



Hollow Piston Cylinders
single acting without spring return
max. operating pressure 400 bar

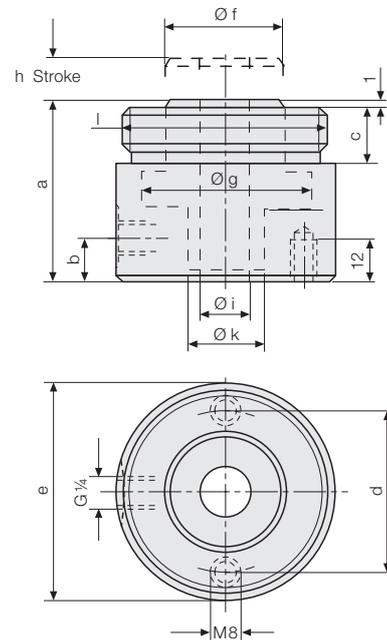


Advantages

- Flat and compact design
- Jerkyless piston movement
- Stroke limitation designed for max. operating pressure
- Easy to retrofit
- Ideal force transmission

Description

Installation is possible by insertion, screwing in or manifold mounting in any position. The clamping force is generated by applying hydraulic pressure to the piston, and the piston is returned by external force effect. The piston is provided with a through hole and is hardened and ground. The housing of the hollow piston cylinder is made of high alloy steel, the surface is black oxidized.



Application

Hollow piston cylinders are used in connection with tie rods, screws and threaded rods, for clamping and locking dies on presses and machines

Hydraulic power units
see product group 7

Accessories
see product group 11

Technical data

Max. operating pressure 400 bar

| Clamping force at 100 bar | [kN] | 8.7 | 13.5 | 21 | 34.3 |
|----------------------------|--------------------|----------------|----------------|----------------|----------------|
| Clamping force at 400 bar | [kN] | 34.8 | 54 | 84 | 137.2 |
| Stroke h | [mm] | 12 | 12 | 15 | 15 |
| Piston restoring force | [kN] | 0.18 | 0.27 | 0.42 | 0.70 |
| Piston area | [cm ²] | 8.7 | 13.5 | 21 | 34.3 |
| Oil volume per 1 mm stroke | [cm ³] | 0.9 | 1.4 | 2.1 | 3.5 |
| a | [mm] | 61 | 61 | 72 | 72 |
| b | [mm] | 11 | 15 | 18.5 | 24 |
| c | [mm] | 22 | 22 | 27.5 | 27.5 |
| d | [mm] | 44 | 55 | 68 | 84 |
| e | [mm] | 60 | 75 | 93 | 113 |
| f | [mm] | 28 | 38 | 54 | 60 |
| g | [mm] | 40 | 50 | 63 | 80 |
| i | [mm] | 16.5 | 20.5 | 24.5 | 30.5 |
| k | [mm] | 22 | 28 | 36 | 45 |
| l | [mm] | M52 x 1.5 | M72 x 1.5 | M90 x 2 | M110 x 2 |
| Weight | [kg] | 1 | 1.7 | 3.1 | 4.6 |
| Part no. | | 1303003 | 1305003 | 1307003 | 1309003 |

Special versions on request

Application examples

