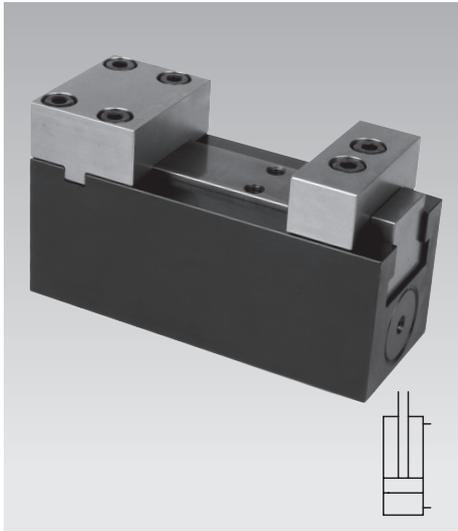




Hydraulic Vises, Long Stroke

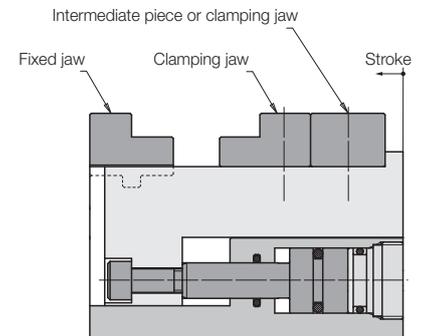
clamping against the fixed jaw, double acting,
max. operating pressure 250 bar



Advantages

- Very compact design
- High rigidity and precision
- Long strokes
- Double-acting function
- Fixtures without pipes possible
- Exchangeable jaws
- Pneumatic contact or seat check in the fixed jaw possible
- Good swarf protection
- Port for central lubrication
- Mounting position: any

Functional principle



Application

Hydraulic vises, also called 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.

Hydraulic vises are especially suitable for series manufacturing in automated mode.

The double-acting cylinder function combined with central lubrication and good swarf protection guarantees high process safety.

Description

The hydraulic vise with fixed jaw consists of a very small base body with integrated hydraulic cylinder which actuates the movable jaw.

All threads and ports are at the bottom to enable 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. Blanks of clamping jaws that can be adapted to the workpiece contour are also available as an accessory.

The fixed jaw can be equipped with a pneumatic seat check.

Important notes

The hydraulic vise 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.

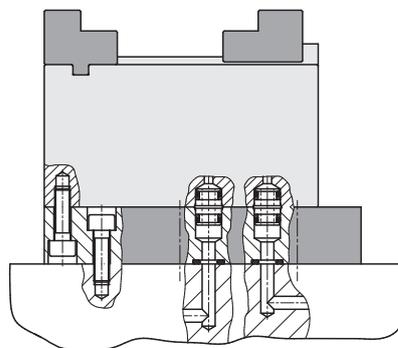
Size 1 (see page 2)

Jaw width	[mm]	40
Clamping stroke	[mm]	30
Max. clamping force	[kN]	9.5

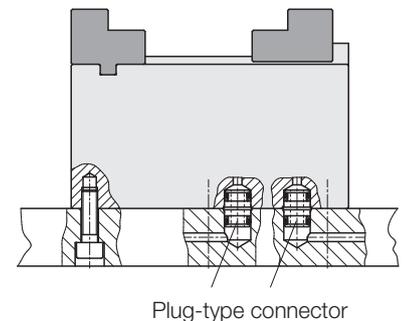
Size 2 (see page 4)

Jaw width	[mm]	65
Clamping stroke	[mm]	40
Max. clamping force	[kN]	15

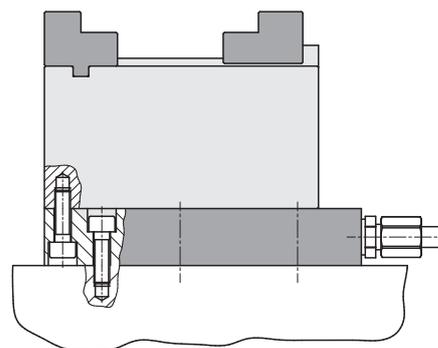
Fixing from above with accessory adaptor plate Drilled channels



