

Declaration of conformity

According to European standards 90/396/EEC-73/23/EEC-89/336/EEC.

KIWA EU type examination certificate (GAR) certificate number 19GR0652/00 – meets the essential requirements as described in regulation (EU) 2016/426 relating to appliances burning gaseous fuels, reference standard EN161:2011+A3:2013.

Coil care

The coil can only be powered when attached to the valve. The power must be disconnected if the coil is removed from the valve, failure to do this will result in the coil burning out.

Never energise the coil if not fitted to the valve otherwise this will shorten its life and eventually result in failure.

The coil should be securely fitted to valve, loose fitting will shorten the life of the coil.

Surge/spikes should be prevented from reaching the coil as this will result in failure.

The power supply must be within the tolerance indicated otherwise failure of the capacity will occur.

The continuous service (100%ED) causes inevitable coil heating, depending on working environment the coil surface will be very hot. The situation is absolutely normal.

In this procedure document we have endeavored to make the information as accurate as possible.



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Gas Solenoid Valve

Installation and Maintenance Instructions



INTRODUCTION

The Gold Seal GSV solenoid valves are widely used in gas transmission to provide isolation and emergency shut-off.

The valves can be used on various hydrocarbon gases including natural gas, methane and liquid petroleum gas.

OPERATION

The GSV solenoid valves will be normally closed and open quickly when energized. The solenoid valves feature a blue light, which is illuminated when the valve is energized.

There are G1/4 holes on both sides and at the bottom of the valve body for a bypass and gas proving equipment.

TECHNICAL SPECIFICATIONS

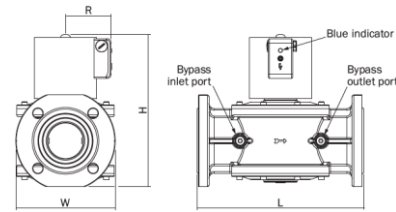
Opening time:	<1 second
Closing time:	< 1 second
Max. Operating frequency:	20 times per minute
Maximum working pressure:	DN65 to DN100
	200 mbar
Integral filter:	IP54
Protection level:	-15 to 60°C
Coil temperature:	65°C
Body connections to:	BS EN 1092
Seal material:	NBR polymer
Body material:	Aluminium alloy
Spring material:	AISI 302 Stainless Steel

ELECTRICAL SPECIFICATIONS

Voltage:	230 V ac & 110 V ac
Rating:	50/60 Hz
Coil Level F:	360° rotation
Suitable for:	Permanent excitation

IMPORTANT: The valve is not explosion proof

DIMENSIONS



Code	L	W	H	R	230V AC Power - W
GSV65F	310	185	283	85	75
GSV80F	310	200	292	85	75
GSV100F	350	250	383	130	150

CAPACITY

The capacity in m³/hr at ΔP = 2.5mbar

Code	Size	m ³ /hr
GSV65F	65	79
GSV80F	80	90
GSV100F	100	190

ELECTRICAL INSTALLATION

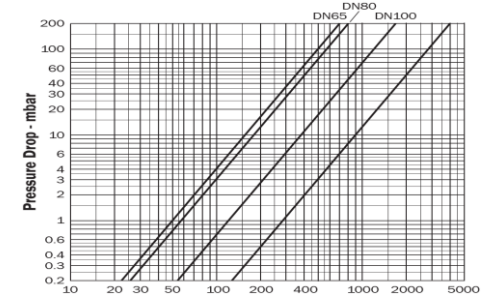
- > Turn off power supply before making electrical connections or servicing any part of the system.
- > Provide a fused isolation switch for the power supply to the actuator.
- > Ensure that wiring is in accordance with local regulations.
- > Use wire which can withstand 105°C ambient.
- > Follow the instructions supplied by the appliance manufacturer.

INSTALLATION

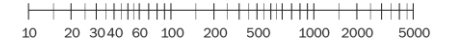
If installing the gas solenoid valve into an existing system;

- > turn off gas supply before starting installation.
- > Disconnect power supply to prevent electrical shock and/or equipment damage.
- > Take care to ensure that dirt cannot enter the gas valve during handling and installation.

PRESSURE DROP CHART



Based on +15°C, 1013 mbar, dry **Air Flow - Nm³/h**



Based on $f = 1.24$ **Natural Gas Flow - Nm³/h**

$$dv = \frac{\text{Gas density}}{\text{Air density}} \quad f = \sqrt{\frac{\text{Relative density of air}}{\text{Relative density of gas}}}$$

Gas	Density kg/m ³	dv density ratio	f correction factor
Air	1.29	1.00	1.00
Natural gas	0.84	0.65	1.24
Liquid gas	2.19	1.70	0.77

General installation recommendations;

- > The GSV gas solenoid valve should be mounted directly in a horizontal pipeline with the actuator upper most.
- > Check that the site conditions comply with the technical specification of the valve.
- > The flow direction arrow on the valve body must match the direction of flow.
- > Thoroughly purge the pipeline before installing the valve to prevent debris entering the valve, damaging the diaphragm and causing premature failure.
- > A gas filter should be installed upstream of the valve to prevent the ingress of debris to prolong the interval between services and the life of the valve.
- > If installed outdoors in harsh environment the valve should be protected accordingly.
- > If recommended, install a bypass around the gas solenoid valve to aid isolation and future maintenance.
- > If the valve fails to open or close check that the power supply is connected correctly and switched. Also check the pressure within the system is within the technical specification of the valve.
- > The solenoid, if not installed on the valve, should be stored indoors between 0 to 40°C with a relative humidity of 80% or less, it should not be stored in the open air.