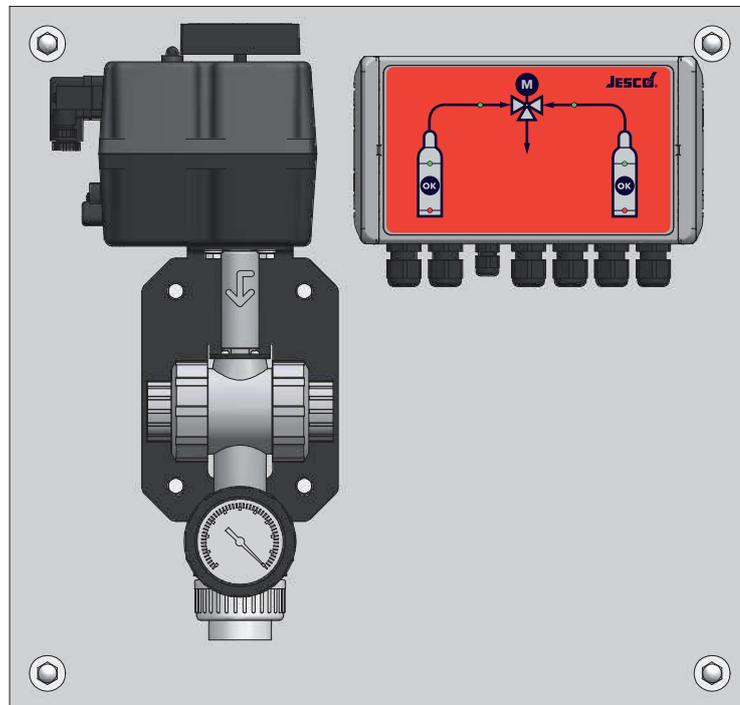


Chlorine gas changeover unit  
**C 7523**  
Operating instructions



Read the operating manual!

The user is responsible for installation and operation related mistakes!



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# 1 Notes for the Reader

This operating manual contains information and behaviour rules for the safe and designated operation of the device.

Observe the following principles:

- read the entire operating instructions prior to inaugurating the device.
- ensure that everyone who works with or on the chlorine gas filter has read the operating instructions and follows it.
- maintain the operating instructions throughout the service life of the device.
- pass the operating instructions on to any subsequent owner of the device.

## 1.1 General non-discrimination

In this operating manual, only the male gender is used where grammar allows gender allocation. The purpose of this is to make the text easy to read. Men and women are always referred to equally. We would like to ask female readers for understanding of this text simplification.

## 1.2 Explanation of the signal words

Different signal words in combination with warning signs are used in this operating manual. Signal words illustrate the gravity of possible injuries if the risk is ignored:

Signal word	Meaning
DANGER!	Refers to imminent danger. Ignoring this sign may lead to death or the most serious injuries.
WARNING!!	Refers to a potentially hazardous situation. Failure to follow this instruction may lead to death or severe injuries.
CAUTION	Refers to a potentially hazardous situation. Failure to follow this instruction may lead to minor injury or damage to property.
<i>Note</i>	Refers to a danger which, if ignored, may lead to risk to the machine and its function.

Table 1: Explanation of the signal words

## 1.3 Explanation of the warning signs

Warning signs represent the type and source of a danger:

Warning sign	Type of danger
	Danger to life from chlorine poisoning
	Danger to life due to electric shock
	General danger zone
	Danger of damage to machine or functional influences

Table 2: Explanation of the warning signs

## 1.4 Identification of warnings

Warnings are intended to help you recognise risks and avoid negative consequences.

This is how warnings are identified:

Warning sign	SIGNAL WORD
<p><b>Description of danger.</b></p> <p>Consequences if ignored.</p> <p>⇒ The arrow signals a safety precaution to be taken to eliminate the danger.</p>	

## 1.5 Instruction for action identification

This is how pre-conditions for action are identified:

- ✓ Pre-condition for action which must be met before taking action.
- ✘ A resource such as a tool or auxiliary materials required to perform the operating instructions.

This is how instructions for action are identified:

- ➔ Separate step with no follow-up action.
- 1. First step in a series of steps.
- 2. Second step in a series of steps.
  - ▶ Result of the above action.
- ✓ **Action completed, aim achieved.**

## 2 Safety

### 2.1 General warnings

The following warnings are intended to help you eliminate the dangers that can arise while handling the device. Risk prevention measures always apply regardless of any specific action.

Safety instructions warning against risks arising from specific activities or situations can be found in the respective sub-chapters.

	<b>DANGER!</b>
<b>Danger to life from chlorine poisoning!</b>	
Chlorine is poisonous. In severe cases, breathing in chlorine may lead to death. It irritates the eyes, the respiratory system and the skin.	
⇒ Use sufficient personal protective equipment.	
⇒ When carrying out any work on the system, use a respirator mask with a Type B gas filter that complies with EN 14387.	
⇒ Always comply with the accident prevention regulations that apply at the place of use.	
⇒ Get rid of leaks without delay. You must get rid of even very minor leaks without delay. Together with the humidity, chlorine forms hydrochloric acid and corrosion results in rapidly increasing leakage.	
⇒ Use only chlorine-resistant seals.	
⇒ Only use seals once. Reusing them leads to leaks.	

	<b>DANGER!</b>
<b>Danger to life from chlorine poisoning!</b>	
Chlorinators without gas warning devices are an increased safety risk, since it is not possible to detect escaping chlorine gas in good time or at all.	
⇒ Install a gas warning device.	

	<b>WARNING!!</b>
<b>Increased risk of accidents due to insufficient qualification of personnel!</b>	
Chlorinators and their accessories must only be installed, operated and maintained by personnel with sufficient qualifications. Insufficient qualification will increase the risk of accidents.	
⇒ Ensure that all action is taken only by personnel with sufficient and corresponding qualifications.	
⇒ Prevent access to the system for unauthorised persons.	

	<b>Note</b>
<b>Damage to the plant due to the formation of hydrochloric acid</b>	
Chlorine gas is highly hygroscopic. This means that humidity enters the system at any open connection on devices or pipes, which results in the formation of hydrochloric acid and contamination. This inevitably causes damage to the units.	
⇒ Keep all connections (including in the vacuum system and on all devices not currently in use) closed at all times.	

### 2.2 Information about chlorine

Chlorine is a hazardous substance. The chemical element chlorine is a greenish-yellow, toxic gas with a pungent odour, which can be detected in the air at concentrations below 1 ppm (= 1 ml/m<sup>3</sup>).

Chlorine is 2.5 times heavier than air and accumulates at ground level.

Chlorine is extremely toxic for water organisms. The reason for the toxicity of chlorine is its extraordinary reactivity. It reacts with animal and vegetable tissue and thus destroys it.

Air with a chlorine gas content of 0.51% leads to a quick death in mammals and humans, as it attacks the respiratory tract and the pulmonary alveolus (formation of hydrogen chloride or hydrochloric acid).

	<b>Note</b>
<b>Faults due to insufficient chlorine quality</b>	
Impurities in the chlorine gas form deposits in devices and valves and can attack the components chemically. This can lead to malfunctions.	
⇒ Only use technically pure chlorine that meets the following requirements:	
- Mass content of chlorine at least 99.5%	
- Water content max. 20 mg/kg	
Chlorine that complies with EN 937 meets these requirements	

### 2.3 Hazards due to non-compliance with the safety instructions

Failure to follow the safety instructions may endanger not only persons, but also the environment and the device.

The specific consequences can be:

- failure of important functions of the device and of the corresponding system,
- failure of required maintenance and repair methods,
- danger to persons,
- danger to the environment caused by substances leaking from the

system.

## 2.4 Working in a safety-conscious manner

Besides the safety instructions specified in this operating manual, further safety rules apply and must be followed:

- accident prevention regulations
- safety and operating provisions,
- safety regulations on handling hazardous substances,
- environmental protection provisions,
- applicable standards and legislation.

## 2.5 Personal protective equipment

Based on the degree of risk posed by the dosing medium and the type of work you are carrying out, you must use corresponding protective equipment. Read the Accident Prevention Regulations and the Safety Data Sheets to the dosing media find out what protective equipment you need.

As a minimum, the following protective equipment is recommended:



Protective mask



protective clothing



Protective gloves



safety shoes

Corresponding protective equipment must be used during these tasks:

- commissioning,
- all work on gas-bearing sections of the plant
- changing the chlorine gas containers,
- shutdown,
- maintenance work,
- disposal.

	<b>DANGER!</b>
<p><b>Danger to life from chlorine poisoning!</b></p> <p>If chlorine gas escapes, a filter mask is ineffective, since it is not a self-contained breathing apparatus.</p> <p>⇒ If chlorine gas escapes, wear a Type 2 self-contained breathing apparatus that complies with EN 137.</p>	

## 2.6 Personnel qualification

Any personnel who work on the device must have appropriate special knowledge and skills.

Anybody who works on the device must meet the conditions below:

- attendance at all the training courses offered by the owner,
- personal suitability for the respective activity,
- sufficient qualification for the respective activity,
- training in how to handle the device,
- knowledge of safety equipment and the way this equipment functions,
- knowledge of this operating manual, particularly of safety instructions and sections relevant for the activity,
- knowledge of fundamental regulations regarding health and safety and accident prevention.

All persons must generally have the following minimum qualification:

- training as specialists to carry out work on the device unsupervised,
- sufficient training that they can work on the device under the supervision and guidance of a trained specialist.

These operating instructions differentiate between these user groups:

### 2.6.1 Specialist staff

Thanks to their professional training, knowledge, experience and knowledge of the relevant specifications, specialist staff are able to perform the job allocated to them and recognise and/or eliminate any possible dangers by themselves.

### 2.6.2 Trained electricians

Due to their professional training, knowledge and experience as well as knowledge of specific standards and provisions, trained electricians are able to do the electrical work assigned to them and to recognise and avoid any potential dangers by themselves.

They are specially trained for their specific working environment and are familiar with relevant standards and provisions.

They must comply with the legally binding regulations on accident prevention.

### 2.6.3 Trained persons

Trained persons have received training from the operator about the tasks they are to perform and about the dangers stemming from improper behaviour.

Trained persons have attended all trainings offered by the operator.

### 2.6.4 Personnel tasks

In the table below you can check what qualifications are the pre-condition for the respective tasks. Only people with appropriate qualifications are allowed to perform these tasks!

