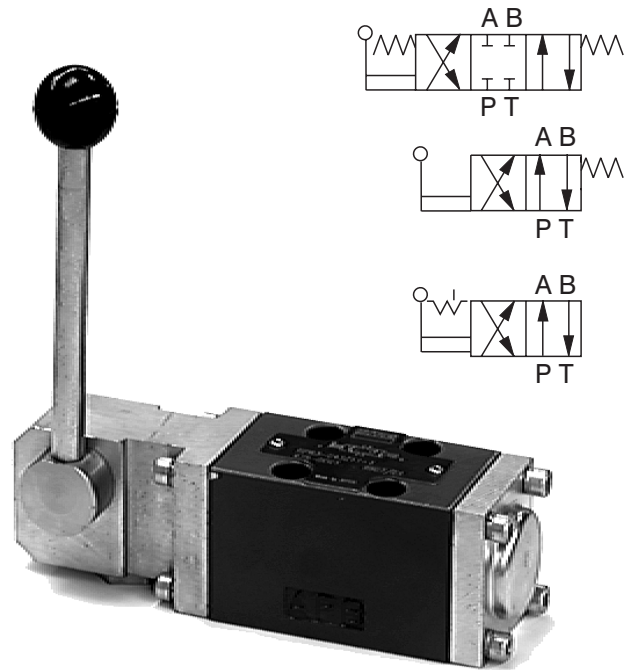


- 4/3 and 4/2 way spool type directional control valves
- Hand-lever operated
- Actuating section can be rotated in four positions 90° apart
- Installation dimensions according to DIN 24 340 / ISO 4401 / CETOP RP121-H

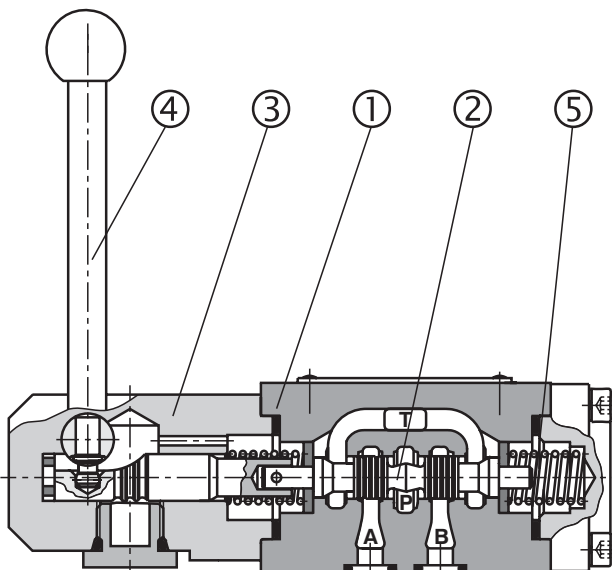


Functional Description

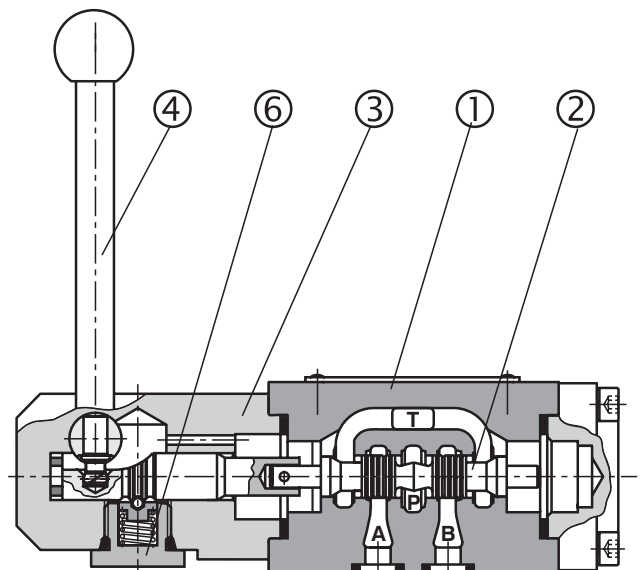
The hand operated directional control valves are used mainly to control start, stop and direction of fluid. The valves consist of housing (1) with control spool (2) and the actuating section (3). The actuating section consists either of the hand lever (4) and of one or two return springs (5), or of the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

