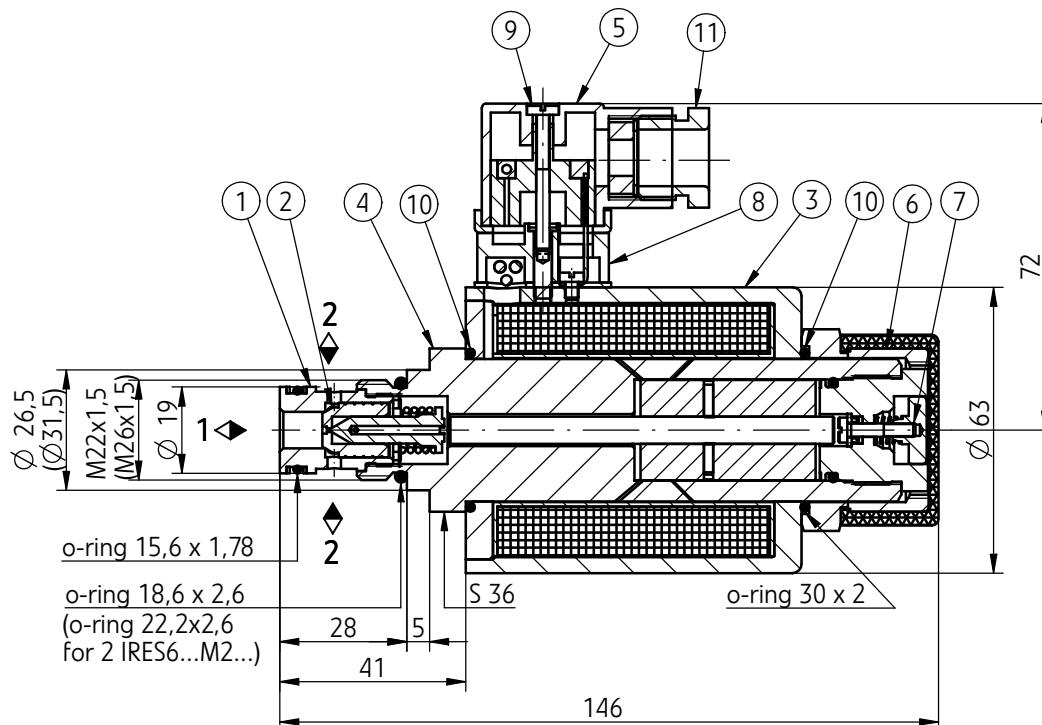


DATA SHEET - SERVICE MANUAL

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  **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 as well as safety device preventing excessive current increase. 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 turn of coil after tightening up the nut (6)

TECHNICAL DATA

Hydraulic fluid	mineral oil
Required filtration	up to 16 μm
Recommended Filtration	up to 10 μm
Nominal fluid viscosity	37 mm^2/s at temperature 55 °C
Viscosity range	2,8 up to 328 mm^2/s
Optimum working temperature	40 up to 55°C
Working temperature range	-20 up to 60°C
Relative humidity of air	up to 95%
Maximum pressure	31,5 MPa
Maximum flow	30 dm^3/min
Weight	1, 5 kg
Supply voltage U_n	12 V
Supply current I_n	110 mA
Scope of insulation	IP 64

ACCORDING TO DIRECTIVE 94/9/WE

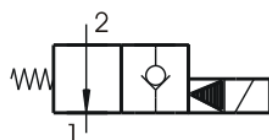
Quality certificate	CE 1026	No. FTZ U 05 ATEX Q 013
Inspection certificate	FTZU 05 ATEX 0068	
Type of protection	 I M 1 Ex ia I	

ASSEMBLY AND OPERATION REQUIREMENTS

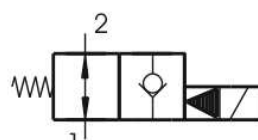
1. Electric connection of the valve must be made according to electric scheme.
2. Conductors of valve must be meet requirements applied in the mining machinery.
3. Only skilled workers can direct connect valve to an electrical system.
4. The plug must be supported by retains screw.
5. During the period of operation must be kept the fluid viscosity and filtration according to requirements defined in Service Manual
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 hydraulic fluid.
7. Any valve repair in the mine condition is forbidden. A damaged valve must be supplied to the producer in order to repair. The address of service is shown on the last page of this Data sheet – Service Manual
8. A person that operates the valve has to acquaint with Service Manual.

SCHEMES

graphical symbol

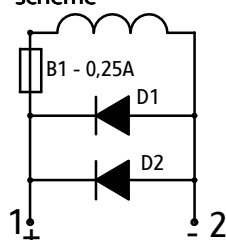


2IRES6 A1...

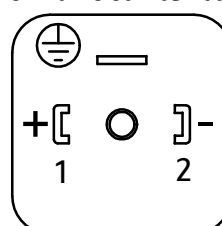


2IRES6 A3...

