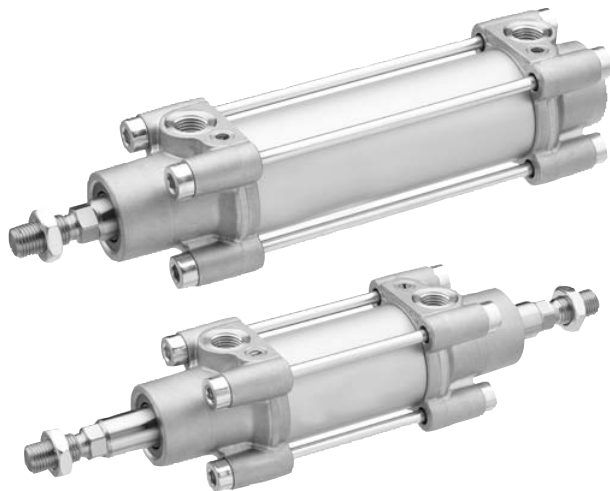


Piston rod cylinders ▶ Standard cylinders

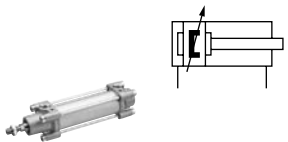
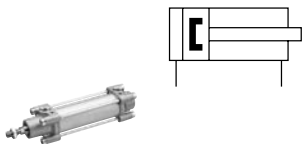
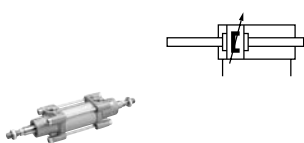
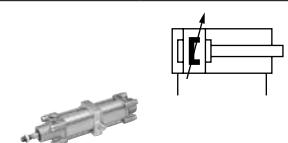
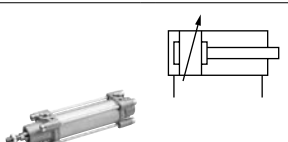
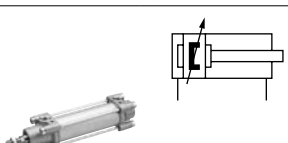
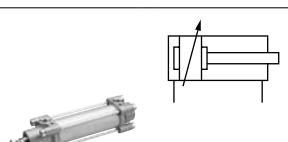
ISO 15552, series TRB

Brochure



Piston rod cylinders ▶ Standard cylinders

ISO 15552, series TRB

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ISO 15552, series TRB

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Piston rod cylinders ▶ Standard cylinders

ISO 15552, series TRB

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Piston rod cylinders ▶ Standard cylinders

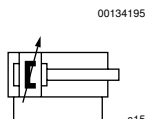
ISO 15552, series TRB

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Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ ATEX optional



Standards	ISO 15552
Compressed air connection	Internal thread
Working pressure min./max.	2 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar
Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Technical Remarks

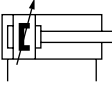
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- ATEX-certified cylinders can be generated in the Internet configurator.
- ATEX ID: II 2G c IIB T4 II 2D c IP65 T125 °C X
- The operating temperature range for ATEX-certified cylinders is -20 °C ... 50 °C.

Piston Ø	[mm]	32	40	50	63	80
Retracting piston force	[N]	435	660	1035	1765	2855
Extracting piston force	[N]	505	790	1235	1960	3165
Cushioning length	[mm]	16.5	19	17	16.5	19.5
Cushioning energy	[J]	4.8	9	15	27	54
Weight	0 mm stroke	0.46	0.67	1.14	1.4	2.12
	+10 mm stroke	0.024	0.03	0.036	0.052	0.06
Stroke max.	[mm]	1600	1900	2100	2500	2800
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10
Tie-rods		Stainless steel	Stainless steel	Steel galvanized	Steel galvanized	Steel galvanized

Piston Ø	[mm]	100	125		
Retracting piston force	[N]	4635	7220		
Extracting piston force	[N]	4945	7725		
Cushioning length	[mm]	19.5	22		
Cushioning energy	[J]	88	140		
Weight	0 mm stroke	3.16	6.92		
	+10 mm stroke	0.065	0.21		
Stroke max.	[mm]	2800	2750		
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10		
Tie-rods		Steel galvanized	Steel galvanized		

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ ATEX optional

	Piston Ø Piston rod thread Ports Piston rod Ø	32 M10x1,25 G 1/8 12	40 M12x1,25 G 1/4 16	50 M16x1,5 G 1/4 20	63 M16x1,5 G 3/8 20	80 M20x1,5 G 3/8 25
	Stroke 25	0822340001	0822341001	0822342001	0822343001	0822344001
	50	0822340002	0822341002	0822342002	0822343002	0822344002
	80	0822340003	0822341003	0822342003	0822343003	0822344003
	100	0822340004	0822341004	0822342004	0822343004	0822344004
	125	0822340005	0822341005	0822342005	0822343005	0822344005
	160	0822340006	0822341006	0822342006	0822343006	0822344006
	200	0822340007	0822341007	0822342007	0822343007	0822344007
	250	0822340008	0822341008	0822342008	0822343008	0822344008
	320	0822340009	0822341009	0822342009	0822343009	0822344009
	400	0822340010	0822341010	0822342010	0822343010	0822344010
	500	0822340011	0822341011	0822342011	0822343011	0822344011
	Piston Ø Piston rod thread Ports Piston rod Ø	100 M20x1,5 G 1/2 25	125 M27x2 G 1/2 32			
	Stroke 25	0822345001	0822306201			
	50	0822345002	0822306202			
	80	0822345003	0822306203			
	100	0822345004	0822306204			
	125	0822345005	0822306205			
	160	0822345006	0822306206			
	200	0822345007	0822306207			
	250	0822345008	0822306208			
	320	0822345009	0822306209			
	400	0822345010	0822306210			
	500	0822345011	0822306211			

Configurable product

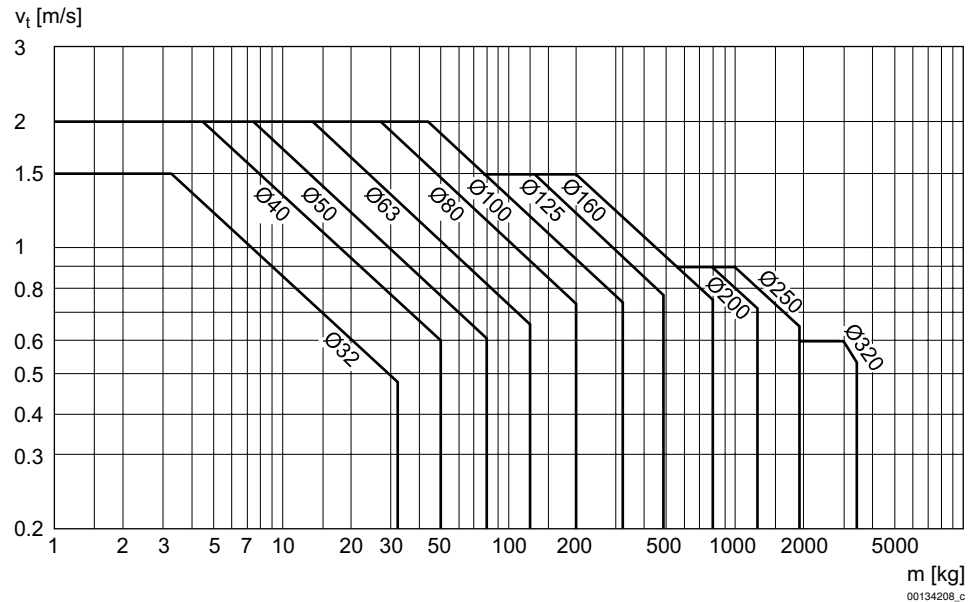

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Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

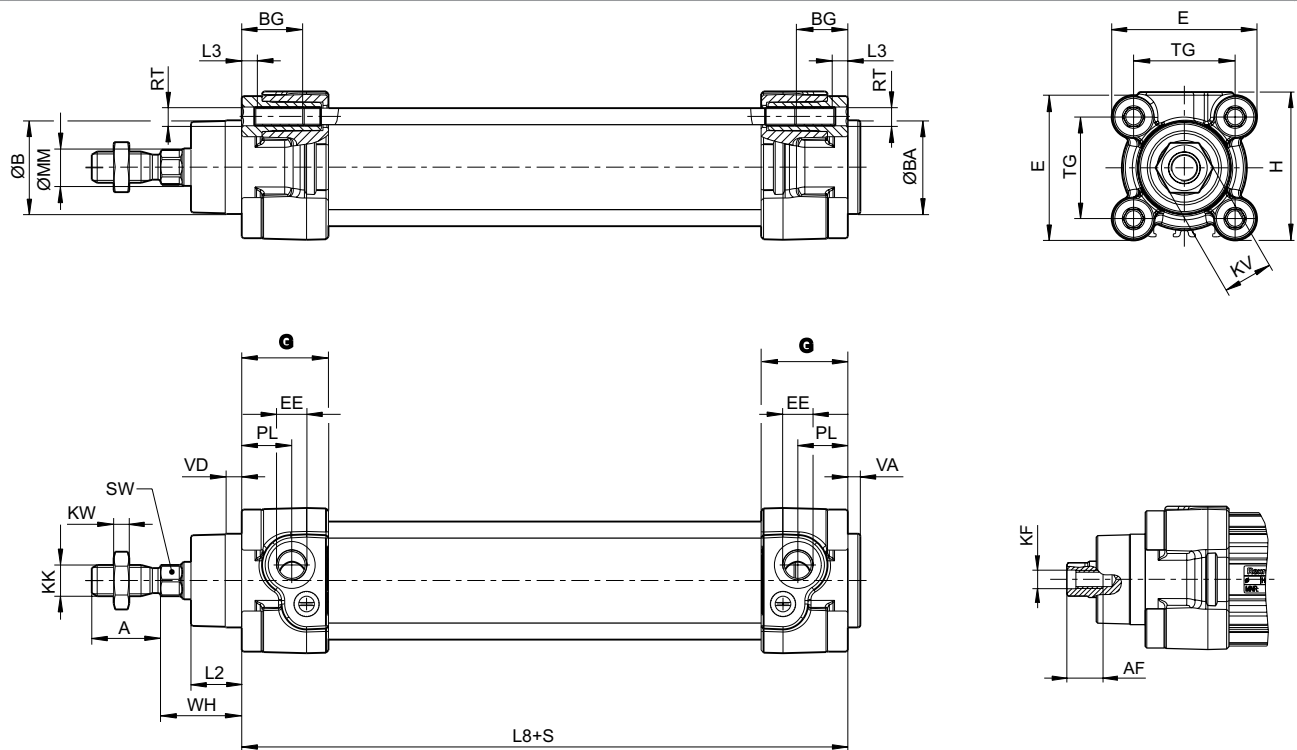
▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ ATEX optional

Cushioning diagram



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

Dimensions



S = stroke

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ ATEX optional

Piston Ø	A -2	AF+1	ØB d11	ØBA d11	BG min.	E	EE	G	H	KF	KK
32	22	12	30	30	16	46.5	G1/8	27.75	47.5	M6	M10x1,25
40	24	13.5	35	35	16	53	G1/4	33.25	53	M8	M12x1,25
50	32	17	40	40	16	65	G1/4	31	65	M10	M16x1,5
63	32	17	45	45	16	75	G3/8	38.25	75	M10	M16x1,5
80	40	21	45	45	17	95	G3/8	38.25	95	M12	M20x1,5
100	40	21	55	55	17	115	G1/2	42.25	115	M12	M20x1,5
125	54	28	60	60	20	140	G1/2	53.85	140	M16	M27x2

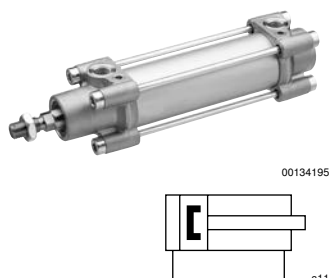
Piston Ø	KV	KW	ØMM f8	PL	L2	L3 ±0,5	L8	RT	SW	TG	VA -1
32	16	5	12	16	16.25	4.5	94±0,4	M6	10	32,5±0,5	4
40	18	6	16	20	18.25	4.5	105±0,7	M6	13	38±0,5	4
50	24	8	20	19	25	4.5	106±0,7	M8	17	46,5±0,6	4
63	24	8	20	24	25	4.5	121±0,8	M8	17	56,5±0,7	4
80	30	10	25	23.5	33	0	128±0,8	M10	22	72±0,7	4
100	30	10	25	25	36	0	138±1	M10	22	89±0,7	4
125	41	13.5	32	33	45	0	160±1	M12	27	110±1,1	6

Piston Ø	VD	WH										
32	5	26±1,4										
40	5	30±1,4										
50	5	37±1,4										
63	5	37±1,8										
80	5	46±1,8										
100	5	51±1,8										
125	7	65±2,2										

Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: elastic ▶ Piston rod: external thread



Standards	ISO 15552
Compressed air connection	Internal thread
Working pressure min./max.	2 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar
Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Piston Ø		[mm]	32	40	50	63	80
Retracting piston force		[N]	435	660	1035	1765	2855
Extracting piston force		[N]	505	790	1235	1960	3165
Impact energy		[J]	0.4	0.65	1	1.6	2.5
Weight	0 mm stroke	[kg]	0.46	0.67	1.14	1.4	2.12
	+10 mm stroke	[kg]	0.024	0.03	0.036	0.052	0.06
Stroke max.		[mm]	1600	1900	2100	2500	2800
Working pressure min./max.		[bar]	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10
Tie-rods			Stainless steel	Stainless steel	Steel galvanized	Steel galvanized	Steel galvanized

Piston Ø	[mm]	100	125			
Retracting piston force	[N]	4635	7220			
Extracting piston force	[N]	4945	7725			
Impact energy	[J]	3.9	6			
Weight	0 mm stroke	[kg]	3.16	6.92		
	+10 mm stroke	[kg]	0.065	0.21		
Stroke max.	[mm]	2800	2750			
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10			
Tie-rods		Steel galvanized	Steel galvanized			

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: elastic ▶ Piston rod: external thread

	Piston Ø Piston rod thread Ports Piston rod Ø	32 M10x1,25 G 1/8 12	40 M12x1,25 G 1/4 16	50 M16x1,5 G 1/4 20	63 M16x1,5 G 3/8 20	80 M20x1,5 G 3/8 25
	Stroke 25	0822340600	0822341600	0822342600	0822343600	0822344600
	50	0822340601	0822341601	0822342601	0822343601	0822344601
	80	0822340602	0822341602	0822342602	0822343602	0822344602
	100	0822340611	R480055348	0822342607	0822343603	0822344603
	125	0822340612	0822341611	0822342612	R480163015	0822344605
	160	0822340609	0822341610	0822342606	0822343606	0822344609
	200	R480162940	0822341604	0822342620	R480163016	0822344607
	250	0822340618	0822341608	0822342614	0822343608	0822344608
	320	R480162941	R480162983	0822342621	0822343612	0822344606
	400	0822340614	0822341605	R480162998	R480163017	0822344604
	500	R480045159	R480162984	R480162999	R480163018	0822344611
	Piston Ø Piston rod thread Ports Piston rod Ø	100 M20x1,5 G 1/2 25	125 M27x2 G 1/2 32			
	Stroke 25	0822345600	R480170413			
	50	0822345601	R480142425			
	80	0822345602	R480170781			
	100	0822345604	R480160422			
	125	R480141842	R480170784			
	160	0822345606	R480170785			
	200	0822345610	R480170786			
	250	R480149881	R480170787			
	320	R480163046	R480146555			
	400	0822345603	R480170788			
	500	R480163047	R480168824			

Configurable product

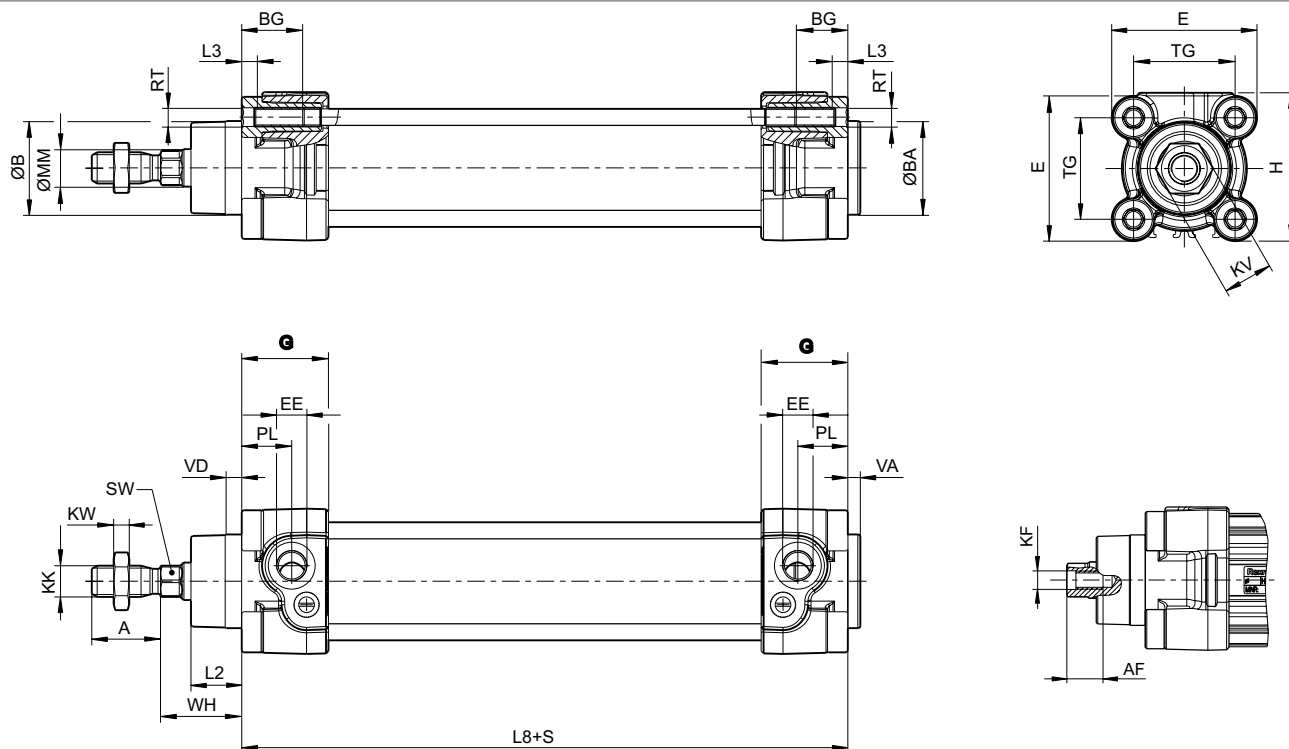

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Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: elastic ▶ Piston rod: external thread

Dimensions



S = stroke

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Piston Ø	A -2	AF+1	ØB d11	ØBA d11	BG min.	E	EE	G	H	KF	KK
32	22	12	30	30	16	46.5	G1/8	27.75	47.5	M6	M10x1,25
40	24	13.5	35	35	16	53	G1/4	33.25	53	M8	M12x1,25
50	32	17	40	40	16	65	G1/4	31	65	M10	M16x1,5
63	32	17	45	45	16	75	G3/8	38.25	75	M10	M16x1,5
80	40	21	45	45	17	95	G3/8	38.25	95	M12	M20x1,5
100	40	21	55	55	17	115	G1/2	42.25	115	M12	M20x1,5
125	54	28	60	60	20	140	G1/2	53.85	140	M16	M27x2

Piston Ø	KV	KW	ØMM f8	PL	L2	L3 ±0,5	L8	RT	SW	TG	VA -1
32	16	5	12	16	16.25	4.5	94±0,4	M6	10	32,5±0,5	4
40	18	6	16	20	18.25	4.5	105±0,7	M6	13	38±0,5	4
50	24	8	20	19	25	4.5	106±0,7	M8	17	46,5±0,6	4
63	24	8	20	24	25	4.5	121±0,8	M8	17	56,5±0,7	4
80	30	10	25	23.5	33	0	128±0,8	M10	22	72±0,7	4
100	30	10	25	25	36	0	138±1	M10	22	89±0,7	4
125	41	13.5	32	33	45	0	160±1	M12	27	110±1,1	6

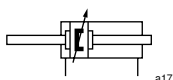
Piston Ø	VD	WH									
32	5	26±1,4									
40	5	30±1,4									
50	5	37±1,4									
63	5	37±1,8									
80	5	46±1,8									
100	5	51±1,8									
125	7	65±2,2									

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread, through



00134197



Standards	ISO 15552
Compressed air connection	Internal thread
Working pressure min./max.	2 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar

Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

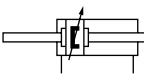
Piston Ø		[mm]	32	40	50	63	80
Retracting piston force		[N]	435	660	1035	1765	2855
Extracting piston force		[N]	435	660	1035	1765	2855
Cushioning length		[mm]	16.5	19	17	16.5	19.5
Cushioning energy		[J]	4.8	9	15	27	54
Weight	0 mm stroke	[kg]	0.52	0.82	1.42	1.7	2.67
	+10 mm stroke	[kg]	0.033	0.046	0.061	0.077	0.099
Stroke max.		[mm]	1500	1500	1500	1500	1500
Working pressure min./max.		[bar]	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10
Tie-rods			Stainless steel	Stainless steel	Steel galvanized	Steel galvanized	Steel galvanized

Piston Ø	[mm]	100	125			
Retracting piston force	[N]	4635	7220			
Extracting piston force	[N]	4635	7220			
Cushioning length	[mm]	19.5	22			
Cushioning energy	[J]	88	140			
Weight	0 mm stroke	[kg]	3.7	9		
	+10 mm stroke	[kg]	0.104	0.26		
Stroke max.	[mm]	1500	1500			
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10			
Tie-rods		Steel galvanized	Steel galvanized			

Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread, through

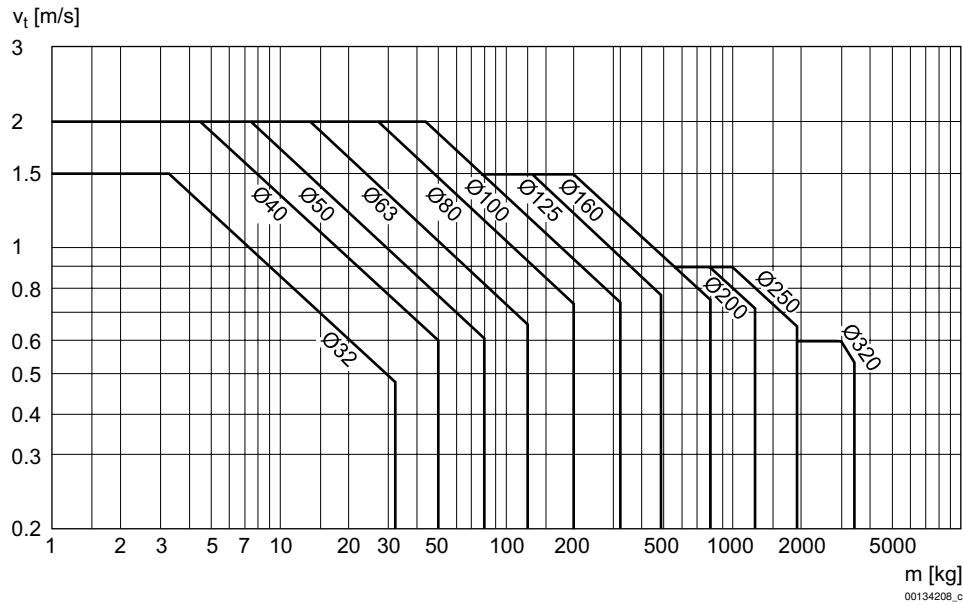
	Piston Ø Piston rod thread Ports Piston rod Ø	32 M10x1,25 G 1/8 12	40 M12x1,25 G 1/4 16	50 M16x1,5 G 1/4 20	63 M16x1,5 G 3/8 20	80 M20x1,5 G 3/8 25
	Stroke 25	0822340501	0822341501	0822342501	0822343501	0822344501
	50	0822340502	0822341502	0822342502	0822343502	0822344502
	80	0822340503	0822341503	0822342503	0822343503	0822344503
	100	0822340504	0822341504	0822342504	0822343504	0822344504
	125	0822340505	0822341505	0822342505	0822343505	0822344505
	160	0822340506	0822341506	0822342506	0822343506	0822344506
	200	0822340507	0822341507	0822342507	0822343507	0822344507
	250	0822340508	0822341508	0822342508	0822343508	0822344508
	320	0822340509	0822341509	0822342509	0822343509	0822344509
	400	0822340510	0822341510	0822342510	0822343510	0822344510
	500	0822340511	0822341511	0822342511	0822343511	0822344511
	Piston Ø Piston rod thread Ports Piston rod Ø	100 M20x1,5 G 1/2 25	125 M27x2 G 1/2 32			
	Stroke 25	0822345501	R480166022			
	50	0822345502	7472410919			
	80	0822345503	7472024294			
	100	0822345504	7472412262			
	125	0822345505	7472412263			
	160	0822345506	7472412264			
	200	0822345507	7472412265			
	250	0822345508	7472412266			
	320	0822345509	7472412267			
	400	0822345510	7472412268			
	500	0822345511	7472412269			

Configurable product

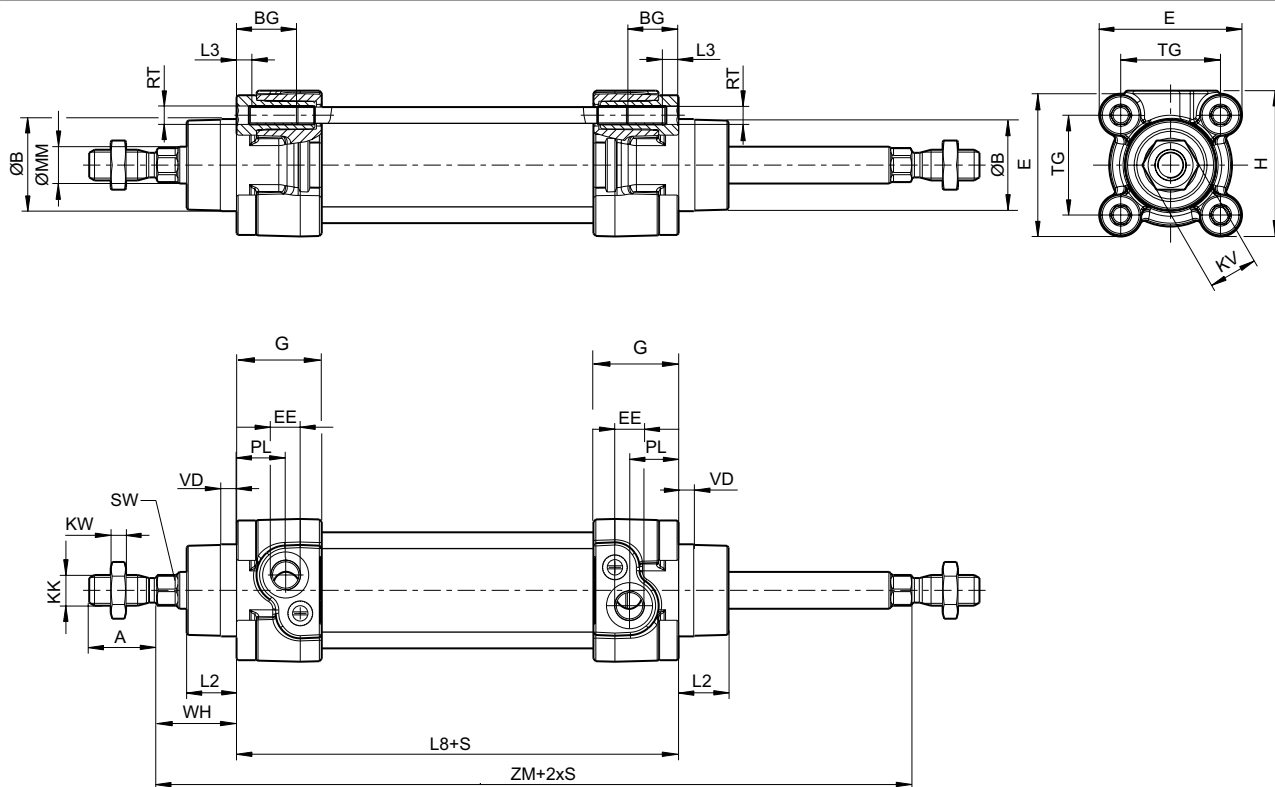

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Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread, through

Cushioning diagram


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

Dimensions


S = stroke

00134212

Piston rod cylinders ▶ Standard cylinders
Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread, through

Piston Ø	A -2	ØB d11	BG min.	E	EE	G	H	KK	KV	KW	ØMM f8
32	22	30	16	46.5	G1/8	27.75	47.5	M10x1,25	16	5	12
40	24	35	16	53	G1/4	33.25	53	M12x1,25	18	6	16
50	32	40	16	65	G1/4	31	65	M16x1,5	24	8	20
63	32	45	16	75	G3/8	38.25	75	M16x1,5	24	8	20
80	40	45	17	95	G3/8	38.25	95	M20x1,5	30	10	25
100	40	55	17	115	G1/2	42.25	115	M20x1,5	30	10	25
125	54	60	20	140	G1/2	53.85	140	M27x2	41	13.5	32

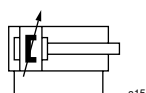
Piston Ø	PL	L2	L3 ±0,5	L8	RT	SW	TG	VD	WH	ZM
32	16	16.25	4.5	94±0,4	M6	10	32,5±0,5	5	26±1,4	146+3/-1,5
40	20	18.25	4.5	105±0,7	M6	13	38±0,5	5	30±1,4	165+3/-1,5
50	19	25	4.5	106±0,7	M8	17	46,5±0,6	5	37±1,4	180+3/-1,5
63	24	25	4.5	121±0,8	M8	17	56,5±0,7	5	37±1,8	195+3/-1,5
80	23.5	33	0	128±0,8	M10	22	72±0,7	5	46±1,8	220+3/-1,5
100	25	36	0	138±1	M10	22	89±0,7	5	51±1,8	240+3,5/-2
125	33	45	0	160±1	M12	27	110±1,1	7	65±2,2	290+3,5/-2

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ with trunnion mounting ▶ Piston rod: external thread



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Standards	ISO 15552
Compressed air connection	Internal thread
Working pressure min./max.	2 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar
Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane
Trunnion mounting	Nodular graphite iron, galvanized

Technical Remarks

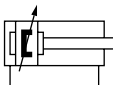
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- NOTE: The orientation and position of the trunnion mounting in the center of the cylinder may not be changed!

