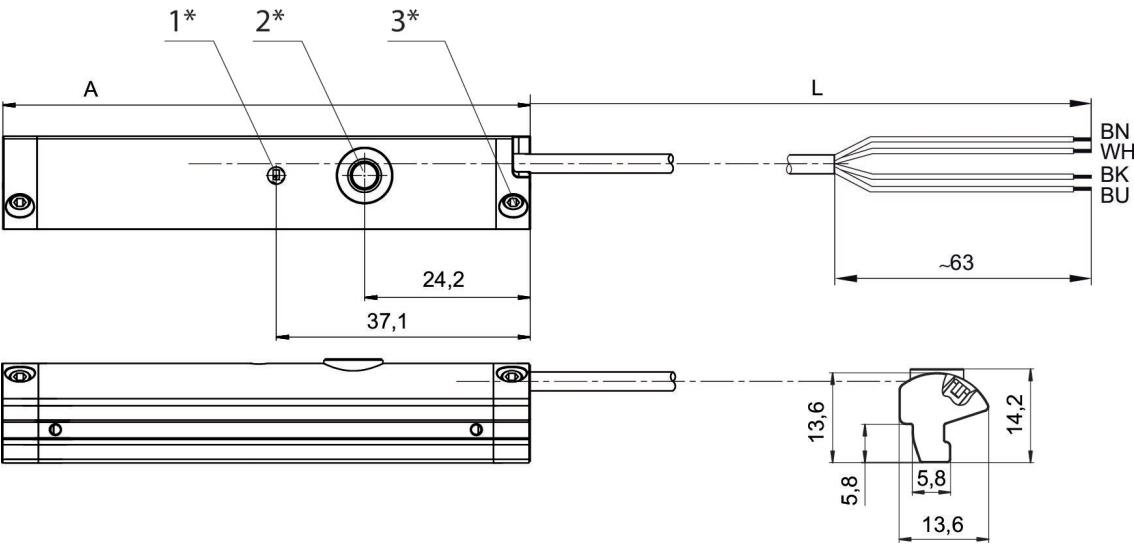
Sensors, Series SM6, with cable, without wire end ferrule, tin-plated

For series: PRA PRE CCI KPZ SSI GPC CVI
Certificates: cULus



Direct mounting for series	Switch descr.	Cable length L [m]	max. measuring range [mm]	Overall length Sensor [mm]	Version	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	32	45	short circuit resistant, Protected against polarity reversal, Overload protection	R412010141
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	64	77	short circuit resistant, Protected against polarity reversal, Overload protection	R412010143
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	96	109	short circuit resistant, Protected against polarity reversal, Overload protection	R412010262
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	128	141	short circuit resistant, Protected against polarity reversal, Overload protection	R412010264
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	160	173	short circuit resistant, Protected against polarity reversal, Overload protection	R412010411
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	192	205	short circuit resistant, Protected against polarity reversal, Overload protection	R412010413
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	224	237	short circuit resistant, Protected against polarity reversal, Overload protection	R412010415
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2	256	269	short circuit resistant, Protected against polarity reversal, Overload protection	R412010417

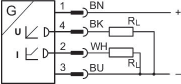
Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11
L = cable length
(2) WH=white
A = sensor length

