

Warewashing



Utensil washer **ECOMAX 702**

Installation and Operation Manual

(Original Operation Manual)

EN

Table of Contents

1	Notes on the documentation	4
1.1	Application.....	4
1.2	Layout of the documentation.....	4
1.3	Symbols used	4
2	Safety instructions and regulations	5
2.1	Hazard levels	5
2.2	Layout of safety instructions.....	5
2.3	Basic safety instructions	5
2.4	Property damage.....	7
3	Product description	7
3.1	Intended purpose.....	7
3.2	Designation	8
3.3	Technical specifications	8
4	Controls	8
5	Installation	9
5.1	Personnel qualification.....	9
5.2	Special safety instructions.....	9
5.3	Transporting to the installation location.....	10
5.4	Removing the packaging	10
5.5	Installing the machine	10
5.6	Connecting to the power supply.....	11
5.7	Connecting the water	11
5.8	Connecting the drain	12
5.9	Connecting the dispenser	12
6	Commissioning	14
6.1	Personnel qualification.....	14
6.2	Special safety instructions.....	14
6.3	Filling chemical hoses.....	14
7	Operation	15
7.1	Personnel qualification.....	15
7.2	Special safety instructions.....	15
7.3	Preparations for washing.....	16
7.4	Using the deadbolt (optional)	17
7.5	Washing.....	17
7.6	Switch off machine	18
7.7	Executing daily cleaning	18
7.8	Executing weekly cleaning	18

8	Settings	18
8.1	Opening the operator menu	19
8.2	Exiting the operator menu	19
8.3	Making the chemical settings (option).....	19
9	Problems and malfunctions	20
9.1	Remedying the problem.....	20
9.2	Malfunctions.....	21
10	Maintenance	21
11	Disposal	22
12	Product disclaimer	22
13	Conformity	23

ECOMAX 702

Notes on the documentation

1 Notes on the documentation

1.1 Application

This document contains the most important information for the installation and commissioning of the machine by qualified personnel, as well as the information required for day-to-day operation by the operator.

- ▶ Keep the operation manual and all referenced documents in a safe and accessible place.
- ▶ Store the operation manual in a suitable container protected from humidity and dirt deposits.
- ▶ If you sell the machine, pass on the installation and operation manual.

1.2 Layout of the documentation

Referenced documents are all instructions that describe the installation, operation, maintenance and repair of the device, as well as additional instructions for all accessories used.

For the operator:

- Comic Card (brief instructions)
- Operating instructions

For the specialised tradesman:

- Installation instructions
- Service Manual
- Service Software Manual
- Trouble shooting list
- Circuit diagram
- Spare parts catalogue

1.3 Symbols used

Symbol	Meaning
	Warning of hazardous electrical voltage
	Beware of explosion
	Warning of risk of crushing
	Beware of hazardous substances
	Beware of hand injuries
	Beware of slipping
	Beware of hazard area

Symbol	Meaning
	Useful additional information and tips

2 Safety instructions and regulations

2.1 Hazard levels

The hazard level is part of the safety instructions and is denoted by the signal word.

Potential consequences are differentiated by the choice of signal word.

	imminent danger: results in serious physical injury or death
	potentially hazardous situation: can cause serious physical injury or death
	potentially hazardous situation: can cause minor physical injury
	potentially harmful situation: can cause damage to the product or other objects

2.2 Layout of safety instructions

These warning notices are depicted with warning symbols and signal words in the corresponding safety colours.





Nature and source of the hazard

Explanation on the nature and source of the hazard

- ▶ Measures for averting the hazard
- ▶ Additional measures for averting the hazard, where applicable

2.3 Basic safety instructions

2.3.1 Product safety

The machine conforms to state-of-the-art technology and the recognised safety regulations. Nonetheless, hazards may occur.

- ▶ Operate the machine only in compliance with the operation manual.
- ▶ During machine handling, observe the safety instructions and warning notices that precede each action.

All modifications and alterations to the product are reserved for persons authorised by HOBART.

