

## 2/2-WAY SOLENOID VALVE, SERVO OPERATED, FOR STEAM APPLICATIONS



## Description:

- 2/2-way valve
- poppet valve with membrane sealing
- servo operated
- female thread ISO228
- duty cycle 100% (VDE0580)
- optional installation position, preferable standing magnet
- close muting
- TÜV-design approved

## Application area:

- viscosity 22mm<sup>2</sup>/s
- media temperature -10°C to +150°C
- ambient temperature -10°C to +60°C
- operating pressure 0,1 upto 10bar
- minimum pressure has to be there as differential pressure
- IP65 (with correct installed connector plug) DIN40050 --> DIN EN 60529
- for hot water and steam

## References:

For contaminated fluids insertion of a strainer is recommended.

At operating state temperature (DC) the input power of a coil decreases by up to ca. 30% due to physical reasons.

**Attention!** The conditions imposed on the Ex approvals lead to reduction of the permissible standard temperature ranges in the cases of explosion protected solenoids.

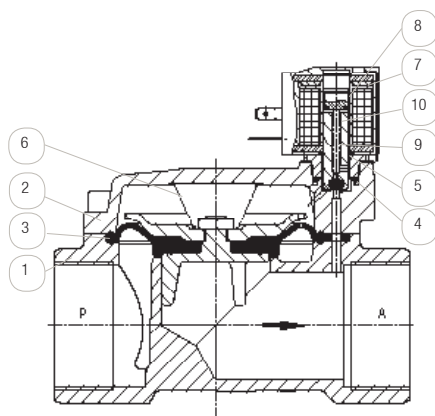
## Comments:

Only minor solenoid force is required, because a pilot hole uses the pressure difference.

Please note the **flow direction** (marked with arrow on the body) during installation. **Voltage tolerance +10% / -10%** at maximum pressure and standard ambient temperature.

Other tensions and coil powers as well as sealings on request. You find these in the catalog under „Spare parts and accessories“. Included in the scope of supply is the **connector plug**. You find more connector plugs under accessories and spare parts in the catalog. On request a **higher protection class** than IP65 is possible, with special coils and connector plugs.

**Thread ISO 228:** The norm describes the thread connection of a parallel male thread with a parallel female thread and is marked with „G“.



Pos.	Component	Brass		Optional material
1	Body	CW617N	A	-
2	Cover	CW617N		-
3	Membrane	HNBR	H	-
4	O-ring	HNBR		-
5	O-ring	HNBR		-

## Wear parts:

- Pos. 3: Membrane
- Pos. 6: Pressure spring
- Pos. 7: Magnet coil
- Pos. 8: Tubus
- Pos. 4: O-ring
- Pos. 9: Pressure spring
- Pos. 10: Plunger
- Pos. 5: O-ring

For details about the order code see "Order information". An overview of the complete material code you can find at the beginning of each product section of the product catalogue.

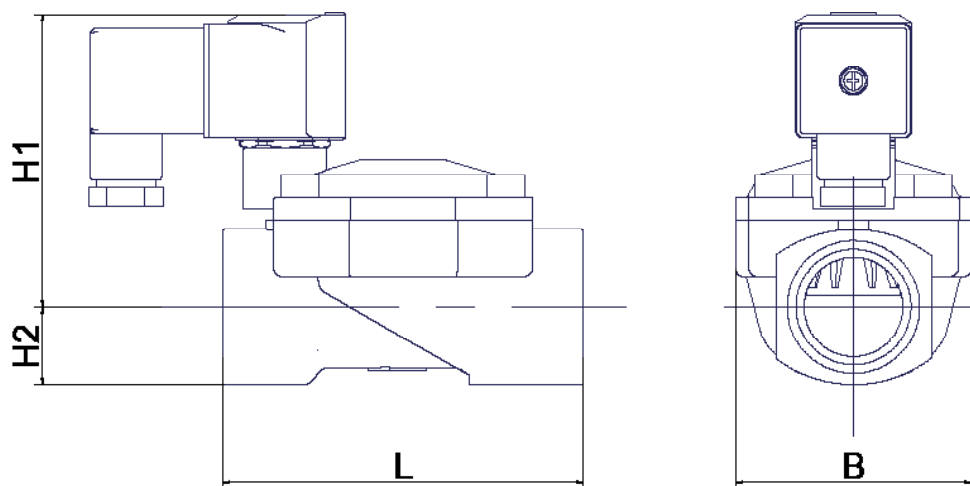
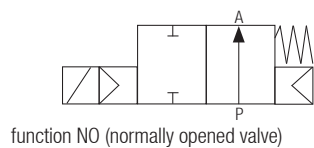
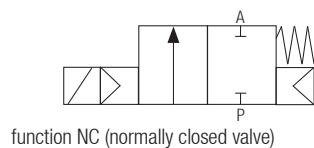
You find an overview of the complete material code in the catalog at the beginning of the respective product group.

