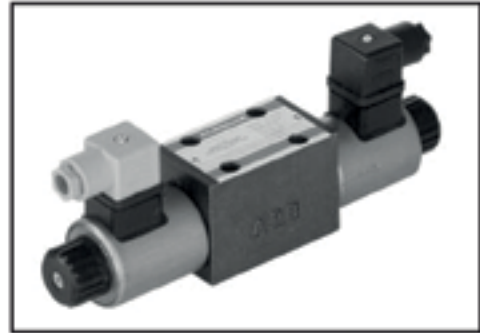


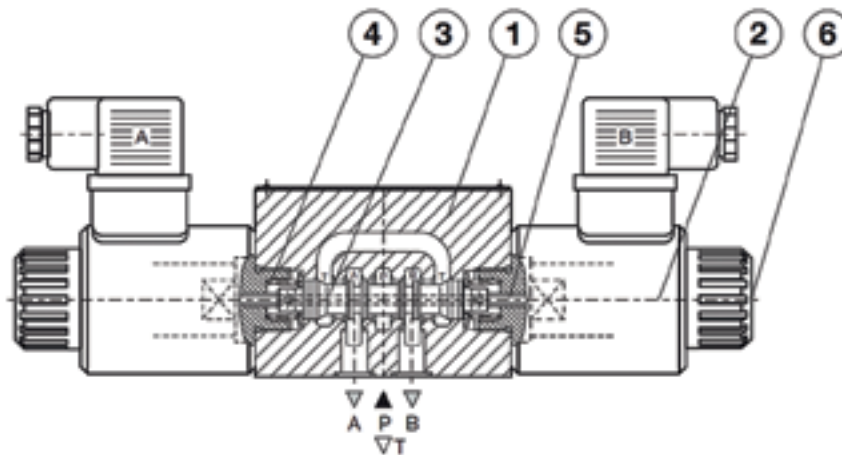
4/2 and 4/3 - WAY DIRECTIONAL VALVES type KV

- NS 6
- to 350 bar
- to 75 l/min
- Direct operation by solenoid
- Connection diagram and connecting dimensions to ISO 4401, DIN 24340
- Plug-in connector for solenoids to ISO 4400
- 5-chamber model with good spool guidance
- Optimized flow paths for low losses of pressure
- Adjustment of the switching time
- Wet pin solenoid with interchangeable coil
- Manual emergency control
- Protection of solenoid IP 65 to DIN EN 60529
- Fulfil EMC (89/336/EEC)



KV-4/3-5KO-6

Description of operation



Directional valves type KV with direct solenoid operation control the direction of the hydraulic medium flow.

These directional valves consist of a housing (1), a control spool (3), and one solenoid (2) with two return springs (4) in 4/2-way directional valves, and two solenoids (2) with two return springs (4) in 4/3-way directional valves. In 4/3-way directional valves the centre position of the control spool is the neutral position. The change-over to the operating position (a) and (b) is done by energising the solenoids (2) "a" and "b" respectively, whereby the solenoid plunger acts on the control spool (3) via the operating pin (5), thus clearing the corresponding flow ways and establishing relevant links between ports A, B, P, and T. For selection of spool types refer to page 3.6.2.

When the solenoid (2) is de-energised, the control spool (3) is returned to its neutral position by the return spring (4). The change-over can be done manually by pressing the emergency hand operator (6).

KV-4/2-5KO-6-81

Directional valve with two operating position, two solenoids without springs allows the control spool to be held in the operating position (detent). The control spool remains in the operation position also when the solenoids are de-energised.

