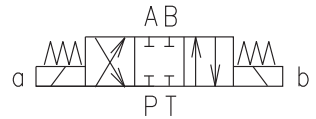


Special model - special installation dimensions

- 4/3-, 4/2- and 3/2-way directional valves with solenoid control
- Solenoids can be turned arbitrarily around their axis
- Push button manual override



Functional Description

The directional control valves RPE2-04 consist of cast iron housing (1), control spool (5), centering springs (4) and operating solenoids (2, 3).

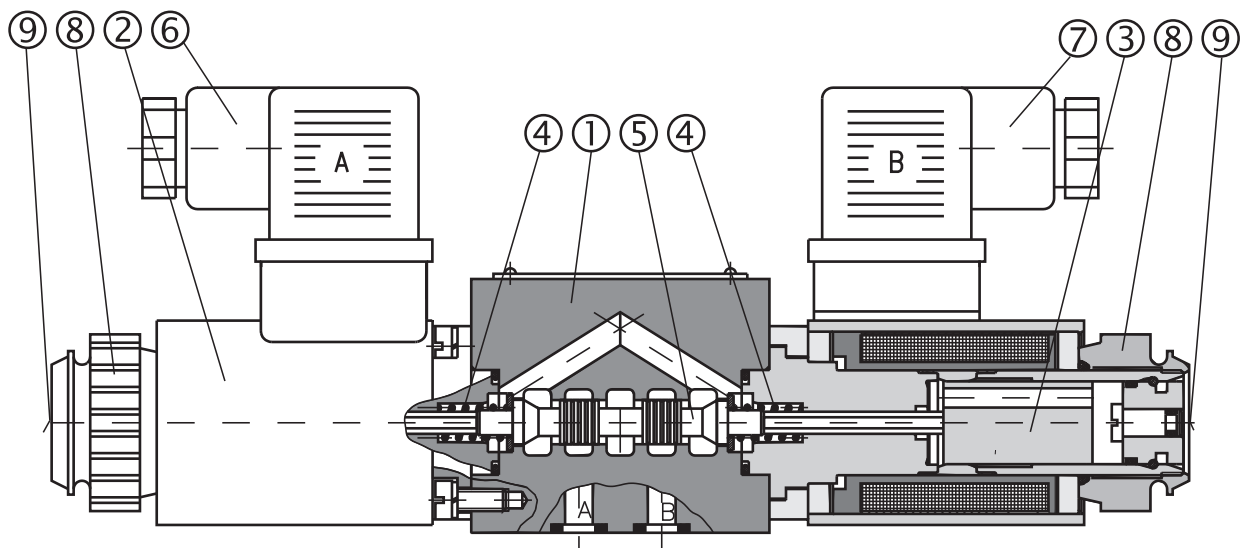
The three-position directional valves are fitted with two solenoids and two springs. The two-position directional valves have either one solenoid and one return spring or two solenoids and the detent assembly.

The operating solenoids are D.C. solenoids and are supplied through connectors A, B (6, 7). For A.C. supply the solenoids are provided with rectifiers, which are

integrated directly into the connectors A, B (6, 7). The plug connectors can be turned by 90°. By loosening the fixing nut (8), the solenoids (2, 3) can be turned on their axis in the range of 360°.

Provided that the pressure in T-port does not exceed 363.6 psi (25 bar), the spool of the valve can be repositioned by manual override (9).

The surface of the valve housing is phosphate coated and the operating solenoids are zinc coated.



