

air Swing clamp mini air Link clamp mini

Double acting 0.5 MPa



air Swing clamp mini
model RTC01

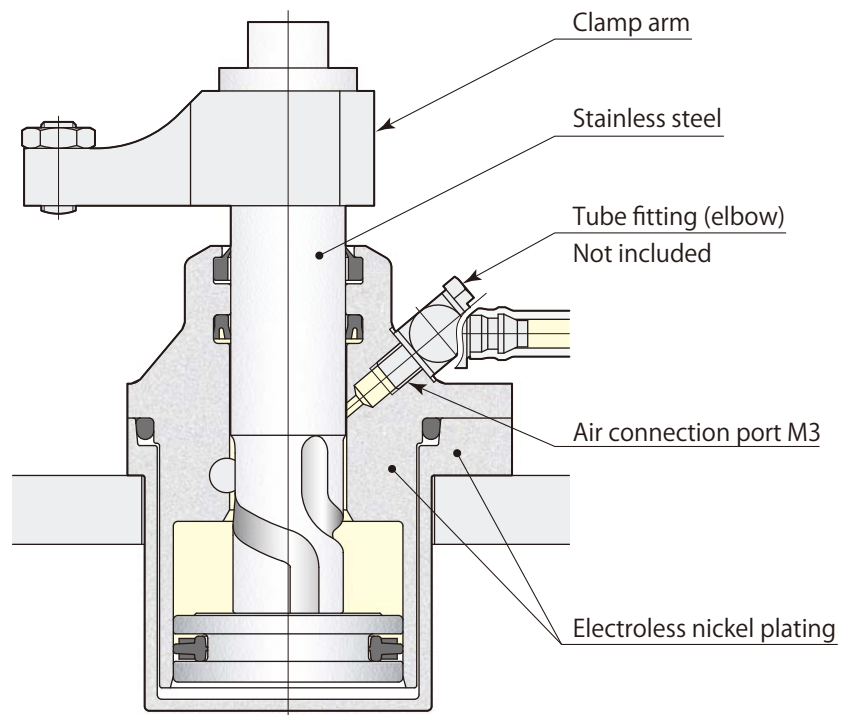
air Link clamp mini
model RLC01

air Swing clamp mini

model **RTC 01** PAT.P.

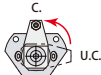



Full-scale photo



Specifications

Swing direction (when clamping)

L : Counter-clockwise  u.c.

R : Clockwise  u.c.