Fixing from below Drilled channels

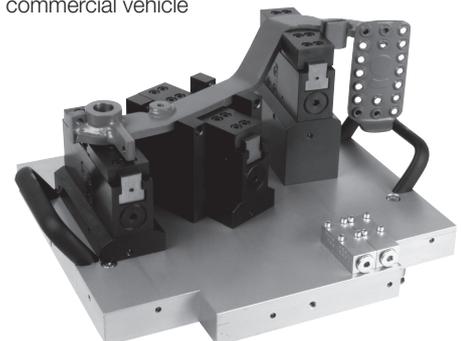


Pipe thread



Application example

Clamping fixture for a pedal of a commercial vehicle



Size 1: Jaw Width 40 mm, Clamping Stroke 30 mm
Technical Data • Accessory • Dimensions

Size 1

Technical data

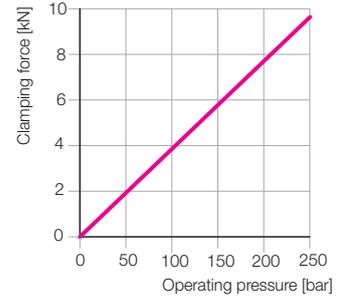
Clamping force max.	[kN]	9.5
Clamping stroke	[mm]	30
Jaw width	[mm]	40
Max. flow rate	[cm ³ /s]	25
Operating volume		
Clamping	[cm ³]	15
Unclamping	[cm ³]	12
Weight	[kg]	approx. 2.24
Part no.		4413031

Adaptor plate (accessory)

Weight	[kg]	approx. 1.8
Part no.		0441303

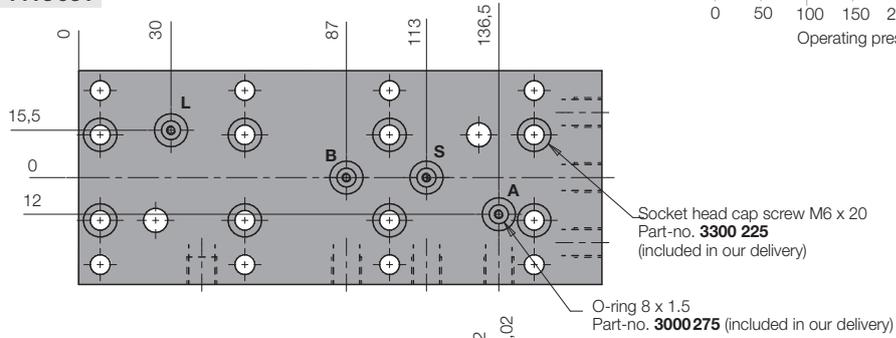
Clamping force diagram

(Height of the clamping jaw 15 mm)

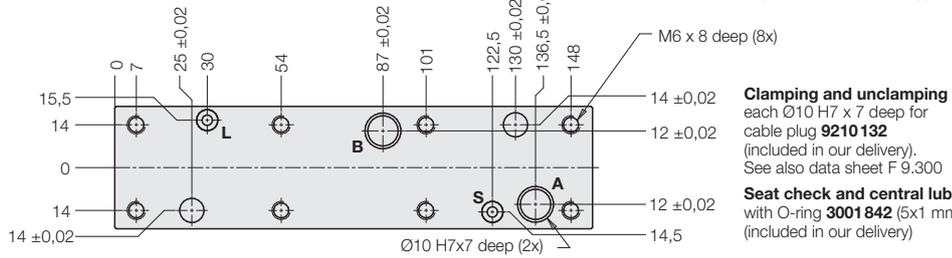


Accessories: Adaptor plate

View from below

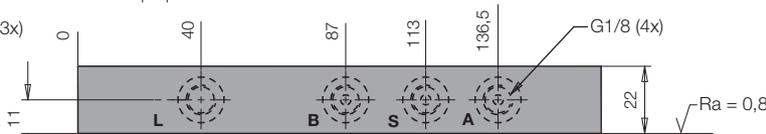
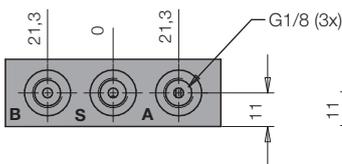
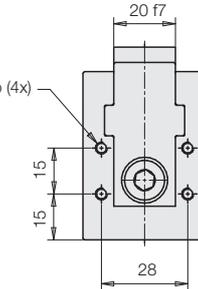
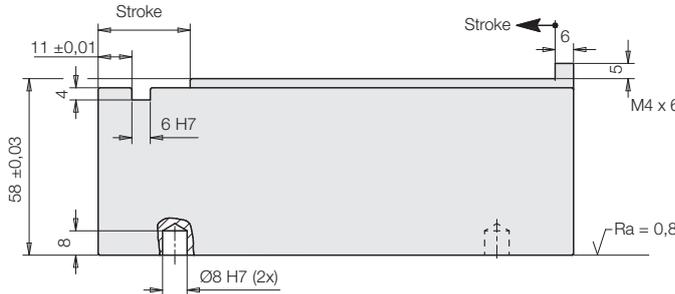
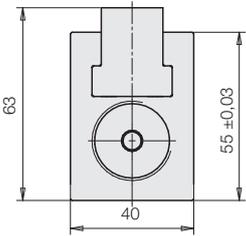


