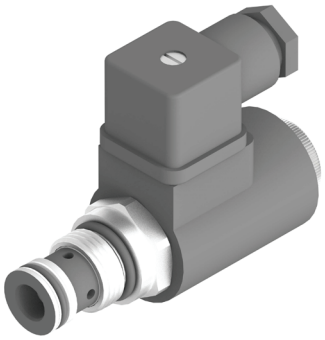
Directional cartridge valve tight on one side type 2URES6

NS 6 | p_{max} 25 MPa | Q_{max} 40 dm³/min | WK 432 720

PONAR wadowice

DATA SHEET - OPERATION MANUAL

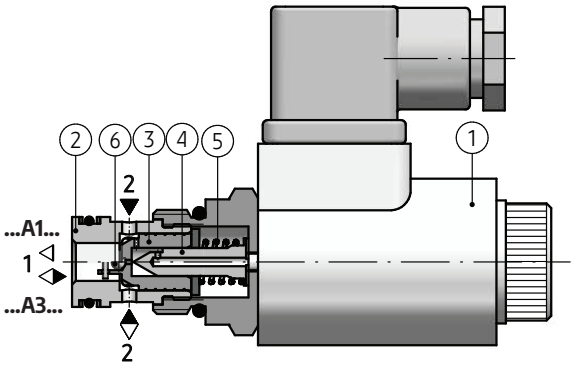


APPLICATION

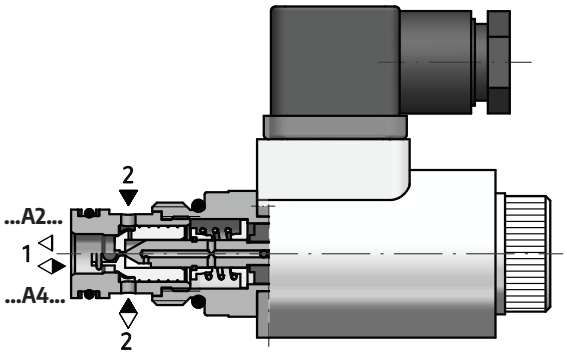
Directional cartridge valve type **2URES6...** is intended for control direction of fluid flow, causing particular movement direction or stops a receiver (cylinder or hydraulic motor). The directional valve is mounted by screwing into a threaded cavity.

The product is compliant with the regulations of directive 2014/35/UE

versions: **2URES6A1...; ...A3...**



versions: **2URES6A2...; ...A4...**



DESCRIPTION OF OPERATION

The directional valve type **2URES6...** consists of solenoid **1**, sleeve **2**, cone **3**, needle **4** and spring **5**. Flow is enabled or cut off by moving the cone **3** in sleeve **2**.

In version **2URES6A1...** flow is enabled in the direction **2→1**; in version **2URES6A3...** flow is enabled in both directions: **2→1** and **1→2**, by means of cone (**3**) with ball (**6**). Flow is cut off by applying voltage onto the solenoid (**1**) and moving needle (**4**), which in consequence closes cone (**3**) by pressure from port **2**.

In version **2URES6A2...** flow is enabled in the direction **2→1**;
in version **2URES6A4...** flow is enabled in both directions: **2→1** and **1→2** by means of cone (**3**) with ball (**6**). Flow is enabled by applying voltage onto the solenoid and moving needle (**4**), which in consequence closes cone (**3**) by pressure from port **2**.

