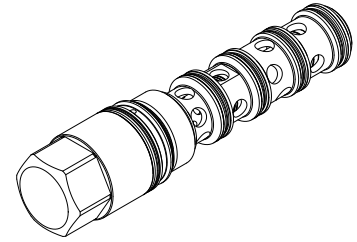


**Proportional directional valve
 cartridge construction**

- pilot operated
- not pressure compensated
- $Q_{max} = 250$ l/min
- $p_{max} = 315$ bar
- $Q_N = 150$ l/min

M42 x 2
 Wandfluh standard


DESCRIPTION

Pilot operated proportional directional valve with screw-in cartridge, thread M42 x 2, for cavity according to Wandfluh standard. The piston and sleeve are made of hardened steel. External parts are zinc-/nickel-coated.

FUNCTION

The valve is controlled externally through a pilot pressure via the x and y connections. Without control, the piston is held in the central position by a spring. The piston opening and volume flow increase proportionally to the pilot pressure. Thanks to the optimum piston shape, sensitive movement processes are possible. Wandfluh proportional pressure valves (see register 2.3) and Wandfluh proportional amplifiers (see register 1.13) are available for control purposes.

APPLICATION

Proportional directional spool valves are well suited for demanding applications where high resolution, high volume flow and low hysteresis are requested. They are implemented in industrial hydraulics as well as in mobile hydraulics for the smooth control of hydraulic actuators.

TYPE CODE

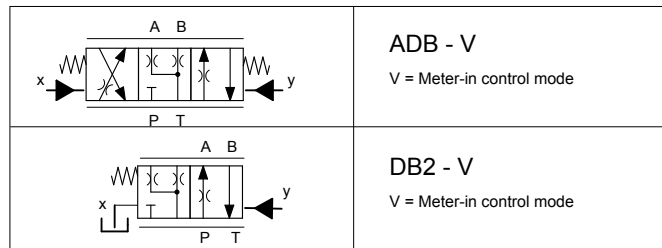
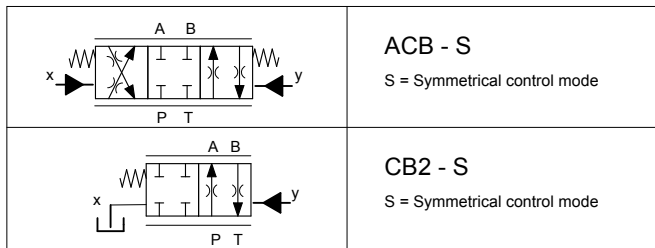
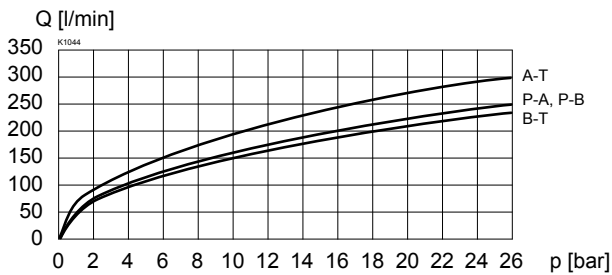
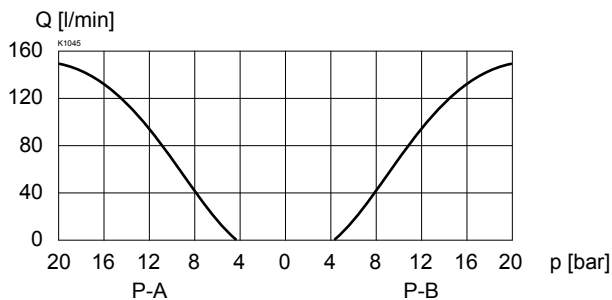
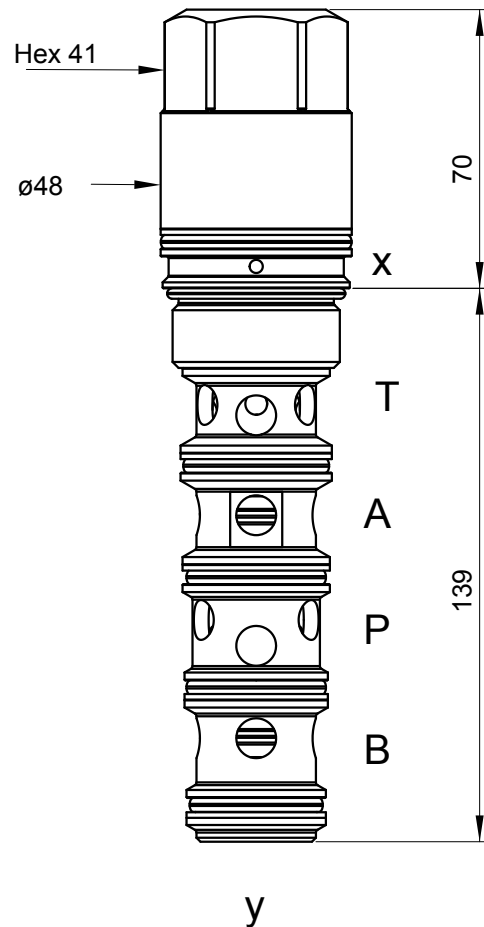
	W	V	P	PM42	-	-	-	150	#	-	
Directional valve											
Pilot operated											
Proportional											
Screw-in cartridge M42x2											
Designation of symbols according to type charts											
Nominal volume flow level Q_N											150 l/min
Design-Index (subject to change)											

GENERAL SPECIFICATIONS

Designation	Pilot operated proportional directional valve
Construction	Screw-in cartridge for cavity according to Wandfluh standard
Actuation	Pilot valve
Mounting	thread M42x2
Ambient temperature	-30...90 °C
Mounting position	any, preferably horizontal
Fastening torque	$M_D = 80...100$ Nm
Weight	$m = 1,4$ kg
Cavity	Detailed cavity drawing see data sheet 2.13-1052

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
Maximum pressure	$p_{max} = 315$ bar
Minimum pilot pressure	$p_{V min} = 4,5$ bar
Maximum pilot pressure	$p_{V max} = 30$ bar
Nominal volume flow level	$Q_N = 150$ l/min
Volume flow range	$Q = 0...250$ l/min
Leakage volume flow	P → T (at 200 bar): < 0,5 l/min

TYPE CHARTS / DESIGNATIONS OF SYMBOLS

CHARACTERISTICS oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $Q = f(\Delta p)$ Pressure loss/flow-characteristics over 1 metering edges

 $Q = f(p_v)$ Flow / pilot pressure-characteristics $\Delta p = 10 \text{ bar}$

DIMENSIONS

ACCESSORIES

 Proportional pressure valves
 Proportional amplifier

 Register 2.3
 Register 1.13

Technical explanation see data sheet 1.0-100

CONNECTION EXAMPLE
