



2 WAY FLOW CONTROL VALVE TYPE 2FRM5

**WK
146 937**

Size 5

up to 21 MPa

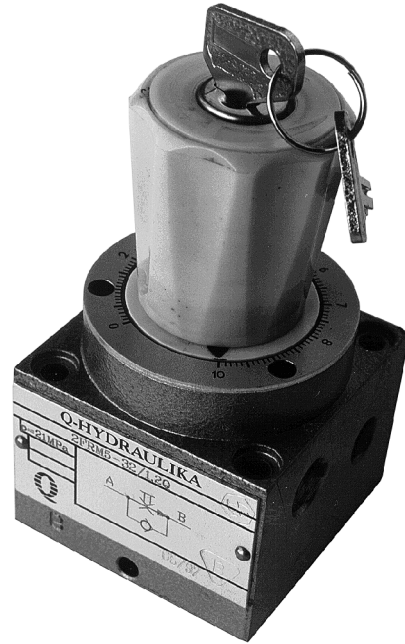
up to 15 dm³/min

04.1999r.

2 way flow control valves serve to set the fluid flow constant in one direction and allow free flow in the opposite direction independently of the pressure and temperature changes.

The valve is fixed to a subplate by 4 bolts (not included with the valve). O-rings are fitted between the valve and the subplate to assure the sealing of the mating surfaces. The flow control valves can be mounted in hydraulic systems in any position.

DESCRIPTION OF OPERATION



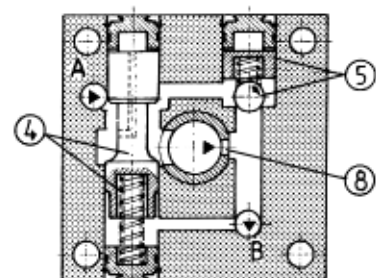
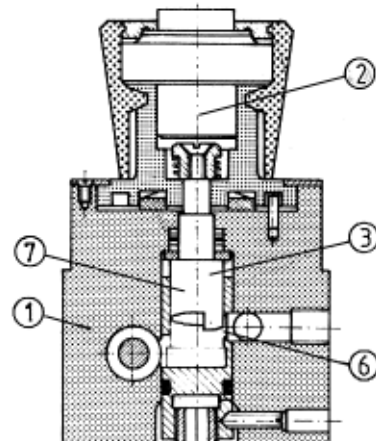
In order to fix a flow rate, the fluid has to be supplied under pressure to line A. The fluid is throttled by the orifice bush 3 at the aperture 6. By turning the lockable handknob 2 in the range of 0 - 300° (that corresponds with 10 scale graduations), the cylindrical pin creates the variable section at the throttle orifice 8.

The set flow is independent of the pressure due to the pressure compensator 4 fitted in the housing 1 on the way to the orifice bush 3.

The independence of the fluid temperature variations is achieved by means the suitable shaped orifice.

To avoid undesirable troubles at starting, pressure compensator stroke limiter is available.

An additional check valve 5 is mounted to secure free flow from B to A.

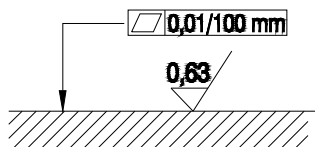
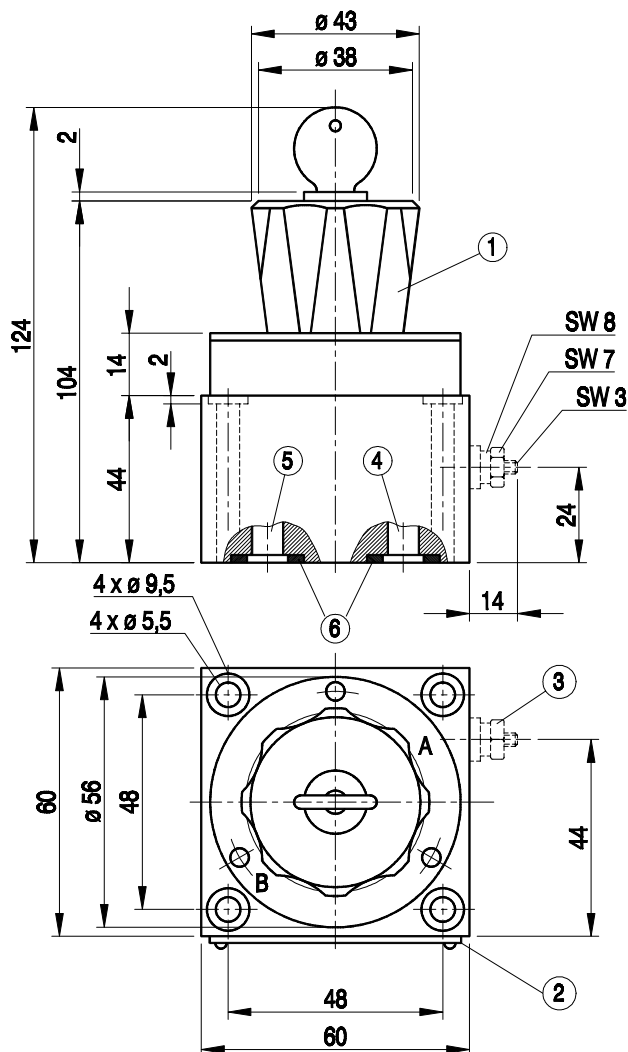


TECHNICAL DATA

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	253 - 343 K
Filtration	up to 16 μm when Q < 5 dm ³ /min up to 10 μm when Q < 0.5 dm ³ /min
Flow control tolerance for constant temp. and pressure	± 3 %
Min. pressure drop	0.3 - 0.5 MPa
Weight	1.6 kg

