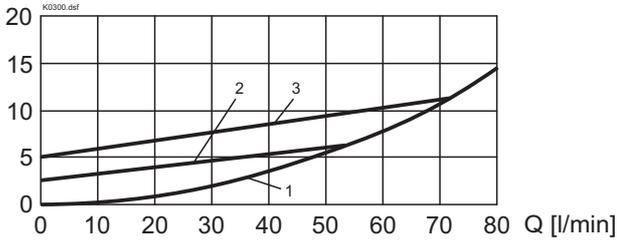
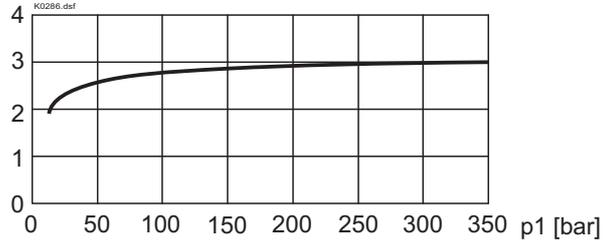
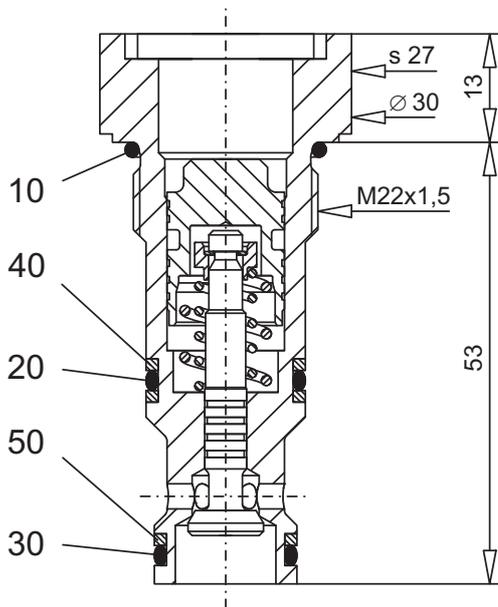
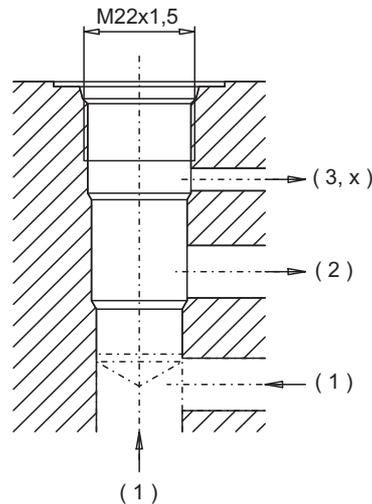


PERFORMANCE DATA Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure loss - volume flow - curve

- 1 Flow direction 1 \rightarrow 2
- 2 Flow direction 2 \rightarrow 1 ($p_0 = 2 \text{ bar}$)
- 3 Flow direction 2 \rightarrow 1 ($p_0 = 5 \text{ bar}$)

 Δp [bar]

 Unblocking ratio = $f(p_1)$

[-]


DIMENSIONS / SECTIONAL DRAWINGS

 Cavity drawing to
 ISO 7789-22-06-0-98

 For detailed cavity drawing and cavity tools
 see data sheet No 2.13-1006.

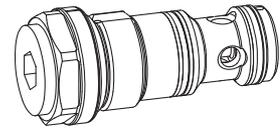
PARTS LIST

Position	Article	Description
10	160.2188	O-ring ID 18,77x1,78
20	160.2156	O-ring ID 15,60x1,78
30	160.2120	O-ring ID 12,42x1,78
40	49.3196	Back-up ring RD 16,1x19x1,4
50	49.3176	Back-up ring RD 14,1x17x1,4

Technical explanation see data sheet 1.0-100E

**Non-return valve
hydraulic pilot
Screw-in cartridge**

- $Q_{max} = 150 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

M33x2
 ISO 7789

DESCRIPTION

Hydraulic pilot operated check valve. Single screw-in cartridge with M33x2 thread and cavity in accordance with ISO 7789. The valve allows free flow in one direction (2→1) and blocks in the other direction (1→2), by means of a metal-to-metal seal. The one-piece cartridge body is made of steel. The external parts are in zinc coated and therefore protected from corrosion.

FUNCTION

In the free flow direction, the volume flow opens the seat cone against a spring. In the reverse direction, the spring holds the valve closed. If pressure builds up in connection x, this shifts the pilot control piston and opens the check valve. The required pilot control pressure is dependent on the pilot ratio.

APPLICATION

Pilot operated check valve are used to hold pressurised hydraulic cylinders, in for example lifting or tensioning devices, without any leakage. The hydraulic cylinder can only be moved into the closed direction if the valve has been opened via connection x. The directional valves required for cylinder control should have both service ports connected to the tank, to ensure operational safety when idle.

