



PRESSURE SWITCH TYPE USPH 4

**WK
450 398**

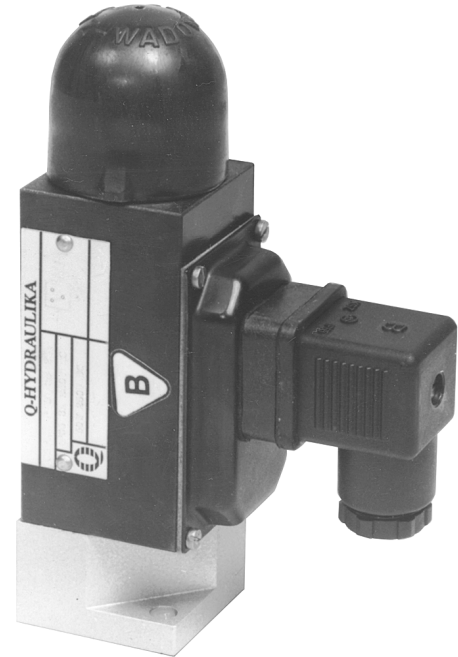
up to 35 MPa

04. 2000r.

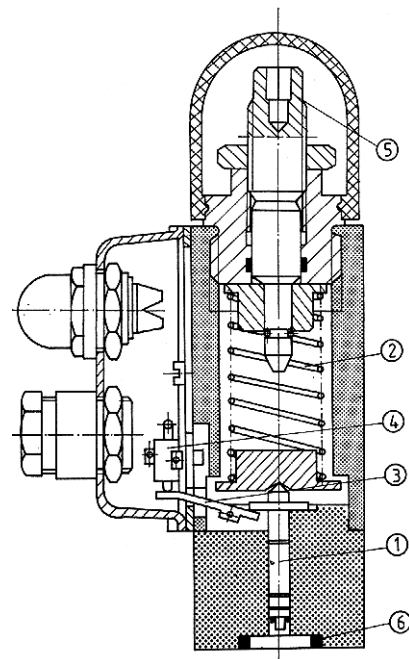
APPLICATION

Pressure switch type USPH 4 serves to switch an electrical circuit on and off by means of a micro switch under the influence of pressure variations in relation to the set pressure.

The pressure switch may be used to control or monitor processes i.e. by means of a visual (light) or acoustic (bell) indicator. Sandwich plate type ULBC is used between the subplate and the pressure switch when mounting. The pressure switch is fixed to the sandwich plate by two bolts M4 x 16. Mating surfaces are sealed by means of O-rings which are included with the switch.



