

# 2-WAY FLOW CONTROL VALVE TYPE UDRD6



Q-HYDRAULIKA

NS6 | up to 31,5 MPa | up to 43 dm<sup>3</sup>/min

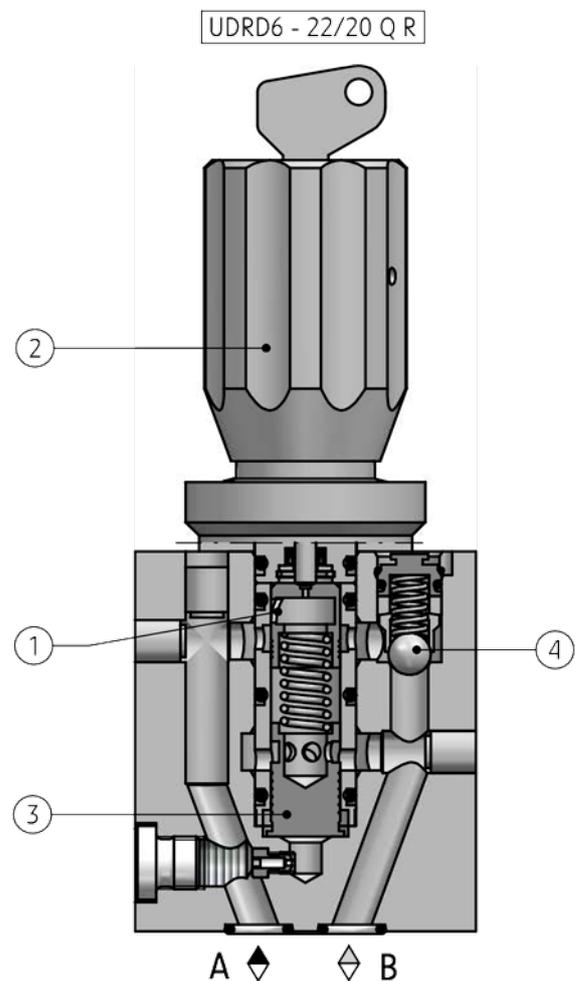
WK 420 020

2-way flow control valve type **UDRD6...** serves to control fluid flow rate independently of pressure and temperature in direction **A** to **B** and allows free flow in the opposite direction **B** to **A** (in version with a check valve). The valve may be mounted in a hydraulic circuit in any position.



## DESCRIPTION OF OPERATION

After supplying pressurized oil into line **A** of the valve a flow rate is stabilized at the throttling gap (1). By rotating handknob (2) clockwise (in range of 10 scale divisions – about 300°) the throttling gape (1) broadens and flow through the valve increases. Constant flow independent of pressure is held by pressure compensator (3). Free flow from line **B** to **A** is ensured by check valve (4) – in version with check valve (UDRD6 – 22/...**R**).



