# Compact cylinder ISO 21287, Series CCI

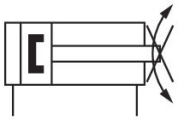
**R422001325**



## AVENTICS Series CCI Compact cylinders (ISO 21287)

The AVENTICS Series CCI (ISO 21287) cylinders stand for innovative, compact construction and an easy to clean design. The Series CCI (ISO 21287) is ideal for long strokes and increased requirements for optimized cycle times and moving masses. The sensors can be installed quickly and easily on all sides and over the entire cylinder lengths.





## Technical data

| | |
|---|---|
| Industry | Industrial |
| Standards | ISO 21287 |
| Piston Ø | 32 mm |
| Stroke | 40 mm |
| Ports | G 1/8 |
| Functional principle | Double-acting |
| Cushioning | Elastic cushioning |
| Magnetic piston | Piston with magnet |
| Environmental requirements | Industry standard<br>ATEX optional |
| Piston rod thread - type | Internal thread |
| Piston rod thread | M8 |
| Piston rod | non-rotating, with front plate |
| Scraper | Standard Industry Scraper |
| Pressure for determining piston forces | 6,3 bar |
| Retracting piston force | 435 N |
| Extracting piston force | 507 N |
| Min. ambient temperature | -20 °C |
| Max. ambient temperature | 80 °C |
| Min. working pressure | 1 bar |

| | |
|---|---|
| Max. working pressure | 10 bar |
| Impact energy | 0.5 J |
| Weight 0 mm stroke | 0.303 kg |
| Weight +10 mm stroke | 0.05 kg |
| Stroke max. | 300 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 | Aluminum |
| Cylinder tube | Aluminum |
| End cover | Aluminum |
| Front plate | Aluminum |
| Nut for piston rod | Steel, chrome-plated |
| Part No. | R422001325 |

## Technical information

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

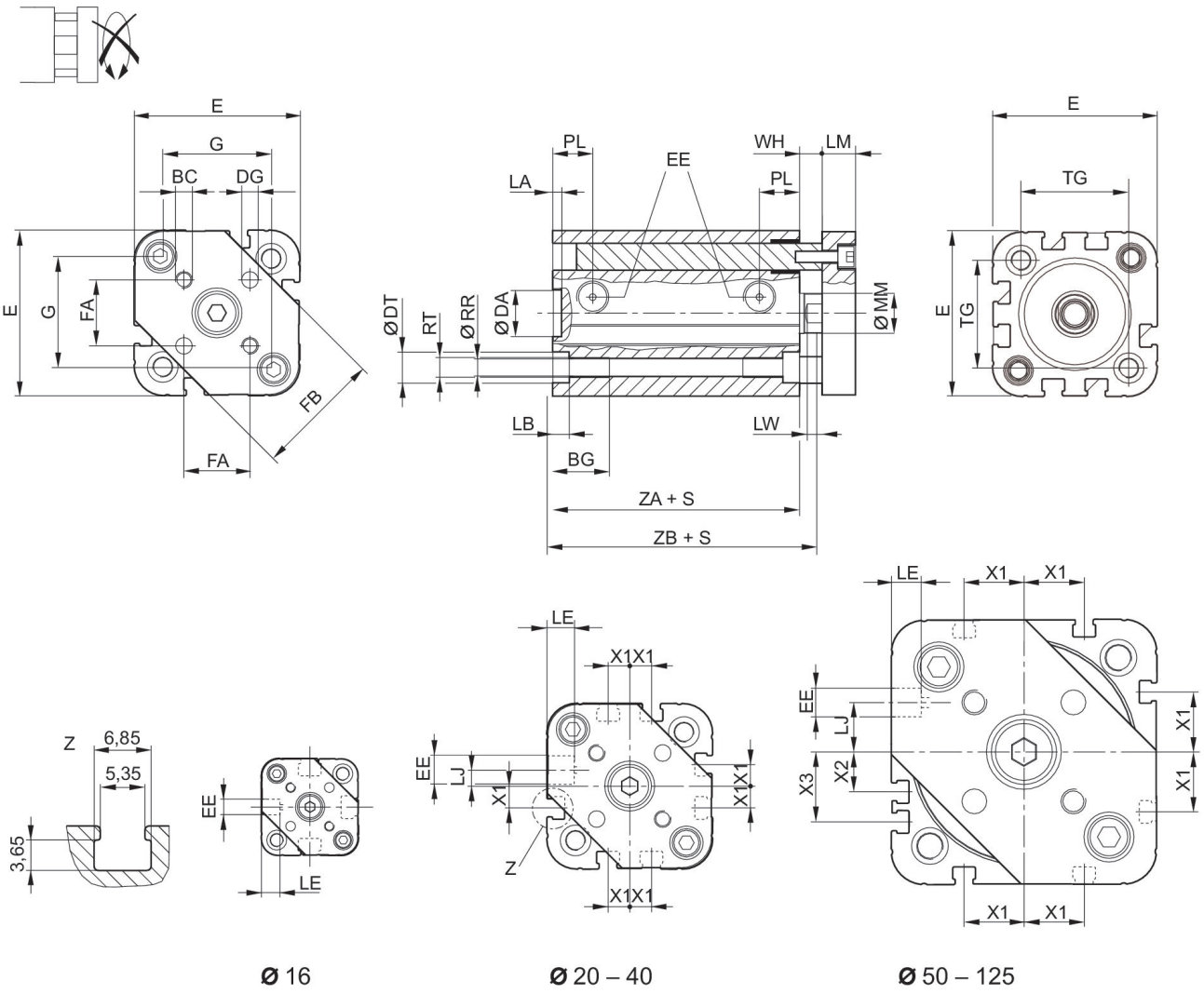
The oil content of compressed air must remain constant during the life cycle.

