

air Link clamp

Dual cylinder model Double acting 0.5 MPa

model **CLZ**



Dual cylinder model
model CLZ25-F

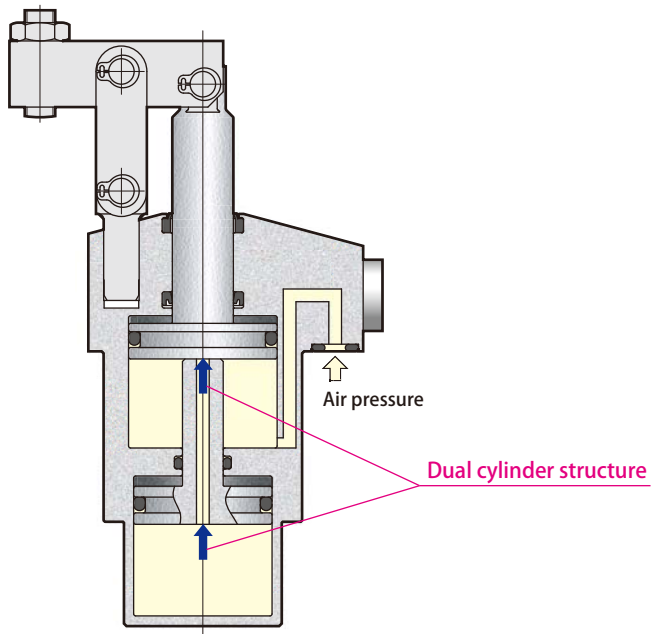
Dual cylinder model

model **CLZ**□-□ PAT.

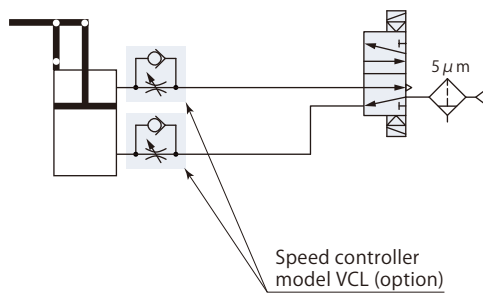
Dual cylinder structure enables cylinder force upper than that of single cylinder's.

Air link clamp

CLZ
Dual cylinder model



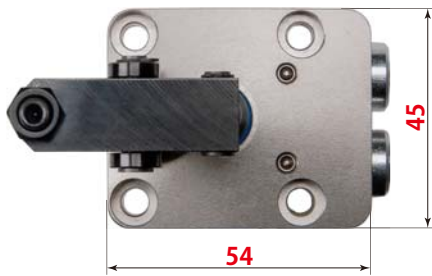
Pneumatic circuit diagram



Comparison with the current model

Air link clamp
Dual cylinder model
CLZ25

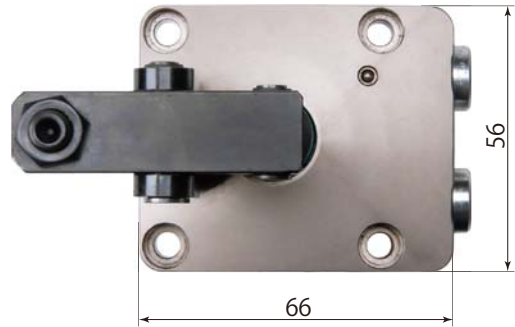
Cylinder force : 590 N
(Air pressure 0.5MPa)



Cylinder force Equality

Air link clamp
Standard model
CLX40

Cylinder force : 630 N
(Air pressure 0.5MPa)



Flange area approx. 66%



Less space

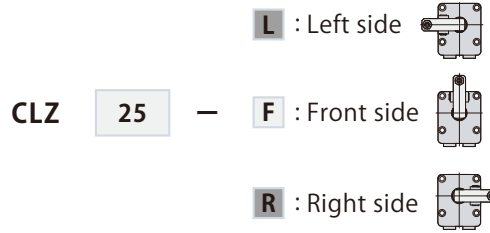


Height from mounting surface approx. 82%



Specifications

Size Clamp arm mounting direction



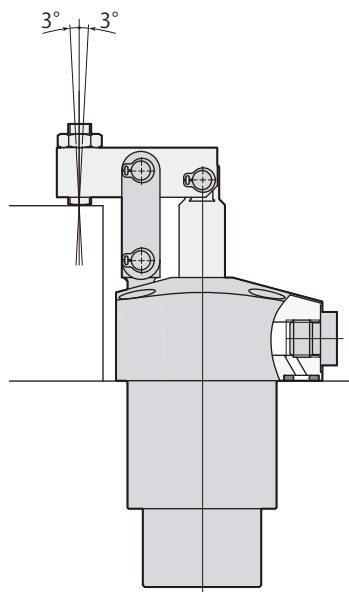
 indicates made to order.

