



Work Support

Hydraulic forwarding, contact by spring force, single acting with spring return



Description :

Hydraulic work support is a replacement to the adjustable screw jack. It is not a force exerting 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 application. The work support is used to support the job, to avoid deflection and vibrations due to cutting and clamping forces. It helps to clamp the job without distortion.

Principle :

A plunger is in retracted position in the un-pressurized 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.

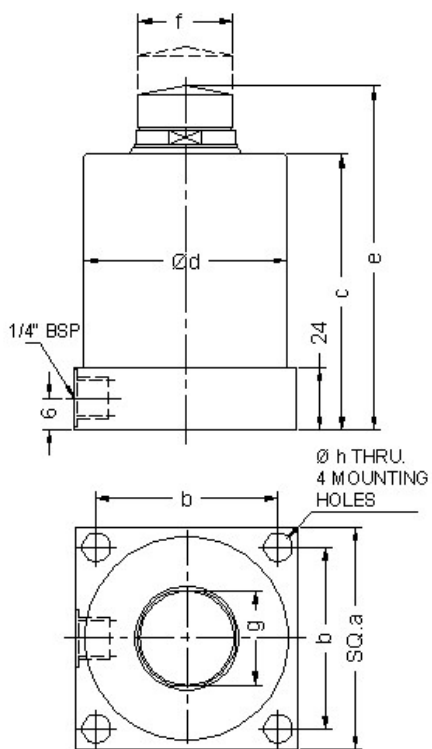
Specifications :

- Minimum operating pressure - 100 bar.
- Maximum operating pressure - 150 bar.
- For work support 3311501, elastic deformation under load is approx. 0.002 mm per kN.
- For work support 3320501, elastic deformation under load is approx. 0.001 mm per kN.

Notes :

- As the Work support is single acting, spring return, a breather is provided. It should be protected from cutting liquids and coolants.
- 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.

Dimensional details :



PART NO.	3311501	3320501
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.

All dimensions are in mm, Overall dimension tolerance ± 0.5 mm.

Subject to change for improvement. (Revision - July12)

Application Example :

