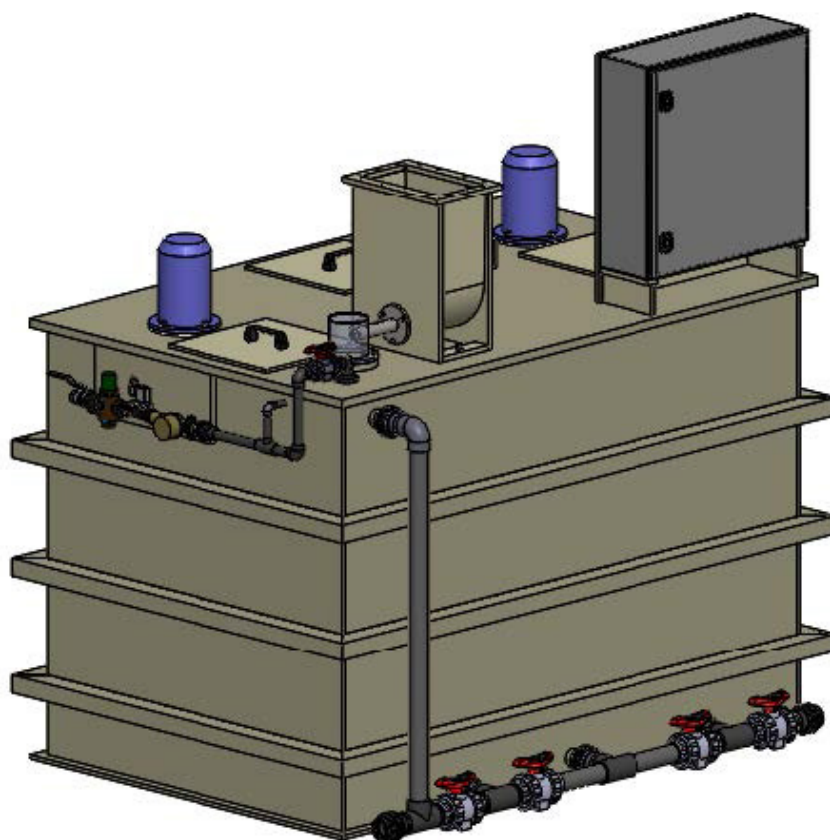


Polymer preparing and dosing station **EASYPURE Powder and Liquid** Operating instructions



Read the operating instructions!

The user is liable for improper installation and operation.

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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 instructions prior to starting-up the device.
- Ensure that everyone who works with or on the device has read the operating instructions and follows them.
- 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 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.
PLEASE NOTE	Refers to a danger which, if ignored, may lead to risk to the machine and its function.

Tab. 1: Explanation of signal words

1.3 Explanation of warning signs

Warning signs represent the type and source of a danger:

Warning sign	Type of danger
	General danger zone
	Danger of electric shock
	Danger of explosions
	Danger of drawing in and crushing
	Danger of damage to machine or functional influences

Tab. 2: Explanation of 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 signals a safety precaution to be taken to eliminate the danger.	

1.5 Identification of action instructions

This is how pre-conditions for action are identified:

- ✓ Pre-condition for action that must be met before you may start the steps.

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-sections.

	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. ⇒ 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 device and the 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.

You will require the minimum of the following personal protective equipment:

Personal protective equipment required	
	Protective clothing
	Safety shoes
	Protective gloves

Tab. 3: Personal protective equipment required

Wear the following personal protective equipment when performing the following tasks:

- Operation
- Shut-down
- 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 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 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

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.

2.5.2 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 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	■ Assembly ■ Hydraulic installation ■ Commissioning ■ Taking out of operation ■ Fault rectification ■ Maintenance ■ Repairs ■ Disposal
Trained electricians	■ Electrical installation ■ Rectifying electrical faults ■ Electrical repairs
Trained Persons	■ Control ■ Storage ■ Transportation

Tab. 4: 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 0.1 – 0.5 %.

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

3.3 Device revision

These operating instructions apply to the following devices:

Device	Month / year of manufacture
EASYPURE	After 01/2023

Tab. 5: 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.



PLEASE NOTE

Damage of the device due to moisture binding!

Hygroscopic dosing media, i.e. materials that absorb and bind moisture, are only suitable to a limited extent. In this case, the dry material can become so hard due to moisture binding that the dry material feeder can no longer transport any material or the metering screw is damaged.

⇒ The dry material must be protected against moisture ingress so that it remains free-flowing and thus transportable.

