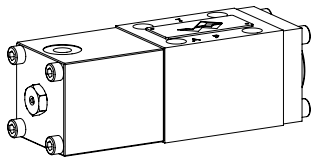
Poppet valve

Flange construction

- pneumatically operated
- 2/2-, 3/2- und 3/4-way
- normally open and normally closed
- Q_{max} = 40 l/min
- p_{max} = 350 bar

NG6
ISO 4401-03



DESCRIPTION

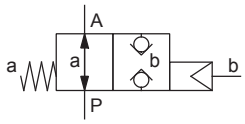
Direct operated 2/2-, 3/2 and 3/4-way poppet valve in flange construction. By means of the pneumatic actuation control head, the poppet valve spool is opened or closed acting against the spring. Due to the poppet spool construction with pressure compensation on both sides, the flow through the valve is possible in both directions. The seat spool guide is sealed by means of an O-ring. The metallically sealing seat closes the valve virtually leak free.

APPLICATION

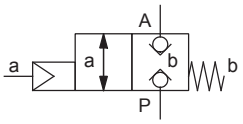
Poppet valves are used where tight closing functions of the valve are essential like leakage-free load holding, clamping or gripping.

SYMBOL

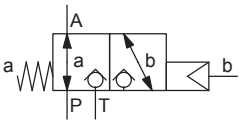
AK22060b



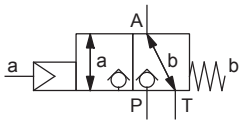
AK22061a



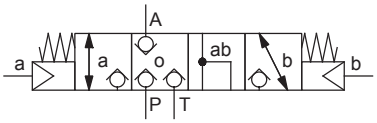
AK32060b



AK32061a



AK3406



TYPE CODE

2/2 or 3/2 way execution	A	K	☐	2	0	6	☐	-	☐	#	☐
3/4 way execution	A	K	3	4	0	6		-	☐	#	☐

International standard interface ISO

Pneumatically operated

2 way (connections)	2
3 way (connections)	3

2 switching positions
4 switching positions

Nominal size 6

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

Sealing material	NBR	
	FKM (Viton)	D1
	NBR 872	Z604

Design index (subject to change)

1.11-6140

GENERAL SPECIFICATIONS

Designation	2/2-, 3/2- and 3/4-way poppet valve
Construction	Direct operated
Mounting	Flange construction
Nominal size	NG6 according to ISO 4401-03
Actuation	Pneumatically operated
Ambient temperature	-25…+70 °C
Weight	1,7 kg (2/2- and 3/2-way) 2,5 kg (3/4-way)
MTTFd	150 years

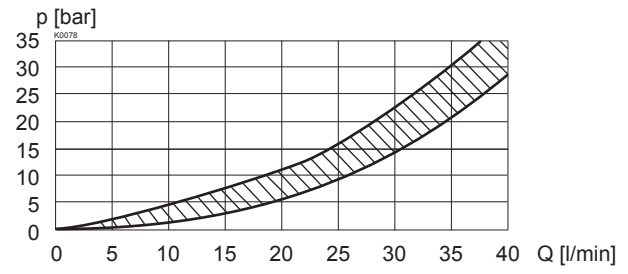
ACTUATION

Actuation	Pneumatically
Execution	Actuation CKII #2
Pilot pressure	$p_{V\,min}$ = 2 bar bei p_T = 20 bar $p_{V\,min}$ = 5,5 bar bei p_T = 200 bar
Control volume	V = 6,9 cm³

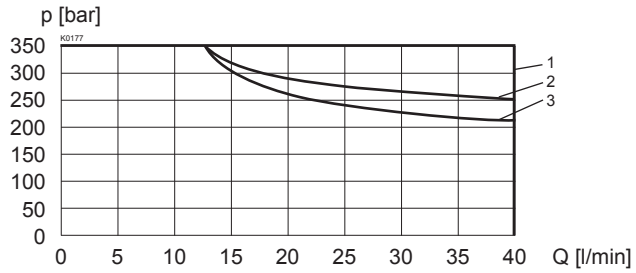
PERFORMANCE SPECIFICATIONS

Oil viscosity υ = 30 mm²/s

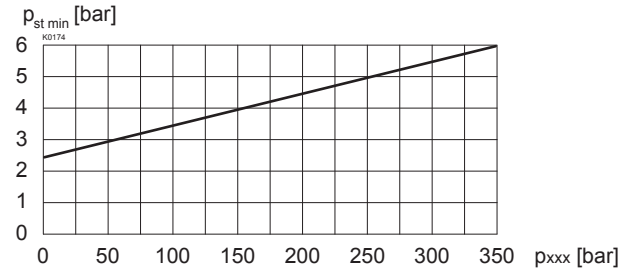
Δp = f (Q) **Pressure drop volume-flow characteristics**