(Nil) : Standard

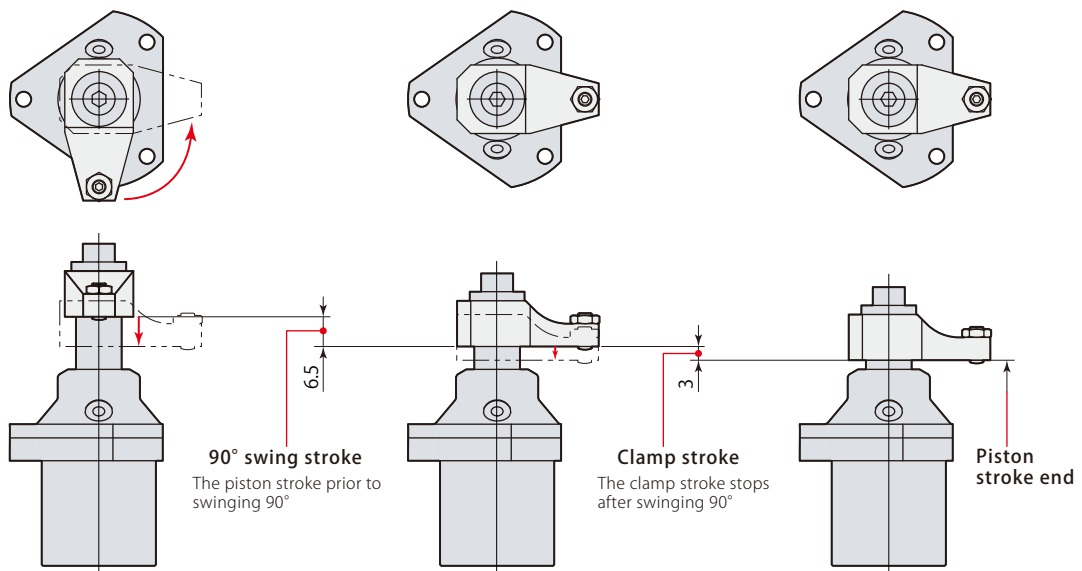
– **A1** : Clamp arm included

– **A2** : Clamp arm included

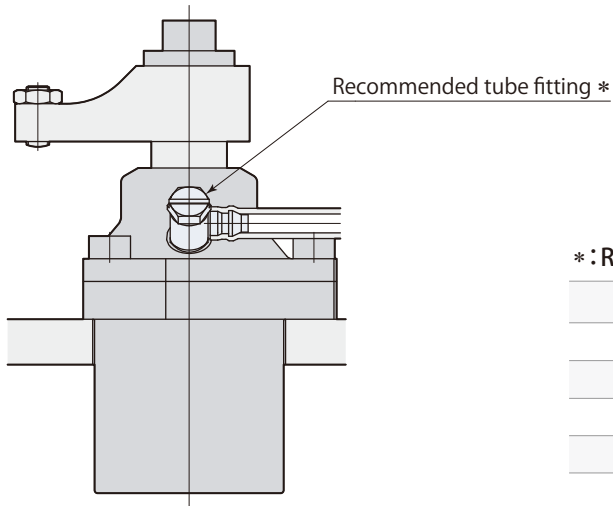
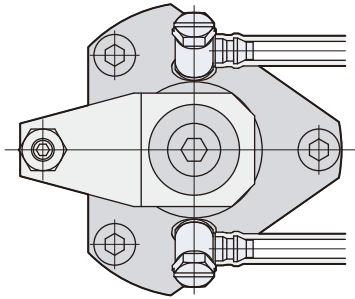
Model		RTC01	
Cylinder force (air pressure 0.5MPa)	N	118	
Cylinder inner diameter	mm	20	
Rod diameter	mm	10	
Effective area (clamp)	mm ²	236	
Swing angle		90° ± 3°	
Positioning pin groove position accuracy		± 1°	
Repeated clamp positioning accuracy		± 0.5°	
Full stroke	mm	9.5	
90° swing stroke	mm	6.5	
Clamp stroke	mm	3	
Cylinder capacity	Clamp	cm ³	2.2
	Unclamp	cm ³	3.0
Clamp arm allowable moment of inertia	kg·m ²	2.3 × 10 ⁻⁴	
Mass (arm not included)	g	141	
Recommended tightening torque of mounting screws*1	N·m	1.0	
Recommended tightening torque of cap screw*2	N·m	3.0	

- Pressure range: 0.1–0.5 MPa
- Proof pressure: 0.75 MPa
- Operating temperature: 0–70 °C
- Fluid used: Air*3
- Oil supply: Not required
- *1: ISO R898 class 12.9
- *2: Arm mounting screw
- *3: Supply dry air through a filter of 5 μm or less.

Clamping must be done within the range of the clamp stroke.



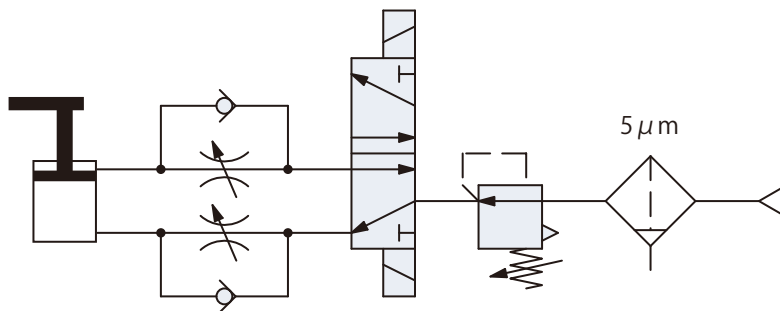
Piping method



***:Recommended tube fitting**

Supplier	Model
SMC	M-3ALU-4
CKD	FTL4-M3
KOGANEI	UEF4-M3
PISCO	LH-0425-M3

Air circuit diagram



- Adjust the swing speed with a speed controller to ensure that the 90° swing time of the clamp arm is more than 0.2 seconds.

