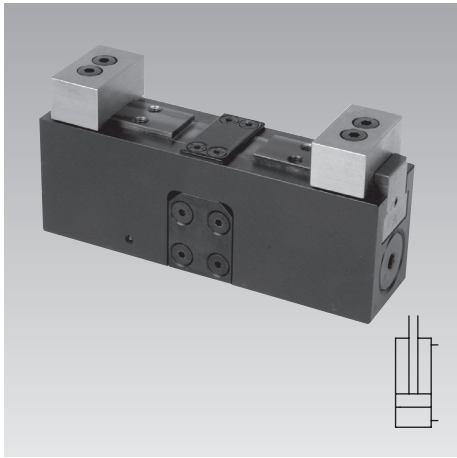




Hydraulic Vises, Concentric Clamping

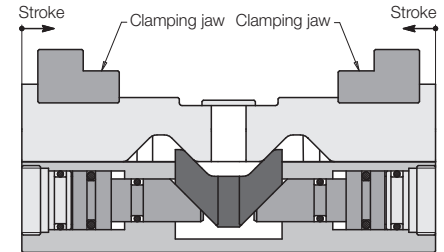
max. clamping force 6.5 and 9 kN, jaw width 40 and 65 mm,
 double acting, max. operating pressure 250 bar



Advantages

- Very compact design
- High rigidity
- Retention force – high clamping force
- Repetitive clamping accuracy ± 0.02 mm
- 2 sizes
- Length of the stroke 2 x 5 and 2 x 8 mm
- Double-acting function
- Fixtures without pipes possible
- Exchangeable jaws
- 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 a concentric clamping function consists of a very slim basic body with 2 integrated hydraulic cylinders. The piston forces are transferred via a guided connecting link to the two clamping slides so that a centric synchronism is obtained.

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.

Important notes

The concentric clamping vise is only suitable for exterior clamping.

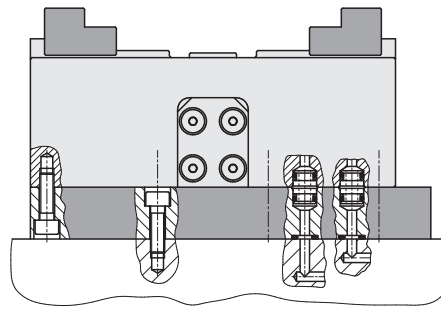
Lubricate at the latest after 500 clamping cycles the clamping slide via the central lubrication.

Never use the complete clamping stroke to guarantee safe clamping of the workpiece. Max. operating temperature 80 °C.

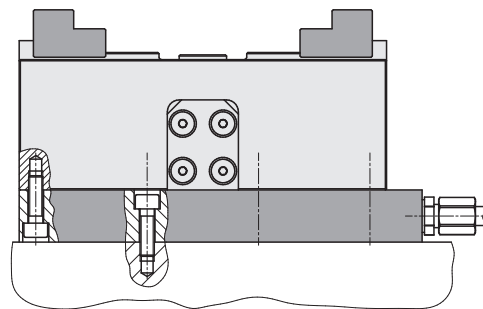
Fixing from above

with accessory adaptor plate

Drilled channels

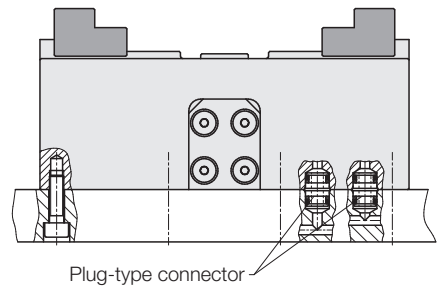


Pipe thread



Fixing from below

Drilled channels

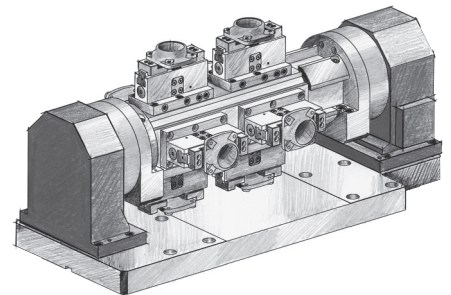


Accessories

Clamping jaws and adaptor plate are not included in the delivery of the clamping vise and have to be ordered separately as accessory.

Application example

Concentric clamping of 8 flanges on a rotary indexing fixture.



