

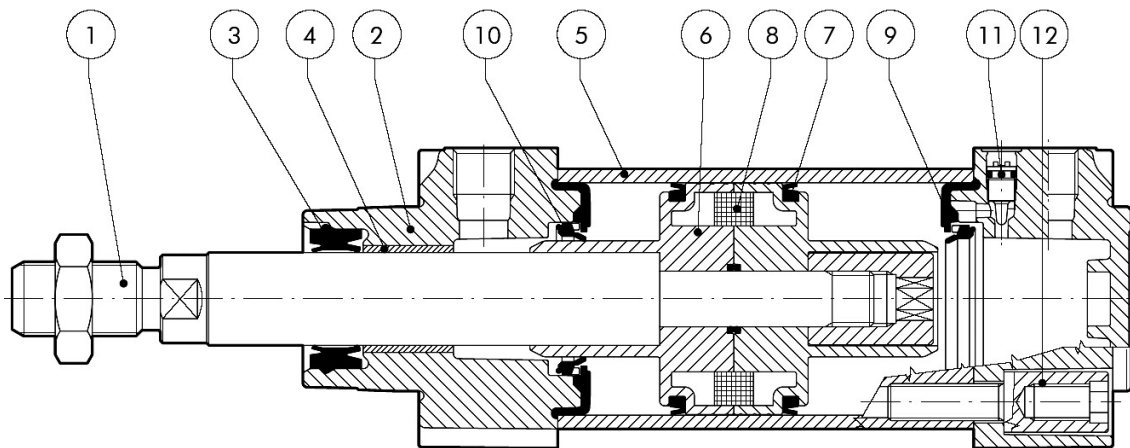
Actuators

Pneumatic actuators are usually utilized as executing elements in pneumatic systems. Available in a single-acting version (with a spring), double-acting and with a through-rod. In a single-acting version output position is forced by the spring, and a change of piston position requires compressed air intake. In a double-acting version both feed and return of the piston is obtained by compressed air. The actuators can be additionally equipped with magnets used for Non-contact Piston Position Detection and stroke cushioning.

Special design cylinders, "non-stick slip" version, are used to ensure smooth regulation of work. Used at low piston speed and transverse loads.

To prevent rotation of an actuator, it is recommended to use the piston rod of a special shape (TF actuator version) or guides. Then the piston rod and elements that are fixed to it are at constant angle or can transfer specified torque. All actuators are designed for operation with unlubricated air and do not require any maintenance. If lubricated air is used, lubrication must be continuous because it replaces the factory-applied grease.

Construction of ISO 15552 actuator



1. Piston rod: C45 steel or stainless steel, thick chromed.
2. Head: die cast aluminium.
3. Piston rod seal: polyurethane, NBR or FKM/FPM.
4. Guide bushing.
5. Body: drawn anodised calibrated aluminium.
6. Piston: self-lubricating technopolymer
7. Piston seal: polyurethane, NBR or FKM/FPM.
8. Magnet: plastoferrite.
9. Buffer + static O-rings: NBR or FKM/FPM
10. Cushioning seal: polyurethane, NBR or FKM/FPM.
11. Cushioning needle: OT 58 brass, with needle out movement safety system even when fully open.
12. Screws: for assembly.

INDUSTRIAL PNEUMATICS - actuators

ISO 6432 mini-cylinders



ISO 6432 Ø 8 ÷ 25 mm

Piston diameter: Ø 8, 10, 12, 16, 20, 25 mm

Working stroke: Up to 500 mm

Working press.: From 0.8 up to 10 bar - Ø 8 ÷ 12 mm
From 0.6 up to 10 bar - Ø 16 ÷ 25 mm

Working temp.: From -35°C up to +150°C

112	0	12	0050	X	P
version	construction	piston diameter	working stroke	material	sealing
101 - SE axial connection 102 - DEM axial connection 106* - SE 109* - DEA 110 - DE 111 - SE 112 - DEM 113 - DEMA	O - standard V - without head nut S - non-magnetic G - non-stick slip	08** 10** 12** 16 20 25	up to 500 mm	A - piston rod: C45 chrome piston: aluminium C - piston rod: C45 chrome piston: technopolymer Z - piston rod and nut: stainless steel piston: aluminium X - piston rod and nut: stainless steel piston: technopolymer	N - NBR P - polyurethane V - Viton*** B - low temperature***