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).

# Compact cylinder ISO 21287, Series CCI

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## Dimensions



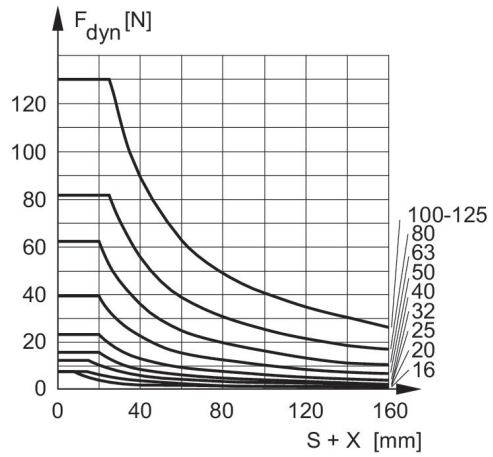

S = stroke
G = distance between the guide rods

| Piston Ø | BC | BG | DA H11 | DG H13 | DT | E | EE | FA | FB |
|---|---|---|---|---|---|---|---|---|---|
| 16 | M3 | 15 | 10 | 3 | 6 | 29.3 | M5 | 9.9 ±0.1 | 20 |
| 20 | M4 | 15.5 | 12 | 4 | 7.5 | 36.3 | M5 | 12 ±0.1 | 24 |
| 25 | M5 | 15.5 | 12 | 5 | 8 | 40.3 | M5 | 15.6 ±0.1 | 30 |
| 32 | M5 | 17 | 14 | 5 | 8.6 | 50 | G 1/8 | 19.8 ±0.1 | 38 |
| 40 | M5 | 17 | 14 | 5 | 9.2 | 58 | G 1/8 | 23.3 ±0.1 | 44 |
| 50 | M6 | 17 | 18 | 6 | 11 | 68.3 | G 1/8 | 29.7 ±0.1 | 54 |
| 63 | M6 | 17 | 18 | 6 | 11 | 80 | G 1/8 | 35.4 ±0.1 | 62 |
| 80 | M8 | 20 | 23 | 8 | 15 | 96 | G 1/8 | 46 ±0.1 | 80 |
| 100 | M10 | 20 | 28 | 10 | 15 | 116 | G 1/8 | 56.6 ±0.1 | 100 |
| 125 | M10 | 35 | 12 | 10 | - | 134.6 | G 1/4 | 63.64 ±0.1 | 120 |

| Piston Ø | G | LA | LB | LE | LJ | LM | LW | MM f8 | PL |
|---|---|---|---|---|---|---|---|---|---|
| 16 | 19 | 2.5 | 3.5 | 4.5 | – | 6 | 4 | 8 | 8 |
| 20 | 25 | 2.5 | 4.5 | 4.5 | 4.5 | 8 | 4 | 10 | 10 |
| 25 | 27 | 2.5 | 4.5 | 4.5 | 4 | 8 | 4 | 10 | 10 |
| 32 | 34 | 2.5 | 5 | 7.5 | 4.85 | 10 | 4.5 | 12 | 12 |
| 40 | 42 | 2.5 | 5 | 7.5 | 9.85 | 10 | 4.5 | 12 | 12 |
| 50 | 49 | 2.5 | 5 | 7.5 | 12 | 12 | 6 | 16 | 12 |
| 63 | 60 | 2.5 | 5 | 7.5 | 14.8 | 12 | 6 | 16 | 12 |
| 80 | 72 | 3 | 5 | 7.5 | 22 | 14 | 7 | 20 | 14 |
| 100 | 92 | 3 | 5 | 7.5 | 27 | 14 | 7 | 25 | 16.5 |
| 125 | 110 | 2.6 | - | ??? | 39 | 18 | 7.5 | 25 | 20.5 |

