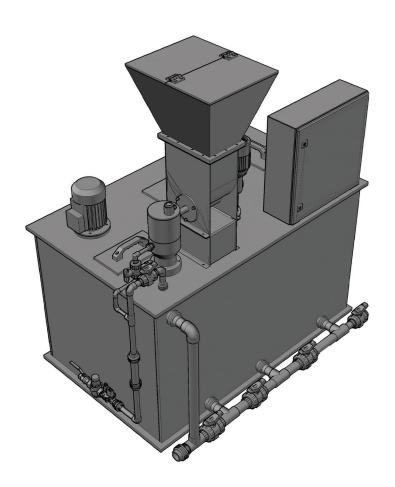




# Polymer preparing and dosing station

# **EASYPURE Powder and Liquid**

Operating instructions







Read the operating instructions!

The user is responsible for installation and operation related mistakes!



# **Table of Contents**

1	Notes for the Reader4
	1.1 General non-discrimination4
	1.2 Explanation of the signal words4
	1.3 Explanation of the warning signs4
	1.4 Identification of warnings4
	1.5 Instruction for action identification5
	The modulation design design and the modulation and
2	<b>Safety</b> 6
_	2.1 General warnings
	2.2 Hazards due to non-compliance with the safety instructions6
	2.3 Working in a safety-conscious manner
	2.4 Personal protective equipment6
	2.5 Personnel qualification
_	
3	Intended Use8
	3.1 Notes on product warranty8
	3.2 Intended purpose8
	3.3 Device revision8
	3.4 Prohibited dosing media8
	3.5 Water quality8
4	Product description9
	4.1 Scope of delivery9
	4.2 Design and function9
5	<b>Technical data</b> 13
	5.1 Output data
	5.2 Operating conditions and limits
	5.3 Electrical specifications
	5.4 Connection dimensions
	5.5 Components coming into contact with the media
	5.6 Other data
6	<b>Dimensions</b>
7	Installation
	7.1 Installation location
	7.2 Hydraulic installations
	7.3 Electrical installation
8	<b>Control</b>
-	8.1 Control display19
	8.2 Shutting down in an emergency
	8.3 Selection
	8.4 Error messages
a	8.4 Error messages22
9	8.4 Error messages
9	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24
9	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24         9.2 Long-term shutdown       24
9	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24         9.2 Long-term shutdown       24         9.3 Storage       24
9	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24         9.2 Long-term shutdown       24         9.3 Storage       24         9.4 Transportation       24
9	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24         9.2 Long-term shutdown       24         9.3 Storage       24
	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24         9.2 Long-term shutdown       24         9.3 Storage       24         9.4 Transportation       24         9.5 Disposal of old equipment       24
	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24         9.2 Long-term shutdown       24         9.3 Storage       24         9.4 Transportation       24         9.5 Disposal of old equipment       24         Maintenance       25
	8.4 Error messages       22         Shutdown       24         9.1 Short-term shutdown       24         9.2 Long-term shutdown       24         9.3 Storage       24         9.4 Transportation       24         9.5 Disposal of old equipment       24

11	Troubleshooting	27
	Spare parts	
13	EC declaration of conformity	29
14	Declaration of no objection	30
15	Warranty claim	31



# 1 Notes for the Reader

These operating instructions contain information and behaviour rules for the safe and designated operation of the device.

Observe the following principles:

- read the entire operating manual prior to starting-up 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 these operating instructions, 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 these operating instructions. 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.
Note	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	
<u>^</u>	General danger zone	

Table 2: Explanation of the warning signs

Warning sign	Type of danger	
A	Danger of electric shock	
	Danger of explosions	
	Danger of drawing in and crushing	
	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
Description	of danger.
Consequences	if ignored.
⇒ The arrow s the danger.	signals a safety precaution to be taken to eliminate



# 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.

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 to 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.



### **DANGER!**

### Mortal danger from electric shock!

Live parts can inflict fatal injuries.

⇒ Ensure that the mains voltage is switched off before opening the control cabinet door.



### **DANGER!**

### Danger to life through explosions!

When using dosing devices without ATEX certification in a potentially explosive area, explosions can occur that result in fatal injuries.

⇒ Never use the device in potentially explosive areas.



### **WARNING**

### Danger of drawing-in and crushing.

Contact with rotating system components can result in light to serious injuries to limbs.

- ⇒ Do not open the inspection cover during operation.
- Do not reach into the system opening (even with tools).
- ⇒ Do not touch the agitator shaft.
- $\, \Rightarrow \,$  Do not touch the dry feeder dosing screw.
- ⇒ 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.



### **WARNING**

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

The drive and their accessories may 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.

# 2.2 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.

### 2.3 Working in a safety-conscious manner

Besides the safety instructions specified in these operating instructions, 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.

### 2.4 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 clothing



Protective gloves



Goggles



Corresponding protective equipment must be used during these tasks:

- commissioning,
- working on the device during operation,
- shutdown,
- maintenance work,
- disposal.

# 2.5 Personnel qualification

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

Anybody who works on the product 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 these operating instructions, 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:

### 2.5.1 Specialist staff

Specialist staff are able, thanks to their professional training, knowledge and experience as well as knowledge of the respective provisions, to do the job allocated to them and recognise and/or eliminate any possible dangers by themselves.

