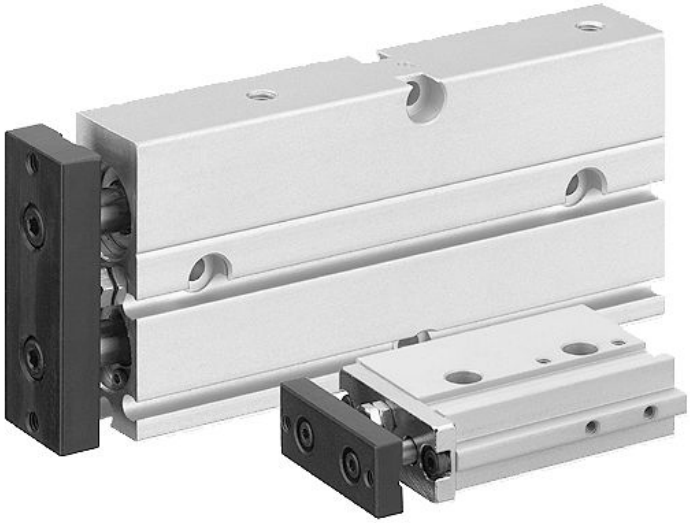
Series TWC



AVENTICS™

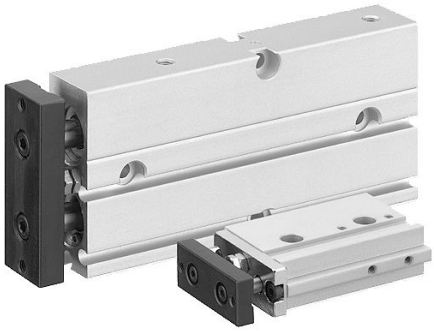
AVENTICS Series TWC Double piston cylinders

EMERSON™

Series TWC

The AVENTICS Series TWC is a compact and powerful cylinder with its double piston offering also an high non-rotating accuracy.

- Ø 6 ... 32 mm



Product overview

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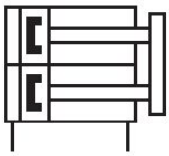
Plug

Double piston cylinder, Series TWC

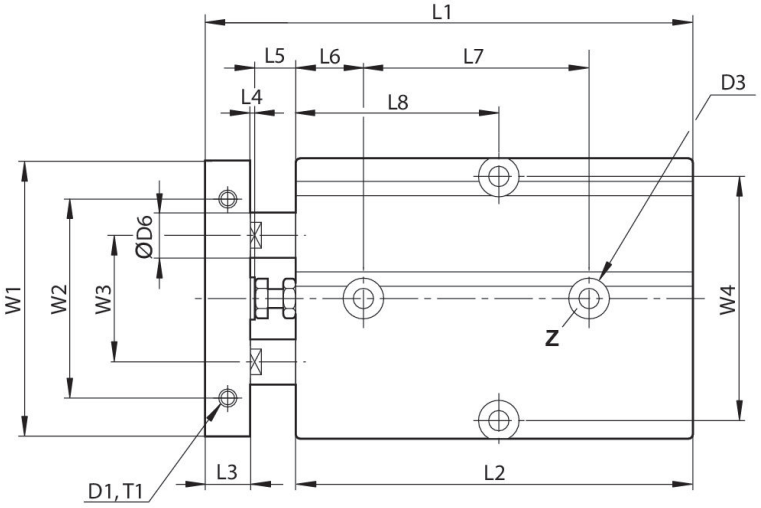
Magnetic piston: with magnetic piston
Cushioning: elastic
Functional principle: Double-acting
Min. ambient temperature: 0 °C
Max. ambient temperature: 60 °C
Max. working pressure: 7 bar

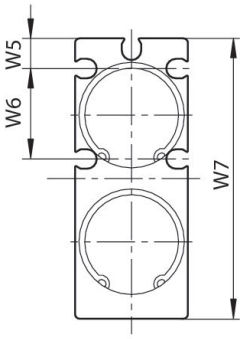


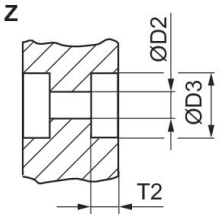
Piston Ø [mm]	Stroke [mm]	Thread connection	Functional principle	Part No.
6	10	M5	Double-acting	R402000794
6	20	M5	Double-acting	R402000795
6	30	M5	Double-acting	R402000796
6	40	M5	Double-acting	R402000797
6	50	M5	Double-acting	R402000798
10	10	M5	Double-acting	R402000799
10	20	M5	Double-acting	R402000800
10	30	M5	Double-acting	R402000801
10	40	M5	Double-acting	R402000802
10	50	M5	Double-acting	R402000803
10	60	M5	Double-acting	R402000804
10	70	M5	Double-acting	R402000805
16	10	M5	Double-acting	R402000806
16	20	M5	Double-acting	R402000807
16	30	M5	Double-acting	R402000808
16	40	M5	Double-acting	R402000809
16	50	M5	Double-acting	R402000810
16	60	M5	Double-acting	R402000811
16	70	M5	Double-acting	R402000812
16	80	M5	Double-acting	R402000813
16	90	M5	Double-acting	R402000814
16	100	M5	Double-acting	R402000815
20	10	M5	Double-acting	R402000816
20	20	M5	Double-acting	R402000817
20	30	M5	Double-acting	R402000818
20	40	M5	Double-acting	R402000819
20	50	M5	Double-acting	R402000820
20	60	M5	Double-acting	R402000821
20	70	M5	Double-acting	R402000822
20	80	M5	Double-acting	R402000823
20	90	M5	Double-acting	R402000824

