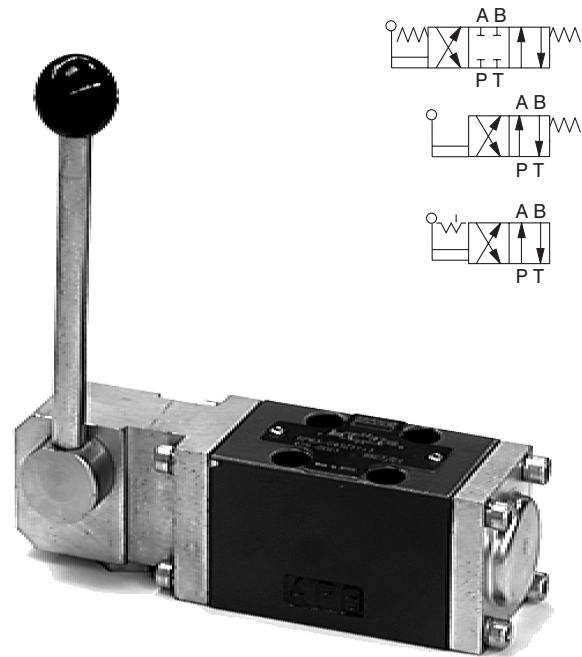


- 4/3 and 4/2- way spool type directional control valves
- Hand-lever operated
- Actuating section can be rotated in four positions 90° apart
- Installation dimensions according to DIN 24 340 / ISO 4401 / CETOP RP121-H

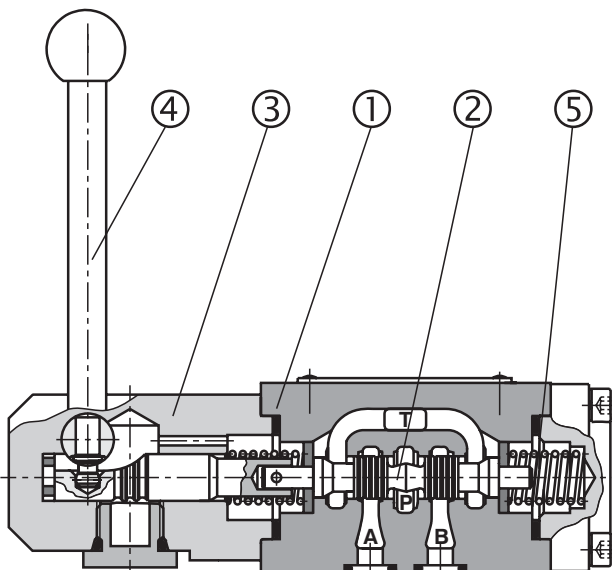


Functional Description

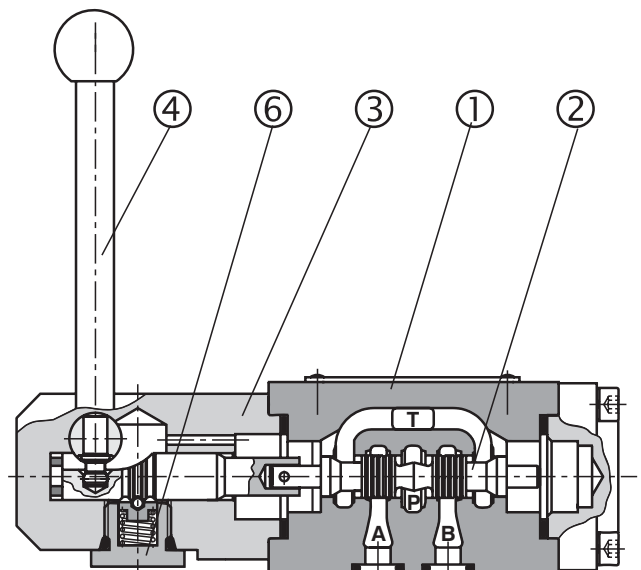
The hand operated directional control valves are used mainly to control start, stop and direction of fluid. The valves consist of housing (1) with control spool (2) and the actuating section (3). The actuating section consists either of the hand lever (4) and of one or two return springs (5), or of the hand lever (4) and the detent assembly (6). The detent assembly holds the spool in its last shifted position.

The directional control valves are being manufactured as two-position and three-position valves (see table with functional symbols).

The valve housing (1) is phosphate coated, the components of the actuating section (3) are zinc coated.