### 2.5.2 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 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.

### 2.5.3 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.

#### 2.5.4 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> <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><li>Electrical installation</li><li>Rectifying electrical faults</li><li>Electrical repairs</li></ul>
Trained persons	<ul><li>Control</li><li>Storage</li><li>Transportation</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 13) 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 polymer preparing and dosing station EASYPURE Powder and Liquid is intended for the following purpose: Generation of a polymer solution to be used as a powder polymer flocculation aid or a fluid concentrate with drinking water. Provision of the polymer solution in a metering chamber.

Both basis solutions and ready-to-use solutions with pre-determined concentrations can be prepared. The pre-set concentration threshold amounts to  $0.3-0.6\,\%$ .

The system can be used to generate salt or coagulant solution which do not present large amounts of soiling.

### 3.3 Device revision

This operating instructions apply to the following devices:

Device	Month / year of manufacture	
EASYPURE	02/2014 onwards	

Table 4: Device revision

### 3.4 Prohibited dosing media

This device serves the preparation of solutions which do not damage the device. Each individual product requires calculations and preparations. All chemicals used must be approved by the manufacturer.

The viscosity of the solution may not exceed 2500 mPas in standard designs. The gear agitator design enables a viscosity of max. 5000 mPas

# 3.5 Water quality

Drinking water or water of a similar quality should be used. It should be free of solids and suspended matter.



# **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:

- Polymer preparing and dosing station EASYPURE Powder and Liquid,
- Supply hopper for the dry feed (optional)
- Switching diagrams,
- Operating instructions.

### 4.2 Design and function

### 4.2.1 Structure of the device

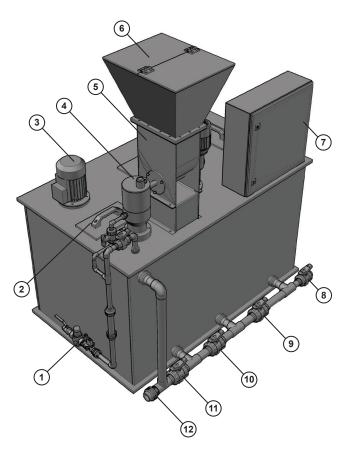


Fig. 1: Structure of the device

Position	Description
1	Water equipment
2	Inspection cover ( one per chamber)
3	Agitator (one per preparation and maturing chamber; optionally also in the dosing chamber)
4	Suspensomat

Table 5: Description of components

Position	Description
5	Dry feeder
6	Supply hopper for the dry feed (optional)
7	Switch cabinet
8	Dosing chamber exit with shut-off valve
9	Maturing chamber shut-off valve
10	Preparation chamber shut-off valve
11	Overflow shut-off valve
12	Overflow exit

Table 5: Description of components

### 4.2.2 Function description

EASYPURE Powder and Liquid is a fully-automatic system for the continuous preparation of dosing solutions consisting of water and dry substances.

The dry feed is shaken into the dry feeder (5) supply hopper (6). Working in automatic operation, the dry feeder doses the amount of dry feed required for the concentration set into the suspensomat (4). Should the dry feeder approach empty, an alarm message is issued to the control.

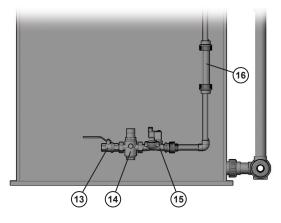


Fig. 2: Water equipment

The preparation water (1) is fed into the system via the water equipment. The pressure reducer (14) maintains the operating pressure in the permissible range The solenoid valve (15) opens and closed the water supply automatically. The current flow volume is monitored by the flow meter (16). An alarm message is issued to the control following a water shortage. The water supply can be shut off manually with the ball valve (13).



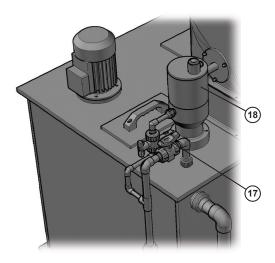


Fig. 3: Jet fittings

The water supply splits into a filling valve (17) via which the water flows into the preparation chamber and into a bypass to the suspensomat (18). Dry substances from the dry feeder (5) are wetted in the suspensomat so that they can be distributed homogeneously upon entry into the preparation chamber.

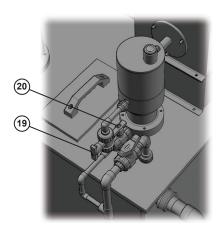


Fig. 4: Suspensomat setting valves

The water is fed into the suspensomat via two separate injection jets. The dry feed is wetted thoroughly and evenly via the injection jets in two stages. The setting of the upper and lower injection jets can be performed manually via the two valves (19 and 20).

The dosing solution is prepared in a container divided into three chambers. Preparation, maturing and withdrawal (dosing) is performed in an uninterrupted, continual process. An agitator is installed in both the preparation and maturing chamber to support the solution process through stirring. The system is optionally available with an agitator in the dosing chamber.

After the dry feed is dissolved in the first chamber, the solution moves across the dividing wall into the second chamber (maturing chamber). The maturing time available for generating a basis solution depends on the withdrawal volume and the capacity of the system. With a maximum withdrawal volume, it amounts to c. 60 minutes.

The set solution is then displaced into the third chamber (dosing chamber). An ultrasonic sensor fitted in the dosing chamber regulates automatic operation using the various fill levels (see the formula in chapter 4.2.2.1 "Function sequence in automatic operation." on page 11).



The displacement process can lead to minimal mixing of the fresh and matured solutions in the threshold zones. The immature solution can thus enter the dosing chamber. The amount is extremely small. Nevertheless this should be taken into account in process requiring absolutely matured solutions.

