

APPLICATION

Flow control throttle valves type **UDB10...** are designed to control (throttle) fluid flow which depends on pressure difference and fluid viscosity at throttling point. They can be used in hydraulic systems with constant operating resistance or where change in flow speed is of no importance when the load is changed. They are intended for subplate mounting in any position in hydraulic systems.

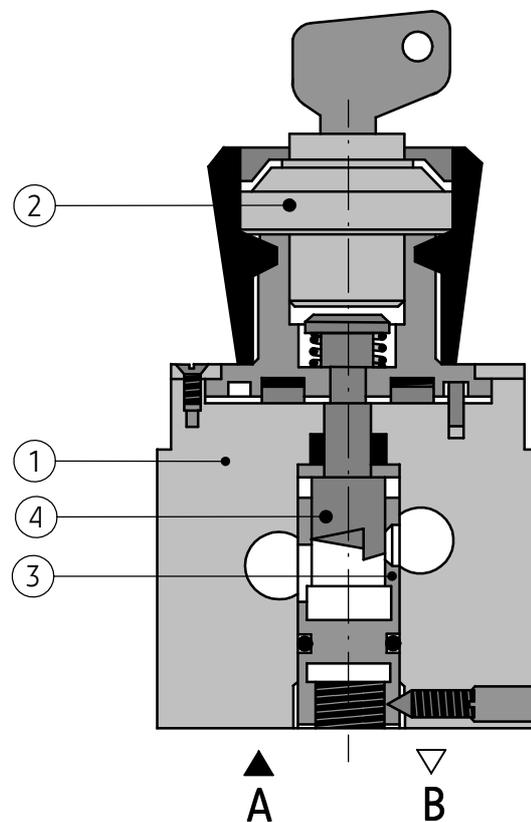


UDB10 - 02/50L

DESCRIPTION OF OPERATION

Flow control valve type **UDB10...** is a precise control throttle valve. Main elements of the valve are: housing (1) adjustment (2) and throttle elements - sleeve (3) and orifice (4).

The fluid flow is throttled through the controlled coverage of the hole in the sleeve (3) with a spiral orifice edge (4).