Type with return springs



Type with detent assembly

Order Code

RPR3-04 -

Directional control valves manually operated

no designation
V

Seals
NBR
FPM (Viton)

Valve size **D 02 (04)**

Number of operating positions

two positions **2**
three positions **3**

Spool symbols
see table spool symbols

Technical Data

Valve size	US (mm)	D 02 (04)
Maximum flow	GPM (L/min)	8.0 (30)
Maximum operating pressure at ports P, A, B	PSI (bar)	4600 (320)
Maximum operating pressure at port T	PSI (bar)	1450 (100)
Pressure losses	PSI (bar)	see p-Q characteristics
Hydraulic fluid		Petroleum oils (HM,HL,HLP) Phosphate ester fluids (HFD-R)
Fluid temperature range for standard seal (NBR)	°F (°C)	-22 ... +212 (-30 ... +100)
Fluid temperature range for Viton sealing (FPM)	°F (°C)	-4 ... +248 (-20 ... +120)
Viscosity range	SUS (mm ² /s)	98 ... 1840 (20 ... 400)
Maximum degree of fluid contamination		Class 21/18/15 to ISO 4406 (1999)
Operating force on lever	lbs (N)	< 8.99 (< 40)
Service life	cycles	10 ⁶
Weight	lbs (kg)	2.21 (1.0)
Mounting position		any

Spool Symbols

Type	Symbol	Crossover	Type	Symbol	Crossover
Z11			Z15		
C11			C15		
H11			H15		
P11			P15		
Y11			Y15		
B11			B15		
L11			L15		
L21			L25		

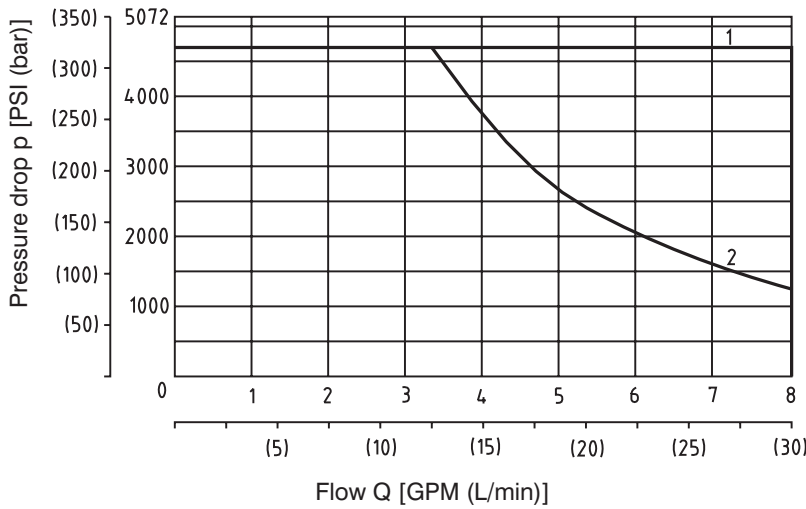
Spool Symbols

Type	Symbol	Crossover	Type	Symbol	Crossover
Y31			Y35		
Y71			Y75		
R11			J15		
A51			J75		
R21			R25		

p-Q Characteristic

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

Operating limits for maximum hydraulic power transferred by the directional valve.

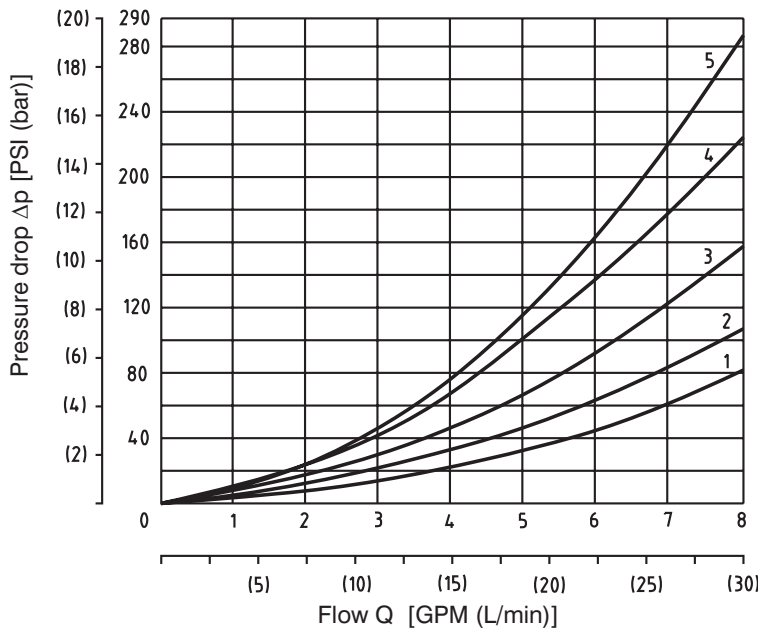


Z11	1	Z15	1
C11	1	C15	1
H11	1	H15	1
P11	1	P15	1
Y11	1	Y15	1
B11	1	B15	1
L11	2	L15	1
L21	2	L25	1
Y31	1	Y35	1
Y71	1	Y75	1
R11	1	J15	1
A51	1	J75	1
R21	1	R25	1

