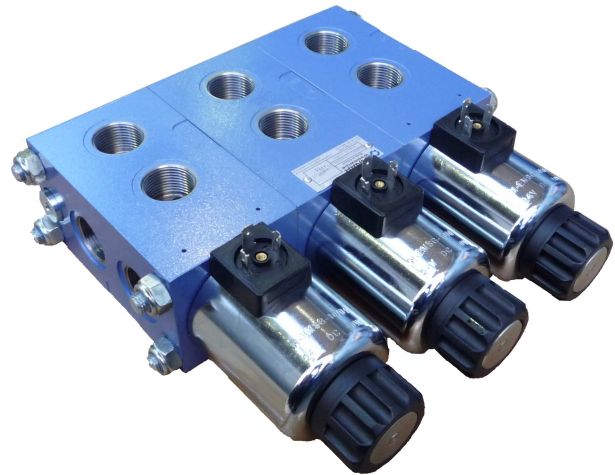


### DATA SHEET - SERVICE MANUAL

#### APPLICATION

Mobile 6 way 2 position stackable directional valves type 6/2UREM10... are intended for hydraulic systems where movement of consumers (cylinders or hydraulic motors) is controlled by means of one basic directional valve. Shifting of a proper section of valve 6/2UREM10... results in connecting the consumer to the basic directional valve. The valves are used for in-line mounting in any position.



#### DESCRIPTION OF OPERATION

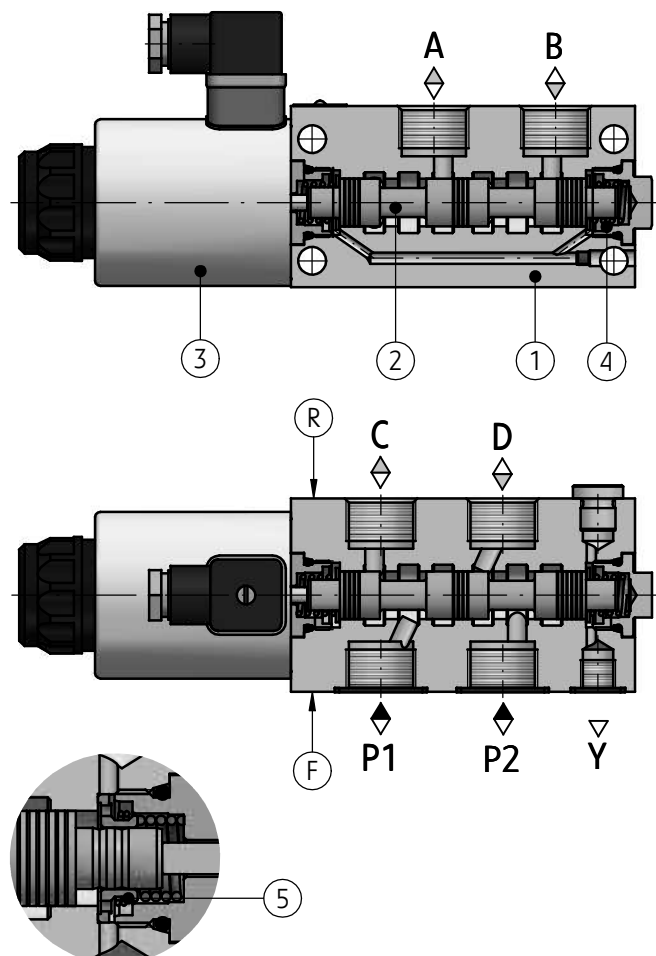
Mobile 6 way directional valves type 6/2UREM10... are used as one unit or blocks with maximum 5 sections. The sections are stackable. Each section has ports **A** and **B** to connect the consumer (e.g. hydraulic cylinder). Ports **P1** and **P2** on the side wall (F) of the front (or one unit) section are used to connect the basic directional valve. Ports **C** and **D** on the wall (R) of the rear (or one unit) section are used to connect the consumer. Depending on the spool position lines **P1** and **P2** are connected correspondingly to lines **A** and **B** or **C** and **D**. Ports **P1**, **P2** and **C**, **D** are situated opposite each other what allows the transfer of supply from the previous to the next section of the stackable valve at initial position of spool (2). Solenoid controlled section consists of a housing (1), control spool (2), solenoid (3) and return spring (4).

