

## AVENTICS Series TRB Tie rod cylinders (ISO 15552)

The AVENTICS Series TRB (ISO 15552) cylinders are among the most frequently implemented in industries where heavy duty cylinders are required, such as wood and aluminium, steel and automotive, heavy-duty machinery and mining to name just a few.



### Technical data

Industry	Industrial
Standards	ISO 15552
Piston Ø	80 mm
Stroke	125 mm
Ports	G 3/8
Functional principle	Double-acting
Cushioning	Pneumatic adjustable cushioning
Magnetic piston	Piston with magnet
Environmental requirements	Industry standard cold-resistant
Piston rod thread - type	External thread
Piston rod thread	M20x1,5
Piston rod	single
Scraper	Cold-Resistant Scraper
Pressure for determining piston forces	6,3 bar
Retracting piston force	2855 N
Extracting piston force	3165 N
Min. ambient temperature	-40 °C
Max. ambient temperature	70 °C
Min. working pressure	1.5 bar

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Max. working pressure	10 bar
Cushioning length	19.5 mm
Cushioning energy	54 J
Weight 0 mm stroke	2.12 kg
Weight +10 mm stroke	0.06 kg
Stroke max.	2800 mm
Medium	Compressed air
Min. medium temperature	-40 °C
Max. medium temperature	70 °C
Max. particle size	50 µm
Min. oil content of compressed air	0 mg/m <sup>3</sup>
Max. oil content of compressed air	5 mg/m <sup>3</sup>

## Material

Piston rod	Stainless Steel
Scraper material	Brass
Material tie-rod	Stainless Steel
Seal material	Polyurethane
Material, front cover	Die-cast aluminum
Cylinder tube	Aluminum
End cover	Die-cast aluminum
Nut for piston rod	Steel, chrome-plated
Part No.	R480691946

## Technical information

The pressure dew point must be at least 15 °C less than 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. Further information can be found in the “Technical information” document (available in <https://www.emerson.com/en-us/support>).

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## Dimensions



S = stroke

\*) For cylinders with optional piston rod with internal thread

Piston Ø	A -2	AF+1	ØB d11	ØBA d11	BG min.	E	EE	G	H
32	22	12	30	30	16	46.5	G 1/8	27.75	47.5
40	24	13.5	35	35	16	53	G 1/4	33.25	53
50	32	17	40	40	16	65	G 1/4	31	65
63	32	17	45	45	16	75	G 3/8	38.25	75
80	40	21	45	45	17	95	G 3/8	38.25	95
100	40	21	55	55	17	115	G 1/2	42.25	115
125	54	28	60	60	20	140	G 1/2	53.85	140

Piston Ø	KF	KK	KV	KW	ØMM f8	PL	L2	L3 ±0,5	L8
32	M6	M10x1,25	16	5	12	16	16.25	4.5	94±0,4
40	M8	M12x1,25	18	6	16	20	18.25	4.5	105±0,7
50	M10	M16x1,5	24	8	20	19	25	4.5	106±0,7
63	M10	M16x1,5	24	8	20	24	25	4.5	121±0,8
80	M12	M20x1,5	30	10	25	23.5	33	0	128±0,8
100	M12	M20x1,5	30	10	25	25	36	0	138±1
125	M16	M27x2	41	13.5	32	33	45	0	160±1

Piston Ø	RT	SW	TG	VA -1	VD	WH
32	M6	10	32.5±0,5	4	5	26±1,4
40	M6	13	38±0,5	4	5	30±1,4

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Piston Ø	RT	SW	TG	VA -1	VD	WH
50	M8	17	46,5±0,6	4	5	37±1,4
63	M8	17	56,5±0,7	4	5	37±1,8
80	M10	22	72±0,7	4	5	46±1,8
100	M10	22	89±0,7	4	5	51±1,8
125	M12	27	110±1,1	6	7	65±2,2

## Cushioning diagram



$v_1$  = Piston velocity [m/s]  $m$  = Cushionable mass [kg]

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