





## 2/2 or 3/2-way Whisper Valve with media separation

- Highest chemical resistance
- Compact design with 8.9 mm installation width
- DN 0.8 mm (vacuum up to 5 bar) and 1.2 mm (vacuum up to 3 bar)
- Very fast, almost silent switching with <20 dB (A) and very low power consumption
- High back-pressure tightness, excellent cleanability and 100 % duty cycle

Product variants described in the data sheet may differ from the product presentation and description.

### Can be combined with

- |   |  |
|---|--|
|   | <b>Type 2503</b> ▶<br>Cable plug for whisper valve Types 6712 and 6724     |
|  | <b>Type 8763</b> ▶<br>Pressure controller for precise time-pressure dosing |

### Type description

Many fluidic processes moving closer to where they are actually required. In the field of medical devices, for example, treatments such as dialysis can be provided to patients in convenient surroundings at home. Washing units in analytical equipment are positioned on the pipetting arm or directly on the print head in printing applications. This imposes different requirements on the components used. Solenoid valves must be able to switch without being heard. They need to be smaller and lighter to be used in mobile devices. However, their ability to achieve a long service life and excellent switching characteristics is every bit as important. The Whisper Valve Type 6724 combines all of these traits and, thanks to its modular structure and range of available material variants, this valve is universally applicable.

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## 1. General technical data

### 1.1. General data

Product properties	
Dimensions	Detailed information can be found in chapter "5. Dimensions" on page 6.
Material	
Body	PEEK or PPS
Seal	FFKM, EPDM or FKM
Internal volume	Bürkert sub-base (9 x 26): approx. 38 µl Bürkert sub-base (26 x 57) horizontal: approx. 79 µl Threaded version UNF ¼"-28: approx. 59 µl Tube connector: approx. 68 µl
Orifice	
Standard version	DN 0.8 or DN 1.2
Impulse version	DN 1.2
Circuit function	Detailed information can be found in chapter "3. Circuit functions" on page 5.
Typical product service life	
Standard version	10 million switching cycles (acc. to laboratory duration tests) <sup>1)</sup>
Impulse version	1 million switching cycles (acc. to laboratory duration tests) <sup>1)</sup>
Performance data	
Pressure range	Detailed information can be found in chapter "1.2. Medium pressure" on page 4.
Switching noise	30 dB (A) (<20 dB (A) on request <sup>2)</sup> )
Switching time <sup>3)</sup>	Opening: approx. 3 ms (Pressure build-up 0...10 %) Closing: approx. 3 ms (Pressure reduction 100...90 %)
Electrical data	
Power supply	12 V DC, 24 V DC (other voltages on request)
Duty cycle <sup>4)</sup>	100 % continuous operation
Nominal power	
Standard version	1 W <sup>5)</sup>
Impulse version	1.25 W <sup>5)</sup> (impulse length min. 500 ms)
Voltage tolerance	
Standard version	± 10 % (incl. residual ripple)
Impulse version	± 5 % (incl. residual ripple)
Medium data	
Operating medium	Resistant to neutral and aggressive gases and liquids. For more detailed information, see the chapter "4.1. Chemical Resistance Chart – Bürkert resistApp" on page 5.
Medium temperature	
Standard version	FFKM: +15 °C...+50 °C (59 °F...122 °F) FKM: 0 °C...+50 °C (32 °F...122 °F) EPDM: 0 °C...+50 °C (32 °F...122 °F)
Impulse version	FFKM: +15 °C...+40 °C (59 °F...104 °F) FKM: 0 °C...+40 °C (32 °F...104 °F) EPDM: 0 °C...+40 °C (32 °F...104 °F)
Viscosity (max.)	21 mm <sup>2</sup> /s
Process/Port connection & communication	
Electrical connection <sup>6)</sup>	Plug with detent, pin spacing 2 mm, see data sheet <b>Type 2503</b> ▶
Port connection	Bürkert sub-base (9 x 26) Bürkert sub-base (26 x 57) horizontal Threaded version UNF ¼"-28 Tube connector version
Approvals and Certificates	
Suitable for food industry	FDA – on request, only with sealing material EPDM
Oxygen application	Oxygen suitability of materials in contact with fluid (BAM) – on request, only with sealing material FKM
Degree of protection	IP10
Suitable for drinking water	KTW (W270) – on request, only with sealing material EPDM

### Environment and installation

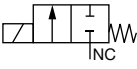
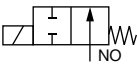
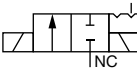
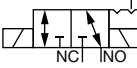
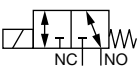
Installation As required, preferably with actuator upright

