

## SHUT-OFF VALVES TYPE ZO

### FUNCTION:

Shut-off valves type ZO are designed to shut-off or divert a flow of steam, liquids and inflammable gases.

### DESIGN VARIATIONS:

Shut-off valves type ZO are available in three design variations, depending on the valve mode of operation:

ZO-21 – globe type valve, normally closed (air to open);

ZO-22 – globe type valve, normally open (air to close);

ZO-30 – 3-way diverting valve.

### CONSTRUCTION:

The valve comprises two main functional units: valve body (1) and actuator (2), which are connected by a yoke (3). The valve body is available in three different materials: gray cast iron, ductile iron or carbon steel. The valve seat is made from rolled stainless steel. Valve stem packing as well as stem's hydraulic balancing are provided by elastic, stainless steel bellow. External sealing is provided by SPIRALTHERM sealings. Valve plug is made from stainless steel and sealed by PTFE or ECOFLON II sealing ring. Actuator's main units include:

- Actuator cases /stamped from steel sheet/ that pressurize a diaphragm;
- Rubber diaphragm /made from EPDM with cloth lining having the effective area of 100 cm<sup>2</sup> or 160 cm<sup>2</sup>;
- Spring that is mounted inside the actuator; the spring is already pre-set. All the valves have threaded connections: external, internal or mixed.

Additional accessories:

- welding ends,
- screwed - in flanges.

### PRINCIPLE OF OPERATION:

The pre-set tension of the actuator spring causes valve plug pressurizing against the valve seat, which provides for the required shut-off tightness. Air pressure, which is applied above the diaphragm, evokes the force that overrides the spring tension and moves the valve plug from its one limit position to the other. At pneumatic signal failure, the valve plug is moved back to its initial position owing to the spring force.