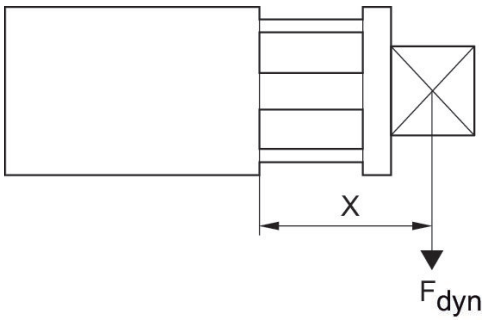
| Piston Ø | RR | RT 6H | TG | WH | X1 | X2 | X3 | ZA ±0,1 | ZB |
|---|---|---|---|---|---|---|---|---|---|
| 16 | 3.3 | M4 | 18 | 4.8 ±0.9 | – | – | – | 34.9 | 39.7 ±0.8 |
| 20 | 4.2 | M5 | 22 | 5.6 ±0.9 | 4.2 | – | – | 37.3 | 43.6 ±0.8 |
| 25 | 4.2 | M5 | 26 | 5.6 ±0.9 | 4.5 | – | – | 39 | 44.5 ±0.9 |
| 32 | 5.1 | M6 | 32.5 | 7.4 ±0.9 | 6.5 | – | – | 44 | 51.4 ±1 |
| 40 | 5.1 | M6 | 38 | 7.4 ±0.9 | 11 | – | – | 45 | 52.4 ±1 |
| 50 | 6.7 | M8 | 46.5 | 8.4 ±0.9 | 13 | 4 | 13 | 45.5 | 53.6 ±1 |
| 63 | 6.7 | M8 | 56.5 | 8.5 ±0.9 | 18 | 12 | 21 | 49 | 57.4 ±1 |
| 80 | 8.5 | M10 | 72 | 9.8 ±1 | 18 | 16.5 | 25.5 | 54.7 | 64.4 ±1 |
| 100 | 8.5 | M10 | 89 | 9.8 ±1 | 20 | 20 | 29 | 67 | 76.7 ±1 |
| 125 | 11.1 | M12 | 110 | 11 | 29 | 29 | 38 | 81 | 92 ±1 |

## Maximum admissible lateral force dynamic



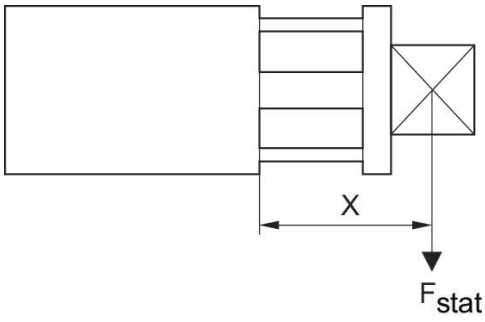

F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

## Maximum admissible lateral force dynamic



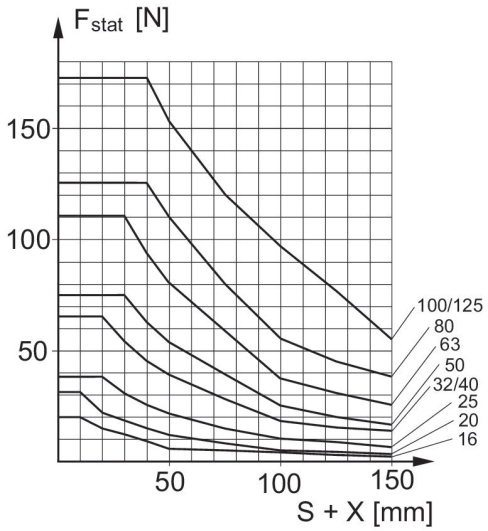

F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover

## Maximum admissible lateral force static



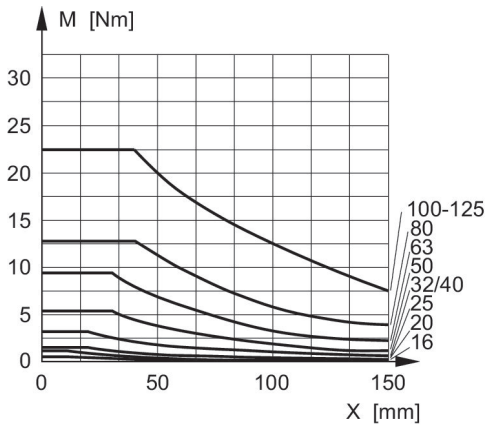

F stat. = static lateral force
X = distance between force application point and cylinder cover

