

## AVENTICS Series CCL-IS Standard cylinders (ISO 15552)

The AVENTICS Series CCL-IS (ISO 15552) cylinder in clean design is produced specifically for packaging applications in the food industry. It is characterized by practical sensor mountings and its clean design combines efficient, simple cleaning with low maintenance cycles.

- Easy to clean anodized surfaces
- Scrapers and lubricants (NSF-H1) are approved for food applications
- Hygienic protective caps for unused mounting holes
- Available in eight sizes covering piston diameters from 25 mm to 125 mm
- Selection from elastic or pneumatic cushioning possible
- Option to configure the air connections for supply and exhaust on rear cover, which increases flexibility when designing the system's tubing concept



## Technical data

|                                        |                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------|
| Industry                               | Industrial                                                                                  |
| Standards                              | ISO 15552                                                                                   |
| Piston Ø                               | 50 mm                                                                                       |
| Stroke                                 | 125 mm                                                                                      |
| Ports                                  | G 1/4                                                                                       |
| Functional principle                   | Double-acting                                                                               |
| Cushioning                             | Pneumatic adjustable cushioning                                                             |
| Magnetic piston                        | Piston with magnet                                                                          |
| Environmental requirements             | Industry standard<br>suitable for use in food processing<br>ATEX optional<br>High corrosion |
| 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                | 1039 N                                                                                      |
| Extracting piston force                | 1237 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                 | 1.37 kg             |
| Weight +10 mm stroke               | 0.065 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      | Polyester       |
| Material tie-rod      | Stainless Steel |
| Material, front cover | Aluminum        |
| Cylinder tube         | Aluminum        |
| End cover             | Aluminum        |
| Part No.              | R480060030      |

## Technical information

Further options can be generated in the Internet configurator.

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.

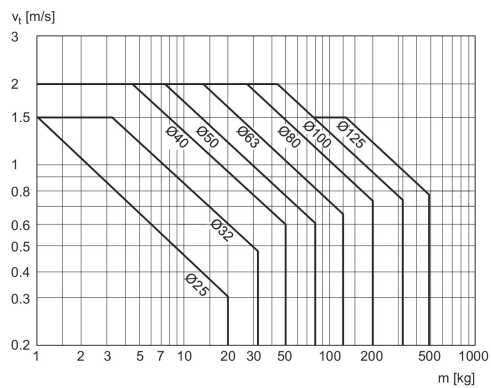
Ø25 not according to ISO 15552

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

Ø25 not according to ISO 15552

The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is PTFE.

## Cushioning diagram



V = velocity [m/s]