DESCRIPTION OF OPERATION



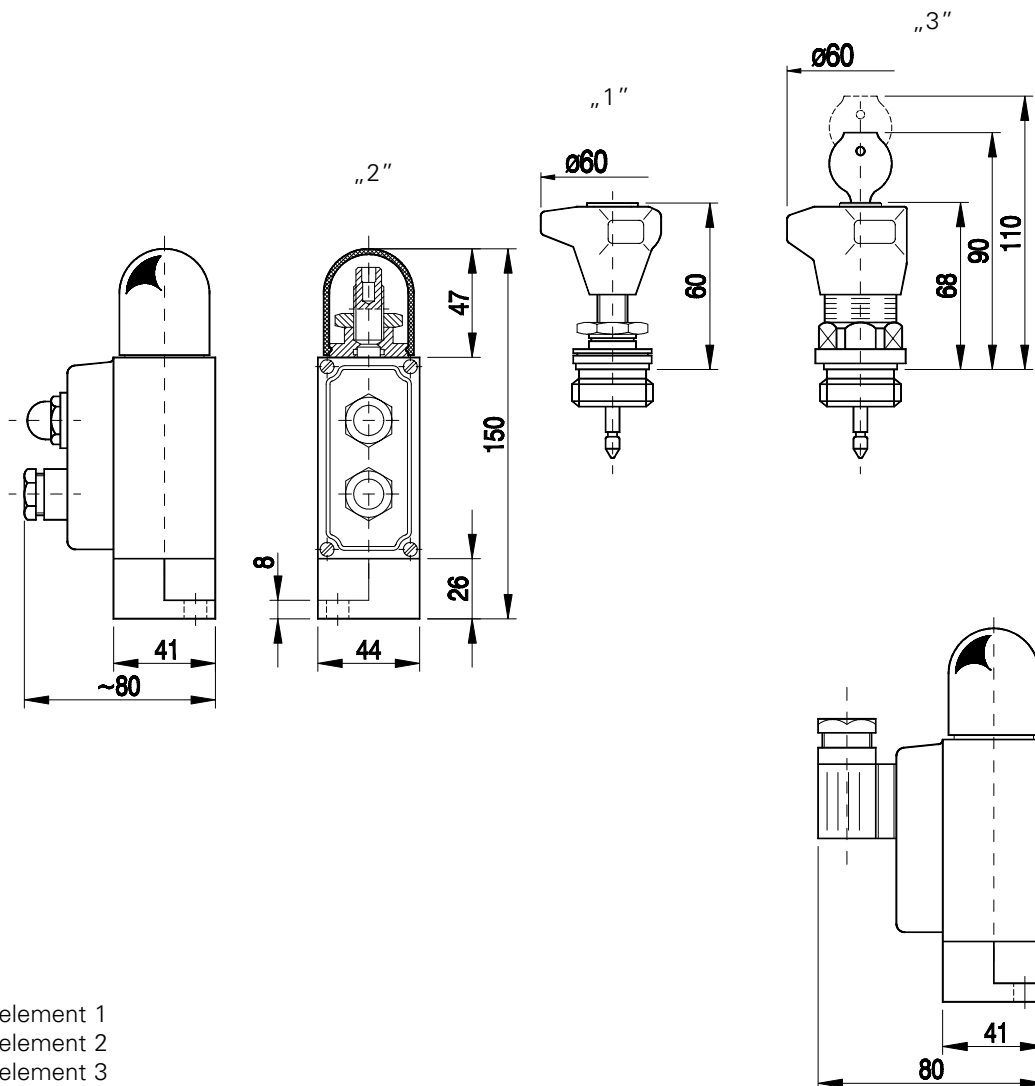
Pressure affects the piston 1 which lifts unclamping the lever 3. The lever switches the micro switch. The switching pressure is set at the adjusting element by means of the spring 2. As soon as pressure force decreases, the spring causes the piston to move downward. The piston pushes the lever and switches the micro switch to its initial state.

