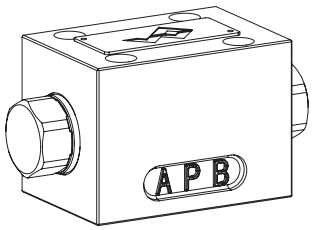
Spool valve

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 l/min
- p_{max} = 350 bar

NG6

ISO 4401-03-03



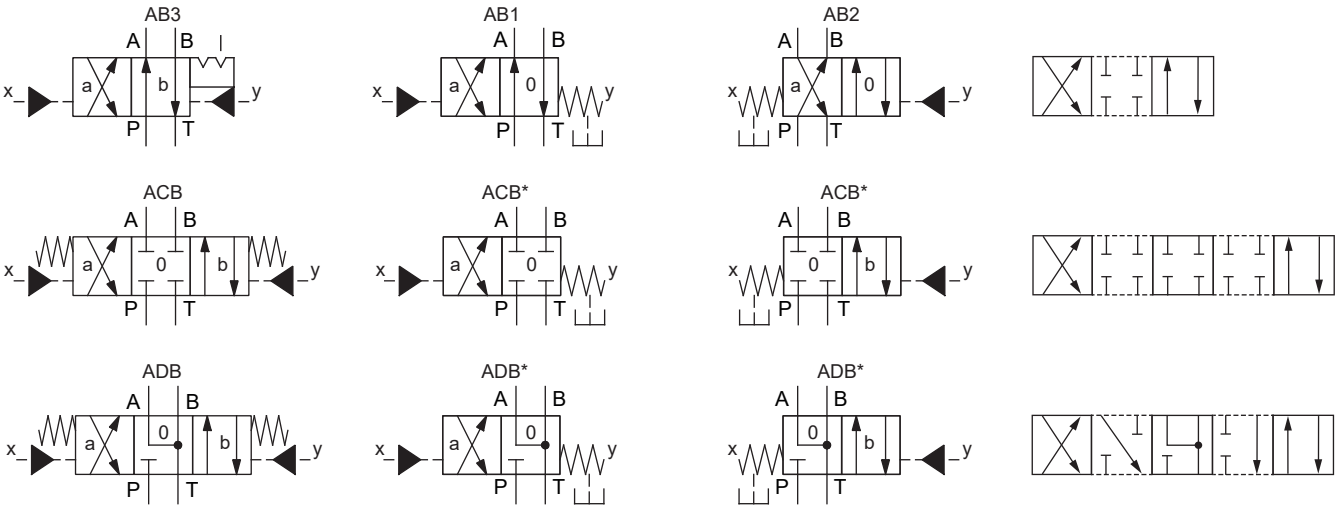
DESCRIPTION

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	1,2 kg
MTTFd	150 years

ACTUATION

Actuation	Hydraulically operated
Pilot pressure	p_{min} = 15 bar p_{max} = 210 bar
Control volume	V = 0,34 cm^3

TYPE CODE

WF F F A06 - [ ] - [ ] - [ ] K9 # [ ]

Spool valve, direct operated		
Hydraulically actuated		
Flange construction		
International standard interface ISO, NG6		
Designation of symbols acc. to table		
Pilot oil	sideways	se
	via mounting interface	ae
Sealing material	NBR	
	FKM (Viton)	D1
	NBR 872	y-Z604
Stainless		
Design index (subject to change)		

1.7-32S

HYDRAULIC SPECIFICATIONS

Working pressure	p_{max} = 350 bar
Tank pressure	$p_{T\,max}$ = 200 bar Resp. 15 bar lower than the control pressure
Maximum volume flow	Q_{max} = 50 l/min, see characteristics
Leakage oil	See characteristics
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

