# Short-stroke cylinder, Series SSI, double-acting, without magnetic piston

**R480637907**

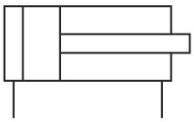


- Ideal for simple assembly and clamping movements, tight installation space, and short strokes
- Mount on moving machine parts possible thanks to their low weight
- Intelligent connection concept
- Available in piston diameters from 12 mm to 100 mm
- Available as piston rod, single or double-acting cylinders, with a hollow piston rod, as a non-rotating version with a front plate, or an especially short version without a magnet

## AVENTICS Series SSI Short-stroke cylinders (ISO 15524)

The AVENTICS Series SSI are short stroke cylinders in accordance with the latest ISO standard 15524. The cylinders are compact and up to 30% lighter than comparable cylinders thanks to weight optimized profiles. In addition, they provide a high degree of flexibility in sensor assembly and extremely effective elastic cushioning.





## Technical data

| | |
|---|---|
| Industry | Industrial |
| Standards | ISO 15524 |
| Piston Ø | 100 mm |
| Stroke | 25 mm |
| Ports | G 3/8 |
| Functional principle | Double-acting |
| Cushioning | Elastic cushioning |
| Magnetic piston | Piston without magnet |
| Environmental requirements | Industry standard |
| Piston rod thread - type | Piston rod: internal thread |
| Piston rod thread | M20 |
| Piston rod | single |
| Scraper | Standard Industry Scraper |
| Pressure for determining piston forces | 6,3 bar |
| Retracting piston force | 4441 N |
| Extracting piston force | 4948 N |
| Min. ambient temperature | -20 °C |
| Max. ambient temperature | 80 °C |
| Min. working pressure | 0.6 bar |

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| | |
|---|---|
| Max. working pressure | 10 bar |
| Impact energy | 0.5 J |
| Weight 0 mm stroke | 1.83 kg |
| Weight +10 mm stroke | 0.168 kg |
| Stroke max. | 150 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 | Nitrile butadiene rubber |
| Material, front cover | Aluminum |
| Cylinder tube | Aluminum |
| End cover | Aluminum |
| Part No. | R480637907 |

## Technical information

For this variant with external thread, two different external threads with the dimensions indicated below can be selected in the configurator .

Note the selection of fittings for strokes < 10 mm.

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).

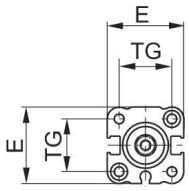
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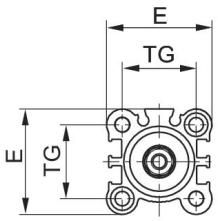
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## Dimensions

