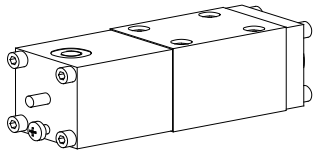
Poppet valve pneumatically operated
- **2/2-, 3/2- and 3/4-way construction**
- **Q_{max} = 40 l/min**
- **p_{max} = 350 bar**

NG6
ISO 4401-03



DESCRIPTION
Poppet valve, flanged design NG6 according to ISO 4401-03, available as a 2/2 or 3/2-way valve (normally open or closed) and as a 3/4-way valve (normally closed). 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.

FUNCTION
The valve is direct operated by a pneumatically operated 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. Cartridge type 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

2/2- or 3/2-way construction	A	K	☐	2	06	☐	#	☐
3/4-way construction	A	K	3	4	06		#	☐

International mounting interface ISO

Pneumatically operated

2-way (connections) [2]
3-way (connections) [3]

2 position
4 position

Nominal size 6

Normally closed — Pilot head on A-side [1a]
Normally open — Pilot head on B-side [0b]

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	pneumatically operated
Mounting	Flange, 4 mounting holes for socket head screws M5x45
Connections	Threaded connection plates Multi-flange subplates Longitudinal stacking system
Ambient temperature	-20…+50 °C
Mounting position	any, preferable horizontal
Fastening torque	M_D = 5,5 Nm (quality 8,8)
Weight: 2/2-, 3/2-way	m = 1,7 kg
3/4-way	m = 2,5 kg
Volume flow direction	any (see characteristics)

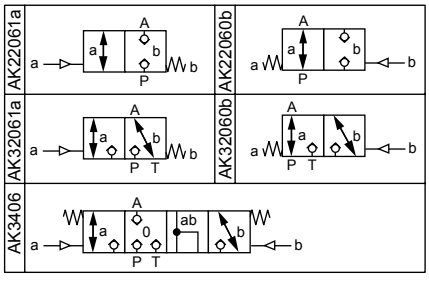
CONTROL PNEUMATIC

Min. pilot pressure	$p_{st' min.}$ = see characteristics
Max. pilot pressure	$p_{st' max.}$ = 8 bar
Control volume	V_{st} = 7 cm³

HYDRAULIC SPECIFICATIONS

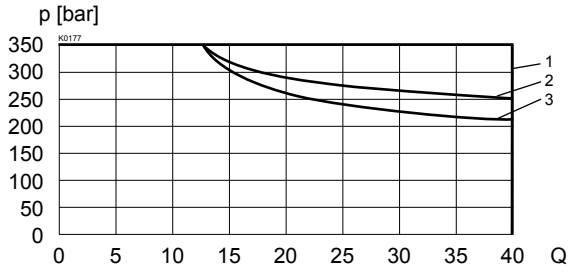
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 20/18/14 (Required filtration grade ß10…16≥75) see data sheet 1.0-50/2
Viscosity range	12 mm²/s…320 mm²/s
Fluid temperature	-20… +70 °C
Working pressure	p_{max} = 350 bar
Max. volume flow	$Q_{max.}$ = 40 l/min see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

SYMBOLS



CHARACTERISTICS Oil viscosity υ = 30 mm²/s

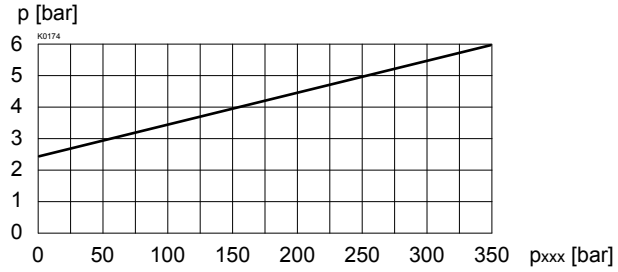
p = f (Q) Performance limit



Type	Flow direction			
	P - A	A - T	A - P	T - A
AK22061a	1	-	1	-
AK22060b	1	-	3	-
AK32061a	1	2	1	1
AK32060b	1	1	2	1
AK3406	1	1	1	1

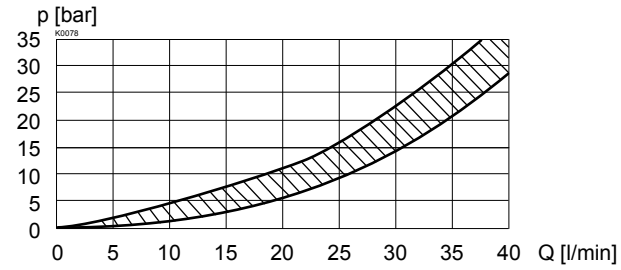
$p_{st\ min}$ = f (p_{xxx}) Min. Pilot pressure characteristics at Q_{max}

p_{xxx} = pressure in line xxx (see table)



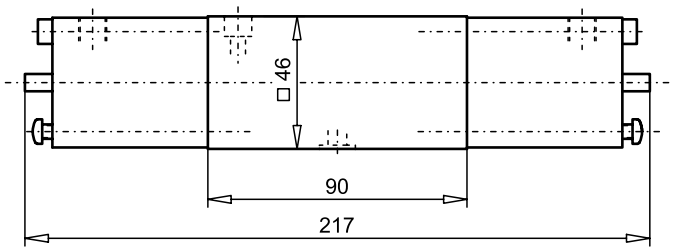
Type	Flow direction			
	P - A	A - T	A - P	T - A
AK22061a	A	-	A	-
AK22060b	A	-	A	-
AK32061a	A	A	A	A
AK32060b	A	A	A	A
AK3406	A	T	A	T

Δp = f (Q) Pressure loss/flow characteristics

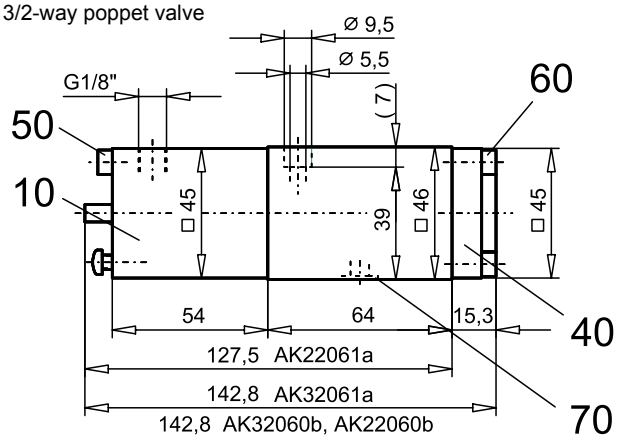


DIMENSIONS

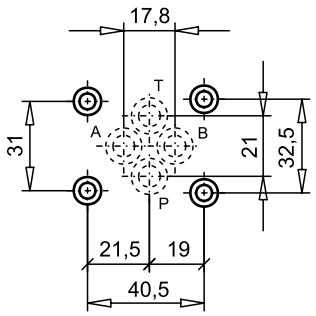
3/4-way poppet valve



2/2-way poppet valve
3/2-way poppet valve



(Steuerkopf auf B-Seite / Pilot head on side B / Tête piloté au côté B)



PARTS LIST

Position	Article	Description
10	254.4050	Pneumatic pilot head CKII
40	058.4215	Cover
50	246.2160	Socket head cap screw M5x60 DIN 912
60	246.2117	Socket head cap screw M5x16 DIN 912
70	160.2093	O-ring ID 9,25x1,78

ACCESSORIES

Threaded connections plates, Multi-flange subplates and Longitudinal stacking system see register 2.9

Technical explanation see data sheet 1.0-100