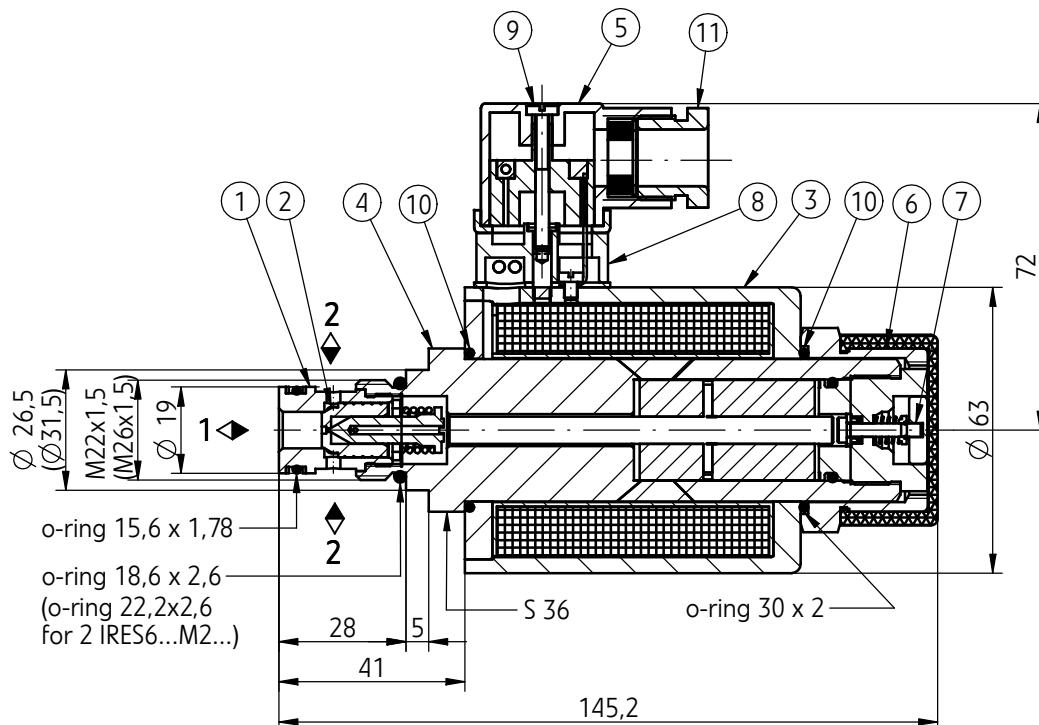


### CATALOGUE - SERVICING INSTRUCTION

#### APPLICATION

The electrically operated valve type 2IRES6... is used for controlling of oil flow in hydraulic systems. It is used for cartridge fitting in mining underground excavation. The valve is certified with  $\text{Ex}$  IM1EX ia I, and can work with outlet explosion proof circuit "ia" or "ib" of the power pack permitted for group I in gas explosion at maximum parameters  $U_i = 15V$ ,  $I_i = 1,6A$

#### OVERALL DIMENSIONS



#### DESCRIPTION OF OPERATION

To open or close oil flow is done by changing position of cone (2) in the sleeve (1). The close of the port is secured by putting voltage on coil (3). The coil can be placed in each angle position to the solenoid sleeve. The flow in outlet position from port 1 to port 2 is possible (version A3). It can be made by using the ball stopping the hole in the cone (2). An optional emergency button (7) permits movement of the spool without solenoid. The valve is equipped with explosion proof solenoid type EMSGI – 45. Solenoid is assembled with solenoid sleeve (4) and emergency button (7). There is a coil (3) on the sleeve (4) Outside of coil mounted is socket (8) Inside the socket are diodes. Electrical connection is realized by using plug (5). Power lead must be sealed and immobilized in both types using gland (11). Sealing rings (10) protect the coil against external impacts and prevent from tern of coil after tightening up the nut (6)