Item 6 - O-ring 12 x 2 - 1 piece

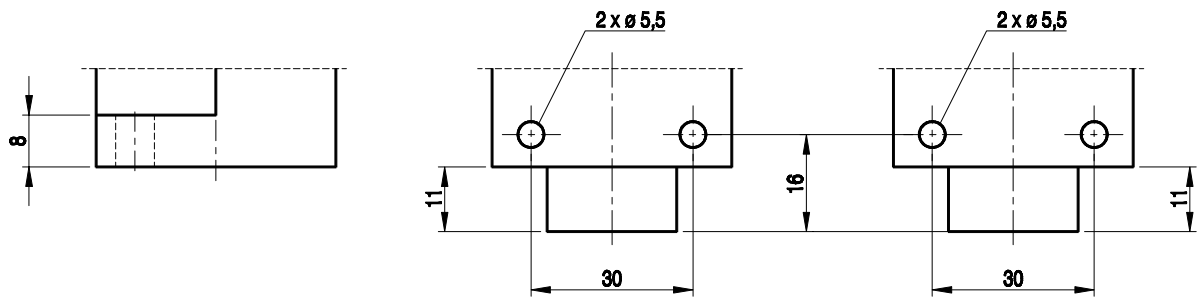
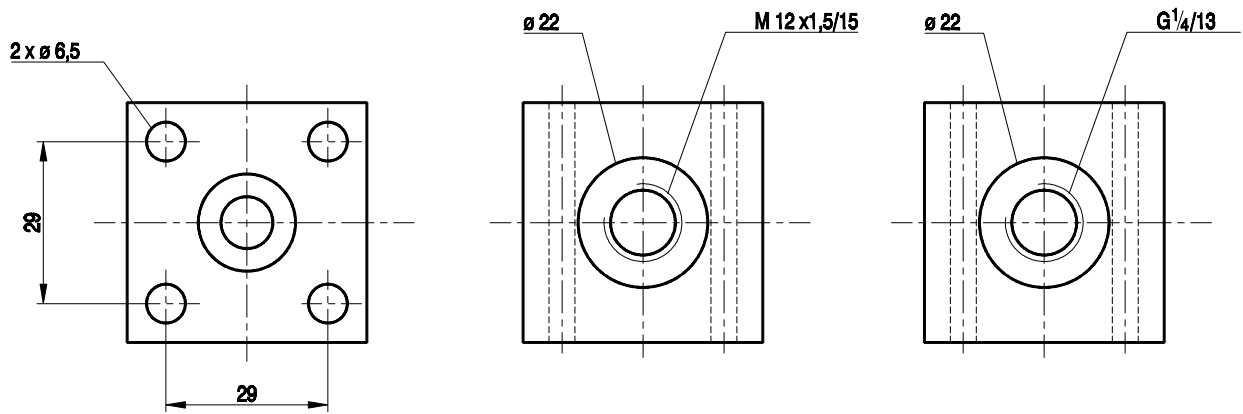
TECHNICAL DATA

Hydraulic fluid	Mineral oil or phosphate ester
Nominal fluid viscosity	37 mm ² /s at the temperature of 328 K
Viscosity range	2.8 to 380 mm ² /s
Optimum working temperature (fluid in a tank)	313 - 328 K
Fluid temperature range	243 - 343 K
Filtration	up to 16 mm
Maximum operating pressure	10 MPa, 20 MPa, 35 MPa
Switching repeatability	± 2 % of pressure setting
Maximum contact loading	5 A for AC voltage 250 V DC voltage 30 V
Insulation	IP 65 per PN/E-08106 (DIN 40050)
Weight	0.6 kg
Weight of ULBC	0.8 kg (size 6), 1.9 kg (size 10)

OVERALL AND CONNECTION DIMENSIONS



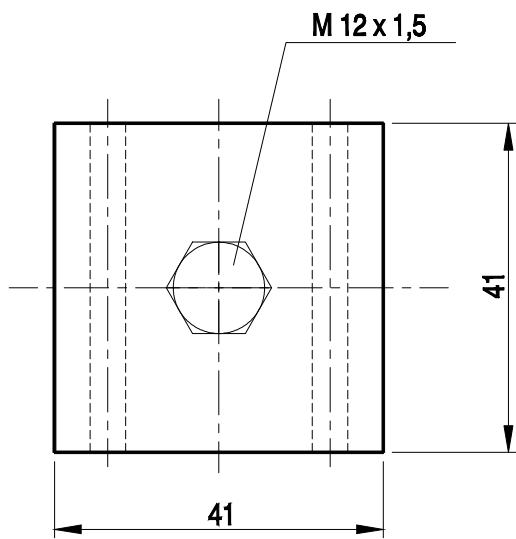
- 1 - adjusting element 1
- 2 - adjusting element 2
- 3 - adjusting element 3



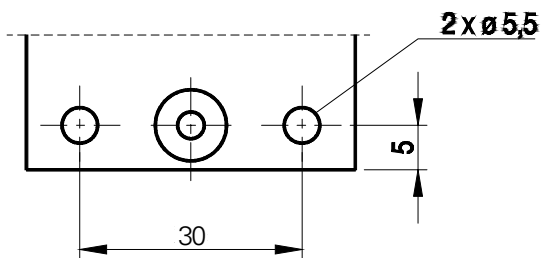
„P”