Piston Ø	[mm]	32	40	50	63	80
Retracting piston force	[N]	435	660	1035	1765	2855
Extracting piston force	[N]	505	790	1235	1960	3165
Cushioning length	[mm]	16.5	19	17	16.5	19.5
Cushioning energy	[J]	4.8	9	15	27	54
Weight	0 mm stroke	[kg]	0.76	1.17	1.84	2.5
	+10 mm stroke	[kg]	0.024	0.03	0.036	0.052
Stroke max.	[mm]	1600	1900	2100	2500	2800
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10
Tie-rods		Stainless steel	Stainless steel	Steel galvanized	Steel galvanized	Steel galvanized

Piston Ø	[mm]	100	125			
Retracting piston force	[N]	4635	7220			
Extracting piston force	[N]	4945	7725			
Cushioning length	[mm]	19.5	22			
Cushioning energy	[J]	88	140			
Weight	0 mm stroke	[kg]	5.86	10.62		
	+10 mm stroke	[kg]	0.065	0.21		
Stroke max.	[mm]	2800	2750			
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10			
Tie-rods		Steel galvanized	Steel galvanized			

Piston rod cylinders ▶ Standard cylinders
Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ with trunnion mounting ▶ Piston rod: external thread

	Piston Ø Piston rod thread Ports Piston rod Ø	32 M10x1,25 G 1/8 12	40 M12x1,25 G 1/4 16	50 M16x1,5 G 1/4 20	63 M16x1,5 G 3/8 20	80 M20x1,5 G 3/8 25
	Stroke 80	0822340902	0822341902	0822342902	0822343902	0822344902
	100	0822340903	0822341903	0822342903	0822343903	0822344903
	125	0822340904	0822341904	0822342904	0822343904	0822344904
	160	0822340905	0822341905	0822342905	0822343905	0822344905
	200	0822340906	0822341906	0822342906	0822343906	0822344906
	250	0822340907	0822341907	0822342907	0822343907	0822344907
	320	0822340908	0822341908	0822342908	0822343908	0822344908
	400	0822340909	0822341909	0822342909	0822343909	0822344909
	500	0822340910	0822341910	0822342910	0822343910	0822344910
	Piston Ø Piston rod thread Ports Piston rod Ø	100 M20x1,5 G 1/2 25	125 M27x2 G 1/2 32			
	Stroke 80	0822345902	7472412312			
	100	0822345903	R480647252			
	125	0822345904	R480166294			
	160	0822345905	7472412341			
	200	0822345906	R480647253			
	250	0822345907	7472412343			
	320	0822345908	7472412344			
	400	0822345909	R480647341			
	500	0822345910	R480166072			

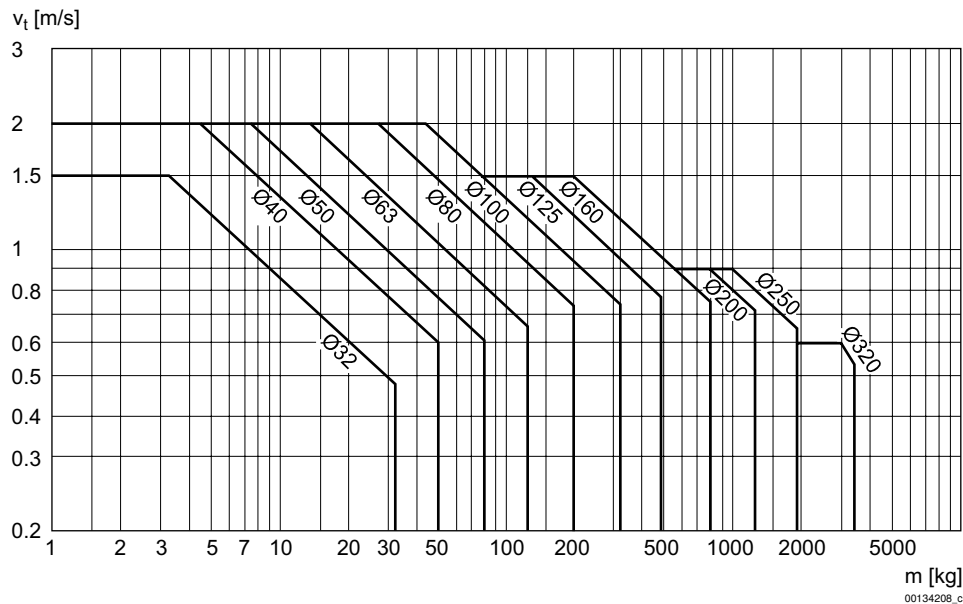
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Tie rod cylinder ISO 15552, Series TRB

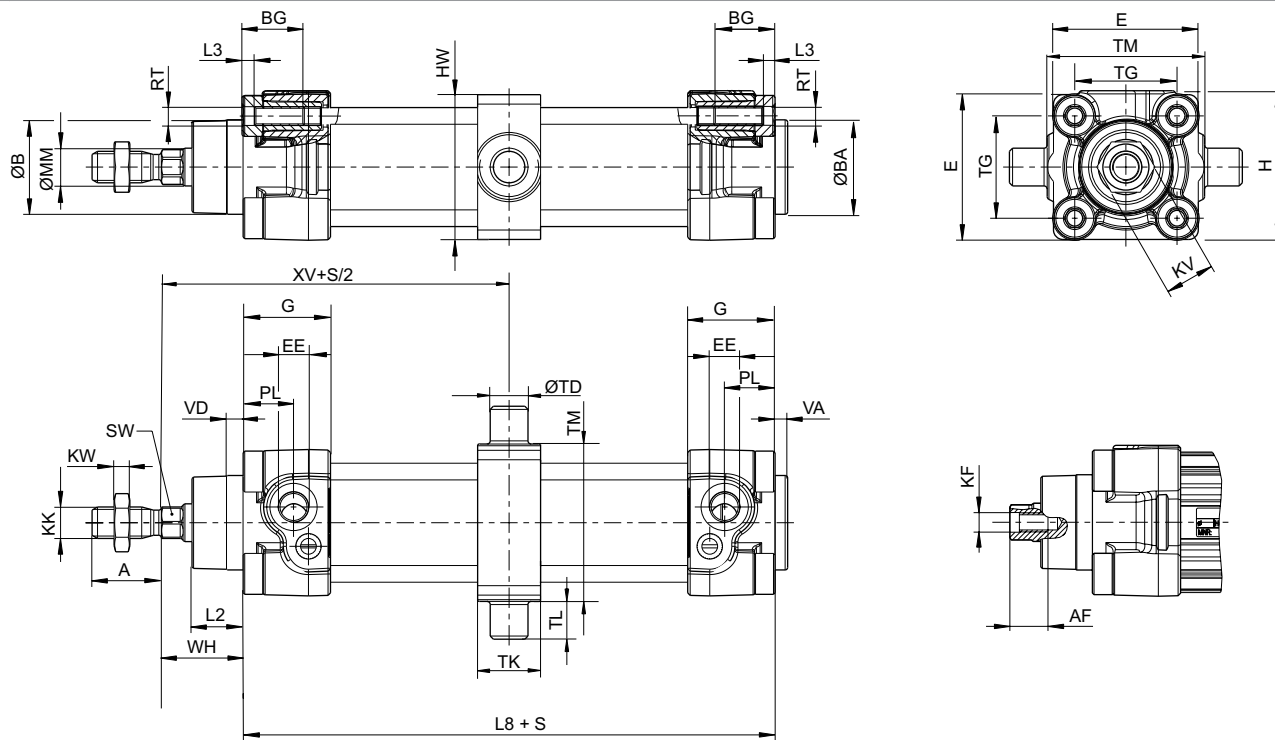
► Ports: G 1/8 - G 1/2 ► double-acting ► with magnetic piston ► Cushioning: pneumatically, adjustable ► with trunnion mounting ► Piston rod: external thread

Cushioning diagram



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

Dimensions



S = stroke

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Piston rod cylinders ▶ Standard cylinders
Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ with trunnion mounting ▶ Piston rod: external thread

Piston Ø	A -2	AF+1	ØB d11	ØBA d11	BG min.	E	EE	G	H	HW	KF
32	22	12	30	30	16	46.5	G1/8	27.75	47.5	56	M6
40	24	13.5	35	35	16	53	G1/4	33.25	53	59	M8
50	32	17	40	40	16	65	G1/4	31	65	69	M10
63	32	17	45	45	16	75	G3/8	38.25	75	84	M10
80	40	21	45	45	17	95	G3/8	38.25	95	102	M12
100	40	21	55	55	17	115	G1/2	42.25	115	125	M12
125	54	28	60	60	20	140	G1/2	53.85	140	160	M16

Piston Ø	KK	KV	KW	ØMM f8	PL	L2	L3 ±0,5	L8	RT	SW	TG
32	M10x1,25	16	5	12	16	16.25	4.5	94±0,4	M6	10	32,5±0,5
40	M12x1,25	18	6	16	20	18.25	4.5	105±0,7	M6	13	38±0,5
50	M16x1,5	24	8	20	19	25	4.5	106±0,7	M8	17	46,5±0,6
63	M16x1,5	24	8	20	24	25	4.5	121±0,8	M8	17	56,5±0,7
80	M20x1,5	30	10	25	23.5	33	0	128±0,8	M10	22	72±0,7
100	M20x1,5	30	10	25	25	36	0	138±1	M10	22	89±0,7
125	M27x2	41	13.5	32	33	45	0	160±1	M12	27	110±1,1

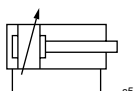
Piston Ø	VA -1	VD	WH	HW	ØTD e9	TK	TL h14	TM h14	XV			
32	4	5	26±1,4	46	12	20	12	50	73			
40	4	5	30±1,4	59	16	20	16	63	82.5			
50	4	5	37±1,4	69	16	25	16	75	90			
63	4	5	37±1,8	84	20	30	20	90	97.5			
80	4	5	46±1,8	102	20	35	20	110	110			
100	4	5	51±1,8	125	25	46	25	132	120			
125	6	7	65±2,2	160	25	50	25	160	145			

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread
 ▶ silicone-free ▶ heat resistant



00134195



Standards	ISO 15552
Compressed air connection	Internal thread
Working pressure min./max.	2 bar / 10 bar
Ambient temperature min./max.	-10 °C / +150 °C
Medium temperature min./max.	-10 °C / +150 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar
Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Fluorocautchouc
Nut for piston rod	Steel, galvanized
Scraper	Fluorocautchouc

Technical Remarks

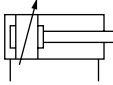
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Piston Ø	[mm]	32	40	50	63	80
Retracting piston force	[N]	435	660	1035	1765	2855
Extracting piston force	[N]	505	790	1235	1960	3165
Cushioning length	[mm]	11.5	15	17	16.5	19.5
Cushioning energy	[J]	4.8	9	15	27	54
Weight	0 mm stroke	[kg]	0.46	0.67	1.14	2.12
	+10 mm stroke	[kg]	0.024	0.03	0.036	0.052
Stroke max.	[mm]	1600	1900	2100	2500	2800
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10
Tie-rods		Stainless steel	Stainless steel	Steel galvanized	Steel galvanized	Steel galvanized

Piston Ø	[mm]	100	125			
Retracting piston force	[N]	4635	7220			
Extracting piston force	[N]	4945	7725			
Cushioning length	[mm]	19.5	22			
Cushioning energy	[J]	88	140			
Weight	0 mm stroke	[kg]	3.16	6.92		
	+10 mm stroke	[kg]	0.065	0.21		
Stroke max.	[mm]	2800	2750			
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10			
Tie-rods		Steel galvanized	Steel galvanized			

Piston rod cylinders ▶ Standard cylinders
Tie rod cylinder ISO 15552, Series TRB

- ▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread
▶ silicone-free ▶ heat resistant

	Piston Ø Piston rod thread Ports Piston rod Ø	32 M10x1,25 G 1/8 12	40 M12x1,25 G 1/4 16	50 M16x1,5 G 1/4 20	63 M16x1,5 G 3/8 20	80 M20x1,5 G 3/8 25
	Stroke 25	0822240400	0822241400	0822242400	0822243400	0822244400
	50	0822240401	0822241401	0822242401	0822243401	0822244401
	80	0822240402	0822241402	0822242402	0822243402	0822244402
	100	0822240403	0822241403	0822242403	0822243403	0822244403
	125	0822240404	0822241404	0822242404	0822243404	0822244404
	160	0822240405	0822241405	0822242405	0822243405	0822244405
	200	0822240406	0822241406	0822242406	0822243406	0822244406
	250	0822240407	0822241407	0822242407	0822243407	0822244407
	320	0822240408	0822241408	0822242408	0822243408	0822244408
	400	0822240409	0822241409	0822242409	0822243409	0822244409
	500	0822240410	0822241410	0822242410	0822243410	0822244410
	Piston Ø Piston rod thread Ports Piston rod Ø	100 M20x1,5 G 1/2 25	125 M27x2 G 1/2 32			
	Stroke 25	0822245400	0822206401			
	50	0822245401	0822206402			
	80	0822245402	0822206403			
	100	0822245403	0822206404			
	125	0822245404	0822206405			
	160	0822245405	0822206406			
	200	0822245406	0822206407			
	250	0822245407	0822206408			
	320	0822245408	0822206409			
	400	0822245409	0822206410			
	500	0822245410	0822206411			

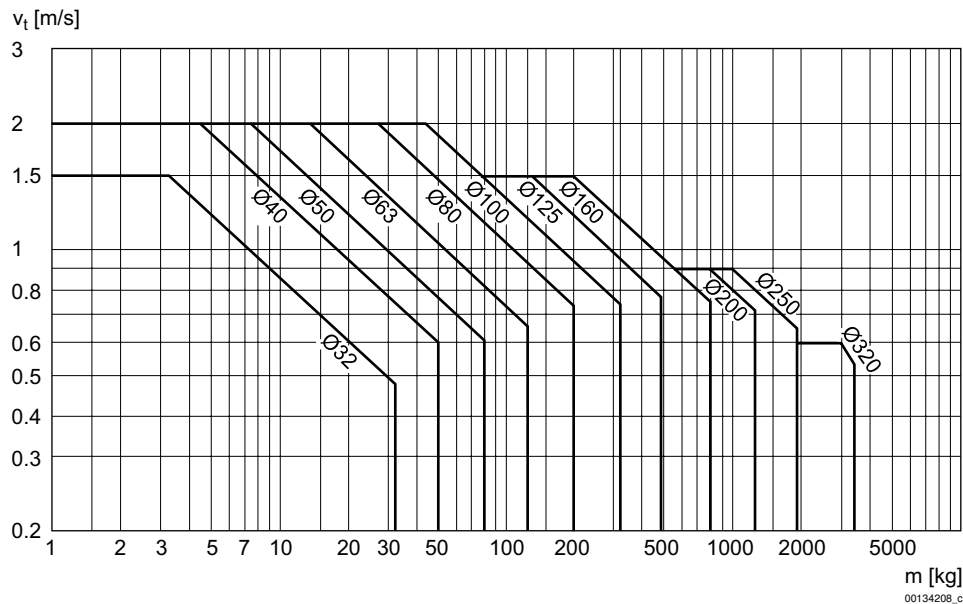
Configurable product


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Tie rod cylinder ISO 15552, Series TRB

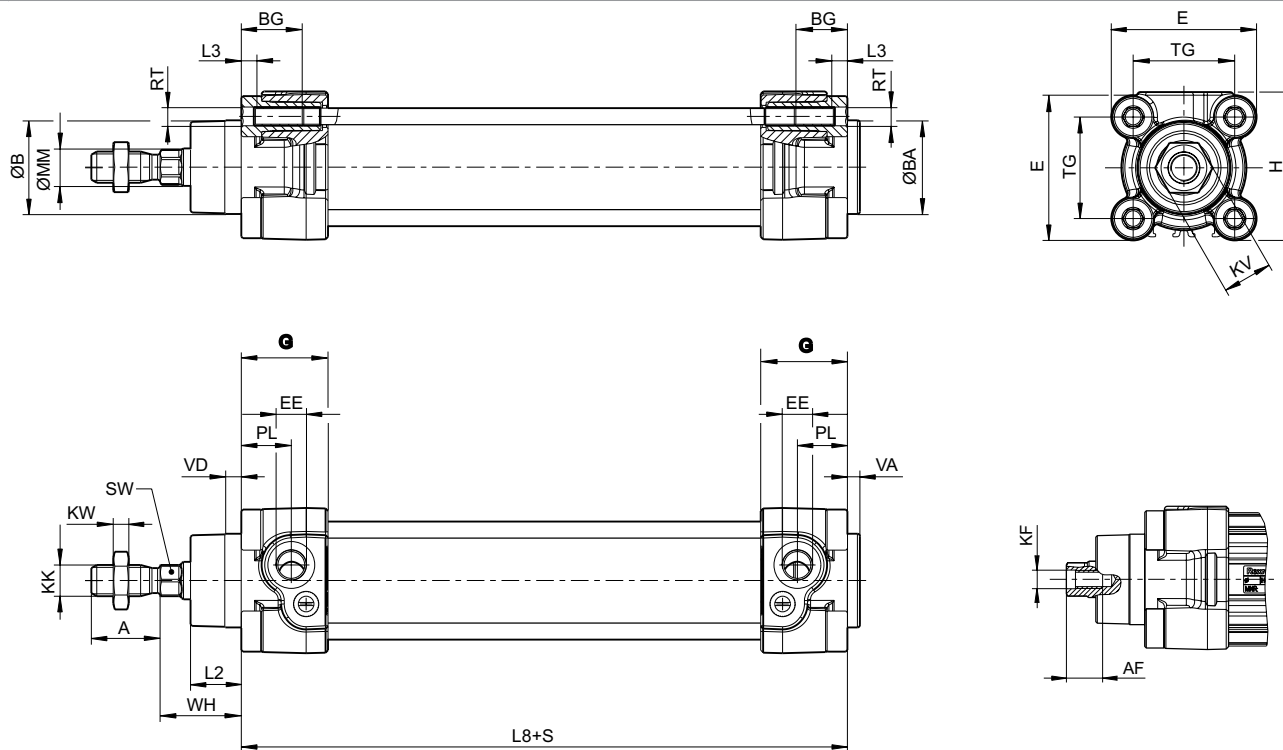
- ▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread
- ▶ silicone-free ▶ heat resistant

Cushioning diagram



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

Dimensions



S = stroke

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Piston rod cylinders ▶ Standard cylinders
Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread
▶ silicone-free ▶ heat resistant

Piston Ø	A -2	AF+1	ØB d11	ØBA d11	BG min.	E	EE	G	H	KF	KK
32	22	12	30	30	16	46.5	G1/8	27.75	47.5	M6	M10x1,25
40	24	13.5	35	35	16	53	G1/4	33.25	53	M8	M12x1,25
50	32	17	40	40	16	65	G1/4	31	65	M10	M16x1,5
63	32	17	45	45	16	75	G3/8	38.25	75	M10	M16x1,5
80	40	21	45	45	17	95	G3/8	38.25	95	M12	M20x1,5
100	40	21	55	55	17	115	G1/2	42.25	115	M12	M20x1,5
125	54	28	60	60	20	140	G1/2	53.85	140	M16	M27x2

Piston Ø	KV	KW	ØMM f8	PL	L2	L3 ±0,5	L8	RT	SW	TG	VA -1
32	16	5	12	16	16.25	4.5	94±0,4	M6	10	32,5±0,5	4
40	18	6	16	20	18.25	4.5	105±0,7	M6	13	38±0,5	4
50	24	8	20	19	25	4.5	106±0,7	M8	17	46,5±0,6	4
63	24	8	20	24	25	4.5	121±0,8	M8	17	56,5±0,7	4
80	30	10	25	23.5	33	0	128±0,8	M10	22	72±0,7	4
100	30	10	25	25	36	0	138±1	M10	22	89±0,7	4
125	41	13.5	32	33	45	0	160±1	M12	27	110±1,1	6

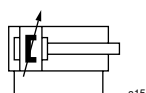
Piston Ø	VD	WH										
32	5	26±1,4										
40	5	30±1,4										
50	5	37±1,4										
63	5	37±1,8										
80	5	46±1,8										
100	5	51±1,8										
125	7	65±2,2										

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ heat resistant



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a15

Standards	ISO 15552
Compressed air connection	Internal thread
Working pressure min./max.	2 bar / 10 bar
Ambient temperature min./max.	-10°C / +120°C
Medium temperature min./max.	-10°C / +120°C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar
Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Fluorocautchouc
Nut for piston rod	Steel, galvanized
Scraper	Fluorocautchouc

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

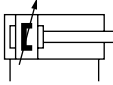
Piston Ø	[mm]	32	40	50	63	80
Retracting piston force	[N]	435	660	1035	1765	2855
Extracting piston force	[N]	505	790	1235	1960	3165
Cushioning length	[mm]	11.5	15	17	16.5	19.5
Cushioning energy	[J]	4.8	9	15	27	54
Weight	0 mm stroke	[kg]	0.46	0.67	1.14	2.12
	+10 mm stroke	[kg]	0.024	0.03	0.036	0.052
Stroke max.	[mm]	1600	1900	2100	2500	2800
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10
Tie-rods		Stainless steel	Stainless steel	Steel galvanized	Steel galvanized	Steel galvanized

Piston Ø	[mm]	100	125			
Retracting piston force	[N]	4635	7220			
Extracting piston force	[N]	4945	7725			
Cushioning length	[mm]	19.5	22			
Cushioning energy	[J]	88	140			
Weight	0 mm stroke	[kg]	3.16	6.92		
	+10 mm stroke	[kg]	0.065	0.21		
Stroke max.	[mm]	2800	2750			
Working pressure min./max.	[bar]	1.5 - 10	1.5 - 10			
Tie-rods		Steel galvanized	Steel galvanized			

Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ heat resistant

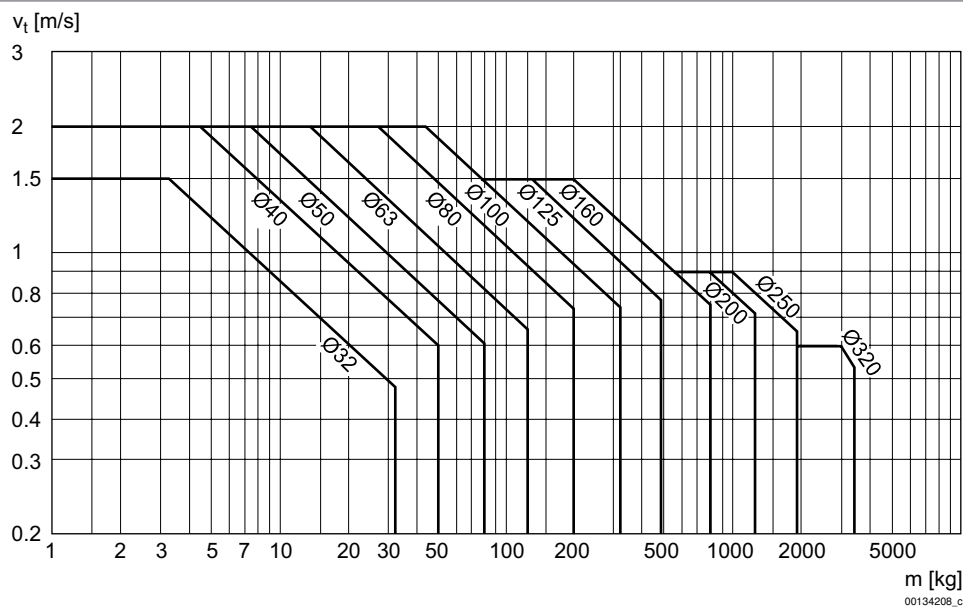
	Piston Ø Piston rod thread Ports Piston rod Ø	32 M10x1,25 G 1/8 12	40 M12x1,25 G 1/4 16	50 M16x1,5 G 1/4 20	63 M16x1,5 G 3/8 20	80 M20x1,5 G 3/8 25
	Stroke 25	R412013636	R412013654	R412013674	R412013694	R412013712
	50	R412013637	R412013655	R412013675	R412013695	R412013713
	80	R412013638	R412013656	R412013676	R412013696	R412013714
	100	R412013639	R412013657	R412013677	R412013697	R412013715
	125	R412013640	R412013658	R412013678	R412013698	R412013716
	160	R412013641	R412013659	R412013679	R412013699	R412013717
	200	R412013642	R412013660	R412013680	R412013700	R412013718
	250	R412013643	R412013661	R412013681	R412013701	R412013719
	320	R412013644	R412013662	R412013682	R412013702	R412013720
	400	R412013645	R412013663	R412013683	R412013703	R412013721
	500	R412013646	R412013664	R412013684	R412013704	R412013722
	Piston Ø Piston rod thread Ports Piston rod Ø	100 M20x1,5 G 1/2 25	125 M27x2 G 1/2 32			
	Stroke 25	R412013731	R480605348			
	50	R412013732	R480605349			
	80	R412013733	R480605350			
	100	R412013734	R480605351			
	125	R412013735	R480605352			
	160	R412013736	R480605353			
	200	R412013737	R480605354			
	250	R412013738	R480605355			
	320	R412013739	R480605356			
	400	R412013740	R480605357			
	500	R412013741	R480605358			

Configurable product

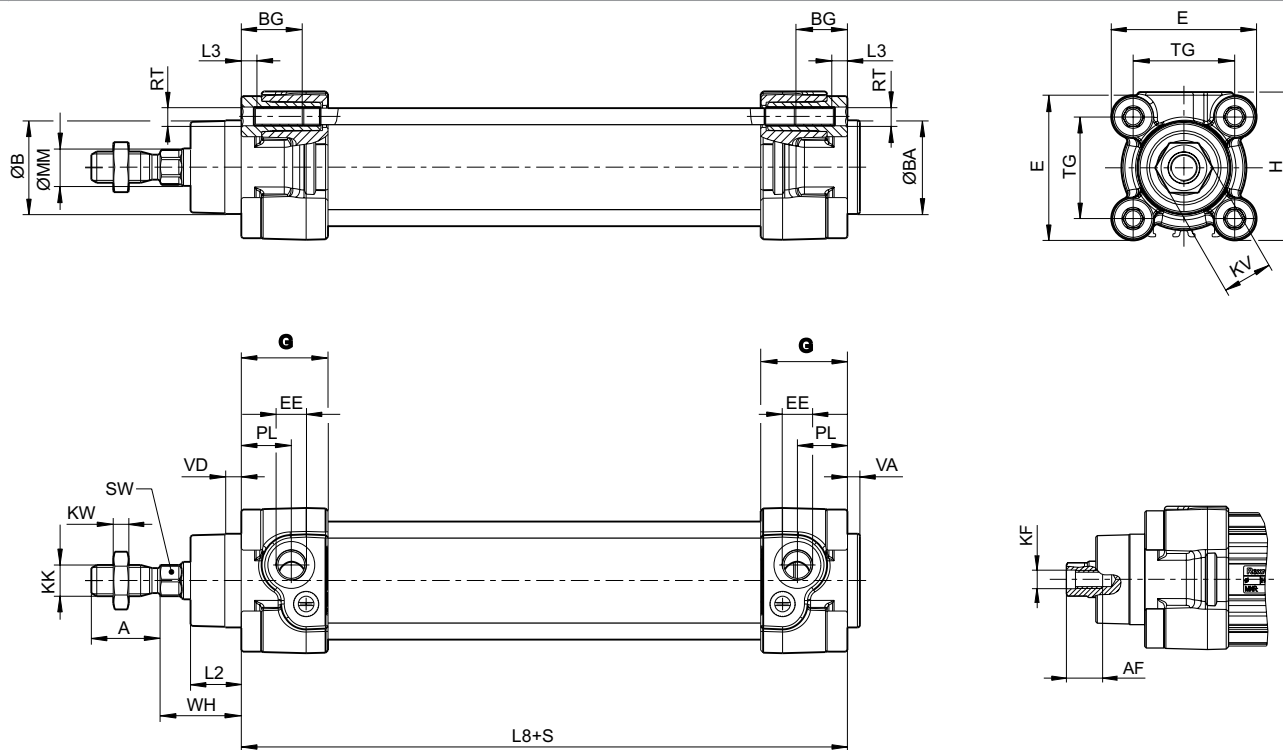

This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ heat resistant

Cushioning diagram


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

Dimensions


S = stroke

00134211_a

Piston rod cylinders ▶ Standard cylinders
Tie rod cylinder ISO 15552, Series TRB

▶ Ports: G 1/8 - G 1/2 ▶ double-acting ▶ with magnetic piston ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ heat resistant

Piston Ø	A -2	AF+1	ØB d11	ØBA d11	BG min.	E	EE	G	H	KF	KK
32	22	12	30	30	16	46.5	G1/8	27.75	47.5	M6	M10x1,25
40	24	13.5	35	35	16	53	G1/4	33.25	53	M8	M12x1,25
50	32	17	40	40	16	65	G1/4	31	65	M10	M16x1,5
63	32	17	45	45	16	75	G3/8	38.25	75	M10	M16x1,5
80	40	21	45	45	17	95	G3/8	38.25	95	M12	M20x1,5
100	40	21	55	55	17	115	G1/2	42.25	115	M12	M20x1,5
125	54	28	60	60	20	140	G1/2	53.85	140	M16	M27x2

Piston Ø	KV	KW	ØMM f8	PL	L2	L3 ±0,5	L8	RT	SW	TG	VA -1
32	16	5	12	16	16.25	4.5	94±0,4	M6	10	32,5±0,5	4
40	18	6	16	20	18.25	4.5	105±0,7	M6	13	38±0,5	4
50	24	8	20	19	25	4.5	106±0,7	M8	17	46,5±0,6	4
63	24	8	20	24	25	4.5	121±0,8	M8	17	56,5±0,7	4
80	30	10	25	23.5	33	0	128±0,8	M10	22	72±0,7	4
100	30	10	25	25	36	0	138±1	M10	22	89±0,7	4
125	41	13.5	32	33	45	0	160±1	M12	27	110±1,1	6

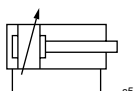
Piston Ø	VD	WH										
32	5	26±1,4										
40	5	30±1,4										
50	5	37±1,4										
63	5	37±1,8										
80	5	46±1,8										
100	5	51±1,8										
125	7	65±2,2										

Tie rod cylinder ISO 15552, Series TRB

▶ double-acting ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ Low friction



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Standards	ISO 15552
Compressed air connection	Internal thread
Working pressure min./max.	1 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar
Materials:	
Cylinder tube	Steel, painted
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Nitrile butadiene rubber
Nut for piston rod	Steel, galvanized
Scraper	Nitrile butadiene rubber

See table for additional data on materials.

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- The extracting breakaway pressure is determined with the piston in center position.

Piston Ø	[mm]	32	40	50	63	80
Retracting piston force	[N]	435	660	1035	1765	2855
Extracting piston force	[N]	505	790	1235	1960	3165
Extracting breakaway pressure	[bar]	0.05	0.04	0.04	0.03	0.03
Cushioning length	[mm]	11.5	15	17	16.5	19.5
Cushioning energy	[J]	4.8	9	15	27	54
Weight	0 mm stroke	0.46	0.67	1.14	1.4	2.12
	+10 mm stroke	0.024	0.03	0.036	0.052	0.06
Stroke max.	[mm]	1600	1900	2100	2500	2800
Tie-rods		Stainless steel	Stainless steel	Steel galvanized	Steel galvanized	Steel galvanized

Piston Ø	[mm]	100	125			
Retracting piston force	[N]	4635	7220			
Extracting piston force	[N]	4945	7725			
Extracting breakaway pressure	[bar]	0.02	0.02			
Cushioning length	[mm]	19.5	22			
Cushioning energy	[J]	88	140			
Weight	0 mm stroke	3.16	6.92			
	+10 mm stroke	0.065	0.21			
Stroke max.	[mm]	2800	2750			
Tie-rods		Steel galvanized	Steel galvanized			

Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

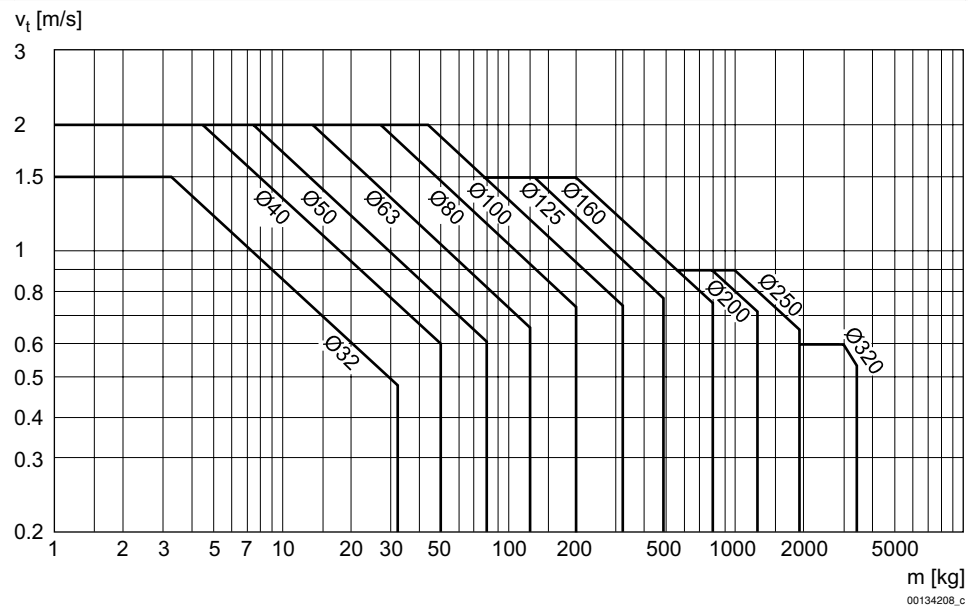
▶ double-acting ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ Low friction

Configurable product



This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Cushioning diagram



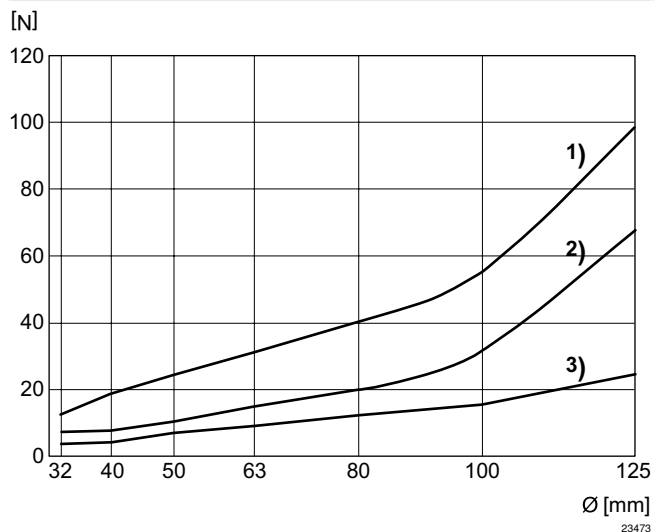
v = Piston velocity [m/s]
 m = Cushionable mass [kg]

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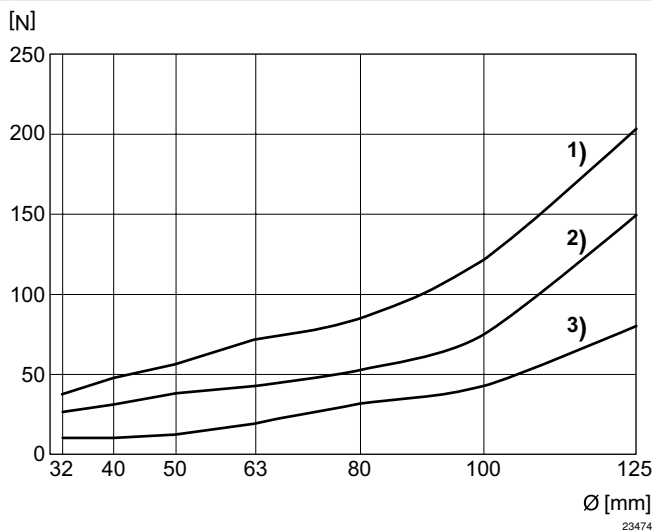
Tie rod cylinder ISO 15552, Series TRB

▶ double-acting ▶ Cushioning: pneumatically, adjustable ▶ Piston rod: external thread ▶ Low friction

Stick-slip effect in unpressurized state

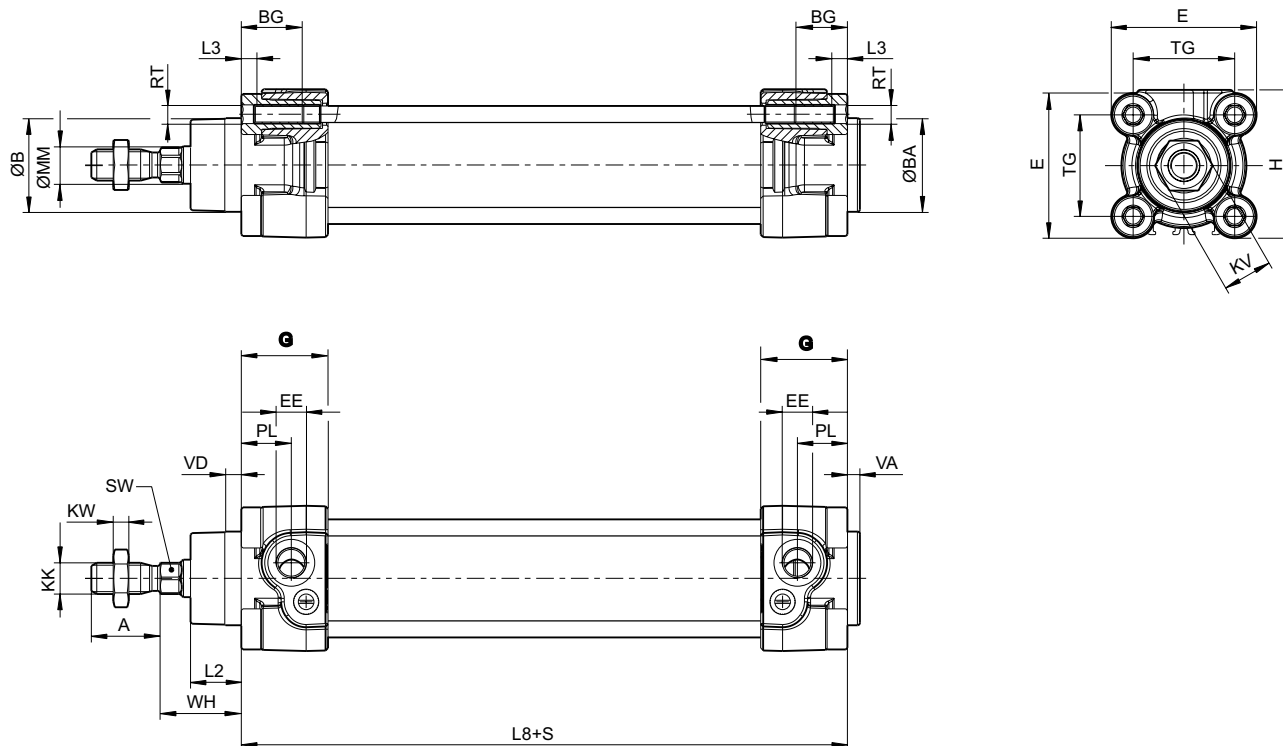


Stick-slip effect, internal cylinder pressure on both sides 6,3 bar



- 1) Standard PRA
- 2) Low-friction PRA (with magnet)
- 3) Low-friction TRB (without magnet)

Dimensions



S = stroke

00134211_b

Piston rod cylinders ► Standard cylinders

Tie rod cylinder ISO 15552, Series TRB

► double-acting ► Cushioning: pneumatically, adjustable ► Piston rod: external thread ► Low friction

Ø	A -2	ØB d11	ØBA d11	BG min.	E	EE	G	H	KK	KV
32	22	30	30	16	46.5	G1/8	27.75	47.5	M10x1,25	16
40	24	35	35	16	53	G1/4	33.25	53	M12x1,25	18
50	32	40	40	16	65	G1/4	31	65	M16x1,5	24
63	32	45	45	16	75	G3/8	38.25	75	M16x1,5	24
80	40	45	45	17	95	G3/8	38.25	95	M20x1,5	30
100	40	55	55	17	115	G1/2	42.25	115	M20x1,5	30
125	54	60	60	20	140	G1/2	53.85	140	M27x2	41

Ø	KW	ØMM f8	PL	L2	L3 ±0,5	L8	RT	SW	TG	VA -1
32	5	12	16	16.25	4.5	94±0,4	M6	10	32,5±0,5	4
40	6	16	20	18.25	4.5	105±0,7	M6	13	38±0,5	4
50	8	20	19	25	4.5	106±0,7	M8	17	46,5±0,6	4
63	8	20	24	25	4.5	121±0,8	M8	17	56,5±0,7	4
80	10	25	23.5	33	0	128±0,8	M10	22	72±0,7	4
100	10	25	25	36	0	138±1	M10	22	89±0,7	4
125	13.5	32	33	45	0	160±1	M12	27	110±1,1	6

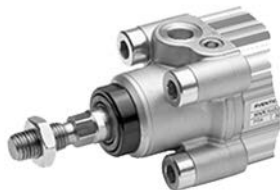
Ø	VD	WH									
32	5	26±1,4									
40	5	30±1,4									
50	5	37±1,4									
63	5	37±1,8									
80	5	46±1,8									
100	5	51±1,8									
125	7	65±2,2									

Tie rod cylinder ISO 15552, Series TRB-MS

▶ Modular sealing system

Standards

ISO 15552



For additional technical data please see the relevant data sheets for the standard version.

