

Operating instructions

– Original operating instructions –

Powder dosing unit
Concept PDG 2906

2022/04



Publishing details

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Disclaimer

Diagrams and texts have been compiled with the greatest possible care. Nevertheless, errors and technical changes cannot be ruled out. The information is provided without guarantee.

Details in these operating instructions are subject to change without prior notice due to ongoing product development.

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1 Intended use

The Concept PDG 2906 powder dosing unit is used for continuous and time-controlled dosing of detergent in granulate, powder or block form.

The Concept PDG 2906 powder dosing unit may only be used within the specified performance limits and under the permissible ambient conditions.

2 Disclaimer

Any other or additional use shall be considered improper use.

The manufacturer will not be held liable for resulting damage. Modifications to the peristaltic dosing pump are prohibited.

The peristaltic dosing pump may only be used in a technically faultless and operationally safe condition. Any improper use will result in extinguishment of the manufacturer's warranty and general liability.

Only a qualified specialist may open the device. The peristaltic dosing pump must be installed by a trained specialist who is responsible for compliance with applicable standards and regulations.

Faultless functioning and operational safety as well as the greatest possible freedom from interference can only be ensured if only device components tested and approved by SAIER Dosiertechnik GmbH are used.

Only accessories that have been tested together with this device and approved by SAIER Dosiertechnik GmbH may be used. If third-party accessories are used, SAIER Dosiertechnik does not guarantee that the device will operate or function safely or reliably.

There is no warranty for damage caused by using third-party accessories.

The guarantee period is 24 months from delivery.

3 EC Declaration of Conformity

The company

HERBERT SAIER GMBH

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Germany

hereby declares that the product listed below conforms to the following EU Directives, harmonised standards and national standards.

Product	Powder dosing unit
Model	Concept PDG 2906 21016
Serial number	See nameplate on device
EU Directives	Low Voltage Directive 2014/35/EU Electromagnetic Compatibility (EMC) Directive 2014/30/EU Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive 2011/65/EU
Harmonised standards	EN 60335-1:2020-08 EN 60335-2-41:2012-06 EN 61000-6-3:2011-09 EN 61000-6-2:2006-03

Herbert Saier GmbH
5 March 2021



Michael Saier
(Managing Director)

4 About these instructions



Important information

Read these operating instructions before using the unit.

Please observe and comply with the following points:

- All instructions relating to the safety of the operator and protection of the surroundings must be followed.
- These operating instructions are considered an integral part of the device. They must be kept to hand and made available to relevant persons as required.
- These operating instructions must be precisely followed in order to use the device as intended and in the correct manner.
- All supplied technical information, care and maintenance instructions must be observed.

4.1 Safety information

Safety information is labelled according to the severity of the danger:



DANGER!

Indicates an immediate hazard with a high level of risk which may result in death or serious injury.



WARNING!

Indicates a hazard with a moderate level of risk which may result in death or serious injury.



CAUTION!

Indicates a hazard with a low level of risk which may result in minor or moderate injury or damage to property.

1.1.1 Types of hazard

The following types of hazard may arise during installation, operation, repair or disposal of the device:



Danger of death, electricity

Before opening the device housing, disconnect the power supply to the device and make sure it cannot be switched back on.



Crush hazard

Before operating the pump, ensure that all provided covers are properly fitted.



Danger of suffocation, lethal gases and vapours

Mixing certain liquids can produce deadly gases and vapours.



Chemical burn hazard

Wear eye protection.



Danger from chemicals

Wear protective gloves.



Danger from chemicals

Wear protective clothing.

4.2 Information notes

Information notes contain important instructions for the installation and proper operation of the device. They should always be observed.



Important information

This information note indicates that material damage or financial loss may occur if the information is ignored.



Information

This symbol indicates a helpful tip.

5 Items supplied



Check contents

Check delivery package contents against the delivery note immediately upon receipt of goods. Later complaints cannot be considered.

Quantity	Components
1	Concept PDG 2906 peristaltic dosing pump with 5-core cable
1	Tube kit
2	Sealing plug for the tube kit
2	Connecting plug for the tube kit
4	6 mm wall plug (screw anchor)
4	Screws
4	Cover caps for the screws
2	PG cable glands
1	Operating instructions

6 Transportation and storage

- Transport and store the device in its original packaging.
- Protect the packaged device from moisture and chemicals.
- Ambient temperature range: -10 ... +45 °C.
- Humidity: maximum 95% relative humidity, non-condensing.
- No direct sunlight.

7 Technical specifications

Performance data	Flow rate rinse-aid pump:	20 ... 500 ml/h (with PS 138-1.6x1.6 Ri4 / 2.5 bar max.)	
		80 ... 2000 ml/h (with PS 138-3.2x1.6 Ri4G / 2 bar max.)	
Configuration	Device:	Buttons on device	Windows laptop (SSC software)
	Conductivity measurement:	Inductive conductivity sensor ILFS 02	
	Reset dosing time monitoring:	Increase in conductivity	Setpoint value reached
	Rinse-aid dosing	Constant	Variable
	Dosing control:	Runtime Runtime and pauses Conductivity control two-point Conductivity control proportional	
	Control programs:	1 predosing program 1 basic program 7 weekly programs / timer programs 1 special program	
Electrical data	Operating voltage:	230 V ±10%	
	Frequency:	50 /60 Hz	
	Input power:	20 VA	
	Protection class:	IP 65	
	Fuse:	0.2 A fuse for device 2 A medium time-lag fuse for solenoid valve	
Data storage	Consumption data – daily product consumption of rinse-aid pump and solenoid valve activation time Container empty events / container change Error events: Dosing error / sensor failure etc.		

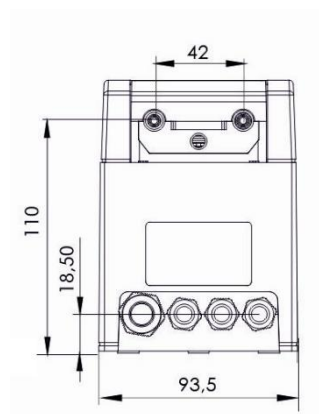
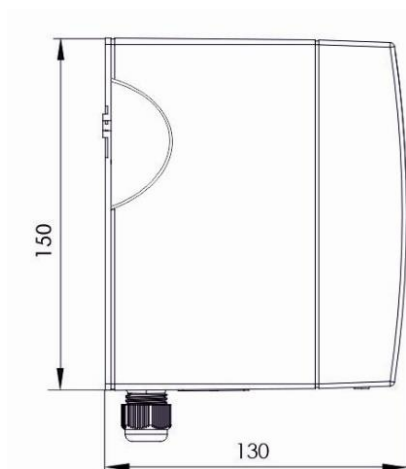
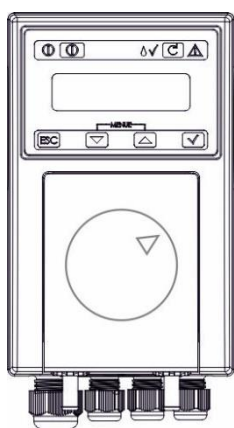
Mechanical data

Dimensions:	93.5 x 150 x 130 mm
Weight:	Approx. 1.2 kg
Tube connections (rinse-aid pump):	4x1 mm (4 mm internal diameter)

Ambient conditions

Ambient temperature range:	+10 ... +50 °C
Environmental stress:	Conforms to DIN EN 60068-2-38

Dimensions



8 Description

The Concept PDG 2906 powder dosing unit is used for continuous and time-controlled dosing of detergent in powder, granulate or block form.

