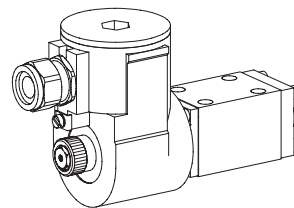


Solenoid poppet valve

- 2/2-, 3/2- and 3/4-way type
- $Q_{max} = 40 \text{ l/min}$
- $p_{max} = 350 \text{ bar}$

NG6
ISO 4401-03

DESCRIPTION

Direct operated poppet valve flange type NG6.
Activated with explosion proof solenoid.

EEx: in accordance with european standards
EN 50014, EN 50018

d: flameproof enclosure

Group II C: (gas group II A, II B)

for all applications except mining

Zone 1: (and 2) explosive mixtures
present intermittently

EC-type examination certificate:

Execution T4: PTB 98 ATEX 1009

Execution T6: PTB 98 ATEX 1008

FUNCTION

The central functioning element of all directly controlled poppet valves is the poppet valve cartridge NG6. The valve is operated by a explosion proof type solenoid which in turn either opens or closes the poppet. 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. From a mechanical and functional point of view, poppet valves can replace slide valves at any time. These valves are suitable for hazardous areas in off-shore and shipbuilding applications as well as in chemical, oil and gas industry.

TYPE CODE

2/2- or 3/2-way construction

3/4-way construction

International mounting interface ISO

Explosion proof solenoid

2-way (connections)

3-way (connections)

2 position

4 position

Nominal size 6

Normally closed,

Normally open,

solenoid on A-Side

solenoid on B-Side

Terminal box with out cable

Standard nominal voltage U_N :

24 VDC

G24

115 VAC

230 VAC

R115

R230

Execution:

T1...T4

T4

T1...T6

T6

(on request)

Design-Index (Subject to change)

GENERAL SPECIFICATIONS

Description	2/2-, 3/2- and 3/4-way poppet valve
Nominal size	NG6 acc. to ISO 4401-03
Construction	Direct operated poppet valve
Operations	Solenoid
Mounting	Flange
	4 mounting holes for cyl. screws M5x45 or M5x75 with distance ADP6/30
Connections	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Admissible ambient temp. *:	
Execution T4	-20...+40 °C
Execution T6 (on request)	-20...+90 °C (operation as T1...T4) -20...+40 °C (operation as T5/T6)
Mounting position	any, preverable horizontal
Fastening torque	$M_D = 5,5 \text{ Nm}$ (quality 8,8)
Weight: 2/2-, 3/2-way	$m = 3,3 \text{ kg}$
3/4-way	$m = 5,8 \text{ kg}$
Volume flow direction	any (see characteristics)

ELECTRICAL CONTROL

Construction	Solenoid, wet pin push, pressure tight
Standard-nominal voltage	$U_N = 24 \text{ VDC}$ $U_N = 115 \text{ VAC}$, $U_N = 230 \text{ VAC}$ DC wired with VDR AC = 50 to 60 Hz $\pm 2\%$; with integrated half wave rectifier and recovery diode
Voltage tolerance	$\pm 10\%$ of nominal voltage
Protection class	IP 65 acc. to EN 60 529
Relative duty factor	100% DF
Switching cycles	12'000/h
Operating life	10^7 (number of switching cycles, theoretically)
Connection/Power supply	Through cable entry for cable diameter 11...14 mm (acc. to EN 50014)
Temperature class:	
Execution T4	T1...T4
Execution T6	T1...T6 (on request)
Nominal power:	
Execution T4	22 W (DC), 35 VA (AC)
Execution T6	7 W (DC), 12 VA (AC) (on request)

START-UP

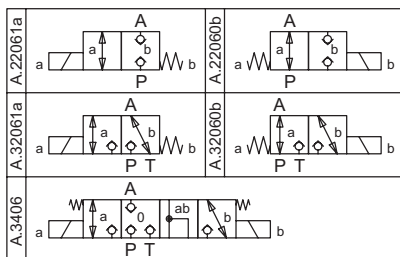
Information concerning the installation and commissioning is contained in the operating instructions supplied together with the solenoid coil.

HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406 : 1999, class 20/18/14 (Required filtration grade $\beta_{10...16} \geq 75$) refer to data sheet 1.0-50/2 12 mm ² /s...320 mm ² /s
Viscosity range	
Admissible fluid temp. *: Execution T4	-20...+40 °C
Execution T6 (on request)	-20...+70 °C (operation as T1...T4) -20...+40 °C (operation as T5/T6)
Working pressure	$p_{\max} = 350$ bar
Max. volume flow	$Q_{\max} = 40$ l/min see characteristics

