

Series CCL-IC



AVENTICS™

AVENTICS Series CCL-IC
Standard cylinders (ISO 21287)


EMERSON™

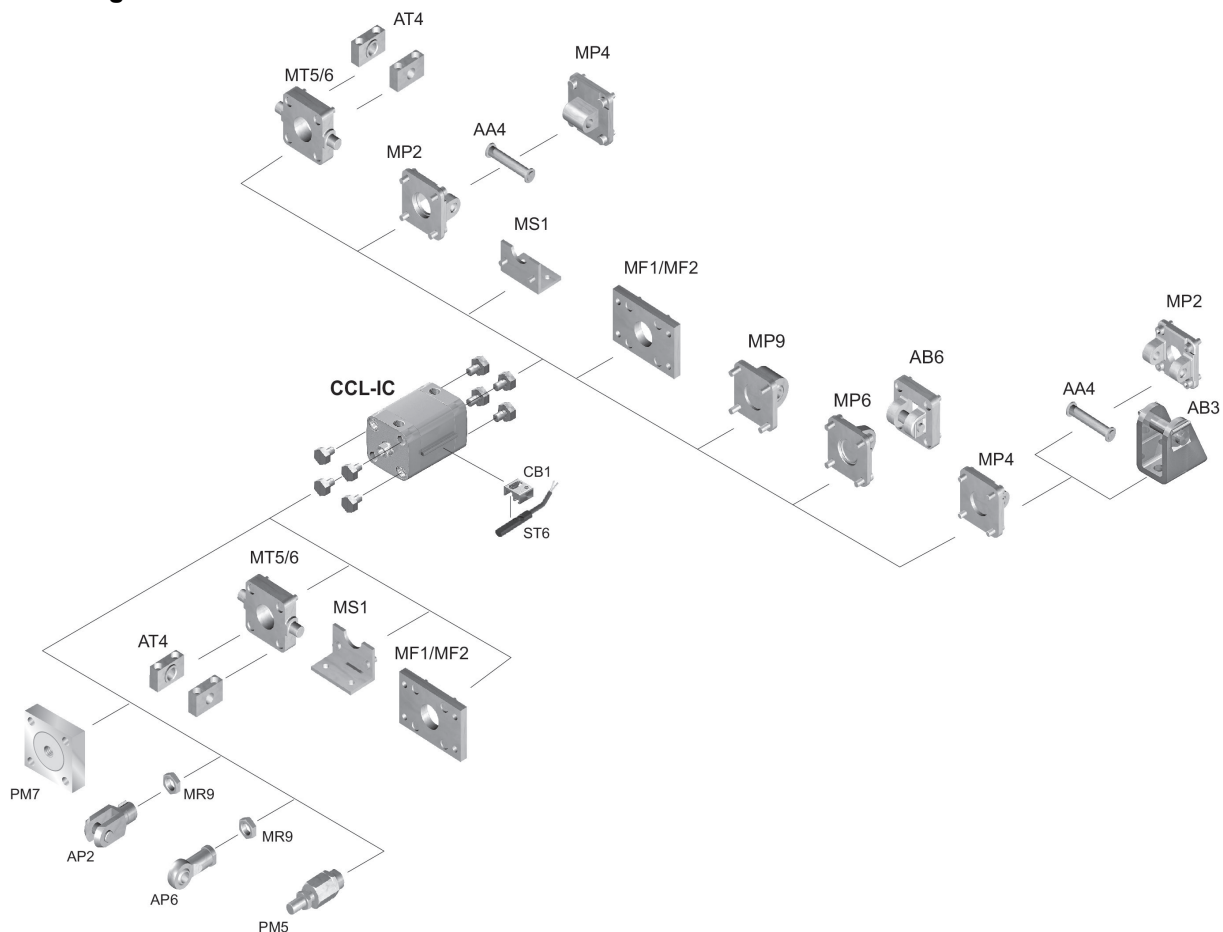
Series CCL-IC

The AVENTICS Series CCL-IC (ISO 21287) cylinders with their compact and clean design can be used in a wide range of applications. Their smooth surface together with their materials, such as anodized aluminium, stainless steel, and NSF-H1 lubricants, make the cylinder ideal for the demanding requirements in the food and beverage industry.

- Compact clean design
- Available in nine sizes covering piston diameters from 16 mm to 100 mm
- Easy to clean anodized surfaces
- Scrapers and lubricants (NSF-H1) are approved for food applications
- Hygienic protective caps for unused mounting holes
- Universal mounting concept for easy assembly, without the need for additional mounting elements



Overview drawing



ISO 21287, Series CCL-IC

ISO 21287
Compact and short-stroke cylinders
Industry standard
suitable for use in food processing
High corrosion
single
Piston with magnet
Elastic cushioning
Internal thread
Internal thread
Single-acting, retracted without pressure

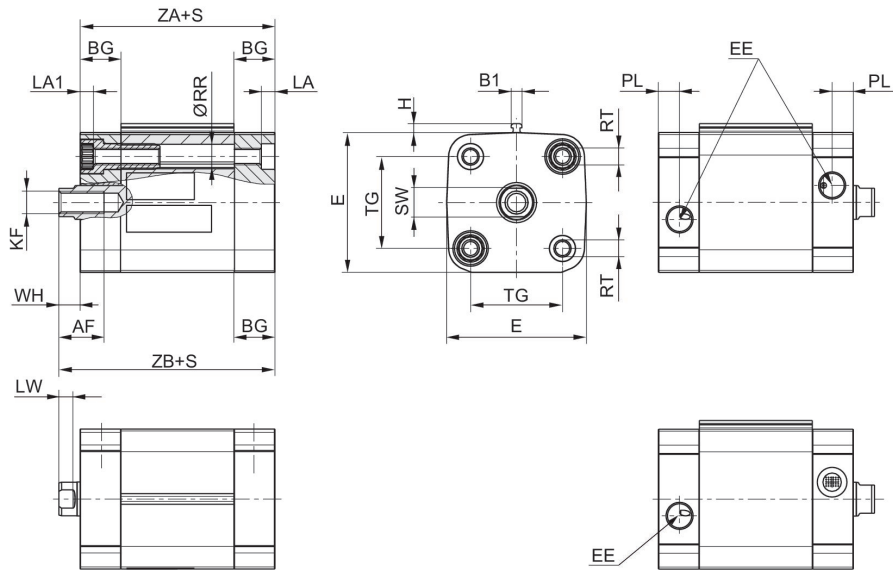


Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R480668926
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R480668927
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R480668928
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R480668929
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	12	115	R480668930
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R480668931
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R480668932
20	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R480668933
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R480668934
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	13	185	R480668935
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R480668936
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R480668937

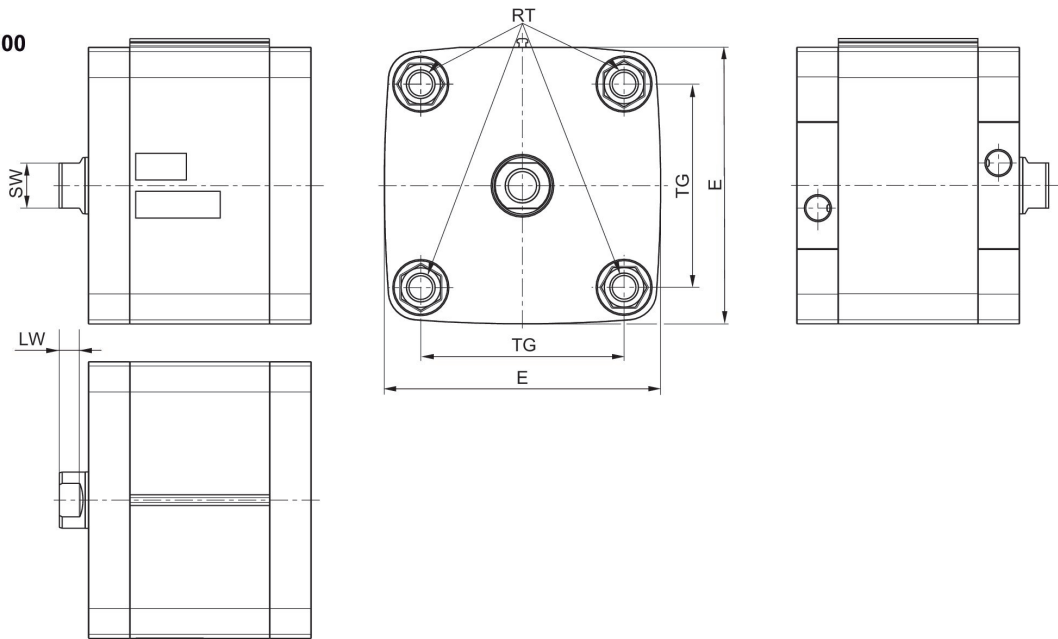
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R480668938
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R480668939
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	25	284	R480668940
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R480668941
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R480668942
32	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R480668943
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R480668944
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	35	472	R480668945
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R480668946
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R480668947
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R480668948
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R480668949
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	43	749	R480668950
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R480668951
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R480668952
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R480668953
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R480668954
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1155	R480668955

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	R480668956
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R480668957
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R480668958
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R480668959
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	82	1882	R480668960

Dimensions
Ø16 - 63



Ø80 - 100



S = stroke

Piston Ø	AF	B1	BG min.	E	EE	H	KF	LA	LA1	LW
16	10	3.8	15	29	M5	3.1	M4	3.5	3.5	3.2
20	10	3.8	15	36.5	M5	3.1	M6	4.8	4.6	3.7
25	10	3.8	15	40.5	M5	3.1	M6	4.8	4.6	3.7
32	12	3.8	16	49.5	G1/8	3.1	M8	4.8	4.8	5
40	12	3.8	16	57.5	G1/8	3.1	M8	4.8	4.8	5
50	16	3.8	16	69.5	G1/8	3.1	M10	4.8	4.8	5.7
63	16	3.8	16	79.5	G1/8	3.1	M10	4.8	4.8	5.7

Piston Ø	PL	RR min.	RT	SW	TG	WH	ZA+S	ZB+S
16	5	3.2	M4	7	18 ±0,5	4.8 ±1,4	36	40.8
20	5	4.1	M5	8	22 ±0,4	6 ±1,4	37	43
25	5	4.1	M5	8	26 ±0,4	6 ±1,4	39	45
32	7.5	5.1	M6	10	32.5 ±0,5	7 ±1,6	44	51
40	7.5	5.1	M6	10	38 ±0,5	7 ±1,6	45	52
50	7.5	6.4	M8	13	46.5 ±0,5	8 ±1,6	45.5	53.5
63	7.5	6.4	M8	13	56.5 ±0,5	8 ±1,6	49	57

ISO 21287, Series CCL-IC

ISO 21287
Compact and short-stroke cylinders
Industry standard
suitable for use in food processing
High corrosion
single
Piston with magnet
Elastic cushioning
External thread
Internal thread
Single-acting, retracted without pressure

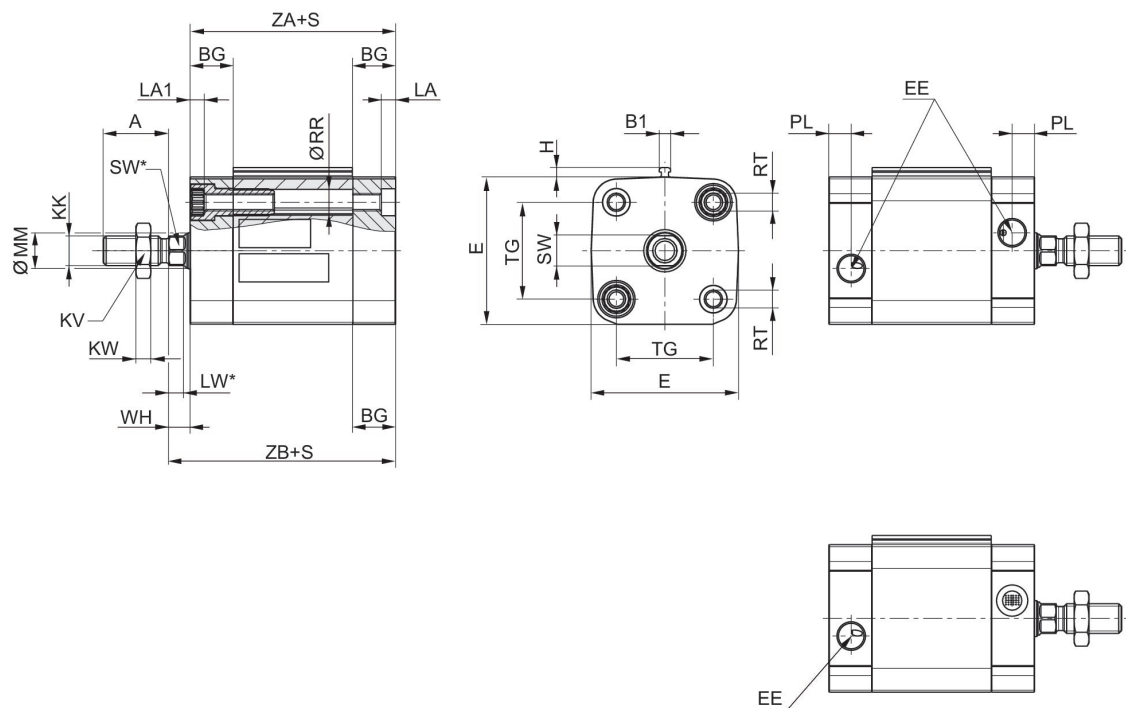


Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
16	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	12	115	R480668891
16	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	12	115	R480668892
16	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	12	115	R480668893
16	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	12	115	R480668894
16	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	12	115	R480668895
20	5	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	13	185	R480668896
20	10	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	12	185	R480668897
20	15	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	12	185	R480668898
20	20	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	12	185	R480668899
20	25	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	12	185	R480668900
25	5	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	25	284	R480668901
25	10	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	25	284	R480668902

