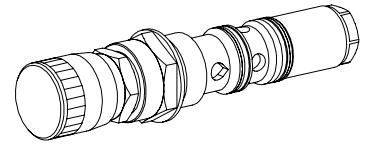


**2-way flow control valve
Screw-in cartridge**

- $Q_{max} = 50$ l/min
- $Q_{Nmax} = 50$ l/min
- $p_{max} = 250$ bar

M33x2
 Wandfluh standard

DESCRIPTION

2-way screw-in cartridge-type flow regulating valve, cavity acc. to Wandfluh standard. The valve is available in two different setting versions: turning knob and lockable type EWA. In its standard form, this regulating valve can be supplied with three nominal volume flow ranges. The cartridge body is made of steel. The aluminium turning knob is colorless anodized.

FUNCTION

The 2-way flow control valve is designed to keep to oil flow to any actuator constant irrespective of the load. By turning the knob of the variable restrictor the volume flow can be adjusted. If the pressure in the system changes the pressure compensator will change the diameter of the oil passage in order to keep the pressure drop over the restrictor constant.

APPLICATION

For use in all hydraulic systems where the supply volume flow needs to be kept constant even when the load fluctuates. Installation of the screw-in cartridge in control blocks as well as in the Wandfluh sandwich plates and flange valves of the NG10 as a functional element (please refer to the separate data sheets in register 2.5).

CONTENTS

GENERAL SPECIFICATIONS	1
HYDRAULIC SPECIFICATIONS	1
SYMBOLS	1
CONTROL	1
CHARACTERISTICS	2
DIMENSIONS	2
PARTS LIST	2
ACCESSORIES	2

TYPE CODE

		MR1002 - <input type="checkbox"/> - <input type="checkbox"/> # <input type="checkbox"/>
Flow control valve 2-way Turning knob adjustment		
Nominal volume	$Q_N = 20$ <input type="checkbox"/> 20 $Q_N = 31,5$ <input type="checkbox"/> 31,5 $Q_N = 50$ <input type="checkbox"/> 50	
Additional marking for lock adjustment	<input type="checkbox"/> EWA	
Design-Index (Subject to change)		

GENERAL SPECIFICATIONS

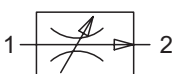
Description	2-way flow control valve
Construction	Screw-in cartridge for cavity acc. to Wandfluh standard
Mounting	screw-in thread M33x2
Ambient temperature	-20...50° C
Mounting position	any
Fastening torque	$M_D = 80$ Nm
Weight:	$m = 0,7$ kg (knob) $m = 0,8$ kg (lock)

HYDRAULIC SPECIFICATIONS

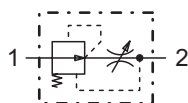
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$) refer to data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+70° C
Peak pressure	$p_{max} = 250$ bar
Nominal volume flow rates	$Q_N = 20$ l/min, $Q_N = 31,5$ l/min, $Q_N = 50$ l/min
Min. volume flow	$Q_{min} = 0,05$ l/min
Max. volume flow	$Q_{max} = 50$ l/min
Control accuracy	≤ 1%

