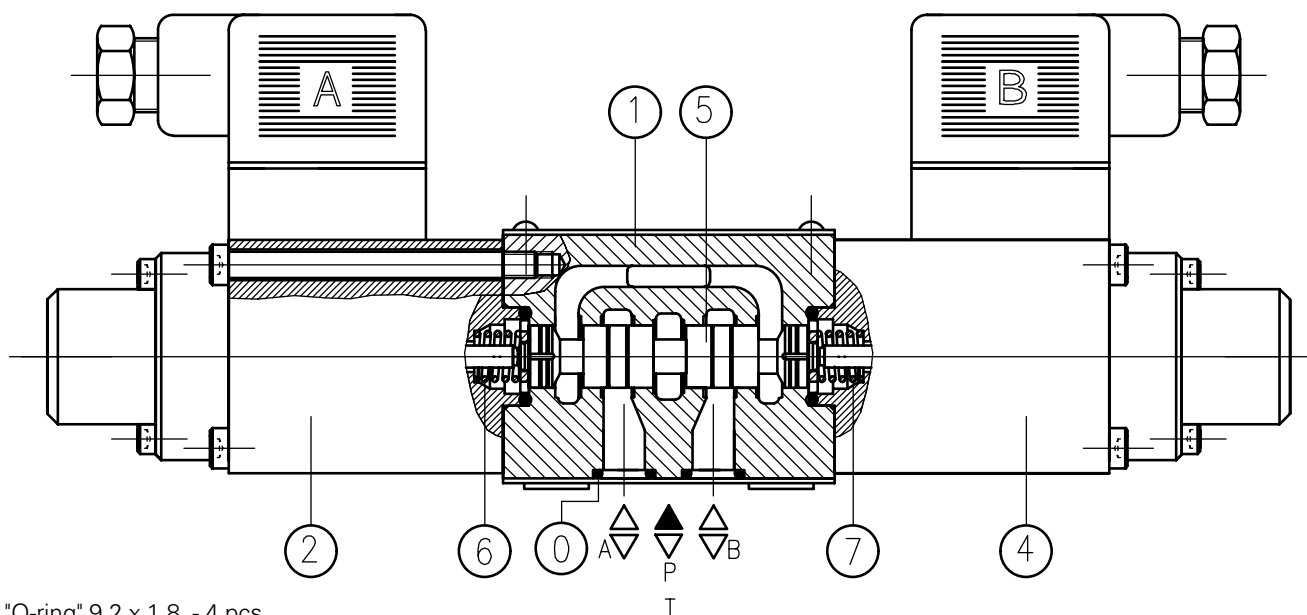


### APPLICATION

Proportional directional valves type USAB 6 are used to control the direction and speed of a user movement. The output flow is proportional to electrical input signal.



"O-ring" 9,2 x 1,8 - 4 pcs

### DESCRIPTION OF OPERATION

Proportional directional valve type USAB 6 comprises mainly the housing 1, solenoids 2 and 4, spool 5, springs 6 and 7.

Electronic regulator (30 RE ...) can be included with the valve.

