Strong Basis. Individual Solutions.

3/2-WAY SOLENOID VALVE, DIRECT OPERATED SEAT VALVE

**Type:** GMV7500

**Errors and changes excepted. Revision: 11/2018-004**

**SYSTEM VALVES**

**Range of application:**
- viscosity 22mm²/s
- medium temperature -10°C up to +80°C
- ambient temperature: -10°C up to +35°C
- working pressure from 0 bar no pressure difference required
- for pressure ranges up to 160 bar
- IP65 (with a professionally installed connector socket) according to DIN 40050
- for hot and cold water, oil and air

**Description:**
- 3/2-way valve in G 1/4"
- valve in poppet design
- direct operated
- female thread acc. to ISO228
- duty cycle 100% (VDE0580)
- any installation position (solenoid upright is preferred)
- connector plug acc. to EN 175301-803 or terminal box (depending on the solenoid design)

**Comments:**

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

- Higher pressure ranges are possible.

- Other voltage, coil power or sealing on request! These can be found in the catalog under "spare parts and accessories". Included is the **connector socket GS02 (28x28mm)**. Further connector sockets can be found in the catalog under square parts and accessories. **Higher protection class** than IP65 is possible with special coils and connector sockets.

- **Threads according to EN 228**: It describes the threaded connection of a parallel male thread with a parallel female thread and is marked with "G".

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<table>
<thead>
<tr>
<th>pos.</th>
<th>part</th>
<th>brass</th>
<th>stainless steel</th>
<th>optional material</th>
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<td>brass</td>
<td>A</td>
<td>O</td>
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<td>seat nozzle</td>
<td>up to 2mm: PTFE</td>
<td>up to 2mm: PTFE</td>
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<td>&gt;2mm: FKM</td>
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<td>up to 2mm: PTFE</td>
<td>&gt;2mm: FKM</td>
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<td>1.4310</td>
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<td>&gt;2mm: FKM</td>
<td>V</td>
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<td>8</td>
<td>tube</td>
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</tr>
<tr>
<td>9</td>
<td>plunger</td>
<td></td>
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</tr>
</tbody>
</table>

**wear parts (can vary depending on the valve design):**
- valve disc
- spring
- spring
- tube
- plunger
- solenoid
- connector socket

**options:**
- **NO**: opened in rest position
- **HA**: manual override
- **OF**: free of oil and grease
- **CV**: chemically nickel plated body
- **UN**: universal design, bidirectional flow-through
- **NPT**: pipe thread ANSI B 1.20.1
- **EX**: explosion protection acc. to ATEX:
  - Ex II 2G Ex m II T4
  - Ex II 2G Ex em II T4
- **AA**: sealed plunger spot
- **HD**: high pressure application

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An overview of the complete material code you can find at the beginning of each product section of the product catalogue.

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References:

For contaminated fluids insertion of a strainer is recommended.

At operating state temperature 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.

Higher pressure ranges are possible.

Other voltage, coil power or sealing on request! These can be found in the catalog under "spare parts and accessories". Included is the **connector socket GS02 (28x28mm)**. Further connector sockets can be found in the catalog under square parts and accessories. **Higher protection class** than IP65 is possible with special coils and connector sockets.

**Threads according to EN 228**: It describes the threaded connection of a parallel male thread with a parallel female thread and is marked with "G".
## 3/2-WAY SOLENOID VALVE, DIRECT OPERATED SEAT VALVE

**Type:** GMV7500

### System Valves

**Strong Basis. Individual Solutions.**

**GMV7500-02xT10-x-x**

- **1/4 inch**
- **Working pressure:** 40 [bar]
- **L:** 72 [mm]
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.06 [m³/h]

**GMV7500-02xT15-x-x**

- **1/4 inch**
- **Working pressure:** 32 [bar]
- **L:** 72 [mm]
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.09 [m³/h]

**GMV7500-02xT20-x-x**

- **1/4 inch**
- **Working pressure:** 20 [bar]
- **L:** 72 [mm]
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.13 [m³/h]

**GMV7500-02xT25-x-x**

- **1/4 inch**
- **Working pressure:** 14 [bar]
- **L:** 72 [mm]
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.16 [m³/h]

**GMV7500-02xT30-x-x**

- **1/4 inch**
- **Working pressure:** 10 [bar]
- **L:** 72 [mm]
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.2 [m³/h]

**GMV7500-02xT40-x-x**

- **1/4 inch**
- **Working pressure:** 7 [bar]
- **L:** 72 [mm]
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.35 [m³/h]

**GMV7500-02xT50-x-x**

- **1/4 inch**
- **Working pressure:** 4 [bar]
- **L:** 72 [mm]
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.5 [m³/h]

**High pressure application:**

**GMV7500-02xT10-x-x-HD**

- **1/4 inch**
- **Working pressure:** 160 [bar]
- **L:** on request
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.06 [m³/h]

**GMV7500-02xT15-x-x-HD**

- **1/4 inch**
- **Working pressure:** 130 [bar]
- **L:** on request
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.09 [m³/h]

**GMV7500-02xT20-x-x-HD**

- **1/4 inch**
- **Working pressure:** 100 [bar]
- **L:** on request
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.13 [m³/h]

**GMV7500-02xT25-x-x-HD**

- **1/4 inch**
- **Working pressure:** 70 [bar]
- **L:** on request
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.16 [m³/h]

**GMV7500-02xT30-x-x-HD**

- **1/4 inch**
- **Working pressure:** 50 [bar]
- **L:** on request
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.2 [m³/h]

**GMV7500-02xT40-x-x-HD**

- **1/4 inch**
- **Working pressure:** 30 [bar]
- **L:** on request
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.35 [m³/h]

**GMV7500-02xT50-x-x-HD**

- **1/4 inch**
- **Working pressure:** 16 [bar]
- **L:** on request
- **H1:** 28 [mm]
- **H2:** 7 [mm]
- **H3:** 40 [mm]
- **B:** 1.9 [kg]
- **CV**: 0.5 [m³/h]

**Values:**

- **CV value:** The nominal flow rate CVs acc. to VDI/VDE 2173 shows the water quantity in cubic meter per hour with the valve fully opened, $\Delta p=1$ and the water temperature between 5°C and 30°C.

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### Solenoid Power

**Type**
- **AC***
  - G04: 43VA / 24VA
  - G08: rectifier
- **DC**
  - G20: 9VA
  - G21: 23W

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**Order information:**

1. **Type:** GMV7500
2. **Connection size 02** (see table)
3. **Materials:**
   - 1. digit: body material
     - A=brass
     - O=stainless steel
   - 2. digit: sealing
     - V=FKM
     - T=PTFE (up to nominal size 2mm)
4. **Nominal size in 1/10mm (see table)**
5. **Operation:**
   - 1. digit (3 digits): specification solenoid type (see table / options)
   - 2. digit: specification voltage:
     - 0: 230V AC
     - 1: 24V DC
     - 2: 110V AC (on request)
     - Other voltage on request.
6. **Options** (see "options")

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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 +80 °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.