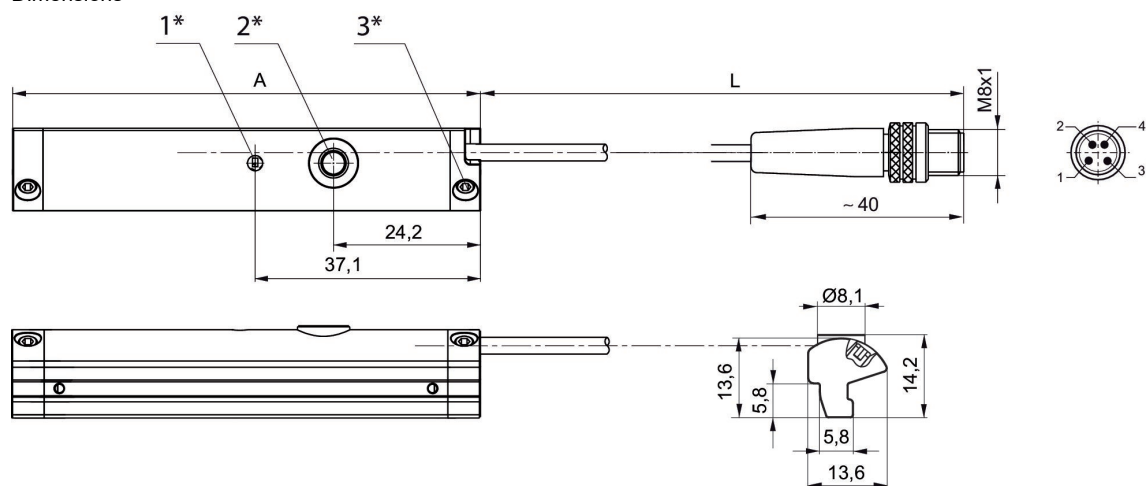
Sensors, Series SM6, with cable, plug M8x1

For series: PRA PRE CCI KPZ SSI GPC CVI
Electrical connection 2, type: Plug
Electrical connection 2, thread size: M8x1
Certificates: cULus
Electrical connection 2, number of poles: 4-pin



Direct mounting for series	Switch descr.	Cable length L [m]	max. measuring range [mm]	Overall length Sensor [mm]	Version	Part No.
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	32	45	short circuit resistant, Protected against polarity reversal, Overload protection	R412010142
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	64	77	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010144
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	96	109	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010263
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	128	141	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010265
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	160	173	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010410
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	192	205	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010412
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	224	237	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010414
PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3	256	269	Protected against polarity reversal, Protected against polarity reversal, Overload protection	R412010416

Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11

L = cable length

Pin assignment: 1 = (+), 2 = (OUT 1) 3 = (GND), 4 = (OUT 2), EN 60947-5-7

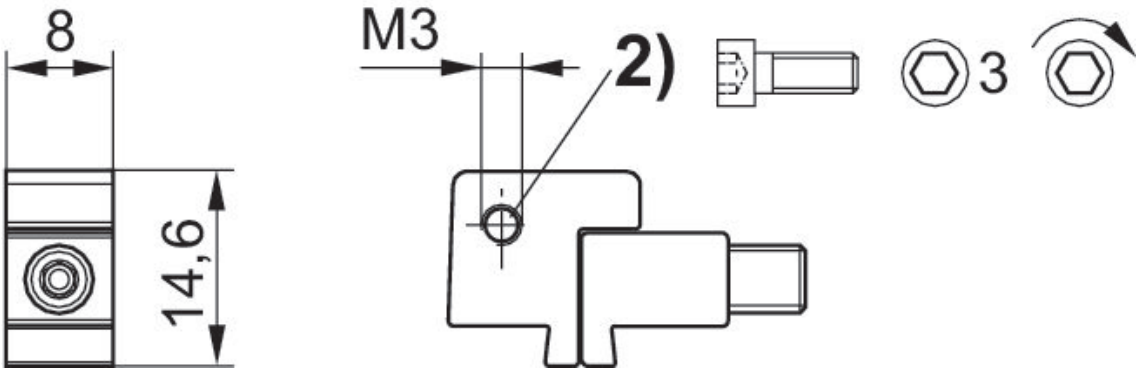
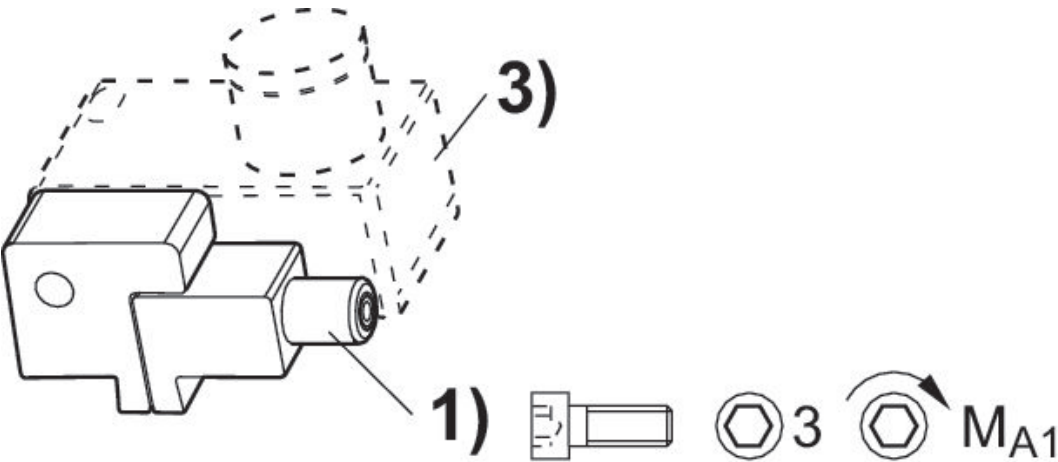
A = sensor length