Ordering Code

RPE2-04 / -

Solenoid Operated Directional Valves

Nominal size

Number of operating positions

two positions
three positions

2
3

Functional Symbols

see the table functional symbols

2
3

Installation Dimensions
see valve dimensions on pg. 4
to DIN 24 340-A-4

Rated supply voltage at the connector input

01200	D.C. 12V	
01400	D.C. 14V	
02100	D.C. 21V	02450 A.C. 24V (50Hz)
02400	D.C. 24V	
04200	D.C. 42V	
04800	D.C. 48V	
06000	D.C. 60V	
10200	D.C. 102V	11550 A.C. 115V (50Hz)
20500	D.C. 205V	23050 A.C. 230V (50Hz)

Technical Data

Nominal size	mm	04			
Maximum flow	l/min	see p-Q characteristics			
Max. operating pressure at ports P, A, B	bar	320			
Max. operating pressure at port T	bar	100			
Pressure drop	bar	see Δp -Q characteristics			
Hydraulic fluid		Hydraulics oils of power classes HM, HV to CETOP RP 91 H in viscosity classes ISO VG 32, 46 and 68			
Fluid temperature range	°C	-30 ... +80			
Ambient temperature, max.	°C	up to +50			
Viscosity range	mm ² /s	20 ... 400			
Maximum degree of fluid contamination		Class 21/18/15 to ISO 4406 (1999).			
Rated voltage and current at connector input without rectifier	V/A D.C.	12/2.4 48/0.56	14/2.0 60/0.46	21/1.33 102/0.29	24/1.16 205/0.15
Rated voltage and current at connector input with rectifier	V/A A.C.	24/1.52		115/0.33	230/0.17
Permissible rated voltage variation	%	A.C. ± 10		D.C. ± 10	
Max. switching frequency	1/h	15 000			
Switching time, ON; at $v = 32 \text{ mm}^2/\text{s}$	ms	30 ... 50			
Switching time, OFF; at $v = 32 \text{ mm}^2/\text{s}$	ms	A.C. 70 ... 100		D.C. 30 ... 50	
Duty cycle	%	100			
Service life	cycles	10^7			
Enclosure type to DIN 40 050		IP 65			
Weight - valve with 1 solenoid valve with 2 solenoids	kg	1.10 1.50			
Mounting position		optional			

Functional Symbols

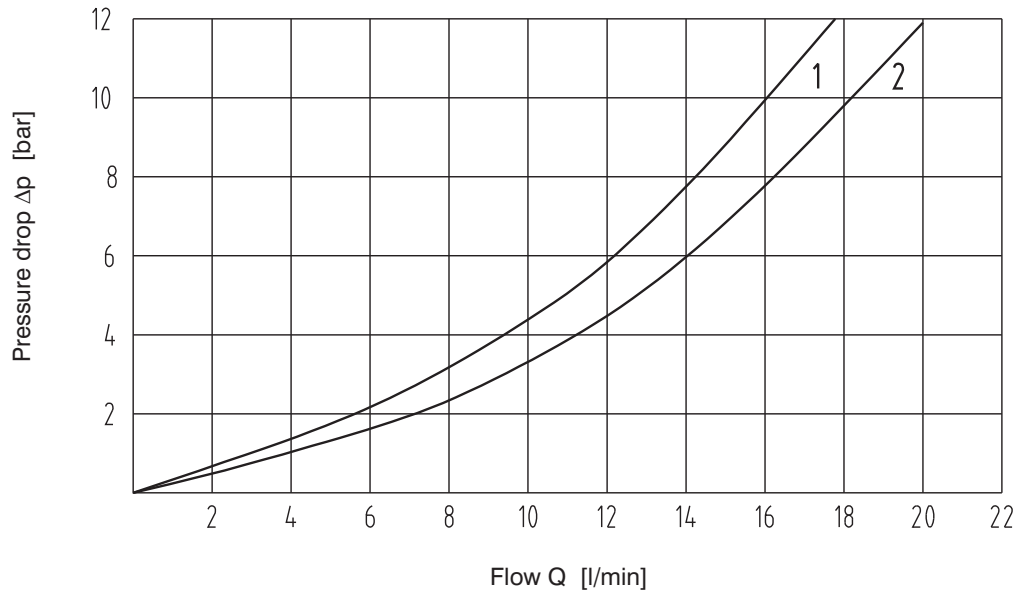
Designation	Symbol	Interposition	Designation	Symbol	Interposition
Z11			X11		
C11			J15		
H11			J75		
P11			Z11		
Y11			Z51		
L21			C51		
B11			Z71		
R11			Z81		
A51			C11		
P51			R21		
Y51					

Caution!