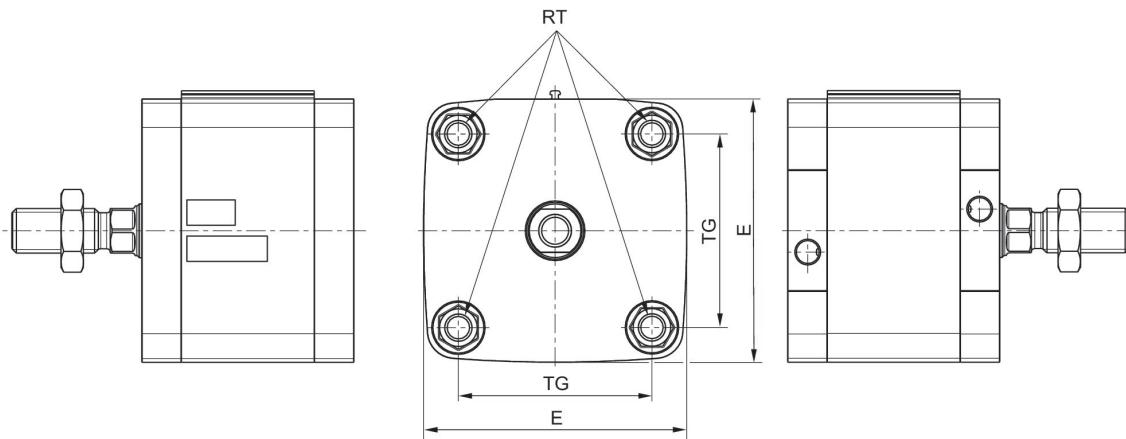
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
25	15	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	25	284	R480668903
25	20	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	25	284	R480668904
25	25	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	25	284	R480668905
32	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R480668906
32	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R480668907
32	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R480668908
32	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R480668909
32	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	35	472	R480668910
40	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R480668911
40	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R480668912
40	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R480668913
40	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R480668914
40	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	43	749	R480668915
50	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1155	R480668916
50	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,5	Standard Industry Scraper	82	1155	R480668917
50	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,5	Standard Industry Scraper	82	1155	R480668918
50	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,5	Standard Industry Scraper	82	1155	R480668919
50	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,5	Standard Industry Scraper	82	1155	R480668920

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	R480668921
63	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R480668922
63	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R480668923
63	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R480668924
63	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	82	1882	R480668925

Dimensions
Ø16 - 63



Ø80 - 100



S = stroke

Piston Ø	A	B1	BG min.	E	EE	H	KK	KV	KW	LA
16	12	3.8	15	29	M5	3.1	M6	10	3.2	3.5
20	16	3.8	15	36.5	M5	3.1	M8	13	4	4.8
25	16	3.8	15	40.5	M5	3.1	M8	13	4	4.8
32	19	3.8	16	49.5	G1/8	3.1	M10x1.25	17	5	4.8
40	19	3.8	16	57.5	G1/8	3.1	M10x1.25	17	5	4.8
50	22	3.8	16	69.5	G1/8	3.1	M12x1.25	18	6	4.8

Piston Ø	A	B1	BG min.	E	EE	H	KK	KV	KW	LA
63	22	3.8	16	79.5	G1/8	3.1	M12x1.25	18	6	4.8

Piston Ø	LA1	LW	LW*	MM f8	PL	RR min.	RT	SW	SW*	TG
16	3.5	3.2	3.2	8	5	3.2	M4	7	7	18 ±0,4
20	4.6	3.7	3.7	10	5	4.1	M5	8	8	22 ±0,4
25	4.6	3.7	3.7	10	5	4.1	M5	8	8	26 ±0,4
32	4.8	5	5*	12	7.5	5.1	M6	10	10*	32,5 ±0,5
40	4.8	5	5*	12	7.5	5.1	M6	10	10*	38 ±0,5
50	4.8	5.7	4,8*	16	7.5	6.4	M8	13	13*	46,5 ±0,6
63	4.8	5.7	4,8*	16	7.5	6.4	M8	13	13*	56,5 ±0,7

Piston Ø	WH	ZA +S	ZB+S
16	4,8 ±1,4	36	40.8
20	6 ±1,4	37	43
25	6 ±1,4	39	45
32	7 ±1,6	44	51
40	7 ±1,6	45	52
50	8 ±1,6	45.5	53.5
63	8 ±1,6	49	57

ISO 21287, Series CCL-IC

ISO 21287
Compact and short-stroke cylinders
Industry standard
suitable for use in food processing
ATEX optional
High corrosion
single
Piston with magnet
Elastic cushioning
Internal thread
Internal thread
Double-acting
Optionally heat-resistant
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	R480668787
16	10	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668788
16	15	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668789
16	20	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668790
16	25	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668791
16	30	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668792
16	40	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668793
16	50	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668794
16	60	M5	Elastic cushioning	Piston with magnet	M4	Standard Industry Scraper	95	127	R480668795
20	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668796
20	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668797

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	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668798
20	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668799
20	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668800
20	30	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668801
20	40	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668802
20	50	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668803
20	60	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	148	198	R480668804
25	5	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668805
25	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668806
25	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668807
25	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668808
25	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668809
25	30	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668810
25	40	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668811
25	50	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668812
25	60	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	260	309	R480668813
32	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668814
32	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668815

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	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668816
32	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668817
32	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668818
32	30	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668819
32	40	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668820
32	50	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668821
32	60	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668822
32	80	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668823
32	100	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668824
32	125	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668825
32	150	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	435	507	R480668826
40	5	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668827
40	10	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668828
40	15	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668829
40	20	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668830
40	25	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668831
40	30	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668832
40	40	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668833

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	50	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668834
40	60	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668835
40	80	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668836
40	100	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668837
40	125	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668838
40	150	G 1/8	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	720	792	R480668839
50	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668840
50	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668841
50	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668842
50	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668843
50	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668844
50	30	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668845
50	40	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668846
50	50	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668847
50	60	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668848
50	80	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668849
50	100	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668850
50	125	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668851

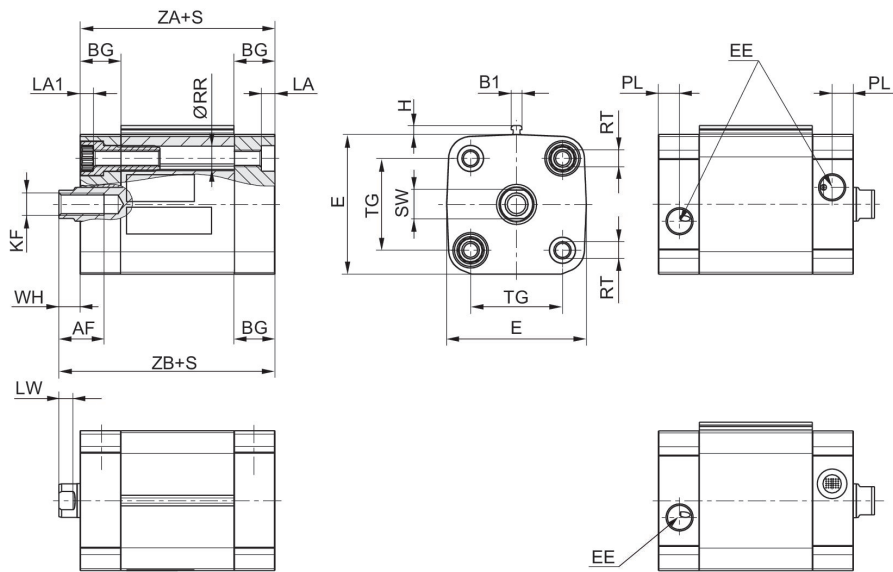
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
50	150	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1110	1237	R480668852
63	5	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668853
63	10	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668854
63	15	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668855
63	20	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668856
63	25	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668857
63	30	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668858
63	40	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668859
63	50	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668860
63	60	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668861
63	80	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668862
63	100	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668863
63	125	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668864
63	150	G 1/8	Elastic cushioning	Piston with magnet	M10	Standard Industry Scraper	1837	1964	R480668865
80	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668866
80	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668867
80	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668868
80	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668869

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	R480668870
80	40	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668871
80	50	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668872
80	60	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668873
80	80	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668874
80	100	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668875
80	125	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668876
80	150	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	2969	3167	R480668877
100	5	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668878
100	10	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668879
100	15	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668880
100	20	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668881
100	25	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668882
100	30	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668883
100	40	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668884
100	50	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668885
100	60	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668886
100	80	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668887

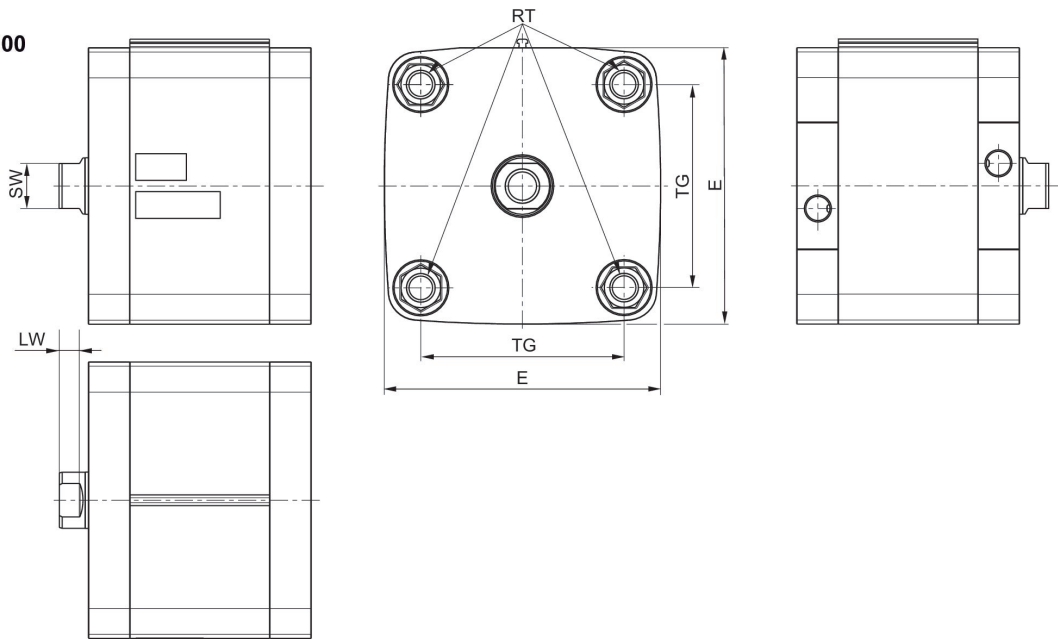
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
100	100	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668888
100	125	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668889
100	150	G 1/8	Elastic cushioning	Piston with magnet	M12	Standard Industry Scraper	4639	4948	R480668890

Dimensions

Ø16 - 63



Ø80 - 100



S = stroke

Piston Ø	AF	B1	BG min.	E** ISO 21287: 96	EE	H	KF	LA	LA1	LW
16	10	3.8	15	29	M5	3.1	M4	3.5	3.5	3.2
20	10	3.8	15	36.5	M5	3.1	M6	4.8	4.6	3.7
25	10	3.8	15	40.5	M5	3.1	M6	4.8	4.6	3.7
32	12	3.8	16	49.5	G1/8	3.1	M8	4.8	4.8	5
40	12	3.8	16	57.5	G1/8	3.1	M8	4.8	4.8	5
50	16	3.8	16	69.5	G1/8	3.1	M10	4.8	4.8	5.7
63	16	3.8	16	79.5	G1/8	3.1	M10	4.8	4.8	5.7
80	20	3.8	17	98**	G1/8	3.1	M12	0	0	7
100	20	3.8	17	115.5	G1/8	3.1	M12	0	0	7.5

Piston Ø	PL	RR min.	RT	SW	TG	WH	ZA +S	ZB +S
16	5	3.2	M4	7	18 ±0,4	4,8 ±1,4	36	40.8
20	5	4.1	M5	8	22 ±0,4	6 ±1,4	37	43
25	5	4.1	M5	8	26 ±0,4	6 ±1,4	39	45
32	7.5	5.1	M6	10	32,5 ±0,5	7 ±1,6	44	51
40	7.5	5.1	M6	10	38 ±0,5	7 ±1,6	45	52
50	7.5	6.4	M8	13	46,5 ±0,6	8 ±1,6	45.5	53.5
63	7.5	6.4	M8	13	56,5 ±0,7	8 ±1,6	49	57
80	7.5	8.4	M10	16	72 ±0,7	10 ±2	54	64
100	7.5	8.4	M10	21	89 ±0,7	10 ±2	67	77