In version 6/2UREM10.../...OF... (without springs, with detent) the spool (2) is positioned and hold by means of the detent (5). Its shift results from energizing of one of the solenoids.

In version 6/2URER10.../O... (without spring, without detent) the spool (2) is positioned and hold by the energized solenoid.

At version 6/2URER10...Y... port **Y** is to be connected to tank.

6/2UREM10 -12/B 0 G1 Y G24 N Z4



## TECHNICAL DATA

Hydraulic fluid	mineral oil	
<b>Required filtration</b>	<b>16 µm</b>	
<b>Recommended filtration</b>	<b>10 µm</b>	
Nominal fluid viscosity	37 mm <sup>2</sup> /s in temperature 55 °C	
Viscosity range	2,8 do 328 mm <sup>2</sup> /s	
Fluid temperature range (in tank)	recommended	40 °C to 55 °C
	maximum	-20 °C to +70 °C
Ambient temperature range	- 20 °C to +50 °C	
<b>Max operating pressure (in port P1, P2, A, B, C, D)</b>	with drain port Y connected to tank	<b>35 MPa</b>
	without drain port (port Y plugged)	<b>21 MPa</b>
<b>Max pressure in port Y</b>	<b>21 MPa</b>	
Max switching frequency	15000 on/h	
Weight of one section	with 1 solenoid	max 3 kg
	with 2 solenoids	max 3,5 kg
<b>Nominal supply voltage for solenoids</b>	<b>DC</b>	<b>12V , 24V</b>
Supply voltage tolerance	±10%	
Power requirement	40 W	
Insulation	<b>IP 65</b>	
Solenoid coil temperature	max 150 °C	

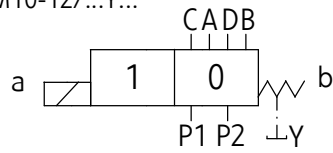
## ASSEMBLY AND APPLICATION REQUIREMENTS

1. Only valve working properly and suitably installed may be connected to an electric system. Only skilled workers are allowed to connect and disconnect electric system.
2. It is forbidden to apply directional spool valve if the supply cable in the gland of plug-in-connector is not properly tightened.
3. It is forbidden to apply directional spool valve if the plug-in-connector is not properly tightened to the solenoid socket and is not secured by screwing bolt tightly.
4. Due to heating solenoid coils, directional spool valves should be placed in order to eliminate the possibility of incidental touch while using, or, they should be equipped with the coil covers (in accordance with the European standards PN - EN ISO 13732-1 and PN - EN 982).

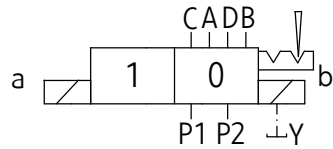
# SCHEMES

## Hydraulic schemes of sections of directional valve

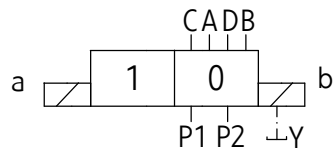
section 6/2UREM10-12/...Y...



section 6/2UREM10-12/...Y-OF...



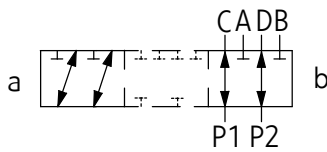
section 6/2UREM10-12/...Y O...



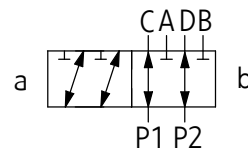
## Hydraulic schemes for spools

working and intermediate positions

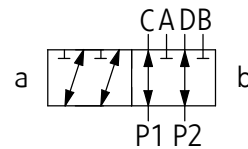
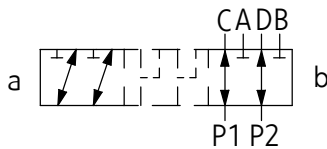
scheme "A"



