# Profile cylinder ISO 15552, PRA series

**0822121009**

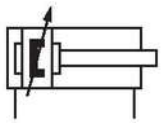


## AVENTICS Series PRA Profile cylinders (ISO 15552)

The AVENTICS Series PRA (ISO 15552) cylinders have a compact design profile with integrated sensor slots. The Series PRA (ISO 15552) cylinders can be used for all industries. This includes general automation technology, machine and systems construction, as well as specific industry applications.

- 6 mm T-slots and 4 mm C-slots allow for a large number of sensors to be mounted easily, quickly and compactly
- Available in piston diameters from 32 mm to 125 mm
- Modular sealing system allows for adaptability
- Advanced pneumatic end position cushioning
- Additional elastic damping elements
- Wide range of variants and accessories available in the configurator





## Technical data

| | |
|---|---|
| Industry | Industrial |
| Standards | ISO 15552 |
| Piston Ø | 40 mm |
| Stroke | 320 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 | M12x1,25 |
| Piston rod | single |
| Scraper | Standard Industry Scraper |
| Pressure for determining piston forces | 6,3 bar |
| Retracting piston force | 660 N |
| Extracting piston force | 790 N |
| Min. ambient temperature | -20 °C |
| Max. ambient temperature | 80 °C |
| Min. working pressure | 1.5 bar |

| | |
|---|---|
| Max. working pressure | 10 bar |
| Cushioning length | 19 mm |
| Cushioning energy | 9 J |
| Weight 0 mm stroke | 0.65 kg |
| Weight +10 mm stroke | 0.032 kg |
| Stroke max. | 1900 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/m³ |
| Max. oil content of compressed air | 5 mg/m³ |

## Material

| | |
|---|---|
| Piston rod | Stainless Steel |
| Scraper material | Polyurethane |
| 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. | 0822121009 |

## 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.

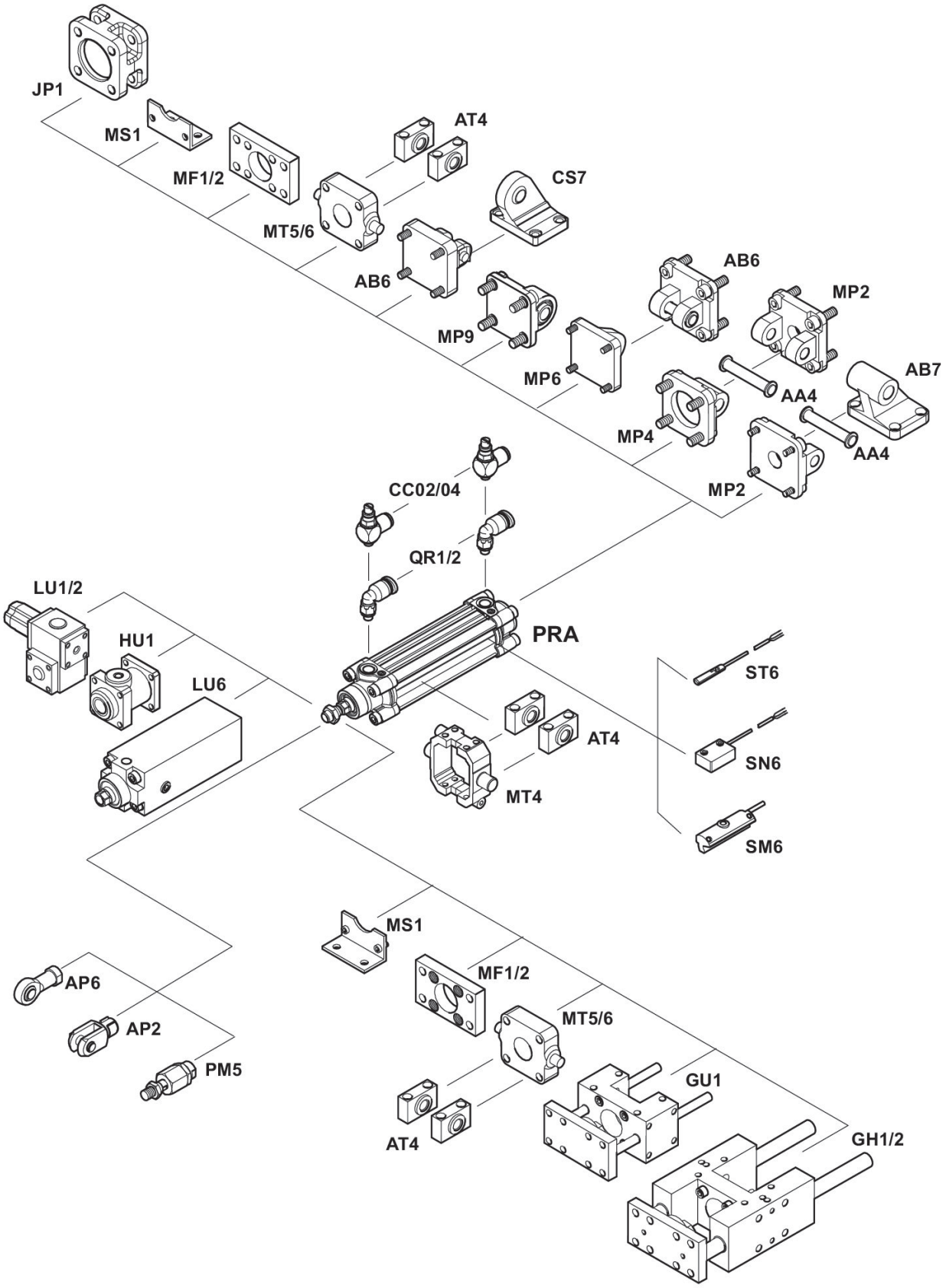
The operating temperature range for ATEX-certified cylinders is -20°C ... 60°C.