**\*Please also pay attention to the differing medium temperature:**

- EPDM upto max. 120°C

## Options:

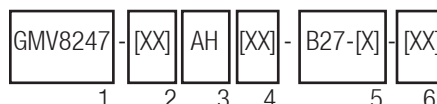
- NO: opened in rest position upto nominal size 3mm
- OF: free of oil and grease
- CV: body chemical nickel-plated
- HA: manual override upto nominal size 3mm
- NPT: pipe thread ANSI B 1.20.1



Matchcode	Size [inch]	Nomi- nal size [mm]	Operating pressure [bar]			L [mm]	H1 [mm]	H2 [mm]	B [mm]	Weight [kg]	Kv* [m³/h]	Power coil	
			min.	max. AC	max. DC							AC*	DC
GMV8247-02AH80-B27-x	G 1/4	8	0,1	10	10	60	67	11,5	44	0,5	1,7	15/12VA	8W
GMV8247-03AH100-B27-x	G 3/8	10	0,1	10	10	60	67	11,5	44	0,5	2,7	15/12VA	8W
GMV8247-04AH120-B27-x	G 1/2	12	0,1	10	10	67	67	14	44	0,5	3,4	15/12VA	8W
GMV8247-05AH200-B27-x	G 3/4	20	0,1	10	10	80	71,5	16,5	50	0,7	5,5	15/12VA	8W
GMV8247-06AH250-B27-x	G 1	25	0,1	10	10	95	77	20,5	62	1	8,5	15/12VA	8W

\*Power coil AC: Declared are the power suit and the holding power.

\*KV-Value: The nominal pressure of Kv to VDI / VDE 2173 indicates the water amount in m³ / h, found out at a pressure difference  $\Delta p = 1 \text{ bar}$  and a media temperature from +5°C to 30°C.



#### Appointment details:

1: Basistype: GMV8247

2: Connection size: 02-06

3: Material:

- 1. body material: A (brass)
- 2. sealing: H (HNBR)

4. Nominal size in 1/10mm (s. chart)

5: Operation:

- Indication of the coil type: B27
- Indication of the tension:  
0: 230V AC  
1: 24V DC  
Other tensions on request.

6: Options (see „Options“)

Demands on your application conditions that are not listed on the data sheet, can be requested!

The guide book and the maintenance guidelines, particularly the given safety instructions have to be paid attention to before the installation!

## Heating and power of solenoid coils

default solenoid valves are designed for continuous operation (100% ED = power-on time) under normal operating conditions. The pulling force of a solenoid coil is basically influenced by three elements:

- the self-heating of the magnet coil
- the medium temperature
- the ambient temperature

Solenoid coils are by default designed for a maximum ambient temperature of +60 °C. This specification applies for the maximum allowable operating pressure specified in the data sheet of the corresponding valve, 100% duty cycle and a medium temperature of +150 °C.

Operating temperature solenoid (DC) reduces the power consumption. For physical reasons up to approx. 30%.

## Heating and power of solenoid coils

default solenoid valves are designed for continuous operation (100% ED = power-on time) under normal operating conditions. The pulling force of a solenoid coil is basically influenced by three elements:

- the self-heating of the magnet coil
- the medium temperature
- the ambient temperature

Solenoid coils are by default designed for a maximum ambient temperature of +35 °C. This specification applies for the maximum allowable operating pressure specified in the data sheet of the corresponding valve, 100% duty cycle and a medium temperature of +90 °C.

A higher ambient temperature is possible, when lower values are applied for the other influencing parameters. When the max. operation pressure and max. ambient temperature of +50 °C is given the medium temperature is not allowed to be higher than max. +50 °C. In addition to that, deviations from the default design temperature range are possible, e.g. when temperature coils or other constructive measures are used. Please contact the MIT headquarters to discuss the specific application.

More precise specifications and technical data with regard to the operating conditions can be found in the data sheets of the solenoid coils and the solenoid valve regarded. Please observe that the surface temperature of a permanently loaded coil can amount up to +120 °C, solely by the self-heating of the coil. The power consumption of our default solenoid valves was calculated to DIN VDE 05820 for a coil temperature of +20 °C.