Model		CLZ25	
Cylinder force (Air pressure 0.5 MPa)	N	590	
Rod diameter	mm	12	
Effective area (clamp)	mm ²	1183	
Full stroke	mm	19	
Clamp stroke	mm	17.5	
Stroke margin	mm	1.5	
Cylinder capacity	Clamp	cm ³	22.5
	Unclamp	cm ³	20.3
Mass	kg	0.34	
Recommended tightening torque of mounting screws*1		N·m	4.0

- Air pressure range:0.1–0.5 MPa ● Proof pressure:0.75 MPa ● Operating temperature:0–70 °C
- Fluid used: Air*2 ● Oil supply: Not required
- Seals are resistant to chlorine-based cutting fluid.

*1: ISO R898 class 12.9

*2: Supply the dry and filtered air. Particulate size 5 μm or less is recommended.



Clamping point

When clamping the workpiece, the clamp arm should be situated like the sketch as shown below. (Clamping point)

Please avoid any non-axial force such as the bending moment toward the piston rod.

(Allowable angle ±3 °)

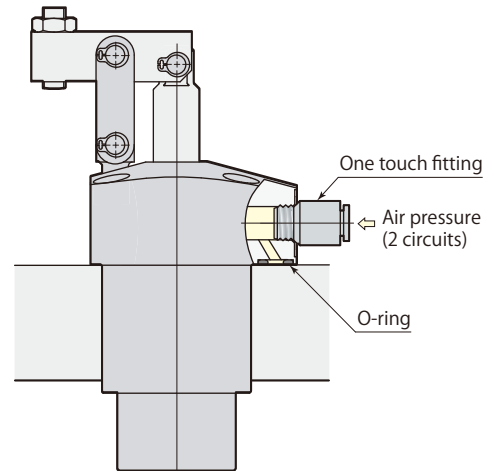
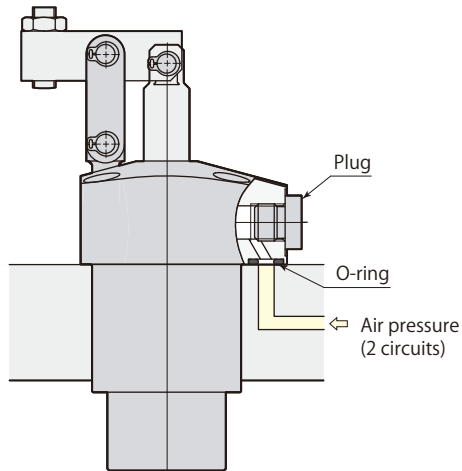
Manifold piping and G port piping are available.

Manifold piping

When choosing manifold piping, a speed controller model VCL is mountable on the G ports of the clamp.

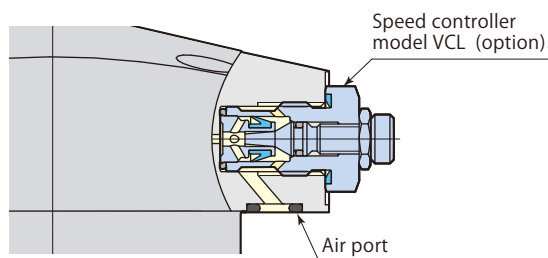
G port piping

Dismount plugs when choosing G port piping. (O-ring must be used.) The one touch fitting or the speed controller with one touch fitting should be mounted when choosing G port piping.



Speed controller model VCL

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Performance diagram and Performance table

Clamping force varies depending on the clamp arm length (LH) and air pressure (P).

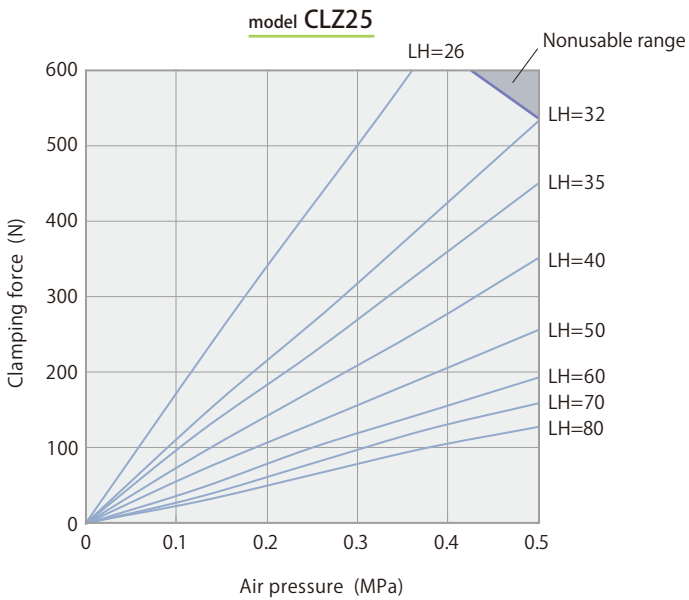
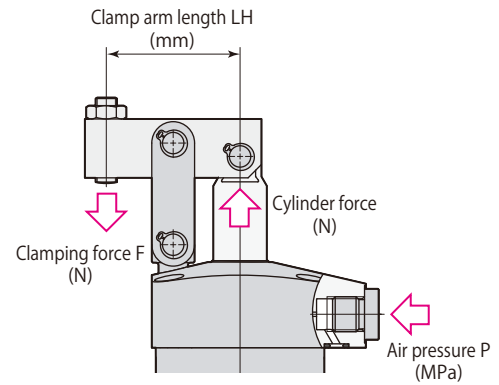
Clamping force calculation formula

$$F = \text{Coefficient 1} \times P \times 1000 / (\text{LH} - \text{Coefficient 2})$$

