

## 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                               | 50 mm                              |
| Stroke                                 | 50 mm                              |
| Ports                                  | G 1/4                              |
| Functional principle                   | Double-acting                      |
| Cushioning                             | Pneumatic adjustable cushioning    |
| Magnetic piston                        | Piston with magnet                 |
| Environmental requirements             | Industry standard<br>ATEX optional |
| Piston rod thread - type               | External thread                    |
| Piston rod thread                      | M16x1,5                            |
| Piston rod                             | single                             |
| Scraper                                | Standard Industry Scraper          |
| Pressure for determining piston forces | 6,3 bar                            |
| Retracting piston force                | 1035 N                             |
| Extracting piston force                | 1235 N                             |
| Min. ambient temperature               | -20 °C                             |
| Max. ambient temperature               | 80 °C                              |
| Min. working pressure                  | 1.5 bar                            |

---

|                                    |                     |
|------------------------------------|---------------------|
| Max. working pressure              | 10 bar              |
| Cushioning length                  | 17 mm               |
| Cushioning energy                  | 15 J                |
| Weight 0 mm stroke                 | 1.14 kg             |
| Weight +10 mm stroke               | 0.036 kg            |
| Stroke max.                        | 2100 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 <sup>3</sup> |
| Max. oil content of compressed air | 5 mg/m <sup>3</sup> |

## Material

|                       |                      |
|-----------------------|----------------------|
| Piston rod            | Stainless Steel      |
| Scraper material      | Polyurethane         |
| Material tie-rod      | Steel, chrome-plated |
| 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.              | 0822342002           |

## Technical information

ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db\_X can be generated in the Internet configurator.

The operating temperature range for ATEX-certified cylinders is -20°C ... 60°C.

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

series TRB

0822342002

2024-04-26

## 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 |

# Tie rod cylinder ISO 1552, Series TRB

series TRB

0822342002

2024-04-26

| 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]

# Tie rod cylinder ISO 1552, Series TRB

series TRB

0822342002

2024-04-26