working positions



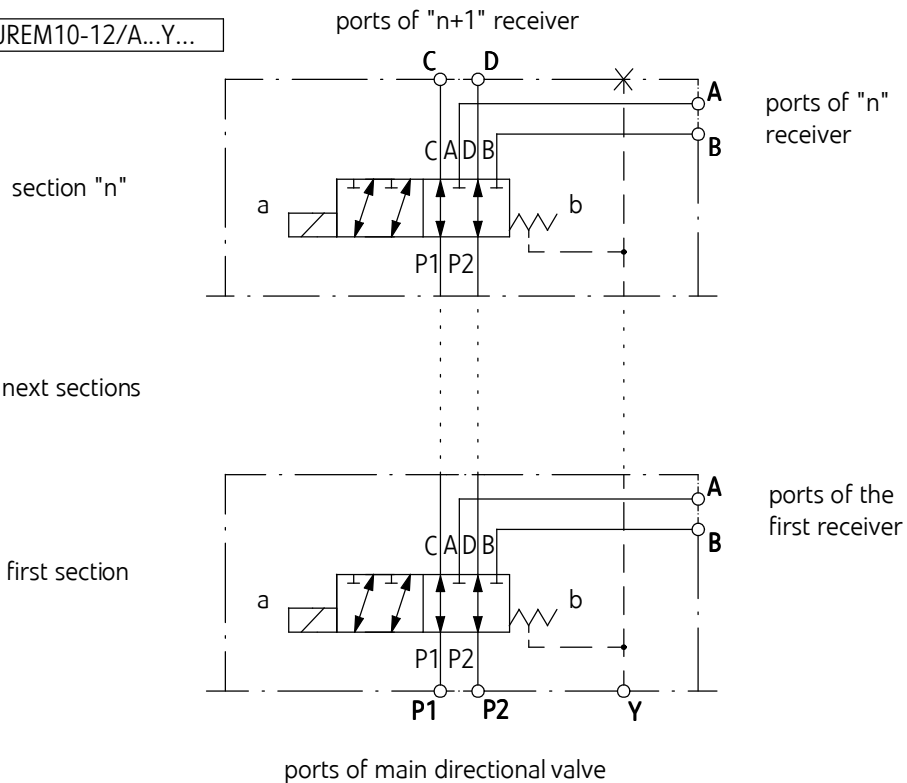
scheme "B"



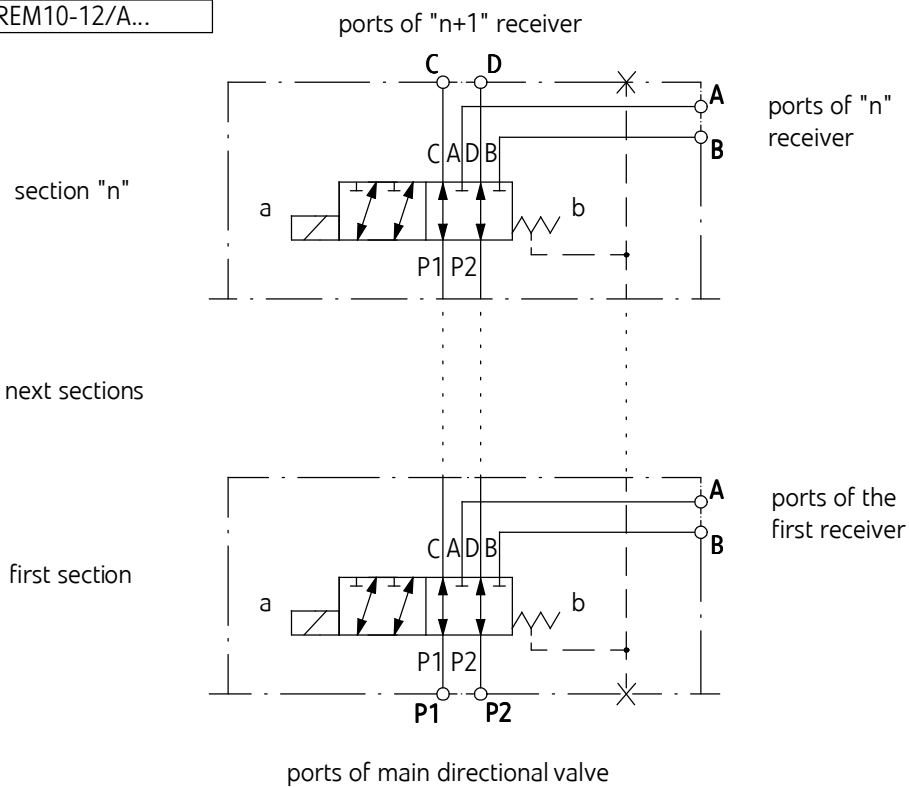
# SCHEMES

Detailed hydraulic scheme of directional valve typ 6/2UREM10...

version: 6/2UREM10-12/A...Y...