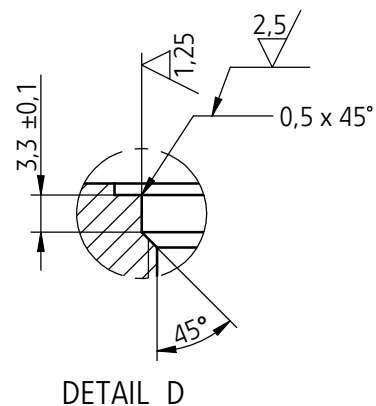
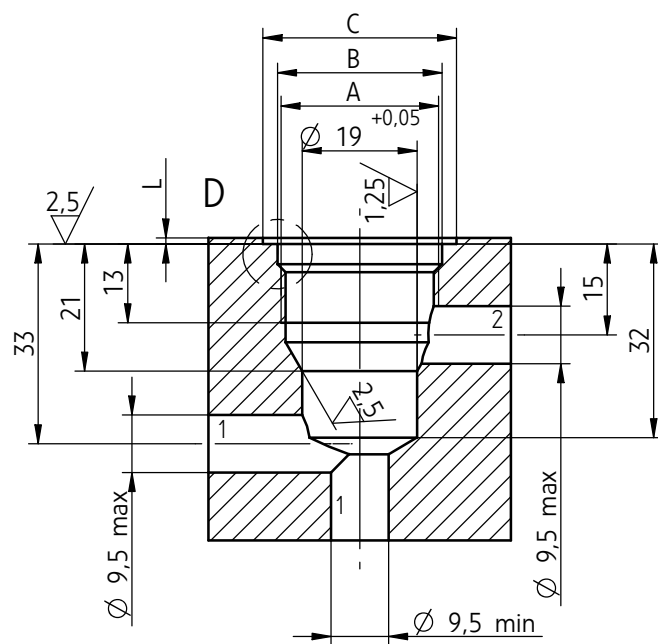
electrical scheme



view of electrical connection



DIMENSION OF CAVITY



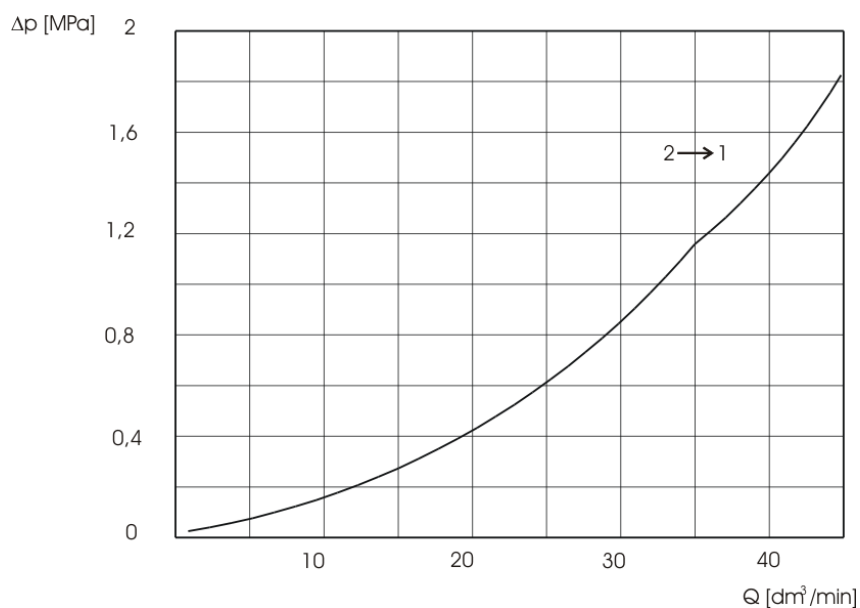
$\odot \phi 0,025$ - Applied to all main hole diameters and phase point
Tightening torque of valve 30 Nm.

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°C

Flow curves



HOW TO ORDER

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

2IRES6	-02 / 2	G12	Z4	★																																								
<table border="1"> <tr> <td> Hydraulic scheme Scheme A1 = A1 Scheme A3 = A3 </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Series number (02-09) – connection and installation dimension unchanged = 02 </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Number of position 2 position = 2 </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Mounting method Port M22 x 1,5 = M1 Port M26 x 1,5 = M2 </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Control voltage solenoids 12V DC = 12 </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Electrical connection Plug in connector = Z4 </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> Sealing NBR (for fluids on mineral oil base) = no code FPM (for fluids on phosphate ester base) = V </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="5"> Additional requirements in clear text (to be advanced with the manufacturer) </td> </tr> </table>					Hydraulic scheme Scheme A1 = A1 Scheme A3 = A3					Series number (02-09) – connection and installation dimension unchanged = 02					Number of position 2 position = 2					Mounting method Port M22 x 1,5 = M1 Port M26 x 1,5 = M2					Control voltage solenoids 12V DC = 12					Electrical connection Plug in connector = Z4					Sealing NBR (for fluids on mineral oil base) = no code FPM (for fluids on phosphate ester base) = V					Additional requirements in clear text (to be advanced with the manufacturer)				
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Coding example:

2IRES6 A1- 02/2 M1 G12 Z4

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