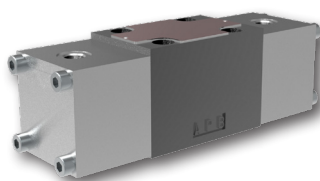


4/2 and 4/3 Directional Control Valve, Hydraulically Operated

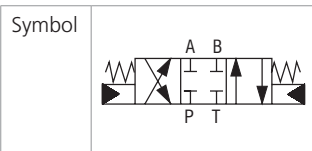
RPH2-06

Size 06 (D03) • Q_{max} 80 l/min (21 GPM) • p_{max} 350 bar (5100 PSI)



Technical Features

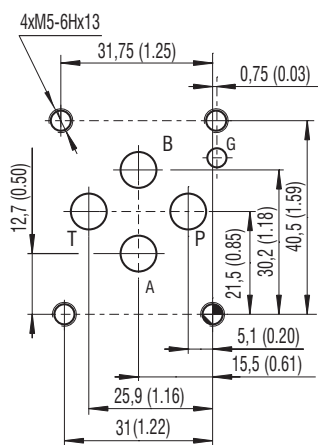
- › Direct acting directional control valve, hydraulically operated with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03)
- › High transmitted hydraulic power up to 350 bar with optimized design to minimize pressure drop
- › Five chamber housing design with reduced hydraulic power dependence on fluid viscosity
- › Actuating section can be rotated in 90° increments for flexible installation
- › Wide range of interchangeable spools available
- › Connection for hydraulic operation M10 x 1, G1/8 and 7/16-20 UNF-2B (SAE-4)
- › In the standard version, the valve housing is phosphated and steel parts zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available (ISO 9227, 520 h salt spray)



Functional Description

These hydraulically operated directional control valves are used mainly to control start, stop and direction of fluid. The valves consist of a housing, a control spool with two centering springs, and the actuating section. The actuating section consists of the hydraulic actuation cylinder. The directional control valves are manufactured as two or three position valves (see table with functional symbols).

ISO 4401-03-02-0-05



Ports P, A, B, T max \varnothing 7.5 mm (0.29 in)

Technical Data

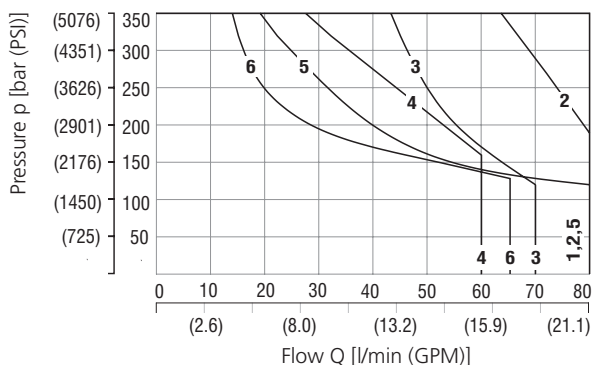
Valve size		06 (D03)
Max. flow	l/min (GPM)	80 (21.1)
Max. operating pressure P, A, B	bar (PSI)	350 (5080)
Max. operating pressure at port T	bar (PSI)	130 (1890)
Min. pilot pressure at max. power of the valve	bar (PSI)	30 (440) + p(T)*
Max. pilot pressure	bar (PSI)	160 (2320)
Pilot volume	cm ³ (cu.in)	0.5 (0.03)
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 ... +120 (-4 ... +248)
Mass	valve with 1 actuator	1.6 (3.53)
	valve with 2 actuators	2.7 (5.70)
General information		Datasheet Type
Mounting interface		GI_0060 Products and operating conditions
Spare parts		SMT_0019 Size 06
Spare parts		SP_8010

*The operating pressure, needed for spool moving depends on the hydraulic power of the valve (on the flow and the system pressure), spool type and the pressure in the T-channel. The operating pressure can take value from a minimum value of several bar up to permitted maximum value of 160 bar. Increasing pressure in the T-channel increases the needed oper. pressure in ratio 1:1. To reach surely the basic position of the spool, the actuating section should be relieved without pressure.

Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

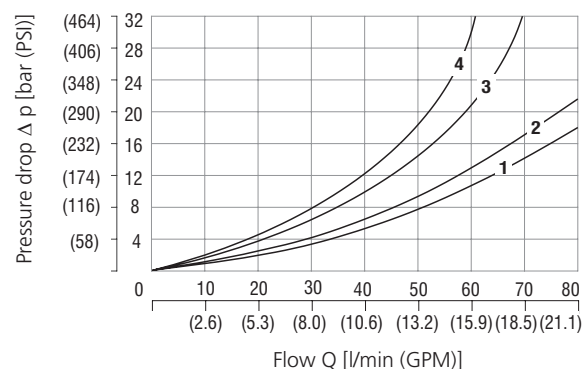
Operating limits

Operating limits for max. hydraulic power with min. piloting pressure



H11	1	J15	3	C51	1	A51	5
H51	1	R11	4	Z11	2	Y11	6
C11	1	X11	4	Z51	2	Y51	6

Pressure drop related to flow rate

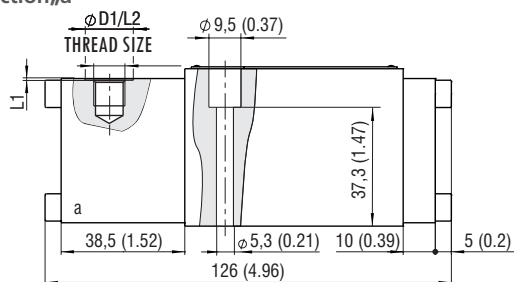


	P-A	P-B	A-T	B-T	P-T		P-A	P-B	A-T	B-T	P-T
Z11, R11, X11, J15	1	1	2	2		C51	3			4	2
C11	3	3	3	4	2	Z51		1	2		
H11, H51	1	1	1	1	2	A51	1	1			
Y11	1	1	1	1		Y51	1	1			

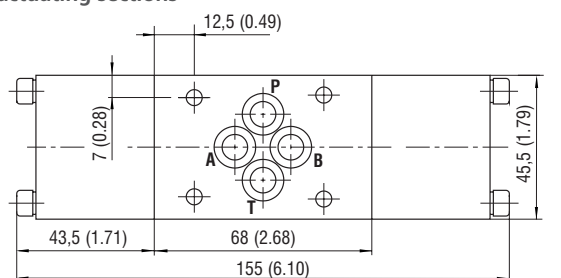
For operating limits under conditions and flow directions other than shown contact our technical support. Admissible operating limits may be considerably lower with only one direction of flow (A or B plugged, or without flow.)

Dimension in millimeters (inches)

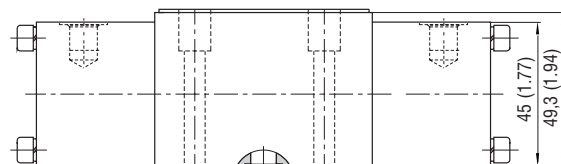
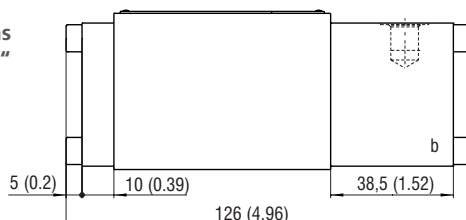
Valve with two positions one actuating section „a“



Valve with three positions two actuating sections



Valve with two positions one actuating section „b“

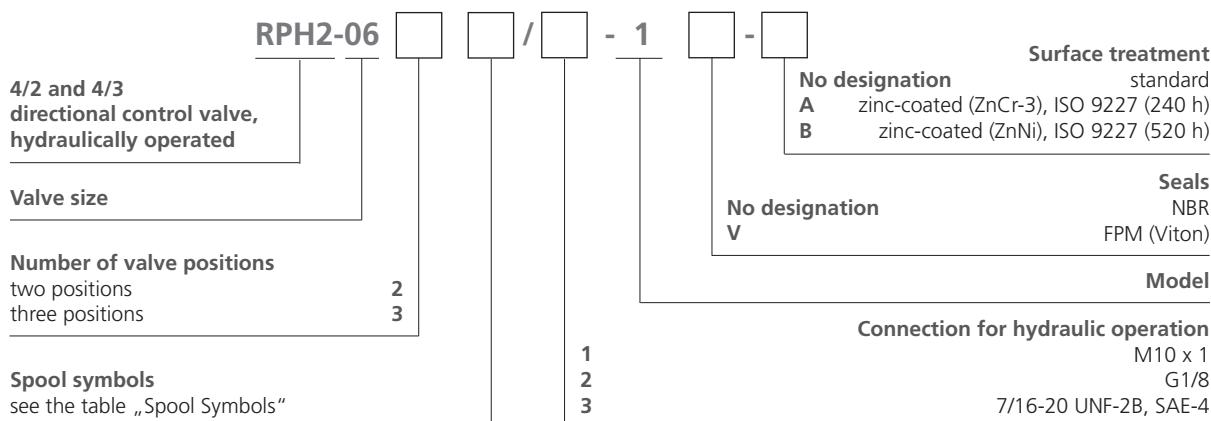


Thread size	∅ D1	L1	L2
M10 x 1, G1/8	15.5 (0.61)	1 (0.04)	8 (0.32)
7/16-20 UNF-2B, SAE-4	21 (0.83)	0.8 (0.03)	14 (0.55)

Spool Symbols

Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			C51		
C11			H51		
H11			Y51		
Y11			Y11		
L21			H11		
R11			X11		
A51			Z11		
Z51			J15		

Ordering Code

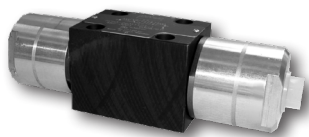


Mounting bolts M5 x 45 DIN 912-10.9 or studs must be orderer separately see Spare Parts data sheet HA 8010. Tightening torque is 8.9 Nm (6.56 lbf.ft). Besides the commonly used valve versions shown other special models are available. Contact our technical support for their identification, feasibility and operating limits.