Sensor mounting, Series CB1

For series: SN3



Material	Part No.
Aluminum	1827020386



1) Clamping screw 2) Mounting screw for sensor 3) Sensor

Part No.	Clamp- ing screw	MA1 [Nm]
1827020386	M3x25	1,8 +0,4

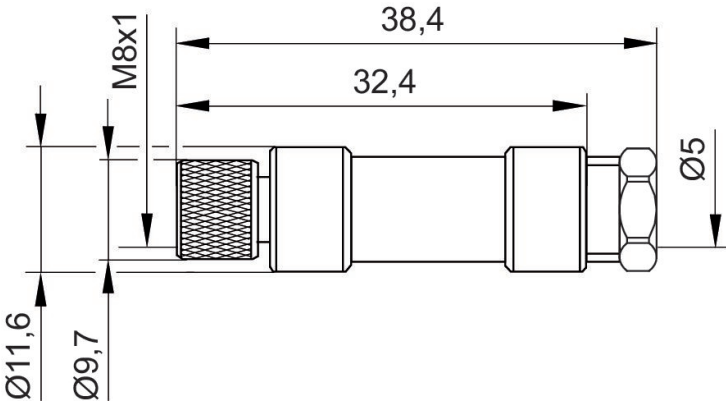
Round plug connector, Series CON-RD, straight

Electrical connection 1, type: Socket
Electrical connection 1, thread size: M8x1
Electrical connection 1, number of poles: 3-pin



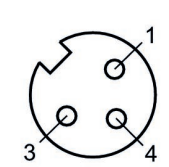
Opera-tional voltage	Contact assign-ment	Coding	Shielding	Connec-tion type	Max. current [A]	min. suit-able ca-ble Ø [mm]	max. suit-able ca-ble Ø [mm]	Min. am-bient tem-perature [°C]	Max. am-bient tem-perature [°C]	Part No.
48 V AC/DC	3-pin	A-coded	unshielded	Soldering	4	3.5	5	-25	80	1834484173