m = mass

# Standard cylinders ISO 15552, series CCL-IS

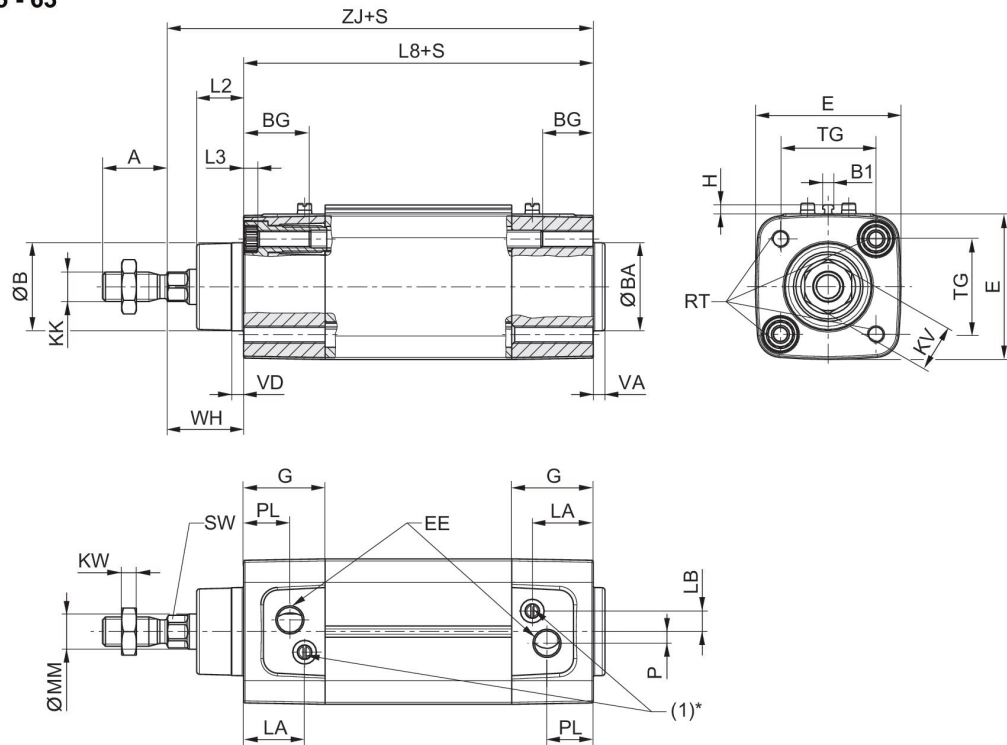
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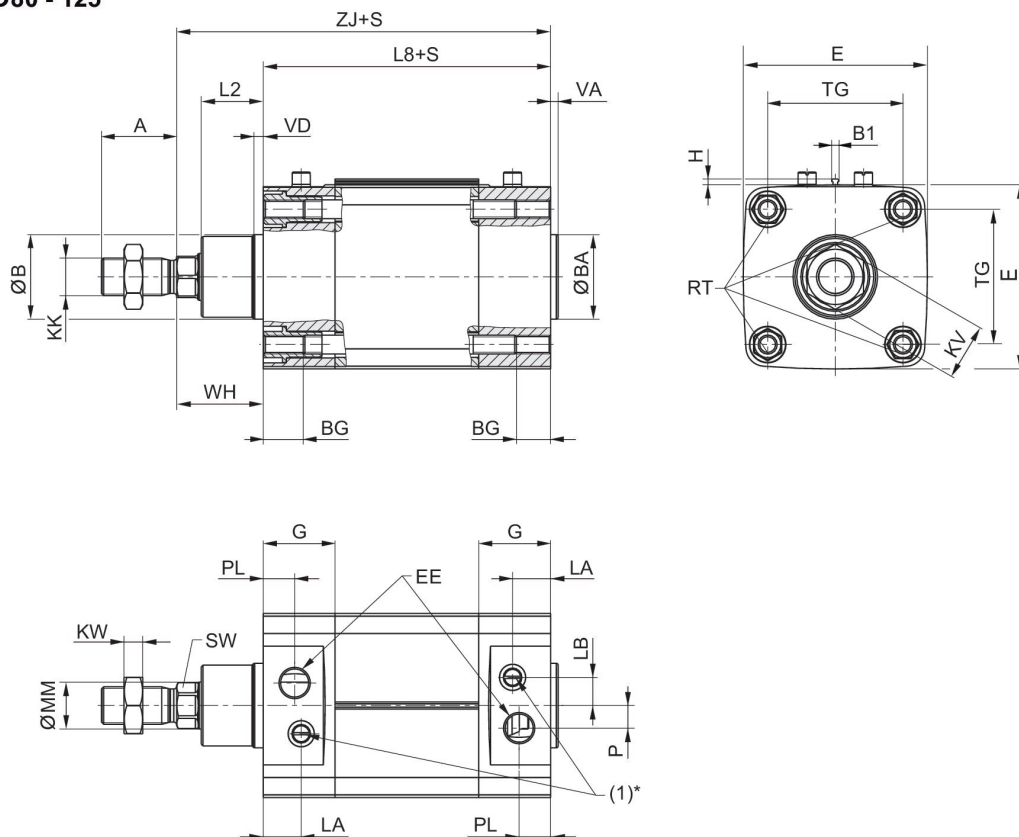
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## Dimensions

Ø 25 - 63



Ø80 - 125



S = stroke

\* The flow control screw (1) only has a function in cylinders with adjustable cushioning.

