

APPLICATION

Counterbalance valves are used for load holding (from direction 1 to 2), especially best suited for applications where direction of forces induced by the changes of movable mass.



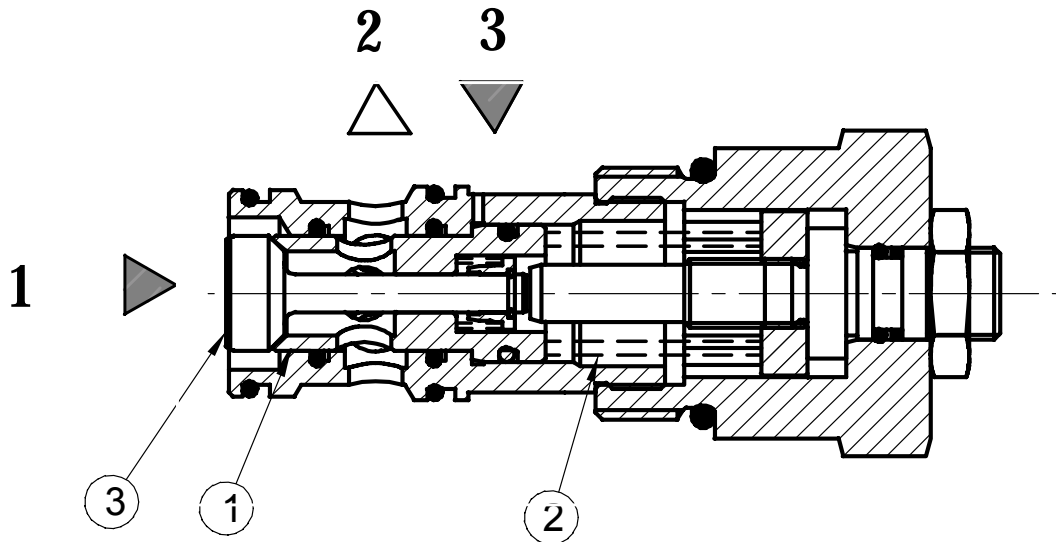
DESCRIPTION OF OPERATION

Pressure at port 1 acts on the surface of a sleeve 1, a spring 2 holds the sleeve in an initial position. When the pressure reaches the relief value set by the spring 2 the sleeve 1 shifts and excess oil flows off from port 1 to 2. After giving pilot pressure P_p into port 3 flow from port 1 to 2 is opened. The pressure P_p at port 3 required to open the line from 1 to 2 depends on the pressure set and load pressure P₁ at port 1.

Pilot ratio is 1 : 4,5

Pilot ratio = (P_{set} - P₁) / P_p = 4,5

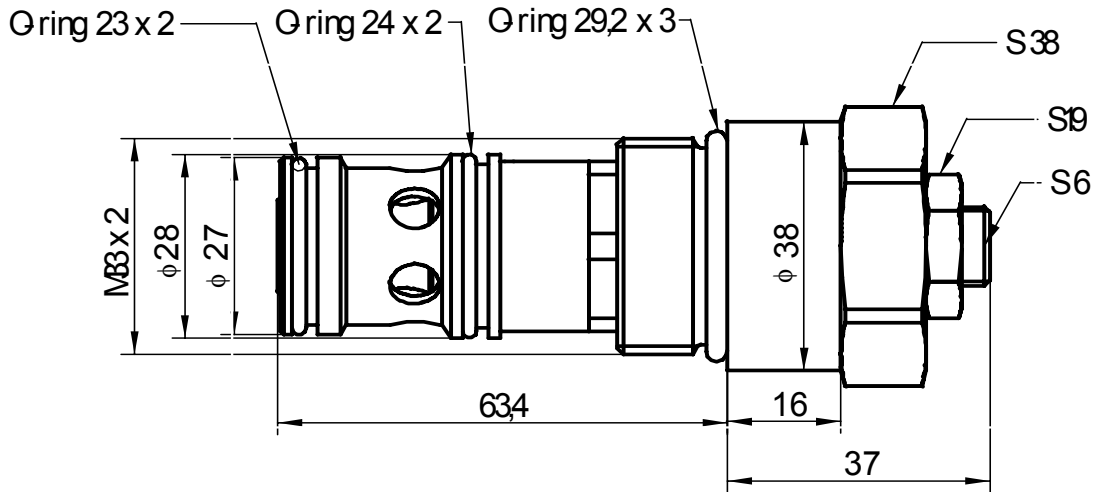
When port 2 is pressurised, a check valve opens allowing free flow from port 2 to 1.