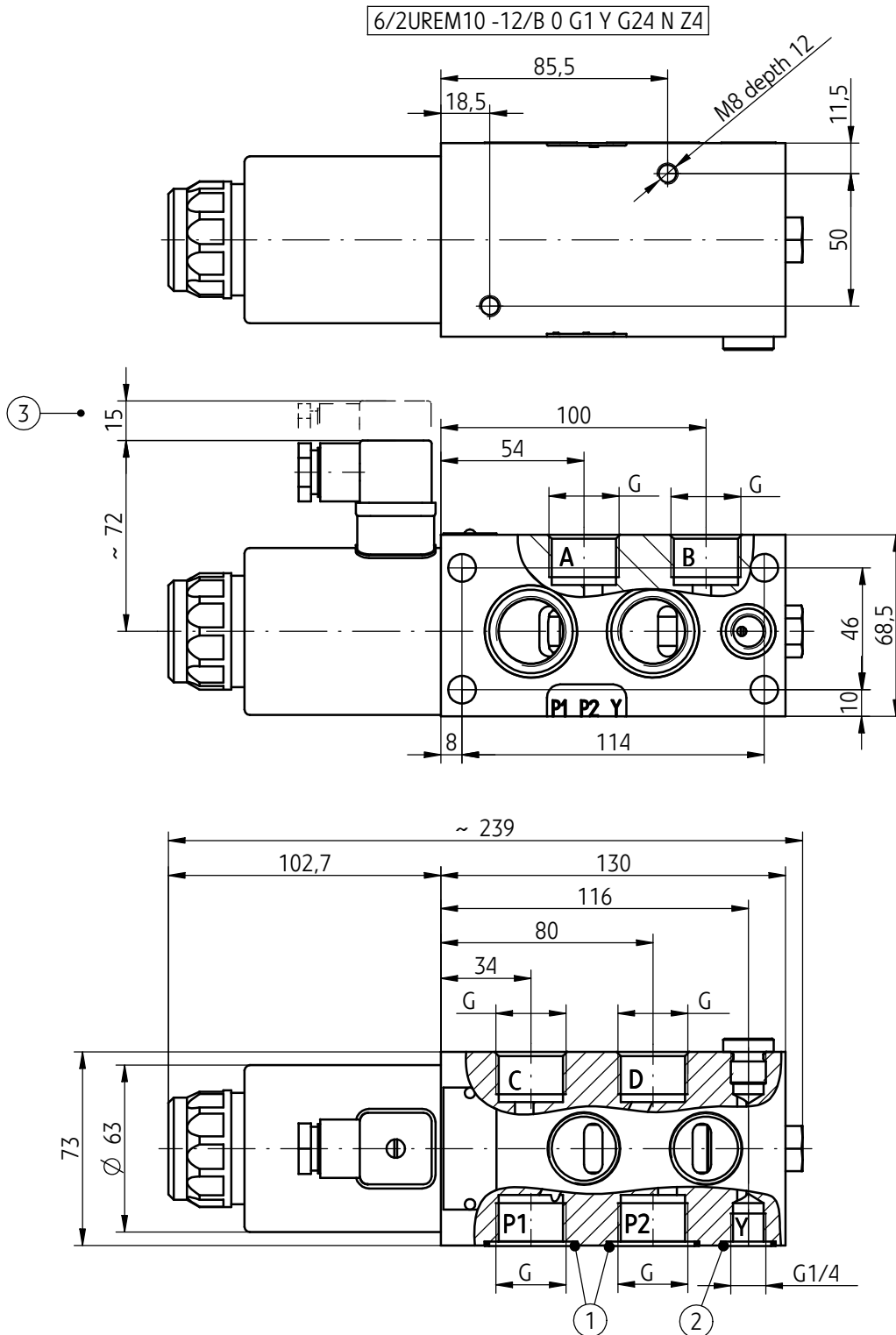


version: 6/2UREM10-12/A...