Qualification	Activities
Specialist staff	<ul style="list-style-type: none"> <li>■ Transportation</li> <li>■ Assembly</li> <li>■ Hydraulic installations</li> <li>■ Commissioning</li> <li>■ Taking out of operation</li> <li>■ Fault rectification</li> <li>■ Maintenance</li> <li>■ Repairs</li> <li>■ Disposal</li> </ul>
Trained electricians	<ul style="list-style-type: none"> <li>■ Electrical installation</li> <li>■ Rectifying electrical faults</li> <li>■ Electrical repairs</li> </ul>
Trained persons	<ul style="list-style-type: none"> <li>■ Storage</li> <li>■ Control</li> </ul>

Table 3: Personnel qualification

### 3 Intended use

#### 3.1 Notes on product warranty

Any non-designated use of the device can impair its function and the protection provided. This leads to invalidation of any warranty claims!

Please note that liability is on the side of the user in the following cases:

- the device is operated in a manner which is not consistent with these operating instructions, particularly safety instructions, handling instructions and the section "Intended Use".
- Information on usage and environment (see section 5 „Technical data“ on page 11) is not adhered to.
- if people operate the device who are not adequately qualified to carry out their respective activities.
- No original spare parts or accessories of Lutz-Jesco GmbH are used.
- Unauthorised changes are made to the device.
- The user uses different dosing media than those indicated in the order.
- Maintenance and inspection intervals are not adhered to as required or not adhered to at all.
- The device is commissioned before it or the corresponding system has been correctly and completely installed.
- Safety equipment has been bridged, removed or made inoperative in any other way.

#### 3.2 Intended purpose

The C7523 changeover unit is intended exclusively for use with chlorine gas dosing systems in accordance with the vacuum procedure in accordance with DIN 19606. It serves to switch between two vacuum supply batteries.

It may only be used with technically pure chlorine with a minimum mass content of 99.5%

#### 3.3 Device revision

This operating manual applies to the following devices:

Device	Month / year of manufacture
Chlorine gas changeover unit C 7523	03/2015 onwards

Table 4: Device revision

The production date is indicated on the rating plate.

#### 3.4 Prohibited dosing media

The device must not be used for the following media and substances:

- Any gases except chlorine gas,
- Media with a pressure not less than the atmospheric pressure.
- Chlorine of insufficient quality

## 4 Product description

### 4.1 Scope of delivery

Please compare the delivery note with the scope of delivery. The following items are part of the scope of delivery:

- Motor ball valve
- Contact gauge
- Various hydraulic connections (optional)
- Wall holder
- Control with power plug
- Plastic wall panel (optional)
- • Installation material for wall fixing
- Operating instructions

### 4.2 Design and function

Chlorine gas dosing systems in a water treatment system must be permanently ready for operation so that the water can be sufficiently disinfected at any point. This explains the fitting of the systems with two supply batteries - one side in operation, the other on stand-by. The vacuum chlorine changeover valve effects automatic switching between the two cylinders or drum batteries.

Typical installations are shown on the example installations (from page 20).

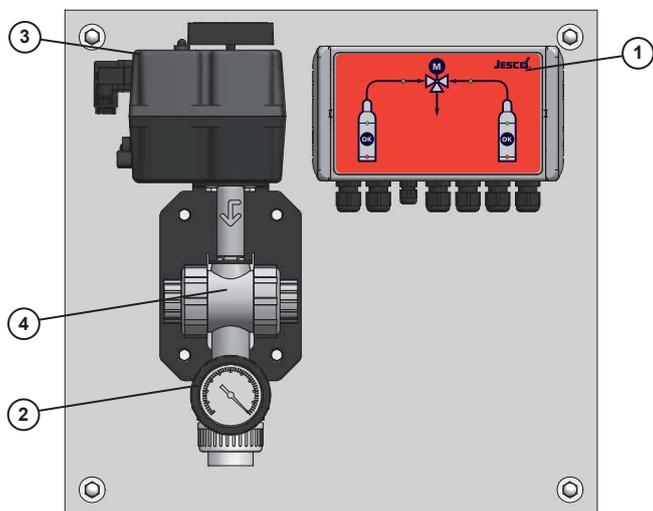


Fig. 1: Structure of the device

If the power supply from the operation battery ebbs, the vacuum generated by the injector will become stronger. The control ① recognises the chlorine shortage using the contact gauge ② and activates the motor ③ on the three-way ball valve ④.

The control signals the operating state with coloured LEDs in the flow chart. (See section 8 „Control“ on page 22) The most important operating signals are available for remote indication as relay contacts.

The "residue discharge" function enables the consumption of residue from incompletely-emptied tanks of a total vacuum battery. Working in set intervals, the changeover unit then switches to the battery registered as empty and removes the residue.

Manual changeover can be triggered by the push of a button. Mechanical changeover by hand is possible given a power outage.

### 4.3 Rating plate

The rating plate contains information on the safety and functional method of the product. The rating plate must be kept legible for the duration of the service life of the product.

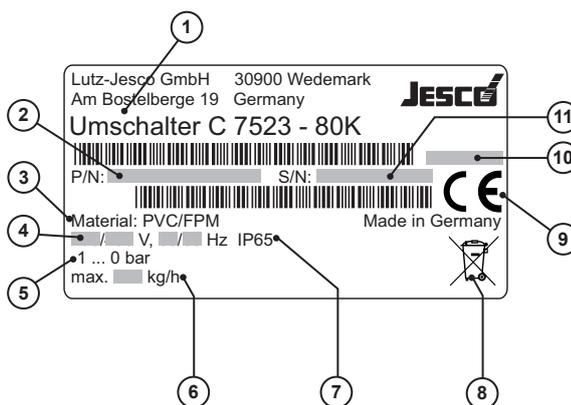


Fig. 2: Rating plate C 7523

No.	Description
1	Product name
2	Part number
3	Materials coming into contact with media
4	Voltage supply
5	Permitted operating pressure
6	Maximum flow
7	IP protection class
8	WEEE marking
9	Label showing conformity with applicable European directives
10	Month/year of manufacture
11	Serial number

Table 5: Rating plate

## 5 Technical data

Description		Value
Throughput		up to 80 kg/h Cl <sub>2</sub> (see tab. 7)
Operating pressure		-1...0 bar
Contact gauge		Ø63 mm, class 2.5, -1...0 bar
Setting range of the switching point on the contact gauge		-0.9...-0.1 bar
Changeover time		approx. 22 s
Material in contact with the media		PVC / FPM / Silver / coated brass
Further materials		Coated steel, PP, ABS
Voltage supply		115...230 V, 50...60 Hz
Power consumption	Normal mode	max. 0,3 A / max. 20 VA
	Switch-on current	max. 17.5 A (peak)
Load capacity of the relay		max. 3 A / 250 VAC
Weight	without mounting plate	approx. 5 kg
	with mounting plate	approx. 7 kg
Protection class		IP 65
Ambient temperature		0 – 55 °C, avoid direct sunlight
Air humidity		max. 95%, non condensing

Table 6: Technical data

Product	Hydraulic connections	Max. flow rate
C 7523-4K	hose 8/12 mm	4 kg/h Cl <sub>2</sub>
C7523-10K	hose 12/16 mm	10 kg/h Cl <sub>2</sub>
C7523-40K	Pipe DN25/Ø32	40 kg/h Cl <sub>2</sub>
C7523-80K	Pipe DN32/Ø40	80 kg/h Cl <sub>2</sub>

