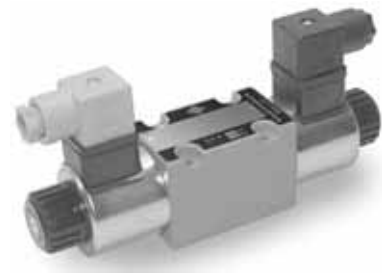




4/2, 4/3 WAY DIRECTIONAL VALVE KV-3KO

- NG 6
- Up to 250 bar [3 625 PSI]
- Up to 40 L/min [10,6 GPM]
- Connection diagram and connecting dimensions to ISO 4401.
- Different types of plug-in connectors.
- 3-chamber model.
- Optimized flow paths for low losses of pressure.
- Wet pin solenoid with interchangeable coil.
- Manual emergency control.
- Protection of solenoid IP 65 to EN 60529 / IEC 60529.
- Fulfil EMC (89/336/EEC).



KV-4/3-3KO-6

Operation

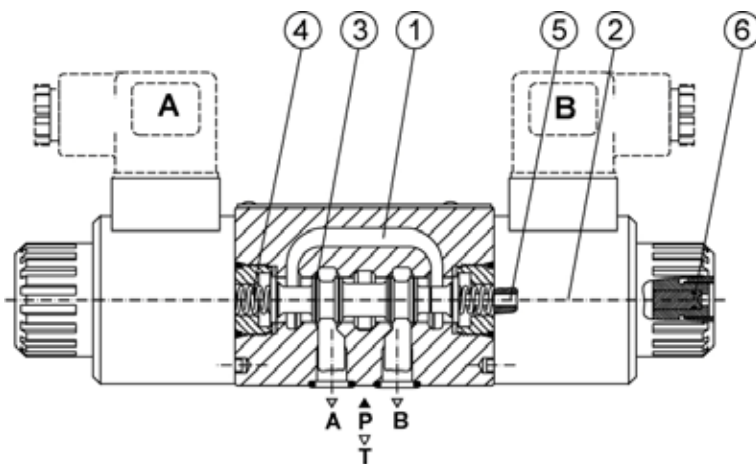
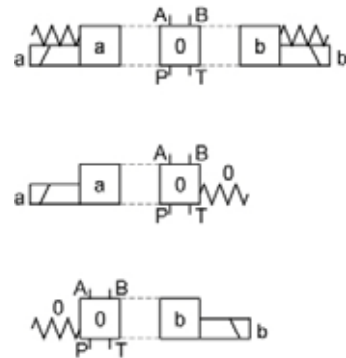
Directional valves type KV-3KO with direct solenoid operation control the direction of the hydraulic medium flow.

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 energizing 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.

When the solenoid (2) is de-energized, 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 manual override (6).

Hydraulic symbols

Spool types



Mechanically operated

Hydraulically operated

Electrically operated



Features

Hydraulic

Size	6		
Flow rate	L/min [GPM]		see ΔP-Q curves
Operating pressure	Ports A, B, P	bar [PSI]	250 [3 625]
	Port T	bar [PSI]	
Viscosity range	mm ² /s [SUS]		15 to 380 [69.5 to 1 760]
Oil temperature range	°C [°F]		-20 to +70[-4 to 158]
Filtration	NAS 1638		8
Mass	4/2	kg [lb]	1,3 [2.9]
	4/3		1,8 [3.9]
Mounting position	Optional		

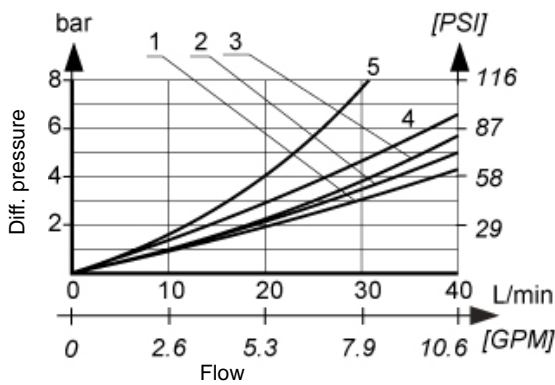
Electrical

Supply voltage	Direct	V	12, 24, 48
	Alternating		110, 230
Power	W		26
Switch-on time*	ms		50 to 80
Switch-off time*	ms		30 to 55
Switching frequency	1/h		15 000
Ambient temperature	°C [°F]		to 50 [122]
Coil temperature	°C [°F]		to 180 [356]
Duty cycle	Continuous		

* The switching-on and off times apply to 24 V DC solenoids.

