

## 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                                                                  |
| Type                                   | Dry-run scraper for increased service life in grease-free operation        |
| Piston Ø                               | 100 mm                                                                     |
| Stroke                                 | 250 mm                                                                     |
| Ports                                  | G 1/2                                                                      |
| 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>High corrosion |
| Piston rod thread - type               | External thread                                                            |
| Piston rod thread                      | M20x1,5                                                                    |
| Piston rod                             | single                                                                     |
| Cylinder special features              | Dry-Run Scraper                                                            |
| Scraper                                | Dry-Run Scraper                                                            |
| Pressure for determining piston forces | 6,3 bar                                                                    |
| Retracting piston force                | 4639 N                                                                     |

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R481609696

Series CCL-  
IS

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|                                    |                     |
|------------------------------------|---------------------|
| Extracting piston force            | 4948 N              |
| Min. ambient temperature           | -20 °C              |
| Max. ambient temperature           | 80 °C               |
| Min. working pressure              | 1.5 bar             |
| Max. working pressure              | 10 bar              |
| Cushioning length                  | 19.5 mm             |
| Cushioning energy                  | 88 J                |
| Weight 0 mm stroke                 | 4.42 kg             |
| Weight +10 mm stroke               | 0.133 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 <sup>3</sup> |
| Max. oil content of compressed air | 5 mg/m <sup>3</sup> |

## Material

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Piston rod            | Stainless Steel                                    |
| Scraper material      | Ultra-high-molecular-weight polyethylene (UHMW-PE) |
| Material tie-rod      | Stainless Steel                                    |
| Material, front cover | Aluminum                                           |
| Cylinder tube         | Aluminum                                           |
| End cover             | Aluminum                                           |
| Part No.              | R481609696                                         |

## Technical information

Further options can be generated in the Internet configurator.

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

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## Dimensions

Ø 32 - 63



Ø80 - 125



S=stroke

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

## Cushioning diagram



V = velocity [m/s]  
m = mass

## 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 |
|----------|----|-----------------|-----|-------|-------|------|-------|-----|----------|----|
| 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  |
|----------|------|-------|---------|----------|-------|----|-------|------|-------|-----|
| 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  |
|----------|----|-----------|----|----|---------|-----|
| 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 |