- For applications outside these parameters, please consult the manufacturer.
- With functional symbols A51 and J75 for pressures exceeding 100 bar, the T-port should be connected directly to the tank.
- For directional valves with two solenoids, one solenoid must be without charge before the other solenoid can be charged. Switching time for directional valves with detent assembly should not be shorter than 60 ms.
- 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 M5 x 50 DIN 912-10.9 or studs must be orderer separately. Tightening torque is 5 Nm.
- 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.

Δp-Q Characteristics

Measured at $v = 32 \text{ mm}^2/\text{s}$ and $t = 40 \text{ }^\circ\text{C}$



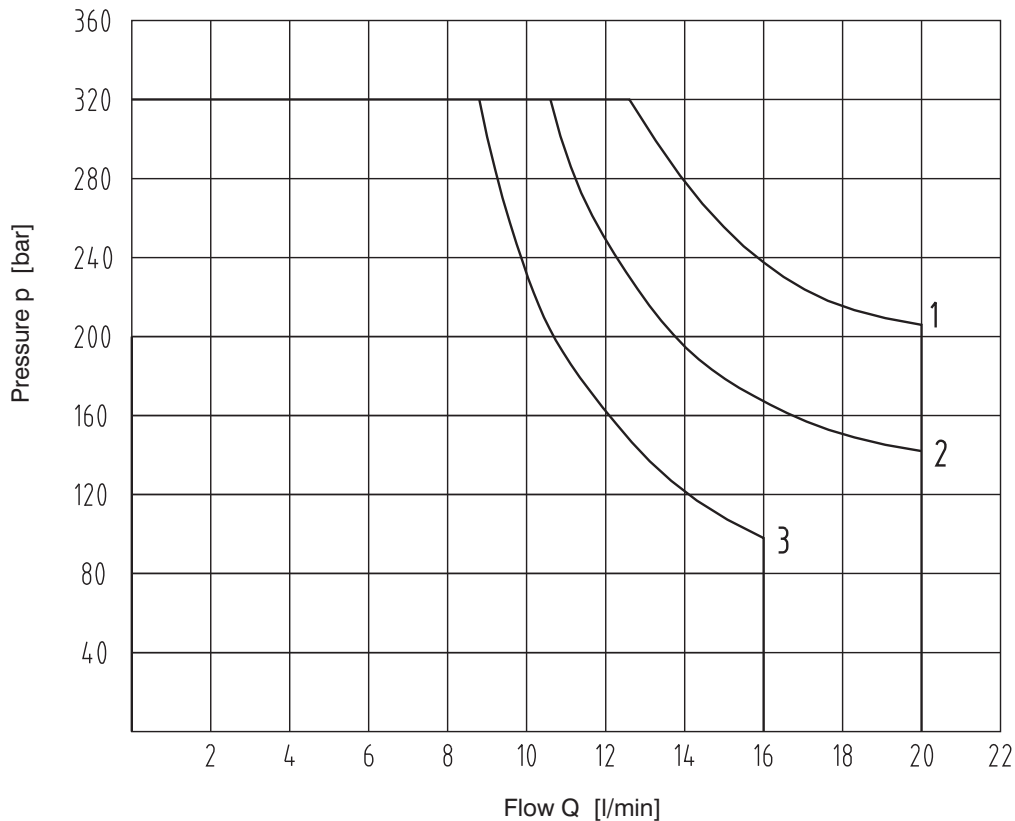
For all Functional Symbols

P→T	P→A	P→B	A→T	B→T
1	2	2	2	2

p-Q Characteristics

Measured at $v = 32 \text{ mm}^2/\text{s}$ and $t = 40 \text{ }^\circ\text{C}$

Operating limits for maximum hydraulic power transferred by the directional valve. For respective spool type - see functional symbols.



