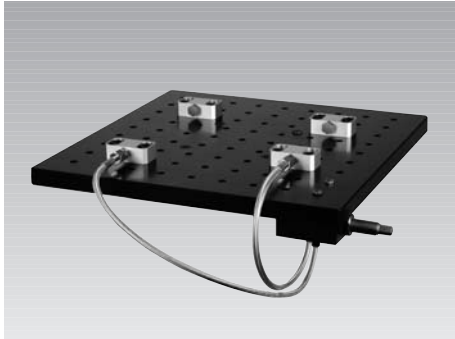


Clamping modules - hydraulic

Hydraulic clamps with universal clamping plate and screw pump,
max. clamping force 2.5 kN



Clamping module with hydraulic clamps

Application

With *modulog* clamping modules workpieces for manual assembly operations are easily and reliably positioned, fixed and clamped. Thus the fitter can exert forces on the workpiece without displacing it. The quality of the assembly process will be improved.

Principal use

- Assembly of heavy components
- Assembly of frequently changing components
- Workshop applications
- Clamping during test cycles
- Machining of cylinder heads
- Assembly of electric motors

Mounting

The clamping modules are screwed onto the grid of the universal clamping plate with socket head cap screws M12. The screws have to be tightened with 80 Nm.

The screw pump is fixed with 2 socket head cap screws M8 at the bottom side of the universal clamping plate.

The universal clamping plate can be mounted with 4 socket head cap screws M10 with flat head on other *modulog* modules.

Important note!

For dimensioning of the clamps it has to be distinguished if the forces act against a fixed stop or if clamping forces are used by friction.

Advantages

- Quicker and simpler clamping process
- Uniform, reproducible clamping force by hydraulic clamping
- Quick and easy retrofitting
- Complete sets including universal clamping plate
- Every point on the universal clamping plate is approachable with the clamping elements
- Easy handling for retrofitting due to universal clamping plate made of aluminium
- Easy fixing of the universal clamping plate on other *modulog* modules by the *modulog* interface

Description

The *modulog* clamping module consists of 2 clamping elements, which are connected by hydraulic hoses to a screw pump. For each clamping element a corresponding fixed stop can be positioned on the universal clamping plate.

The universal clamping plate is provided with a grid for mounting of the clamping elements. This allows flexible positioning of the clamping elements for clamping of very different workpieces.

Also the screw pump is fixed on the universal clamping plate.

The universal clamping plate is equipped with a 140 x 140 *modulog* interface in the centre, so that it can be easily mounted on other *modulog* modules. Combined with *modulog* lifting or rotating modules the workpiece can be moved to the ergonomically ideal height or rotating position.

The elements are also available as component parts. The kit contains the complete system, filled with hydraulic oil and bled, with screw pump kit and clamping elements.

Material

Clamping elements: high-tensile aluminium, steel, partially hardened

Universal clamping plate: high-tensile aluminium
Screw pump: steel

modulog

Clamping modules - hydraulic



Clamping module with hydraulic clamps, universal clamping plate and screw pump

Max. clamping force: 2.5 kN
Max. clamping stroke: 5 mm
Operation with wrench

Part-no. 8903-02-04-H

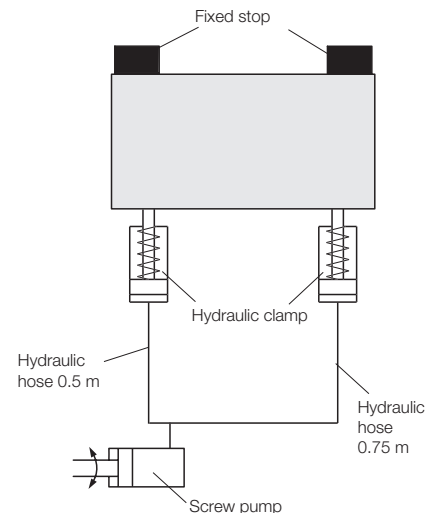
Universal clamping plate

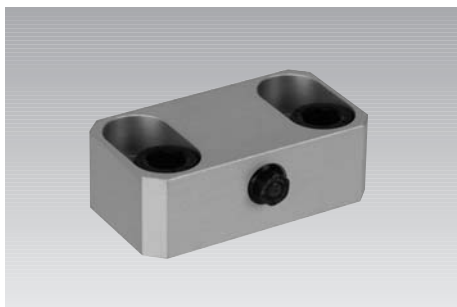
with grid 50 mm – M12
with *modulog* interface
140 x 140 mm - counterbore for
DIN 912 M10

Screw pump

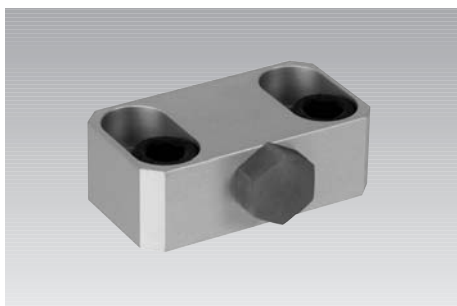
Max. operating pressure: 500 bar
Function: single acting
Operation with wrench