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

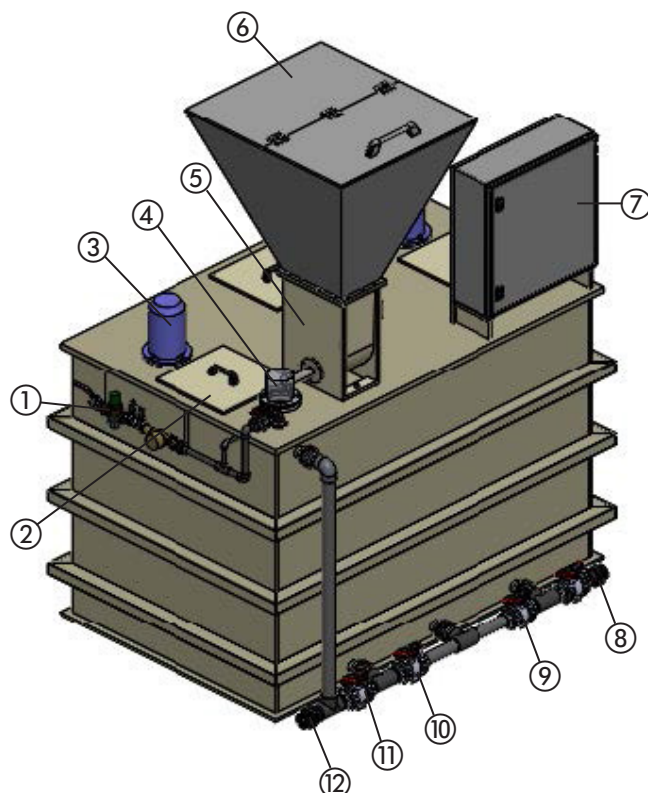


Fig. 1: Structure of the device

Item	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	Downpipe (optional Suspensomat)
5	Dry feeder
6	Supply hopper for the dry feed (optional)
7	Control cabinet

Item	Description
8	Metering chamber output with shut-off valve
9	Maturing chamber shut-off valve
10	Preparation chamber shut-off valve
11	Overflow shut-off valve
12	Overflow output

Tab. 6: 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 material is manually poured into the hopper (6) of the dry material feeder (5). In automatic mode, the dry material feeder doses the amount of dry material required for the set concentration into a downpipe (4) (or optionally into a suspensomat). Should the dry feeder approach empty, an alarm message is issued to the control.

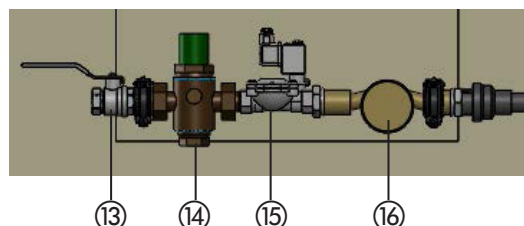


Fig. 2: Water equipment

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 closes the water supply automatically. The current flow volume is monitored by the flow meter / contact water meter (16). An alarm message is issued to the control following a water shortage. The water supply can be manually adjusted or locked with the ball valve (13).

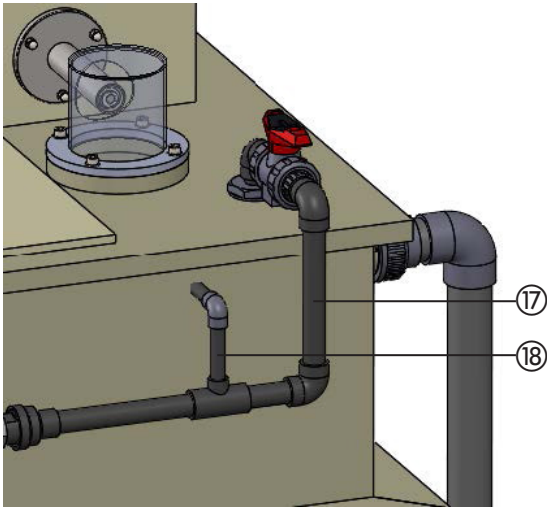


Fig. 3: Jet fitting and downpipe

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

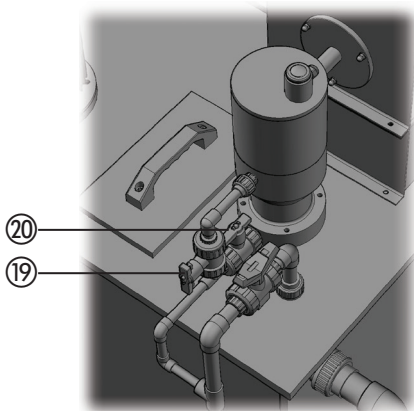


Fig. 4: Suspensomat adjustment valves

Alternatively, the system can be equipped with a suspensomat for wetting the dry substances. Here, 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 approx. 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 section 4.2.2.1 „Function sequence in automatic operation“ on page 11).



The displacement process may result in 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.

