

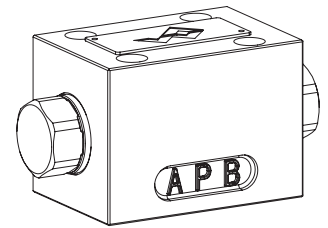
Spool valve

Flange construction

- ◆ hydraulically operated
- ◆ 4/2-way impulse execution detented
- ◆ 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 4401-03-03



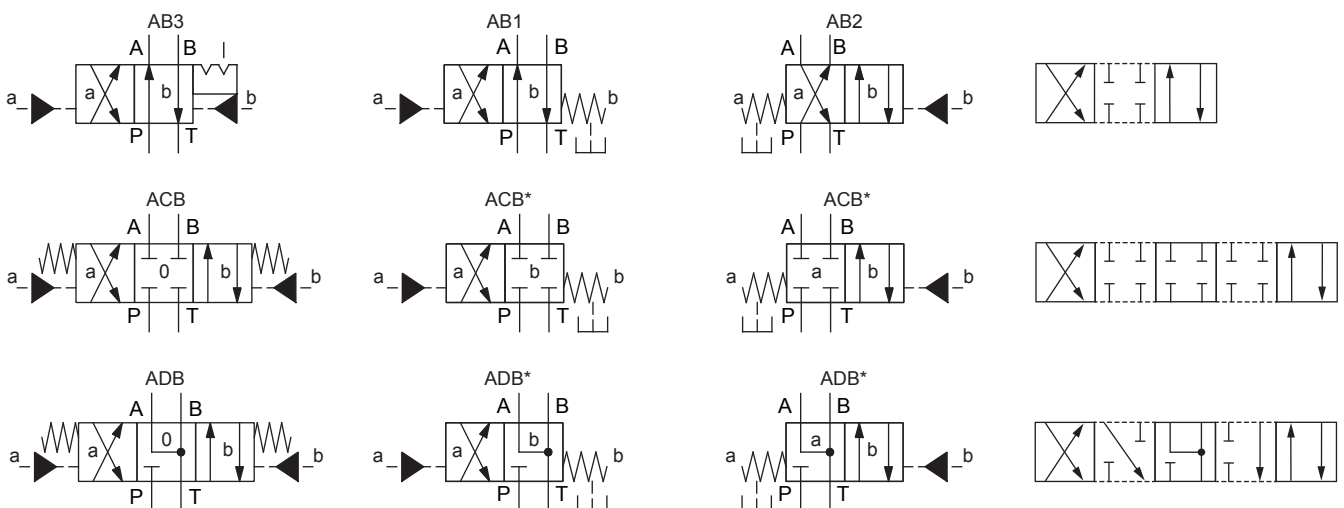
DESCRIPTION

Direct operated spool valve hydraulically operated via pilot port 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.

APPLICATION

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

SYMBOL



* These 4/2-way valves with spring reset are being delivered as 4/3-way valves.

Note!



When the pilot ports are not actuated (without pressure), or not needed, the leakage oil must be discharged.

GENERAL SPECIFICATIONS

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

ACTUATION

Actuation	Hydraulically operated
Pilot pressure	$p_{min} = 15 \text{ bar}$ $p_{max} = 280 \text{ bar}$
Control volume	$V = 0,34 \text{ cm}^3$

TYPE CODE

Spool valve, direct operated		WF	F	F	A06	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	#	<input type="text"/>
Hydraulically actuated															
Flange construction															
International standard interface ISO, NG6															
Designation of symbols acc. to table															
Pilot oil	sideways via mounting interface	<input type="text"/>	se	<input type="text"/>	ae										
Sealing material	NBR FKM (Viton) NBR 872	<input type="text"/>		D1											
Surface protection	Standard Zinc-nickel	<input type="text"/>			K8										
Design index (subject to change)		1.7-32													

HYDRAULIC SPECIFICATIONS

Working pressure	$p_{max} = 350$ bar
Tank pressure	$p_{Tmax} = 200$ bar Resp. 15 bar lower than the control pressure
Maximum volume flow	$Q_{max} = 80$ 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

