

Type 6757

2/2- and 3/2-way flipper solenoid valve with separating diaphragm



Operating Instructions

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1 About this document

The document is an important part of the product and guides the user to safe installation and operation. The information and instructions in this document are binding for the use of the product.

- ▶ Before using the product for the first time, read and observe the whole safety chapter.
- ▶ Before starting any work on the product, read and observe the respective sections of the document.
- ▶ Keep the document available for reference and give it to the next user.
- ▶ Contact the Bürkert sales office for any questions.



Further information concerning the product at [Products](#).

- ▶ Enter the article number from the type label in the search bar.

The illustrations in these instructions may vary depending on the product variant.

1.1 Symbols



DANGER!

Warns of a danger that leads to death or serious injuries.



WARNING!

Warns of a danger that can lead to death or serious injuries.



CAUTION!

Warns of a danger that can lead to minor injuries.

NOTICE!

Warns of property damage on the product or the installation.



Indicates important additional information, tips and recommendations.



Refers to information in this document or in other documents.

- ▶ Indicates a step to be carried out.

✓ Indicates a result.

Menu Indicates a software user-interface text.

1.2 Terms and abbreviations

The terms and abbreviations are used in this document to refer to following definitions.

Product	Flipper valve Type 6757
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1.3 Manufacturer

Bürkert Fluid Control Systems

Christian-Bürkert-Str. 13–17

74653 Ingelfingen

GERMANY

The contact addresses are available at [Contact](#).



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2 Safety

2.1 Intended use

The Type 6757 Whisper Valve is designed to be used in analysis, medicinal and laboratory technology. It can be used for dosing, mixing and distributing liquids and gases.

- ▶ Do not use Type 6757 without the appropriate safeguards outdoors.
- ▶ Do not use rectified alternating voltage without smoothing as a supply voltage. Observe polarity!
- ▶ Only use the device when it is in perfect condition, and always ensure proper storage, transportation, installation and operation.

2.2 Basic safety instructions

These safety instructions do not take into account any unforeseen circumstances or incidents which may arise during installation, operation and maintenance.

Danger – high pressure

- ▶ Before loosening lines or valves, switch off the pressure and drain the lines.

Risk of burns/fire from hot device surfaces due to prolonged activation time.

- ▶ Keep the device away from highly flammable substances and media and do not touch with bare hands.
- ▶ Do not obstruct heat dissipation required for operation.

Medium may leak out if the diaphragm is worn

- ▶ Check regularly for any medium leakages.
- ▶ If the medium is hazardous, secure the environment against risks.

Ensure the following to prevent injuries:

- ▶ Secure the system/device against unintentional activation.
- ▶ Do not use in potentially explosive atmospheres.
- ▶ Do not make any internal or external changes.
- ▶ Ensure that only trained technicians carry out installation and maintenance work.
- ▶ After interruption of the power supply, ensure that the process is restarted in a controlled manner.
- ▶ Comply with the generally accepted engineering standards.

3 Technical data

3.1 Standards and directives

This product complies with the legal requirements applicable at the time of placing on the market and has been developed and tested in accordance with the relevant European directives/regulations and harmonized standards. The conformity is documented and, if necessary, supported by evidence. The EU Declaration of Conformity can be found behind the respective type on the home page country.burkert.com

3.2 Operating conditions

NOTICE!

Valve damaged by overly high temperature.

- Do not exceed temperature of 110 °C on the metal housing.

Ambient temperature	+15...+50°C ¹⁾
Medium	+15...+50°C ¹⁾
Storage temperature	-10...+65°C
Media	aggressive, neutral gaseous and liquid media that do not attack the body and seal materials (see resistance table) Check for adequate resistance!
Degree of protection	IP30 as per EN 60529
Protection class	III as per IEC 61140 or NEC Class II Power Supply

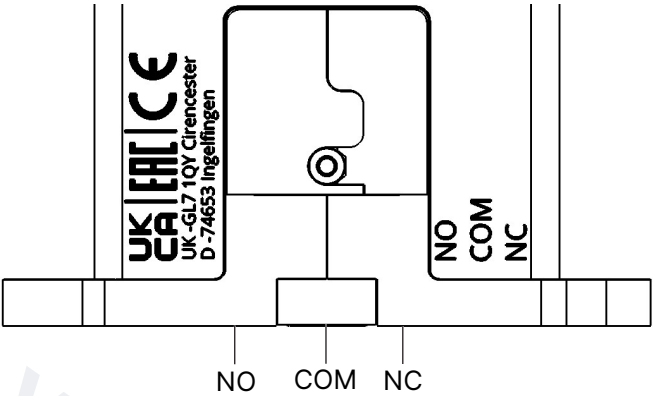
3.3 Electrical data

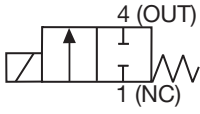
See data sheet (country.burkert.com) and labelling on the valve.