DANE TECHNICZNE

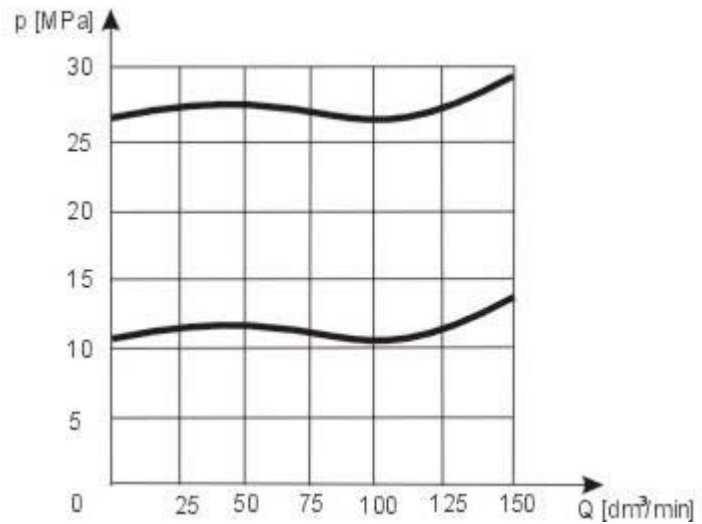
Working fluid	Mineral oil
Nominal fluid viscosity	37 mm ² /s at a temp. 328 K (55 °C)
Viscosity range	2,8 to 328 mm ² /s
Optimum temperature range	313 to 328 (40 to 55°C)
Temperature range	243 to 343 (-30 to 70°C)
Required filtration	16 μm
Reccomended filtration	10 μm
Max working pressure	30 MPa
Max flow rate	120 dm ³ /min
Pressure of opening check valve	0,2 MPa
Pilot ratio	4,5
Weight	0,45 kg

OVERALL DIMENSIONS

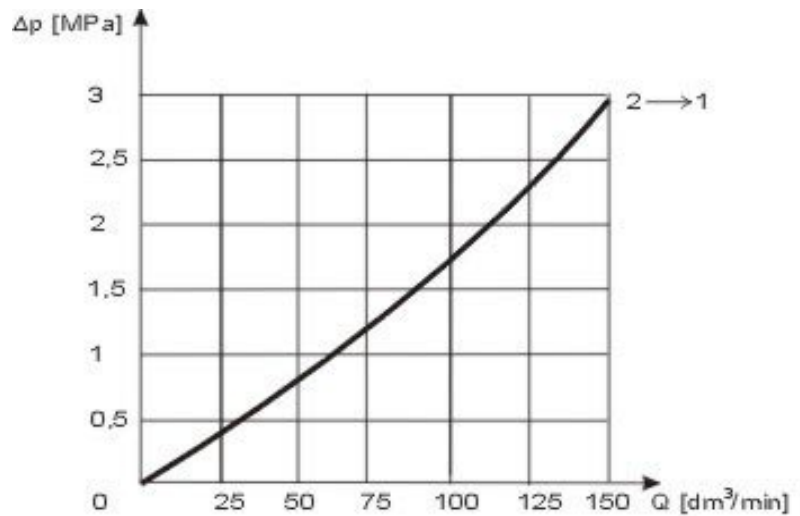


PERFORMANCE CURVES at $v = 41 \text{ mm}^2/\text{s}$ and a temp. 0°C

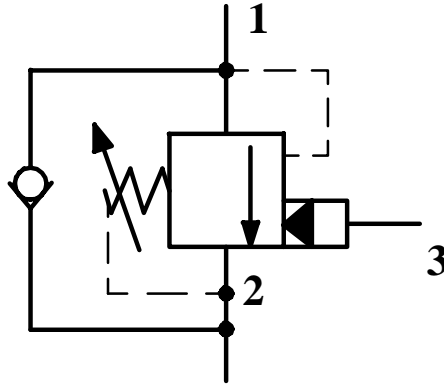
Performance curve



Flow resistance curve for check valve



SYMBOL



HOW TO ORDER

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

UZPHD 10	-	/	-	-	-				*
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Series number 02	= 02
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Pressure range do 10 MPa	= 100
do 30 MPa	= 300