Piston Ø [mm]	Stroke [mm]	Thread connection	Functional principle	Part No.
20	100	M5	Double-acting	R402000825
25	10	M5	Double-acting	R402000826
25	20	M5	Double-acting	R402000827
25	30	M5	Double-acting	R402000828
25	40	M5	Double-acting	R402000829
25	50	M5	Double-acting	R402000830
25	60	M5	Double-acting	R402000831
25	70	M5	Double-acting	R402000832
25	80	M5	Double-acting	R402000833
25	90	M5	Double-acting	R402000834
25	100	M5	Double-acting	R402000835
32	10	G 1/8	Double-acting	R402000836
32	20	G 1/8	Double-acting	R402000837
32	30	G 1/8	Double-acting	R402000838
32	40	G 1/8	Double-acting	R402000839
32	50	G 1/8	Double-acting	R402000840
32	60	G 1/8	Double-acting	R402000841
32	70	G 1/8	Double-acting	R402000842
32	80	G 1/8	Double-acting	R402000843
32	90	G 1/8	Double-acting	R402000844
32	100	G 1/8	Double-acting	R402000845

Dimensions







Piston Ø	D1	T1	Ø D2	Ø D3	T2	D4	D5	Ø D6	H1
6									
10	2xM3	4	3,4	6	5	M5	2xM3	6	16
16	2xM4	5	4,5	8	5.5	M5	2xM4	8	20
20	2xM4	5	4,5	8	5.5	M5	2xM4	10	24
25	2xM5	6	4,5	9	6	M5	2xM4	12	29
32	2xM8	10	5,5	9.5	10.5	G 1/8	2xM6	16	38

Piston Ø	H3	L1 ±0,8 1)	L2±0,2 S=10 2)	L2±0,2 S=20 2)	L2±0,2 S=30 2)	L2±0,2 S=40 2)	L2±0,2 S=50 2)	L2±0,2 S=60 2)	L2±0,2 S=70 2)
6									
10	17	68	66	76	86	96	106	116	126
16	21	78	73	83	93	103	113	123	133
20	25	88	78	88	98	108	118	128	138
25	30	91	82	92	102	112	122	132	142
32	40	118	98	108	118	128	138	148	158

Piston Ø	L2±0,2 S=80 2)	L2±0,2 S=90 2)	L2±0,2 S=100 2)	L3	L4	L5	L6	L7 ±0,2 1)	L8 ±0,2 S=10 2)
6									
10				5	1	6	15	25	25
16	143	153	163	8	1	6	15	30	40
20	148	158	168	10	1	9	15	30	45
25	152	162	172	10	1	8	15	40	50
32	168	178	188	17	1	12	17	45	55

Piston Ø	L8 ±0,2 S=20 2)	L8 ±0,2 S=30 2)	L8 ±0,2 S=40 2)	L8 ±0,2 S=50 2)	L8 ±0,2 S=60 2)	L8 ±0,2 S=70 2)	L8 ±0,2 S=80 2)	L8 ±0,2 S=90 2)	L8 ±0,2 S=100 2)
6									
10	40	45	50	55	60	65			
16	45	50	55	60	65	70	75	80	85
20	45	45	50	55	60	65	70	75	80
25	50	50	55	60	65	70	75	80	85
32	60	65	70	75	80	85	90	95	100

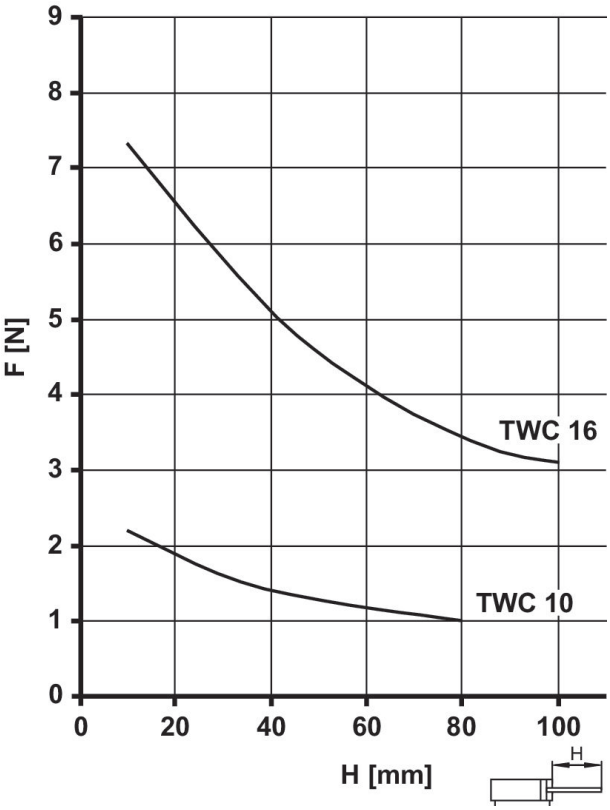
Piston Ø	L9	L10	W1	W2 ±0,2	W3	W4 ±0,2	W5	W6	W7
6									
10	32	10	41	26	18	34	5	14	42
16	32	10	53	34	24	47	5.7	18.5	54
20	35	12	61	44	28	55	6.8	20	62
25	40	12	72	56	34	66	8.3	22.5	73
32	46	15	94	72	42	83	10.1	34	96