ΔP-Q Performance curves

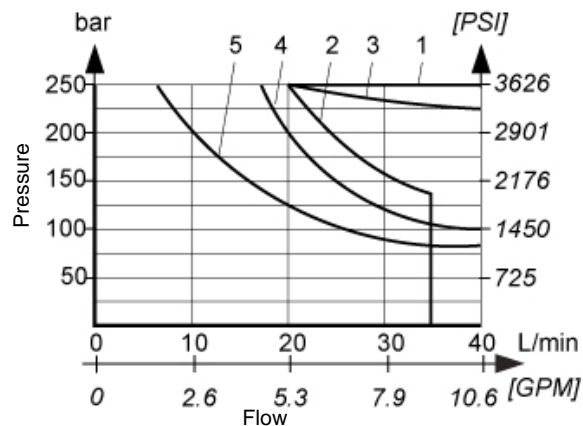
Measured at 50°C [122°F] and viscosity of 32 mm²/s [148 SUS].



Spool	Flow path				
	P-A	P-B	A-T	B-T	P-T
1	1	1	2	2	-
2	3	3	3	3	5
3	1	1	4	4	-
6	1	1	1	1	-
51A, 51B	1	1	3	3	-
41A, 41B	3	3	-	-	-

ΔP-Q Operating limits

Measured at 50°C [122°F] and viscosity of 32 mm²/s [148 SUS].