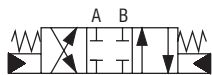
4/2 and 4/3 Directional Control Valve, Hydraulically or Pneumatically Operated

RPH3-06

Size 06 (D03) • Q_{max} 80 l/min (21 GPM) • p_{max} 350 bar (5100 PSI)



Symbol



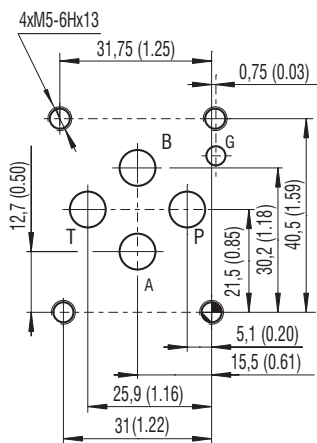
Technical Features

- › Direct acting directional control valve, hydraulically or pneumatically operated with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03)
- › High transmitted hydraulic power up to 350 bar with optimized design to minimize pressure drop
- › Five chamber housing design with reduced hydraulic power dependence on fluid viscosity
- › Minimum pilot pressure 2 bar (29 PSI) for maximum hydraulic power
- › Wide range of interchangeable spools available
- › Connection for hydraulic operation M10 x 1, G1/8, G1/4
- › In the standard version, the valve housing is phosphated and steel parts zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available (ISO 9227, 520 h salt spray)

Functional Description

These hydraulically or pneumatically operated directional control valves are used mainly to control start, stop and direction of fluid. The valves consist of a housing, a control spool with two centering springs, and the actuating section. The actuating section consists of the hydraulic or pneumatic actuation cylinder. The directional control valves are manufactured as two or three position valves (see table with functional symbols).

ISO 4401-03-02-0-05



Ports P, A, B, T max \varnothing 7.5 mm (0.29 in)

Technical Data

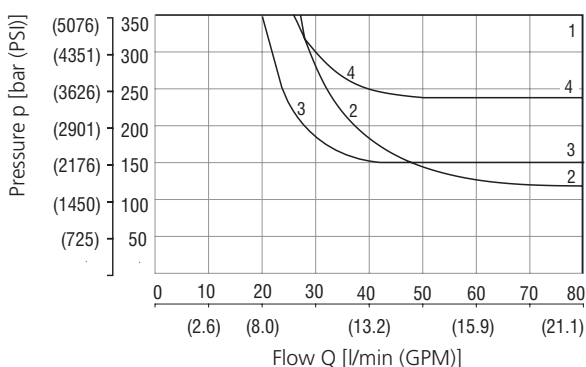
Valve size		06 (D03)
Max. flow	l/min (GPM)	80 (21.1)
Max. operating pressure P, A, B	bar (PSI)	350 (5080)
Max. operating pressure at port T	bar (PSI)	160 (2320)
Min. pilot pressure	bar (PSI)	2 (30)
Max. pilot pressure	bar (PSI)	25 (360)
Pilot volume	cm ³ (cu.in)	6,2 (0.38)
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... +212)
Weight	valve with 1 actuator	1.8 (3.96)
	valve with 2 actuators	2.5 (5.50)

	Datasheet	Type
General information	GI_0060	Products and operating conditions
Mounting interface	SMT_0019	Size 06
Spare parts	SP_8010	

Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

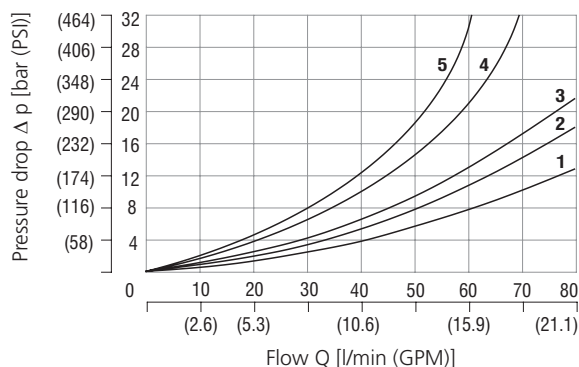
Operating limits

Operating limits for maximum hydraulic power with min. piloting pressure



Z11, P11, Y11, B11, R11, A51, P51, X11, J15, J75	1
C11, Y51	2
H11	3
L21	4

Pressure drop related to flow rate



	P-A	P-B	A-T	B-T	P-T		P-A	P-B	A-T	B-T	P-T
Z11, L21, B11, R11, X11, J15	2	2	3	3		Y11	2	2	2	2	
C11	4	4	4	5	3	A51, J75	2	2			
H11	2	2	2	2	3	P51		1	3		
P11	1	1	3	3		Y51		2	2		

For operating limits under conditions and flow directions other than shown contact our technical support. Admissible operating limits may be considerably lower with only one direction of flow (A or B plugged, or without flow.)