PRA_MS

Configurable product

This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Piston Ø	Seal	Scraper	Ambient temperature min./max.
32	Acrylonitrile butadiene rubber	Polyester elastomer	-20 °C / + 80 °C
	Acrylonitrile butadiene rubber	Polytetrafluorethylene	-20 °C / + 80 °C
	Fluorocautchouc	Polytetrafluorethylene	-10 °C / + 120 °C
40-125	Acrylonitrile butadiene rubber	Polyester elastomer	-20 °C / + 80 °C
	Acrylonitrile butadiene rubber	Polytetrafluorethylene	-20 °C / + 80 °C
	Fluorocautchouc	Polytetrafluorethylene	-10 °C / + 120 °C
	Acrylonitrile butadiene rubber	Brass	-20 °C / + 80 °C
	Fluorocautchouc	Brass	-10 °C / + 120 °C

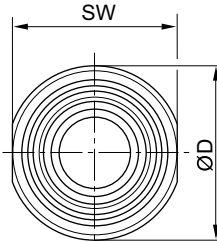
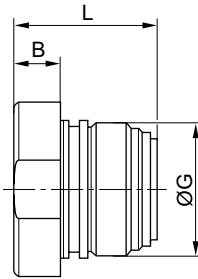
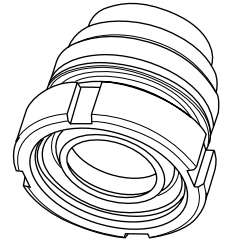
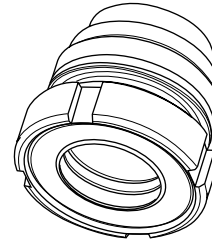
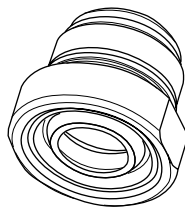
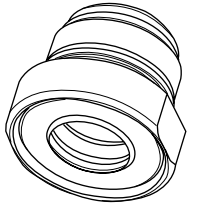
Piston rod cylinders ▶ Standard cylinders

Tie rod cylinder ISO 15552, Series TRB-MS

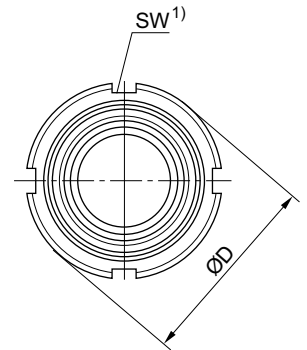
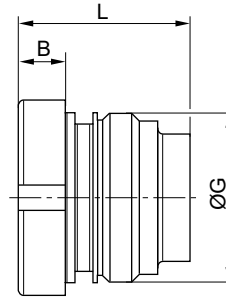
▶ Modular sealing system

For cylinder diameters: 32-40 mm, Dimensions in mm

For cylinder diameters: 50-125 mm, Dimensions in mm

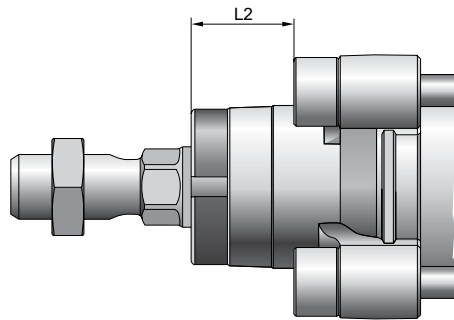


00126410_e



00126410_c

1) Can be mounted with hook wrench in accordance with DIN 1810 A



00126410_f

Ø	B	ØD	G	L	L2	SW							
32	6.7	24.5	M22x1	23	16.25	23							
40	9.2	34	M26x1,5	28.1	18.25	32							
50, 63	9	38.5	M33x2	33.5	25	40-42							
80, 100	10	44	M40x2	44	33	45-50							
125	12	57	M50x2	56	45	58-62							

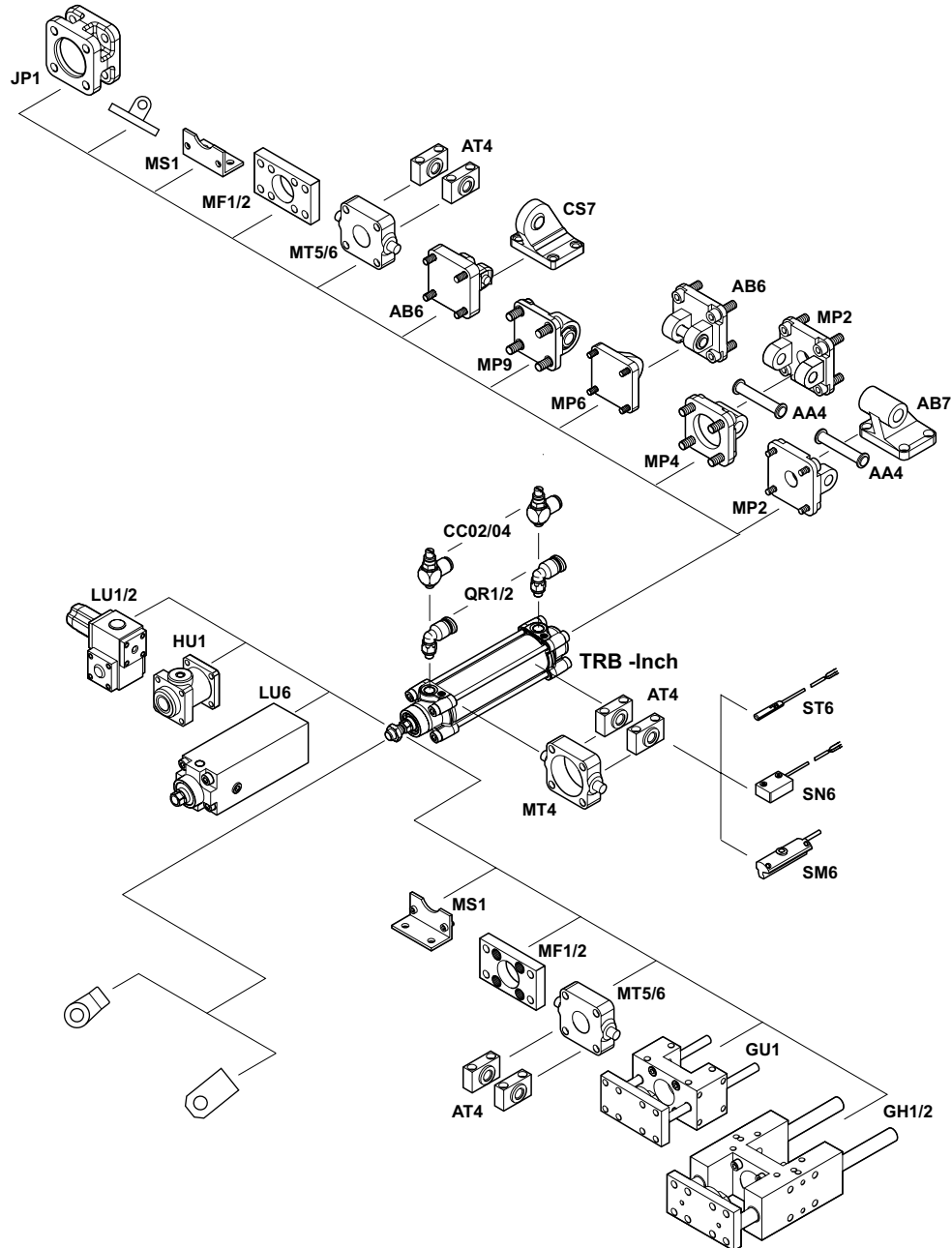
ISO 15552, Series TRB
Accessories

Accessories overview

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Overview drawing



NOTE:

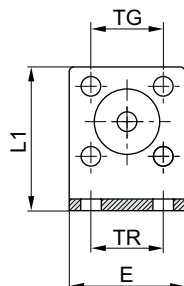
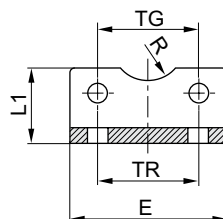
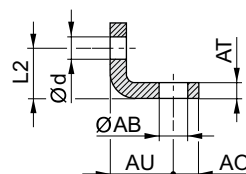
This overview drawing is only for orientation to see where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

IM0043422

ISO 15552, Series TRB
 Accessories

Foot mounting, Series MS1


00105808

**Ø16****Ø20 - 320**

00126387

Scope of delivery: 2 foot mountings incl. mounting screws

Part No.	Piston Ø	For series	ØAB	AO	AT	AU ±0,2	Ød	E	L1	L2
1827001271	32	ICL CCI CCL-IC/-IS PRA/TRB CVI	7	8	4 ±0,3	24	6.6	48	25	15.5
1827001272	40	ICL CCI CCL-IC/-IS PRA/TRB CVI	10	10	4 ±0,3	28	6.6	56	26	17
1827001273	50	ICL CCI CCL-IC/-IS PRA/TRB CVI	10	11	5 ±0,3	32	9	68	32	21.5
1827001498	63	ICL CCI CCL-IC/-IS PRA/TRB CVI	10	13	5 ±0,3	32	9	78	34	21.5
1827001275	80	ICL CCI CCL-IC/-IS PRA/TRB CVI	12	16	6 ±0,5	41	11	98	47	27
1827001276	100	ICL CCI CCL-IC/-IS PRA/TRB CVI	14.5	19	6 ±0,5	41	11	117	52	26.5
1827001310	125	ICL PRA TRB CCL-IS CVI	16.5	20	8 ±1,0	45	13.5	144	69	35

Part No.	Piston Ø	R	TG	TR	Standardiza- tion					
1827001271	32	15	32,5 ±0,2	32	ISO 15552					
1827001272	40	17.5	38 ±0,2	36	ISO 15552					
1827001273	50	20	46,5 ±0,2	45	ISO 15552					
1827001498	63	22.5	56,5 ±0,2	50	ISO 15552					

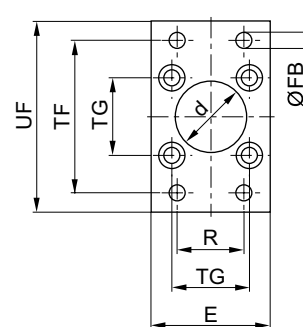
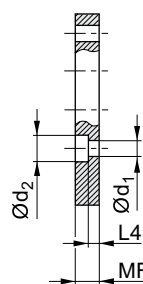
 Material: Steel
 Surface: galvanized

Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB
Accessories

Part No.	Piston Ø	R	TG	TR	Standardiza- tion					
1827001275	80	22.5	72 ±0,2	63	ISO 15552					
1827001276	100	27.5	89 ±0,2	75	ISO 15552					
1827001310	125	30	110 ±0,3	90	ISO 15552					

Material: Steel
Surface: galvanized

Flange mounting, Series MF1, MF2
► Cylinder mounting in accordance with ISO 15552


00126399

00105812

Scope of delivery: flange mounting incl. mounting screws

Part No.	Piston Ø	Ød H11	Ød1	Ød2	E 1)	ØFB	L4	MF	R	TF	TG
1827001277	32	30	6.6	11	50	7	4.5	10	32	64	32,5 ±0,2
1827001278	40	35	6.6	11	55	9	4.5	10	36	72	38 ±0,2
1827001279	50	40	9	15	65	9	6	12	45	90	46,5 ±0,2
1827001499	63	45	9	15	75	9	6	12	50	100	56,5 ±0,2
1827001281	80	45	11	18	100	12	9	16	63	126	72 ±0,2
1827001282	100	55	11	18	120	14	9	16	75	150	89 ±0,2
1827004861	125	60	14	20	140	16	10.5	20	90	180	110 ±0,3

Part No.	UF										
1827001277	80										
1827001278	90										
1827001279	110										
1827001499	125										
1827001281	154										
1827001282	186										
1827004861	220										

1) Max.
Material: Steel
Surface: galvanized

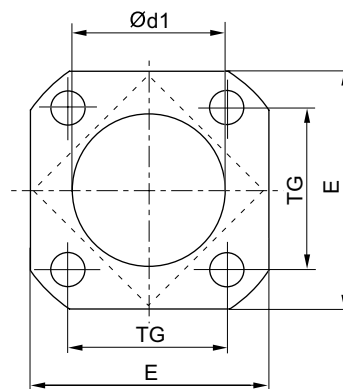
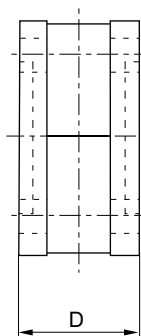
ISO 15552, Series TRB
 Accessories

Intermediate flange, Series JP1

▶ for multi-position cylinders



00135554



00135553

Scope of delivery: Incl. mounting screws

Part No.	Piston Ø	D	Ø d1 N7	E	TG							
1827020247	32	27	30	47	32.5							
1827020248	40	27	35	53	38							
1827020249	50	32	40	65	46.5							
1827020250	63	28	45	75	56.5							
1827020251	80	38	45	95	72							
1827020252	100	38	55	115	89							
1827020253	125	44	60	140	110							

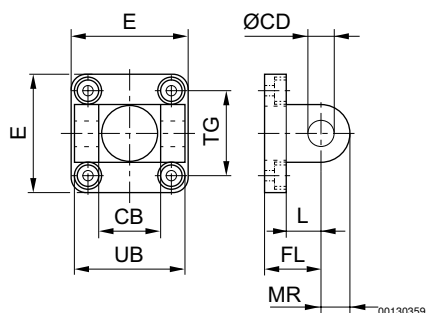
Material: Aluminum

Clevis mounting, Series MP2

▶ Cylinder mounting in accordance with ISO 15552



P523_025



00130359

Scope of delivery: clevis mounting incl. mounting screws

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

Part No.	Piston Ø	CB H14	Ø CD H9	E	FL ±0,2	L 1)	MR 2)	UB h13	TG		
1827001289	32	26	10	49 ±1	22	12	10	45	32,5 ±0,2		
1827001290	40	28	12	53 ±1	25	15	13	52	38 ±0,2		
1827001291	50	32	12	63 ±1	27	15	13	60	46,5 ±0,2		
1827001500	63	40	16	73 ±1	32	18	17	70	56,5 ±0,2		
1827001293	80	50	16	98 ±1	36	20	17	90	72,0 ±0,2		
1827001294	100	60	20	115 ±1	41	25	18	110	89,0 ±0,2		
1827004862	125	70	25	140	50	30	26	130	110 ±0,3		

1) Min.
2) Max.
Material: Aluminum (forged)

Bolts, AA4

Fig. 1

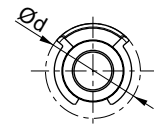
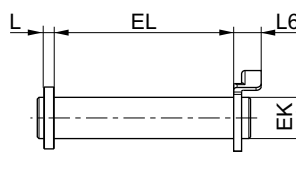
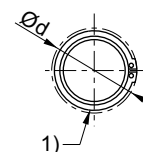


Fig. 2

00105158



21294

Scope of delivery: pivot pins incl. circlips
1) circlip DIN 471

Part No.	Piston Ø	Ø d 2)	EK e8	EL	L 2)	L6 2)	Standardization	Weight [kg]	Fig.	
1823120020	32	20	10	45,2 +0,3	3.5	9	-	0.03	Fig. 1	
1823120021	40	22	12	52,2 +0,3	4	9	-	0.05	Fig. 1	
1823120022	50	22	12	60,2 +0,3	4	9	-	0.06	Fig. 1	
1823120023	63	28	16	70,2 +0,3	4.5	11	-	0.12	Fig. 1	
1823120024	80	28	16	90,2 +0,3	4.5	11	-	0.15	Fig. 1	
1823120025	100	38	20	110,2 +0,3	5	11	-	0.29	Fig. 1	
5236000092	125	34.2	25	132 +0,5	-	3,75	ISO 15552	0.53	Fig. 2	

2) Max.
Material: Steel
Surface: galvanized

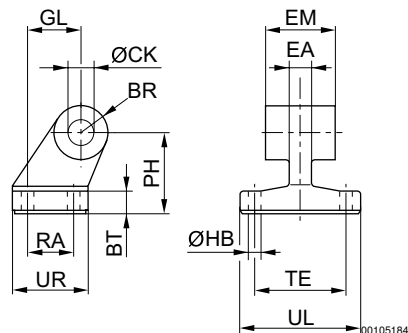
ISO 15552, Series TRB
 Accessories

Bearing block, Series AB7

▶ Cylinder mounting in accordance with ISO 15552



00105160



00105184

Part No.	Piston Ø	BR	BT	Ø CK H9	Ø HB H13	EM	GL JS14	EA 1)	PH JS15	RA JS14	TE JS14
1825805275	32	10	8	10	6.6	26 -0,2/-0,6	21	10	32	18	38
1825805276	40	11	10	12	6.6	28 -0,2/-0,6	24	12	36	22	41
1825805277	50	13	12	12	9	32 -0,2/-0,6	33	16	45	30	50
1825805278	63	15	12	16	9	40 -0,2/-0,6	37	16	50	35	52
1825805279	80	15	14	16	11	50 -0,2/-0,6	47	20	63	40	66
1825805280	100	19	15	20	11	60 -0,2/-0,6	55	20	71	50	76
1825805281	125	22,5	20	25	14	70 -0,5/-1,5	70	30	90	60	94

Part No.	UL 1)	UR 1)									
1825805275	51	31									
1825805276	54	35									
1825805277	65	45									
1825805278	67	50									
1825805279	86	60									
1825805280	96	70									
1825805281	124	90									

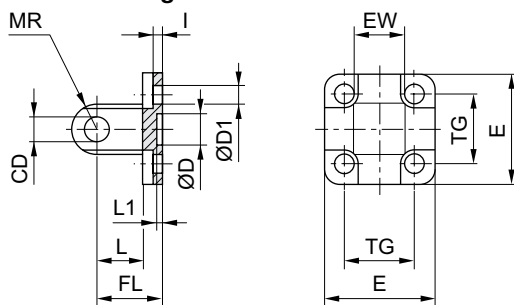
 1) Max.
 Material: Nodular graphite iron
 Surface: galvanized

Rear eye, Series MP4

▶ Cylinder mounting in accordance with ISO 15552 ▶ for clevis mounting MP2 and AB3



P523_024



00126403_a

Scope of delivery: clevis incl. mounting screws

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB
Accessories

Part No.	Piston Ø	CD H9	Ø D	Ø D1	E	EW	FL ±0,2	I ±0,5	L 1)	L1 1)	MR 2)
1827001283	32	10	30 H11	6.6	48	26 -0,2/-0,6	22	5.5	12	4.5	10
1827001284	40	12	35 H11	6.6	53	28 -0,2/-0,6	25	5.5	15	4.5	12
1827001285	50	12	40 H11	9	63	32 -0,2/-0,6	27	6.5	15	4.5	12
1827020086	63	16	45 H11	9	73	40 -0,2/-0,6	32	6.5	20	4.5	16
1827001287	80	16	45 H11	11	98	50 -0,2/-0,6	36	10	20	4.5	16
1827001288	100	20	55 H11	11	115	60 -0,2/-0,6	41	10	25	4.5	20
1827004866	125	25	60 H11	14	140	70 -0,5/-1,2	50	10	30	7	26

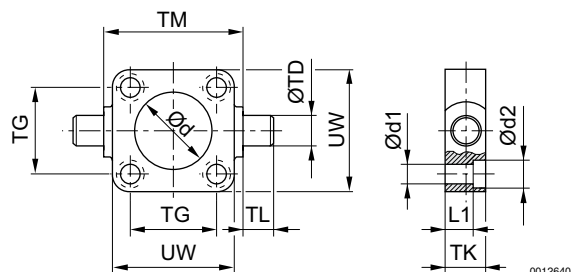
Part No.	TG										
1827001283	32,5 ±0,2										
1827001284	38 ±0,2										
1827001285	46,5 ±0,2										
1827020086	56,5 ±0,2										
1827001287	72 ±0,2										
1827001288	89 ±0,2										
1827004866	110 ±0,3										

1) Min.

2) Max.

Material: Aluminum (forged)

Trunnion mounting, front or rear, Series MT5, MT6



The delivered product may vary from that in the illustration.
Scope of delivery: trunnion mounting incl. mounting screws

00128925

00126407

Part No.	Piston Ø	For series	Ø d H11	Ø d1	Ø d2	L1	TD e9	TG ±0,2	TK	TL h14	TM h14
1827001609	32	CCI CVI CCL-IC/-IS ICL PRA/TRB	30	6.6	11	7.5	12	32.5	16	12	50
1827001610	40	CCI CVI CCL-IC/-IS ICL PRA/TRB	35	6.6	11	7.5	16	38	20	16	63
1827001611	50	CCI CVI CCL-IC/-IS ICL PRA/TRB	40	9	15	10	16	46.5	24	16	75

ISO 15552, Series TRB
Accessories

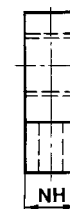
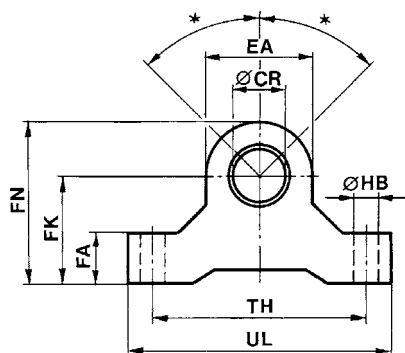
Part No.	Piston Ø	For series	Ø d H11	Ø d1	Ø d2	L1	TD e9	TG ±0,2	TK	TL h14	TM h14
1827002046	63	CCI CVI CCL-IC/-IS ICL PRA/TRB	45	9	15	10	20	56.5	24	20	90
1827001613	80	CCI CVI CCL-IC/-IS ICL PRA/TRB	45	11	18	16	20	72	28	20	110
1827001614	100	CCI CVI CCL-IC/-IS ICL PRA/TRB	55	11	18	25.5	25	89	38	25	132
1827001615	125	CVI ICL CCL-IS PRA TRB	60	14	20	34	25	110	46	25	160

Part No.	Piston Ø	UW									
1827001609	32	48									
1827001610	40	56									
1827001611	50	65									
1827002046	63	75									
1827001613	80	100									
1827001614	100	120									
1827001615	125	145									

Material: Nodular graphite iron
Surface: galvanized

Eye brackets


P300_012



D300_011

* Max. pendulum movement for cylinders with rear eye MP6 with ball joint: ±45°

Part No.	Ø CR H8	EA	FA	FK ±0,1	FN	HB	NH	TH	UL			
3671202000	10	16	10	21	29	5.5	10	27	37			

Material: Aluminum

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

Part No.	Ø CR H8	EA	FA	FK ±0,1	FN	HB	NH	TH	UL			
3671203000	12	19	11	22	32	6.6	11	44	55			
3671204000	16	28	16	35	49	9	16	65	82			
3671206000	20	38	19	40	59	9	19	80	99			
3671212000	30	56	28	57	88	13	28	114	142			

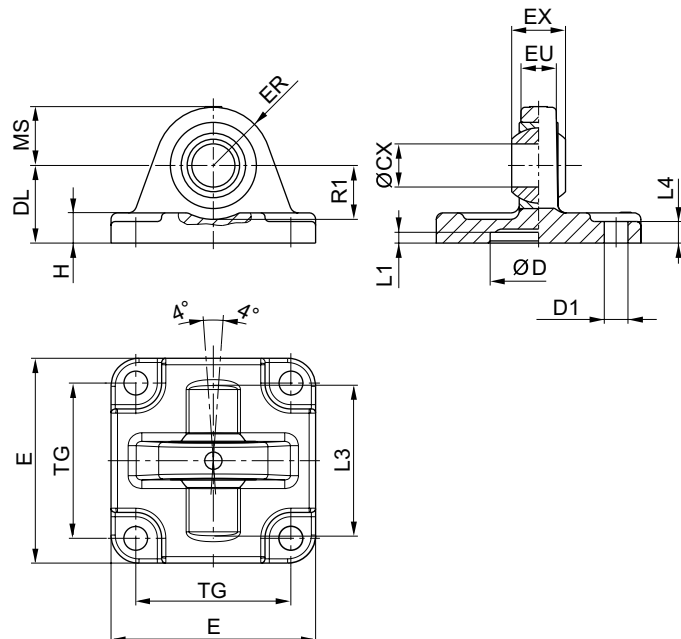
Material: Aluminum

Rear eye, Series MP6

▶ Cylinder mounting in accordance with ISO 15552 ▶ With ball joint and foot



24548



00126391

Scope of delivery: clevis incl. mounting screws

Part No.	Piston Ø	ØCX H7	ØD H11	ØD1 H13	DL ±0,2	E	EX -0,1	ER	EU	H	L1 1)	L3
1827001619	32	10	30	6.6	22	47	14	15	10.5	9	4.5	36
1827001620	40	12	35	6.6	25	53	16	18	12	9	4.5	42
1827001621	50	16	40	9	27	65	21	20	15	10.5	4.5	48
1827020087	63	16	45	9	32	75	21	23	15	10.5	4.5	55
1827001623	80	20	45	11	36	95	25	27	18	14	4.5	70
1827001624	100	20	55	11	41	115	25	30	18	15	4.5	80
1827001625	125	30	60	14	50	140	37	40	25	16	7	100

Part No.	L4	MS -0,5	R1 1)	TG	Weight [kg]							
1827001619	5.5	15	12	32,5 ±0,2	0.1							
1827001620	5.5	18	15	38 ±0,2	0.1							

1) Min.
Material: Aluminum (forged)

ISO 15552, Series TRB
Accessories

Part No.	L4	MS -0,5	R1 1)	TG	Weight [kg]							
1827001621	6.5	21	19	46,5 ±0,2	0.2							
1827020087	6.5	23	21	56,5 ±0,2	0.3							
1827001623	10	27	24	72 ±0,2	0.6							
1827001624	10	30	25	89 ±0,2	0.8							
1827001625	10	40	33	110 ±0,3	1.4							

1) Min.

Material: Aluminum (forged)

ISO 15552, Series TRB Accessories

Rear eye, Series MP9

▶ With rubber bushing



IM0043848

Fig. 1

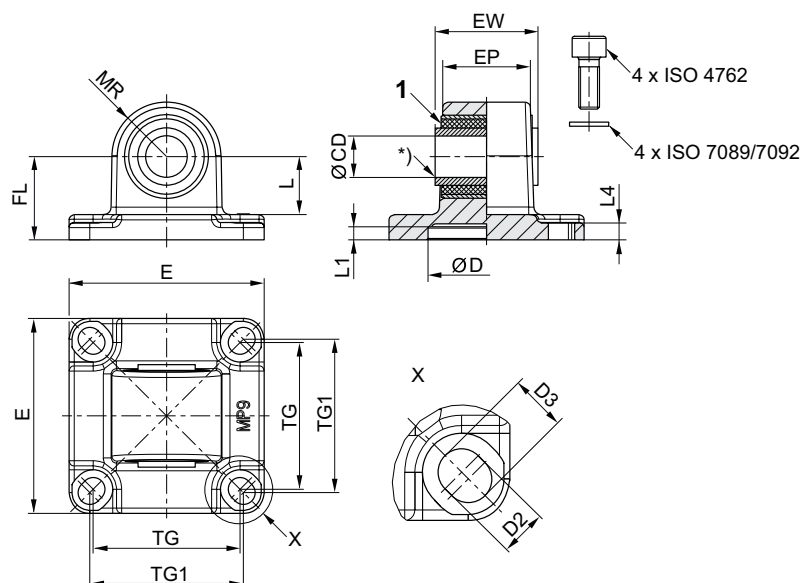
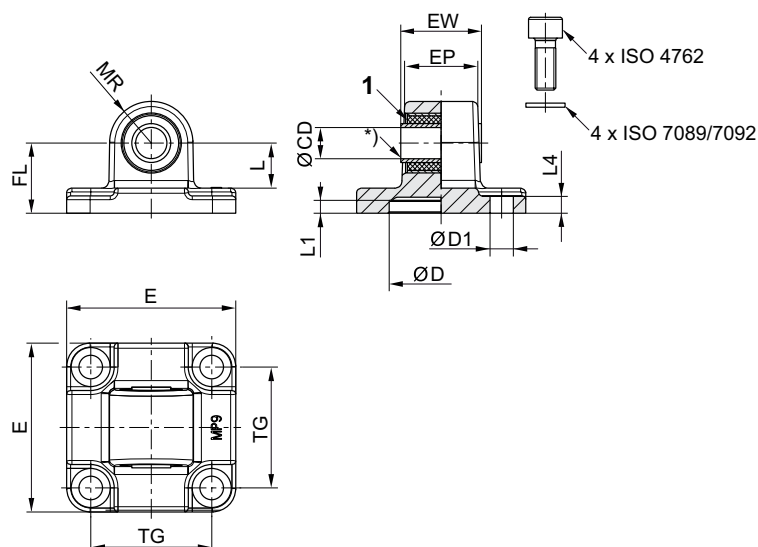


Fig. 2



IM0043825

1) Rubber bushing

* Plain bearing material: bronze (Ø125: steel, galvanized)

Scope of delivery: clevis incl. mounting screws

Part No.	Piston Ø	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	MR	L 1)	L1
3683202000	25	10	—	40	17.5	14.5	26	27	20	12.5	14.8	3
3683203000	32	10	—	46	25.5	18.9	32.5	—	22	12.5	13.8	5
3683204000	40	—	12	53	27	23.5	38	40	25	15	16.3	5
3683205000	50	—	12	65	31	28	46.5	—	27	16	17.3	5
3683206000	63	—	16	75	39.5	33.5	56.5	59	32	21	22.3	5
3683208000	80	—	16	94.5	49.5	43	72	—	36	22	21.8	5

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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ISO 15552, Series TRB
Accessories

Part No.	Piston Ø	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	MR	L 1)	L1
3683210000	100	–	20	114	59.5	54	89	90	41	25	25.8	5
R412015973	125	–	25	138	69.5	60	110	–	50	34	33.8	7.5

Part No.	L4	D H11	D1 H13	D2 -0,2	D3 -0,2	Standardiza- tion	Weight [kg]	Fig.	Note			
3683202000	3	18	–	5.5	6.2	ISO 21287	0.063	Fig. 1	2) 4)			
3683203000	5.5	30	6.6	–	–	ISO 15552	0.092	Fig. 2	3) 5)			
3683204000	5.5	35	–	6.6	8	ISO 15552	0.143	Fig. 1	3) 5)			
3683205000	6.5	40	9	–	–	ISO 15552	0.217	Fig. 2	5)			
3683206000	6.5	45	–	9	10.8	ISO 15552	0.411	Fig. 1	3) 5)			
3683208000	10	45	11	–	–	ISO 15552	0.64	Fig. 2	5)			
3683210000	10	55	–	11	11.7	ISO 15552	0.956	Fig. 1	3) 5)			
R412015973	10	60	13.5	–	–	ISO 15552	1.37	Fig. 2	5)			

