Operating instructions

SMARTPOWER™ Rinse Dispenser

Dispenser for solid rinse aid products

SMARTPOWER™ Rinse Dispenser (UK Version)
MAN054126 Rev. 01-06.2024
28.06.2024

Table of contents

1 General

1.1 Notes on the operating instructions

CAUTION!

Read the instructions!

Prior to commencing any works and/or operating, appliances or machinery, these instructions must be read and understood as a strict necessity. In addition, always heed all the instructions relating to the product that are included with the product!

All instructions are also available for download if you have mislaid the original. Furthermore, you will always have the opportunity to get the latest version of the manuals. The German-language manual is the **original operating manual,** which is legally relevant. **All other languages are translations.**

Particular attention should be paid to the following:

- Personnel must have carefully read and understood all instructions belonging to the product before starting any work. The basic premise for safe operation is observing all safety instructions and work instructions in this manual.
- Figures in this manual are provided for basic understanding and may deviate from the actual product.
- All manuals and guides must be placed at the disposal of the operating and maintenance personnel at all times. Therefore, please store all manuals and guides as a reference for operation and service.
- If the system is resold, this manual must always be supplied with it.
- The relevant sections of this operating manual must be read, understood and noted before installing the system, using it for the first time, and before carrying out any maintenance or repair work.

Available instructions

The most up-to-date and complete operating manual is available online:

To download the instruction with a PC, tablet or smartphone, use the link below or scan the QR code given.
Download the operating instructions *'SMARTPOWER™ Rinse Dispenser'* (MAN054126):
https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Ware-Washing/MAN054126_SMARTPOWER_Rinse_Dispenser_UK.pdf

The EcoPlus PDRX dispenser to which the SMARTPOWER™ Rinse Dispenser is connected is described in a separate manual. To download the instruction with a PC, tablet or smartphone, use the link below or scan the QR code given.
Download the operating instructions for *'EcoPlus PDRX'* (MAN054265):
https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Ware-Washing/MAN054265_EcoPlus_PDRX_UK.pdf

Always call up the latest operating instructions

If any *'operating instructions'* are changed, the document will immediately be posted *'online'*. All operating instructions are provided in PDF format.
To open and display the operating instructions, we recommend that you use Adobe PDF Viewer(*https://acrobat.adobe.com*).

Accessing operating instructions using the website of Ecolab Engineering GmbH

You can search for and select the required instructions on the manufacturer's website (*https://www.ecolab-engineering.de*) under *[Media Centre]* / *[Operating Instructions]*.

Accessing operating instructions using the *'DocuAPP'* for Windows®

You can use the *'DocuApp'* for Windows® (as of Version 10) to download, read and print all published operating instructions, catalogues, certificates and CE declarations of conformity on a Windows® PC.

To install this program, open the 'Microsoft Store' and enter " ***DocuAPP*** *" in the search field. https://www.microsoft.com/store/productId/9N7SHKNHC8CK .*
Follow the installation instructions.

Accessing operating instructions using a smartphone/tablet

You can use the Ecolab *'DocuApp'* to access all operating manuals, catalogues, certificates and CE declarations of conformity published by Ecolab Engineering using a smartphone or tablet (Android & iOS). The published documents are always up to date and new versions are displayed immediately.

'Ecolab DocuApp' guide for download

For more information about ***'DocuApp'***, refer to the dedicated software description (art. no. MAN047590).
Download: *https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/dosiertechnik/Dosierpumpen/417102298_DocuAPP.pdf*

Installing *'DocuApp'* for Android

On Android based smartphones, the ***'DocuApp'*** can be installed from the "Google Play Store".

1. Call up the"Google Play Store" with your Smartphone / Tablet.
2. Enter the name "**Ecolab DocuAPP**" in the search field.
3. Select the **Ecolab DocuAPP**.
4. Choose *[Install]*.
   ⇨ The ***' DocuApp'*** is installed.

Installing the *'DocuApp'* for iOS (Apple)

On iOS based smartphones, the ***'DocuApp'*** can be installed from "App Store".

1. Call up the "App Store" on your iPhone/iPad.
2. Go to the search function.
3. Enter the name "**Ecolab DocuAPP**" in the search field.
4. Enter the search term **Ecolab DocuApp** to search for the app.
5. Choose *[Install]*.
   ⇨ The ***' DocuApp'*** is installed.

Symbols, highlights and bulleted lists

Safety instructions in this manual are identified by symbols and introduced by signal words expressing the extent of the hazard.

DANGER!
Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.

WARNING!
Indicates a potentially imminent danger that can lead to serious injuries or even death.

CAUTION!
Indicates a potentially hazardous situation which may result in minor or slight injury.

NOTICE!
Indicates a potentially dangerous situation that may result in property damage.

Tips and recommendations
This symbol highlights useful tips, recommendations and information for an efficient and trouble-free operation.

ENVIRONMENT!
Indicates potential hazards to the environment and identifies environmental protection measures.

Safety instructions in the operating instructions

Safety instructions can refer to specific, individual operating instructions. These safety instructions are embedded in the operating instructions, so they do not interrupt the reading flow when executing the action. The signal words described above are used.

Example:

1. Loosen screw.
2. **CAUTION!**
   Risk of trapping on the cover!
   Close the cover carefully.
3. Tighten screw.

Tips and recommendations
This symbol highlights useful tips, recommendations and information for an efficient and trouble-free operation.

Other markings

The following markings are used in these instructions to provide emphasis:

1., 2., 3. ...	Step-by-step operating instructions
⇨	Results of the operating steps
	References to sections of these instructions and related documents
■	Lists in no set order
[Button]	Controls (e.g. button, switch), indicators (e.g. signal lights)
'Display'	Screen elements (e.g. buttons, assignment of function keys)

Item numbers and EBS numbers

Both item numbers and EBS numbers are shown in these operating instructions. EBS numbers are Ecolab-internal item numbers and are used within our corporate group.

Copyright

1.2 Transportation

The unit is supplied in cardboard packaging. Please refer to the technical data for the packaging dimensions and packaging weight.

Improper transportation

NOTICE!

Material damage due to improper transport

Transport units can fall or tip over if improperly transported. This can cause considerable damage.

- Observe symbols and instructions on the packaging
- Unload and transport the transport items carefully
- Only use intended attachment points
- Transport items to the place of use using a suitable means of transport or lifting equipment.
- Use only approved means of transport
- Do not remove packaging until immediately before installation

DANGER!

Risks when commissioning equipment which has been damaged during transportation.

Installation or start-up must not take place if any transport damage is detected when unpacking the system.

Installing/starting up a damaged pump may result in uncontrollable errors, which may lead to irreparable damage to personnel and/or of the equipment when using aggressive dosing agents.

Transport inspection

NOTICE!

Check the delivery for completeness and any transport damage.

In case of visible transport damage, proceed as follows:

- Do not accept the delivery or accept it only on a provisional basis.
- Note down the extent of damage on the transport documents or on the carrier's delivery slip.
- Lodge a complaint.

Claim for any damage as soon as you notice it!

Damage claims can be filed only within the applicable period for complaints.

1.3 Packaging

The individual packages are bundled to suit the expected transport conditions.
Only environmentally-friendly materials have been used in the packaging.
The packaging is designed to protect the individual components against shipping damage, corrosion and other damage before assembly.
Do not destroy the packaging and only remove it just before assembly.

There may be instructions on how to handle the packages (e.g. this way up, fragile, keep dry). These must be adhered to accordingly.

ENVIRONMENT!

Risk of environmental damage from incorrect disposal!

Packaging materials are valuable raw materials and can, in many cases, be used again or be usefully processed and recycled.

Incorrect disposal of packaging materials can be a threat to the environment.

– Observe the local disposal regulations!
– Environmentally-friendly disposal of packaging materials.
– If necessary, hire a specialist to carry out disposal.

1.4 Storage

In certain cases, storage instructions may be specified on the packages that go beyond the requirements specified here.
These must be observed accordingly.

- Do not store outdoors.
- Store in a dry and dust-free place.
- Do not use abrasive solutions.
- Keep away from direct sunlight.
- Avoid mechanical vibrations.
- If stored for longer than 3 months, regularly check the condition of all parts and packaging. If necessary, renew or replace the packaging.
- Store away from frost.
- For more information, please see ↬ *10 Technical data*

NOTICE!
Intermediate storage

– The packaging is designed for a storage period of 3 months.
– If the dispenser is not operational for a period of longer than one week: fully empty and flush tank with water.

CAUTION!
Risk of damage to the dispenser.
Ingress of dirt and water can damage the dispenser. Never clean the unit with a steam cleaner or with a water jet.

1.5 Equipment marking – identification plate

Information on equipment marking and information on the rating plate can be found in chapter ↬ Chapter 10 ‘Technical data’ on page 60 .
The correct specification of the name and type is important for all queries.
This is the only way of ensuring fast and accurate processing of your enquiry.

1.6 Warranty

The manufacturer provides a warranty for operational safety, reliability and performance under the following conditions only:

- Assembly, connection, adjustment, maintenance and repairs must be carried out by qualified and authorised specialist personnel in compliance with all documents supplied.
- Please follow the instructions for use in the User Manual.
- Only original equipment spare parts are to be used for repairs.
- If metering media have been named for use in this manual, we explicitly exclude warranty / liability if other products are used!

Our products are built, tested and certified in accordance with current standards/guidelines. They left the factory in a safe, faultless condition.

To maintain this condition and to ensure a trouble-free operation, the user must observe all instructions, warnings, maintenance regulations, etc. that are contained in all the corresponding manuals and that may be attached to the product.

The manufacturer's general warranty and service conditions apply.

1.7 Repairs/returns to Ecolab Engineering GmbH

DANGER!

Conditions for returns

Before being returned, all parts must be completely free of all chemicals! We would point out that only clean, rinsed parts that are free of all chemicals can be accepted by our service!

This is the only way of excluding the possibility of the risk of injury to our staff due to residues of chemical products. The goods sent in must, where possible, also be packed in a suitable bag preventing any leakage of liquid residues into the surrounding packaging. Enclose a copy of the product data sheet for the chemical used so that our Service staff can be prepared to use the necessary personal protective equipment (PPE).

The return must be requested online

https://www.ecolab-engineering.de/de/kontakt/ruecksendungen/

Fill in all details and follow the further navigation.

You will receive the completed return form by email.

Packaging and shipping

If possible, use the original box to return the device.

Ecolab assumes no liability for transport damage.

1. Print and sign the return form.
2. Pack the product to be returned without any accessories, unless they may be related to the error.

   Make sure that the original serial number label is present on all products that are returned.

3. Enclose the following documents with the consignment:
   - Signed return form
   - Copy of the order confirmation or delivery note
   - In the case of a warranty claim: Invoice copy with date of purchase
   - Safety data sheet for hazardous chemicals

   *The return form must be affixed in a clearly visible position **on the outside** of the package using a delivery note bag.*

4. Copy the return address with return number to the shipping label.

1.8 Contact

Manufacturer

Ecolab Engineering GmbH
Raiffeisenstrasse 7
D-83313 Siegsdorf
Telephone (+49) 86 62 / 61 0
Fax (+49) 86 62 / 61 166
engineering-mailbox@ecolab.com
http://www.ecolab-engineering.com

Before contacting the manufacturer, we always recommend that you contact your sales partner in the first instance.

2 Safety

2.1 General safety advice

DANGER!
If you believe that the unit can no longer be operated safely, you must decommission it immediately and secure it so that it cannot be used inadvertently.

This applies:

– if the unit shows visible signs of damage,
– if the unit no longer appears to be operational,
– after prolonged periods of storage under unfavourable conditions.

The following instructions must always be observed:

– Prior to carrying out any work on electric parts, switch off the power supply and secure the system against being switched back on again.
– Safety regulations and prescribed protective clothing when handling chemicals should be followed.
– Attention must be paid to the information included on the product data sheet of the metering medium used.
– The unit must only be operated with the supply and control voltage specified in the Technical Data section.