- A** = Clamping
- B** = Unclamping
- S** = Central lubrication
- L** = Air for seat check



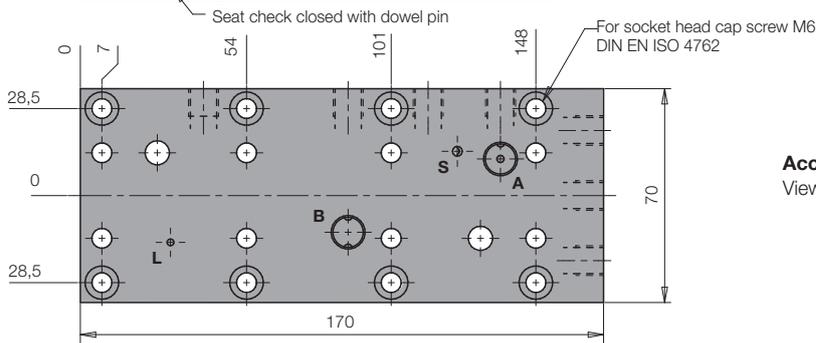
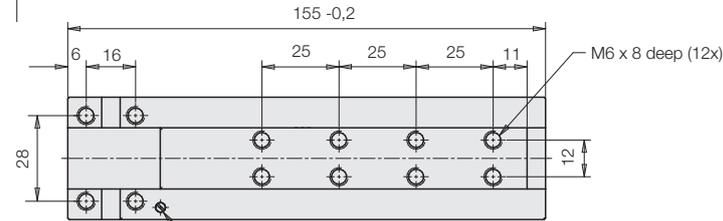
Clamping and unclamping
 each Ø10 H7 x 7 deep for
 cable plug **9210132**
 (included in our delivery).
 See also data sheet F 9.300

Seat check and central lubrication
 with O-ring **3001842** (5x1 mm)
 (included in our delivery)



Accessories: Adaptor plate

Side views



Accessories: Adaptor plate

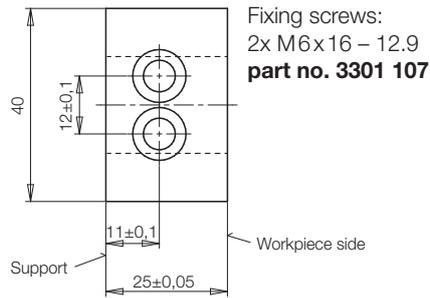
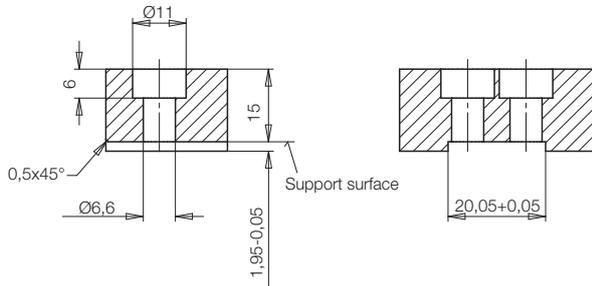
View from above

