





## 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> ▶ Cable plug for whisper valve Types 6712 and 6724
	<b>Type 8763</b> ▶ 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	Further information can be found in chapter <a href="#">“6. Dimensions” on page 8.</a>
Material	
Seal	FFKM, EPDM, FKM or FFKM HCR (High Chemical Resistance)
Fluidic housing	PEEK, PPS, PVDF
Internal volume	Bürkert sub-base (9 × 26): approx. 38 µl Bürkert sub-base (26 × 57) horizontal: approx. 93 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
FFKM HCR version	DN 1.2
Circuit function	Further information can be found in chapter <a href="#">“3. Circuit functions” on page 5.</a>
Typical product service life	10 million switching cycles (acc. to laboratory duration tests) <sup>1)</sup>
Performance data	
Pressure range	Further information can be found in chapter <a href="#">“1.2. Medium pressure” on page 4.</a>
Duty cycle <sup>4)</sup>	100 % continuous operation
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	
Operating voltage	12 V/DC, 24 V/DC (other voltages on request)
Nominal power	
Standard version	1.25 W <sup>5)</sup>
Impulse version	Switching 1.25 W <sup>5)</sup> (pulse length minimum 500 ms), holding power 0 W
Voltage tolerance	
Standard version	- 10 %/+ 5 % (including residual ripple)
Impulse version	± 5 % (including residual ripple)
Medium data	
Operating medium	Resistant to neutral and aggressive gases and liquids. Further information can be found in chapter <a href="#">“5.1. Bürkert resistApp” on page 7.</a>
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) (Higher temperature range on request)
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 <a href="#">Type 2503</a> ▶ Two PVC strands 0.22 mm <sup>2</sup> (AWG24), pre-assembled, for non-detachable push-on installation by the customer
Port connection	Bürkert sub-base (9 × 26) Bürkert sub-base (26 × 57) horizontal Threaded version UNF ¼"-28 Tube connector version
Approvals and conformities	
Degree of protection	IP10 (IP40 for stranded wire version with correctly installed connection cable)
Foods and beverages/Hygiene	Further information can be found in chapter <a href="#">“4.4. Foods and beverages/Hygiene” on page 6.</a>

**Environment and installation**

Installation position As required, preferably with actuator upright

**Ambient temperature**

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)

- 1.) Service life depends on the type of medium, the temperature, the pressure, the seal material, control and the specific operational conditions. The use of a freewheeling diode is recommended to extend the service life.
- 2.) The maximum body temperature must not exceed + 110 °C. In continuous operation, care must be taken to ensure sufficient heat dissipation (convection) on the metal surface of the valve. Overheating of the valve can lead to damage.
- 3.) May be higher with impulse version. < 20 dB(A) with optional soft-close electronics only possible in conjunction with standard valve.
- 4.) Measurement at + 20 °C, 2 bar at the valve outlet acc. to DIN ISO 12238:2001
- 5.) No further power reduction possible
- 6.) Please order socket with flying leads separately (see "8.4. Ordering chart accessories" on page 17).  
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 × 0.5 mm, grid size 2 mm and a maximum size of the connector of 4.9 × 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 at the connection			Max. differential pressure [bar]
		NC [bar]	COM [bar]	NO [bar]	
<b>CF A</b> 2/2-way solenoid valve 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
	1.2 (with seal material FFKM HCR)	Vac...2 <sup>1)</sup>	N/A	- <sup>2)3.)</sup>	2
<b>CF B</b> 2/2-way solenoid valve 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>CF P</b> 2/2-way impulse solenoid valve Direct-acting 	1.2	Vac...2 <sup>1)</sup>	N/A	- <sup>2)3.)</sup>	2
<b>CF S</b> 3/2-way impulse solenoid valve Direct-acting Flow direction unrestricted 	1.2	Vac...2 <sup>1)</sup>	0...2 <sup>3.)</sup>	Vac...2 <sup>1)</sup>	2
<b>CF T</b> 3/2-way solenoid valve Direct-acting Flow direction optional Universal 	0.8	Vac...5 <sup>1)</sup>	0...3 <sup>3.)</sup>	Vac...5 <sup>1)</sup>	5
	1.2	Vac...3 <sup>1)</sup>	0...3 <sup>3.)</sup>	Vac...3 <sup>1)</sup>	3
	1.2 (with boost electronics <sup>4.)</sup> )	Vac...7 <sup>1)</sup>	0...5 <sup>3.)</sup>	Vac...2 <sup>1)</sup>	7
	1.2 (with seal material FFKM HCR)	Vac...2 <sup>1)</sup>	0...2 <sup>3.)</sup>	Vac...2 <sup>1)</sup>	2

