DATA SHEET

Type 6712

bürkert
FLUID CONTROL SYSTEMS

2/2 way Whisper Valve with media separation

- Highest chemical resistance combined with minimum internal volume
- Compact design with 7 mm installation width
- DN 0.8 mm (3 bar) and 0.4 mm (5 bar)
- Switching noise <36 dB
- For dosing applications with excellent cleanability

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

Can be combined with

Type 8763 ▸
Pressure controller for precise pressure-time dosing

Type 2503 ▸
Cable plug for small Bürkert solenoid valves Types 6712 and 6724

Type description

Fluidic “point-of-care” applications, such as dialysis or artificial respiration, and “point-of-use” applications, such as at pipetting arms in biological analysis, present special requirements. The new, media-separated Whisper Valve Type 6712 was developed for precisely these applications. It sets new benchmarks particularly with low switching noise and excellent cleanability. However, the Type 6712 is also the first choice in industrial applications, such as inkjet printers, thanks to its long service life and excellent switching dynamics. The valve’s modular design and available material variants means that it can be used with practically all liquids and gases in the fields of life sciences and industrial applications. This is a valve that combines dosing accuracy and cleanability.

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Visit product website ▸

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1. General technical data

Product characteristics	
Pressure ranges	
DN 0.4	0…5 bar[1.) 2.)]
DN 0.8	0…3 bar[1.) 2.)]
Pressure at the outlet (back pressure)	
DN 0.4	Max. 1.8 bar[2.) 3.)]
DN 0.8	Max. 1.2 bar[2.) 3.)]
Material	
Body	PEEK and PPS
Seal	EPDM and FFKM
Nominal diameters	DN 0.4 and DN 0.8
Outward leak tightness	8 bar[3.)]
Typical service life	30,000,000 circuits (according to laboratory endurance tests)[4.)]
Internal volume	Fluid chamber: 2 µl Total (incl. connections): 5 µl
Port connection	Bürkert flange (7 × 18.2 mm)
Duty cycle	100 % continuous operation
Protection class	IP40 according to IEC 60144
Switching frequency	50 Hz
Switching noise	36 dB(A)[5.)]
Performance data	
Power consumption	0.9 W[6.)]
Switching times	See „5. Performance specifications“ on page 6
Electrical data	
Electrical connection	Single flying leads, AWG 26, 500 mm Cable plug Type 2503 with grid dimension 2 mm[7.)] (see chapter „6.4. Ordering chart accessories“ on page 8) (Solder pin on request)
Operating voltage	12 V DC, 24 V DC
Voltage tolerance	±10 %
Medium data	
Medium	Resistant to neutral and aggressive gases and liquids (see „3.1. Chemical Resistance Chart – Bürkert resistApp“ on page 4)
Medium temperature	
EPDM	0 °C…+55 °C
FFKM	+10 °C…+55 °C
Viscosity	Max. 21 mm²/s
Approvals and certificates	
Approvals[8.)]	
Suitability for drinking water	KTW (W270)
Suitability for foodstuffs	FDA
Environment and installation	
Ambient temperature	
EPDM	0 °C…+55 °C
FFKM	+10 °C…+55 °C
Installation position	Any, preferably actuator face up

1.) Maximum relative pressure maintaining seal on the valve seat

2.) With optional boost electronics (see „6.4. Ordering chart accessories“ on page 8) pressure ranges increase.

3.) Relative pressure

4.) Service life depends on the type of medium, the temperature, the pressure, the seal material and the specific operational conditions. The use of BoostClose electronics is only recommended with EPDM material. This reduces the service life compared to the standard control.

5.) Tested under Bürkert test conditions. The value may deviate under different conditions.

6.) No further power reduction possible.