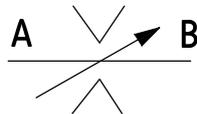


TECHNICAL DATA

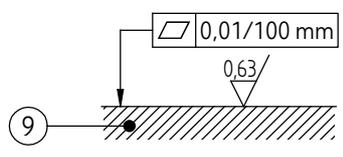
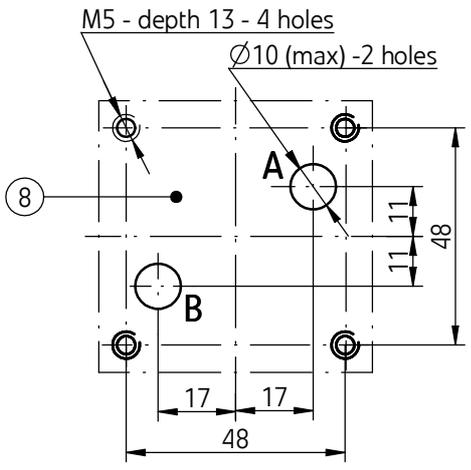
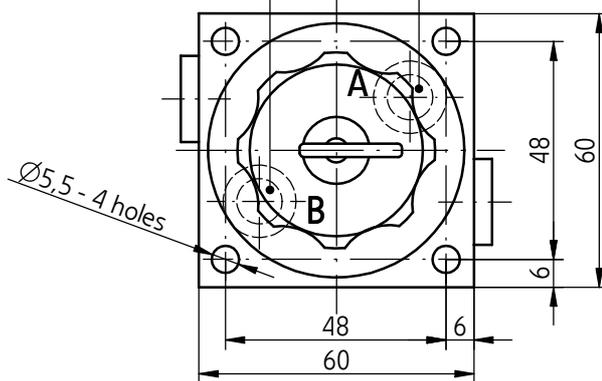
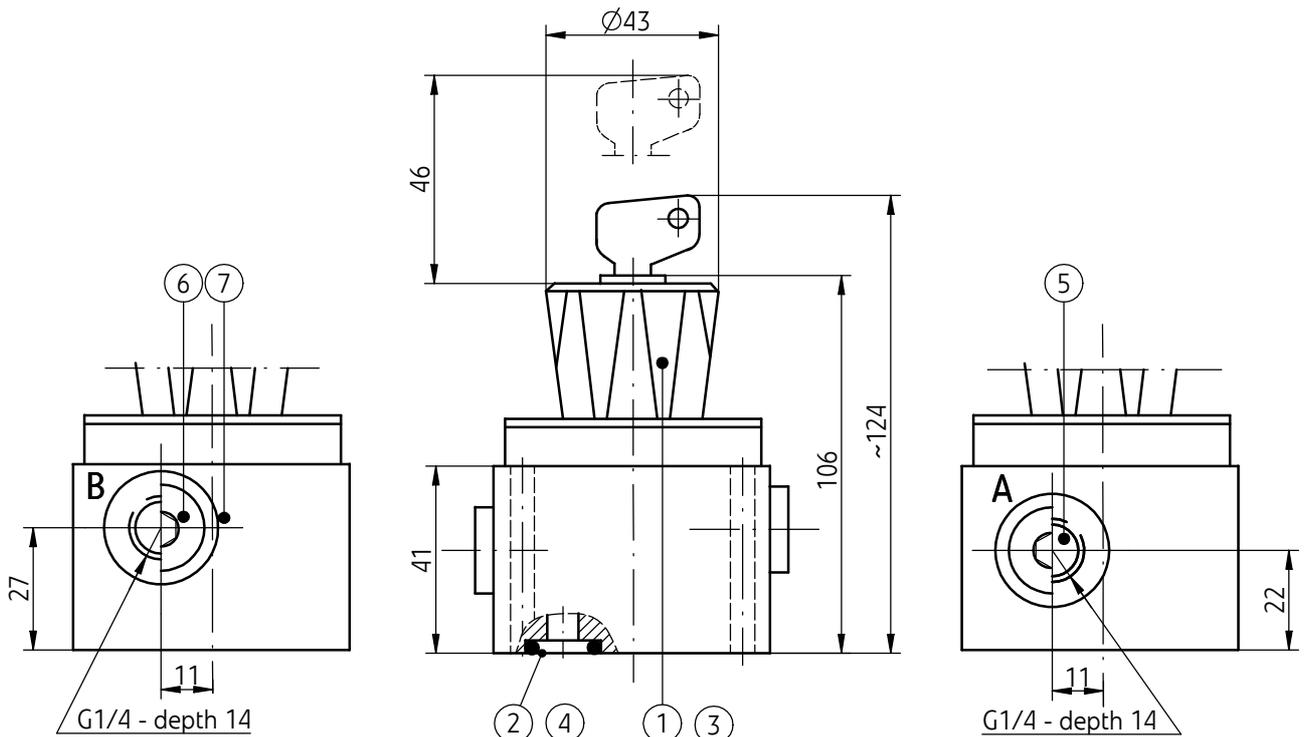
| | | |
|-------------------------------------|--|---------------------|
| Hydraulic fluid | mineral oil | |
| Required filtration | up to 16 µm | |
| Recommended filtration | up to 10 µm | |
| Nominal fluid viscosity | 37 mm ² /s at temperature 55 °C | |
| Viscosity range | 2,8 up to 380 mm ² /s | |
| Fluid temperature range (in a tank) | recommended | 40 °C up to 55 °C |
| | max | -20 °C up to +70 °C |
| Ambient temperature range | - 20 °C up to +70 °C | |
| Maximum operating pressure | 21 MPa | |
| Degree of rotation of hand knob | 300° | |
| Turning torque of hand knob | up to 10 MPa | 1,1 Nm |
| | up to 20 MPa | 1,8 Nm |
| Weight | 1,4 kg | |

SCHEMES

Graphic symbol for the valve type UDDB10...