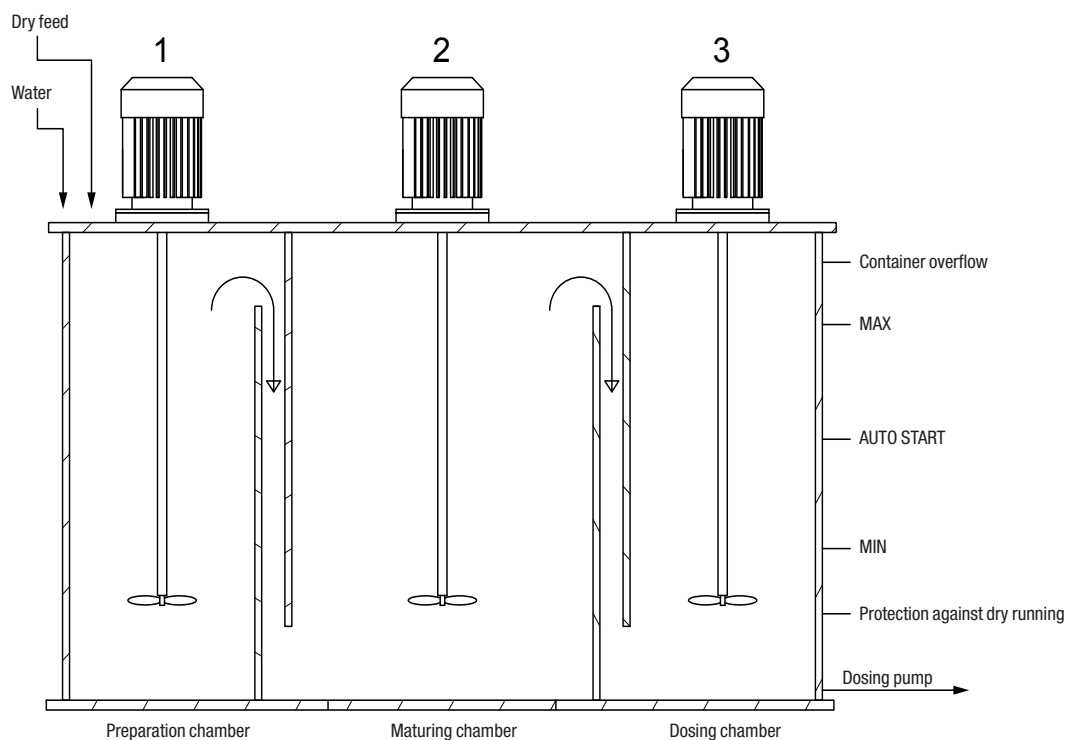


Fig. 5: Function sequence in automatic operation

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

EASYPURE Powder and Liquid Unit	Limit (Control Notification)				
	Container overflow	MAX	AUTO START	MIN	Protection against dry running
Water equipment solenoid valve	closed	closed	open	open	open
Dry feeder	OFF	OFF	ON	ON	ON
Agitator 1	ON	ON	ON	ON	ON
Agitator 2	ON	ON	ON	ON	ON
Agitator 3 (optional)	ON	ON	ON	OFF	OFF
Subsequent dosing pump(s) (not included in the scope of delivery)	ON	ON	ON	ON	OFF

Tab. 7: 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.

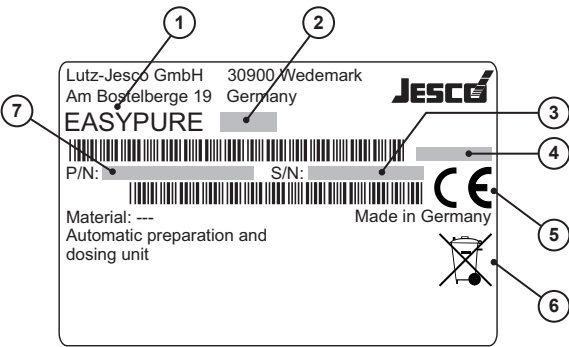


Fig. 6: Rating plate EASYPURE

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

Tab. 8: Rating plate

5 Technical data

5.1 Output data

Description		Polymer preparing and dosing station EASYPURE Powder and Liquid				
		500	1000	2000	3000	4000
Preparation output (with a maturing time of 60 min*)	l/h	500	1000	2000	3000	4000
Dosing performance of the dry feeder**	dm ³ /h	3	5	10	20	

Tab. 9: Output data

* A longer maturing time is possible with a smaller preparation output. A larger preparation output is possible with shorter maturing times.

