

## 3/2-way pneumatic cartridge solenoid valve



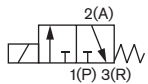
- Compact design with 11 mm width per station
- Orifices from 0.5 mm (9 bar) to 1.2 mm (1.5 bar)
- High durability and reliability
- Low power consumption, as well as optional ATEX Ex ib version
- Design for optimum integration

Customer specific applications are becoming more complex. Size, fluidic performance, low power consumption and cost efficiency are critical criteria. Therefore the demands on the components used are increasing. Type 6164 was developed with the goal, to simplify pneumatic control with optimum integration of a pilot valve in block and plastic moulding parts. Thus, making a more compact design possible.

This valve sets new standards with its uncompromising reliability, above average life cycle span and excellent fluidic characteristics.

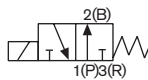
Various certifications and conformities make the use of the valve in medical applications such as media multiplexers in dental technology and oxygen control in respirators possible.

### Circuit function C



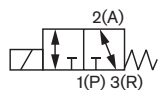
3/2- way valve,  
direct acting,  
normally closed

### Circuit function D



3/2-way valve  
direct acting,  
normally open

### Circuit function T



3/2 way valve,  
universal function

Technical data	
<b>Orifice and pressure range</b>	DN 0.5mm (Vac - 9bar)      DN 0.8mm (Vac - 7.5bar) DN 1.0mm (Vac - 5bar)      DN 1.2mm (Vac - 1.5bar)
<b>Permissible leakage</b>	Vac - 10 bar (Dependent on the version used) <sup>1)</sup>
<b>Body material</b>	PEEK
<b>Seal material</b>	FKM, NBR (on request)
<b>Medium</b>	neutral gas
<b>Medium temperature</b>	FKM                              -10 bis +55 °C NBR (on request)           -20 bis +55 °C
<b>Ambient temperature</b>	FKM                              -10 to +55 °C <sup>5)</sup> NBR (on request)           -20 to +55 °C <sup>5)</sup>
<b>Typical life span</b>	100.000.000 switching cycles (accordance to endurance tests) <sup>2)</sup>
<b>Port connection</b>	▪ Bürkert-Cartridge-Connection
<b>Electrical connection</b>	▪ Plug / Solder ▪ Flying leads on request
<b>Operation voltage</b>	12 and 24 V DC (other voltages on request)
<b>Voltage tolerance</b>	±10%
<b>Power consumption</b>	0.7W 2.8 W/0.3W (with external electric power reduction) 0.3 W (for Exi version)
<b>Duty cycle</b>	100% continuous rating
<b>Installation</b>	as required
<b>Protection class</b>	depending on the electrical connection when installed Pins                              IP00 Special plug                   IP40 Leads                            IP54
<b>Response times</b>	Measurement at valve outlet acc. to DIN ISO 12238:2001 Open                            <5ms (pressure rise 0-10%) Closed                          <5ms (pressure drop 100-90%)
<b>Switching frequency</b>	16Hz
<b>Switching noise</b>	42 dB <sup>3)</sup>
<b>Weight</b>	6 g (standard version)
<b>Approvals and conformity for selected variants</b>	ATEX Ex ib - II 2G Ex ib IIC T4 T5 T6 TB01 ATEX 2048 <sup>4)</sup> IEC Ex PTB 07.0063 <sup>4)</sup> FM Class I Div II <sup>4)</sup> UL class 2 Oxygen compatible <sup>4)</sup>