2.2 Intended use

The SMARTPOWER™ Rinse Dispenser dispenser delivers rinse aid solution from Ecolab's compressed rinse aid capsules (SMARTPOWER™).

The following points are included under intended use:

- Only the compressed rinse aid approved for the product may be dispensed.
- Use is restricted to commercial applications; private use is excluded.
- All operating instructions and operating instructions prescribed by Ecolab and all maintenance and servicing conditions must be complied with.
- The metering unit must be operated only within the operating conditions permitted in accordance with *Chapter 10 'Technical data' on page 60* .

Any other or additional use is considered improper. Ecolab shall not be liable for any resulting damage to property or for personal injury.

Reasonably foreseeable incorrect use

According to the hazard analysis, the following points can lead to misuse:

- Operation with an open cover or without a cover.
- Using the metering unit as a storage location for objects or tools.
- Operation using incorrect voltage supplies.
- Incompatible accessory parts.
- Line cross-sections that are too small.
- Incorrect ambient temperatures or media temperatures.
- Operation in potentially explosive areas.
- Use of unsuitable metering media.

Unauthorised modifications and spare parts

CAUTION!

Changes or modifications are not permitted without prior, written permission from Ecolab Engineering GmbH and shall result in the forfeiting of any and all warranty entitlements. Original spare parts and accessories approved by the manufacturer are designed to increase safety.
The use of other parts excludes the warranty for the resulting consequences.
Note that CE conformity expires if subsequent modifications are made.

2.3 Service life

If maintenance is conducted properly (visual inspection, functional testing, replacement of parts, etc.), the life span of the component is approximately 10 years.

Afterwards, a revision or a general overhaul may need to be done the manufacturer.
↳ *'Manufacturer' on page 11*

2.4 Safety measures taken by the operator

NOTICE!

It is expressly up to the operator to train, monitor and instruct its operating and maintenance personnel so that they comply with all of the necessary safety measures.
The frequency of inspections and controls must be complied with and documented.

WARNING!

Danger due to improperly installed system components

Improperly installed system components can result in personal injury and damage to the system.

– Check that the system components provided (pipe joints, flanges) have been installed correctly.
– If assembly has not been performed by Customer Service or another authorised party, check that all system components are made of the correct materials and meet the requirements.

Obligations of the operator

Valid guidelines

In the EEA (European Economic Area), national implementation of the Directive (89/391/EEC) and corresponding individual directives, in particular the Directive (2009/104/EC) concerning the minimum safety and health requirements for the use of work equipment by workers at work, as amended, are to be observed and adhered to. If you are outside the EEA, the local regulations always apply. However, it is important to make sure that the EEA rules do not apply to your area, due to special agreements. ***The operator is responsible for checking the terms and conditions that affect you.***

The operator must adhere to the local legal provisions for:

- The safety of personnel (within the Federal Republic of Germany, in particular the federal law and accident prevention regulations, workplace guidelines, e.g. operating instructions, also according to Section 20 Hazardous Substances Ordinance (GefStoffV), personal protective equipment (PPE), preventive investigations)
- The safety of work materials and tools (protective equipment, work instructions, procedural risks and maintenance)
- Product procurement (safety datasheets, list of hazardous substances)
- Disposal of products (Waste Act)
- Disposal of materials (decommissioning, Waste Act)
- Cleaning (detergents and disposal)
- and observe current environment protection regulations.

The owner is also required to:

- Provide personal protective equipment (PPE)
- Incorporate the measures into operating instructions and to instruct personnel accordingly
- For operating sites (from 1m above ground) To provide safe access
- The operator must provide lighting in workplaces in accordance with DIN EN 12464-1 (within the Federal Republic of Germany). Observe the local applicable regulations!
- To ensure that local regulations are complied with during installation and commissioning, if these procedures are conducted by the operator

2.5 Personnel requirements

Qualifications

DANGER!

Risk of injury if personnel are inadequately qualified!

If unqualified personnel carry out work or are in the danger area, dangers may arise which can lead to serious injuries and considerable damage to property.

All the activities may only be performed by personnel that is qualified and suitably trained for this purpose.

Keep unqualified personnel away from hazard areas.

NOTICE!

Incorrect operation by unreliable personnel

Material damage due to incorrect operation.

Only persons who can be expected to carry out their work reliably can be approved as personnel. Individuals whose reactions are impaired, e.g. by drugs, alcohol, medicines, are not authorised.

– When selecting personnel, observe the valid age and occupation-specific regulations.
– Unauthorised persons must be kept away from the component.

Obligations on the part of personnel

The personnel must:

- follow the applicable national laws and regulations, as well as the operator's regulations on occupational safety
- read and follow the instructions in this document before starting work
- not enter areas secured using protective measures or access restrictions without due authorisation
- in the event of faults that could jeopardise the safety of personnel or components, immediately switch off the Plant and report the fault to the responsible department or person
- wear the personal protective equipment (PPE) prescribed by the operator
- observe the applicable safety regulations and the manufacturer's safety data sheet when handling chemicals

Operator
The operator has been instructed about the tasks assigned to him and possible dangers in case of improper behaviour. He may only carry out tasks that go beyond operation during normal operation if this is specified in these instructions or the owner has expressly authorised the operator to do so.

Qualified electrician
Qualified electricians are able to carry out the work on electrical systems because of their technical training, knowledge and experience, as well as awareness of the relevant standards and regulations; qualified electricians are capable of independently identifying and preventing potential risks. He is specially trained and knows the relevant standards and regulations.

Qualified employee
A person with appropriate training, appropriate education and experience who is able to identify risks and avoid hazards.

Service Personnel
Certain work may only be carried out by the manufacturer's service personnel or by service personnel authorised or specially trained by the manufacturer. If you have any questions, contact the *'Manufacturer' on page 11* .

Service personnel
Certain work may only be carried out by service personnel of the manufacturer or by service personnel authorised or specially trained by the manufacturer. If you have any questions, please contact *Manufacturer* .

Specialist
A person with appropriate training, schooling and experience enabling him or her to identify risks and avert danger.

Trained personnel
Someone who has been instructed by a professional in their designated task and informed of the possible dangers of improper behaviour and, if applicable, has been informed of the necessary protective devices and measures.

DANGER!

Auxiliary personnel without special qualifications

Auxiliary personnel without special qualifications or without special training who do not meet the requirements described here are unaware of the dangers in the work area.

Therefore, there is a risk of injury to auxiliary personnel.

It is imperative that auxiliary personnel without specialist knowledge are familiarised with the use of personal protective equipment (PPE) for the activities to be performed, or are appropriately trained, and that these measures are monitored. These personnel may then only be deployed on activities for which intensive training has been given beforehand.

DANGER!

Unauthorised personnel

Unauthorised persons who do not meet the requirements described here are not familiar with the risks in the operating area.

Therefore unauthorised persons are at risk of injury.

Working with unauthorised persons:

- All work must be suspended for as long as unauthorised persons are present in hazardous or working areas.
- If in doubt as to whether a person is authorised to be in hazardous and operating area, approach said person and lead them out of this area.
- General information: Keep unauthorised persons away!

2.6 Personal protection equipment (PPE)

DANGER!

Personal protective equipment, hereinafter referred to as PPE, is used to protect personnel. It is imperative to pay attention to the PPE described in the product data sheet (safety data sheet) for the metered medium.

Chemical resistant protective gloves
Chemical-resistant protective gloves are used to protect the hands against aggressive chemicals.

Protective eyewear
Protective eyewear protects the eyes against flying parts and liquid splashes.

Protective gloves
Protective gloves are used to protect the hands against friction, abrasions, cuts or deeper injuries as well as when touching hot surfaces.

Safety shoes
Safety shoes protect feet against crushing, falling parts, sliding on slippery surfaces and against aggressive chemicals.

2.7 General information about risks

Unauthorised access

DANGER!
Unauthorised access
The owner must ensure that unauthorised personnel are prevented from accessing the operating area.

Hazard arising from automatic start-up

DANGER!
Automatic start-up poses a hazard in areas marked with the symbol opposite. An automatic start-up can be initiated as soon as the power supply is connected with no need to press a switch/button beforehand.

Risk of slipping

DANGER!
Risks of slipping are to be identified using the adjacent symbol.
Spilled chemicals are a slipping hazard in wet conditions.

WARNING!
Risk of slipping due to fluid in the operation and provisioning area!
– Wear non-slip, chemically resistant shoes when working.
– Place product containers in a tank to prevent a slipping hazard caused by leaking fluids.

ENVIRONMENT!
Leaked, spilled metering media must be cleaned and disposed of correctly, according to the instructions on the safety data sheet. It is essential to ensure that the required personal protective equipment (PPE) is used.

Risk of fire

DANGER!

Risk of fire

If there is a risk of fire, it is imperative to use the designated extinguishing agent and to implement suitable safety measures to tackle the fire.
It is also imperative here to comply with the safety data sheet for the chemicals you use to tackle the fire!

Chemical hazards (metering medium/active substance)

WARNING!

Burns caused by harmful chemicals

Leaks on the component can allow corrosive chemicals to escape and cause serious injury.

- Read the enclosed safety data sheet carefully before using chemicals.
- The safety regulations and the required protective clothing for working with chemicals must be complied with.
- Safety devices such as showers and eye flushing must be accessible and checked regularly to ensure that they are fully functional.
- Ensure adequate ventilation and extraction.
- Avoid skin and eye contact.
- Check the component regularly for tightness.
- Do not put the component into operation if leaks occur.
- If leaks are identified, trigger the emergency stop function immediately.
- Do not operate the component again until the leaks have been repaired.

DANGER!

Spilled chemicals can pose a biological hazard.

Be careful not to spill chemicals or allow them to leak; otherwise, a biological hazard cannot be ruled out. Make sure that suitable binding agents are provided at the filling point according to the safety data sheet for the metering chemicals.

DANGER!

Risk of injury to the skin and eyes caused by the chemical used (metering medium).

- Read the enclosed safety data sheet carefully before using the metering medium.
- The safety regulations and the required protective clothing when working with chemicals must be complied with.
- Attention must be paid to the information included on the product data sheet for the metering medium used.

DANGER!

Hands must be washed before breaks and at the end of the working day. Information about the usual precautions when handling chemicals and about the use of PPE can be found on the relevant safety data sheet for the chemical being used and must be complied with.

ENVIRONMENT!

Metering medium that leaks or spills may be harmful to the environment.

Leaks or spills of a metering medium must be cleaned up and disposed of correctly in accordance with the instructions on the safety data sheet.
It is imperative to use the prescribed PPE.

Preventive action:
Place product containers in a tray to collect leaking fluids without harming the environment.

2.8 Metering media

CAUTION!

Use of metering media:

- The component may be used only with products validated by Ecolab. **We dont accept liability if products that havent been validated are used.**
- The metering media are procured by the operator.
- The owner will bear sole responsibility for correct handling and the associated risks.
- The hazard warnings and disposal instructions are provided by the operator.
- Wear suitable protective clothing (see safety data sheet).
- All safety regulations must be followed and the information contained in the safety data sheet/product data sheet must be observed.

WARNING!

Injuries from uncontrolled chemical spills

Uncontrolled chemical spills can cause serious injuries.
Use the personal protective equipment (PPE) specified in the safety data sheet for the chemical products.

Safety when handling chemicals

NOTICE!

Risk of accident and environmental damage when chemical residues are mixed together

There is a risk of burns if residual stocks are mixed together and environmental damage if chemicals are leaking. For operational reasons, residues remain in the chemical supply containers. These are completely normal and designed to be kept to a minimum.

To avoid accidents caused by burns to operating personnel and damage to the environment caused by leaking chemicals, no residual stocks may be mixed together.

CAUTION!