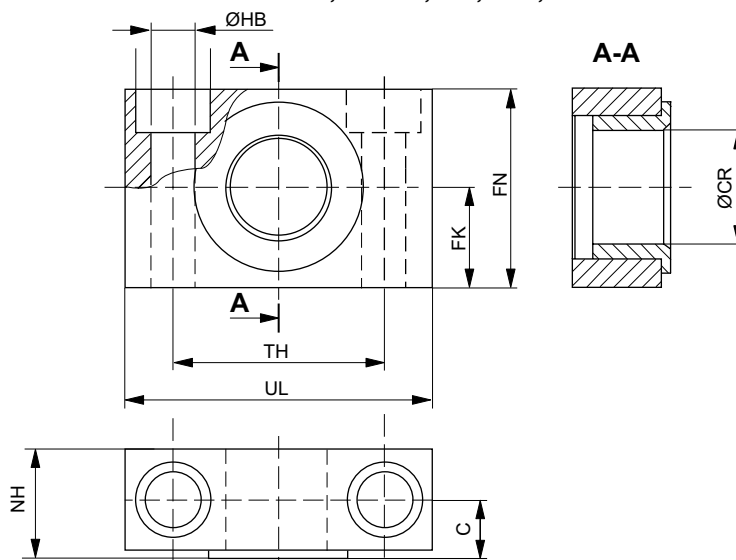
- 1) Min.
 2) CAD files *_iso.* (suitable for cylinders according to ISO 21287) and *_167.* (suitable for 167 series cylinders)
 3) suitable for 167 series cylinders
 4) Material: Die-cast aluminum
 5) Material: Aluminum (forged)

Bearing brackets MT4, MT5, MT6, Series AT4

► Cylinder mounting in accordance with ISO 15552 ► for Series CCI, CCL-IC, ICL, KPZ, PRA/TRB



00105163



00105221

Part No.	Piston Ø	For series	UL	NH	TH	C	CR H9	HB H13	FN	FK
1827001603	20, 25, 32	CCI CCL-IC ICL KPZ PRA/TRB	46	18	32 ±0,2	10.5	12	6.6	30	15 ±0,1

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

Part No.	Piston Ø	For series	UL	NH	TH	C	CR H9	HB H13	FN	FK
1827001604	40, 50	CCI CCL-IC ICL KPZ PRA/TRB	55	21	36 ±0,2	12	16	9	36	18 ±0,1
1827001605	63, 80	CCI CCL-IC ICL KPZ PRA/TRB	65	23	42 ±0,2	13	20	11	40	20 ±0,1
1827001606	100, 125	CCI CCL-IC ICL KPZ PRA/TRB	75	28.5	50 ±0,2	16	25	14	50	25 ±0,1

Part No.	Piston Ø	Plain bearing	Delivery quantity [Piece]							
1827001603	20, 25, 32	Sintered bronze	2							
1827001604	40, 50	Sintered bronze	2							
1827001605	63, 80	Sintered bronze	2							
1827001606	100, 125	Sintered bronze	2							

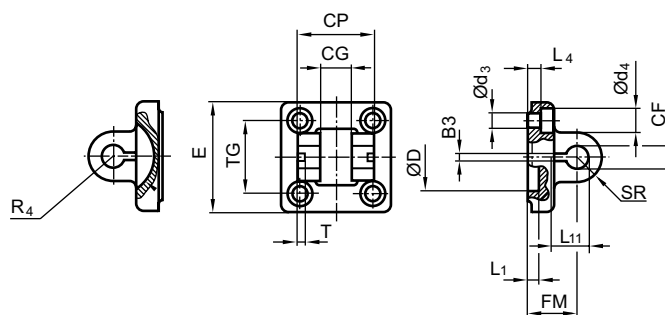
Material: Steel
Surface: galvanized

Clevis mounting, Series AB6

▶ Cylinder mounting in accordance with ISO 15552



24547



00105819

Scope of delivery: clevis mounting incl. pivot pins and mounting screws

Part No.	Piston Ø	B3 ±0,2	Ø CF F7	CG D10	CP d12	Ø d3	Ø d4	Ø D	E	FM ±0,2	L1 1)	L4 ±0,5
1827001593	32	3.3	10	14	34	6.6	11	30	49	22	4.5	5.5
1827001594	40	4.3	12	16	40	6.6	11	35	55	25	4.5	5.5
1827001595	50	4.3	16	21	45	9	15	40	67	27	4.5	6.5
1827002024	63	4.3	16	21	51	9	15	45	77	32	4.5	6.5
1827001597	80	4.3	20	25	65	11	18	45	97	36	4.5	10
1827001598	100	4.3	20	25	75	11	18	55	117	41	4.5	10
1827001599	125	6.3	30	37	97	14	20	60	140	50	7	10

ISO 15552, Series TRB
Accessories

Part No.	L11 -0,5	R4	SR	T ±0,2	TG							
1827001593	16.5	17	11	3	32,5 ±0,2							
1827001594	18	20	12	4	38 ±0,2							
1827001595	23	22	15	4	46,5 ±0,2							
1827002024	23	25	15	4	56,5 ±0,2							
1827001597	27	30	20	4	72 ±0,2							
1827001598	27	32	20	4	89 ±0,2							
1827001599	40	42	26	6	110 ±0,3							

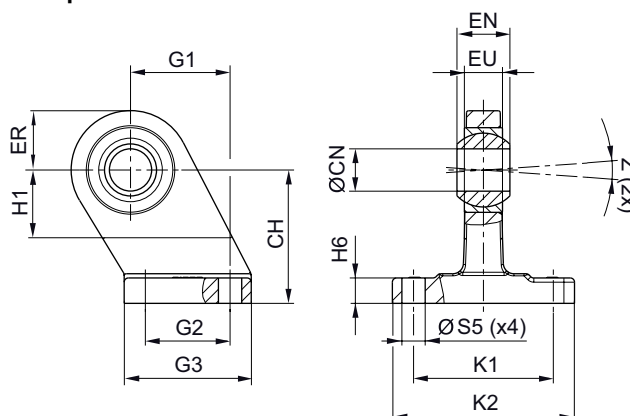
1) Min.
Material: Aluminum (forged)

Bearing block, Series CS7

▶ Cylinder mounting in accordance with VDMA 24562 part 2



00105817



00105820

Part No.	Piston Ø	CH JS15	ØCN H7	EU 1)	EN -1,0	ER 1)	G1 JS14	G2 JS14	G3 1)	H1 2)	H6	K1 JS14
1827001784	32	32	10	10.5	14	16	21	18	31	16	9 ±1	38
1827001785	40	36	12	12	16	18	24	22	35	20	9 ±1	41
1827001786	50	45	16	15	21	21	33	30	45	22	11 ±1	50
1827001787	63	50	16	15	21	23	37	35	50	27	11 ±1	52
1827001788	80	63	20	18	25	28	47	40	60	31	12 ±1,5	66
1827001789	100	71	20	18	25	30	55	50	70	38	13 ±1,5	76
1827001790	125	90	30	25	37	40	70	60	90	40	17 ±1,5	94

Part No.	K2 1)	ØS5 H13	Z 2)									
1827001784	51	6.6	4°									
1827001785	54	6.6	4°									
1827001786	65	9	4°									
1827001787	67	9	4°									
1827001788	86	11	4°									
1827001789	96	11	4°									
1827001790	124	14	4°									

1) Max.

2) Min.

 Material: Nodular graphite iron
 Surface: galvanized

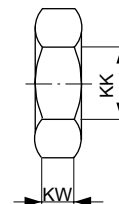
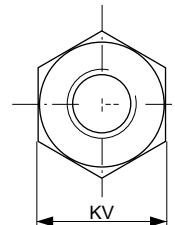
Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Nut for piston rod, Series MR9



00105168



00105192

Part No.	KK	KV	KW	Material	Surface	Weight [kg]				
1823300020	M10x1,25	17	6	Steel	galvanized	0.01				
8103190344	M12x1,25	19	6	Steel	galvanized	0.012				
1823300030	M16x1,5	24	8	Steel	galvanized	0.017				
1823300031	M20x1,5	30	10	Steel	galvanized	0.03				
1823A00029	M27x2	41	13.5	Steel	galvanized	0.108				
8103190414	M36x2	55	18	Steel	galvanized	0.175				
8103190424	M42x2	65	21	Steel	galvanized	0.37				

Rod clevis, Series AP2 ▶ galvanized steel



00105171

Fig. 1

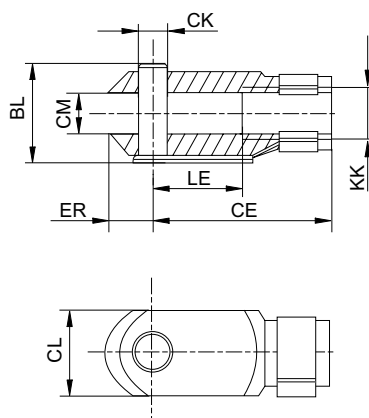
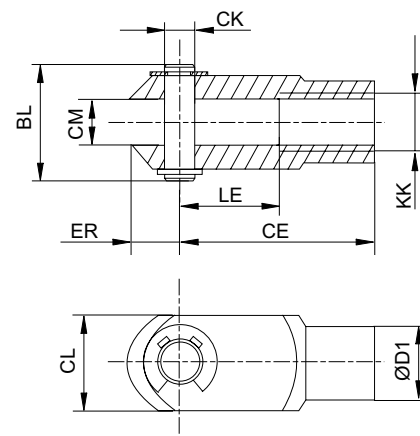


Fig. 2



00126410

Part No.	KK	BL	CE	ØCK e11	CL	CM	ØD1	ER	LE	Material
1822122024	M10x1,25	26	40	10	20	10	18	12	20	Steel
1822122025	M12x1,25	31	48	12	24	12	20	14	24	Steel
1822122005	M16x1,5	39	64	16	32	16	26	19	32	Steel
1822122004	M20x1,5	50	80	20	40	20	34	20	40	Steel
1827001493	M27x2	68	110	30	55	30	48	38	54	Steel
1827001471	M36x2	80	144	35	70	35	60	57	72	Steel
1827001472	M42x2	98	168	40	85	40	70	64	84	Steel

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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ISO 15552, Series TRB
Accessories

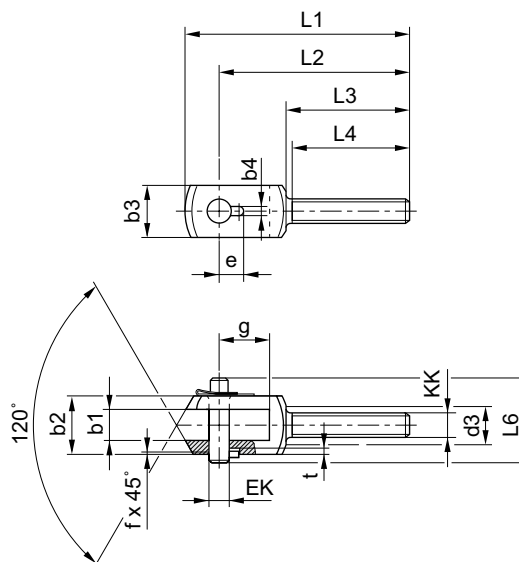
Part No.	Surface	Weight	Fig.								
		[kg]									
1822122024	galvanized	0.1	Fig. 1								
1822122025	galvanized	0.16	Fig. 1								
1822122005	galvanized	0.4	Fig. 1								
1822122004	galvanized	0.7	Fig. 1								
1827001493	galvanized	2	Fig. 2								
1827001471	galvanized	3.5	Fig. 2								
1827001472	galvanized	6.6	Fig. 2								

Rod clevis, Series PM6

▶ galvanized steel



00105173



00105197

Scope of delivery incl. bolt

Part No.	KK	b1 B12	b2 d12	b3	b4 +0,2	d3	e +0,3	EK	f	g	L1	L2
1822122032	M10x1,25	14	28	20	3.3	17	11.5	10	0.7	20	90	78
1822122033	M12x1,25	16	30	25	4.3	19	12	12	1	26	108	92
1822122034	M16x1,5	21	40	35	4.3	24	14	16	1	31	129	108
1822122035	M20x1,5	25	50	40	4.3	30	16	20	1	43	156	131
1822122036	M27x2	37	67	60	6.3	38	24	30	1.5	54	200	168

Part No.	L3	L4 +1	L6	t +0,2	Material	Surface						
1822122032	53	50	35	3	Steel	galvanized						
1822122033	58	55	39	3	Steel	galvanized						
1822122034	65	62	50	3	Steel	galvanized						
1822122035	73	69	60	3	Steel	galvanized						
1822122036	98	92	77	5	Steel	galvanized						

Piston rod cylinders ▶ Standard cylinders

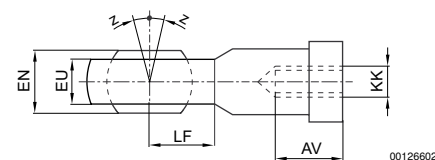
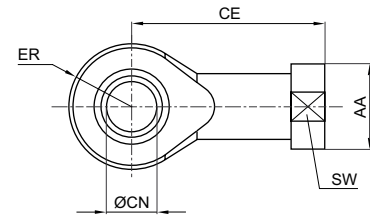
ISO 15552, Series TRB Accessories

Ball eye rod end with flange, Series AP6

▶ galvanized steel



00105172



00126602

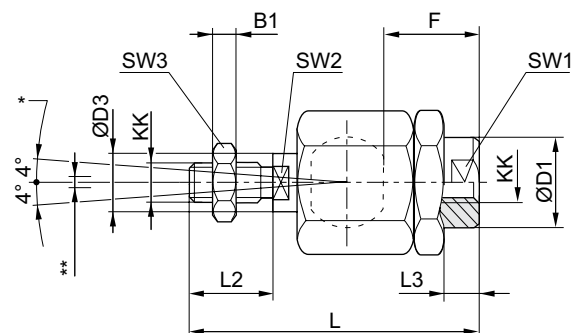
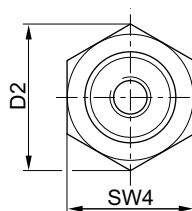
Part No.	KK	AA	AV min.	CE	Ø CN H7	EN -0,1	ER	EU max.	LF	SW	Z [°] max.
1822124003	M10x1,25	19	15	43	10	14	14	11.5	14	17	4
1822124004	M12x1,25	22	18	50	12	16	16	12.5	16	19	4
1822124005	M16x1,5	27	24	64	16	21	21	15.5	21	22	4
1822124006	M20x1,5	34	30	77	20	25	25	18.5	25	30	4
1822124013	M27x2	50	45	110	30	37	35	27	35	41	4

Part No.	Material	Surface	Weight [kg]								
1822124003	Steel	galvanized	0.07								
1822124004	Steel	galvanized	0.12								
1822124005	Steel	galvanized	0.21								
1822124006	Steel	galvanized	0.38								
1822124013	Steel	galvanized	1.17								

Flexible spherical coupling, Series PM5



00105169



D300_029

* Angle joint
 ** Radial joint from 0,5 - 2 mm
 Axial play set to 0.05 to 0.2 mm

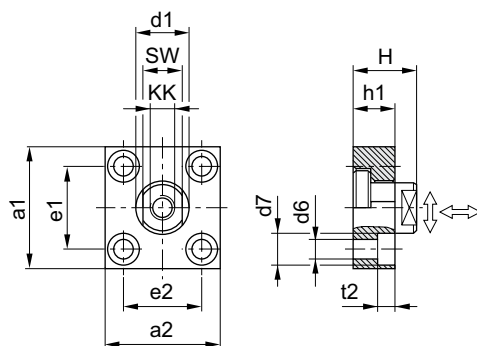
ISO 15552, Series TRB
Accessories

Part No.	KK	B1	Ø D1	D2	Ø D3	F	L ±2	L2	L3 ±1	SW1	SW2	SW3
1826409002	M10x1,25	6	21.5	34	14	23	73	20	7.5	19	12	17
1826409003	M12x1,25	7	21.5	34	14	28	77	24	13	19	12	19
1826409004	M16x1,5	8	33.5	47	22	32	108	32	9	30	19	24
1826409005	M20x1,5	10	33.5	47	22	42	122	40	19	30	19	30
1826409006	M27x2	13.5	62	62	28	48	147	54	14	32	24	41

Part No.	SW4	Material	Surface	Weight								
				[kg]								
1826409002	30	Steel	galvanized	0.21								
1826409003	30	Steel	galvanized	0.21								
1826409004	41	Steel	galvanized	0.65								
1826409005	41	Steel	galvanized	0.68								
1826409006	55	Steel	galvanized	1.7								

Flexible plate coupling, Series PM7


00105170



00105194

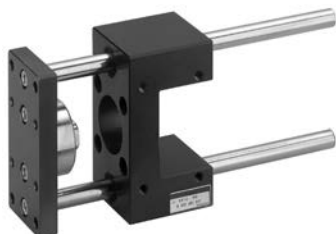
Part No.	KK	a1	a2	d1 h11	d6 H13	d7 H13	e1 H13	e2	h1	t2	H
1827001629	M10x1,25	60	37	20	6.6	11	36 ±0,15	23 ±0,15	15	7	24
1827001630	M12x1,25	60	56	25	9	15	42 ±0,2	38 ±0,2	20	9	30
1827001631	M16x1,5	80	80	30	11	18	58 ±0,2	58 ±0,2	20	11	32
1827001632	M20x1,5	90	90	40	14	20	65 ±0,3	65 ±0,3	20	13	35
1827001633	M27x2	90	90	40	14	20	65 ±0,3	65 ±0,3	20	13	35
1827001634	M36x2	125	125	60	18	26	90 ±0,3	90 ±0,3	30	17	55

Part No.	SW	Tightening torque for the coupling pin Ma ± 5%	Axial play	Radial play	Material	Surface	Weight		
		[Nm]	[min./max.]	[min./max.]			[kg]		
1827001629	17	17	0.4 - 0.8	1.9 - 2.3	Steel	galvanized	0.3		
1827001630	19	29	0.4 - 0.8	1.9 - 2.3	Steel	galvanized	0.4		
1827001631	24	71	0.4 - 0.8	1.9 - 2.3	Steel	galvanized	0.9		
1827001632	36	138	0.4 - 0.8	1.9 - 2.3	Steel	galvanized	1.15		
1827001633	36	350	0.4 - 0.8	1.9 - 2.3	Steel	galvanized	1.1		
1827001634	50	1080	0.4 - 0.95	2.8 - 3.4	Steel	galvanized	3.4		

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Guide unit, Series GU1



00105859

Bearing type
Ambient temperature min./max.
For standard cylinders

Plain bearing
-20 °C / 80 °C
ISO 15552

Materials:
Bearing housings
Bearing type
Carrying plate
Flexible coupling in carrying plate
Guide rods

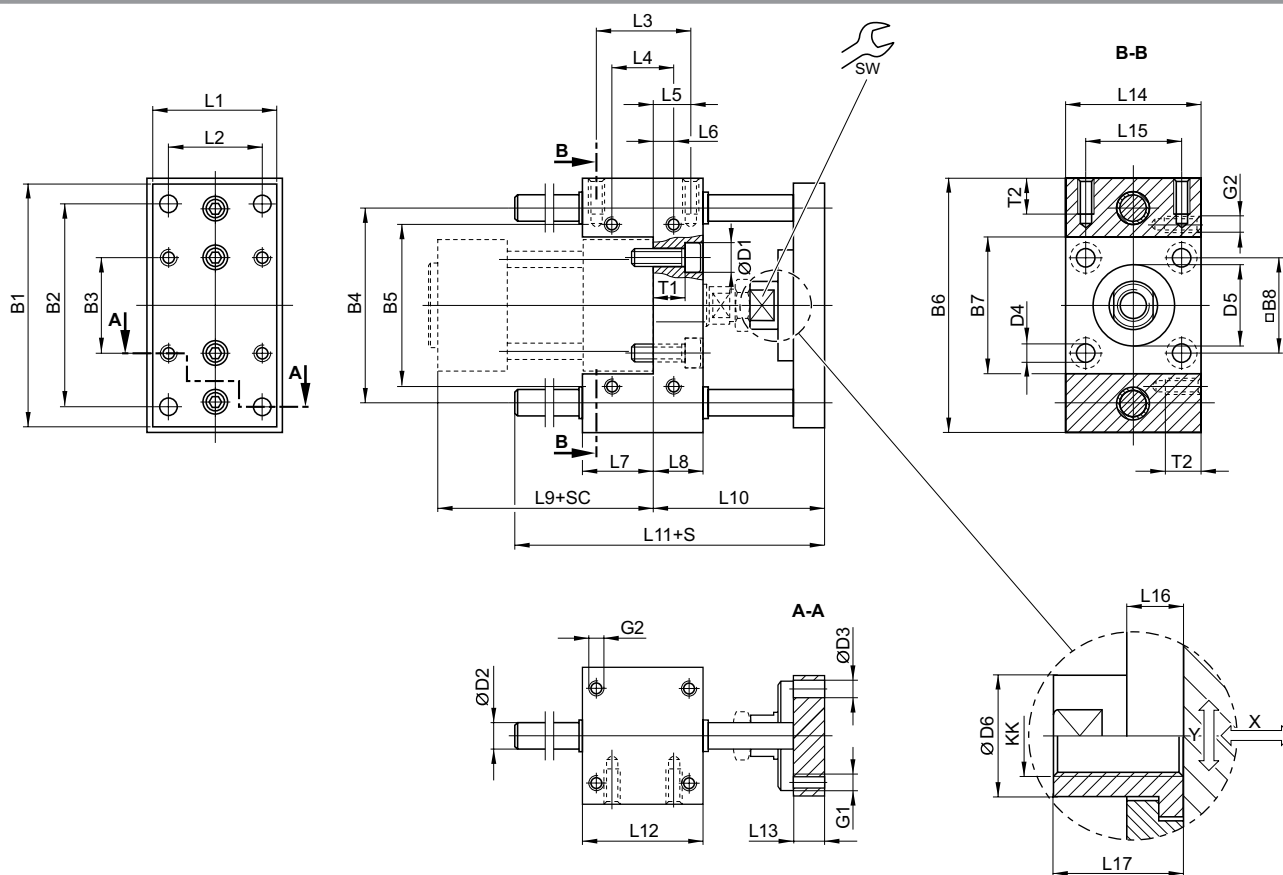
Aluminum, colorless anodized
Sintered bronze
Aluminum, colorless anodized
Stainless steel
Stainless steel, smooth rolled

Suitable piston Ø		[mm]	32	40	50	63	80
Weight	0 mm stroke	[kg]	0.63	0.946	1.356	1.655	3.45
	10 mm stroke	[kg]	0.0122	0.0176	0.0176	0.0176	0.0222

Suitable piston Ø		[mm]	100				
Weight	0 mm stroke	[kg]	4.69				
	10 mm stroke	[kg]	0.0222				

	Suitable piston Ø [mm]	32	40	50	63	80
	Stroke 50	0821401010	0821401020	0821401030	0821401480	0821401050
	100	0821401011	0821401021	0821401031	0821401481	0821401051
	160	0821401012	0821401022	0821401032	0821401482	0821401052
	200	0821401013	0821401023	0821401033	0821401483	0821401053
	250	0821401014	0821401024	0821401034	0821401484	0821401054
	320	0821401015	0821401025	0821401035	0821401485	0821401055
	400	0821401016	0821401026	0821401036	0821401486	0821401056
	500	0821401017	0821401027	0821401037	0821401487	0821401057
	600	0821401018	0821401028	0821401038	0821401488	0821401058
	800	0821401019	0821401029	0821401039	0821401489	0821401059
	1000	0821401500	0821401502	0821401504	0821401490	0821401508
	1200	0821401501	0821401503	0821401505	0821401491	0821401509
	Suitable piston Ø [mm]	100				
	Stroke 50	0821401060				
	100	0821401061				
	160	0821401062				
	200	0821401063				
	250	0821401064				
	320	0821401065				
	400	0821401066				
	500	0821401067				
	600	0821401068				
	800	0821401069				
	1000	0821401510				
	1200	0821401511				

Inch dimensions rounded to the nearest whole number.
For use with hybrid inch cylinders with metric piston rod thread

ISO 15552, Series TRB
Accessories
Ø 32 - 100 mm


00127778

S = stroke
 SC = cylinder stroke
 X = max. play (axial)
 Y = min. play (radial)

[Piston Ø]	B1	B2	B3	B4	B5	B6	B7	B8	D1	D2	D3	D4	D5
32	90	78	32.5	74	58	100	48	32.5	11	10	6.6	6.6	30 M8
40	100	84	38	80	64	106	54	38	11	12	6.6	6.6	35 M8
50	120	100	46.5	96	80	125	66	46.5	15	12	9	9	40 M8
63	125	105	56.5	104	95	132	76	56.5	15	12	9	9	45 M8
80	155	130	72	130	130	165	98	72	18	16	11	11	45 M8
100	175	150	89	150	150	185	118	89	18	16	11	11	55 M8

[Piston Ø]	D6	G1	G2	KK	L1	L2	L3	L4	L5	L6	L7	L8	L9
32	18	M6	M6	M10x1,25	45	32.5	32.5	32.5	9.25	9.25	31	17	94
40	18	M6	M6	M12x1,25	50	38	38	38	11	11	37	21	105
50	24	M8	M8	M16x1,5	60	46.5	46.5	46.5	18.75	18.75	34	25	106
63	24	M8	M8	M16x1,5	70	56.5	56.5	56.5	15.25	15.25	51	25	121
80	30	M10	M10	M20x1,5	90	72	72	50	25	14	56	34	128
100	30	M10	M10	M20x1,5	110	89	89	70	28.5	19	71	39	138

[Piston Ø]	L10	L11	L12	L13	L14	L15	L16	L17	SW	T1	T2		
32	69	106	48	12	48	32.5	14	22	15	10	14		

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

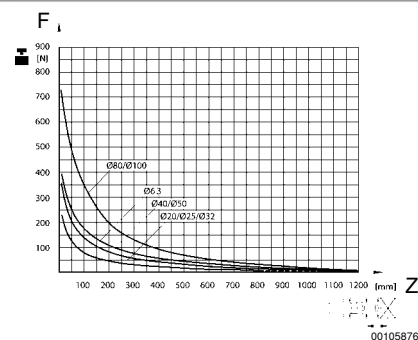
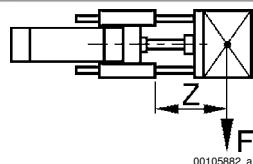
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Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

[Piston Ø]	L10	L11	L12	L13	L14	L15	L16	L17	SW	T1	T2		
40	74	117	58	12	56	38	14	22	15	14	14		
50	89	129	59	15	66	46.5	14	26	22	16	16		
63	89	146	76	15	76	56.5	14	26	22	16	16		
80	106	170	90	16	98	72	14	32	27	24	20		
100	111	190	110	16	118	89	14	32	27	29	20		

Useful load



F = Useful load, Z = Projection

Guide unit, Series GH1



Bearing type
Ambient temperature min./max.
For standard cylinders

Plain bearing
-20 °C / 80 °C
ISO 15552

Materials:
Bearing housings
Bearing type
Carrying plate
Flexible coupling in carrying plate
Guide rods

Aluminum, colorless anodized
Sintered bronze
Aluminum, colorless anodized
Stainless steel
Stainless steel, smooth rolled

Suitable piston Ø		[mm]	32	40	50	63	80
Weight	0 mm stroke	[kg]	1.3	2.3	3.7	4.7	8.8
	10 mm stroke	[kg]	0.009	0.016	0.025	0.025	0.039

Suitable piston Ø		[mm]	100				
Weight	0 mm stroke	[kg]	11.1				
	10 mm stroke	[kg]	0.039				

ISO 15552, Series TRB
Accessories

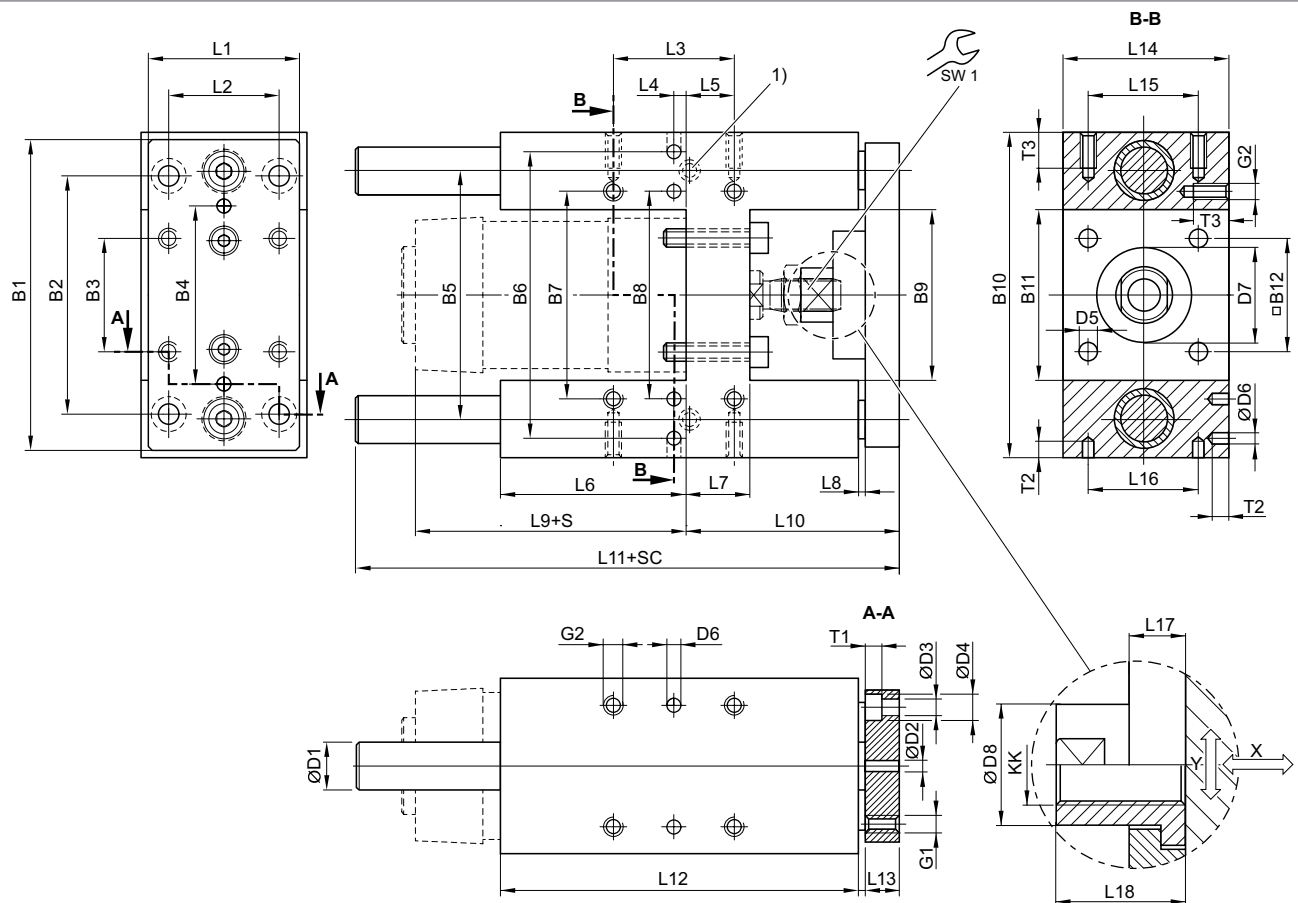
	Suitable piston Ø [mm]	32	40	50	63	80
	Stroke 50	0821401220	0821401230	0821401240	0821401280	-
	100	0821401221	0821401231	0821401241	0821401281	0821401260
	160	0821401222	0821401232	0821401242	0821401285	-
	200	0821401223	0821401233	0821401243	0821401282	0821401261
	250	0821401224	0821401234	0821401244	0821401286	-
	320	0821401225	0821401235	0821401245	0821401283	0821401262
	400	0821401226	0821401236	0821401246	0821401287	-
	500	0821401227	0821401237	0821401247	0821401284	0821401263
	600	0821401228	0821401238	0821401249	0821401288	0821401264
	800	0821401229	0821401239	0821401474	0821401289	0821401265
	1000	0821401470	0821401472	0821401475	0821401290	0821401266
	1200	0821401471	0821401473	0821401476	0821401291	0821401267
	Suitable piston Ø [mm]	100				
	Stroke 50	-				
	100	0821401270				
	160	-				
	200	0821401271				
	250	-				
	320	0821401272				
	400	-				
	500	0821401273				
	600	0821401274				
	800	0821401275				
	1000	0821401276				
	1200	0821401277				

Inch dimensions rounded to the nearest whole number.
 For use with hybrid inch cylinders with metric piston rod thread

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Ø 32 - 100 mm



- 1) Lube nipple
S = stroke
SC = cylinder stroke
X = max. play (axial)
Y = min. play (radial)

00127787

[Piston Ø]	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	D1
32	90	78	32.5	50	74	81	61	61	50.2	97	50.2	32.5	12
40	110	84	38	54	87	99	69	69	58.2	115	58.2	38	16
50	130	100	46.5	72	104	119	85	85	70.2	137	70.2	46.5	20
63	145	105	56.5	82	119	132	100	100	85.2	152	85.2	56.5	20
80	180	130	72	106	148	166	130	130	105.4	189	105.4	72	25
100	200	150	89	131	172	190	150	150	130.4	213	130.4	89	25

[Piston Ø]	D2 H7	D3	D4	D5	D6 H7	D7 M8	D8	G1	G2	KK	L1	L2	L3
32	6	6.6	11	6.6	6	30	14.5	M6	M6	M10x1,25	45	32.5	32.5
40	6	6.6	11	6.6	6	35	18	M6	M6	M12x1,25	54	38	38
50	6	9	15	9	6	40	24	M8	M8	M16x1,5	63	46.5	46.5
63	6	9	15	9	6	45	24	M8	M8	M16x1,5	80	56.5	56.5
80	6	11	18	11	6	45	30	M10	M10	M20x1,5	100	72	72
100	6	11	18	11	6	55	30	M10	M10	M20x1,5	120	89	89

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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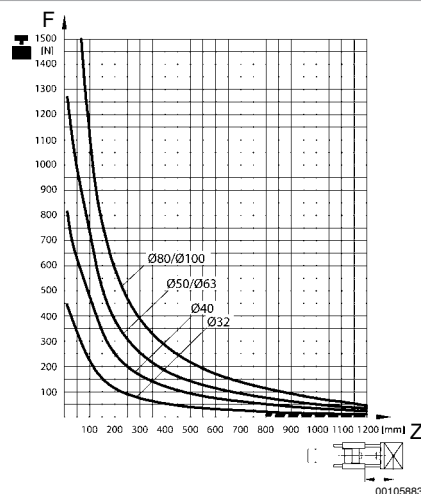
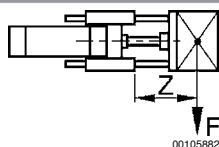
ISO 15552, Series TRB