Technical Data • Accessory • Dimensions

Part no. 4413051

Technical data

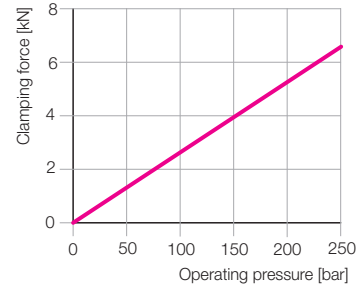
Clamping force / jaw	[kN]	6.5
Retention force	[kN]	8
Release force	[kN]	0.5
Min. pressure	[bar]	10
Clamping stroke	[mm]	2 x 5
Repetitive clamping accuracy	[mm]	±0.02
Jaw width	[mm]	40
Max. flow rate	[cm ³ /s]	25
Stroke volume	[cm ³]	6.4
Clamping	[cm ³]	3.2
Unclamping	[cm ³]	
Weight	[kg]	approx. 2.4

Adaptor plate (accessory)

Weight	[kg]	approx. 1.9
Part no.		0441 305

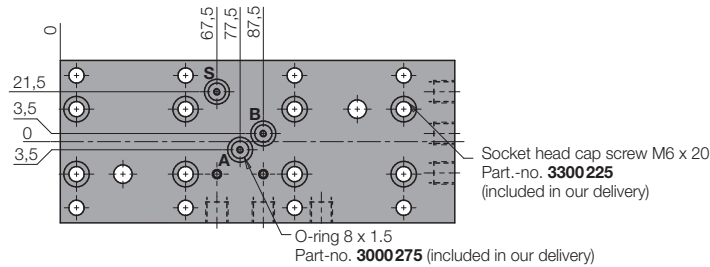
Clamping force diagram

(Height of the clamping jaw 15 mm)

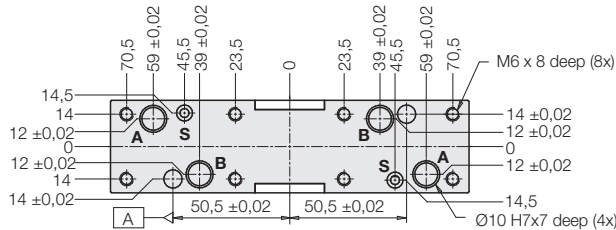


Accessories: Adaptor plate

View from below



A = Clamping
B = Unclamping
S = Central lubrication



Clamping and unclamping

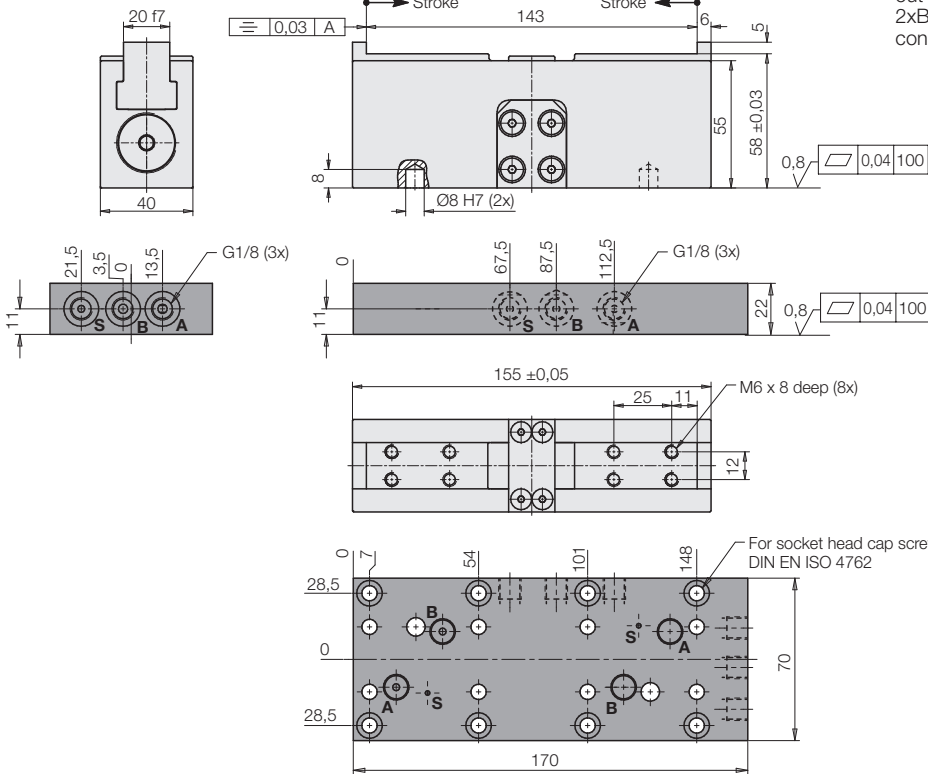
each Ø10 H7 x 7 deep for
4 x cable plug **9210 132**
(included in our delivery).
See also data sheet F 9.300