Danger due to mixing of different chemicals

Different chemicals may never be mixed with each other, unless this is exactly the purpose of the component! In this case, it must be checked first which chemicals may be mixed in which ratio.
Mixing may only be carried out by trained specialist personnel.

When changing containers, it is essential to ensure that only the same chemicals are exchanged.

Safety data sheets

The safety data sheet is intended to be consulted by users and enables them to take any steps necessary to safeguard their health and safety at work.

DANGER!

Safety data sheets are always provided together with the supplied chemicals. Before using the chemicals, the safety data sheets must be read and understood, and all requirements must be implemented on site. Ideally, they should be displayed close to the workplace or to the supply containers so that the appropriate measures can be taken quickly in the event of an accident. The operator must provide the necessary protective equipment (PPE), as well as the described emergency equipment (eye bottle, etc.). Persons entrusted with operating the equipment must be instructed accordingly and trained.

Download of safety data sheets

The latest safety data sheets are available online.
To download them, go to the following link or scan the QR code.
Than you can enter your required product and download the associated safety data sheet.
https://www.ecolab.com/sds-search

2.9 Installation, maintenance and repair work

NOTICE!

Material damage by using incorrect tools!

Material damage may arise by using incorrect tools. **Use the correct tools.**

DANGER!

Damage and injuries may occur if installation, maintenance or repair work is carried out incorrectly.

All installation, maintenance and repair work must only be performed by authorised and trained specialist personnel in accordance with the applicable local regulations. Safety regulations and prescribed protective clothing when handling chemicals should be followed. Attention must be paid to the information included on the product data sheet for the metering medium used. Prior to all work the feeding of the metering medium should be disconnected and the system cleaned.

NOTICE!

Only original equipment spare parts may be used for maintenance and repairs.

3 Delivery

Item	Item description	Article no.	EBS no.
	**SMARTPOWER™ Rinse Dispenser**	178044	92231099
	1 x quick mounting plate	92232209	10033406
	4 x PAN PLATE SCREW 4.8X45 DIN7981 SS	413059064	10005489
	4 x WASHER 6.4X12X1.6 DIN125 SS	413500361	10000603
	4 x ALL-PURPOSE SPRING SPIRAL DOWEL TFS 6/35	417200041	10009539
	1 x BALL VALVE, G3/8 M-FM, brass/chrome	415502807	10101487
	1 x CABLE UNION M 25 x 1.5 PA/GR	418441004	10009616
	1 x JAM NUT M 25 X 1.5 HGR	418441112	10013879
	1 x Flex hose, iG3/8-iG3/8, 2.5 m	417400764	10200268
	1 x SMARTPOWER™ Safety instructions		

4 Set-up / Functional description

Setup SMARTPOWER™ Rinse Dispenser

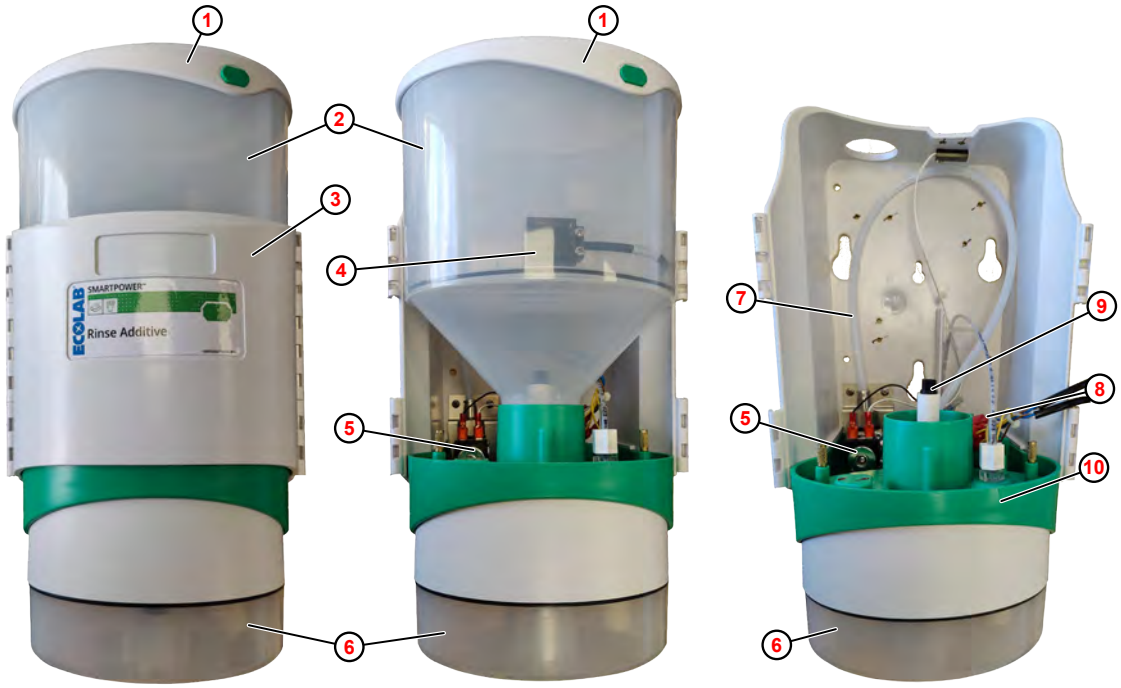


Fig. 1: Setup

1. Cover with sensor
2. Product cylinder with product feed
3. Front flap
4. Infrared sensor
5. Solenoid valve
6. Collection cup
7. Fresh water supply line
8. Rinse aid supply connection
9. Spray nozzle
10. Base

Function description

The SMARTPOWER™ Rinse Dispenser is an automatic dispenser for Ecolab pressed rinse aid products. It essentially consists of a base (Fig. 1 , 10), a product cylinder with product feed 2 to accommodate the compressed rinse aid, a solenoid valve 5 and a spray nozzle 9 . To improve the rinse aid concentration and concentration consistency, the clean water can be dispensed in pulse mode with a Rinse-Pulse-Timer board . The Rinse-Pulse-Time board is built in to the rear wall behind the product cylinder.

The Rinse-Pulse-Timer board is disabled by default.

After opening the front flap 3 and removing the product cylinder 2 , all parts are freely accessible for assembly, maintenance and repair.

The SMARTPOWER™ Rinse Dispenser is connected to an EcoPlus PDRX dispenser and controlled via the WWC-PCB control board installed in it. As soon as the commercial dishwasher sends the release signal to the control board, the EcoPlus PDRX commands the SMARTPOWER™ Rinse Dispenser for the entire cleaning process. The solenoid valve 5 opens and clean water flows into the product cylinder from below, releasing rinse aid from the inserted rinse aid capsule. The rinse aid solution collects in the collection cup 6 of the dispenser until a float switch in the collection cup switches off the solenoid valve.

If more rinse aid is required, the EcoPlus PDRX dispenser triggers a peristaltic squeeze pump attached to the PDRX. This extracts the rinse aid solution from the collection cup. If the float switch in the collection cup sinks, the solenoid valve of the SMARTPOWER™ Rinse Dispenser is activated and fresh rinse aid solution is added.

If the rinse aid capsule dissolves to such an extent that the infrared sensors ④ no longer detect it, error code *‘0206’* appears on the EcoPlus PDRX dispenser.

To prevent contaminated water from flowing back into the drinking water network, a double check valve must be installed in the inlet pipe SMARTPOWER™ Rinse Dispenser.

5 Assembly and connection

CAUTION!

- Assembly must always be carried out by authorised personnel using these operating instructions.
- Wear appropriate protective clothing during the assembly and handling of this system. All valid safety regulations on handling chemicals must be observed.
- Electrical work must only be carried out by qualified electricians. Opening covers or removing parts may expose other parts carrying an electrical current. Connection points may also be live.
- Always use approved installation parts and accessories; refer to the accessories and installation list.
- Make absolutely sure that all line connections are firmly mounted and leakproof.
- Improper assembly may lead to injury due to chemical leaks.
- Legal regulations and the applicable product data sheets (*‘Safety data sheets’ on page 20*) must be taken into account for all chemicals.
- Wear personal protective equipment.

5.1 Installation

Installation site

The SMARTPOWER™ Rinse Dispenser is mounted in the immediate vicinity of the EcoPlus PDRX.

When determining the installation site, make sure the specifications of the unit are adhered to. The unit must not be exposed to strong shocks or constant vibrations. Electromagnetic fields e.g. by motors or transformers, must be avoided.

Direct heat, especially direct sunlight, will heat up the unit inside the housing and can damage the unit. Make sure the unit is not exposed to direct sunlight.

Before installation, make sure the supply lines are properly connected.
Chapter 10 ‘Technical data’ on page 60 .

Wall condition

When mounting the component on a wall, it must be ensured that the wall can support the weight on a permanent basis (see *Chapter 10 ‘Technical data’ on page 60*).

Climatic conditions

The ambient temperature and relative humidity at the installation site must correspond to the technical data. *Chapter 10 ‘Technical data’ on page 60*

Mounting position

The unit should be wall-mounted upright.

Space requirements

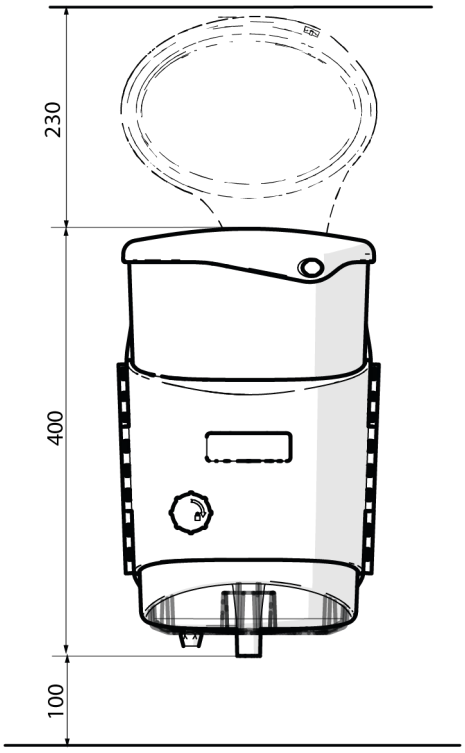


Fig. 2: Space requirements

To be able to open the hinged cover and insert the product, leave a clearance of at least 23 cm directly above the SMARTPOWER™ Rinse Dispenser.
Leave a clearance of 10 cm below the SMARTPOWER™ Rinse Dispenser so the ready-to-use solution can drain through the flexible drain hose.

Wall-mounting

Personnel:	■ Service Personnel ■ Qualified employee
Protective equipment:	■ Protective gloves ■ Safety shoes ■ Protective eyewear
Tool:	■ Drill ■ Spirit level

Requirements:

- The suitability of the wall for wall mounting has been tested.
- The necessary supply connections are available.
- The installation location is suitable for the operation of the unit.

