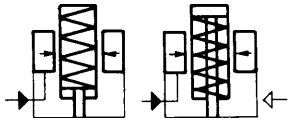


## No. 6961F/L

### Support Element, block type

spring advanced or air advancing,  
max. operating pressure 400 bar,  
min. operating pressure 50 bar.



Order no.	Article no.	Contact force F1* [N]	Support force F2 [kN]	Stroke H [mm]	Vol. [cm <sup>3</sup> ]	Piston area [cm <sup>2</sup> ]	Weight [g]
65250	6961F-08	20-32	8	6	5,5	2,00	1100
65268	6961F-12	32-41	12	8	8,0	3,14	1800
65276	6961F-20	40-72	20	10	13,0	4,90	3100
65284	6961L-08	170	8	6	5,5	2,00	1100
65292	6961L-12	270	12	8	8,0	3,14	1800
65300	6961L-20	440	20	10	13,0	4,90	3100

\*Article No. 6961F-\*\*: Contact force F1 dependent on spring pretensioning and setting travel.

Article No. 6961L-\*\*: Contact force F1 dependent on air pressure at max. 10 bar.

### Design:

Cylinder body from steel, burnished. Support pin case hardened and ground. Internal locking sleeve system Kostyrka. Special wiper prevents contamination. Support pin with internal thread. Home position retracted or extended, depending on function. Internal parts from stainless steel. Oil supply via threaded connection or oil channel in the fixture body.

### Application:

Support element no. 6961F-\*\*: Plunger extended, spring adjustable contact force.

Support element no. 6961L-\*\*: Plunger retracted, pneumatic advance spring return.

These spring or pneumatic advancing hydraulic support elements provide additional support to avoid vibration or deflection during machining. Even large workpiece tolerances can be compensated (castings). Fitted directly below a clamping point they prevent distortion of the workpiece. The support elements can be matched with clamping cylinders of same nominal size into one circuit. To prevent the support plunger from possible slackening during a clamping procedure, it is advisable to connect a sequence valve (no. 6918-2) to control the support elements. Due to this fact, the support element is locked before the clamping procedure can be activated (fig. 1). Being used as an additional support to prevent from bending and vibration, the element should be preceded by a sequence valve (no. 6918-2) in order to ensure supporting before clamping. In case the clamping force is higher than the support force, the clamping force has to be reduced by using a pressure reducing valve no. 6917 (fig. 2).

### Features:

High resilience due to high operating pressure, matched to the forces of the clamping cylinder row. Smooth contacting of the workpiece by adjustable spring or pneumatic pressure. Universal use in each position.

Easy attachment of thrust pieces in the piston rod thread.

### Note:

For spring advanced types, there is risk of sucking in coolant! To avoid this, a breather hose has to be connected to the pneumatic port and moved to a protected area. Support pin must be protected against the entry of dirt and splash water by fitting a set screw or plug. The support elements must be properly vented! The vent port must always be on top. Failure to do so can cause destruction of the clamping element by the escaping diesel.

**The supporting force should be matched to the clamping force in order to absorb machining forces.**

**The supporting force should always be at least twice as high as the clamping force.**

### Hydraulic diagrams:

fig. 1

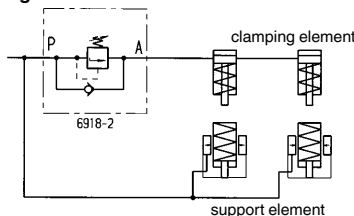
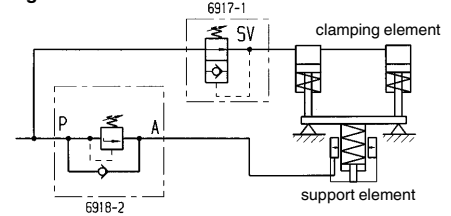


fig. 2



CAD

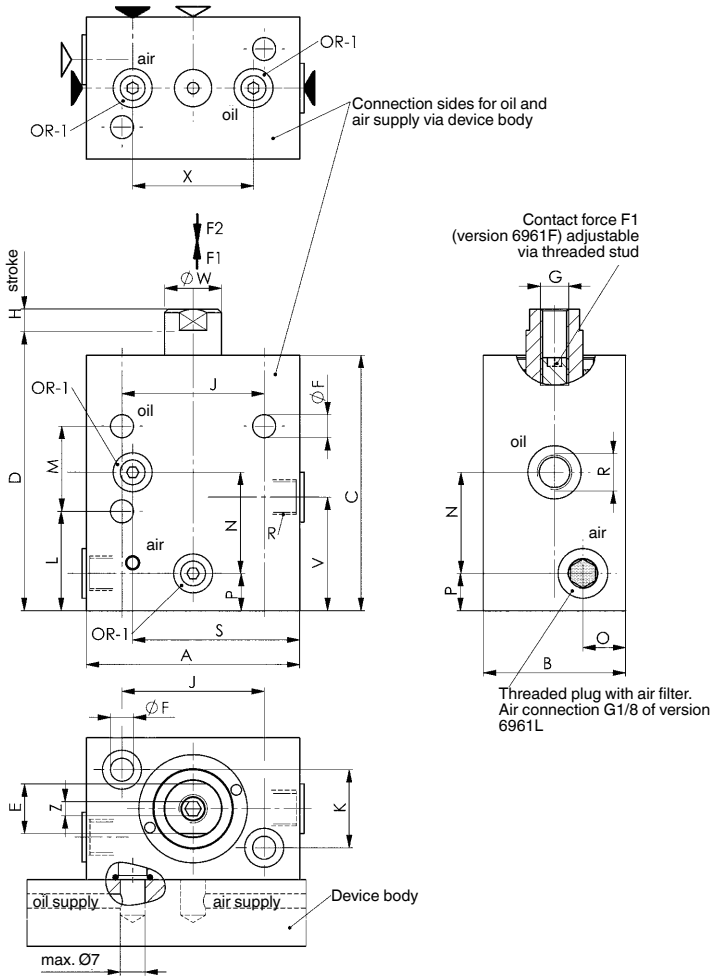
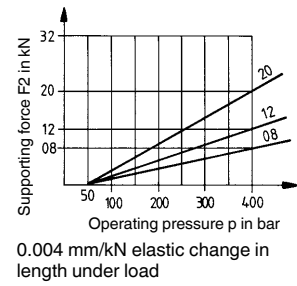


Diagram:



## Dimensions:

Order no.	Article no.	A	B	C	D	E	dia. F	G	J	K	L	M	N	O	P	R	S	V	dia. W	X	Z	OR-1 O-ring Order No.
65250	6961F-08	60	40	72	79,0	SW14	6,5	M8	40	22	28	24	28,5	12	10,5	G1/8	47	32	16	34	SW4	161554
65268	6961F-12	70	50	86	93,5	SW17	8,5	M10	50	30	32	32	33,5	16	12,5	G1/8	56	36	20	42	SW5	161554
65276	6961F-20	80	60	104	113,5	SW22	10,5	M12	60	40	33	40	40,0	20	14,0	G1/8	62	39	25	44	SW6	161554
65284	6961L-08	60	40	72	79,0	SW14	6,5	M8	40	22	28	24	28,5	12	10,5	G1/8	47	32	16	34	SW4	161554
65292	6961L-12	70	50	86	93,5	SW17	8,5	M10	50	30	32	32	33,5	16	12,5	G1/8	56	36	20	42	SW5	161554
65300	6961L-20	80	60	104	113,5	SW22	10,5	M12	60	40	33	40	40,0	20	14,0	G1/8	62	39	25	44	SW6	161554