3 – WAY PRESSURE CONTROL VALVE

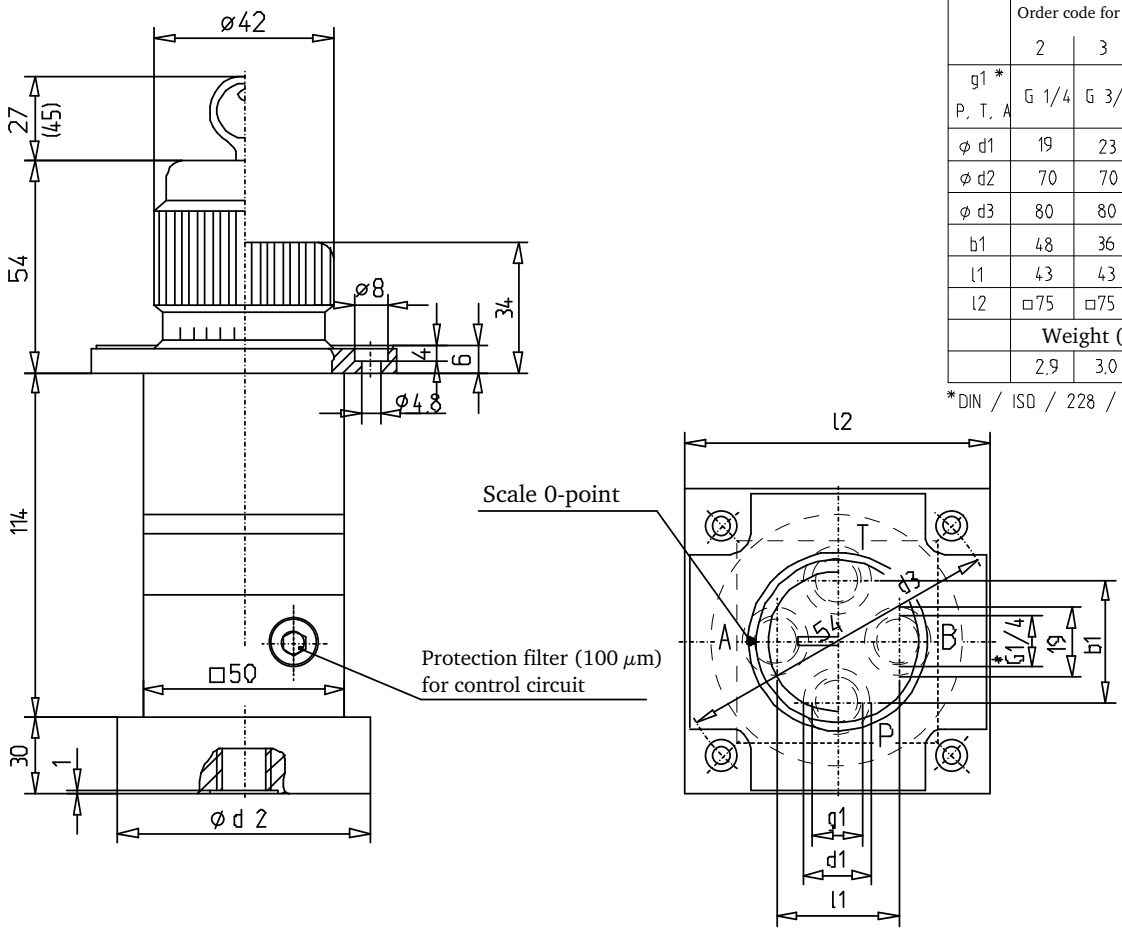
Manual control – pipe connection (NG 6)
Front panel installation with flange
Pilot operated - 315 bar - 40 l/min

Type
616 C

3-way pressure control valves control and limit a stepless adjustable pressure in the outlet stream to a downstream system, almost independent of the primary pressure and volume flow. 3-way pressure control valves have a secondary pressure safety device, so a pressure increase in the consumption side will be compensated.

FEATURES

- Scaled control knob, adjustment angle 325°
- Control knob optionally lockable - VW-locking E 10
- 4 nominal settable pressure ranges
- Minimal controllable pressure at all pressure ranges < 1 bar
- Secondary pressure safety device
- With pilot oil connection (B) for remote control or pressure release in connection A (must be closed if that function is not needed)
- Pipe connection: threaded holes according to DIN 3852 T.2
- Valves rest position: connection A to T, P closed
- Standard-sealing material Viton (FKM)



Dimensions (mm)			
	Order code for conn. size		
	2	3	4
g1 * P, T, A	G 1/4	G 3/8	G1/2
ø d1	19	23	27
ø d2	70	70	80
ø d3	80	80	100
b1	48	36	48
l1	43	43	46,5
l2	□75	□75	□90
	Weight (kg)		
	2,9	3,0	3,3

*DIN / ISO / 228 / 1

ORDER INFORMATION

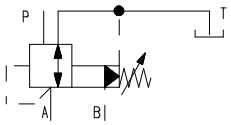
The scope of delivery includes a safety key when order contains a control knob with lock (**S**).