#### Ambient temperature

FFKM	+ 15 °C...+50 °C
FKM	0 °C...+50 °C
EPDM	0 °C...+50 °C

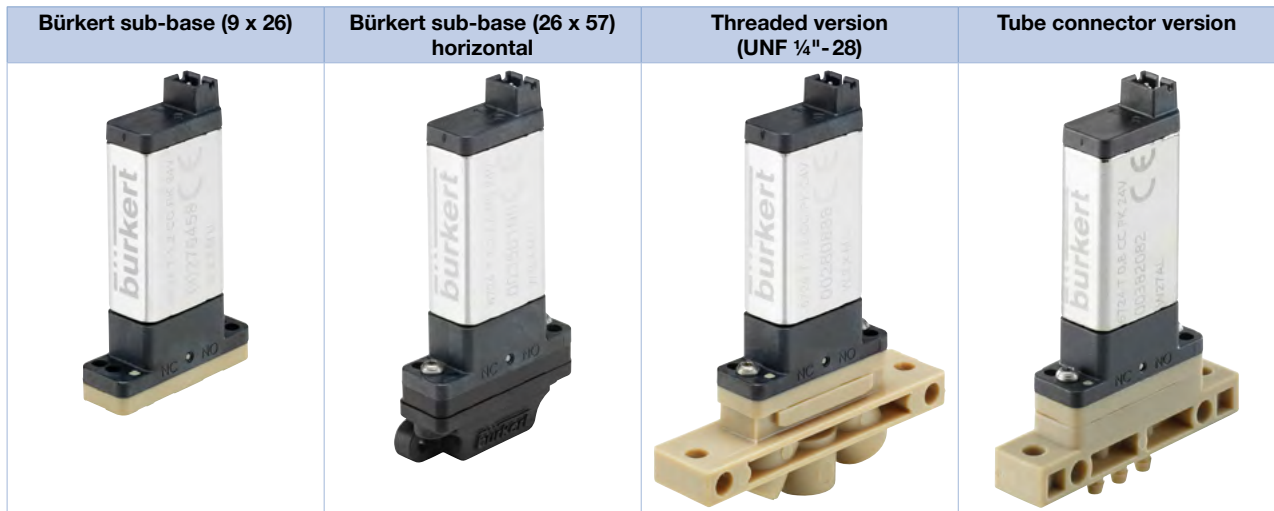
- 1.) Service life depends on the type of medium, the temperature, the pressure, the seal material and the specific operational conditions.
- 2.) <20 dB(A) with the optional possibility of soft close electronics (applies only to standard valve). May be higher for impulse version.
- 3.) Measurement at valve output at 2 bar and 20 °C acc. to DIN ISO 12238:2001
- 4.) Max. housing temperature must not exceed 110 °C. In continuous operation care must be taken to ensure sufficient heat dissipation (convection) at the metal surface of the valve. Overheating of the valve can lead to damage.
- 5.) No further power reduction possible
- 6.) Please order socket with flying leads separately (see "7.4. Ordering chart accessories" on page 13).  
Other suitable connectors are, for example W+P: Series 521 (socket 521S-02-1; contact 521S-01-2-00) or JST (socket PHR-2; contact SPH-002GW-P0.5S), version 04/2015). As a PCB connector we recommend a pin size of 0.5 x 0.5 mm, grid size 2 mm and a maximum size of the connector of 4.9 x 2.5 mm. E.g. Samtec SQT-102-01-x-S (x=L or F) or W+P Series 257 Part No. 257-002-1-50-00-6.

## 1.2. Medium pressure

Circuit function	Orifice [mm]	Pressure range under [bar]			Max. differential pressure [bar]
		NC	COM	NO	
<b>A, Solenoid valve</b> 2/2 way Direct acting Normally closed 	0.8	Vac...5 <sup>1) 2)</sup>	N/A	- <sup>2) 3)</sup>	5
	1.2	Vac...3 <sup>1)</sup>	N/A	- <sup>2) 3)</sup>	3
	1.2 (with boost electronics <sup>4)</sup> )	Vac...7 <sup>1)</sup>	N/A	- <sup>2) 3)</sup>	7
<b>B, Solenoid valve</b> 2/2 way Direct acting Normally open 	0.8	0...3 <sup>1) 3)</sup>	N/A	Vac...5	5
	1.2	- <sup>1) 2) 3)</sup>	N/A	Vac...2	2
<b>P, Impulse solenoid valve</b> 2/2 way Direct-acting 	1.2	Vac...2 <sup>1)</sup>	N/A	- <sup>2) 3)</sup>	2
<b>S, Impulse solenoid valve</b> 3/2 way Direct-acting Flow direction unrestricted 	1.2	Vac...2 <sup>1)</sup>	0...2 <sup>3)</sup>	Vac...2	2
<b>T, Solenoid valve</b> 3/2 way Direct acting Flow direction optional 	0.8	Vac...5 <sup>1)</sup>	0...3 <sup>3)</sup>	Vac...5	5
	1.2	Vac...2 <sup>1)</sup>	0...2 <sup>3)</sup>	Vac...2	2
	1.2 (with boost electronics <sup>4)</sup> )	Vac...7 <sup>1)</sup>	0...5 <sup>3)</sup>	Vac...2	7

- 1.) Connect technical vacuum (-0.8 bar) to NC or NO. If vacuum is connected to (COM/OUT), significantly reduced flow must be expected.
- 2.) Up to 2 bar, the flow direction is permissible even against the specification.
- 3.) Low vacuum due to back pressure at media flow permissible. In case of continuous operation with higher vacuum, there is a risk of flow reduction. In case of doubt, please contact your Bürkert sales office.
- 4.) For information on the optional boost electronics see chapter "7.4. Ordering chart accessories" on page 13.

