

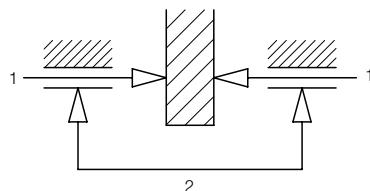


Position Flexible Clamp

double acting, separate locking port
max. operating pressure 250 bar

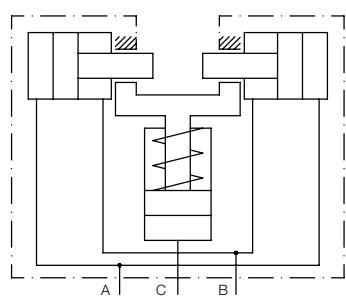


Position flexible clamping



For machining in a clamping fixture in 3 levels, a workpiece will be positioned and clamped against a maximum of 5 support and location points.

If further sections of the workpiece have to be supported and clamped, additional work supports will be used, on top of which also clamping can be effected.



Description

The position flexible clamp is a small vice with two movable jaws, which are operated by a common hydraulic port. Independently of its position within the clamping area, the workpiece will be clamped nipper-like (floating).

By means of a separate locking port, both jaws are hydraulically locked. The clamped workpiece can no longer "float", if the machining forces are introduced.

Oil supply to the locking port can be controlled by a sequence valve or a second clamping circuit.

Application

Position flexible clamping elements can be used for supporting and clamping of unstable workpiece sections. They adapt themselves to the position of the clamping point without deforming them. They cushion vibrations and compensate machining forces from all directions.

Important notes

The upper face of the locking piston clamping element has to be checked from time to time with regard to contamination by swarf and cleaned, if required.

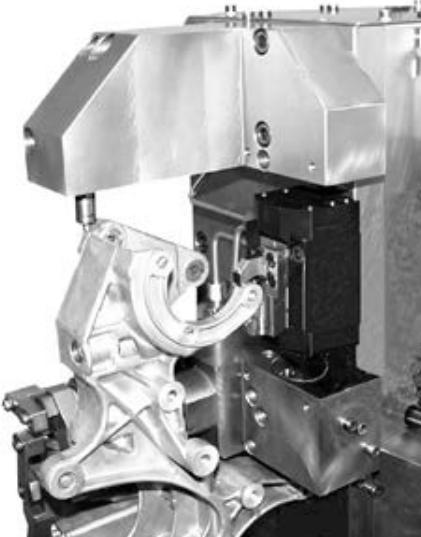
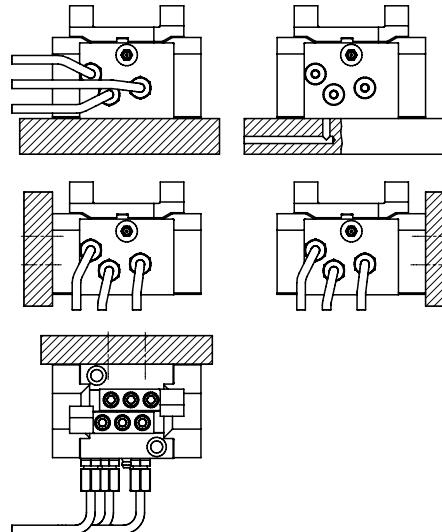
Already 2 mm difference in stroke can cause an one-sided displacing force of 10 N onto the workpiece.

Operating conditions, tolerances and other data see data sheet A 0.100.

Advantages

- Compact 2-jaws clamping element
- For exterior and interior clamping
- Clamping jaws easily adaptable
- Position flexible within the clamping range
- Can be adapted to big workpiece tolerances
- Very low displacement forces act on the workpiece (see: Important notes)
- Compensation of machining forces from all directions
- Double-acting clamping function
- Locking port can be controlled separately
- Mounting from 4 sides possible
- Oil supply alternatively via fittings or drilled channels
- Clamping slide can be greased

