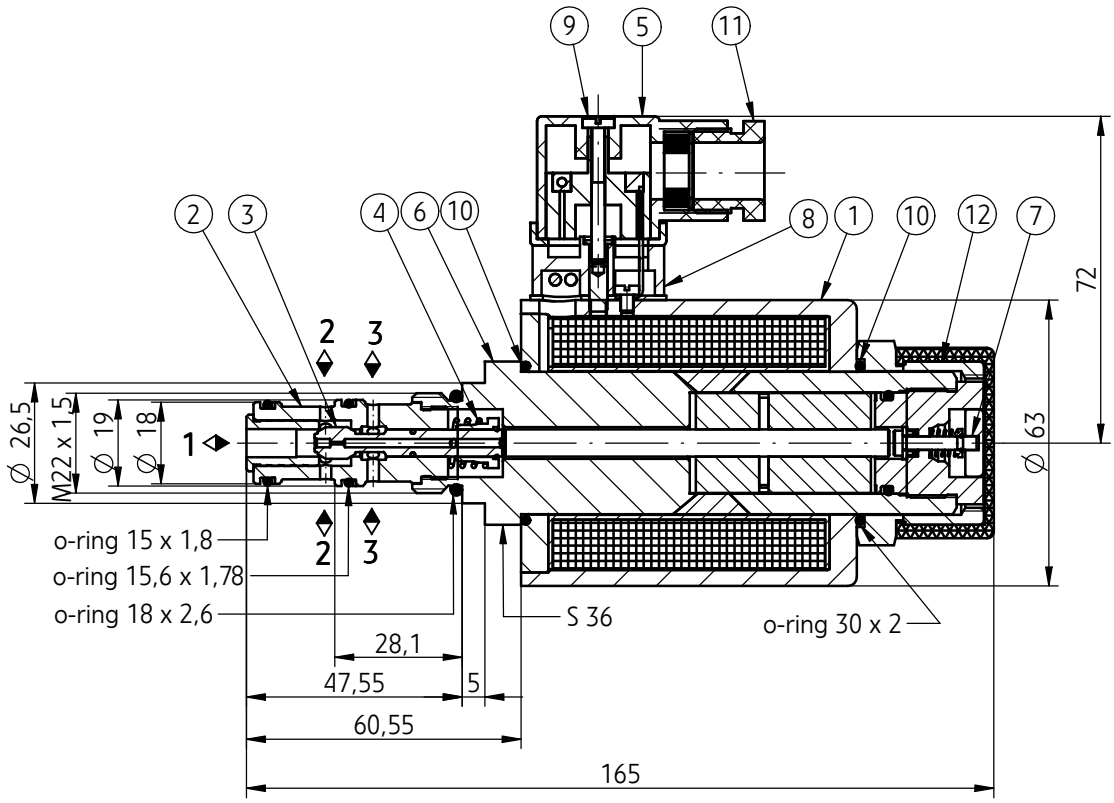
PONAR wadowice	Three-way explosion proof directional control valve type 3 IREH 6			WK 499 296
	NS6	32 MPa	20 dm³/min	09.2007

CATALOGUE - SERVICING INSTRUCTION

APPLICATION

The three-way directional control valves are designed as direct operated components for subplate mounting. These valves are mainly used in hazardous areas especially in mining industry. It is certified with ⟨Ex⟩ I M1 Ex ia I, and can work with outlet explosion proof circuit "a" or "b" of the power pack permitted for group 1 gas explosion at maximum parameter Ui=15V, Ii-1,6A.

OVERALL DIMENSIONS



DESCRIPTION OF OPERATION

The directional valve is switched by changing position of the spool (3) witch moving along its axis separates or connects ports "**1**", "**2**", "**3**" in the sleeve (2). The move of the spool is secured by the putting voltage on coil (1) through the plug (5). The return of the spool is realized by the spring (4). The coil can be placed in each angle position to the sleeve (6). 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 sleeve and emergency button. There is a coil (1) on the sleeve (6). 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 by using gland (11). Sealing rings (10) protect the coil against external impacts and prevent from moving coil after tightening up the nut (12).