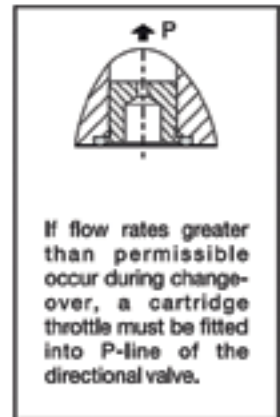
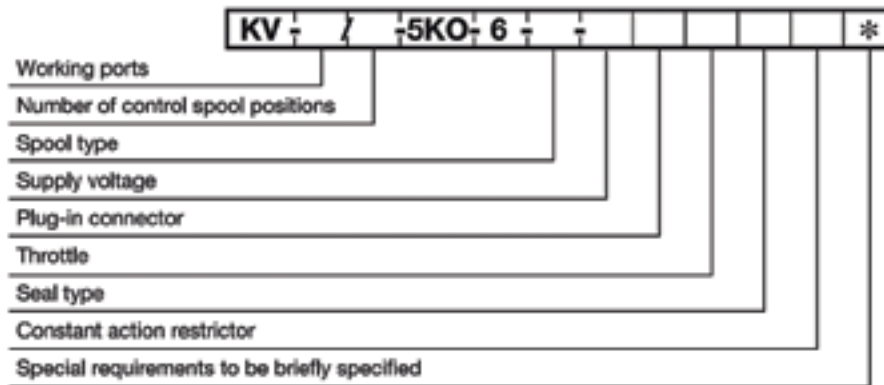
Technical data

		Hydraulic	
Size		6	
Flow rate		see p-Q curves, page 3.6.3	
Operating pressure ports P,A,B	bar	350	
Operating pressure port T	bar	210	
Oil temperature range	°C	-20 to +70	
Viscosity range	mm ² /s	15 to 380	
Mounting position		optional	
Mass	4/2	kg	1,9
	4/3	kg	2,7
Filtration		NAS 1638	8

Electrical

Supply voltage	direct or alternating	V	12, 24, 48 110, 230
Power		W	29*
Switch-on time**		ms	50 to 80
Switch-off time**		ms	30 to 55
Switching frequency		1/h	15 000
Ambient temperature		°C	to +50
Coil temperature		°C	to +180
Duty cycle			continuous
** -The switching-on and off times apply to 24 V DC solenoids			
* -12V supply voltage - 36 W			

Ordering code



<p>Working ports</p> <p>3 working ports = 3 4 working ports = 4</p>	<p>Plug-in connector</p> <p>without signal lamp = no design with signal lamp = L</p>												
<p>Number of control spool positions</p> <p>two positions = 2 three positions = 3</p>	<p>Throttle</p> <p>without throttle in "P" line = no design. throttle 0,8 mm dia = D08 throttle 1,0 mm dia = D10 throttle 1,2 mm dia = D12</p>												
<p>Supply voltage</p> <table border="0"> <tr> <td>direct voltage</td> <td>alternating voltage</td> </tr> <tr> <td>24 V = no design.</td> <td>12 V = 12 AC</td> </tr> <tr> <td>12 V = 12 DC</td> <td>24 V = 24 AC</td> </tr> <tr> <td>48 V = 48 DC</td> <td>48 V = 48 AC</td> </tr> <tr> <td>110 V = 110 DC</td> <td>110 V = 110 AC</td> </tr> <tr> <td>230 V = 230 DC</td> <td>230 V = 230 AC</td> </tr> </table> <p>- Alternating voltage solenoids are fitted with a bridge rectifier. - With solenoids of over 48 V an earthing clamp (⏚) to ISO 4400 must be connected. * To fulfil EMC (89/336/EEC) a capacitor must be built in (see 10.2.2)</p>	direct voltage	alternating voltage	24 V = no design.	12 V = 12 AC	12 V = 12 DC	24 V = 24 AC	48 V = 48 DC	48 V = 48 AC	110 V = 110 DC	110 V = 110 AC	230 V = 230 DC	230 V = 230 AC	<p>Seal type</p> <p>NBR seals for mineral oil HL, HLP, to DIN 51524 = no design. FPM seals for HETG, HEES, HEPG to VDMA 24568 = E and ISO 15380</p>
direct voltage	alternating voltage												
24 V = no design.	12 V = 12 AC												
12 V = 12 DC	24 V = 24 AC												
48 V = 48 DC	48 V = 48 AC												
110 V = 110 DC	110 V = 110 AC												
230 V = 230 DC	230 V = 230 AC												
	<p>Constant action restrictor</p> <p>Without restrictor = no design. Restrictor 0,3 dia. = UD</p>												

Spool types

- Port T in the valves with spool type 41A and 41B to be used as leakage line.

Important note:
Valves with adjustment of the switching time - a constant or short - time static oil pressure of at least ≥ 4 bar must prevail at connection T of the directional control valve to maintain the pressure in the spring chambers.

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