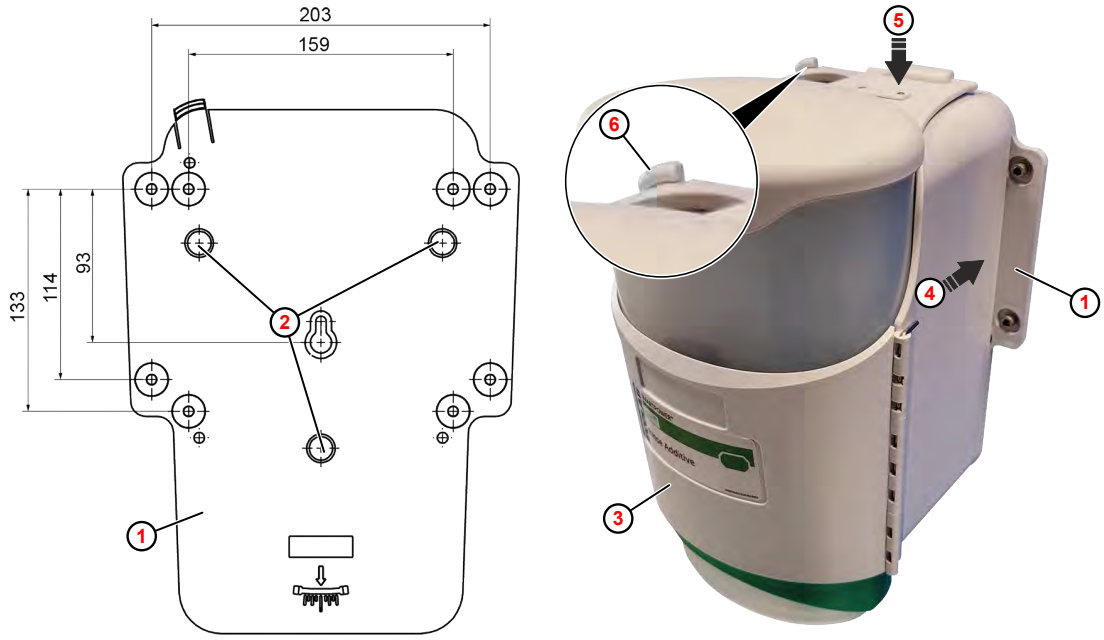


Fig. 3: Mounting the unit (with the rinse dispenser as an example)

1. Select the final location of the SMARTPOWER™ Rinse Dispenser and drill holes in accordance with the Fig. 3 .
2. Drill the fixing holes and place the ∅ 6 mm dowels.
3. Attach the mounting plate ① with dowel screws.
4. SMARTPOWER™ Rinse Dispenser ③ ② Put ④ the on the retaining pins.
5. SMARTPOWER™ Rinse Dispenser Press the down ⑤ until the locking tab ⑥ on the top of the unit clicks into place.

5.2 Hydraulic installation

Domestic water supply

Personnel:
- Service Personnel
- Qualified employee

Protective equipment:
- Protective gloves
- Safety shoes
- Protective eyewear

Material:
- 3/8" outer diameter plastic pipe
- T-piece shut-off valve 15mm x 15mm x 3/8"-pipe
- John Guest double check valve, 15 mm
- 2x pipe shaft 15mm x 3/8" pipe
- T-screw connection 3/8" pipe
- G3/8 adapter x 3/8" pipe

CAUTION!
Risk of injury caused by chemicals harmful to health
In the event of a system fault, dosing chemicals could enter the public water supply network.
– To secure the public water supply network, a double check valve must be installed on site in the fresh water connection pipe to the SMARTPOWER™ Rinse Dispenser and to the EcoPlus PDRX.

Connect the appliance to the hot water supply as described below.

Requirements
- The unit is mounted in accordance with the regulations.
- The clean water supply line is shut off.

CAUTION!
Damage to the unit if the permissible water pressure is exceeded
– Always observe the max. permissible water pressures and temperatures (see *Section Technical data on page 60*).
If necessary, fit a pressure reducer and/or mixing valve upstream.
– The connection for the water supply (feed line) must be located behind a shut-off cock (angle valve).

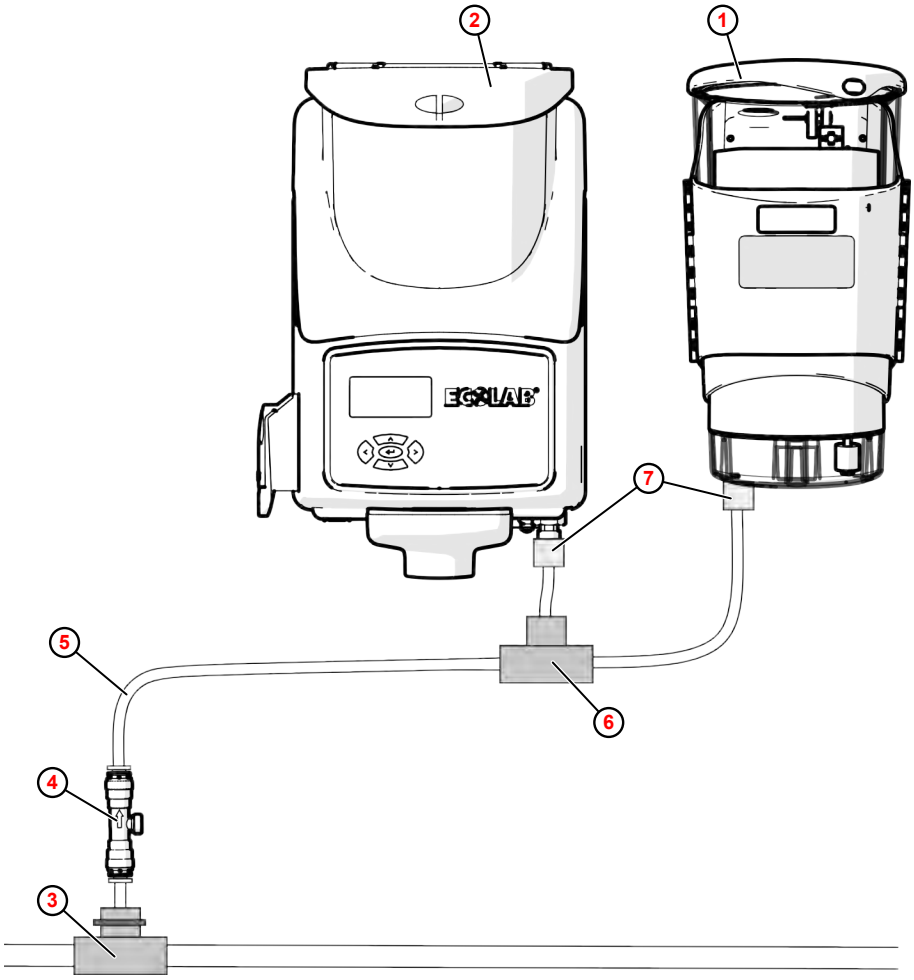


Fig. 4: Water connection

1. Connect a G3/8 x 3/8" pipe adapter (7) to the water connection of both the SMARTPOWER™ Rinse Dispenser (1) and the EcoPlus PDRX (2) .
2. Disconnect the clean water supply line and install a compatible shut-off valve T-piece (3) .
3. Before dividing the clean water connection pipe (5) into two connection lines, install a John Guest double check valve (4) in the connection pipe.
4. Lead and connect the fresh water connection pipe (5) via a T-piece (6) and a suitable adapter (7) to the SMARTPOWER™ Rinse Dispenserand to the EcoPlus PDRX.

The components (3) - (7) are not supplied with the unit. Please procure them locally.

Rinse aid hose for EcoPlus PDRX

Fig. 5: Rinse aid hose connection

1. Connect the rinse aid hose ① to the peristaltic squeeze pump of the EcoPlus PDRX.

On the metering side, a pressure control valve must be installed in the rinse-aid feed of the dishwasher.

5.3 Power supply

Risk due to electrical energy

CAUTION!
Disconnect the power supply when working on electrical components
To protect against electrical shocks, switch off the power supply prior to carrying out any work on electric parts and secure the system against being switched back on again. Work on such components may be carried out only by skilled personnel who are duly trained and authorised.

CAUTION!
Risk of damage to components sensitive to electrostatic discharge!
The control PCB contains components sensitive to electrostatic discharge. These can be destroyed by improper handling:

- Touch electronic components only if it is unavoidable due to the work to be carried out on them.
- If parts must be touched, discharge your body immediately before.
- Wear an ESD wrist strap during the work and establish potential equalisation to the component.
- Place components only on conductive surfaces.
- Store or ship components only in antistatic packaging.

Preparing for electrical installation

The SMARTPOWER™ Rinse Dispenser is connected to an EcoPlus PDRX dispenser and controlled via the WWC-PCB control board installed in it.

See the operating instructions for how to prepare the EcoPlus PDRX for electrical installation.

To download the instruction with a PC, tablet or smartphone, use the link below or scan the QR code given.
Download the operating instructions for *'EcoPlus PDRX'* (MAN054265):
https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Ware-Washing/MAN054265_EcoPlus_PDRX_UK.pdf

SMARTPOWER™ Rinse Dispenser Connect to the Ecoplus PDRX

Personnel: ■ Qualified electrician

Tool: ■ ESD wrist strap

Requirements

- The unit is correctly mounted and installed
- The EcoPlus PDRX is correctly mounted and installed

1. Lay the connection cable to the EcoPlus PDRX.
2. Connect the connection cable to the control board WWC-PCB as shown in the connection diagram. *'Terminal connection diagram SMARTPOWER™ Rinse Dispenser' on page 32*

Terminal connection diagram SMARTPOWER™ Rinse Dispenser

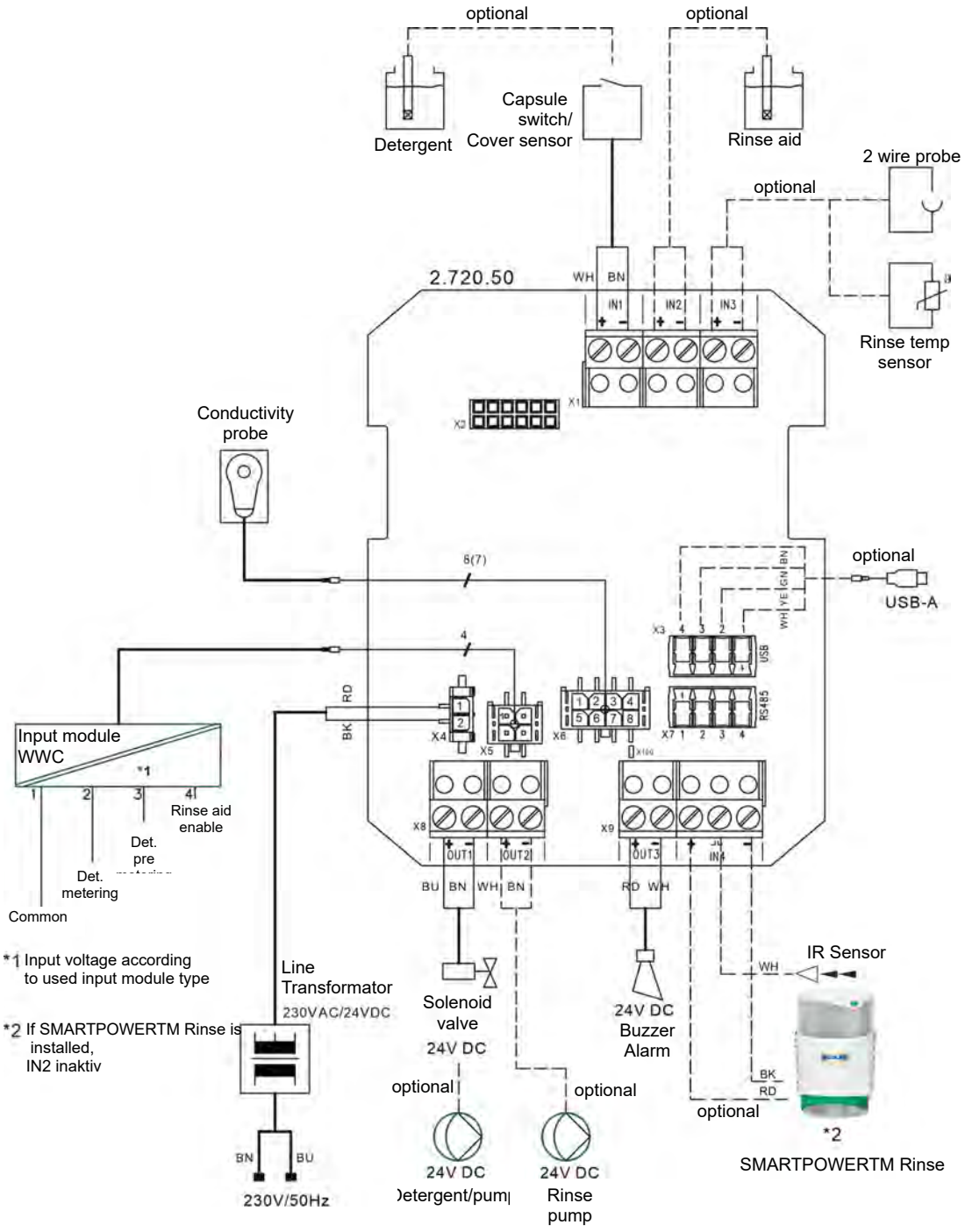


Fig. 6: Terminal connection diagram SMARTPOWER™ Rinse Dispenser

„

6 Commissioning / operation

6.1 Control/Software

The SMARTPOWER™ Rinse Dispenser is connected to an EcoPlus PDRX dispenser and controlled via the WWC-PCB control board installed in it. Settings and controls are mainly done on the EcoPlus PDRX. The startup, adjustment and operation of the control PCB are described in separate instructions.