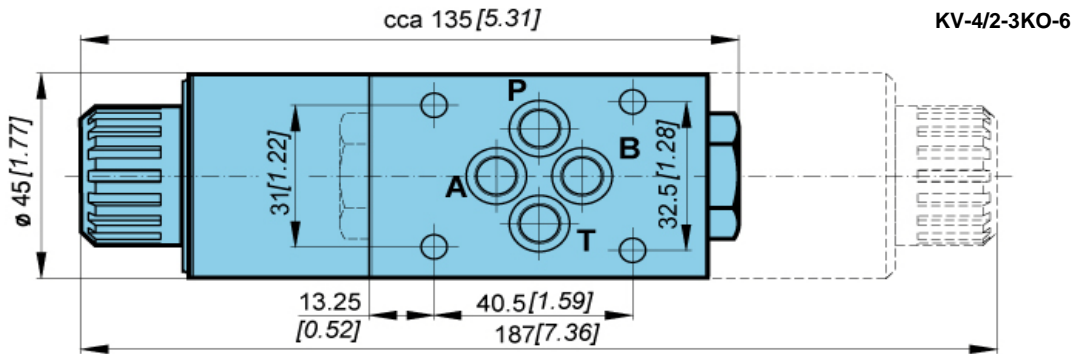


Spool	curve
1	1
2	2
3	3
6	4
51A, 51B	1
41A, 41B	5



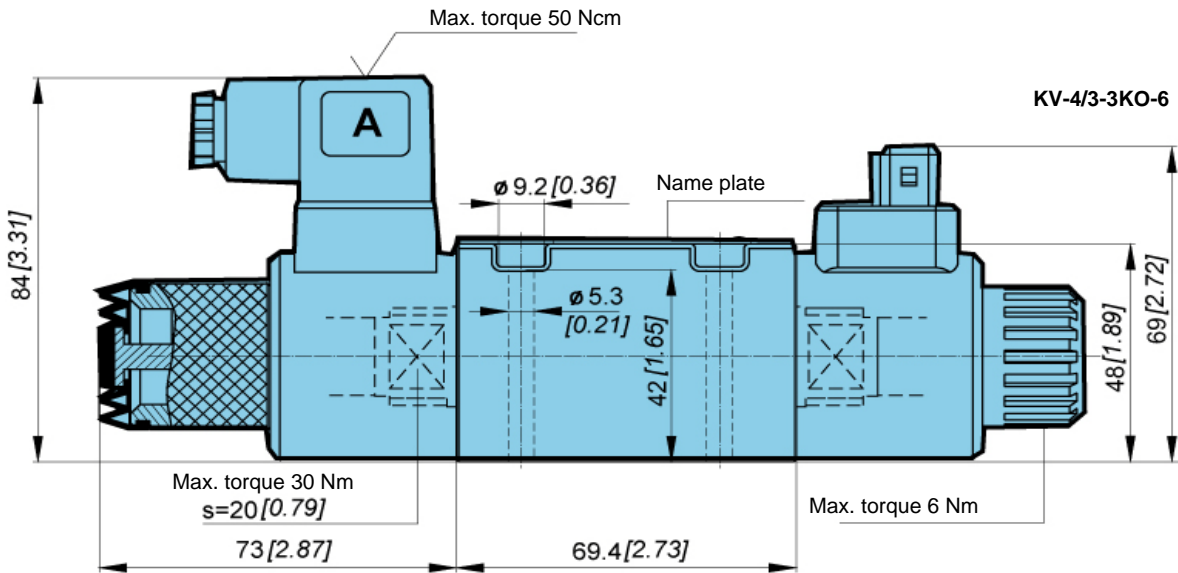
Dimensions

Connection diagram and connecting dimensions to ISO 4401.



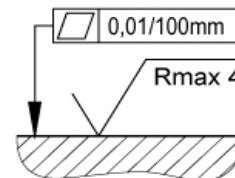
Option: Plug-in connector to ISO 4400

Option: AMP JUNIOR connector



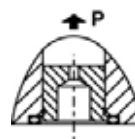
4 x Fixing screws M5x50 to ISO 4762- 10.9 must be ordered separately.
Required tightening torque Md= 7Nm.

Required quality of the mating surface.



Cartridge throttle

If flow rates greater than permissible occur during change-over, a cartridge throttle must be fitted into P-line of the directional valve.