Dimensions



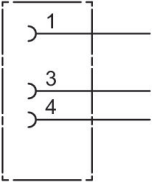
1834484173

Pin assignment, socket



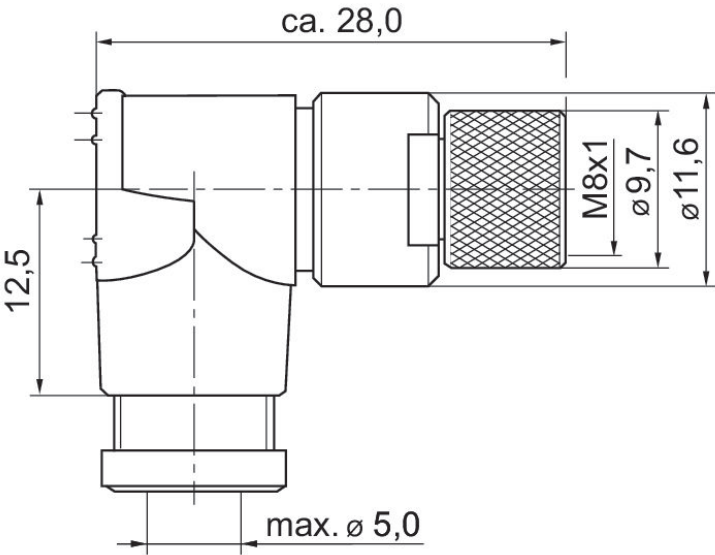
Round plug connector, Series CON-RD, angled

Electrical connection 1, type: Socket
Electrical connection 1, thread size: M8x1
Electrical connection 1, number of poles: 3-pin



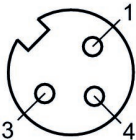
Opera-tional voltage	Contact assign-ment	Coding	Shielding	Connec-tion type	Max. current [A]	min. suit-able ca-ble Ø [mm]	max. suit-able ca-ble Ø [mm]	Min. am-bient tem-perature [°C]	Max. am-bient tem-perature [°C]	Part No.
48 V AC/DC	3-pin	A-coded	unshielded	Soldering	4	3.5	5	-40	85	1834484174

Dimensions in mm



1834484174

Pin assignment, socket



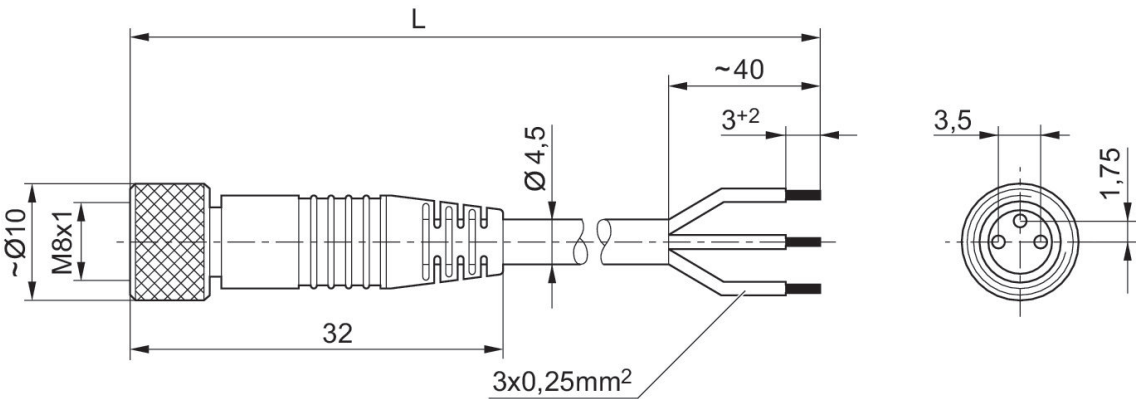
Round plug connector, Series CON-RD, open cable ends, straight

Electrical connection 1, type: Socket
Electrical connection 1, thread size: M8x1
Electrical connection 1, number of poles: 3-pin



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, coding	Electrical connection 2, type	Cable length [m]	Cable-Ø [mm]	Wire cross-section [mm²]	Min. ambient temperature [°C]	Max. ambient temperature [°C]	Part No.
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	3	4.5	0.24	-25	85	1834484166
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	5	4.5	0.24	-25	85	1834484168
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	10	4.5	0.24	-25	85	1834484247