Piston Ø	W8 ±0,2
6	
10	34

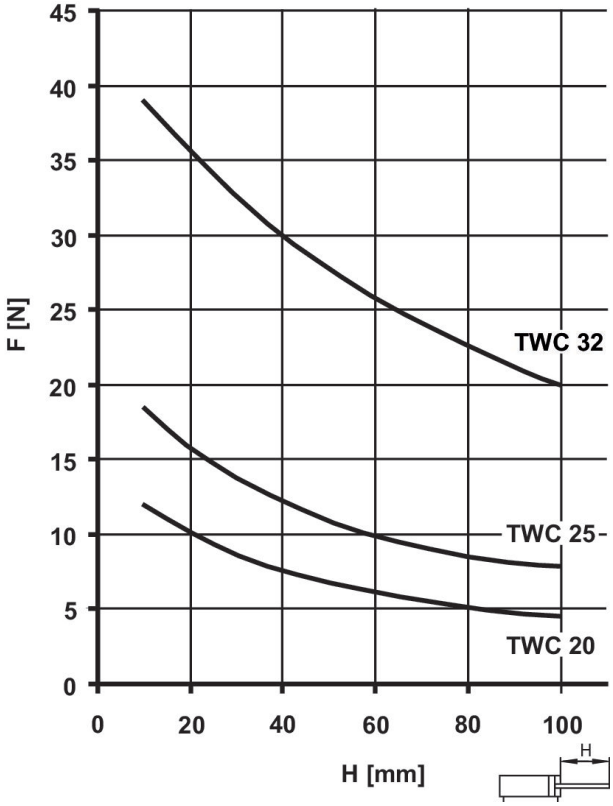
Piston Ø	W8 ±0,2
16	47
20	55
25	66
32	83

S = stroke
1) + Stroke
2) Dimensions for corresponding stroke

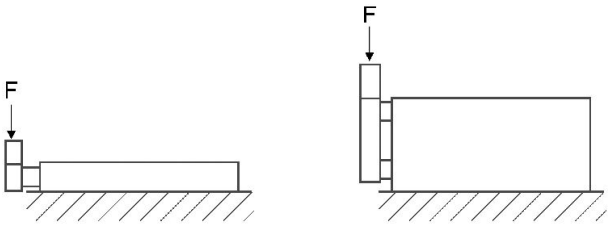
Max. transverse force F depending on the stroke length



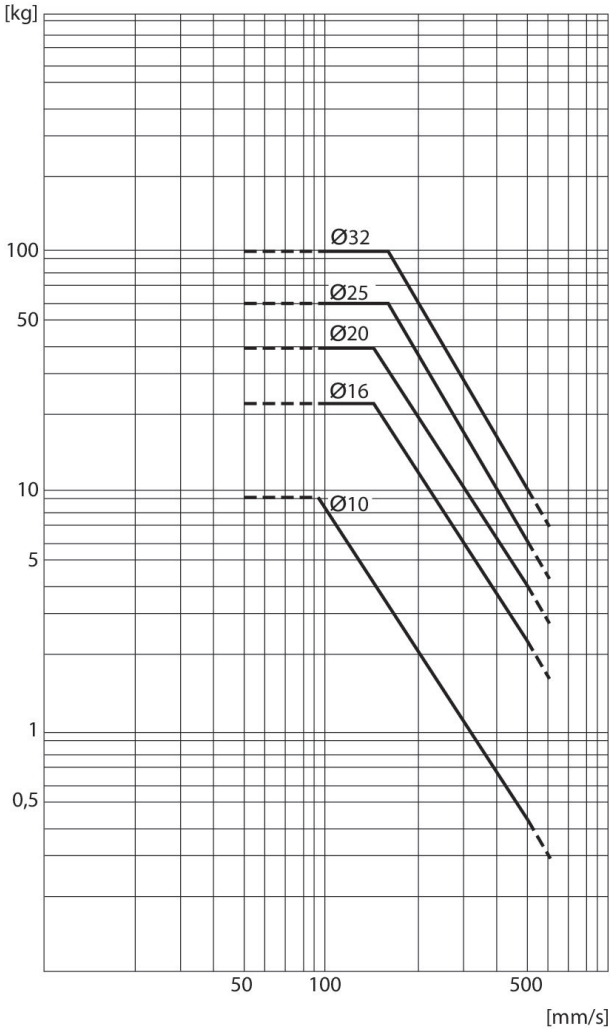
Max. transverse force F depending on the stroke length



Max. transverse force F depending on the stroke length

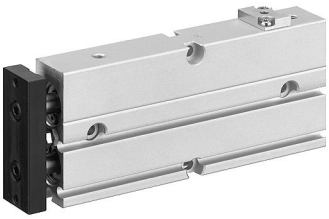


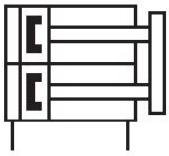
Maximum permissible moving mass depending on the impact speed