The finished solution is ready for withdrawal and further dosing from one or more dosing pumps. The dosing pumps are not part of the system EASYPURE, but can be controlled with the system control and thus be integrated in automatic operation.



# 4.2.2.1 Function sequence in automatic operation.

The fill level in the third chamber (dosing chamber) is continually monitored by an ultrasonic sensor. This uses various threshold values to control the filling process in the preparation chamber and the withdrawal process in the dosing chamber.

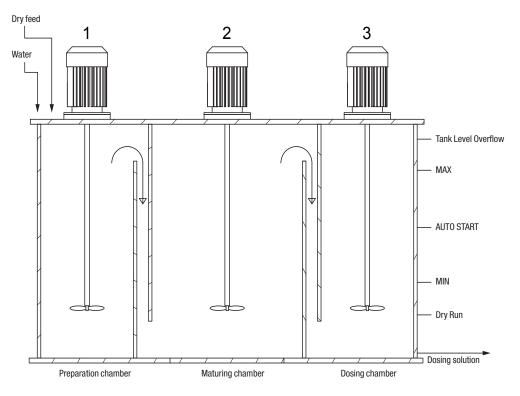


Fig. 5: Function sequence in automatic operation

The unit switching of the system is defined for the various threshold values as follows:

EASYPURE Powder and Liquid Unit	Limit (control notification)				
	Tank Level Overflow	MAX	AUTO START	MIN	Dry Run
Water equipment solenoid valve	Closed	Closed	Open	Open	Open
Dry feeder	OFF	0FF	ON	ON	ON
Agitator 1	ON	ON	ON	ON	ON
Agitator 2	ON	ON	ON	ON	ON
Agitator 3 (optional)	ON	ON	ON	0FF	0FF
Subsequent dosing pump(s) (not included in the scope of delivery)	ON	ON	ON	ON	0FF

Table 6: Switching the unit with various threshold values



# 4.2.3 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.

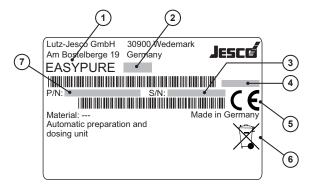


Fig. 6: Rating plate EASYPURE

No.	Description
1	Product name
2	Nominal size
3	Serial number
4	Month / year of manufacture
5	Label showing conformity with applicable European directives
6	WEEE label
7	Part number

Table 7: Rating plate



# 5 Technical data

# 5.1 Output data

Description		Polymer preparing and dosing station EASYPURE Powder and Liquid								
		500	1000	2000	3000	4000	5000	6000	10000	
Preparation output (with a maturing time of 60 min*)	l/h	500	1000	2000	3000	4000	5000	6000	10000	
Dosing performance of the dry feed doser	dm³/h	4		14	38		60	150		

Table 8: Output data

# 5.2 Operating conditions and limits

Description		Polymer preparing and dosing station EASYPURE Powder and Liquid							
		500	1000	2000	3000	4000	5000	6000	10000
Operating pressure	bar				2 -	- 6			
Maturing time	min			60					
Concentration %		0.1 – 0.5							
Permissible grain size	mm		1	2			3		
Nominal water consumption	l/h	500	1000	2000	3000	4000	5000	6000	10000
Protection class	IP	IP54							
Permissible ambient temperature	°C	+5 to +40							
Maximum viscosity mPas		2500							

Table 9: Operating conditions and limits

<sup>\*</sup> A longer maturing time is possible with a smaller preparation output. A larger preparation output is possible with shorter maturing times.



# **5.3 Electrical specifications**

		Polymer preparing and dosing station EASYPURE Powder and Liquid								
Description	Description		1000	2000	3000	4000	5000	6000	10000	
Total control cabinet connection	kW	2.2	2.2	2.2	3	3	4	5.5	6	
Dry feeder	kW			0.37						
Heater	kW	0.	0.03		0.04					
Agitator Preparing tank	kW	0.25		0.55		0.	75	1.1	1.5	
Agitator Maturing tank	kW	0.25	0.37	0.55	0.75	1	.1	1.5	2.2	
Agitator withdrawal tank (optional)	kW	0.25		0.55		0.75		1.1	1.5	

Table 10: Electrical specifications

# **5.4 Connection dimensions**

B tult		Polymer preparing and dosing station EASYPURE Powder and Liquid								
Description	Description		1000	2000	3000	4000	4000 5000		10000	
Water equipment ball valve	Inch	3/4				1	1 1/4	2		
Pressure reducer	Inch	3/4					1	1 1/4	2	
Solenoid valve	Inch		3/4				1		2	
Flow meter	DN		20			2	5	32	50	
Feed	DN		20			2	5	32	50	
Preparation, maturing and dosing chamber shut-off valves	DN	25 32 40			50		80			
Dosing chamber output shut-off valve	DN	20 25 32			4	.0	50	65		

Table 11: Connection dimensions



# 5.5 Components coming into contact with the media

Description	Material
3 chamber container	PP
Cables and connections	PVC and EPDM
Water equipment	Brass / PVC
Dry feeder	Stainless steel (1.4301)
Agitator shaft and propeller	Stainless steel (1.4571)