Central lubrication

2 x with O-ring **3001 842** (5x1 mm)
(included in our delivery)

Important note

If the vise is manifold-mounted without adaptor plate, all 6 ports (2xA, 2xB, 2xS) have to be individually connected.



Accessories: Adaptor plate

Side views

Accessories: Adaptor plate

View from above

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

Clamping Force 9 kN • Clamping Stroke 2 x 8 mm

Technical Data • Accessory • Dimensions

Part no. 4413 151

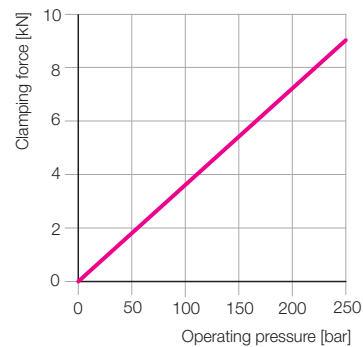
Technical data

Clamping force / jaw	[kN]	9
Retention force	[kN]	15
Release force	[kN]	0.5
Min. pressure	[bar]	10
Clamping stroke	[mm]	2 x 8
Repetitive clamping accuracy	[mm]	±0.02
Jaw width	[mm]	65
Max. flow rate	[cm³/s]	50
Stroke volume Clamping	[cm³]	14.2
Unclamping	[cm³]	6.0
Weight	[kg]	approx. 6

Adaptor plate (Accessory)

Weight	[kg]	approx. 3.5
Part no.		0441 315

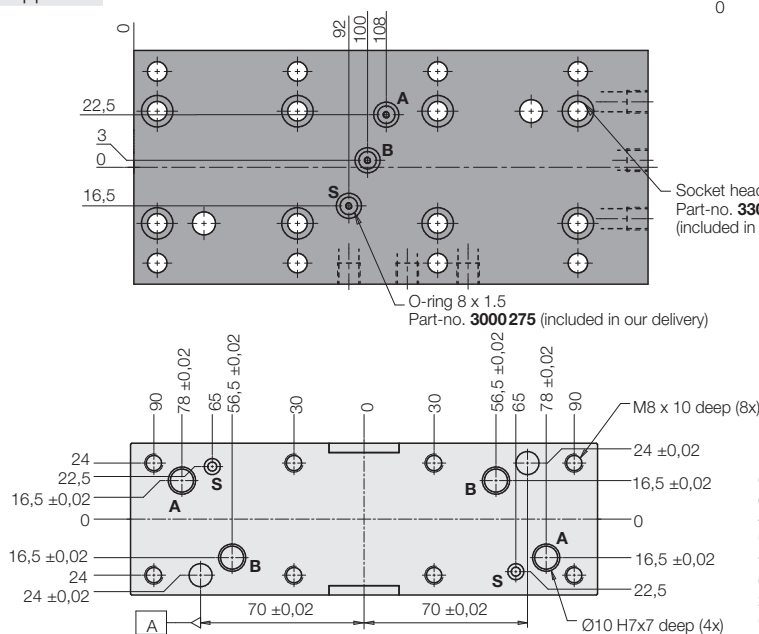
Clamping force diagram
(Height of the clamping jaw 25 mm)