Double piston cylinder, Series TWC-HL

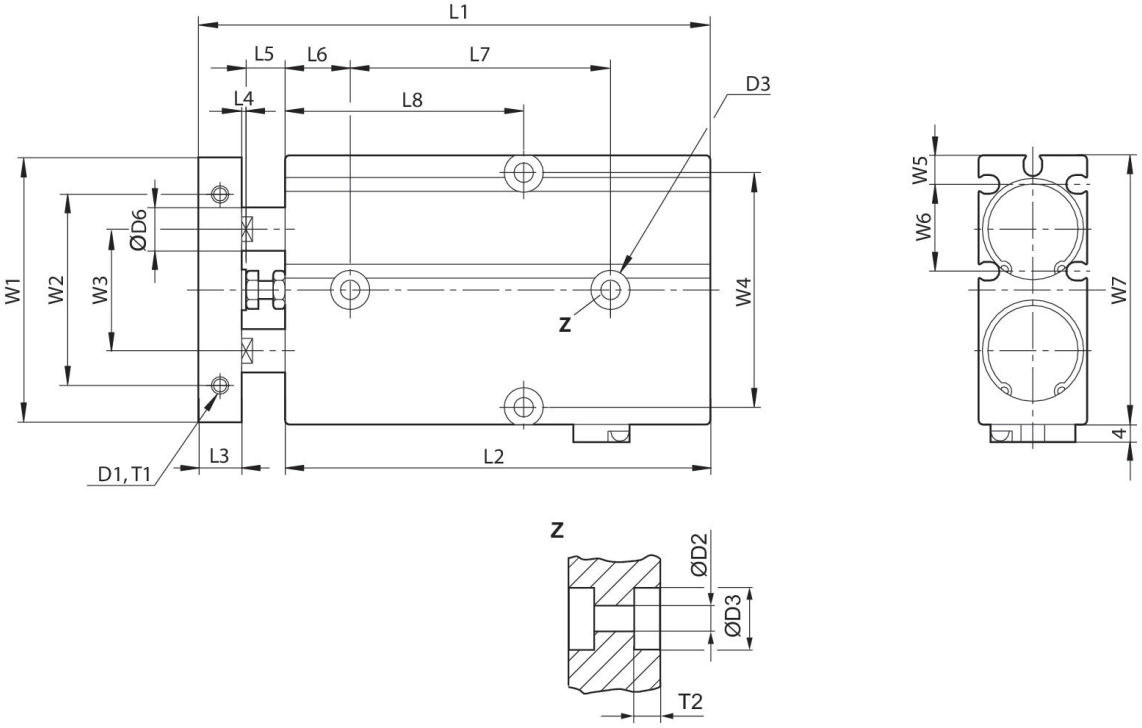
Magnetic piston: with magnetic piston
Cushioning: elastic
End position lock: retracted cylinder
Functional principle: Double-acting
Min. ambient temperature: 0 °C
Max. ambient temperature: 60 °C
Min. working pressure: 1.5 bar
Max. working pressure: 7 bar



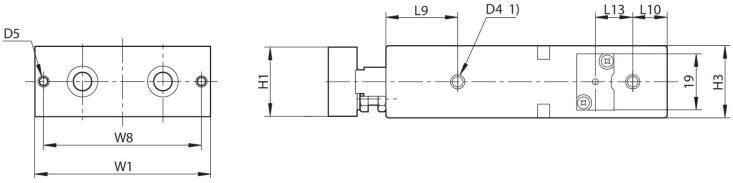


Piston Ø [mm]	Stroke [mm]	Thread connection	Functional principle	Part No.
16	10	M5	Double-acting	R402000846
16	20	M5	Double-acting	R402000847
16	30	M5	Double-acting	R402000848
16	40	M5	Double-acting	R402000849
16	50	M5	Double-acting	R402000850
16	60	M5	Double-acting	R402000851
16	70	M5	Double-acting	R402000852
16	80	M5	Double-acting	R402000853
20	10	M5	Double-acting	R402000854
20	20	M5	Double-acting	R402000855
20	30	M5	Double-acting	R402000856
20	40	M5	Double-acting	R402000857
20	50	M5	Double-acting	R402000858
20	60	M5	Double-acting	R402000859
20	70	M5	Double-acting	R402000860
20	80	M5	Double-acting	R402000861
25	10	M5	Double-acting	R402000862
25	20	M5	Double-acting	R402000863
25	30	M5	Double-acting	R402000864
25	40	M5	Double-acting	R402000865
25	50	M5	Double-acting	R402000866
25	60	M5	Double-acting	R402000867
25	70	M5	Double-acting	R402000868
25	80	M5	Double-acting	R402000869

TWC 16-HL - 25-HL



TWC 16-HL - 25-HL



1) Compressed air connection
T1 = depth of thread

Piston Ø	D1	T1	Ø D2	Ø D3	T2	D4	D5	Ø D6	H1
16	2xM4	5	4,5	8	5,5	M5	2xM4	8	20
20	2xM4	5	4,5	8	5,5	M5	2xM4	10	24
25	2xM5	6	4,5	9	6	M5	2xM4	12	29

Piston Ø	H3	L1 ±0,8 1)	L2 ±0,2 S=10 2)	L2 ±0,2 S=20 2)	L2 ±0,2 S=30 2)	L2 ±0,2 S=40 2)	L2 ±0,2 S=50 2)	L2 ±0,2 S=60 2)	L2 ±0,2 S=70 2)
16	21	88	83	93	103	113	123	133	143
20	25	98	88	98	108	118	128	138	148
25	30	101	92	102	112	122	132	142	152

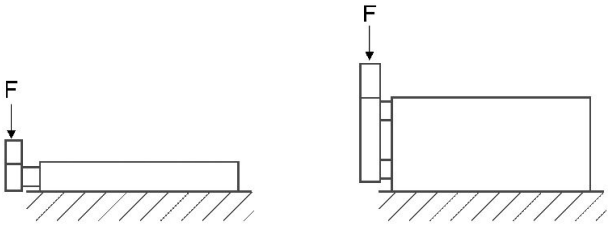
Piston Ø	L2 ±0,2 S=80 2)	L3	L4	L5	L6	L7 ±0,2 1)	L8 ±0,2 S=10 2)	L8 ±0,2 S=20 2)	L8 ±0,2 S=30 2)
16	153	8	1	6	15	40	40	45	50
20	158	10	1	9	15	40	40	45	50
25	162	10	1	8	15	50	45	50	55