„M”

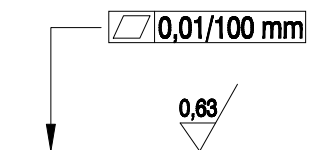
„R”



- „P” - subplate mounting
- „M” - threaded connections M12 x 1.5
- „R” - threaded connections G 1/4
- „K” - side subplate mounting



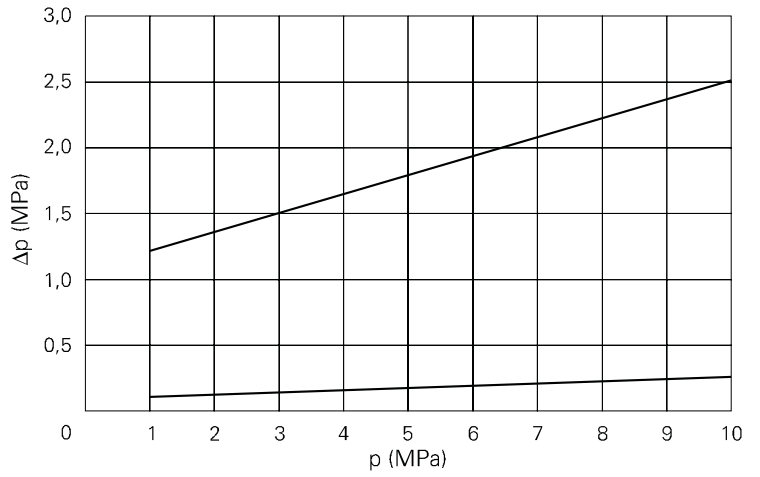
„K”



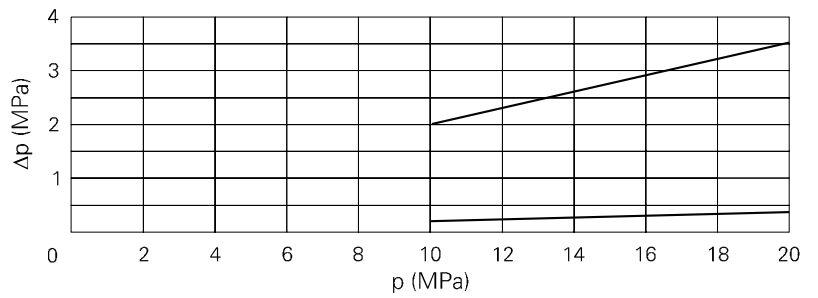
Admissible surface roughness and flatness deviation for a subplate face.

Performance curves measured at $n = 41 \text{ mm}^2/\text{s}$ and $T = 323 \text{ K}$