Size 1: Jaw Width 40 mm Accessories

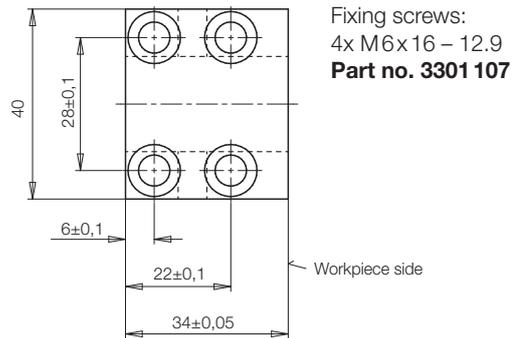
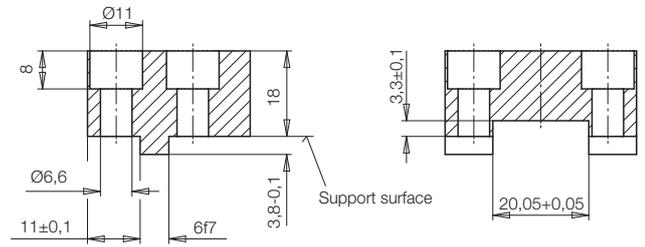
Accessory – clamping jaws

Versions	Clamping jaw blanks
Material	16 MnCr5 smooth

Clamping jaw: Part no. 3548070



Fixed jaw: Part no. 3548071



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 chart below.

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

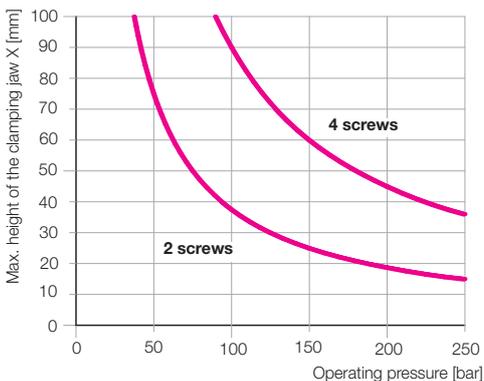
Important note

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

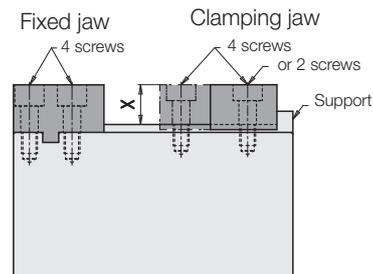
Max. height of the clamping jaws X at max. operating pressure of 250 bar

Fixing screws for clamping jaws	M6 x 16 – 12.9
X [mm] with 2 screws	15
X [mm] with 4 screws	36

Max. height of the clamping jaw X as a function of the operating pressure



Fixing of the clamping jaws



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

Size 2: Jaw Width 65 mm, Clamping Stroke 45 mm

Technical Data • Accessory • Dimensions

Size 2

Technical data

Clamping force max.	[kN]	15
Clamping stroke	[mm]	45
Jaw width	[mm]	65
Max. flow rate	[cm ³ /s]	40
Operating volume		
Clamping	[cm ³]	36
Unclamping	[cm ³]	27
Weight	[kg]	approx. 7.0

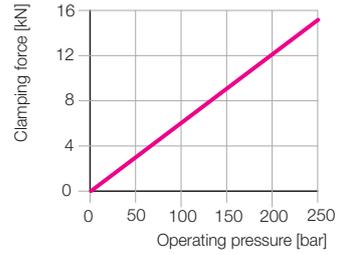
Part no. **4413131**

Adaptor plate (accessory)

Weight	[kg]	approx. 3.8
Part no.		0441313

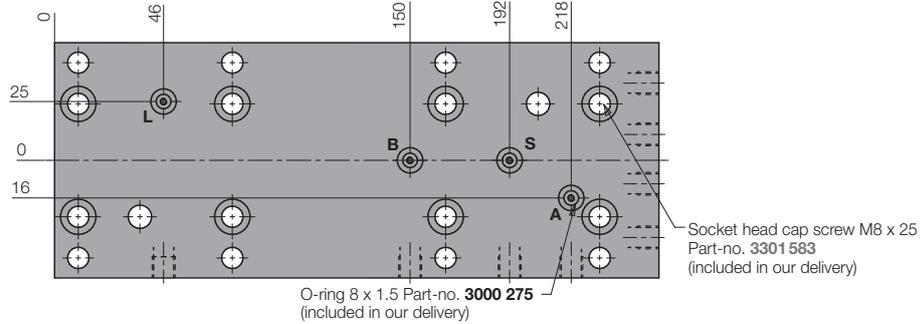
Clamping force diagram

(Height of the clamping jaw 25 mm)

