

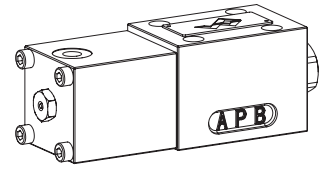
Spool valve

Flange construction

- ◆ pneumatically operated
- ◆ 4/2-way impulse valve
- ◆ 4/3-way with spring centred mid position
- ◆ 4/2-way with spring reset
- ◆ $Q_{max} = 80 \text{ l/min}$
- ◆ $p_{max} = 350 \text{ bar}$

NG6

ISO 4401-03



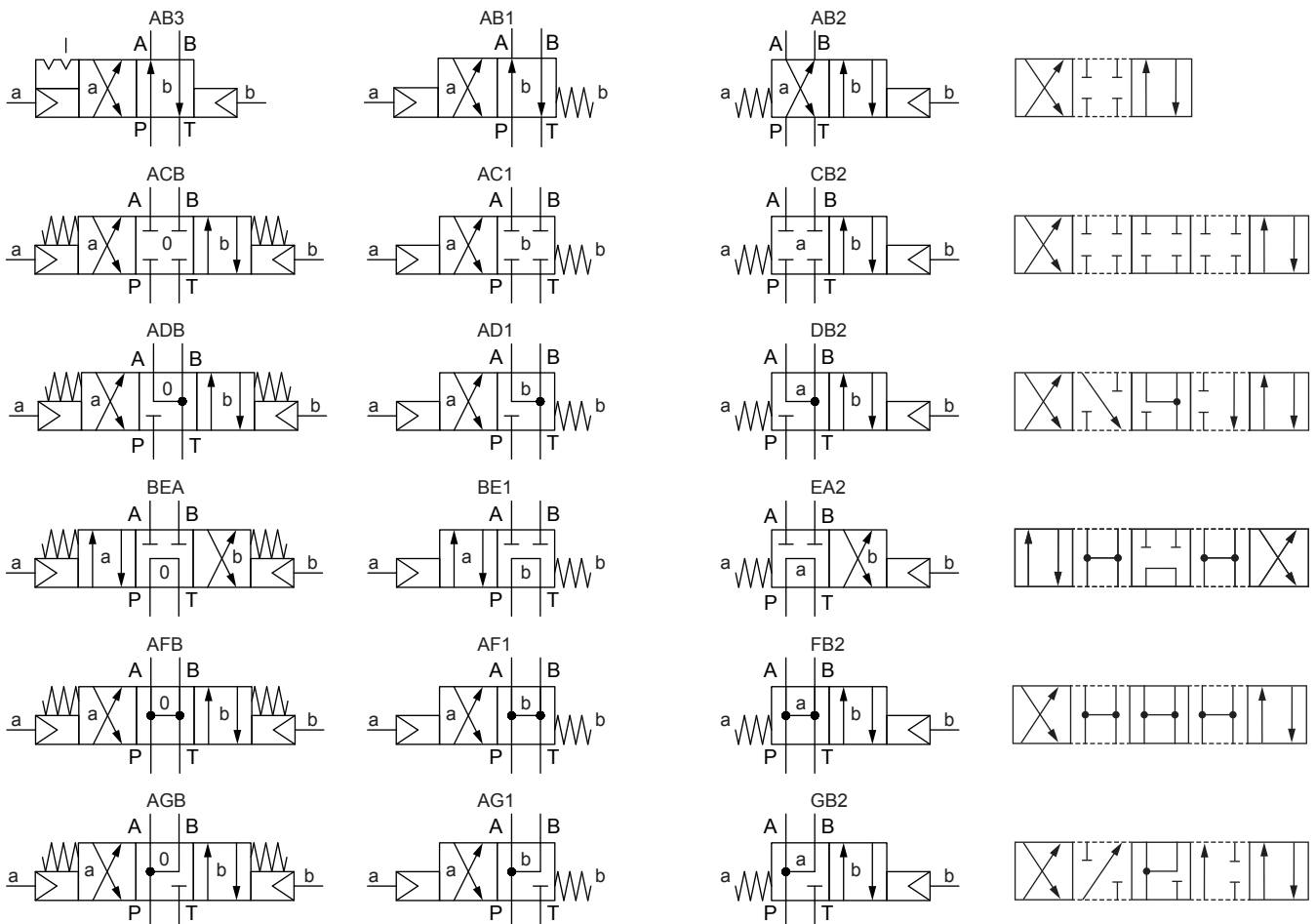
DESCRIPTION

Direct operated spool valve, pneumatically operated, with 4 connections in a 5 chamber system. Spool detented or with spring reset. Without actuation, the spool is held in the center position by the spring (4/3), or switched back to the offset position (4/2). With the detent, the spool is held in the last switching position selected. Precise spool fit, low leakage, long service life time. Spool made from hardened steel, valve body from high quality hydraulic cast steel.

APPLICATION

Spool valves are mainly used for controlling direction of movement and stopping of hydraulic cylinders and motors.

SYMBOL



TYPE CODE

		WD L F A06 - <input type="text"/> - <input type="text"/> - <input type="text"/> # <input type="text"/>
Spool valve, direct operated		
Pneumatically actuated		
Flange construction		
International standard interface ISO, NG6		
Designation of symbols acc. to table		
Sealing material	NBR FKM (Viton) NBR 872	<input type="text"/> D1 y-Z604
Surface protection	Standard Zinc-nickel	<input type="text"/> K8