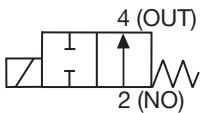
¹⁾ for diaphragm material FFKM
Expanded temperature ranges: depends on materials (see data sheet at country.burkert.com)

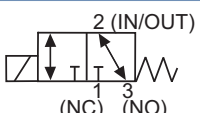
4 Product description

4.1 Assignment of the fluidic connections



Circuit function A	DN	Dummy [bar]	COM [bar]	NC [bar]	ΔP max. ²⁾ [bar]	Flow direction
	1.4	-	Vac...16		16	NC → COM
	2	-	Vac...10		10	
	3	-	Vac...6		6	
	4	-	Vac...3		3	

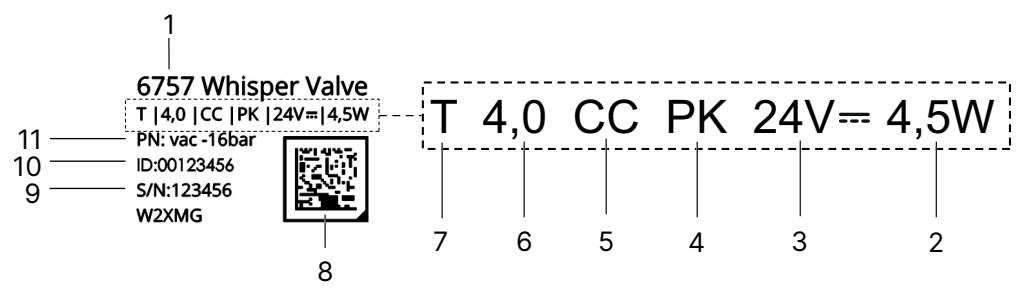
Circuit function B	DN	NO [bar]	COM [bar]	Dummy [bar]	ΔP max. ²⁾ [bar]	Flow direction
	1.4	Vac...16		-	16	NO → COM
	2	Vac...10		-	10	
	3	Vac...6		-	6	
	4	Vac...3		-	3	

Circuit function T	DN	NO [bar]	COM [bar]	NC [bar]	ΔP max. ²⁾ [bar]	Flow direction
	1.4	Vac...10			10	All flow directions permitted.
	2	Vac...6			6	
	3	Vac...3			3	
	4	Vac...1.5			1.5	

²⁾ Observe the permissible differential pressure for vacuum operation.

4.2 Labelling

 Note the information on the valve.



1 Type	2 Power
3 Voltage	4 Body material
5 Sealing material	6 Orifice
7 Circuit function	8 Data-Matrix-Code: Article number, serial number
9 Serial number	10 Article number
11 Pressure range	

Seal material: AA = EPDM, FF = FKM, CC = FFKM
Body material: PK = PEEK, PS = PPS
Nominal diameter: 4.0 = 4.0 mm

5 Installation

5.1 Fluidic installation



WARNING!

Risk of injury from high pressure in the system

- ▶ Before loosening lines or valves, switch off the pressure and drain the lines.

Installation position: any, preferably with actuator on top.

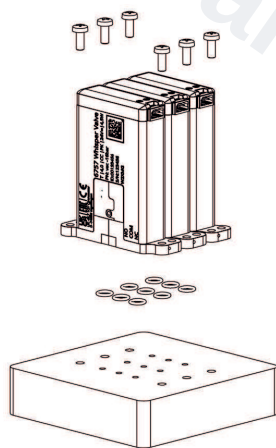
- ▶ Clean pipelines and flange connections.
- ▶ Install dirt trap in the direction of the current before the valve (recommended mesh width 5 µm).



WARNING!

