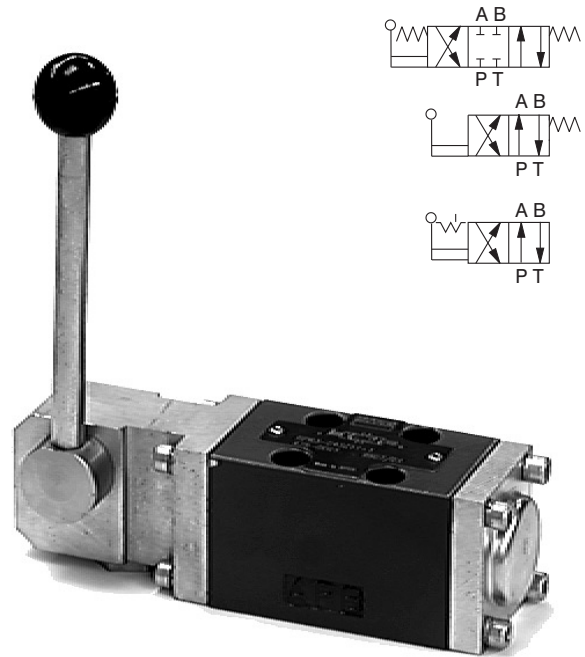


- 4/3 and 4/2- way spool type directional control valves
- Hand-lever operated
- Actuating section can be rotated in four positions 90° apart
- Installation dimensions according to DIN 24 340 / ISO 4401 / CETOP RP121-H

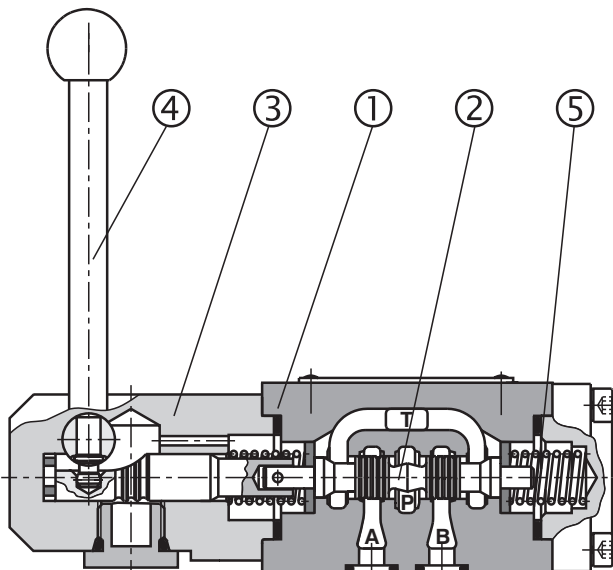


## Functional Description

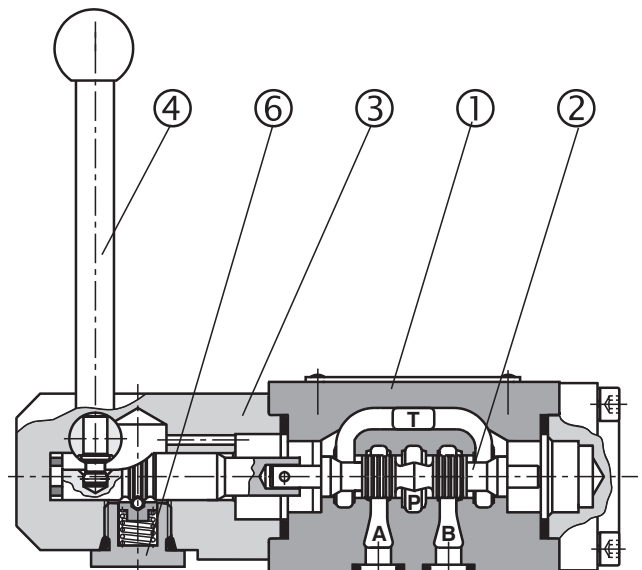
The hand operated directional control valves are used mainly to control start, stop and direction of fluid. The valves consist of housing (1) with control spool (2) and the actuating section (3). The actuating section consists either of the hand lever (4) and of one or two return springs (5), or of the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

# Ordering Code

**RPR3-04**   -

Directional control valves manually operated

Valve size **04 (D 02)**

Number of operating positions

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

no designation  
V

Seals  
NBR  
FPM (Viton)