Design index (subject to change)		
1.6-32		

GENERAL SPECIFICATIONS

Designation	4/2-, 4/3-spool valve
Construction	Direct operated
Mounting	Flange construction
Nominal size	NG6 according to ISO 4401-03
Actuation	Pneumatically operated
Ambient temperature	-25...+70 °C
Weight	1,75 kg (1 actuation) 2,25 kg (2 actuations)
MTTFd	150 years

ACTUATION

Actuation	Pneumatically operated
Execution	Actuation CKIIM
Pilot pressure	$p_{V\min} = 2 \text{ bar}$ at $p_T = 20 \text{ bar}$ $p_{V\min} = 5,5 \text{ bar}$ at $p_T = 200 \text{ bar}$
Control volume	$V = 6,9 \text{ cm}^3$

HYDRAULIC SPECIFICATIONS

Working pressure	$p_{\max} = 350 \text{ bar}$
Tank pressure	$p_{T\max} = 200 \text{ bar}$
Maximum volume flow	$Q_{\max} = 80 \text{ l/min}$, see characteristics
Leakage oil	See characteristics
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm ² /s...320 mm ² /s
Temperature range fluid	-25...+70 °C (NBR) -20...+70 °C (FKM)
Contamination efficiency	Class 20 / 18 / 14
Filtration	Required filtration grade $\beta_{10...16} \geq 75$, see data sheet 1.0-50

SURFACE TREATMENT

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

Optionally (K8):
 -All external parts are zinc-nickel coated
 ISO 9227 (800 h) salt spray test

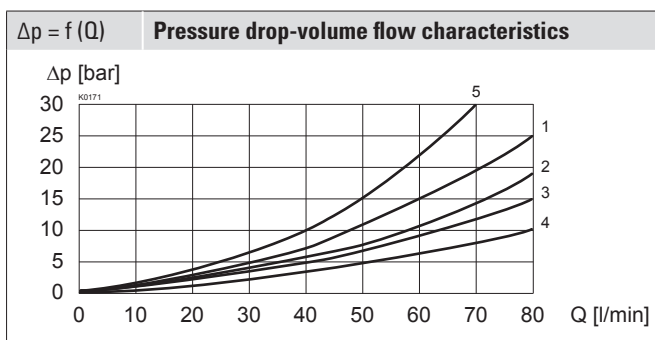
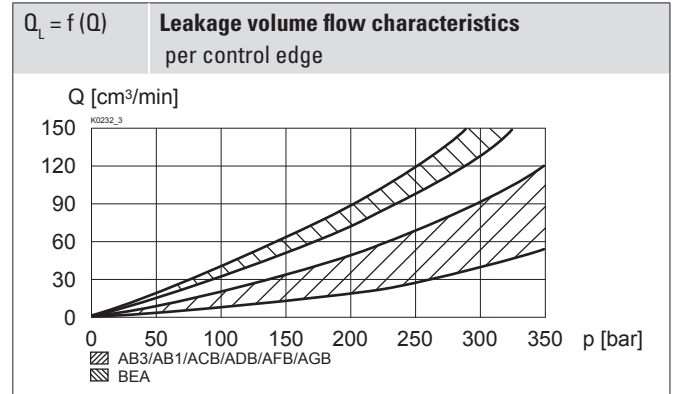
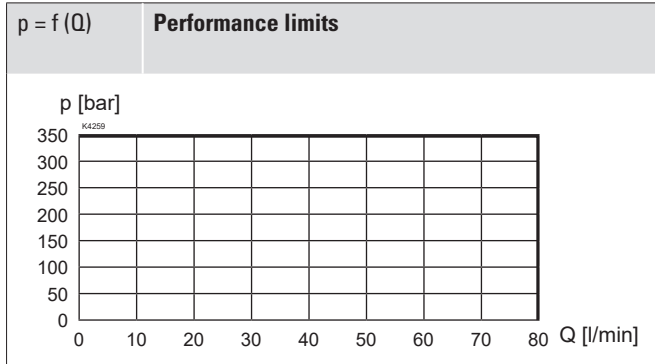
MANUAL OVERRIDE