Hand Operated Directional Control Valve

Nominal size

Number of operating positions

two positions
three positions

2
3

no designation
V

Seals
NBR
FPM (Viton)

Spool symbols
see table spool symbols

Technical Data

Valve size	mm	04
Maximum flow	L/min	30
Maximum operating pressure at ports P, A, B	bar	320
Maximum operating pressure at port T	bar	100
Pressure losses	bar	see p-Q characteristics
Hydraulic fluid	Hydraulic oils of power classes (HL, HLP) to DIN 51524	
Fluid temperature range for standard seal (NBR)	°C	-30 ... +100
Fluid temperature range for Viton sealing (FPM)	°C	-20 ... +120
Viscosity range	mm ² /s	20 ... 400
Maximum degree of fluid contamination	Class 21/18/15 to ISO 4406 (1999)	
Operating force on lever	N	< 40
Service life	cycles	10 ⁶
Weight	kg	1.0
Mounting position	optional	

Spool Symbols

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

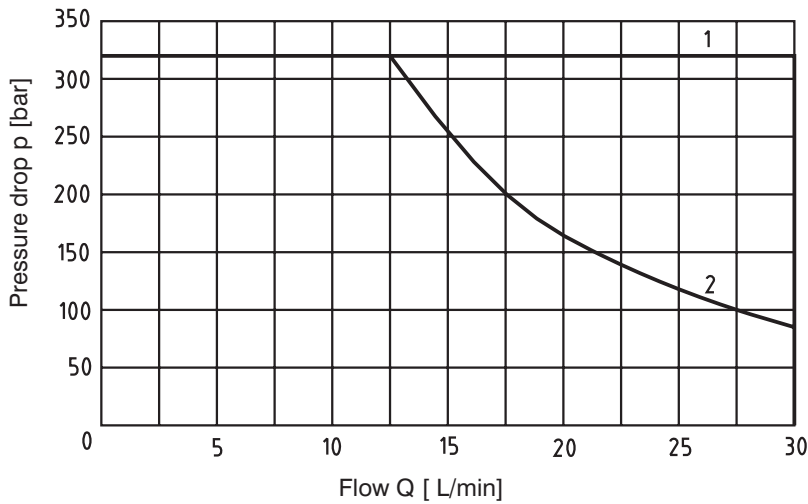
Spool Symbols

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

p-Q Characteristics

Measured at $v = 32 \text{ mm}^2/\text{s}$

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

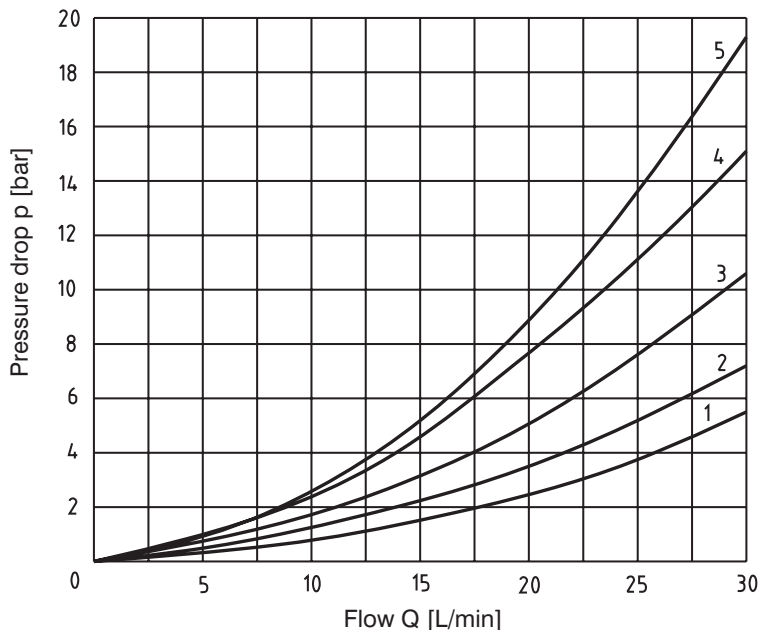


Z11	1	Z15	1
C11	1	C15	1
H11	1	H15	1
P11	1	P15	1
Y11	1	Y15	1
B11	1	B15	1
L11	2	L15	1
L21	2	L25	1
Y31	1	Y35	1
Y71	1	Y75	1
R11	1	J15	1
A51	1	J75	1
R21	1	R25	1