SYMBOLS

simplified

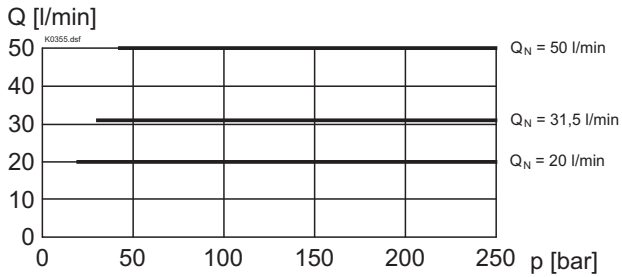
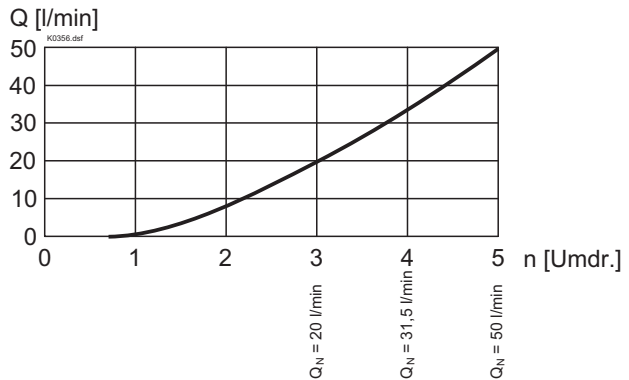
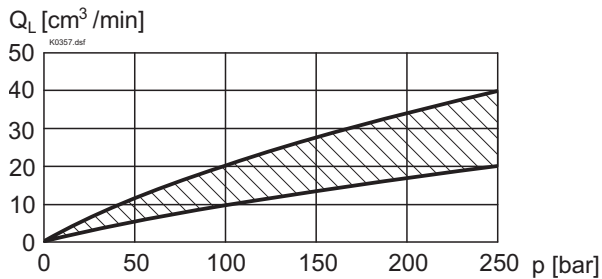


detailed


CONTROL

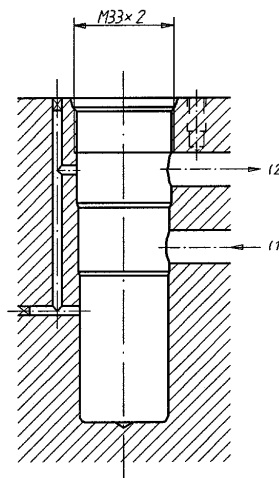
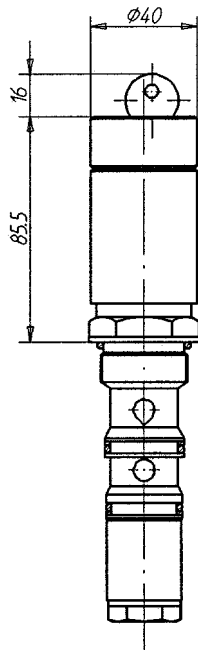
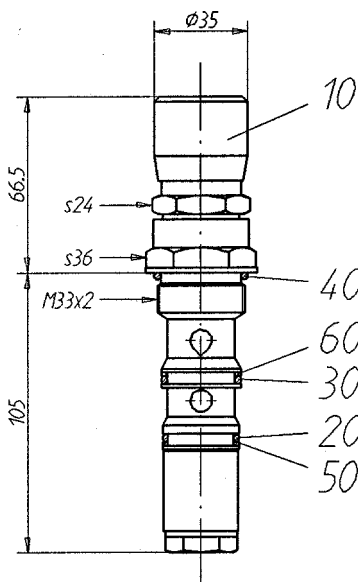
Mechanical types of operation in 2 different versions:

- no remark = Knob adjustment interlockable
- EWA = Lock adjustment

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $Q = f(p)$ Pressure drop/flow characteristic

 $Q = f(n)$ Volume flow adjustment range

 $Q_L = f(p)$ Leakage volume flow characteristic

DIMENSIONS

Knob adjustment

Lock adjustment

 Cavity drawing acc.
 to Wandfluh standard

 For cavity details and cavity tools,
 see data sheet 2.13-1030.

PARTS LIST

Position	Article	Description
10	114.1201	Turning knob
20	160.2235	O-ring ID 23,47x2,62
30	160.2251	O-ring ID 25,07x2,62
40	160.2298	O-ring ID 29,82x2,62
50	49.3297	Back-up ring RD 24,5x29x1,4
60	49.3307	Back-up ring RD 25,5x30x1,4

ACCESSOIRES

 Cartridge built-in flange-or sandwich plates
 Flange/Sandwich valves

Register 2.5

Technical explanation see data sheet 1.0-100E