Risk of escaping medium if seal is incorrectly fitted

- ▶ Ensure that the seals provided fit properly.
- ▶ Only use manifolds with sufficient surface quality and flat surfaces.



- ▶ Drill holes in accordance with the drill diagram (see data sheet for dimensions).
- ▶ Place seals in the valve.
- ▶ Assign fluidics connections properly.
- ▶ Fasten valve with screws. Tightening torque for metric screws in metal threads: 1.5 Nm (the torque may vary for other materials).
- ▶ Check installation for tightness.

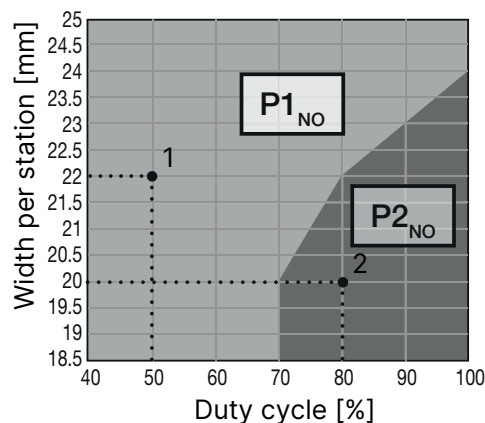
Fig. 1: Hole pattern



For nominal diameter 3 or 4 with G1/8 threaded connection, ensure that the screw connections have a sufficiently large cross-section.

5.1.1 Block structure

For circuit functions T and B, the following restriction applies to the pressure range in block structure:

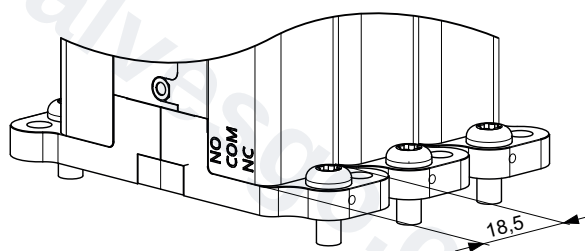


DN	CF	Area P1 _{NO} [bar]	Area P2 _{NO} [bar]
1.4	T	Vac...10	Vac...9
	B	Vac...16	Vac...15
2	T	Vac...6	Vac...5
	B	Vac...10	Vac...9
3	T	Vac...3	Vac...2.5
	B	Vac...6	Vac...5.5
4	T	Vac...1.5	Vac...1.0
	B	Vac...3	Vac...2.5

Fig. 2: Circuit function T and B pressure range restriction

Example 1: Width per station 22 mm, duty cycle 50% -> max. P1 permitted at NO port

Example 2: Width per station 20 mm, duty cycle 80% -> max. P2 permitted at NO port



Minimum permitted width per station: 18.5 mm

5.2 Electrical installation

Power supply: Tolerance $\pm 5\%$ (inc. residual ripple)

Power consumption: See data sheet



The correct polarity is a prerequisite for the function of the valve (see data sheet).

Strand variant installation

NOTICE!

The connection between the stranded housing and the square connector is designed as a 'non-detachable connection'.

- During installation, ensure that the stranded housing cannot be removed without damage after it has been connected.
- Ensure that the stranded housing is firmly locked into the square connector.

5.3 Disassembly



WARNING!

Risk of injury from dangerous media.

- Before loosening lines or valves, flush out hazardous media, depressurise and drain the lines.

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6 Maintenance

- Check regularly for any medium leakages.

7 Troubleshooting

If faults occur, check:

- that the fluidics connections are assigned correctly in accordance with the circuit functions,
- whether the operating pressure is within the permissible range,
- the power supply and valve control unit,
- the correct polarity of the electrical connections.

8 Logistics

8.1 Transport and storage

- ▶ Protect the device against moisture and dirt in the original packaging during transportation and storage.
- ▶ Avoid UV radiation and direct sunlight.
- ▶ Protect connections, if present, from damage with protective caps.
- ▶ Observe the permitted storage temperature.

8.2 Return



No work or tests will be carried out on the device until a valid Contamination Declaration has been received.

- ▶ To return a used device to Bürkert, contact the Bürkert sales office. A return number is required.

8.3 Disposal

Environmentally friendly disposal



- ▶ Follow national regulations regarding disposal and the environment.
- ▶ Collect electrical and electronic devices separately and dispose of them as special waste.

Further information at country.burkert.com