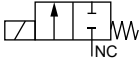
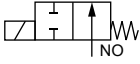
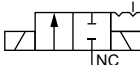
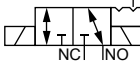
- 1.) Connect technical vacuum (- 0.8 bar) to NC or NO. If vacuum is connected to (COM/OUT), significantly reduced flow must be expected.
- 2.) Up to 2 bar, the flow direction is permissible even against the specification.
- 3.) Low vacuum due to back pressure at media flow permissible. In case of continuous 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 "8.4. Ordering chart accessories" on page 17.

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## 2. Product versions

Bürkert sub-base (9 × 26)	Bürkert sub-base (26 × 57) horizontal	Threaded version (UNF ¼"-28)	Tube connector version
			
Electrical connection stranded wire, Bürkert sub-base (9 × 26) – PVDF	Electrical connection stranded wire Bürkert sub-base (9 × 26)	Electrical connection stranded wire Bürkert sub-base (9 × 26)	
			

## 3. Circuit functions

Symbol	Description
	<b>Circuit function A (CF A)</b> 2/2-way solenoid valve Direct-acting Normally closed
	<b>Circuit function B (CF B)</b> 2/2-way solenoid valve Direct-acting Normally open
	<b>Circuit function P (CF P)</b> 2/2-way impulse solenoid valve Direct-acting
	<b>Circuit function S (CF S)</b> 3/2-way impulse solenoid valve Direct-acting Flow direction unrestricted

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Symbol	Description
	<b>Circuit function T (CF T)</b> 3/2-way solenoid valve Direct-acting Flow direction optional Universal

## 4. Approvals and conformities

### 4.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available versions can be supplied with the below mentioned approvals or conformities.

### 4.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

### 4.3. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

### 4.4. Foods and beverages/Hygiene

Conformity	Description
FDA	<b>FDA – Code of Federal Regulations (valid for the variable code PL03)</b> All wetted materials are compliant with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA) according to the manufacturer's declaration.

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## 5. Materials

### 5.1. Bürkert resistApp

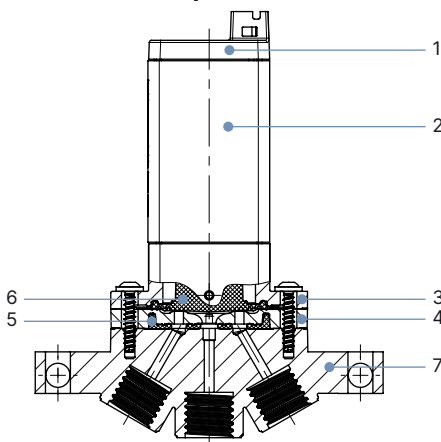


#### Bürkert resistApp – Chemical resistance chart

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](#)

### 5.2. Material specifications



No.	Element	Material
1	Cover	LCP
2	Coil housing	nickel-plated
3	Valve housing	PPS
4	Fluidic housing <sup>1)</sup>	PEEK, PPS or PVDF
5	Sub-base seal <sup>1)</sup>	FFKM, EPDM or FKM
6	Diaphragm <sup>1)</sup>	FFKM, EPDM, FKM or FFKM HCR (High Chemical Resistance)
7	Additional connection housing <sup>1) 2)</sup>	PEEK or PPS