To download the corresponding instructions on a PC, tablet or smartphone, use the links below or scan the QR code.

Complete operating instructions for download

The EcoPlus PDRX dispenser to which the SMARTPOWER™ Rinse Dispenser is connected is described in a separate manual. To download the instruction with a PC, tablet or smartphone, use the link below or scan the QR code given.
Download the operating instructions for *'EcoPlus PDRX'* (MAN054265):
https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Ware-Washing/MAN054265_EcoPlus_PDRX_UK.pdf

Download of operating instructions *WWC PCB* (article no. MAN049685):
https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Ware-Washing/MAN049685_WWC-PCB.pdf

Pictograms

Pictogram	Meaning	Pictogram	Meaning	Pictogram	Meaning
	"System working"		Solid product		Pre-dosing
	Alarm (general)		Detergent block (SMARTPOWER™)		Washing
	Access code		Rinse aid block (SMARTPOWER™)		Rinse
	Visualisation		Liquid product		Single tank GSM
	Manual operation		Powder product		Multiple tank GSM
	Settings		Solenoid valve		Module release
SETUP	Configuration		Peristaltic pump		Memory
	Inductive conductivity measuring cell		Pump (general)		Conductivity
	Conductive conductivity measuring cell		Booster		Volume
	Time Controlled / Date, Time / Period		Buzzer		Activated
	Delay time		Save		Not active
	Dosing time		Increase value		Decrease value
	Max. temperature		Automatic summer/winter switching		Exit/Quit
	Min. temperature		TurboSmart pump 20 l/h		TurboSmart pump 1.4 l/h
	Box / box counter		Operating data		Reset to factory settings
	Change tank water		Washing phases		Import/export Import/export data

Program structure

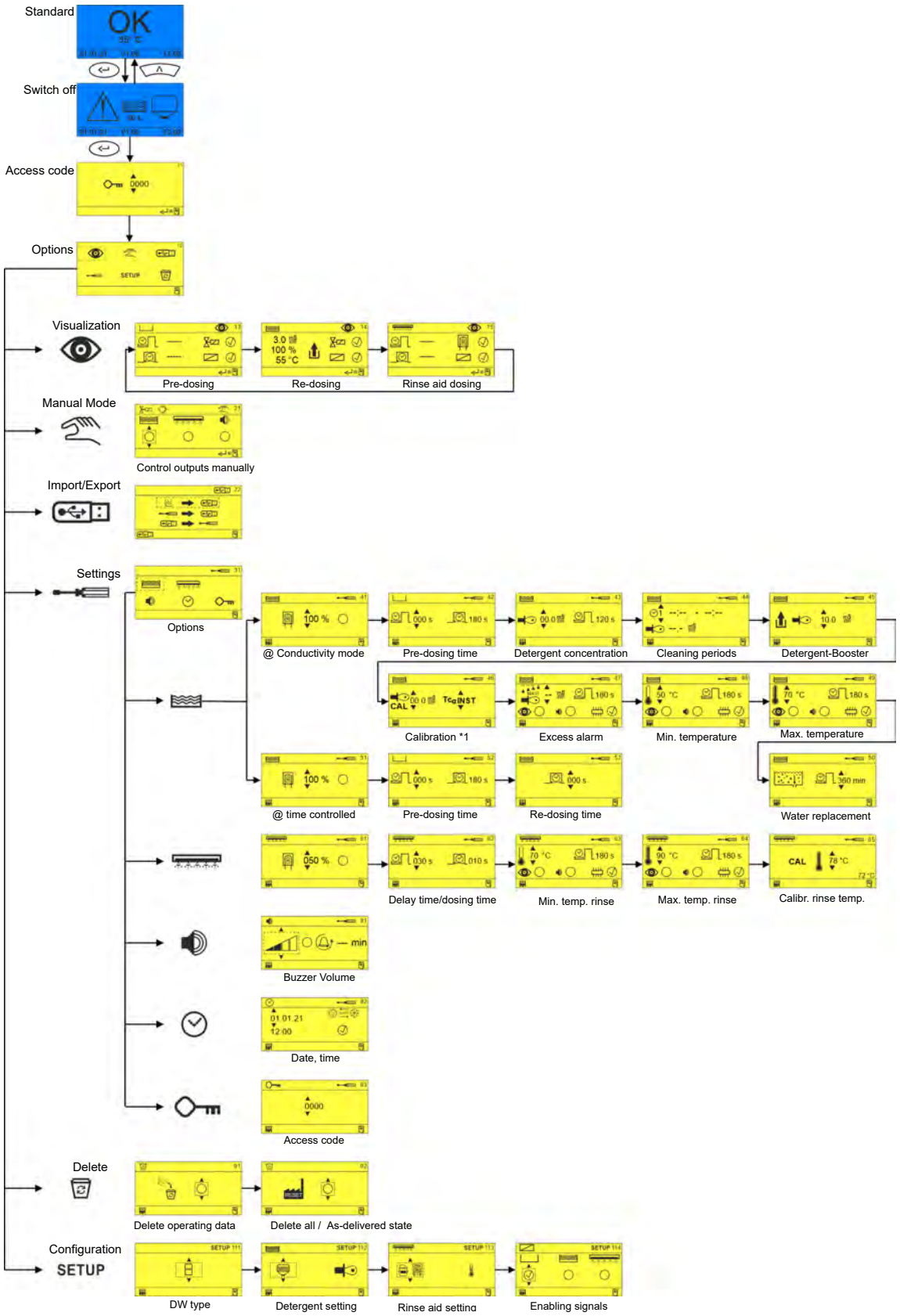


Fig. 7: Programme structure

6.2 Start-up

6.2.1 Initial start-up

In the following, it is assumed that the SMARTPOWER™ Rinse Dispenser was connected to an EcoPlus PDRX that is already in operation.

For the initial startup of the EcoPlus PDRX, please see the operating instructions.

Carry out initial commissioning

Personnel:
- Service Personnel

Protective equipment:
- Protective gloves
- Safety shoes
- Protective eyewear

Requirements

- The SMARTPOWER™ Rinse Dispenser is correctly mounted and installed.
  ↬ *Chapter 5 'Assembly and connection' on page 25*

1. Switch on the GSM.
   ⇨ The EcoPlus PDRX starts up
   ⇨ The main screen appears.

2. Perform the rinse aid setup on the EcoPlus PDRX.
3. Prepare the dishwasher and make the settings on the EcoPlus PDRX.
4. Open shut-off valve on water supply pipe.
5. Check that all hoses, connections and components are properly sealed and check that the cover switch functions properly.
6. Into the SMARTPOWER™ Rinse Dispenser, insert a SMARTPOWER™ rinse aid capsule and start the dishwasher rinse program.

After five to ten cycles, check the rinsing results.

6.2.2 Set-up

You use the *'Set-Up'* menu to set up the unit operated using the control PCB.

Basic settings such as dishwasher type, detergent and rinse aid products used (solid, liquid), and the use of release signals are set in this process.

When installing a complete unit, the system is already preset.
Only the dishwasher type and release signals still need to be configured.

Rinse aid - SETUP 113

In the *'Rinse aid setup'* (113), the rinse aid used is configured and set whether the rinse temperature is measured or not.

Depending on the rinse aid used, the following settings can be made on the EcoPlus PDRX:

- Liquid product via peristaltic pump (versions **SDR-ST** and **SDRX**)
- Capsule

The following detergent must be configured for the use of the SMARTPOWER™ Rinse Dispenser:

- Capsule

You can also set the following:

- The boiler temperature is measured and displayed
- -- - No temperature sensor configured to show boiler temperature

Release signals - SETUP 114

The *'Enable Signals Set-Up'* screen (114) is used to configure enable signals that are sent from dishwasher modules to the controller PCB.

If enable signals are configured, the SMARTPOWER™ Rinse Dispenser waits until the corresponding enable signal is present to deliver the metered quantity.

You can configure the following sharing signals:

- Pre-dose
- Wash
- Rinse

If no input is activated, the corresponding dosage starts as soon as the voltage is applied.

6.2.3 Set the rinse aid concentration

Description

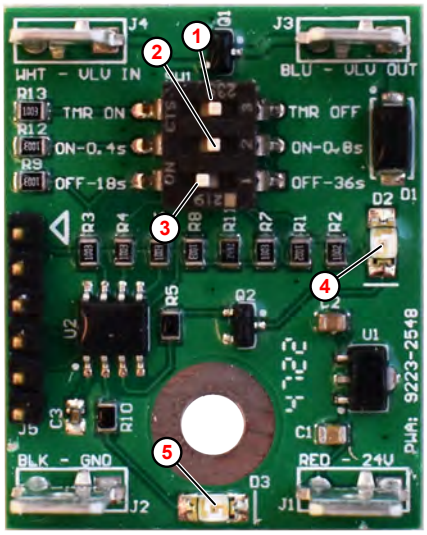
To improve the rinse aid concentration and concentration consistency, you can set the clean water output to pulse mode:

- The pulsating flow of water releases more rinse aid from the capsule.
- The rinse aid concentration increases.

To do this, the Rinse-Pulse-Timer board (,) must be switched on.

> *By default, SMARTPOWER™ Rinse Dispenser the Rinse-Pulse-Timer board is switched off.*

Switch positions



1. "TIMER" DIP switch
2. "ON" DIP switch
3. "OFF" DIP switch
4. "Operation" LED - flashes when the solenoid valve is actuated
5. "Pulse" LED - flashes when 24 VDC is running through the board

Fig. 8: Rinse-Pulse-Timer board

The Rinse-Pulse-Timer board has 3 DIP switches. These have the following settings:

- Timer (TMR) ① : ON/OFF, **Default:** OFF
- Active time (ON) ② : 0.4 s or 0.8 s, **Default:** 0.8 sec
- Pause time (OFF) ③ : 18 s or 36 s, **Default:** 18 sec

Activate Rinse-Pulse-Timer

Personnel:
- Service Personnel

Protective equipment:
- Protective gloves
- Safety shoes
- Protective eyewear

Requirements

- Initial set-up has been carried out. ↳ *Chapter 6.2.1 'Initial start-up' on page 36*

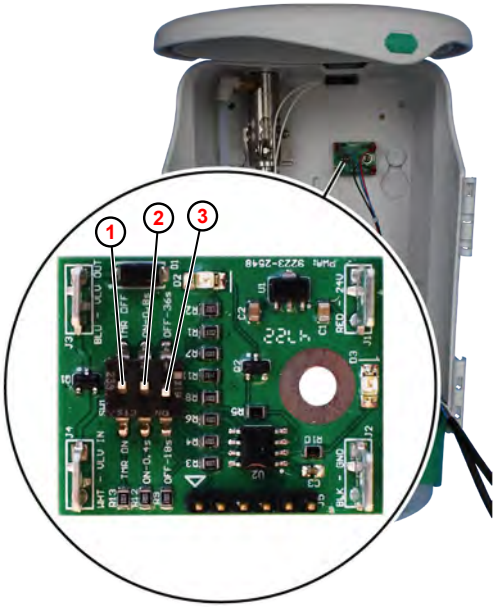


Fig. 9: Rinse-Pulse-Timer board

1. Open the front hatch.
2. Remove the product funnel.
3. Switch the "TMR" DIP switch ① to "ON".
   ⇨ Rinse-Pulse-Timer is on.
4. If necessary, adjust the active time and pause time:
   - DIP switch "ON" ② : Set active time
   - DIP switch "OFF" ③ : Setting the pause time

   Any deviation from the default settings should only be made in consultation with Ecolab Customer Service. ↳ *'Switch positions' on page 38*
5. Final steps:
   - Installing the product funnel
   - Close the front flap

   After two to three program runs, check the rinsing results.