<sup>1)</sup> Overpressure to the atmospheric pressure

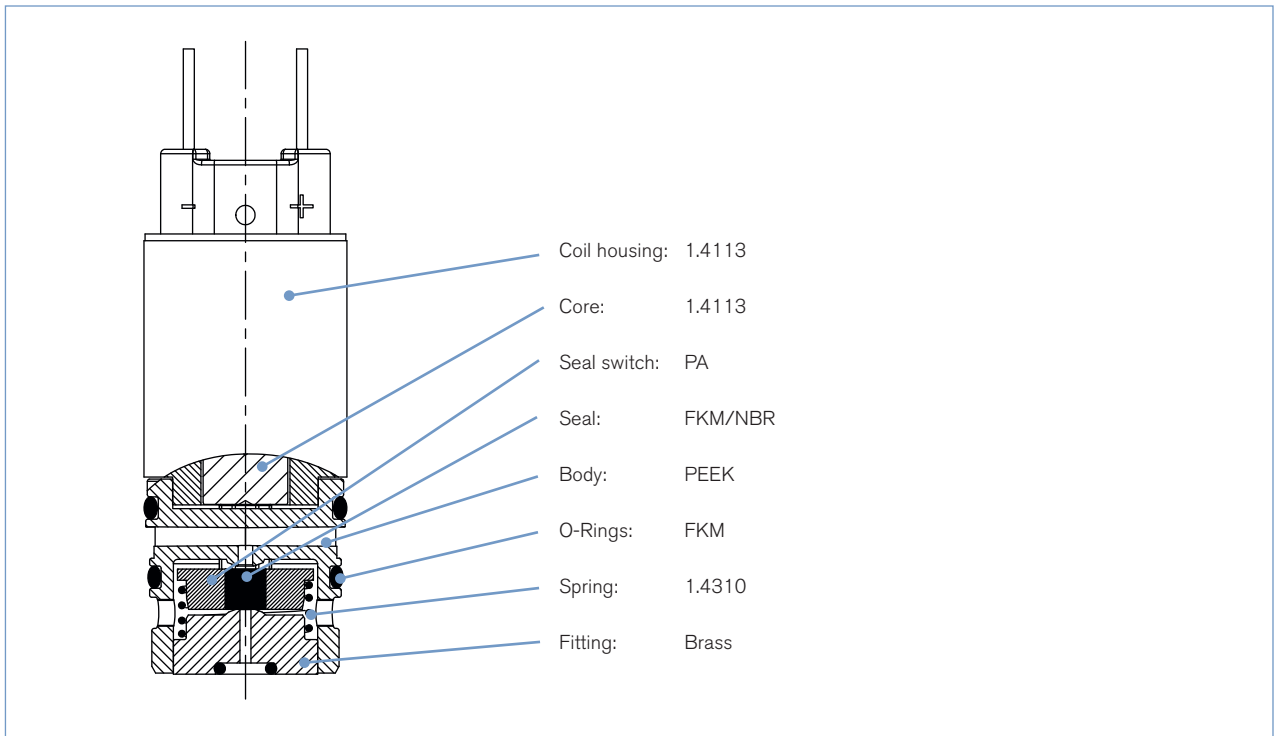
<sup>2)</sup> Life span is dependent on temperature, pressure and operating conditions

<sup>3)</sup> According to ISO3745, testing environment in brass manifold, free-hanging

