

HLC Hydraulic Link-Clamp Cylinder

Piston: Ø22~Ø28 mm | Pressure Max: 300 bar

Introduction

- The HLC link-clamp cylinder is mainly used when there is a need for space clearance for placing and clamping workpieces, allowing for easy placement and clamping of the workpiece.
- This product is of Japanese specifications.
- A dust seal is provided at the push rod to prevent external dirt from entering the cylinder body.
- The maximum operating pressure can reach 300 bar. (If the clamping arm is longer, it can reach 350 bar. For details, please consult the technical staff.)
- You can choose pipe thread or manifold-mounting type.
- When supplying oil through pipe thread, please remove the nut installed in the oil inlet hole of the piping and ensure that the O-ring of the oil inlet hole of the manifold-mounting is properly installed.
- A filter screen is installed at the product's oil inlet hole to prevent foreign objects from entering the cylinder body.
- This link-clamp cylinder is double-acting.

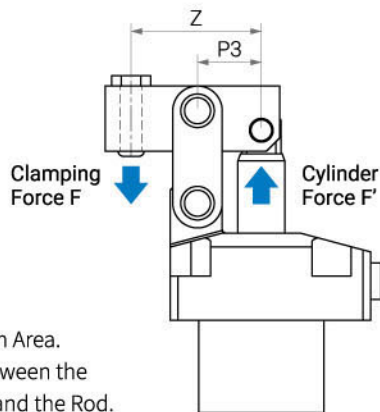
Caution

- There is a minimum recommended length for the clamping arm (please refer to the "Z" value in the clamping arm design specifications). When the length is below this value, please reduce the pressure to prevent damage to the cylinder.
- After the clamping arm stops pressing down, please ensure that the clamping arm is horizontal, with a tilt angle exceeding $\pm 3^\circ$ (excessive horizontal force can damage the pin fixing position above the center axis).
- This product does not come with a clamping arm. The clamping arm needs to be made separately. Please refer to the product specifications for relevant fabrication specifications.



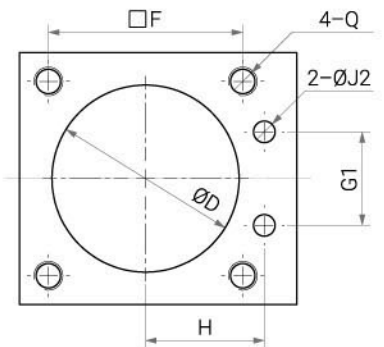
※The product itself does not come with a clamping arm, which needs to be made or ordered separately.

Output Force Calculation



- $F = P3 \times F' / (Z - P3)$.
- F : Clamping Force.
- F' : Cylinder Force = Pressure \times Piston Area.
- Z : The distance between the clamping point and the Rod.

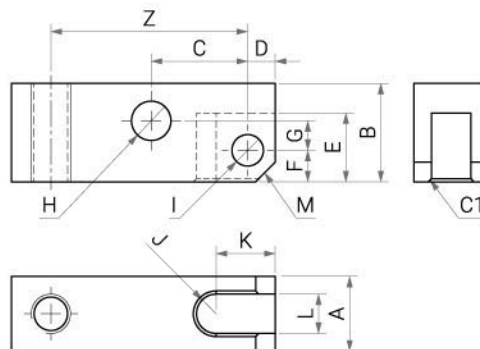
Mounting Details



Unit (mm)

Items	D	F	G1	H	J2	Q
HLC-22	Max. Ø52	54	26	33	Max. Ø6	M8
HLC-28	Max. Ø62	65	30	40	Max. Ø6	M10