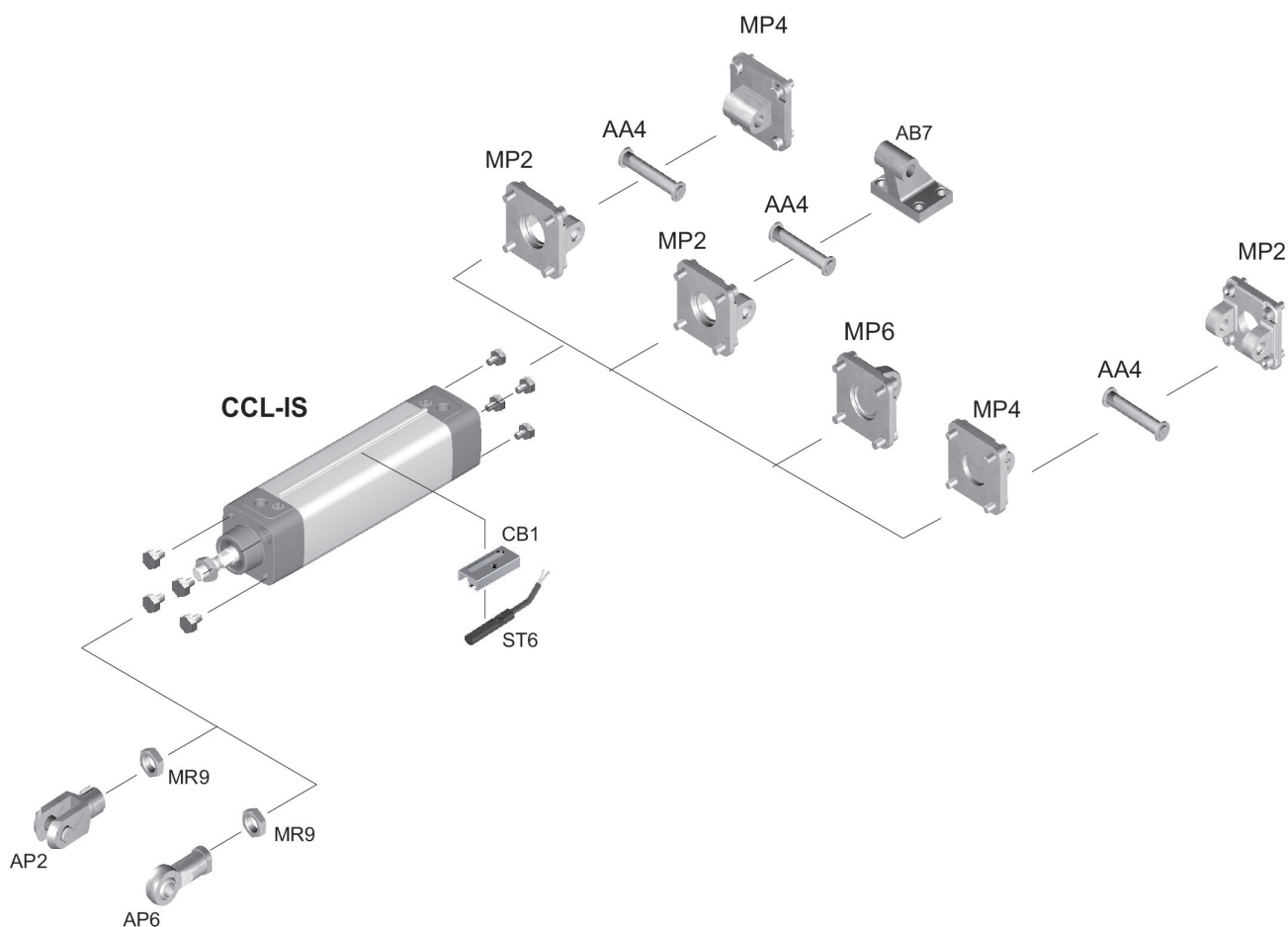
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## Overview drawing



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.

