



**Valtorc International**

*"Actuated Valve Specialists"*

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## **SOLENOID VALVE INSTALLATION AND MAINTENANCE**

### **A. INSTALLATION**

a.1 Before mounting the valve it is essential to check that the solenoid valve model, the voltage (Volt) and the frequency (Hz) correspond to the characteristics required.

### **B. MECHANICAL PART**

- b.1 Assembly of the solenoid valve must correspond with the flow directions indicated with an arrow on the valve body.
- b.2 If the valves are provided with the caps for protecting the connections, make sure they are removed before assembly.
- b.3 Care should be taken to prevent foreign bodies from entering the valve during the assembly phase, e.g. material chips, dirt, or particles of insulating material such as PTFE tape from the "external" thread connections.
- b.4 Although the valve can be used in any position, the inverted position is not advised since possible impurities could become blocked inside the core tube causing malfunctioning.
- b.5 When installing the valve make sure that the position and surrounding space are sufficient to allow for possible future maintenance or replacement of the coil.
- b.6 Never use a part of the core tube or the coil itself as a lever during the tightening phase, this could cause irreparable damage to the valve.
- b.7 In those installations where impurities, slag, or deposits of various types may infiltrate the fluid, it is advisable to mount a filter upstream to the valve.
- b.8 In case of solenoid valves with holes drilled for supports, use must be made exclusively of these without modifying the holes or anything else on the valve body.
- b.9 For solenoid valves with connections to be welded, please refer to paragraph d.4.

### **C. ELECTRICAL CONNECTIONS**

- c.1 Before connecting the coil to the supply system, make sure that the characteristics conform to the supply voltage.
- c.2 Each coil features two terminals located opposite each other and a ground terminal. The terminals opposite each other are used for energizing the coil and are not polarized. If a plug-in connector is provided the terminals are marked 1 and 2.
- c.3 Where applicable the ground must be connected.
- c.4 The coil should not be energized before being installed on the valve since this could cause it to burn out.
- c.5 Rotate the coil to the most suitable position, loosening and subsequently tightening the upper nut.
- c.6 If the valve body should be subject to condensation or defrosting it is advisable to add a moistureproof O ring.

### **D. WORKING TEMPERATURE**

- d.1 It is normal for the coil temperature to increase during operation; irregular overheating will cause smoke and a smell of burning. In this case the supply must be completely isolated.
- d.2 Care should be taken not to install the valve near to sources of heat or in environments where there could be dissipation of the heat produced by the coil.
- d.3 For special conditions, e.g. high temperatures or particular safety regulations, please consult our office.
- d.4 Particular attention should be paid to the temperature when installing the valves with connections welded.
- d.5 When carrying out welding between the valve connection and the pipe of the system it is necessary to dismantle the coil and check that the temperature of the valve body does not exceed values of 100-150 degrees Celsius (200-300 degrees Fahrenheit). The flame should be regulated so that it does not come into contact with the valve. The body of the latter should be cooled by wrapping it in wet cloth. Should it be impossible to carry out these precautions, we suggest dismantling the parts inside the valve.

### **E. MAINTENANCE**

- e.1 After disconnecting the supply voltage and discharging the pressure, carry out inspection of the valve.
- e.2 Clean and inspect all internal parts and replace them if necessary.
- e.3 Remount all the parts making up the solenoid valve with care, paying great attention to the correct position of each part and protecting the sealing surfaces.
- e.4 Check for tightness and correct operation.

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