ISO 21287, Series CCL-IC

ISO 21287
Compact and short-stroke cylinders
Industry standard
suitable for use in food processing
ATEX optional
High corrosion
single
Piston with magnet
Elastic cushioning
External thread
Internal thread
Double-acting
Optionally heat-resistant
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	M6	Standard Industry Scraper	95	127	R480668683
16	10	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668684
16	15	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668685
16	20	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668686
16	25	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668687
16	30	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668688
16	40	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668689
16	50	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668690
16	60	M5	Elastic cushioning	Piston with magnet	M6	Standard Industry Scraper	95	127	R480668691
20	5	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668692
20	10	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668693

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	15	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668694
20	20	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668695
20	25	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668696
20	30	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668697
20	40	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668698
20	50	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668699
20	60	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	148	198	R480668700
25	5	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668701
25	10	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668702
25	15	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668703
25	20	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668704
25	25	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668705
25	30	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668706
25	40	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668707
25	50	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668708
25	60	M5	Elastic cushioning	Piston with magnet	M8	Standard Industry Scraper	260	309	R480668709
32	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668710
32	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668711

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	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668712
32	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668713
32	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668714
32	30	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668715
32	40	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668716
32	50	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668717
32	60	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668718
32	80	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668719
32	100	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668720
32	125	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668721
32	150	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	435	507	R480668722
40	5	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668723
40	10	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668724
40	15	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668725
40	20	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668726
40	25	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668727
40	30	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668728
40	40	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668729

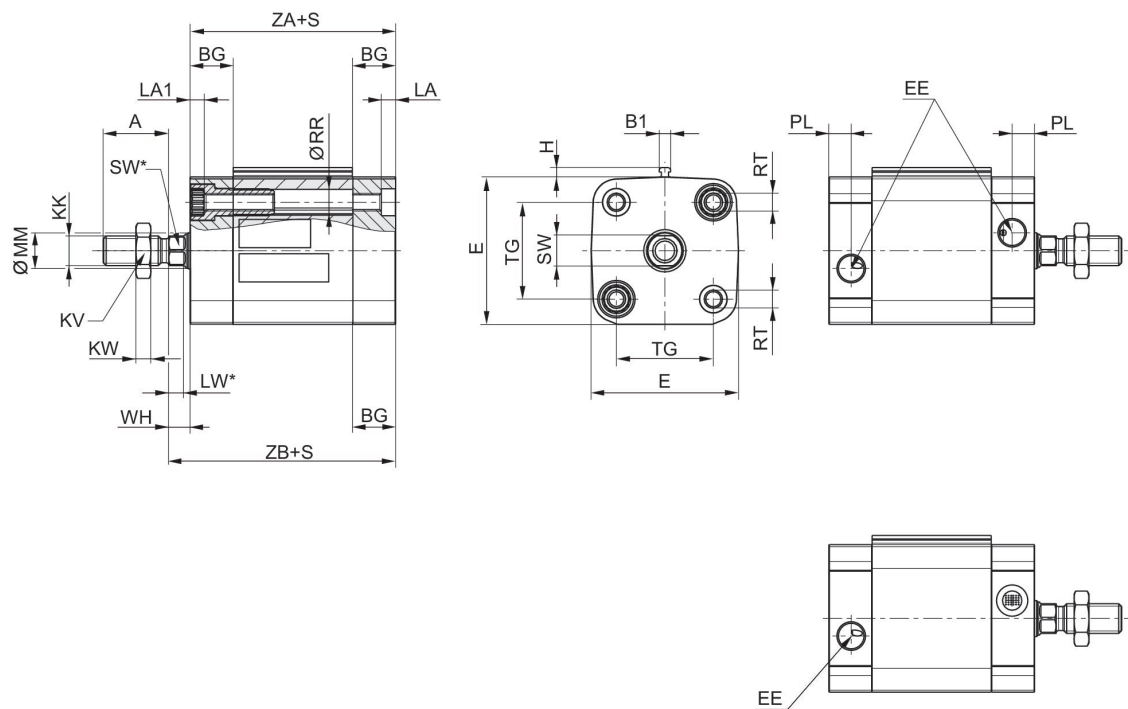
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
40	50	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668730
40	60	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668731
40	80	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668732
40	100	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668733
40	125	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668734
40	150	G 1/8	Elastic cushioning	Piston with magnet	M10x1,25	Standard Industry Scraper	720	792	R480668735
50	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668736
50	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668737
50	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668738
50	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668739
50	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668740
50	30	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668741
50	40	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668742
50	50	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668743
50	60	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668744
50	80	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668745
50	100	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668746
50	125	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668747

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	150	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1110	1237	R480668748
63	5	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668749
63	10	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668750
63	15	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668751
63	20	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668752
63	25	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668753
63	30	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668754
63	40	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668755
63	50	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668756
63	60	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668757
63	80	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668758
63	100	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668759
63	125	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668760
63	150	G 1/8	Elastic cushioning	Piston with magnet	M12x1,25	Standard Industry Scraper	1837	1964	R480668761
80	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668762
80	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668763
80	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668764
80	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668765

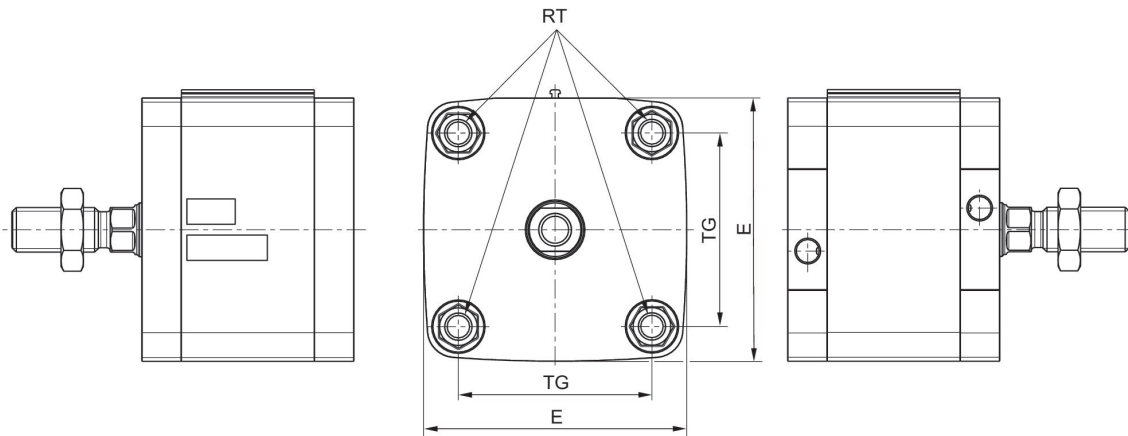
Piston Ø [mm]	Stroke [mm]	Ports	Cushioning	Magnet- ic piston	Piston rod thread	Scraper	Retract- ing pis- ton force [N]	Extract- ing pis- ton force [N]	Part No.
80	30	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668766
80	40	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668767
80	50	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668768
80	60	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668769
80	80	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668770
80	100	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668771
80	125	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668772
80	150	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	2969	3167	R480668773
100	5	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668774
100	10	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668775
100	15	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668776
100	20	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668777
100	25	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668778
100	30	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668779
100	40	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668780
100	50	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668781
100	60	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668782
100	80	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668783

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	M16x1,5	Standard Industry Scraper	4639	4948	R480668784
100	125	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668785
100	150	G 1/8	Elastic cushioning	Piston with magnet	M16x1,5	Standard Industry Scraper	4639	4948	R480668786

Dimensions
Ø16 - 63



Ø80 - 100



S = stroke

Piston Ø	A	B1	BG min.	E	EE	H	KK	KV	KW	LA
16	12	3.8	15	29	M5	3.1	M6	10	3.2	3.5
20	16	3.8	15	36.5	M5	3.1	M8	13	4	4.8
25	16	3.8	15	40.5	M5	3.1	M8	13	4	4.8
32	19	3.8	16	49.5	G1/8	3.1	M10x1.25	17	5	4.8
40	19	3.8	16	57.5	G1/8	3.1	M10x1.25	17	5	4.8
50	22	3.8	16	69.5	G1/8	3.1	M12x1.25	18	6	4.8
63	22	3.8	16	79.5	G1/8	3.1	M12x1.25	18	6	4.8
80	28	3.8	17	98 / ISO 21287:96	G1/8	3.1	M16x1.5	24	8	0
100	28	3.8	17	115.5	G1/8	3.1	M16x1.5	24	8	0

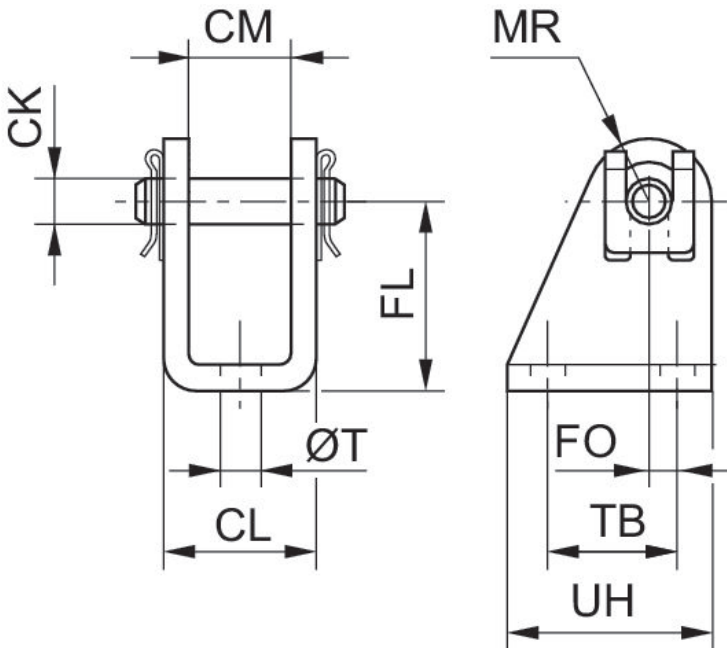
Piston Ø	LA1	LW	LW*	MM f8	PL	RR min.	RT	SW	SW*	TG
16	3.5	3.2	3.2	8	5	3.2	M4	7	7	18 ±0,4
20	4.6	3.7	3.7	10	5	4.1	M5	8	8	22 ±0,4
25	4.6	3.7	3.7	10	5	4.1	M5	8	8	26 ±0,4
32	4.8	5	5*	12	7.5	5.1	M6	10	10*	32,5 ±0,5
40	4.8	5	5*	12	7.5	5.1	M6	10	10*	38 ±0,5
50	4.8	5.7	4,8*	16	7.5	6.4	M8	13	13*	46,5 ±0,6
63	4.8	5.7	4,8*	16	7.5	6.4	M8	13	13*	56,5 ±0,7
80	0	7	6,4*	20	7.5	8.4	M10	16	16*	72 ±0,7
100	0	7.5	6,4*	25	7.5	8.4	M10	21	21*	89 ±0,7

Piston Ø	WH	ZA +S	ZB+S
16	4,8 ±1,4	36	40.8
20	6 ±1,4	37	43
25	6 ±1,4	39	45
32	7 ±1,6	44	51
40	7 ±1,6	45	52
50	8 ±1,6	45.5	53.5
63	8 ±1,6	49	57
80	10 ±2	54	64
100	10 ±2	67	77

Clevis mounting AB3, Series CM1



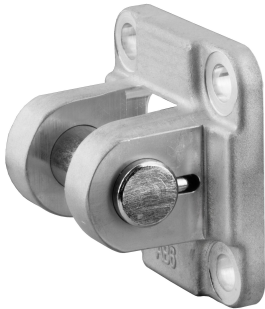
Piston diameter [mm]	Swivel bearing Ø [mm]	Material	Part No.
12, 16	6	Stainless Steel	3323416000
20, 25	8	Stainless Steel	3323420000
32	10	Stainless Steel	3323432000



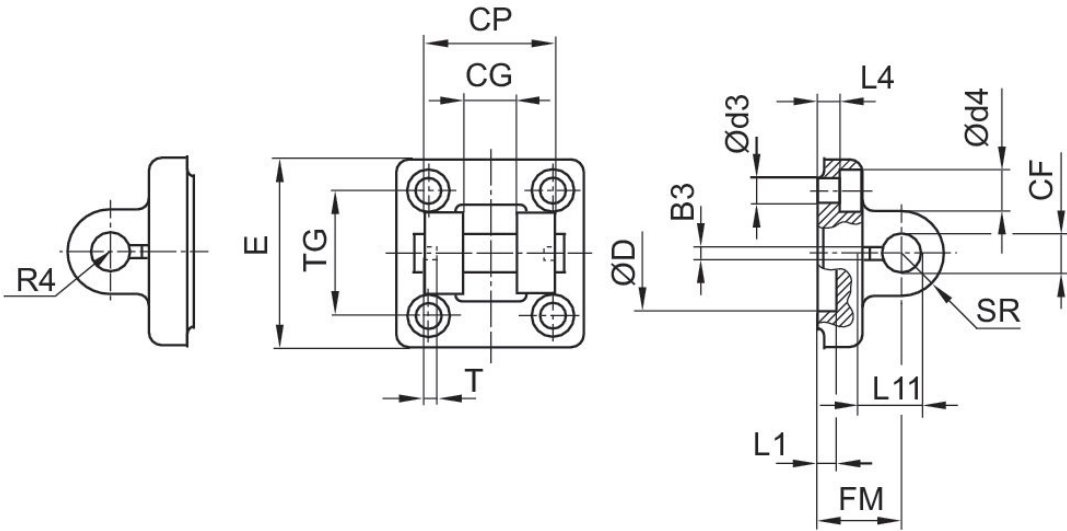
Piston Ø	Part No.	CM	Ø CK	CL	FL	FO	MR	Ø T	TB	UH
8, 10	1827001447	8,1	4	13,1	24	1,5	5	4,5	12,5	20
8, 10	3323410000	8	4	13	24	1,5	5	4.5	12	20
12, 16	1827001446	12,1	6	18,1	27	2,0	7	5,5	15	25
12, 16	3323416000	12	6	18	27	2,0	7	5.5	15	25
20, 25	1827001445	16,1	8	24,1	30	4,0	10	6,6	20	32
20, 25	3323420000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