OVERALL AND CONNECTION DIMENSIONS



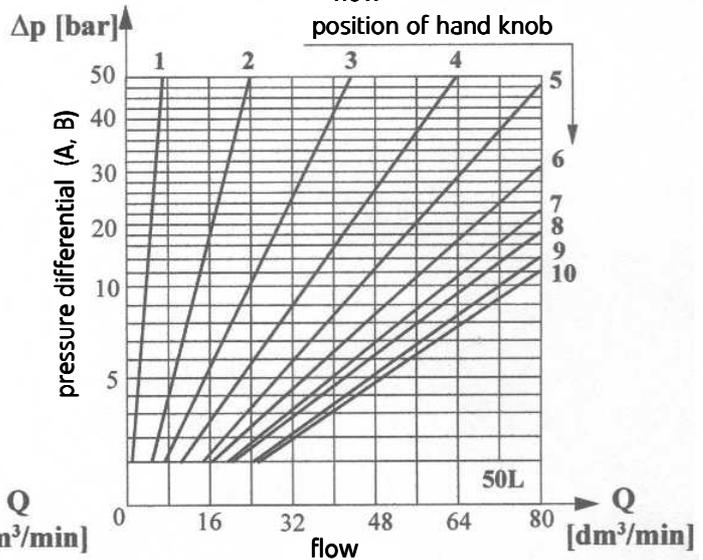
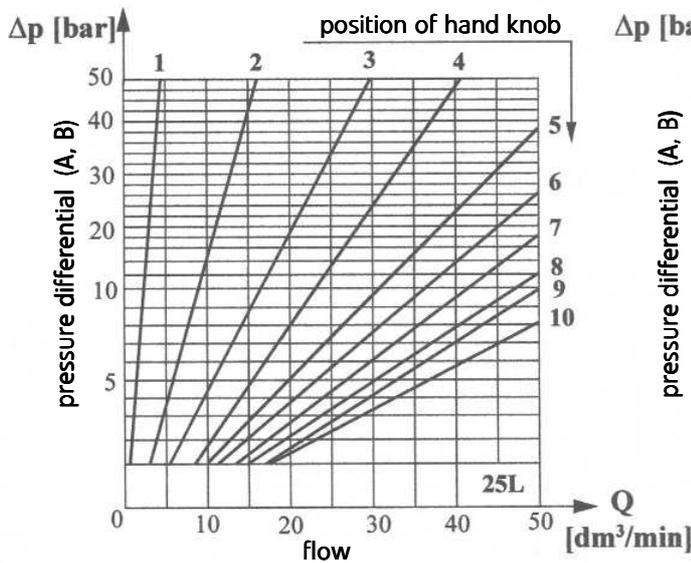
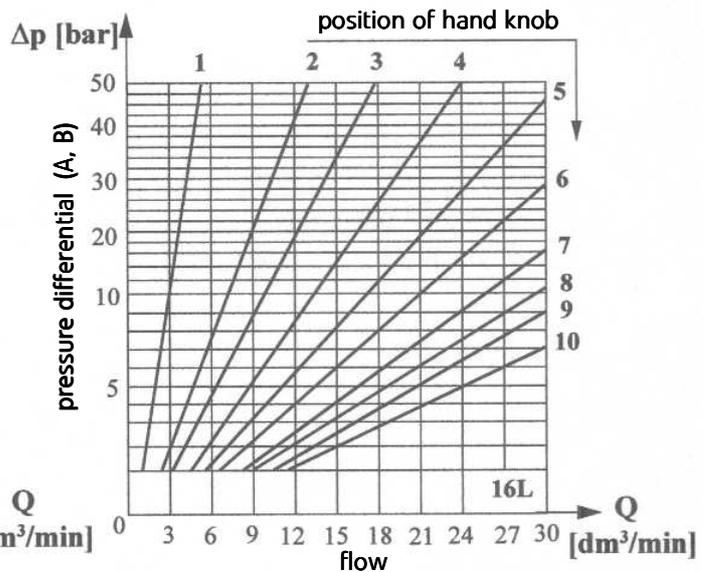
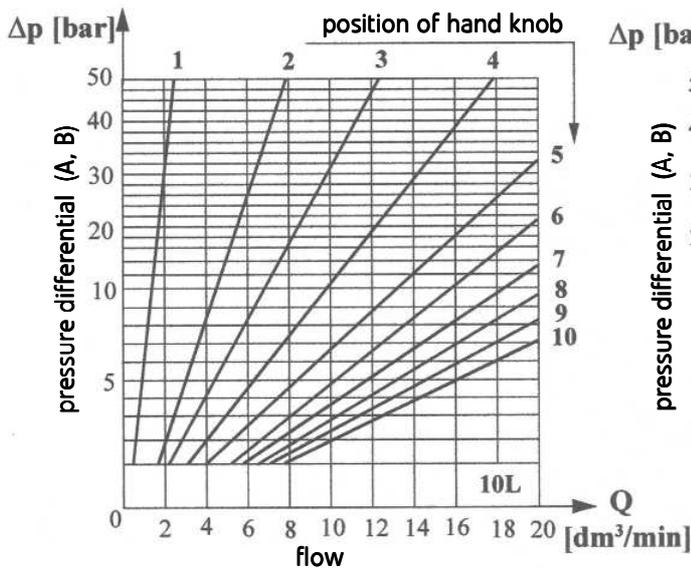
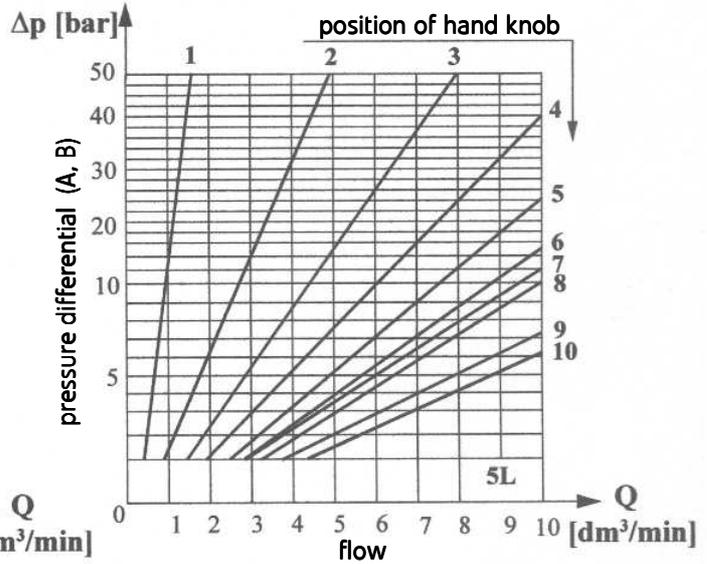
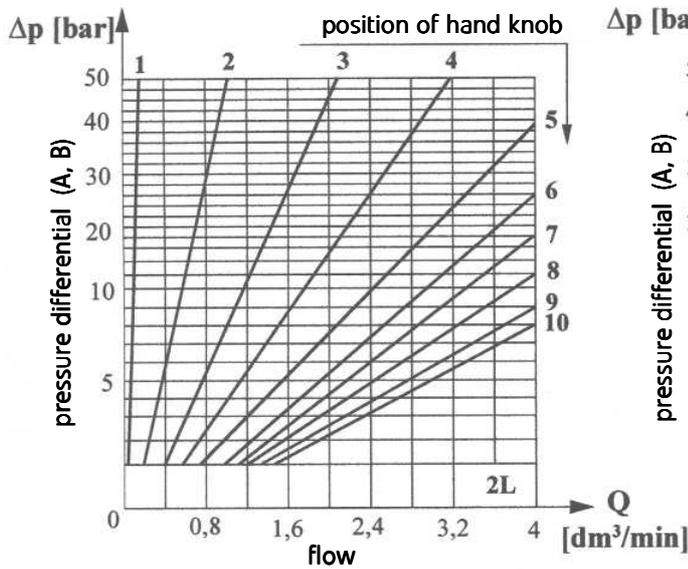
- 1 - Hand knob
 - 2 - O-ring 12 x 2 - 2 pcs/kit (A, B)
 - 3 - Port A - inlet
 - 4 - Port B - outlet
 - 5 - Additional port A (G1/4)
 - 6 - Additional port B (G1/4)
 - 7 - Plug G1/4 - 2 pcs/kit (A, B)
 - 8 - Porting pattern for the valve - configuration of holes in the subplate complied with connection of the valve type FRM5
 - 9 - Subplate surface required
- mouing bolts **M5 x 50 - 8.8** in accordance with **PN - EN ISO 4762** - 4 pcs/kit
tightening torque **Md = 6 Nm**