## TECHNICAL DATA

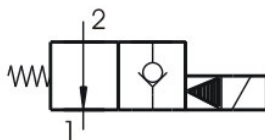
Hydraulic Fluid	Mineral Oil
Relative humidity of air	To 95%
Viscosity range	From 2,8 to 328 mm <sup>2</sup> /s
Optimum working temperature	From 40 to 55°C
Working temperature range	From -20 to 60°C
<b>Required filtration</b>	<b>16 μm</b>
Recommended Filtration	10 μm
<b>Maximum pressure</b>	<b>32 MPa</b>
<b>Maximum flow</b>	<b>30 dm<sup>3</sup>/min</b>
<b>Supply voltage</b>	<b>12 V</b>
Supply current	110 mA
Weight	1,5 kg
<b>Scope of insulation</b>	<b>IP 64</b>
<b>Characteristic of explosion proof</b>	<b>⊕ I M 1 Ex ia I</b>

## ASSEMBLY AND OPERATION REQUIREMENTS

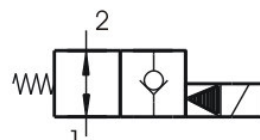
1. Electric connection of the valve must be made according to electric scheme.
2. Conductors of valve must meet requirements applied in the mining machinery.
3. Only skilled workers can direct connect valve to a electrical system.
4. The plug must be supported by retains screw.
5. During the period of operation must be kept the fluid viscosity and filtration according to requirements defined in serving instruction.
6. In order to ensure the failure free and safe operation must be check:
  - Condition of the electrical connection,
  - The verity proper working of the valve,
  - Cleanness of the hydraulics fluid.
7. Repairing of the broken valve must be done by service workshop.
8. A person that operates the valve has to acquaint with Servicing Instruction.