Table 12: Components coming into contact with the media

# 5.6 Other data

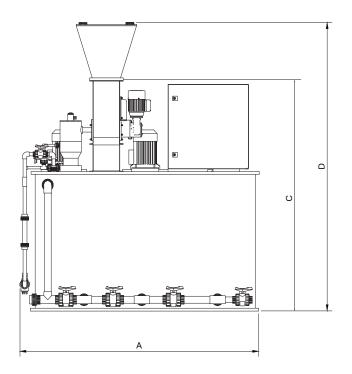
Description		Polymer preparing and dosing station EASYPURE Powder and Liquid							
		500	1000	2000	3000	4000	5000	6000	10000
Volume Preparation chamber	I	201	310	653	825	1127	1500	1890	2610
Volume maturing chamber)	I	224	550	774	1402	1803	2100	2532	5120
Volume Dosing chamber	I	201	360	653	825	1127	1500	1890	2610
Empty weight (c.)	kg	250	310	380	415	520	550	610	890

Table 13: Other data



# **6 Dimensions**

# All dimensions in mm



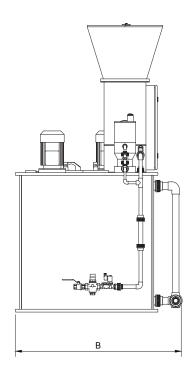


Fig. 7: Dimensions

	Α	В	C	D
Size	Total length	Total width	Total height without funnel	Total height with funnel
EASYPURE 500	1700	1200	1460	1850
EASYPURE 1000	2000	1350	1460	1850
EASYPURE 2000	2300	1450	1860	2250
EASYPURE 3000	2700	1600	1860	2250
EASYPURE 4000	3200	1750	1910	2300
EASYPURE 5000	3300	1850	2010	2400
EASYPURE 6000	3500	1850	2010	2600
EASYPURE 10000	3900	1850	2010	2700

Table 14: Dimensions



### 7 Installation



### **WARNING**

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

This device and its accessories may 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.



### **WARNING**

### Danger of personal injury and material damage!

The device is extremely heavy. The failure to take adequate safety precautions during transportation and to act with caution can lead to accidents involving personal injuries and damage to property. Limbs can be crushed when the device is set up.

- ⇒ Transport the device using a floor conveyor that is suitable for the load such as a pallet truck, forklift truck or crane.
- $\Rightarrow$  Wear safety shoes while transporting the device.



### Note

### Damage to the system due to incorrect installation

The failure to observe installation instructions (e.g. use of unsuitable tools, incorrect torque) can damage the system parts.

- □ Use suitable tools.
- $\Rightarrow$  Note the specified torque.

### 7.1 Installation location

- A base with a maximum incline of 1:200 is recommended on which to set-up the device.
- The system must be accessible for operation, maintenance and filling with dosing medium

# 7.2 Hydraulic installations



### Note

### Soiling from water of an insufficient quality

The use of water from the cleaning process or other water with insufficient cleaning leads to soiling of the pressure-relief valve and flocculate deposit on the chambers. This results in increased soiling in the system and increases the maintenance requirements.

⇒ The water used must be of a quality similar to drinking water. It should be free of solids and suspended matter.

#### Precondition for action:

- The device is not filled.
- The system has been disconnected electrically and is protected against reconnecting.

Perform the following working steps:

1. Close the water supply on the input of the water equipment.



Size of the connections see chapter 5.4 "Connection dimensions" on page 14.

- Install a pipe disconnecter in the drinking water supply if the local conditions require it.
- 3. Connect the dosing pump suction line to the dosing chamber output.
- 4. Connect the overflow pipe and lead the pipe in a suitable outflow
- Hydraulically installed



# 7.3 Electrical installation



### **DANGER!**

# Mortal danger from electric shock!

Live parts can inflict fatal injuries.

- ⇒ Disconnect from the electricity supply before opening the control cabinet
- ⇒ Secure the device to prevent it from being switched on again.

Perform the following working steps:

- → Connect the voltage supply in the control cabinet in accordance with the wiring diagrams included in the scope of delivery.
- → Earth the device in accordance with local regulations.
- ✓ Electrically installation



# **8 Control**

# 8.1 Control display

# **Symbols**

Symbol	Meaning
	Motor ON
	Motor OFF
	Inactive only in manual mode
I	Ball valve closed
$\bowtie$	Ball valve open
	min. contact – no flow
<b>ひ</b>	current flow

Table 15: Symbols

# Operating keys and symbols

Key	Symbol	Function
F1	<b>(39</b>	Key CLOCK – alarm stop for 2 minutes. If alarm stop required, key must be pressed.
F2		Without funcction
F3		Without funcction
	D/E/F/BG/H	Language selection
F4	ZURÜCK	
	0	Control system shut off

Table 16: Operating elements

# 8.2 Shutting down in an emergency

In an emergency, you must immediately disconnect the device from the mains supply or activate the Emergency Stop switch installed in the system.



### 8.3 Selection

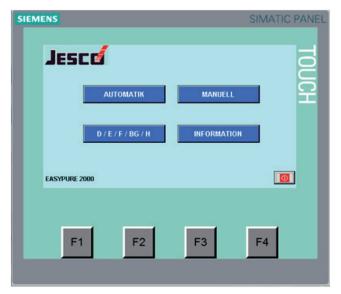


Fig. 8: Auswahlbildschirm

Selection	Description
Automatic	Standard operation
Manual	Manual operation of individual components
D/E/F/BG/H	Change Language
Information	System-specific data

Table 17: Selection elements



Fig. 9: Language selection



Fig. 10: System-specific data

# 8.3.1 Dial window MANUAL

To select the manual operation by pressing the desired button.

Step 1 after assembly or with renewed start always start with FIRST FILLING step.

With the BACK button to move to image selection.