2.3.2 Personnel qualification

- ▶ Observe the regulations on occupational health and safety.
- ▶ Carefully read through the Operation Manual before use.

ECOMAX 702**Safety instructions and regulations**

Activity	User group	Qualification/training
Installation	Qualified personnel	Hobart Service or an electrically qualified person trained by Hobart or a competent person acc. to the German technical regulations for occupational safety (TRBS 1203) trained by Hobart
	Trainees	Only under professional supervision and examination
Commissioning	Qualified personnel	Hobart Service or an electrically qualified person trained by Hobart or a competent person acc. to the German technical regulations for occupational safety (TRBS 1203) trained by Hobart
	Trainees	Only under professional supervision and examination
Work on electrical system	Qualified personnel	Hobart Service or an electrically qualified person trained by Hobart or a competent person acc. to the German technical regulations for occupational safety (TRBS 1203) trained by Hobart
Operation	Operating personnel and persons over the age of 14	Only under supervision and after instruction by the operator on the basis of the Operation Manual, instructions on dangers
	Handicapped individuals	The suitability must be assessed by the operator on an individual basis
	Persons up to the age of 13	Persons up to the age of 13 are not suited for machine operation
Maintenance, repair	Qualified personnel	Hobart Service or an electrically qualified person trained by Hobart or a competent person acc. to the German technical regulations for occupational safety (TRBS 1203) trained by Hobart
	Trainees	Only under professional supervision and examination

2.3.3 Product-specific hazards***Avoid body parts being crushed or knocked:***

- ▶ Observe the instructions on the packaging for storage, lifting or transporting.
- ▶ Covering the ventilation opening on the top of the machine may lead to the door opening suddenly during the washing procedure.

Avoid risk of explosion:

- ▶ Do not install machine in a potentially-explosive location.

Avoid electric shock, fire risk:

- ▶ Do not allow water to flow under live components.
 - Make sure the machine is correctly stored (see frost damage section 2.4).
 - Make sure that the machine does not overflow when being filled.
- ▶ Do not damage the connection cable while unpacking.
- ▶ Have the machine connected to the power supply by qualified personnel.
- ▶ Have all modifications to the machine carried out by qualified personnel.
- ▶ Have additional feed tanks mounted by qualified personnel.
- ▶ Do not operate the machine unsupervised.

Avoid fire risk:

- ▶ Do not allow water to flow under live components.

- Make sure the machine is correctly stored (see frost damage section 2.4).
- Make sure that the machine does not overflow when being filled.
- ▶ Have the machine connected to the power supply by qualified personnel.
- ▶ Have all modifications to the machine carried out by qualified personnel.

Avoid chemical burns, sensitisation of the skin, poisoning:

- ▶ Wear protective equipment (gloves, safety goggles, protective clothing) when handling chemicals.
- ▶ Use only suitable chemicals. Observe the manufacturer's data.
- ▶ Have chemical sensor system set by authorised trained service technicians.
- ▶ Do not open the machine during operation, wait for the program to finish.
- ▶ Disconnect the machine from the mains prior to cleaning.
- ▶ For cleaning, wear protective equipment (gloves, safety goggles, protective clothing) when touching parts contaminated by detergent.

Avoid burns, scalds (to the hands):

- ▶ Do not open the machine during operation or the evaporation phase, wait for the programme to finish. Otherwise, hot water could spray out.
- ▶ Disconnect the machine from the mains prior to cleaning.

Avoid slipping:

Moisture can build up on the floor around the machine.

- ▶ Provide a floor covering that does not pose a risk of slipping when wet.

Residues on the wash ware, hygiene regulations not maintained:

- ▶ Hygiene regulations must be observed and/or demonstrated in accordance with the national provisions.

2.3.4 Additional hazards

Potential hazards caused by operating resources to be used can be found in the enclosed safety datasheets. Workplaces must be signed accordingly.

2.4 Property damage

Avoid frost damage:

Temperatures below 0°C lead to functional damage.

- ▶ Before storing below 0°C, empty residual water in hoses, tank and boiler.
- ▶ Prior to restart, store the machine at room temperature (min. 15°C) for 24h.