F: Clamping force P: Air pressure LH: Clamp arm length

Clamp arm length (LH) 50 mm, at air pressure 0.5 MPa,
Clamping force $F = 17.03 \times 0.5 \times 1000 / (50 - 16) = 250.44 \text{ N}$

Do not use the clamp in the nonusable range. It may cause damage of link mechanism.



model CLZ25		Clamping force $F = 17.03 \times P \times 1000 / (\text{LH} - 16)$								Min. arm length Min. LH mm
Air pressure MPa	Cylinder force N	Clamping force N								
		Clamp arm length LH mm								
		26	32	35	40	50	60	70	80	
0.5	590		530	450	350	250	190	160	130	32
0.4	470		420	360	280	200	150	130	110	27
0.3	350		320	270	210	150	110	90	80	24
0.2	240		220	180	140	100	80	60	50	24
0.1	120		110	90	70	50	40	30	30	24

■ indicates nonusable range

Air link clamp

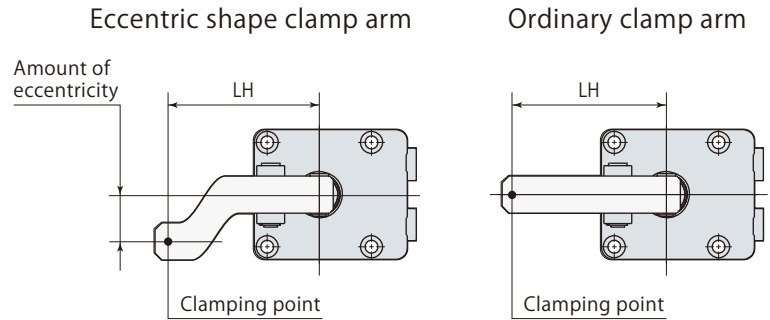
CLZ Dual cylinder model

Clamp arm allowable eccentricity

An eccentric shape clamp arm, as shown in diagram on right can be used with link clamp model CLZ, if it is not possible to set clamping point at tip section of clamp arm in alignment with center line of piston rod and clamp arm.

Amount of eccentricity, however, must be within allowable eccentricity shown below.

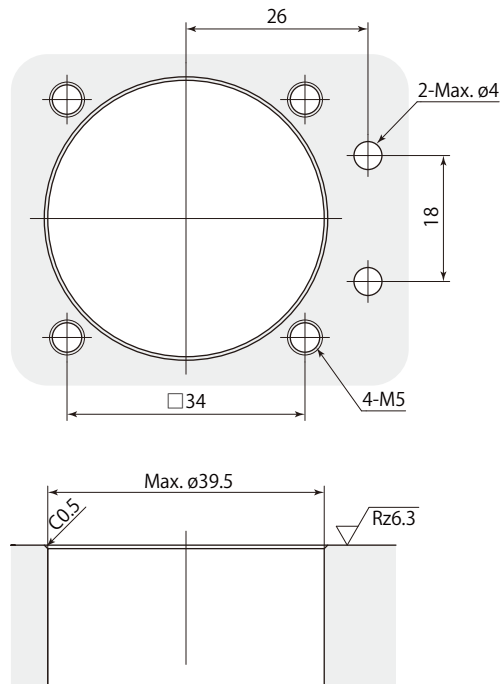
Using a clamp arm that exceeds allowable eccentricity results in significant eccentric load on link mechanism and piston rod, leading to malfunction.



model CLZ25		□ indicates nonusable range						
Air pressure MPa	Allowable eccentricity mm							
	Clamp arm length LH mm							
	26	32	35	40	50	60	70	80
0.5	□	□	□	2	6	10	13	18
0.4	□	2	3	6	12	18	22	28
0.3	1	6	9	13	22	32	41	47
0.2	6	15	19	27	41	53	60	60
0.1	24	32	35	40	50	60	60	60

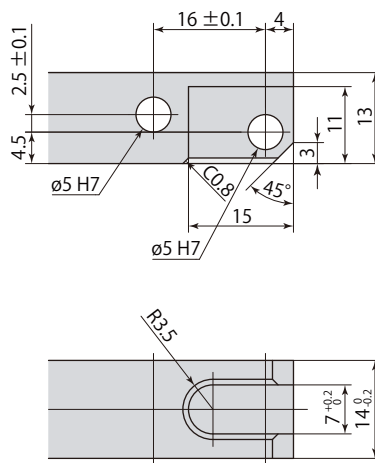
CLZ Dual cylinder model Air link clamp

Mounting details



Clamp arm mounting details

Manufacture a clamp arm with the dimensions shown in the table below.



Recommended material: S45C (HB167~229)