# OVERALL AND CONNECTION DIMENSIONS

type 6/2UREM10-12/... - dimensions of 1 section



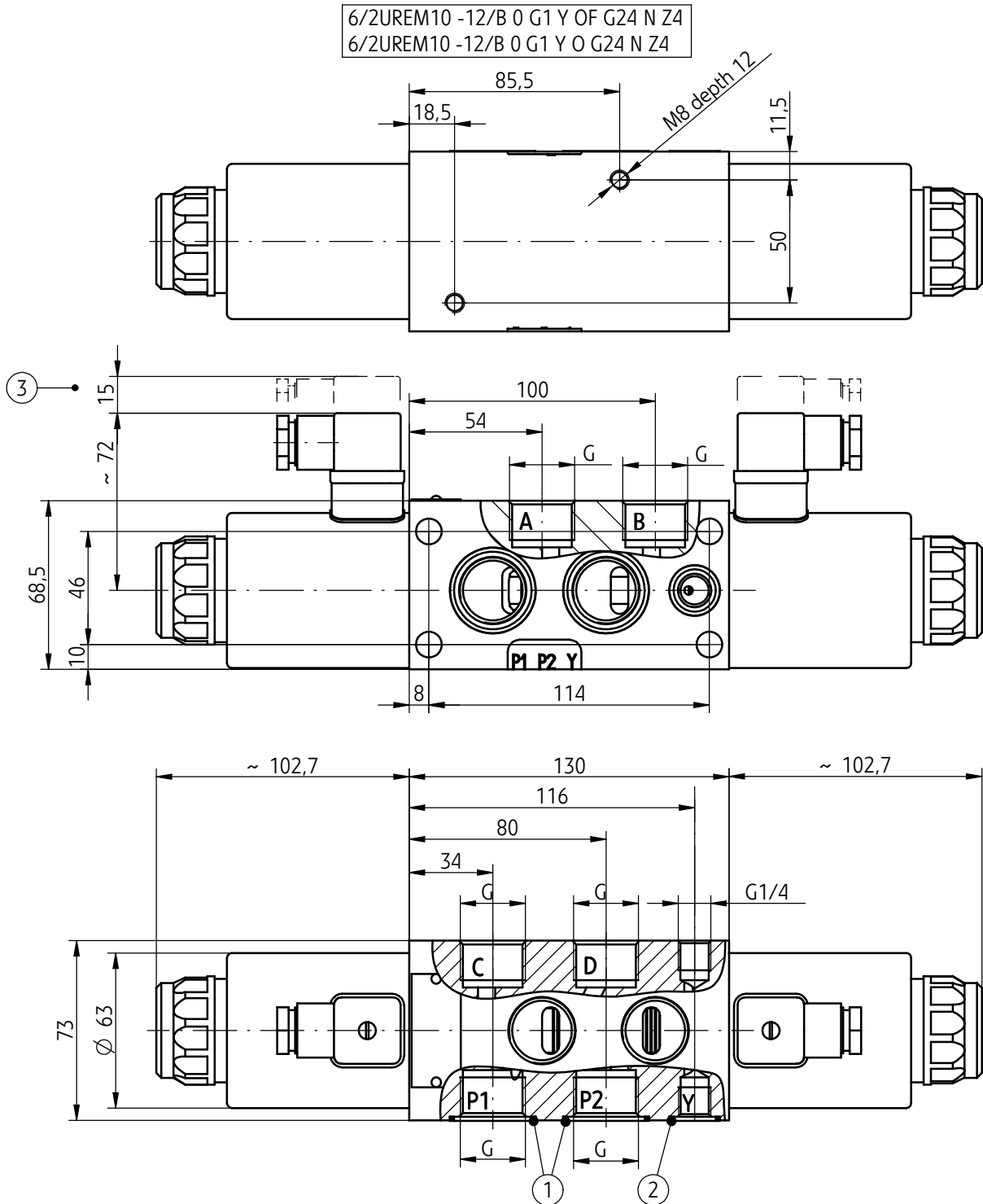
valve version	G
6/2UREM10-...G1	G1/2
6/2UREM10-...G2	G3/4

For placing an order of one section with (sealings (1) and (2) as an element of sectional valve, in order code "0" is chosen.  
 1 - o-ring **kantseal 31,47 x 1,68** - 2 pcs.  
 2 - o-ring **kantseal 17,17 x 1,68** - 1 pc.  
 3 - space for plug dismounting