Performance table

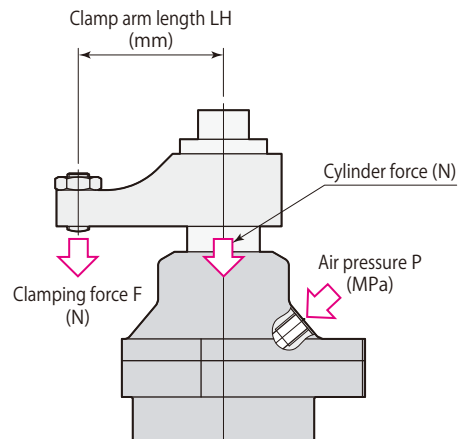
Clamping force varies depending on the clamp arm length (LH) and air pressure (P).

Clamping force calculation formula

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

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

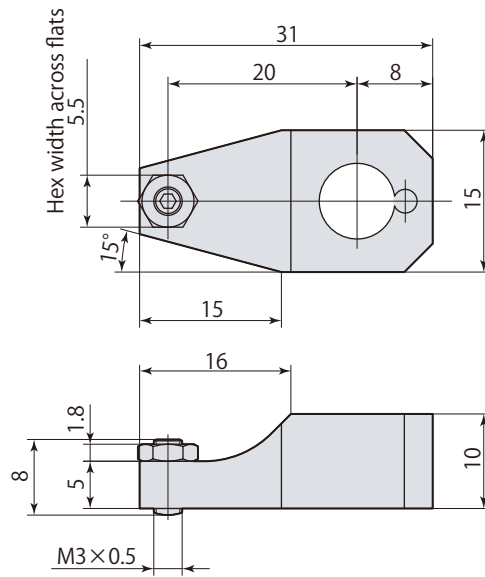
RTC01 with clamp arm length (LH) 20 mm at air pressure of 0.4MPa, Clamping force F is calculated by $0.4 \times 1000 / (4.244 + 0.03778 \times 20) = 80 \text{ N}$



model RTC01		Clamping force $F = P \times 1000 / (4.244 + 0.03778 \times \text{LH})$				
Air pressure MPa	Cylinder force N	Clamping force N				
		Clamp arm length LH mm				
		16	20	24	28	32
0.5	118	103	100	97	94	92
0.4	94	82	80	78	75	73
0.3	71	62	60	58	57	55
0.2	47	41	40	39	38	37
0.1	24	21	20	19	19	18