Accessories

[Piston Ø]	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16
32	12	4.25	76	17	3	94	64	177.5	125	12	50	32.5	32.5
40	8	11	81	21	3	105	74	192.5	140	12	58	38	38
50	4.5	18.75	79	26	3	106	89	205	150	15	70	46.5	46.5
63	13	15.25	111	26	3	121	89	237	182	15	85	56.5	56.5
80	15	21	128	34	3	128	110	280	215	20	105	72	72
100	20	24.5	128	39	3	138	115	280	220	20	130	89	89

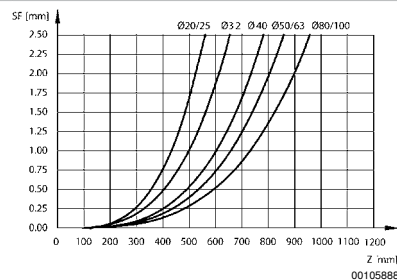
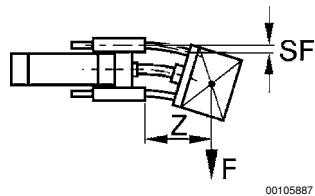
[Piston Ø]	L17	L18	T1	T2	T3	SW1							
32	6	17	6.5	10	15	13							
40	14	22	6.5	10	15	15							
50	14	26	9	10	16	22							
63	14	26	9	10	16	22							
80	14	32	11	10	20	27							
100	14	32	11	10	20	27							

Useful load



F = Useful load, Z = Projection

Bending due to own load

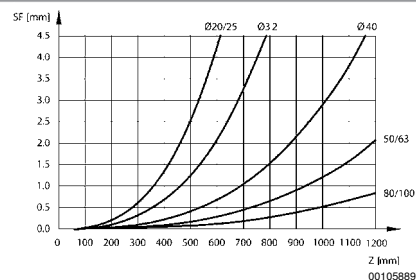
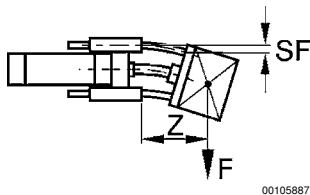


F = useful load (at the load center), SF = bending, Z = projection

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

Bending due to 10 N load



F = useful load (at the load center), SF = bending, Z = projection

Guide unit, Series GH2



Bearing type
Ambient temperature min./max.
For standard cylinders

Linear ball bearing
-20 °C / 80 °C
ISO 15552

Materials:
Bearing type
Carrying plate
Flexible coupling in carrying plate
Guide rods

Steel
Aluminum, colorless anodized
Stainless steel
Steel, hardened

Suitable piston Ø		[mm]	32	40	50	63	80
Weight	0 mm stroke	[kg]	1.3	2.3	3.7	4.7	8.8
	10 mm stroke	[kg]	0.009	0.016	0.025	0.025	0.039

Suitable piston Ø		[mm]	100				
Weight	0 mm stroke	[kg]	11.1				
	10 mm stroke	[kg]	0.039				

ISO 15552, Series TRB
Accessories

	Suitable piston Ø [mm]	32	40	50	63	80
	Stroke 50	0821401320	0821401330	0821401340	0821401380	-
	100	0821401321	0821401331	0821401341	0821401381	0821401360
	200	0821401322	0821401332	0821401342	0821401382	0821401361
	320	0821401323	0821401333	0821401343	0821401383	0821401362
	500	0821401324	0821401334	0821401344	0821401384	0821401363
	600	0821401325	0821401335	0821401345	0821401385	0821401364
	800	0821401326	0821401336	0821401346	0821401386	0821401365
	1000	0821401327	0821401337	0821401347	0821401387	0821401366
	1200	0821401328	0821401338	0821401348	0821401388	0821401367
	Suitable piston Ø [mm]	100				
	Stroke 50	-				
	100	0821401370				
	200	0821401371				
	320	0821401372				
	500	0821401373				
	600	0821401374				
	800	0821401375				
	1000	0821401376				
	1200	0821401377				

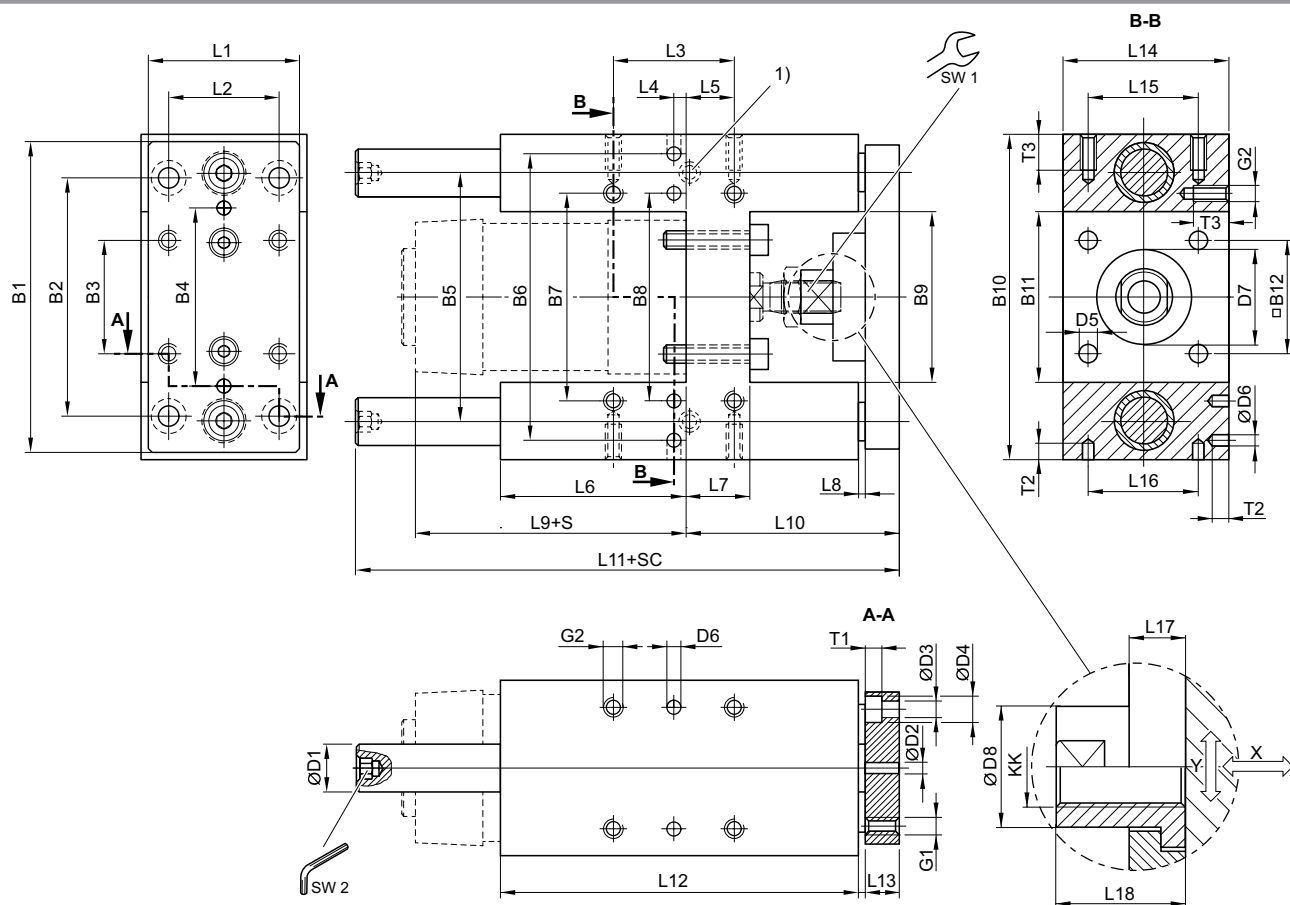
Inch dimensions rounded to the nearest whole number.

For use with hybrid inch cylinders with metric piston rod thread

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Ø 32 - 100 mm



- 1) Lube nipple
S = stroke
SC = cylinder stroke
X = max. play (axial)
Y = min. play (radial)
Hexagon in guide rod

00127779

[Piston Ø]	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	D1
32	90	78	32.5	50	74	81	61	61	50.2	97	50.2	32.5	12
40	110	84	38	54	87	99	69	69	58.2	115	58.2	38	16
50	130	100	46.5	72	104	119	85	85	70.2	137	70.2	46.5	20
63	145	105	56.5	82	119	132	100	100	85.2	152	85.2	56.5	20
80	180	130	72	106	148	166	130	130	105.4	189	105.4	72	25
100	200	150	89	131	172	190	150	150	130.4	213	130.4	89	25

[Piston Ø]	D2 H7	D3	D4	D5	D6 H7	D7 M8	D8	G1	G2	KK	L1	L2	L3
32	6	6.6	11	6.6	6	30	14.5	M6	M6	M10x1,25	45	32.5	32.5
40	6	6.6	11	6.6	6	35	18	M6	M6	M12x1,25	54	38	38
50	6	9	15	9	6	40	24	M8	M8	M16x1,5	63	46.5	46.5
63	6	9	15	9	6	45	24	M8	M8	M16x1,5	80	56.5	56.5
80	6	11	18	11	6	45	30	M10	M10	M20x1,5	100	72	72
100	6	11	18	11	6	55	30	M10	M10	M20x1,5	120	89	89

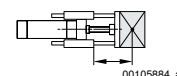
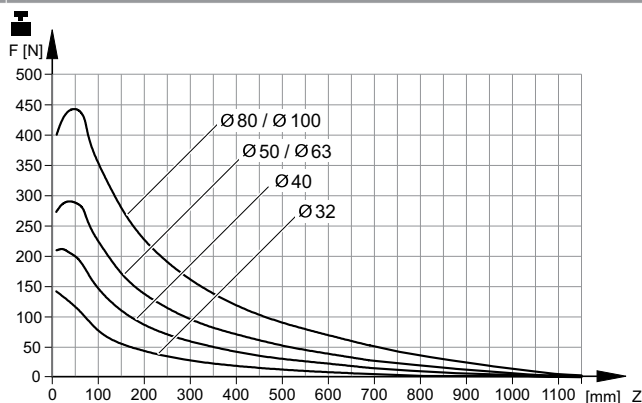
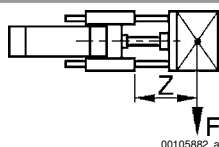
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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ISO 15552, Series TRB
Accessories

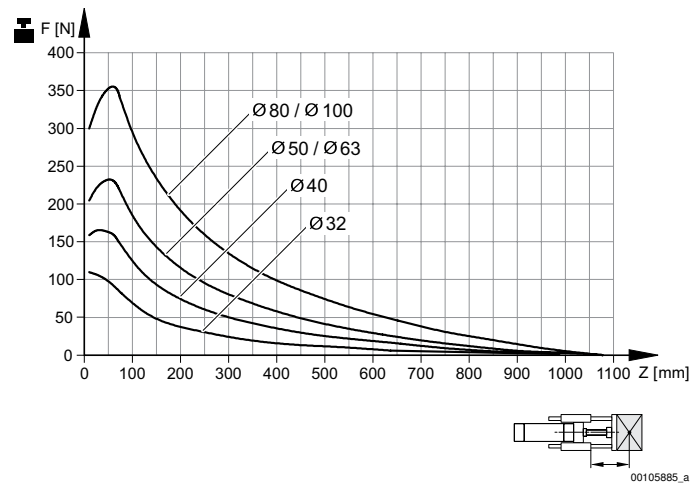
[Piston Ø]	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16
32	12	4.25	76	17	3	94	64	177.5	125	12	50	32.5	32.5
40	8	11	81	21	3	105	74	192.5	140	12	58	38	38
50	4.5	18.75	79	26	3	106	89	237	150	15	70	46.5	46.5
63	13	15.25	111	26	3	121	89	237	182	15	85	56.5	56.5
80	15	21	128	34	3	128	110	280	215	20	105	72	72
100	20	24.5	128	39	3	138	115	280	220	20	130	89	89

[Piston Ø]	L17	L18	T1	T2	T3	SW1	SW2						
32	6	17	6.5	10	15	13	5						
40	14	22	6.5	10	15	15	6						
50	14	26	9	10	16	22	6						
63	14	26	9	10	16	22	6						
80	14	32	11	10	20	27	8						
100	14	32	11	10	20	27	8						

Useful load


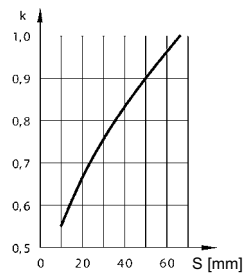
Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories



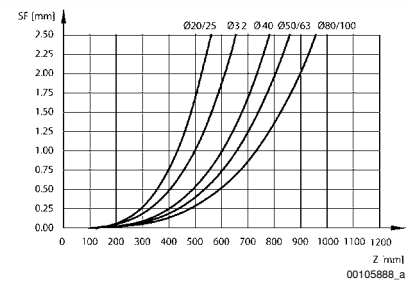
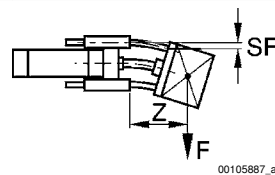
Service life 5×10^6 m
F = Useful load, Z = Projection

Reduction of useful load for short-stroke

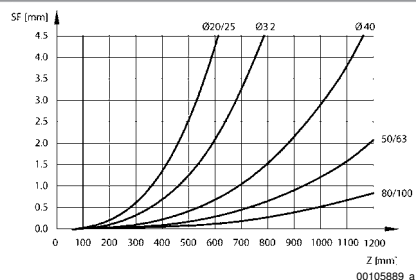
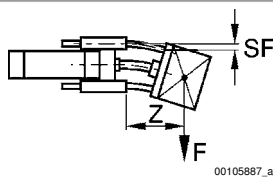


S = stroke
k=correction factor: normal=1; shock loaded=2
With a short stroke, the useful load figures determined from the diagram must be multiplied by the correction factor k.
These short-stroke adjustments are already included in the load diagram for a displacement of up to 60 mm.

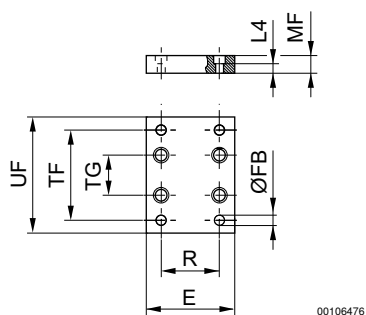
Bending due to own load



F = useful load (at the load center), SF = bending, Z = projection

ISO 15552, Series TRB
Accessories
Bending due to 10 N load


F = useful load (at the load center), SF = bending, Z = projection

Flange mounting


Part No.	Piston Ø	For series	E	Ø FB	L4	MF	R	TF	TG	UF		
1821038079	32	for guide units H' version	50	6.6	4.5	10	32.5	116	61	130		
1821038080	40	for guide units H' version	55	9	4.5	10	38	140	69	160		
1821038081	50	for guide units H' version	70	9	6	12	46.5	160	85	180		
1821038082	63	for guide units H' version	80	9	6	12	56.5	175	100	195		
1821038083	80	for guide units H' version	100	12	9	16	72	218	130	242		
1821038084	100	for guide units H' version	120	14	9	16	89	245	150	272		
Material: Steel Surface: galvanized												

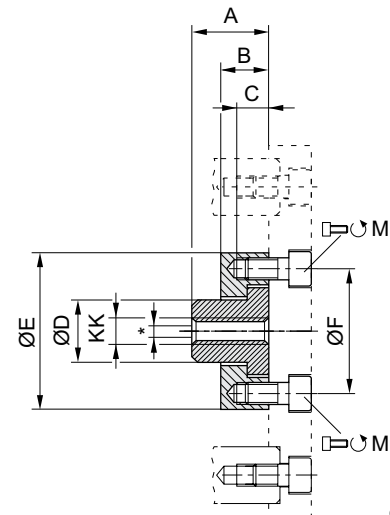
Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Flexible coupling form B, Series GU3



00106407



00105878_a

* Radial joint from 1,5 - 1,8 mm
Scope of delivery: flexible coupling incl. mounting screws

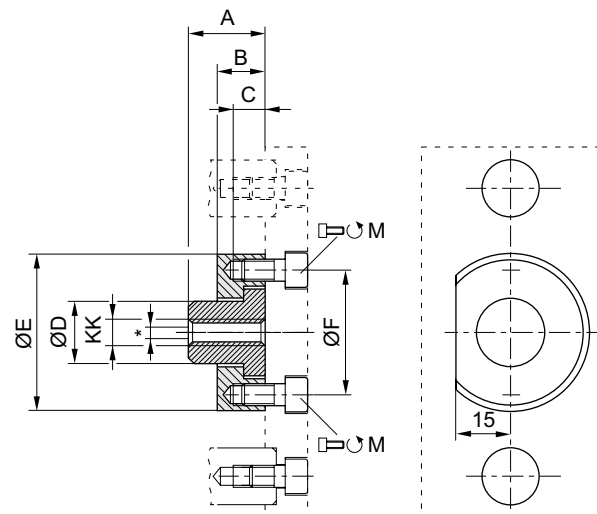
Part No.	KK	Ø	M	A	B	C	D	ØE	ØF	Material
R413000283	M8	20	2x M5x12	22	6	6	14.5	SW 30	26	Stainless steel
R413000284	M10x1,25	25/32	2x M5x12	17	6	6	14.5	SW 30	26	Stainless steel
R413000285	M20x1,5	80/100	4x M6x20	32	14	9.5	30	60	51	Stainless steel

for guide units

Flexible coupling form C, Series GU3



00136409



00105878

* Radial joint from 2 - 2,5 mm
Scope of delivery: flexible coupling incl. mounting screws

ISO 15552, Series TRB
Accessories

Part No.	KK	Ø	M	A	B	C	D	ØE	ØF	Material
R413000276	M6	12/16	2x M4x10	18	7	7	10	22	15	Stainless steel
R413000280	M12x1,25	40	2x M6x12	22	14	8	18	45	36	Stainless steel
R413000281	M16x1,5	50/63	4x M6x14	26	14	8	24	54	45	Stainless steel
for guide units										

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Series MSS

► Für Serie: PRA, TRB (Ø 32 - 125 mm)



Operating pressure 2 bar / 10 bar
Medium Compressed air
Oil content of compressed air 0 mg/m³ / 5 mg/m³

Materials:
Housing Aluminum, anodized

20908

Piston Ø	Seal	Scraper	Ambient temperature min./max.	Application area	Part No.
32	Acrylonitrile butadiene rubber	Polyester elastomer	-20°C / +80°C	1)	0496400704
	Acrylonitrile butadiene rubber	Polytetrafluorethylene	-20°C / +80°C	2)	0496401107
	Fluorocacoutchouc	Polytetrafluorethylene	-10°C / +120°C	3)	0496401700
40	Acrylonitrile butadiene rubber	Brass	-20°C / +80°C	2)	0496400402
	Fluorocacoutchouc	Brass	-10°C / +120°C	2)	0496401409
	Acrylonitrile butadiene rubber	Polyester elastomer	-20°C / +80°C	1)	0496400801
	Acrylonitrile butadiene rubber	Polytetrafluorethylene	-20°C / +80°C	3)	0496401204
	Fluorocacoutchouc	Polytetrafluorethylene	-10°C / +120°C	3)	0496401808
50, 63	Acrylonitrile butadiene rubber	Brass	-20°C / +80°C	2)	0496400518
	Fluorocacoutchouc	Brass	-10°C / +120°C	2)	0496401506
	Acrylonitrile butadiene rubber	Polyester elastomer	-20°C / +80°C	1)	0496400909
	Acrylonitrile butadiene rubber	Polytetrafluorethylene	-20°C / +80°C	3)	0496402103
	Fluorocacoutchouc	Polytetrafluorethylene	-10°C / +120°C	3)	0496401905
80, 100	Acrylonitrile butadiene rubber	Brass	-20°C / +80°C	2)	0496400607
	Fluorocacoutchouc	Brass	-10°C / +120°C	2)	0496401603
	Acrylonitrile butadiene rubber	Polyester elastomer	-20°C / +80°C	1)	0496401018
	Acrylonitrile butadiene rubber	Polytetrafluorethylene	-20°C / +80°C	3)	0496402200
	Fluorocacoutchouc	Polytetrafluorethylene	-10°C / +120°C	3)	0496402006
125	Acrylonitrile butadiene rubber	Brass	-20°C / +80°C	2)	0496301404
	Fluorocacoutchouc	Brass	-10°C / +120°C	2)	0496303105
	Acrylonitrile butadiene rubber	Polyester elastomer	-20°C / +80°C	1)	0496301307
	Acrylonitrile butadiene rubber	Polytetrafluorethylene	-20°C / +80°C	3)	0496301706
	Fluorocacoutchouc	Polytetrafluorethylene	-10°C / +120°C	3)	0496303202

1) Paper/printing industry / Textile industry

2) Chemical industry / Sugar production / Steel production / Automotive industry / Woodworking industry

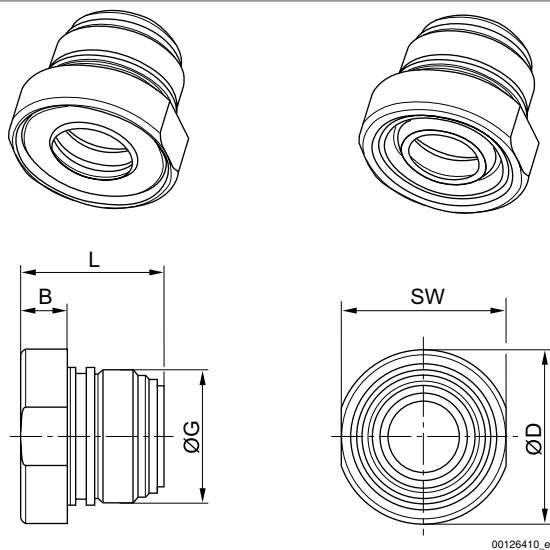
3) Textile industry / Food industry / Chemical industry / Sugar production

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

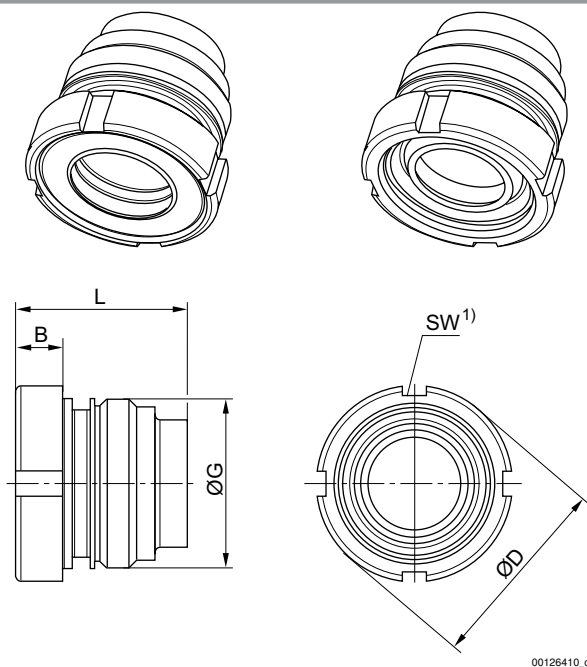
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ISO 15552, Series TRB
Accessories

For cylinder diameters: 32-40 mm

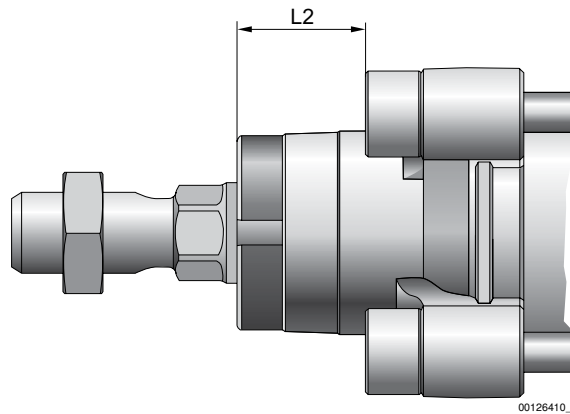


For cylinder diameters: 50-125 mm



1) Can be mounted with hook wrench in accordance with DIN 1810 A

Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB
Accessories


00126410_f

Part No.	Ø	B	ØD	G	L	L2	SW					
0496400704	32	6.7	24.5	M22x1	23	16.25	23					
0496401107	32	6.7	24.5	M22x1	23	16.25	23					
0496401700	32	6.7	24.5	M22x1	23	16.25	23					
0496400402	40	9.2	34	M26x1,5	28.1	18.25	32					
0496401409	40	9.2	34	M26x1,5	28.1	18.25	32					
0496400801	40	9.2	34	M26x1,5	28.1	18.25	32					
0496401204	40	9.2	34	M26x1,5	28.1	18.25	32					
0496401808	40	9.2	34	M26x1,5	28.1	18.25	32					
0496400518	50, 63	9	38.5	M33x2	33.5	25	40-42					
0496401506	50, 63	9	38.5	M33x2	33.5	25	40-42					
0496400909	50, 63	9	38.5	M33x2	33.5	25	40-42					
0496402103	50, 63	9	38.5	M33x2	33.5	25	40-42					
0496401905	50, 63	9	38.5	M33x2	33.5	25	40-42					
0496400607	80, 100	10	44	M40x2	44	33	45-50					
0496401603	80, 100	10	44	M40x2	44	33	45-50					
0496401018	80, 100	10	44	M40x2	44	33	45-50					
0496402200	80, 100	10	44	M40x2	44	33	45-50					
0496402006	80, 100	10	44	M40x2	44	33	45-50					
0496301404	125	12	57	M50x2	56	45	58-62					
0496303105	125	12	57	M50x2	56	45	58-62					
0496301307	125	12	57	M50x2	56	45	58-62					
0496301706	125	12	57	M50x2	56	45	58-62					
0496303202	125	12	57	M50x2	56	45	58-62					

ISO 15552, Series TRB

Accessories

Holding unit, Series HU1

▶ Ø32 - 100 mm ▶ hold: spring force, release: compressed air



00104762

Function	Hold with clamping jaws
Release pressure	4 bar / 8 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Static holding force	See table below
Materials:	
Housing	Aluminum, black anodized

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- Warning: The holding unit may not be used for the following applications: - for dynamic holding- in or as safety equipment
- Holding unit may only be unlocked when turned off.
- Make sure that the load direction does not change during a holding interval. A change in the direction of force, as well as external forces such as impacts, strong vibrations, or torsional forces, will briefly release the piston rod and may destroy the HU1 holding unit.
- When clamped, there must be no residual pressure on the holding unit (0 bar).
- Note: The minimum control pressure is $\geq$ the working pressure of the cylinder!

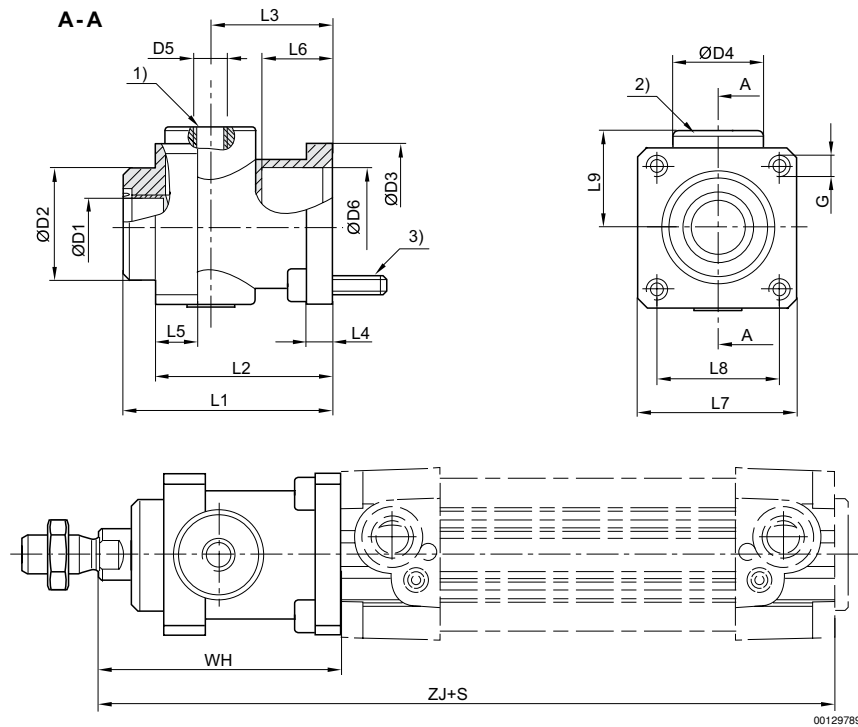
	Piston Ø	suitable piston rod Ø	Piston rod extension	Compressed air connection	Static holding force	Weight	Part No.
	[mm]	[mm]	[mm]		[N]	[kg]	
	32	12	42	M5	650	0.2	0821401165
	40	16	45	G 1/8	1100	0.27	0821401166
	50	20	57	G 1/8	1600	0.57	0821401167
	63	20	57	G 1/8	2500	0.8	0821401168
	80	25	77	G 1/8	4000	1.85	0821401169
	100	25	77	G 1/8	6300	2.9	0821401170

Holding force at 0 bar

Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB
Accessories

Dimensions



- 1) air connection
2) Holding cartridge
3) mounting screws 4x
S = stroke

Piston Ø	Ø D1	Ø D2	Ø D3	Ø D4	D5	L1	L2	L3	L4	L5	L6	L7	L8
32	12	30	35	25	M5	58	48	34	8	13	20.5	45	32.5
40	16	35	40	28	G 1/8	65	55	38	8	13	22.5	50	38
50	20	40	50	35	G 1/8	82	70	48	15	16	29.5	60	46.5
63	20	45	60	38	G 1/8	82	70	49.5	15	16	29.5	70	56.5
80	25	45	80	48	G 1/8	110	90	61	18	20	35	90	72
100	25	55	100	58	G 1/8	115	100	69	18	20	–	105	89

Piston Ø	L9	G	WH	ZJ									
32	25.5	M6	68	162									
40	30	M6	75	180									
50	36	M8	94	200									
63	40	M8	94	215									
80	50	M10	123	251									
100	58	M10	128	266									

ISO 15552, Series TRB
Accessories
Locking unit, Series LU1

▶ Ø32 - 100 mm ▶ Hold: adjustable spring force, Release: compressed air



00136968

Function	Clamp with eccentric tappet
Release pressure	2 bar / 8 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Static holding force	See table below
Materials:	
Housing	Aluminum, anodized
Cover	Die-cast aluminum

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- Warning: The Locking unit may not be used for the following applications:- for dynamic holding- in or as safety equipment
- Locking unit may only be unlocked when turned off.
- Note: The minimum release pressure is $\geq$ the working pressure of the cylinder! The holding force is dependent on the set spring force

	Piston Ø	suitable piston rod Ø	Piston rod extension	Compressed air connection	Static holding force	Weight	Part No.
	[mm]	[mm]	[mm]		[N]	[kg]	
	32	12	79	G 1/8	840	1.75	0821401130
	40	16	81		1100	1.75	0821401131
	50, 63	20	100		2700	3	0821401132
	80, 100	25	140		5800	8.8	0821401133

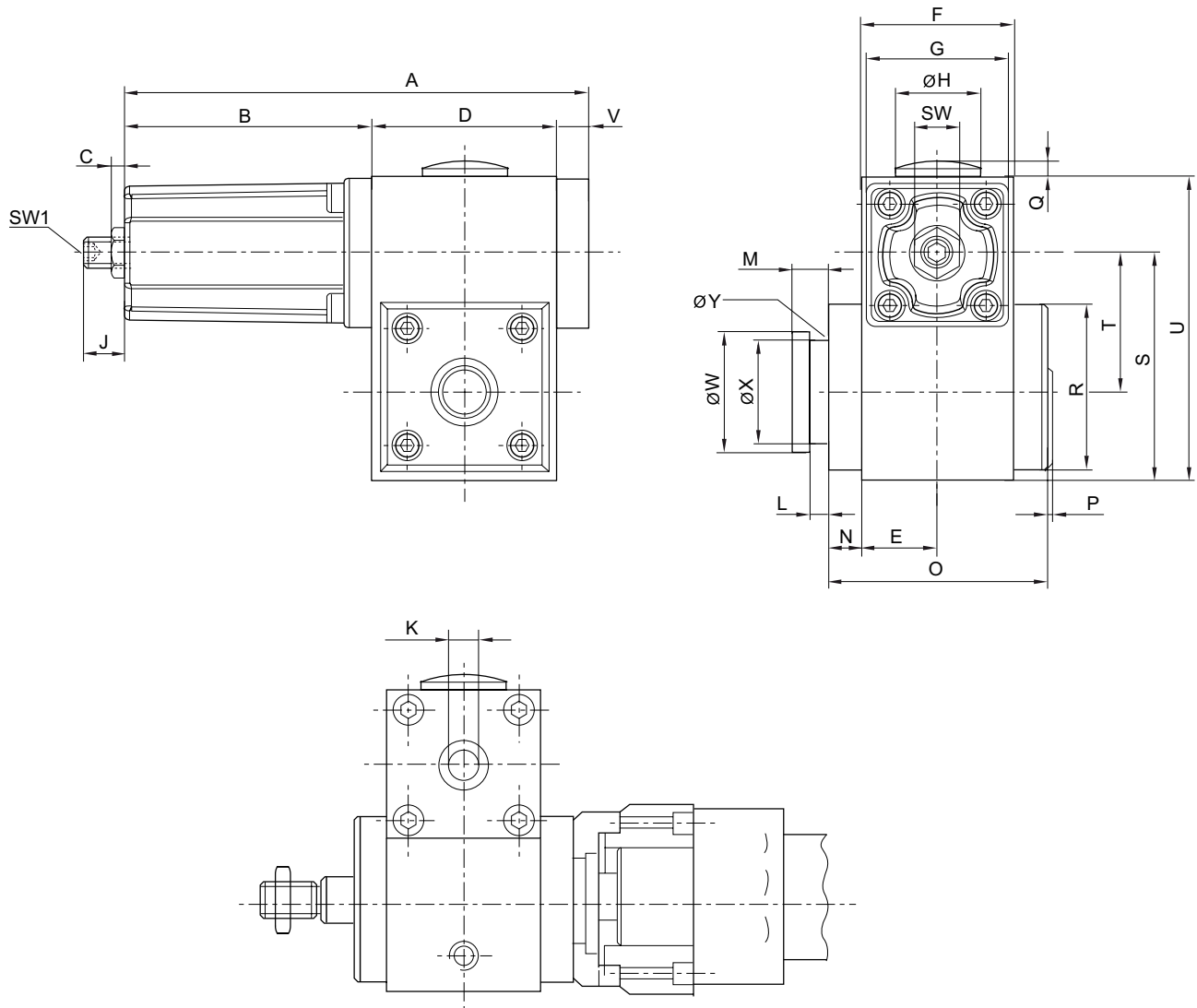
Holding force at 0 bar

Mounting elements LU3, LU4, LU5 are required for assembly and must be ordered separately as accessories.