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



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
63	1827002024	4.3	16	21	51	9	15	45	74	32

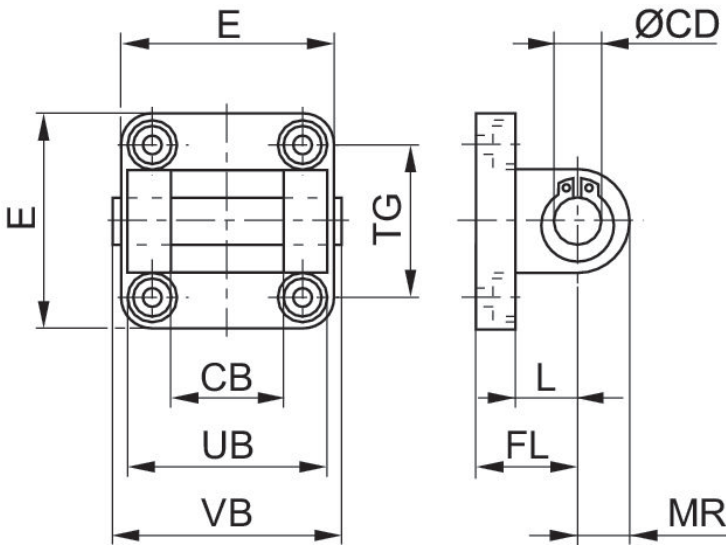
Piston Ø	Part No.	B3 ±0,2	Ø CF F7	CG D10	CP d12	Ø d3	Ø d4	Ø D	E	FM ±0,2
80	1827001597	4.3	20	25	65	11	18	45	94	36
100	1827001598	4.3	20	25	75	11	18	55	113	41
125	1827001599	6.3	30	37	97	14	20	60	138	50
160	1827001600	6.3	35	43	122	18	26	65	180	55
200	1827001601	6.3	35	43	122	18	26	75	220	60
250	1827001602	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, Series CM1



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	ISO 15552	Aluminum	3682903590
40	12	ISO 15552	Aluminum	3682904590
50	12	ISO 15552	Aluminum	3682905590
63	16	ISO 15552	Aluminum	3682906590
80	16	ISO 15552	Aluminum	3682908590
100	20	ISO 15552	Aluminum	3682910590

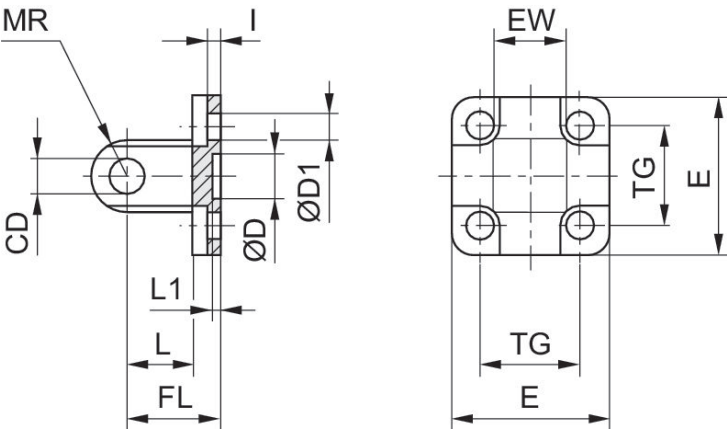


Cylinders Ø	Part No.	CB H14	Ø CD H9	E max.	FL	L min.	MR	UB h14	VB	TG
32	3682903590	26	10	47	22 ±0,2	12	10	45	50	32,5 ±0,2
40	3682904590	28	12	54	25 ±0,2	15	12	52	57	38,0 ±0,2
50	3682905590	32	12	65	27 ±0,2	15	12	60	65	46,5 ±0,2
63	3682906590	40	16	75	32 ±0,2	20	15	70	76	56,5 ±0,2
80	3682908590	50	16	94	36 ±0,2	20	17	90	96	72,0 ±0,2
100	3682910590	60	20	112	41 ±0,2	25	21	110	117	89,0 ±0,2
125	R412025571	70	25	138	50	30	26	130	140	110,0 ±0,3

Rear eye MP4-HD, Series CM1



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	1827001283
40	12	ISO 15552	Aluminum	1827001284
50	12	ISO 15552	Aluminum	1827001285
63	16	ISO 15552	Aluminum	1827020086
80	16	ISO 15552	Aluminum	1827001287
100	20	ISO 15552	Aluminum	1827001288



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
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

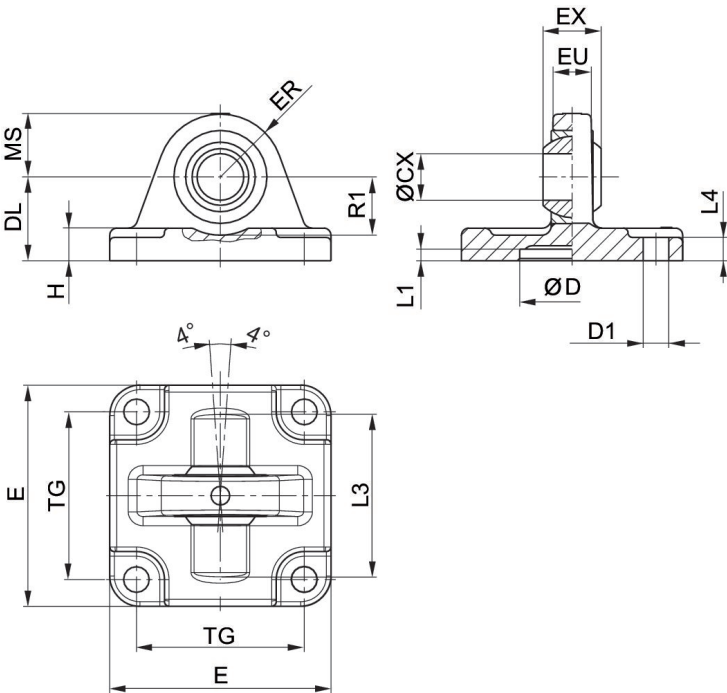
Piston Ø	Part No.	CD H9	Ø D	Ø D1	E	EW	FL ±0,2	I ±0,5	L min.	L1 min.
100	1827001288	20	55 H11	11	113.5	60 -0.2/-0.6	41	10	25	4.5
125	1827004866	25	60 H11	14	138	70 -0.5/-1.2	50	10	30	7
160	1827004867	30	65 H11	18	180	90 -0.5/-1.2	55	10	35	7
200	1827004868	30	75 H11	18	220	90 -0.5/-1.2	60	11	35	7
250	1827004869	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, Series CM1



Piston diameter [mm]	Swivel bearing Ø [mm]	Standardization	Material	Part No.
32	10	ISO 15552	Aluminum (forged and anodized)	2798060320
40	12	ISO 6431	Aluminum	3663604000
50	16	ISO 15552	Aluminum (forged and anodized)	R412025637
63	16	ISO 15552	Aluminum (forged and anodized)	2798060630
80	20	ISO 15552	Aluminum (forged and anodized)	R412025638
100	20	ISO 15552	Aluminum (forged and anodized)	2798061000

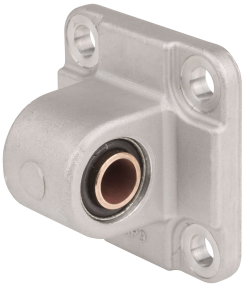


Scope of delivery: clevis incl. mounting screws

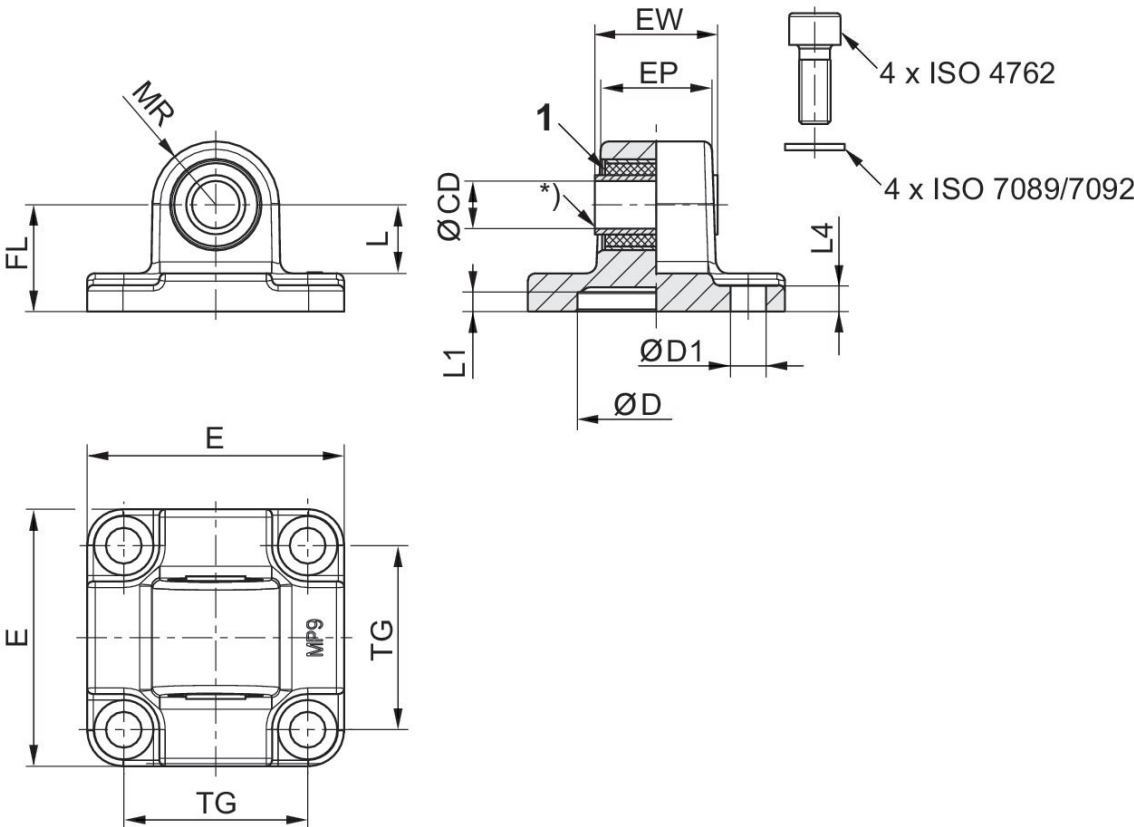
Piston Ø	Part No.	ØCX H7	ØD H11	ØD1 H13	DL ±0,2	E	EX -0,1	ER	EU	H
25	3663602000	10	18	5,5	20	40	9	14	8	6
32	3663603000	10	20	5.5	22	46	9	15	8	6
40	3663604000	12	30	6.6	28	55	12	17	9.5	8
52,5	3663605000	12	40	6,6	28	62	12	17	9.5	9
63	5220163442	10	–	7.5	29	45	14	15	10.5	8
75	3663606000	16	55	9	36	80	16	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, Series CM1



