

Type 0262, 0263

2/2-way diaphragm control valve

2/2-Wege-Membransteuerventil

Vanne de commande à membrane 2 voies



Operating Instructions

Bedienungsanleitung

Manuel d'utilisation

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1 THE OPERATING INSTRUCTIONS

The operating instructions contain important information.

- ▶ Read the instructions carefully and follow the safety instructions in particular.
- ▶ Keep the instructions and provide them to every user.
- ▶ The liability and warranty do not apply if the procedures in the operating instructions are not followed.

1.1 Symbols

- ▶ Highlights instructions to avoid a danger.
- Designates a procedure which you must carry out.

Warning of injuries:



DANGER!

Immediate danger! Serious or fatal injuries.



WARNING!

Possible danger! Serious or fatal injuries.



CAUTION!

Danger! Moderate or minor injuries.

Warning of damage:

NOTE!

2 INTENDED USE

Non-intended use of the diaphragm control valve Type 0262 and Type 0263 may be dangerous to people, nearby equipment and the environment.

- ▶ The device is designed for controlling the flow rate of liquid and gaseous media.
- ▶ In potentially explosive atmospheres, only use devices approved for use in those areas. These devices are labeled with a separate Ex type label. For such use, note the information provided on the separate Ex type label and the additional explosion-related information or separate explosion-related operating instructions.
- ▶ The device is approved for use in Zone 1 and 21 in accordance with ATEX directive 2014/34/EU category 2 G/D.
- ▶ Use according to the authorized data, operating conditions, and conditions of use specified in the contract documents and operating instructions.
- ▶ Use the device only in conjunction with third-party devices and components recommended and authorized by Bürkert.
- ▶ Correct transportation, storage and installation as well as careful operation and maintenance are essential for reliable and fault-free operation.
- ▶ Use the device for its intended purpose only.

2.1 Warranty

The warranty is only valid if the device is used as intended in accordance with the specified application conditions.

2.2 Information on the Internet

The operating instructions for Type 0262 and 0263 can be found on the Internet at: www.burkert.com

3 BASIC SAFETY INSTRUCTIONS

These safety instructions do not consider any contingencies or incidents which occur during installation, operation and maintenance. The operator is responsible for observing the location-specific safety regulations, also with reference to the personnel.



Risk of injury due to high pressure.

- ▶ Before working on the system or device, switch off the pressure and vent or drain lines.

Risk of injury from electric shock.

- ▶ Before working on the system or device, switch off the power supply and secure to prevent reactivation.
- ▶ Observe the applicable accident prevention and safety regulations for electrical equipment.

Risk of burns during continuous operation due to hot device surface.

- ▶ Keep device away from highly flammable substances and media and do not touch with bare hands.



General hazardous situations.

To prevent injuries:

- ▶ Operate the device only in perfect state and in consideration of the operating instructions.
- ▶ Do not make any changes to the device and do not subject it to mechanical stress.
- ▶ Secure device or system to prevent unintentional activation.
- ▶ Only trained technicians may perform installation and maintenance work.
- ▶ Install the device according to the regulations applicable in the country.
- ▶ After an interruption in the power supply, ensure that the process is restarted in a controlled manner.
- ▶ Observe the general rules of technology.

4 PRODUCT DESCRIPTION

4.1 General description

The externally controlled valve Type 0262 and 0263 is pneumatically actuated.

It uses neutral gases or air (control media) to control the flow rate of media, e.g. water, alcohol, oil, fuel, hydraulic fluid, saline solution, lye, organic solvent and steam.

4.2 Properties

- Glandless, double spindle seal,
- Actuator housing made of acid and lye-resistant plastic,
- High flow values through the stream-lined valve body,
- Type 0263 has a hermetically sealing diaphragm between the valve body and actuator.

4.3 Device versions

A variant for steam application with PTFE seal is available for Type 0262.