Avoid water damage:

- ▶ Do not operate the machine without supervision.
- ▶ Close on-site shut-off valves at the end of operation.

3 Product description

3.1 Intended purpose

The machine is an item of technical equipment intended solely for commercial dishwashing.

The machine is designed solely for cleaning crockery (porcelain, glass, ceramic, temperature-resistant plastics or stainless steel or similar) from the food industry.

Not for washing:

ECOMAX 702

Controls

- Containers that do not come into contact with foodstuffs, such as ashtrays, electric appliances etc.
- Animals or textiles
- Foodstuffs intended for further consumption

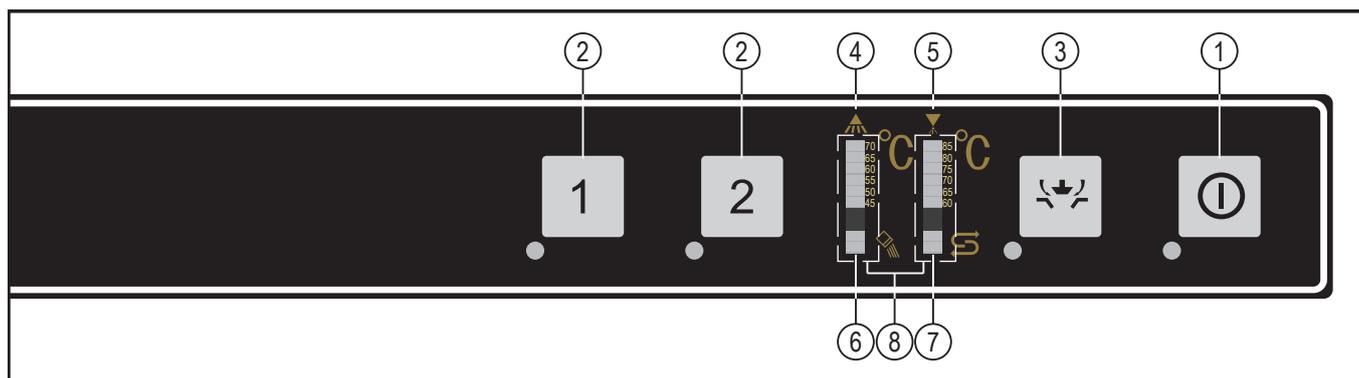
3.2 Designation

The rating plate is located on the front of the machine. If you have any questions regarding service and parts, quote the serial and DSN No.

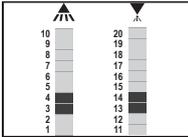
3.3 Technical specifications

Dimensions (H x W x D)	1,765 x 780 x 945 mm
Water consumption per rinse cycle	4.5 l
Flow pressure	0.5 – 10 bar
Cold or hot water connection	max. 60°C
Voltage	see rating plate
Total connected load	
Fuse protection	
Tank capacity (l)	80
Loading height	630 mm
Emission sound pressure level L_{pA} (measurement uncertainty $K_{pA} = 2.5$ dB)	67 db (A)
Weight	158 kg

4 Controls



①	ON/Escape key	Pressing this button switches the machine on. LED illuminates after being pressed. – LED flashing = machine being filled and heated. – LED permanently lit = machine is ready for operation. In case of operating error or faults, the machine can be switched off immediately without prior pump out by pressing this key. After switch off, however, the machine is not voltage free.
②	Program keys	Press these keys to choose between short program (1) and standard program (2). The corresponding LED illuminates.

③	Drain/OFF key	Pressing and holding (3 seconds) this key activates the automatic self-cleaning cycle and then switches off the machine automatically. On machines with drain pump, the tank is emptied. After switch off, however, the machine is not voltage free.
④	Temperature display, washing	
⑤	Temperature display, rinsing	
⑥	Salt deficiency display	Indicates regenerating salt deficiency in the water softener (if built-in).
⑦	Regeneration display	Water softener regeneration active. Program run time can extend.
⑧	Setting functions display	<p>The individual LEDs are also used for various settings and special functions.</p>  <p>Left display: LEDs 1 to 5 illuminate depending on the function selected. 1 = Detergent dosing time 2 = Rinse aid dosing time 3 = Hardness setting 4 = Hose fill, detergent 5 = Hose fill, rinse aid</p> <p>Right display: Indicates the set value.</p>

5 Installation

5.1 Personnel qualification

Installation must only be carried out by qualified personnel (see section 2.3.2).