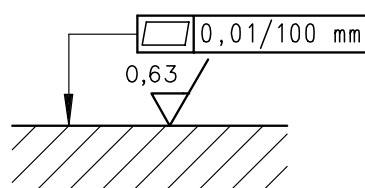
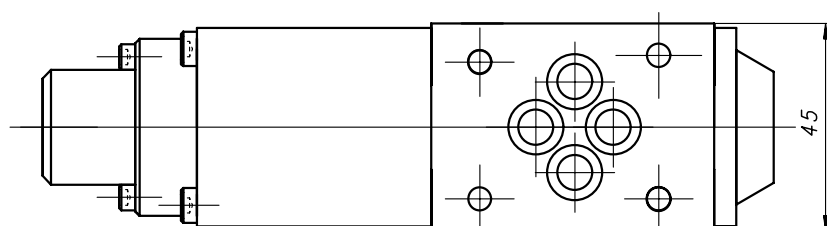
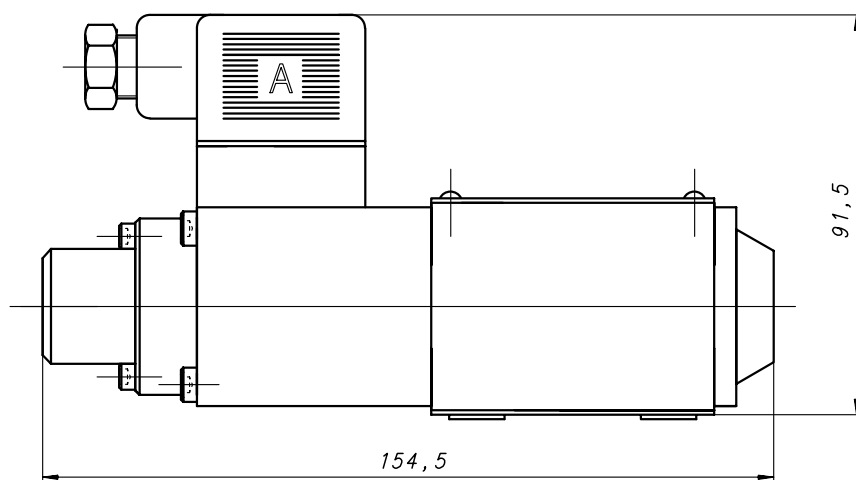
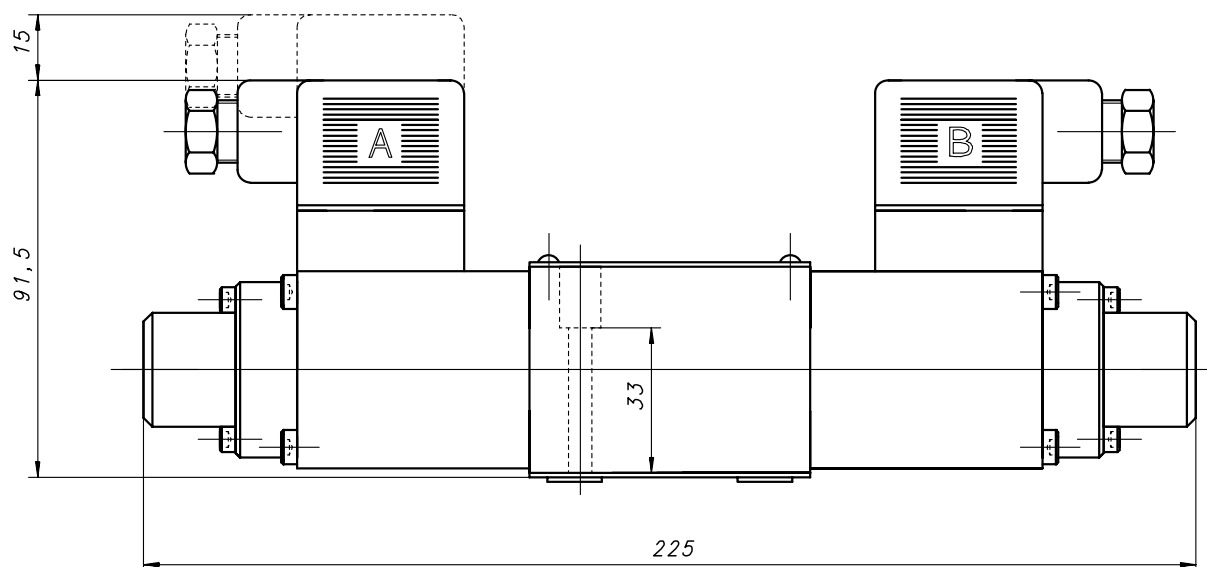
It is used to control proportional solenoids of the valve.

The proportional solenoid 2 or 4 moves the spool 5 from its neutral position. The neutral position is held by means of the springs 6 and 7. Current flowing through the solenoid 2 or 4 produces force pushing the spool 5 against the springs 6 or 7.