* - available from Ø16mm piston diameter,

** - stainless steel piston rod,

*** - only for non-magnetic versions and with aluminium piston.

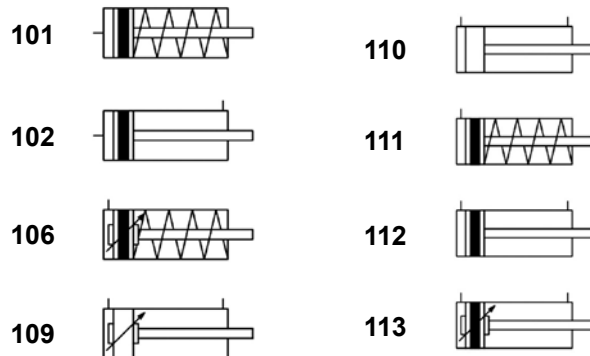
SE - single-acting (magnetic), cushioned (101, 111), adjustable cushioning (106),

DE - double-acting (non-magnetic), cushioned,

DEA - double-acting (non-magnetic), adjustable cushioning,

DEM - double-acting (magnetic), cushioned (102, 112),

DEMA - double-acting (magnetic), adjustable cushioning.



There are also economic versions of actuators (reduced weight) or versions made of stainless steel available.

INDUSTRIAL PNEUMATICS - actuators

Round cylinders RNDC series



RNDC Ø 32 ÷ 50 mm

Piston diameter: Ø 32, 40, 50 mm

Working stroke: Up to 500 mm

Working press.: From 0.4 up to 10 bar - Ø 32, 40 mm
From 0.3 up to 10 bar - Ø 50 mm

Working temp.: From -35°C up to +150°C

111	0	32	0100	C	N
version	construction	piston diameter	working stroke	material	sealing
109 - DEA 110 - DE 111* - SE 112 - DEM 113 - DEMA	O - standard V - without head nut S - non-magnetic G - non-stick slip	32 40 50	up to 500 mm	A - piston rod: C45 chrome piston: aluminium C - piston rod: C45 chrome piston: technopolymer Z - piston rod and nut: stainless steel piston: aluminium X - piston rod and nut: stainless steel piston: technopolymer	N - NBR P - polyurethane V - Viton** B - low temperature**

* - only for version with aluminium piston

** - only for non-magnetic versions and with aluminium piston

SE - single-acting (magnetic), cushioned (available only with aluminium piston)

DE - double-acting (non-magnetic), cushioned

DEA - double-acting (non-magnetic), adjustable cushioning

DEM - double-acting (magnetic), cushioned

DEMA - double-acting (magnetic), adjustable cushioning



Actuators made of stainless steel are also available.

INDUSTRIAL PNEUMATICS - actuators

ISO 15552 cylinders



ISO 15552 type A Ø 32 ÷ 125 mm

Piston diameter: Ø 32, 40, 50, 63, 80, 100, 125 mm

Working stroke: Up to 2800 mm

Working press.: From 0.4 up to 10 bar - Ø 32, 40 mm

From 0.3 up to 10 bar - Ø 50, 63 mm

From 0.2 up to 10 bar - Ø 80 ÷ 125 mm

Working temp.: From -35°C up to +150°C

121

A

A1

0100

C

P

version	construction	piston diameter	working stroke	material	sealing
121 - DEMA 124 - DEM 126* - SE*	A - standard B - non stick slip C non-magnetic	32 40 50 63 80 A1 - 100 A2 - 125	up to 2800 mm	A - piston rod: C45 chrome piston: aluminium (standard for Ø ≥ 80 mm) C - piston rod: C45 chrome piston: technopolymer (standard for Ø ≤ 63 mm) Z - piston rod and nut stainless steel piston: aluminium X - piston rod and nut: stainless steel piston: technopolymer	N - NBR P - polyurethane V - Viton** B - low temperature**

* - available up to Ø 63, only with aluminium piston

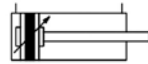
** - available only for non-magnetic versions and with aluminium piston

DEMA - double-acting (magnetic), adjustable cushioning

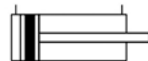
DEM - double-acting (magnetic), cushioned

SE - single-acting (magnetic), adjustable cushioning

121



124



126



There are also economic versions of actuators (reduced weight) or versions made of stainless steel available.