5 STRUCTURE AND FUNCTION

5.1 Structure

The valve consists of a membrane actuator and a 2-way valve body.

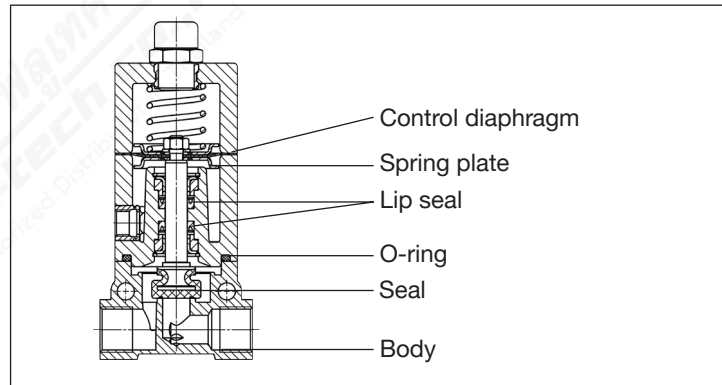


Fig. 1: Structure of Type 0262

In Type 0263 the actuator is hermetically sealed from the medium by a diaphragm.

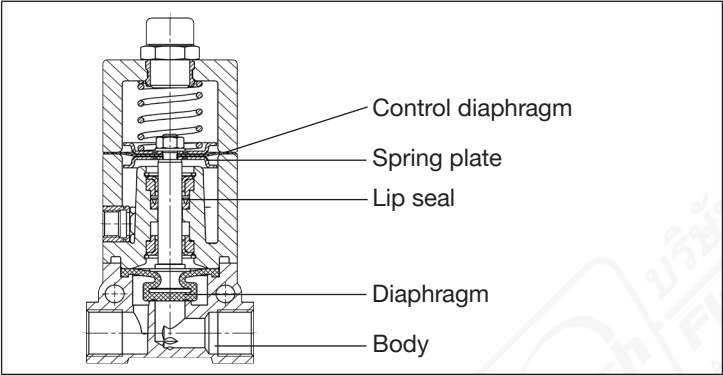


Fig. 2: Structure of Type 0263

5.2 Function

Spring force (CFA) or pneumatic control pressure (CFB and CFI) generates the closing force on the seat seal or diaphragm. The force is transferred via a spindle which is connected to the control diaphragm.

5.2.1 Control function

Control function (CF)

CFA		Closed by spring force in rest position
CFB		Opened by spring force in rest position
CFI		Actuating function via reciprocal pressurization

5.2.2 Incoming flow under seat

The valve is closed against the medium flow by spring force (control function A, CFA) or by control pressure (control function B, CFB). As the medium pressure is under the seat seal, this pressure contributes to opening of the valve.

NOTE!

Seat seal or diaphragm subject to wear.

When the incoming flow is over the seat, powerful water hammers may occur, especially in the case of liquid media.

- ▶ Do not use device for incoming flow over the seat.
- ▶ Observe arrow for direction of flow on the valve body.

6 TECHNICAL DATA

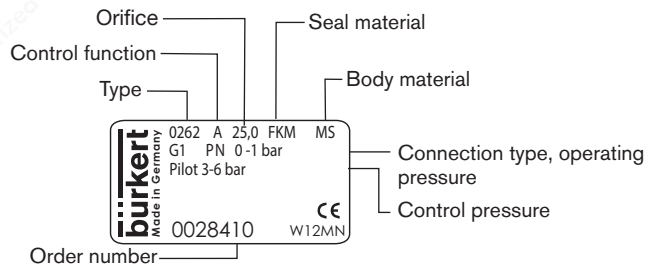
6.1 Conformity

The device conforms to the EU directives as per the EU Declaration of Conformity (if applicable).

6.2 Standards

The applied standards, which are used to demonstrate conformity with the directives, are listed in the EU type examination certificate and/or the EU Declaration of Conformity (if applicable).