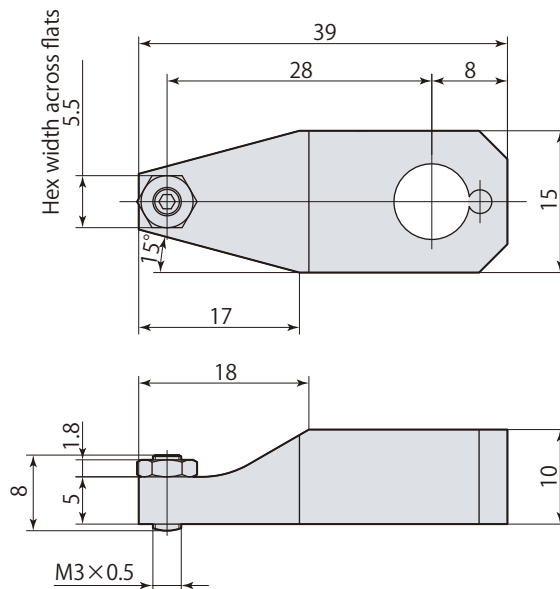
-A1 Clamp arm

Material: Stainless steel

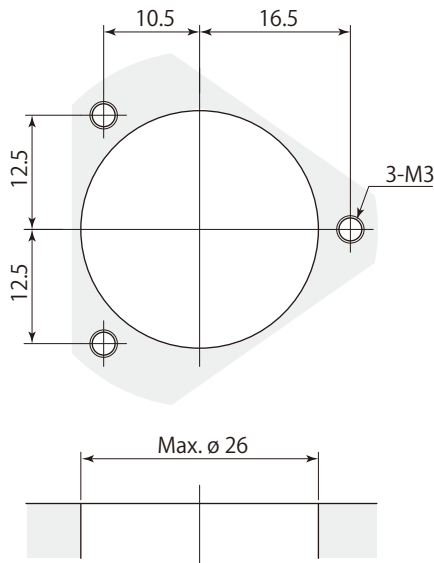


-A2 Clamp arm

Material: Stainless steel

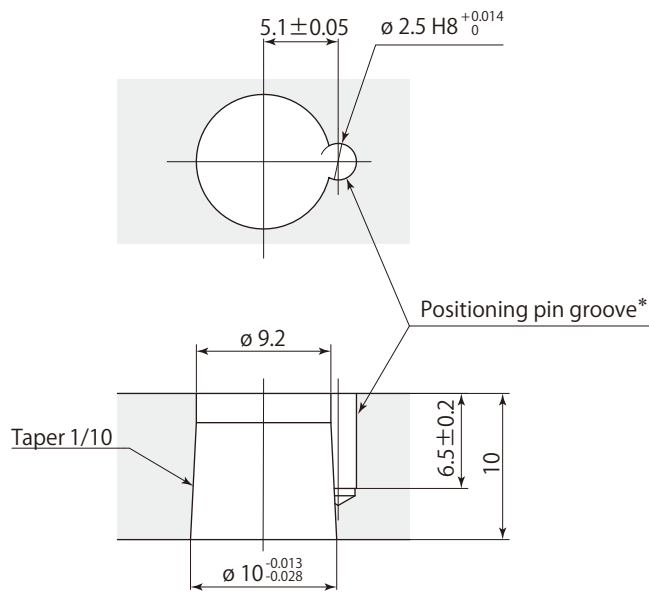


Mounting details



Clamp arm mounting details

Manufacture a clamp arm with the dimensions shown below.

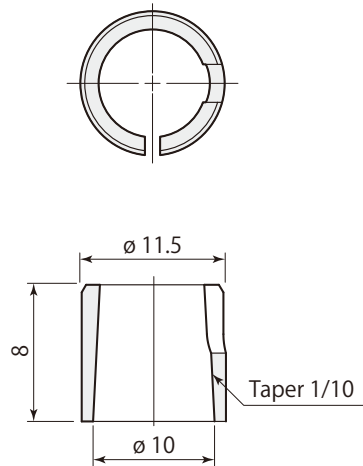


*: Machining a groove is not required if a positioning pin is not used. A positioning pin will ensure that the clamping arm is positioned securely and easily in the mounting direction.

Taper sleeve

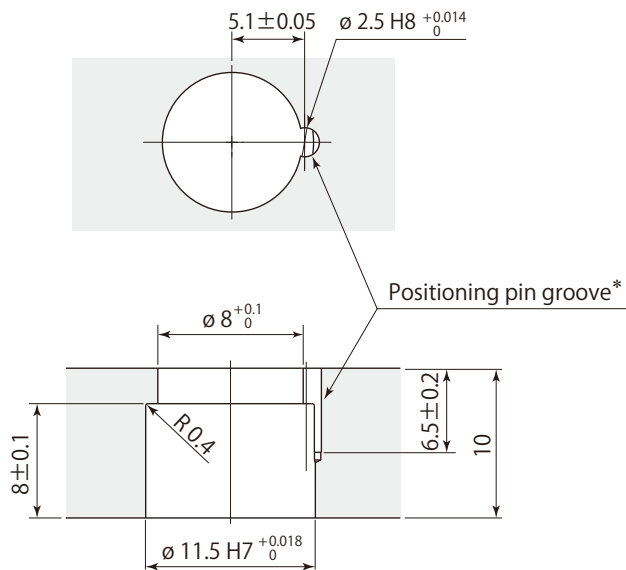
Material: Stainless steel

RTH 01 — CS : Taper sleeve



Clamp arm mounting details (Using taper sleeve)

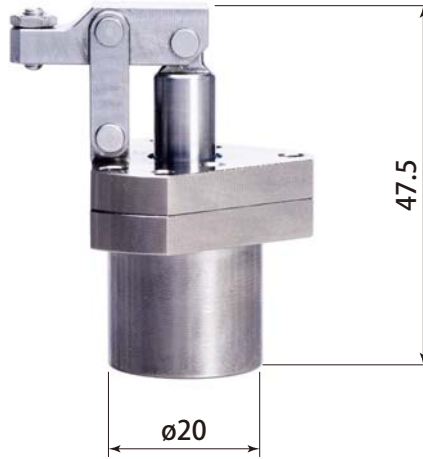
Manufacture a clamp arm with the dimensions shown below.