TECHNICAL DATA

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

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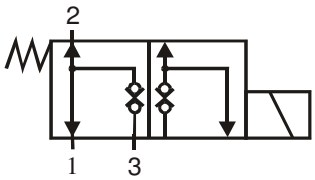
ASSEMBLY AND OPERATION REQUIREMENTS

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 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.

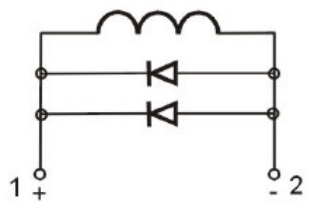
SCHEMES

graphical symbol

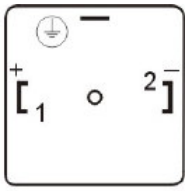


3 IREH 6 D2...

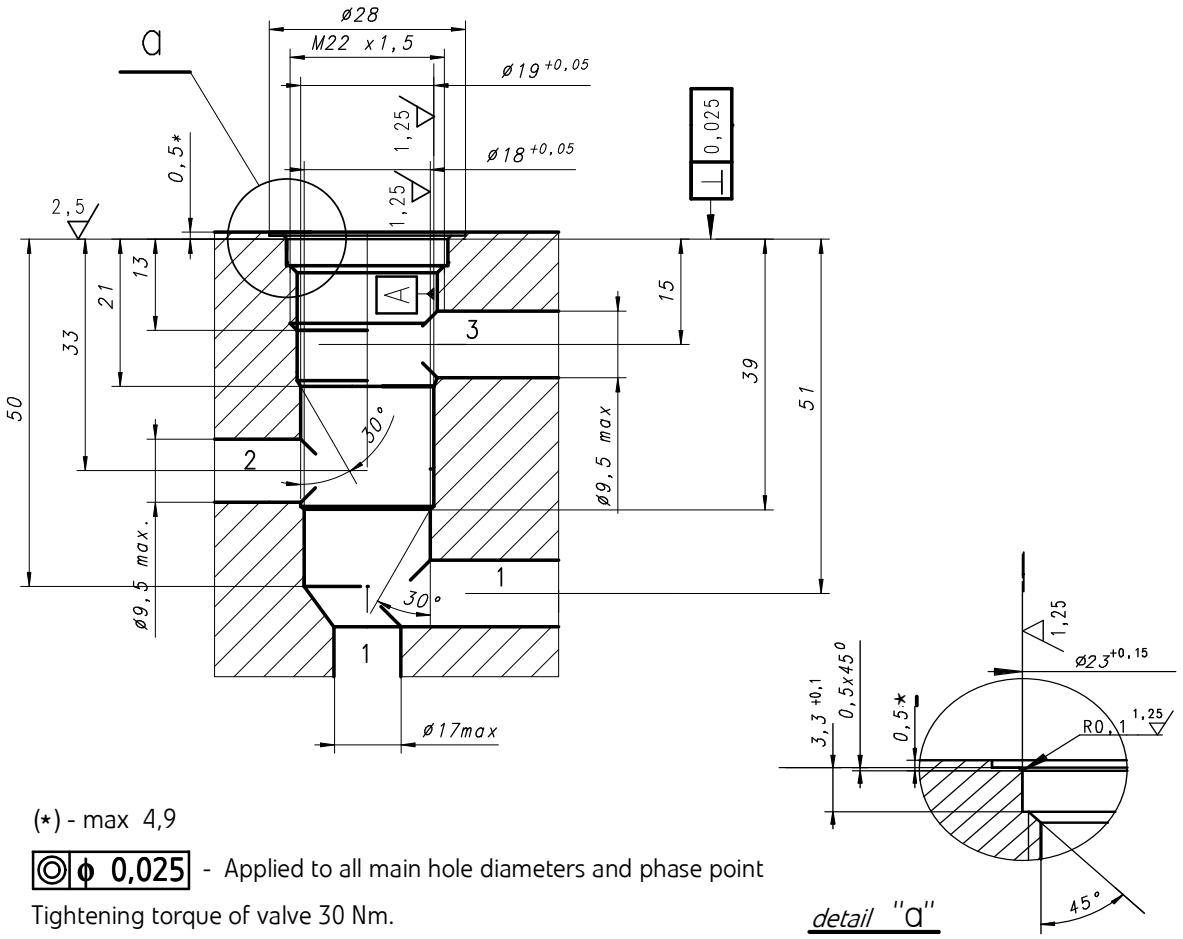
electrical scheme



view of electrical connection



DIMENSION OF CAVITY



(*) - max 4,9

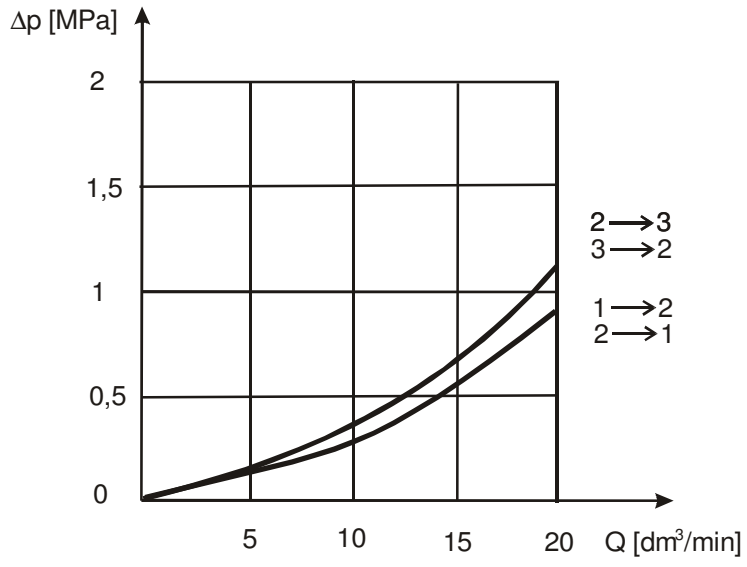
⌀ ϕ 0,025 - Applied to all main hole diameters and phase point

Tightening torque of valve 30 Nm.

PERFORMANCE CURVES

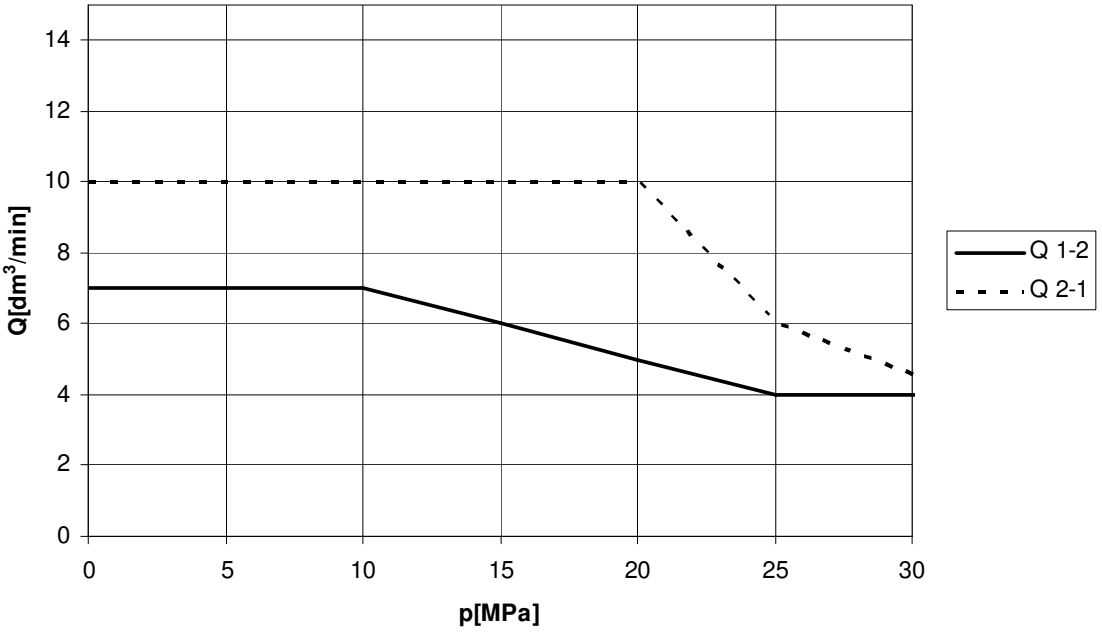
oil viscosity ν = 41 mm^2/s at temperature 50°C