p = f (Q) **Performance limits**



$P_{st\,min}$ = f (p) **Min. pilot pressure-pressure characteristic at Q_{max}**



HYDRAULIC SPECIFICATIONS

Working pressure	p_{max} = 350 bar
Maximum volume flow	Q_{max} = 40 l/min, see characteristic
Volume flow direction	Any (see characteristic)
Leakage oil	Poppet type, max. 0,05 ml / min (approx. 1 drop / min) at 30 cSt
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm²/s…320 mm²/s
Temperature range fluid	-25…+70 °C (NBR) -20…+70 °C (FKM)
Contamination efficiency	Class 20 / 18 / 14
Filtration	Required filtration grade ß 10…16 ≥ 75, see data sheet 1.0-50

	Flow direction			
Type	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

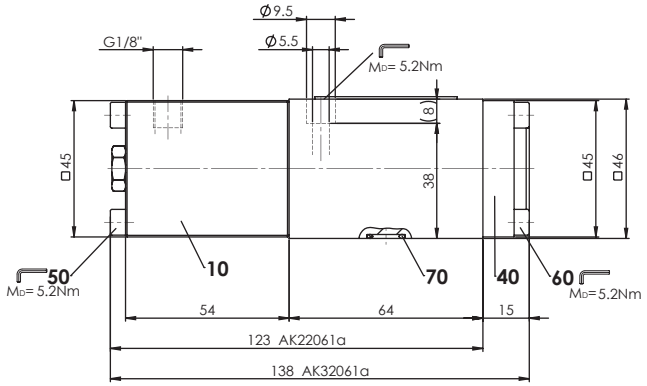
VALVES INSTALLED

The central functioning element is the poppet valve cartridge listed below

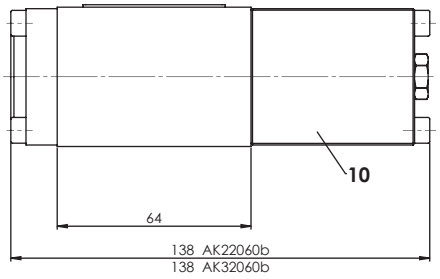
Article	Description	Data sheet no.
2206	Solenoid poppet valve cartridge normally closed NG6	1.11-2030

DIMENSIONS

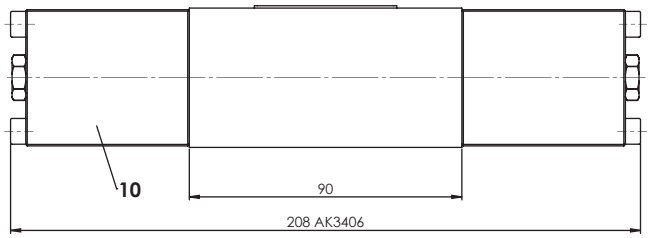
3/2-; 2/2-way



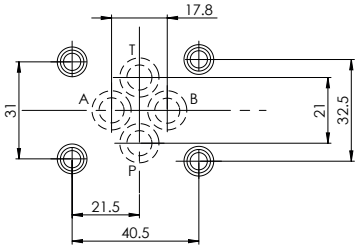
3/2-; 2/2-way



3/4-way



HYDRAULIC CONNECTION



PARTS LIST

Position	Article	Description
10	254.4061	Pneumatic actuation CK II #2
40	058.4215	Cover
50	246.2160	Socket head screw M5 x 60 DIN 912
60	246.2117	Socket head screw M5 x 16 DIN 912
70	160.2093 160.6092	O-ring ID 9,25 x 1,78 (NBR) O-ring ID 9,25 x 1,78 (FKM)

ACCESSORIES

Fixing screws	Data sheet 1.0-60
Threaded subplates	Data sheet 2.9-30
Multi-station subplates	Data sheet 2.9-60
Horizontal mounting blocks	Data sheet 2.9-100
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50

SURFACE TREATMENT

- The valve body is painted with a two component paint
- The pneumatic actuation and the cover are zinc-nickel coated
- The socket head screws are zinc coated

STANDARDS

Mounting interface	ISO 4401-03
Contamination efficiency	ISO 4406

MANUAL OVERRIDE

HB6 as standard
Optionally: HN (K)
→ see data sheet 1.1-311

SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

INSTALLATION NOTES

Mounting type	Flange mounting 4 fixing holes for socket head screws M5 x 45
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws M_D = 5,2 Nm (screw quality 8.8, zinc coated)

Note! The length of the fixing screw depends on the base material of the connection element.

Wandfluh AG Postfach CH-3714 Frutigen
Tel. +41 33 672 72 72 Fax +41 33 672 72 12 sales@wandfluh.com