PERFORMANCE CURVES

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

Flow curves

versions: UDDB10-02/...L...

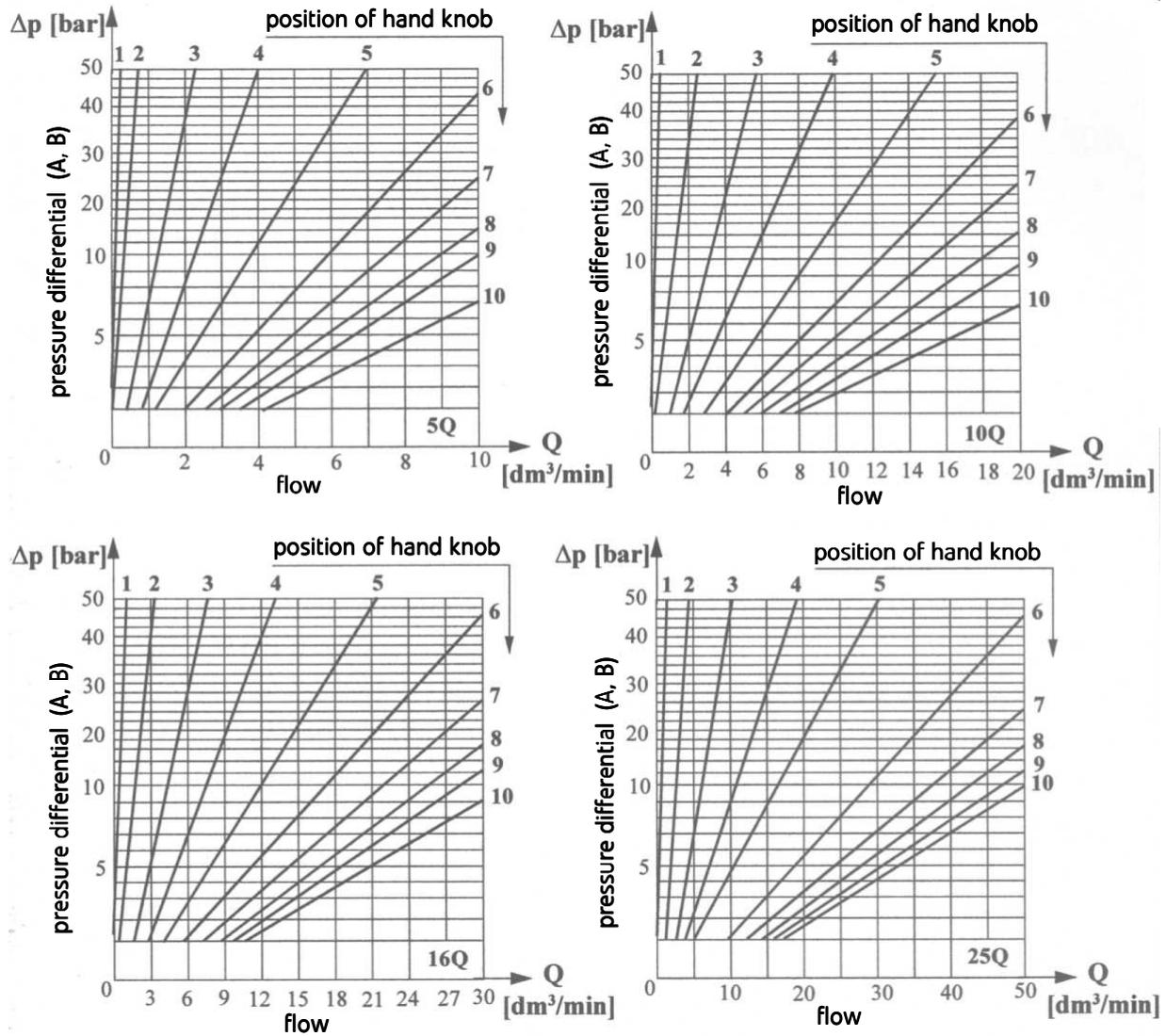


PERFORMANCE CURVES

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

Flow curves

versions: UDDB10-02/...Q...



HOW TO ORDER

| | | | | | |
|------|----|---|---|--|---|
| UDDB | 10 | / | + | | * |
|------|----|---|---|--|---|

| | | |
|---|------------------------------|-------------------------|
| Wielkość nominalna (WN) WN10 | | = 10 |
| Series number (01-09) - connection and installation dimensions unchanged = 0X series 02 | | = 02 |
| Flow range (A → B) | | |
| linear | 5 dm³/min | = 5L |
| | 10 dm³/min | = 10L |
| | 16 dm³/min | = 16L |
| | 25 dm³/min | = 25L |
| | 35 dm³/min | = 35L |
| | 50 dm³/min | = 50L |
| progressive | 2 dm³/min | = 2Q |
| | 10 dm³/min | = 10Q |
| | 16 dm³/min | = 16Q |
| | 25 dm³/min | = 25Q |
| Sealing | | |
| NBR (for fluids on mineral oil base) | | = no designation |
| FPM (for fluids on phosphate ester base) | | = V |
| Further requirements in clear text (to be agreed with the manufacturer) | | |

NOTES:

The valve should be ordered according to the above coding.

The symbols in bold are preferred versions in short delivery time.

Coding example: UDDB10/02 - 10L

SUBPLATES AND MOUNTING BOLTS

Subplates must be ordered according to the data sheet

WK 146 937. Subplates:

G 44/01 - threaded connections **G 1/4**

G 45/01 - threaded connections **G 1/2**

Subplates and bolts fixing valve **M5 x 50 - 8.8**
in accordance with **PN-EN ISO 4762** - 4 pcs/kit
must be ordered separately.

PONAR Wadowice S.A.
ul. Wojska Polskiego 29
34-100 Wadowice
tel. +48 33 488 29 00
fax. +48 33 488 21 03
www.ponar-wadowice.pl