## 2. Product versions



## 3. Circuit functions

Circuit functions	Description
	<b>Type: A, solenoid valve</b> 2/2 way Direct-acting Normally closed
	<b>Type: B, solenoid valve</b> 2/2 way Direct-acting Normally open
	<b>Type: P, impulse solenoid valve</b> 2/2 way Direct-acting
	<b>Type: S, impulse solenoid valve</b> 3/2 way Direct-acting Flow direction unrestricted
	<b>Type: T, solenoid valve</b> 3/2 way Direct-acting Flow direction optional Universal

## 4. Materials

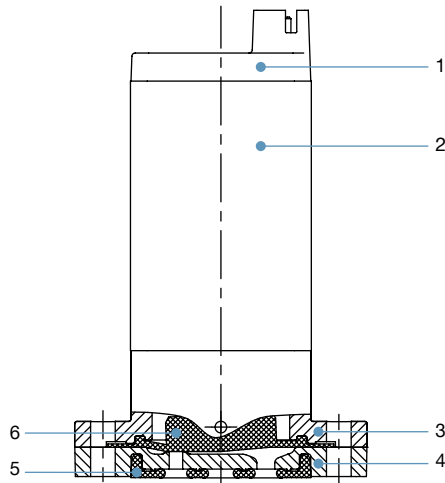
### 4.1. Chemical Resistance Chart – Bürkert resistApp

**Bürkert resistApp – Chemical Resistance Chart**

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start Chemical Resistance Check

### 4.2. Material specifications



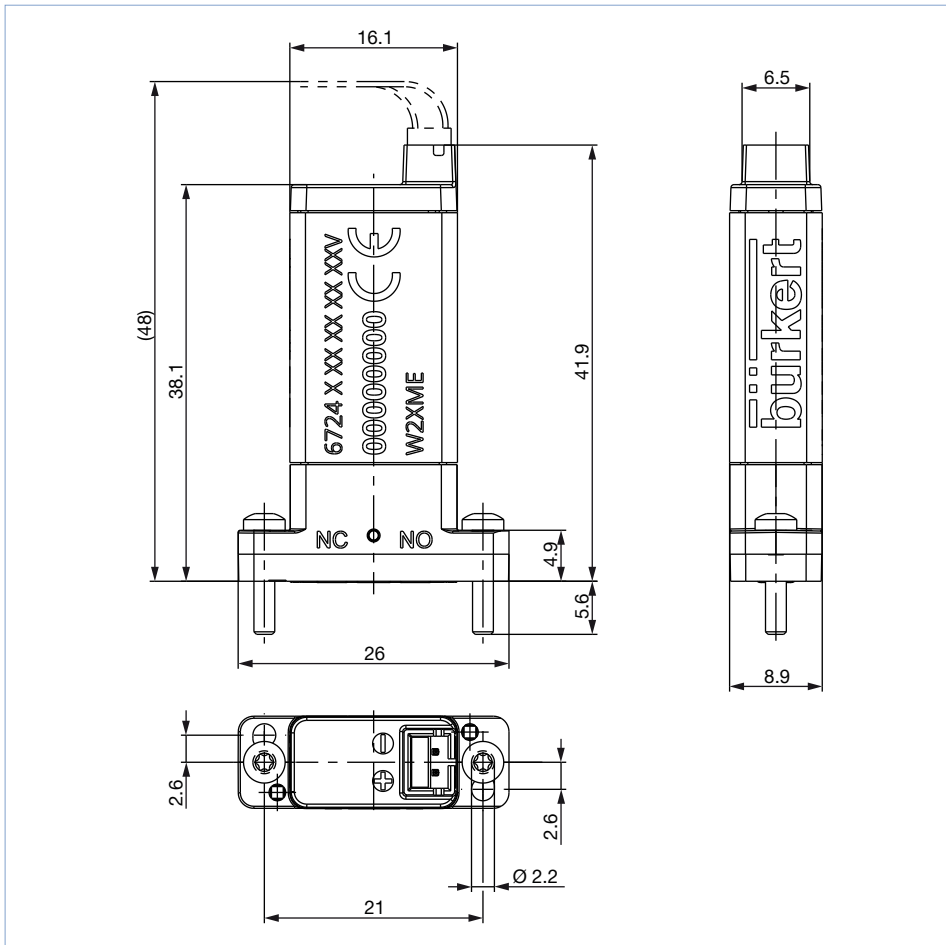
No.	Element	Material
1	Cap	LCP
2	Coil housing	nickel-plated
3	Valve body	PPS
4	Fluid housing (medium contact)	PEEK or PPS
5	Flange seal (medium contact)	FFKM, FKM or EPDM
6	Diaphragm (medium contact)	FFKM, FKM or EPDM