5.2 Special safety instructions

⚠ WARNING!



Risk of electric shock, fire hazard

Water (frost damage, machine overflow) flowing over live components can cause injury from electric shock or fire.

- ▶ Do not allow water to flow under live components.
- ▶ Make sure the machine is correctly stored (see frost damage section 2.4).
- ▶ Make sure that the machine does not overflow when being filled.

⚠ CAUTION!



Risk of being crushed or knocked

When being lifted or transported, the machine can overturn or fall and cause injury.

- ▶ Observe the instructions on the packaging for storage, lifting or transporting.

⚠ WARNING!



Risk of explosion

Installing the machine in a potentially explosive location can cause explosion and serious injury from ejected parts.

- ▶ Do not install machine in a potentially-explosive location.

NOTICE!

Frost damage

Temperatures below 0°C during transport/storage cause function impairments.

- ▶ Prior to installation, store the machine at room temperature (min. 15°C) for 24h.

5.3 Transporting to the installation location

- ▶ If possible, transport the machine in its packaging and on the pallet.
- ▶ Use suitable transport means (elevating truck, crane etc.).
- ▶ If using a forklift, shim the machine with wooden trusses.

5.4 Removing the packaging

⚠ CAUTION!



Risk of electric shock, fire hazard

When the machine is unpacked, the connection cable can become damaged and cause injury from electric shock or fire.

- ▶ Do not damage the connection cable while unpacking the machine.
- ▶ Take cable measurement DGUV V3.

- ▶ Remove packaging materials and accessories from the machine.
- ▶ Inspect the machine for possible transport damage.

5.5 Installing the machine

⚠ WARNING!



Risk of electric shock, fire hazard

Water ingress can cause short circuit and mortal danger from electric shock and fire.

- ▶ As a protection against penetrating water, the rear side of the machine must be sealed.
- ▶ If this cannot be guaranteed, a back covering must be also ordered.

- ▶ Seal the machine against the wall, or attach the optionally-available back covering.
- ▶ Align machine horizontally by turning the adjusting feet using a spirit level.
- ▶ A clearance of 50 mm must always be left over the ventilation opening in the rear area of the top of the machine.

Installing the machine in the corner:

- ▶ Maintain a side wall clearance of 400 mm.

Installing the machine in a room:

- ▶ Attach the optionally-available back covering.

5.6 Connecting to the power supply

WARNING!



Risk of electric shock

Failure to connect properly to the power supply can cause mortal danger from electric shock.

- ▶ Have the machine connected to the power supply only by qualified personnel.

NOTE: To guarantee the electrical safety of the machine, it must be connected to a protective earthing equipment conductor installed as specified. In addition, the machine must be attached on site to the equipotential bonding connection. The connecting screw () provided for this purpose is located at the rear of the floor pan next to the cable bushing.

With frequency converter-controlled machines and the corresponding use of a residual current protective device (FI/RCD), this must be rated as type B (sensitive to alternating/direct currents).

These fundamental safety requirements and the proper design of the site indoor installation must be verified by a qualified electrician.

Hobart does not accept any liability for damage caused by improper installation! Any applicable site local installation instructions must be observed!

The mains cable must be connected via a cut-out device (main switch or accessible plug device).

The power supply must be consistent with the data on the rating plate.

- ▶ Modification to an alternative power supply is possible as per the variants on the circuit diagram.
- ▶ Fuses and cable cross section must be designed accordingly.

Zur Prüfung des korrekten Drehstromphasenanschlusses muss die Drehrichtung der Waschpumpe(n) geprüft werden.

- ▶ Kabelbinder - ca. 3 cm tief - durch das rückseitige Lüftungsgitter schieben.