6.3 Type label



6.4 Operating conditions

6.4.1 Temperature ranges

Type	Seal material	Medium temperature [°C]	Ambient temperature [°C]
0262	NBR	-10...+90	-10...+90
	FKM	-10...+100	
	EPDM	-10...+100	
	PTFE/EPDM	-10...+140	
	PTFE/FKM	-10...+140	
0263	NBR	-10...+90	-10...+90
	FKM	-10...+100	
	EPDM	-10...+100	



If a pilot valve is used, the maximum ambient temperature is +55 °C.

Temperature of the control medium

max. +90 °C

6.4.2 Pressure ranges

Type	Orifice	Medium pressure for circuit function [bar]			Max. control pressure [bar]
		A normal spring	A reinforced spring	B normal spring	
0262	10	0...5	0...10	0...10	6
	12	0...3.5	0...6	0...10	6
	20		0...1.5	0...1.5	6
	25		0...1	0...1	6
0263	10	0...2.5	0...5	0...10	6
	12	0...2	0...4.5	0...10	6



Observe minimum control pressure according to the specifications on the type label.

6.4.3 Permitted media

Seal material	Permitted media
NBR	Neutral media, e.g. compressed air, town gas, water, hydraulic oil
FKM	Per solutions, oxygen, hot air
EPDM	Oil and grease-free media, e.g. hot water, alkaline washing and bleaching lyes
PTFE/EPDM	Oil and grease-free media, e.g. hot water and steam
PTFE/FKM	Hot oil, hydrocarbons, aromatic compounds and steam

Control medium neutral gases and liquids, in particular air, water, hydraulic fluids up to max. +90 °C

7 ASSEMBLY



DANGER!

Risk of injury from high pressure and discharge of medium.

- ▶ Before working on the device or system, switch off the pressure. Vent or drain lines.

Risk of injury from electric shock.

- ▶ Before working on the device or system, switch off the power supply. Secure against reactivation.
- ▶ Observe applicable accident prevention and safety regulations for electrical equipment.



WARNING!

Risk of injury due to incorrect assembly.

- ▶ Assembly may be carried out only by trained technicians and with the appropriate tools.
- ▶ Secure system against unintentional activation.
- ▶ Following assembly, ensure a controlled restart.

7.1 Before installation

Installation position: optional, preferably with actuator face up.

- Remove contaminants from pipelines.
- Ensure that the pipelines are aligned.
- Observe flow direction.

7.2 Installation

- Connect valve body to pipeline.



Ensure that the valve body is installed torsionally rigid.



WARNING!

Danger if incorrect lubricants used.

Unsuitable lubricant may contaminate the medium. In oxygen applications there is a risk of an explosion.

- ▶ Only use approved lubricants for specific applications, such as oxygen or analytical applications.

7.3 Pneumatic connection



WARNING!

Risk of injury due to unsuitable hoses.

- ▶ Use only hoses which can withstand the pressure and temperature of the medium.
- ▶ Observe technical data of the hose manufacturer.

For control function I: Danger due to the control pressure failing.

If the control pressure fails, the valve remains in an undefined position.

- ▶ For a controlled restart, pressurize the device with control pressure and then connect the medium.

7.3.1 Connection of the control medium

Control function A:

- Connect control medium to lower connection of the actuator.

Control function B:

- Connect control medium to upper connection of the actuator.

Control function I:

- Connect control medium to upper and lower connections of the actuator. Pressure on the lower connection opens the valve. Pressure on the upper connection closes the valve.