8.1 The system

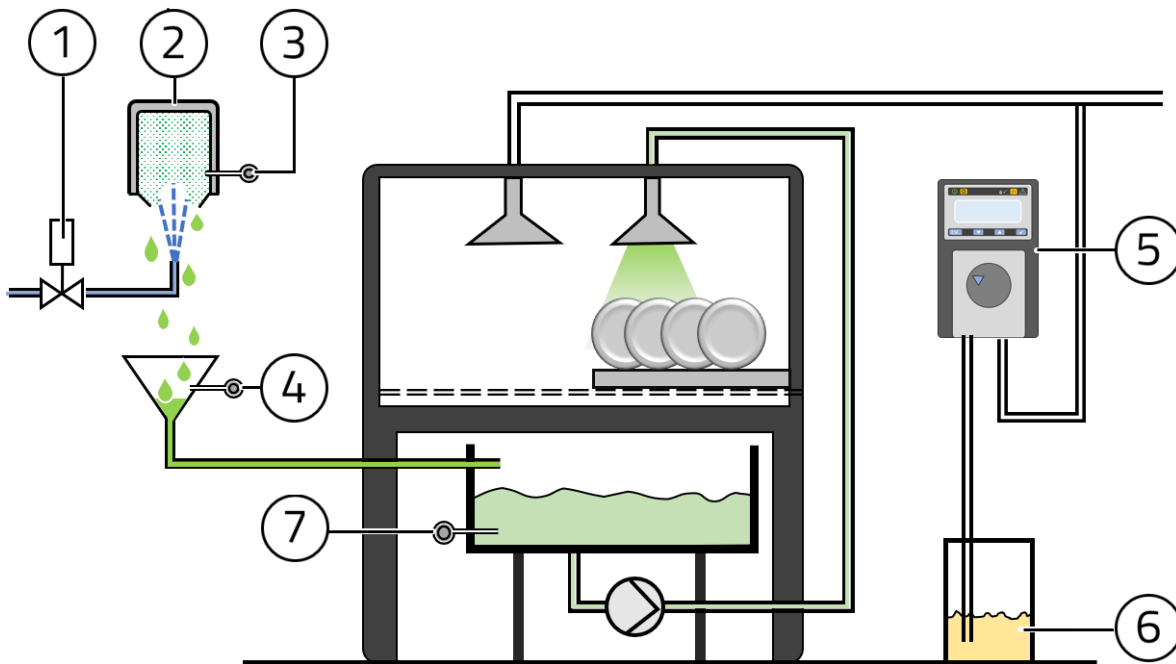


Fig. 1: Powder dosing system

Item	Component	Function
1	Powder dosing solenoid valve	Opens and closes the supply of fresh water for the powder dosing
2	Powder cartridge	Container for the detergent in powder form
3	Cartridge sensor	Signals when no cartridge is fitted
4	Powder funnel sensor	Switches when the level of detergent liquid in the collection funnel is too high. The powder dosing solenoid valve closes
5	Dosing pump with control unit Concept PDG 2906	<ul style="list-style-type: none"> • Controls the powder dosing • Controls the rinse-aid dosing • Pumps rinse-aid for the rinsing process into the piping system
6	Rinse-aid container	Container for the rinse-aid
7	Conductivity sensor (ILFS 02)	Measures the conductivity in the wash tank

8.2 Components

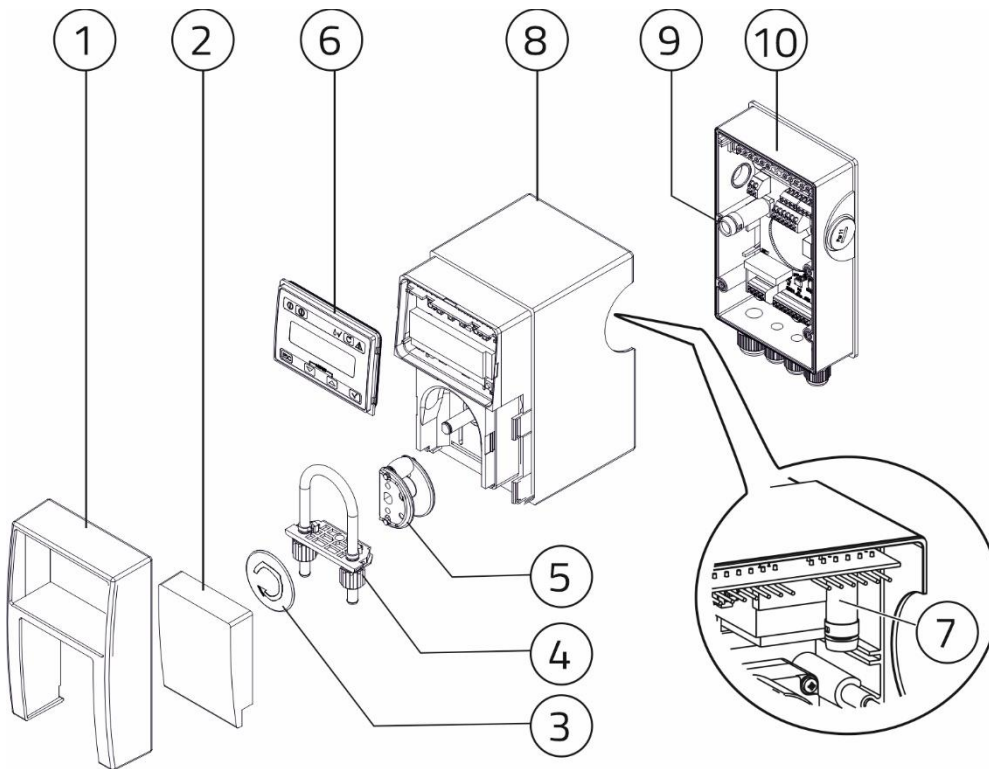


Figure 2: Components

- 1** Cover
- 2** Pump housing cover
- 3** Rotor cover
- 4** Tube kit
- 5** Rotor
- 6** Front screen
- 7** 0.2 A slow-blow fuse for device
- 8** Pump housing
- 9** 2 A medium time-lag fuse for solenoid valve
- 10** Connection box

8.3 Control elements

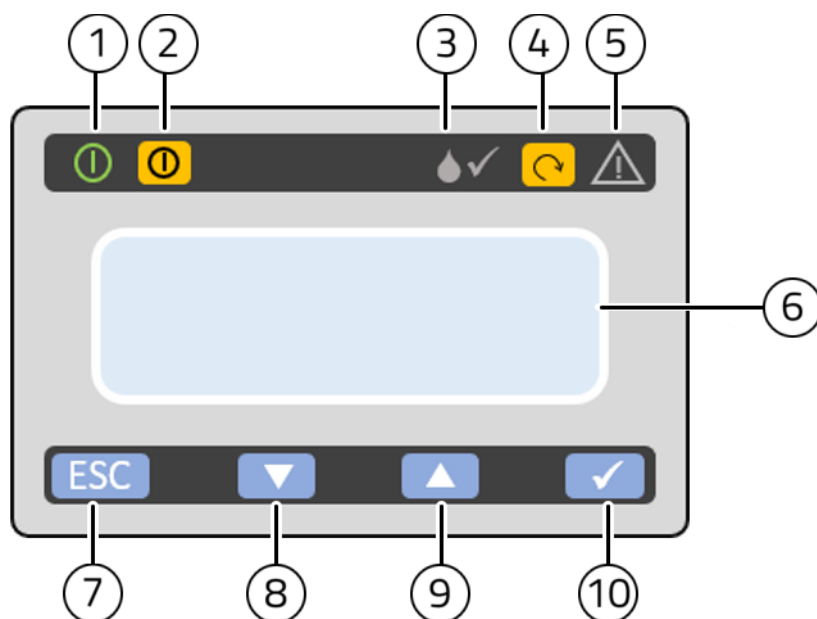


Fig. 3: Control panel

Item	Description	Function
1	Operation indicator	● Lights up green when operating voltage is present at the device
2	"On/off" button	Switch device on/off
3	"●✓" indicator	⚙ Flashes when pump is running
4	↻ button	<ul style="list-style-type: none"> - Pump is running at maximum speed - Error reset - Acknowledge alarm
5	Fault indicator	● ⚙ LED lights up or flashes red if an error occurs
6	LCD display	Displays menu text
7	ESC button	<ul style="list-style-type: none"> - Cancel input - Back to last entry
8	▼ button	Decrease value
9	▲ button	Increase value
10	✓ button	<ul style="list-style-type: none"> - Confirm input - Continue to next menu item

Button combination	Function
ESC button and ↻ button	Pump runs for the specified filling time at maximum speed

LED signals

LED	Signal	Meaning
Green	Lights up continuously	Dosing not active Setpoint value reached Conductivity control is switched on ¹
Green	Flashing at normal speed	Dosing active Setpoint value not reached Increase in conductivity is detected ¹ Pump is running ²
Green	Flashing rapidly	Dosing active, setpoint value not reached, no increase in conductivity is detected (possible cause: container empty) ¹
Green	Not lit	Conductivity control is switched off ¹
Red	Not lit	No fault
Red	Lights up continuously	Tube rupture detected
Red	Flashing at normal speed	Suction lance empty signal
Red	Flashing rapidly	Maximum dosing time exceeded (container empty or other fault) ¹
Red	Flashing slowly	Conductivity sensor ILFS not detected ¹

¹⁾ Only for operating modes with conductivity control

²⁾ For all operating modes

9 Installation

9.1 Installation location

- The product should be installed in a protected place.
- An installation location should be chosen that is not exposed to humidity, water, vapours, alkalis, acids or excessive ambient temperatures.
- The assembly area must be level and free of deformation.
- The mounting surface should be free of vibrations and shocks.
- Consider the installation situation when installing the pump.
- The pump housing must be mounted vertically.

1.1.2 Injection points

At “injection points”, the dosed medium is introduced into a pipe containing liquid.



Fig. 4: Position of injection points

Most injection points are fitted in the top of the pipe (1).

If the medium has to be introduced bubble-free, the injection point is installed on the underside of the pipe (2).

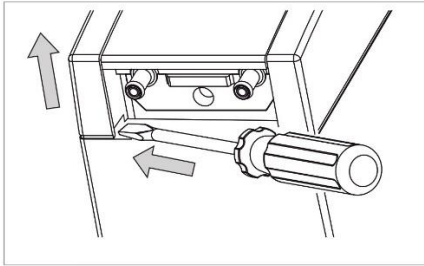


Important information

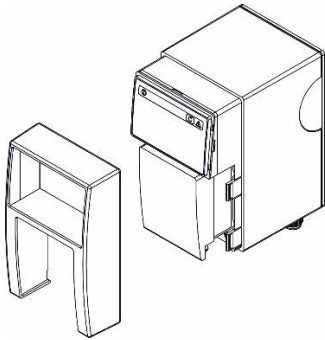
If injection points are used, it is important to ensure that only small pressure losses occur at the injection points.

