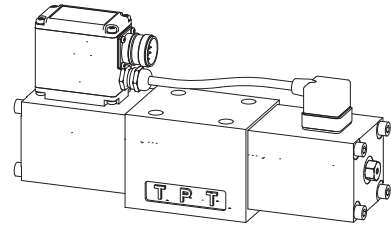
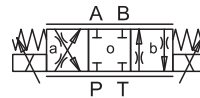


Proportional directional control valve

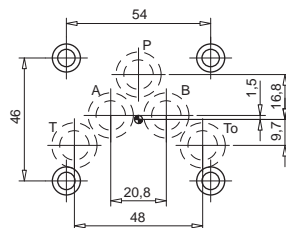
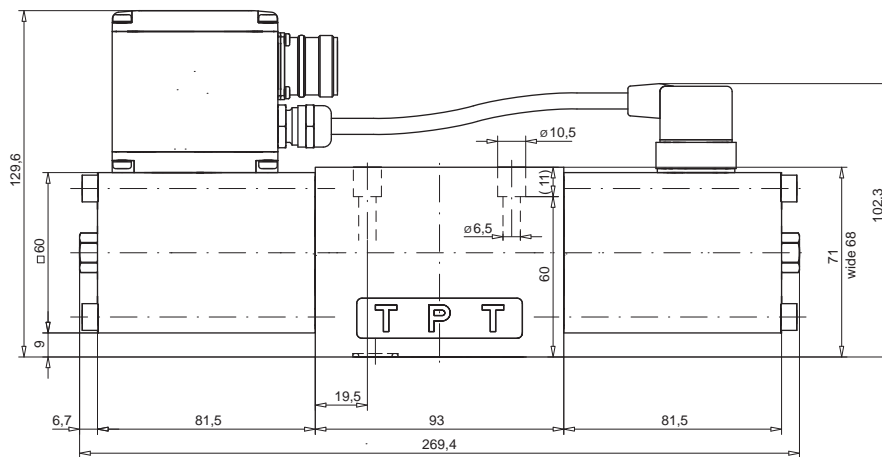
- Integrated amplifier
- direct operated
- $Q_{max} = 90$ l/min
- $Q_N = 65$ l/min
- $p_{max} = 350$ bar

NG10
 ISO 4401-05

TYPE CODE

WDVFA10 - ACB - S - 65 - G24

SYMBOL

ACB - S

S = Symmetrical control mode

DIMENSIONS

GENERAL SPECIFICATIONS

Nominal size	NG10 acc. to ISO 4401-05
Description	4/3-way proportional-control valve with integrated electronics
Construction	Direct operated spool valve
Mounting	Flange, 4 fixing holes for socket head cap screws M6x70
Fastening torque	$M_D = 9,5$ Nm (screw quality 8.8)
Connections	Connection plates, Multi-station flange subplate, Longitudinal stacking system
Mounting position	any, preferably horizontal
Ambient Temperature	-20...+50° C
Weight 4/3-way	7,19 kg

HYDRAULIC SPECIFICATIONS

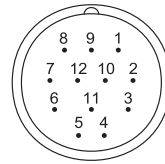
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, classe 18/16/13 (Required filtration grade $\beta_{6...10} \geq 75$) refer to data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20... +70° C
Working pressure	$p_{max} = 350$ bar (connections P, A, B)
Tank pressure	$p_{max} = 160$ bar (connection T)
Nominal volume flow	$Q_N = 65$ l/min ($Q_{max} = 90$ l/min) at 10 bar pressure drop over 2 metering edges.
Leakage volume flow	on request
Hysteresis	10%* * at optimal dither signal

ELECTRICAL SPECIFICATIONS

Protection class	IP 67 acc. to EN 60 529 with suitable connector and closed electronic housing
Supply voltage	12 VDC or 24 VDC
Ramps	separate adjustment for up and down for each solenoid
Serial interface	RS 232 C for „PASO“ (under cover of electronic housing settings adjusted at factory)
Analog interface (MAIN):	
Device receptacle (male)	M23, 12-poles
Mating connector	Plug (female), M23, 12-poles (not incl. in delivery)
Preset value signal:	Voltage / current selected with software
Parameter setting:	via RS 232 C

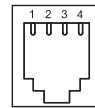

NOTE!

Detailed electrical characteristics and description of „DSV“ electronics are shown on data sheet **1.13-75**.

CONNECTOR WIRING DIAGRAM
Analog interface:
Device receptacle (male) X1


- 1 = Supply voltage +
- 2 = Supply voltage 0 VDC
- 3 = Stabilised output voltage
- 4 = Preset value voltage +
- 5 = Preset value voltage -
- 6 = Preset value current +
- 7 = Preset value current -
- 8 = Reserved for extensions
- 9 = Reserved for extensions
- 10 = Enable control (Digital input)
- 11 = Error signal (Digital output)
- 12 = Chassis

Preset value voltage (PIN 4/5) resp. current (PIN 6/7) are selected with set-up and diagnosis software.
 Factory setting: Voltage (-10...+10 V), (PIN 4/5)

Serial interface RS 232 C (X2) to adjust settings


- 1 = GND
- 2 = TXD
- 3 = RXD
- 4 = not used

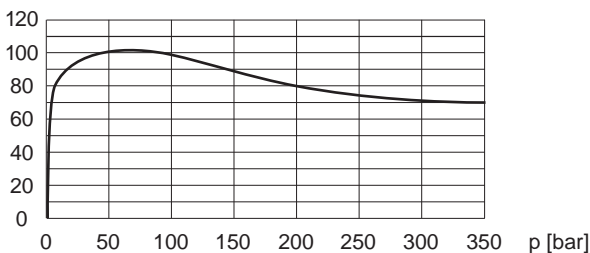
Additional information can be found on our website:
 „www.wandfluh.com“

Free-of-charge download of the „PASO“-software and the instruction manual for the „DSV“ hydraulic valves.

CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$

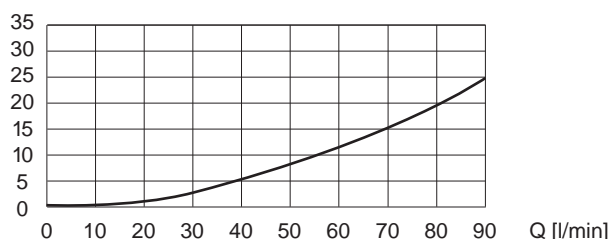
$Q = f(p)$ Volume flow pressure characteristics ($s = 100\%$)

Q [l/min] (s corresponds to preset value signal and x corresponds to spool stroke)



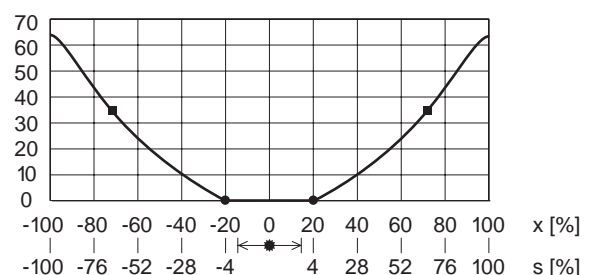
$\Delta p = f(Q)$ Pressure loss/flow characteristics ($s = 100\%$)

p [bar]



$Q = f(s, x)$ Volume flow-signal-characteristics ($\Delta p = 10 \text{ bar}$)

Q [l/min]


Factory settings:

Dither set for optimal hysteresis

- = Deadband: Both solenoids switched off with command signal -2%...+2%
- = Opening point: at command signal $\pm 4\%$
- = Flow at $\Delta p = 10 \text{ bar}$ over 2 metering edges at command signal $\pm 70\%$