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



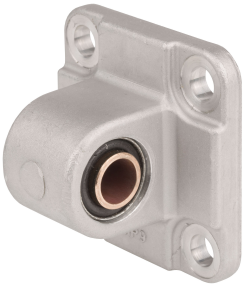
1) Rubber bushing

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

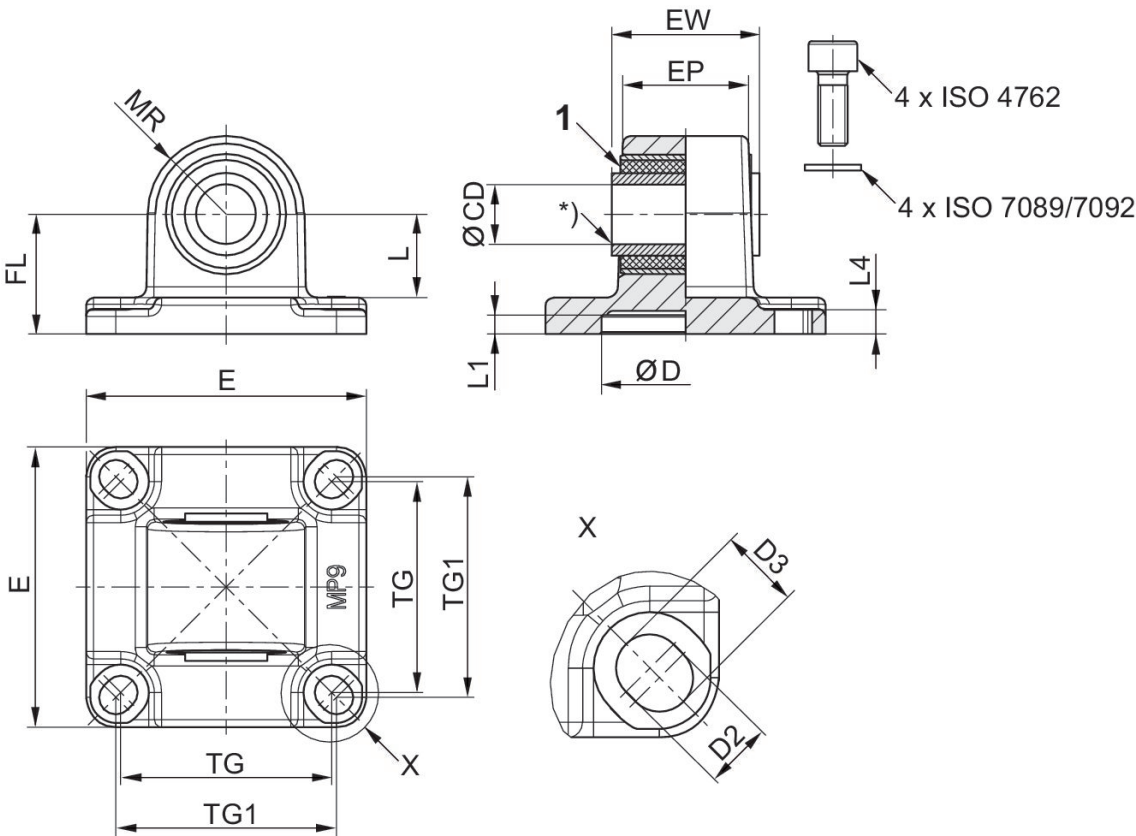
Piston Ø	Part No.	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	L 1)
50	3683205000	-	12	65	31	28	46.5	–	27	17.3
50	3663205000		12	63	31		46		28	15.5
80	3663208000		16	95	49.5		73		38	20.5
80	3683208000	-	16	94.5	49.5	43	72	–	36	21.8
125	R412015973	-	25	138	69.5	60	110	–	50	33.8

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

Rear eye MP9, Series CM1



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



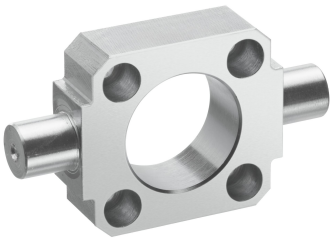
1) Rubber bushing

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

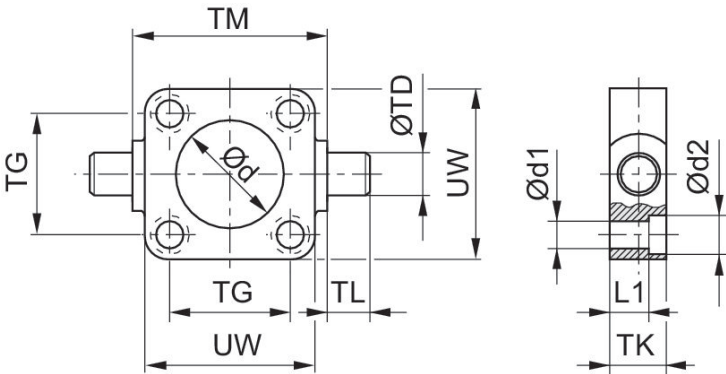
Piston Ø	Part No.	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	L 1)
63	3683206000	-	16	75	39.5	33.5	56.5	59	32	22.3
100	3683210000	-	20	114	59.5	54	89	90	41	25.8

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

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
25	Aluminum	R412026354
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



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

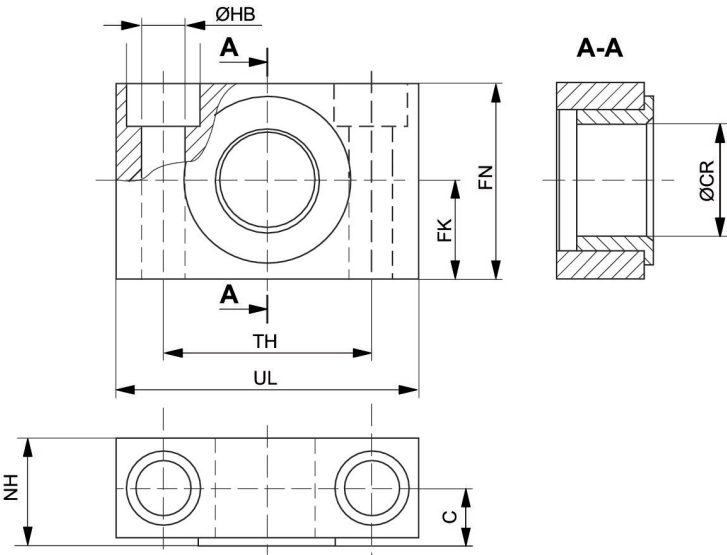
Piston Ø	UW
20	35
25	39
25	39
32	46
32	48
40	59
40	56
50	69
50	65
63	84
63	75
80	102
80	100
100	125
100	120
125	145
160	184
200	224
250	286

Bearing AT4, Series CM1

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



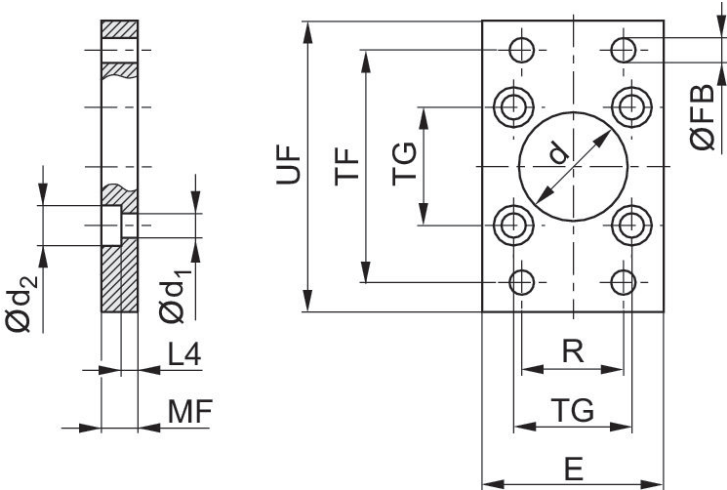
Piston Ø	Part No.	UL	NH	TH	C	CR H9	HB H13	FN	FK
20, 25, 32	1827001603	46	18	32 ±0,2	10.5	12	6.6	30	15 ±0,1
40, 50	1827001604	55	21	36 ±0,2	12	16	9	36	18 ±0,1
63, 80	1827001605	65	23	42 ±0,2	13	20	11	40	20 ±0,1
100, 125	1827001606	75	28.5	50 ±0,2	16	25	14	50	25 ±0,1
160, 200	1827001607	92	40	60 ±0,3	22.5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

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



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
200	1827001461	75	18	26	220	22	12.5	25	135	270

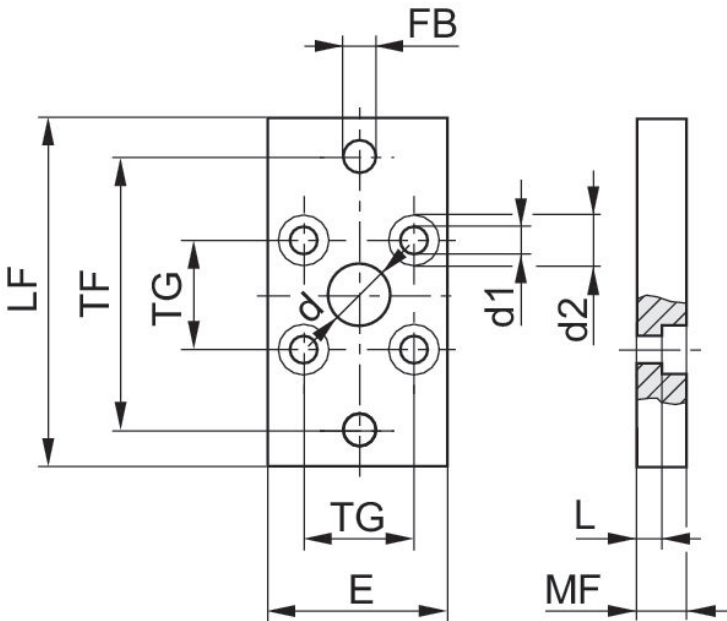
Piston Ø	Part No.	Ød H11	Ød1	Ød2	E max.	ØFB	L4	MF	R	TF
250	1827001462	90	22	33	280	26	10.5	25	165	330
320	5239016012	110	26	40	350	33	15	30	200	270

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

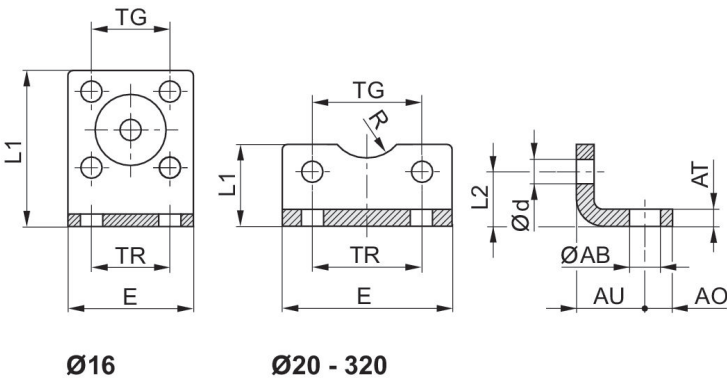
Piston Ø	UF
16	55
20	70
25	76

1) Max.

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



Piston Ø	Part No.	ØAB	AO	AT	AU ±0,2	Ød	E	L1	L2	R
16	1821332053	5.5	5	3	13	4.5	29	35.5	13	8
20	1827002284	6.6	6	4	16	5.4	36	22	16	10
25	1827002285	6.6	6	4	16	5.4	40	23	17	11
25	3682202000	7	8	4	22	5.5	40	21	11.5	13.5
32	1827002286	6.6	8	5	18	6.6	50	24	16	–
32	1827001271	7	8	4 ±0,3	24	6.6	48	25	15.5	15
32	3662203000	7	8	5	24	5.5	47	26	16	15
40	1827002287	9	8	5	20	6.6	60	29.5	21.5	–
40	1827001272	10	10	4 ±0,3	28	6.6	56	26	17	17.5

Piston Ø	Part No.	ØAB	AO	AT	AU ±0,2	Ød	E	L1	L2	R
40	3662204000	9	11	5	31	6.6	56	28	16	20
50	1827002288	9	8	6	24	9	68	30	22	–
50	1827001273	10	11	5 ±0,3	32	9	68	32	21.5	20
50	3662205000	9	12	6	33	6.6	63	35	22	23
63	1827002289	11	12	6	27	9	84	39	28.5	–
63	1827001498	10	13	5 ±0,3	32	9	78	34	21.5	22.5
63	3662206000	9	12	6	36	9	81	40	20.5	23
80	1827002290	11	12	8	30	11	102	36.5	24.5	–
80	1827001275	12	16	6 ±0,5	41	11	98	47	27	22.5
80	3662208000	12	15	8	43	9	95	45	26.5	26
100	1827002291	13.5	12	8	33	11	123	38.5	26.5	–
100	1827001276	14.5	19	6 ±0,5	41	11	117	52	26.5	27.5
100	3662210000	14	17	10	43	11	115	50	26	32
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
320	5239010502	35	45	23 ±1,0	85	26	350	200	65	55

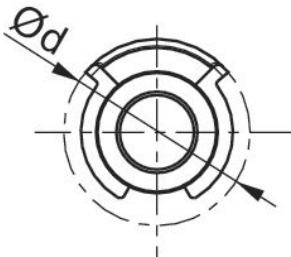
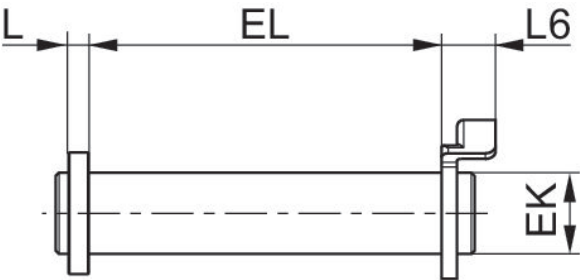
Piston Ø	TG	TR
16	18 ±0,2	18
20	22 ±0,2	22
25	26 ±0,2	26
25	27	26
32	32	32
32	32,5 ±0,2	32
32	32	32
40	42	42
40	38 ±0,2	36
40	40	36
50	50	50
50	46,5 ±0,2	45
50	46	45
63	62	62
63	56,5 ±0,2	50
63	59	50
80	82	82
80	72 ±0,2	63
80	73	63
100	103	103
100	89 ±0,2	75
100	90	75
125	110 ±0,3	90
160	140 ±0,3	115
200	175 ±0,3	135
250	220 ±0,3	165