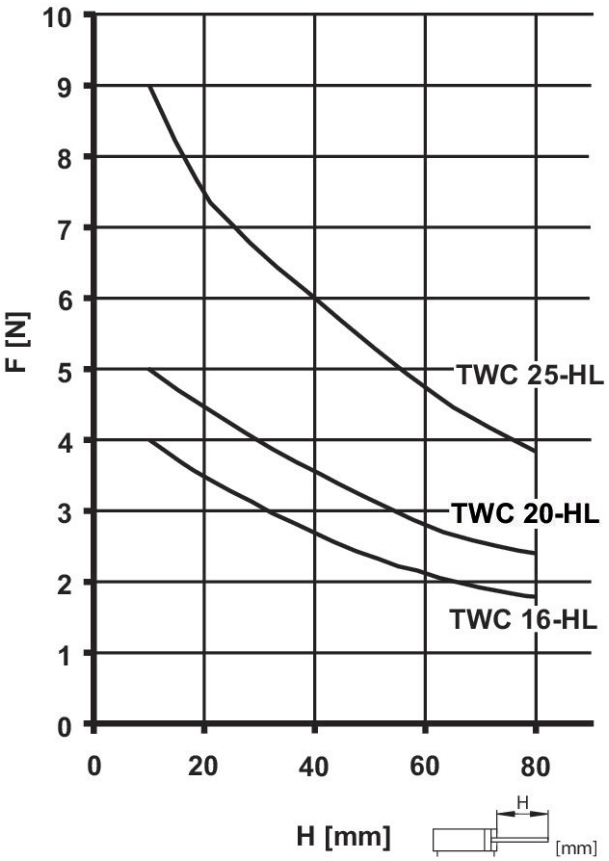
Piston Ø	L8 ±0,2 S=40 2)	L8 ±0,2 S=50 2)	L8 ±0,2 S=60 2)	L8 ±0,2 S=70 2)	L8 ±0,2 S=80 2)	L9	L10	L13	W1
16	55	60	65	70	75	22	10	13	53
20	55	60	65	70	75	25	12	13	61
25	60	65	70	75	80	30	12	10	72

Piston Ø	W2 ±0,2	W3	W4 ±0,2	W5	W6	W7	W8 ±0,2
16	34	24	47	5.7	18.5	54	47
20	44	28	55	6.8	20	62	55
25	56	34	66	8.3	22.5	73	66

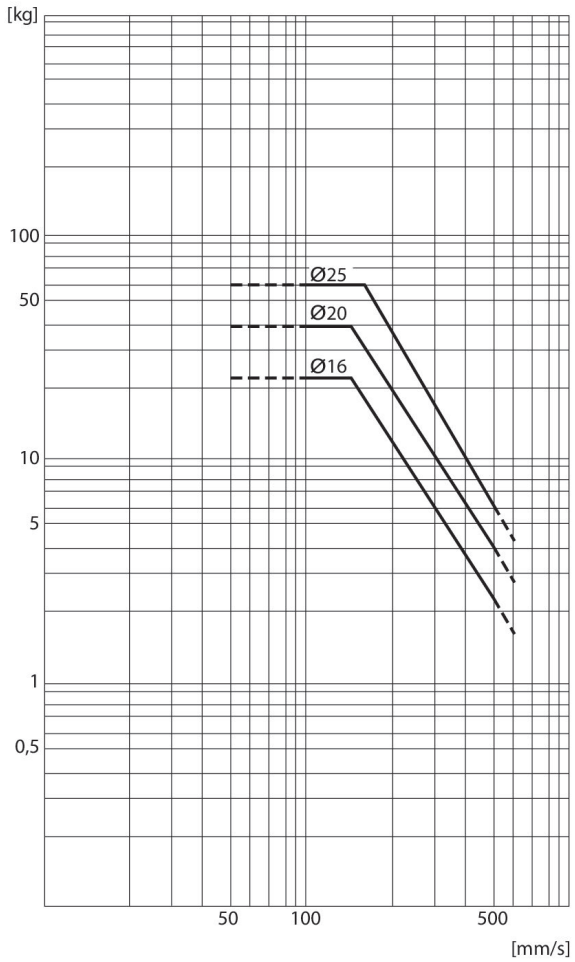
S = stroke
1) + Stroke
2) Dimensions for corresponding stroke

Max. transverse force F depending on the stroke length Ø [[16] mm] ... [[25] mm]



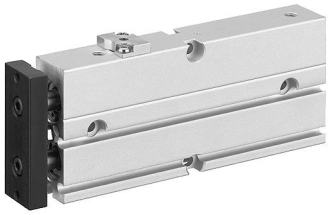


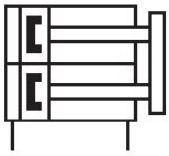
Maximum permissible moving mass depending on the impact speed