- ▶ Kontrollieren ob das Lüfterrad entgegen dem Uhrzeigersinn (in Pfeilrichtung) dreht.
- ▶ Andernfalls zwei der drei Phasen am Zuleitungskabel gegeneinander vertauschen.

5.7 Connecting the water

NOTE: The machine must be operated with potable water.

- ▶ If possible, connect to warm water (max. 60°C).

Water hardness:

- max. 3 °d = 0.53 mmol/l

Flow pressure:

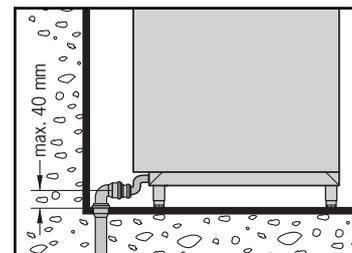
- 0.5 – 10 bar
- If the flow pressure is above 10 bar: provide pressure reducing valve.

- ▶ Connect the union nut "A" (3/4" thread) of the water supply hose to the site shut off valve.
- ▶ Do not kink or cut the water supply hose.
- ▶ Any required extension must be executed using a suitable pressure hose, e.g. 324088-1.

5.8 Connecting the drain

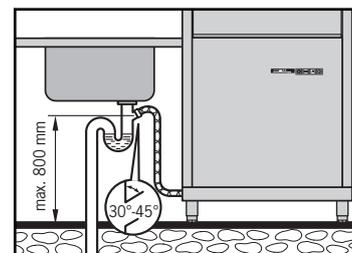
Machines without drain pump

- ▶ The drain connection must not be more than 40 mm above the ground.
- ▶ Do not kink drain hose.



Machines with drain pump

- ▶ The connection between machine and site drain must not exceed a max. height of 0.8 m.
- ▶ Do not kink or lay the drain hose loose on the ground.



5.9 Connecting the dispenser

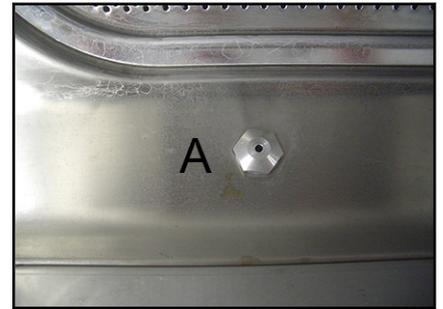
- ▶ Drain tank.
- ▶ Turn off the site main switch or remove the plug.
- ▶ Remove frontal covering.



Connecting the liquid dispenser:

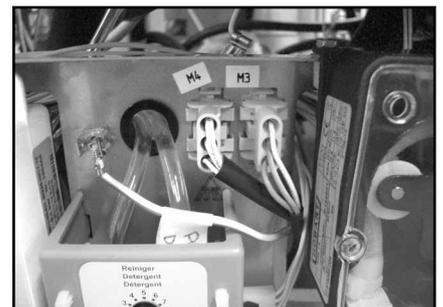
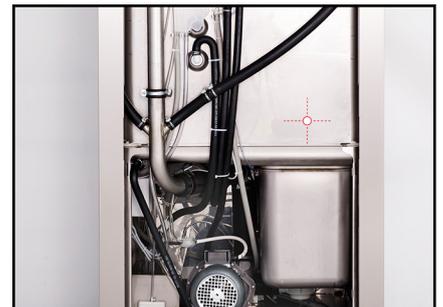
- ▶ A metering nipple is available on top of the boiler for dispensing rinse aid.

- ▶ For detergent dosing, connect the hose (PVC / Ø 6 mm outside × Ø 4 mm inside) between the pressure side of the dispenser and the metering nipple (A) on the wash tank, secure with hose clamp.
- ▶ Install dispenser or mount externally.