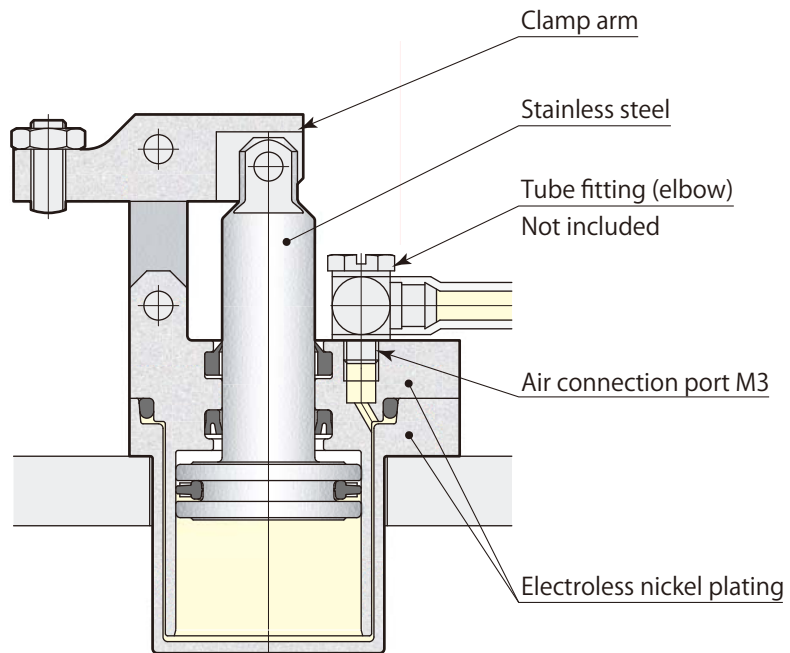
*: Machining a groove is not required if a positioning pin is not used. A positioning pin will ensure that the clamping arm is positioned securely and easily in the mounting direction.

air Link clamp mini

model **RLC 01** PAT.P.



Full-scale photo



Specifications

RLC **01** (Nil) : Standard

- **A1** : Clamp arm included
- **A2** : Clamp arm included

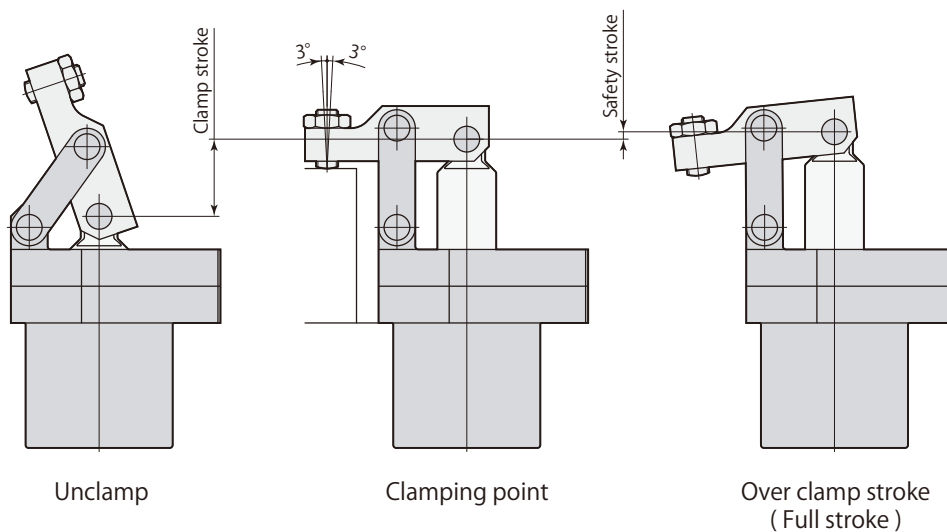
Model		RLC01	
Cylinder force (air pressure 0.5MPa)	N	101	
Cylinder inner diameter	mm	16	
Rod diameter	mm	8	
Effective area (clamp)	mm ²	201	
Full stroke	mm	11.5	
Clamp stroke	mm	10.5	
Safety stroke	mm	1	
Cylinder capacity	Clamp	cm ³	2.3
	Unclamp	cm ³	1.7
Mass (arm not included)	g	75	
Recommended tightening torque of mounting screws*1	N·m	1.0	

