



Series 1200, Rolled end covers MIR

Construction characteristics

| | | | | | |
|-----------------------|---|----|----|----|----|
| Barrel | stainless steel AISI 304 | | | | |
| Fixing devices | steel painted in cataphoresis | | | | |
| Forks | zinc plated steel | | | | |
| Seals | standard: NBR Oil resistant rubber, PUR Piston rod seals (HNBR or FPM seals available upon request) | | | | |
| Single-acting springs | C98 zinc plated steel for springs | | | | |
| Pistons | brass (Ø8-10-12) aluminium (Ø16-20-25-32) | | | | |
| Piston rod | stainless steel | | | | |
| End caps | anodized aluminium | | | | |
| Cushioning length | Ø | 16 | 20 | 25 | 32 |
| | mm | 15 | 18 | 18 | 18 |

Operational characteristics

| | | | | | |
|-----------------------|--|--|--|--|--|
| Fluid | filtered air, preferably lubricated | | | | |
| Max. working pressure | 10 bar | | | | |
| Working temperature | -5°C ... +70°C with standard seals magnetic or non magnetic piston -5°C ... +80°C with FPM seals magnetic piston -5°C ... +80°C with HNBR seals magnetic piston -5°C ... +120°C with HNBR seals non magnetic piston -5°C ... +150°C with FPM seals non magnetic piston | | | | |

Please follow the suggestions below to ensure a long life for these cylinders:

- use clean and lubricated air.
- correct alignment during assembly with regard to the applied load so as to avoid radial components or bending the rod.
- avoid high speeds together with long strokes and heavy loads: this would produce kinetic energy which the cylinder cannot absorb, especially if used as a limit stop (in this case use mechanical stop device).
- evaluate the environmental characteristics of cylinder used (high temperature, hard atmosphere, dust, humidity etc.).

Please note: air must be dried for applications with lower temperature.

Use hydraulic oils H class (ISO VG32) for correct continued lubrication.

Standard strokes

Double acting version

Ø8 - Ø10:

15 - 25 - 50 - 75 - 80 - 100 mm

Ø12 - Ø16:

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 mm

Ø20 - Ø25:

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 mm

Ø32:

15 - 25 - 50 - 75 - 80 - 100 - 150 - 160 - 200 - 250 - 300 - 320 - 350 - 400 - 450 - 500 mm

On request are available strokes up to:

Ø8 - Ø10: 250 mm

Ø12 - Ø16: 700 mm

Ø20 - Ø32: 1000 mm

Single acting version

Front spring **Ø8 - Ø32:** up to stroke 50 mm

Rear spring **Ø16 - Ø32:** up to stroke 50 mm

Minimum and maximum springs load for single acting version

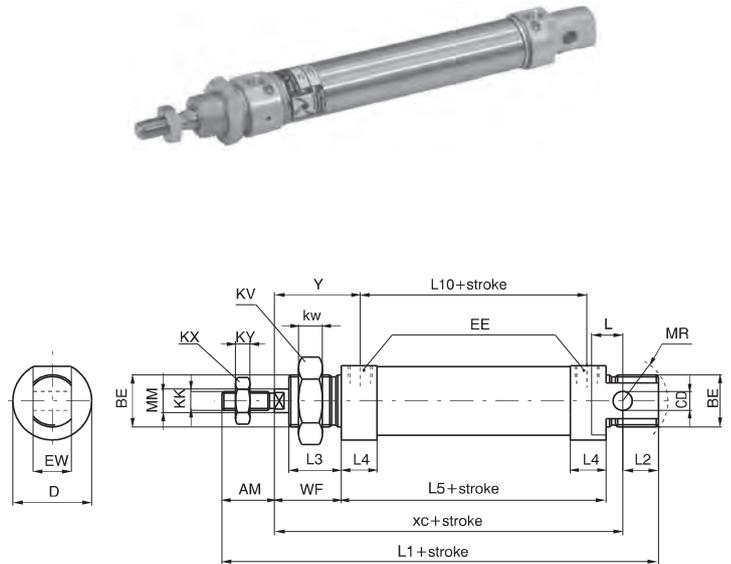
| Bore | Ø8 | Ø10 | Ø12 | Ø16 | Ø20 | Ø25 | Ø32 |
|---------------|-----|-----|-----|-----|-----|------|------|
| Min. load (N) | 2.2 | 2.2 | 4 | 7.5 | 11 | 16.5 | 23 |
| Max. load (N) | 4.2 | 4.2 | 8.7 | 21 | 22 | 30.7 | 52.5 |