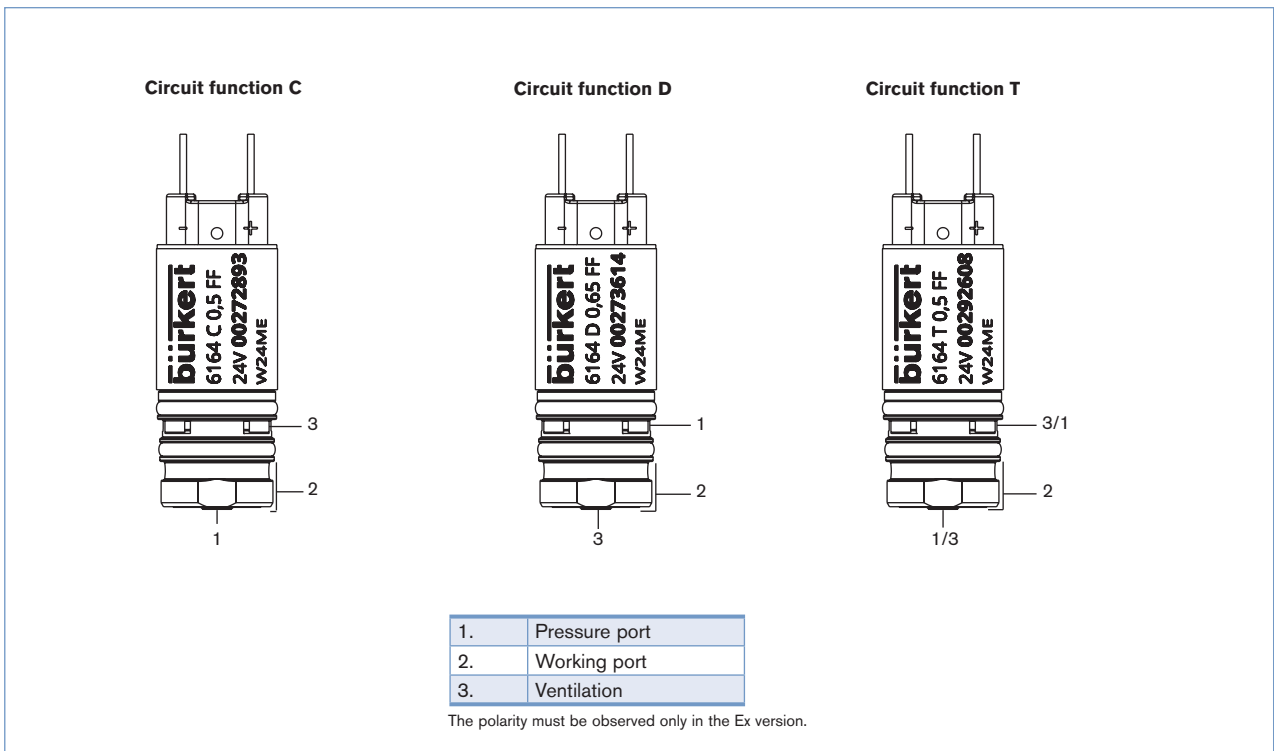
<sup>4)</sup> In preparation

<sup>5)</sup> Depending on installation conditions (see manual), higher temperatures on request