Hydraulic circuit diagram

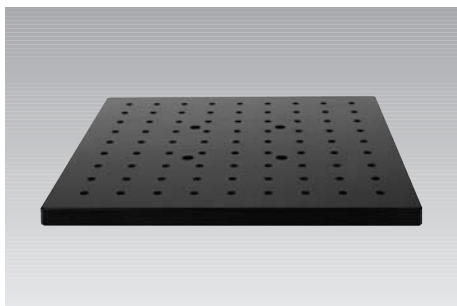




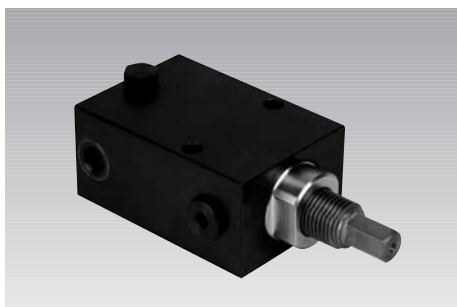
Hydraulic clamp 6505-339



Fixed stop 6505-340



Universal clamping plate 6311-572



Screw pump of the kit 6505-341

Description

This clamping module contains 2 hydraulically-operated hydraulic clamps and 2 fixed stops. Both hydraulic clamps are clamped and unclamped with the screw pump.

The hydraulic clamps excel by their compactness and their simple operation.

Installation and operation

If possible the workpiece has to be clamped so that the highest forces act against the fixed stop. The workpiece must safely rest.

The screw pump is operated with a socket or a wrench SW 13 and thus the workpiece is safely clamped against the 2 fixed stops.

Important notes!

When mounting, pay attention to the maximum clamping stroke.

The maximum clamping force is obtained with maximum operating pressure of the screw pump. The required torque at the screw pump is 53 Nm. (see diagram)

Part numbers

Clamping module with hydraulic clamps 8903-02-04-H

Delivery:

- 2 off hydraulic clamps
- 2 off fixed stops
- 1 off universal clamping plate
- 1 off screw pump kit including 2 hydraulic hoses with fittings

Part numbers individual elements:

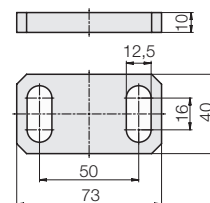
Hydraulic clamp: 6505-339
 Fixed stop: 6505-340
 Universal clamping plate: 6311-572
 Screw pump kit: 6505-341

Technical characteristics

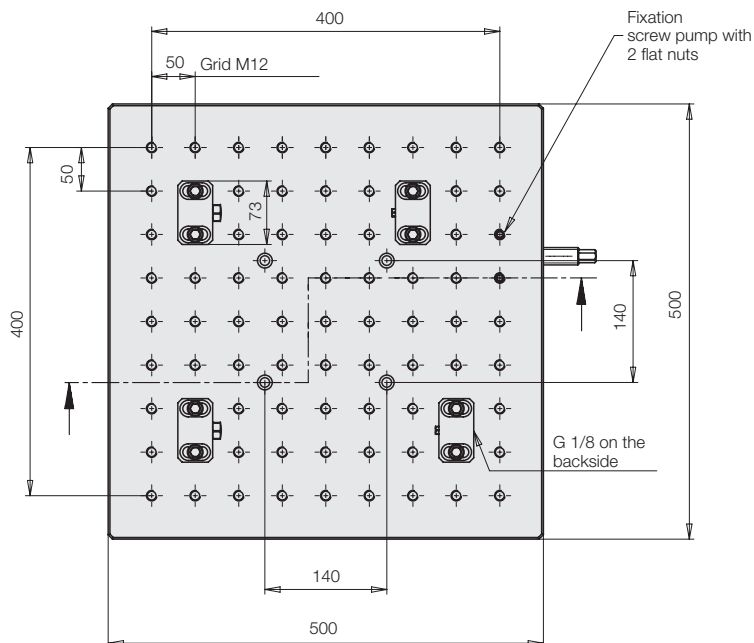
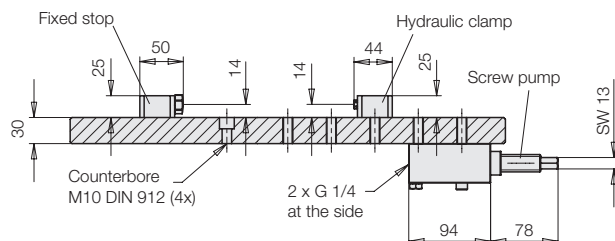
Function:	single acting
Clamping force (per hydraulic clamp):	[kN] 2.5
Clamping stroke:	[mm] max. 5
Max. operating pressure:	[bar] 500
Hose nominal diameter:	ND 4

Accessory

Height plate
 Part-no. 6311-633



Dimensions



Operating torques at the screw pump