** Dosing capacity related to polymer powder.

5.2 Operating conditions and limits

Description		Polymer preparing and dosing station EASYPURE Powder and Liquid				
		500	1000	2000	3000	4000
Operating pressure	bar	2 – 6				
Maturing time	min	60				
Concentration	%	0,1 – 0.5				
Permissible grain size	mm	1		2		
Nominal water consumption	l/h	500	1000	2000	3000	4000
Protection class		IP54				
Permissible ambient temperature	°C	5 – 40				
Maximum viscosity	mPas	2500				

Tab. 10: Operating conditions and limits

5.3 Electrical specifications

Description		Polymer preparing and dosing station EASYPURE Powder and Liquid				
		500	1000	2000	3000	4000
Total control cabinet connection	kW	2.2			3	
Dry feeder	kW	0.18				
Heater	kW	0.03		0.04		
Vibrator	kW	0.045				
Agitator Preparing tank	kW	0.25		0.55		0.75
Agitator Maturing tank	kW	0.25	0.37	0.55	0.75	1.1
Agitator withdrawal tank (optional)	kW	0.25		0.55		0.75

Tab. 11: Electrical specifications

5.4 Connection dimensions

Description		Polymer preparing and dosing station EASYPURE Powder and Liquid				
		500	1000	2000	3000	4000
Water equipment ball valve	Inch	3/4				1
Pressure reducer	Inch	3/4				1
Solenoid valve	Inch	3/4				1
Flow meter		DN20				DN25
Feed		DN20				DN25
Preparation, maturing and dosing chamber shut-off valves		DN32		DN40		

Tab. 12: 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	Tank	PP
	Dosing spindle	PE
Agitator shaft and propeller		Stainless steel (1.4571) and PP

Tab. 13: 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
Volume preparation chamber	l	146	283	547	815	1067
Volume maturing chamber)	l	224	473	928	1385	1839
Volume dosing chamber	l	151	290	561	830	1084
Empty weight (c.)	kg	250	310	380	415	520

Tab. 14: Other data

6 Dimensions

All dimensions in mm

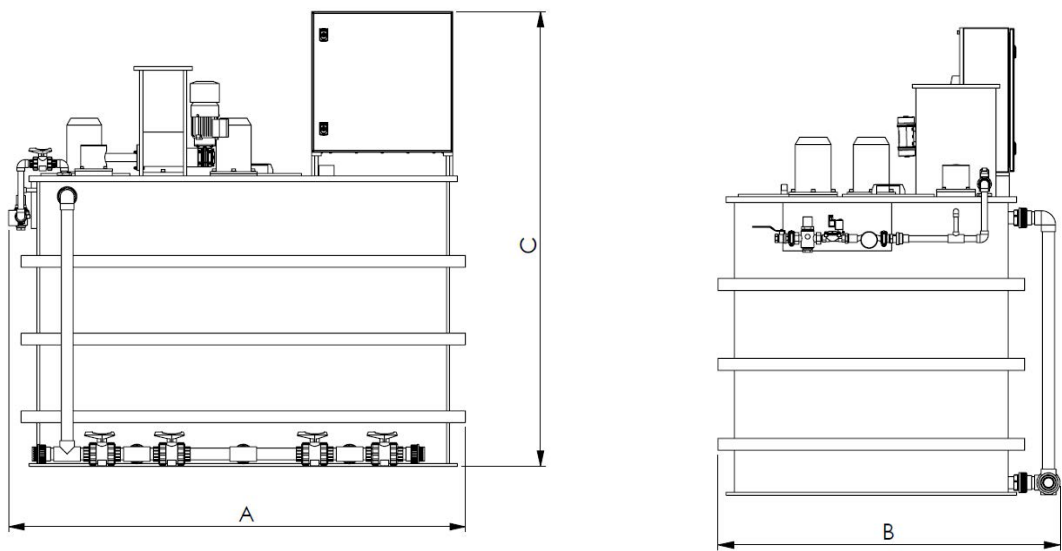


Fig. 7: Dimensions

Size	A	B	C
	Total length	Total width	Total height
EASYPURE 500	1580 approx.	1070 approx.	approx. 1440 (control cabinet mounted on the side)
EASYPURE 1000	1760 approx.	1320 approx.	1540 approx.
EASYPURE 2000	1950 approx.	1450 approx.	1940 approx.
EASYPURE 3000	2470 approx.	1600 approx.	1940 approx.
EASYPURE 4000	2880 approx.	1750 approx.	1940 approx.

Tab. 15: 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. ⇒ Wear safety shoes while transporting the device.	

	PLEASE 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. ⇒ Note the specified torque.	

7.2 Hydraulic installation

	PLEASE 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 reducer 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.

 For the size of the connections, see section 5.4 „Connection dimensions“ on page 14.

2. 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**

7.1 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

7.3 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:

1. Connect the voltage supply in the control cabinet in accordance with the wiring diagrams included in the scope of delivery.
2. Earth the device in accordance with local regulations.