Piston Ø	TG	TR
320	270 ±0,3	200

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



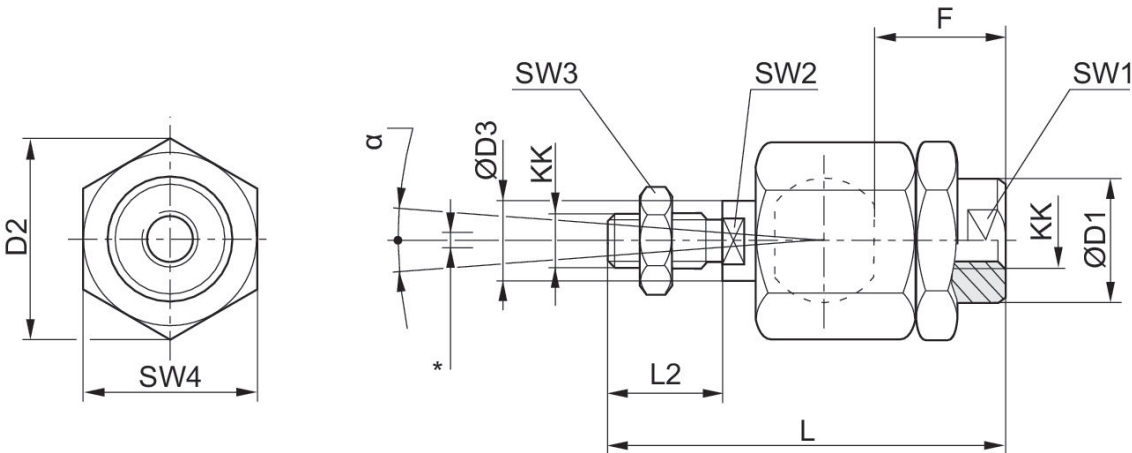
Piston Ø	Part No.	Ø d max.	EK e8	EL	L max.	L6 max.
32	1823120020	20	10	45.2 +0,3	3.5	9
40	1823120021	22	12	52.2 +0,3	4	9
50	1823120022	22	12	60.2 +0,3	4	9
63	1823120023	28	16	70.2 +0,3	4.5	11
80	1823120024	28	16	90.2 +0,3	4.5	11
100	1823120025	38	20	110.2 +0,3	5	11

Compensating coupling PM5, series CM2



Thread size	Material	Part No.
M6x1	Steel, chrome-plated	R412026140
M8x1,25	Steel, chrome-plated	R412026141
M10x1,25	Steel, chrome-plated	R412026142
M12x1,25	Steel, chrome-plated	R412026143
M16x1,5	Steel, chrome-plated	R412026144

Dimensions



* Radial joint

KK	Part No.	Ø D1	D2	Ø D3	F	L ±2	L2	SW1	SW2	SW3
M4	1826409008	12	13.5	4	13	33	8	12	3.2	7
M5	R412007860	8.5	14.8	6	12	38.5	13.5	7	5	8
M6x1	R412026140	8.5	14.5	6	11	36.5	11	7	5	10
M8x1.25	R412026141	12.5	19	8	21	58	21	11	7	13
M10x1.25	R412026142	22	32	14	23	74.5	23	19	12	17
M12x1.25	R412026143	22	32	14	24	75	24	19	12	19
M16x1.5	R412026144	32	45	22	30	103	30	30	20	24
M20x1.5	R412026145	32	45	22	40	119	40	30	20	30
M27x2	1826409006	62	62	28	48	147	54	32	24	41
M36x2	1826409007	80	80	38	86	241	72	50	36	55

KK	Part No.	Ø D1	D2	Ø D3	F	L ±2	L2	SW1	SW2	SW3
M42x2	R412007729	64	98	42	96	271	82	60	36	65

KK	SW4	α [°]	1)	2)
M4	12	8	0.05-0.2	0-0,5
M5	13	8	0.05-0.2	0-0,5
M6x1	13	6	0.05-0.5	0-1,5
M8x1.25	17	8	0.05-0.5	0-1,5
M10x1.25	30	8	0.05-0.5	0-2
M12x1.25	30	7	0.05-0.5	0-2
M16x1.5	41	6	0.05-0.5	0-2
M20x1.5	41	6	0.05-0.5	0-2
M27x2	55	8	0.05-0.2	0-2
M36x2	75	8	0.05-0.2	0-2
M42x2	85	8	0.05-0.2	0-2

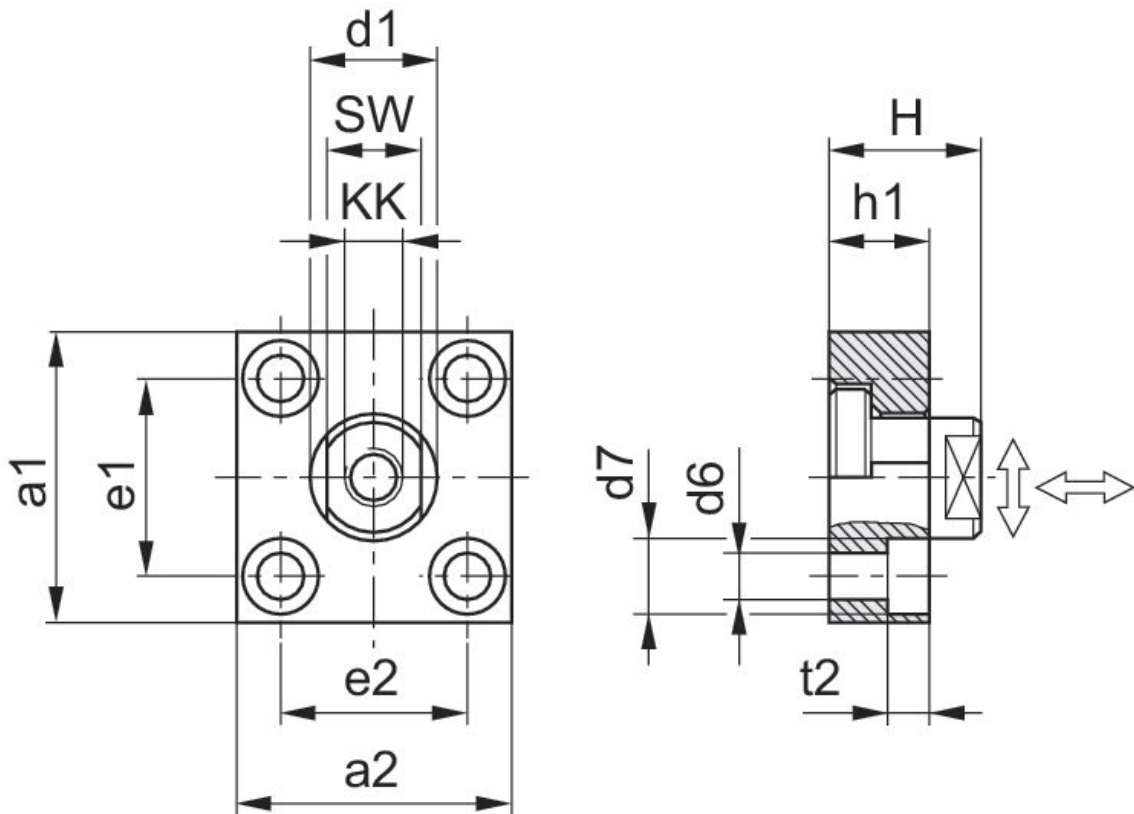
1) Axial play
2) Radial play

Compensating coupling PM7, series CM2



Thread size		Material	Part No.
M10x1,25		Steel, chrome-plated	1827001629
M12x1,25		Steel, chrome-plated	1827001630
M16x1,5		Steel, chrome-plated	1827001631

Dimensions

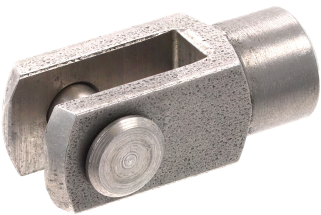


KK	Part No.	a1	a2	d1 h11	d6 H13	d7 H13	e1 H13	e2	h1	t2
M10x1.25	1827001629	60	37	20	6.6	11	36 ±0,15	23 ±0,15	15	7
M12x1.25	1827001630	60	56	25	9	15	42 ±0,2	38 ±0,2	20	9
M16x1.5	1827001631	80	80	30	11	18	58 ±0,2	58 ±0,2	20	11
M20x1.5	1827001632	90	90	40	14	20	65 ±0,3	65 ±0,3	20	13

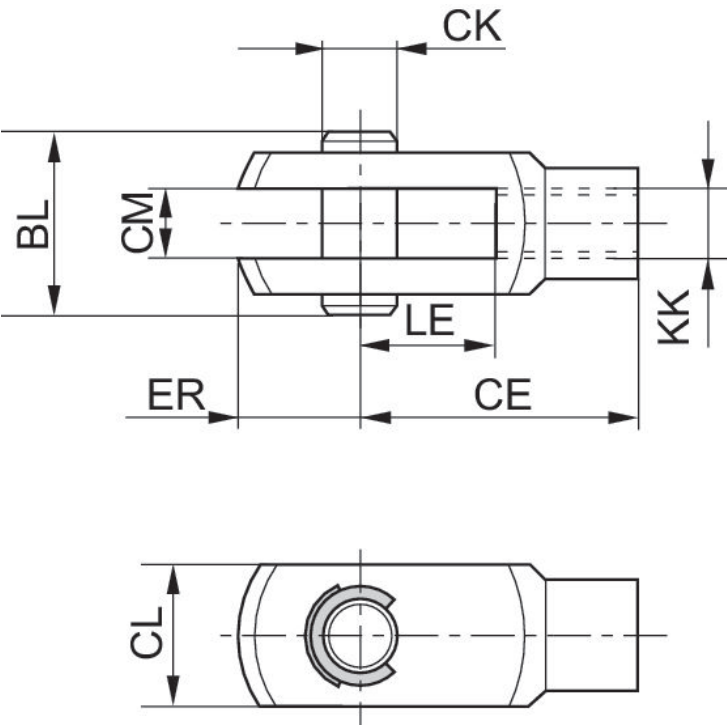
KK	Part No.	a1	a2	d1 h11	d6 H13	d7 H13	e1 H13	e2	h1	t2
M27x2	1827001633	90	90	40	14	20	65 ±0,3	65 ±0,3	20	13
M36x2	1827001634	125	125	60	18	26	90 ±0,3	90 ±0,3	30	17

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 AP2, Series CM2



for series	Material	Part No.
CSL-RD, SSI, ICM	Stainless Steel	3330516000
CCL-IC, CSL-RD, CCI, ICM	Stainless Steel	3330520000
CCL-IS, CCL-IC, CCI, CSL-RD, SSI, ICM, ICS-D2, 167	Stainless Steel	3590502000
CCL-IS, CCL-IC, CCI, SSI, 167, ICS-D2	Stainless Steel	3590504000
CCL-IS, ICS-D2, 167	Stainless Steel	3590505000



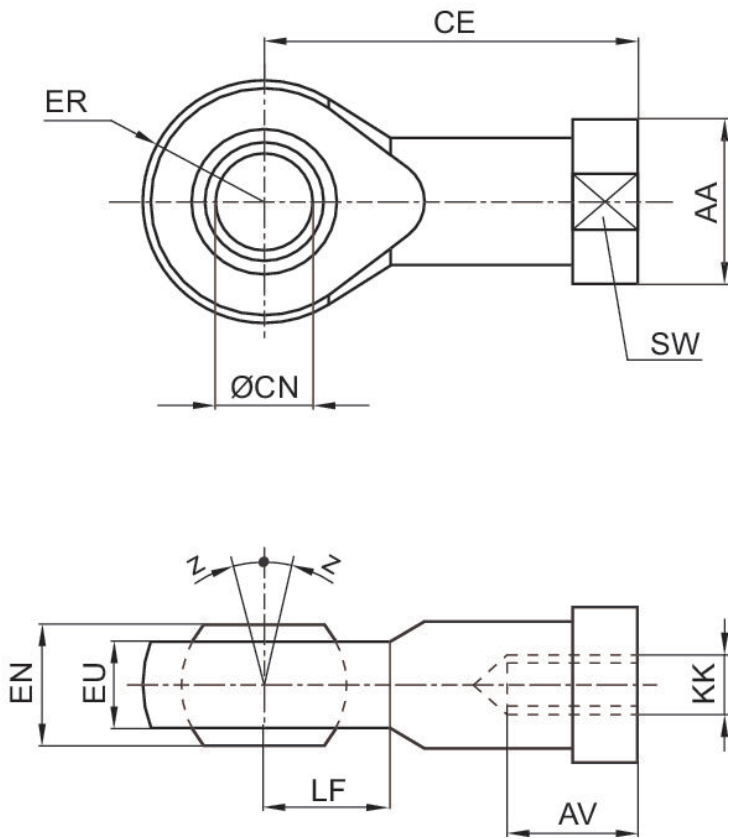
KK	Part No.	CE	CK e8	CL	CM B12	ER	BL	LE
M4	3330510000	16	4	10	5	6	15	8
M6	3330516000	24	6	12	6	7	17	12
M8	3330520000	32	8	16	8	10	22	16
M10x1,25	3590502000	40	10	20	10	12	26	20
M12x1,25	3590504000	48	12	24	12	14	31	24

KK	Part No.	CE	CK e8	CL	CM B12	ER	BL	LE
M16x1,5	3590505000	64	16	32	16	19	39	32
M20x1,5	3590508000	80	20	40	20	20	49	40