9.2 Installation

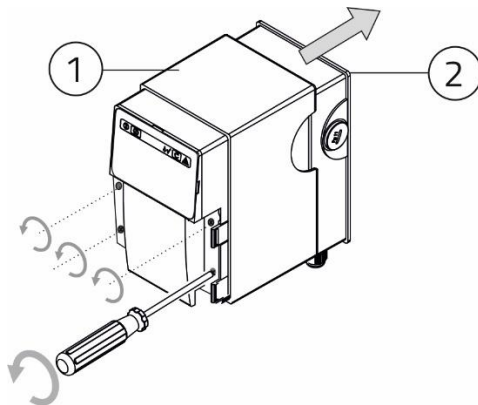
1.1.3 Open the device



- ▶ Gently insert a screwdriver into the two openings in the cover.
- ▶ Lift the cover.



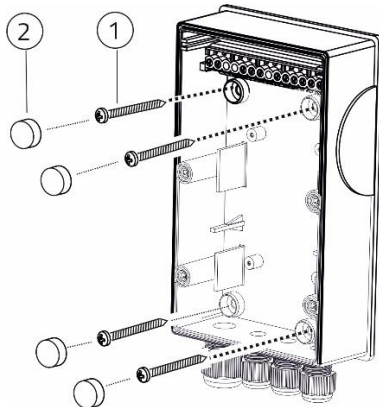
- ▶ Remove the shroud cover.



- ▶ Undo the four screws in the pump housing (1).
- ▶ Separate the pump housing from the connection box (2).

The device is ready for installation.

1.1.4 Mount the connection box



- ▶ Use the four screws (1) to mount the connection box.
- ▶ Cover the ends of the screws with the 4 screw covers (2).
- ☑ *The connection box is mounted.*

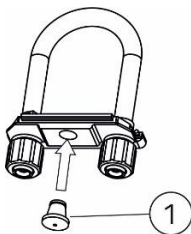
9.3 Fit tube kit

1.1.5 Seal the tube kit



Tube rupture monitoring!

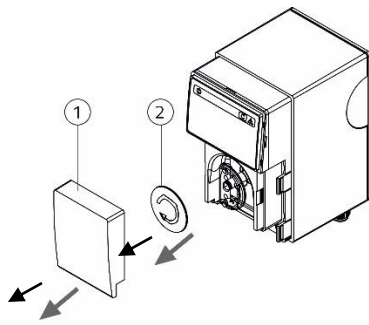
The device has a tube rupture monitoring feature. For the tube rupture monitoring feature to function correctly, the tube holder must be sealed.



- ▶ Press the sealing plug (1) into the opening in the tube holder.

Fig. 5: Seal the tube kit

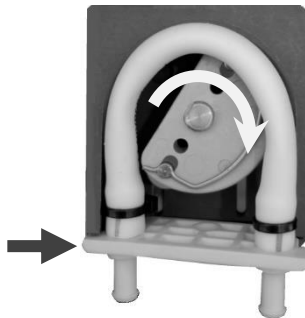
1.1.6 Fit tube kit



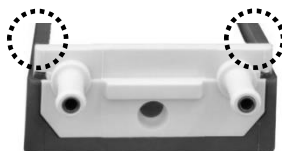
- ▶ Remove the pump housing cover (1).
- ▶ Remove the rotor cover (2).



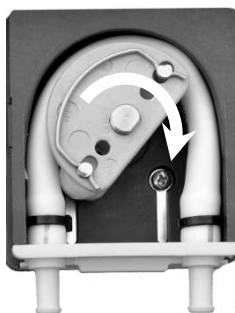
- ▶ Rotate the rotor into angled "D" position.



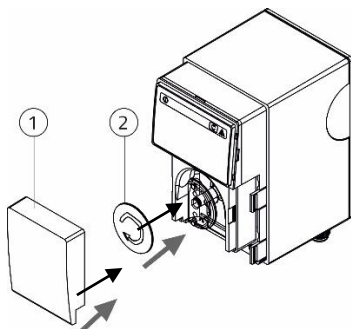
- ▶ Place the tube in position to the left of the rotor.
- ▶ Slide the tube holder into the guide on the left (➡).
- ▶ Use long-nose pliers or a rotor key to rotate the rotor clockwise.
- ▶ While turning the rotor, press the pump tube into the guide.



- ▶ Slide the tube holder fully into both guides.
- ▶ Check that the tube holder sits flush.



- ▶ Rotate the rotor several times to align the pump tube.



- ▶ Refit the rotor cover (2).
- ▶ Refit the pump housing cover (1).
- ☑ *The tube kit is fitted.*

9.4 Tube connection



WARNING! Escape of hazardous liquid at high pressure

Kinking the tube generates high pressure that can cause the tube to rupture and the pumped medium to escape.

Take care that tubes are installed in the proper manner, and observe the maximum bending radius.

Please note the following points:

- Tube diameter and tube length should be selected so that the total pressure within the tube system (pump tube and supply tube) and, if applicable, the installation does not exceed the maximum permissible value (see "Technical specifications" section).
- Connect tubes to the corresponding connections in the proper manner.
- Connect the suction line and pressure line correctly. Observe the markings ▲ and ▼ on the tube kit.

9.5 Electrical installation



Danger of death, electricity

Before opening the device housing, disconnect the power supply to the device and make sure it cannot be switched back on.



Irreparable damage to the device!

All AC voltages connected to the device must be in phase!



Important information

The following points must be strictly observed.

- The electrical installation may only be carried out by an authorised electrician.
- The relevant standards, safety regulations, and the mains connection conditions issued by the local power supply companies must be observed!
- If the dosing system is connected to a 230 V mains independent of the machine, an all-pole disconnecter must be provided in the power supply line!

1.1.7 Connection box



Terminal marking

Only the "15 pole" terminal strip (item 4) has numbered terminals.

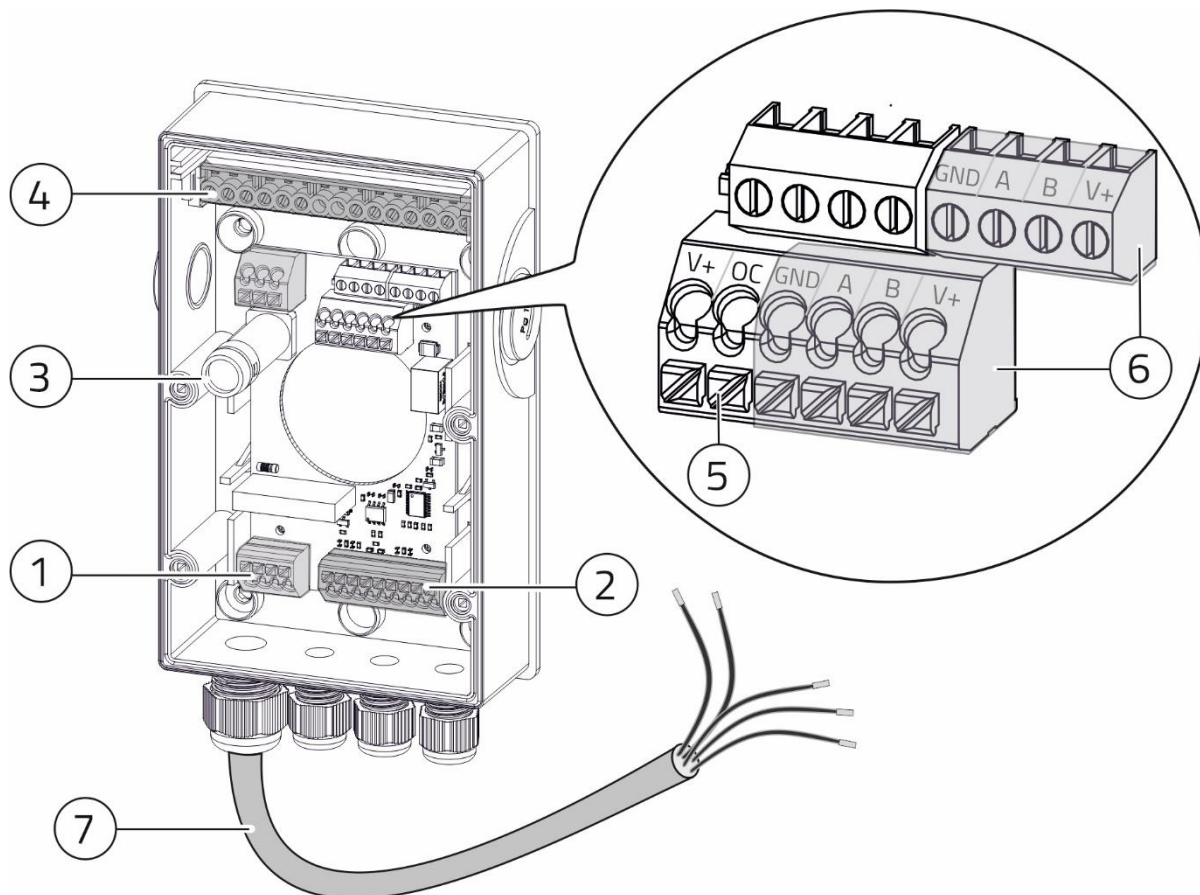


Fig. 6: Connection box with terminals

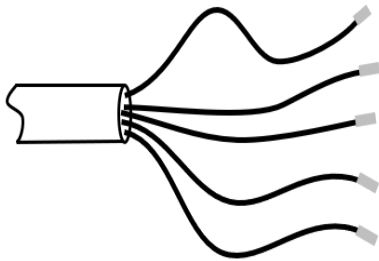
Item	Component	Function
1	"230 V" terminal	Operating voltage and solenoid valve connection
2	"Sensors" terminal	Connection of sensors
3	2 A fuse, medium time lag	Fuse for solenoid valve
4	"15 pole" terminal strip	Connection of signalling device and conductivity sensor
5	Piezo buzzer connection	Piezo buzzer connection
6	"Data bus" terminals	Connection of data bus to power supply +5 V DC
7	5-core connection cable	Connection of power supply and 3 control inputs

1.1.8 5-core cable connection



Wire identification

The wires in the cable are numbered.