**Materials**

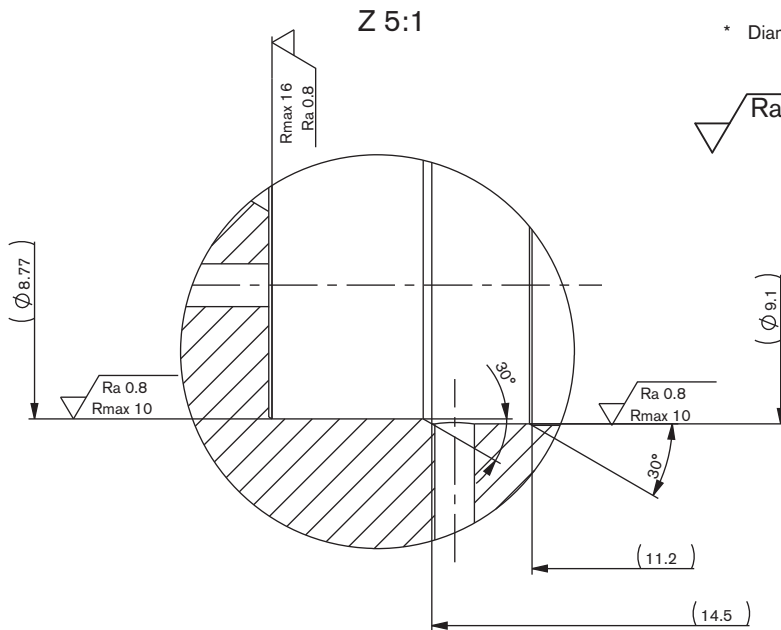
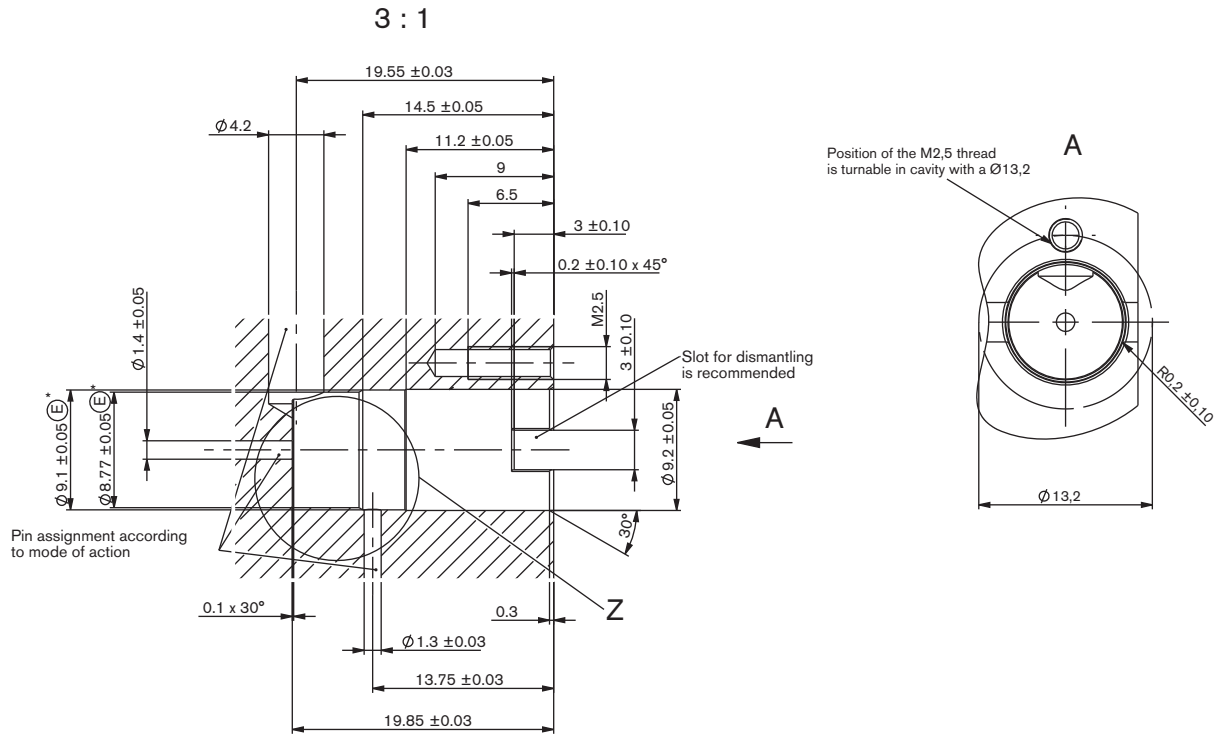