CONTENT

GENERAL SPECIFICATIONS	1
HYDRAULIC SPECIFICATIONS	1
SYMBOLS	1
CHARACTERISTICS	2
DIMENSIONS/ SECTIONAL DRAWINGS	2
PARTS LIST	2

TYPE CODE

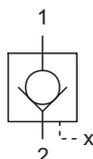
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Non-return valve piloted								
Screw-in cartridge M33x2								
Screw-in cartridge	$p_o = 2 \text{ bar}$	<input type="checkbox"/>						
	$p_o = 5 \text{ bar}$	<input type="checkbox"/>						
Design-Index (Subject to change)								

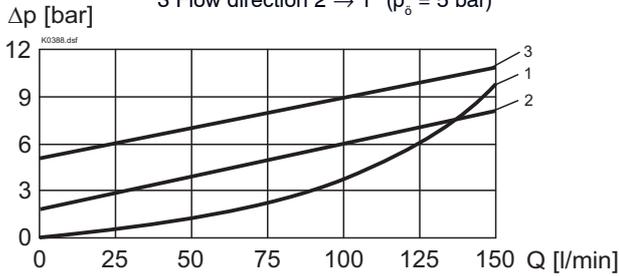
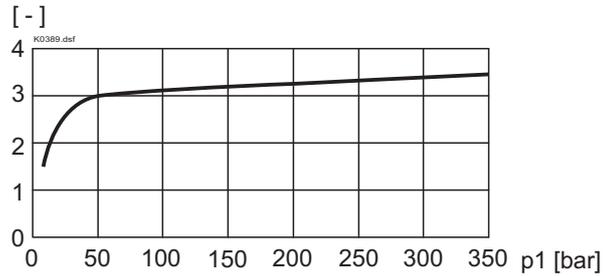
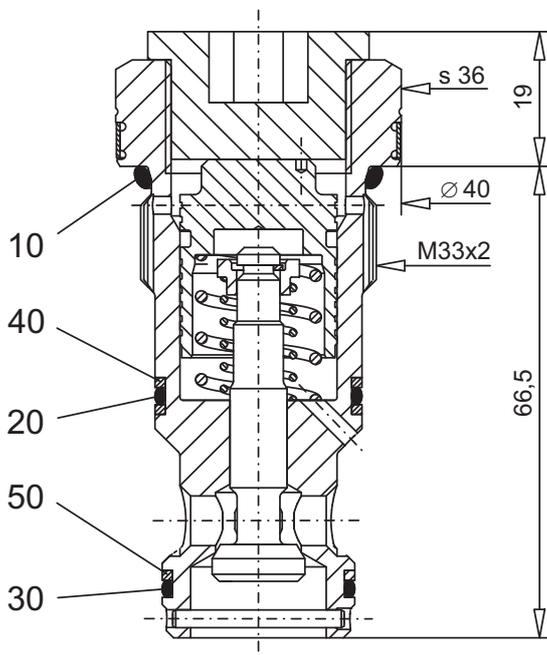
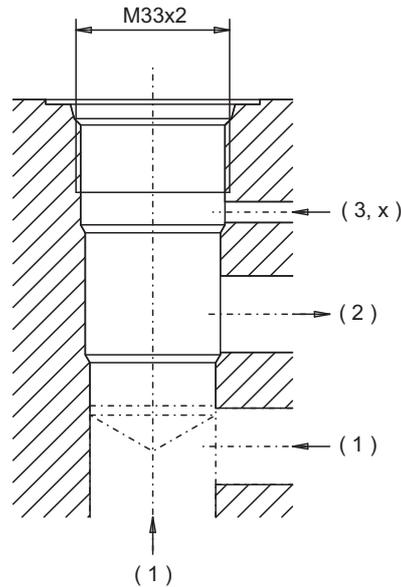
GENERAL SPECIFICATIONS

Description	Non-return valve hydraulic pilot
Construction	Screw-in cartridge for cavity acc. to ISO 7789
Mounting	Screw-in thread M33x2
Ambient temperature	-20...+50°C
Mounting position	any
Fastening torque	$M_D = 80 \text{ Nm}$
Weight	$m = 0,37 \text{ kg}$

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) 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	$p_{rmax} = 350 \text{ bar}$
Opening pressure 2 → 1	$p_o = 2 \text{ bar}, 5 \text{ bar}$
Unblocking ratio	see characteristics
Max. volume flow	$Q_{max} = 150 \text{ l/min}$
Pilot ratio	$i = 1 : 3,2$

SYMBOLS


PERFORMANCE DATA Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure loss - volume flow - curve
 1 Flow direction 1 \rightarrow 2
 2 Flow direction 2 \rightarrow 1 ($p_0 = 2 \text{ bar}$)
 3 Flow direction 2 \rightarrow 1 ($p_0 = 5 \text{ bar}$)

 Unblocking ratio = $f(p_1)$

DIMENSIONS / SECTIONAL DRAWINGS

 Cavity drawing to
 ISO 7789-33-06-0-98

 For detailed cavity drawing and cavity tools see
 data sheet 2.13-1011.

PARTS LIST

Position	Article	Description
10	160.2298	O-ring ID 29,82x2,62
20	160.2252	O-ring ID 25,12x1,78
30	160.2236	O-ring ID 23,52x1,78
40	49.3296	Back-up RD 26,1x29x1,4
50	49.3276	Back-up RD 24,1x27x1,4

Technical explanation see data sheet 1.0-100E