- 1 Neutral conductor
- 2 Live (230 V~) operating voltage
- 3 Powder predosing (230 V~)
- 4 Powder dosing (230 V~)
- 5 Rinse-aid dosing (230 V~)

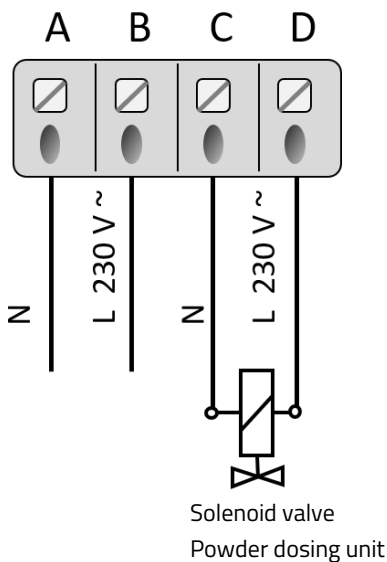
1.1.9 Connection of solenoid valve and sensors



CAUTION: Two different voltages!

The two voltages must be kept separate in accordance with regulations.

230 V~ mains voltage!



Safety Extra Low Voltage!

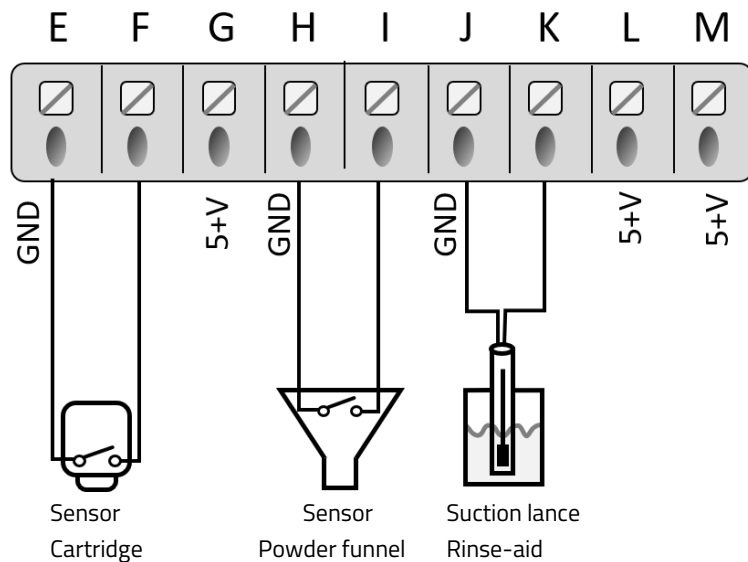


Fig. 7: "230 V" connection and "sensors" terminal strip

Terminal	Designation	Note
A - B	Neutral and live	Connected at the factory
C - D	Powder dosing solenoid valve	Controls the water supply

Terminal	Designation	Function
E - F	Powder cartridge sensor	If no powder cartridge is inserted, an error message is generated
G	Output voltage +5 V DC	For an optical sensor for the cartridge
H - I	Powder funnel sensor	If the liquid level in the flushing-out funnel is too high, the solenoid valve is closed
J - K	Rinse-aid suction lance	If the liquid level is too low, an error message is generated
L	Output voltage +5 V DC	For further applications
M	Output voltage +5 V DC	For further applications

1.1.10 CTLOG 2013 connection

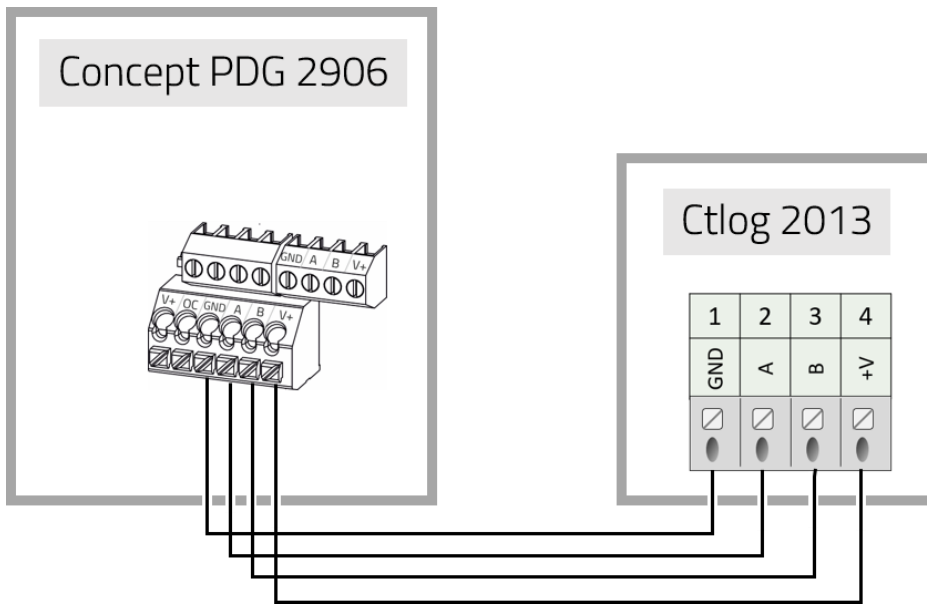


Fig. 8: CTLOG 2013 connection

Terminal	Designation	Note
1	GND	Earth (ground)
2	A	Bus line A (RS-485)
3	B	Bus line B (RS-485)
4	Supply voltage	+15... 24 V DC

1.1.11 Connection of conductivity sensor and signalling device



CAUTION: Two different voltages!

1. Terminals 1-5: 230 V
2. Terminals 9-12: Safety Extra Low Voltage

The two voltages must be kept separate in accordance with regulations.

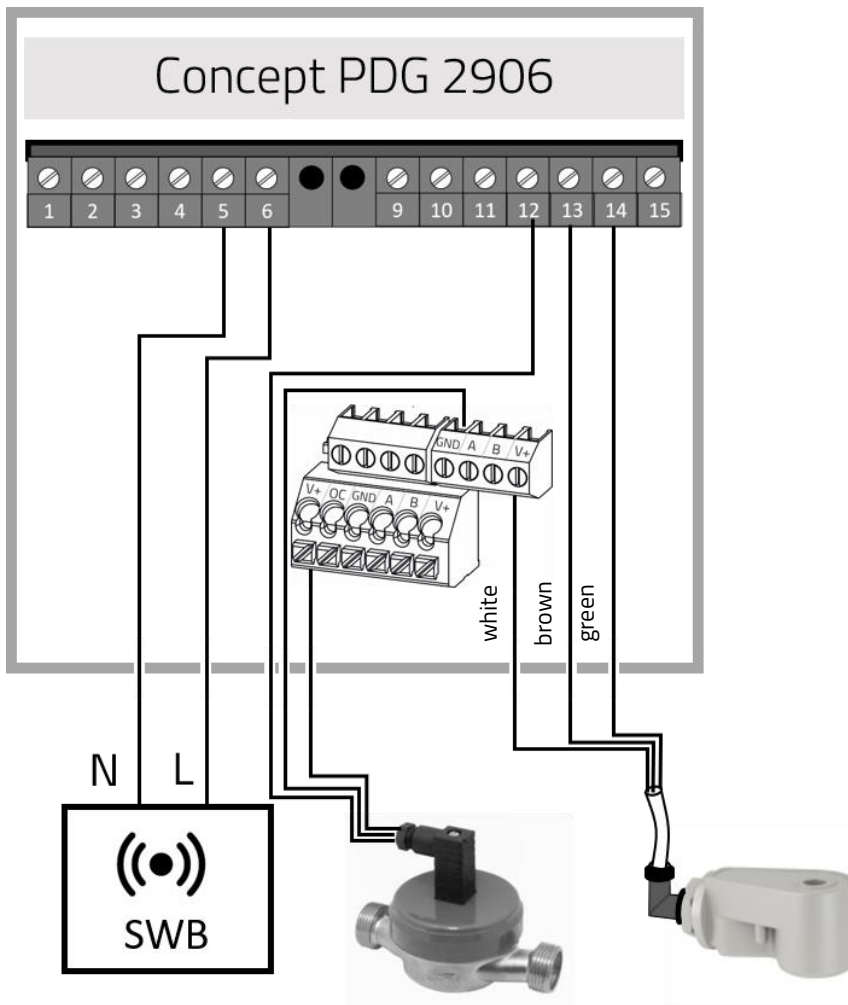


Fig. 9: 15-pole terminal connection

Terminal	Designation	Note
5 - 6	Neutral and live 230 V~	SWB signalling device connection
V+	Supply voltage +15 ... 24 V DC	ILFS 02 connection Conductivity sensor
13	GND	
14	Data	
V+	Supply voltage +15 ... 24 V DC	Flow meter connection
GND	GND	
12	Data	