Spool symbols  
see table spool symbols

## Technical Data

Valve size	mm (US)	04 (D 02)
Maximum flow	L/min (GPM)	30 (8.0)
Maximum operating pressure at ports P, A, B	bar (PSI)	320 (4600)
Maximum operating pressure at port T	bar (PSI)	100 (1450)
Pressure losses	bar (PSI)	see p-Q characteristics
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51524
Fluid temperature range for standard seal (NBR)	°C (°F)	-30 ... +100 (-22 ... +212)
Fluid temperature range for Viton sealing (FPM)	°C (°F)	-20 ... +120 (-4 ... +248)
Viscosity range	mm <sup>2</sup> /s (SUS)	20 ... 400 (98 ... 1840)
Maximum degree of fluid contamination		Class 21/18/15 to ISO 4406
Operating force on lever	N (lbf)	< 40 (<8.99)
Service life	cycles	10 <sup>6</sup>
Weight	kg (lbs)	1.0 (2.21)
Mounting position		unrestricted

## Spool Symbols

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

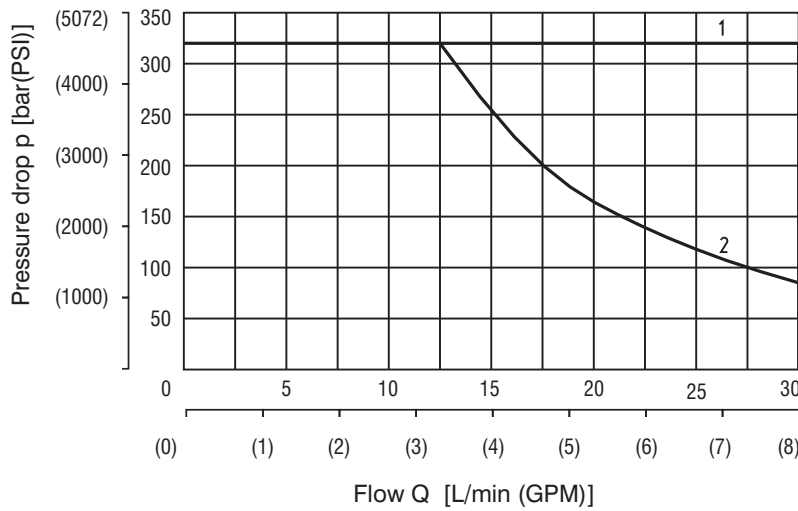
# Spool Symbols

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

## p-Q Characteristic

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

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

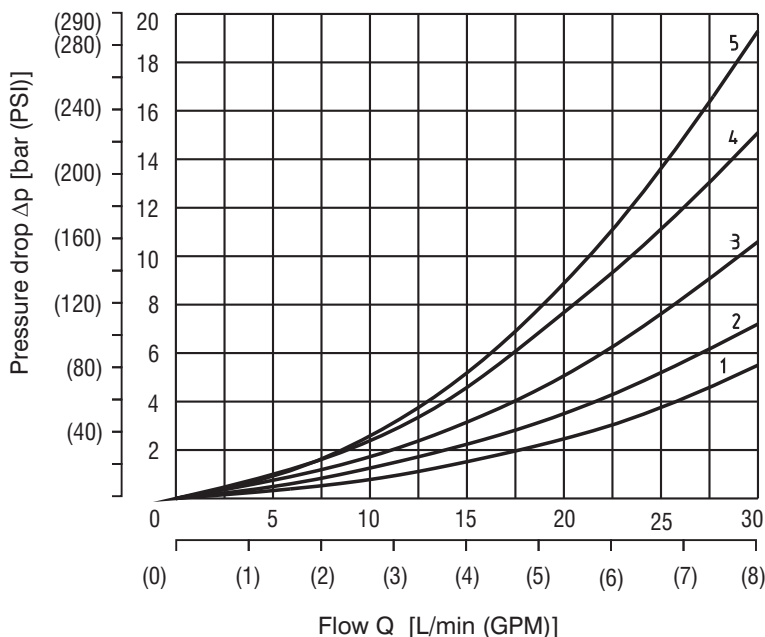


Z11	1	Z15	1
C11	1	C15	1
H11	1	H15	1
P11	1	P15	1
Y11	1	Y15	1
B11	1	B15	1
L11	2	L15	1
L21	2	L25	1
Y31	1	Y35	1
Y71	1	Y75	1
R11	1	J15	1
A51	1	J75	1
R21	1	R25	1