**Port connection**

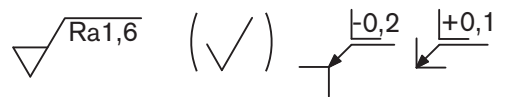


Defining of the installation area

Sunken cartridge

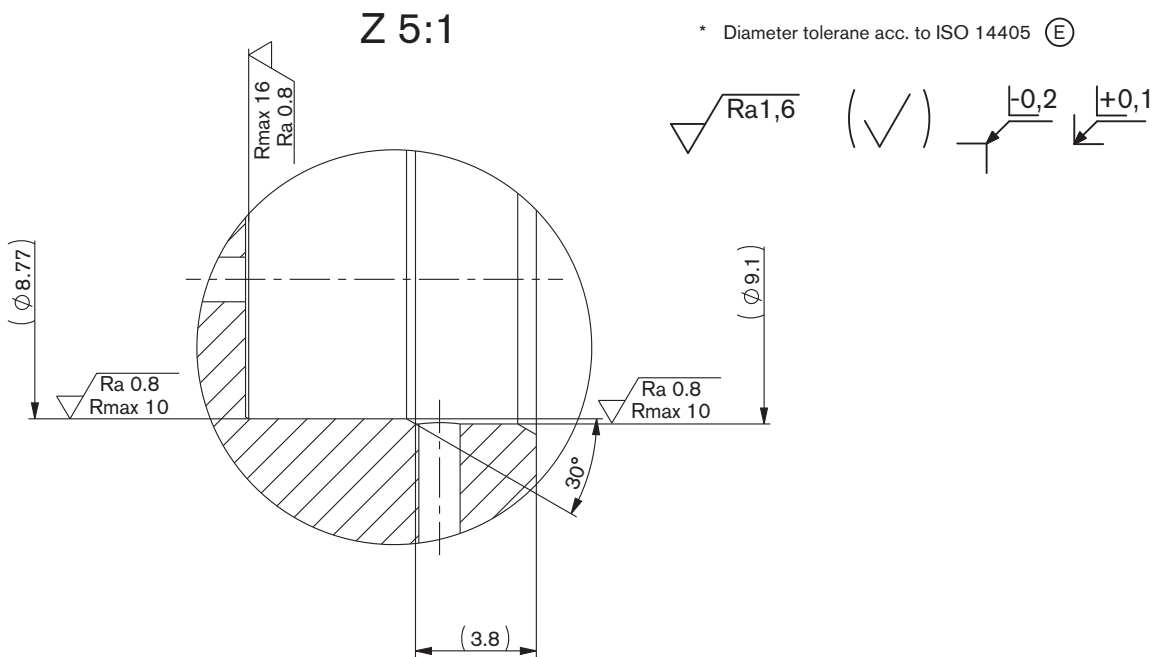
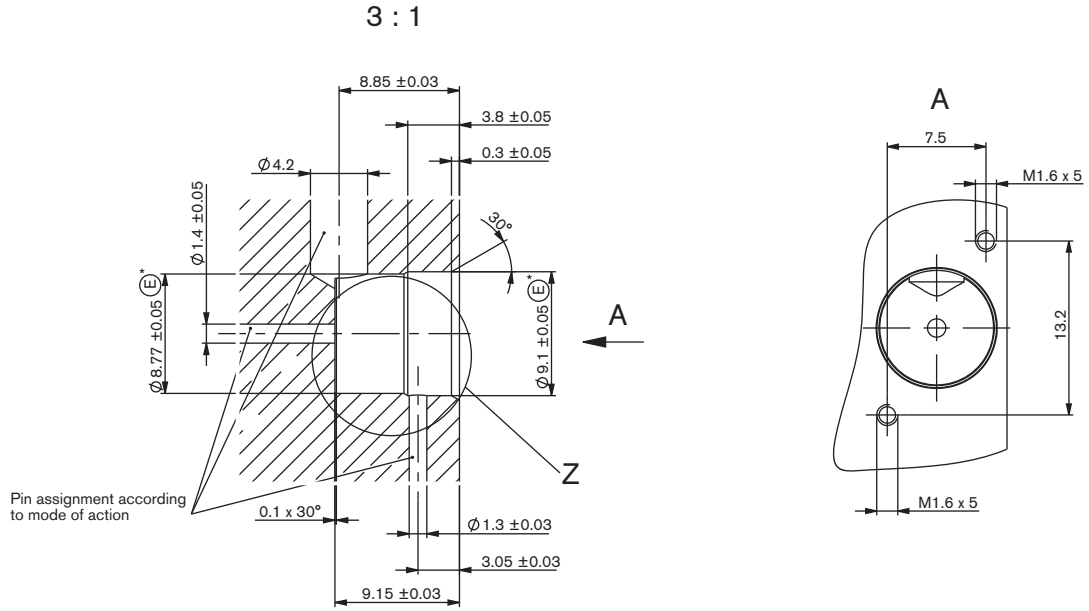