## 5. Dimensions

### 5.1. Bürkert sub-base (9 x 26)

**Note:**

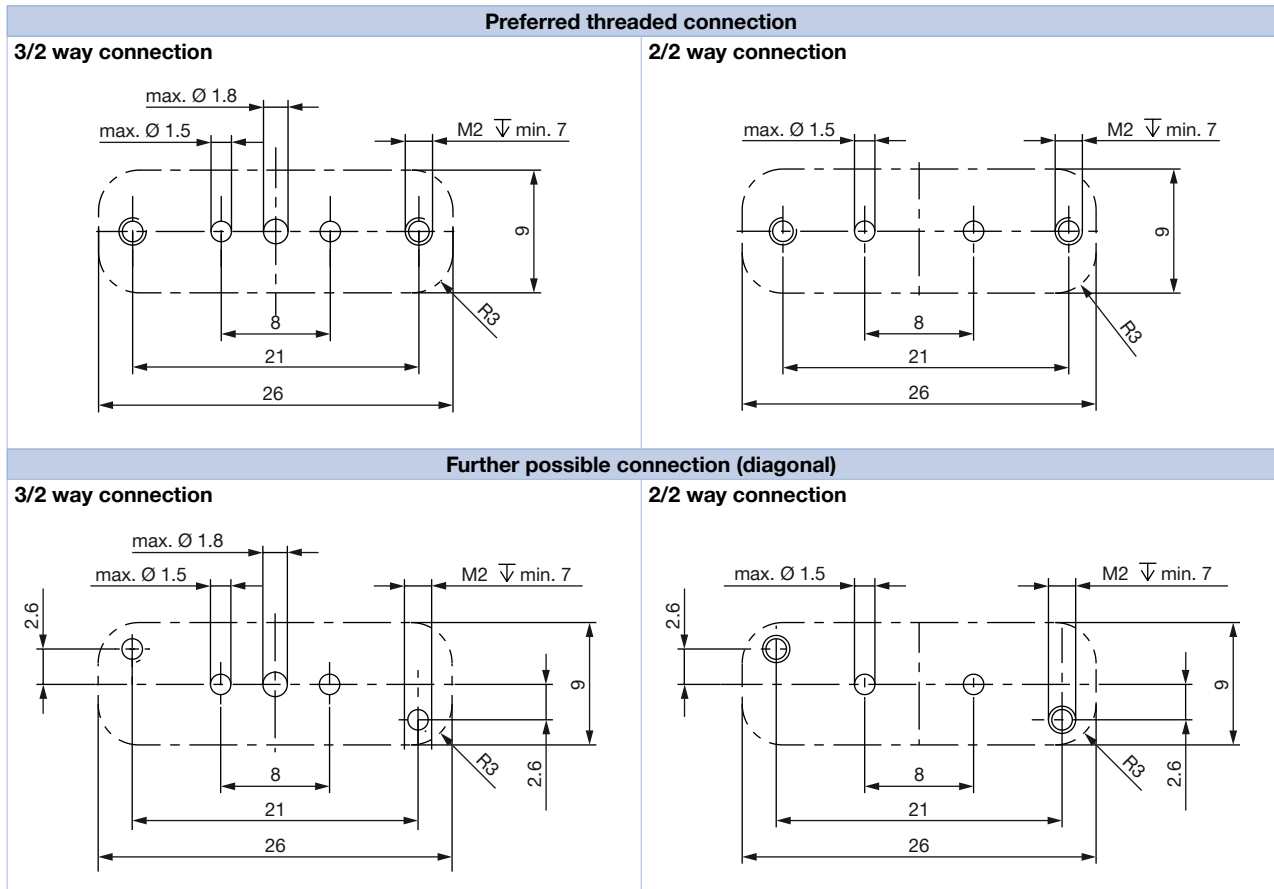
- Dimensions in mm
- Including fastening screws M2 x 10