Fig. 11: Auswahlfenster MANUELL

### **AGITATOR 1**

By pressing the "I" key, the agitator is turned on. This function is independent of the level of the container. The motor icon changes to switching control, the color green / red

By pressing the red button "0" the agitator is switched off again.

With the BACK button to return to the previous menu item. If this button does not turn on due to a malfunction of the Touchpanel, can be performed by pressing F4 also a back step.

With the key CLOCK the bottom left or the F1 key, the external alarm signal can be suppressed for 2 minutes (siren, flashing light, etc.).

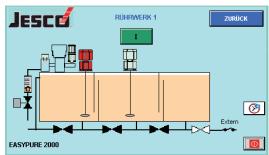


Fig. 12: AGITATOR 1



#### **AGITATOR 2**

By pressing the "I" key, the agitator is turned on. This function is independent of the level of the container. The motor icon changes to switching control, the color green / red

By pressing the red button "O" the agitator is switched off again.

With the BACK button to return to the previous menu item. If this button does not turn on due to a malfunction of the Touchpanel, can be performed by pressing F4 also a back step.

With the key CLOCK the bottom left or the F1 key, the external alarm signal can be suppressed for 2 minutes (siren, flashing light, etc.).

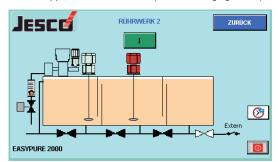


Fig. 13: AGITATOR 2

#### **DRY FEEDER**

By pressing the "I" button the dry feeder and the mouthpiece heating is on for max. 2 minutes continuous operation. This function is independent of the level of the tank and the water supply. The engine symbol and the parts of the dry material changes to control the color to green, the "I" button (On) is to switch to "O" (Off). Press the button % X to change the Concentration — Save with "ENTER" key. A change in concentration during the operation is possible at any time.

The alarm is signaling the Suspensomat Error and triggers when a malfunction.

By pressing the button "0" the function is switched off and it can be switched on again manually. Leaving the picture with the BACK button causes a shutdown of the dry feeder. If the BACK button does not turn on due to a malfunction of the panel, can be performed by pressing F4 also a back step.

With the key CLOCK the bottom left or the F1 key, the external alarm signal can be suppressed for 2 minutes (siren, flashing light, etc.).

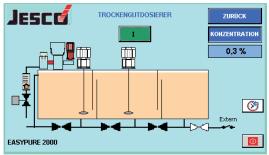


Fig. 14: DRY FEEDER

#### **SOLENOID VALVE**

By pressing the "I" key the solenoid valve is switched on for max. 2 minutes. This function depends on the level of the container. If the Max. Level is reached, turning on the solenoid valve is not possible. Valve symbol changes to control the color to green. The alarm of the flowmeter Min. is inactive.

By pressing the button "0" the function is switched off and it can be switched on again manually.

Leaving the picture with the BACK button causes a shutdown of the solenoid valve. If the BACK button does not turn on due to a malfunction of the Touchpanel, can be performed by pressing F4 also a back step.

With the key CLOCK the bottom left or the F1 key, the external alarm signal can be suppressed for 2 minutes (siren, flashing light, etc.).

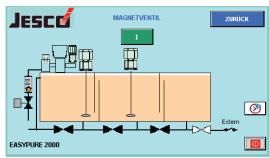


Fig. 15: SOLENOID VALVE



#### First filling



Attention for the valve position on the display!

By pressing the "I" key the solenoid valve switched for max. 120 minutes on your endurance. This feature is standard depending on the level of the container. The solenoid valve icon will change the color to green, the Power button is used to switch. The alarm of the flow Min. is in operation. This function is maintained until reaching the levels + in operation, and the solenoid valve switches off automatically.

If not achieve the level, the function is switched off after the internally set time and can only be restarted by pressing again the I / 0 button.

Leaving the picture with the BACK button causes a shutdown of the filling. If the BACK button does not turn on due to a malfunction of the panel, can be performed by pressing F4 also a back step.

With the key CLOCK the bottom left or the F1 key, the external alarm signal can be suppressed for 2 minutes (siren, flashing light, etc.).

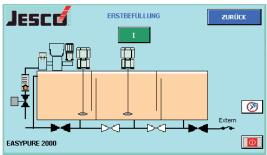


Fig. 16: First filling

# AUTOMATIC

Pressing the concentration button the input field for the concentration is opened and the desired value can be selected in a text list and confirmed with the ENTER key. A change in concentration during the operation is possible at any time.

By pressing "I" (ON - green) the plant is put into operation.

Here, the preparation of the solution is automatically carried out by monitoring the level in the extraction vessel. The agitators 1 and 2 remain constantly in operation, as the feeder heater. The Solenoid Valve and the dry feeder are switched and monitored as required.

Upon reaching the dry running protection in container extraction, the EXTERN – Signal output is switched off .



### **WARNUNG**

# Increased risk of accidents!

Rotating or pressurized parts are put into operation without warning..

The program can be stopped by pressing "0" (OFF – Red).

Leaving the picture with the BACK button will switch off the automatic mode

If the BACK button does not turn on due to a malfunction of the panel, can be performed by pressing F4 also a back step.

With the key CLOCK the bottom left or the F1 key, the external alarm signal can be suppressed for 10 minutes (siren, flashing light, etc.).