\* Diameter tolerance acc. to ISO 14405 (E)

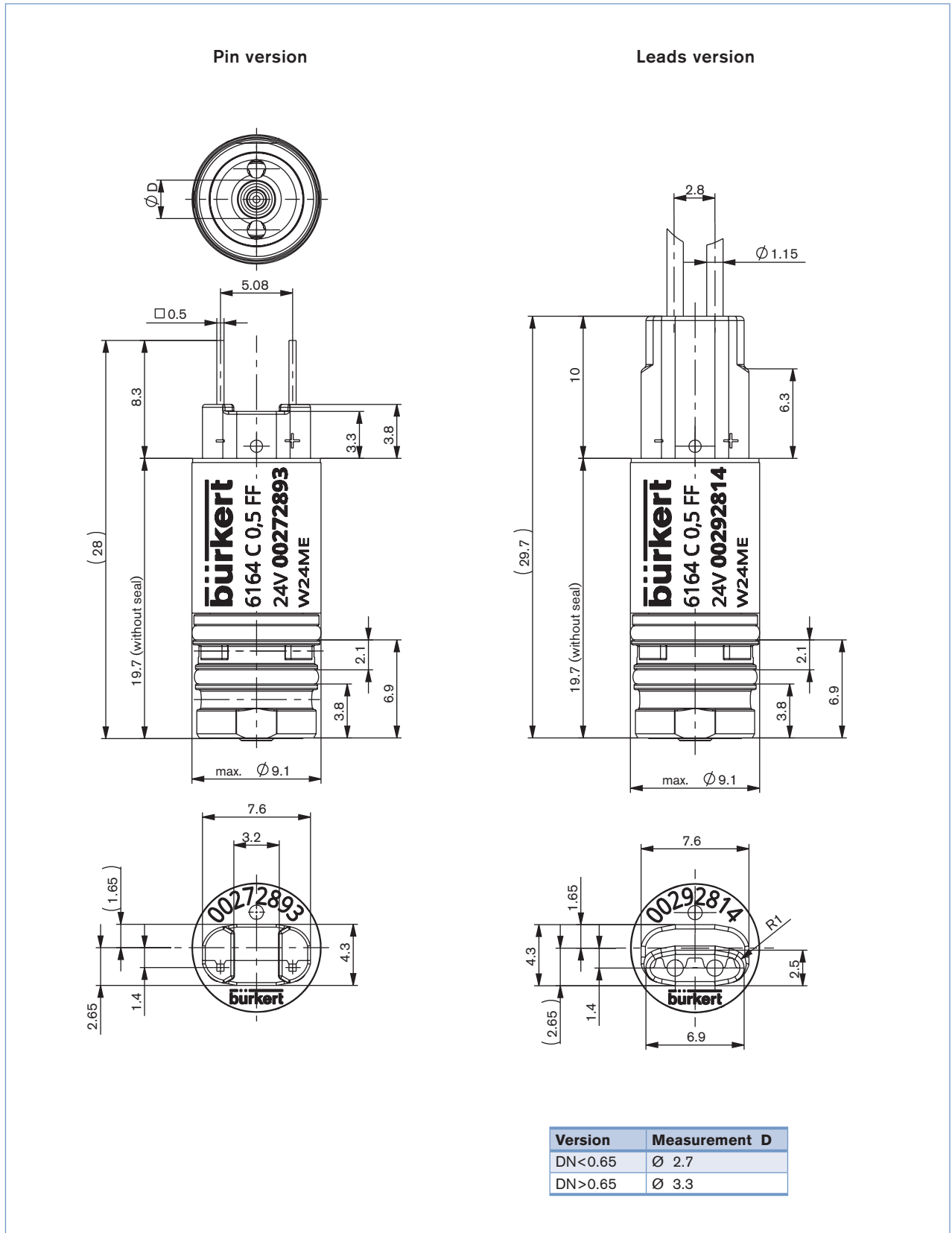


Defining of the installation area

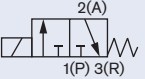
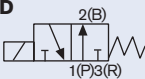
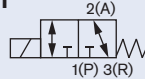
Half sunken Cartridge with retaining bracket