✓ **Electrically installed.**

8 Control

8.1 Control unit display

Symbols

Symbol	Meaning
	Agitator ON (green)
	Agitator OFF (grey)
	no flow (grey)
	currently set flow rate (green)
	Ball valve closed (grey)
	Ball valve open (green)

Tab. 16: Symbols

Controls

Key	Symbol	Meaning
F1		No function
F2		No function
F3		No function
F4		BACK
		Switching off the control
		Switching on the control
		Options

Tab. 17: Controls

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

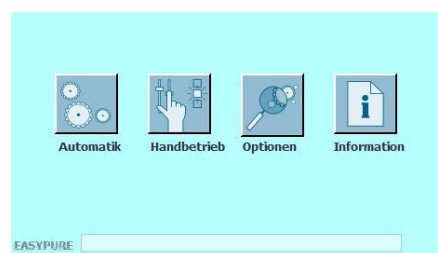


Fig. 8: Selection Screen

Key	Meaning
Automatic	Standard operation
Manual Control	Manual operation of individual components
Options	Selection of settings
Information	Plant-specific data

Tab. 18: Selection window

8.3.1 Automatic selection window

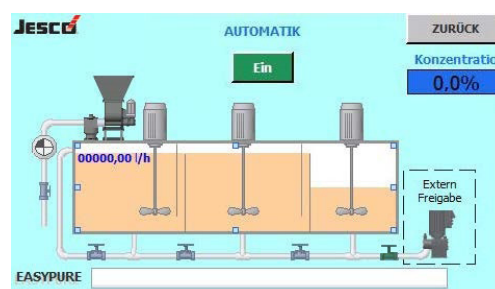


Fig. 9: Automatic selection window

Pressing the **Concentration** key opens the input field for the concentration and the desired value can be selected from a text list and confirmed with **Enter**. The concentration can be changed at any time during operation.

With the **On** button (green), the system is put into operation.

The preparation of the solution is carried out automatically by monitoring the filling level in the withdrawal container. The agitators 1 and 2 remain in constant operation at all times, as does the nosepiece heater. The solenoid valve and the dry material feeder are switched and monitored according to demand.

When the dry-running protection is reached in the removal container, the switching output *External* is turned off.



WARNING

Danger of personal injury and material damage!

Rotating or pressurised parts are put into operation without warning.

The programme can be stopped by pressing the **Off** key.

Exiting the screen with the **BACK** button switches off *automatic* operation.

If this button does not switch due to a malfunction of the panel, the **F4** button can also be used to switch off.

8.3.2 Manual mode selection window



Fig. 10: Manual mode selection window

To select manual operation, press the **Manual mode** button on the selection screen.

After assembly or when starting up again, always start with **FIRST FILLING**.

Press the **BACK** button to return to the selection screen.

8.3.2.1 Dry feeder

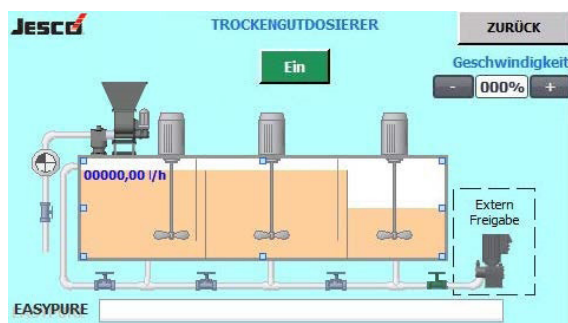


Fig. 11: Dry feeder

By pressing the **On** key, the dry material feeder and the nosepiece heater are switched to continuous operation for 2 minutes. This function is independent of the tank level and the water supply. The motor symbol and parts of the dry material feeder change colour to green for control purposes and the **On** button becomes a red **Off** switch.

By pressing the **+** and **-** keys, the speed of the dry material feeder can be changed at any time.

With suspensomat option: The alarm of the suspensomat is ready for reporting and triggers in the event of a malfunction.

By pressing the **Off** button, the function is switched off again and can be switched on again manually. Leaving the screen with the **Back** switches the dry material feeder off.

8.3.2.2 First filling



Fig. 12: First filling

i Note the valve position on the display!

Pressing the **On** button switches the solenoid valve to continuous operation. This function depends on the fill level of the container. The solenoid valve symbol changes colour for switching control, the **On** button becomes the **Off** button. The "Flow rate min." alarm indicator is in operation if the water flow rate is too low. This function remains in operation until the level + is reached and switches the solenoid valve off automatically.

If the level is not reached, the function is switched off after the internally specified time has elapsed and can only be restarted by pressing the **On/Off** button again.

Leaving the screen with the **Back** button switches off the filling process.

If this button does not switch due to a malfunction of the panel, the **F4** button can also be used to switch off.