## OVERALL AND CONNECTION DIMENSIONS

type 6/ZUREM10-12/...OF... - dimensions of 1 section

type 6/ZUREM10-12/...O... - dimensions of 1 section



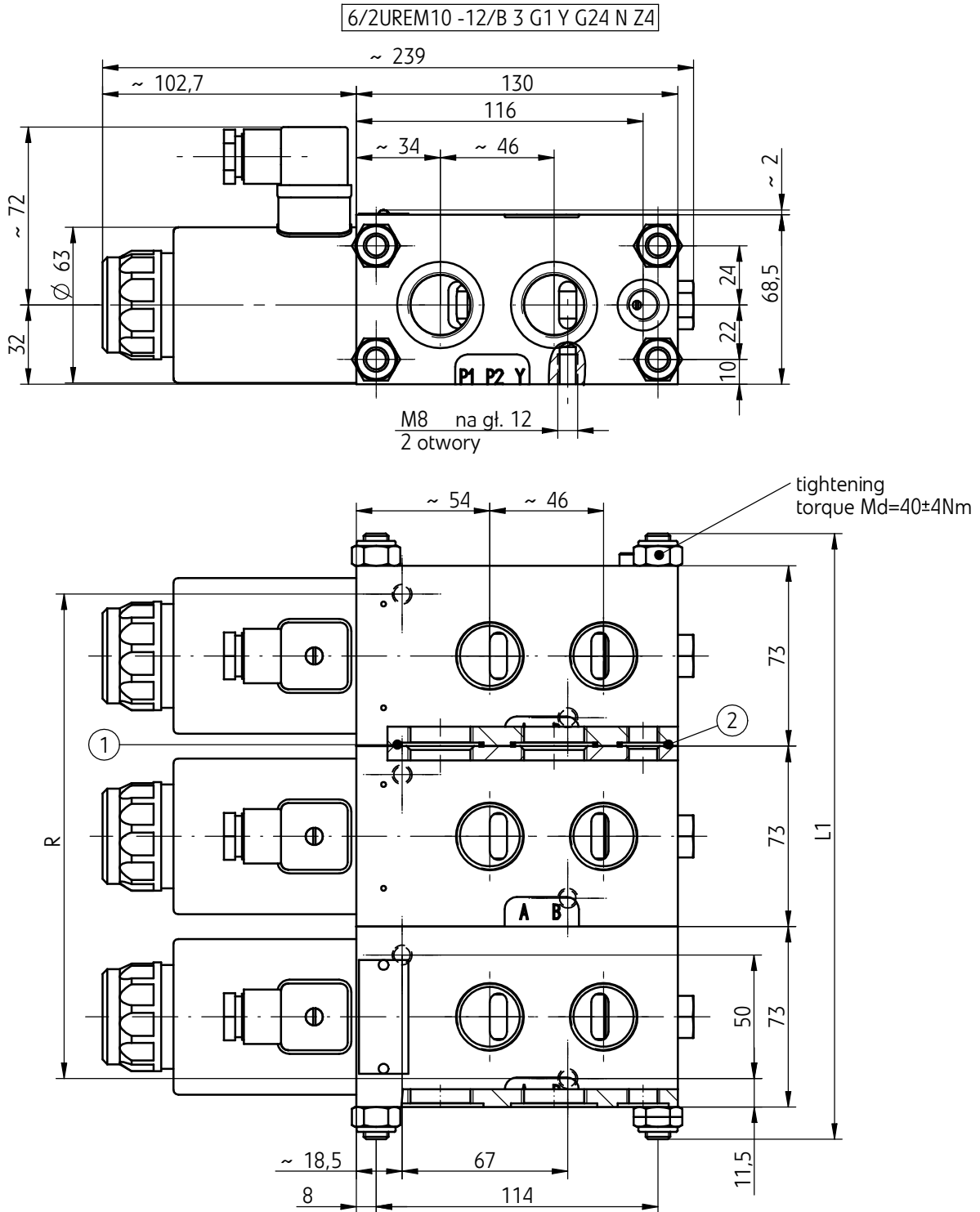
valve version	G
6/ZUREM10-...G1	G1/2
6/ZUREM10-...G2	G3/4