## TECHNICAL DATA

Working medium	Mineral oil
Operating pressure at port P, A, B	up to 31,5 MPa
Operating pressure at port T	up to 16 MPa
Required filtration	16 mm
Recommended filtration	10 mm
Nominal fluid viscosity	37 mm <sup>2</sup> /s at temp. 328 K
Viscosity range	2,8 to 380 mm <sup>2</sup> /s
Working temperature (in tank)	313 to 328 K
Hysteresis	< 6 %
Repetition accuracy	< 3 %
Operating position	optional
3-position valve weight	~ 2,5 kg
2-position valve weight	~ 1,8 kg
Electrical characteristics	
Nominal solenoid power	~ 13 W
Resistance of cold solenoid coil (293K)	5,4W
Resistance of max hot solenoid coil	8,1W
Electronic regulators	30 RE 20 - for USE B6 - 3 and 2-position, data card WK 495 773

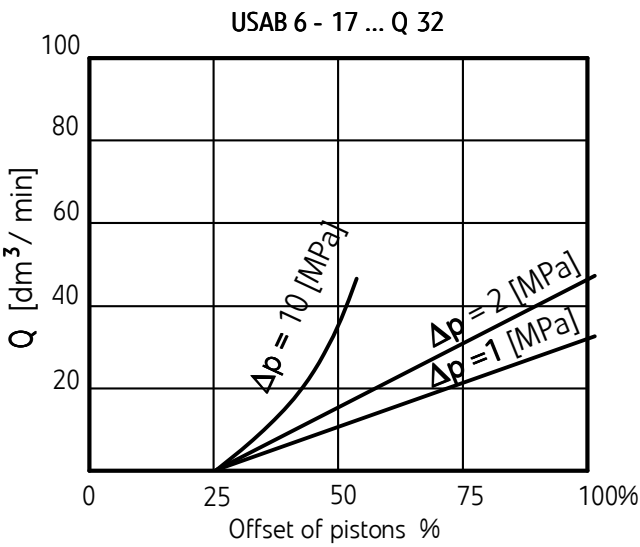
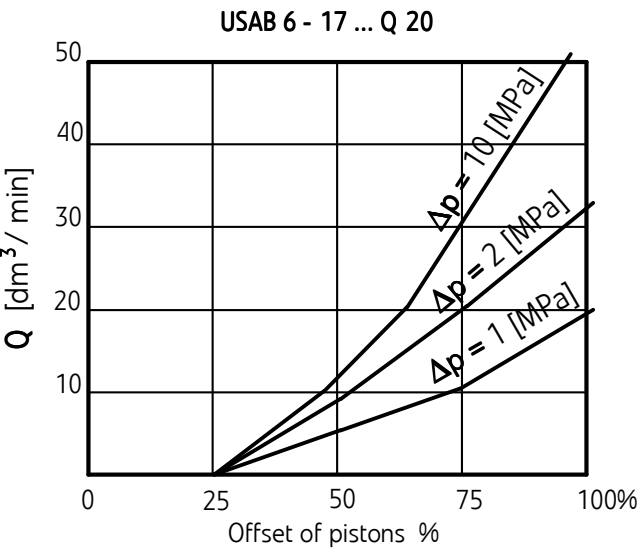
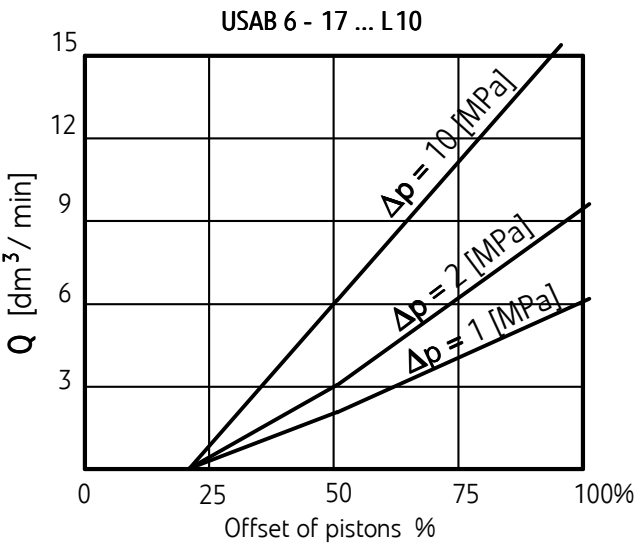
# OVERALL AND CONNECTION DIMENSIONS



Admissible surface roughness and flatness deviation for a subplate face.