Basic version

Coding: 12**T**.**Ø**.stroke.**V****ⓐ**

| | |
|----------|--|
| T | TYPE |
| | 80 = Double acting version |
| | 91 = front spring (max stroke 50 mm) 92 = rear spring from Ø16 (max stroke 50 mm) |
| Ø | BORE |
| | 8 = Ø8 |
| | 10 = Ø10 ... 32 = Ø32 |
| V | VERSION |
| | A = Adjustable cushioning (from Ø16) |
| | M = Magnetic piston AM = Cushioning with magnetic piston (from Ø16) |
| ⓐ | SEALS |
| | = NBR |
| | T = HNBR V = FPM |

Standard version, fully compliant with ISO standards. Can use all available mountings. For single acting type, the maximum stroke is 50 mm, after which overall dimensions increase in length to an extent not proportional to the stroke (and in any case not longer than stroke 100).

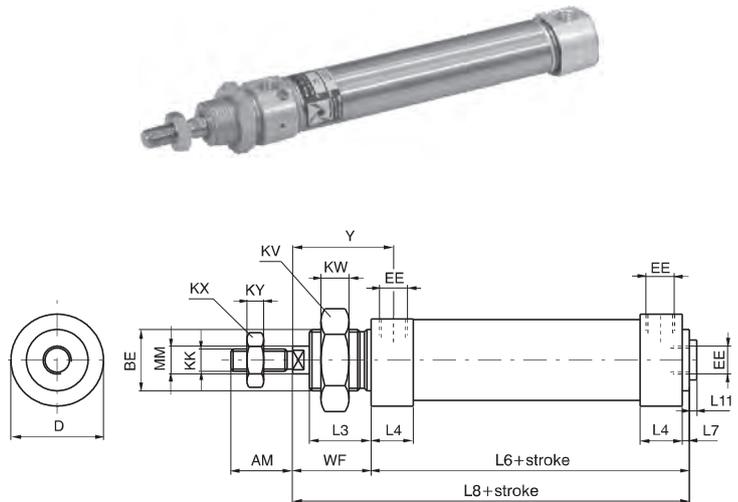


Without rear eye version

Coding: 12**T**.**Ø**.stroke.**V****ⓐ**

| | |
|----------|--|
| T | TYPE |
| | 81 = Double acting version |
| | 93 = front spring (max stroke 50 mm) 94 = rear spring from Ø16 (max stroke 50 mm) |
| Ø | BORE |
| | 8 = Ø8 |
| | 10 = Ø10 ... 32 = Ø32 |
| V | VERSION |
| | A = Adjustable cushioning (from Ø16) |
| | M = Magnetic piston AM = Cushioning with magnetic piston (from Ø16) |
| ⓐ | SEALS |
| | = NBR |
| | T = HNBR V = FPM |

Version derived from standard version 1260 and not included in ISO standard. Not having a rear eye it is shorter. Rear inlet connection is at 90° like the front one, in line and plugged. The considerations made for the basic type 1280 apply for all single-acting types.



Through rod cylinder version

Coding: 1282.**Ø**.stroke.**V****ⓐ**

| | |
|----------|--|
| Ø | BORE |
| | 8 = Ø8 |
| | 10 = Ø10 ... 32 = Ø32 |
| V | VERSION |
| | = Double acting version |
| | A = Adjustable cushioning (from Ø16) M = Magnetic piston AM = Cushioning with magnetic piston (from Ø16) |
| ⓐ | SEALS |
| | = NBR |
| | T = HNBR V = FPM |

This version having rods coming out from both end plates with overall dimensions, except for the rod, equal to 1280 version. This version is not suitable for Ø8 and Ø10 due to difficulty in anchoring the pistons to rods.