Double piston cylinder, Series TWC-RL

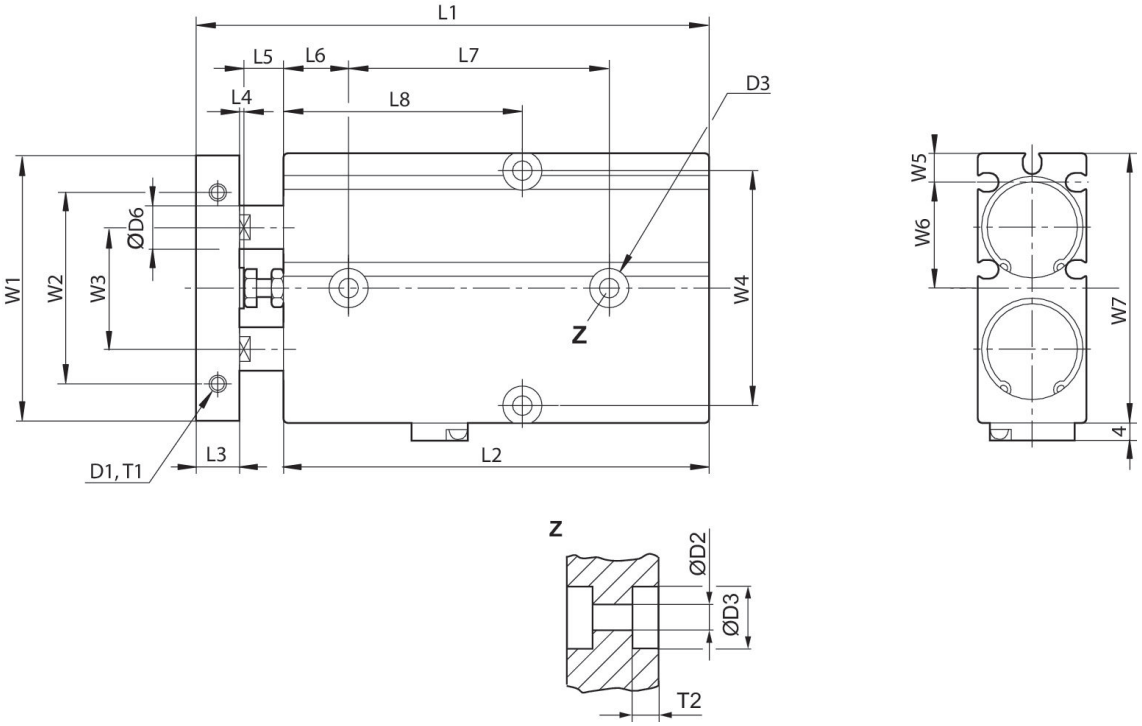
Magnetic piston: with magnetic piston
Cushioning: elastic
End position lock: extended cylinder
Functional principle: Double-acting
Min. ambient temperature: 0 °C
Max. ambient temperature: 60 °C
Min. working pressure: 1.5 bar
Max. working pressure: 7 bar



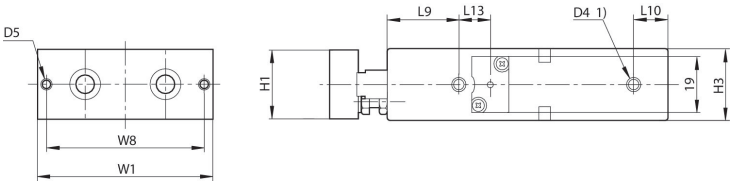


Piston Ø [mm]	Stroke [mm]	Thread connection	Functional principle	Part No.
16	10	M5	Double-acting	R402000870
16	20	M5	Double-acting	R402000871
16	30	M5	Double-acting	R402000872
16	40	M5	Double-acting	R402000873
16	50	M5	Double-acting	R402000874
16	60	M5	Double-acting	R402000875
16	70	M5	Double-acting	R402000876
16	80	M5	Double-acting	R402000877
20	10	M5	Double-acting	R402000878
20	20	M5	Double-acting	R402000879
20	30	M5	Double-acting	R402000880
20	40	M5	Double-acting	R402000881
20	50	M5	Double-acting	R402000882
20	60	M5	Double-acting	R402000883
20	70	M5	Double-acting	R402000884
20	80	M5	Double-acting	R402000885
25	10	M5	Double-acting	R402000886
25	20	M5	Double-acting	R402000887
25	30	M5	Double-acting	R402000888
25	40	M5	Double-acting	R402000889
25	50	M5	Double-acting	R402000890
25	60	M5	Double-acting	R402000891
25	70	M5	Double-acting	R402000892
25	80	M5	Double-acting	R402000893

TWC 16-RL - 25-RL



TWC 16-RL - 25-RL



1) Compressed air connection
T1 = depth of thread

Piston Ø	D1	T1	Ø D2	Ø D3	T2	D4	D5	Ø D6	H1
16	2xM4	5	4,5	8	5,5	M5	2xM4	8	20
20	2xM4	5	4,5	8	5,5	M5	2xM4	10	24
25	2xM5	6	4,5	9	6	M5	2xM4	12	29

Piston Ø	H3	L1 ±0,8 1)	L2 ±0,2 S=10 2)	L2 ±0,2 S=20 2)	L2 ±0,2 S=30 2)	L2 ±0,2 S=40 2)	L2 ±0,2 S=50 2)	L2 ±0,2 S=60 2)	L2 ±0,2 S=70 2)
16	21	88	83	93	103	113	123	133	143
20	25	98	88	98	108	118	128	138	148
25	30	101	92	102	112	122	132	142	152

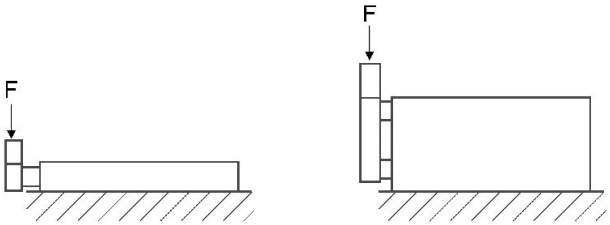
Piston Ø	L2 ±0,2 S=80 2)	L3	L4	L5	L6	L7 ±0,2 1)	L8 ±0,2 S=10 2)	L8 ±0,2 S=20 2)	L8 ±0,2 S=30 2)
16	153	8	1	6	15	40	45	45	50
20	158	10	1	9	15	40	45	45	50
25	162	10	1	8	15	50	50	50	55

