

These general instructions complete the technical specification for each device, assembly drawing and any other document delivered with the valves. Malfunctions, damage, or injury may occur if these instructions are not followed and this may also compromise the warranty conditions.

1. General

This component is not a safety accessory, it is intended only for the compliant use either as an individual component or incorporated in apparatus, machinery and installations. Valves are designed to be operated in accordance with the limits specified in the technical specification, assembly drawing and any other document delivered.

All applicable directives, legislation, orders and standards, as amended from time to time, as well as state-of-the-art practices and procedures must be observed for the intended scope of application of the product. Where applicable, take all appropriate measures to ensure the requirements are met.

Valve conform to European directives 2006/95/CE for low voltage, 2004/108/CE for electromagnetic compatibility and ROHS 2011/65/EU. A declaration of conformity may be issued upon request.

All assembly, operation, use, and maintenance must be performed by qualified and authorised personnel.

Personnel working with the components must be familiar with the applicable safety regulations and requirements relating to the components, apparatus, machinery and electrical installations. In case of problems, please contact

FLUID AUTOMATION SYSTEMS or one of his authorised representatives.

2. Assembly

Preparation :

- Check the preliminary storage conditions required for the component. They must be in accordance with the product's specifications.
- Carefully remove the components from their packaging.
- Power off and depressurize the apparatus, machinery, or installation designed to receive the component. Stipulate poweroff and depressurisation requirements to guard against any unauthorised intervention.
- Make sure that the unit, its components, and their environment are clean, and protect them against a deterioration.
- Do not modify the components.
- Make sure that the fluid is compatible with the materials in contacts.

Connection :

- Connect all the ports of the valve only after having consulted the assembly drawing.
- Connect mechanical, electrical and fluid parts only when the power and pressure is off.
- Clean the surfaces and the conduits that will connect to the valve.
- Be sure to observe the direction of flow of the fluid.
- Use only the provided connection possibilities.
- Ensure that no foreign matter enters the circuit, in particular when making the connection leakproof.
- Be sure to observe the allowed bend radius for tubing; do not restrict the ports for fluid circulation.
- Tubes and connection elements must not exert any force, torque, or strain on the valve.
- Use appropriate tools and locate assembly tools as close as possible to the connection point.
- Consult product datasheets for recommendation on tightening torque.
- Connections must be made to last.
- In order to protect the equipment, install an adequate strainer or filter upstream from and as close as possible to the component.
- All power cables must have a sufficient cross section and a sufficient insulation. They must be installed in a compliant manner.
- Depending on the voltage, electrical components must be grounded according to local standards and regulations.

The electrical connection is either made by detachable spade plug connectors with at least an IP20 protection rating (when properly mounted), by screw terminals embedded in a coil with metal enclosure, by spade terminals, or by flying leads/cables embedded in the coll.

Remarks concerning solenoid valves: Due to their physical design, all solenoids, solenoid-actuated valves have a coil which is equivalent to an inductance.

Switching off the current will create inductive voltage spikes liable to cause electrostatic discharge in nearby wiring. The only way to eliminate these parasitic voltages is in using appropriate attenuation devices such as, diodes, Zener diodes, varistors, RC (resistor/capacitor) components, or filters.

The use of a diode may however impact the performances of the valve. The characteristics and wiring of these devices depend exclusively on specific requirements, which can only be determined individually by the user. Additional protective measures may be required according to the assembly method and the location where the device is used.

3. Operation

Operation is authorised only after having duly verified that the apparatus, machinery or installation in which the valve has been incorporated complies with the applicable directives, legislation, orders and standards, as amended from time to time.

4. Utilisation

- Do not subject the valves to loads or forces other than those for which they are designed.
- Do not operate the valve under pressure unless its ports are connected to conduits.
- The manual override must be actuated with an adequate tool.
- Make sure to prevent the device from Freezing in the event that temperatures fall below +5°C.

The coils are designed for continuous operation and may therefore become hot. If the solenoid valve is easily accessible, provide for means of protection to prevent accidental contact that may cause burns. Do not energize the solenoid-valve if it is not completely assembled. Do not pressurize the solenoid-valve if it is not completely assembled.

5. Maintenance

The disassembling of the valve is under the user's responsibility.

It is recommended to periodically check the correct operation of the valves. The checking and cleaning frequency depends on the type of fluids used, and the operating and environmental conditions.

Before any maintenance work is done, power off and depressurise the valve, machinery or installation to prevent any unauthorised intervention.

Make sure that the component and its environment are clean.

If problems arise during maintenance, please contact **FLUID AUTOMATION SYSTEMS** or one of his authorised representatives.

6. Environment

Components must be disposed in compliance with applicable environmental regulations when taking apparatus or machinery out of service and carrying out their final destruction