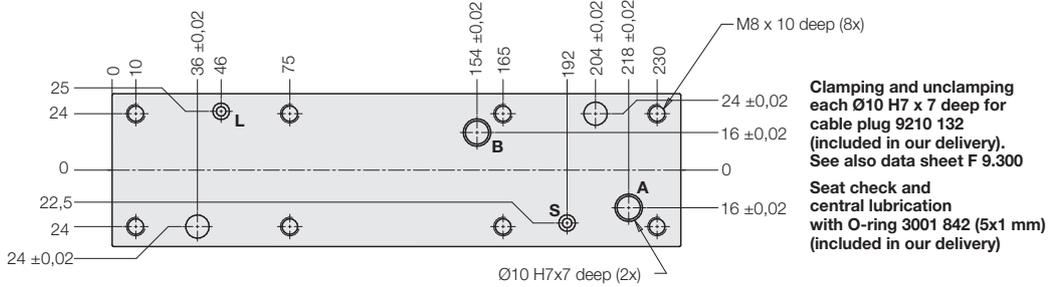


Accessories: Adaptor plate

View from below

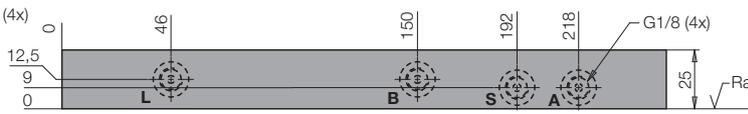
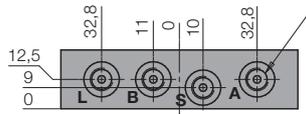
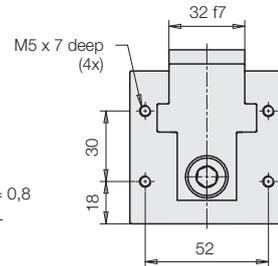
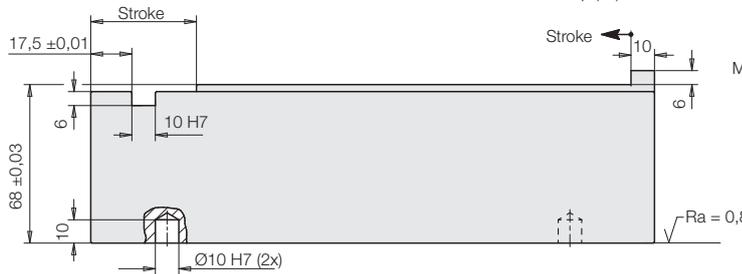
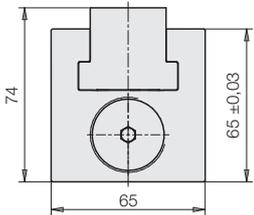


- A** = Clamping
- B** = Unclamping
- S** = Central lubrication
- L** = Air for seat check



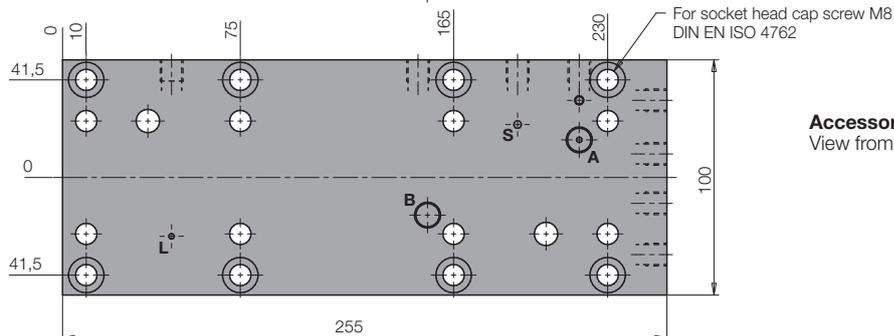
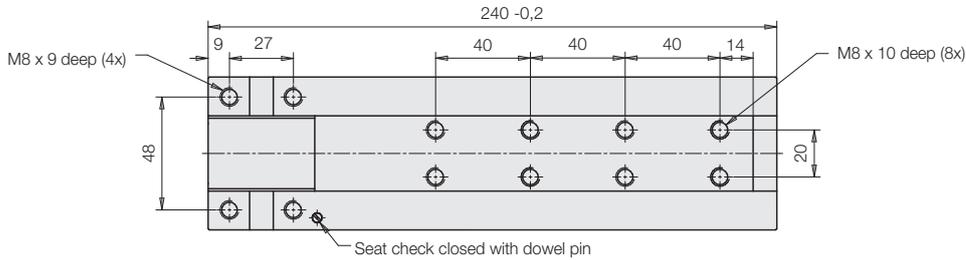
Clamping and unclamping each Ø10 H7 x 7 deep for cable plug 9210 132 (included in our delivery). See also data sheet F 9.300