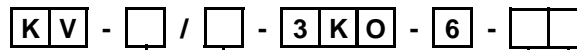
Mechanically operated

Hydraulically operated

Electrically operated



Model code



Working ports

Three working ports	3
Four working ports	4

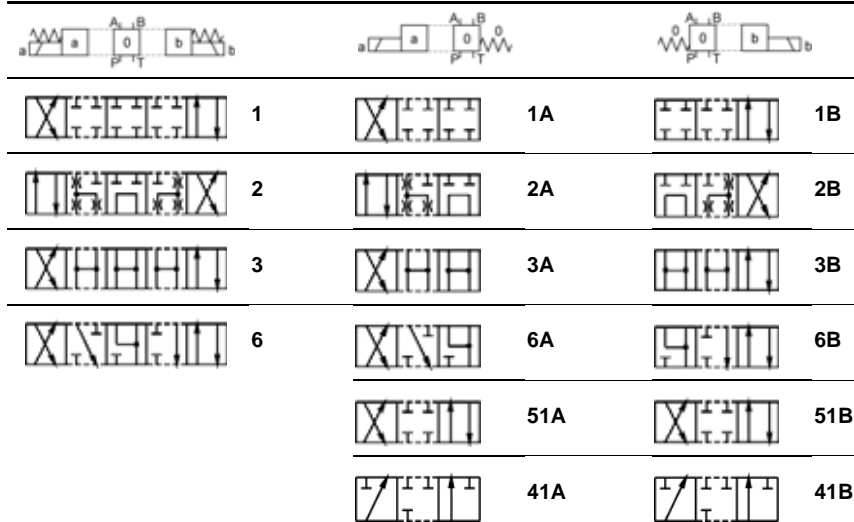
Number of control spool positions

Two positions	2
Three positions	3

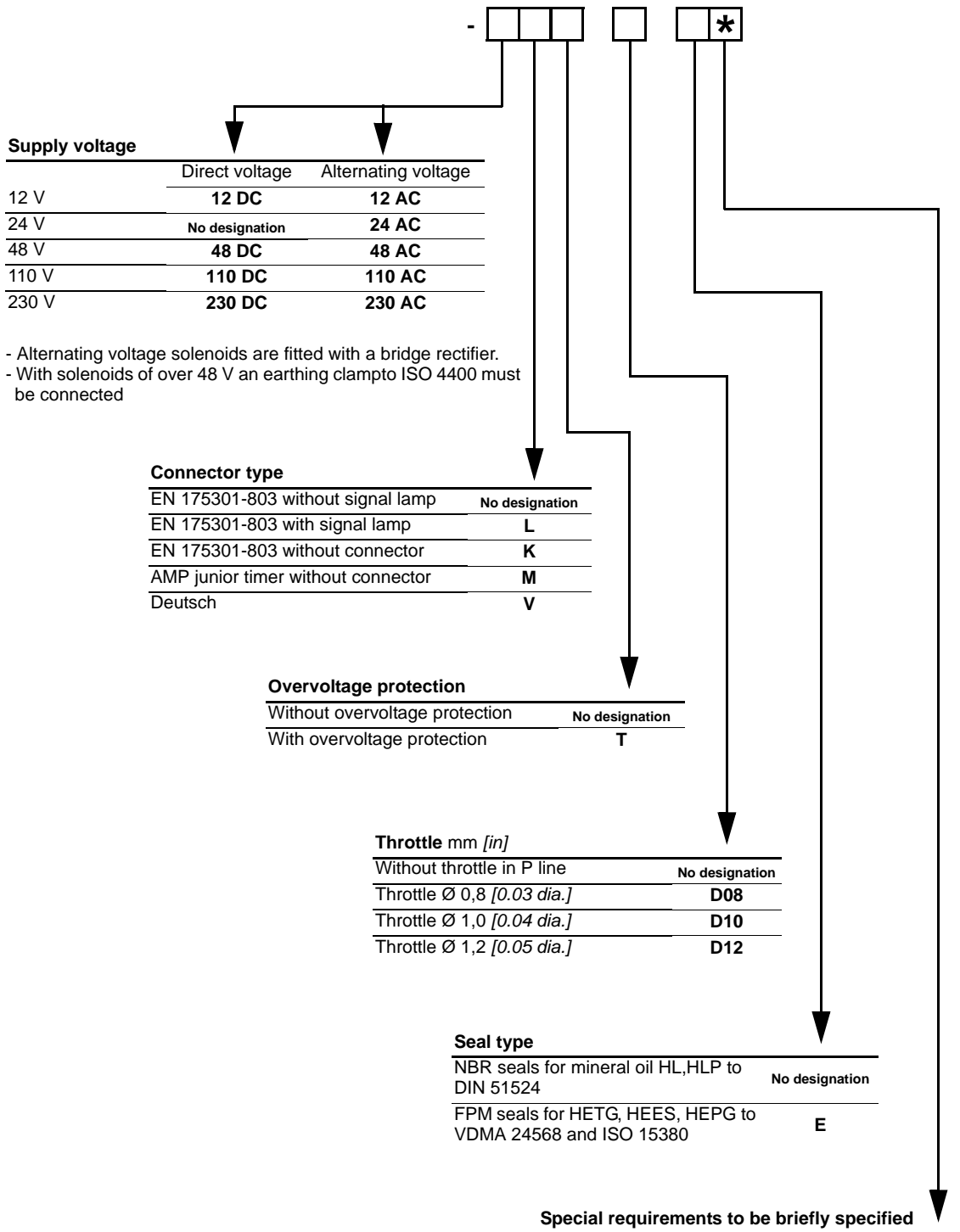
Manual override option

Emergency manual override	No designation
Manual override with rubber cover	G
Lockable manual override	C

Spool types



Port T in the valves with spool type 41A and 41B to be used as leakage line when working pressure is higher than 210 bar [3 045 PSI].



Mechanically operated

Hydraulically operated

Electrically operated