Table 7: Maximum flow

## 6 Dimensions

All dimensions in mm

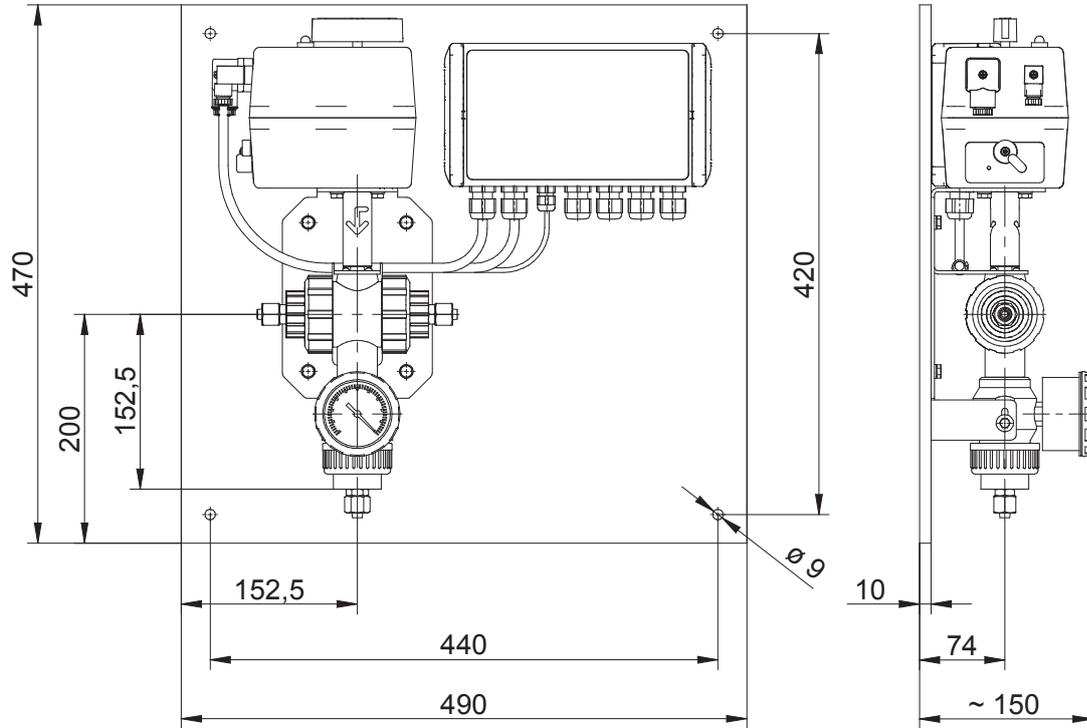


Fig. 3: Dimensioned drawing C 7523 on mounting plate

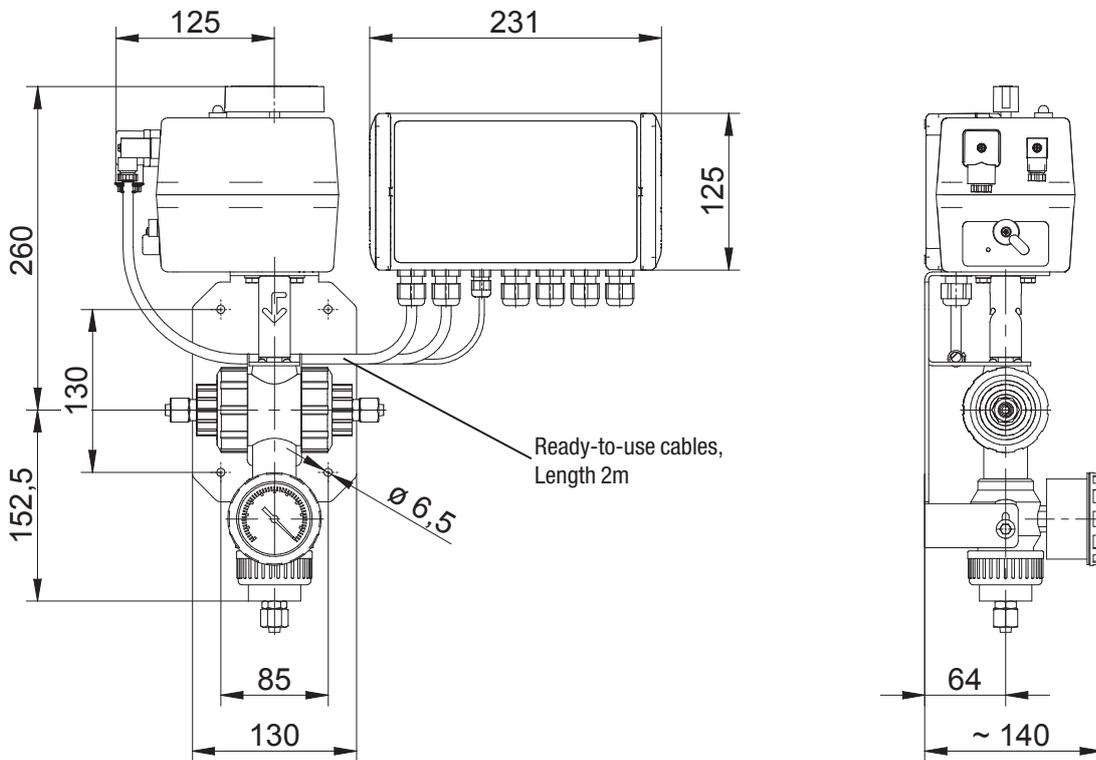


Fig. 4: Dimensioned drawing C 7523 as assembly kit

## 7 Installation

	DANGER!
<p><b>Danger to life from chlorine poisoning!</b></p> <p>Chlorinators without gas warning devices are an increased safety risk, since it is not possible to detect escaping chlorine gas in good time or at all.</p> <p>⇒ Install a gas warning device.</p>	

	WARNING!!
<p><b>Increased risk of accidents due to insufficient qualification of personnel!</b></p> <p>Chlorinators and their accessories must only be installed, operated and maintained by personnel with sufficient qualifications. Insufficient qualification will increase the risk of accidents.</p> <p>⇒ Ensure that all action is taken only by personnel with sufficient and corresponding qualifications.</p> <p>⇒ Prevent access to the system for unauthorised persons.</p>	

	Note
<p><b>Damage to the system due to incorrect installation</b></p> <p>The failure to observe installation instructions (e.g. use of unsuitable tools, incorrect torque) can damage the system parts.</p> <p>⇒ Use suitable tools.</p> <p>⇒ Note the specified torque.</p>	

### 7.1 Installation location

The changeover unit is fitted in the room of the chlorine supply.

The room must fulfil the following requirements:

- secured against access by unauthorised persons,
- protected against weather conditions,
- frost-free,
- permissible ambient temperature adhered to (see Section 5 "Technical data" on page 11)
- room of sufficient size to allow trouble-free assembly as well as inspection and maintenance of the device at all times,
- an electrical connection is given
- the room must comply with the locally valid prescriptions

### 7.2 Installing the device

The device must be installed perpendicularly to the wall surface in a way that makes it easily accessible to the operator. The control should be mounted at c. eye-level.

Precondition for action:

- ✓ A flat wall
- ✓ The mounting material is suitable for the wall.

Resources required:

- ✗ Water level
- ✗ Drill
- ✗ 2 open-end spanners SW13

Perform the following working steps:

1. Hold the device against the wall and align it horizontally. The installation position is specified on page 20.
  2. Mark the mounting point on the wall.
  3. Drill in the marked holes and insert the rawplug.
  4. Screw in the stair bolts ① into the rawplug until the wooden thread seals with the wall surface.
  5. Place a nut ② and washer ③ on every screw.
  6. Slide the wall panel ④ on the stair bolts.
  7. Place a washer ⑤ and a cap nut ③ on every screw.
  8. Insert the nuts (② + ⑥) in such a way that the wall panel is held level and without tension.
  9. Tighten the nuts.
- ✓ **The device is fitted on the wall.**

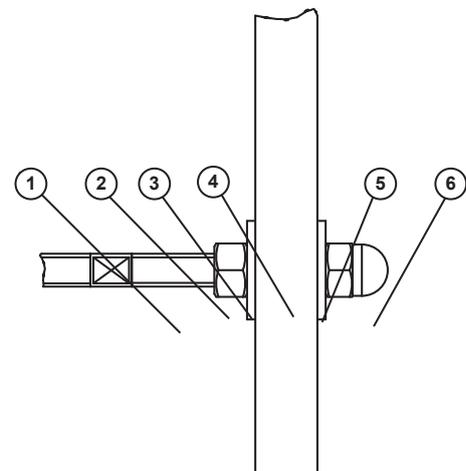


Fig. 5: Fitting the wall panel

### 7.3 Hydraulic installations

PVC-U pipes or PE hoses are used as conduits. If the line is to supply multiple consumers, the line should be calculated for the total of the consumption volume.

The following nominal widths are recommended for the vacuum line (pressure loss max. 25 bar, calculated at 0.9 bar (a) with 4x90° angles):

Mass flow of chlorine	Length of the vacuum line between the vacuum regulator and the dosing device					
	5 m	10 m	20 m	30 m	50 m	100 m
1 kg/hr	DN 8	DN 8	DN 8	DN 8	DN 8	DN 12
2 kg/hr	DN 8	DN 8	DN 8	DN 12	DN 12	DN 12
4 kg/hr	DN 8	DN 12	DN 12	DN 12	DN 12	DN 15
10 kg/hr	DN 12	DN 12	DN 15	DN 15	DN 20	DN 20
15 kg/hr	DN 12	DN 15	DN 20	DN 20	DN 20	DN 25
25 kg/hr	DN15	DN 20	DN 20	DN 25	DN 25	DN 32
40 kg/hr	DN 20	DN 25	DN 25	DN 25	DN 32	DN 32
60 kg/hr	DN 25	DN 25	DN 32	DN 32	DN 32	DN 40
80 kg/hr	DN 32	DN 32	DN 32	DN 32	DN 40	DN 50

Table 8: Max. capacity

Where necessary, a large distance can be installed in a large nominal width and a connection in the nominal width of the device can be selected for shorter sections shortly before and after the device.

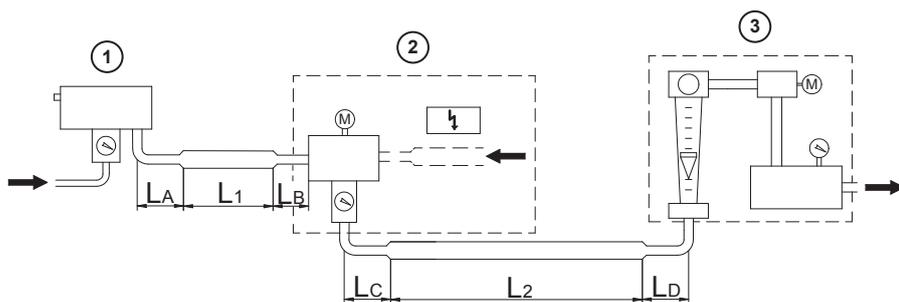


Fig. 6: Long vacuum line

Position	Meaning
①	Vacuum regulator
②	Vacuum changeover unit
③	Dosing device
$L_A-L_D$	Lines connected to the device each with c. 0.5m in the connection nominal width
$L_1, L_2$	Large distances in a larger nominal width The sum $L_1+L_2$ may not exceed the length as specified in table 8

Table 9: Long vacuum line

The volume to be removed from a supply battery is limited by the number of pressure tanks connected. To prevent the unnecessary connection of too many pressure tanks, in the majority of cases, the supply battery is designed for normal operation. Such installations are fitted with a bypass valve for higher volumes required at short notice (e.g. a shock chlorination). It is thus possible to extract from both supply batteries simultaneously.

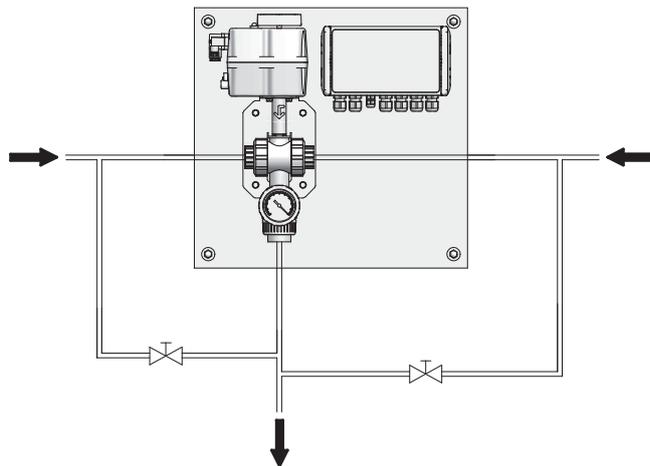


Fig. 7: Installation with bypass valves

If the dosing system is also to be operated whilst maintenance is performed on the changeover unit, 5 manual valves are required in the pipe line.

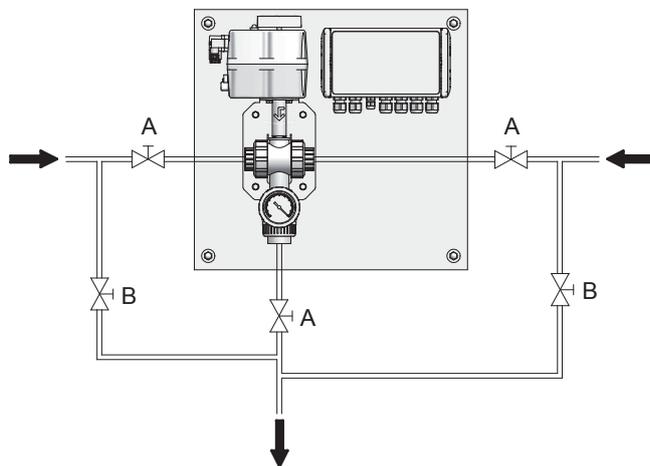


Fig. 8: Installation with 5 service valves

Check valve	In normal operation	During service
A	Open	Closed
B	Closed	Manual switching

Table 10: Function of the service valves

### 7.3.1 Establish the hose connection

Precondition for action:

- ✓ The device is fitted on the wall.
- ✓ The transport protection on the connection has been removed.

