

- Available in piston diameters from 32 mm to 125 mm
- Advanced pneumatic cushioning
- Additional elastic damping elements
- Wide range of scraper modules available
- With the modular system you can change the scraper on the cylinder at any time and considerably decrease service intervals
- Wide range of variants and accessories available in the configurator

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 | 100 mm |
| Stroke | 160 mm |
| Ports | G 1/2 |
| Functional principle | Double-acting |
| Cushioning | Pneumatic adjustable cushioning |
| Magnetic piston | With magnet |
| Environmental requirements | Industry standard High corrosion |
| Piston rod thread - type | External thread |
| Piston rod thread | M20x1,5 |
| Piston rod | single |
| Scraper | Metal Scraper |
| Pressure for determining piston forces | 6,3 bar |
| Retracting piston force | 4635 N |
| Extracting piston force | 4945 N |
| Min. ambient temperature | -20 °C |
| Max. ambient temperature | 80 °C |
| Min. working pressure | 1.5 bar |

Tie rod cylinder ISO 15552, Series TRB

series TRB

R480692112

2025-09-03

| | |
|------------------------------------|---------------------|
| Max. working pressure | 10 bar |
| Cushioning length | 19.5 mm |
| Cushioning energy | 88 J |
| Weight 0 mm stroke | 3.16 kg |
| Weight +10 mm stroke | 0.065 kg |
| Stroke max. | 2800 mm |
| Medium | Compressed air |
| Min. medium temperature | -20 °C |
| Max. medium temperature | 80 °C |
| Max. particle size | 50 µm |
| Min. oil content of compressed air | 0 mg/m ³ |
| Max. oil content of compressed air | 5 mg/m ³ |

Material

| | |
|-----------------------|-------------------|
| Piston rod | Stainless Steel |
| Scraper material | Polyurethane |
| 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 | Stainless Steel |
| Part No. | R480692112 |

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>).

Tie rod cylinder ISO 1552, Series TRB

R480692112

series TRB

2025-09-03



Tie rod cylinder ISO 15552, Series TRB

R480692112

series TRB

2025-09-03

Cushioning diagram



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

Dimensions



S = stroke

*) For cylinders with optional piston rod with internal thread

Tie rod cylinder ISO 15552, Series TRB

R480692112

series TRB

2025-09-03

| Piston Ø | A -2 | AF+1 | ØB d11 | ØBA d11 | BG min. | E | EE | G | H | KF |
|----------|------|------|--------|---------|---------|------|-------|-------|------|-----|
| 32 | 22 | 12 | 30 | 30 | 16 | 46.5 | G 1/8 | 27.75 | 47.5 | M6 |
| 40 | 24 | 13.5 | 35 | 35 | 16 | 53 | G 1/4 | 33.25 | 53 | M8 |
| 50 | 32 | 17 | 40 | 40 | 16 | 65 | G 1/4 | 31 | 65 | M10 |
| 63 | 32 | 17 | 45 | 45 | 16 | 75 | G 3/8 | 38.25 | 75 | M10 |
| 80 | 40 | 21 | 45 | 45 | 17 | 95 | G 3/8 | 38.25 | 95 | M12 |
| 100 | 40 | 21 | 55 | 55 | 17 | 115 | G 1/2 | 42.25 | 115 | M12 |
| 125 | 54 | 28 | 60 | 60 | 20 | 140 | G 1/2 | 53.85 | 140 | M16 |

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

| Piston Ø | TG | VA -1 | VD | WH |
|----------|----------|-------|----|--------|
| 32 | 32,5±0,5 | 4 | 5 | 26±1,4 |
| 40 | 38±0,5 | 4 | 5 | 30±1,4 |
| 50 | 46,5±0,6 | 4 | 5 | 37±1,4 |
| 63 | 56,5±0,7 | 4 | 5 | 37±1,8 |
| 80 | 72±0,7 | 4 | 5 | 46±1,8 |
| 100 | 89±0,7 | 4 | 5 | 51±1,8 |
| 125 | 110±1,1 | 6 | 7 | 65±2,2 |