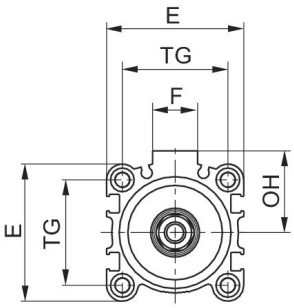
ø12 – 16



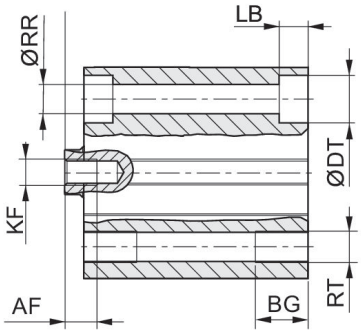

ø20 – 25



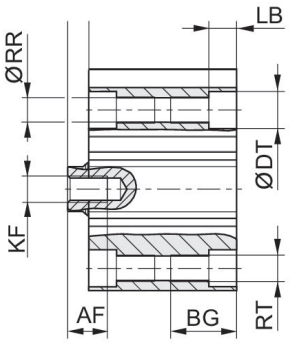

ø32 – 100



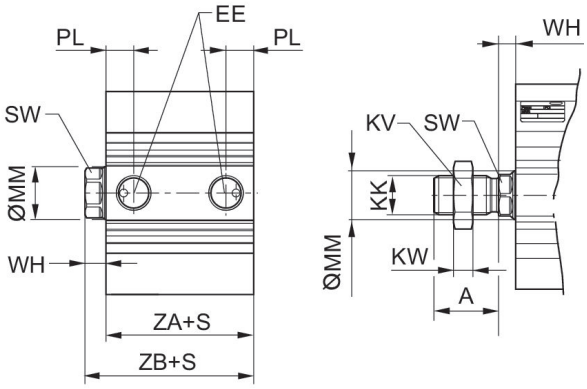

ø12 – 25




ø32 – 100




ø12 – 100




S = stroke

| Piston Ø | A ±0.3 | AF | BG | ØDT | E | EE | F | KF | KK 1) |
|---|---|---|---|---|---|---|---|---|---|
| 12 | 10,5 | 6 | 7 | 6,5 | 25 | M5 | - | M3 | M4 |
| 16 | 12 | 8 | 7 | 6,5 | 29 | M5 | - | M4 | M6 |
| 20 | 14 | 7 | 10 | 9 | 36 | M5 | - | M5 | M8 |
| 25 | 17,5 | 12 | 10 | 9 | 40 | M5 | - | M6 | M10x1.25 |
| 32 | 21,5 | 13 | 16 | 9 | 45 | G 1/8 | 17 | M8 | M12x1.25 |
| 40 | 21,5 | 13 | 16 | 9 | 52 | G 1/8 | 17 | M8 | M12x1.25 |
| 50 | 26,5 | 15 | 20 | 11 | 64 | G 1/4 | 21 | M10 | M16x1.5 |
| 63 | 26,5 | 15 | 25 | 14 | 77 | G 1/4 | 21 | M10 | M16x1.5 |
| 80 | 34 | 21 | 30 | 17,5 | 98 | G 3/8 | 26 | M16 | M20x1.5 |
| 100 | 33 | 27 | 30 | 17,5 | 117 | G 3/8 | 26 | M20 | M20x1.5 |

| Piston Ø | KK 2) | KV 1) | KV 2) | KW 1) | KW 2) | LB max. | ØMM f8 | OH | ØRR |
|---|---|---|---|---|---|---|---|---|---|
| 12 | M5 | 7 | 8 | 2,2 | 2,7 | 3,5 | 6 | - | 3,7 |
| 16 | M6 | 10 | 10 | 3,2 | 3,2 | 3,5 | 8 | - | 3,7 |
| 20 | M8 | 13 | 13 | 4 | 4 | 5,5 | 10 | - | 5,55 |

# Short-stroke cylinder, Series SSI, double-acting, without magnetic piston

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| Piston Ø | KK 2) | KV 1) | KV 2) | KW 1) | KW 2) | LB max. | ØMM f8 | OH | ØRR |
|---|---|---|---|---|---|---|---|---|---|
| 25 | M10x1.25 | 17 | 17 | 6 | 6 | 5,5 | 12 | - | 5,55 |
| 32 | M14x1.5 | 18 | 22 | 6 | 8 | 5,5 | 16 | 27 | 5,55 |
| 40 | M14x1.5 | 18 | 22 | 6 | 8 | 5,5 | 16 | 31 | 5,55 |
| 50 | M18x1.5 | 24 | 27 | 8 | 9 | 8 | 20 | 39 | 7,4 |
| 63 | M18x1.5 | 24 | 27 | 8 | 9 | 10,5 | 20 | 45,5 | 9,3 |
| 80 | M22x1.5 | 30 | 32 | 10 | 10 | 13,5 | 25 | 59 | 11,2 |
| 100 | M26x1.5 | 30 | 41 | 10 | 13,5 | 13,5 | 32 | 65 | 11,2 |