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



Accessories: Adaptor plate

Side views



Accessories: Adaptor plate

View from above

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

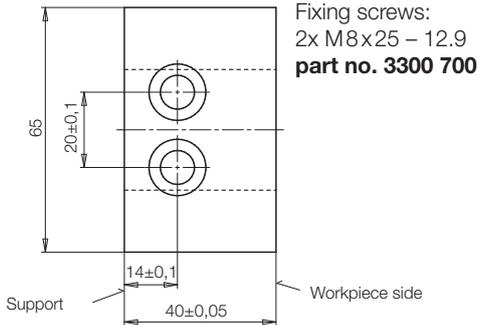
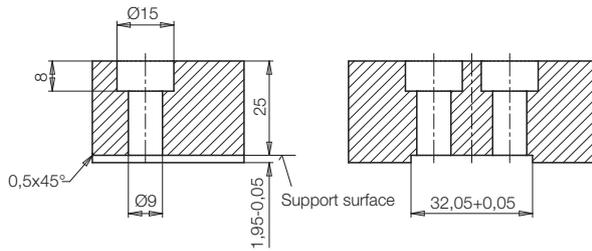
Size 2: Jaw Width 65 mm Accessories

Accessory – clamping jaws

Versions	Clamping jaw blanks
Material	16 MnCr5 smooth

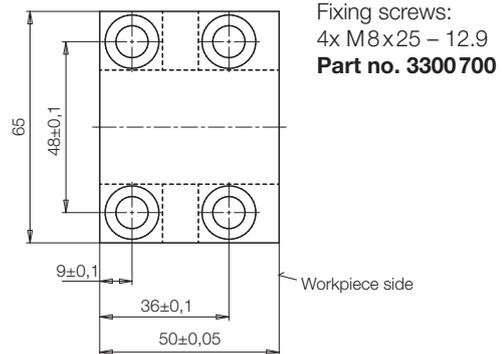
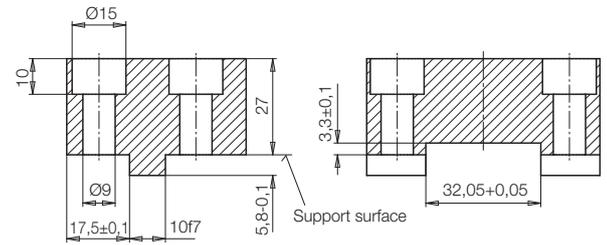
Clamping jaw

Part no. 3548080



Fixed jaw

Part no. 3548081



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 chart below.

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

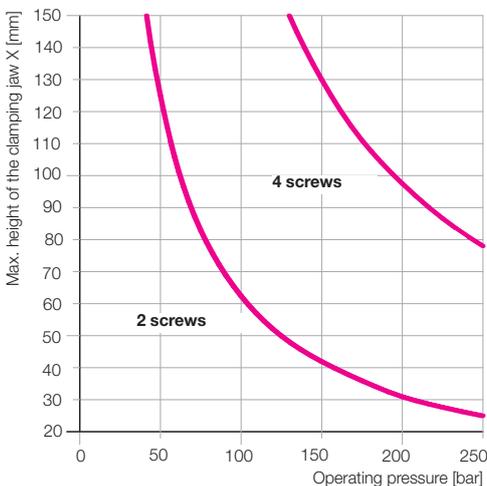
Important note

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

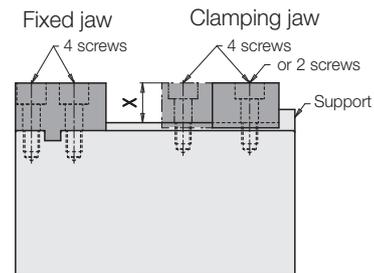
Max. height of the clamping jaws X at max. operating pressure of 250 bar

Fixing screws for clamping jaws	M8 x 25 – 12.9
X [mm] with 2 screws	25
X [mm] with 4 screws	78

Max. height of the clamping jaw X as a function of the operating pressure



Fixing of the clamping jaws



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