

Low-block clamping cylinders

hydraulic, with spring reset, single-acting, pmax. 500 bar

230-1

Issue: 06/2024

Description:

Low-block clamping cylinders are used, if the clamping force has to be applied to the workpiece laterally.

Regarding the force application, the design requires horizontal and vertical components of force with stroke-dependent magnitudes.

The magnitude of the vertical (F_v) component of force cannot exceed approx. 25% of the clamping force (F_{sp}) magnitude. This force presses the workpiece against the support.

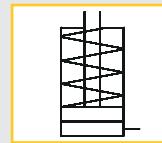
The horizontal (F_h) component of force magnitude drops to a minimum of 95% of the initial force magnitude, depending on the stroke.

The pressurised oil can be supplied either via a G1/4 threaded port or via manifold connection with O-ring.

The clamping piston has an internal stroke limiter. The piston and the pressure piece are returned to their home position after the pressure has been released via a spring. The cylinders must be protected against ingress of coolants and cutting lubricants.



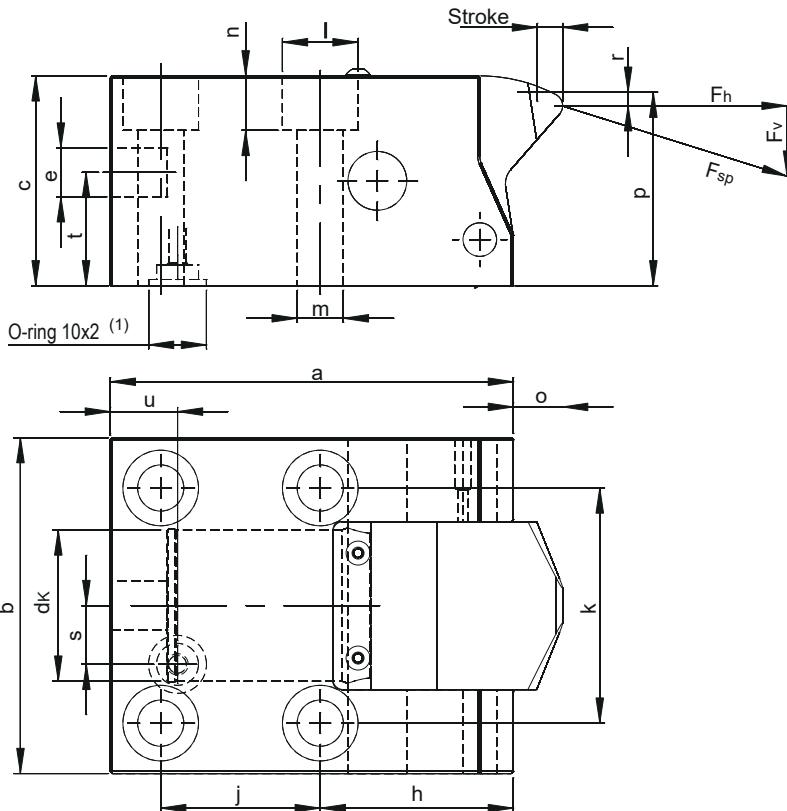
Webcode: 023001



Connections:

Threaded port G1/4

Manifold connection with O-ring



| dK Piston Ø: | [mm] | 16 | 25 | 36 |
|---------------------------|-------|--------------|--------------|--------------|
| Stroke | [mm] | 8 | 10 | 10 |
| Clamping force at 100 bar | [kN] | 1,7 | 4 | 8 |
| Clamping force at 500 bar | [kN] | 8,5 | 20 | 40 |
| Oil requ./10 mm stroke | [cm³] | 2 | 4,9 | 10,2 |
| a | [mm] | 68 | 90 | 96 |
| b | [mm] | 50 | 60 | 80 |
| c | [mm] | 32 | 40 | 50 |
| e | | G1/4 | G1/4 | G1/4 |
| h | [mm] | 32 | 42 | 46 |
| j | [mm] | 27 | 38 | 38 |
| k | [mm] | 32 | 40 | 56 |
| l | [mm] | 13,5 | 15 | 18 |
| m | [mm] | 8,5 | 9 | 11 |
| n | [mm] | 8,5 | 9 | 11 |
| o | [mm] | 2 | - | 2 |
| p | [mm] | 31 | 39 | 49 |
| r | [mm] | 4 | 4 | 4 |
| s | [mm] | - | - | 14 |
| t | [mm] | 19 | 23 | 27 |
| u | [mm] | 13 | 14 | 16 |
| Weight | [kg] | 0,9 | 1,4 | 2,1 |
| Order numbers: | | TBZY-016-001 | TBZY-025-001 | TBZY-036-001 |

⁽¹⁾Scope of supply includes the O-ring.

Materials:

Housing: burnished steel

Piston: case-hardened steel

Pressure piece: case-hardened steel

Spare parts:

O-ring 10x2 Order numbers:
all Piston Ø 6010-003

Seal ring Order numbers:
all Piston Ø 6005-004

Torsion springs Order numbers:
Piston Ø 16, 25 2006-004
Piston Ø 36 2008-024

Seal kits Order numbers:
Piston Ø 16 DS-TBZY-016
Piston Ø 25 DS-TBZY-025
Piston Ø 36 DS-TBZY-036

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HYDROKOMP®
Hydraulische Komponenten GmbH

+49 6401 225999-0

sales@hydrokomp.de

Siemenstr. 16
35325 Mücke (Germany)

www.hydrokomp.de

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