6.3 Operation

The SMARTPOWER™ Rinse Dispenser is connected to an EcoPlus PDRX dispenser and controlled via the WWC-PCB control board installed in it. Settings and controls are mainly done on the EcoPlus PDRX.
The startup, adjustment and operation of the control PCB are described in separate instructions.

To download the corresponding instructions on a PC, tablet or smartphone, use the link below or scan the QR code.

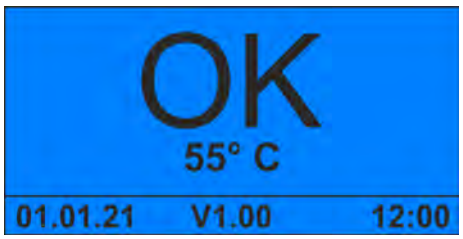
Complete operating instructions for download

Download the operating instructions for *'EcoPlus PDRX'* (MAN054265):
https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Ware-Washing/MAN054265_EcoPlus_PDRX_UK.pdf

6.3.1 Switching on the unit

The EcoPlus PDRX is powered directly by the dishwasher and switched on with it.

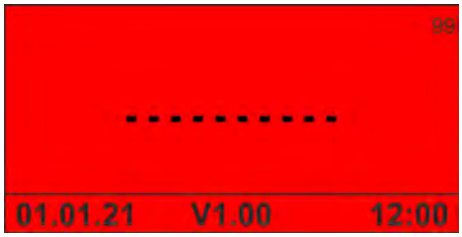
1. Turn on the dishwasher.
⇨ The EcoPlus PDRX starts up.
⇨ The main screen appears.



6.3.2 Temporarily taking the unit out of operation

Starting point: Default ‘ *screen’*

1. + Press simultaneously for 5 seconds.
   ⇨ The device stops and goes into standby mode.



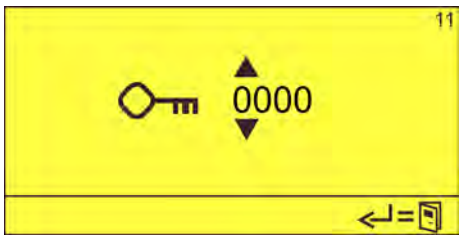
2. If necessary, interrupt the water supply.

Press to resume operation.

6.3.3 Entering the access code

Starting point: Default *‘ screen’*

1. key combination pressed while the pump is currently in operation.



2. Enter the access code with and confirm with .
⇨ The *‘Options’* screen (12) appears.

6.3.4 Insert a new rinse aid capsule

General

The SMARTPOWER™ Rinse Dispenser detects the rinse aid capsule in the product funnel with the help of two infrared sensors (,).

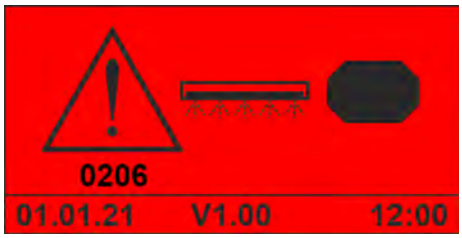


Fig. 10: Error code 206 (SMARTPOWER™ rinse aid)

If the rinse aid capsule is empty, the EcoPlus PDRX displays error code 206 "Rinse aid capsule empty".

The EcoPlus PDRX and the SMARTPOWER™ Rinse Dispenser come to a stop.

Procedure

Personnel:
- Operator

Protective equipment:
- Protective gloves
- Safety shoes
- Protective eyewear

Requirements:

- Error code 206 appears

Fig. 11: Insert a new rinse aid capsule

1. Open the hinged cover ① .
2. Check the product funnel ② for foreign bodies and dirt and clean if necessary.
3. *Remove the rinse aid capsule ③ from the cellophane packaging.*

   Insert the rinse aid capsule into the product funnel.
4. Close the hinged lid.
   ⇨ The error message disappears.

7 Servicing and maintenance

NOTICE!
Material damage by using incorrect tools!
Material damage may arise by using incorrect tools. **Use the correct tools.**

DANGER!
If you believe that the unit can no longer be operated safely, you must decommission it immediately and secure it so that it cannot be used inadvertently.

This applies:

- if the unit shows visible signs of damage,
- if the unit no longer appears to be operational,
- after prolonged periods of storage under unfavourable conditions.

The following instructions must always be observed:

- Prior to carrying out any work on electric parts, switch off the power supply and secure the system against being switched back on again.
- Safety regulations and prescribed protective clothing when handling chemicals should be followed.
- Attention must be paid to the information included on the product data sheet of the metering medium used.
- The unit must only be operated with the supply and control voltage specified in the Technical Data section.

CAUTION!
Changes or modifications are not permitted without prior, written permission from Ecolab Engineering GmbH and result in the forfeiting of any and all warranty entitlements. Original spare parts and accessories approved by the manufacturer heighten the degree of safety.
The use of other parts results in an exclusion of the warranty for any ensuing consequences.
Please consider that the CE conformity expires in case of subsequent conversions

DANGER!

Damage and injuries may occur if installation, maintenance or repair work is carried out incorrectly.

All installation, maintenance and repair work must only be performed by authorised and trained specialist personnel in accordance with the applicable local regulations. Safety regulations and prescribed protective clothing when handling chemicals should be followed. Attention must be paid to the information included on the product data sheet for the metering medium used. Prior to all work the feeding of the metering medium should be disconnected and the system cleaned.

NOTICE!

Only original equipment spare parts may be used for maintenance and repairs.

CAUTION!

Before conducting maintenance work, the power to the system must be switched off and the water supply must be interrupted. Furthermore, the safety guidelines must be observed. *Chapter 2 'Safety' on page 12*

The maintenance interval is 1 year maximum, although every six months is recommended.

7.1 Maintenance intervals

Interval	Maintenance work	Personnel
As required	**General status:** External dirt: Check the unit is clean and clean if necessary. Damage: Check the unit damage and notify Ecolab Customer Service if necessary.	Specialist
	Product funnel: Dirt: Clean funnels if necessary.	Specialist
	Collection cup: Dirt: Clean collection cup if necessary.	Specialist
Every six months	**Water supply pipe and water-carrying components in the appliance:** Watertightness: Where necessary. Replace seals or defective components.	Specialist Service personnel
	Rinse aid line: blockage/tightness: Replace the hose if necessary.	Specialist Service personnel
	Lid sensor: Correct functionality: Where necessary, clean hopper, replace components.	Specialist Service personnel
	Spray nozzle: Dirt: Descale and replace if necessary.	Specialist Service personnel

7.2 Maintenance and servicing work

7.2.1 Clean the appliance

Personnel:
- Operator
- Trained personnel

Protective equipment:
- Protective eyewear
- Chemical resistant protective gloves

1. Wipe down the unit using a damp cloth.
2. Check the unit for secure attachment and external damage.
3. If applicable, check the display for damage and pixel errors.
4. Check the connector lines and cables for damage, secure fit and correct routing.

7.2.2 Opening the front hatch

Personnel:
- Operator

Protective equipment:
- Protective eyewear
- Chemical resistant protective gloves

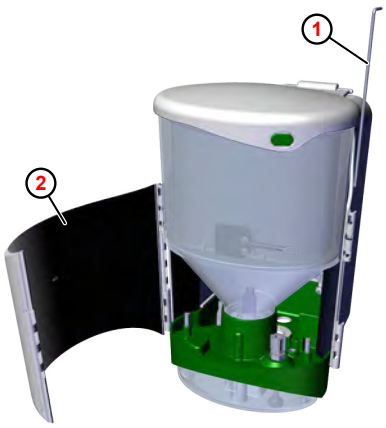


Fig. 12: Open the front flap (e.g. SMARTPOWER™ Rinse Dispenser)

1. Pull the hinge pin ① upwards out of the unit.
2. Open the front hatch ② .

7.2.3 Remove the collection cup

Personnel:
- Operator

Protective equipment:
- Protective eyewear
- Chemical resistant protective gloves

Requirements:

- Front hatch open. *Chapter 7.2.2 'Opening the front hatch' on page 46*

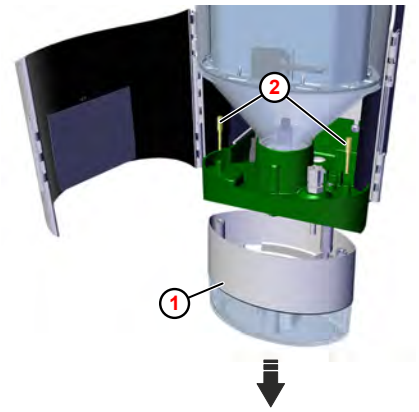


Fig. 13: Remove the collection cup

1. Press the collection cup ① against the unit from below.
2. Unscrew the fastening screws ② .
3. Remove the collection cup by moving down and out of the unit.

Before replacing, rinse the collection cup with clean water.

7.2.4 Remove the product cylinder

Personnel:
- Operator

Protective equipment:
- Protective eyewear
- Chemical resistant protective gloves

Requirements:

- The dishwasher is switched off and protected against reactivation.
- Angle valve for water supply closed.
- Hinged cover is open.
- Front hatch open. *Chapter 7.2.2 'Opening the front hatch' on page 46*

Fig. 14: Loosen the product cylinder

1. If necessary, remove the SMARTPOWER™ rinse aid capsule.
2. Unscrew the two countersunk screws (1) .
3. **NOTICE!**
   Risk of damage to connection cables and plugs
   When removing the product cylinder, make sure that the connection cables of the infrared sensors (4) are not damaged.

   Remove the product cylinder (2) with the product feed (3) facing upwards.

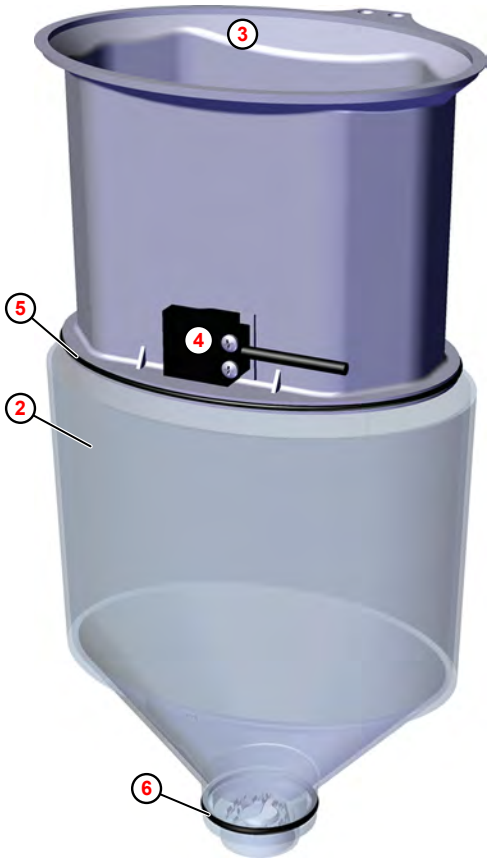


Fig. 15: Pull out and remove the product feed

4. Pull the product feed ③ out of the product cylinder ② .

5.
- Clean the product feed using a damp cloth.
- Rinse product cylinder with clean water.