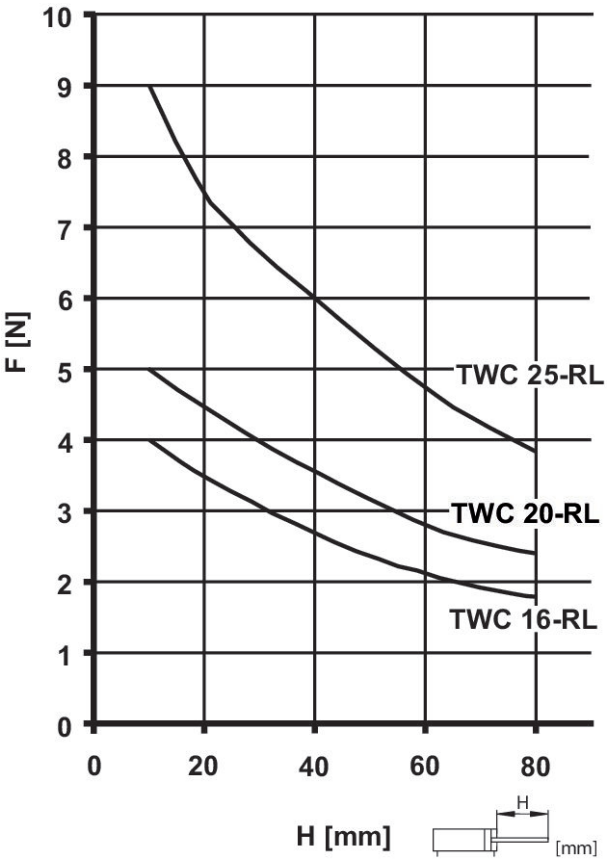
Piston Ø	L8 ±0,2 S=40 2)	L8 ±0,2 S=50 2)	L8 ±0,2 S=60 2)	L8 ±0,2 S=70 2)	L8 ±0,2 S=80 2)	L9	L10	L13	W1
16	55	60	65	70	75	22	10	11	53
20	55	60	65	70	75	25	12	11	61
25	60	65	70	75	80	30	12	9	72

Piston Ø	W2 ±0,2	W3	W4 ±0,2	W5	W6	W7	W8 ±0,2
16	34	24	47	5.7	18.5	54	47
20	44	28	55	6.8	20	62	55
25	56	34	66	8.3	22.5	73	66

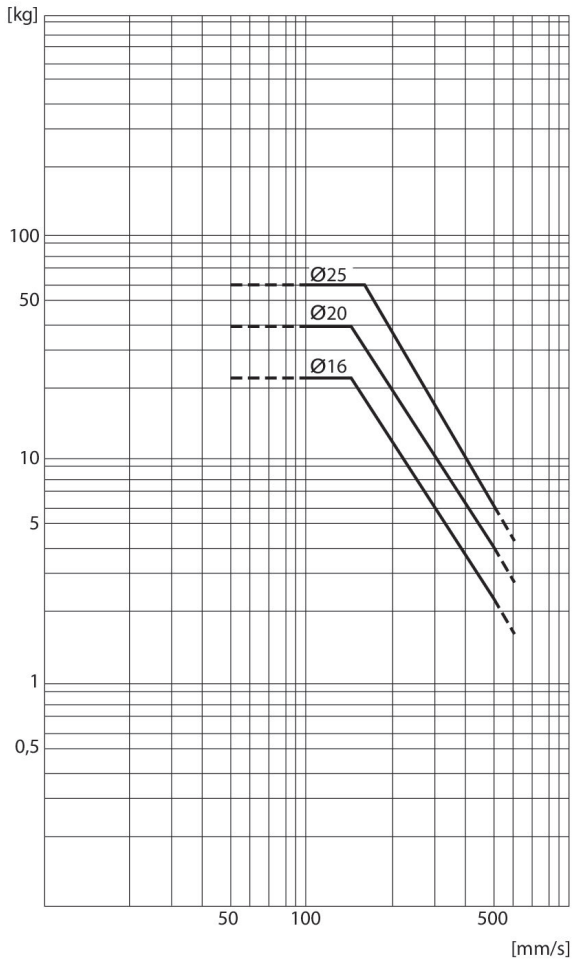
S = stroke
1) + Stroke
2) Dimensions for corresponding stroke