8.3.2.3 Solenoid valve

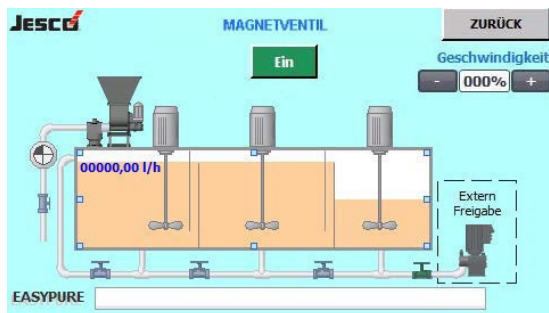


Fig. 13: Solenoid valve

Pressing the **On** button switches the solenoid valve to continuous operation. This function depends on the fill level of the container. Once the maximum level has been reached, it is not possible to switch on the solenoid valve. The valve symbol changes colour to green for control, the **On** button becomes a red **Off** switch. The low water flow alarm in the flow meter is not active.

By pressing the **Off** button, the function is switched off again and can be switched on again manually.

Leaving the screen with the **Back** button switches off the filling process.

8.3.2.4 Agitator 1

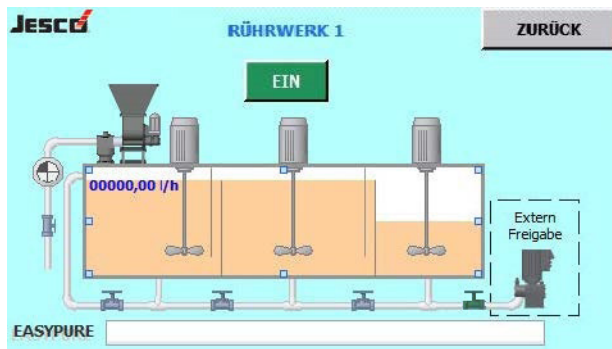


Fig. 14: Agitator 1

Pressing the **On** button (green) switches on the agitator. This function is independent of the filling level of the container. The agitator changes colour from grey to green in the display as a check and the mixing blade starts to rotate.

Pressing the **Off** button (red) switches the agitator off again.

Press the **Back** button to return to the previous menu item. If this button does not switch due to a malfunction of the touch panel, use the **F4** button as an alternative.

8.3.2.5 Agitator 2

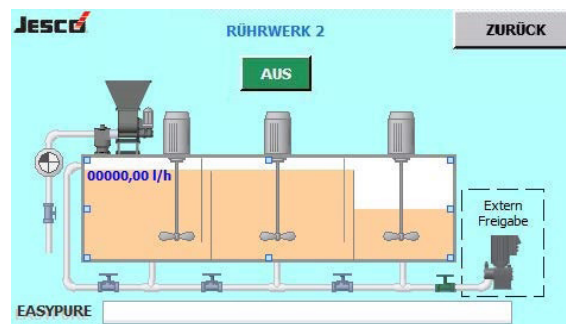


Fig. 15: Agitator 2

Pressing the **On** button (green) switches on the agitator. This function is independent of the filling level of the container. The agitator changes colour from grey to green in the display as a check and the mixing blade starts to rotate.

Pressing the **Off** button (red) switches the agitator off again.

Press the **Back** button to return to the previous menu item. If this button does not switch due to a malfunction of the panel, use the **F4** button is also used to switch off.

8.3.3 Options selection window



Fig. 16: Options selection window

To select the settings, press the **Options** button on the selection screen. Here you will first be asked for a user name and password. Different password protection levels allow different setting options. All settings can be set as Admin, Lutz-Jesco has no user rights, Service has no user rights or security parameters and the user can only operate.

Press the **BACK** button to return to the selection screen.

8.3.3.1 Diagnosis

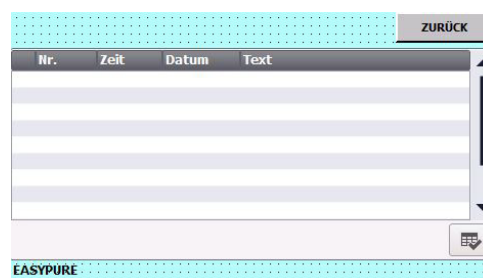


Fig. 17: Diagnosis

Pressing the **Diagnosis** button takes you to the malfunction display. All fault messages from the EASYPURE are listed here in chronological order.

