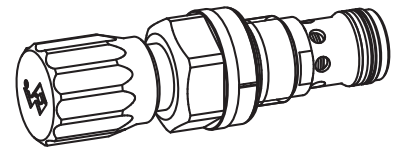


**2-way flow control valve**  
**Adjustable orifice, fixed pressure compensator**  
**Screw-in cartridge**

- $Q_{max} = 48$  l/min
- $Q_{Nmax} = 40$  l/min
- $p_{max} = 350$  bar

**M22x1,5**  
 ISO 7789

**DESCRIPTION**

2-way screw-in cartridge-type flow control valve with M22x1,5 thread, for pressure cavity acc. to ISO 7789. The valve is available in 2 different setting versions: Spanner setting „S“ and turning knob „D“. In its standard form, this control valve can be supplied with five nominal volume flow ranges. The two part cartridge body is made of steel. The surface of the valve is zinc-plated for rust protection.

**FUNCTION**

The 2-way flow control valve is designed to keep the speed of a consumer constant irrespective of the load. The adjustable measuring orifice determines the volume flow. If there is a pressure change, the pressure compensating spool is displaced and changes the outlet diameter in order to keep the pressure difference on the measuring orifice 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 (vertical stacked systems) and flange valves of the NG3-Mini size. (Please note the separate data sheets in register 2.5). Cavity tools are available for machining cavities (hire or purchase). Please refer to the data sheets in register 2.13.

**CONTENT**

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**TYPE CODE**

	QZ	<input type="checkbox"/>	PM22 -	<input type="text"/>	#	<input type="text"/>
Flow control valve 2-way						
Setting versions: Screw	<input type="checkbox"/>	S				
Turning knob	<input type="checkbox"/>	D				
Cover	<input type="checkbox"/>	A	(see data sheet 2.0-50)			
Screw-in cartridge M22x1,5						
Standard nominal flow rates:						
	$Q_N = 2,5$ l/min	<input type="checkbox"/>	2,5			
	$Q_N = 6,3$ l/min	<input type="checkbox"/>	6,3			
	$Q_N = 16$ l/min	<input type="checkbox"/>	16			
	$Q_N = 25$ l/min	<input type="checkbox"/>	25			
	$Q_N = 40$ l/min	<input type="checkbox"/>	40			
Design-Index (Subject to change)						

**GENERAL SPECIFICATIONS**

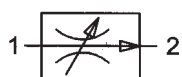
Denomination	Flow control valve 2-way
Construction	Screw-in cartridge for cavity acc. to ISO 7789
Mounting	Screw-in thread M22x1,5
Ambient temperature	-20...50° C
Mounting position	any
Fastening torque	$M_D = 50$ Nm
Weight:	$m = 0,18$ kg (screw) $m = 0,19$ kg (knob)
Volume flow direction:	1 → 2 adjustable flow

**HYDRAULIC SPECIFICATIONS**

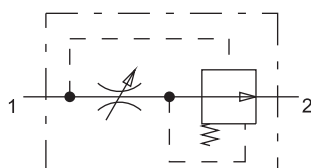
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$ ) refer to data sheet 1.0-50/2
Viscosity range	12 mm <sup>2</sup> /s...320 mm <sup>2</sup> /s
Fluid temperature	-20...+70° C
Peak pressure	$p_{max} = 350$ bar
Nominal volume flow rates:	$Q_N = 2,5$ l/min, 6,3 l/min, 16 l/min, $Q_N = 25$ l/min, 40 l/min
Min. volume flow	$Q_{min} = 0,1$ l/min ( $v = 30$ mm <sup>2</sup> /s)
Max. volume flow	$Q_{max} = 48$ l/min
Control accuracy	≤ 1%