### TECHNICAL DATA

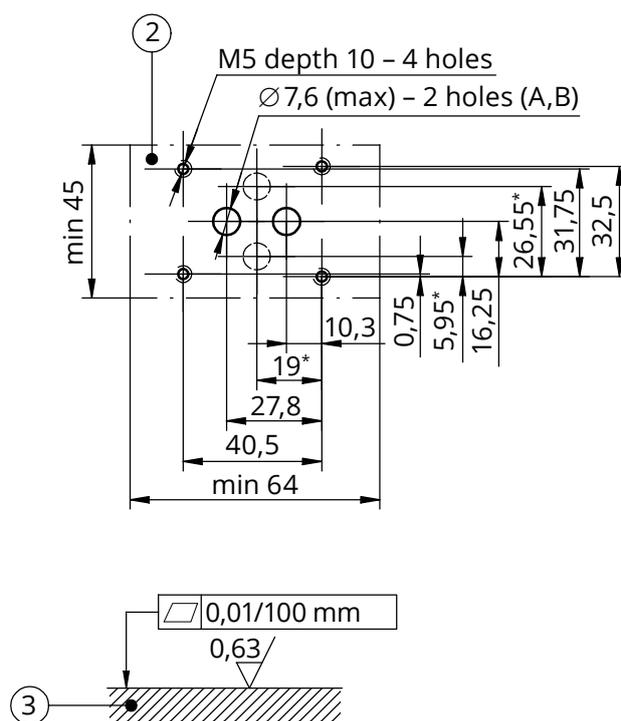
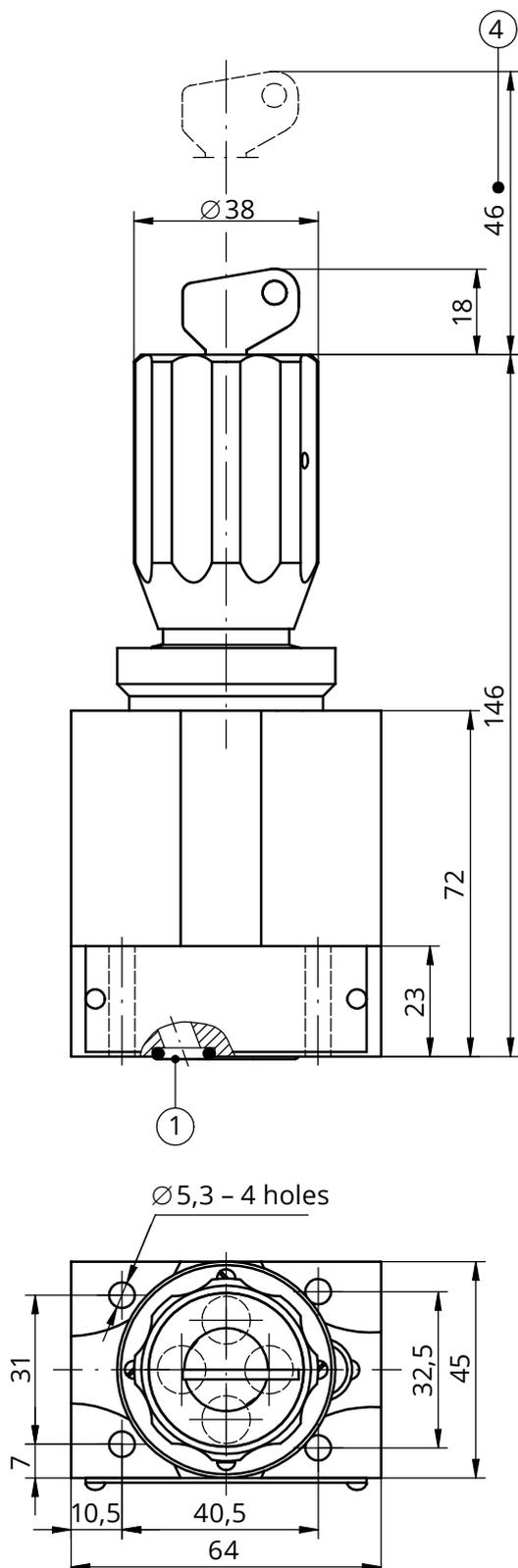
Hydraulic fluid	mineral oil	
<b>Required filtration</b>	<b>up to 16 µm</b>	
Recommended filtration	up to 10 µm	
Nominal fluid viscosity	37 mm <sup>2</sup> /s at temperature 55°C	
Viscosity range	2,8 up to 380 mm <sup>2</sup> /s	
Fluid temperature range (in a tank)	recommended	40° C up to 55° C
	max.	-20° C up to +70° C
Ambient temperature range	-20° C up to +70° C	
<b>Maximum operating pressure</b>	<b>31,5 MPa</b>	
Tolerance of flow control for constant pressure and temperature	+ 5 %	
<b>The least pressure difference before and behind the valve</b>	<b>1,5 MPa</b>	
Flow stability at pressure change	+ 5 %	
Weight	1,4 kg	

### SCHEMES

Simplified and detailed graphic symbols of flow control valves type **UDRD6...**

detailed symbol	simplified symbol
version UDRD6.../...R...	
version UDRD6.../...M...	

## OVERALL AND CONNECTION DIMENSIONS



- 1 - Sealing ring **o-ring 9,2 × 1,8** - 4 pcs/kit  
 2 - Porting pattern - configuration of surface holes in subplate in accordance with the following standards:  
 • **CETOP RP 121H** - identified by **CETOP 4.2-4-03** (nominal size **CETOP 03**)  
 • **ISO 4401** - identified by **ISO 4401-03-02-0-94** mounting bolts **M5 × 30 - 10.9** - 4 pcs/kit in accordance with **PN - EN ISO 4762** tightening torque **Md = 9 Nm**  
**NOTE:** (\*) - dimensions related to centers of deep holes (with sealing rings item 1 - 2 pcs) in housing of flow control valve in order to apply an accordance with **CETOP RP 121H, ISO 4401**  
 3 - Subplate surface required  
 4 - Space required to remove the key from the lock of the adjustment