1.) in contact with medium

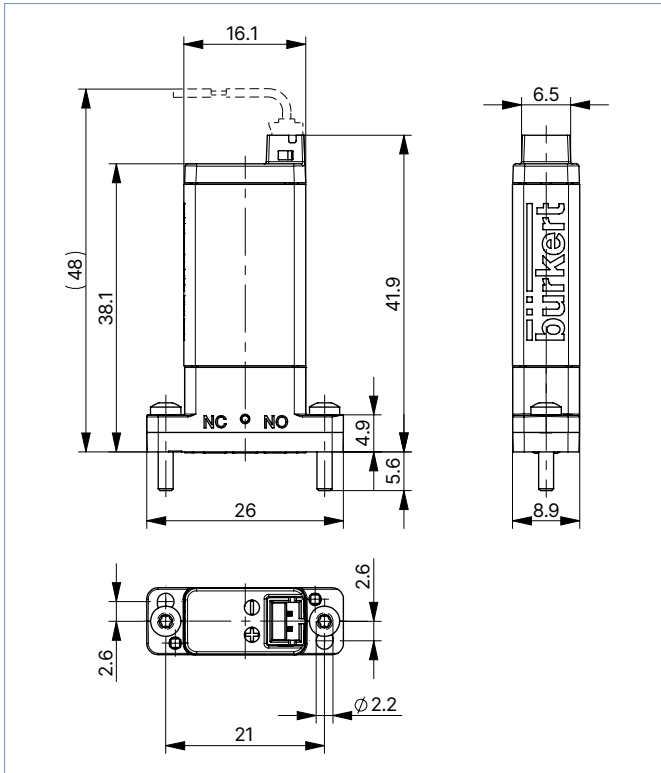
2.) not available for flange connection

## 6. Dimensions

### 6.1. Bürkert sub-base (9 × 26) – PPS or PEEK

**Note:**

- Dimensions in mm