Name	3-way pressure control valve	616	C	S	270	4	M…

Type series
Serial code letter
Actuation: Control knob without lock = **without code**
Control knob with lock = **S**
Nominal settable pressure (bar): **50; 100; 200; 270**
Valve variant: connection size for **P**, **T** and **A**
2 = $G^1/_4$; **3** = $G^3/_8$; **4** = $G^1/_2$
(pilot oil connection) **B** = $G^1/_4$
Supplementary details for special modification = **M…**

CHARACTERISTICS

1. GENERAL

Symbol		
Design	two-stage:	pilot operated stage → poppet valve Main operated stage → piston valve
Weight	1,6 kg	
Mounting position	any	
Direction of volume flow	P to A or A to T	
Ambient temperature range	-25°C to +80°C	

2. HYDRAULIC CHARACTERISTICS

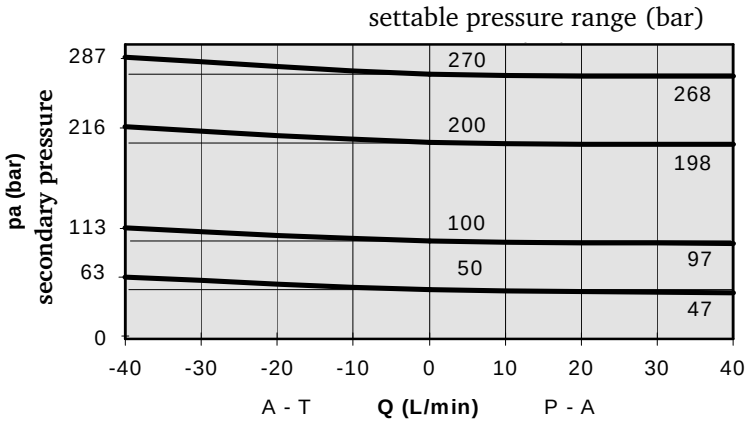
Nominal pressure / maximal pressure	connection P; A; B = 315 bar, connection T = 70 bar
Settable pressure range	50; 100; 200; 270 bar
Minimal pressure difference P to A	15 bar
Nominal volume flow	30 l/min
Pressure/volume flow function	see fig. 1
Hydraulic fluid	hydraulic oil according to DIN 51 524 (1,2)
Temperature range of hydraulic fluid	-20°C to +70°C
Viscosity range	5 - 350 mm^2/s
Pilot volume flow	approx. 350 cm^3/min
Contamination level/filtering	general permitted class 18/15 according to ISO 4406 or 9 according to NAS 1638; (recommended filter: min retention rate $\beta_{10\text{-}15} \geq 75$)

3. TYPE OF ACTUATION

	manual adjustment via control knob
Controlling torque	40 Ncm
Adjustment angle	325°

CHARACTERISTIC CURVES

pa-Q-characteristics
Control performance of the secondary pressure for the different settable pressure ranges depending on variable volume flow. The primary pressure is 20 bar above the individual settable pressure range.



DESCRIPTION OF THE VALVE

1. VALVE

For pilot operated valves the pressure is controlled and regulated almost independent of the volume flow.
The pilot oil for the pilot control is taken from the primary side and kept constant by a volume flow regulator
The control circuit is protected against gross contamination by a filter (100 µm). In case of an incident the filter can easily be removed and cleaned.
The valve has four connections. The main connections P and A for inlet and outlet, connection T for securing the secondary circuit and the control connection B.

The pilot oil is also be discharged via connection T. In order to avoid valve oscillations, we recommend to conduct connection T pressureless and trouble-free separately to the tank. Via connection B the valve can be released externally, but also controlled remotely; it must be closed if the function is not required. We recommend to provide port B in control blocks or connection plates, to adjust the damping performance of the valve in case of occurring system oscillations.

2. MATERIAL

The valve parts are basically made of engineering steel. The external parts are burnished or galvanized. All wear parts are hardened. The control knob is made of different materials (Al, St, plastic material).

For applications outside of the given specifications, please contact Schiedrum Hydraulic.
All given specifications are partially based on long-term experience and laboratory measurements. The data are typical for the valve, but can deviate in series. All measurements were performed on a test bench with a oil viscosity of 36 mm^2/s and with a filter mesh of < 10 mm. All given data should be used as description of the product only and are not to understand as warranty in the sense of law.