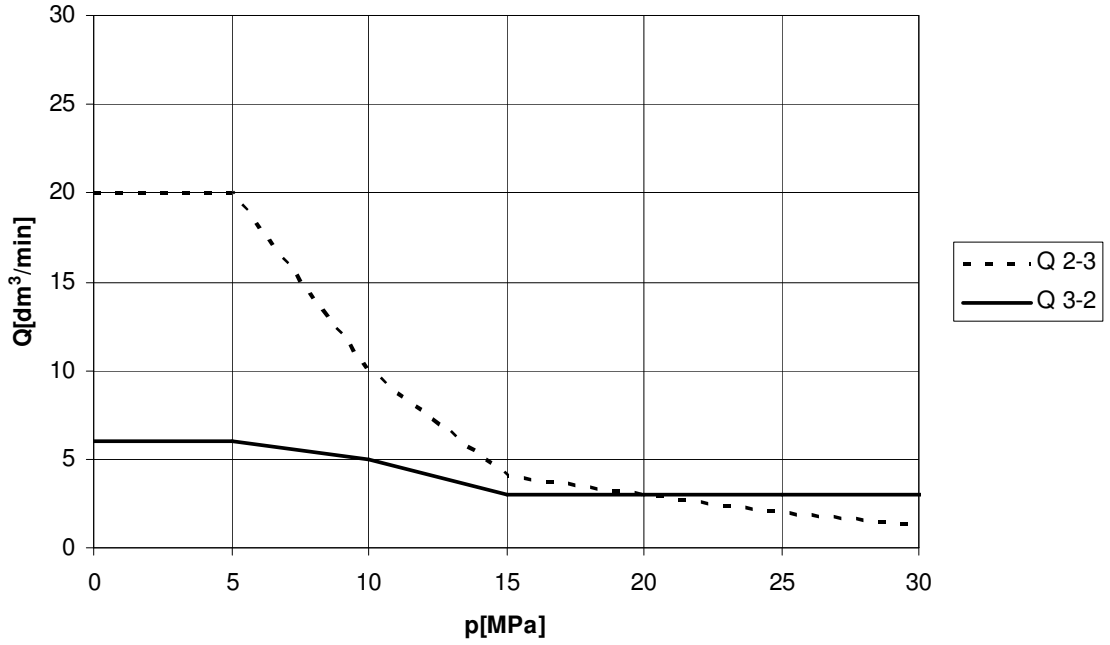
Flow curves



PERFORMANCE CURVES oil viscosity ν = 41 mm^2/s at temperature 50°C

Limitary flow curves





HOW TO ORDER

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

3 IREH 6	D2	–	02	/	2	M1	G12	Z4		★

Hydraulic scheme
Scheme D2 = D2

Unit series
02 - (02-09) - dimension unchanged = 02

Number of position
Two position = 2

Mounting method
Port M22 x 1,5 = M1

Control voltage solenoids
12V DC = G12

Electrical connection
Plug in connector = Z4

Sealing
Ruben seal = no code
Viton seal = V

Additional requirements in clear text
(to be advanced with the manufacturer)

Coding example:

3 IREH 6 D2 - 02/2 M1 G12 Z4

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