## Maximum admissible lateral force static



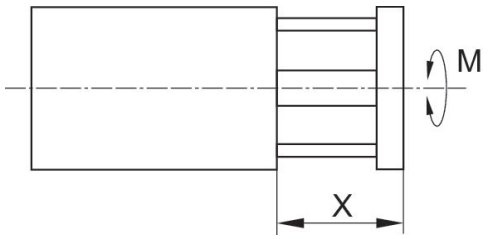

F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

## Max. permissible torque



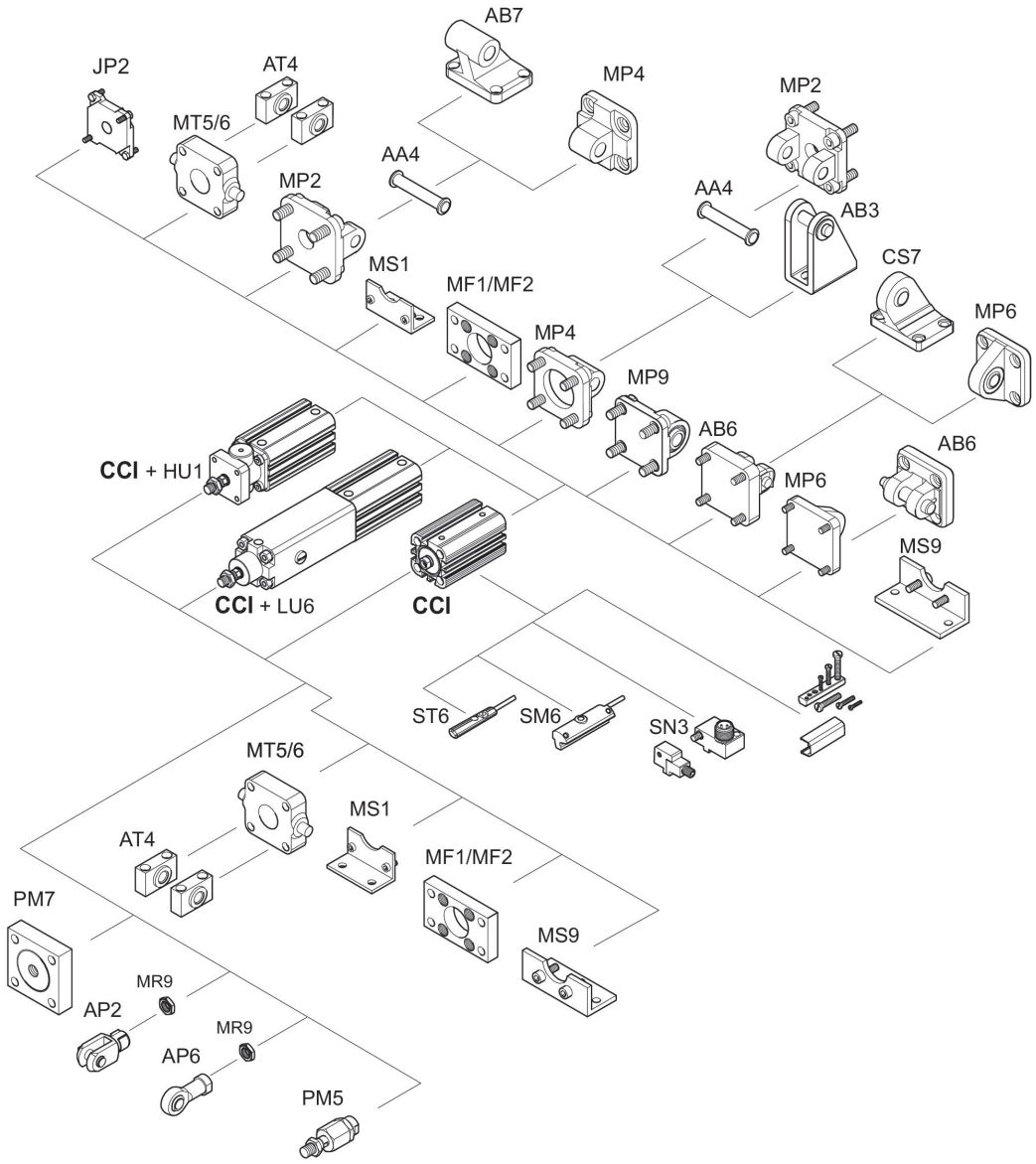

M = max. permissible torque
X = spacing between torque contact surface and cylinder cover

## Max. permissible torque




M = max. permissible torque
X = distance between force application point and cylinder cover

## 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.