STANDARDS

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

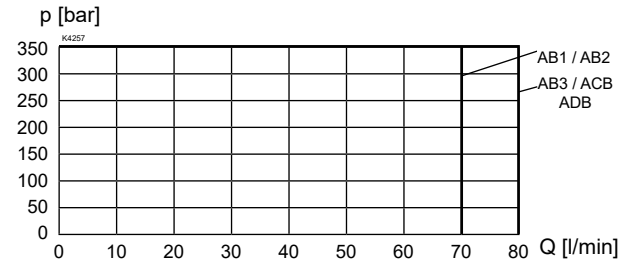
ACCESSORIES

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

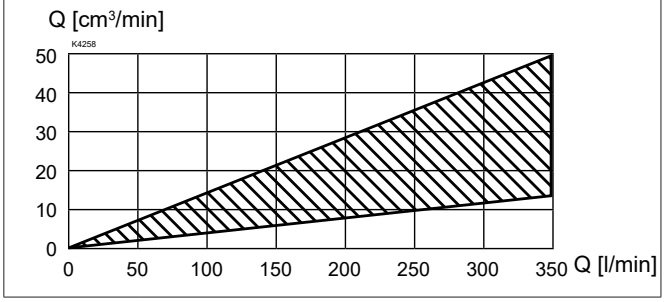
PERFORMANCE SPECIFICATIONS

Oil viscosity υ = 30 mm²/s

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



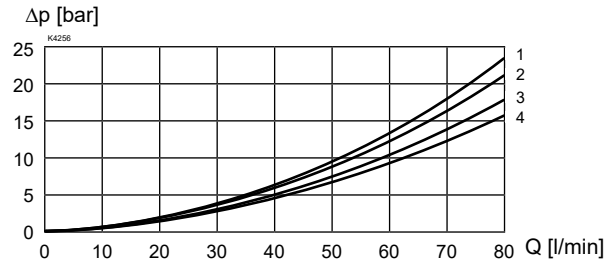
Q_L = f (Q) **Leakage volume flow characteristics** per control edge



PERFORMANCE SPECIFICATIONS

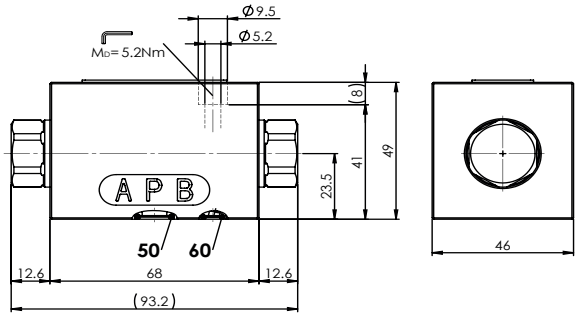
Oil viscosity υ = 30 mm²/s

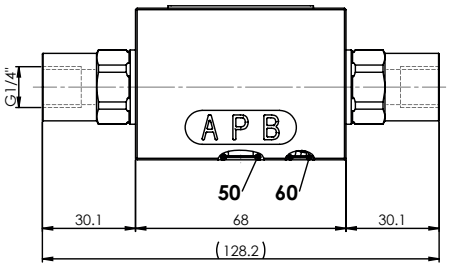
Δp = f (Q) **Pressure drop-volume flow characteristics**



	Volume flow direction				
Symbol	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

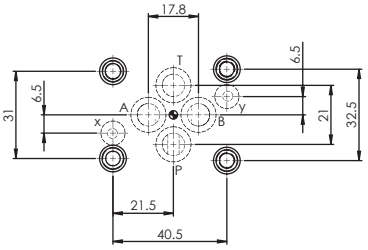
DIMENSIONS





HYDRAULIC CONNECTION

Mounting interface ISO 4401-03-03



PARTS LIST

Position	Article	Description
	251.2225	Seal kit
	105376	Seal kit WFFFA06-D1
	105377	Seal kit WFFFA06-Z604

Seal kit consisting of

50	O-Ring	ID 9,25 x 1,78
60	O-Ring	ID 5,28 x 1,78

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_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.

SURFACE TREATMENT

The valve body, the screw plug and the bush are zinc-nickel coated

ISO 9227 (800 h) salt spray test

SEALING MATERIAL

NBR, FKM (Viton) or NBR 872 as standard, choice in the type code

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