Resources required:

- ✂ sharp knife

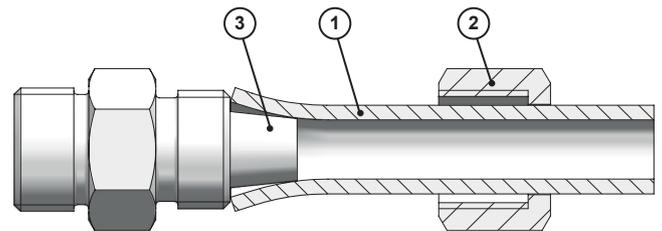


Fig. 9: Establish the hose connection

Perform the following working steps:

1. Cut the hose ① at right angles.
2. Slide the union nut ② onto the hose.
3. Slide the hose end onto the cone of the hose connection ③.
4. Tighten the union nut by hand.
5. Fix the hose to the wall.

- ✓ **Hose connected fitted.**

### 7.3.2 Make the PVC seal connection.

Precondition for action:

- ✓ The device is fitted on the wall.
- ✓ The vacuum line is fixed with sufficient pipe clamps and meets the connection in an un-tensioned state.
- ✓ All parts are clean and dry.
- ✓ The transport protection on the connection has been removed.

Resources required:

- ✂ Pipe cutter
- ✂ File or chamfer tool
- ✂ PVC adhesive and cleaning agent
- ✂ Non-fuzzing paper towels

Perform the following working steps:

1. Cut the PVC pipe at right angles. Make a chamfer on the pipe exterior (c. 3mmx20°).
2. Clean the pipe and the bushing with the cleaning agent recommended by the manufacturer of the adhesive.
3. Glue the pipe in the connection. Follow the instructions on the PVC adhesive.

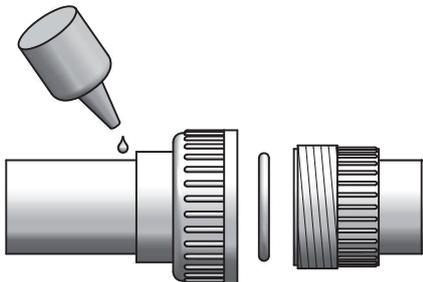


Fig. 10: Make the PVC seal connection

4. Mount the connection on the device. Ensure that the O-ring is fitted.
  5. Tighten the union nut by hand.
  6. Allow the bond to harden for at least 3 hours prior to the leak test.
- ✓ **PVC seal connection made.**

### 7.4 Electrical installation

	<b>DANGER!</b>
<b>Mortal danger from electric shock!</b>	
Improperly installed or damaged components in the electronics installation can cause injury.	
⇒ Ensure that all work on the electrical installation is performed by a qualified electrician.	
⇒ Ensure that all work on the electrical installation is performed in a de-energised state.	
⇒ Ensure that the power supply is secured with a fault current protective circuit.	
⇒ Replace damaged cables or components without delay.	

#### Open the control housing

Resources required:

- ✂ Flat-bladed screwdriver, size 3

Perform the following working steps:

1. Hold the screwdriver in the right-hand clearance on the front of the housing.
2. Move the screwdriver grip towards the lid of the housing until the hinge part disconnects from the adjustment lock.
3. Pivot the housing lid to the left.

✓ **Housing opened.**

#### Close the control housing

Perform the following working steps:

1. Pivot the housing lid towards the housing floor.
2. Pivot the hinge part towards the lid until it snaps in audibly.
3. Press against the hinge part with your hand until it locks audibly in place.

✓ **Housing closed.**

**Terminal plan**

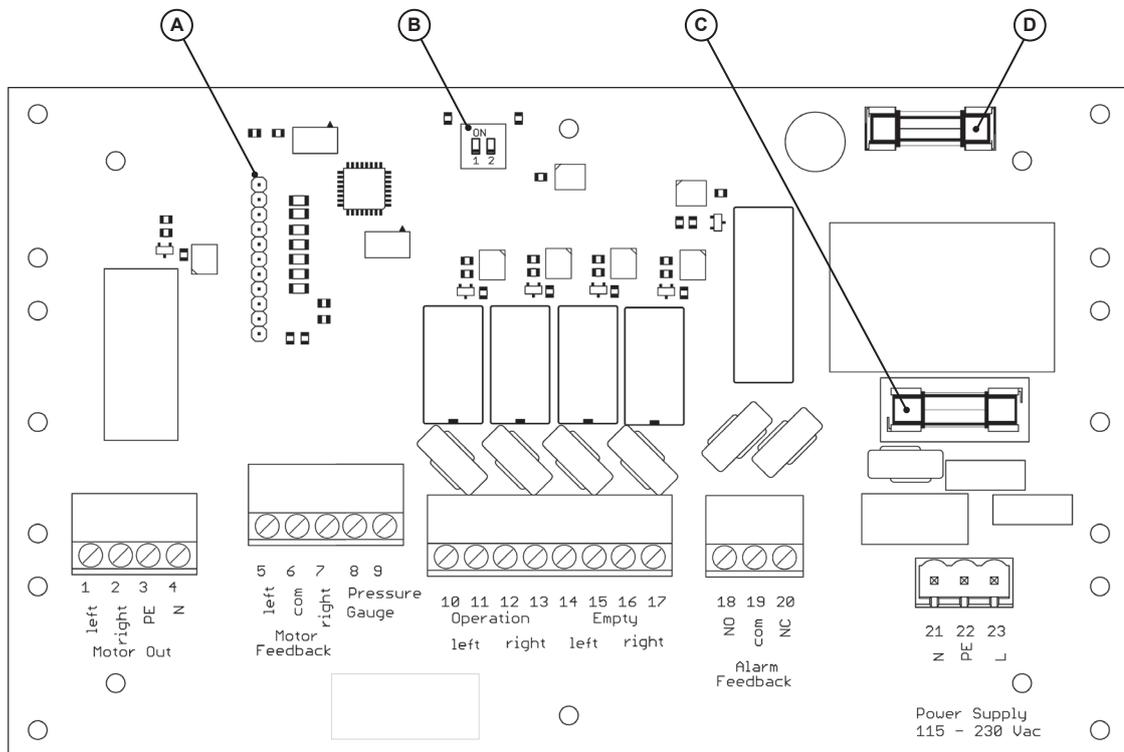


Fig. 11: Control circuit board

Position	Description
A	Connector for the ribbon cable
B	Switch SW1/SW2
C	Microfuse 3.15 A (T)
D	Reserve fuse

Table 11: Elements of the circuit board

Switch	Function	Switch downwards	Switch upwards
SW1	Residue discharge	OFF (delivery state)	ON
SW2	Service switch	Normal mode (delivery state)	Diagnosis (only for the factory customer services dept.)

Table 12: Functions of the switch SW1/SW2

Terminal		Function	
1	L	Left-hand rotation phase	Voltage output to the motor ball valve
2	L	Right-hand rotation phase	
3	PE	protective conductor	
4	N	neutral conductor	
5	Left	Position feedback from the motor ball valve	
6	com		
7	Right		
8	+	Input for the contact gauge	
9	-		
10		Relay output operation left (NO max. 3A/250VAC)	
11			
12		Relay output operation left (NO max. 3A/250VAC)	
13			
14		Relay output left battery empty (NO max. 3A/250VAC)	
15			
16		Relay output right battery empty (NO max. 3A/250VAC)	
17			
18	NO	Relay output fault (max. 3A/250VAC) active if both side are empty or fault on the motor	
19	com		
20	NC		
21	N	neutral conductor	Mains input 115-230 VAC
22	PE	protective conductor	
23	L	phase	

Table 13: Terminal connection

In its delivery state, the motor of the ball valve is connected in accordance with the following plan.

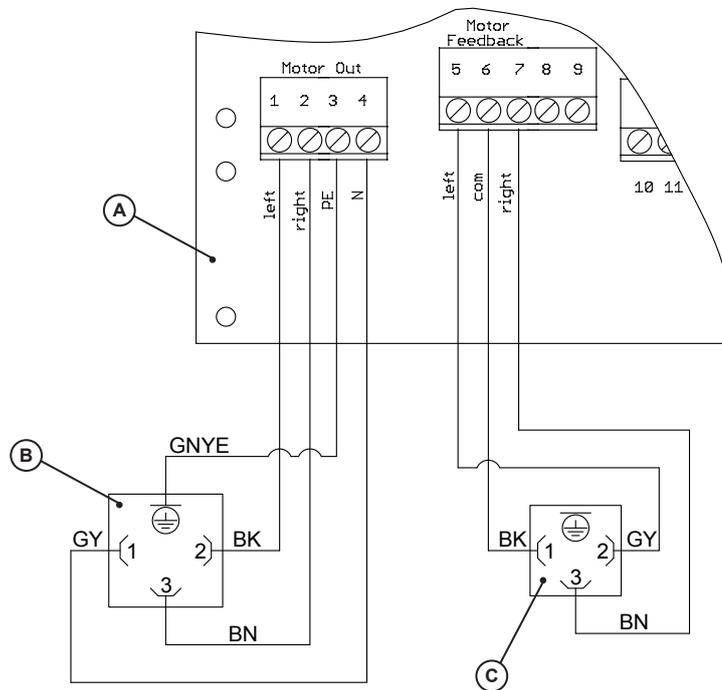


Fig. 12: Motor connection

Position	Description
A	Control circuit board
B	Large plug on the motor
C	Small plug on the motor

Table 14: Motor connection

## 7.5 Completing the installation

The cable screw connections must be tightened after assembly in order to ensure the IP protection class of the installation. All union nuts on the screw connections of the piping are tightened by hand.