Ball eye rod end AP6, series CM2



for series	Swivel bearing Ø [mm]	Material	Part No.
CCL-IC, CSL-RD, ICM	6	Stainless Steel	8958209012
CCL-IC, CSL-RD, ICM	8	Stainless Steel	8958209022
CCL-IS, CCL-IC, SSI, CSL-RD, ICM, ICS-D2	10	Stainless Steel	8958209032
CCL-IS, CCL-IC, SSI, ICS-D2	12	Stainless Steel	8958209042
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

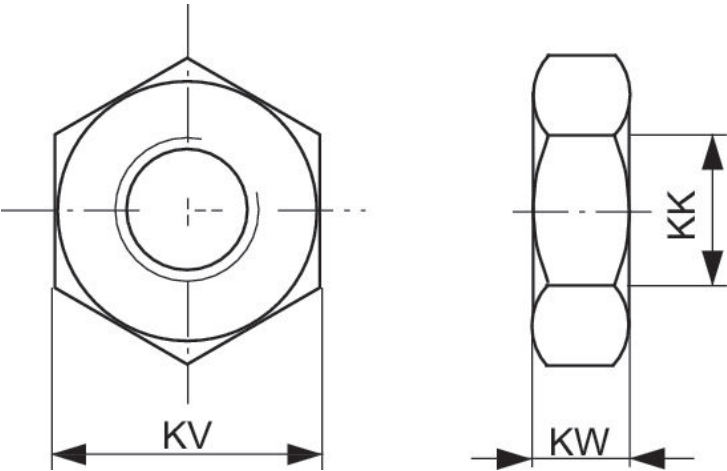
KK	Part No.	AA	AV min.	CE	Ø CN H7	EN -0,1	ER	EU max.	LF	SW
M6	8958209012	13	9	30	6	9	10	6,75	10	11
M8	8958209022	16	12	36	8	12	12	9	12	14
M10x1,25	8958209032	19	15	43	10	14	14	10.5	14	17
M12x1,25	8958209042	22	18	50	12	16	16	12	16	19
M16x1,5	8958209052	27	24	64	16	21	21	15	21	22
M20x1,5	8958209062	34	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 nut MR9



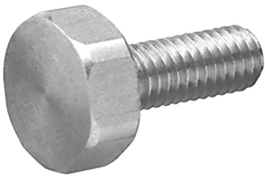
Thread size	Material	Part No.
M6	Stainless Steel	8103190644
M8	Stainless Steel	8103190164
M10x1,25	Stainless Steel	8103190464
M12x1,25	Stainless Steel	3590304000
M16x1,5	Stainless Steel	3590305000



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
M36x2	8103190414	50	16
M42x2	8103190424	60	21
M6	8103190644	10	3.2
M8	8103190164	13	4

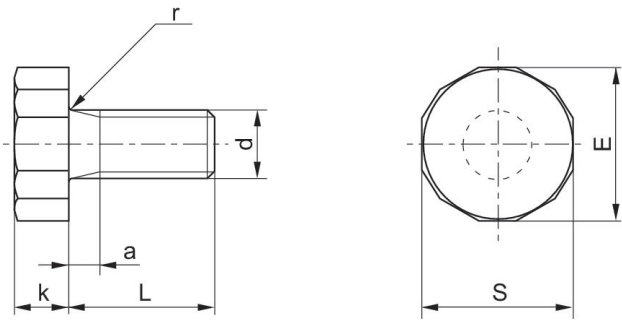
KK	Part No.	KV	KW
M10x1,25	8103190464	17	5
M4	3330310000	7	2.2
M12x1,25	3590304000	19	6
M16x1,5	3590305000	24	8
M20x1,5	3590308000	30	10
M20x1,5	8103040344	30	10
M24x2	8103190394	36	12
M48x2	8103190434	65	25
M10x1,25	2990600303	17	5
M12x1,25	2990600304	19	6
M16x1,5	2990600305	24	8
M20x1,5	2990600308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

Blanking screw



G	Delivery unit [piece]		Part No.
M6	4		R402003749
M8	4		R402003750

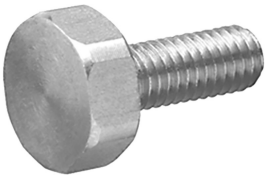
Dimensions



Dimensions in mm

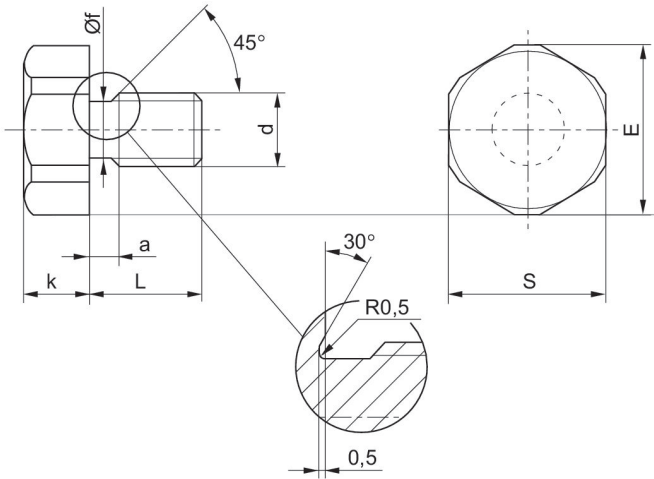
Part No.	a	d	E	k	L	S	r
R412024762	2	M4	9.8	3.9	10	9.8	0.5
R412024763	3	M5	11	4	12	12	0.5
R402003749	3	M6	14	5.3	16	13	0.7
R402003750	3	M8	18	6.4	17	16	0.7

Blanking screw



G	Delivery unit [piece]		Part No.
M10	4		R402003751
M12	4		R402003752

Dimensions

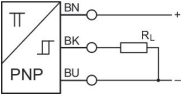


Dimensions in mm

Part No.	a	d	E	k	L	S	r
R402003751	4	M10	24	7,9	8.8	15	21
R402003752	4	M12	30	9,5	11.5	18	27

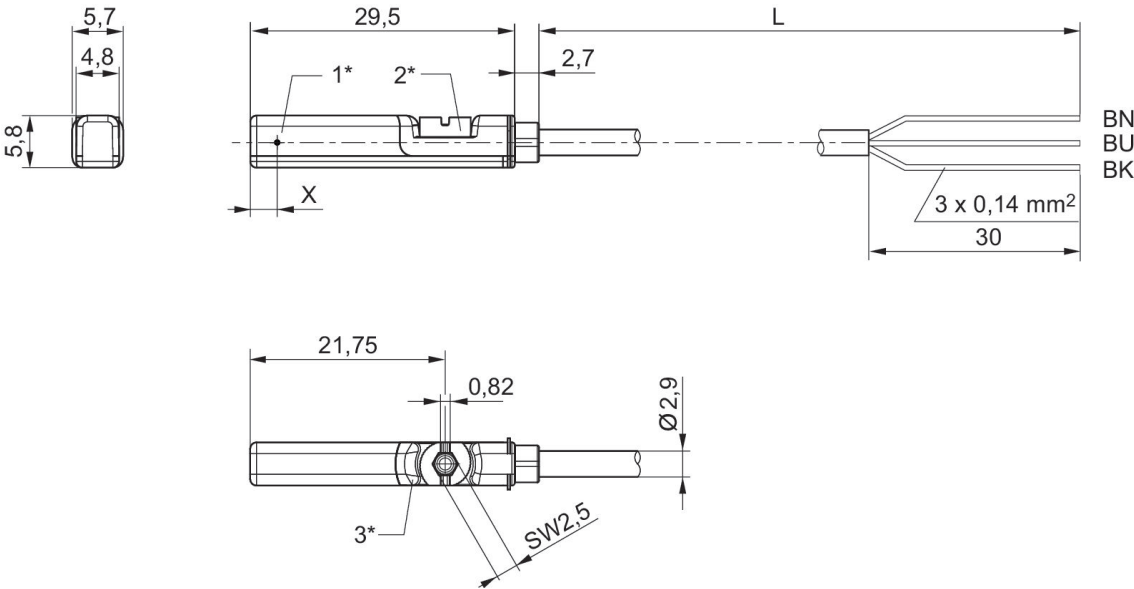
Sensor, Series ST6

CCL-IC
open cable ends
RoHS
UL (Underwriters Laboratories)
cULus



Direct mounting for series	Type of contact	Cable sheath	Cable length L [m]	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Part No.
CCL-IC	electronic PNP	Polyurethane	5	0.13	10	30	short circuit resistant	R412025609

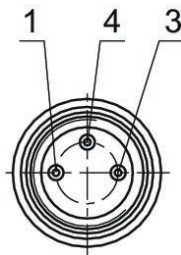
Dimensions



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

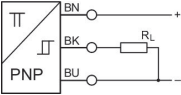
R412025609

Pin assignment M8x1 (3-pin)



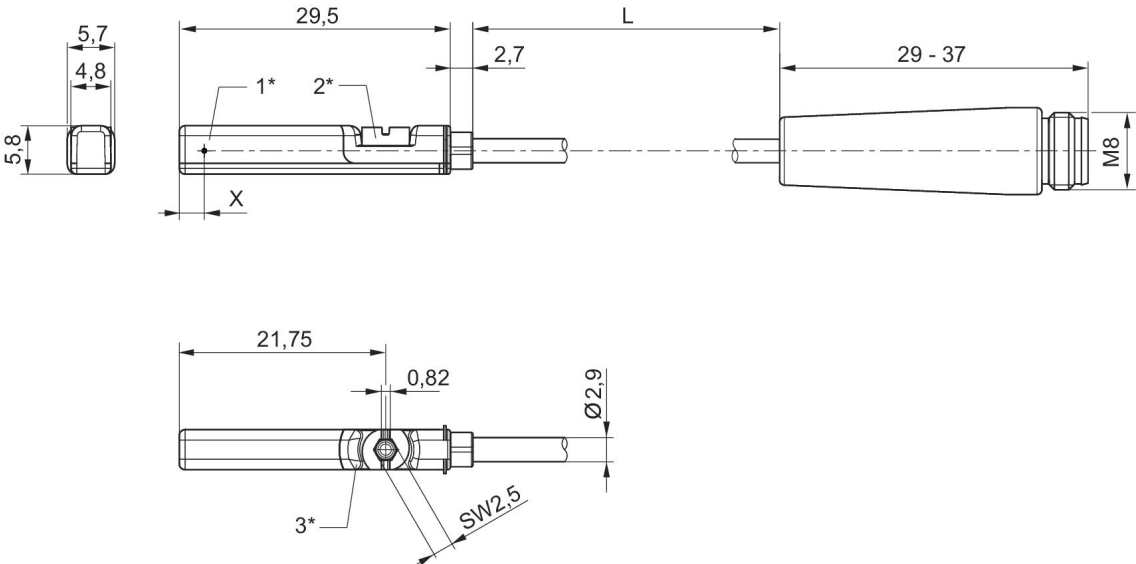
Sensor, Series ST6

CCL-IC
open cable ends
RoHS
UL (Underwriters Laboratories)
cULus



Direct mounting for series	Type of contact	Cable sheath	Cable length L [m]	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Part No.
CCL-IC	electronic PNP	Polyurethane	0.3	0.13	10	30	short circuit resistant	R412025610

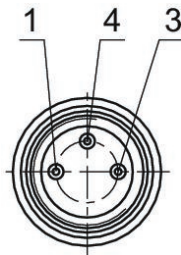
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11.6 mm
Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

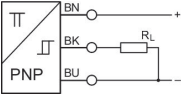
R412025610

Pin assignment M8x1 (3-pin)



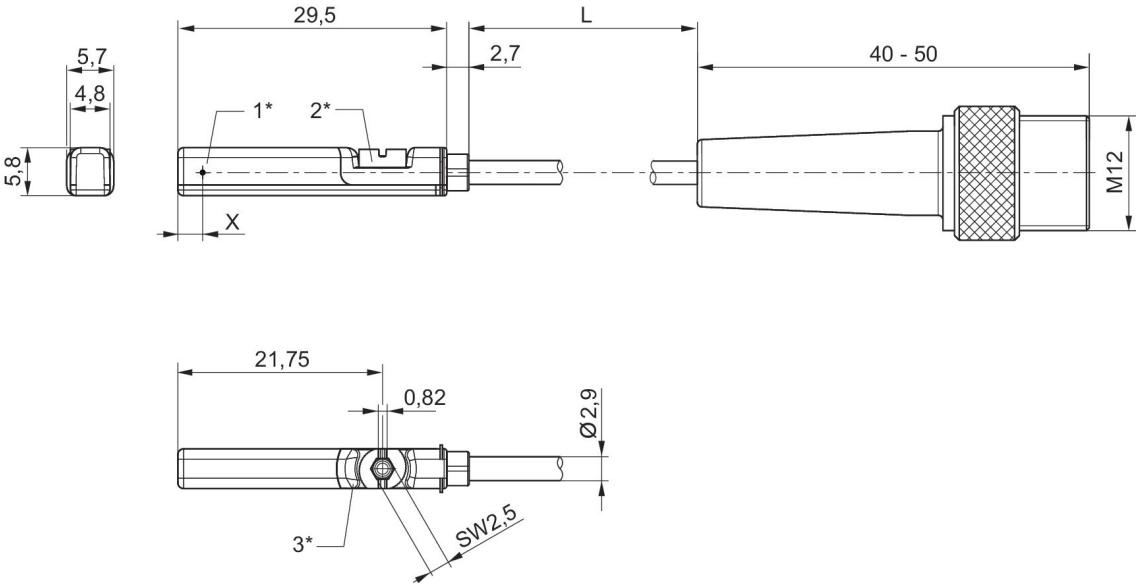
Sensor, Series ST6

CCL-IC
open cable ends
RoHS
UL (Underwriters Laboratories)
cULus



Direct mounting for series	Type of contact	Cable sheath	Cable length L [m]	Max. DC switching current [A]	Min. operating voltage DC [V DC]	Max. operating voltage DC [V DC]	Version	Part No.
CCL-IC	electronic PNP	Polyurethane	0.3	0.13	10	30	short circuit resistant	R412025611

