Installation and Maintenance Manual
Series VS5300 5 Port Metal Seal Type Solenoid Valves
For future reference, please keep this manual in a safe place.

These safety instructions are intended to prevent a hazardous situation or equipment damage. These instructions indicate the level of potential hazard labeled as “Caution”, “Warning” or “Danger”. To ensure safety, be sure to observe ISO 6464-1, ISO 8434-1 and other safety practices.

CAUTION: Operator error could result in injury or equipment damage.

WARNING: Operator error could result in serious injury or loss of life.

DANGER: In extreme conditions, there is a possible result of serious injury or loss of life.

1. The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications. Since the products specified here are used in various operating conditions, their compatibility for the specific pneumatic system must be based on specifications or after analysis and tests to meet your specific requirements.

Standard specifications

- Valves
  - Single
  - Double
- Leakage rate
  - Single
  - Double

Inspections

Ensure that the air supply system is filtered to 5 microns.

Installation

- Air and power supplies are isolated before commencing installation.
- Do not install these valves in explosive atmospheres.
- If these valves are exposed to water or oil droplets, ensure that they are isolated from any electrical circuit.
- If they are intended to energize a valve for an extended period, please consult SMC.
- If leakage causes associated equipment to malfunction, ensure that a leakage-proof system is put in place. Check fittings while pressure and power are applied. Initial leakage and leakage tests should be performed after installation.
- Only install safety instructions have been read and understood.

Electrical connection DIN connector type

Lamp and surge voltage suppressor

- Single and 100VDC or more
- AC and 100VDC or more

Electrical connection connector type

- Lamp and surge voltage suppressor
- AC and 100VDC or more

Leakage voltage (Fig 6)

- Note: When using a C-R device, voltage suppressor for contact protection, the leakage voltage may increase due to the current leakage flowing through the C-R device.
- Note: Use turbine oil No. 1 (ISO VG 32), if lubricated.
- Use dry-air at low temperature.

CAUTION: Ensure that the air supply system is filtered to 5 microns.

Note 1: ISO 6464-1
Note 2: ISO 8434-1

WARNING

Ensure that both power and air supplies are isolated before removing/replacing connectors. If this occurs, ensure that the system is isolated from any electrical circuits.

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Never use in conditions where vibrations exceed 5G.

5.6VA/50Hz vibration.

Solenoid operated valves should be aligned perpendicular to the valve face. However, in environments that subject the valves to vibration double age may occur.

A BEAP EB2 position single
A BEAP EB2 position double

SM031A

Pilot operator assembly: SF4-...

Pressure
-3 position 1.5 kgf/cm² (150kPa)
-2 position 1.0 kgf/cm² (100kPa)

Belgium
Phone 67-12-90-20
Netherlands
Phone 01-4501822
Austria
Phone 052-34-0022
Switzerland
Phone 021-3211111

3COM +

CAUTION

Isolate both power and air supplies before removing/replacing the manual override.

Non-locking push type (Fig 11)
Non-locking push type (Fig 12)
Non-locking push type (extended type)*A
Lock type (tool type)*B

Separate the body from the valve and install a new O-ring.

Mounting

When dissassembling and reassembling ensure that all components are in their proper guide positions. Prevent gaskets from being torn and torque screws down evenly.

Pilot operator assembly: S4-○

Solenoid valve body

SUP spacer

Individual supply spacer
An individual supply spacer complete with gasket may be fixed between valve and subplate so as to provide an individual pressure supply to any valve.

Individual SUP spacer
VVF3000-P-G1-1 (plug-in type)
VVF3000-P-G2-2 (non plug-in type)

Fig 9

Individual exhaust spacer
An individual exhaust spacer complete with gasket may be fixed between valve and subplate so as to provide an individual exhaust supply to any valve.

VVF3000-R-G1-1 (plug-in type)
VVF3000-R-G1-2 (non plug-in type)

Fig 10

Exhaust block disk
If valve exhaust affects the function of other valves on the manifold then an exhaust block disk may be fitted between the subplates so as to include exhaust galleries.

SUP EDI block disk AXT636-1A

For block plate

Fig 11

Perfect spacer
When fixed between a valve and subplate the perfect spacer can hold an assembly in a fixed position any where along its stroke for a considerable period of time.

VVF3000-22A-1 (plug-in type)
VVF3000-22A-2 (non plug-in type)

Fig 12