Max. transverse force F depending on the stroke length 16 ... 25 mm



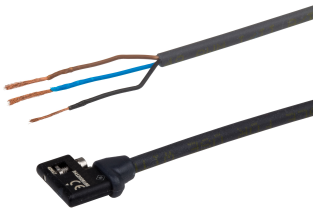


Maximum permissible moving mass depending on the impact speed



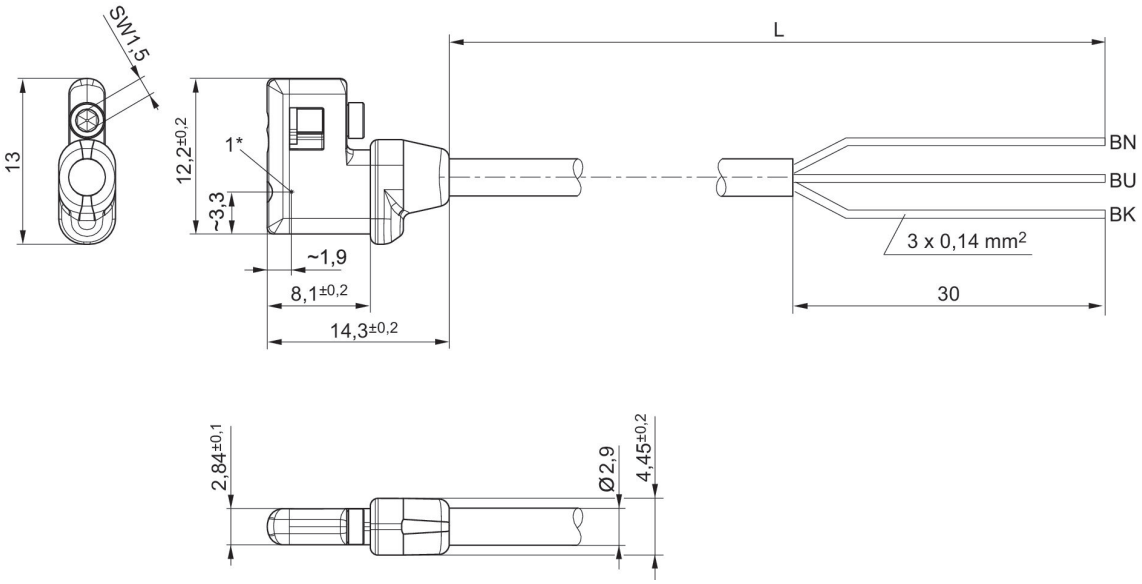
Sensors, Series SC4, open cable ends

For series: UPG RTC MSN GPC MSC PRA SSI TWC
Certificates: CE declaration of conformity cULus UL (Underwriters Laboratories)
Min. ambient temperature: -30 °C
Max. ambient temperature: 80 °C



Direct mounting for series	Switch descr.	Electrical connection number of poles	Cable length L [m]	Part No.
UPG, RTC, MSN, GPC, MSC, PRA, SSI, TWC	electronic PNP	3-pin	3	R412026162
UPG, RTC, MSN, GPC, MSC, PRA, SSI, TWC	electronic PNP	3-pin	5	R412026163
UPG, RTC, MSN, GPC, MSC, PRA, SSI, TWC	NPN	3-pin	3	R412026166

Dimensions



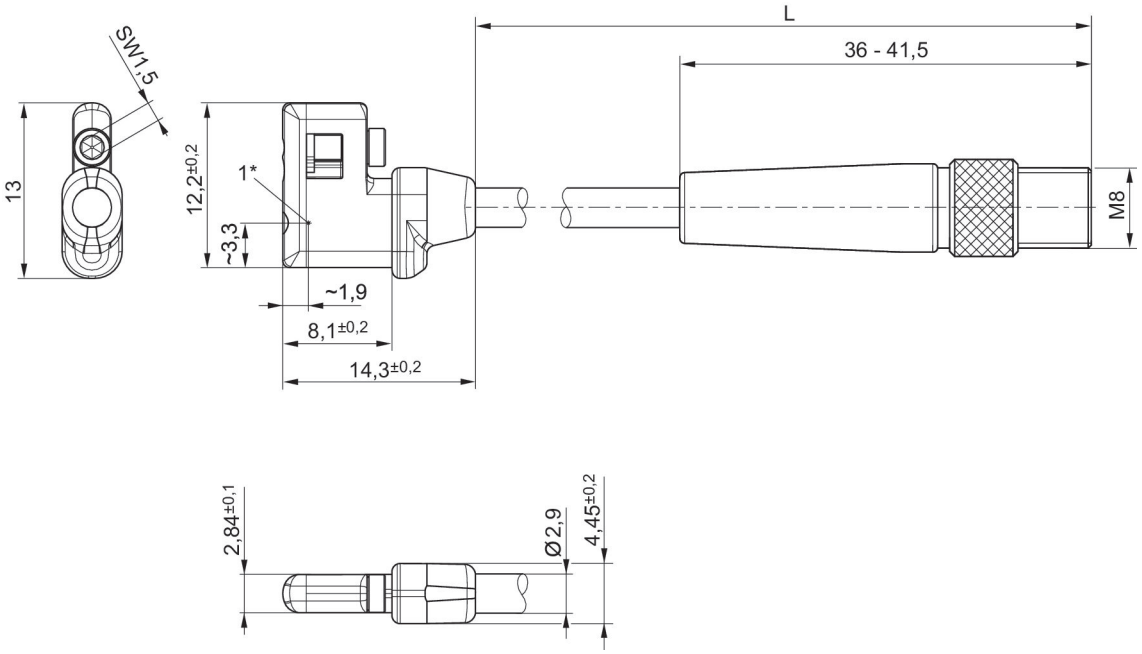
* Switching point
L = cable length

Sensors, Series SC4, with cable, plug M8

For series: UPG RTC MSN GPC MSC PRA SSI TWC
Certificates: CE declaration of conformity cULus UL (Underwriters Laboratories)
Electrical connection 2, number of poles: 3-pin
Min. ambient temperature: -30 °C
Max. ambient temperature: 80 °C

Direct mounting for series	Switch descr.	Electrical connection number of poles	Cable length L [m]	Part No.
UPG, RTC, MSN, GPC, MSC, PRA, SSI, TWC	electronic PNP	3-pin	0.3	R412026164
UPG, RTC, MSN, GPC, MSC, PRA, SSI, TWC	electronic PNP	3-pin	0.5	R412026165
UPG, RTC, MSN, GPC, MSC, PRA, SSI, TWC	electronic NPN	3-pin	0.3	R412026167

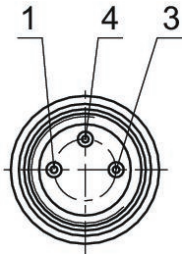
Dimensions



* Switching point
L = cable length

R412026164, R412026165, R412026167

Pin assignment M8x1 (3-pin)



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

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