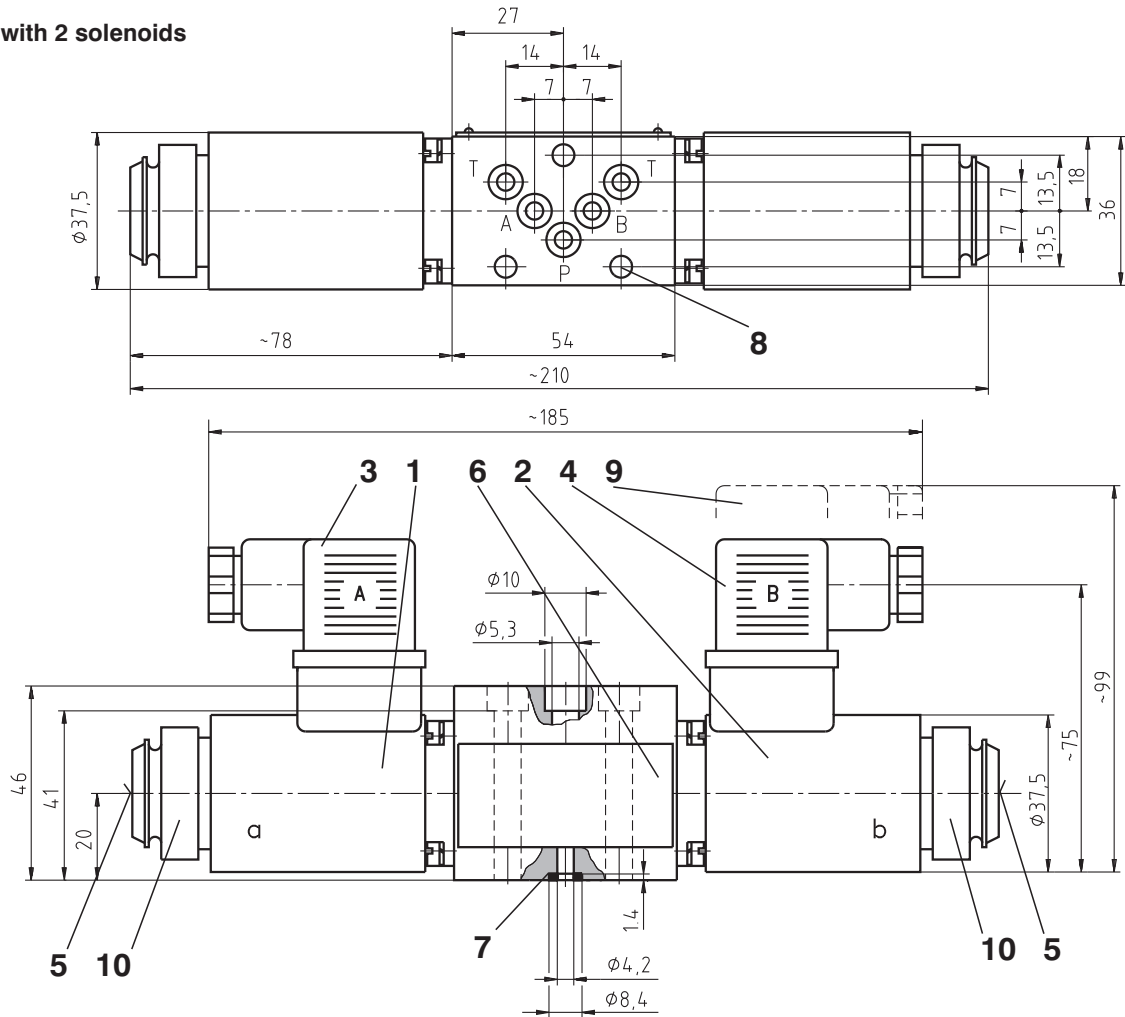
Z11	Z51	H11	P11	P51	Y11	Y51	C11	C51	B11	L21	R11	R21	X11	A51	Z71	Z81	J15	J75
2	2	2	2	2	2	2	3	3	2	3	1	1	1	3	3	3	3	1

