Series 61 cylinders - Aluminium profile

Single and double-acting, magnetic, cushioned
Standard, low friction, low temperatures and tandem versions
ø 32, 40, 50, 63, 80, 100, 125 mm

Series 61 cylinders have been designed to comply with the dimensions laid down in the ISO 15552 standards. A permanent magnet, mounted on the piston in these cylinders, enables information to be received regarding the piston position by means of proximity switches mounted in grooves along the cylinder profile. These grooves can be covered with a slot cover profile.

This cylinder series is equipped with adjustable end-stroke cushioning. Moreover, they are equipped with a mechanical cushioning in order to reduce the impact of the piston as it reaches the end of the stroke.

- In compliance with ISO 15552 standards and with the previous DIN/ISO 6431 - VDMA 24562 standards
- Rolled stainless steel rod
- Clean design with adjustable pneumatic cushioning
- Available special versions

TANDEM:

- Double thrust and traction forces

LOW FRICTION:

- Friction force reduced by over 40%

LOW TEMPERATURE:

- Versions for -40°C and for -50°C

G VARIANT FOR DUSTY APPLICATIONS:

- Highly resistant to dust, cement, resin, mud and wood residue

GENERAL DATA

Type of construction	with tie-rods (inside the profile)
Operation	double-acting, single-acting, tandem. Low friction version: double-acting only.
Materials	standard: AL end-blocks and piston, rolled stainless steel AISI 420B rod, anodized AL profile tube, zinc-plated steel tie-rods and tie-rod nuts, PU seals; low friction: standard materials with NBR piston seal and NBR rod seal (FKM rod seal on request) low temperature: standard materials with chrome plated stainless steel AISI 420B rod, brass rod scraper ring, stainless steel AISI 303 nuts, stainless steel AISI 420B tie-rods, PU piston seals and NBR rod seal
Type of mounting	with front / rear flange, foot mounting, with front / rear / centre / swivel trunnion
Stroke min - max	10 ÷ 2500 mm
Operating temperature	standard and low friction: 0°C ÷ 80°C (with dry air -20°C) low temperature (-40°C version): -40°C ÷ 60°C (with dry air -40°C) low temperature (-50°C version): -50°C ÷ 60°C (with dry air -50°C)
Operating pressure	1 ÷ 10 bar (standard and low temperature); 0,1 ÷ 10 bar (low friction)
Speed	10 ÷ 1000 mm/sec, no load (standard and low temperature); 5 ÷ 1000 mm/sec, no load (low friction)
Fluid	filtered air, without lubrication. For standard versions only: if lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

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STANDARD STROKES FOR CYLINDERS SERIES 61

■ = Single-acting (standard and low temperature) ✖ = Double-acting (standard, low friction and low temperature)
Other strokes up to 2500 mm are available on request.

STANDARD STROKES														
Ø	25	50	75	80	100	125	150	160	200	250	300	320	400	500
32	■ ✖	■ ✖	■ ✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
40	■ ✖	■ ✖	■ ✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
50	■ ✖	■ ✖	■ ✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
63	■ ✖	■ ✖	■ ✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
80	■ ✖	■ ✖	■ ✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
100		■ ✖	■ ✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖
125		✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖	✖

CODING EXAMPLE

61	M	2	P	050	A	0200	

61 — SERIES

M — VERSION
M = standard, magnetic L = low friction, magnetic

2 — OPERATION
1 = single-acting, front spring (ø 32 ± ø 100)
2 = double-acting, front and rear cushioned
3 = double-acting, no cushion
4 = double-acting, rear cushioned
5 = double-acting, front cushioned
6 = double-acting, through-rod, front and rear cushioned
7 = single-acting, through-rod

PNEUMATIC SYMBOLS
CS07
CD09
CD08
CD10
CD11
CD13
CS11

P — MATERIALS
P = see the general data on page 1/1.25.01
R = stainless steel AISI 420B tie-rods, stainless steel AISI 303 tie-rod nuts, others: see p. 1/1.25.01
C = rolled stainless steel AISI 303 piston rod, stainless steel AISI 304 piston rod nut
U = rolled stainless steel AISI 303 piston rod, AISI 304 piston-rod nut, AISI 420B tie-rods, AISI 303 tie-rod nuts
W = rolled stainless steel AISI 304 piston rod, AISI304 piston-rod nut, AISI 420B tie-rods, AISI 303 tie-rod nuts
Z = chrome plated stainless steel AISI 420B rod, stainless steel AISI 304 rod nut, stainless steel AISI 420B tie-rods, stainless steel AISI 303 tie-rods nuts, seals for low temperature (-40°C), brass rod scraper [Ø 125 excepted]
Y = chrome plated stainless steel AISI 420B rod, stainless steel AISI 304 rod nut, stainless steel AISI 420B tie-rods, stainless steel AISI 303 tie-rods nuts, seals for low temperature (-50°C), brass rod scraper [Ø 125 excepted]

050 — BORE
032 = 32 mm - 040 = 40 mm - 050 = 50 mm - 063 = 63 mm - 080 = 80 mm - 100 = 100 mm - 125 = 125 mm

A — CONSTRUCTION
A = standard with rod nut - RL = cylinder with rod lock

0200 — STROKE (see the table)