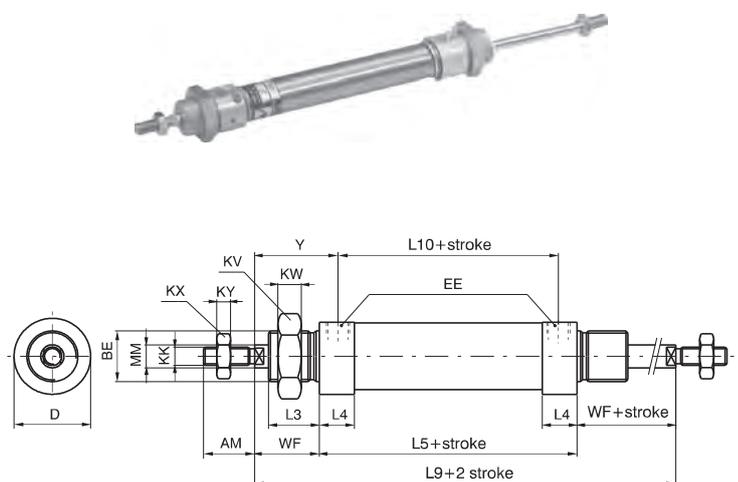




Table of dimensions

| Bore | 8 | 10 | 12 | 16 | 20 | 25 | 32 |
|-------------|----------|----------|---------|---------|---------|----------|----------|
| AM (-0,2) | 12 | 12 | 16 | 16 | 20 | 22 | 20 |
| BE | M12X1,25 | M12X1,25 | M16X1,5 | M16X1,5 | M22X1,5 | M22X1,5 | M30X1,5 |
| CD (H9) | 4 | 4 | 6 | 6 | 8 | 8 | 12 |
| D (h11) | 16 | 16 | 20 | 21 | 27 | 30 | 38 |
| EE | M5 | M5 | M5 | M5 | G1/8" | G1/8" | G1/8" |
| EW (d13) | 8 | 8 | 12 | 12 | 16 | 16 | 26 |
| KK (6g) | M4X0,7 | M4X0,7 | M6X1 | M6X1 | M8X1,25 | M10X1,25 | M10X1,25 |
| KV | 17 | 17 | 22 | 22 | 30 | 30 | 42 |
| KW | 5,5 | 5,5 | 6 | 6 | 7 | 7 | 8 |
| KX | 7 | 7 | 10 | 10 | 13 | 17 | 17 |
| KY | 3 | 3 | 4 | 4 | 5 | 6 | 6 |
| L | 6 | 6 | 9 | 9 | 12 | 13 | 13 |
| L1 (±1) * | 86 | 86 | 105 | 111 | 130 | 141 | 139 |
| L2 | 10 | 10 | 14 | 13 | 15 | 15 | 14 |
| L3 | 12 | 12 | 17 | 17 | 18 | 22 | 22 |
| L4 | 9 | 9 | 9 | 11 | 15,5 | 15 | 14,5 |
| L5 (±1) * | 46 | 46 | 50 | 56 | 68 | 69 | 69 |
| L6 * | 48 | 48 | 52 | 58 | 70,5 | 71,5 | 71,5 |
| L7 | 2 | 2 | 2 | 2 | 2,5 | 2,5 | 2,5 |
| L8 * | 64 | 64 | 74 | 80 | 94,5 | 99,5 | 99,5 |
| L9 (±1,2) * | 78 | 78 | 94 | 100 | 116 | 125 | 125 |
| L10 (±1) * | 37 | 37 | 41 | 45 | 52,5 | 53 | 54,5 |
| L11 | 1,5 | 1,5 | 1,5 | 1,5 | 2 | 2 | 2 |
| MM (f7) | 4 | 4 | 6 | 6 | 8 | 10 | 12 |
| MR | 12 | 12 | 16 | 16 | 18 | 19 | 22 |
| WF (±1,2) | 16 | 16 | 22 | 22 | 24 | 28 | 28 |
| XC (±1) * | 64 | 64 | 75 | 82 | 95 | 104 | 105 |
| Y (±1,2) | 20,5 | 20,5 | 26,5 | 27,5 | 32 | 36 | 35 |

Dimensions marked with * do not increase proportionally to stroke for rear spring version (over 25 mm stroke)

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STROKE TOLERANCE: until stroke 100 mm - 1,5, beyond + 2 mm.

| Weight | Stroke 0 | 30 | 35 | 65 | 80 | 160 | 200 | 310 |
|--------|------------|----|-----|----|----|-----|------|-----|
| g | every 10mm | 2 | 2,5 | 4 | 5 | 7,5 | 11,5 | 18 |

Without rear eye version

| Weight | Stroke 0 | 25 | 35 | 60 | 75 | 150 | 185 | 290 |
|--------|------------|----|-----|----|----|-----|------|-----|
| g | every 10mm | 2 | 2,5 | 4 | 5 | 7,5 | 11,5 | 18 |

Through rod cylinder version

| Weight | Stroke 0 | 35 | 40 | 75 | 95 | 200 | 250 | 370 |
|--------|------------|-----|----|----|----|------|------|-----|
| g | every 10mm | 2,5 | 3 | 6 | 7 | 10,5 | 15,5 | 24 |

PNEUMATIC ACTUATION