### 5.2. Bürkert sub-base (9 x 26) interface

**Note:**

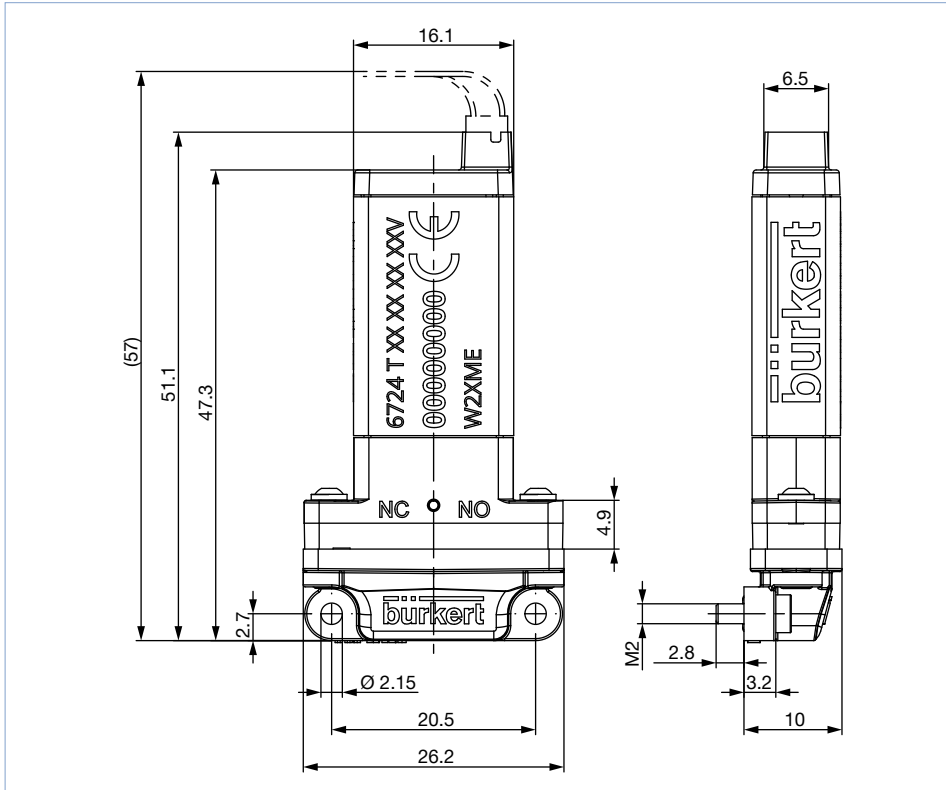
Dimensions in mm



### 5.3. Bürkert sub-base (26 x 57) horizontal

**Note:**

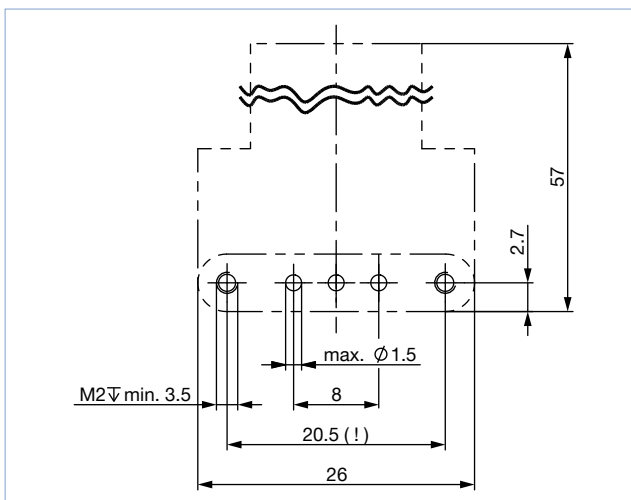
- Dimensions in mm
- Optional: Sub-base can be turned by 180°
- Including fastening screws M2 x 6