## 7.6 Installation examples

### 7.6.1 Installation with a vacuum manifold

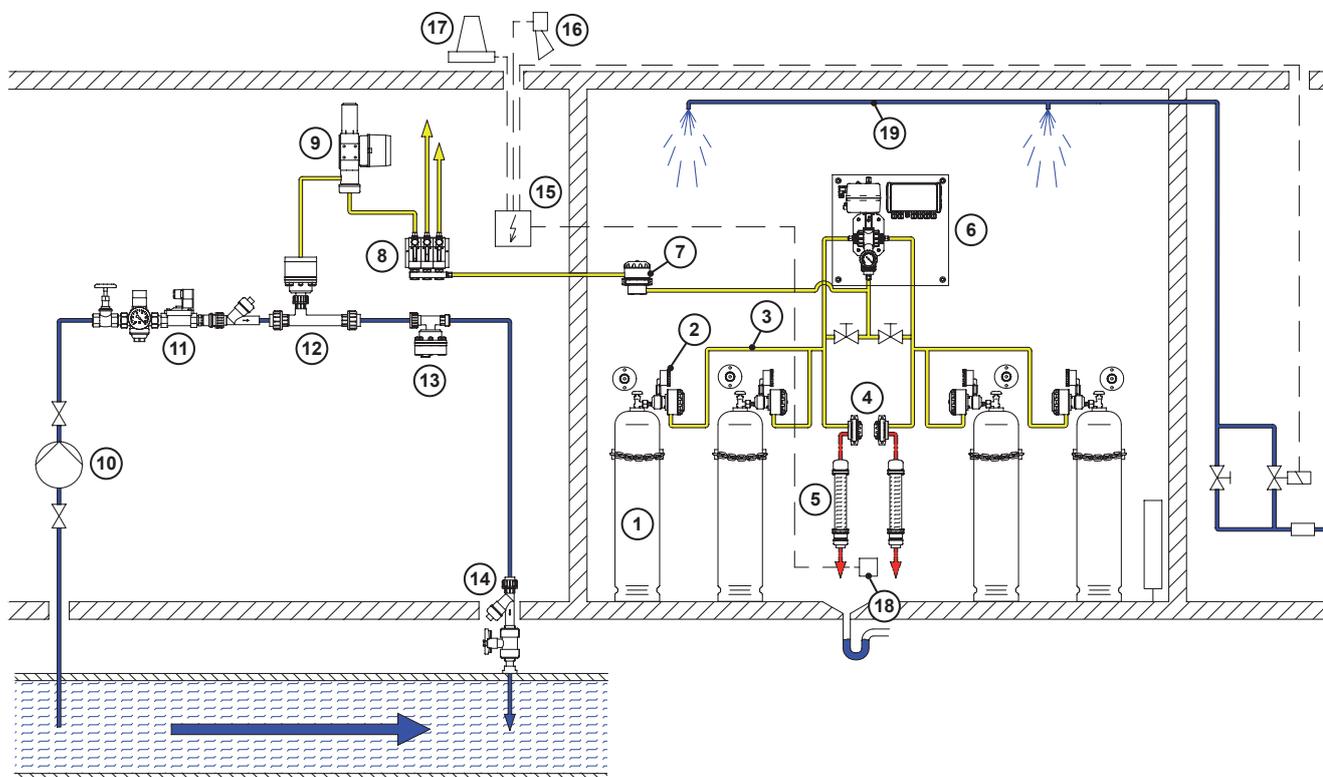


Fig. 13: Installation with a vacuum manifold

Position	Description
1	Chlorine cylinder
2	Vacuum regulator
3	Vacuum manifold
4	Safety blowoff valve
5	Activated carbon cartridge
6	Vacuum changeover unit with 2 bypass valves
7	Safety shutoff valve
8	Flow meter
9	Control valve
10	Motive water pump

Position	Description
11	Motive water set
12	Injector with non-return valve
13	Vacuum breaker
14	Chlorine solution injection nozzle
15	Gas warning device
16	Horn
17	Strobe
18	Gas sensor
19	Sprinkler system

Table 15: Designation of components

### 7.6.2 Installation with a positive pressure manifold

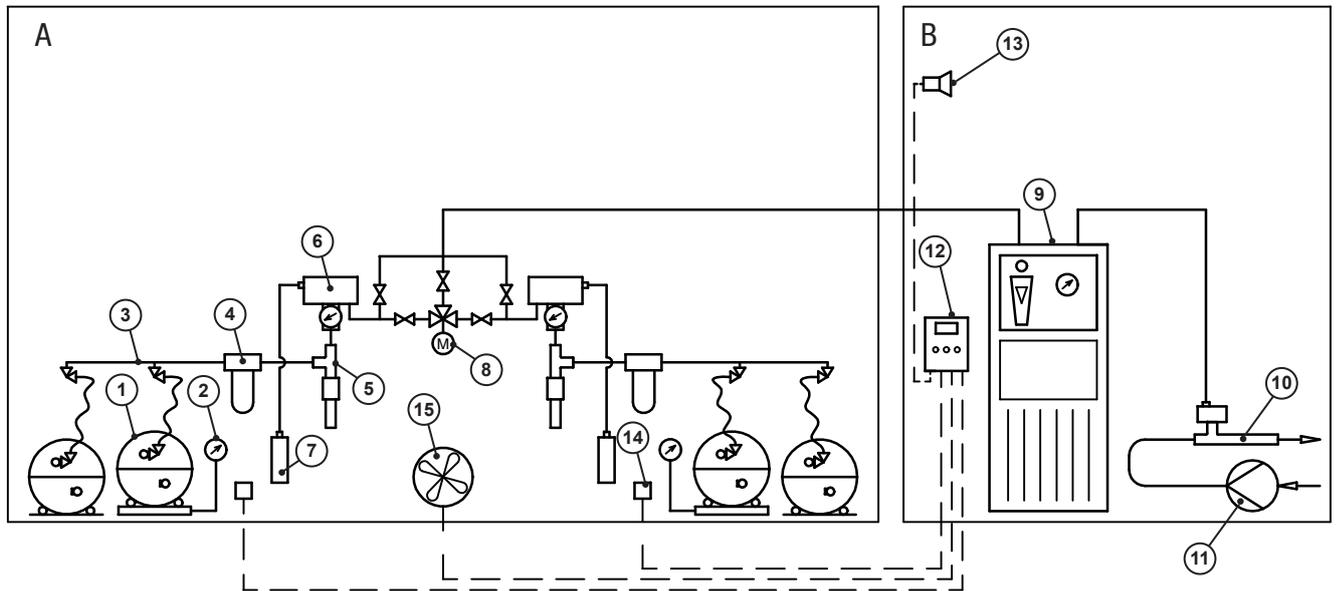


Fig. 14: Installation with a positive pressure manifold

Position	Description
A	Room for the chlorine gas supply
B	Dosing device room
1	Chlorine barrel
2	Chlorine barrel scale
3	Pressurised manifold
4	Chlorine gas filter
5	Moisture eliminator with heating collar
6	Vacuum regulator
7	Activated carbon cartridge

Position	Description
8	Changeover unit with 5 service valves
9	Dosing device
10	Injector with non-return valve
11	Motive water pump
12	Gas warning device
13	Horn
14	Gas sensor
15	Entrance port of the chlorine eliminator

Table 16: Designation of components

## 8 Control

### 8.1 Controls

#### 8.1.1 Operator controls of the control unit

All operating states are displayed on the control.

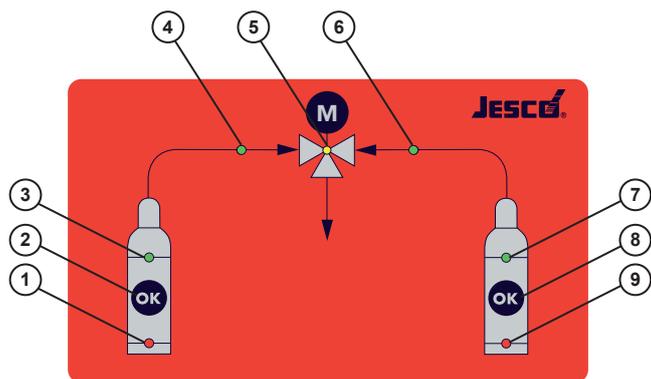


Fig. 15: Control elements

Position	Description	Meaning
1	LED red	Left battery empty
2	Keys	Acknowledge the cylinder change left and switch left manually
3	LED green	Left battery full
4	LED green	Operation left battery
5	LED yellow	Motor works
6	LED green	Operation right battery
7	LED green	Right battery full
8	Keys	Acknowledge the cylinder change right and switch right manually
9	LED red	Right battery empty

Table 17: Control elements

#### 8.1.2 Motor operating elements

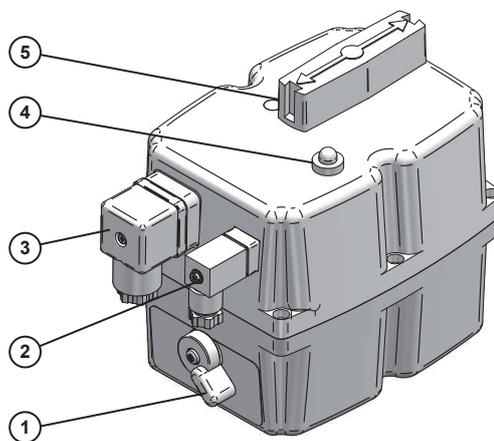


Fig. 16: Motor operating elements

Position	Description	Meaning	
1	Selector lever	MAN	Manual operation
		AUTO	Automatic operation
2	Plug small	Position switch	
3	Plug large	Voltage supply	
4	Operating light	Continuous light	Automatic operation
		Flashing	Manual or fault
		OFF	No voltage
5	Hand lever	Manual operation, if the selector lever (1) is set to MAN	

Table 18: Motor operating elements

## 8.2 Operating modi

### 8.2.1 Automatic operation

Control element	Position
Switch SW2 on the circuit board	OFF
Selector lever on the motor	AUTO

Table 19: Set automatic operation

When in automatic operation, the changeover unit reacts to the switching status of the contact gauge. When receiving notification that the current supply battery is empty, the changeover unit changes to the standby battery.

## 8.2.2 All empty

If both batteries are empty, the valve on the battery last used remains stationary.

Signal	Empty battery	Used battery
LED battery empty (red)	Flashes	Flashes
Relays empty	ON	ON
LED battery full (green)	OFF	OFF
Operation LED (green)	OFF	ON
Relays operation	OFF	ON
Relays fault	ON	

Table 20: State of the control during "Everything empty"

The notification of 2 empty batteries is issued with two minutes delay; installations with very long vacuum lines can experience a delay in the issue of the OK notification from the contact gauge. The green LED flashes in the newly-connected cylinder during the waiting time.

## 8.2.3 Residue discharge

Residue discharge is an optional function in automatic operation.

Control element	Position
Switch SW1 on the circuit board	ON

Table 21: Setting residue discharge

Total vacuum batteries can experience changeover even when not all of the chlorine tanks of the battery are empty. This is due to the strong cooling of the tanks following the extraction of too large a quantity of chlorine.

With active residue discharge, the changeover unit switches to the supply battery notified as empty from which the residual quantity is removed. This is performed in a 15 minute rhythm. Changing the cylinder and pressing the "OK" button ends the residue discharge.

Signal	Empty battery	Used battery
LED battery empty (red)	ON	OFF
Relays empty	ON	OFF
LED battery full (green)	Flashes	ON
Operation LED (green)	ON	OFF
Relays operation	ON	OFF
Relays fault	OFF	

Table 22: State of the control during "Residue discharge"

## 8.2.4 Manual operation

Control element	Position
Selector lever on the motor	MAN

Table 23: Setting residue discharge

The ball valve on the hand grip of the motor is activated in manual operation. The motor no longer follows the signals of the control. This can lead to fault messages during manual operation.