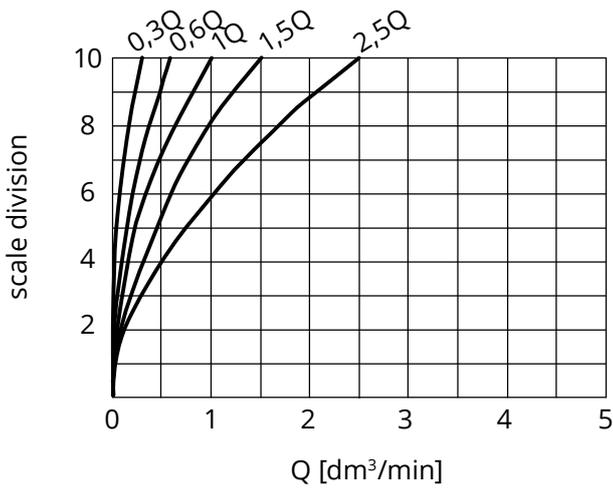
## PERFORMANCE CURVES

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

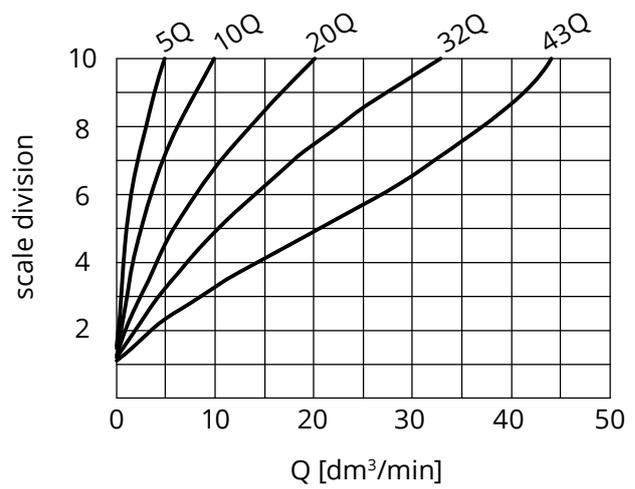
### Characteristic of flow in relation to the valve setting

Characteristic curves of flow relation to handknob position on scale for flow control valves with different settable flow ranges

flow direction **A**→**B**



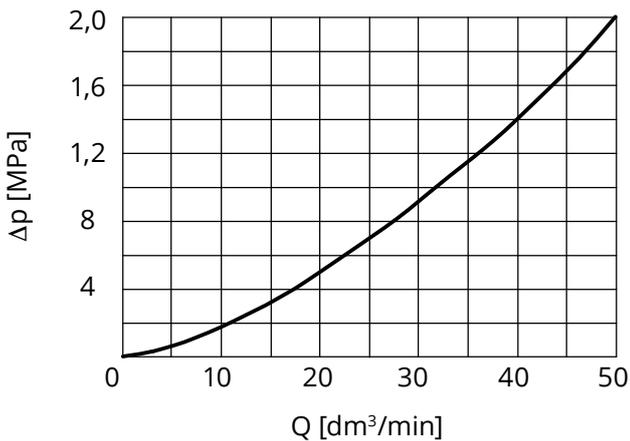
flow direction **A**→**B**



### Characteristic of flow resistance

Characteristic curves of flow resistance through check valve – version UDRD6-22/...R...

flow direction **B**→**A**



## HOW TO ORDER

UDRD 6 - / / / \*

**Nominal size (NS)**  
**NS6**

= 6

**Series number**

(20 - 29) - connection and installation dimensions unchanged = 2X  
**series 22** = 22

**Flow range (A→B)**

up to 0,3 dm <sup>3</sup> /min	= 0,3 Q
up to 0,6 dm <sup>3</sup> /min	= 0,6 Q
up to 1,0 dm <sup>3</sup> /min	= 1,0 Q
up to 1,5 dm <sup>3</sup> /min	= 1,5 Q
up to 2,5 dm <sup>3</sup> /min	= 2,5 Q
up to 5,0 dm <sup>3</sup> /min	= 5 Q
up to 10 dm <sup>3</sup> /min	= 10 Q
up to 20 dm <sup>3</sup> /min	= 20 Q
up to 32 dm <sup>3</sup> /min	= 32 Q
up to 43 dm <sup>3</sup> /min	= 43 Q

**Version**

with check valve = R  
**without check valve** = M

**Sealing**

**NBR** (for fluids on mineral oil base) = no designation  
FKM (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: UDRD6 - 22/20 Q M

## SUBPLATES AND MOUNTING BOLTS

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Subplates should be ordered according to data sheet **WK 496 480**. Symbols of subplates:

**G 341/01** – threaded connections **G 1/4**

G 342/01 – threaded connections G 3/8

G 502/01 – threaded connections G 1/2

G 341/02 – threaded connections M14 × 1,5

G 342/02 – threaded connections M16 × 1,5

Subplates and mounting bolts **M5 × 30 – 10,9** – 4 pcs/kit in accordance with PN – EN ISO 4762 must be ordered separately.

Tightening torque for bolts **Md = 9 Nm**

**NOTE:**

**Subplate symbols in bold are preferred versions in short delivery time.**