● 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

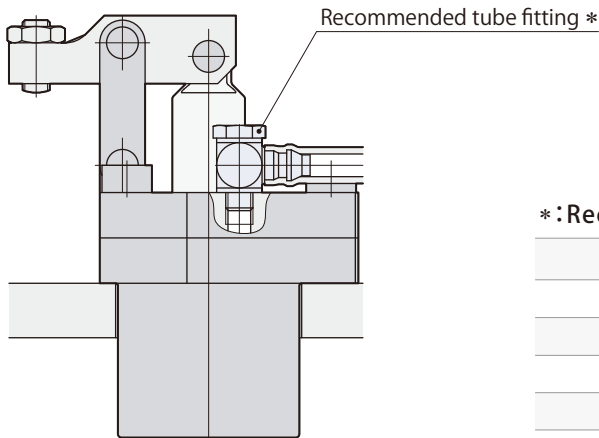
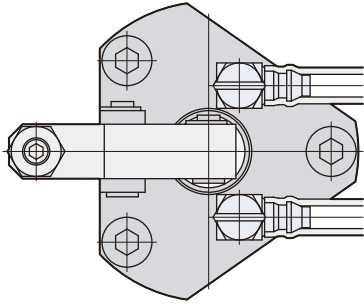
*1: ISO R898 class 12.9

*2: Supply dry air through a filter of 5 μm or less.



Clamping should be performed at the clamping point. Do not apply any force other than axial to the piston rod. (Allowable angle $\pm 3^\circ$)

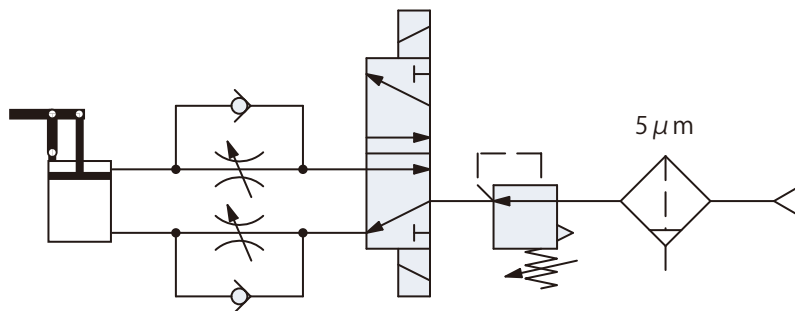
Piping method



*:Recommended tube fitting

Supplier	Model
SMC	M-3ALU-4
CKD	FTL4-M3
KOGANEI	UEF4-M3
PISCO	LH-0425-M3

Air circuit diagram



Performance diagram & Performance table

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

Clamping force calculation formula

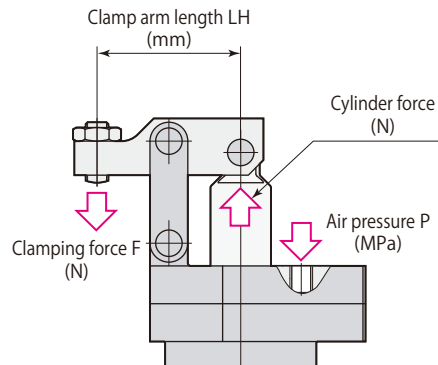
$$F = \text{Coefficient 1} \times P / (\text{LH} - \text{Coefficient 2})$$