Signal	Condition
LED valve	flashes
Relays malfunction	ON

Table 24: Malfunction state of the control with MAN

## 9 Start-up

### 9.1 Check the vacuum system

	<b>Note</b>
<p><b>Operating faults through leakages in the vacuum system</b></p> <p>Small leaks in the vacuum system will not be recognised in normal operation, since no chlorine escapes. Air will enter the system with moisture. The moisture can combine with the chlorine to create deposits and operating malfunctions.</p> <p>With the injector switched off, there may be a slight chlorine smell.</p> <ul style="list-style-type: none"> <li>⇒ Check the vacuum system.</li> <li>⇒ Ensure that all action is taken only by personnel with sufficient and corresponding qualifications.</li> </ul>	

Precondition for action:

- ✓ The vacuum system is fully assembled.
- ✓ All the open connections of the vacuum system were closed.
- ✓ The injector is ready for operation.

Perform the following working steps:

1. Interrupt the voltage supply of the changeover unit.

	<p>The position of the ball valve is adjusted manually during the check. Error messages are generated if the voltage supply is activated.</p>
--	---

2. Switch the selection lever on the motor of the changeover unit to MAN (= manual operation)
3. Turn the grip on the motor in such a way that the left supply battery is connected.
4. Interrupt the chlorine supply from the connected supply battery. To do so, either connect the tank valve of a valve in the supply line to the vacuum regulator.
5. Open the valve on the dosing device to adjust the dosing quantity.
6. Switch on the injector and wait until the vacuum pressure gauge displays at least -0.5 bar.

	<p>A number of dosing devices contain a valve which protects the injector against too strong a vacuum. If this valve is set e.g. to 0.4 underpressure, a negative pressure of 0.5 bar cannot be reached during the leak test.</p>
--	---

7. Switch off the injector.
  - ▶ The vacuum must stay unchanged for at least five minutes.
8. If the vacuum collapses quickly, eliminate the leak and repeat the check on the vacuum system.

9. Turn the grip on the motor in such a way that the right supply battery is connected. Repeat steps 4-8.

✓ **Vacuum system checked**

	<b>Note</b>
<p><b>Damage of the gauge</b></p> <p>The search for leaks in the vacuum system often uses compressed air or nitrogen with a slight positive pressure as the leak point can then be recognised using a soapy solution. This test damages the contact gauge.</p> <ul style="list-style-type: none"> <li>⇒ Dismantle the contact gauge before checking the vacuum system with positive pressure.</li> </ul>	

### 9.2 Turning on the device

Precondition for action:

- ✓ The device is fully assembled.
- ✓ The leak test was performed.

Perform the following working steps:

1. Switch on the voltage supply.
  2. Ensure that the selection lever on the motor is set to AUTO.
- ➔ The motor moves automatically to the operating position last set.

✓ **Device switched on.**

### 9.3 Adjusting the switch point

It is rare that the switch point of the contact gauge needs to be adjusted. Possible reasons for this could include:

- Very weak performance of the injector
- Dosing device with restrictor valve for the vacuum.

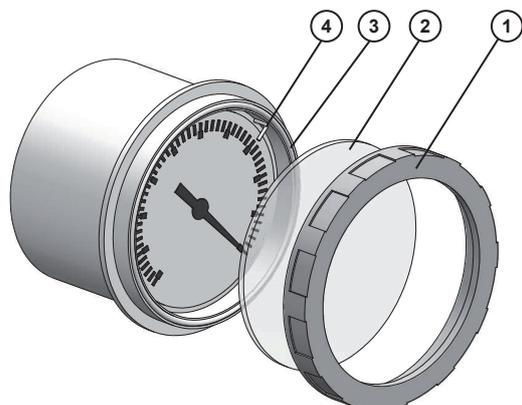


Fig. 17: Adjusting the switch point

Perform the following working steps:

1. Remove the transparent lid (2) from the contact gauge. To do so, unscrew the outside ring (1) from the device. Observe the seal (3).
2. Move the red marking (4) to the desired switch point.
3. Refit the transparent lid and tighten the ring nut by hand. Ensure the correct position of the seal.

✓ **Switch point of the contact gauge adjusted.**

## 10 Operation

In normal operation, the device operates automatically and does not require operation. The change to the standby battery is performed automatically.

### 10.1 Tank change

To enable interruption-free dosing, the empty chlorine tank must be replaced by full chlorine tanks.

Precondition for action:

- ✓ The control shows "empty" for a supply battery. The battery empty LED (red) illuminates.
- ✓ Full chlorine tanks are available.

Perform the following working steps:

1. Replace the empty chlorine tanks with full chlorine tanks. A description of how to change the tanks is provided in the operating instructions of the device which is connected directly to the chlorine tank.
  2. Press the "OK" button on the control of the changeover unit.
    - The battery empty LED (red) extinguishes.
    - The LED battery full (green) illuminates.
- ✓ **The tank change has been performed.**

### 10.2 Shutting down in an emergency

	<b>DANGER!</b>
<p><b>Danger to life from chlorine poisoning!</b></p> <p>Chlorine is poisonous. In severe cases, breathing in chlorine may lead to death. It irritates the eyes, the respiratory system and the skin.</p> <ul style="list-style-type: none"><li>⇒ If chlorine escapes, leave the room immediately.</li><li>⇒ Use sufficient personal protective equipment.</li><li>⇒ If chlorine gas escapes, wear a Type 2 self-contained breathing apparatus that complies with EN 137.</li><li>⇒ Only initiate counter measures after putting on the protective equipment.</li></ul>	

The device must be separated from the mains supply in emergencies.

The further procedure depends on the type of accident and should be planned and executed by professional personnel.

### 10.3 Inspection intervals

The components of the chlorination installation must be subject to a daily visual check. Inform service personnel of anything conspicuous or a chlorine smell.

## 11 Shutdown

### 11.1 Short-term shutdown

Perform the following working steps:

1. Close the chlorine tank valves.
2. Use the injector to suck off the remaining chlorine.
3. Switch off the injector.

✓ **Chlorinator shut down for the short term.**

### 11.2 Long-term shutdown

Perform the following working steps:

1. Close the chlorine tank valves.
2. Use the injector to suck off the remaining chlorine.
3. Run the chlorinator for approximately five minutes with nitrogen or dry compressed air.
4. Switch off the injector.
5. Close all the open connections to protect the lines and devices from humidity and dirt.

✓ **Chlorinator shut down for the long term.**

The device remains in the installation location during the operating pause. All connections remain closed. The voltage supply should remain active so that condensate is unable to gather in the control.

Ensure ideal storage conditions where possible:

- the storage place must be cold, dry, dust-free and generously ventilated,
- temperatures between +2 °C and +40 °C.
- Relative air humidity must not exceed 90 %.



We recommend a minimum of a minor maintenance after a longer standstill period (see "maintenance intervals" on page 28).

### 11.3 Disposal of old equipment

- Before disposing of the old equipment, you must clean off the remaining chlorine by rinsing it with nitrogen or air.
- The device must be disposed of in accordance with applicable local laws and regulations. It should not be disposed of as domestic waste!
- As the disposal regulations may differ from country to country, please consult your supplier if necessary.
- In Germany, the manufacturer must provide free-of-charge disposal, provided the device has been safely returned along with a declaration of no objection (see page 36).

## 12 Maintenance

Products by Lutz-Jesco are manufactured to the highest quality standards and have a long service life. However, some parts are subject to operational wear. This means that regular visual inspections are necessary to ensure a long operating life. Regular maintenance will protect the device from operation interruptions.

**DANGER!**

**Mortal danger from electric shock!**

Live parts can inflict fatal injuries.

- ⇒ Before carrying out any maintenance work, always disconnect the device from the power supply.
- ⇒ Secure the system to prevent it from being switched on by accident.

**DANGER!**

**Danger to life from chlorine poisoning!**

Do not carry out maintenance or any other work on the chlorinator until the system has been decommissioned and all of the chlorine gas has been removed from the lines. The failure to follow this instruction presents a significant risk of injury.

- ⇒ Prior to any maintenance work, prepare the system in accordance with section 12.3 „Preparing the system for maintenance“ on page 28.

**WARNING!!**

**Increased risk of accidents due to insufficient qualification of personnel!**

Chlorinators and their accessories must only be installed, operated and maintained by personnel with sufficient qualifications. Insufficient qualification will increase the risk of accidents.

- ⇒ Ensure that all action is taken only by personnel with sufficient and corresponding qualifications.

**Note**

**Damage to the system due to corrosion**

Water in chlorine carrying system components combines with chlorine to form hydrochloric acid and leads to corrosion

- ⇒ After maintenance work is complete, remove all water residues from the system before placing it into operation.
- ⇒ Keep the connection of the contact vacuum meter closed so that humidity cannot penetrate

### 12.1 Maintenance intervals

To avoid hazardous incidents, chlorinators must be regularly maintained. This table gives you an overview of maintenance work and the intervals at which you must carry it out. The next few sections provide instructions for carrying out this work.

Interval	Maintenance
After 1 year	Minor maintenance: <ul style="list-style-type: none"> <li>■ Clean the device.</li> <li>■ Change the connection seals</li> <li>■ Functional control</li> </ul>
After 3 years	Major maintenance: <ul style="list-style-type: none"> <li>■ Clean the device.</li> <li>■ Replace all elastomers</li> <li>■ Functional control</li> </ul>
After 5 years	<ul style="list-style-type: none"> <li>■ Replace the contact gauge</li> </ul>

Table 25: Maintenance intervals

In some cases, regional regulations may require shorter maintenance intervals. Maintenance intervals depend only on how frequently the equipment is used. Chemical wear of rubber parts, for example, begins with the initial medium contact and continues irrespective of the usage.

Maintenance sets are listed in chapter 14 „Spare parts“ on page 32.

### 12.2 Maintenance accessories

Description	Part number
Silicone grease, medium viscosity 35 g for application to seals	35537
Plastic tools for dismantling O-rings	W00133

Table 26: Maintenance accessories

### 12.3 Preparing the system for maintenance

Perform the following working steps:

1. Close the chlorine tank valves.
2. Use the injector to suck off the remaining chlorine.
3. Run the chlorinator for approximately five minutes with nitrogen or dry compressed air.
4. Switch off the injector.

✓ **The system is prepared for maintenance.**

## 12.4 Minor maintenance:

Precondition for action:

- ✓ The system has been prepared for maintenance (see chapter 12.3).
- ✓ New connection seals are available.