- Including fastening screws M2 × 10

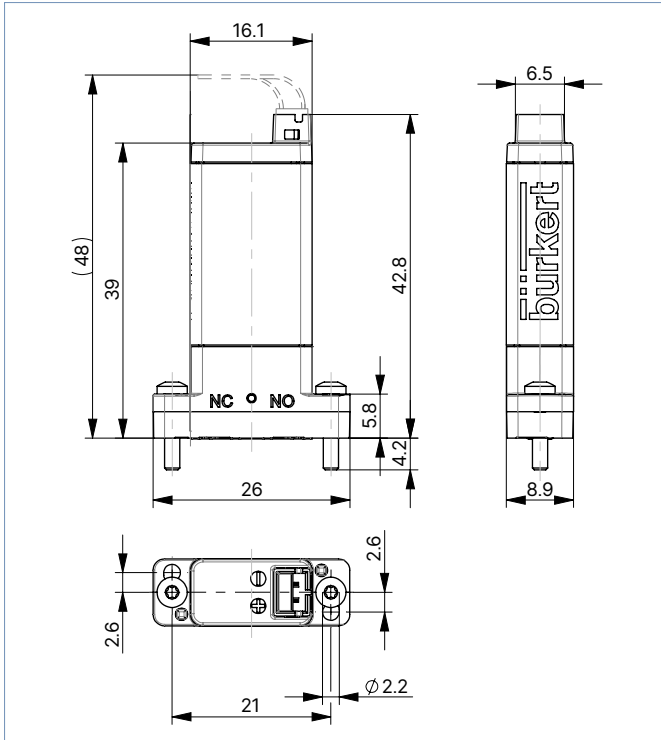




**6.2. Bürkert sub-base (9 × 26) – PVDF**

**Note:**

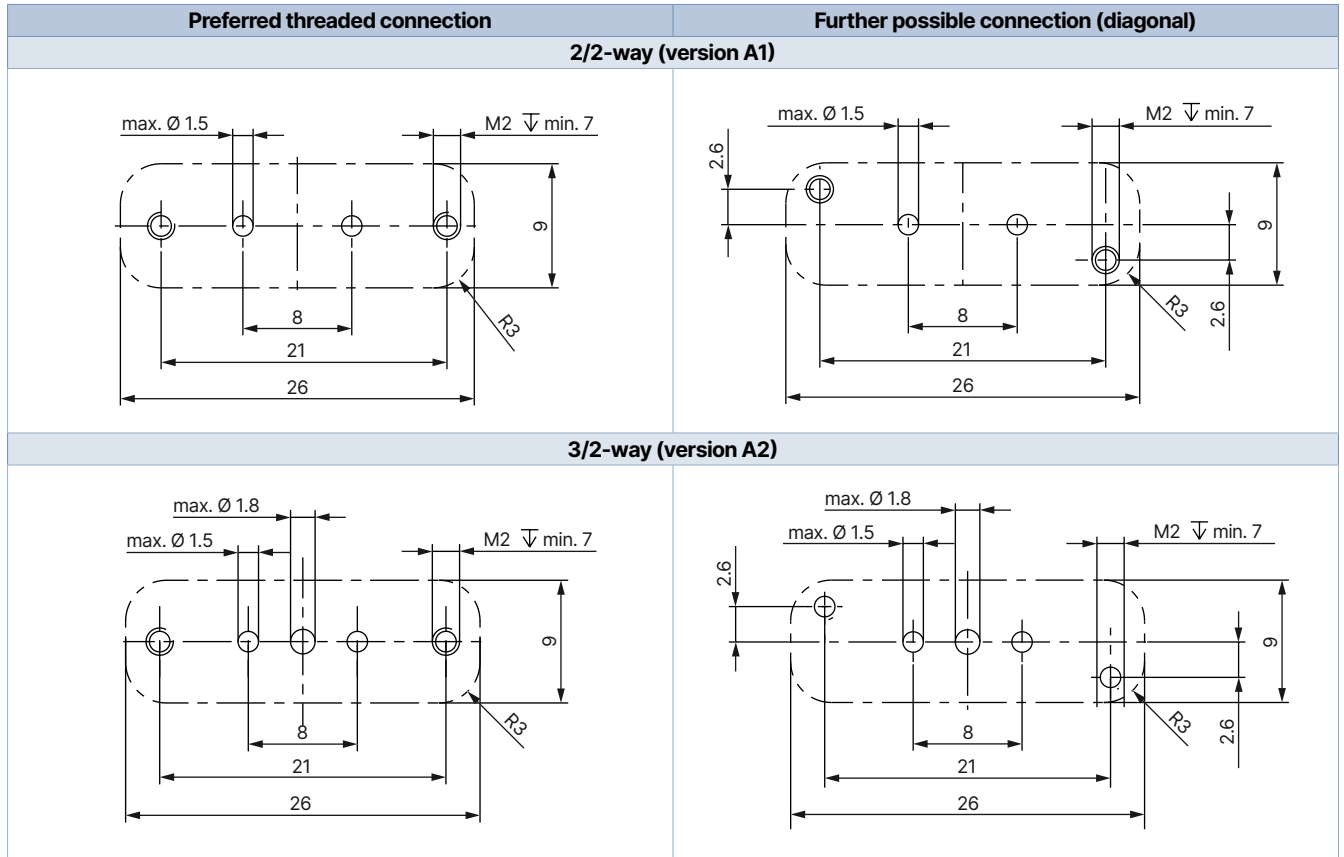
- Dimensions in mm
- Including fastening screws M2 × 10