Δp -Q Characteristic

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

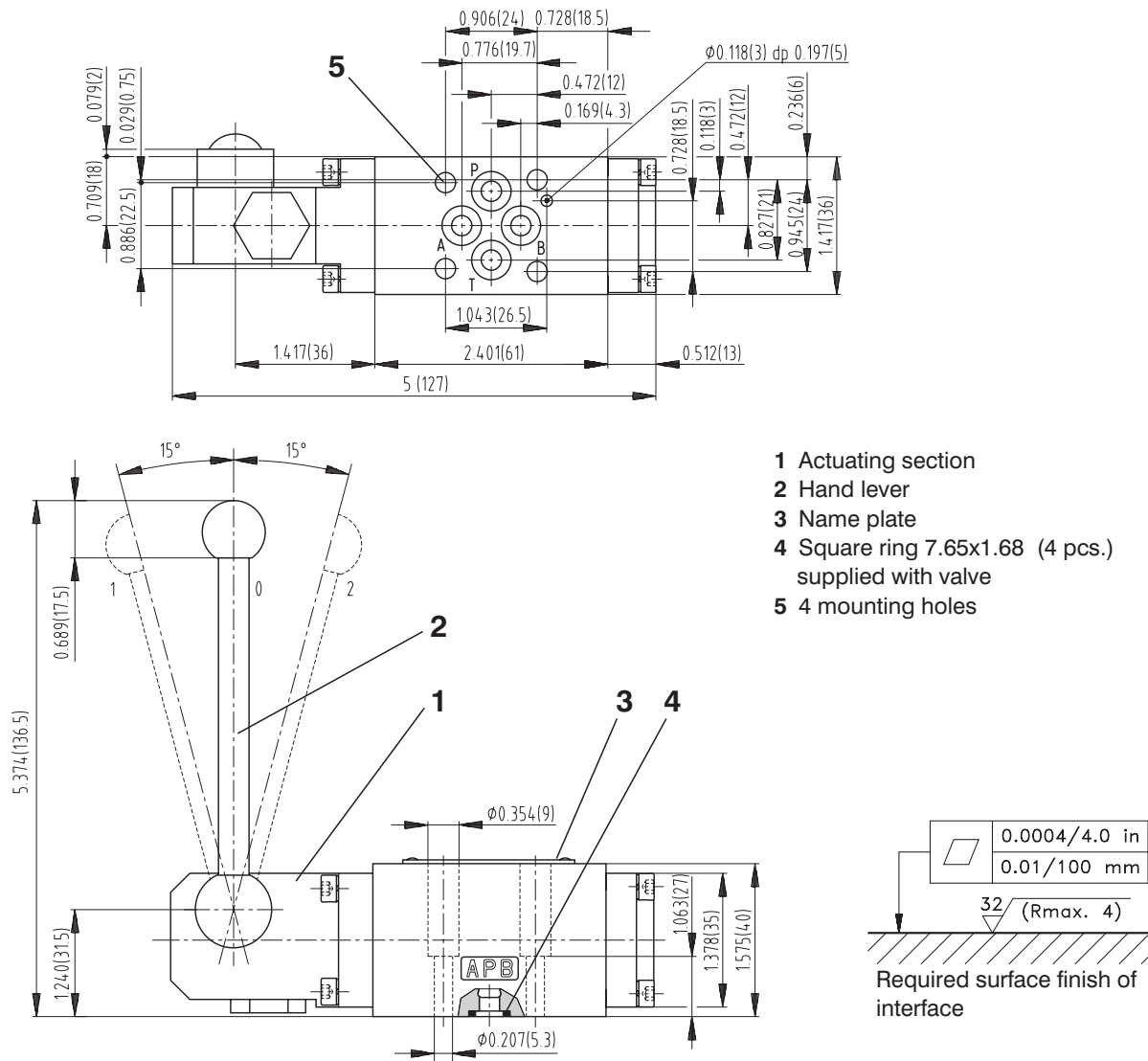
Pressure drop Δp related to flow rate.



	P-A	P-B	A-T	B-T	P-T
Z11, Z15	3	2	2	2	
C11, C15	5	5	4	4	3
H11, H15	3	3	2	2	3
P11, P15	1	1	1	3	
Y11, Y15	3	3	1	1	
B11, B15	3	3	2	1	
L11, L15	3	2	1	2	4
L21, L25	2	2	3	3	4
Y31, Y35	3	3	2	2	
Y71, Y75	3	1			
R11, J15	3	3	2	2	
A51, J75	2	2			
R21, R25	3	3	2	2	

Valve Dimensions

Dimensions in inches and millimeters (in brackets)



Spare Parts

Dimensions in millimeters

Seal kit

Type	Dimensions, quantity				Order number
	O-ring	Square ring	O-ring	O-ring	
Standard NBR70	22 x 2 (2 pcs.)	7.65 x 1.68 (4 pcs.)	11 x 1.5 (2 pcs.)	11.3 x 2.4 (1 pc.)	475-9000
Viton	22 x 2 (2 pcs.)	7.65 x 1.68 (4 pcs.)	11 x 1.5 (2 pcs.)	11.3 x 2.4 (1 pc.)	475-9001

Bolt kit (for studs see HU 0020)

Dimensions, quantity	Bolt torque	Order number
M5x35 DIN 912-10.9 (4 pcs.)	3.7 ft-lbs (5 Nm)	486-9011
10-24 UNCx1.375 (4 pcs.)		2 000 106

Caution!

- Directional valves with other functional symbols as those shown in the table above can be delivered on request.
- The plastic packaging is recyclable.
- Mounting bolts or studs must be ordered separately.
- Certified documentation is available per request.

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