Dimensions [mm]



## Ordering chart

Circuit function	Port connection	Orifice ventilation 1-2	Orifice ventilation 2-3	QNn value 1-2 air [l/min]	QNn value 2-3 air [l/min]	Pressure range [bar]	Voltage	Power rating [W]	Item no. with connection pin
<b>C</b> 	Bürkert Cartridge port connection	0.5	0.65	6	9.5	Vac-9 <sup>1)</sup>	12	0.7	273 612
		0.5	0.65	6	9.5	Vac-9 <sup>1)</sup>	24	0.7	272 893
		0.5	0.65	6	9.5	2.5-10	24	0.7	281 022
		0.8	1.1	16	20	Vac-7.5 <sup>1)</sup>	24	2.8/0.3 <sup>2)</sup>	285 701
		1.0	1.1	20	20	Vac-5 <sup>1)</sup>	24	2.8/0.3 <sup>2)</sup>	285 700
		1.2	1.1	25	22	Vav-1.5 <sup>1)</sup>	24	2.8/0.3 <sup>2)</sup>	272 894
<b>D</b> 	Bürkert Cartridge port connection	0.65	0.5	6.5	6	Vac-6 <sup>1)</sup>	12	0.7	273 615
		0.65	0.5	6.5	6	Vac-6 <sup>1)</sup>	24	0.7	273 614
<b>T</b> 	Bürkert Cartridge port connection	0.5	0.65	6	6	Vac-4	24	0.7	292 608

<sup>1)</sup> VAC corresponds to -0.8 bar relative

<sup>2)</sup> External electric power reduction necessary

### **i** Further versions on request



#### **Voltage**

Voltages 9V, 6V, 3V on request



#### **Additional**

Leads version on request

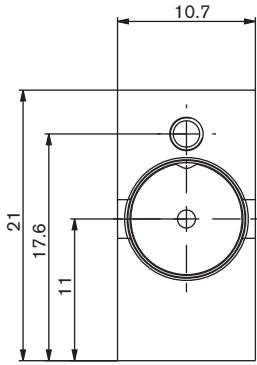


#### **Approvals**

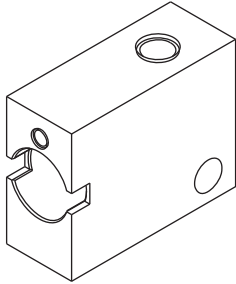
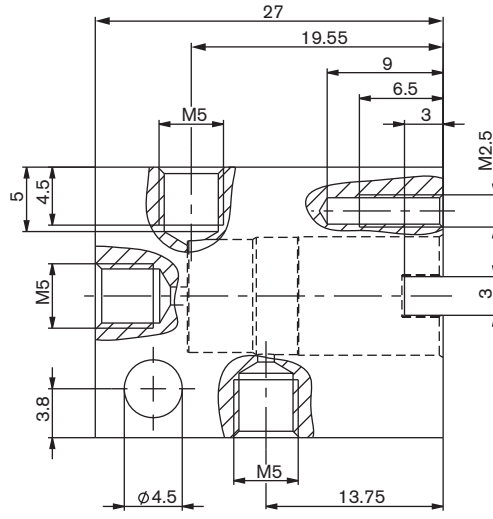
Device with approvals on request