## SCHEMES

graphical symbol

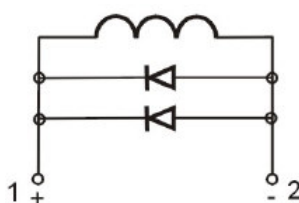


2 IRES 6 A1...

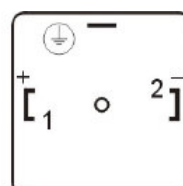


2 IRES 6 A3...

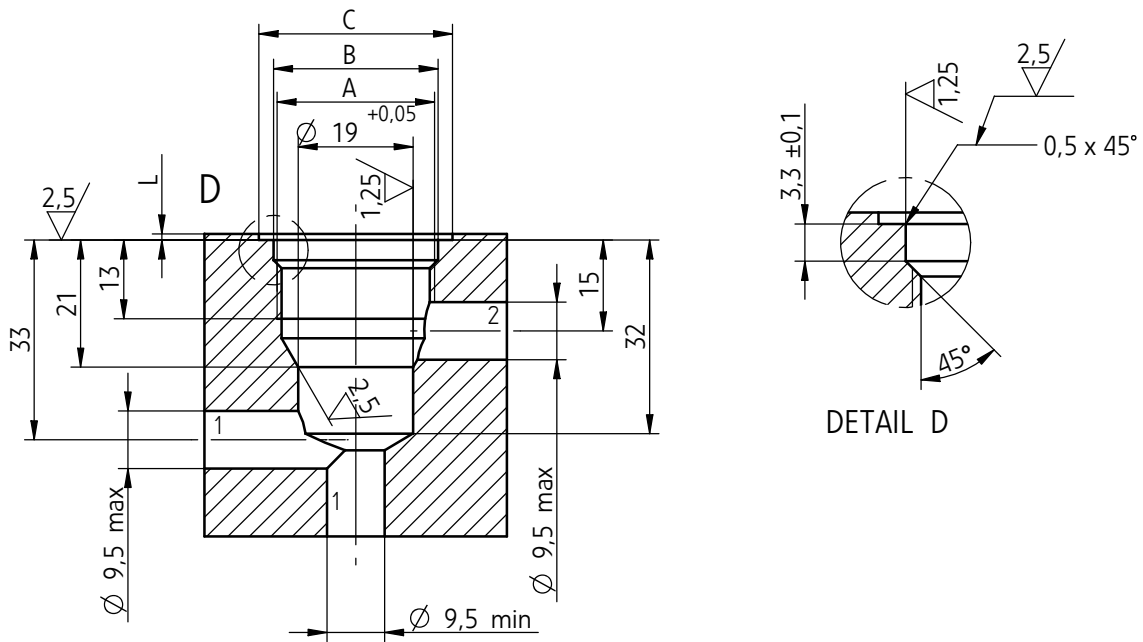
electrical scheme



view of electrical connection



## DIMENSION OF CAVITY

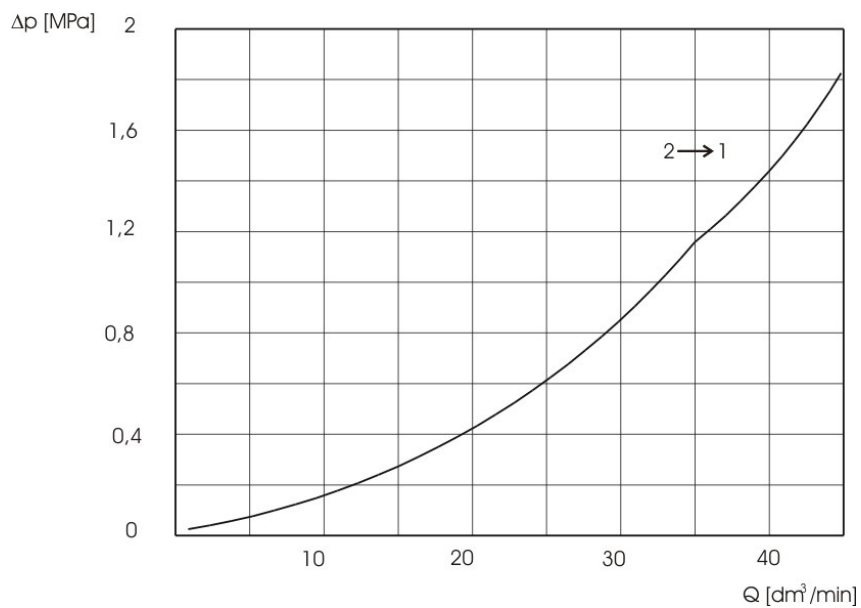


$\phi$  0,025 - Applied to all main hole diameters and phase point  
 Tightening torque of valve 30 Nm.

Port	A	B	C	L
M1	M22 x 1,5	$\phi$ 23 +0,15	$\phi$ 28	1
M2	M26 x 1,5	$\phi$ 27,4 +0,15	$\phi$ 32	5

## PERFORMANCE CURVES oil viscosity $\nu = 41 \text{ mm}^2/\text{s}$ at temperature $50^\circ\text{C}$

### Flow curves



## HOW TO ORDER

Order coded in the way showed below should be forwarded to the manufacturer.

<b>2 IRES 6</b>	<b>-02 / 2</b>		<b>G12</b>	<b>Z4</b>		<b>★</b>
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<b>Hydraulic scheme</b> Scheme A1 = A1 Scheme A3 = A3						
<b>Unit series</b> (02-09) - dimension unchanged = 02						
<b>Number of position</b> Two position = 2						
<b>Mounting method</b> Port M22 x 1,5 = M1 Port M26 x 1,5 = M2						
<b>Control voltage solenoids</b> 12V DC = 12						
<b>Electrical connection</b> Plug in connector = Z4						
<b>Sealing</b> Ruben seal = no code Viton seal = V						
<b>Additional requirements in clear text</b> (to be advanced with the manufacturer)						

Coding example:

2 IRES 6 A1- 02/2 M1 G12 Z4

PONAR Wadowice S.A.  
 ul. Wojska Polskiego 29  
 34-100 Wadowice  
 tel. +48 33 823 44 41 - 45  
 fax. +48 33 823 41 69  
[www.ponar-wadowice.pl](http://www.ponar-wadowice.pl)