8.3.3.2 Setup

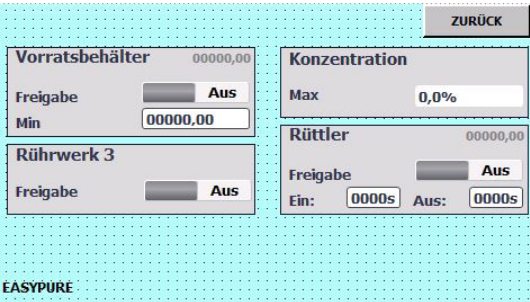


Fig. 18: Setup

Pressing the **Settings** button takes you to the parameter settings of the unit. The concentration of the solution to be prepared is entered here. Furthermore, an optional third agitator, a storage container for the dry material feeder and an optional vibrator can be integrated into the control of the system. For the vibrator, you must also enter when it switches on and off. For example, you can set On: 10s and Off: 5s; the rebalancing motor then vibrates in intervals of 10 seconds and then stands still for 5 seconds before starting again from the beginning.

Further setting options are available for the admin.

8.3.3.3 User (only for admin)

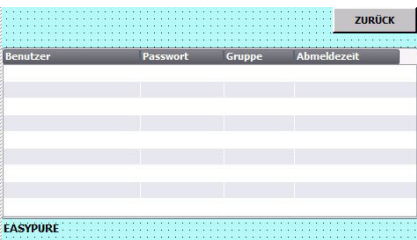


Fig. 19: User

Press the **User** button to access the user settings. Password protection prevents unauthorised adjustment of the parameters. An admin can configure the user parameters here and can also check which user was last active on the system.

8.3.3.4 Calibrate



Fig. 20: Calibrate

Pressing the **Calibration** button takes you to the settings for calibrating the dry material feeder. In dependence on the dry feed you are using, you must match the theoretical delivery capacity with that which is actually measured. First of all, the dosing time for calibrating the dry material feeder in seconds and the motor speed must be specified. An input between 0 and 27648 is required for the motor speed, whereby 0

corresponds to a speed of 0 % and 27648 to a speed of 100 %. A high value for calibration is recommended here. The dry material feeder starts feeding as soon as the **Measurement Start** button is pressed. The conveyed dry material is collected in a measuring vessel. As soon as the dosing time has been reached, the dry material feeder switches off and the collected dry material must be weighed and the weight entered in grams in the **Actual weight (g)** field. The factor is used for internal calculation in the control unit.

8.3.3.5 Language



Fig. 21: Language selection

Pressing the **Language** button takes you to the language setting. The desired language can be set using the corresponding flag. You can choose between German, English, Spanish, Bulgarian and Turkish.

8.3.4 Information selection window



Fig. 22: Information

Pressing the **Information** button on the selection screen takes you to the menu.

The date of manufacture, the unit type and the current programming version of the unit are displayed here.

8.4 Error messages

If a fault message occurs, it appears at the bottom of the screen in every menu view and switches off the system components. Furthermore, an external, potential-free contact is provided for alarm forwarding.

During an alarm, the system is out of operation and after the fault has been rectified, it can be restarted by selecting **AUTOMATIC** in the same menu.

The alarm messages are deleted automatically after the cause of the malfunction has been eliminated.

8.4.1 Suspensomat fault

The sensor in the suspensomat has triggered.

Possible cause:

- Dry material has collected in the suspensomat, triggering an alarm.
- Defect of the sensor or an electrical connection

Remedy:

- Checking the electrical connections
- Open the cover of the suspensomat and clean the inner part with the injection jets and the sensor electrodes.
- After cleaning, the injection jets and the flushing water quantity must be readjusted.

8.4.2 Tank is overfilled

The tank is filled up to the overflow.

Possible cause:

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

Remedy:

- Removing the external water supply
- Checking the water supply to the appliance
- Cleaning the solenoid valve
- Replacing the solenoid valve

8.4.3 Water meter error

This alarm is caused by insufficient water flow in the flow meter.

Possible cause:

- No message is sent from the flow meter to the control unit.

Remedy:

- Checking the signal generator on the flow meter
- Opening the supply valves
- Cleaning the filter in the pressure reducing valve
- Increasing the line pressure after the pressure reducing valve
- Checking the water supply and the solenoid valve
- Replacing the solenoid valve

8.4.4 Safety chain is broken

This alarm is triggered by individual faults and those of an electrical safety device.

 Production will be switched off!

Possible cause:

- Motor protection switch tripped
- Triggering of an overload protection
- Or single fault as described above

Remedy:

- Replacement of the defective parts

8.4.5 Emergency stop

This alarm is triggered by pressing the emergency stop button.

 Production will be switched off!

Possible cause:

- Emergency stop button pressed

Remedy:

- Unlock the emergency stop button and acknowledge the fault

9 Shut-down

9.1 Short-term shut-down

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 shut-down

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**.
3. 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.
6. Open the shutoff valves of the preparation chamber and the maturing chamber as well as the overflow shutoff 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 9.2 „Long-term shut-down“.