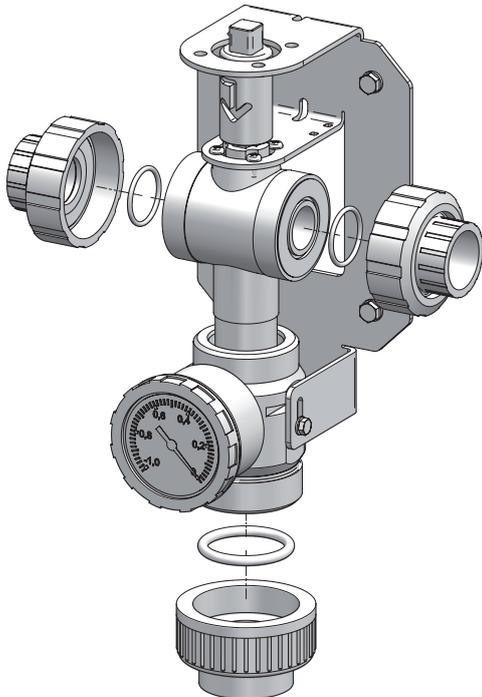


Fig. 18: Connection seals

Perform the following working steps:

1. Loosen the union nuts and remove the three connections. - Remove the O-rings with a blunt tool.
2. Clean the sealing surfaces with a soft cloth.
3. Check the display of the contact gauge. At atmospheric pressure, it must display c. zero. Otherwise, it needs to be cleaned.
4. Look into the interior of the ball valve. Should soiling be visible, the ball valve requires cleaning from inside.
5. Switch the motor to MAN and move the ball valve on the hand lever. It must revolve evenly around 180° with slight resistance. Otherwise, it will be necessary to perform maintenance on the ball valve. Switch the motor to AUTO.
6. Fit the new O-rings and the connections. The union nuts are tightened by hand.

✓ **Small maintenance performed.**

## 12.5 Cleaning the contact gauge



### Note

#### Damage to pressure gauges

Pressure gauges are measurement devices which are adjusted by specialists when manufactured. Pressure gauges that have been disassembled must be tested and readjusted by the manufacturer.

- ⇒ Do not dismantle pressure gauges.
- ⇒ pressure gauges are highly complicated which cannot be emptied entirely.
- ⇒ Do not allow any soiling to enter the pressure gauge.
- ⇒ Do not allow any water to enter the pressure gauge.

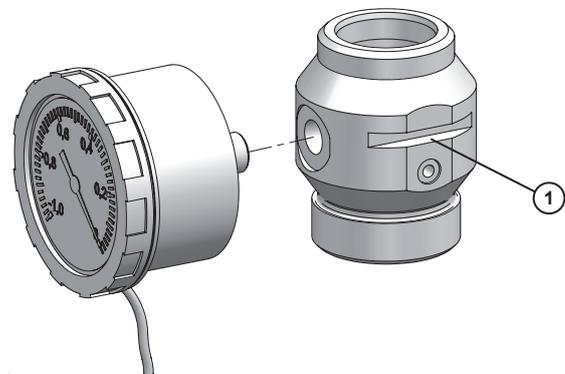
The maintenance on the pressure gauge restricts itself to a visual check and the cleaning of the connection.

Precondition for action:

- ✓ The system has been prepared for maintenance (see 12.3).
- ✓ The changeover unit is free of stress.

Resources required:

- ✘ PTFE strip



- ✘ Cotton swabs Dismantling a pressure gauge

Perform the following working steps:

1. Remove the pressure gauge cable from the control and remove it from the cable entry point ①.
2. Unscrew the pressure gauge from the pressure gauge connection. Remove the PTFE strip from the thread.
3. Check the input of the pressure gauge for contamination. Remove the contamination with isopropyl alcohol. At the same time, hold the pressure gauge with the connection facing downwards so that soiling cannot fall into the device. Do not use a pointed tool, so that the protective film on the plate spring is not destroyed.
4. If the pressure gauge is not immediately reconnected, seal the connection airtight.
5. Fit the pressure gauge with approx. 5 long PTFE strips.
6. Return the cable to the control and reconnect it.

✓ **Contact gauge cleaned.**

## 12.6 Maintenance on the ball valve

Precondition for action:

- ✓ The system has been prepared for maintenance (see 12.3).
- ✓ The changeover unit is free of stress.

Resources required:

- ✗ Ball valve grip (part of the maintenance set)
- ✗ Silicone grease

Perform the following working steps:

1. Note the switching position of the ball valve. (left open or right open)
2. Remove the four screws below on the motor. Remove the motor from the wall console.
3. Remove the four screws above on the ball valve.
4. Remove the two screws from the side on the pressure gauge connection.
5. Remove the ball valve and the pressure gauge connection from the wall console.
6. Disconnect the ball valve and the pressure gauge connection.
7. Dismantle the ball valve. The screw-in part (2) has a leftwards thread and the hand lever (12+13) serves as a tool.

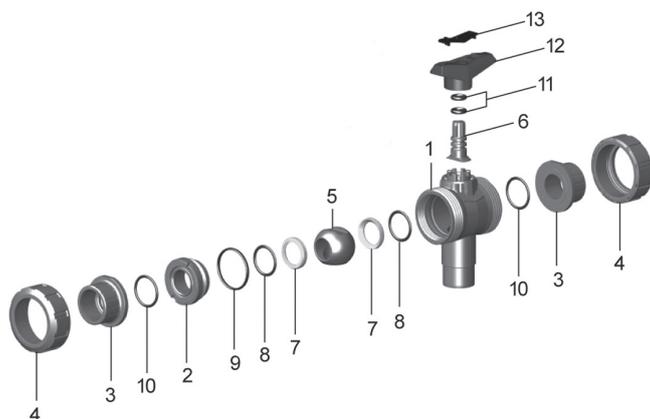


Fig. 19: Individual components of the ball valve

8. Clean all components of the ball valve e.g. with warm water or isopropyl alcohol. Allow all components to dry well.
9. Fit the ball valve with new elastomer. Both of the seals are lightly rubbed with silicone grease.



The ball in the ball valve can be fitted in a mirror inverted fashion. Set the coupling to the control rod to check. The arrow on the coupling points the correct position of the ball.

10. Pull the screw-in part (2) sensitively. The control rod (6) must be rotatable with a little resistance.
11. Remove the O-ring from the pressure gauge connection using a plastic tool. Clean the pressure gauge connection and insert a new O-ring. Silicone grease is rubbed in to the O-ring.
12. Slide the pressure gauge connection onto output of the ball valve connection with a rotating movement.

13. Fit the assembly in the wall console. Slide the pressure gauge cable through the slot in the pressure gauge connection. Pull the 4 screws above on the ball valve sensitively.
14. Insert the coupling piece between the ball valve and motor on the control rod of the ball valve. It will only fit in a single direction.
15. Turn the ball valve into the same position which it had before the maintenance.
16. Install the servomotor.

✓ **Maintenance performed on the ball valve**

## 12.7 Functional control

Precondition for action:

- ✓ The changeover unit is ready for operation.

Perform the following working steps:

1. Switch the selector switch on the motor to AUTO
2. Switch on the voltage supply.
3. Quit all fault messages by pressing the OK button repeatedly until both cylinders signal green.
4. Remove the screw cap on the pressure gauge.
5. Simulate empty supply batteries: Carefully move the pressure gauge pointer in an anti-clockwise direction past the red marking and allow it to turn in the starting position.
6. In this way, check the display in all operating situations and if necessary, the position of connected notification equipment.
7. Then fit the screw cap on the pressure gauge and tighten it carefully by hand. Ensure the correct position of the seal.

✓ **Functional check performed.**

## 12.8 Finishing maintenance

Perform the following working steps:

1. Make a note of the date and scope of the maintenance performed.
2. Attach a sticker displaying the maintenance date to the device.
3. Fit the connections to the device.
4. Close the control.
5. Pull all the cable screw connections to the control.
6. To restart the system, proceed in accordance with the instructions in chapter 9 "Start-up" on page 24.

✓ **Maintenance completed.**

## 13 Troubleshooting

All possible errors are listed in this table.

Problem	Possible cause	Remedy
The changeover unit does not change even though the battery connected is empty and a full battery has been connected to the other side.	After connecting the new chlorine tank, the OK button in the cylinder symbol was not pressed.	The OK button in the cylinder symbol must be pressed after changing the cylinder. The display changes from red to green.
	The voltage supply has been interrupted. All LEDs are off.	Reactivate the voltage supply.
The changeover unit changes during normal operation, even though the chlorine tank is still full.	The "residue discharge" function is active. Recognisable on the illumination pattern of the LEDs. The LED of the empty cylinder flashes green.	No fault has occurred. See the functional description in chapter 8.2.3. If this is desired, deactivate residue discharge on switch SW1.
	The maximum supply volume from the battery was exceeded. <ul style="list-style-type: none"> <li>■ Insufficient chlorine tanks connected</li> <li>■ Not all tank valves were opened.</li> <li>■ Short-term strongly increased extraction due to shock chlorination</li> <li>■ A number of tanks are already empty</li> </ul>	<ul style="list-style-type: none"> <li>■ Connect sufficient chlorine tanks and open the valves</li> <li>■ Remove simultaneously from both tank batteries for a shock chlorination (see figure 7.3.2)</li> <li>■ Should the tanks be emptied at differing rates, arrange for the adjustment of the vacuum regulator and activate the residue discharge function.</li> </ul>
The yellow LED valve symbol flashes	<ul style="list-style-type: none"> <li>■ The switch on the motor is set to MAN.</li> <li>■ A cable connection between motor and control has been interrupted.</li> <li>■ The position switches in the motors are misaligned.</li> </ul>	<ul style="list-style-type: none"> <li>■ Move the switch on the motor to AUTO. Press an OK button.</li> <li>■ Check whether plugs on the motor are loose.</li> </ul> If you do not experience any success: inform Lutz-Jesco service.
A number of LEDs flash simultaneously	The control is in test operation because switch SW2 is set to ON.	Switch SW2 to OFF.
The operating display on the control is mirror inverse to the hydraulic function.	The switch direction was changed during maintenance. Either the ball in the ball valve is fitted back to front or the motor was inserted 180° incorrectly.	Check whether the arrow on the coupling matches the switching function of the ball valve. Repeat the fitting of the maintenance and check its correct alignment.