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Dimensions



00119254_a

Piston Ø	A	B	C	D	E	F	G	ØH	J	K	L	M	N
32	135	69	10	56	23	46	45	30	19	G 1/8	4.1	8	9
40	135	69	10	56	23	46	45	30	18	G 1/8	5.1	10	9
50, 63	169	90	10	69	30	60	55	30	17	G 1/8	5.1	10	9
80, 100	208	98	16.7	100	40	80	65	37.5	15	G 1/8	8.1	16	13

Piston Ø	O	P	Q	R	S	SW	SW1	T	U	V	ØW	ØX	ØY
32	65	3	2.5	50	69	15	5	41.9	92	10	29.9	24	3
40	65	3	2.5	50	69	15	5	40.5	92	10	39.9	30	3
50, 63	84	3	2.5	60	80	15	5	48	111	10	39.9	30	3
80, 100	118	3	2	90	119	24	8	72	155	10	54.9	40	5

ISO 15552, Series TRB
 Accessories

Locking unit, Series LU1

▶ Ø32 - 100 mm ▶ hold: spring force, release: compressed air



00119253

Function	Clamp with eccentric tappet
Release pressure	See table below
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Static holding force	See table below
Materials:	
Housing	Aluminum, anodized
Cover	Die-cast aluminum

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.
- Warning: The Locking unit may not be used for the following applications:- for dynamic holding- in or as safety equipment
- Locking unit may only be unlocked when turned off.

	Piston Ø	suitable piston rod Ø	Piston rod extension	Compressed air connection	Release pressure	Static holding force	Weight	Part No.
	[mm]	[mm]	[mm]		[bar]	[N]	[kg]	
	32	12	79	G 1/8	4.5 / 8	740	1.52	R412003730
	40	16	81		4.5 / 8	1000	1.5	R412003731
	50, 63	20	100		4.5 / 8	2300	2.56	R412003732
	80, 100	25	140		4.5 / 8	4000	7.7	R412003733
	32	12	79		5.5 / 8	840	1.52	0821401134
	40	16	81		5.5 / 8	1100	1.5	0821401135
	50, 63	20	100		5.5 / 8	2700	2.56	0821401136
	80, 100	25	140		5.5 / 8	5800	7.7	0821401137

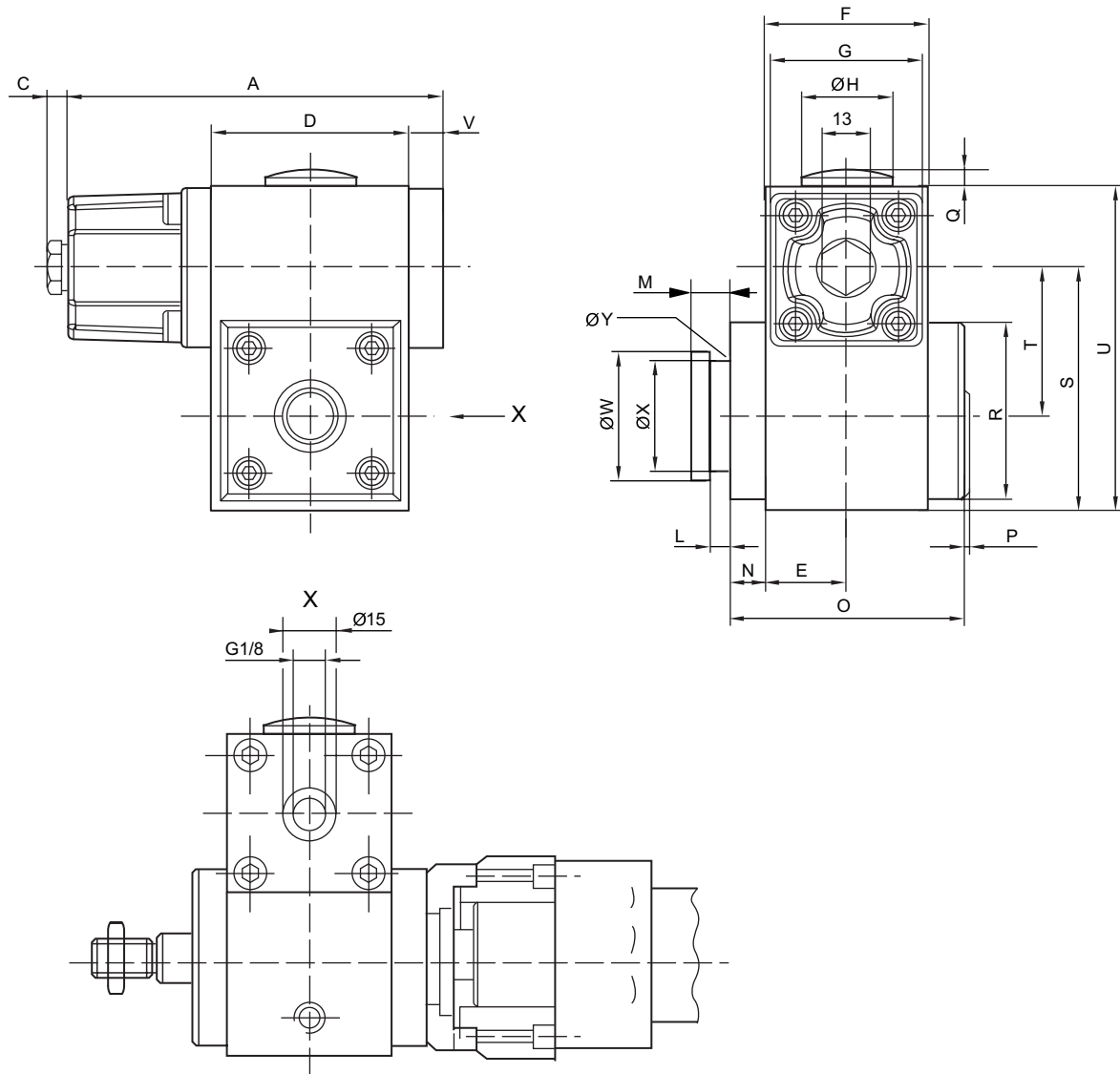
Holding force at 0 bar

Mounting elements LU3, LU4, LU5 are required for assembly and must be ordered separately as accessories.

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Dimensions



00119254

Piston Ø	A	C	D	E	F	G	Ø H	L	M	N	O	P	Q
32	106	6	56	23	46	45	30	4.1	8	9	65	3	2.5
40	106	6	56	23	46	45	30	5.1	10	9	65	3	2.5
50, 63	139.5	6	69	30	60	55	30	5.1	10	9	83.5	3	2.5
80, 100	176.5	6	100	40	80	65	37.5	8.1	16	13	118	3	2

Piston Ø	R	S	T	U	V	Ø W	Ø X	Ø Y					
32	50	68.5	41.9	91.5	10	29.9	24	3					
40	50	68.5	40.5	91.5	10	39.9	30	3					
50, 63	60	79.5	48	110	10	39.9	30	3					
80, 100	90	119	72	155	10	54.9	40	5					

ISO 15552, Series TRB
Accessories
Locking unit, Series LU6

▶ Ø32 - 125 mm ▶ Holding and braking: non-adjustable spring, Release: compressed air



00134922

Version	Clamping jaw lock
Function	Static holding Dynamic braking
Release pressure	4 bar / 10 bar
Ambient temperature min./max.	-25 °C / +80 °C
Medium temperature min./max.	-25 °C / +80 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³
Materials:	
Housing	Aluminum, anodized
Seal	Nitrile butadiene rubber
Scraper	Nitrile butadiene rubber

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The maximum ambient and medium temperature is +70 °C for the dynamic braking function.
- Note: Before pressurizing the locking unit, make sure that there is a balance of forces at the piston on the drive cylinder. Please see the operating instructions for further safety-relevant information. The locking unit can be used in controls with a max. performance level e in accordance with DIN EN ISO 13849-1 ("basic and well-tried safety principles"). For applications in category 2 to 4 controls, additional control measures according to DIN EN ISO 13849-1 are required.
- The locking unit can be used as an individual component or pre-mounted on a cylinder..
- Scope of delivery: LU6, each with 4 flange nuts, washers, and tie rods

Piston rod cylinders ► Standard cylinders
ISO 15552, Series TRB
Accessories

Piston Ø		[mm]	32	40	50	63	80
Max. holding/ braking force	F_{LU6}	[N]	760	1200	1900	3000	5000
Max. moving mass, external	m_{max}	[kg]	77	122	194	306	510
Max. piston speed	v_{max}	[m/s]	1	1	1	1	1
Max. total braking energy	E_{total}	[10 ⁶ J]	3.2	6	10	18	36
Max. braking energy per hour	P_{LU6}	[J/h]	720	1350	2250	4050	8100
Max. braking en- ergy per braking cycle	E_{LU6}	[J]	4.8	9	15	27	54
Braking energy per braking cycle related to B10d	E_{B10d}	[J]	1.6	3	5	9	18
Brake response time (4 bar)	t_{brake}	[s]	0.08	0.08	0.08	0.08	0.08
Brake response time (6.3 bar)	t_{brake}	[s]	0.1	0.1	0.1	0.1	0.1
Brake response time (10 bar)	t_{brake}	[s]	0.12	0.12	0.12	0.12	0.12

Piston Ø		[mm]	100	125		
Max. holding/ braking force	F_{LU6}	[N]	8000	12000		
Max. moving mass, external	m_{max}	[kg]	815	1223		
Max. piston speed	v_{max}	[m/s]	1	1		
Max. total braking energy	E_{total}	[10 ⁶ J]	58	93		
Max. braking energy per hour	P_{LU6}	[J/h]	13200	21000		
Max. braking en- ergy per braking cycle	E_{LU6}	[J]	88	140		
Braking energy per braking cycle related to B10d	E_{B10d}	[J]	29	47		
Brake response time (4 bar)	t_{brake}	[s]	0.09	0.09		
Brake response time (6.3 bar)	t_{brake}	[s]	0.11	0.11		
Brake response time (10 bar)	t_{brake}	[s]	0.13	0.13		

	Piston Ø	suitable pis- ton rod Ø	Piston rod extension	Compressed air connec- tion	Required flow rate	Weight	Max. torsional moment of piston rod	Part No.
					Qn			
	[mm]	[mm]	[mm]		[l/min]	[kg]	[Nm]	
	32	12	125	G 1/8	50	0.8	0.5	5230996402
	40	16	125	G 1/8	70	1	1	5231996402
	50	20	145	G 1/8	140	1.8	2	5232996402
	63	20	165	G 1/8	240	2.8	2.5	5233996402
	80	25	185	G 1/8	450	5.5	5	5234996402
	100	25	220	G 1/8	700	9.5	9	5235996402
	125	32	220	G 1/4	1200	13.8	15	5236996402

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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ISO 15552, Series TRB
Accessories

Part No.	B10d value static	B10d value dynamic	Buckling protection of the piston rod 1)	
			Max. cylinder stroke for Euler case 1	Max. cylinder stroke for Euler case 2
			[mm]	[mm]
5230996402	5.000.000	2.000.000	750	400
5231996402			1100	550
5232996402			1350	700
5233996402			950	500
5234996402			1350	700
5235996402			950	500
5236996402			1500	800

1) Only applies in dynamic cases, and only retracting

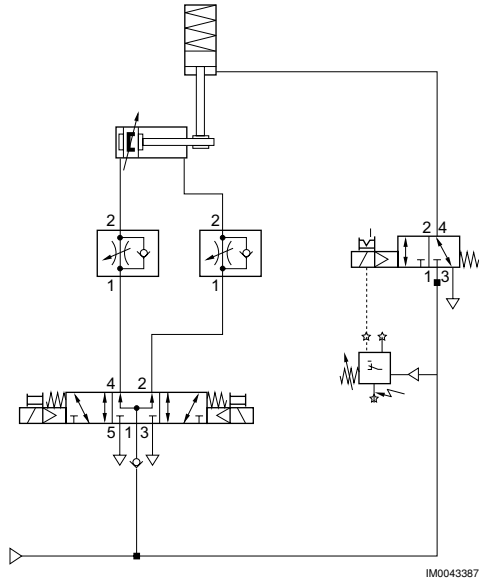
Formulas and sample calculations

Brake force pre-selection, locking unit LU6	Example: 30 kg load (brakes)
$F_{load} = m \cdot g \cdot 2$ (safety factor) $F_{LU6} \geq F_{load}$	$588,6 \text{ N} = F_{load}$ $760 \text{ N for } \varnothing 32 = F_{LU6}$
Pre-selection, PRA /TRB cylinder diameter	Example: 30 kg load, 500 mm stroke, 6 bar, vertical movement, cycle time 0.65 s
a) Cylinder diameter test	→ Calculation Tool: Test both movement directions $\varnothing 32$: Too much energy $\varnothing 40$: correct energy
b) Piston speed test	→ Calculation Tool
$v_{load} \leq v_{max}$	$0,77 \text{ m/s} = v_{load}$ $1,00 \text{ m/s} = v_{max}$
c) Brake energy test	
$E_{load} = \frac{1}{2} m \cdot v^2$ $E_{LU6} \geq E_{load}$	$8,9 \text{ J} = E_{load}$ $9,0 \text{ J} = E_{LU6}$
Test: LU6 performance	Example: 30 kg load, 120 brakes per hour
$P_{load} = E_{load} \cdot n_{brake}$ $P_{LU6} \geq P_{load}$	$1067,2 \text{ J/h} = P_{load}$ $1350 \text{ J/h} = P_{LU6}$
Calculation of the expected service life	Example: 30 kg load, LU6 Ø40
$E_{total} / E_{load} = B10d$ $B10d \leq 2 \cdot 10^6$	$674.650 = B10d$
Calculation of the braking distance	
$S_{brake} = S_{dead\ time} + S_{LU6}$ $S_{dead\ time} = (t_{brake} + t_{valve}) \cdot v_{load}$ $S_{LU6} = E_{load} / F_{LU6}$	t_{valve} = depending on the valve used

Piston rod cylinders ▶ Standard cylinders

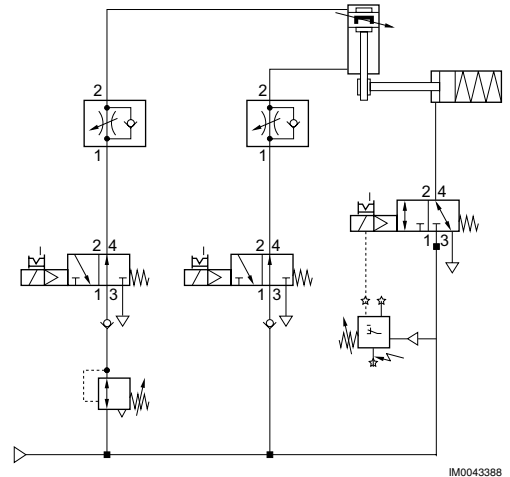
ISO 15552, Series TRB Accessories

Circuit example for non-safety relevant functions:
mounting orientation horizontal



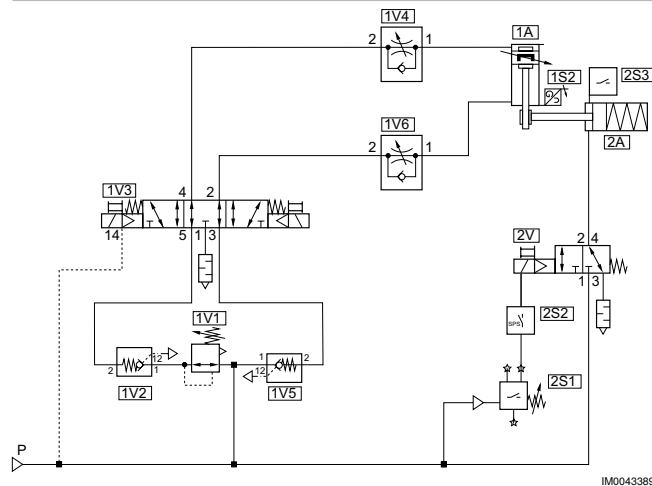
IM0043387

Vertical mounting orientation



IM0043388

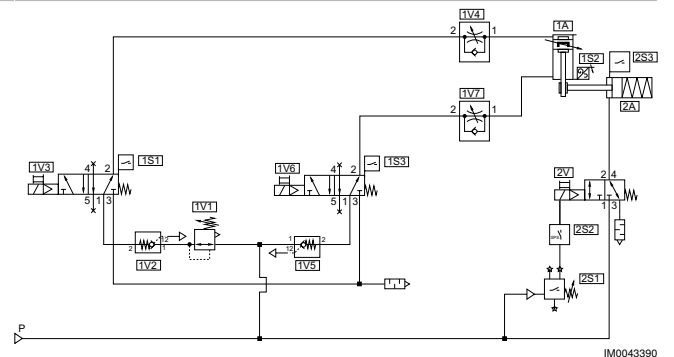
Circuit example for safety-related stop functions:
mounting orientation horizontal



IM0043389

Channel 1: Safe stopping and closing
Channel 2: Safe brake control

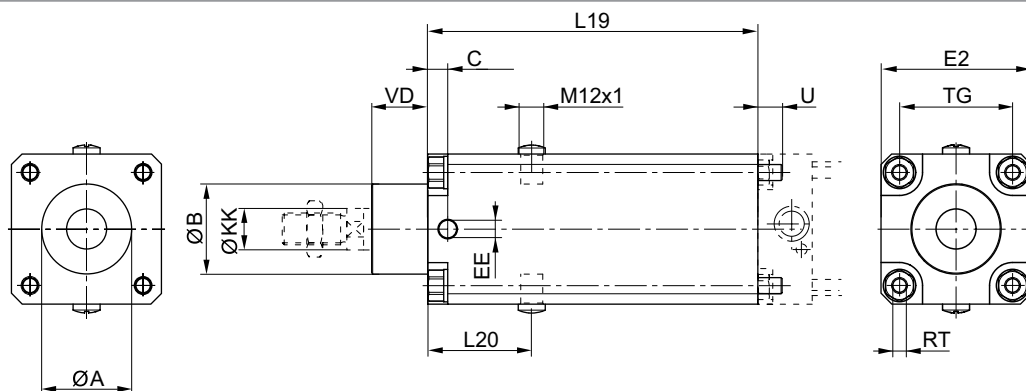
Vertical mounting orientation



IM0043390

Channel 1: Safe stopping and closing
Channel 2: Safe brake control

ISO 15552, Series TRB
 Accessories

Dimensions


00134223

Piston Ø	ØA	ØB d11	C	EE	E2	L19	L20	ØKK e8-h9	TG	RT	U	VD
32	30,5	30	9	G1/8	48	125	44	12	32,5	M6	10	19
40	35,5	35	9	G1/8	53	125	44	16	38	M6	10	21
50	40,5	40	9	G1/8	63	145	49	20	46,5	M8	11	28
63	45,5	45	10	G1/8	75	165	52	20	56,5	M8	11	28
80	45,5	45	11	G1/8	98	185	61.5	25	72	M10	16	34
100	55,5	55	13	G1/8	118	220	68	25	89	M10	16	37
125	60,5	60	13	G1/4	142	220	75	32	110	M12	16	45

Foot mounting, Series LU4

► for cylinders with locking units



23489

Ambient temperature min./max.

-20°C / +80°C

Medium temperature min./max.

-20°C / +80°C

Max. particle size

5 µm

Oil content of compressed air

0 mg/m³ - 5 mg/m³

Materials:

Housing

Nodular graphite iron, galvanized

Technical Remarks

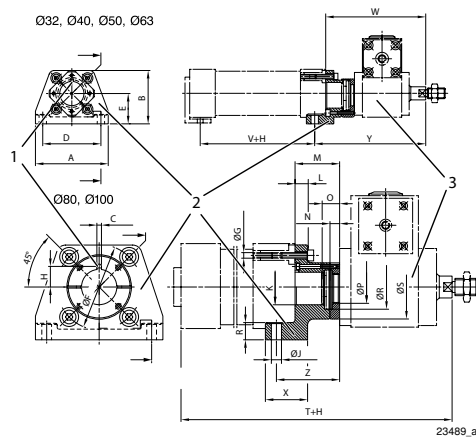
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

For piston Ø	Part No.
[mm]	
32	1827001520
40	1827001521
50	1827001522
63	1827001526
80	1827001524
100	1827002152

Dimensions



H = stroke

The locking unit can be rotated by 4x90°.

A	B	C ±0,1	D ±0,1	E	Ø F	Ø G H13	I	J H8	K H10	L	M	N	O	Ø P
79	57	3.6	65	32	46	6.6	13.2	6.6	30	7	27	3.9	–	24.2
90	64	3.6	75	36	54	6.6	18.2	6.6	35	9.5	33	4.9	13	30.2
110	80	3.6	90	45	66	8.4	18.2	9	40	11	38	4.9	–	30.2
120	90	3.6	100	50	80	8.4	18.2	9	45	11	38	4.9	–	30.2
153	113	6	128	63	102	10.5	24.5	11	45	15	52	7.9	18	40.2
176	133	6	148	71	126	10.5	24.6	11	55	15	57	7.9	–	40.2

A	R	Ø R	Ø S	T	V	W	X	Y	Z					
79	9	30	46.5	199	68	105	32	118	40					
90	11	40	55.5	216	79	111	32	124	46					
110	15	40	66	243	74	137	41	153	54					
120	15	40	71	258	89	137	41	153	54					
153	19.5	55	75	314	84	186	50	208	74					
176	19.5	55	80	329	94	191	50	213	79					

ISO 15552, Series TRB
Accessories
Flange mounting, Series LU5

▶ for cylinders with locking units



23490

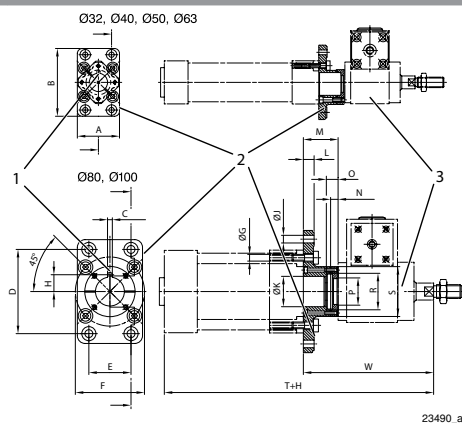
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³

Materials:	
Housing	Nodular graphite iron, galvanized

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

	For piston Ø	Part No.
	[mm]	
	32	1827001512
	40	1827001513
	50	1827001514
	63	1827001503
	80	1827001516
	100	1827001517

Dimensions


23490_a

A	B	C ±0,1	D ±0,1	E ±0,1	Ø F ±0,2	Ø G H13	H	Ø J H13	Ø K H10	L	M	N ±0,1	O 1)	Ø P ±0,2
50	79	3.6	64	32	46	6.6	13.2	7	30	8	27	3.9	8	24.2

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB
Accessories

A	B	C ±0,1	D ±0,1	E ±0,1	Ø F ±0,2	Ø G H13	H	Ø J H13	Ø K H10	L	M	N ±0,1	O 1)	Ø P +0,2
56	91	3.6	72	36	54	6.6	18.2	9	35	10	33.3	4.9	10	30.2
70	111	3.6	90	45	66	8.4	18.2	9	40	12	38.3	4.9	10	30.2
80	120	3.6	100	50	80	8.4	18.2	9	45	12	38.3	4.9	10	30.2
100	153	6	126	63	102	10.5	24.5	12	45	16	52	7.9	16	40.2
120	178	6	150	75	126	10.5	24.6	14	55	16	57	7.9	16	40.2

A	Ø R +0,5	Ø S	W											
50	33	50	105											
56	40	55.5	111											
70	40	66	137											
80	40	71	137											
100	55	75	186											
120	55	80	191											

1) Min.

Mounting flange, Series LU3

► for cylinders with locking units



23488

Ambient temperature min./max.

-20 °C / +80 °C

Medium temperature min./max.

-20 °C / +80 °C

Max. particle size

5 µm

Oil content of compressed air

0 mg/m³ - 5 mg/m³

Materials:

Housing

Nodular graphite iron, galvanized

Technical Remarks

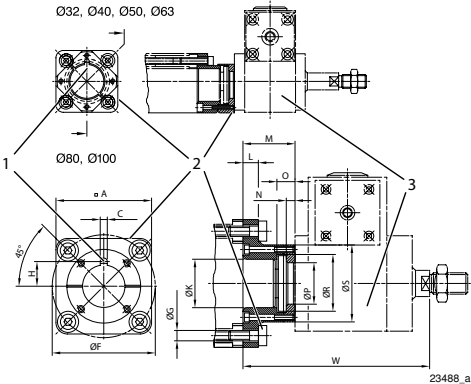
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

For piston Ø	Weight	Part No.
[mm]	[kg]	
32	0.235	1827001504
40	0.36	1827001505
50	0.635	1827001506
63	0.84	1827001508
80	1.62	1827001433
100	2.27	1827001434

ISO 15552, Series TRB

Accessories

Dimensions



Screws included in scope of delivery
The locking unit can be rotated by 4x90°.

A	C +0,1	Ø F ±0,2	G H13	H	Ø K H10	L	M	N -0,1	O 1)	Ø P +0,2	Ø R +0,5	Ø S	W	
50	3.6	46	6.6	13.2	30	7	27.2	3.9	8	24.2	33	46.5	105	
57	3.6	54	6.6	18.2	35	9.5	33.3	4.9	10	30.2	40	55.5	111	
68	3.6	66	8.4	18.2	40	11	38.3	4.9	10	30.2	40	66	137	
75	3.6	80	8.4	18.2	45	11	38.3	4.9	10	30.2	40	71	137	
95	6	102	10.5	24.5	45	15	52	7.9	16	40.2	55	75	186	
115	6	126	10.5	24.6	55	15	57	7.9	16	40.2	55	80	191	

1) Min.

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

Sensor, Series ST6

▶ 6 mm T-slot ▶ with cable ▶ open cable ends, 2-pin, open cable ends, 3-pin



24712

Certificates

Ambient temperature min./max.
Protection class
Switching point precision [mm]
Switching logic
Switching capacity

LED status display
Vibration resistance
Shock resistance

Materials:

Housing
Cable sheath
Locking screw

CE declaration of conformity
cULus
RoHS

-30 °C / +80 °C
IP65, IP67, IP69K
±0,1
NO (make contact)
Reed, 2-pin: max. 10 W
Reed, 3-pin: max. 6 W
Yellow
10 - 55 Hz, 1 mm
30 g / 11 ms

Polyamide
Polyurethane
Stainless steel

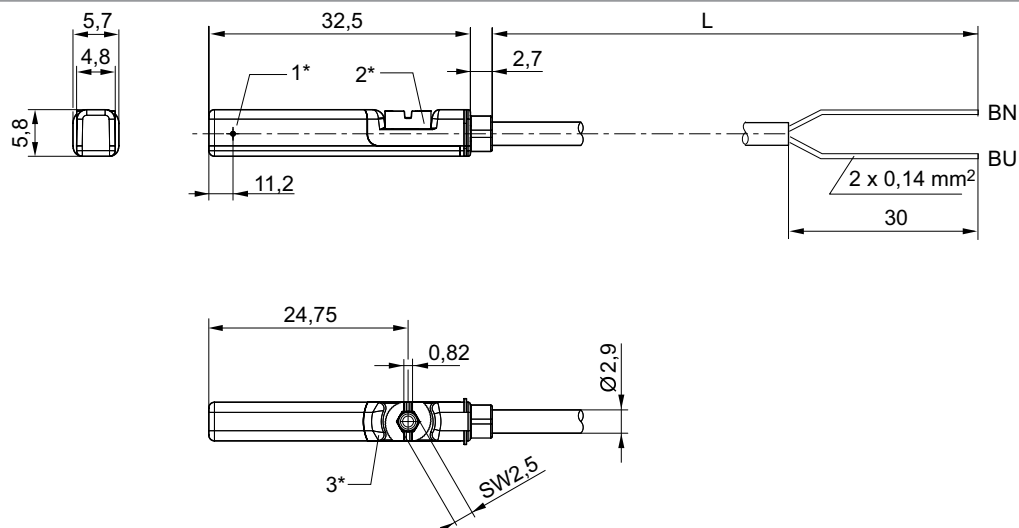
Technical Remarks

- No cULus certification for 230 V variant.

	Type of contact	Cable length	DC operating voltage min./max.	Operational voltage AC min./max.	Voltage drop U at I _{max}	DC switching current, max.	AC switching current, max.	Part No.
		[m]	[V DC]	[V AC]		[A]	[A]	
	Reed	3	10 / 230	10 / 230	I*Rs	0.13	0.13	R412022866
	Reed	3 5 10	10 / 30	10 / 30	I*Rs	0.3	0.5	R412022869 R412022870 R412022871
	electronic PNP	3 5 10	10 / 30	-	≤ 2,5 V	0.13	-	R412022853 R412022855 R412022857
	electronic NPN	3 5	10 / 30	-	≤ 2,5 V	0.13	-	R412022849 R412022850

Part No.	Max. switching frequency kHz	Operating current, not switched	Operating current, switched	Fig.	Note
R412022866	< 0,4	-	-	Fig. 1	1); 3)
R412022869 R412022870 R412022871	< 0,4	-	-	Fig. 2	2); 3)
R412022853 R412022855 R412022857	< 1,0	< 8 mA	< 30 mA	Fig. 2	2); 4)
R412022849 R412022850	< 1,0	< 8 mA	< 30 mA	Fig. 2	2); 4)

- 1) interfaces: open cable ends; 2-pin
2) interfaces: open cable ends; 3-pin
3) Protected against polarity reversal
4) short circuit resistant / Protected against polarity reversal

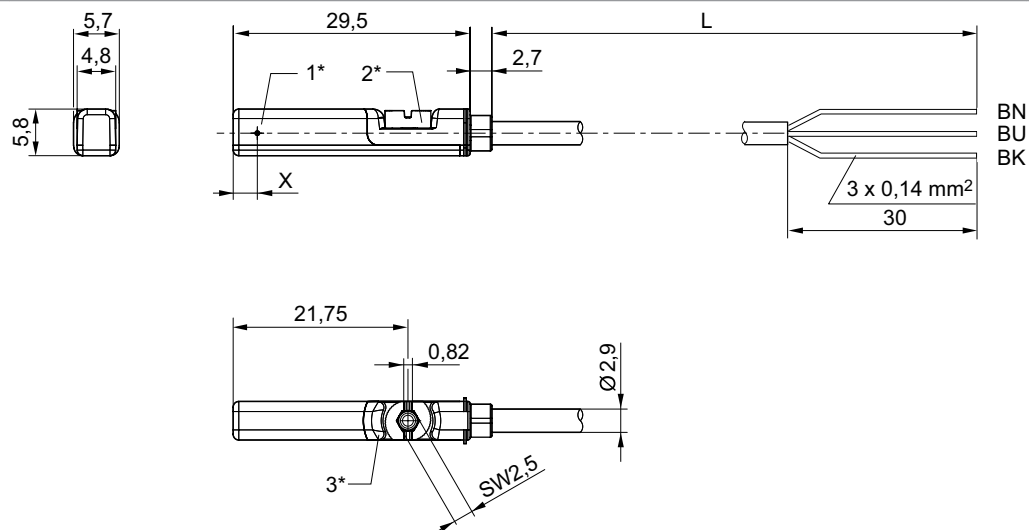
ISO 15552, Series TRB
Accessories
Fig. 1

24619

1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

BN=brown, BU=blue

Fig. 2

24620

1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

BN = brown, BK = black, BU = blue

X = electronic: 11,6 mm, Reed: 8,3 mm

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Sensor, Series ST6

▶ 6 mm T-slot ▶ with cable ▶ open cable ends, 3-pin ▶ ATEX certified



24712

Certificates

ATEX

Ambient temperature min./max.
Protection class
Switching point precision [mm]
Quiescent current (without load)
DC operating voltage min./max.
Switching logic
LED status display
Vibration resistance
Shock resistance

Materials:

Housing
Cable sheath
Locking screw

CE declaration of conformity
cULus
RoHS

II 3G Ex nA op is IIC T4 Gc X
II 3D Ex tc IIIC T135°C Dc X

-20°C / +50°C

IP67

±0,1

< 10 mA

10 V DC - 30 V DC

NO (make contact)

Yellow

10 - 55 Hz, 1 mm

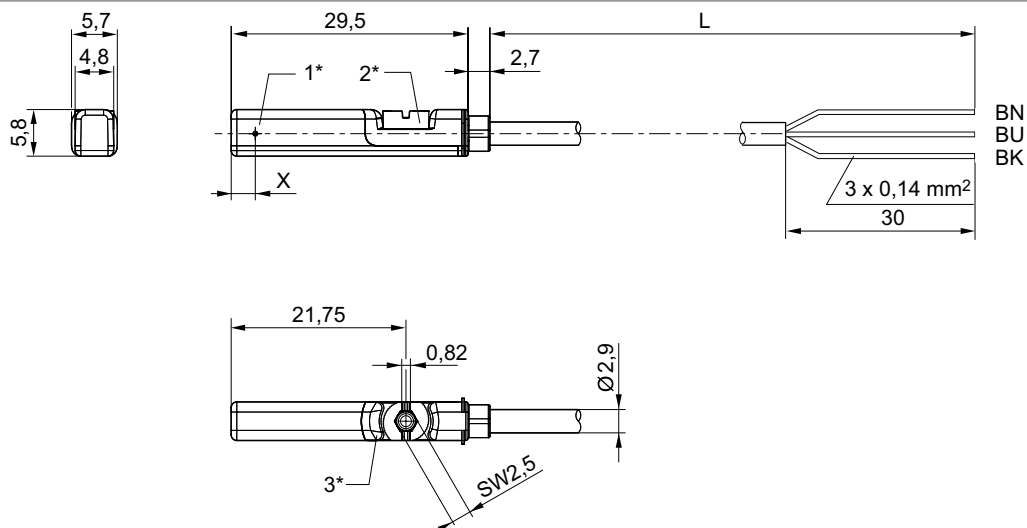
30 g / 11 ms

Polyamide

Polyurethane

Stainless steel

	Type of contact	Cable length	Voltage drop U at I _{max}	DC switching current, max.	Max. switching frequency kHz	Part No.
		[m]		[A]		
	electronic PNP	3	≤ 2,5 V	0.1	< 1,0	R412022854
		5				R412022856
interfaces: open cable ends; 3-pin short circuit resistant / Protected against polarity reversal						

ISO 15552, Series TRB
Accessories
Dimensions


24620

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

▶ 6 mm T-slot ▶ with cable ▶ Plug, M8, 3-pin, with knurled screw



24713

Certificates

Ambient temperature min./max.

