

## AVENTICS Series MNI Mini cylinders (ISO 6432)

The AVENTICS Series MNI (ISO 6432) round cylinders for general machine construction are characterized by its robust and long service life.



### Technical data

|                                        |                                           |
|----------------------------------------|-------------------------------------------|
| Industry                               | Industrial                                |
| Standards                              | ISO 6432                                  |
| Piston Ø                               | 16 mm                                     |
| Stroke                                 | 40 mm                                     |
| Ports                                  | M5                                        |
| Functional principle                   | Single-acting, retracted without pressure |
| Cushioning                             | elastic cushioning                        |
| Magnetic piston                        | Piston with magnet                        |
| Environmental requirements             | Industry standard                         |
| Piston rod thread - type               | External thread                           |
| Piston rod thread                      | M6                                        |
| Piston rod                             | single                                    |
| Scraper                                | Standard Industry Scraper                 |
| Pressure for determining piston forces | 6,3 bar                                   |
| Extracting piston force                | 102.2 N                                   |
| Min. ambient temperature               | -25 °C                                    |
| Max. ambient temperature               | 80 °C                                     |
| Min. working pressure                  | 2 bar                                     |
| Max. working pressure                  | 10 bar                                    |

|                                                    |                                                    |
|----------------------------------------------------|----------------------------------------------------|
| Min. spring force                                  | 14.2 N                                             |
| Max. spring force                                  | 24.4 N                                             |
| Impact energy                                      | 0.14 J                                             |
| Weight                                             | 0.11 kg                                            |
| Weight 0 mm stroke                                 | 0.075 kg                                           |
| Weight +10 mm stroke                               | 0.007 kg                                           |
| Stroke max.                                        | 50 mm                                              |
| Medium                                             | Compressed air                                     |
| Min. medium temperature                            | -25 °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>                                |
| Clamping piece for magnetic field sensor necessary | Clamping piece for magnetic field sensor necessary |

## Material

|                           |                                                |
|---------------------------|------------------------------------------------|
| Piston rod                | Stainless Steel                                |
| Piston material           | Brass<br>Aluminum                              |
| Scraper material          | Polyurethane                                   |
| Seal material             | Acrylonitrile butadiene rubber<br>Polyurethane |
| Material, front cover     | Aluminum                                       |
| Cylinder tube             | Stainless Steel                                |
| End cover                 | Aluminum                                       |
| Nut for cylinder mounting | Steel, chrome-plated                           |
| Nut for piston rod        | Steel, chrome-plated                           |
| Part No.                  | R412009548                                     |

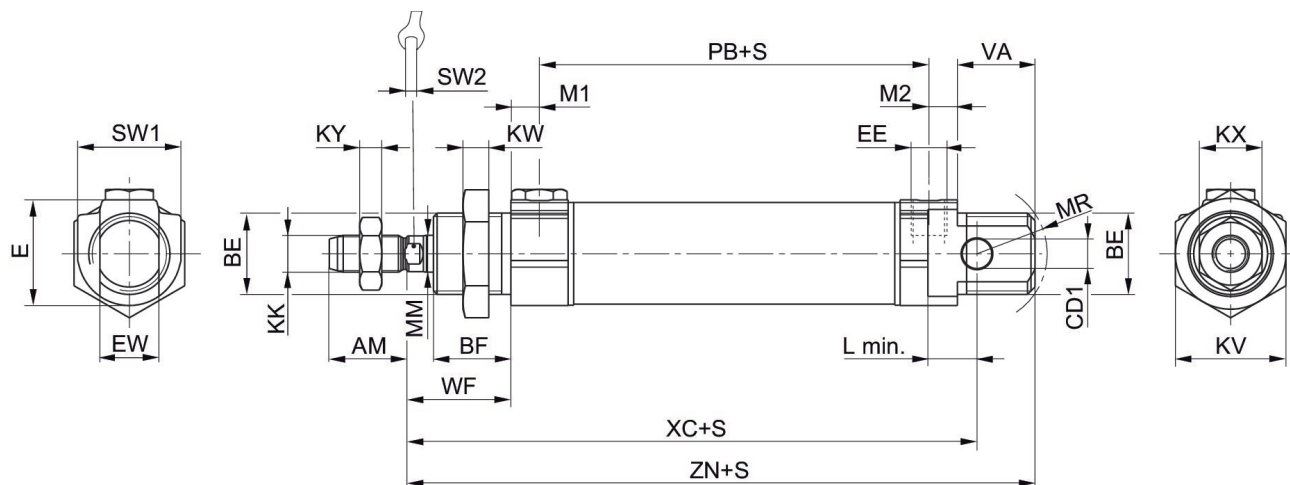
## Technical information

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>).

## Dimensions



S = stroke

X = vent screw

| Piston Ø | AM-2 | BE       | BF | CD H9 | E  | EE t=depth of thread | EW d13 | KK       | KV | KW  |
|----------|------|----------|----|-------|----|----------------------|--------|----------|----|-----|
| 10       | 12   | M12x1,25 | 11 | 4     | 14 | M5 t=5               | 8      | M4       | 17 | 5.5 |
| 12       | 16   | M16x1,5  | 16 | 6     | 19 | M5 t=5               | 12     | M6       | 22 | 6   |
| 16       | 16   | M16x1,5  | 16 | 6     | 19 | M5 t=5               | 12     | M6       | 22 | 6   |
| 20       | 20   | M22x1,5  | 18 | 8     | 28 | G1/8 t=8             | 16     | M8       | 30 | 7   |
| 25       | 22   | M22x1,5  | 21 | 8     | 28 | G1/8 t=8             | 16     | M10x1,25 | 30 | 7   |

| Piston Ø | KX | KY  | L min | MM f8 | M1/M2 | MR | PB ±1 | VA | WF ±1,4 | XC ±1 |
|----------|----|-----|-------|-------|-------|----|-------|----|---------|-------|
| 10       | 7  | 2.2 | 6     | 4     | 4.8   | 12 | 47    | 11 | 16      | 74    |
| 12       | 10 | 3.2 | 8     | 6     | 4.8   | 16 | 41    | 16 | 22      | 75    |
| 16       | 10 | 3.2 | 8     | 6     | 4.8   | 16 | 47    | 17 | 22      | 82    |
| 20       | 13 | 4   | 12    | 8     | 7     | 18 | 51    | 19 | 24      | 95    |
| 25       | 17 | 6   | 12    | 10    | 7     | 19 | 55    | 21 | 28      | 104   |

| Piston Ø | ZN ± 1,4 | SW 1 | SW 2 |
|----------|----------|------|------|
| 10       | 83.5     | 13   | 3    |
| 12       | 88.5     | 19   | 5    |
| 16       | 95.5     | 19   | 5    |
| 20       | 109.5    | 28   | 6    |
| 25       | 119.5    | 28   | 8    |

## Overview drawing



NOTE: This overview drawing is only for orientation to indicate 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.