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 moderately ventilated.
- temperatures between + 0 °C and + 50 °C
- Relative air humidity must not exceed 90 %

9.4 Transportation

Precondition for action:

- ✓ The device has been shut down in accordance with the section 9.2 „Long-term shut-down“.
- 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 section 14 „Decontamination declaration“ on page 30 and section 15 „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 decontamination declaration (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 requires 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	■ Check the downpipe and clean if necessary ■ Check the dosing screw and clean if necessary ■ Check the container and clean if necessary ■ Check the ultrasonic sensor and clean if necessary
Every 5000 operating hours	■ Lubricate the dry feed dosing drives

Tab. 19: Maintenance intervals

10.1.1 Cleaning 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 reducer.
2. Remove the screen.
3. Clean the scree
4. Insert the screen
5. Screw on the cap to the underside of the pressure reducer.
6. Open the ball valve on the water equipment.
7. Check the pressure reducer for leaks.

✓ **Dirt trap cleaned**

10.1.2 Cleaning the downpipe/suspensomat

Precondition for action:

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

Perform the following working steps:

1. Rinse the downpipe or the suspensomat with water.
2. Dry it completely before recommissioning the system.

✓ **Downpipe/suspensomat cleaned.**

10.1.3 Servicing 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 probe

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 8 „Control“ on page 19.

- ✓ **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	Error	Possible causes	Remedy
Tank is empty	Minimum "dry run" level undercut	- Shut-off valve(s) open - Polymer "blocked" in chambers 1 and 2 - Tank leaks - Withdrawal too fast	Stop automatic operation with F4 . Redress the cause of the fault and then clear the error with OK .
Water meter error	Water deficiency	- Insufficient water pressure - Ball valve on the water equipment closed - Valves on the jet fittings to the suspensomat set incorrectly - Suspensomat jets blocked - Cable to flow meter defective - Level sensor in flow meter defective	Stop automatic operation with F4 . Redress the cause of the fault and then clear the error with OK .
Tank is overfilled	Tank overflow	- Solenoid valve leaking - Ultrasonic sensor defective - Cable to ultrasonic sensor defective - External filling	Stop automatic operation with F4 . Redress the cause of the fault and then clear the error with OK .
Dry material feeder overfilled	Dry feeder supply hopper overfull	- Dry feed blocked - Short-circuit in the sensor cable - Level relays in the suspensomat are defective	Stop automatic operation with F4 . Redress the cause of the fault and then clear the error with OK .
Safety chain is broken	Fault in the control cabinet	- Agitator fuses 1-3 tripped - Dosing pump fuses tripped	Redress the cause of the fault and then clear the error with OK .
-	No display after switching on the main switch	- Transformer defective - No current - PLC defective - Display defective	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.
Emergency Stop	Emergency stop button is pressed	Emergency stop was triggered	Unlock the emergency stop button and acknowledge the error.
Storage container is empty	Storage container empty	- Storage container not refilled - Probe defective	Top up the storage container and check the probe.
Not calibrated	Dry feeder is not calibrated	Dry material feeder was not calibrated	Calibrate the dry material feeder.

Tab. 20: Troubleshooting

12 Spare parts

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

Tab. 21: Spare parts

12.1 Maintenance kits

Part	Content
Dry feeder	Dosing screw

Tab. 22: Maintenance kits

13 EC declaration of conformity



(DE) EU-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) EU 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 UE

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 UE

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 UE

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:

Station de préparation et de dosage polymère

Descripción de la mercancía:

Estación de preparación y dosificación de polímero

Omschrijving van het apparaat:

Bereidings- en doseerstation voor polymeer

Designação do aparelho:

Estação de preparação e dosagem de polímeros

Typ:

EASYPURE Powder and Liquid 500 – 4000

Type:

EU-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:

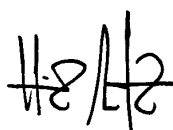
-

Harmonized standards:

Dokumentationsbevollmächtigter:

Lutz-Jesco GmbH

Authorized person for documentation:



Heinz Lutz
Geschäftsführer / Chief Executive Officer
Lutz-Jesco GmbH
Wedemark, 01.02.2023

Lutz-Jesco GmbH
Am Bostelberge 19
30900 Wedemark
Germany

14 Decontamination declaration

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

Decontamination declaration

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:

15 Warranty claim

Warranty claim

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 claim.

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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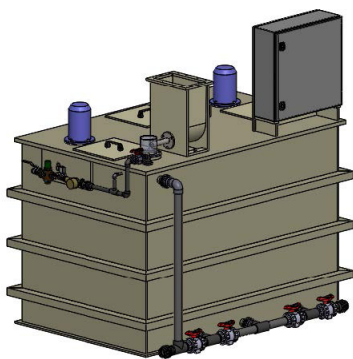
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Operating instructions
EASYPURE Powder and Liquid