### 6.3. Flange pattern (Bürkert sub-base 9 × 26)

**Note:**

Dimensions in mm

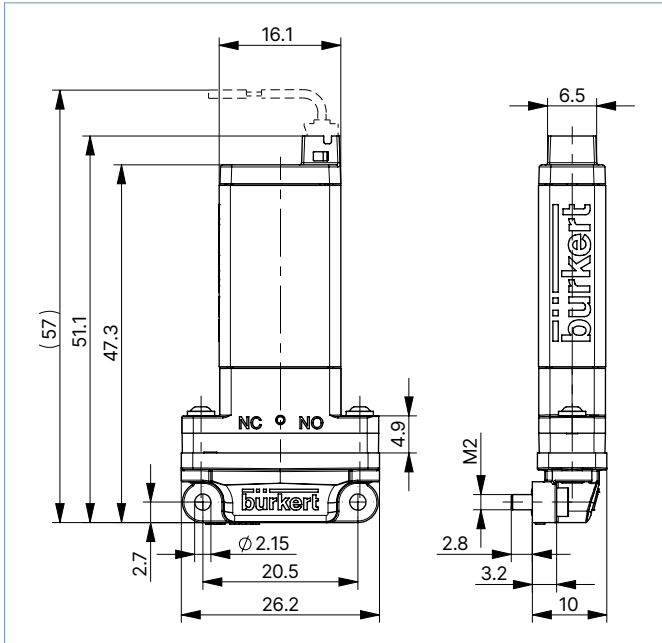


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### 6.4. Bürkert sub-base (26 × 57) horizontal

**Note:**

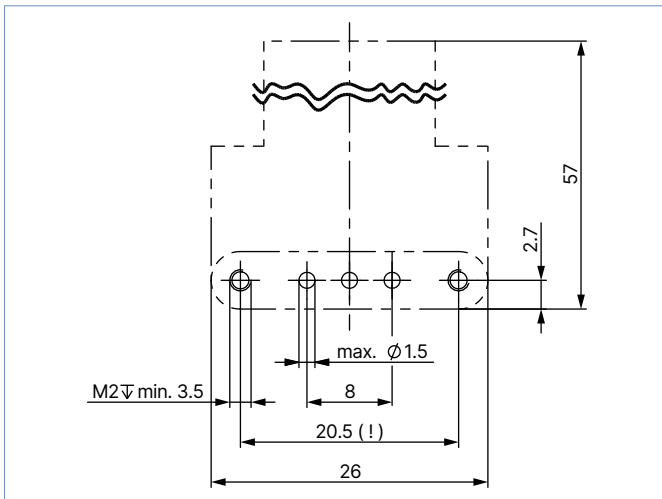
- Dimensions in mm
- Optional: Sub-base can be turned by 180°
- Including fastening screws M2 × 6