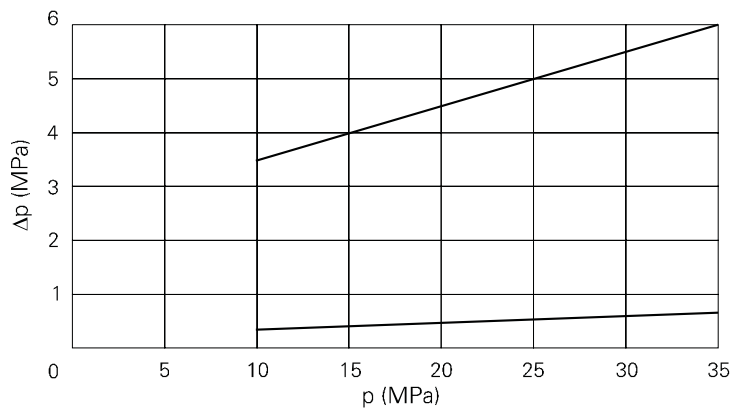
Operating pressure up to 10 MPa



Operating pressure up to 20 MPa

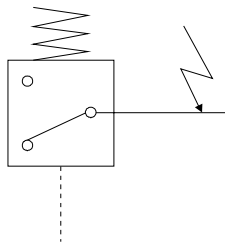


Operating pressure up to 35 MPa

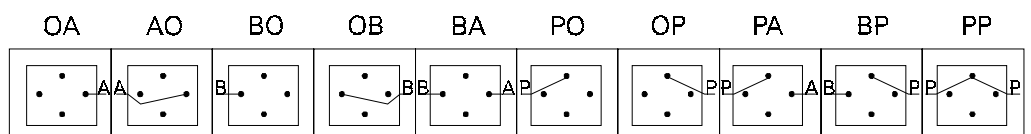


SCHEMES

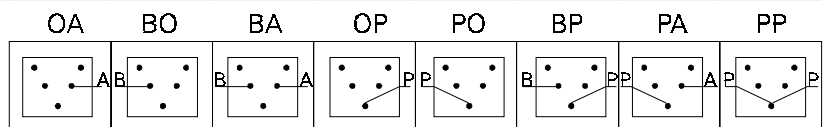
Scheme for USPH 4



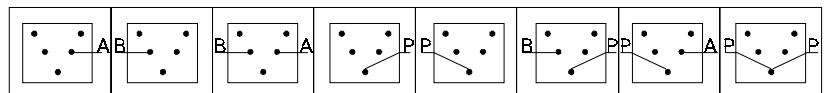
Schemes for ULBC



Scheme for connections for ULBC 06



Scheme for connections of ULBC 10



HOW TO ORDER

Orders coded in the way showed below should be forwarded to the manufacturer.



Mounting method
 Subplate = P
 Threaded conn. M12 x 1.5 = M
 Threaded conn. G 1/4 = R
 Side subplate = K

Further requirements in clear text (to be agreed upon with the manufacturer)

Series number
 01 = 01
 (01 - 09) - installation and connection dimensions remain unchanged

Voltage of control light
 24 V = 24
 110 V = 110
 220 V = 220

Pressure range
 10 MPa = 10
 20 MPa = 20
 35 MPa = 35

Accessories
 Gland = D
 Light = DL
 Angled plug = Z4

Setting element
 Hand knob = 1
 Adjusting screw = 2
 Lockable hand knob = 3

Sealing
 Fluids on mineral oil base = no code
 Fluids on phosphate ester base = V

It is possible to order the pressure switch together with the sandwich plate coded as below.



Nominal size
 Size 6 = 06
 Size 10 = 10

Further requirements in clear text (to be agreed upon with the manufacturer)

Series number
 01 = 01
 (01 - 09) - installation and connection dimensions remain unchanged

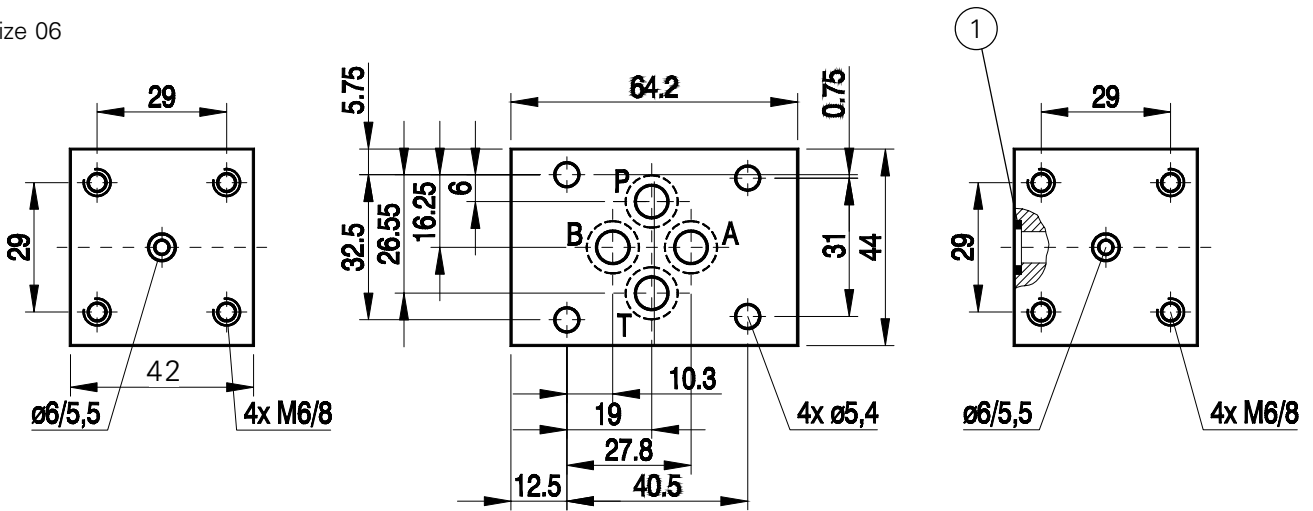
Sealing
 Fluids on mineral oil base = no code
 Fluids on phosphate ester base = V