Additionally, directional valves could be supplied with manual override:
- with stroke setting by rotated knob, type **NE** (see page 2)
- with detent, type **NB** (see page 2)

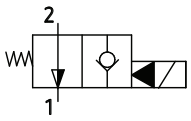
TECHNICAL PARAMETERS

hydraulic fluid	mineral oil	
required fluid cleanliness class	ISO 4406 class 20/18/15	
nominal fluid viscosity	37 mm²/s at temperature 55 °C	
viscosity range	2,8 ÷ 380 mm²/s	
fluid temperature range (in a tank)	recommended max.	40 ÷ 55 °C -20 ÷ 70°C
ambient temperature range	-20 ÷ 50 °C	
maximum operating pressure	25 MPa	
power consumption	26 W	
degree of protection	IP 65	
weight	0,44 kg	

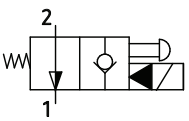
assembly and operation requirements at www.**operating-conditions.ponar**.pl

DIAGRAMS

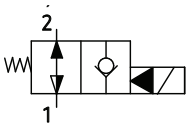
version 2URES6**A1**...



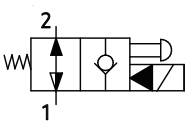
version 2URES6**A1**.../...**N**...



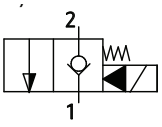
version 2URES6**A3**...



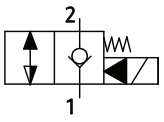
version 2URES6**A3**.../...**N**...



version 2URES6**A2**...



version 2URES6**A4**...