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

PERFORMANCE SPECIFICATIONS

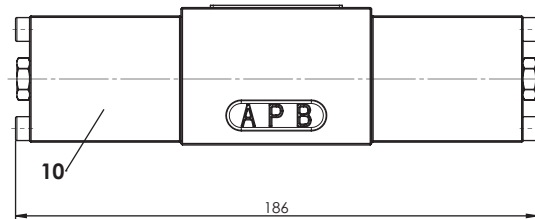
 Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$


Symbol	Volume flow direction				
	P - A	P - B	P - T	A - T	B - T
AB1 / AB2 / AB3	2	2	-	1	1
ACB / AC1 / CB2	2	2	-	1	1
ADB / AD1 / DB2	2	2	-	3	3
BEA / BE1 / EA2	2	2	5	2	2
AFB / AF1 / FB2	4	4	-	3	3
AGB / AG1 / GB2	4	4	-	1	1

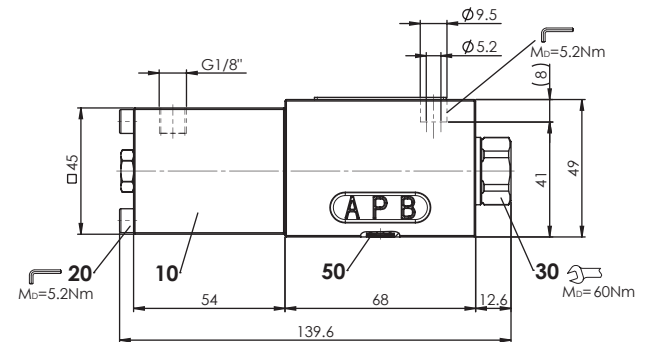
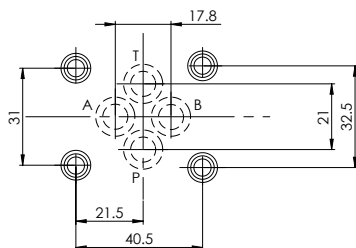
DIMENSIONS

4/3-way valve (spring centred)

4/2-way valve (impulse)



4/2-way valve (spring reset)


HYDRAULIC CONNECTION

PARTS LIST

Position	Article	Description
10	254.4059	Pneumatic actuation CKIIM
20	246.2160	Socket head screw M5 x 60 DIN 912
30	239.2210	Socket head screw M20 x 1
50	160.2093	O-ring ID 9,25 x 1,78 (NBR)
	160.6092	O-ring ID 9,25 x 1,78 (FKM)

STANDARDS

Mounting interface	ISO 4401-03
Contamination efficiency	ISO 4406

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

INSTALLATION NOTES

Mounting type	Flange mounting 4 fixing holes for socket head screws M5 x 50
Mounting position	Any, preferably horizontal
Tightening torque	Fixing screws $M_0 = 5,2 \text{ Nm}$ (screw quality 8.8, zinc coated)

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