Overview of accessories

Manifold fully sunken



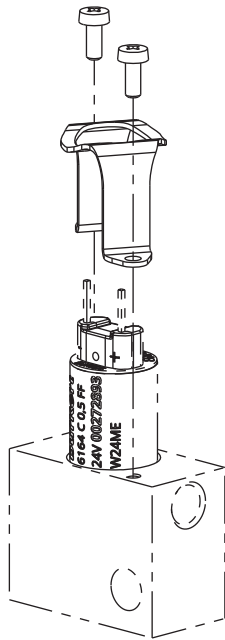
Locking



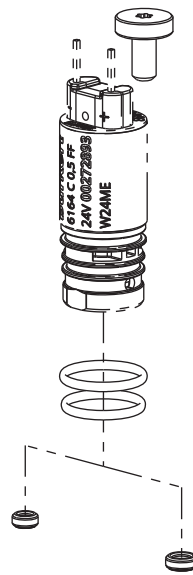
**Note:**  
Max. tightening of the screws  
(see manual)

Description	Item no.
Manifold 1place, brass	695 913
Spare part set for Type 6164	696 033
Mounting bracket Set for Type 6164	696 032
Plug IP40 for Type 6164	695 951

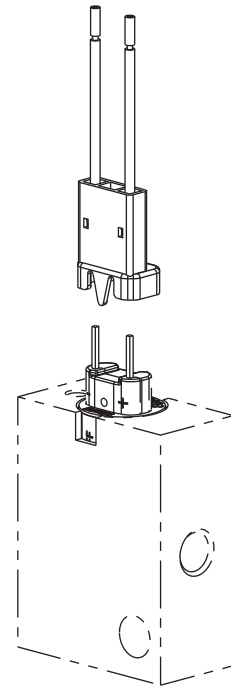
Mounting bracket for semi-submerged configuration



Spare part set O-ring and fixing screw

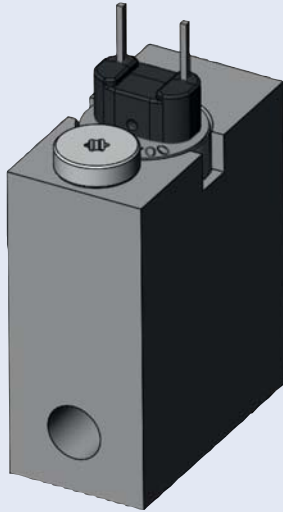


Plug with IP40 locking

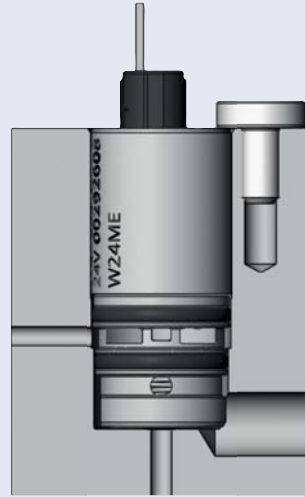


Application examples

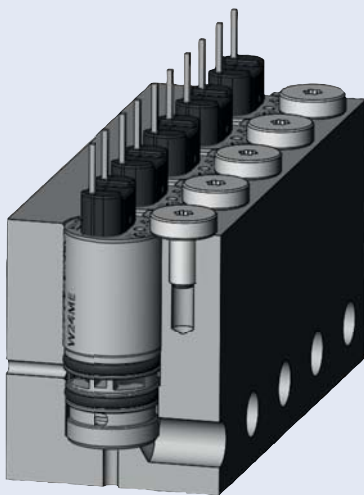
Single block with Cartridge



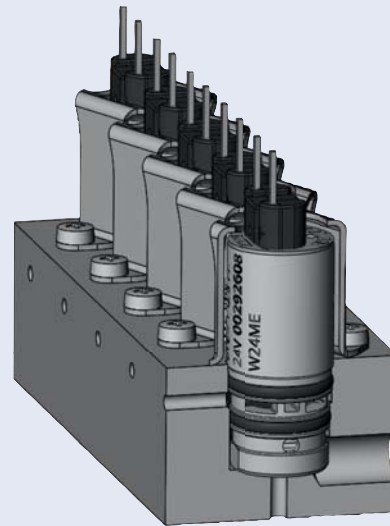
Cartridge installation position



Fully sunken multi-manifold



Semi-sunken multi-manifold



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