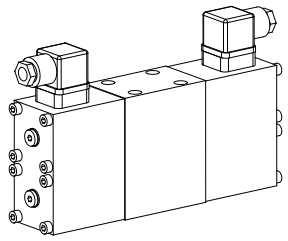
Solenoid poppet valve
- **4/3-way construction**
- **Q_{max} = 40 l/min**
- **p_{max} = 350 bar**

NG6
ISO 4401-03



DESCRIPTION
Poppet valve, flanged design NG6 to ISO 4401-03. The central functioning element of all directly controlled poppet valves in the NG6 series is the poppet valve cartridge NG6. See data sheet 1.11-2030. The solenoids correspond to VDE standard 0580.
Important: When commissioning, the valve must be vented under pressure (max. 2 revolutions of screw E).

FUNCTION
The poppet valve is opened by wet pin push type solenoids and closed by springs. The design of the poppet spool, which is equal in surface area on both sides and thus pressure balanced, means there are no undue opening and closing hydraulic forces. Due to this the oil flow through the poppet valve is possible in both directions. The valve is tight in both flow directions.

APPLICATION
Wandfluh poppet valves can be used anywhere absolutely leak tight closing functions are important. Completely sealed loading, gripping and clamping operations are all important functions which Wandfluh poppet valves can perform. Cartridge typ poppet valves can be neatly accommodated in valve blocks. From a mechanical and functional point of view, poppet valves can replace slide valves at any time.

TYPE CODE

4/3-way construction					A ☐ 4 3 06 - ☐ # ☐
International mounting interface ISO					
Medium-solenoid	M				
Super-solenoid	S				
4-way (connections)					
3 position					
Nominal size 6					
Nominal voltage U_N	12 VDC	G12	110 VAC	R110	
	24 VDC	G24	115 VAC	R115	
			230 VAC	R230	
Design-Index (Subject to change)					

GENERAL SPECIFICATIONS

Description	4/3-way poppet valve
Nominal size	NG6 acc. to ISO 4401-03
Construction	Direct operated poppet valve
Operations	Solenoid
Mounting	Flange, 4 holes for socket cap screws M5 x 90
Connections	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20…+50 °C
Mounting position	any, preferable horizontal
Fastening torque	M_D = 9,7 Nm (quality 12.9)
Weight	m = 5,4 kg

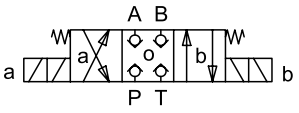
ELECTRICAL CONTROL

Construction	Solenoid, wet pin push type, pressure tight
Standard-nominal voltage	U_N = 12 VDC, 24 VDC U_N = 110 VAC∗, 115 VAC∗, 230 VAC∗ AC = 50 to 60 Hz ∗ Rectifier integrated in the plug Other nominal voltages and nominal performances on request
Voltage tolerance	±10% of nominal voltage
Protection class	IP 65 to EN 60 529
Relative duty factor	100% DF (see data sheet 1.1-430)
Switching cycles	15 000/h
Operating life	10^7 (number of switching cycles, theoretically)
Connection/Power supply	Over device plug connection to ISO 4400 / DIN 43 650, (2P+E), other connections on request
Solenoid:	– Medium SIN45DV (1.1-122) – Super SIS45DV (1.1-127)

HYDRAULIC SPECIFICATIONS

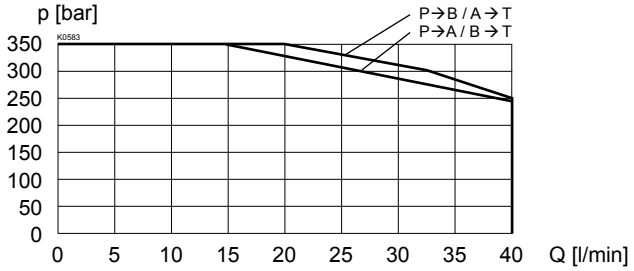
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 20/18/14 (Required filtration grade ß10…16≥75) refer to data sheet 1.0-50/2
Viscosity range	12 mm²/s…320 mm²/s
Fluid temperature	-20…+70 °C
Working pressure	Medium: p_{max} = 160 bar Super: p_{max} = 350 bar
Max. volume flow	$Q_{max.}$ = 40 l/min see characteristics