Δp -Q Characteristics

Measured at $v = 32 \text{ mm}^2/\text{s}$

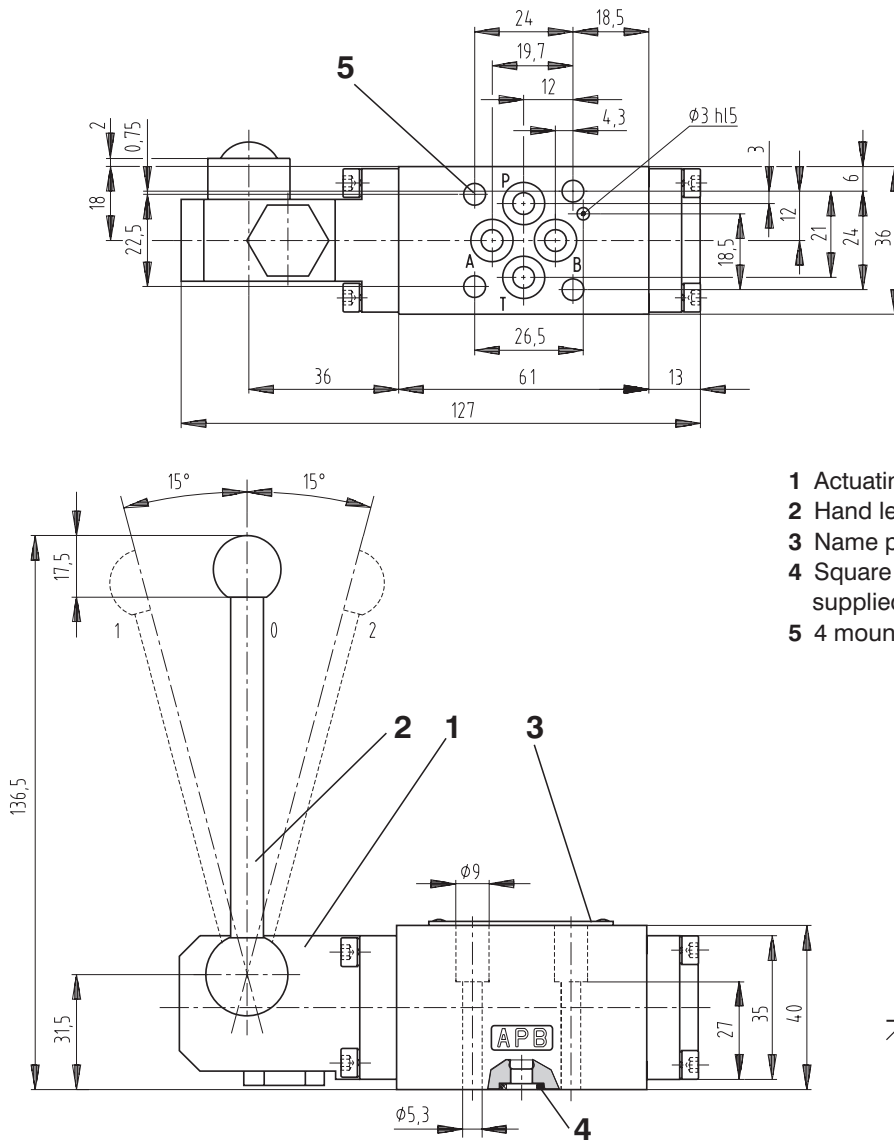
Pressure drop Δp related to flow rate.



	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 millimeters



- 1 Actuating section
- 2 Hand lever
- 3 Name plate
- 4 Square ring 7.65 x 1.68 (4 pcs.)
supplied with valve
- 5 4 mounting holes

Spare Parts

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.)	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 HA 0020)

Dimensions, quantity	Bolt torque	Ordering number
M5x35 DIN 912-10.9 (4 pcs.)	3.7 ft-lbs (5 Nm)	486-9011

Caution!

- Directional valves with other functional symbols as those shown in the table above can be delivered on request.
- The packing foil is recyclable.
- The protective plate can be returned to manufacturer.
- Mounting bolts or studs must be ordered separately.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of the law.

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