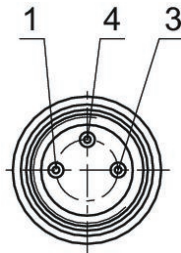
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = PNP: 11,6 mm
Pin assignment: 1 = (+) 3 = (-) 4 = (OUT)

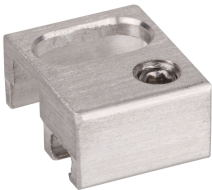
R412025611

Pin assignment M8x1 (3-pin)

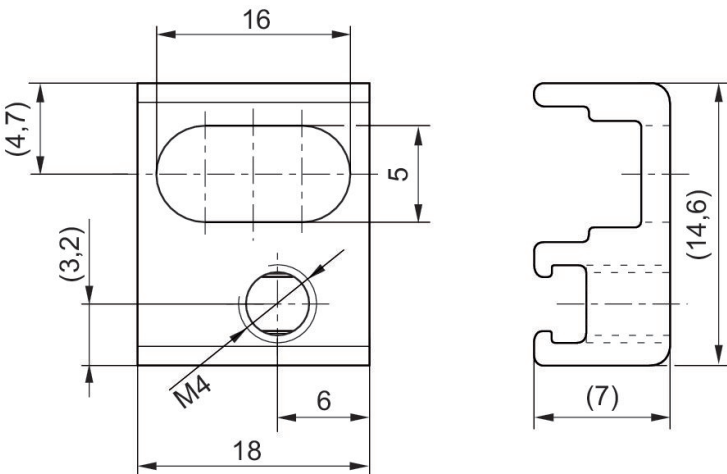


Sensor mounting, Series CB1

ST6

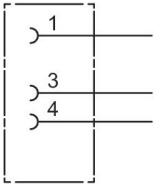


Material	Part No.
Aluminum	R412025944



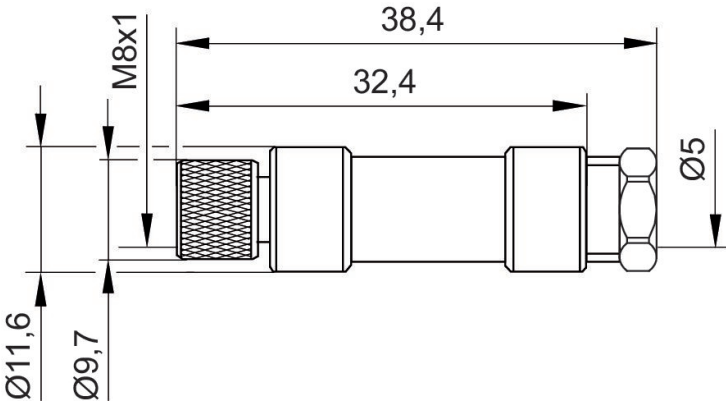
Round plug connector, Series CON-RD

Socket
M8x1
3-pin



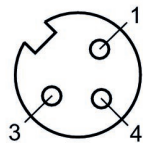
Operational voltage	Contact assignment	Coding	Shielding	Connection type	Max. current [A]	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Min. ambient temperature [°C]	Max. ambient temperature [°C]	Part No.
48 V AC/DC	3-pin	A-coded	unshielded	Soldering	4	3.5	5	-25	80	1834484173

Dimensions



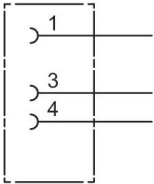
1834484173

Pin assignment, socket



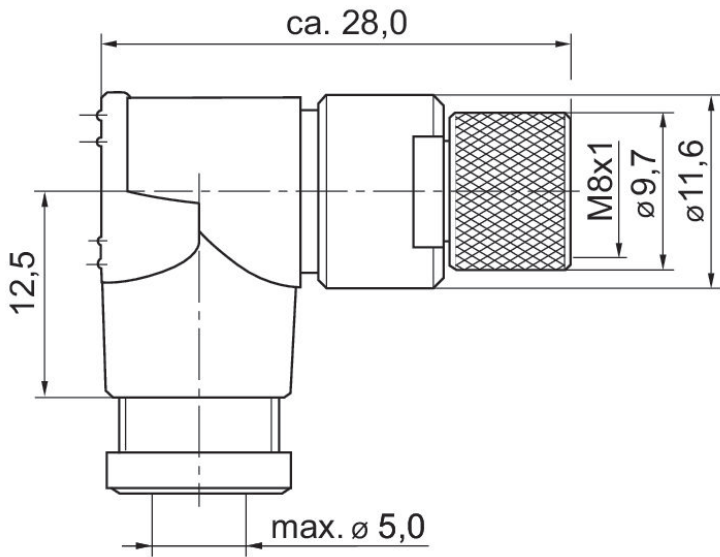
Round plug connector, Series CON-RD

Socket
M8x1
3-pin



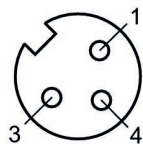
Opera-tional voltage	Contact assign-ment	Coding	Shielding	Connec-tion type	Max. current [A]	min. suit-able ca-ble Ø [mm]	max. suit-able ca-ble Ø [mm]	Min. am-bient tem-perature [°C]	Max. am-bient tem-perature [°C]	Part No.
48 V AC/DC	3-pin	A-coded	unshielded	Soldering	4	3.5	5	-40	85	1834484174

Dimensions in mm



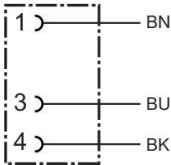
1834484174

Pin assignment, socket



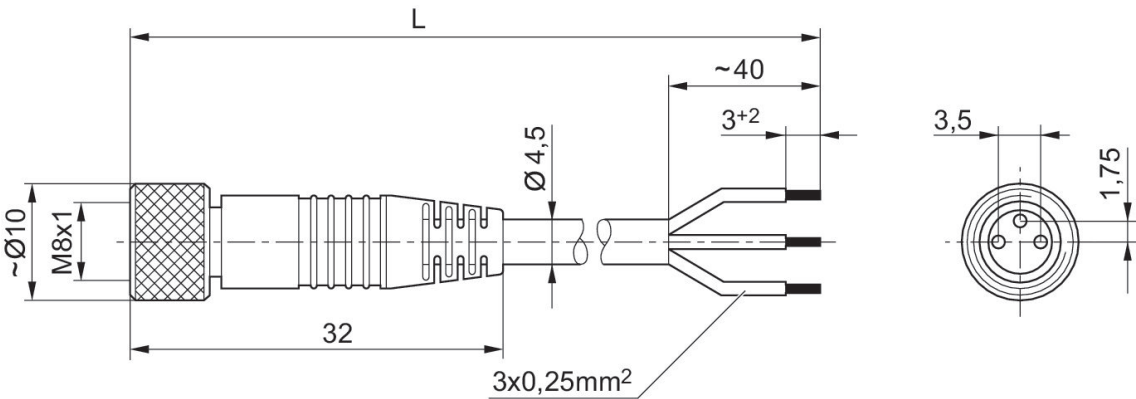
Round plug connector, Series CON-RD

Socket
M8x1
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

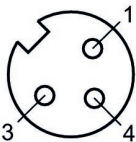
Dimensions



L = length

1834484166, 1834484168, 1834484247

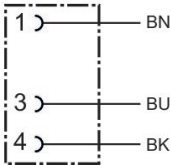
Pin assignment, socket



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

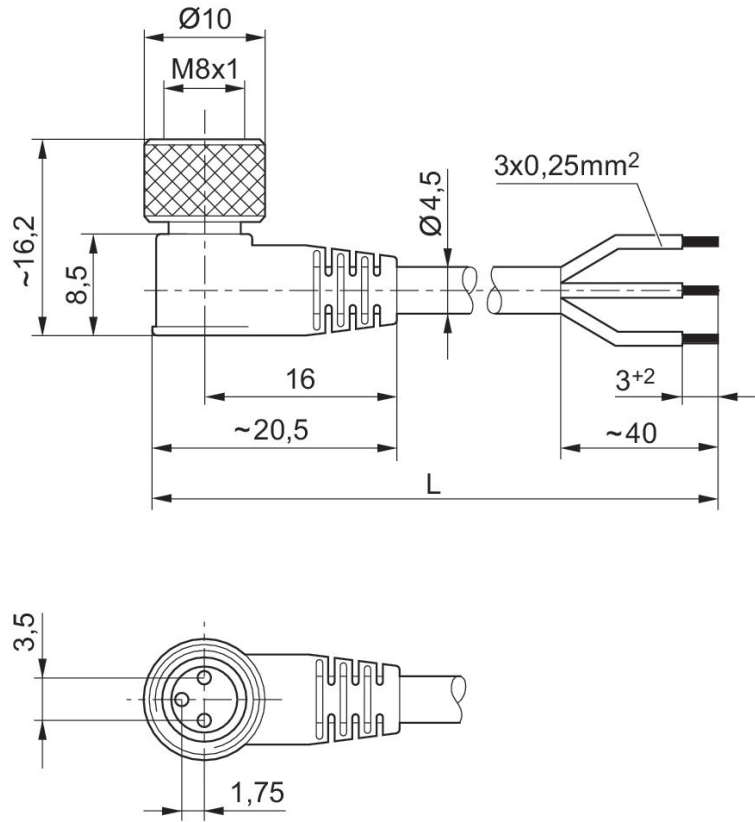
Round plug connector, Series CON-RD

Socket
M8x1
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

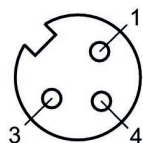
Dimensions



L = length

1834484167, 1834484169, 1834484248

Pin assignment, socket



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

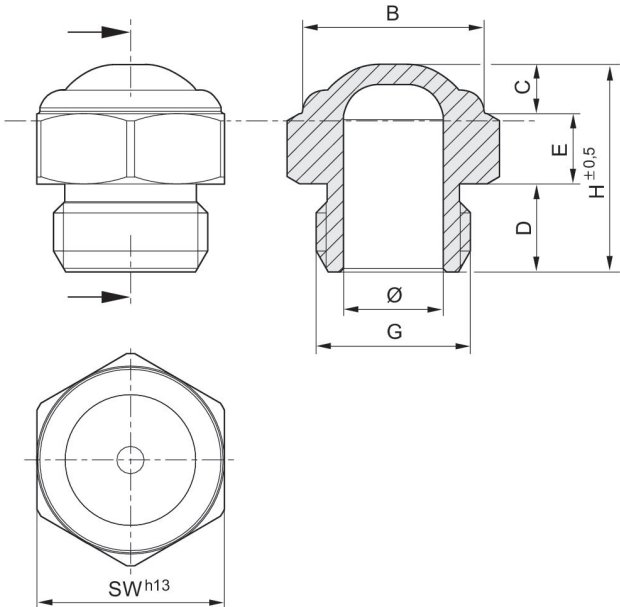
Silencers, series SI1

External thread
Stainless Steel



Compressed air connection	Sound pressure level [dB]	Nominal flow [l/min]	Delivery unit [piece]	Weight [kg]	Part No.
M5	68		10	0.006	R412010686
G 1/8	73	1218	10	0.01	R412010687

Dimensions



Part No.	Port G	Ø	B	D	E	H	SW
R412010686	M5	2.5	6.5	4	3	8	8
R412010687	G 1/8	6	11	6	4	15	13
R412007817	G 1/4	8.5	12	8	5	18	16

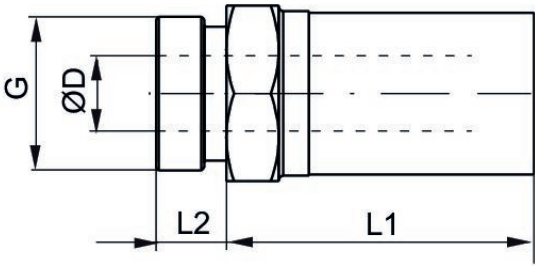
Silencers, series SI1

External thread
Stainless Steel



Compressed air connection	Sound pressure level [dB]	Nominal flow [l/min]	Delivery unit [piece]	Weight [kg]	Part No.
M5	85	73	1	0.003	R412010090
G 1/8	90	1312	1	0.011	R412010081

Dimensions



Part No.	Port G	SW	Ø D	L1	L2
R412010090	M5	8	3.1	10.5	3.5
R412010081	G 1/8	13	6.6	20	6
R412010082	G 1/4	16	8.6	29.5	7.5
R412010083	G 3/8	19	12.1	33.5	7.5
R412010084	G 1/2	24	15.3	39.5	9.5
R412010085	G 3/4	30	19.3	45	10
R412010086	G 1	36	25.5	49.5	11.5

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