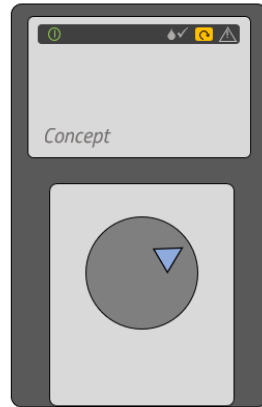
9.6 Installing an additional pump (Concept 2105 dosing pump)

The Concept PDG 2906 dosing pump is designed to control other dosing pumps (additional pumps).

Concept PDG 2906



Concept 2105



The Concept 2105 additional pump can be operated in two modes:

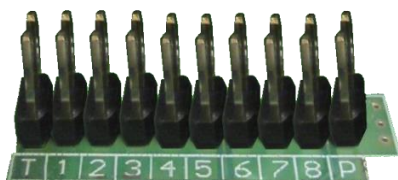
- **Parallel operation:** powder dosing unit and Concept 2105 dosing pump are controlled simultaneously
- **Direct operation:** the Concept 2105 dosing pump is controlled directly via terminal 3 (In1)

1.1.12 Mounting an additional pump

- ▶ Mount the additional pump next to the Concept PDG 2906 dosing pump
- ▶ Carry out installation as described in section 10.2 "Installation"

1.1.13 Set jumpers

- ▶ Open the pump
- ▶ Use tweezers or flat-nose pliers to set the jumpers



T = Terminating resistor

P = Park position for reserve jumper

Fig. 10: Jumper block

► The jumpers should be fitted as follows:

T	1	2	3	4	5	6	7	8	P



Important information

To ensure that there is no transmission interference, it is essential to activate the terminating resistor on the two outermost devices.

Setting a jumper in position "T" activates the terminating resistor on the dosing pump.

The jumpers are set.

1.1.14 Additional pump electrical connection



Irreparable damage to the device!

The supply voltage for the control unit and additional pump must be in phase!



Two different voltages!

- Terminals 1-6: 230 V
- Terminals 9-15: Safety Extra Low Voltage

The two voltages must be kept separate in accordance with regulations.

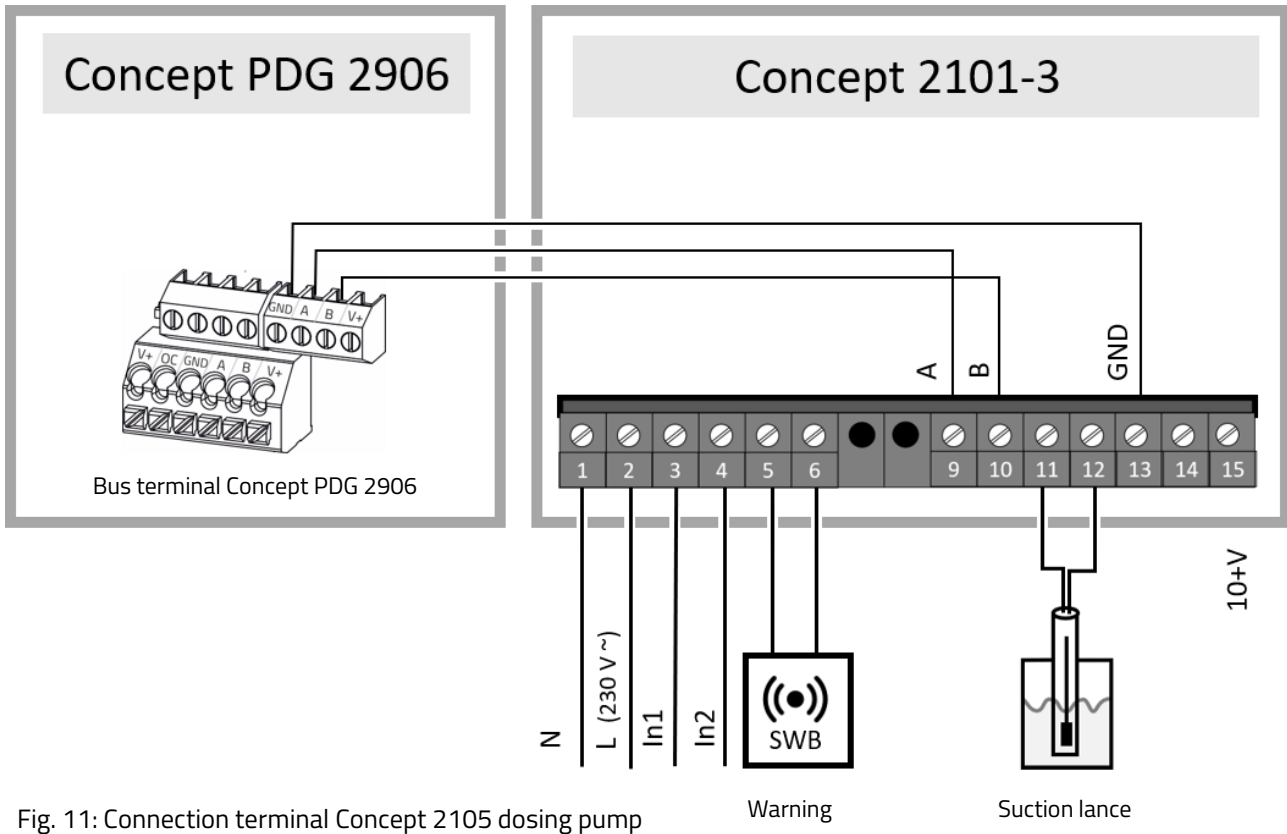


Fig. 11: Connection terminal Concept 2105 dosing pump

Terminal	Designation	Description
1	Neutral conductor N	Operating voltage 230 V~
2	Live L1	
3	In1	Dosing control input, 230V~ Note: Must be connected for direct operation
4	In2	Optional control input, 230 V~, in phase with L1!
5	Neutral conductor N	Warning device connection 230 V~ (Warning signal SWB 8009-LED, SWBH-LED)
6	L	
9	A	Connection SD bus to control device Concept PDG 2906
10	B	
11	GND	Suction lance float switch connection, floating ¹⁾
12	SLN	
13	GND	Connection SD bus to control device Concept PDG 2906
14	Sensor	Connection for floating normally open contact, frequency signal or flow meter
15	10 V	Output voltage approx. +10 V DC Supply voltage for sensors and devices (e.g. ILFS 02, CTLOG 2013 and others)

¹⁾ When delivered, terminals 11 and 12 are bridged. If a suction lance is connected, the bridge must be removed!

10 Menu

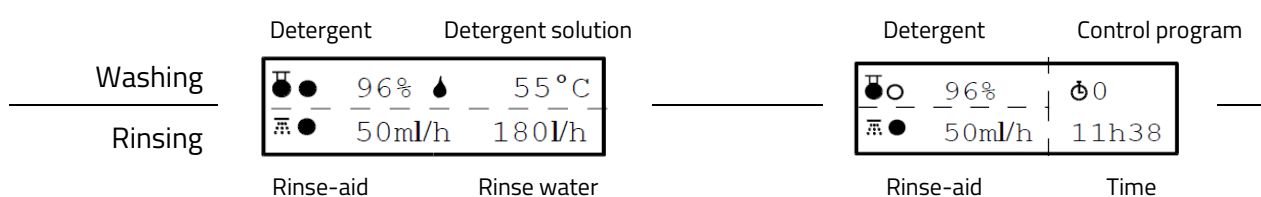
10.1 Display

The display shows the following information:








- Status display (e.g. temperature)
- Error messages (e.g. tube rupture)
- Input displays (e.g. input date/time)

1.1.15 Symbols

Symbols are shown on the display. These symbols explain the displayed values.



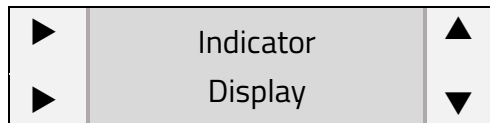
The symbols:

Symbol	Designation	Meaning
	Detergent	The value relates to the detergent.
	Rinse-aid	The value relates to the rinse aid.
	On	The detergent or rinse-aid pump is pumping.
	Off	The detergent or rinse-aid pump is off.
	Detergent solution	This value relates to the detergent solution (detergent and water).
	Rinse-aid solution	No symbol (rinse-aid and water).
	Control program	The displayed control program is active. Control program 0 is always active if no other control program has been configured. The control program with the highest number is always the active one. The special program always has priority over the other programs.
	Winter time	Set winter time in the menus: <ul style="list-style-type: none"> • "Timer" menu • "Date/time" menu

1.1.16 Arrows

Top arrow: Press the button to open the menu.