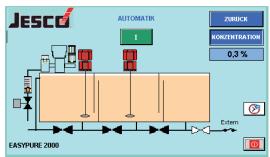


Fig. 17: AUTOMATIC

### 8.4 Error messages

When a fault is going on, a message flashes in the lower area of the screen (on every menu view) and switches the part of the system off. Furthermore, an external, potential-free contact for alarm forwarding is provided.

During an alarm, the system is out of service and again, after the disturbance, it can be started by selecting the same menu AUTOMATIC again.

The alarm messages are deleted automatically after eliminating the cause of the fault.

The external alarm by pressing the symbol CLOCK, be shut down for 2 minutes each, then it will be played freely

### **ERROR SUSPENSOMAT**

The sensor in Suspensomat triggered.

#### Cause:

- In Suspensomat to dry material has collected and triggered alarm.
- Defective sensor or an electrical connection

### Remedy:

- Check the electrical connections
- Cover the Suspensomat open and clean the inner part of the inlet nozzles and the sensor electrodes.
- After cleaning the inlet nozzles and the flushing water have to be reset



### **SPILL**

The tank is filled up to the overflow.

#### Cause:

 This alarm is caused by external water supply or leaking valves in the supply line

### Remedy:

- Remove the external water supply
- Check the water supply to the unit
- Clean the solenoid valve
- Replacement of the solenoid valve

# FLOW MIN.

This alarm is caused by too little water flow in the flow meter.

### Cause:

No message from the flow meter is sent to the controller

### Behebung:

- Check the signal generator on the flow meter
- Open the supply line valves
- Clean the filter in the pressure-reducing valve
- Increase the line pressure to the pressure reducing valve
- Check the water supply and the solenoid valve
- Replacement of the solenoid valve

# **TOTAL FAILURE**

This alarm is triggered by triggering by individual faults and an electrical safety device



Production is shut down!

#### Cause:

- Motor protection switch responded
- triggering an overload protection
- or single fault as described

### Remedy:

Replacement of defective parts



### 9 Shutdown

#### 9.1 Short-term shutdown

Perform the following working steps:

- 1. Press F4 for OFF.
- Automatic operation is stopped.
- 2. Set the main switch on the control cabinet to OFF.
- System shut down for the short term.

### 9.2 Long-term shutdown

Perform the following working steps:

- 1. Press F4 for OFF.
- Automatic operation is stopped.
- 2. Set the main switch on the control cabinet to OFF.
- Disconnect the system from the voltage supply and secure against reactivation.
- 4. Empty the dry feeder and the dry feed supply hopper.
- 5. Connect the shut-off valve to the dosing chamber output.
- Open the shut-off valves of the preparation chamber and the maturing chamber as well as the overflow shut-off valve.
- 7. Empty the system completely.
- 8. Rinse the system chambers.
- 9. Then close the overflow shut-off valve.
- 10. Disconnect the dosing line from the dosing pump and empty the line.
- 11. Rinse the dosing pump.
- 12. Disconnect the water supply.
- ✓ System shut down for the long term.

### 9.3 Storage

Required actions:

The device has been shut down in accordance with the section 11.2 "Long-term shutdown".

Storing the device correctly will extend its service life. You should avoid negative influences such as extreme temperatures, high humidity, dust, chemicals, etc.

Ensure ideal storage conditions where possible:

- the storage place must be cold, dry, dust-free and generously ventilated.
- temperatures between + 0 °C and + 50 °C.
- Relative air humidity must not exceed 90 %.

### 9.4 Transportation

### Required actions:

- The device has been shut down in accordance with the section 11.2 "Long-term shutdown".
- The device may only be transported when empty and using suitable lifting and transport equipment.
- Avoid heavy blows at all costs.
- The device can be transported using carrying straps fixed to the central side edges of the three chamber tank. Ensure that the load is distributed evenly and components do not become jammed.
- The danger of cold embrittlement of the plastics which it contains means that the device may not be transported at temperatures under 0° C. Cracks in welded seams, container walls and reinforcement frames could result.

If the device is sent back to the manufacturer, please follow sections 16 "Declaration of no objection" on page 30 and section 17 "Warranty claim" on page 31.

### 9.5 Disposal of old equipment

- 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 30).



### 10 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.



#### **WARNING**

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

The system and its accessories may 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.

### 10.1 Maintenance intervals

The device require regular maintenance to prevent errors. This table gives you an overview of maintenance work and the intervals at which you must carry it out. The next few sections contain instructions for carrying out this work.

Interval	Maintenance
daily	Check the dirt trap and clean if necessary
weekly	<ul> <li>Check the downpipe and clean if necessary</li> <li>Check the dosing screw and clean if necessary</li> <li>Check the container and clean if necessary</li> <li>Check the ultrasonic sensor and clean if necessary</li> </ul>
every 5000 operating hours	Lubricate the dry feed dosing drives

Table 18: Maintenance intervals

### 10.1.1 Clean the dirt trap

The dirt trap must be checked for too much soiling. The degree of soiling can be determined by a visual inspection of the transparent filter cup in the dirt trap. If the screen surface is 2/3 soiled or the required amount of water cannot penetrate, the screen insert requires cleaning.

Precondition for action:

- The system has been disconnected electrically and is protected against reconnecting.
- ✓ The ball valve to the water equipment is closed.

Perform the following working steps:

- 1. Remove the cap on the underside of the pressure-relief valve.
- Remove the screen
- 3. Clean the scree
- 4. Insert the screen
- 5. Screw on the cap to the underside of the pressure-relief valve.
- 6. Open the ball valve on the water equipment.
- 7. Check the pressure-relief valve for leaks.
- ✓ Dirt trap cleaned

### 10.1.2 Clean the downpipe

Precondition for action:

The system has been disconnected electrically and is protected against reconnecting.