## $\Delta p$ -Q Characteristic

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

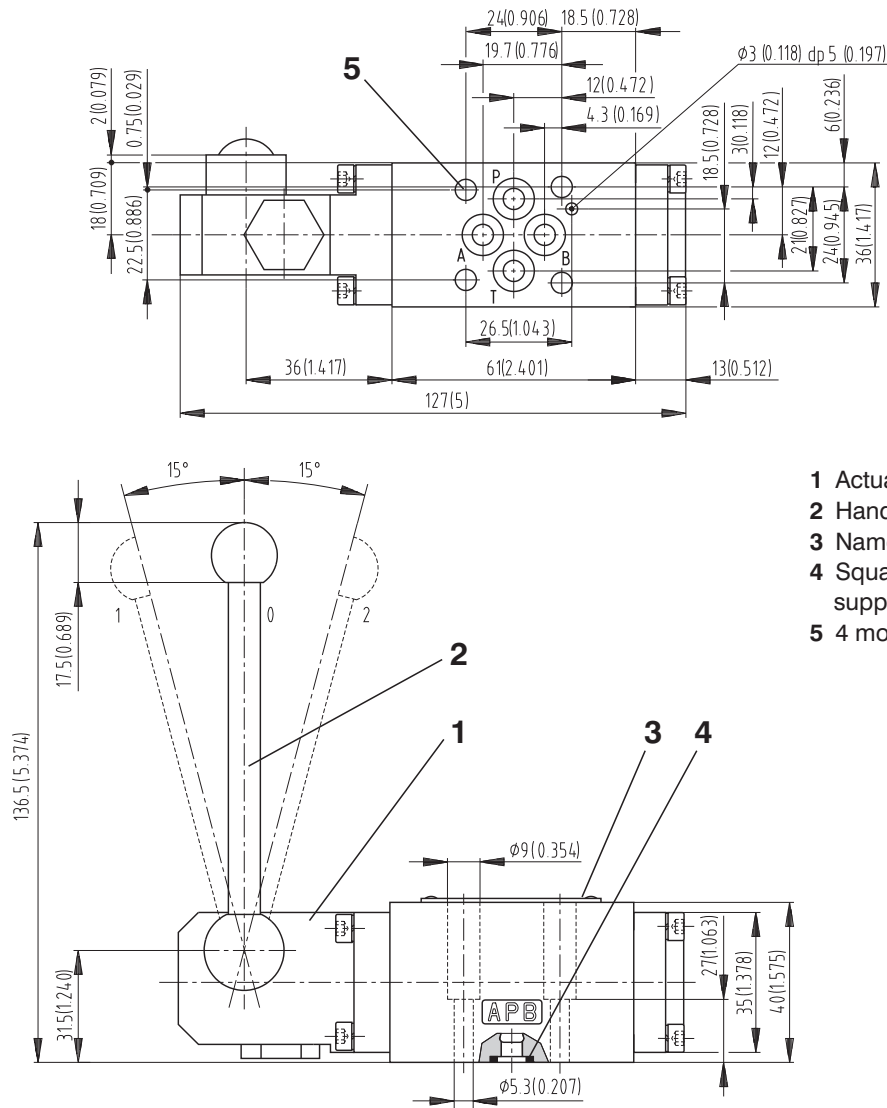
Pressure drop  $\Delta p$  related to flow rate.



	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)



- 1 Actuating section
- 2 Hand lever
- 3 Name plate
- 4 Square ring 7.65x1.68 (4 pcs.) supplied with valve
- 5 4 mounting holes

## Spare Parts

Dimensions in millimeters

### Seal kit

Type	Dimensions, quantity				Ordering 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.)	15673600
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.)	20897200

### Bolt kit (for studs see HA 0020)

Dimensions, quantity	Bolt torque	Ordering number
M5x35 DIN 912-10.9 (4 pcs.)	3.7 ft-lbs (5 Nm)	15874600

## 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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