Bottom arrow: Press the button to confirm the value.



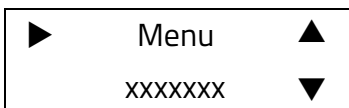
- Select menus
- Change values

10.2 Button functions

Button	Navigate through the menu	Enter values
<input type="button" value="ESC"/>	Exit the menu	Back to the previous value
<input type="button" value="▲"/>	Back to the previous menu	Increase value by 1
<input type="button" value="▼"/>	To next menu	Decrease value by 1
<input type="button" value="☑"/>	Open menu Exit menu after entering value	Confirm value

10.3 Navigate and change values

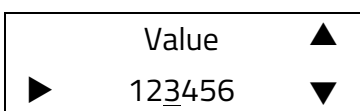
Select and open menu



Select the menu using the and buttons.

Press the button to open the menu.

Change values

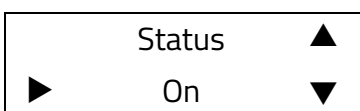


Use the and buttons to increase/decrease the value.

Press the button to confirm the value.

Note: The underlined value can be changed.

Change status



Use the and buttons to select a status.

Press the button to confirm the input.

10.4 Factory settings

	Designation	Value/setting
Detergent	Delay predosing time	0 sec
	Predosing time	0 sec
	Conductivity input 0	12.0 mS/cm
	Conductivity input 1	1.0 mS/cm
	Conductivity input 2	1.0 mS/cm
	¹⁾ Dosing alarm time	Automatic
	Dosing alarm time (manual mode)	1 min
Rinse-aid	¹⁾ Rinse-aid dosing	Constant
	Constant dosing	100 ml/h
	Variable dosing	1 ml/litre (fresh water)
	¹⁾ Rinse-aid correction factor	1.00
Suction lance	¹⁾ Empty signal delay	0 ml/litre
Code number	Code number 1	0000
	¹⁾ Code number 2 (Code number for changing code numbers 1 and 2)	0000
Other settings	¹⁾ Language	German
	¹⁾ PC access	On
	¹⁾ Additive pump	Off
	Time	Winter time (☺)

¹⁾ Can be set in the "Configuration" menu

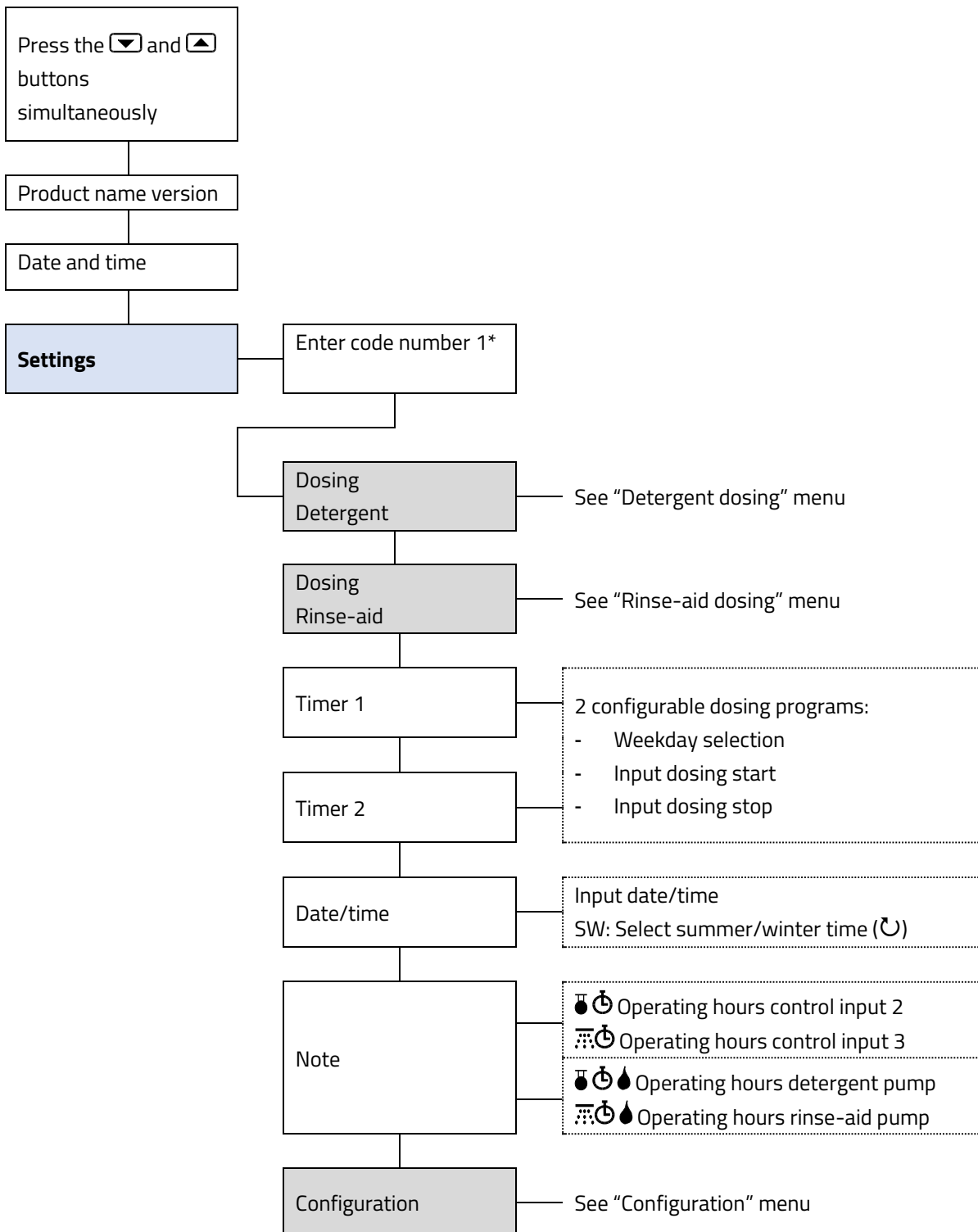
10.5 Calculate correction factor

Due to the quantities involved, it is essential to use the dosing pump tube PS 138-1.6x1.6-Ri4. Due to the tube tolerances, the quantity must be corrected with a correction factor. This can be entered in the "Configuration" menu section.

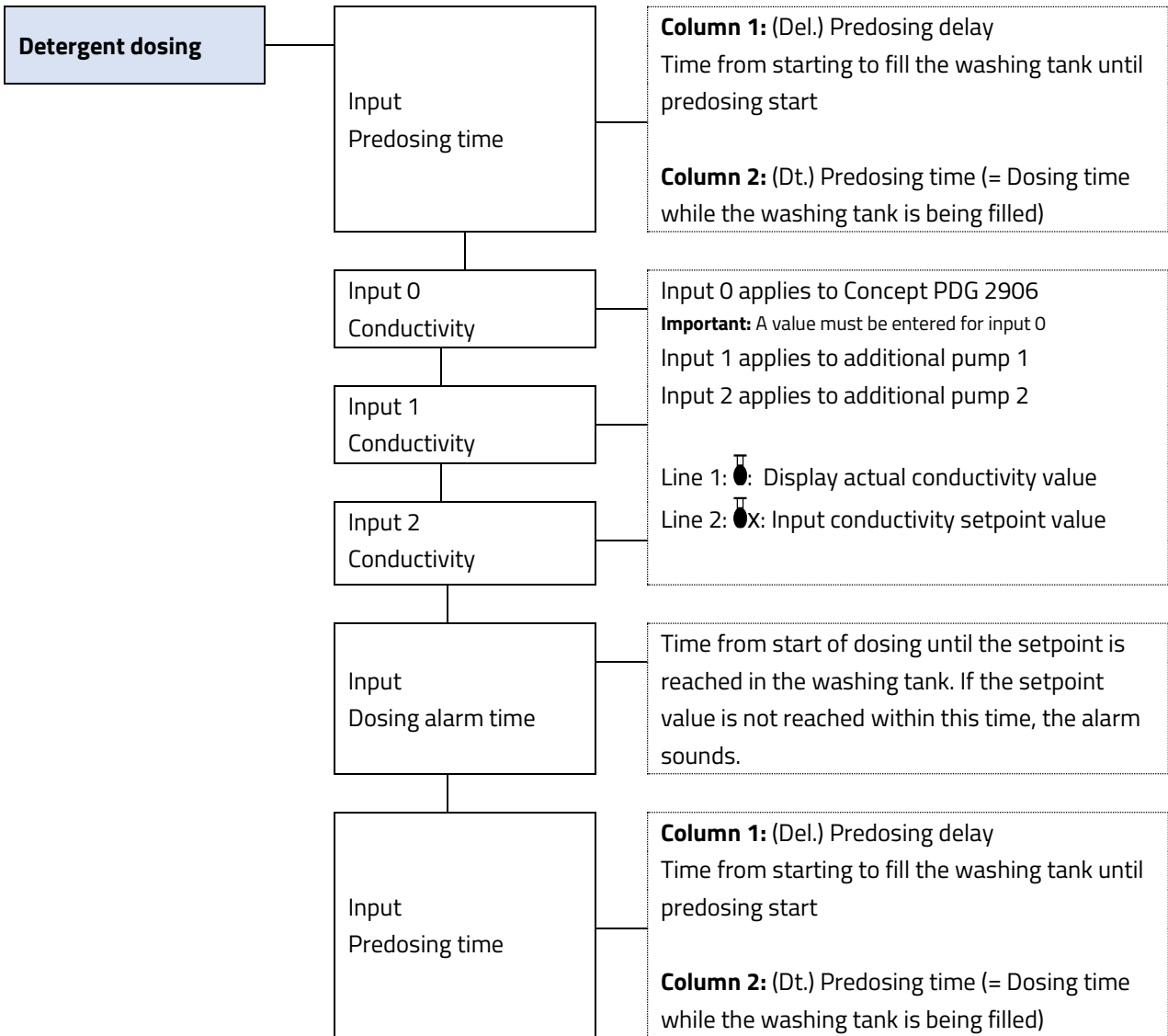
Calibration is carried out as follows:

- Set correction factor to 1.00 ("Configuration" menu section).
- Measure rinse-aid pump volumetrically.
- Divide the measured value in ml/h by the displayed value in ml/h.
- Round the result to two decimal places and enter that value as the correction value.

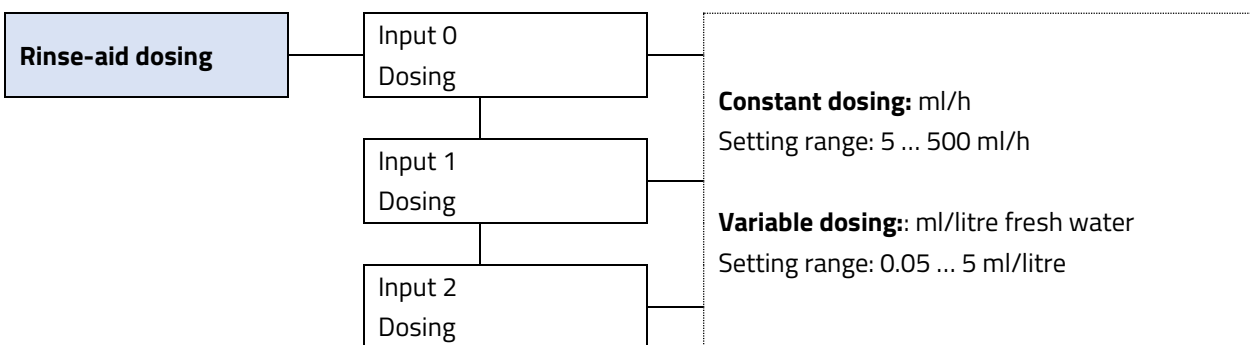
10.6 "Settings" menu



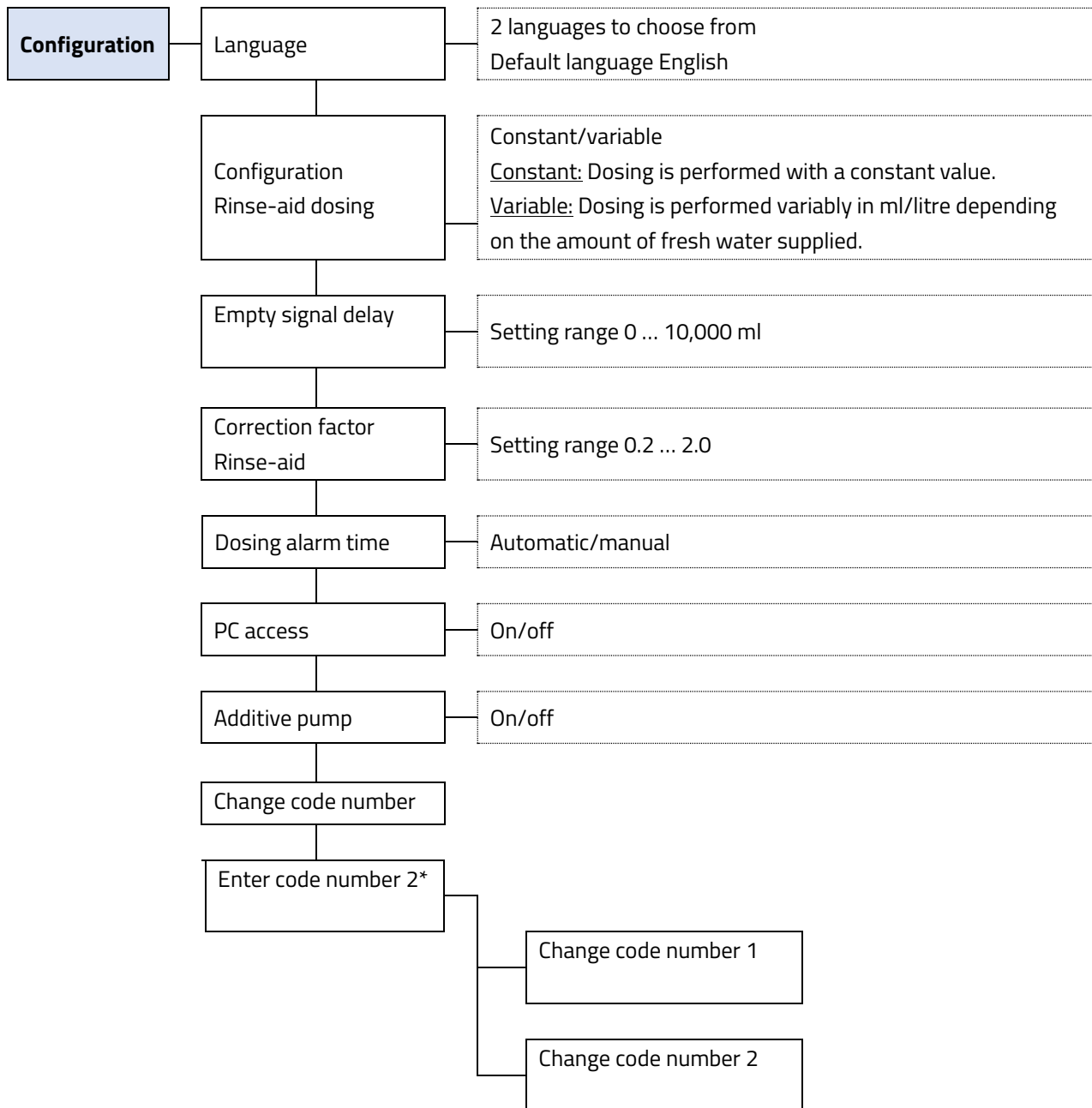
10.7 “Detergent dosing” menu



10.8 “Rinse-aid dosing” menu



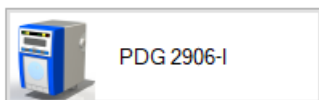
10.9 "Configuration" menu



Note: Code number 1 is the access password for the menu.
Code number 2 is the main password.

10.10 Configuration of Concept 2105 additional pump

1. Connect PC to PDG 2906-I (via WLAN or via USB interface using the Saier data transfer adapter).
2. Start SSC software.
3. Select PDG 2906-I.

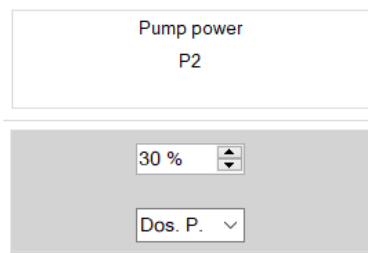


4. Click on "Component pump".

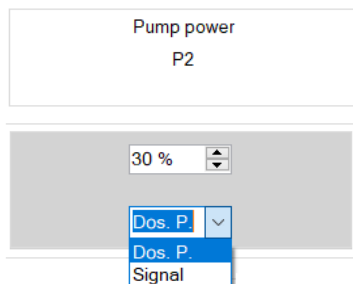


- The additional pump is registered.

5. Set flow rate of additional pump.



6. Select operating mode parallel operation or direct operation.



Dos. P. = Parallel operation
Signal = Direct operation

7. Save settings.
8. Make further settings as described in Concept 2105 operating manual.

The additional pump is configured.

11 Startup

- ▶ Switch on the operating voltage.
- ▶ Configure device (via SSC software or on device).
- ▶ Press and hold the quick fill button T1 until the tubes are filled with the medium without any bubbles.
- ▶ Allow the dosing pump to pump medium for a certain period of time (e.g. one minute). Collect the pumped quantity in a measuring vessel and determine the flow rate.
- ▶ LED L1 lights up green. The device is in operation.
- ▶ The device is configured.
- ▶ Air has been purged from the tube system.
- ▶ The flow rate has been checked and set.