Accessories: Adaptor plate

View from below

A = Clamping
B = Unclamping
S = Central lubrication

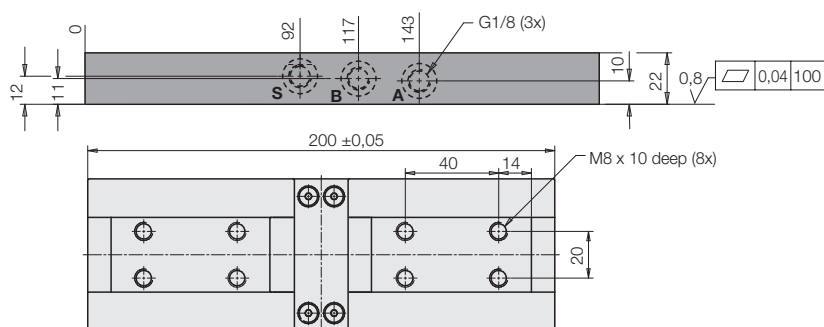
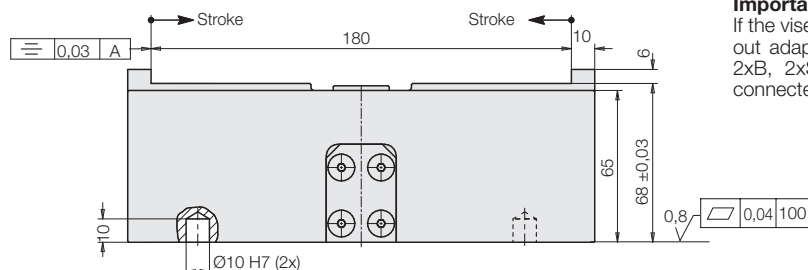
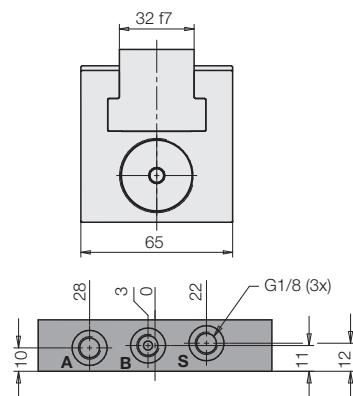


Clamping and unclamping
each Ø10 H7 x 7 deep for
4 x cable plug **9210 132**
(included in our delivery).
See also data sheet F 9.300

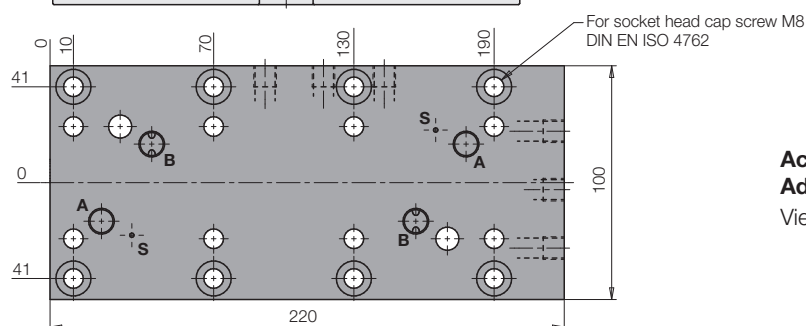
Central lubrication
2 x with O-ring **3001 842** (5x1 mm)
(included in our delivery)

Important note

If the vise is manifold-mounted with-
out adaptor plate, all 6 ports (2xA,
2xB, 2xS) have to be individually
connected.