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## OVERALL AND CONNECTION DIMENSIONS

type 6/2UREM10-12/...OF... - dimensions of 1 section

type 6/2UREM10-12/...O... - dimensions of 1 section



valve version	G (ports P1, P2, A, B, C, D)
6/2UREM10-...G1	G1/2
6/2UREM10-...G2	G3/4

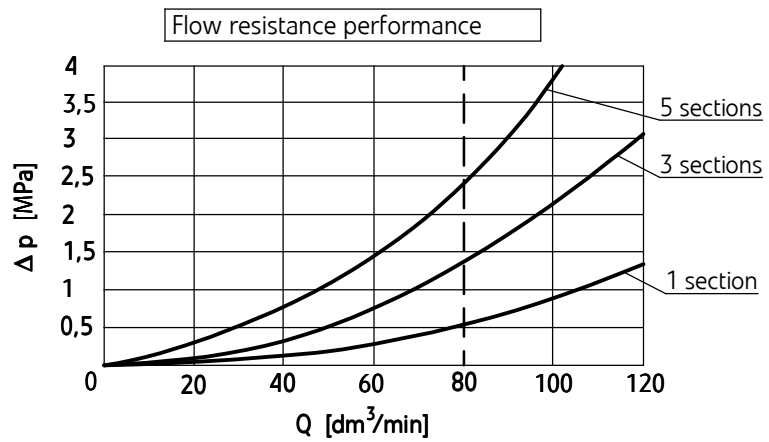
1 - o-ring kantseal 31,47 x 1,68 - 2\*n-2 pcs.  
 2 - o-ring kantseal 17,17 x 1,68 - n-1 pcs.  
 n - number of sections

valve version	R	L1
6/2UREM10-...2...	123	M10x1,25x175-10.9
6/2UREM10-...3...	196	M10x1,25x245-10.9
6/2UREM10-...4...	269	M10x1,25x320-10.9
6/2UREM10-...5...	342	M10x1,25x395-10,9

## PERFORMANCE CURVES

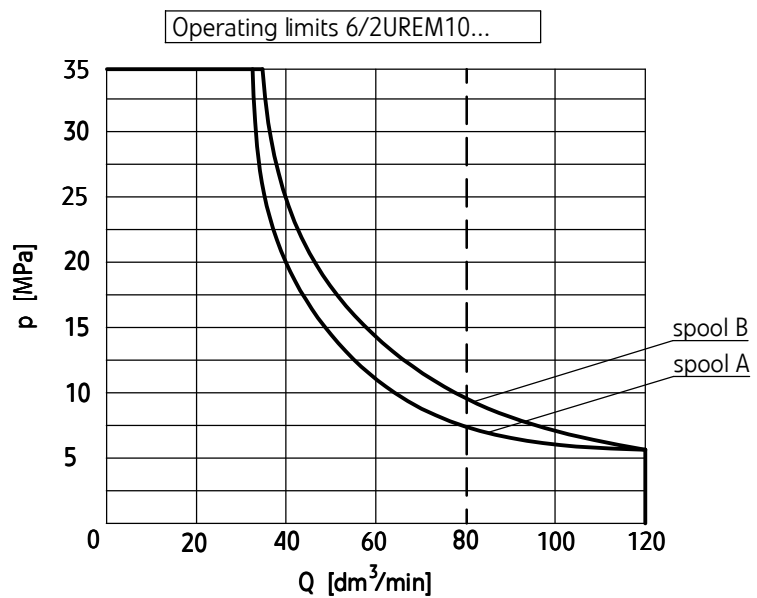
measured at  $\nu = 41 \text{ mm}^2/\text{s}$  and temperature  $t = 50^\circ\text{C}$ )

Performance curves  $\Delta p(Q)$  for directional valves  
Type 6/2UREM10...