Clamp Arm Details



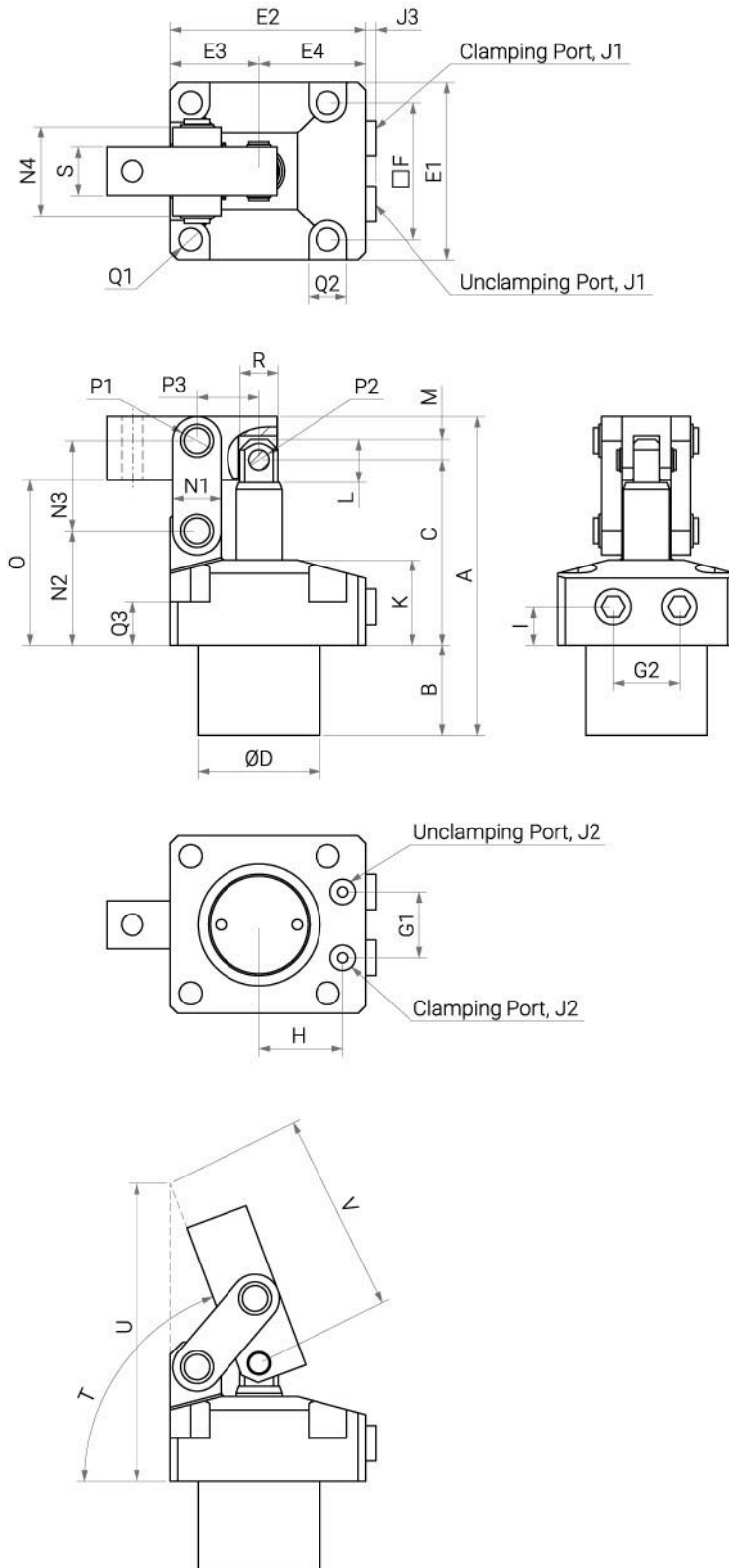
Unit (mm)

Items	A	B	C	D	E	F	G	H	I	J	K	L	M	Z	Recommended Material
HLC-22	19 ⁰ / _{0.1}	25	24.5	7	17.5	8	7.5	Ø10 ^{+0.02} / ₀	Ø8 ^{+0.02} / ₀	R5	15	10 ^{+0.1} / ₀	C5	Min. 50	S45C, RC30~40°
HLC-28	22 ⁰ / _{0.1}	31	30.5	10	22	9	9.5	Ø14 ^{+0.02} / ₀	Ø12 ^{+0.02} / ₀	R5.5	21	11 ^{+0.1} / ₀	C7	Min. 60	

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Specifications



Unit (mm)

Items	HLC-22	HLC-28
Clamp Stroke	26.5	33
Full Stroke	29.5	36
Safety Stroke	3	3
Rod Diameter	Ø18	Ø22
Piston Diameter	Ø22	Ø28
Effective Area	3.8 cm ²	6.2 cm ²
Force (200 bar)	7.6 kN	12.4 kN
A	125.5	154.5
B	35.5	43.5
C	73	89
D	Ø48 ^{-0.1} _{-0.2}	Ø58 ^{-0.1} _{-0.2}
E1	70	86
E2	77	96
E3	35	43
E4	42	53
F	54	65
G1	26	30
G2	26	30
H	33	40
I	15	17
J1	G1/8	G1/4
J2	Ø10 (Deep 1.1)	Ø10 (Deep 1.1)
J2-O-ring	Ø7.5×Ø1.5	Ø7.5×Ø1.5
J3	4	5
K	33.5	41
L	17	21.8
M	8	11
N1	19	25
N2	45	54.5
N3	35.5	44
N4	35	42
O	65	80
P1	Ø10	Ø14
P1 (Snap Ring)	STW-10	STW-14
P2	Ø8	Ø12
P2 (Snap Ring)	STW-8	STW-12
P3	24.5	30.5
Q1	Ø9	Ø11
Q2	15	18.5
Q3	17	20
R	Ø15	Ø20
S	19	22
T	70°	69°
U	117.4	144.8
V	79	98