### 6.5. Flange pattern (Bürkert sub-base 26 × 57)

**Note:**

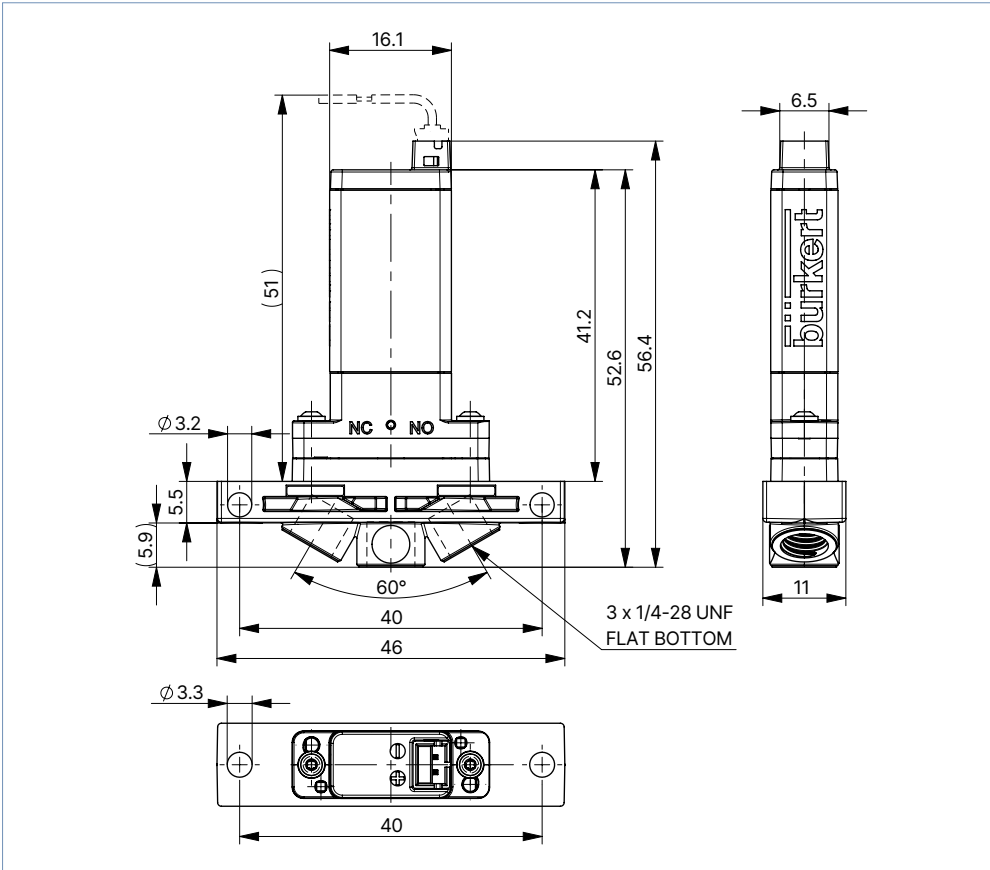
Dimensions in mm



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

**Note:**

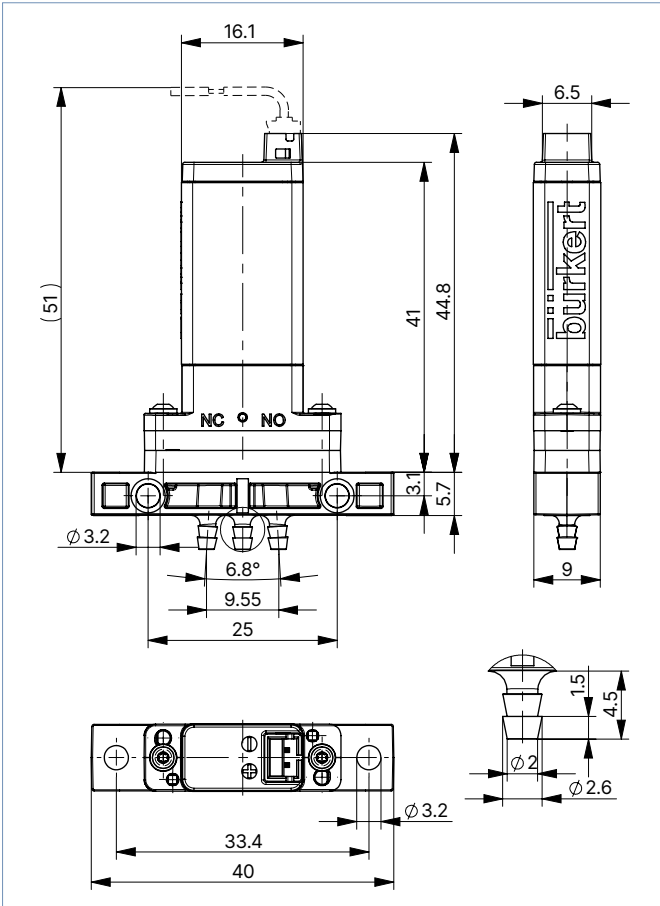
Dimensions in mm



### 6.7. Tube connector version

**Note:**

Dimensions in mm



## 7. Device/Process connections

### 7.1. Pin assignment

Electrical control for impulse versions		Impulse 500 ms		
		1	2	
<b>CFP</b> 2/2-way impulse solenoid valve Direct-acting 	NC (open)	-	+	
	NC (closed)	+	-	
<b>CFS</b> 3/2-way impulse solenoid valve Direct-acting Flow direction unrestricted 	NC ↔ COM (open)	-	+	
	NO ↔ COM (open)	+	-	