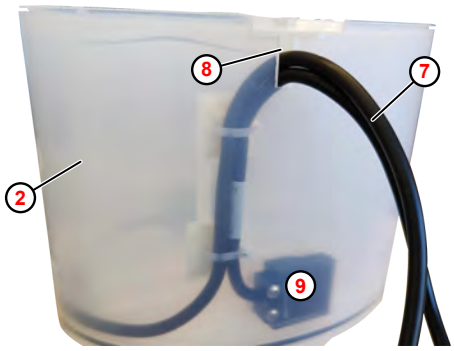


Fig. 16: Feed-through connection cable

6. Pay particular attention to the following during installation:
- Clean the O-rings ⑤ , ⑥ and the O-ring grooves thoroughly.
- Grease the O-rings with petroleum jelly, replace if necessary.

NOTICE!

Risk of damage to connection cables and plugs

When inserting the product guide, make sure that the connection cables ⑦ of the infrared sensors ④ , ⑨ are routed through the recess ⑧ on the product cylinder.

7.2.5 Descaling the spray nozzle

Personnel:
- Service Personnel

Protective equipment:
- Protective eyewear
- Chemical resistant protective gloves

Material:
- Ecolab Sidosil ® Intensive Limescale Remover

WARNING!
Injuries from uncontrolled chemical spills
Uncontrolled chemical spills can cause serious injuries.
Use the personal protective equipment (PPE) specified in the safety data sheet for the chemical products.

Requirements:

- The dishwasher is switched off and protected against reactivation.
- Angle valve for water supply closed.
- Front hatch open. *Chapter 7.2.2 'Opening the front hatch' on page 46*
- Product cylinder is removed. *Chapter 7.2.4 'Remove the product cylinder' on page 48*

Fig. 17: Remove the spray nozzle

1. Put some Sidosil ® Intensive Rinse Aid in a cup or dish.

The liquid should completely cover the spray nozzle.

2. Unscrew the spray nozzle ① .
3. Dip the spray nozzle into the limescale remover and let it soak in for two minutes.

4. Rinse the spray nozzle thoroughly with clean water.

Fig. 18: Check the spray nozzle

5. Check the spray nozzle:
   - Check the outlet ② of the spray nozzle for limescale residues and dirt
   - Check the vortex insert ③ on the underside for dirt and damage

If necessary, replace the spray nozzle.

7.2.6 Removing the rinse aid hose and suction pipe

Personnel:
- Service Personnel

Protective equipment:
- Protective eyewear
- Chemical resistant protective gloves

Material:
- Ecolab Sidosil® Intensive Limescale Remover

Requirements:

- The dishwasher is switched off and protected against reactivation.
- Angle valve for water supply closed.
- Front hatch open. *Chapter 7.2.2 'Opening the front hatch' on page 46*
- Product cylinder is removed. *Chapter 7.2.4 'Remove the product cylinder' on page 48*
- Collection cup is removed. *Chapter 7.2.3 'Remove the collection cup' on page 47*

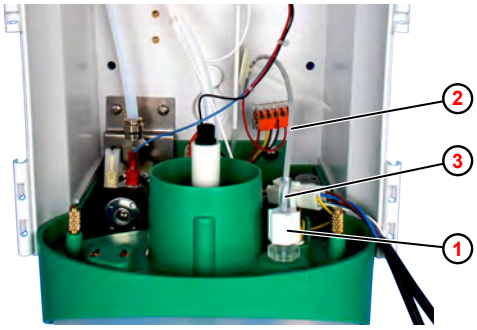


Fig. 19: Loosen the rinse aid hose

1. Unscrew the hose fitting (1) .
2. Pull the rinse aid hose out (2) with reducer (3) out of the suction pipe.
3. Reduce and remove the hose fitting from the suction pipe.
4. If necessary, unthread the intake pipe from the SMARTPOWER™ Rinse Dispenser.

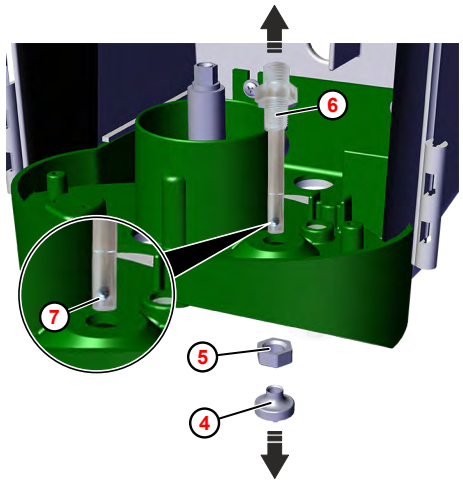


Fig. 20: Remove the suction tube

5. Pull the suction strainer (4) downwards.
6. Loosen the jam nut (5) and remove it downwards.

7.

NOTICE!

If you lose any components

A ball (7) is inserted in the suction pipe to prevent any rinse aid from flowing from the rinse aid hose back into the collection cup.

– When removing the intake pipe, make sure that the ball is not lost!

Remove the suction pipe (6) upwards.

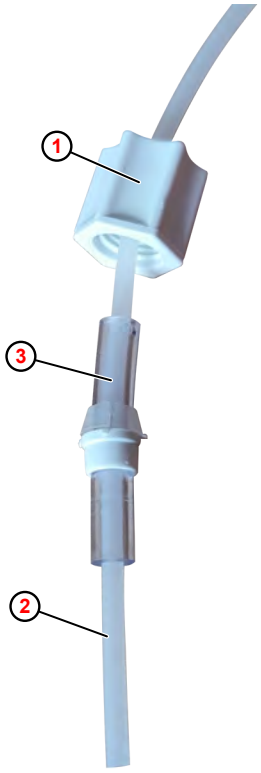


Fig. 21: Slide the reducer on

8. Pay particular attention to the following during installation:

- Make sure the ball (7) is back in the suction pipe.
- First, attach the hose fitting (1) to the rinse aid hose (2) .
- Slide the reducer (3) onto the rinse aid hose so that it protrudes by approx. 3-4 cm.
-

The ball should have the same amount of play in the suction pipe when the rinse aid hose is inserted.

7.2.7 Removing the solenoid valve

Personnel:
- Service Personnel

Protective equipment:
- Protective eyewear
- Chemical resistant protective gloves

Requirements:

- The dishwasher is switched off and protected against reactivation.
- Angle valve for water supply closed.
- Front hatch open. *Chapter 7.2.2 'Opening the front hatch' on page 46*
- Product cylinder is removed. *Chapter 7.2.4 'Remove the product cylinder' on page 48*

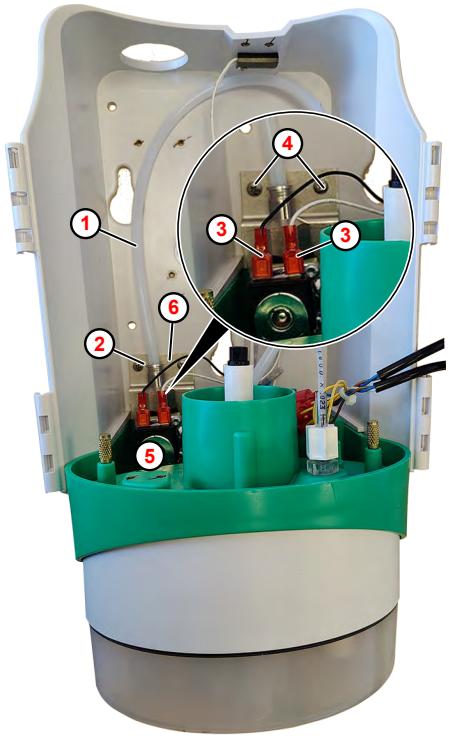


Fig. 22: Loosen the solenoid valve

1. Unscrew the clean water connection cable at the solenoid valve inlet.
2. Press the retaining rings onto the plug-in couplings and disconnect the clean water pipe .
3. Mark and disconnect the connection cable on the solenoid valve.
4. Remove the screws .
5. Remove the solenoid valve with holder from the unit.

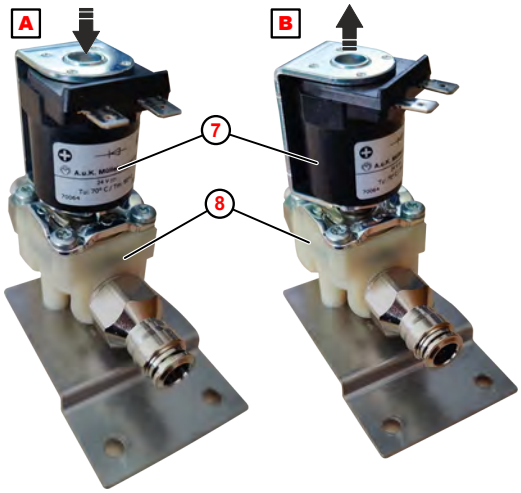


Fig. 23: Unlock the solenoid

6. Press the solenoid towards the valve body and rotate it approx. 30° anti-clockwise.
⇨ The solenoid is unlocked and can be removed in the direction of the arrow .

WARNING!
Lubricate O-rings before assembly, otherwise damage and wear may occur. Never press directly on the connection nipple or solenoid coil – there is a risk of breakage.

7. Pay particular attention to the following during installation:

- Before installing the solenoid valve, securely lock the solenoid to the valve body .
- Push the clean water pipes into the plug-in couplings until you hear a click.

Make sure the pipes are correctly connected.

8 Operational malfunctions and troubleshooting

8.1 General troubleshooting and fault rectification

Fault description	Cause	Remedy	Personnel
No rinse aid solution in the collection cup	Hinged lid open	Close hinged lid	Operator
	Dispenser incorrectly connected to the WWC PCB.	Check the connection of the dispenser to the EcoPlus PDRX. *'Terminal connection diagram SMARTPOWER™ Rinse Dispenser' on page 32*	Qualified electrician
	Faulty solenoid valve body.	Replace the solenoid valve body.	Service Personnel
	Faulty solenoid valve coil.	Replace the solenoid valve coil.	Service Personnel
	Faulty float switch or cover switch	■ Check if 24 VDC is running through the solenoid valve switch. ■ If not, bypass the float switch and check again. ■ If 24 VDC is running through the solenoid valve switch, replace the float switch. ■ If there is no 24 VDC at the solenoid valve switch, replace the cover switch.	Service Personnel
Collection cup is overflowing	Faulty float switch.	Check the float switch and replace if necessary.	Service Personnel
	Faulty solenoid valve.	■ Turn off or interrupt the power supply to the rinse dispenser. ■ If the collection cup continues to overflow, repair or replace the solenoid valve.	Service Personnel
	Dispenser incorrectly connected to the WWC PCB.	Check the connection of the dispenser to the EcoPlus PDRX. *'Terminal connection diagram SMARTPOWER™ Rinse Dispenser' on page 32*	Qualified electrician
	Dispensing valve on the dishwasher is defective.	■ Loosen the rinse aid hose on the rinse dispenser. ■ Start the rinse program on the dishwasher. ■ If water starts leaking from the rinse aid hose, replace the rinse aid dispensing valve on the dishwasher.	Service Personnel

8.2 Fault messages

The SMARTPOWER™ Rinse Dispenser is connected to an EcoPlus PDRX dispenser and controlled via the WWC-PCB control board installed in it. Settings and controls are mainly done on the EcoPlus PDRX.
This section only describes the error messages that are triggered by the SMARTPOWER™ Rinse Dispenser on the EcoPlus PDRX. For other error messages, please see the operating instructions of the SMARTPOWER™ PDRX.

To download the operating instructions for 'EcoPlus PDRX' on a PC, tablet or smartphone, use the link below or scan the QR code.

Complete operating instructions for download

Download the operating instructions for *'EcoPlus PDRX'* (MAN054265):
https://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Ware-Washing/MAN054265_EcoPlus_PDRX_UK.pdf

The acoustic alarm can be switched off by pressing any button on the front of the unit. The alarm message on the display remains visible until the error has been resolved.