### 5.4. Bürkert sub-base (26 x 57) interface

**Note:**

Dimensions in mm

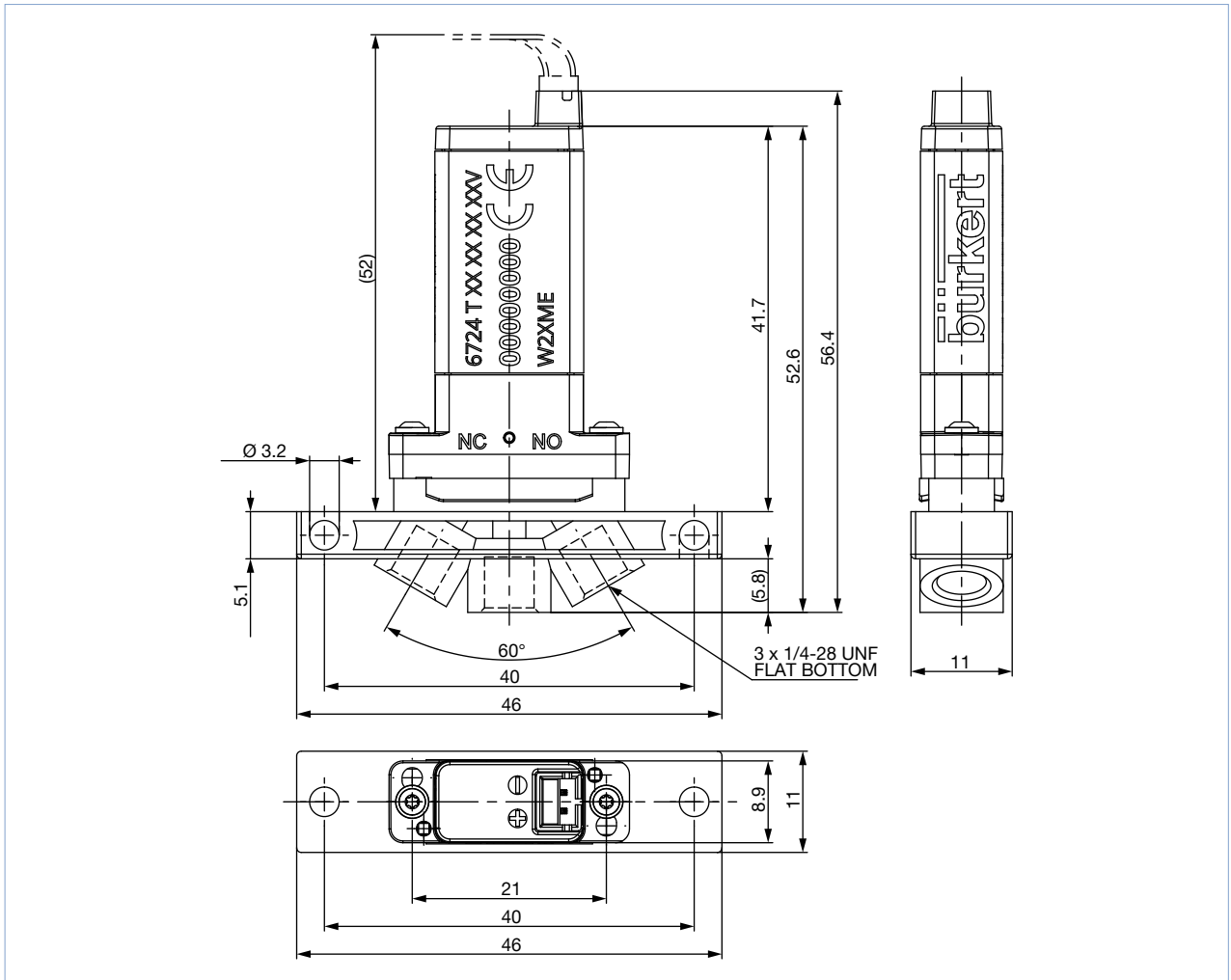




5.5. Threaded port version (UNF 1/4"-28)

Note:

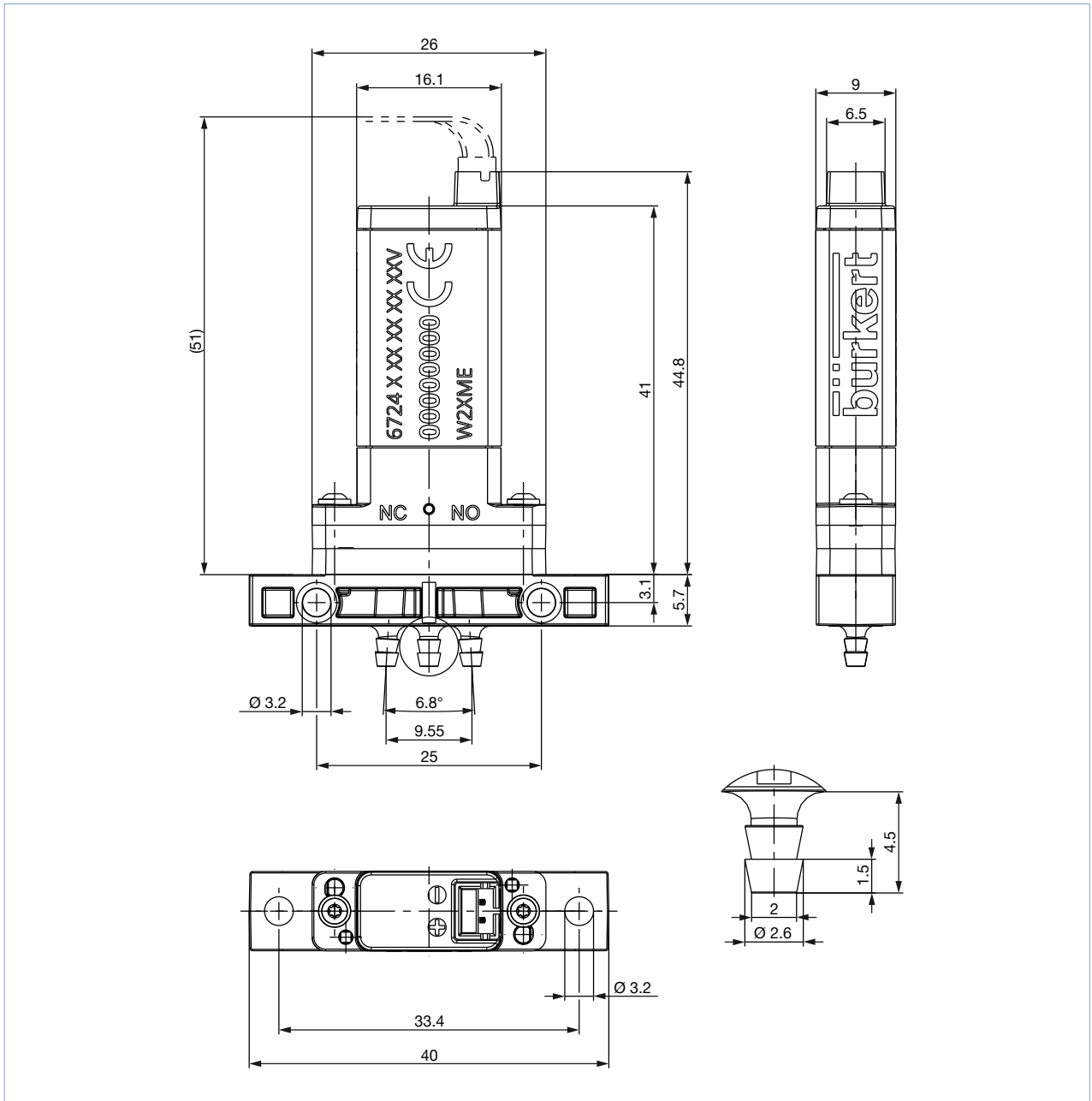
Dimensions in mm



5.6. Tube connector version

Note:

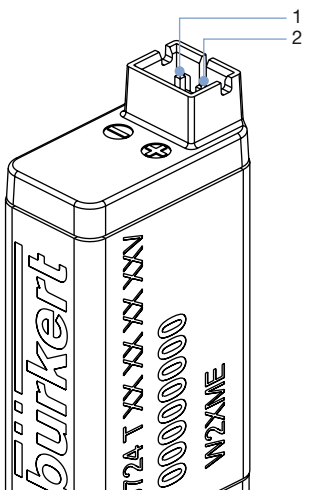
Dimensions in mm



## 6. Device/Process connections

### 6.1. Connection details

Electrical control for impulse versions		Impulse 500 ms	
		1	2
<b>P</b> 2/2 way Impulse	NC (open)	-	+
	NC (closed)	+	-
<b>S</b> 3/2 way Impulse	NC ⇆ COM (open)	-	+
	NO ⇆ COM (open)	+	-



## 7. Ordering information

### 7.1. Bürkert eShop – Easy ordering and quick delivery



#### Bürkert eShop – Easy ordering and fast delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

### 7.2. Bürkert product filter



#### Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.



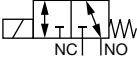
[Try out our product filter](#)

### 7.3. Ordering chart

#### Standard version

##### Note:

- Please order plug connector with lead or electronic separately (see “7.4. Ordering chart accessories” on page 13).
- Including mounting screws for the following port connections:  
Bürkert sub-base (9 x 26): M2x10-TORX T6-A2  
Bürkert sub-base (26 x 57) horizontal: M2x6-TORX T6-A2
- Mounting screws M1.6x8-ISK for replacing Type 6604 with Type 6724 available on request.

Circuit function	Orifice	Port connection	K <sub>v</sub> value water <sup>1.)</sup>	C <sub>v</sub> value water	Q <sub>Nn</sub> value air <sup>2.)</sup>	Pressure range <sup>3.)</sup>	Max. pressure difference	Seal material	Body material	Voltage/frequency	Article no.
	[mm]		[m <sup>3</sup> /h]	[gpm]	[l/min]	[bar]	[bar]			[V]	
<b>A, solenoid valve</b> 2/2 way Direct acting Normally closed 	0.8	Bürkert sub-base (9 x 26)	0.01	0.012	10.7	Vac...5	5	FFKM	PEEK	24	299245
								FKM	PPS		299248
		EPDM		299247							
		UNF 1/4"-28	0.01	0.012	10.7	Vac...5	5	FFKM	PEEK	24	299246
	Tube connector	0.01	0.012	10.7	Vac...5	5	FFKM	PEEK	24	382088	
										EPDM	
	1.2	Bürkert sub-base (9 x 26)	0.026	0.03	28	Vac...3	3	FFKM	PEEK	24	281506
								FKM	PPS		281936
EPDM			281934								
Bürkert sub-base (26 x 57) horizontal		0.026	0.03	28	Vac...3	3	EPDM	PPS	24	356099	
UNF 1/4"-28	0.026 <sup>4.)</sup>	0.03 <sup>4.)</sup>	28 <sup>4.)</sup>	Vac...3	3	FFKM	PEEK	24	281933		
						FKM		12	295793		
<b>B, solenoid valve</b> 2/2 way Direct acting Normally open 	1.2	Bürkert sub-base (9 x 26)	0.026	0.03	28	Vac...2	2	FFKM	PEEK	24	281507
<b>T, solenoid valve</b> 3/2 way Direct acting Flow direction optional 	0.8	Bürkert sub-base (9 x 26)	0.01	0.012	10.7	0...3 <sup>5.)</sup>	5	FFKM	PEEK	24	299249
								FKM	PPS		299252
		EPDM		12	299279						
		UNF 1/4"-28	0.01	0.012	10.7	0...3 <sup>5.)</sup>	5	FFKM	PEEK	24	299251
	Tube connector	0.01	0.012	10.7	0...3 <sup>5.)</sup>	5	FFKM	PEEK	24	382082	
										EPDM	
	1.2	Bürkert sub-base (9 x 26)	0.026	0.03	28	Vac...2	2	FFKM	PEEK	12	295322
								FFKM			24
FKM		PPS		281937							
EPDM				281935							
Bürkert sub-base (26 x 57) horizontal	0.026	0.03	28	Vac...2	2	FKM	PPS	24	356102		
						EPDM			356100		
UNF 1/4"-28	0.026 <sup>4.)</sup>	0.03 <sup>4.)</sup>	28 <sup>4.)</sup>	Vac...2	2	FFKM	PEEK	24	280888		

1.) Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.