7.) Please order cable plug with flying leads separately (see „6.4. Ordering chart accessories“ on page 8)
Other suitable cable plugs are e.g: W + P: 521 series (Socket 521S-02-1; Contact 521S-01-2-00) or JST (Socket PHR-2; Contact SPH-002GW-P0.5S), state 04/2015

8.) Others on request

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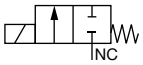
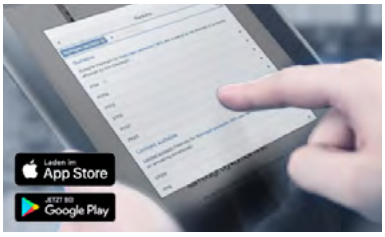
2. Circuit functions

Circuit function	Description
	**Type: A, solenoid valve** 2/2 way Direct-acting Normally closed

3. Materials

3.1. Chemical Resistance Chart – Bürkert resistApp

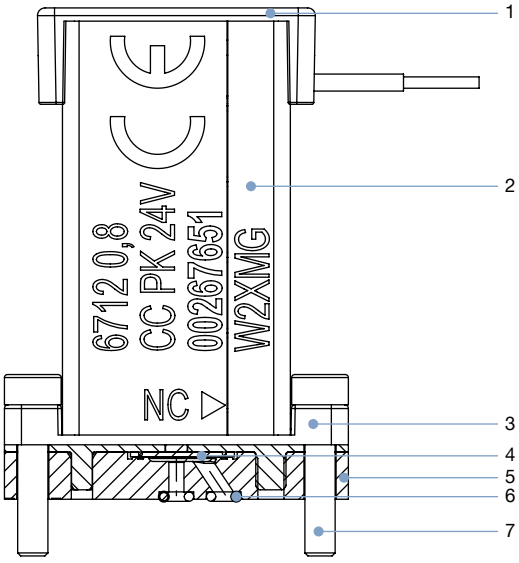


Bürkert resistApp – Chemical Resistance Chart

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

3.2. Material data



No.	Element	Material
1	Cover	PPS
2	Coil housing	Nickel-plated
3	Valve body	PPS
4	Diaphragm (in contact with medium)	EPDM or FFKM
5	Fluid housing (in contact with medium)	PEEK or PPS
6	Flange seal (in contact with medium)	EPDM or FFKM
7	Fixing screw	Stainless steel

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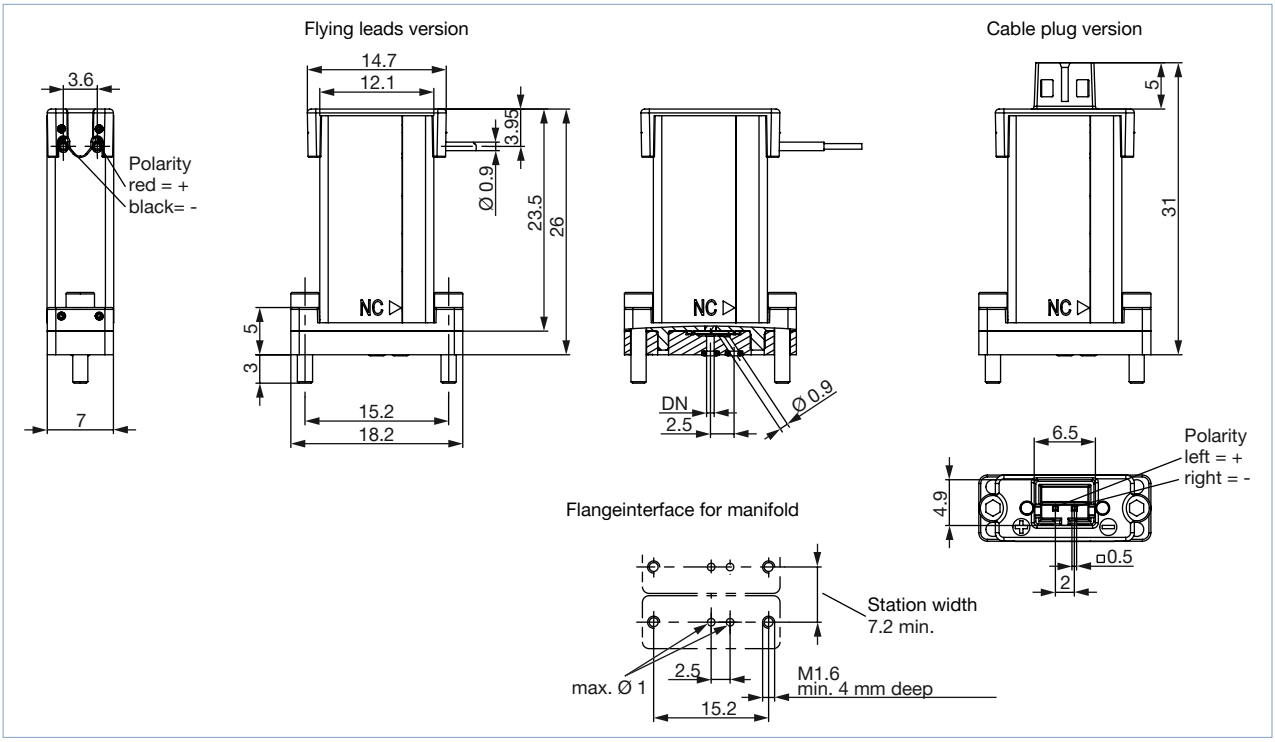
4. Dimensions