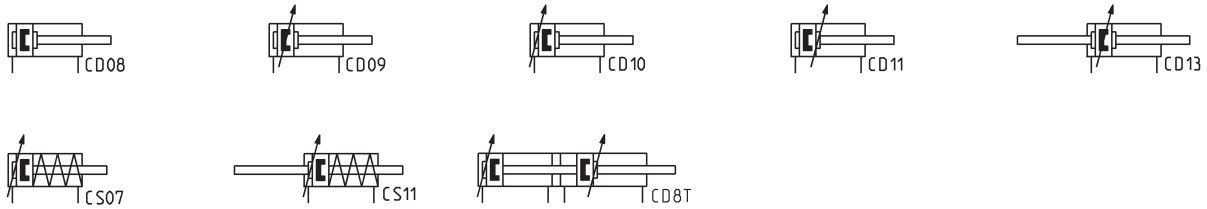
= standard V = FKM rod seal N = tandem (pneumatic symbol: CD8T)
R = NBR rod seal W = all FKM seals ÷130C° C = PU coated cylinder. Colour: Grey *
L = low friction version without rod seal (rear supply only) ** (_ _ _) = extended piston rod _ _ _ mm
G = with brass rod scraper (chrome plated stainless steel AISI 420B rod, NBR rod seal)

* Version C: available on request. For further information, please contact our technical dept.
** The possibility to order the cylinder without piston rod seal, further reduces the friction force.

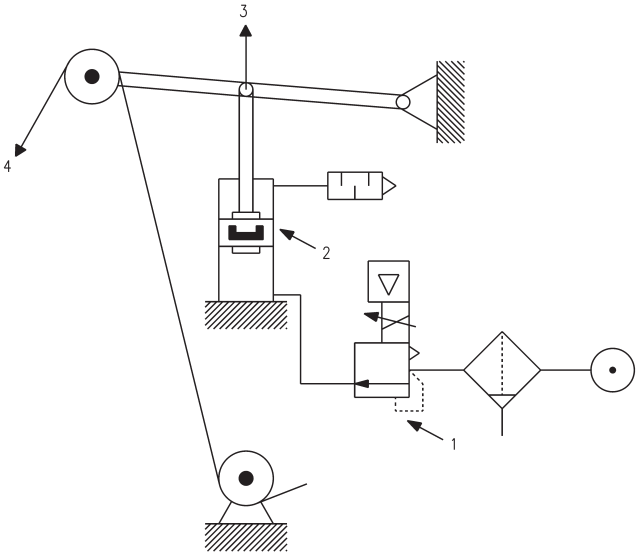
Note: all double-acting cylinders are also available in the low friction version.

PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.

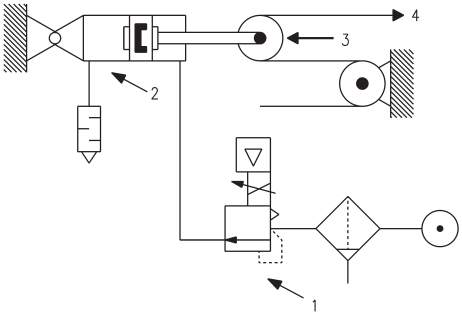


Low friction cylinders Series 61 - APPLICATION EXAMPLES



CYLINDER IN THRUST

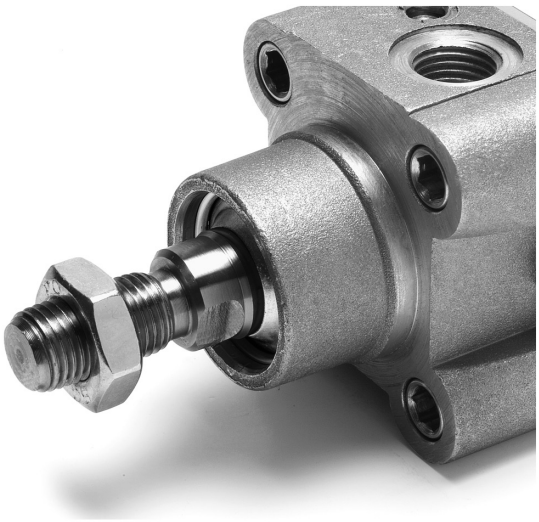
DRAWING NOTES:
1. Precision pressure regulator or electro-pneumatic regulator
2. Low friction cylinder
3. Force direction
4. Band

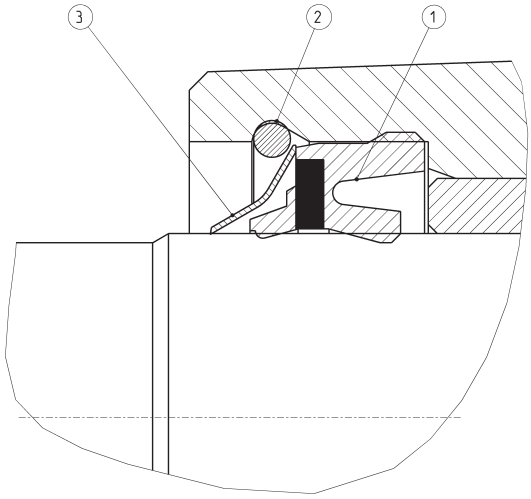


CYLINDER IN TRACTION

Note: in order to reach the highest performance, it is recommended to connect precision pressure regulator or an electro-pneumatic regulator with the low friction cylinder as shown in the drawing.

Low temperature cylinders Series 61 - DETAIL





1 = rod seal
2 = seeger
3 = metal scraper