Protection class

Switching point precision [mm]

DC operating voltage min./max.

Switching logic

Switching capacity

LED status display

Vibration resistance

Shock resistance

Materials:

Housing

Locking screw

CE declaration of conformity

cULus

RoHS

-30 °C / +80 °C

IP65, IP67

±0,1

10 V DC - 30 V DC

NO (make contact)

Reed, 3-pin: max. 6 W

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Polyamide

Stainless steel

	Type of contact	Cable sheath	Cable length	Operational voltage AC min./max.	Voltage drop U at I _{max}	DC switching current, max.	AC switching current, max.	Part No.
			[m]	[V AC]		[A]	[A]	
	Reed	Polyurethane	0.3	10 / 30	I [*] Rs	0.3	0.5	R412022873
		Polyvinyl chloride	0.3					R412022875
		Polyurethane	0.5					R412022874

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Piston rod cylinders ► Standard cylinders

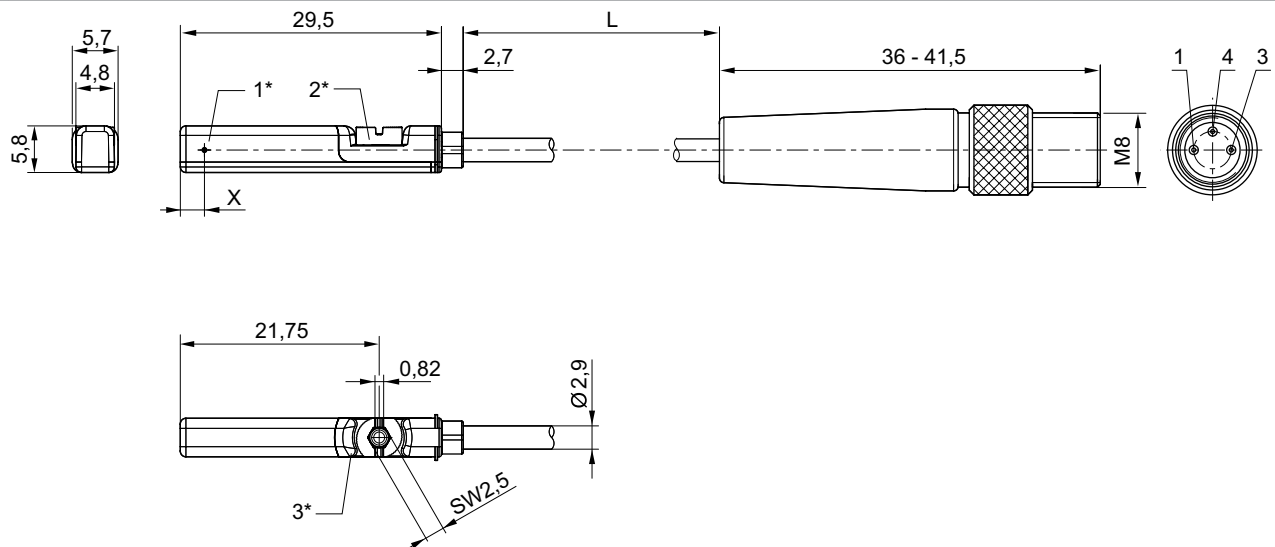
ISO 15552, Series TRB
Accessories

	Type of contact	Cable sheath	Cable length	Operational voltage AC min./max.	Voltage drop U at I _{max}	DC switching current, max.	AC switching current, max.	Part No.
			[m]	[V AC]		[A]	[A]	
	electronic PNP	Polyurethane	0.3	-	≤ 2,5 V	0.13	-	R412022859
		Polyvinyl chloride	0.3					R412022862
		Polyurethane	0.5					R412022861
	electronic NPN	Polyurethane	0.3	-	≤ 2,5 V	0.13	-	R412022852

Part No.	Max. switching frequency kHz	Operating current, not switched	Operating current, switched	Note
R412022873 R412022875 R412022874	< 0,4	-	-	1)
R412022859 R412022862 R412022861	< 1,0	< 8 mA	< 30 mA	2)
R412022852	< 1,0	< 8 mA	< 30 mA	2)

1) Protected against polarity reversal
2) short circuit resistant / Protected against polarity reversal
interfaces: Plug; M8; 3-pin; with knurled screw

Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm
Pin assignment: 1 = (+), 3 = (-), 4 = (OUT)

24622

ISO 15552, Series TRB
 Accessories

Sensor, Series ST6

► 6 mm T-slot ► with cable ► Plug, M8, 3-pin, with knurled screw ► ATEX certified



24713

Certificates

ATEX

Ambient temperature min./max.
 Protection class
 Switching point precision [mm]
 Quiescent current (without load)
 DC operating voltage min./max.
 Switching logic
 LED status display
 Vibration resistance
 Shock resistance

Materials:

Housing
 Cable sheath
 Locking screw

CE declaration of conformity

cULus

RoHS

II 3G Ex nA op is IIC T4 Gc X

II 3D Ex tc IIIC T135°C Dc X

-20°C / +50°C

IP67

±0,1

< 10 mA

10 V DC - 30 V DC

NO (make contact)

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Polyamide

Polyurethane

Stainless steel

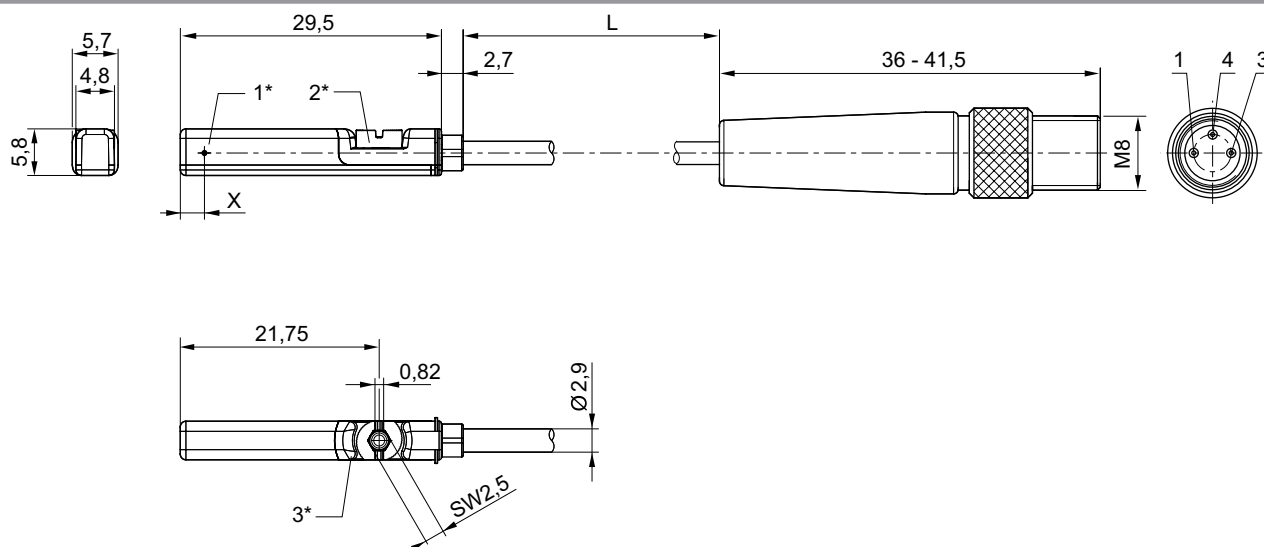
	Type of contact	Cable length	Voltage drop U at I _{max}	DC switching current, max.	Max. switching frequency kHz	Part No.
		[m]		[A]		
	electronic PNP	0.3	≤ 2,5 V	0.1	< 1,0	R412022860

interfaces: Plug; M8; 3-pin; with knurled screw
 short circuit resistant / Protected against polarity reversal

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

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)

24622

Sensor, Series ST6

▶ 6 mm T-slot ▶ with cable ▶ Plug, M8, 3-pin



24742

Certificates

Ambient temperature min./max.
Protection class
Switching point precision [mm]
DC operating voltage min./max.
Switching logic
Switching capacity

LED status display
Vibration resistance
Shock resistance

Materials:

Housing
Cable sheath
Locking screw

CE declaration of conformity

cULus
RoHS
-30 °C / +80 °C
IP65, IP67
±0,1
10 V DC - 30 V DC
NO (make contact)
Reed, 2-pin: max. 10 W
Reed, 3-pin: max. 6 W
Yellow
10 - 55 Hz, 1 mm
30 g / 11 ms

Polyamide
Polyurethane
Stainless steel

	Type of contact	Cable length	Operational voltage AC min./max.	Voltage drop U at I _{max}	DC switching current, max.	AC switching current, max.	Max. switching frequency kHz	Part No.
		[m]	[V AC]		[A]	[A]		
	Reed	0.3	10 / 30	I [*] Rs	0.13	0.13	< 0,4	R412022868

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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ISO 15552, Series TRB
Accessories

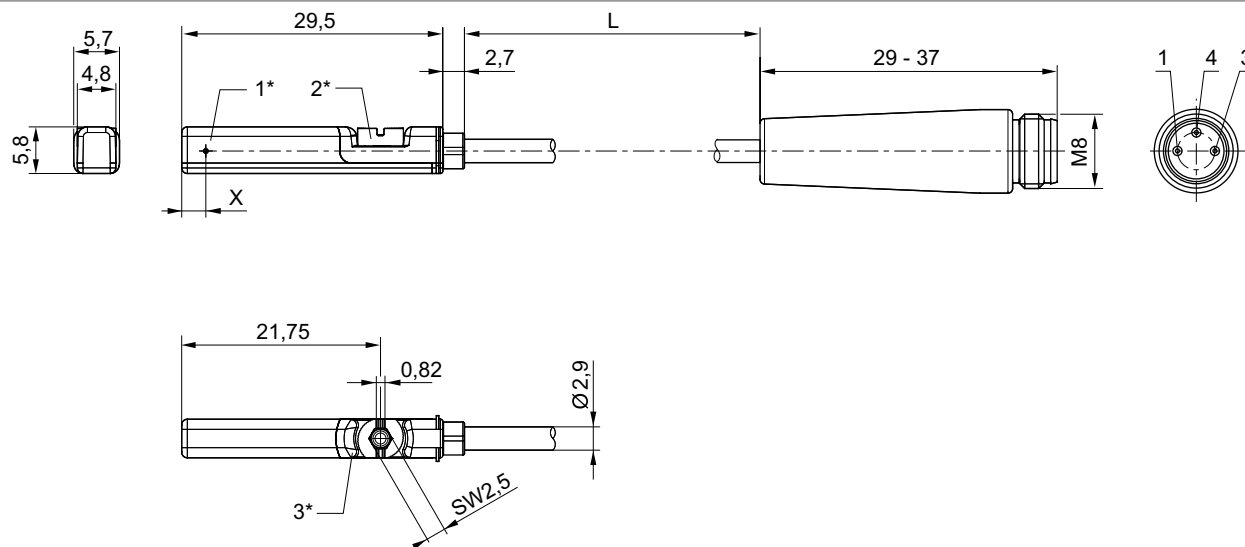
	Type of contact	Cable length	Operational voltage AC min./max.	Voltage drop U at I _{max}	DC switching current, max.	AC switching current, max.	Max. switching frequency kHz	Part No.
		[m]	[V AC]		[A]	[A]		
	Reed	0.3	10 / 30	I [*] Rs	0.3	0.5	< 0,4	R412022872
	electronic PNP	0.3	-	≤ 2,5 V	0.13	-	< 1,0	R412022858
	electronic NPN	0.3	-	≤ 2,5 V	0.13	-	< 1,0	R412022851

Part No.	Operating current, not switched	Operating current, switched	Note
R412022868	-	-	1)
R412022872	-	-	1)
R412022858	< 8 mA	< 30 mA	2)
R412022851	< 8 mA	< 30 mA	2)

1) Protected against polarity reversal

2) short circuit resistant / Protected against polarity reversal

interfaces: Plug; M8; 3-pin

Dimensions


1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

X = electronic: 11,6 mm, Reed: 8,3 mm

Pin assignment: 1 = (+), 3 = (-), 4 = (OUT)

24621

Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB
Accessories

Sensor, Series ST6

► 6 mm T-slot ► with cable ► Plug, M12, 3-pin, with knurled screw



24714

Certificates

Ambient temperature min./max.
Protection class
Switching point precision [mm]
DC operating voltage min./max.
Switching logic
Switching capacity
LED status display
Vibration resistance
Shock resistance

CE declaration of conformity

cULus
RoHS
-30 °C / +80 °C
IP65, IP67
±0,1
10 V DC - 30 V DC
NO (make contact)
Reed, 3-pin: max. 6 W
Yellow
10 - 55 Hz, 1 mm
30 g / 11 ms

Materials:

Housing
Cable sheath
Locking screw

Polyamide
Polyurethane
Stainless steel

	Type of contact	Cable length	Operational voltage AC min./max.	Voltage drop U at I _{max}	DC switching current, max.	AC switching current, max.	Max. switching frequency kHz	Part No.
		[m]	[V AC]		[A]	[A]		
	Reed	0.3	10 / 30	I*Rs	0.3	0.5	< 0,4	R412022876
	electronic PNP	0.1 0.3 3 5	-	≤ 2,5 V	0.13	-	< 1,0	R412022879 R412022863 R412022877 R412022878

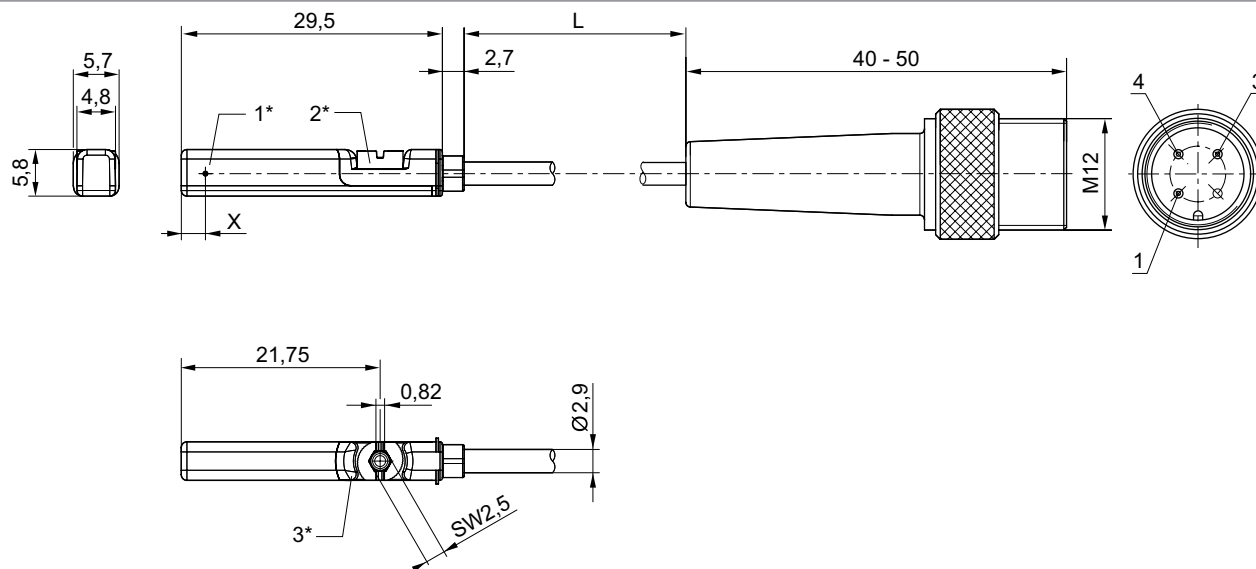
Part No.	Operating current, not switched	Operating current, switched	Note
R412022876	-	-	1)
R412022879 R412022863 R412022877 R412022878	< 8 mA	< 30 mA	2)

1) Protected against polarity reversal
2) short circuit resistant / Protected against polarity reversal
interfaces: Plug; M12; 3-pin; with knurled screw

ISO 15552, Series TRB

Accessories

Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent

L = cable length

X = PNP: 11,6 mm, reed: 8,3 mm

Pin assignment: 1 = (+), 3 = (-), 4 = (OUT)

24623

Sensor, Series ST6

► 6 mm T-slot ► with cable ► Plug, M12, 3-pin, with knurled screw ► ATEX certified



24714

Certificates

ATEX

Ambient temperature min./max.

Protection class

Switching point precision [mm]

Quiescent current (without load)

DC operating voltage min./max.

Switching logic

LED status display

Vibration resistance

Shock resistance

Materials:

Housing

Cable sheath

Locking screw

CE declaration of conformity

cULus

RoHS

II 3G Ex nA op is IIC T4 Gc X

II 3D Ex tc IIIC T135°C Dc X

-20°C / +50°C

IP67

±0,1

< 10 mA

10 V DC - 30 V DC

NO (make contact)

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

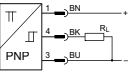
Polyamide

Polyurethane

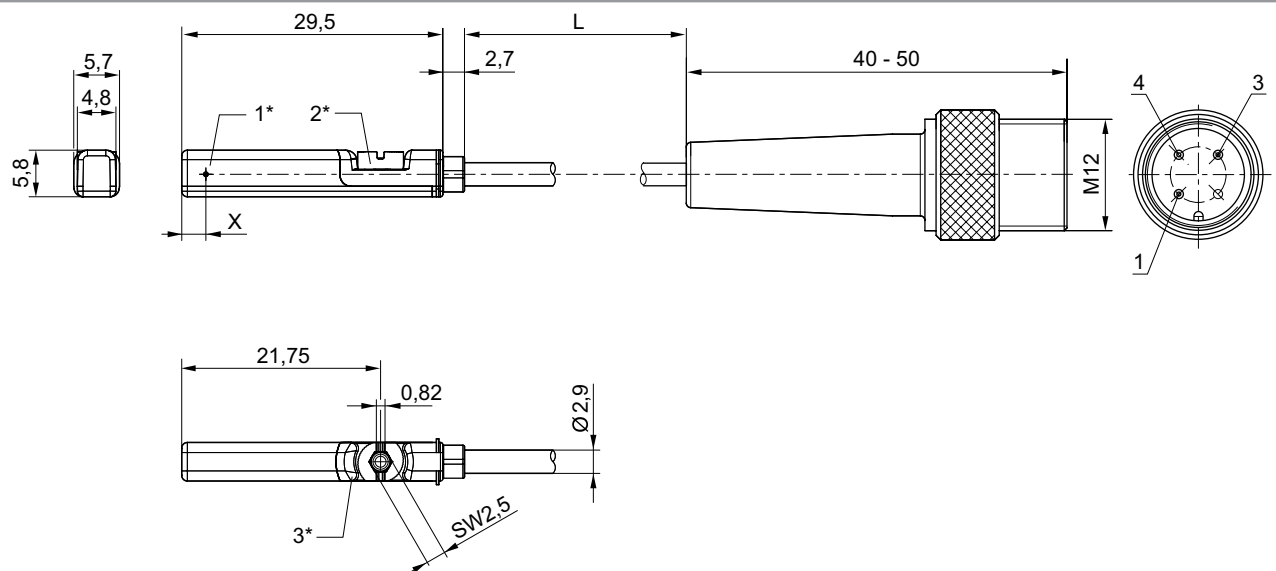
Stainless steel

Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB Accessories

	Type of contact	Cable length	Voltage drop U at I _{max}	DC switching current, max.	Max. switching frequency kHz	Part No.
		[m]		[A]		
	electronic PNP	0.3	≤ 2,5 V	0.1	< 1,0	R412022864
interfaces: Plug; M12; 3-pin; with knurled screw short circuit resistant / Protected against polarity reversal						

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)

24623

ISO 15552, Series TRB
 Accessories

Sensor, Series ST6-HT

▶ 6 mm T-slot ▶ with cable ▶ open cable ends, 2-pin ▶ heat resistant



24712

Certificates

 Ambient temperature min./max.
 Protection class
 Switching point precision [mm]
 DC operating voltage min./max.
 Switching logic
 Switching capacity
 Vibration resistance
 Shock resistance

CE declaration of conformity
 RoHS

 -20 °C / +120 °C
 IP65, IP67
 ±0,1
 10 V DC - 30 V DC
 NO (make contact)
 Reed, 2-pin: max. 10 W
 10 - 55 Hz, 1 mm
 30 g / 11 ms

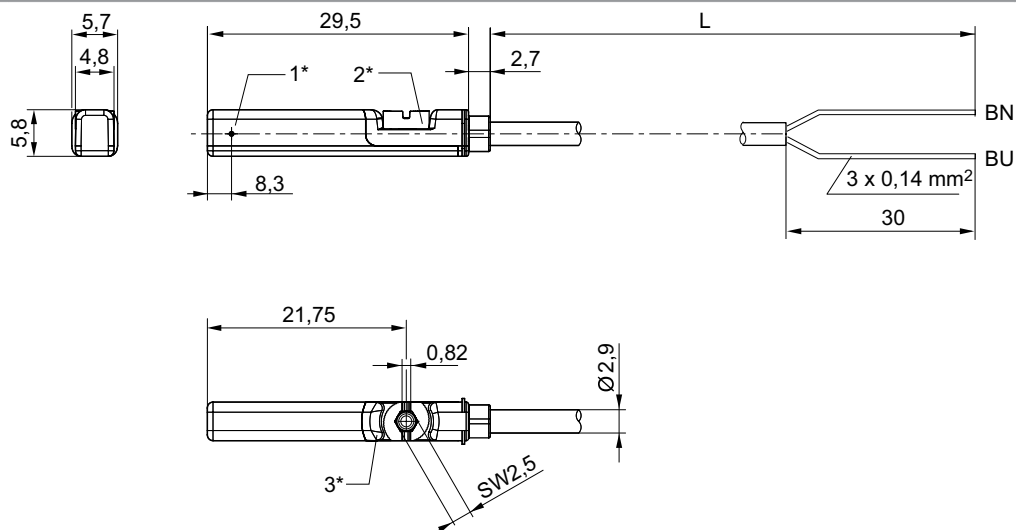
Materials:

 Housing
 Cable sheath
 Locking screw

 Polyamide
 Polyurethane
 Stainless steel

	Type of contact	Cable length	Operational voltage AC min./max.	Voltage drop U at I _{max}	DC switching current, max.	AC switching current, max.	Max. switching frequency kHz	Part No.
		[m]	[V AC]		[A]	[A]		
	Reed	3 10	0 / 30	I [*] Rs	0.13	0.13	< 0,4	R412022865 R412022867

interfaces: open cable ends; 2-pin
Protected against polarity reversal

Dimensions

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

24619_a

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

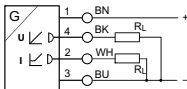
Sensors, Series SM6

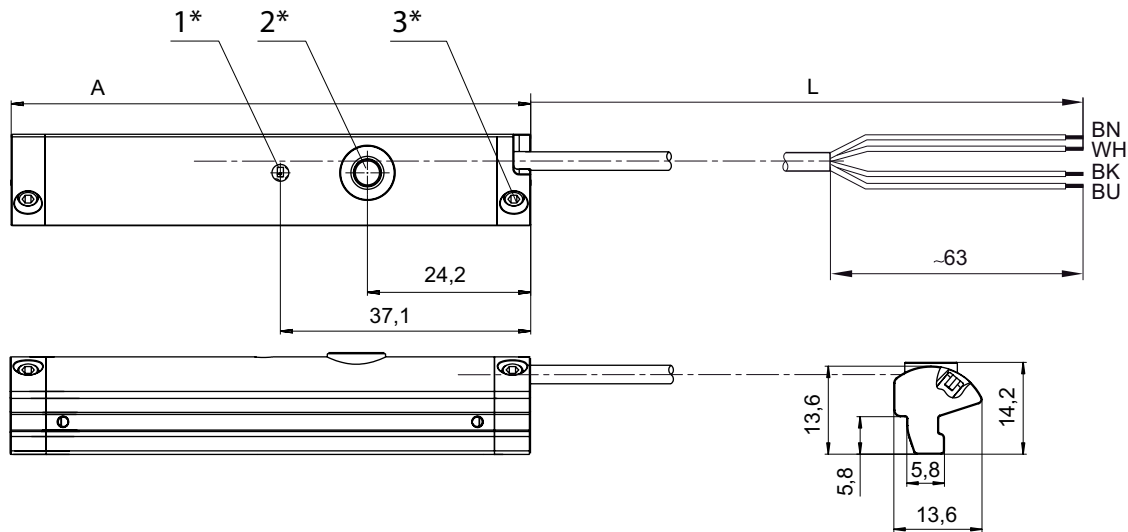
▶ 6 mm groove ▶ with cable ▶ without wire end ferrule, tin-plated, 4-pin ▶ with distance measuring sensor, measurement range 32 - 256 mm



00133722

Certificates	cULus
Ambient temperature min./max.	-20°C / +70°C
Protection class	IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	< 25 mA
Current signal	4 - 20 mA
Maximum load (analog current output)	500 Ω
DC operating voltage min./max.	15 V DC - 30 V DC
Residual ripple	≤ 10 %
sampling interval	1 ms
Resolution max. measuring range	0,05 mm
Repetitive precision max. measuring range	0.1 mm
Linearity deviation	0,3 mm
Sampling speed	3 m/s
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Materials:	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

	Type of contact	Cable length	Measurement range Max.	Overall length Sensor A	Part No.
		[m]	[mm]	[mm]	
	Analog	2	32	45	R412010141
			64	77	R412010143
			96	109	R412010262
			128	141	R412010264
			160	173	R412010411
			192	205	R412010413
			224	237	R412010415
			256	269	R412010417
interfaces: without wire end ferrule, tin-plated; 4-pin short circuit resistant / Protected against polarity reversal / Overload protection					

ISO 15552, Series TRB
Accessories
Dimensions


00133787

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

L = cable length

(1) BN=brown

(2) WH=white

(3) BU=blue

(4) BK=black

A = sensor length

Sensors, Series SM6

▶ 6 mm groove ▶ with cable ▶ Plug, M8x1, 4-pin, with knurled screw ▶ with distance measuring sensor, measurement range 32 - 256 mm



00134312

Certificates

Ambient temperature min./max.

Protection class

Output signal

Quiescent current (without load)

Current signal

DC operating voltage min./max.

sampling interval

Resolution max. measuring range

Repetitive precision max. measuring range

Linearity deviation

Sampling speed

Display

LED status display

Vibration resistance

Shock resistance

Materials:

Housing

Cable sheath

cULus

-20°C / +70°C

IP67

0 - 10 V DC, 4 - 20 mA

< 25 mA

4 - 20 mA

15 V DC - 30 V DC

1 ms

0,05 mm

0.1 mm

0,3 mm

3 m/s

LED

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms

Polyamide, fiber-glass reinforced

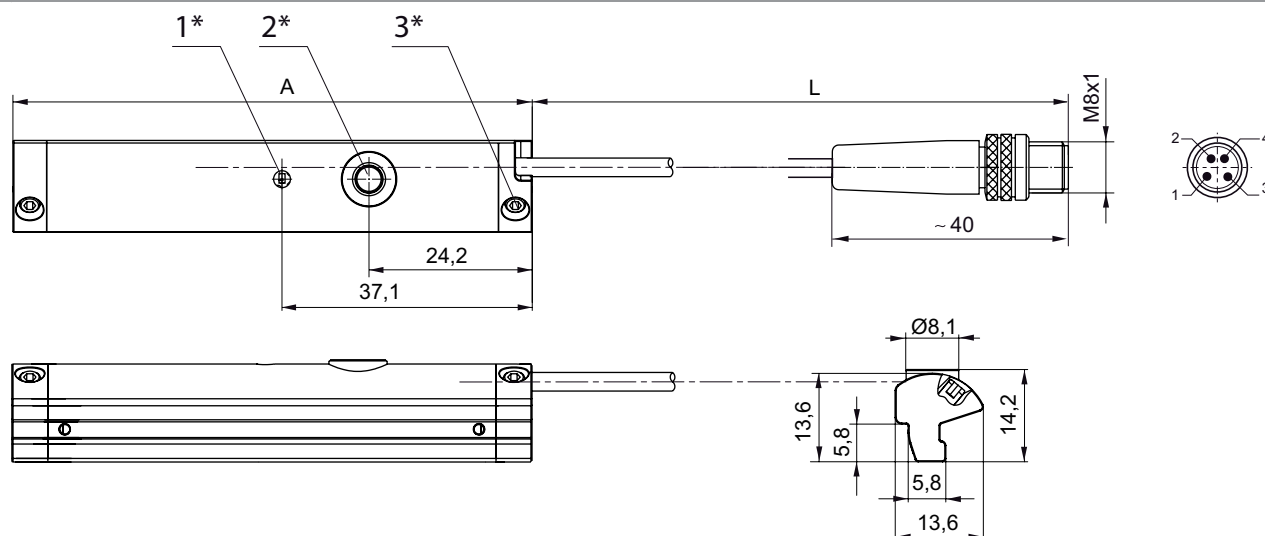
Polyurethane

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

	Type of contact	Cable length	Measurement range Max.	Overall length Sensor A	Part No.
		[m]	[mm]	[mm]	
	Analog	0.3	32	45	R412010142
			64	77	R412010144
			96	109	R412010263
			128	141	R412010265
			160	173	R412010410
			192	205	R412010412
			224	237	R412010414
			256	269	R412010416
interfaces: Plug; M8x1; 4-pin; with knurled screw short circuit resistant / Protected against polarity reversal / Overload protection					

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

00133788

ISO 15552, Series TRB

Accessories

Sensor, Series SN5-X

▶ 3-pin ▶ welding-proof ▶ With stretched impulse ▶ Sensor responds to ferromagnetic material.



00136282

Ambient temperature min./max.
Protection class

-10°C / +70°C
IP65

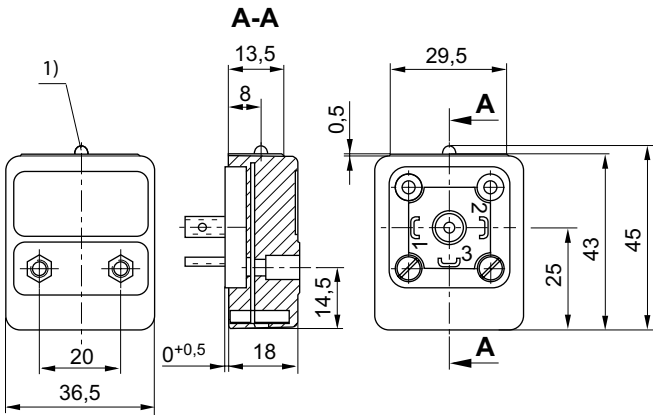
Materials:
Housing

epoxy resin

Technical Remarks
■ Sensor responds to ferromagnetic material.

	Type of contact	Voltage drop U at I _{max}	Operating current, not switched	Operating current, switched	LED	Weight	Part No.
						[kg]	
	electronic PNP	≤ 2,0 V	< 14 mA	< 25 mA	Red Red, Green	0.05	0830100500 0830100502
interfaces: 3-pin Protected against polarity reversal							

Dimensions



00135729

1) LED

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Sensor, Series SN5-X

▶ Socket, M12, 3-pin ▶ Sensor responds to ferromagnetic material.



00136299

Ambient temperature min./max.
Protection class
Switching point precision [mm]
Nominal current, actuated state
Quiescent current (without load)
Display

-10°C / +70°C
IP67
±0,1
< 25 mA
< 14 mA
LED

Materials:
Housing

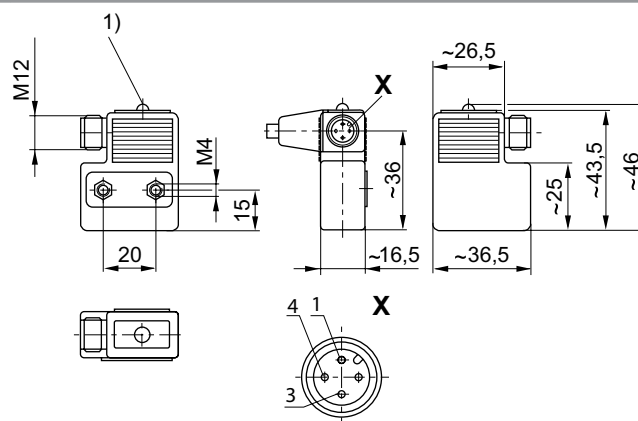
epoxy resin

Technical Remarks

- Sensor responds to ferromagnetic material.