| Piston Ø | RT | SW | TG | WH 3) | WH 4) | X1 | X2 | S | PL |
|---|---|---|---|---|---|---|---|---|---|
| 12 | M4 | 5 | 15,5 ±0,3 | 3,5 ±1,5 | 3,5 ±1,5 | 0 | 0 | 2-4 | 4,5 |
| | | | | | | | | ≥5 | 5,5 |
| 16 | M4 | 7 | 20 ±0,3 | 3,5 ±1,5 | 3,5 ±1,5 | 0 | 0 | ≥2 | 5,5 |
| 20 | M6 | 8 | 25,5 ±0,3 | 4,5 ±1,5 | 4,5 ±1,5 | 5,7 | 4,275 | ≥2 | 5,5 |
| 25 | M6 | 10 | 28 ±0,3 | 5 ±1,5 | 5 ±1,5 | 6 | 5 | ≥2 | 5,5 |
| 32 | M6 | 13 | 34 ±0,3 | 7 ±2 | 7 ±2 | 8,5 | 7,5 | 2-4 | 6,3 |
| | | | | | | | | ≥5 | 7,5 |
| 40 | M6 | 13 | 40 ±0,3 | 7 ±2 | 7 ±2 | 10,75 | 11 | ≥2 | 7,5 |
| 50 | M8 | 17 | 50 ±0,5 | 8 ±2 | 7 ±2 | 14 | 13 | 2-8 | 7,5 |
| | | | | | | | | ≥9 | 10,5 |
| 63 | M10 | 17 | 60 ±0,5 | 8 ±2 | 7 ±2 | 17 | 17 | ≥2 | 10,5 |
| 80 | M12 | 22 | 77 ±0,5 | 10 ±2 | 9,5 ±2 | 23,5 | 21 | ≥2 | 12,5 |
| 100 | M12 | 27 | 94 ±0,5 | 12 ±2,5 | 10,5 ±2,5 | 31 | 28 | ≥2 | 14 |

| Piston Ø | ZA±0,2 | ZB±2 3) | ZB±2 4) |
|---|---|---|---|
| 12 | 17 | 20,5 | 20,5 |
| 16 | 18,5 | 22 | 22 |
| 20 | 19,5 | 24 | 24 |
| 25 | 22,5 | 27 | 27 |
| 32 | 23 | 30 | 30 |
| 40 | 29,5 | 36,5 | 36,5 |
| 50 | 30,5 | 38,5 | 37,5 |
| 63 | 36 | 44 | 43 |
| 80 | 43,5 | 53,5 | 53 |
| 100 | 53 | 65 | 63,5 |

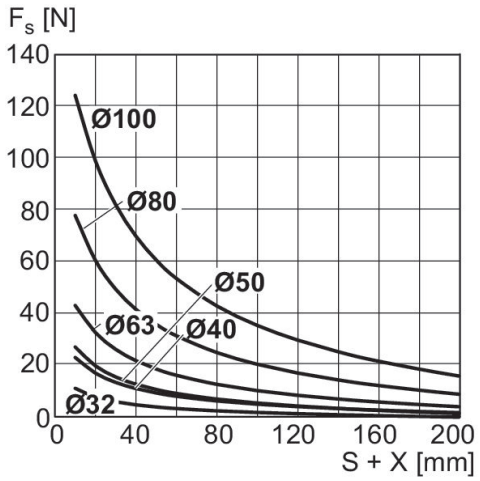
1) Compatible with piston rod accessories
2) Compatible with third-party products

3) Internal thread
4) External thread

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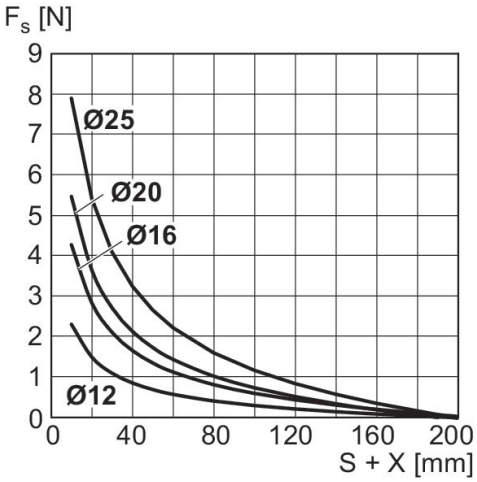
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## Maximum admissible lateral force
Ø 32 ... 100 mm



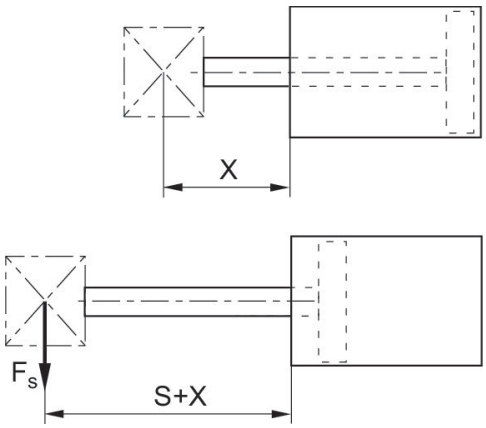

X = distance between force application point and cylinder cover
FS = lateral force
S = stroke