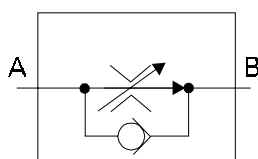
OVERALL DIMENSIONS

- 1 - lockable handknob
- 2 - nameplate
- 3 - pressure compensator stroke limiter
- 4 - inlet „A”
- 5 - outlet „B”
- 6 - o-ring 12.3 × 2.4 - 2 pcs

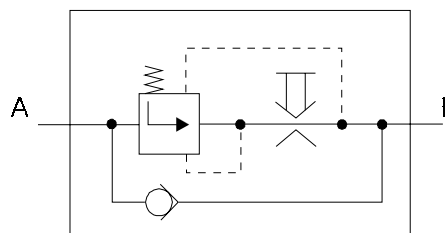


Available surface roughness and flatness deviation for a subplate face.

GRAPHICAL SYMBOL

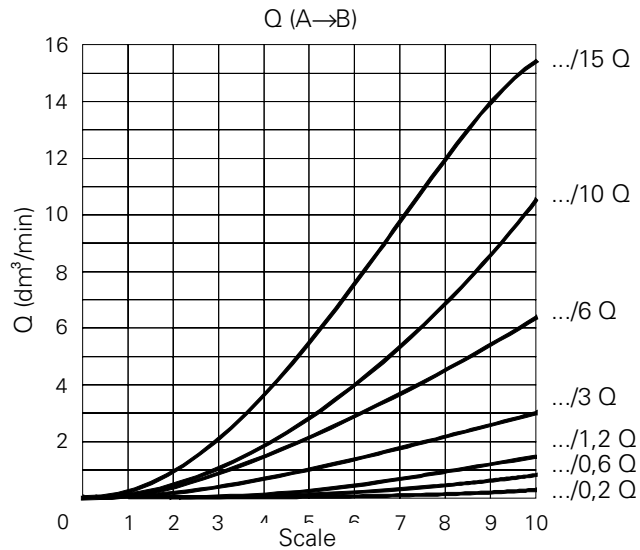


a) simplified



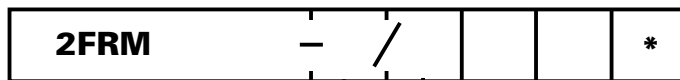
b) detailed

PERFORMANCE CURVES, measured at $\nu = 41 \text{ mm}^2/\text{s}$ and $T = 323 \text{ K}$



HOW TO ORDER

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



Nominal size
Size 5 = 5

Series number
32 = 32
(30 - 39) - installation and connection
dimensions remain unchanged

Flow range (A to B)

0.2 dm ³ /min	= 0.2 Q
0.6 dm ³ /min	= 0.6 Q
1.2 dm ³ /min	= 1.2 Q
3 dm ³ /min	= 3 Q
6 dm ³ /min	= 6 Q
10 dm ³ /min	= 10 Q
15 dm ³ /min	= 15 Q

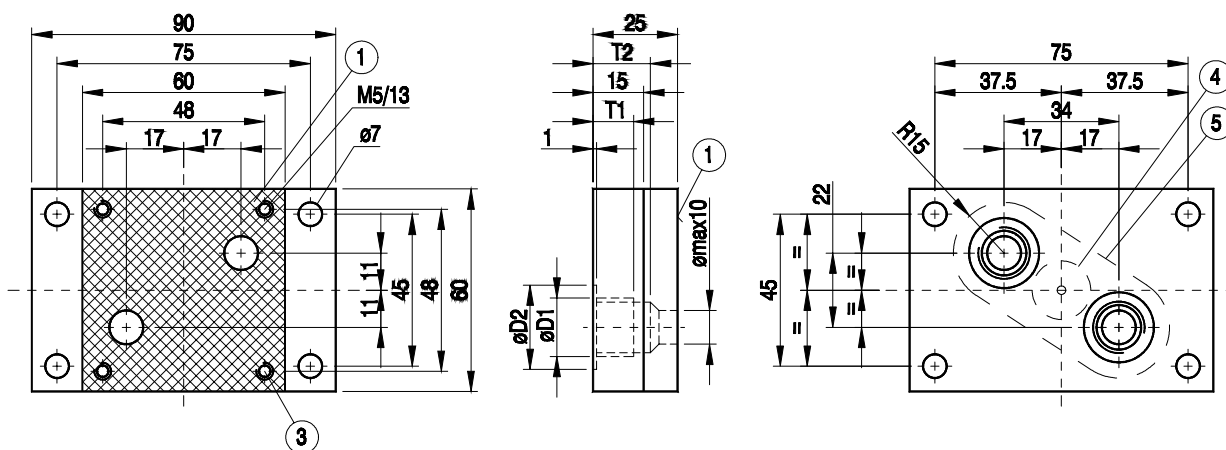
Further requirements in clear text
(to be agreed upon with the
manufacturer)

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

Accessories
Without pressure compensator = no code
stroke limiter
With pressure compensator = B
stroke limiter

Coding example : 2FRM 5 - 32/3QB

CONNECTION DIMENSIONS FOR SUBPLATE



- 1 - Valve mounting surface
- 2 - Surface ground
- 3 - Valve fixing holes
- 4 - Dia.20 - for orifice support
- 5 - Recess in subplate face

Subplate type	D1	dia.D2	T1	T2	Weight	Mounting bolts	Md
G 44/01	G1/4	25	12	17	0.9 kg	4 x M5 x 50 PN-74/M-82302-8.8 (DIN 912)	6 Nm
G 45/01	G1/2	32	14	20			



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