

# VGS211F...CS / VG221F...C / VG311F...C

## Installation

### Hydraulic connections

Follow the fluid directions as shown in the diagram below.

Two-way valve

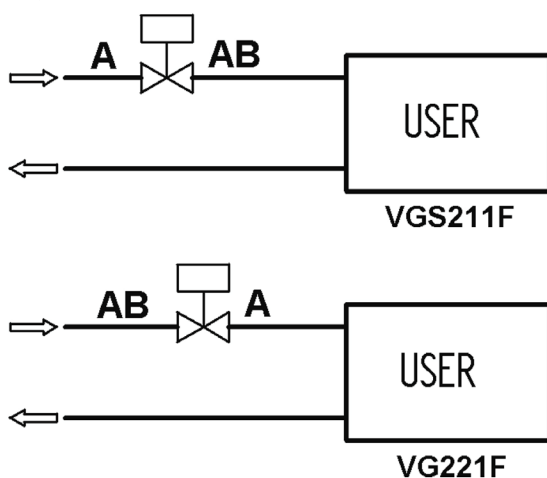


Fig. 1 Variable flow control to the user

It is advisable to install two-way valves on the return leg (excluding steam plants) since the lower temperature of the fluid allows a longer life of the gaskets.

Three-way valve

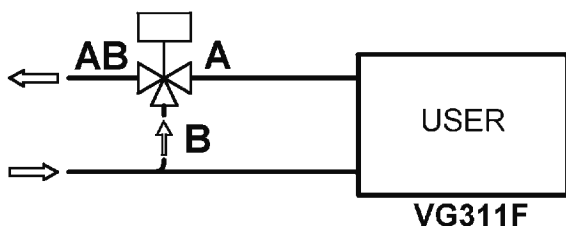


Fig. 2 Variable flow mixing to the user

Three-way valves are designed as a mixing valve with two inlets A and B and one outlet AB, and not as diverting valves with one inlet AB and two outlets A and B.

The VG311F may be used for diverting duties if the recommended differential pressure is reduced to one third of the mixing duty. Performance tables are detailed in the specification sheet.

## Assembling

Before installing the valve, make sure the pipes are clean and free from weld slag in order not to damage the internal parts of the valve itself. The pipes must be perfectly aligned with the valve body and not be subjected to vibrations.

For applications with fluids above 200°C (steam and over-heated water), install expansion joints to avoid the expansion of the pipes to cause undue stress on the valve body.

The valve can be mounted in any position within 180°.

During the actuator position adjustment, do not unscrew the stroke adjustment nut.

The valve must be mounted horizontally in all applications where the high temperature of the fluid, contributes, together with room temperature, to create around the actuator an ambient at a temperature higher than 50 °C, the maximum allowable value for its regular operation.

The actuators must not be installed in explosive environments and must not be subjected to steam jets or dripping water.

Leave sufficient room over the actuator, at least 10-15 cm., to allow the actuator disassembling from the valve body for eventual maintenance.

## Start-up

Before the valve start-up, check:

### Flow direction

It must correspond to the indications printed on the valve body and shown in Fig. 1 and 2.

### Valve opening and closing

This must comply with the plant specification, keep in mind that:

Two-way valves (VGS211F)

Stem down	=	fluid intercepted
Stem up	=	fluid passing

Two-way valves (VG221F)

Stem down	=	fluid passing
Stem up	=	fluid intercepted

Three-way valve (VG311F)

Stem down	=	fluid flows through A-AB
		fluid intercepted through B-AB
Stem up	=	fluid intercepted through A-AB
		fluid flows through B-AB

### Operating conditions

Temperature, nominal pressure and differential pressure on the valve must be within the values specified for each valve model on the relevant data sheets.

### Pipe flushing

An anomalous valve flow action is caused, in almost all cases, by weld slag or foreign bodies entrapped between the valve seat and the plug, often causing damages.

To prevent such inconveniences, it is advisable to use filters upstream of the valve.

Moreover, the pipelines must be thoroughly washed by positioning the valve stem at half stroke; this operation must be performed before start-up and after a prolonged shutdown of the system.

## Maintenance

Stem packing tight check

### VGS211F

Following the hydraulic installation it is necessary to check the tight of the stem packing placed on the bonnet, both in cases of low and high temperatures. The valves require periodic maintenance.

Valves have a stem packing with Teflon rings or, in case of extended neck valves for high temperatures, with packing.

In case of leakage, it is necessary to tighten the gland nut so until leakage ceases. Do not overtighten since this may cause the stem blocking.

### VG311F - VG221F

Valves are equipped with a stuffing box sealed by a double O-ring and, therefore, they do not require any particular maintenance.

In case of irregular leakage, O-Rings and stem packing have to be replaced.



**UK Representative:** Schneider Electric Limited, Stafford Park 5, Telford, TF3 3BL - United Kingdom  
**Manufacturer:** Schneider Electric, Fabriksvägen 1, 137 37 Västerhaninge - Sweden