# Bi Stable Cartridge Valve, DN 5

Product Information


**A. u. K. Müller**

Solenoid valves
Control valves
Special valves and systems

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## Series 50.005.102



## Characteristics

- Servo-controlled
- Pre tested functional unit
- Long term performance capability
- Compact design
- Optimized flow factor Kv for DN 5
- Optimized water hammer characteristic by low noise emission according to EN 60730 and EN 15091
- Easy to assemble and service
- Standard connection
- Cylindrical design
- Low power consumption
- Any fitting position
- Suitable for spray and jet water
- High operating safety through the use of high quality material
- Hygiene benefit by 100% final testing with air

## Applications

- Sanitary fittings
- Electronic faucets
- Irrigation systems
- Industrial appliances
- Pilot system for valves with a larger nominal diameter

## Description

2/2-way solenoid cartridge servo controlled valve of DN 5 in bi stable version, to be used particularly in electronically controlled, battery driven sanitary fittings.

The power consumption is minimised by the use of impulse control (pwm) to increase long term performance, durability and battery life.

The design outline had been reduced so far that integration in appropriate components, while using a minimum amount of space, is given.

Positive properties are extended due to the simple “screw in” version, which supports easy assembly, service and tests by the customer.

The design of a separate valve seat by the customer is not to apply, as otherwise is needed, if a pilot valve will solely be used.

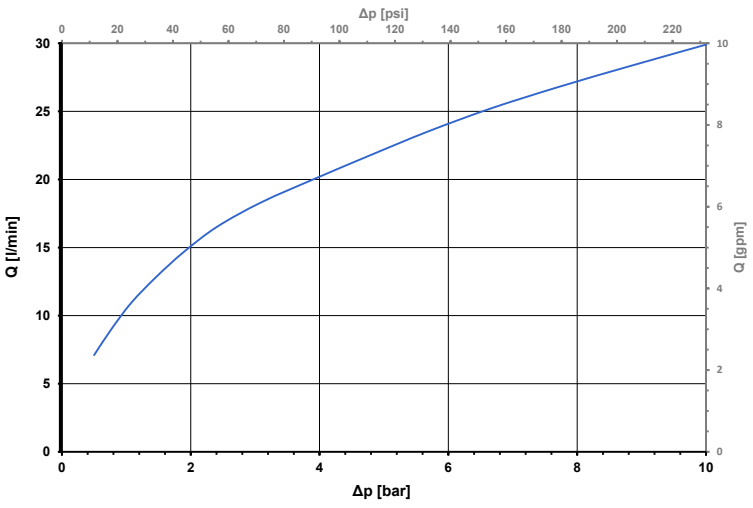
The rate of flow of the cartridge valve has been optimized in such a way, that the nominal diameter of DN 5 fulfils the standard requirements for sanitary tap ware.

## Available Approvals

Approved versions available on request:

- KTW/W270
- WRAS
- ACS
- NSF 61
- Others on request

Typical Performance Curve

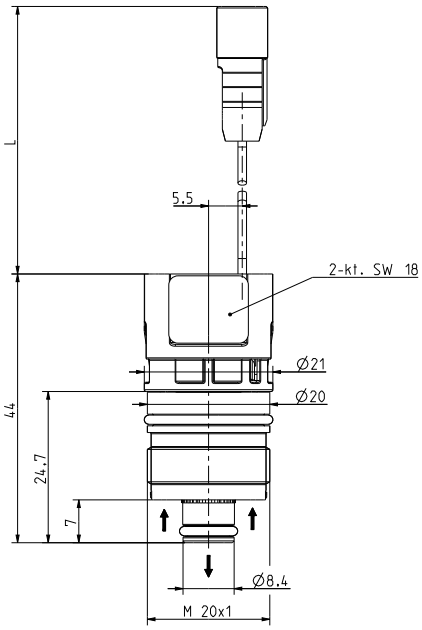



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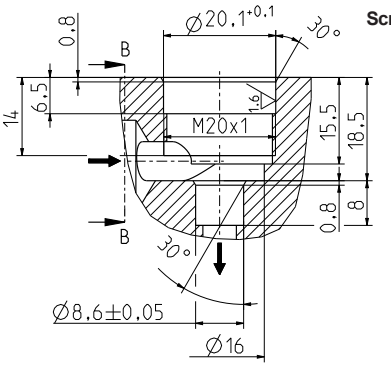
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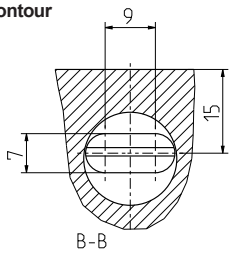



⚠ O-Rings are to be greased before screw-in.

⚠ Max. torque for screw-in: 1Nm




Screw in contour




## Technical Data

| | | |
|---|---|---|
| **Type** | cartridge valve | |
| **Construction** | 2/2-way screw-in, servo controlled | |
| **Function** | bi stable, pulse controlled | |
| **Connection** | thread M20 x 1 | |
| **Fitting position** | any | |
| **Media** | cold and heated potable water and physically and chemically similar media | |
| **T-Medium** | 5 - 70 | °C |
| **T-Ambient** | 5 - 60 | °C |
| **DN** | 5 | mm |
| **p-Operating** | 0,5 - 10,0 | bar |
| **Flow Factor (Kv)** | 10 | l/min |
| **Pressure surge** | according to EN 60730 | |
| **Burst pressure** | according to EN 60730 | |
| **Nominal voltage** | 6 | V DC |
| | other voltages on request | |
| **Operating voltage** | 4,0 - 6,9 V DC open/close<br>at T-Ambient 25 °C | |
| **Pulse shape/-time** | +U<br>10 - 15 ms ON<br>OFF 12 - 15 ms<br>t<br>-U | |
| **Nominal power** | 1,4 W at Un | (< 1,0 W at U = 5 V) |
| **Protection Type** | IP 65 | higher IP-classes on request |
| **Insulation class** | B | according to EN 60730 |

Good resistance to thermal (e.g., T-medium 80 °C / 10 minutes) and chemical disinfection.

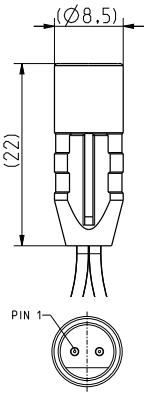
Testing according EN 15091 and adjustment of the valve in the fitting upon request.

## Materials

| | |
|---|---|
| **Valve body** | PA 6/6 |
| **Seal support** | PPSU |
| **Valve body cleading** | stainless steel |
| **Plunger guide** | LCP |
| **Plunger** | stainless steel |
| **Membrane and sealings** | EPDM |
| **Filter** (inlet) | stainless steel (in inlet) |

## Options

| Connection type | standard cable length L | ID |
|---|---|---|
| with leads and connector | 85 ± 5 mm | 62710 |
| others on request | | |




**Male connector**

**Polarity of connector:**

strand color RED Pin 1 — PLUS(+) pulse to open

strand color BLACK — MINUS(-)



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