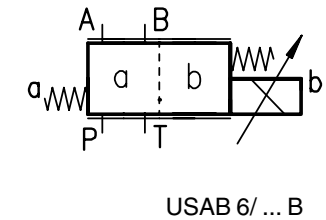
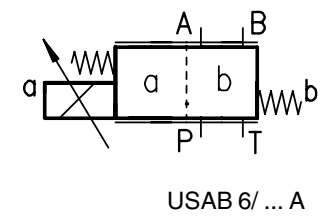
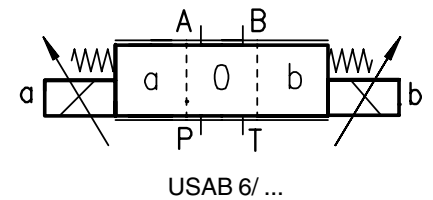
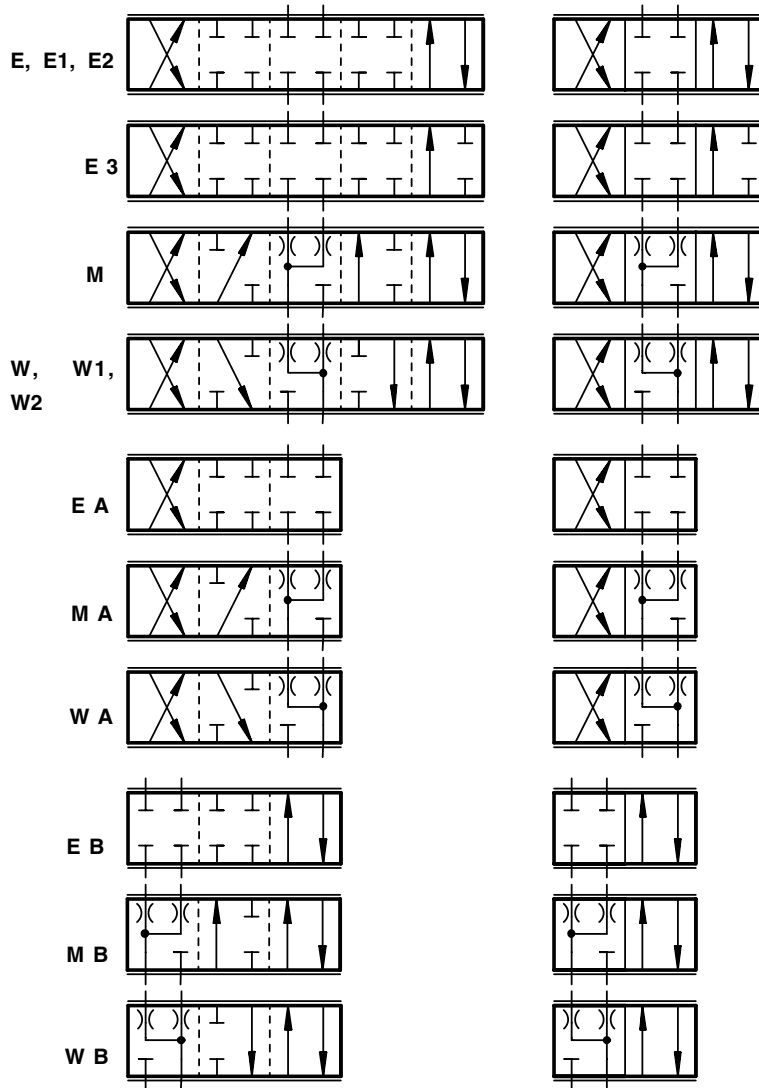
**PERFORMANCE CURVES**

measured at viscosity  $\nu = 41 \text{ mm}^2/\text{s}$  and temperature  $t = 50^\circ\text{C}$



