

GRANZOW[®] INC.

2300 Crownpoint Executive Dr., Charlotte, NC 28227-6702
Phone (704) 845-2300 Fax (704) 845-2301

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS FOR SOLENOID VALVES

The manufacturer warrants the equipment manufactured by it to be free from defects in materials or workmanship for a period of ninety (90) days from the date of shipment to buyer. If the equipment or any part thereof becomes defective within ninety (90) days from such date, the defective equipment will be replaced or credit allowed therefore at the sole option of manufacturer, but without credit or payment for any labor.

The foregoing is the exclusive remedy of any buyer of manufacturer's equipment. The maximum damages liability of the manufacturer is the cost of replacement of the equipment or part.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITEN, ORAL OR STATUTORY, AND IS EXPRESSLY IN LIEU OF THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. THE MANUFACTURER SHALL NOT BE LIABLE FOR LOSS OR DAMAGE BY REASON OF STRICT LIABILITY IN TORT OF ITS NEGLIGENCE IN WHATEVER MANNER INCLUDING DESIGN, MANUFACTURE OR INSPECTION OF THE EQUIPMENT OR ITS FAILURE TO DISCOVER, REPORT, REPAIR OR MODIFY LATENT DEFECTS INHERENT THEREIN.

THE MANUFACTURER, HIS REPRESENTATIVE OR DISTRIBUTOR SHALL NOT BE LIABLE FOR LOSS OR USE OF THE EQUIPMENT OR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES OR DAMAGES INCURRED BY THE BUYER, WHETHER ARISING FROM BREACH OF WARRANTY, NEGLIGENCE OR STRICT LIABILITY IN TORT.

The manufacturer does not warrant any equipment, part, material component, or accessory manufactured by others and sold or supplied in connection with the sale of manufacturer's products.

CAUTION!

1. PRESSURIZED DEVICES

This equipment is a pressure containing device.

- Do not exceed maximum operating pressure.
- Make sure equipment is depressurized before working on or disassembling it for service.

2. ELECTRICAL

This equipment requires electricity to operate.

- Install equipment in compliance with national and local electrical codes.
- Standard equipment is supplied with NEMA 4 electrical enclosures and is not intended for installation in hazardous environments.
- DISCONNECT POWER SUPPLY TO EQUIPMENT WHEN PERFORMING ANY ELECTRICAL SERVICE WORK.**

A. INSTALLATION

- i. 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

- i. Assembly of the solenoid valve must correspond with the flow direction, indicated by an arrow on the valve body.
- ii. If the valves are provided with caps for protecting the connections, make sure they are removed before assembly.
- iii. 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 the PTFE tape from the "external thread" connections.
- iv. 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.
- v. 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.
- vi. 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.
- vii. In those installations where impurities, slag or deposits of various types may infiltrate the fluid, it is advisable to mount a filter upstream of the valve.
- viii. 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.
- ix. For solenoid valves with connections to be welded, please refer to section D(iv).

C. ELECTRICAL CONNECTIONS

- i. Before connecting the coil to the supply system, make sure that the characteristics conform to the supply voltage.
- ii. 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 on the connector are marked 1 and 2.
- iii. Where applicable, the ground terminal must be connected.
- iv. The coil should not be energized before being installed on the valve, since this could cause it to burn out.
- v. Rotate the coil to the most suitable position, loosening and subsequently tightening the upper nut.
- vi. If the valve body should be subject to condensation or defrosting, it is advisable to add a moisture-proof O-Ring as illustrated in our catalog.

D. WORKING TEMPERATURE

- i. 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 immediately isolated.
- ii. Care should be taken not to install the valve near to sources of heat or in environments where there could be a dissipation of the heat produced by the coil.
- iii. For special conditions, e.g. high temperatures or particular safety regulations, please consult our catalog or contact our technical support.
- iv. Particular attention should be paid to the temperatures when installing valves with connections welded.
- v. 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 212–302°F (100–150°C). 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

- i. After disconnecting the supply voltage and discharging the pressure, carry out inspection of the valve.
- ii. Clean and inspect all the internal parts and replace them if necessary.
- iii. 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.
- iv. Check for tightness and correct operation.