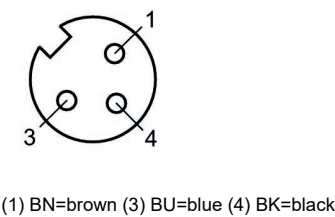
Dimensions



L = length

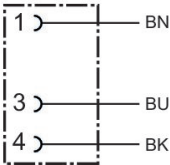
1834484166, 1834484168, 1834484247

Pin assignment, socket



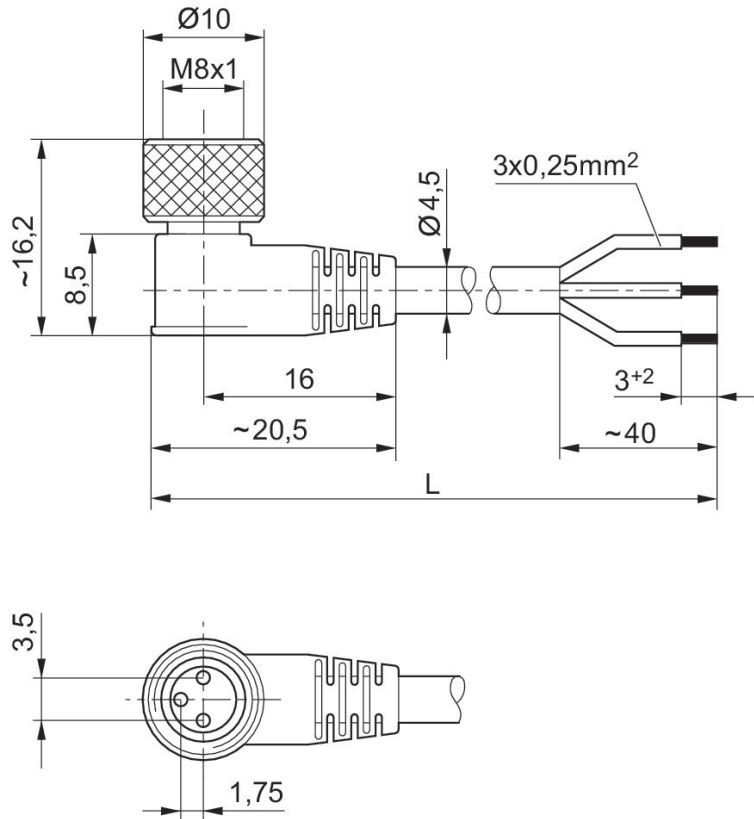
Round plug connector, Series CON-RD, open cable ends, angled

Electrical connection 1, type: Socket
Electrical connection 1, thread size: M8x1
Electrical connection 1, number of poles: 3-pin



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, coding	Electrical connection 2, type	Cable length [m]	Cable-Ø [mm]	Wire cross-section [mm²]	Min. ambient temperature [°C]	Max. ambient temperature [°C]	Part No.
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	3	4.5	0.24	-40	85	1834484167
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	5	4.5	0.24	-40	85	1834484169
48 V AC/DC	4	unshielded	Socket	M8x1	A-coded	open cable ends	10	4.5	0.24	-40	85	1834484248

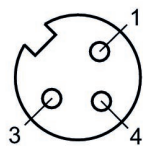
Dimensions



L = length

1834484167, 1834484169, 1834484248

Pin assignment, socket



(1) BN=brown (3) BU=blue (4) BK=black

Silencers, series SI1, Sintered bronze

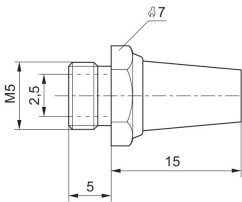
Compressed air connection type: External thread
Silencer material: Sintered bronze



G	Sound pressure level [dB]	Nominal flow [l/min]	Delivery unit [piece]	Weight [kg]	Part No.
M5	72	398	10	0.004	1827000006
G 1/8	75	1623	10	0.01	1827000000

