Fixture Clamp with Fixed Jaw

max. clamping force 9.5 kN, jaw width 40 mm,
double acting, max. operating pressure 250 bar

Application
The fixture clamps are used for machining of dimensionally stable workpieces in single or multiple clamping fixtures. Due to their compact design they can be arranged in a very limited space. Fixture clamps are especially suitable for series manufacturing in automated mode. The double-acting cylinder function combined with central lubrication and good swarf protection guarantees a high process safety.

Description
The fixture clamp with fixed jaw consists of a very small basic body with integrated hydraulic cylinder which actuates the movable jaw. All threads and ports are at the bottom to allow a space-saving arrangement of several clamping points in a very limited space. If fixing from below is not possible an adaptor plate for manifold mounting or tube connection is available. As accessory also blanks of clamping jaws are available for adaptation to the workpiece contour. The fixed jaw can be equipped with a pneumatic seat control.

Important notes
The fixture clamp is only suitable for exterior clamping. Lubricate at the latest after 500 clamping cycles the clamping slide via the central lubrication. Never use the complete clamping stroke to guarantee safe clamping of the workpiece. Max. operating temperature 80 °C. Operating conditions and other data see data sheet A 0.100.

Advantages
- Very compact design
- High rigidity and precision
- Strokes 5 and 30 mm
- Double-acting function
- Fixtures without tubes possible
- Exchangeable jaws
- Pneumatic contact or seat control in the fixed jaw possible
- Good swarf protection
- Port for central lubrication
- Mounting position: variable

Function
Fixing from above
with accessory adaptor plate
Drilled channels

Fixing from below
Drilled channels

Accessories
Fixed jaw, clamping jaws and adaptor plate are not included in the delivery of the fixture clamp and have to be ordered separately as accessory.

Application example
Clamping fixture for a pedal of a freight vehicle.
Clamping stroke 5 mm

Technical data

- Clamping force max. [kN]: 9.5
- Clamping stroke [mm]: 5
- Jaw width [mm]: 40
- Max. flow rate [cm³/s]: 25
- Stroke volume Clamping [cm³]: 2.5
- Stroke volume Unclamping [cm³]: 1.9
- Weight approx. [kg]: 1.66

Adaptor plate (accessory)

- Weight approx. [kg]: 1.3
- Part no.: 0441 300

Clamping stroke 5 mm: Part no. 4413001

Accessory: adaptor plate

- View from below

A = Clamping
B = Unclamping
S = Central lubrication
L = Air for seat control

Accessory: adaptor plate

View from above

Socket head cap screw M6 x 20
Part no. 3300225 (included in the delivery)

O-ring 8 x 1.5
Part no. 3000275 (included in the delivery)

M6 x 8 deep (6x)

Clamping and unclamping
each Ø10 H7 x 7 deep for connecting insert 9210 132 (included in the delivery), see also page F 9.300

Seat control and central lubrication with O-ring 3001 842 (5x1 mm) (included in the delivery)

Accessory: adaptor plate

View from above
### Technical data

- Clamping force max. [kN]: 9.5
- Clamping stroke [mm]: 30
- Jaw width [mm]: 40
- Max. flow rate [cm³/s]: 25
- Stroke volume Clamping [cm³]: 15
  - Unclamping [cm³]: 12
- Weight approx. [kg]: 2.24

### Adaptor plate (accessory)

- Weight approx. [kg]: 1.8
- Part no.: 0441303

---

### Clamping force diagram

(Height of the clamping jaw 15 mm)

---

### Accessory: adaptor plate

- View from below

---

### Accessory: adaptor plate

- View from above

---

### Additional Notes

- Socket head cap screw M6 x 20
  - Part no.: 3300225
  - Included in the delivery

- O-ring 8 x 1.5
  - Part no.: 3002275
  - Included in the delivery

- Seat control closed with threaded pin
  - M4 x 6 deep (4x)

- Seat control and central lubrication
  - Part no.: 3001842 (6x1 mm)
  - Included in the delivery

---

### Römheld GmbH

Actual issue see www.roemheld-group.com

Subject to modifications
**Accessory - clamping jaws**

**Versions:** Clamping jaw blanks

**Material:** 16 MnCr5 smooth

### Clamping jaw: Part no. 3548070

- **Fixing screws:**
  - 2x M6x16 12.9
  - Part no. 3301 107

### Fixed jaw: Part no. 3548071

- **Fixing screws:**
  - 4x M6x16 12.9
  - Part no. 3301 107

**Support face**

<table>
<thead>
<tr>
<th>Workpiece side</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5x45°</td>
</tr>
<tr>
<td>Ø6.6</td>
</tr>
<tr>
<td>19±0.05</td>
</tr>
</tbody>
</table>

**Support**

<table>
<thead>
<tr>
<th>Workpiece side</th>
</tr>
</thead>
<tbody>
<tr>
<td>11±0.1</td>
</tr>
<tr>
<td>25±0.05</td>
</tr>
</tbody>
</table>

**Important note**

The clamping jaws must always be supported by the provided support, since the fixing screws are not in the position to compensate the generated clamping forces.

### Max. height of the clamping jaws X

**at max. operating pressure of 250 bar**

<table>
<thead>
<tr>
<th>Fixing screws</th>
<th>M6x16 - 12.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>X [mm] with 2 screws</td>
<td>15</td>
</tr>
<tr>
<td>X [mm] with 4 screws</td>
<td>36</td>
</tr>
</tbody>
</table>

### Fixing of the clamping jaws

- **Fixed jaw**
  - 4 screws
  - 4x M6x16 12.9
  - Part no. 3301 107

- **Clamping jaw**
  - Support
  - 4 screws
  - 4x M6x16 12.9

---

**Self-made clamping jaws**

Clamping jaws and fixed jaws are manufactured according to the contour of the workpiece to be clamped.

The max. height of the clamping jaw X at 250 bar operating pressure is indicated in the below chart.

If the operating pressure is lower, the clamping jaws and the fixed jaws can be designed higher as per the below diagram.