## SPOOL SCHEMES

## GRAPHICAL SYMBOL



For symbol **E1** i **W1**:-

$P \rightarrow A: Q_{\max}$   
 $P \rightarrow B: Q/2$

$B \rightarrow T: Q/2$   
 $A \rightarrow T: Q_{\max}$

For symbol **E3** i **W3**:-

$P \rightarrow A: Q_{\max}$   
 $P \rightarrow B: Q/2$

$B \rightarrow T: \text{close}$   
 $A \rightarrow T: Q_{\max}$

For symbol **E2** i **W2**:-

$P \rightarrow A: Q/2$   
 $P \rightarrow B: Q_{\max}$

$B \rightarrow T: Q_{\max}$   
 $A \rightarrow T: Q/2$

## HOW TO ORDER

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

**USAB 6**

\*

### Series number

15 = 15  
( 15 - 19 ) - installation and connection dimensions remain unchanged

### Designation of connections to schemes on page 3.

### Flow changes

Linear (only for 10 dm<sup>3</sup>/min) = L  
Progressive = Q

### Nominal flow at $\Delta p$ 1MPa

10dm<sup>3</sup>/min = 10  
20dm<sup>3</sup>/min = 20  
32dm<sup>3</sup>/min = 32

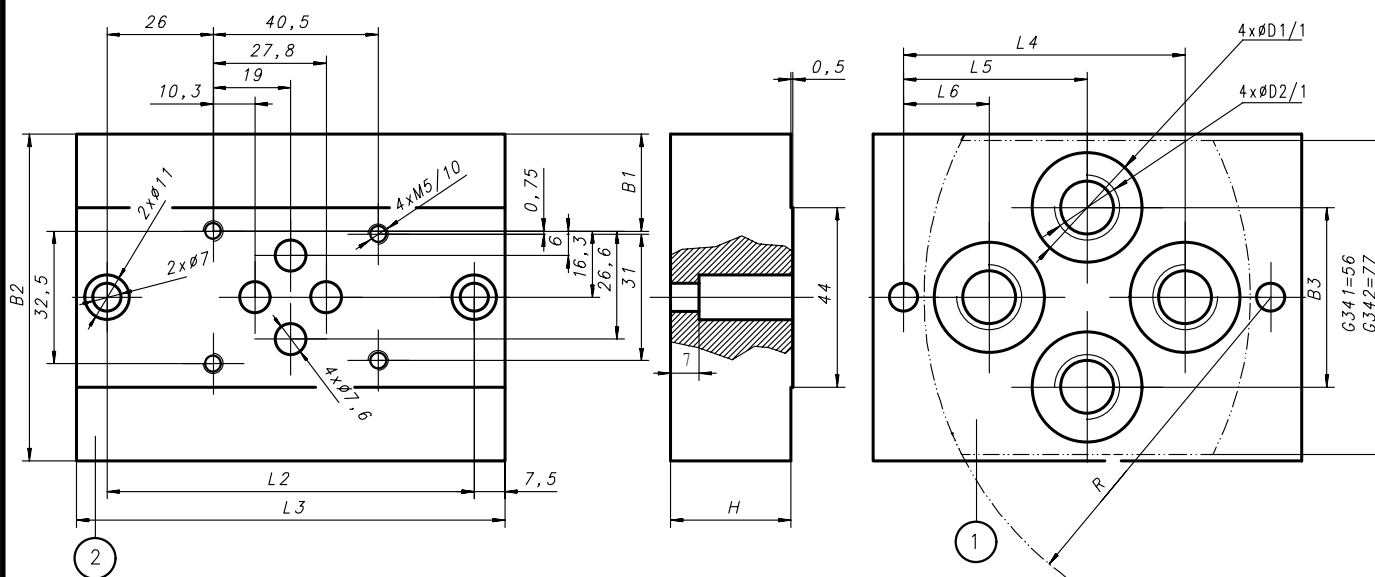
### Sealing

Fluids on mineral oil base = with no code  
Fluids on phosphate-ester base = V

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

Coding example : USAB 6 15 E L 10

## Connection dimensions for subplate



item 1 - recess in subplate face  
item 2 - connecting face

Weight ~ 0,8 kg

Fixing the valve to the subplate by means of 4 bolts  
M5 x 45 - 10.9 PN-74/M-82302 ( DIN 912 )  
Tightening torque - 9 Nm.  
Bolts and subplates have to be ordered separately.

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**PONAR**  
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