Valve Dimensions

Dimensions in millimeters

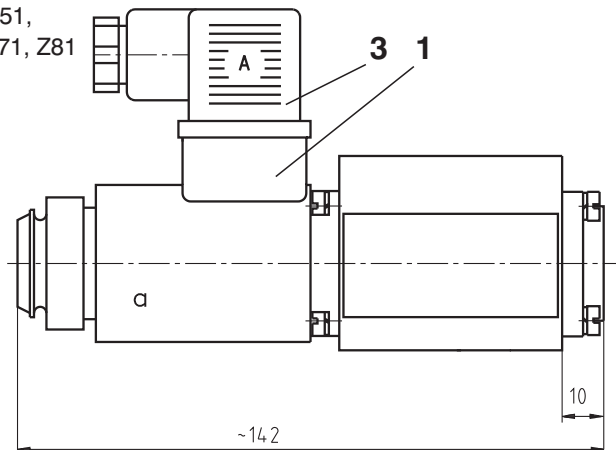
Installation dimensions 2

Valve with 2 solenoids



Valve with 1 solenoid

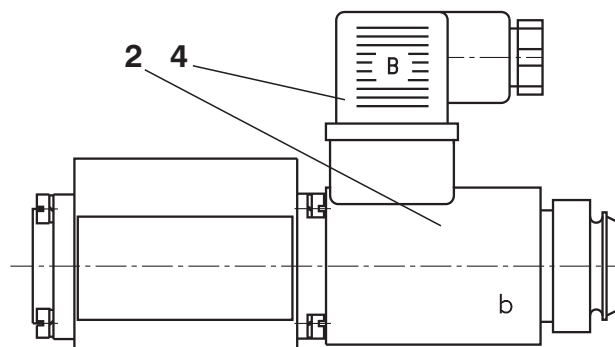
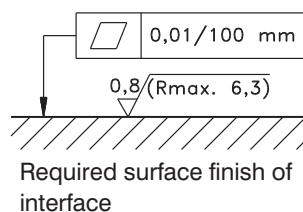
Functional symbols
R11, R21, A51, P51,
Y51, Z51, C51, Z71, Z81



- 1 Solenoid a
- 2 Solenoid b
- 3 Connector plug A, grey color, to DIN 43 650
- 4 Connector plug B, black color, to DIN 43 650
- 5 Manual override
- 6 Name plate
- 7 Square ring 009 5.28 x 1.68 (5 pcs.) supplied with valve
- 8 3 mounting holes
- 9 Distance required to remove plug
- 10 Fixing nut