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

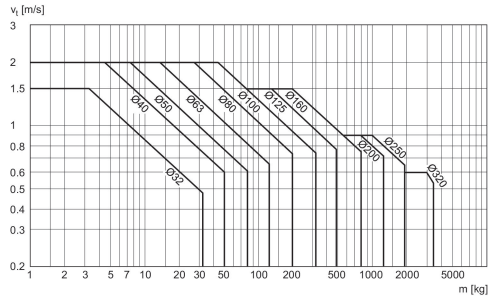
The oil content of compressed air must remain constant during the life cycle.

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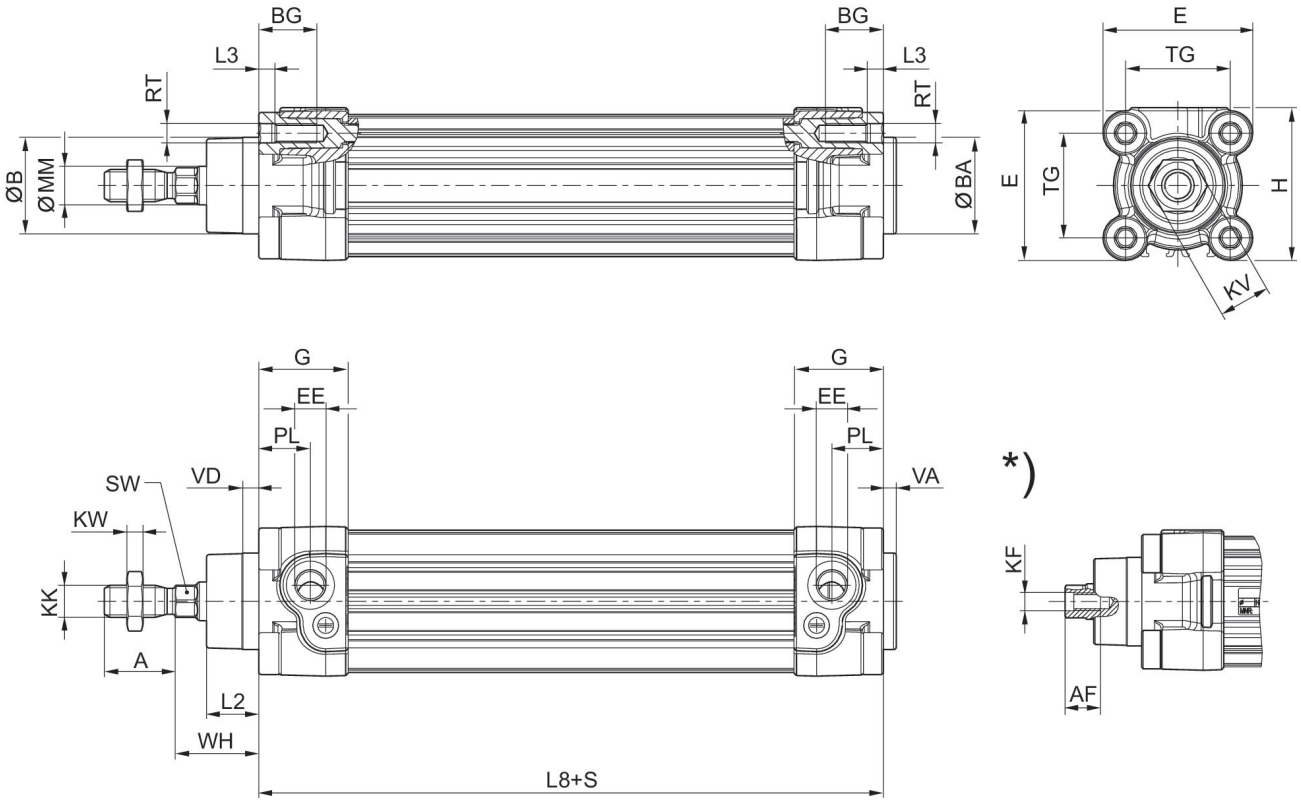


## Cushioning diagram




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

## Dimensions




S = stroke
*) For cylinders with optional piston road with internal thread

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| 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 |