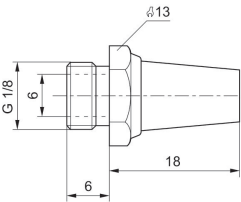
1827000006

Dimensions in mm



1827000000

Dimensions in mm



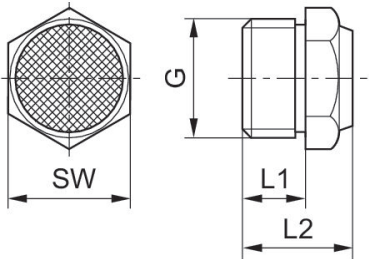
Silencers, series SI1, Sintered bronze

Compressed air connection type: External thread
Silencer material: Sintered bronze



G	Sound pressure level [dB]	Nominal flow [l/min]	Delivery unit [piece]	Weight [kg]	Part No.
M5	79	252	10	0.005	1827000032
G 1/8	85	700	10	0.001	1827000031

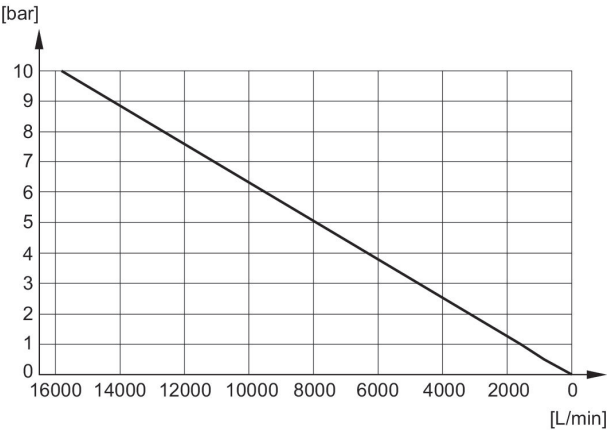
Dimensions



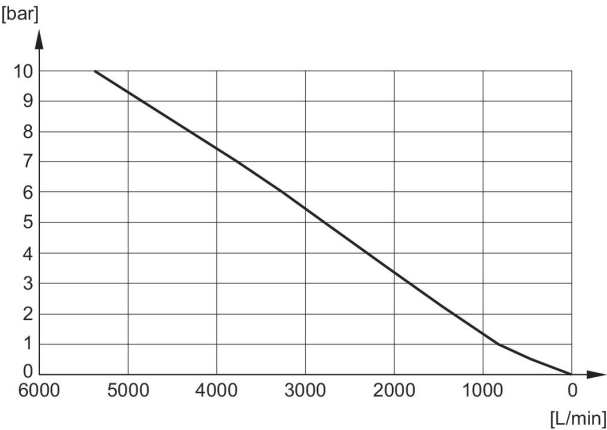
Part No.	Port G	L1	L2	SW
1827000032	M5	5	10.3	7
1827000031	G 1/8	6	11.5	13
1827000033	G 1/4	8	13.5	17
1827000034	G 3/8	10	17.5	22
1827000035	G 1/2	12	19.5	27
8145003400	G 3/4	14	22.5	32
8145001000	G 1	16	22.5	41