Table 27: Troubleshooting

## 14 Spare parts

### 14.1 Spare parts

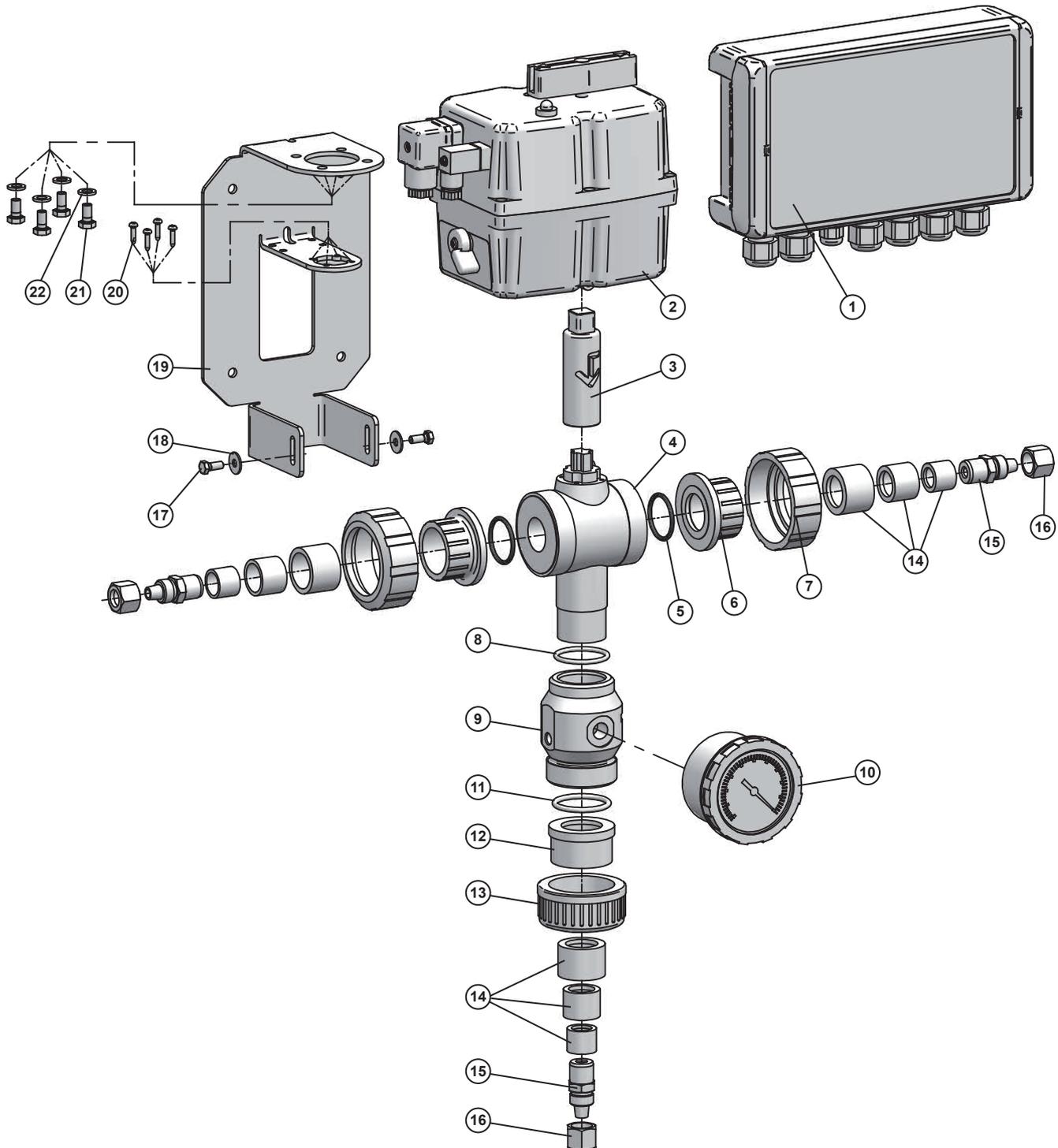


Fig. 20: Exploded diagram C 7523

Position	Quantity	Description	Info	Article no.	
				DN25 (4K...40K)	DN32 (80K)
1	1	Control complete		24700052	
		Circuit board		79597	
2	1	Motor		88819	
3	1	Coupling		40678	40896
4	1	Ball valve	includes 5, 6, 7	12400058	12400059
5*	2	O-ring		80954	80800
6	2	Flange bushing		88836	88835
7	2	Union nut		88840	88839
8*	1	O-ring		80759	80140
9	1	Pressure gauge connection	G ¼ interior	40648	40894
10	1	Contact pressure gauge	G ¼ exterior	24087556	
11*	1	O-ring		80077	80078
12	1	Flange bushing		82221	22257
13	1	Union nut		82218	22259
14	3	Reduction	Ø32a-Ø25i	13642	-
			Ø25a-Ø20i	13641	-
			Ø20i-Ø16i	13236	-
15	3	Hose connection	for Ø8/12 hose	33350	-
			for Ø12/16 hose	15533	-
16	3	Union nut	for Ø8/12 hose	10365	-
			for Ø12/16 hose	15534	-
17	2	Screw	M5x10	85032	
18	2	washer	Ø5	84189	
19	1	Installation bracket		40654	40895
20*	4	Sheet metal screw		85033	85034
21	4	Screw	M6x12	85031	
22	4	washer	Ø6	84160	

Table 28: Individual parts for C 7523

All of the parts marked with an \* are included in the maintenance set.

## 14.2 Maintenance sets

Part	Content	Article no.	
		DN25 (4K...40K)	DN32 (80K)
Small maintenance kit (for annual service)	<ul style="list-style-type: none"> <li>■ Connection seals (items 5, 8, 11)</li> </ul>	41223	41226
Large maintenance set (after 3 years)	<ul style="list-style-type: none"> <li>■ Small maintenance set</li> <li>■ all internal elastomer seals of the ball valve</li> <li>■ Ball valve grip as tool</li> <li>■ Screws</li> <li>■ PTFE strip</li> <li>■ Silicone grease</li> </ul>	41227	41228

Table 29: Maintenance sets

## 15 EC Declaration of Conformity



**(DE) EG-Konformitätserklärung**

Hiermit erklären wir, dass das nachfolgend bezeichnete Gerät aufgrund seiner Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der aufgeführten EG-Richtlinien entspricht. Bei einer nicht mit uns abgestimmten Änderung am Gerät verliert diese Erklärung ihre Gültigkeit.

**(EN) EC Declaration of Conformity**

We hereby certify that the device described in the following complies with the relevant fundamental safety and sanitary requirements and the listed EC regulations due to the concept and design of the version sold by us.  
If the device is modified without our consent, this declaration loses its validity.

**(FR) Déclaration de conformité CE**

Nous déclarons sous notre propre responsabilité que le produit ci-dessous mentionné répond aux exigences essentielles de sécurité et de santé des directives CE énumérées aussi bien sur le plan de sa conception et de son type de construction que du modèle que nous avons mis en circulation.  
Cette déclaration perdra sa validité en cas d'une modification effectuée sur le produit sans notre accord explicite.

**(ES) Declaración de conformidad CE**

Por la presente declaramos que, dados la concepción y los aspectos constructivos del modelo puesto por nosotros en circulación, el aparato mencionado a continuación cumple con los requisitos sanitarios y de seguridad vigentes de las directivas de la U.E. citadas a continuación.  
Esta declaración será invalidada por cambios en el aparato realizados sin nuestro consentimiento.

**(NL) EU-overeenstemmingsverklaring**

Ondergetekende Lutz-Jesco GmbH, bevestigt, dat het volgende genoemde apparaat in de door ons in de handel gebrachte uitvoering voldoet aan de eis van, en in overeenstemming is met de EU-richtlijnen, de EU-veiligheidsstandaard en de voor het product specifieke standaard. Bij een niet met ons afgestemde verandering aan het apparaat verliest deze verklaring haar geldigheid.

**(PT) Declaração de conformidade CE**

Declaramos pelo presente documento que o equipamento a seguir descrito, devido à sua concepção e ao tipo de construção daí resultante, bem como a versão por nós lançada no mercado, cumpre as exigências básicas aplicáveis de segurança e de saúde das directivas CE indicadas.  
A presente declaração perde a sua validade em caso de alteração ao equipamento não autorizada por nós.

<b>Bezeichnung des Gerätes:</b>	Chlorgas-Umschalter
<b>Description of the unit:</b>	Chlorine gas change over
<b>Désignation du matériel:</b>	Commutation du chlore
<b>Descripción de la mercancía:</b>	Conmutador de cloro
<b>Omschrijving van het apparaat:</b>	Chloorgas-schakelaar
<b>Designação do aparelho:</b>	Comutador de cloro
<b>Typ:</b>	C 7523
<b>Type:</b>	
<b>EG-Richtlinien:</b>	2006/42/EG, 2004/108/EG
<b>EC directives:</b>	Die Schutzziele der Niederspannungsrichtlinie 2006/95/EG wurden gemäß Anhang I, Nr. 1.5.1 der Maschinenrichtlinie 2006/42/EG eingehalten. The protective aims of the Low Voltage Directive 2006/95/EC were adhered to in accordance with Annex I, No. 1.5.1 of the Machinery Directive 2006/42/EC.
<b>Harmonisierte Normen:</b>	EN ISO 12100, EN 61000-6-2, EN 61000-6-4
<b>Harmonized standards:</b>	
<b>Dokumentationsbevollmächtigter:</b>	Lutz-Jesco GmbH
<b>Authorized person for documentation:</b>	



Heinz Lutz  
Geschäftsführer / Chief Executive Officer  
Lutz-Jesco GmbH  
Wedemark, 01.03.2014

Lutz-Jesco GmbH  
Am Bostelberge 19  
30900 Wedemark  
Germany

## 16 Declaration of no objection

Please copy the declaration, stick it to the outside of the packaging and return it with the device.

### Declaration of no objection

Please fill out a separate form for each appliance!

We forward the following device for repairs:

Device and device type: ..... Part-no.: .....

Order No.: ..... Date of delivery: .....

Reason for repair: .....

.....

.....

#### Dosing medium

Description: ..... Irritating:  Yes  No

Properties: ..... Corrosive:  Yes  No

We hereby certify, that the product has been cleaned thoroughly inside and outside before returning, that it is free from hazardous material (i.e. chemical, biological, toxic, flammable, and radioactive material) and that the lubricant has been drained.

If the manufacturer finds it necessary to carry out further cleaning work, we accept the charge will be made to us.

We assure that the aforementioned information is correct and complete and that the unit is dispatched according to the legal requirements.

Company / address: ..... Phone: .....

..... Fax: .....

..... Email: .....

Customer No.: ..... Contact person: .....

Date, Signature: .....

## 17 Warranty claim

### Warranty Application

Please copy and send it back with the unit!

If the device breaks down within the period of warranty, please return it in a cleaned condition with the complete warranty application, filled out.

#### Sender

Company: ..... Phone: ..... Date: .....

Address: .....

Contact person: .....

Manufacturer order no.: ..... Date of delivery: .....

Device type: ..... Serial number: .....

Nominal capacity / nominal pressure: .....

Description of fault: .....

.....

.....

.....

.....

.....

.....

.....

.....

#### Service conditions of the device

Point of use / system designation: .....

.....

.....

Accessories used (suction line etc.): .....

.....

.....

.....

Commissioning (date): .....

Duty period (approx. operating hours): .....

Please describe the specific installation and enclose a simple drawing or picture of the chemical feed system, showing materials of construction, diameters, lengths and heights of suction and discharge lines.

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