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| Piston Ø | A  | ØB /<br>ØBA d11 | B1  | BG mm | E     | EE   | G     | H   | KK       | KV |
|----------|----|-----------------|-----|-------|-------|------|-------|-----|----------|----|
| 25       | 22 | 24              | 3.8 | 12.5  | 40.5  | G1/8 | 20    | 3.1 | M10x1,25 | 16 |
| 32       | 22 | 30              | 3.8 | 16    | 49.5  | G1/8 | 27.75 | 3.1 | M10x1,25 | 16 |
| 40       | 24 | 35              | 3.8 | 16    | 57.5  | G1/4 | 33.25 | 3.1 | M12x1,25 | 18 |
| 50       | 32 | 40              | 3.8 | 16    | 69.5  | G1/4 | 31    | 3.1 | M16x1,5  | 24 |
| 63       | 32 | 45              | 3.8 | 16    | 79.5  | G3/8 | 38,25 | 3.1 | M16x1,5  | 24 |
| 80       | 40 | 45              | 3.8 | 17    | 98    | G3/8 | 38,25 | 3.1 | M20x1,5  | 30 |
| 100      | 40 | 55              | 3.8 | 17    | 115,5 | G1/2 | 42,25 | 3.1 | M20x1,5  | 30 |
| 125      | 54 | 60              | 3.8 | 20    | 145   | G1/2 | 54    | 3.1 | M27x2    | 41 |

| Piston Ø | KW   | L2    | L3 max. | L8       | LA    | LB | MM f8 | P    | PL    | RT  |
|----------|------|-------|---------|----------|-------|----|-------|------|-------|-----|
| 25       | 5    | 16    | 5       | 74 ±0,4  | 13.5  | 6  | 12    | 4.5  | 10.3  | M5  |
| 32       | 5    | 16    | 5       | 94 ±0,4  | 20.75 | 7  | 12    | 4    | 15.75 | M6  |
| 40       | 6    | 18.25 | 5       | 105 ±0,7 | 22.75 | 8  | 16    | 5    | 16.75 | M6  |
| 50       | 8    | 25    | 5       | 106 ±0,7 | 20    | 12 | 20    | 7,7  | 16    | M8  |
| 63       | 8    | 25    | 5       | 121 ±0,8 | 27,25 | 11 | 20    | 11   | 19,25 | M8  |
| 80       | 10   | 33    | -       | 128 ±0,8 | 20,25 | 15 | 25    | 12   | 16,75 | M10 |
| 100      | 10   | 36    | -       | 138 ±1   | 24,25 | 14 | 25    | 17   | 19,25 | M10 |
| 125      | 13,5 | 45    | -       | 160 ±1   | 25,5  | 4  | 32    | 27,5 | 20    | M12 |

| Piston Ø | SW | TG        | VA | VD | WH      | ZJ  |
|----------|----|-----------|----|----|---------|-----|
| 25       | 10 | 26 ±0,4   | -  | -  | 24 ±1,4 | 98  |
| 32       | 10 | 32,5 ±0,5 | 4  | 4  | 26 ±1,4 | 120 |
| 40       | 13 | 38 ±0,5   | 4  | 5  | 30 ±1,4 | 135 |
| 50       | 17 | 46,5 ±0,6 | 4  | 5  | 37 ±1,4 | 143 |
| 63       | 17 | 56,5 ±0,7 | 4  | 5  | 37 ±1,8 | 158 |
| 80       | 22 | 72 ±0,7   | 4  | 5  | 46 ±1,8 | 174 |
| 100      | 22 | 89 ±0,7   | 4  | 5  | 51 ±1,8 | 189 |
| 125      | 27 | 110 ±1,1  | 6  | 6  | 65 ±2,2 | 225 |