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

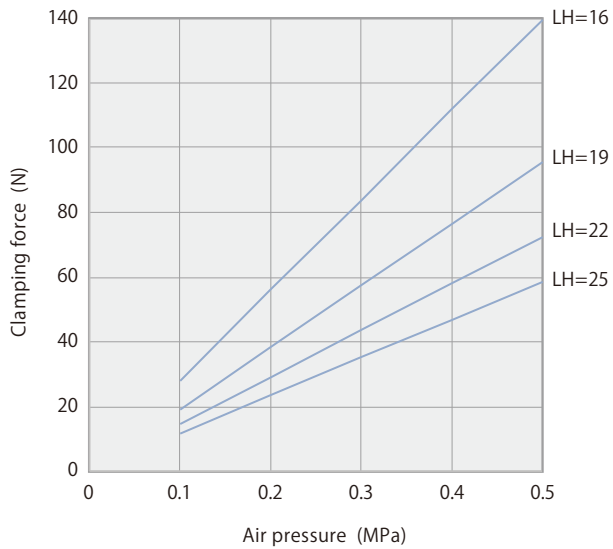
RLC01 with clamp arm length (LH) 16 mm at air pressure of 0.5 MPa,

Clamping force F is calculated by

$$1815 \times 0.5 / (16 - 9.5) = 139.6 \text{ N}$$

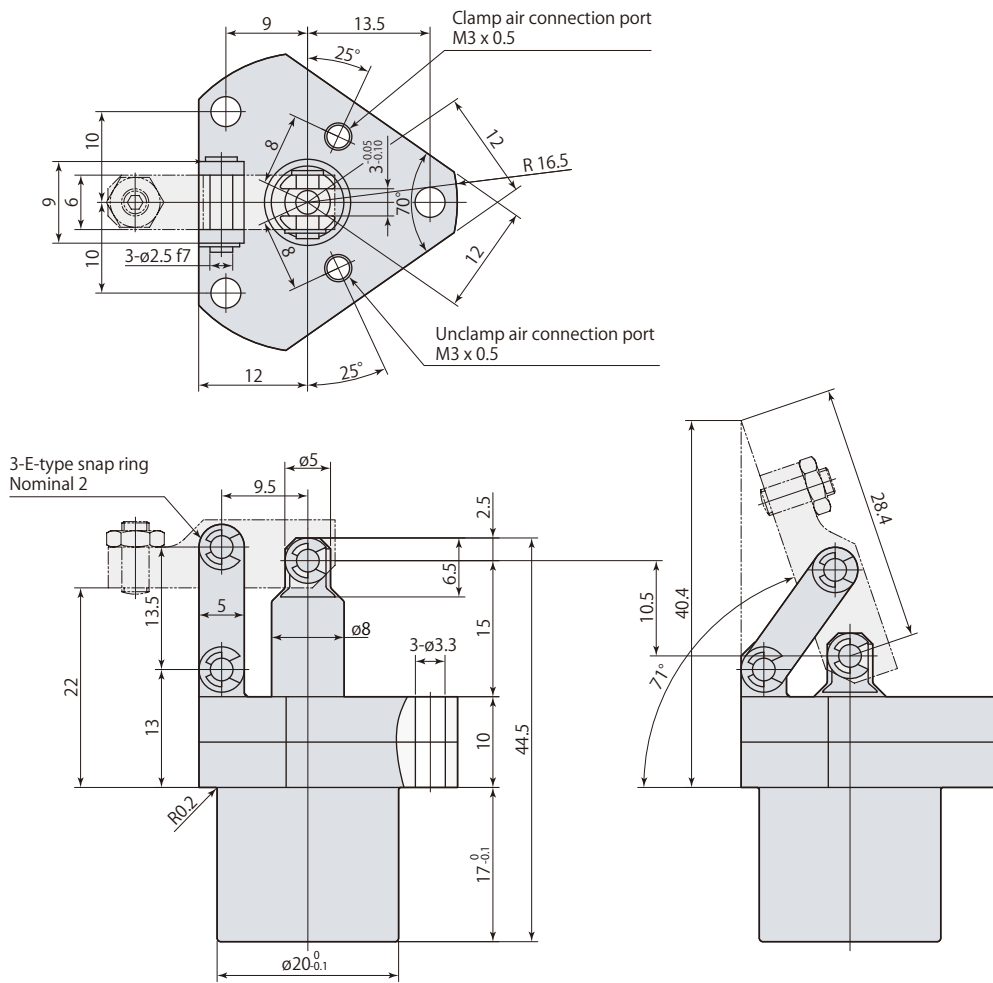


model RLC01



model RLC01		Clamping force $F = 1815 \times P / (LH - 9.5)$			
Air pressure MPa	Cylinder force N	Clamping force N			
		Clamp arm length LH mm			
		16	19	22	25
0.5	101	140	96	73	59
0.4	80	112	76	58	47
0.3	60	84	57	44	35
0.2	40	56	38	29	23
0.1	20	28	19	15	12

Dimensions