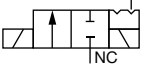
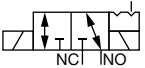
2.) Converted to standard conditions.

3.) Connect technical vacuum (-0.8 bar) to NC or NO. If vacuum is connected to (COM/OUT), significantly reduced flow must be expected.

4.) K<sub>v</sub> value of the valve. The UNF connections have a diameter of 1.2 mm; in conjunction with conventional connection technology (10 cm hose each with ID= 1.6 mm), this results in practical values of K<sub>v</sub>=0.015 m<sup>3</sup>/h; C<sub>v</sub>=0.017 gpm; Q<sub>Nn</sub>=21.8 l/min.

5.) Applies to pressure connection to COM. For pressure connection to NC or NO Vac...5 bar applies.

Impulse version

Circuit function	Orifice	Port connection	K <sub>v</sub> value water <sup>1.)</sup>	C <sub>v</sub> value water	Q <sub>Nn</sub> value air <sup>2.)</sup>	Pressure range <sup>3.)4.)</sup>	Max. pressure difference	Seal material	Body material	Voltage/frequency	Article no.
	[mm]		[m <sup>3</sup> /h]	[gpm]	[l/min]	[bar]	[bar]			[V]	
<b>P<sub>i</sub> impulse solenoid valve</b> 2/2 way Direct-acting 	1.2	Bürkert sub-base (9 x 26)	0.024	0.027	25	Vac...2	2	FKM	PPS	24	355749
			0.024 <sup>5.)</sup>	0.027 <sup>5.)</sup>	25 <sup>5.)</sup>	Vac...2	2	FFKM	PEEK	24	355744
		UNF 1/4"-28	0.024 <sup>5.)</sup>	0.027 <sup>5.)</sup>	25 <sup>5.)</sup>	Vac...2	2			12	355750
										24	355745
<b>S, impulse solenoid valve</b> 3/2 way Direct-acting Flow direction unrestricted 	1.2	Bürkert sub-base (9 x 26)	0.026	0.03	28	Vac...2	2	FKM	PPS	24	355756
			0.026 <sup>5.)</sup>	0.03 <sup>5.)</sup>	28 <sup>5.)</sup>	Vac...2	2	FFKM	PEEK	24	355754
		UNF 1/4"-28	0.026 <sup>5.)</sup>	0.03 <sup>5.)</sup>	28 <sup>5.)</sup>	Vac...2	2			12	20005293
									24	355755	

- 1.) Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.
- 2.) Converted to standard conditions.
- 3.) Overpressure to atmospheric pressure
- 4.) Connect technical vacuum (-0.8 bar) to NC or NO. If vacuum is connected to (COM/OUT), significantly reduced flow must be expected.
- 5.) K<sub>v</sub> value of the valve. The UNF connections have a diameter of 1.2 mm; in conjunction with conventional connection technology (10 cm hose each with ID= 1.6 mm), this results in practical values of K<sub>v</sub>=0.015 m<sup>3</sup>/h; C<sub>v</sub>=0.017 gpm; Q<sub>Nn</sub>=21.8 l/min.



7.4. Ordering chart accessories




Manifolds

Note:

Customised for connecting plates, on request.

Plug connector Type 2503

Accessories	Description	Article no.
	Plug connector with 500 mm flying leads AWG 24 For further information please refer to data sheet <b>Type 2503</b> ▶.	689974
	Plug connector with 500 mm flying leads and boost-close electronics to increase the permissible pressure under NC. For further information refer to the operating instructions for <b>Type 2503</b> ▶ <b>BoostClose</b> or see data sheet <b>Type 2503</b> ▶.	689998

Accessories	Description	Article no.
	<p>Plug connector with 500 mm flying leads and Soft Close Elektronik for noise minimization. For further information refer to the operating instructions for <b>Type 2503 ▶ Soft-Close</b> or see data sheet <b>Type 2503 ▶</b>.</p>	<p>689999 </p>
	<p>The electronic accessory "Impulse" was specially developed for the impulse version of the solenoid valve Type 6724. With the help of the electronics, the impulse valve is activated by reversing the polarity of the voltage. The electronics automatically choose the correct polarity for the valve. This means that no polarity reversal logic needs to be provided in the control system. For further information refer to the operating instructions for <b>Type 2503 ▶ Impulse</b> or see data sheet <b>Type 2503 ▶</b>.</p>	<p>366210 </p>
	<p>Fittings and hoses For UNF connections and hoses see type <b>Type TVU003 ▶</b>.</p>	<p>see data sheet <b>TVU003 ▶</b></p>

DTS 1000262565 EN Version: N Status: RL (released | freigegeben | valide) printed: 04.08.2022

# Bürkert – Close to You

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[www.burkert.com](http://www.burkert.com)

DTS 1000262565 EN Version: N Status: RL (released | freigegeben | validé) printed: 04.08.2022