SYMBOLS

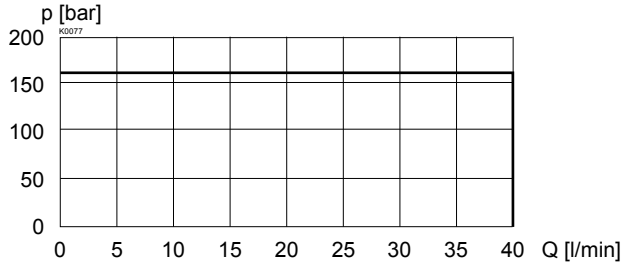


CHARACTERISTICS Oil viscosity υ = 30 mm²/s

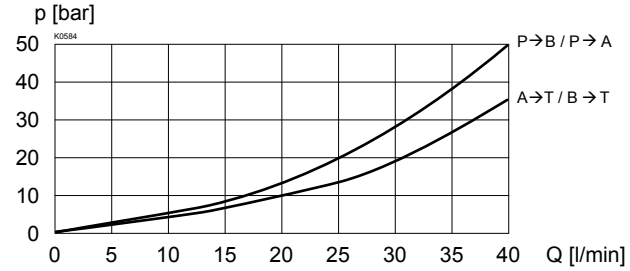
p = f (Q) Performance limit
with standard voltage -10%
Super



p = f (Q) Performance limit
with standard voltage -10%%
Medium

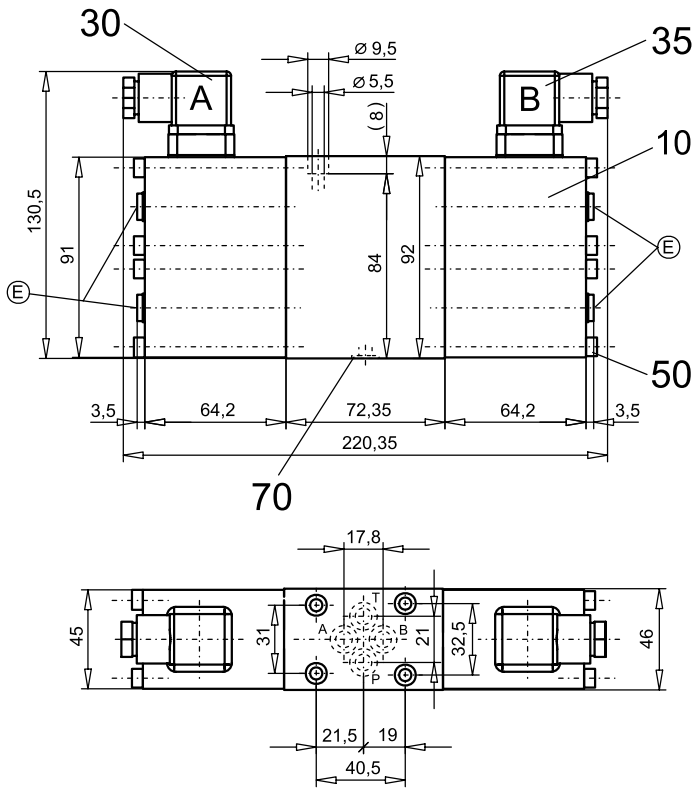


Δp = f (Q) Pressure loss/flow characteristics



DIMENSIONS

4/3-way poppet valve



PARTS LIST

Position	Article	Description
10	260.6... 260.7...	Medium solenoid SIN45DV-....-M40-HB0 Super solenoid SIS45DV-...-M40-HB0
30	219.2001	Plug A (grey)
35	219.2002	Plug B (black)
50	246.2171	Cyl. screw M5x70 DIN 912
70	160.2093	O-ring ID 9,25x1,78

E = air bleed screw

ACCESSORIES

Threaded connection plates, Multi-flange subplates and
Longitudinal stacking system see Register 2.9

Technical explanation see data sheet 1.0-100