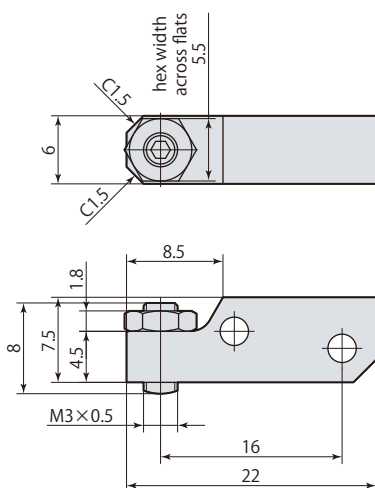
Clamp

Unclamp

- Mounting screws and tube fittings are not included.
- The clamp arm is not included with standard specifications

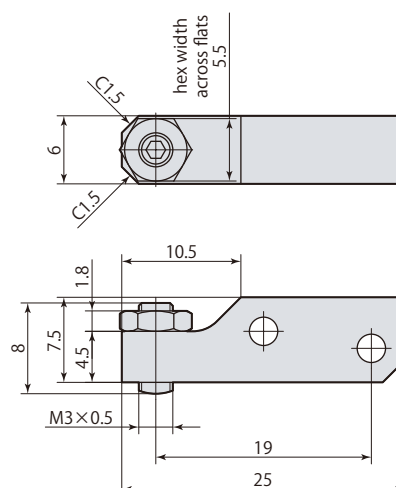
-A1 Clamp arm

Material: Stainless steel

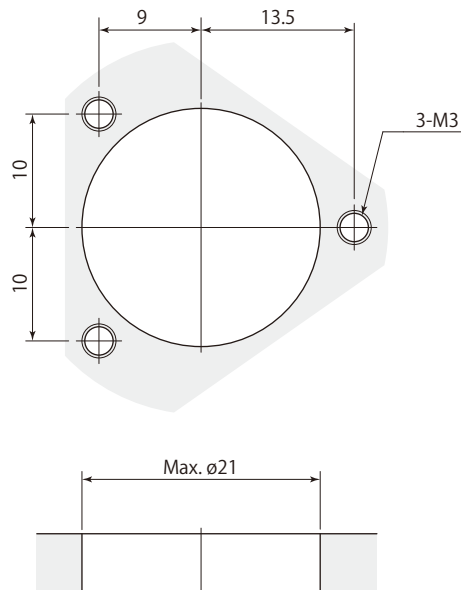


-A2 Clamp arm

Material: Stainless steel

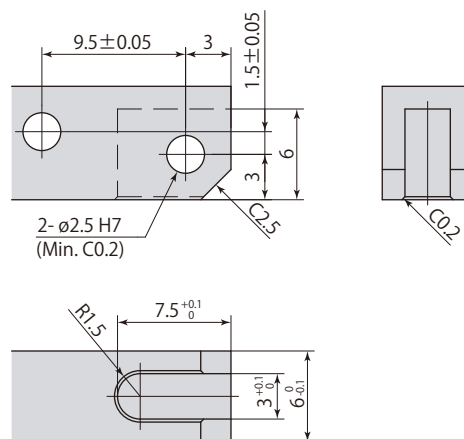


Mounting details



Clamp arm mounting details

Manufacture a clamp arm with the dimensions shown below.



Pascal

Itami, Hyogo, Japan 664-8502
TEL. 072-777-3333 FAX. 072-777-3520



CERTIFICATE OF APPROVAL ISO9001