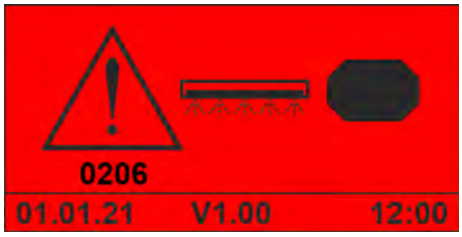


Fig. 24: Error code 206 (SMARTPOWER™ rinse aid)

No.	Fault description	Cause	Remedy
206	Display: Error code 206	Empty message for rinse aid block (SMARTPOWER™)	Insert new rinse aid block
		SMARTPOWER™ Detergent Dispenser faulty	Check that dispenser is functioning correctly; replace if necessary
		PCB defective	Change board

9 Spare parts

Wearing parts, spare parts and accessories are listed in a separate spare parts list.

The most recent version of the spare parts list is always available to download online.

To download the spare parts list to a PC, tablet or smartphone, use the link below or scan the QR code provided.
SMARTPOWER™ Rinse Dispenser Spare parts list:
http://www.ecolab-engineering.de/fileadmin/download/bedienungsanleitungen/institutional/Smartpower-spare-parts.pdf

10 Technical data

In this chapter you will find the technical data of the SMARTPOWER™ Rinse Dispenser.

Dimensions

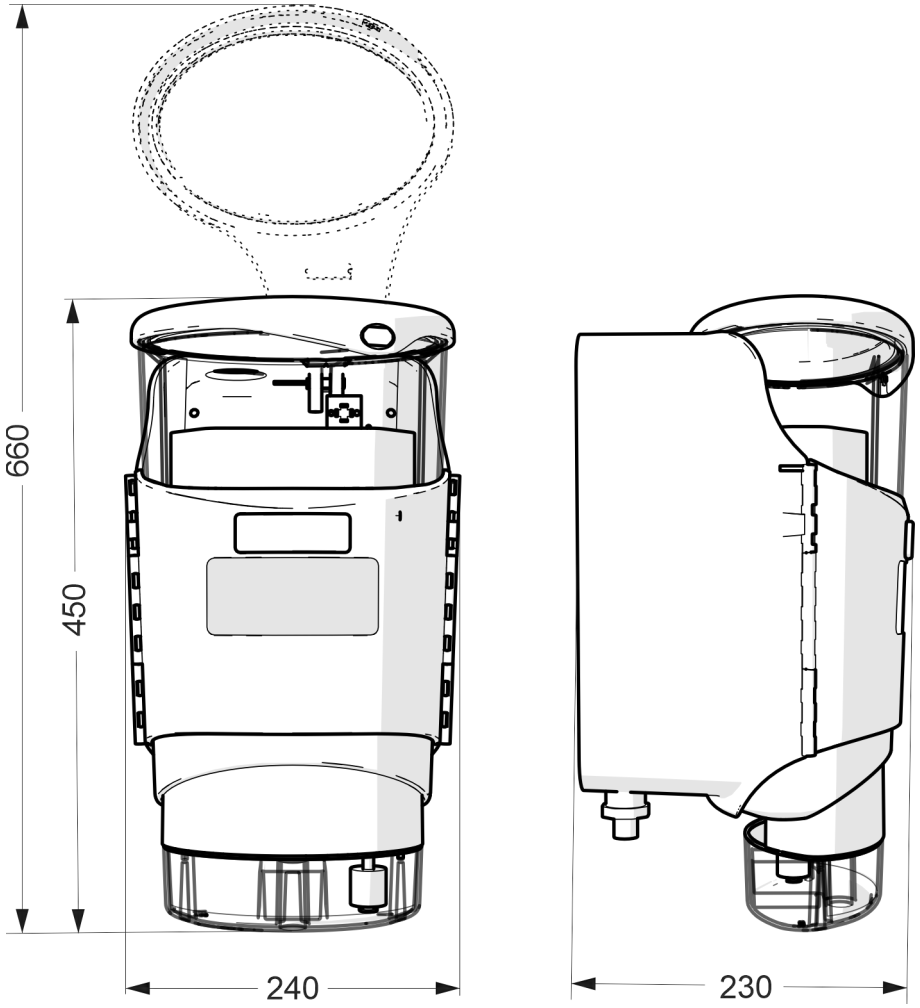


Fig. 25: Dimensions

Data	Value	Unit
Height (cover closed)	450	mm
Height (cover open)	660	mm
Width	240	mm
Depth	230	mm
Package size LxWxH	500 x 300 x 300	mm
Weight (unit without rinse aid capsule)	3,2	kg
Weight (including accessories and packaging)	4,9	kg

General data

Data	Value	Unit
Control voltage (±10%, unregulated)	DC 24	V
Connected rating	26,4	W
Degree of protection	IP2X	
Appliance class	II	
Equipment classification (pollution degree)	PD2	
Connection of water inlet:	Size G 3/8	
Water pressure, static (max.)	6 (0,6)	bar (MPa)
Water pressure, dynamic (min.) (with water temperature at > 5° C)	1,8 (0,18)	bar (MPa)
Water pressure, dynamic (min.) (with water temperature at > 15° C)	1,5 (0,15)	bar (MPa)
Water temperature (max.)	60	°C
Water quality: Drinking water (min.)	3	°d
Approved area of use	Wet environment	

Environmental load

Data	Value	Unit
Noise pollution	< 70	dB(A)

Ambient conditions

Data	Value	Unit
Ambient temperature	5 - 40	°C
Relative humidity (non-condensing) (up to 31°C, linear reduction to 50% at 40°C)	80	%
Maximum operating height	2000	m
Approved area of use	Damp area	

Nameplate

The nameplate contains the most important technical information for the SMARTPOWER™ Rinse Dispenser.

> *The information on the nameplate is required for all enquiries to Ecolab customer service.*

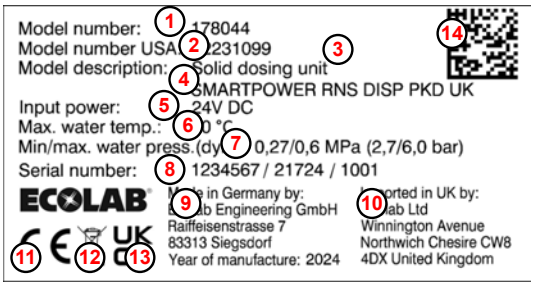


Fig. 26: Nameplate SMARTPOWER™ Rinse Dispenser

1. Pa number
2. US part number
3. EBS number
4. Item designation
5. Voltage specification [V]
6. Max. water temperature
7. Min/max. water pressure (static)
8. Production code consisting of
   production order number (six digits) /
   production code with weekday (single digit, Monday = 1, Friday = 5), calendar week (two-digit), production year (two-digit) /
   number of pieces per production order (consecutive number starting with 1001)
9. Manufacturer's address
10. Importer in UK
11. Note on CE conformity
12. Disposal regulation
13. Note on CE UKCA conformity
14. Data matrix code containing the following :
    part number,
    production code

11 Decommissioning, removal and disposal

NOTICE!
The following disassembly description is the recommended method. However, different local conditions and physical factors will determine the most appropriate method for disassembly in practice.

CAUTION!
When working on parts that come into contact with dangerous products, the prescribed protective clothing (safety goggles, protective gloves, apron if necessary) must be used because of the risk of burns.
When working on the electrical connection of a dispenser unit (e.g. EcoPlus PDRX) all applicable international, national and local safety regulations must be observed.
For work on the power connection, isolate it first (i.e. shut down power).

Recommended procedure

1. Disconnect power to the unit (if necessary).
2. Remove the detergent capsule.
3. Remove chemical residue from the funnel, e.g. by cleaning in a dishwasher.
4. Close the hinged lid and operate the appliance with clean water for a few minutes.
5. Close the water inlet (using angle valve or similar) and remove the connection.
6. Disconnect the unit from its power source.
7. Drain the unit completely and clear all the chemical residue from inside the unit.
8. Either dispose of the unit in accordance with applicable national directives or package safely (cardboard box with padding material) and return to the Ecolab-authorised company for recycling.

11.1 Disposal and environmental protection

All components are to be disposed of in accordance with prevailing local environmental regulations. Dispose of them accordingly, depending on the condition, existing regulations and with due regard for current provisions and criteria.

Recycle the dismantled components:

- Scrap all metals.
- Electrical waste and electronic components must be recycled.
- Recycle all plastic parts.
- Dispose of all other components in line with their material characteristics.
- Hand in batteries at communal collection points or dispose of them through a specialist.

ENVIRONMENT!

Risk of environmental damage from incorrect disposal!

Incorrect disposal can be a threat to the environment.

– Electrical scrap, electronic components, lubricants and other operating fluids must be disposed of by approved waste disposal service providers
– If in doubt, contact your local authority, or an approved waste disposal service provider, for information on correct disposal.

Prior to disposal, all parts which are in contact with media must be decontaminated. Oils, solvents, detergents and contaminated cleaning tools (brushes, cloths, etc.) must be disposed of in compliance with local requirements, in accordance with the prevailing waste code and with due attention to the notes contained in the manufacturers' safety data sheets.

ENVIRONMENT!

Reduction or avoidance of waste from reusable raw materials

Do not dispose of any components in the domestic waste.
Take them instead to the appropriate collection points for recycling.

Please follow the Directive on Waste Electrical and Electronic Equipment 2012/19/EU, the aim and purpose of which is the reduction or prevention of waste from recyclable raw materials. This directive requires member states of the EU to increase the collection rate of electronic waste so that it can be recycled.

12 Certificates

EC Declaration of Conformity

De En Fr

Konformitätserklärung / Declaration of Conformity / Déclaration de Conformité

ECOLAB

ECOLAB Engineering GmbH
Postfach 1164
D-83309 Siegsdorf

Wir erklären hiermit, dass das folgende Produkt
We herewith declare that the following product
Nous déclarons que le produit suivant

Beschreibung / description / description	SMARTPOWER RINSE DISPENSER SMARTPOWER RINSE DISPENSER UK
Modell / model / modèle	178011 / 178044
Typ / part no / type	10019606 / 92231099
Gültig ab / valid from / valable dès:	2024-05-01

auf das sich diese Erklärung bezieht, der / den folgenden Norm(en) oder normativen Dokument(en) entspricht:
to which this declaration relates is in conformity with the following standard(s) or other normative document(s):
auquel se réfère cette déclaration est conforme à la (aux) norme(s) ou autre(s) document(s) normatif(s)

EN ISO 12100:2010
EN1717:2011
EN IEC 63000:2018

gemäß den Bestimmungen der Richtlinie(n):
following the provisions of directive(s):
conformément aux dispositions de(s) directive(s):

2006/42/EG
2011/65/EU

Bevollmächtigter für die Zusammenstellung der technischen Unterlagen:
Authorised person for compiling the technical file:
Personne autorisée pour constituer le dossier technique:

Ecolab Engineering GmbH
Postfach 1164
D-83309 Siegsdorf

Ort und Datum der Ausstellung
Place and date of issue
Lieu et date

83313 Siegsdorf, 11.03.2024

M.Niederbichler
Geschäftsführer
Company Manager
Directeur

D.Rodriguez
Regulatory Affairs - Geräte
Regulatory Affairs - Equipment
Affaires Réglementaires - Matériel

Annex 1a to WI-EU-RDE-602 Rev. 4 / 2022-06-02

Fig. 27: CE Declaration for the SMARTPOWER™ Rinse Dispenser

13 Index

N

O

P

Q

R

S

T

U

V

W

Dokumenten-Nr.: document no.:	SMARTPOWERTM Rinse Dispenser (UK Version)
Erstelldatum: date of issue:	10.10.2024
Version / Revision: version / revision:	MAN054125 Ver. 01-06.2024
Letze Änderung: last changing:	28.06.2024