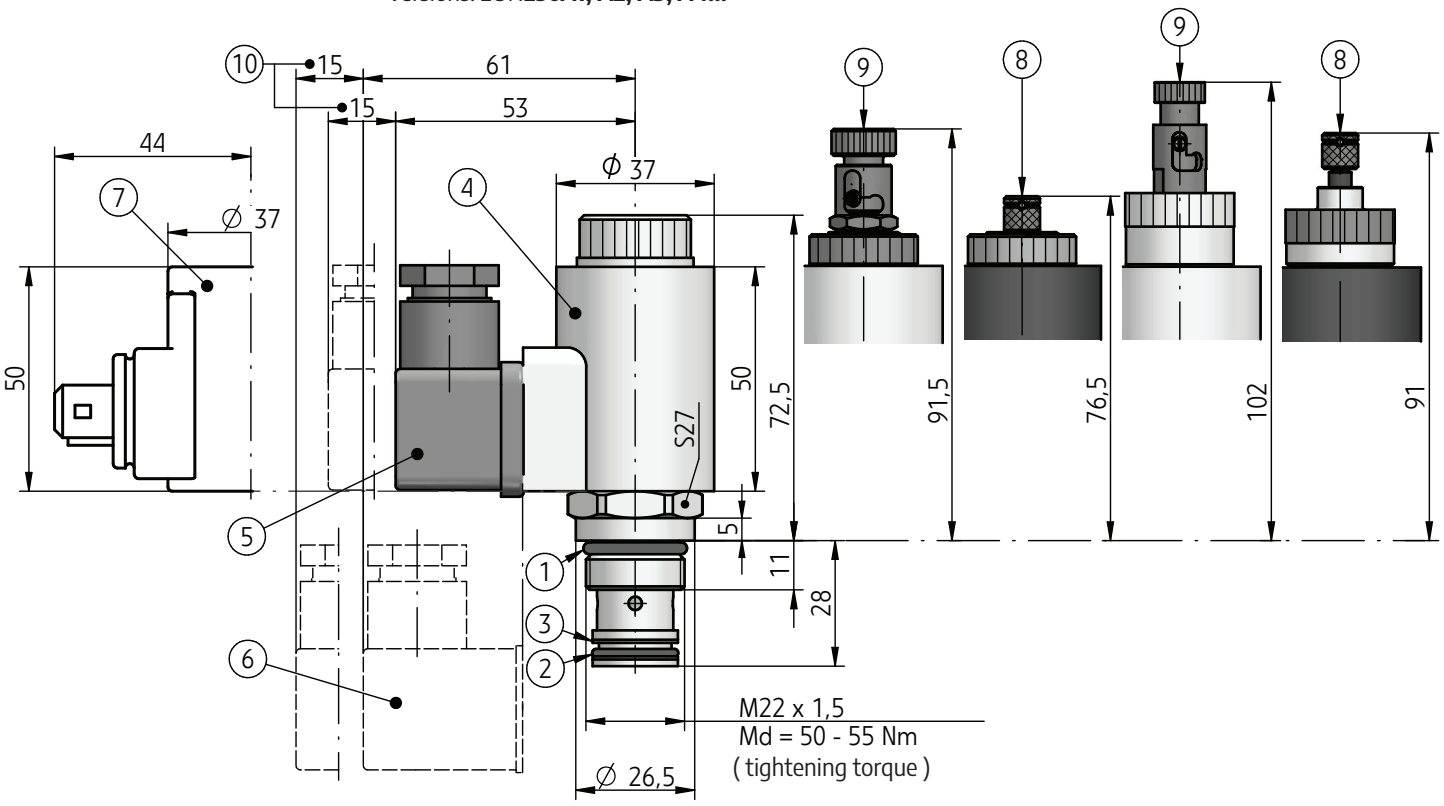
OVERALL AND CONNECTION DIMENSIONS

versions: 2URESA1;A3;A2;A4...M1...; ...NB...; ...NE...;

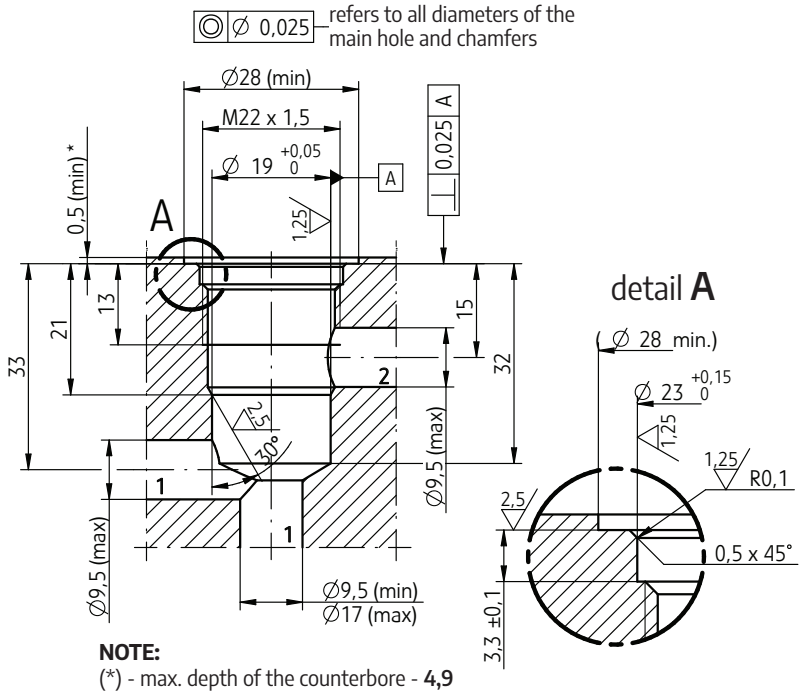
versions: 2URES6**A1; A2; A3; A4...**

versions: 2URES6**A2; A4...** **...NB...** **...NE...**

versions: 2URES6**A1; A3...** **...NB...** **...NE...**



connection dimensions M - 06 - 2 (M22 × 1,5; 2-way)
tightening torque **Md = 50 ÷ 55 Nm**



NOTE:
(*) - max. depth of the counterbore - **4,9**

1. O-ring 18 × 2,65 – 1 pc / set
2. O-ring 15,6 × 1,78 – 1 pc / set
3. Back-up ring 19 × 16,2 × 0,7 – 2 pc / set
4. Coil with a plug-in connector type ISO 4400 12 V DC; 24 V DC; 110 V AC; 230 V AC
5. Plug-in connector type ISO 4400 (DIN 43650 – A) 12 V DC; 24 V DC
6. Plug-in connector type ISO 4400 (DIN 43650 – A) 110 V AC; 230 V AC with rectifie
7. Coil with AMP Junior connector 12 V DC; 24 V DC; plug-in connector (not shown in the drawing) must be ordered separately – data sheet WK 499 963
8. Solenoid version with stroke setting by rotated knob without detent, type **NE**
9. Solenoid version with stroke setting by rotated knob with detent, type **NB**
10. Space required to remove the plug-in connectors - item 5; 6

NOTES:
Consider an additional space ~ 50 mm for removing the coils pos. 4; 7.