	Type of contact	Voltage drop U at I _{max}	DC switching current, max. [A]	LED	Note	Part No.
	electronic PNP	≤ 2,0 V	0.2	Yellow Yellow, Green	2); 4) 1); 3); 5)	0830100525 0830100534
1) Delivery incl. protective cap 1823317014 2) Protected against polarity reversal 3) short circuit resistant / Protected against polarity reversal 4) With stretched impulse 5) Time delay interfaces: Socket; M12; 3-pin						

Dimensions



00136285

1) LED

ISO 15552, Series TRB
 Accessories

Sensor, Series SN6

► with cable ► without wire end ferrule, tin-plated, 2-pin ► heat resistant up to 120 °C



P894_202

 Ambient temperature min./max.
 Protection class
 Switching point precision [mm]
 LED status display
 Vibration resistance
 Shock resistance

 See table below
 IP67, IP65
 ±0,1
 Yellow
 35 g (50 - 2000 Hz)
 50 g / 11 ms

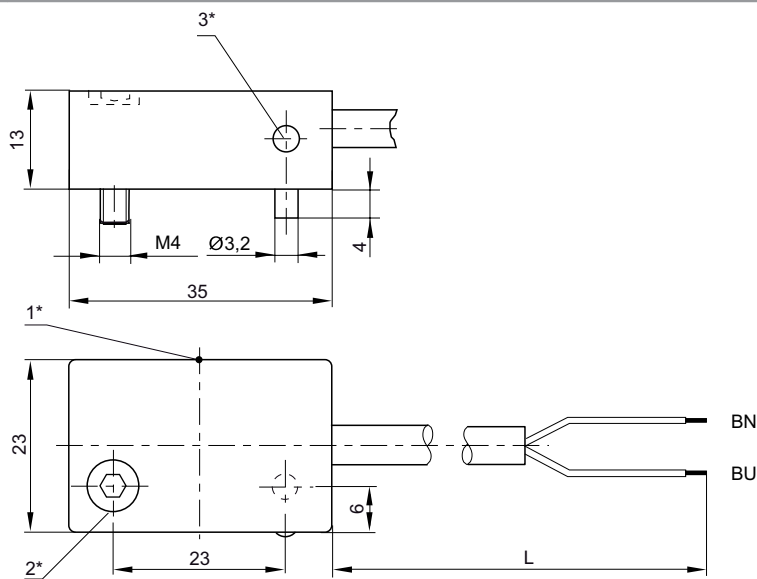
Materials:

 Housing
 Cable sheath

 Polyester amide
 Polyvinyl chloride

	Type of contact	Cable length	Operational voltage AC min./max.	DC switching current, max.	AC switching current, max.	Ambient temperature min./max.	Switching capacity	Part No.
		[m]	[V AC]	[A]	[A]	[°C]		
	Reed	2.5 6	10 / 250	0.5	0.5	-25°C / +75°C	50 W / 50 VA	8940412022 8940412032
	Reed	2.5	10 / 250	3	3	-20°C / +120°C	60 W / 60 VA	8940411902

interfaces: without wire end ferrule, tin-plated; 2-pin
Protected against polarity reversal

Dimensions


00129942

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

Piston rod cylinders ► Standard cylinders

ISO 15552, Series TRB

Accessories

Sensor, Series SN6

► Plug, Form B, industry, 2-pin



P894_060

Protection class	IP65
Switching point precision [mm]	±0,1
Vibration resistance	35 g (50 - 2000 Hz)
Shock resistance	50 g / 11 ms

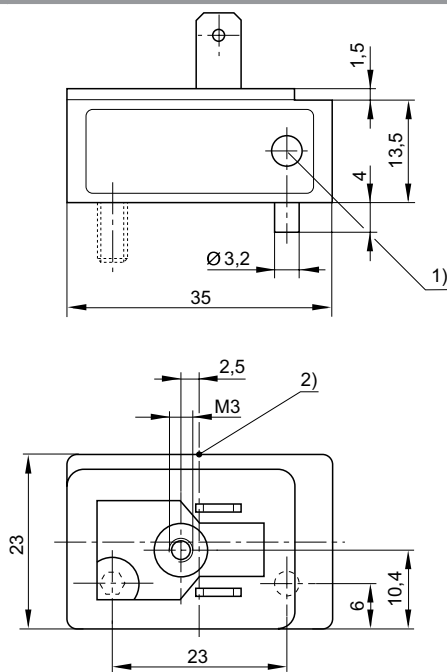
Materials:	
Housing	Polyester amide

	Type of contact	Operational voltage AC min./max.	DC switching current, max.	AC switching current, max.	Ambient temperature min./max.	Switching capacity	LED	Part No.
		[V AC]	[A]	[A]	[°C]			
	Reed	10 / 250	0.5	0.5	-25°C / +75°C	50 W / 50 VA	Yellow	8940410612
	Reed	10 / 250	3	3	-25°C / +75°C	60 W / 60 VA	-	8940410602

Part No.	Note
8940410612	1)
8940410602	-

1) Protected against polarity reversal
interfaces: Plug; Form B, industry; 2-pin

Dimensions



D894_060_c

- 1) LED
2) Switching point

ISO 15552, Series TRB

Accessories

Sensor, Series SN6

▶ Plug, Form B, industry, 2-pin ▶ ATEX certified



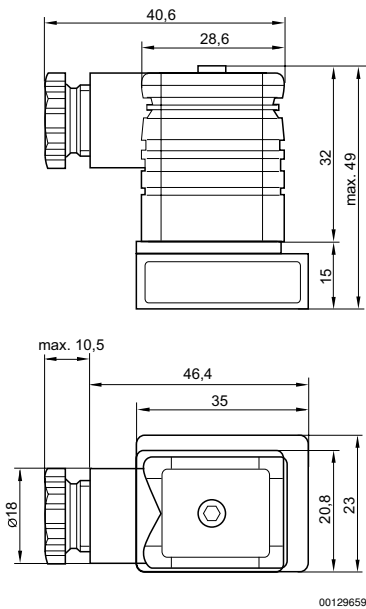
00129777

ATEX	II 3G Ex nC nA IIC T4 Gc II 3D Ex tc IIIB/IIIC T125°C Dc -10°C ≤ Ta ≤ 50°C -10°C / +50°C
Ambient temperature min./max.	IP65
Protection class	±0,1
Switching point precision [mm]	Yellow
LED status display	
Materials:	
Housing	Polyester amide

	Type of contact	DC operating voltage min./max.	Operational voltage AC min./max.	DC switching current, max.	AC switching current, max.	Part No.
		[V DC]	[V AC]	[A]	[A]	
	Reed	21.6 / 26.4	210 / 240	0.1	0.1	R412000823

interfaces: Plug; Form B, industry; 2-pin
Protected against polarity reversal

Dimensions



00129659

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

Sensor, Series IN1
▶ for locking unit, series LU6



00136289

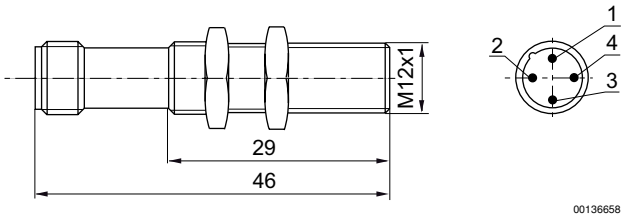
Standardization	DIN EN 60947-5-2
Certification	cULus
Ambient temperature min./max.	-20 / 65 °C
Protection class	IP67
Hysteresis	5 - 15%, adjustable
Temperature drift	± 10 %
Residual ripple	≤ 10 %
Reproducibility	≤ 2 %
Switching logic	NO (make contact)
LED status display	Yellow
Materials:	
Housing	Brass

Technical Remarks	
■ Flush installation	
■ Switching states:1. Pressure applied to locking unit, clamping pliers are open, sensor does not emit a signal (normally open)2. No pressure applied to locking unit, clamping pliers are closed, sensor emits a signal (feedback that LU6 is clamping)	

Operational voltage	Switching distance max.	Power consumption	Continuous current	Part No.
[V DC]		[mA]	[A]	
10 / 30	2 mm	10	0.2	R412010426

short circuit resistant / Protected against polarity reversal

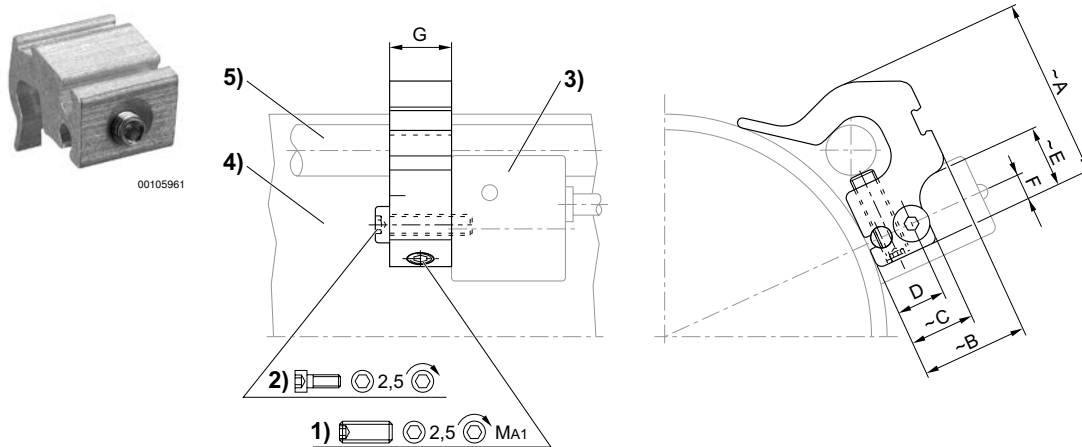
Dimensions



2) not assigned

ISO 15552, Series TRB
Accessories
Sensor mounting, Series CB1

► for Series SN1, SN2 ► to mount on cylinder TRB, TRR



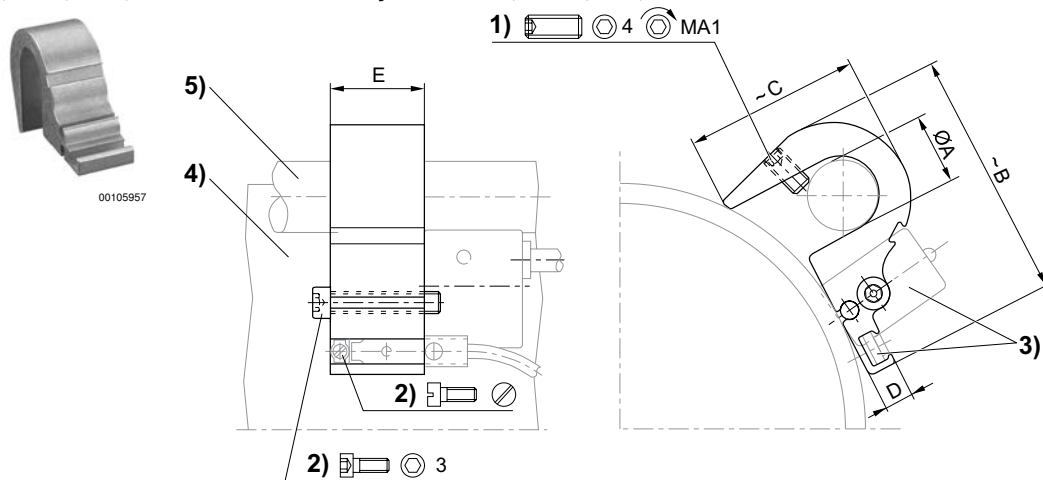
1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

Part No.	Cylinders Ø [mm]	For series	A	B	C	D	E	F	G	1)	MA1 [Nm]
1827020081	32 - 40	SN1, SN2	25.3	12.5	12.5	9.5	—	5	16	M5x16	1 +0,3
1827020082	50 - 63	SN1, SN2	28.7	15.6	12.5	9.5	12	5	12	M5x16	1 +0,3
1827020083	80 - 100	SN1, SN2	33.8	23	12.5	9.5	12	5	12	M5x16	1 +0,3

Part No.	Material	Weight [kg]									
1827020081	Aluminum	0.015									
1827020082	Aluminum	0.013									
1827020083	Aluminum	0.018									

Sensor mounting, Series CB1

► for Series ST6, SM6, SN1, SN2 ► to mount on cylinder TRB, C12P, CVI, 523



1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

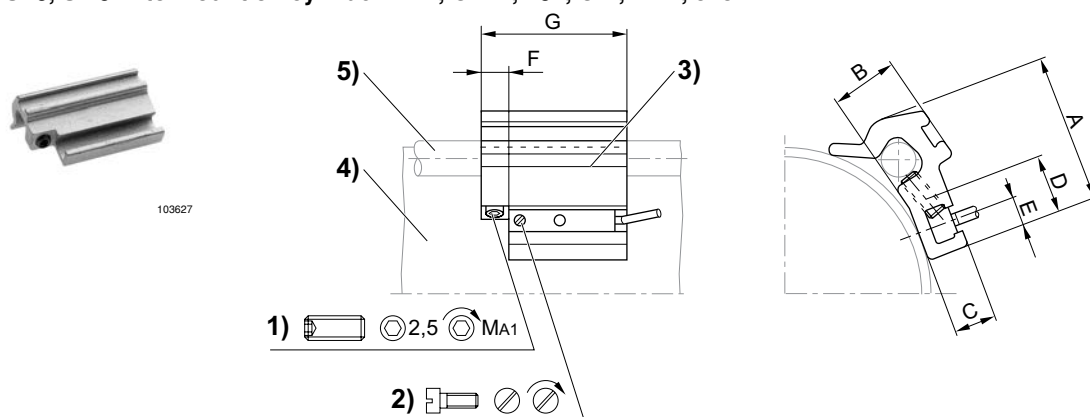
Piston rod cylinders ▶ Standard cylinders
ISO 15552, Series TRB
Accessories

Part No.	Cylinders Ø [mm]	For series	Ø A	B	C	D	E	1)	MA1 [Nm]
1827020292	125 - 125	ST6, SM6, SN1, SN2	12	45	29	6.5	21	M5x10	2

Part No.	Material	Weight [kg]							
1827020292	Aluminum	0.031							

Sensor mounting, Series CB1

▶ for Series ST6, SM6 ▶ to mount on cylinder TRB, C12P, 167, CVI, TRR, 523



00105013

1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

Part No.	Cylinders Ø [mm]	For series	A	B	C	D	E	F	G	1)	MA1 [Nm]
1827020282	32 - 40	ST6, SM6	26	10	7	14	5	8	40	M5x8	2 ±0,2
1827020283	50 - 63	ST6, SM6	32.5	15.5	7	14	5	8	40	M5x10	2 ±0,2
1827020284	80 - 100	ST6, SM6	43	17	6.9	14	5	8	40	M5x16	2 ±0,2

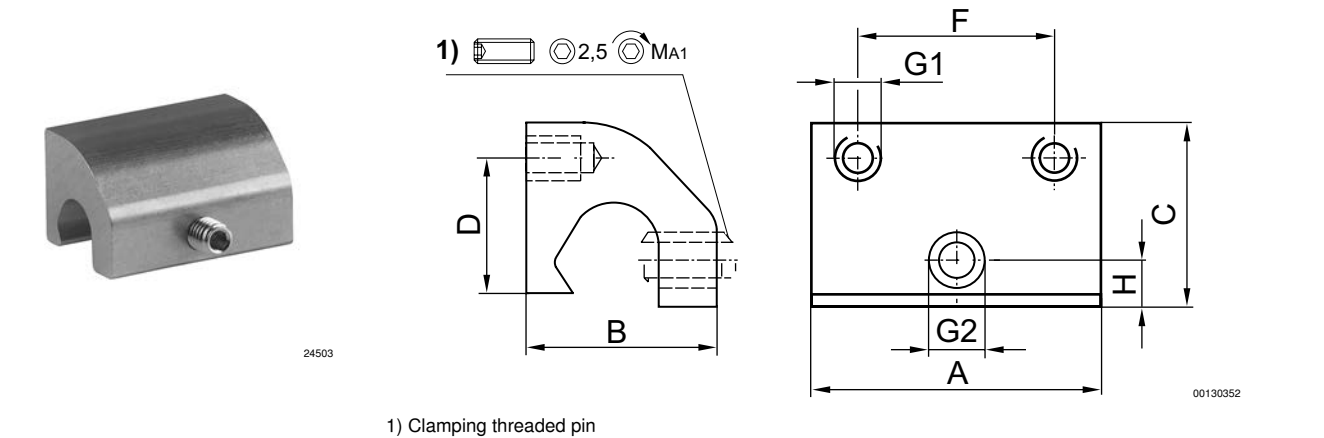
Part No.	Material	Weight [kg]									
1827020282	Aluminum	0.016									
1827020283	Aluminum	0.029									
1827020284	Aluminum	0.042									

ISO 15552, Series TRB

Accessories

Sensor mounting, Series CB1

▶ for Series SN6 ▶ to mount on cylinder TRB, C12P, CVI, 523

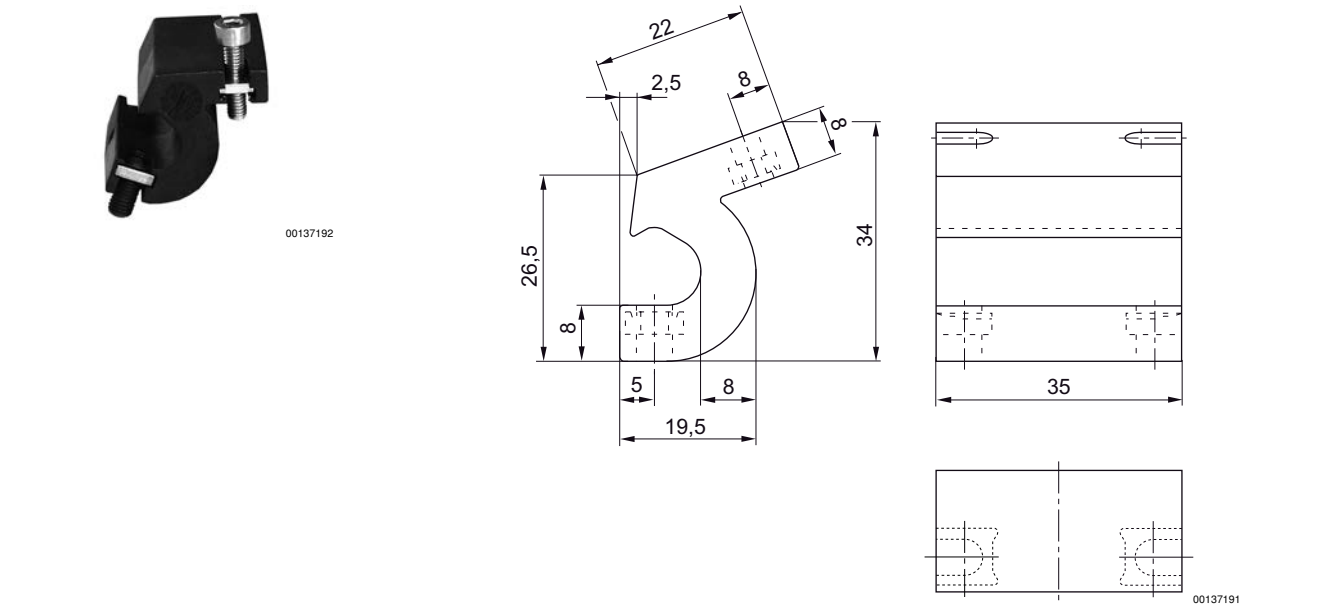


Part No.	Cylinders Ø [mm]	For series	A	B	C	D	F	G1	G2	H	MA1 [Nm]
3220643562	80 - 125	SN6	35	22	21	12	23	M4	M5	5	1,8 +0,4

Part No.	Material	Weight [kg]									
3220643562	Aluminum	0.034									

Sensor mounting, Series CB1

▶ for Series SN6 ▶ to mount on cylinder TRB, CVI, 523



Piston rod cylinders ▶ Standard cylinders
ISO 15552, Series TRB
Accessories

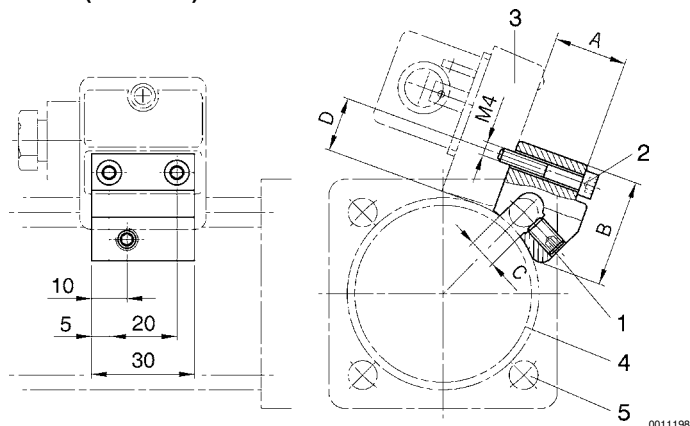
Part No.	Cylinders Ø [mm]	For series	Material	Weight [kg]					
5230033502	32 - 63	SN6	Polyamide	0.028					

Sensor mounting, Series CB1

▶ for Series SN5-X ▶ to mount on cylinder Series TRB (Ø 32-100)



B0000351



00111980

1) Clamping threaded pin 2) Mounting screw for sensor 3) Sensor 4) Cylinder profile 5) Tie rod

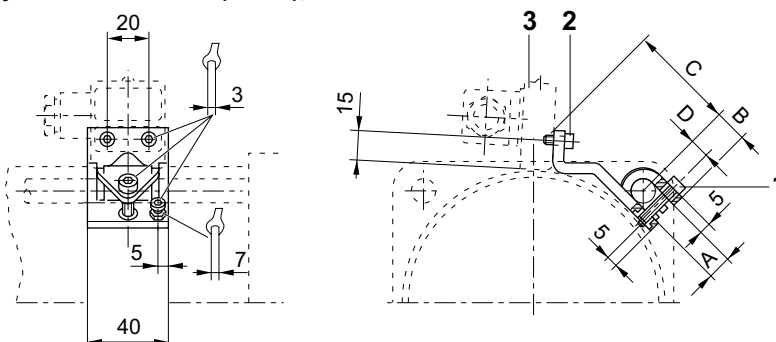
Part No.	Cylinders Ø [mm]	For series	A	B	C	D	SW	Material	Weight [kg]
1827020056	32 - 40	SN5-X	19.5	30	6	15	3	Aluminum	0.03
1827020057	50 - 63	SN5-X	24.5	30	8	15	3	Aluminum	0.035
1827020058	80 - 100	SN5-X	29.5	31	10	15	3	Aluminum	0.4

Sensor mounting, Series CB1

▶ for Series SN5-X ▶ to mount on cylinder series TRB (Ø 125), series ITS



B0000163



00111981

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

Part No.	Cylinders Ø [mm]	For series	A +0,5	B ±1	C ±2	D	Material	Weight [kg]	
1827020076	125	SN5-X	12	15	54	9	Aluminum	0.075	
1827020077	160 - 200	SN5-X	16	17	53	11	Aluminum	0.083	

ISO 15552, Series TRB

Accessories

Part No.	Cylinders Ø [mm]	For series	A +0,5	B ±1	C ±2	D	Material	Weight [kg]	
1827020078	250	SN5-X	20	19	60	13	Aluminum	0.094	

Connecting cable, Series CN2

▶ Socket, M8, 3-pin, straight ▶ open cable ends, 3-pin



00107009_b

Ambient temperature min./max.

-40°C / +85°C

Protection class

IP65

Materials:

Cable sheath

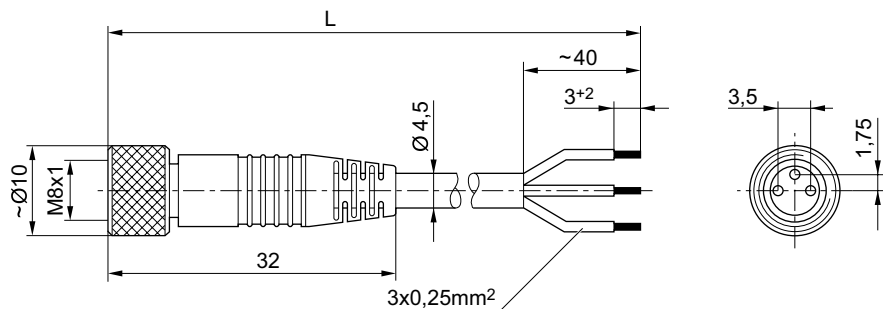
Polyurethane

Technical Remarks

- The specified protection class is only valid in assembled and tested state.

Max. current	Number of wires	Wire cross-section	Cable-Ø	Cable length L	Weight	Part No.
[A]		[mm²]	[mm]	[m]	[kg]	
4	3	0.24	4.5	3	0.091	1834484166
				5	0.145	1834484168
				10	0.33	1834484247

Dimensions



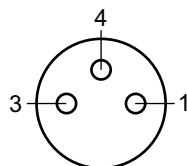
00105612_a

L = length

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Pin assignment



Buchse_3-polig

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

Connecting cable, Series CN2

▶ Socket, M8x1, 3-pin, angled ▶ open cable ends, 3-pin



00107009_c

Ambient temperature min./max.
Protection class

-40 °C / +85 °C
IP65

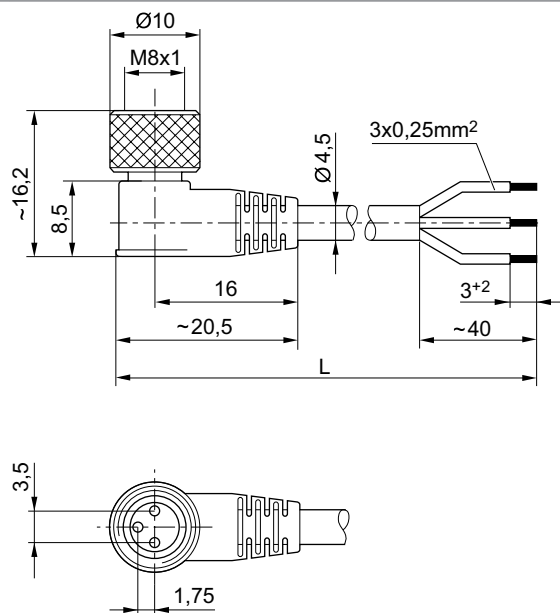
Materials:
Cable sheath

Polyurethane

Technical Remarks

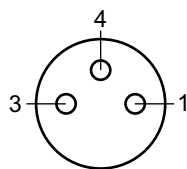
- The specified protection class is only valid in assembled and tested state.

	Max. current	Number of wires	Wire cross-section	Cable-Ø	Cable length L	Weight	Part No.
	[A]		[mm ²]	[mm]	[m]	[kg]	
	4	3	0.24	4.5	3	0.092	1834484167
					5	0.141	1834484169
					10	0.276	1834484248

ISO 15552, Series TRB
Accessories
Dimensions


00105612_b

L = length

Pin assignment


Buchse_3-polig

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

Connecting cable, Series CN2

 ► **Socket, M12x1, 5-pin, A-coded, angled ► without wire end ferrule, tin-plated, 4-pin ► for CANopen, DeviceNet**


Ambient temperature min./max.
 Protection class

-40 °C / +85 °C
 IP65

Materials:
 Cable sheath

Polyurethane

00107009_c

Piston rod cylinders ▶ Standard cylinders

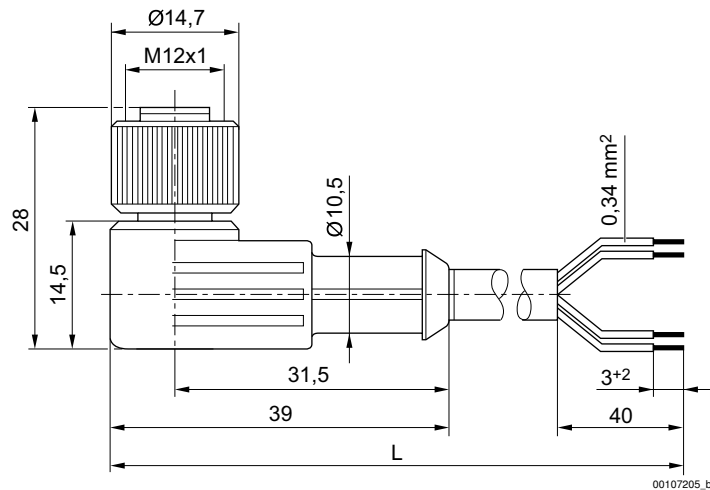
ISO 15552, Series TRB Accessories

Technical Remarks

- The specified protection class is only valid in assembled and tested state.

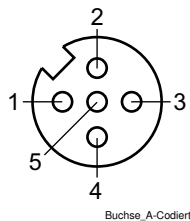
	Operational voltage max.	Max. current	Number of wires	Wire cross-section	Cable length L	Weight	Part No.
	[V AC]	[A]		[mm²]	[m]	[kg]	
1 ↷ — BN	48	4	4	0.34	3	0.13	1834484259
2 ↷ — WH					5	0.202	1834484260
3 ↷ — BU					10	0.387	1834484261
4 ↷ — BK							
5 ↷							

Dimensions



L = length

Pin assignment



- (1) BN=brown
- (2) WH=white
- (3) BU=blue
- (4) BK=black
- (5) not assigned

ISO 15552, Series TRB

Accessories

Socket, M8x1, Series CN2

▶ Socket, M8x1, 3-pin



Ambient temperature min./max.

Protection class

Materials:

Housing

-25°C / +80°C

IP67

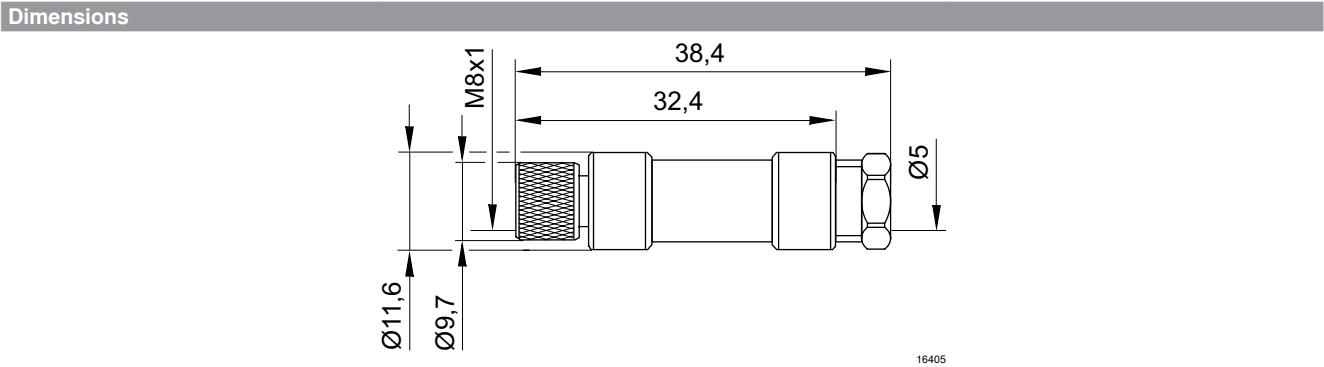
Polyamide

00138877

Technical Remarks							
■ The specified protection class is only valid in assembled and tested state.							

	Operational voltage	Max. current	Cable exit	suitable cable-Ø min./max	number of plug options 1	Housing color	Part No.
	AC						
	[V]	[A]		[mm]			
1 3 4 BN BU BK	48	4	straight	3.5 / 5	1 position	Black	1834484173

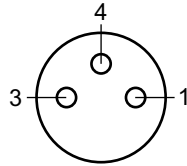
Part No.	Weight
	[kg]
1834484173	0.008



Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB Accessories

Pin assignment



Buchse_3-polig

Socket, M8x1, Series CN2 ▶ Socket, M8x1, 3-pin, angled



16406

Ambient temperature min./max.
Protection class

-25 °C / +85 °C
IP65

Materials:
Housing

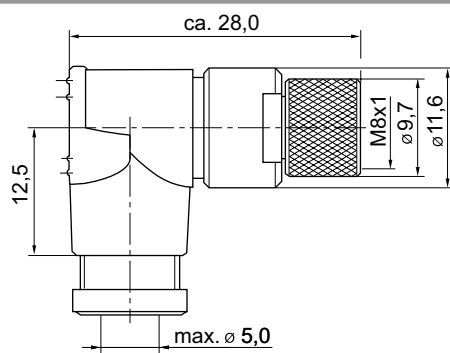
Polyamide

Technical Remarks

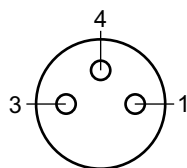
- The specified protection class is only valid in assembled and tested state.

	Operational voltage	Max. current	Contact assignment	Cable exit	suitable cable-Ø min./max	number of plug options ¹	Part No.
	AC						
	[V]	[A]			[mm]		
	48	4	3	angled 90°	3.5 / 5	1 position	1834484174

Part No.	Housing color	Weight
		[kg]
1834484174	Black	0.008

ISO 15552, Series TRB
Accessories**Dimensions**

15832

Pin assignment

Buchse_3-polig

Piston rod cylinders ▶ Standard cylinders

ISO 15552, Series TRB
Accessories

Silencers, Series SI1
▶ Sintered bronze


P100_060

Working pressure min./max.
Ambient temperature min./max.
Medium

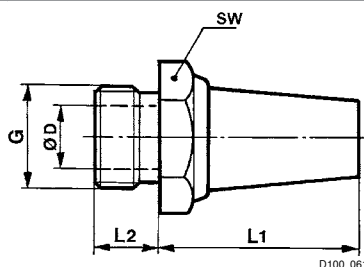
0 bar / 10 bar
-25 °C / +80 °C
Compressed air

Materials:
Silencers
Thread

Sintered bronze
Brass

Compressed air connection	Sound pressure level	Qn	Order quantity	Weight	Part No.
	[dB]	[l/min]	[piece]	[kg]	
G 1/8	75	1500	10	0.01	1827000000
G 1/4	79	2900	10	0.02	1827000001
G 3/8	84	5900	5	0.05	1827000002
G 1/2	90	7100	2	0.08	1827000003

Dimensions



Part No.	Port G	SW	Ø D	L1	L2							
1827000000	G 1/8	13	6	18	6							
1827000001	G 1/4	17	8.5	25	8							
1827000002	G 3/8	22	12	34	10							
1827000003	G 1/2	27	14.5	44	12							

Sound pressure level measured at 6 bar at 1 m distance

ISO 15552, Series TRB
 Accessories

Silencers, Series SI1
 ► Sintered bronze


P100_037

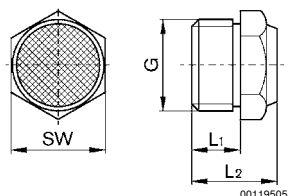
 Working pressure min./max.
 Ambient temperature min./max.
 Medium

 0 bar / 10 bar
 -25°C / +80°C
 Compressed air

 Materials:
 Silencers
 Thread

 Sintered bronze
 Brass

Compressed air connection	Sound pressure level	Qn	Order quantity	Weight	Part No.
	[dB]	[l/min]	[piece]	[kg]	
G 1/8	85	640	10	0.001	1827000031
G 1/4	88	900	10	0.01	1827000033
G 3/8	90	1750	5	0.016	1827000034
G 1/2	85	2000	2	0.035	1827000035

Dimensions


Part No.	Port G	L1	L2	SW								
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								

Sound pressure level measured at 6 bar at 1 m distance

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04-05-2017

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