If the flow rate does not reach the desired value, then adjust the calibration factor for the rinse-aid via the SSC software so that the consumption quantities are calculated correctly.

Setup is complete.

1.1.17 Calculate correction factor

Due to the quantities involved, it is essential to use the dosing pump tube PS 138-1.6x1.6-Ri4. Due to the tube tolerances, the quantity must be corrected with a correction factor. This can be entered in the "Configuration" menu section.

Calibration is carried out as follows:

- Set correction factor to 1.00 ("Configuration" menu section).
- Measure rinse-aid pump volumetrically.
- Divide the measured value in ml/h by the displayed value in ml/h.
- Round the result to two decimal places and enter that value as the correction value.

12 Faults

12.1 General faults

Error	Cause	Remedy
Pump does not pump or pumps too little	Pump tube worn and/or hardened	Replace pump tube
	Back pressure too high	Reduce back pressure
	Suction height too high	Fit pump lower down
	Pump tube fouled	Clean or replace pump tube Eliminate cause of fouling
Motor does not turn	Power supply interrupted	Switch on power supply
	Motor overloaded because tube kit has hardened	Replace pump tube
	Motor faulty	Replace pump
Container empty signal as a result of open contact at function input 1	Container empty	Change container
	No suction lance connected	Connect suction lance, or bridge terminals 11, 12 with a wire bridge
Tube rupture	Pump tube faulty	Clean pump housing Replace pump tube
	Tube holder leaking	Clean pump housing Check pressure line for blockages
Pump overload	Incorrect dimensioning of pump	Fit a more powerful pump
	Process error	Fix process error
	Modify the work process	Adjust parameters on pump



If it is not possible to solve the problem with this information, please contact our customer service department directly.

13 Maintenance

Peristaltic pumps are low-maintenance pumps. The pump tube is subject to chemical and mechanical stress and wear.

If the pump does not reach the desired pump pressure even after replacing the tube, the rotor has to be replaced.



CAUTION

Danger of death, electricity

- ▶ Before opening the device housing, disconnect the power supply to the device and make sure it cannot be switched back on.



CAUTION

Device is under pressure

- ▶ Before disconnecting the tube, first depressurise the device to prevent chemicals from spraying.
- ▶ Wear personal protective equipment in compliance with accident prevention regulations.



Important information

Each time that maintenance is carried out, check whether the work process in the plant has changed.

If the work process has changed, the parameters on the device will need to be adjusted to ensure correct operation again.



Replace the tube kit regularly!

The pump tube wears during operation, which reduces the flow rate.

If the tube kit with the pump tube is not replaced regularly, the tube will rupture.

13.1 Replace tube kit



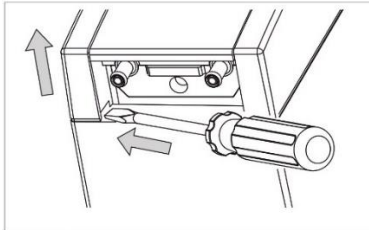
Never grease the tube kit

Greased tube kits will fall out of the guide.

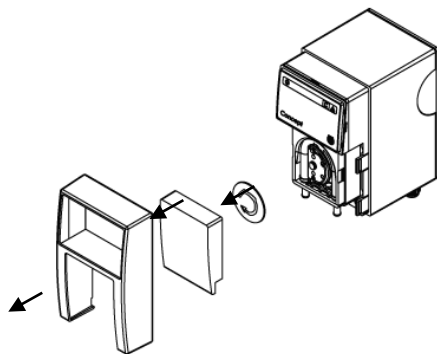


Crush hazard

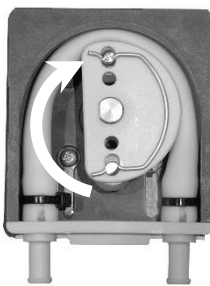
Before operating the pump, ensure that all provided covers are properly fitted.



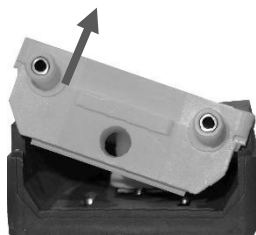
- ▶ Gently insert a screwdriver into the two openings in the cover.
- ▶ Lift the cover.



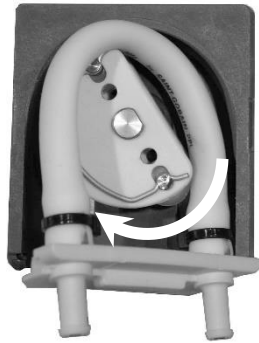
- ▶ Remove the shroud cover.
- ▶ Remove the pump housing cover.
- ▶ Remove the rotor cover.



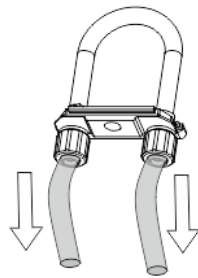
- ▶ Use long-nose pliers or a rotor key to rotate the rotor clockwise into the "D" position.



- ▶ Pull the tube holder down out of the fitting.



- ▶ Continue turning the rotor clockwise until the pump tube is free.
- ▶ Remove the tube kit.

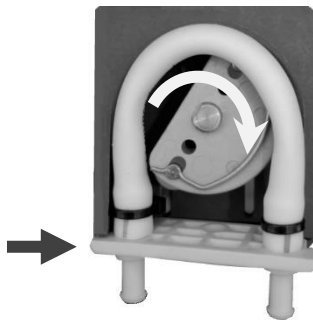


Caution, splash hazard

- ▶ Cover tube holder with a cloth.
- ▶ Pull the pump tube away from the connection.
- ▶ Clean pump housing.



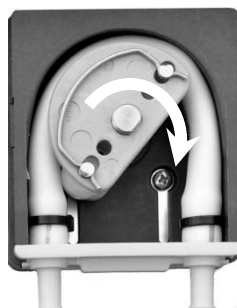
- ▶ Rotate the rotor into angled "D" position.



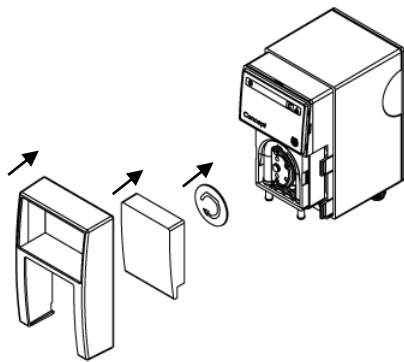
- ▶ Place new tube in position to the left of the rotor.
- ▶ Slide the tube holder into the guide on the left (➡).
- ▶ Continue turning the rotor clockwise.
- ▶ While turning the rotor, press the pump tube into the guide.



- ▶ Slide the tube holder fully into both guides.
- ▶ Check that the tube holder sits flush.



- ▶ Rotate the rotor several times to align the pump tube.



- ▶ Fit rotor cover.
- ▶ Fit pump housing cover.
- ▶ Fit shroud cover.
- ☑ *The tube kit has been replaced.*

14 Replacement parts and support

Device type and serial number required

When ordering replacement parts, always specify the exact device type and the serial number. You can find this information on the nameplate on the outside of the housing.

Use only original replacement parts

You can find tubes for your device on our website at:

15 Dismantling and disposal



Danger of death, electricity

Before opening the device housing, disconnect the power supply to the device and make sure it cannot be switched back on.

- ▶ Open the device.
- ▶ Disconnect and remove all electrical cables.
- ▶ Unscrew the terminal box.
- ☑ *The device is dismantled.*

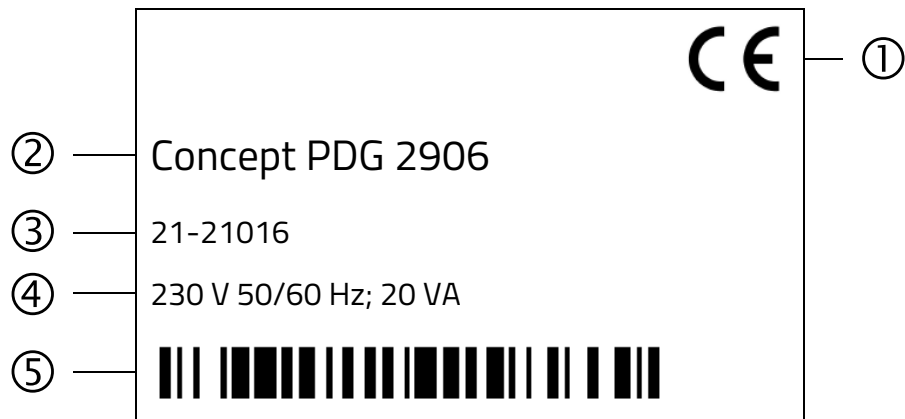
15.1 Proper disposal

Dispose of the device, packaging and replaced parts in accordance with the regulations applicable in the country where the device was installed.

The device must not be disposed of with household waste.

16 Appendix

16.1 Nameplate



- 1 CE marking
- 2 Type designation
- 3 Serial number
- 4 Operating voltage, frequency, power consumption
- 5 Barcode

Article number	21016
Firmware version	2.62 and later
Creation date	2022/4
Modified	
Revision	
Approved by	M. Saier



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