

Rotary lever clamps, pneumatic double-acting

Item description/product images



Description

Product description:

Rotary lever clamps are highly suited for use in cramped conditions. Due to the compactness of the rotary lever clamps, they can be used in a variety of ways in clamping fixtures with little use of space and thus often enable flexible solutions.

Material:

Housing aluminium.
Piston steel.

Version:

Piston hardened.

Note:

By the rotary lever clamps, the clamping lever is connected to the piston rod. The air supply for the rotary lever clamps is via drilled channels.

The clamping lever moves towards the workpiece with a linear stroke and clamps it. When releasing, the clamping lever retracts so far that the workpiece can be removed vertically. The single stroke of a rotary lever clamp depends on the clamping lever selection.

The clamping elements must be checked regularly for dirt and cleaned if necessary. When selecting the installation position, it must be ensured that no swarf nests can form in the swivel area of the lever of the rotary lever clamp.

The flange surface of the rotary lever clamp should be adapted to the height of the workpiece during installation and a horizontal positioning of the clamping point should be available.

By positioning the rotary lever clamp correctly, workpiece tolerances can be optimally compensated for despite the short clamping lever.

High forces can be generated with the rotary lever clamps. It must be ensured that the workpieces and clamping fixtures are designed for these loads.

Rotary lever clamps can be fitted with individual tension levers. The clamping force of a rotary lever clamp is dependent on the lever length.

The tension lever for the rotary lever clamp is not supplied.

Follow safety instructions.

Type of operation:

Drilled channels.

Technical data:

Max. operating pressure: 6 bar.

Assembly:

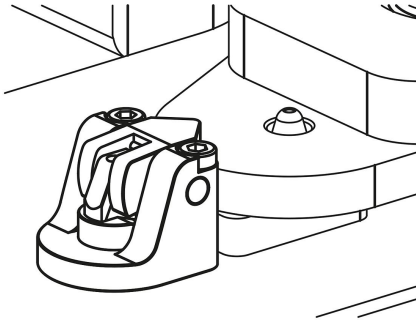
See mounting contour.

Advantages:

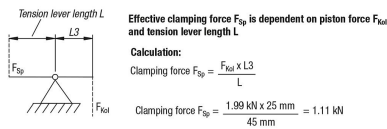
- No lateral forces during clamping.
- Low mounting dimensions.
- Wide selection of levers.
- Collision-free accessibility to the workpiece.
- Lineless pressure supply.

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Calculating the effective clamping force with pneumatic rotary lever clamps:



Example:

Rotary lever clamp cylinder size 40
Operating pressure 6 bar
Piston force F_{Kel} at 6 bar = 1.99 kN
Dimension L3 acc. to table = 25 mm
Tension lever length $L = 45 \text{ mm}$
Resulting effective clamping force $F_{Sp} = 1.11 \text{ kN}$

On request:

Larger piston diameters, longer strokes and with position control.

Supplied with:

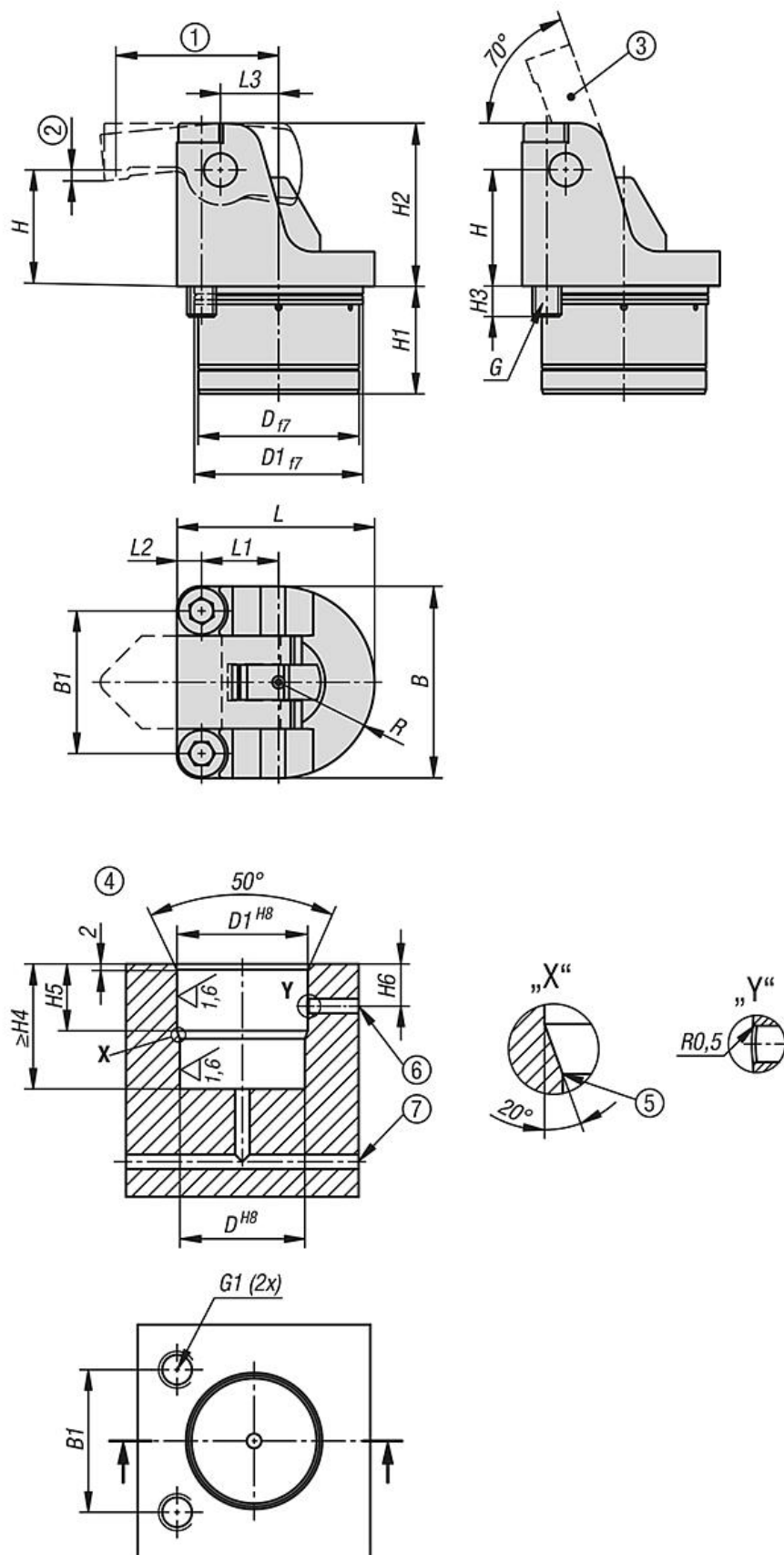
Supplied with 4 DIN EN ISO 4762 cap screws, grade 8.8.

Accessory:

Tension levers for rotary lever clamps K1857.

Drawing reference:

- 1) Tension lever length (see K1857)
- 2) Travel (see K1857)
- 3) See accessories
- 4) Mounting contour
- 5) Rounded edges
- 6) Loosen
- 7) Clamping



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Overview of items

Rotary lever clamps, pneumatic, double-acting

| Order No. | Piston Ø | Connection type | B | B1 | D | D1 | G | G1 | H | H1 | H2 | H3 |
|---------------------|----------|------------------|----|------|----|----|--------|--------|-------|------|-------|------|
| K1870.121304 | 12 | drilled channels | 27 | 19,5 | 20 | 21 | M4x25 | M4x8 | 15 | 22 | 21 | 7 |
| K1870.161304 | 16 | drilled channels | 34 | 25 | 27 | 28 | M5x35 | M5x11 | 20 | 24 | 28 | 10,5 |
| K1870.201304 | 20 | drilled channels | 40 | 30 | 34 | 35 | M6x40 | M6x10 | 25 | 27,5 | 35 | 9 |
| K1870.251304 | 25 | drilled channels | 52 | 38,5 | 43 | 44 | M8x50 | M8x12 | 31,25 | 32 | 43,75 | 11,5 |
| K1870.321304 | 32 | drilled channels | 66 | 49 | 57 | 58 | M10x65 | M10x16 | 40 | 37 | 56 | 15,5 |
| K1870.401304 | 40 | drilled channels | 78 | 59 | 71 | 72 | M12x80 | M12x18 | 50 | 46 | 70 | 17,5 |

| Order No. | Piston Ø | H4 | H5 | H6 | L | L1 | L2 | L3 | R | Piston force at 6 bar (kN) | Effective piston area (cm ²) |
|---------------------|----------|------|----|------|------|-------|------|-------|------|----------------------------|--|
| K1870.121304 | 12 | 22,5 | 12 | 9,5 | 27 | 9,75 | 3,75 | 7,5 | 13,5 | 0,14 | 2,27 |
| K1870.161304 | 16 | 24,5 | 13 | 10 | 35 | 13,5 | 4,5 | 10 | 17 | 0,27 | 4,52 |
| K1870.201304 | 20 | 28 | 15 | 11 | 41,5 | 16,5 | 5 | 12,5 | 20 | 0,42 | 7,06 |
| K1870.251304 | 25 | 33 | 19 | 13 | 53,5 | 20,75 | 6,75 | 15,63 | 26 | 0,68 | 11,34 |
| K1870.321304 | 32 | 38 | 21 | 14,5 | 68 | 26,5 | 8,5 | 20 | 33 | 1,27 | 21,23 |
| K1870.401304 | 40 | 47 | 28 | 18,5 | 82 | 33,5 | 9,5 | 25 | 39 | 1,99 | 33,18 |