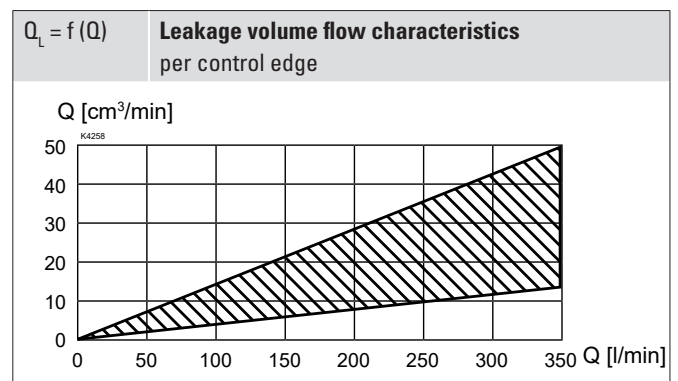
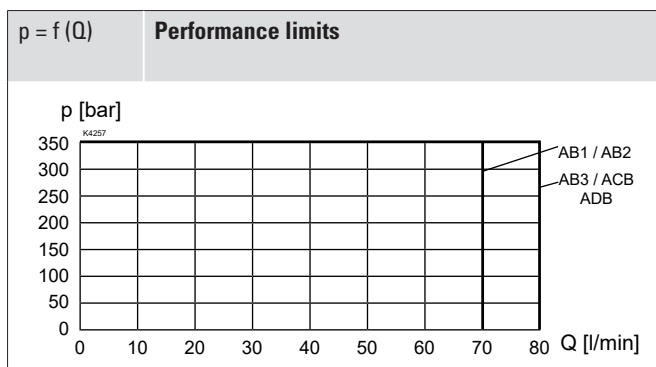
STANDARDS

Mounting interface	ISO 4401-03-03
Contamination efficiency	ISO 4406

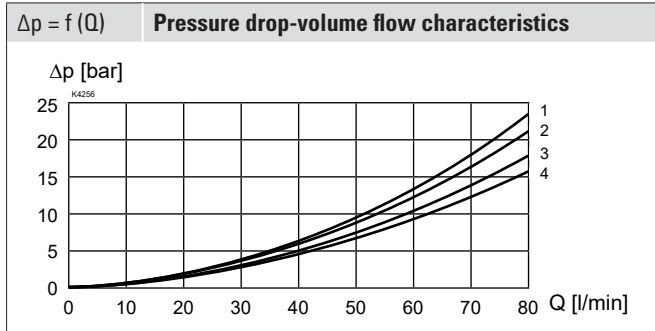
ACCESSORIES

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

PERFORMANCE SPECIFICATIONS

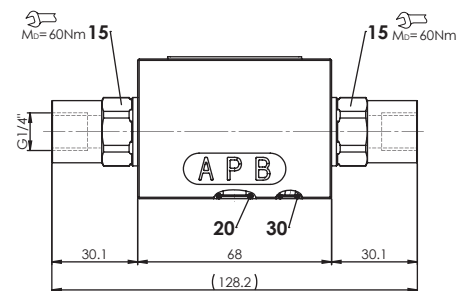
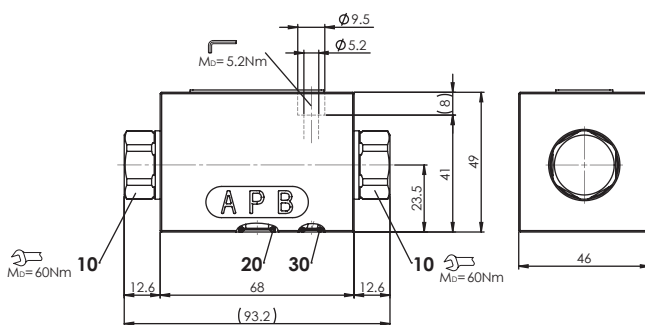
 Oil viscosity $\nu = 30$ mm²/s


PERFORMANCE SPECIFICATIONS

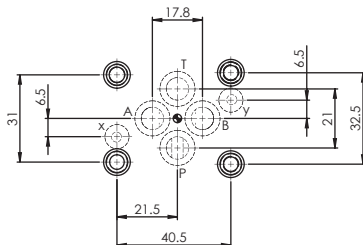
 Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$


Symbol	Volume flow direction				
	P - A	P - B	P - T	A - T	B - T
AB1 / AB2	2	2	-	3	3
AB3	1	1	-	2	2
ACB	2	2	-	3	3
ADB	2	2	-	4	4

DIMENSIONS



HYDRAULIC CONNECTION



PARTS LIST

Position	Article	Description
10	239.2210	Socket head screw M20 x 1
15	032.4818	Bush rd 24 / M3 x 38,5
20	160.2093	O-ring ID 9,25 x 1,78 (NBR)
	160.6092	O-ring ID 9,25 x 1,78 (FKM)
30	160.2052	O-ring ID 5,28 x 1,78 (NBR)
	160.6052	O-ring ID 5,28 x 1,78 (FKM)

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)



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

SURFACE TREATMENT

Standard:

- The valve body is painted with a two component paint
- The screw plug and the bush are zinc-nickel coated

Optionally (K8):

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

SEALING MATERIAL

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

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