Perform the following working steps:

- 1. Rinse the downpipe with water.
- 2. Dry it completely before recommissioning the system.
- ✓ The downpipe has been cleaned.

# 10.1.3 Service the dosing screw

Precondition for action:

The system has been disconnected electrically and is protected against reconnecting.

Perform the following working steps:

With light soiling:

Clean the dosing screw without dismantling.

With heavy soiling:

uninstall the dosing screw and clean it thoroughly.



# 10.1.4 Cleaning the container

Precondition for action:

The system has been disconnected electrically and is protected against reconnecting.

To minimise the danger of slipping and injury, the container should be cleaned whenever necessary, as moisture absorption by specific dry substances can increase the danger of slipping.

### 10.1.5 Cleaning the ultrasonic sensor

Precondition for action:

The system has been disconnected electrically and is protected against reconnecting.

Perform the following working steps:

- 1. Open the screw connection under the sensor.
- 2. Clean the underside of the signal generator (red) with a cloth.

# 10.2 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. To restart the system, proceed in accordance with the instructions in section 9 "Start-up" on page 20.
- Maintenance completed.



# 11 Troubleshooting

See below for information about how to rectify faults on the device or the system. If you cannot eliminate the fault, please consult with the manufacturer on further measures or return the device for repair.

Display	Fault	Possible causes	Remedy
TANKLEVEL DRY RUN	Minimum "dry run" level undercut	<ul> <li>Shut-off valve(s) open</li> <li>Polymer "blocked" in chambers 1 and 2</li> <li>Tank leaks</li> <li>Withdrawal too fast</li> </ul>	Stop automatic operation with F4. Redress the cause of the fault and then clear the error with OK.
FLOW METER FAULT	Water deficiency	<ul> <li>Insufficient water pressure</li> <li>Ball valve on the water equipment closed</li> <li>Valves on the jet fittings to the suspensomat set incorrectly</li> <li>Suspensomat jets blocked</li> <li>Cable to flow meter defective</li> <li>Level sensor in flow meter defective</li> </ul>	Stop automatic operation with F4. Redress the cause of the fault and then clear the error with OK.
TANK LEVEL OVERFLOW	Tank overfill	<ul> <li>Solenoid valve leaking</li> <li>Ultrasonic sensor defective</li> <li>Cable to ultrasonic sensor defective</li> <li>External filling</li> </ul>	Stop automatic operation with F4. Redress the cause of the fault and then clear the error with OK.
DRY FEEDER LEVEL HIGH	Dry feeder supply hopper overfull	<ul> <li>Dry feed blocked</li> <li>Short-circuit in the sensor cable</li> <li>Level relays in the suspensomat are defective</li> </ul>	Stop automatic operation with F4. Redress the cause of the fault and then clear the error with OK.
ELECTRIC SUMMARY FAULT	Fault in the control cabinet	<ul><li>Agitator fuses 1-3 tripped</li><li>Dosing pump fuses tripped</li></ul>	Redress the cause of the fault and then clear the error with OK.
-	No display after switching on the main switch	<ul> <li>Transformer defective</li> <li>No current</li> <li>PLC defective</li> <li>Display defective</li> </ul>	Redress the cause of the fault Contact the manufacturer if necessary
-	The control display not identical with the operating display	Software deleted	Contact the manufacturer.

Table 19: Troubleshooting



# 12 Spare parts

Part	Content
Dry feeder	-
Shut-off valve DN20	Complete ball valve
Shut-off valve DN25	Complete ball valve
Shut-off valve DN32	Complete ball valve
Shut-off valve DN40	Complete ball valve
Shut-off valve DN50	Complete ball valve
Shut-off valve DN65	Complete ball valve
Shut-off DN80	Complete ball valve
Pressure-relief valve 3/4"	Screen insert (0.16mm)
Pressure-relief valve 1"	Screen insert (0.16mm)
Pressure-relief valve 1 1/4"	Screen insert (0.16mm)
Pressure-relief valve 2	Screen insert (0.16mm)
Pressure-relief valve 3/4"	Transparent filter cup with 0-ring
Pressure-relief valve 1"	Transparent filter cup with 0-ring
Pressure-relief valve 1 1/4"	Transparent filter cup with 0-ring
Pressure-relief valve 2	Transparent filter cup with 0-ring

Table 20: Spare parts

# 12.1 Maintenance sets

Part	Content
Dry feeder	Twin roller chain, chain lock, flange bushing, washer seal, bushing, O-ring

Table 21: Maintenance sets



# 13 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 invalidad 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.

Bezeichnung des Gerätes: Polymer Ansetz- und Dosierstation Description of the unit: Polymer preparing and dosing station

Désignation du matériel: Descripción de la mercancía: Omschrijving van het apparaat: Designação do aparelho:

Typ: EASYPURE Powder and Liquid 500 - 10000 Type:

EG-Richtlinien: 2006/42/EG. 2004/108/EG

**EC** directives: 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.

Harmonisierte Normen: Harmonized standards:

Dokumentationsbevollmächtigter:

Lutz-Jesco GmbH Authorized person for documentation:

Lutz-Jesco GmbH Geschäftsführer / Chief Executive Officer Am Bostelberge 19

Lutz-Jesco GmbH 30900 Wedemark Wedemark, 01.02.2014 Germany



# 14 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
material (i.e. chemical, biological, toxic, flammable, and radioactive manufacturer finds it necessary to carry out further cleaning work.  We assure that the aforementioned information is correct and complet requirements.	rk, we accept the charge will be made to us.
Company / address:	Phone:
	Fax:
	Email:
Customer No.:	Contact person:
Date, Signature:	



# 15 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 clear filled out.	ned condition with the	complete warranty application,
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 ruction, diameters, lengths and heights of suction and discharge lines.	of the chemical feed sy	ystem, showing materials of const-



# Index

A Automatic operation
C
Clean dirt trap
Clean ultrasonic probe
Commissioning the device
Connection dimensions
D
Declaration of no objection
Dimensions
Prombled dosing media8
EC Declaration of Conformity       27         Electrical installation       18
Electrical specifications
F
Finishing maintenance
<b>G</b> General warnings6
Н
Handling instructions Marking
Hazards due to non-compliance with the safety instructions
Installation
hydraulic
Long torm chutdown

M
Maintenance23
Finishing24
Maintenance intervals23
Maintenance sets
Manual operation21
N
Notes for the Reader4
0
Opening/closing solenoid valve21
Operating conditions and limits13
Operation21
automatic21
manual
Other data
Output data
_
P
Personal protective equipment6
Personnel qualification
Personnel tasks
Product description
Prohibited dosing media
<b>3</b>
•
S
<b>S</b> Safety
<b>S</b> Safety
S         Safety
S       Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23
S         Safety
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22
S Safety
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation         4
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation         Explanation       4         Specialist staff       7
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21
Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22         Structure of the device       9
Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22
Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22         Structure of the device       9         Switching on       20
Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22         Structure of the device       9         Switching on       20
S         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22         Structure of the device       9         Switching on       20         T         Trained electricians       7
S         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22         Structure of the device       9         Switching on       20         T         Trained electricians       7         Trained persons       7
S         Safety       6         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22         Structure of the device       9         Switching on       20         T         Trained electricians       7         Trained persons       7         Transportation       22
S         Scale diagrams       16         Scope of delivery       9         Servicing the dosing screw       23         Short-term shutdown       22         Shutdown       22         Shutting down in an emergency       21         Signal words       Explanation       4         Specialist staff       7         Specifications       13         Start/stop agitators 1,2 and 3       21         Start/stop dry feeder       21         Storage       22         Structure of the device       9         Switching on       20         T         Trained electricians       7         Trained persons       7







Warnings	
General warnings	6
Marking	4
Warning sign	
Explanation	4
Warranty claim	29
Water quality	8
Working in a safety-conscious manner	6





**Product Range** Lutz Pumpen GmbH P.O. Box 1462 • D-97864 Wertheim www.lutz-pumpen.de

**Product Range** Lutz-Jesco GmbH P.O. Box 100164 • D-30891 Wedemark www.lutz-jesco.com



Barrel and Container Pumps



**Dosing Pumps** 



Measuring and Control Equipment



Flow Meters



Chlorinators



Disinfection



Double Diaphragm Pumps



Chemical Centrifugal Pumps



Standard Plus



Centrifugal Pumps



TEGHNOPOOL

Products for the disinfection of swimming pool water based on salt water electrolysis and domestic water technology



# The Lutz-Jesco App for iPads is available from the iTunes App Store. Additional information can be found at www.lutz-jesco.com



Headquarters Lutz-Jesco GmbH Am Bostelberge 19 30900 Wedemark Germany

Tel.: +49 5130 5802-0 Fax: +49 5130 580268

E-mail: info@lutz-jesco.com Website: www.lutz-jesco.de

Hungary Lutz-Jesco Üzletág Vasvári P. u. 9. 9024 Györ Hungary

Tel.: +36 96 523046 Fax: +36 96 523047

E-mail: info@lutz-jesco.hu Website: www.lutz-jesco.hu Austria Lutz-Jesco GmbH Aredstraße 7/2 2544 Leobersdorf

Austria

Tel.: +43 2256 62180 Fax: +43 2256 6218062

E-mail: info@lutz-jesco.at Website: www.lutz-jesco.at Netherlands

Lutz-Jesco Nederland B.V. Nijverheidstraat 14 C 2984 AH Ridderkerk Netherlands

Tel.: +31 180 499460 Fax: +31 180 497516

E-mail: info@lutz-jesco.nl Website: www.lutz-jesco.nl



Great Britiain Lutz-Jesco (GB) Ltd. Gateway Estate West Midlands Freeport Birmingham B26 3QD Great Britain

Tel.: +44 121 782 2662 Fax: +44 121 782 2680

E-mail: info@lutz-jesco.co.uk Website: www.lutz-jesco.co.uk USA Lutz-JESCO America Corp. 55 Bermar Park Rochester, N.Y. 14624

Tel.: +1 585 426-0990 Fax: +1 585 426-4025

E-mail: mail@jescoamerica.com Website: www.lutzjescoamerica.com

Fast Asia Lutz-Jesco East Asia Sdn Bhd 6 Jalan Saudagar U1/16

Hicom Glenmarie Industrial Park 40150 Shah Alam/ Selangor Malaysia

Tel.: +603 55692322 Fax: +603 55691322

E-mail: info@lutz-jescoasia.com Website: www.lutz-jescoasia.com Website: www.jescome.com

Middle East Lutz-Jesco Middle East FZE P.O. Box 9614 SAIF-Free Zone Center Sharjah UAE

Tel.: +971 6 5572205 Fax: +971 6 5572230

E-mail: info@jescome.com