## Maximum admissible lateral force
Ø 12 ... 25 mm




X = distance between force application point and cylinder cover
FS = lateral force
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## Maximum admissible lateral force
Ø 12 ... 25 mm

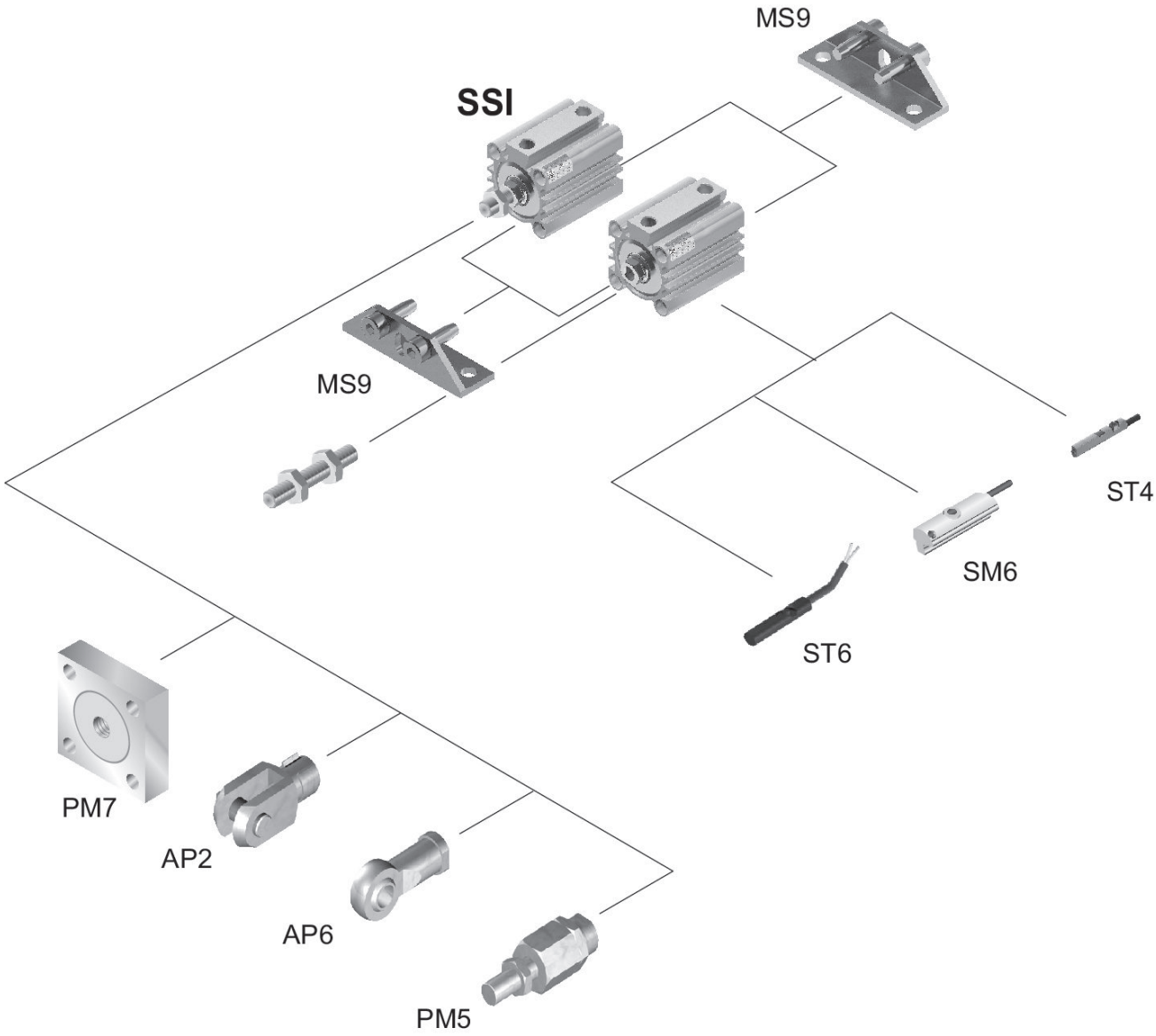



X = distance between force application point and cylinder cover
FS = lateral force
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## Overview drawing




Use our Internet configurator to order variants with an external thread.
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.