Type of cavity - gniazdo M 33 x 2	=M1
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Pilot ratio - 4,5	=45
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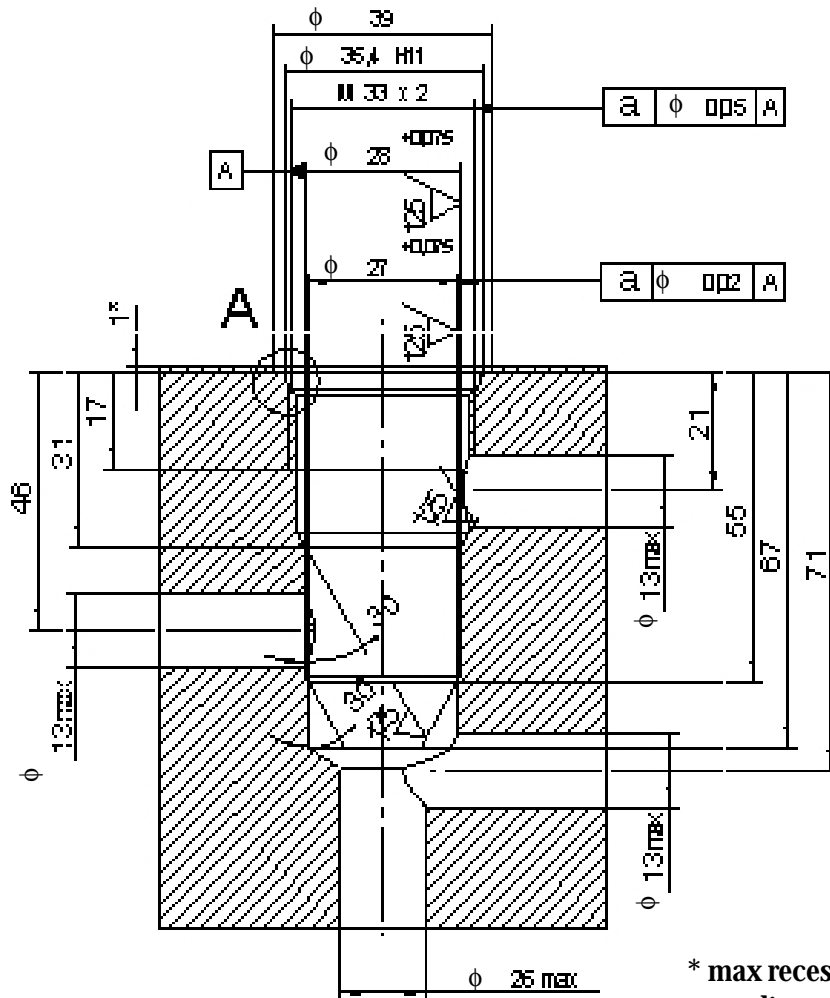
pressure of checking valve - 0,2 MPa	=2
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Sealing: - oilproof	= no destignation
- viton	= V

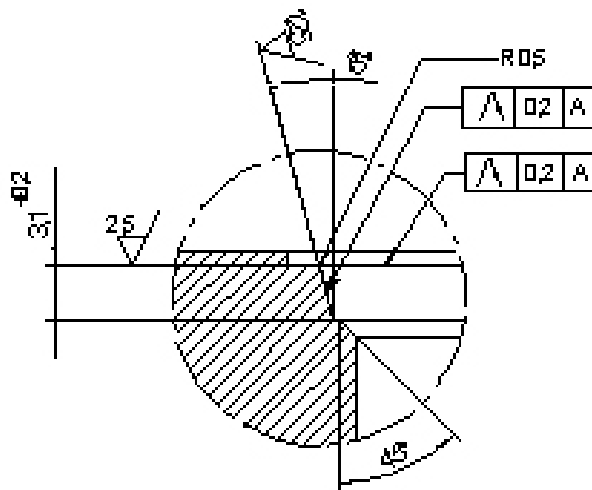
Further requirements to be added in text (to agree with manufacturer)

Coding example:
UZPHD10 - 02/ 100 - M1 - 45 - 2

DIMENSIONS OF CAVITY



* max recess depth according to valve dimensions



detail "a"

Tightening torque of valve cartridge 60 - 65 Nm

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