INDUSTRIAL PNEUMATICS - actuators

ISO 15552 cylinders



ISO 15552 Ø 160 ÷ 200 mm

Piston diameter: Ø 160, 200, mm

Working stroke: From 25 up to 2800 mm

Working press.: Up to 10 bar

Working temp.: From -10°C up to +70°C

W121

160

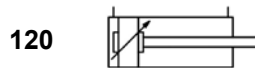
0050

version	piston diameter	working stroke
W120 - DEA W121 - DEMA W124 - DEM	160 - piston rod: C45 chrome - seal: NBR 200 - piston rod: C45 chrome - seal: NBR XA3 - Ø 160 mm - piston rod stainless steel seal: NBR XA4 - Ø 200 mm - piston rod stainless steel seal: NBR VA3 - Ø 160 mm - piston rod stainless steel seal: FKM/FPM VA4 - Ø 200 mm - piston rod stainless steel seal: FKM/FPM KA3 - Ø 160 mm - piston rod: C45 chrome seal: FKM/FPM KA4 - Ø 200 mm - piston rod: C45 chrome seal: FKM/FPM	from 25 to 2800 mm

DEA - double-acting (non-magnetic), adjustable cushioning

DEMA - double-acting (magnetic), adjustable cushioning

DEM - double-acting (magnetic), cushioned



Actuators



Mini actuator Ø 6 ÷ 16 mm - CRTC series

- Piston diameter: 6 - 10 - 16 mm
- Standard stroke length: 5, 10, 15 mm
- Threaded connection: M5
- Operation with unlubricated compressed air also possible
- Seals: NBR
- Versions: single-acting
- O-ring seal enables assembly directly in the machine body



Short-stroke actuator Ø 12 ÷ 100 mm - SSCY series

- Piston diameter: 12 ÷ 100 mm
- Standard stroke length: 5 ÷ 150 mm (depends on a version)
- Cushioning in end-of-stroke positions adjustable on both sides
- Operation with unlubricated compressed air also possible
- Seals: NBR, polyurethane, Viton
- Versions: single or double-acting, with a through-rod, protection against rotation, magnetic position sensors (standard), with a built-in oscillating flange
- Assembly set



Compact actuator Ø 12 ÷ 100 mm - CMPC series

- Piston diameter: 12 ÷ 100 mm
- Single or double-acting with extended or retracted piston rod, with a through-rod, protection against rotation
- Operation with unlubricated compressed air also possible
- Seals: polyurethane
- Fixing holes spacing according to: ISO 6431-VDMA 24562, NFE 49-004-1 and 2
- Can be mounted in series of 2, 3 or 4 actuators (multi-actuator units)
- Multi-position units (with 2, 3 stages) can be formed
- Assembly set



Actuator with double piston rod Ø 32 ÷ 100 mm - TWNC series

- Piston diameter: 32 ÷ 100 mm
- Standard stroke length: 25 ÷ 500 mm
- Axial dimensions according to ISO 6431
- Cushioning in end-of-stroke positions adjustable on both sides
- Operation with unlubricated compressed air also possible
- Seals: NBR, polyurethane
- Versions: double-acting, with a single or twin through-rod, magnetic position sensors (standard)
- Assembly set



Rotary actuator Ø 32 ÷ 100 mm - R1 series

- Piston diameter: 32 ÷ 100 mm
- Standard rotation angle: 90°, 180°, 270°, 360° with mechanical stroke adjustment
- Magnetic position sensors
- Cushioning in end-of-stroke positions adjustable on both sides
- Seals: NBR
- Operation with unlubricated compressed air also possible
- Driving shaft with male pinion or female hole
- Construction: pinion - rack mechanism
- Special versions: on request