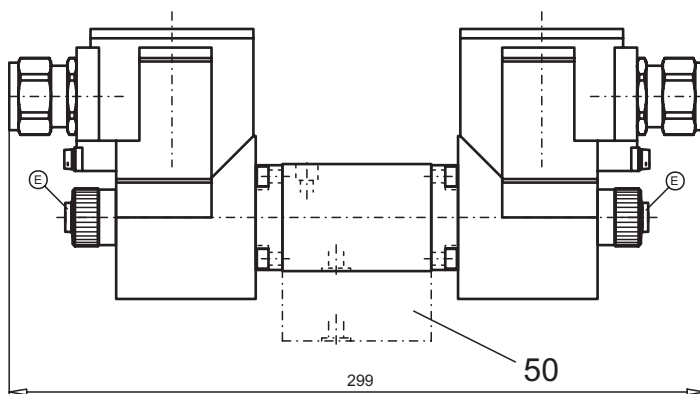
* Deviating pressure medium - or ambient temperatures are possible for special arrangements after checking and authorisation by a responsible inspector. Measures for the prevention of the exceeding of the admissible solenoid surface - and internal temperatures can be: a good ventilation, low ambient temperatures (for higher pressure medium temperatures), limitation of the maximum possible power supply voltage, a short switching-on duration, installation on large heat dissipating blocks, etc. The responsibility in all cases lies with the operator, resp. with his inspector.

SYMBOLS



DIMENSIONS

3/4-way poppet valve



E = air bleed screw

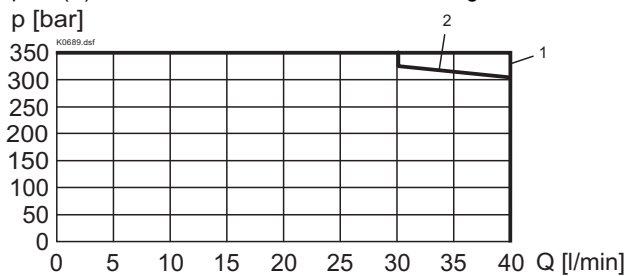
Order distance plate
ADP6/30 separatly

PARTS LIST

Position	Article	Description
10	207.5 ...	Coil type EExd
15	239.2033	Plug (incl. seal) HB0
20	058.4211	Cover
30	246.2117	Socket head cap screw M5x16 DIN 912
40	160.2093	O-ring ID 9,25x1,78
50	173.3453	Distance plate ADP6/30
60	111.1080	Cable entry brass M20x1,5

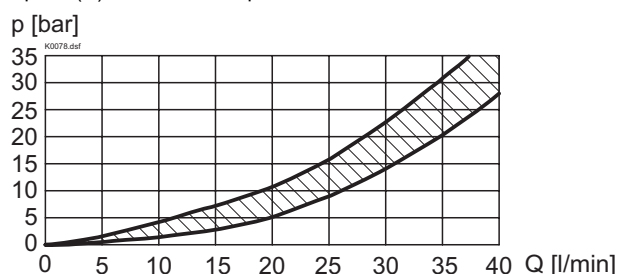
CHARACTERISTICS (T6 on request) Oil viscosity $\nu = 30$ mm²/s

$p = f(Q)$ Performance limits with standard voltage -10 %



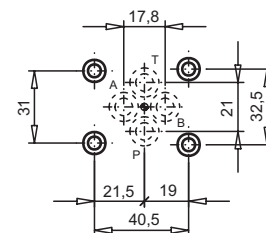
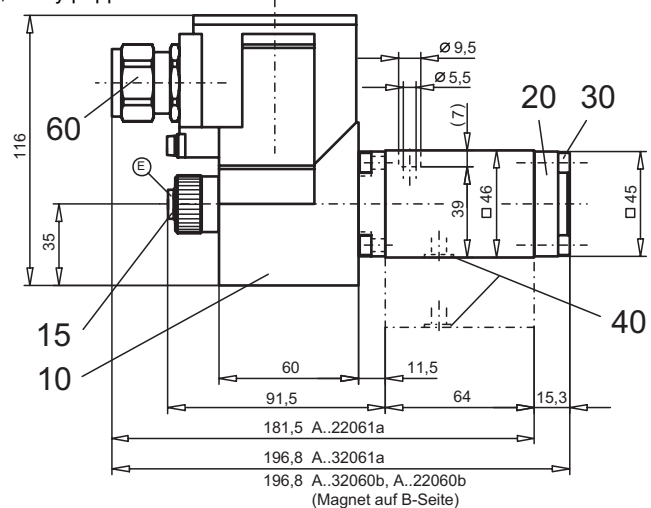
Type	Flow direction			
	P - A	A - T	A - P	T - A
AEXd22061a	1	-	1	-
AEXd22060b	1	-	2	-
AEXd32061a	1	1	-	-
AEXd32060b	1	1	-	-
AEXd3406	1	1	1	1

$\Delta p = f(Q)$ Pressure drop volume flow characteristics



2/2-way poppet valve

3/2-way poppet valve



ACCESSORIES

Threaded connecting plates

see Reg. 2.9

Technical explanation see data sheet 1.0-100E