**SYMBOLS**

simplified

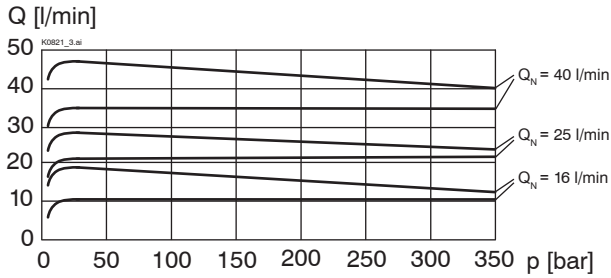
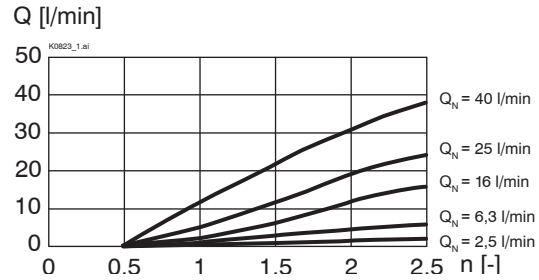
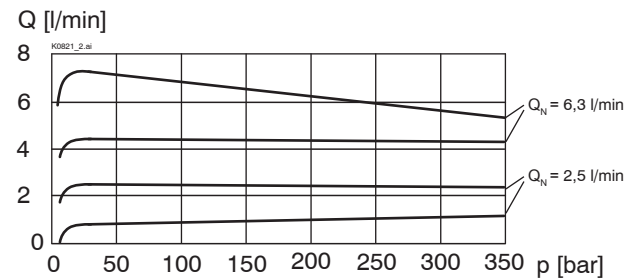
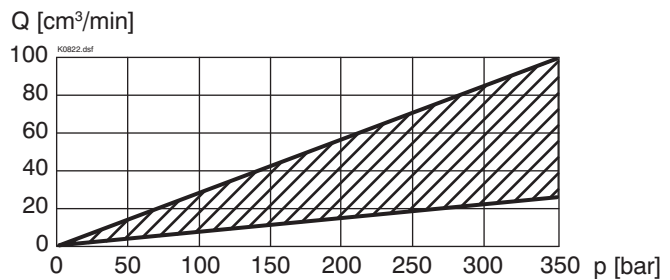


detailed


**MECHANICAL ACTUATION**

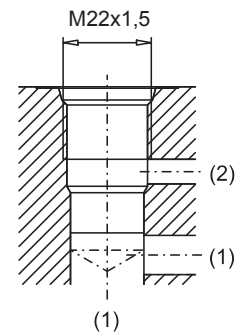
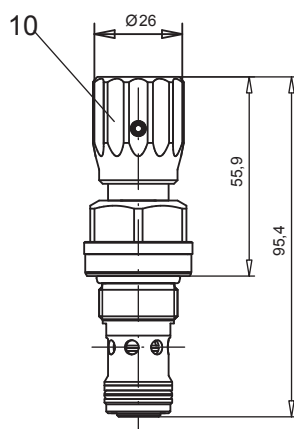
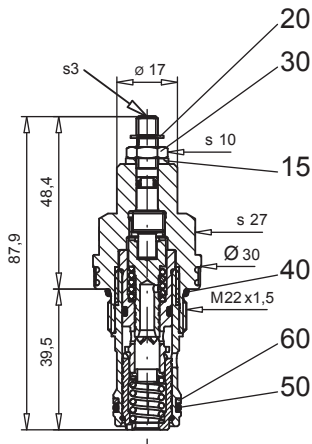
Mechanical types of operation in 2 different versions:

- S = Screw adjustment  
 with fork wrench and Allen key
- D = knob
- Control stroke  $S_b = 2,5$  mm
- Control angle  $\alpha_b = 900^\circ / 2,5$  turns

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

 $Q = f(n)$  Volume flow adjustment characteristic ( $p = 350 \text{ bar}$ )

 $Q = f(p)$  Volume flow pressure characteristic

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

**DIMENSIONS**

Screw adjustment „S“

Knob adjustment „D“

 Cavity drawing  
 ISO 7789-22-01-0-98

 For cavity details and  
 cavity tools, see data sheet  
 2.13-1008.

**PARTS LIST**

Position	Article	Description
10	114.2299	Knob
15	234.1060	Plate
20	193.1040	Safety plate RD4 DIN 6799
30	153.1302	Hexagonal nut 0,5D M6x3,2
40	160.2188	O-ring ID 18,77x1,78
50	160.2156	O-ring ID 15,60x1,78
60	049.3196	Back-up ring RD 16,1x19x1,4

**ACCESSOIRES**

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

Register 2.5

Technical explanation see data sheet 1.0-100E