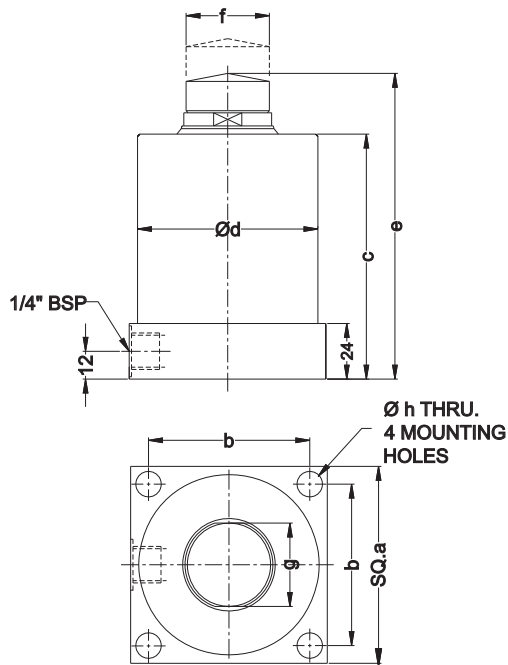




Work Support

hydraulic forwarding- contact by spring force single acting with spring return



Hydraulic work support is a replacement to the adjustable screw jack. This is not a force giving element but a resistance giving element. This work support replaces both spring forwarding as well as pneumatic forwarding work support.

Application

Irregular job is supported on only three points. If an additional support is required, it must be adjustable, like the manual screw jack support. Hydraulic work support is the right solution for such an application.

The work support is used to support the job, to avoid deflection and vibrations marks due to cutting and clamping forces. It helps to clamp the job without any distortion.

Principle

A plunger is in retracted position in the un-pressurised mode. After applying pressure hydraulic piston moves forward to push spring. Hence supporting plunger touches the job by a light spring force. After 30 - 40 bar pressure sleeve collapses to hold the supporting plunger. It resists to move in the axial direction due to frictional force. The resistance is equal to the radial inward force multiplied by the coefficient of friction.

Advantages

- ◆ Only one port for piping purpose
- ◆ Built in sequencing. First hydraulic piston moves forward to push supporting plunger, till it touches the component and then sleeves collapses to lock the piston.
- ◆ Plunger touching force is very low. Hydraulic piston force is not transferred on the job. There is spring between touching plunger and hydraulic piston.
- ◆ Touching plunger is in normally retracted condition hence loading and unloading of job is very easy.

Specifications

- ◆ Minimum hydraulic operating pressure - 100 bar.
- ◆ Maximum hydraulic operating pressure - 200 bar.
- ◆ For work support 3311500, elastic deformation under load is approx. 0.002 mm per kN.
- ◆ For work support 3320500, elastic deformation under load is approx. 0.001 mm per kN.

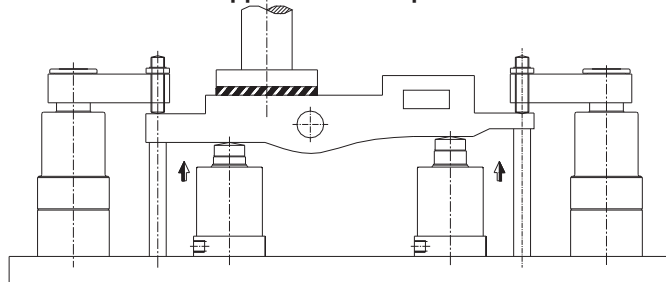
Notes

- ◆ Breather should be protected from cutting fluid and coolant.
- ◆ If a clamping force is applied on the work support, it should not be more than 50 % of the support force.
- ◆ Heavy extensions to plunger can influence the contact force of the work support.
- ◆ For ordering the seal kit, add the prefix "S" to the part number.

PART NO.	3311500	3320500
SUPPORT FORCE §	5 kN	10 kN
a	70	85
b	57	70
c	95	106
d	66	78
e	119.4	132
f	21	36
g	21	36
h	9	11
Stroke ± 1	15	15
Weight	3 kg	4 kg
Plunger Contact Force Max.	80 N	100 N

§ Force is specified at 150 bar.
Subject to change for improvement

Application example



All dimensions are in mm
Overall dimension tolerance ± 0.5 mm