Connecting thread: G 1/8

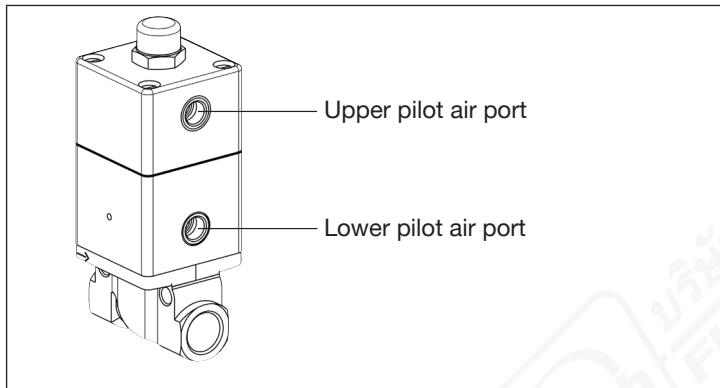


Fig. 3: Pilot air ports

NOTE!

Seat seal and diaphragm subject to wear with control function I.

- ▶ To prevent powerful water hammers with CFI, contact the pilot air via an intake air throttle.

8 START-UP



WARNING!

Risk of injury due to incorrect operation.

- ▶ Prior to start-up, make sure operating personnel are familiar with the operating instructions and have understood them.
- ▶ The device or system should be started up by fully trained personnel only.

For control function I: Danger due to the control pressure failing.

If the control pressure fails, the valve remains in an undefined position.

- ▶ For a controlled restart, pressurize the device with control pressure and then connect the medium.



Observe specifications on the type label and in the chapter Technical data.

→ Set pilot air according to specifications on the type label.

9 REMOVAL



WARNING!

Risk of injury due to improper removal.

- Removal should be performed only by trained personnel using suitable tools.

Risk of injury from hazardous media.

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

→ Loosen pneumatic connection.

→ Remove device.

10 SPARE PARTS



CAUTION!

Risk of injury and/or damage due to the use of incorrect parts.

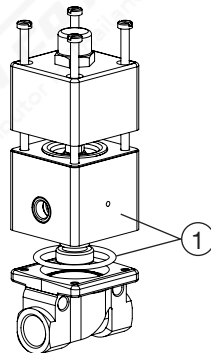
Incorrect accessories and unsuitable spare parts may cause injuries and damage the device and the surrounding area.

- Use original accessories and original spare parts from Bürkert only.

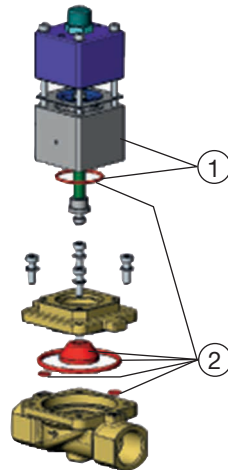
The following spare parts are available for Type 0262 and 0263:

- Actuator set (consists of Pos. 1 and Pos. 2).
- Seal set (consists of Pos. 2).

DN10



DN20, DN25



10.3.1 Actuator set Type 0262

Seal material	Circuit function A		
	DN10/12	DN20	DN25
EPDM	015 082	015 205	015 211
NBR	015 196	015 206	015 212
FKM	015 197	015 207	015 213

Seal material	Circuit function B		
	DN10/12	DN20	DN25
EPDM	015 202	015 208	015 214
NBR	015 203	015 209	015 215
FKM	015 204	015 210	015 216

10.3.2 Actuator set Type 0263

Seal material	Circuit function	
	A	B
EPDM	015 217	015 220
NBR	015 218	015 221
FKM	015 219	015 222

10.3.3 Seal set Type 0262

Seal material	Orifice	
	DN20	DN25
EPDM	624 343	624 346
NBR	624 341	624 344
FKM	624 342	624 345

11 TRANSPORTATION, STORAGE, DISPOSAL

NOTE!

Damage in transit due to inadequately protected devices.

- Protect the device against moisture and dirt in shock-resistant packaging during transportation.
- Observe permitted storage temperature.

Incorrect storage may damage the device.

- Store the device in a dry and dust-free location.
- Storage temperature. -20 to +55 °C.

Damage to the environment caused by device components contaminated with media.

- Dispose of the device and packaging in an environmentally friendly manner.
- Observe applicable disposal and environmental regulations.



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