Subplate type according to scheme
 = OA
 = AO
 = BO
 = OB
 = BA
 = PO
 = OP
 = PA
 = BP
 = PP

Coding example : USPH 4 - P - 01/35 - 2 Z4
 + ULBC 06/01 BA

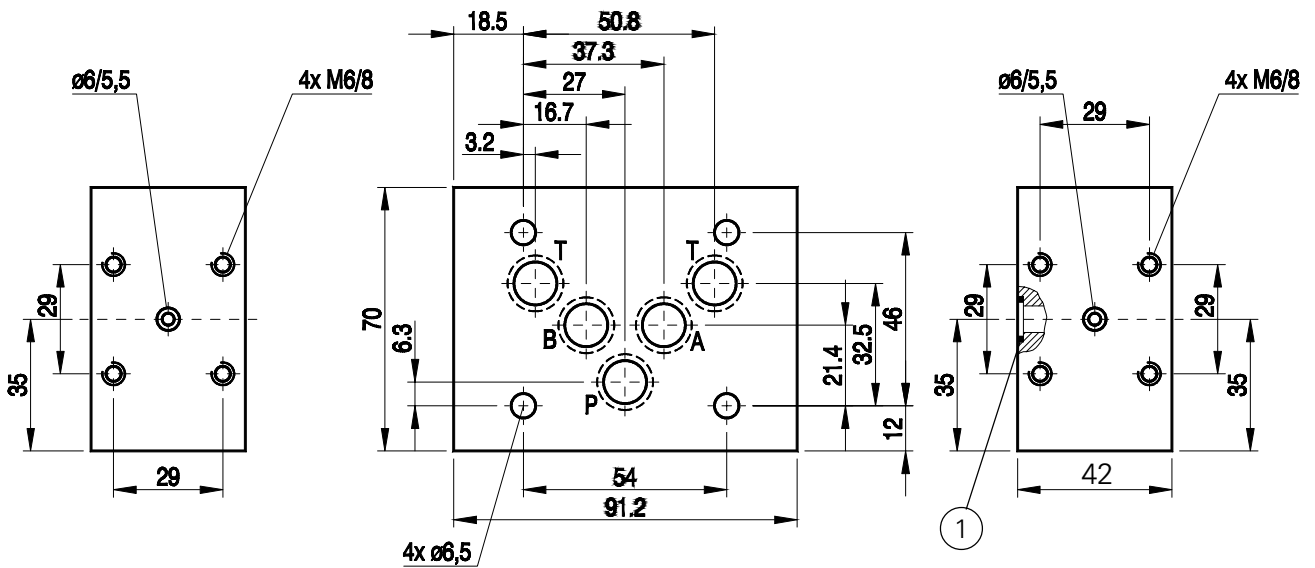
OVERALL AND CONNECTION DIMENSION FOR SANDWICH PLATE

Size 06



Item 1 - o-ring 9.2 x 1.8 - 4 pcs

Size 10



Item 1 - o-ring 12 x 2 - 5 pcs



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