Accessories:
Adaptor plate
Side views

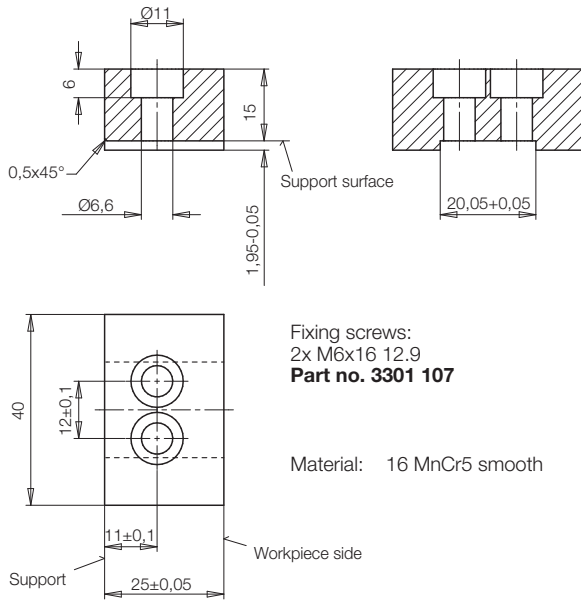


Accessories:
Adaptor plate
View from above

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

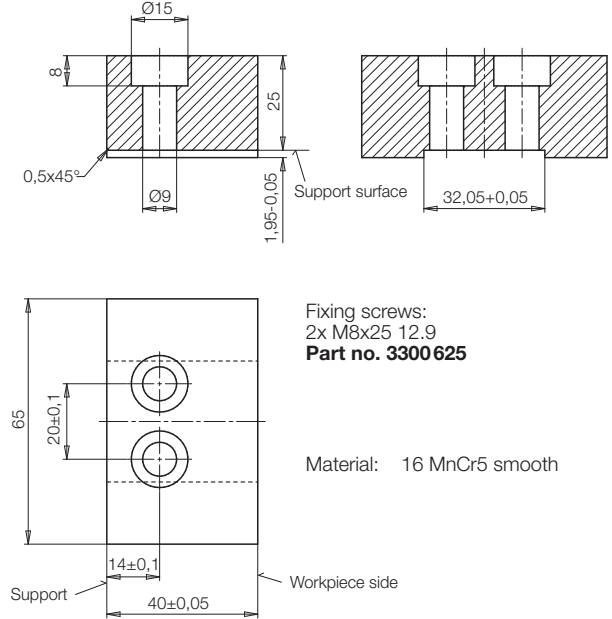
For vise 4413051

Clamping jaw blank 40 mm
Part-no. 3548070



For vise 4413151

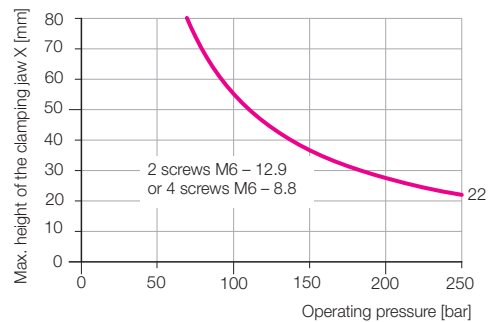
Clamping jaw blank 65 mm
Part-no. 3548080



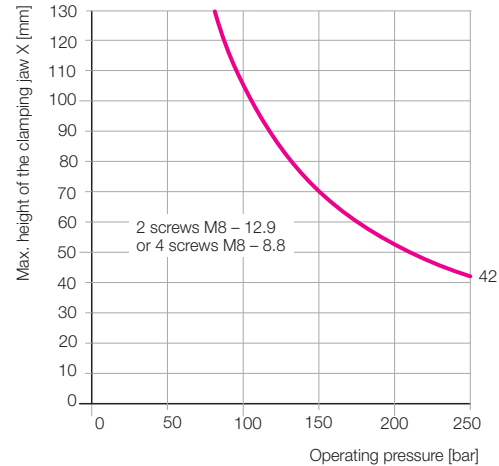
Self-made clamping jaws

Clamping 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 charts below.

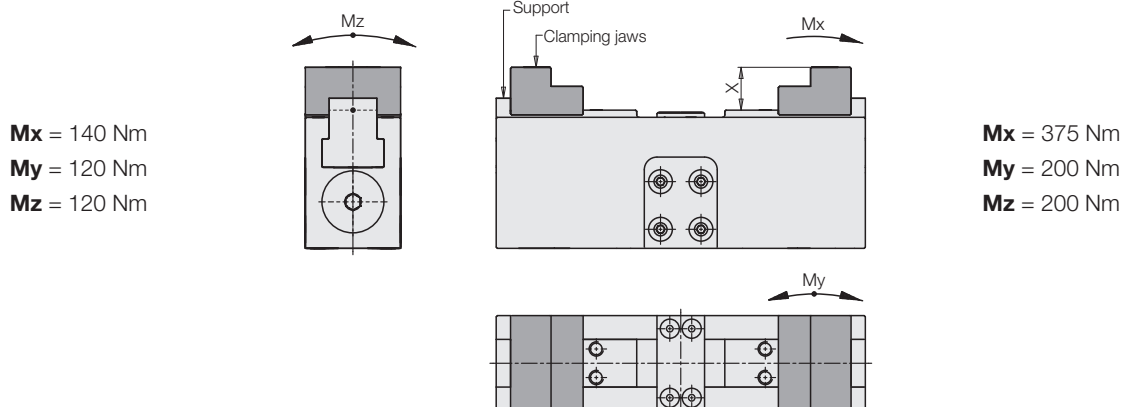
Max. height of the clamping jaw X for 4413051 as a function of the operating pressure



Max. height of the clamping jaw X for 4413151 as a function of the operating pressure



Permissible torques on the clamping jaws



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