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## 8. Ordering information

### 8.1. Bürkert eShop

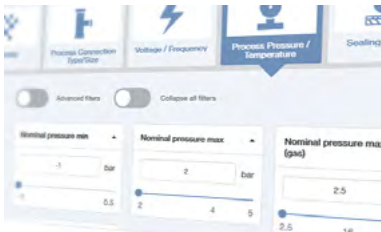


#### Bürkert eShop – Easy ordering and quick delivery

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](#)

### 8.2. 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](#)

### 8.3. Ordering chart

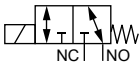
#### Standard version

**Note:**

- Plug connectors with flying leads or electronics Type 2503 are not included in the scope of delivery and must be ordered separately, see [“8.4. Ordering chart accessories” on page 17](#)).
- Including mounting screws for the following port connections:  
Bürkert sub-base (9 × 26): M2 × 10-TORX T6-A2, Bürkert sub-base (26 × 57) horizontal: M2 × 6-TORX T6-A2
- Mounting screws M1.6 × 8-ISK for replacing Type 6604 with Type 6724 are available on request.
- The ‘stranded wire connection’ variant includes a plug connector with pre-assembled strands. This can be installed by the customer and plugged into the device for commissioning.

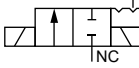

Circuit function	Port connection	Orifice	Q <sub>Vn</sub> value air <sup>2.)</sup>	K <sub>V</sub> value water <sup>1.)</sup>	C <sub>V</sub> value water	Voltage/frequency	Pressure range <sup>3.)</sup>	Max. pressure difference	Body material	Seal material	Electrical connection	Article no.		
		[mm]	[l/min]	[m <sup>3</sup> /h]	[gpm]	[V]	[bar]	[bar]						
<b>CF A</b> 2/2-way solenoid valve Direct-acting Normally closed 	Bürkert sub-base (9 × 26)	0.8	10.7	0.01	0.012	24	Vac...5	5	PEEK	FFKM	Plug	20034162		
									PPS	FKM		20071070		
										EPDM		20037617		
												20071068		
	UNF 1/4"-28		10.7	0.01	0.012	24	Vac...5	5	PEEK	FFKM		20071231		
	Tube connector		10.7	0.01	0.012	24	Vac...5	5	PEEK	FFKM		20071233		
										EPDM		20071279		
	Bürkert sub-base (26 × 57) horizontal								PPS	EPDM				
	Bürkert sub-base (9 × 26)	1.2	28	0.026	0.03	24	Vac...3	3	PEEK	FFKM	Strand 500 mm	20027698		
												PVDF	Plug	20094654
												PPS	FKM	20071187
														EPDM
													20037618	
													Strand 500 mm	20095102
UNF 1/4"-28	28 <sup>4.)</sup>	0.026 <sup>4.)</sup>	0.03 <sup>4.)</sup>	24	Vac...3	3	PEEK	FFKM	Plug	20071047				
										FKM	Strand 500 mm	20095105		
												Plug	20071065	
Bürkert sub-base (9 × 26)		28	0.026	0.03	24	Vac...2	2	PEEK	FFKM HCR	Plug	20075595			
						Vac...2	2				20048280			
<b>CF B</b> 2/2-way solenoid valve Direct-acting Normally open 	Bürkert sub-base (9 × 26)	1.2	28	0.026	0.03	24	Vac...2	2	PEEK	FFKM	Plug	20071046		