Valve with 1 solenoid

Functional symbols X11, Z11, C11

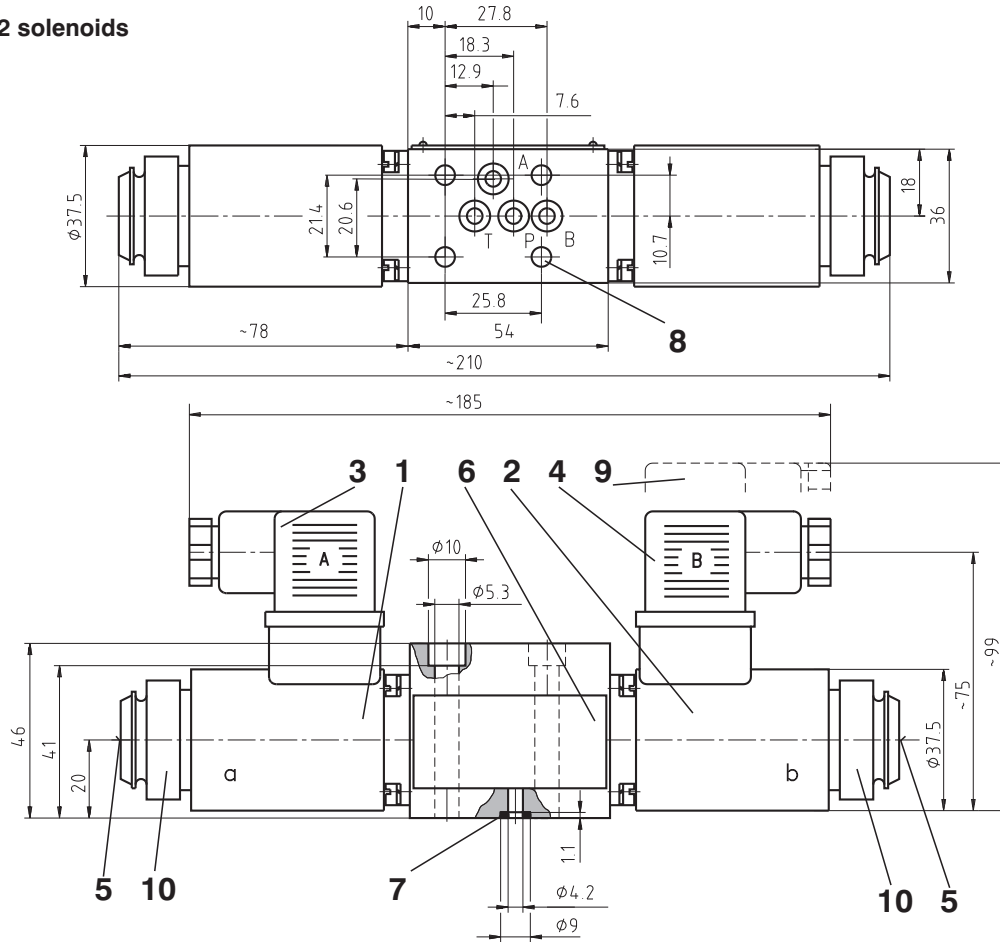


Valve Dimensions

Dimensions in millimeters

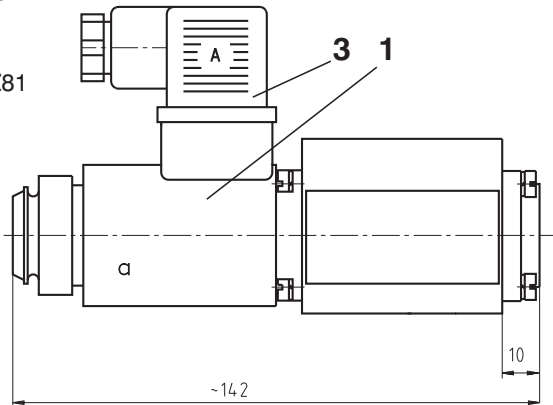
Installation dimensions 3 (to DIN 24 340-A4)

Valve with 2 solenoids



Valve with 1 solenoid

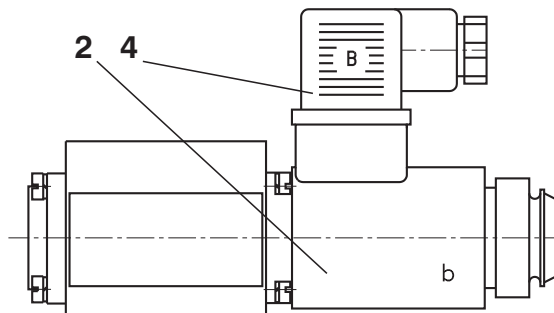
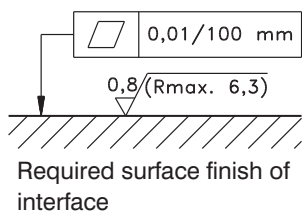
Functional symbols
R11, R21, A51, P51,
Y51, Z51, C51, Z71, Z81



- 1 Solenoid a
- 2 Solenoid b
- 3 Connector plug A, grey color, to DIN 43 650
- 4 Connector plug B, black color, to DIN 43 650
- 5 Manual override
- 6 Name plate
- 7 Square ring 6 x 1.5 (4 pcs.) supplied with valve
- 8 4 mounting holes
- 9 Distance required to remove plug
- 10 Fixing nut

Valve with 1 solenoid

Functional symbols X11, Z11, C11



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