Sound pressure level measured at 6 bar at 1 m distance

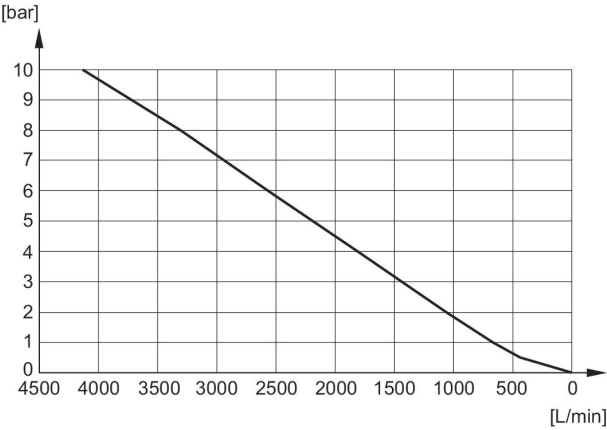
Flow diagram



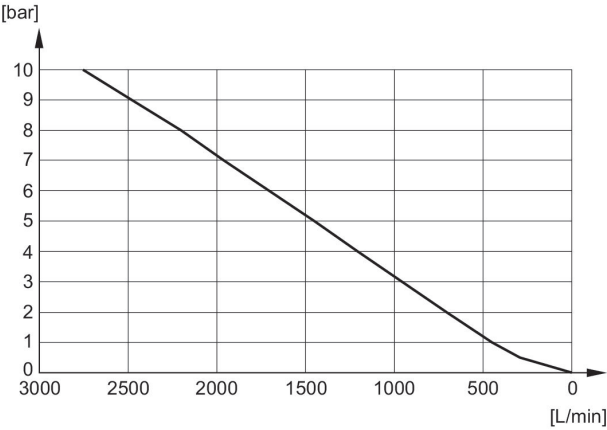
Flow diagram



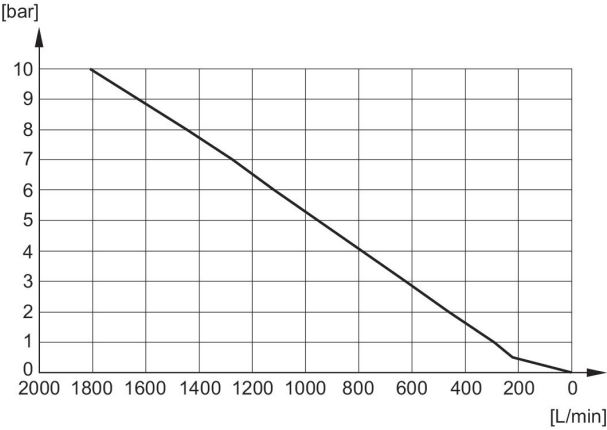
Flow diagram



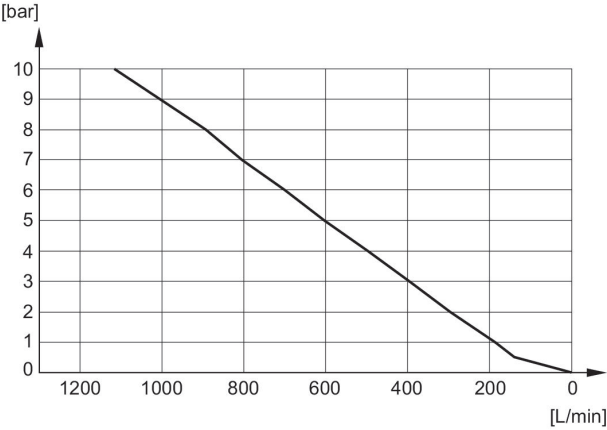
Flow diagram



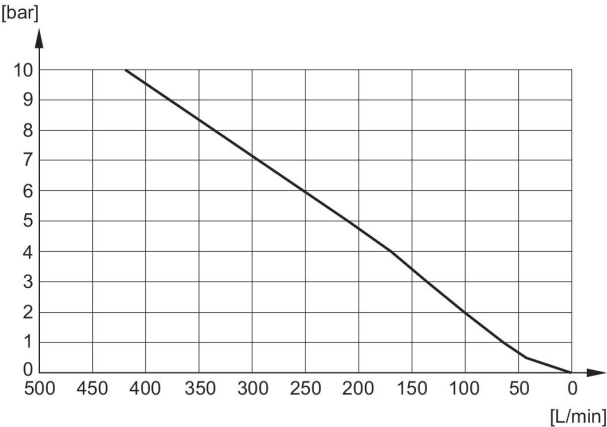
Flow diagram



Flow diagram



Flow diagram



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air supply management, proportional pressure
control valves



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