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Circuit function	Port connection	Orifice	Q <sub>in</sub> value air <sup>2.)</sup>	K <sub>v</sub> value water <sup>1.)</sup>	C <sub>v</sub> value water	Voltage/frequency	Pressure range <sup>3.)</sup>	Max. pressure difference	Body material	Seal material	Electrical connection	Article no.
		[mm]	[l/min]	[m <sup>3</sup> /h]	[gpm]	[V]	[bar]	[bar]				
<b>CF T</b> 3/2-way solenoid valve Direct-acting Flow direction optional Universal 	Bürkert sub-base (9 × 26)	0.8	10.7	0.01	0.012	24	0...3 <sup>5.)</sup>	5	PEEK	FFKM	Plug	20030343
						12			PPS	FKM		20071074
						24			PPS	EPDM		20071081
	UNF 1/4"- 28	10.7	0.01	0.012	24	0...3 <sup>5.)</sup>	5	PEEK	FFKM		20035617	
	Tube connector	10.7	0.01	0.012	24	0...3 <sup>5.)</sup>	5	PEEK	FFKM		20071230	
									EPDM		20071234	
									PPS	FKM	20071281	
	Bürkert sub-base (26 × 57) horizontal	10.7	0.01	0.012	24	0...3 <sup>5.)</sup>	5	PPS	EPDM		20071280	
	Bürkert sub-base (9 × 26)	1.2	28	0.026	0.03	12	Vac...3	3	PEEK	FFKM		20071063
						24				FFKM		20027694
		PVDF	PPS	FKM	EPDM	Strand 500 mm	Plug	20094659				
								20094666				
UNF 1/4"- 28		28 <sup>4.)</sup>	0.026 <sup>4.)</sup>	0.03 <sup>4.)</sup>	24	Vac...3	3	PEEK	FFKM		20071045	
									2		20084556	
Bürkert sub-base (9 × 26)	28 <sup>4.)</sup>	0.026 <sup>4.)</sup>	0.03 <sup>4.)</sup>	24	Vac...2	2	PEEK	FFKM HCR		20054962		
								2		20075596		

- 1.) Measurement at + 20 °C, 1 bar at the 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>Nm</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	Port connection	Orifice	Q <sub>in</sub> value air <sup>2.)</sup>	K <sub>v</sub> value water <sup>1.)</sup>	C <sub>v</sub> value water	Voltage/frequency	Pressure range <sup>3.)4.)</sup>	Max. pressure difference	Body material	Seal material	Article no.
		[mm]	[l/min]	[m <sup>3</sup> /h]	[gpm]	[V]	[bar]	[bar]			
<b>CF P</b> 2/2-way impulse solenoid valve Direct-acting 	Bürkert sub-base (9 × 26)	1.2	25	0.024	0.027	24	Vac...2	2	PPS	FKM	355749
						24			PEEK	FFKM	355744
						12					355750
UNF 1/4"- 28	25 <sup>5.)</sup>	0.024 <sup>5.)</sup>	0.027 <sup>5.)</sup>	24	Vac...2	2				355745	
<b>CF S</b> 3/2-way impulse solenoid valve Direct-acting Flow direction unrestricted 	Bürkert sub-base (9 × 26)	1.2	28	0.026	0.03	24	Vac...2	2	PPS	FKM	355756
						24			PEEK	FFKM	355754
						12					20005293
	UNF 1/4"- 28	28 <sup>5.)</sup>	0.026 <sup>5.)</sup>	0.03 <sup>5.)</sup>	24	Vac...2	2				355755

- 1.) Measurement at + 20 °C, 1 bar at the valve inlet and free outlet
- 2.) Converted to standard conditions
- 3.) Pressure data: 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>Nm</sub> = 21.8 l/min.



### 8.4. Ordering chart accessories

#### Manifolds

**Note:**

Customised for connecting plates, on request.

#### Cable plug Type 2503

Accessories	Description	Article no.
	Cable plug with 500 mm flying leads AWG 24 For further information please refer to data sheet <b>Type 2503</b> ▶.	689974
	Cable plug 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
	Cable plug with 500 mm flying leads and Soft Close Elektronik for noise minimization. For further information refer to the operating instructions for <b>Type 2503</b> ▶ <b>SoftClose</b> or see data sheet <b>Type 2503</b> ▶.	689999
	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</b> ▶ <b>Impulse</b> or see data sheet <b>Type 2503</b> ▶.	366210

#### Fittings and hoses

Accessories	Description	Article no.
	Fittings and hoses for UNF connections and hoses see type <b>Type TVU003</b> ▶.	see data sheet <b>TVU003</b> ▶

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