4.1. Valve

Note:
Dimensions in mm



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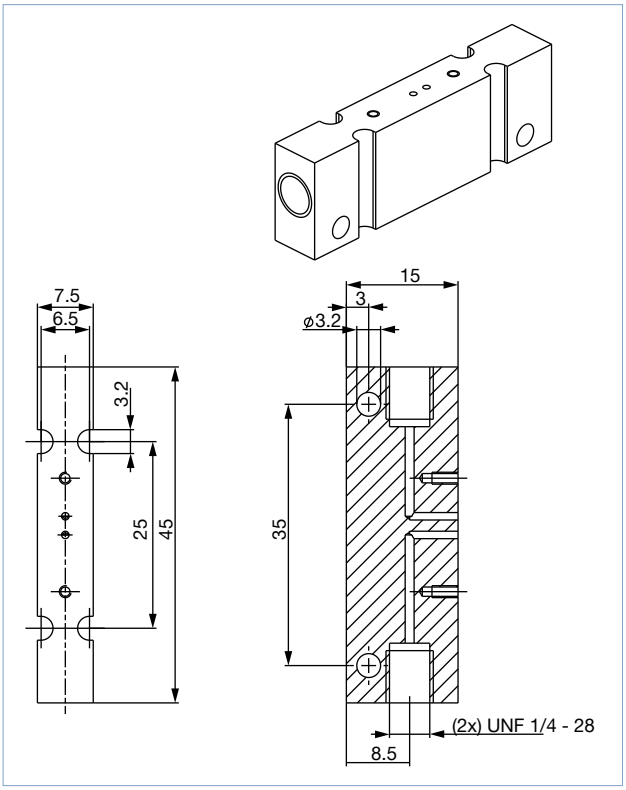
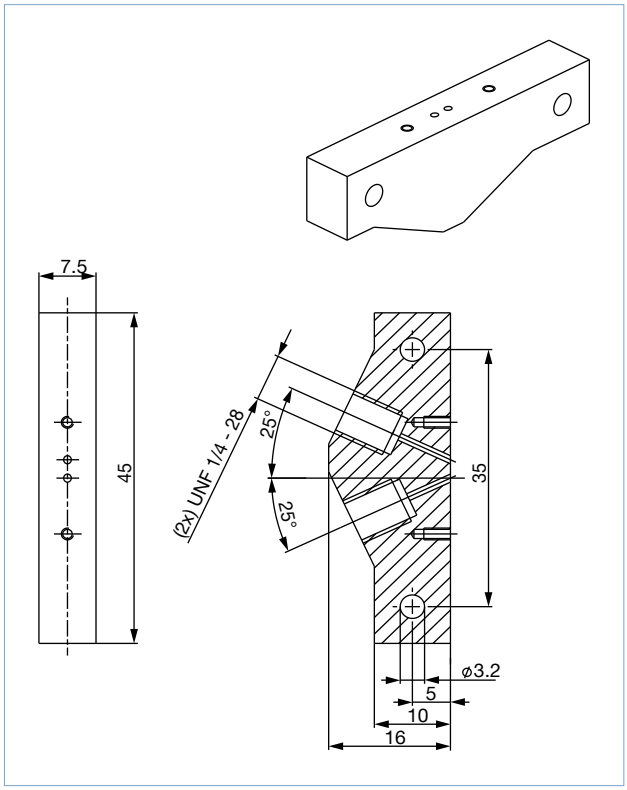
4.2. Manifolds