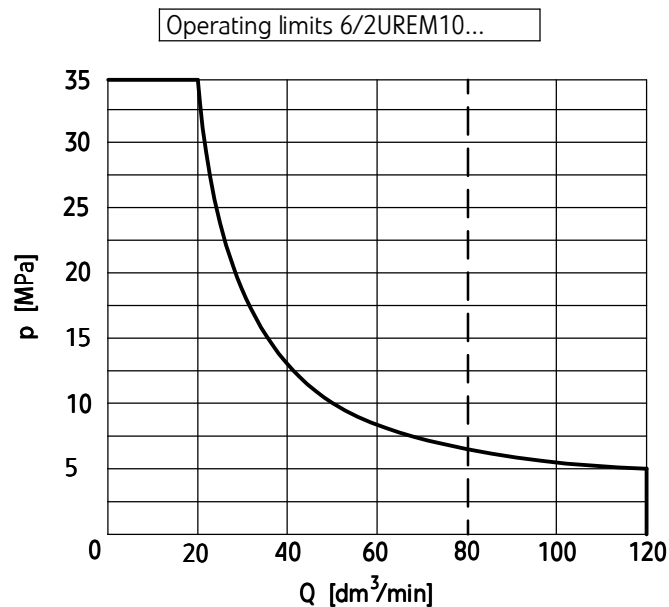
flow directions:

- P1 → A
- P1 → C
- P2 → B
- P2 → D



flow directions:

- P1 → A, B → P2
- P1 → C, D → P2
- P2 → B, A → P1
- P2 → D, C → P1



### NOTE:

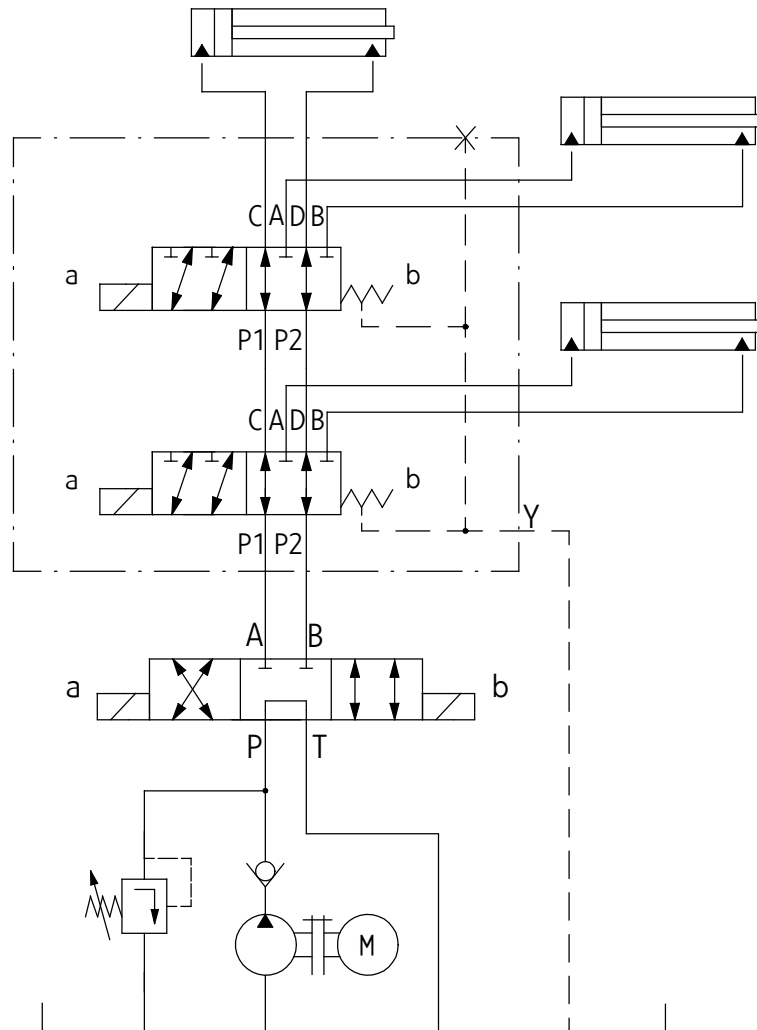
Above operating limits are related to symmetrical flow through supply and return channel.





EXAMPLE OF APPLICATION  
IN HYDRAULIC SYSTEM

6/2UREM10-12/A 2 G1 Y G24 N Z4



PONAR Wadowice S.A.  
ul. Wojska Polskiego 29  
34-100 Wadowice  
tel. +48 33 488 21 00  
fax. +48 33 488 21 03  
[www.ponar-wadowice.pl](http://www.ponar-wadowice.pl)

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