PERFORMANCE CURVES

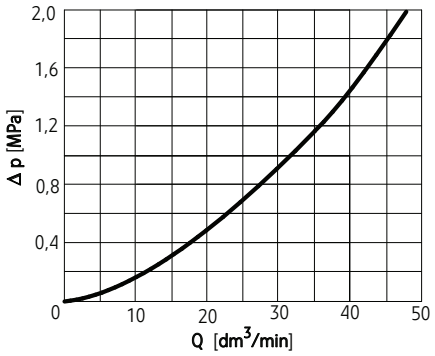
measured at viscosity ν = 41 mm²/s and temperature t = 50 °C

Flow resistance curves

Pressure resistance **Δp** in relation to flow **Q** for directional cartridge valve type **2URES6...**

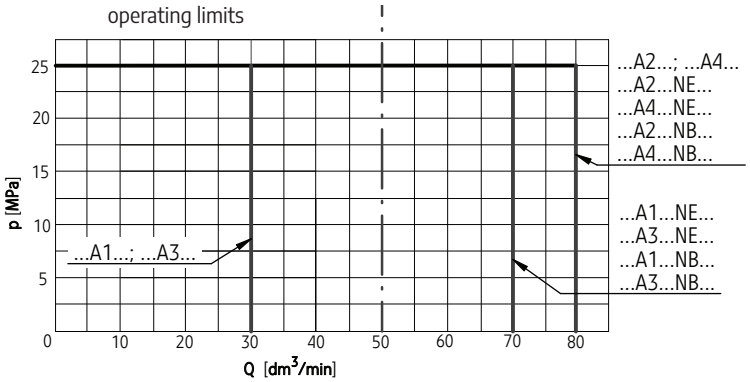
versions:
...**A1**...; ...**A2**...; ...**A3**...; ...**A4**...

flow direction:
2 → 1



Operating limits

Characteristic curves **p - Q** for direction: **2 → 1**



HOW TO ORDER

2	URES	6		–		/	2	M1						
1		2	3		4		5	6	7	8	9	10	11	

1 Number of service ports
2-way = **2**

2 Nominal size (NS)
NS6 = **6**

3 Design version
(diagrams according to page 1)
version **...A1...** = **A1**
version ...A2... = A2
version **...A3...** = **A3**
version ...A4... = A4

4 Series number
(12 ÷ 19) connection and installation dimensions unchanged = 1X
series 16 = **16**

5 Number of working positions
2-position valve = **2**

6 Type of connection
cavity M22 × 1,5 = **M1**

7 Control voltage for solenoids
12 V DC = G12
24 V DC = **G24**
110 V AC 50 Hz (with rectifier) = W110R
230 V AC 50 Hz (with rectifier) = **W230R**

8 Manual override
solenoids without manual override = ∅
with stroke setting by rotated knob= NE
with stroke setting by rotated knob with detent = NB

9 Electrical connection
ISO 4400 (DIN 43650-A) without LED = Z4
ISO 4400 (DIN 43650-A) with LED = Z4L
AMP Junior without plug-in connector – only for 12 V DC; 24 V DC (see pos. 7)= J

10 Sealing
NBR (for fluids on mineral oil base) = ∅
FKM (for fluids on phosphate ester base) = V

11 Further requirements = *
(to be agreed with the manufacturer)

NOTES:
∅ indicates that the box should be left blank.
The **symbols in bold are** the preferred versions available in short delivery time.
Coding example: **2URES6 A1 - 16 / 2 M1 G24 Z4**