Note:

- Dimensions in mm
- 1x manifold with UNF ¼ - 28 working ports
- Delivery without valve



Description	Article no.
Manifold UNF ¼ - 28 PEEK	694895



Description	Article no.
Manifold UNF ¼ - 28 PEEK (low internal volume)	695956

5. Performance specifications

5.1. Switching times

Seal material		DN 0.4 at 5 bar[1.)]	DN 0.8 at 3 bar[1.)]
EPDM	Opening[2.)]	0.8 ms	0.5 ms
	Closing[3.)]	1.2 ms	0.9 ms
FFKM	Opening[2.)]	0.9 ms	0.7 ms
	Closing[3.)]	1.8 ms	1.0 ms

1.) Typical switching time measured between valve outlet and a flow resistance according to DIN ISO 12238:2001 at 25 °C; switching time depends on temperature, pressure and seal material.

2.) Pressure build-up 0 - 10 %

3.) Pressure reduction 100 - 90 % against maximum back pressure

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6. Ordering information

6.1. 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

6.2. Bürkert product filter

Bürkert product filter – Get quickly to the right product

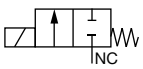
You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

6.3. Ordering chart

Note:

- Please order cable plug connector with lead or electronic separately (see „6.4. Ordering chart accessories“ on page 8). Other electrical assemblies on request.
- Other suitable cable plug connectors are e. g. W+P series 521, JST series PHR-2 or Würth series ConWTB 2.00 mm.
- Attachment for flange connection: 2 stainless steel cylinder screws ISO 4762 M1.6 x 8 (included)

Circuit function	Orifice	Port connection	K_V value water[1.]	C_V value water	Q_{Nn} value air[2.]	Pressure range	Max. back pressure at the outlet	Seal material	Body material	Electrical connection	Voltage/ Frequency	Article no.
	[mm]		[m³/h]	[gpm]	[l/min]	[bar]	[bar]				[V/Hz]	
A, solenoid valve 2/2 way Direct-acting Normally closed 	0.4	Bürkert flange	0.005	0.006	5.8	0…5	1.8	EPDM	PPS	Plug	12 V DC	273226
								FFKM	PEEK	Flying leads	24 V DC	273206
	0.8		0.012	0.014	13.1	0…3	1.2	EPDM	PPS	Plug	12 V DC	273232
								FFKM	PEEK			273231
								EPDM	PPS	Flying leads		273188
								FFKM	PEEK			273187
								EPDM	PPS	Plug	24 V DC	273236
								FFKM	PEEK			273235
								EPDM	PPS	Flying leads		273190
								FFKM	PEEK			267651

1.) Flow rate value for water measurement at +20 °C, and 1 bar pressure at the valve inlet and free outlet

2.) Measurement at +20 °C, 1 bar pressure at the valve inlet and 1 bar pressure difference

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6.4. Ordering chart accessories

Note:

- Ordering information for the manifolds can be found in chapter „4.2. Manifolds“ on page 6.
- For other cable plug connector versions see separate data sheet **Type 2503** ▶.

Accessories	Description	Article no.
	Cable plug connector Type 2503 with wire AWG 24, 500 mm in length	689974
	BoostClose electronics Type 2503 for increasing the permissible pressure under NC and the permissible back pressure. Further information can be found in the Type 2503 BoostClose operating instructions.	689998
	Fittings and hoses	see data sheet **TVU003** ▶

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