Installation and connecting possibilities

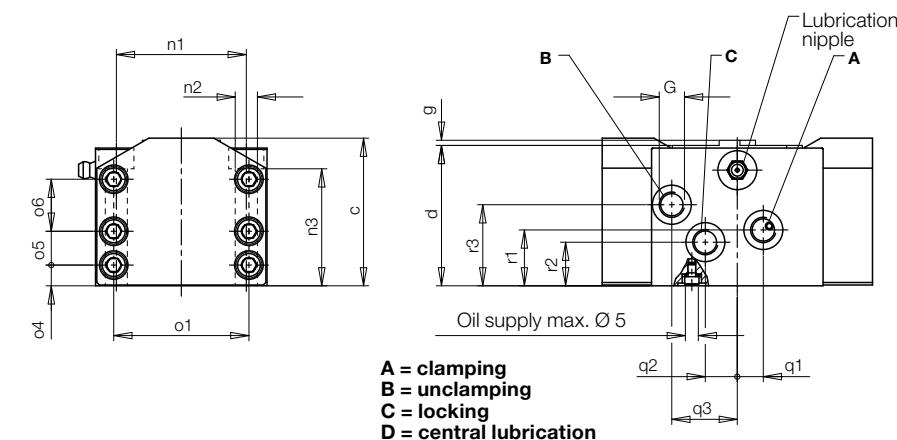


Application example

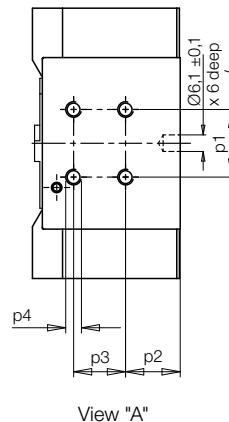
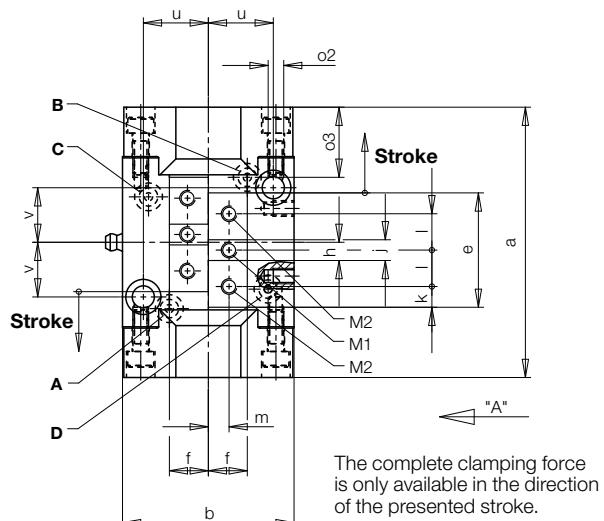
The figure shows a position flexible clamp for "floating clamping" of a self-supporting arm of a power unit support of the automotive industry, which has been fixed in its position by means of swing clamps as per data sheet B 1.880 and B 1.891.

Technical data

Dimensions • Accessories



A = clamping
B = unclamping
C = locking
D = central lubrication



View "A"

Installation and connecting possibilities

The position flexible clamping element, can be fixed alternatively at the bottom (dimensions n1 up to n3, v, u), or at the back (dimensions p1 up to p4).

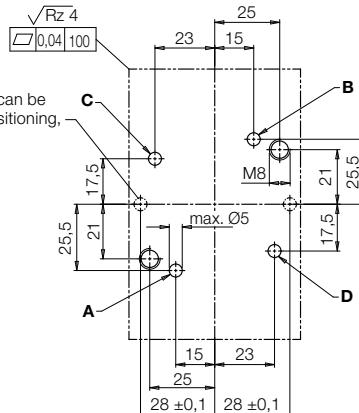
It can also be fixed at both sides. For this purpose per screw row with gauge for bore holes n1 two of the three available screws have to be removed and replaced by the fixing screws (dimensions o1 up to o6). These will hold the complete piston pressure and have to be screwed in at least to dimension o3 – 1 (2) mm.

For manifold mounting remove socket head cap screws with USIT rings and screw-in plugs G 1/8 in the body.

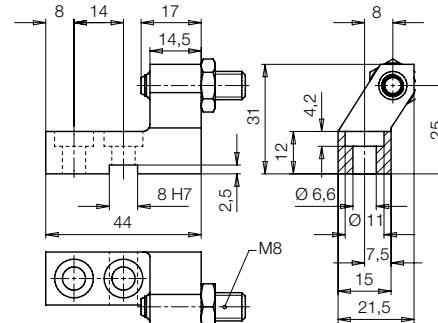
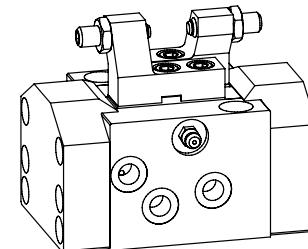
O-rings and plugs see accessories.

Connecting scheme

For O-ring sealing



Example with clamping jaws



Height of the clamping point *)

Clamping jaw for exterior clamping of a work-piece web with a thickness of 6 up to 14 mm (adjustable from 0 up to 18 mm).

*) Please consider for your own design of the clamping jaws, that a maximum height of the clamping point of 31 mm must not be exceeded.

Clamping jaw with swivel contact bolt

Part no. 3548447

Clamping force at 250 bar

[kN] 7

Holding force at 250 bar

[kN] 4

Stroke, per clamping jaw

[mm] 6

Admissible flow rate

[cm³/s] 5

Oil volume clamping

[cm³] 3.8

Oil volume unclamping

[cm³] 1.4

Oil volume locking

[cm³] 0.6

a

[mm] 104

b

[mm] 66

c

[mm] 56.8

d

[mm] 54

e

[mm] 44

f

[mm] 15

G

[mm] G 1/8

g

[mm] 2

h

[mm] 7

j

[mm] 8 f7

k

[mm] 8

l

[mm] 14

M1 / M2 x depth of thread

M 6x11 / M 6x9

m

[mm] 8

n1 / n2 / n3

[mm] 50 / Ø 8.5 / 45

o1 / o2 / o3 (≤ max. screw-in depth)

[mm] 52 / M 6 / 27

o4 / o5 / o6

[mm] 8 / 13 / 20

p1 / p2 / p3 / p4 x depth of thread

[mm] 26 / 21 / 20 / M 6x8

q1 / q2 / q3

[mm] 10 / 12.3 / 25.2

r1 / r2 / r3

[mm] 21.5 / 16.8 / 31.2

u

[mm] 25

v

[mm] 21

Part no.

4412974

Accessories

Plug G 1/8 (3 x required)
O-Ring 8x1.5 (4 x required)

Part no.

3610158

3000343