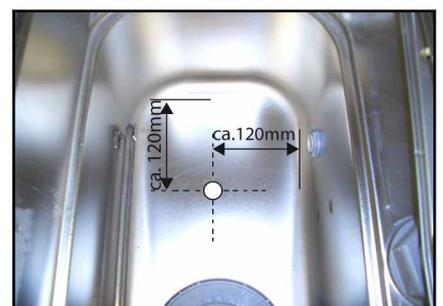
To connect a powder or solid detergent dispenser:

- ▶ Detach the back covering.
- ▶ Drill out the inner tank wall according to the required connection diameter.
- ▶ Screw the dosing connection tightly to the tank wall.
- ▶ Connect the plug of the cable harness to the dispenser (max. 100 VA).



Installing the connectivity probe:

- ▶ Conductivity probe should be installed at the flat part of tank bottom.
- ▶ Drill out the tank according to the probe diameter.



- ▶ Replace cover(s).

- ▶ Turn on site main switch or insert the plug.
- ▶ Set the dispenser and the sensor system.

6 Commissioning

6.1 Personnel qualification

Commissioning must only be carried out by qualified personnel (see section 5.1).

6.2 Special safety instructions

NOTE: Before commissioning the machine, the relevant electrical safety checks must be performed according to the locally applicable regulations!

6.3 Filling chemical hoses

NOTE: Only for installed dosing units



We recommend the use of HOBART Hyline detergent and rinse aid.

NOTE: Mixing chemicals in the hose when exchanging chemicals can lead to crystallisation and damage to the hoses and dosing units. This is prevented by intermediary rinsing with water (see section 6.3.1 and 6.3.2). Failure to comply with this information will invalidate the guarantee and product liability.

CAUTION!



Chemical burns, sensitisation of the skin, poisoning

The use of unsuitable chemicals can cause injury.

- ▶ Use only commercial detergent and rinse aid.
- ▶ Observe the manufacturer's application and safety instructions.

WARNING!



Chemical burns, sensitisation of the skin, poisoning

Incorrect handling of detergent or rinse aid can lead to serious injuries.

- ▶ Wear protective equipment (gloves, safety goggles, protective clothing) when handling chemicals.

6.3.1 Provisioning external chemical canisters

Preparing the detergent:

Suction height of dosing pump: max. 1.5 m.

- ▶ Place suction hose **without** colour marking at the suction valve down to the bottom of the external reservoir.

Preparing the rinse aid:

Suction height of dosing pump: max. 1.5 m.

- ▶ Place suction hose with **blue** marking at the suction valve down to the bottom of the external reservoir.

6.3.2 Filling the intake hoses

NOTE: Possible only when the machine is switched off.

- ▶ Open Door.
- ▶ Press the two PROGRAM keys at the same time.
 - ↳ Key LEDs illuminate.
 - ↳ In the display, LEDs 1 and 11-20 illuminate (depending on basic setting).
- ▶ Press PROGRAM key "1" repeatedly until LED 3 illuminates in the display.
- ▶ Close Door.
- ▶ Press PROGRAM key "1" again.
 - ↳ Display LED 4 illuminates.

Filling the cleaner hose:

- ▶ Press PROGRAM key "2" and hold down until the intake hose is visibly filled.
 - ↳ The hose is being filled.
 - ↳ Running light display LEDs 15-18.

Releasing the key interrupts the filling process.

Filling the rinse aid hose:

- ▶ Press program key "1" again.
 - ↳ Display LED 5 illuminates.
- ▶ Press PROGRAM key "2" and hold down until the intake hose is visibly filled.
 - ↳ The hose is being filled.
 - ↳ Running light display LEDs 15-18.

Releasing the key interrupts the filling process.

Aborting the hose filling process:

- ▶ Open Door or do not press any key for 30 seconds.

7 Operation

7.1 Personnel qualification

The machine must be operated by instructed personnel (see section 5.1).

7.2 Special safety instructions

⚠ WARNING!



Fire hazard

Malfunction or continuous operation of the machine can cause injuries due to fire.

- ▶ Do not operate the machine without supervision.

ECOMAX 702

Operation

⚠ CAUTION!



Chemical burns, sensitisation of the skin, poisoning, burning

If the Door is opened during operation, vapour can escape and/or wash water can spurt out and cause injury.

- ▶ Do not open the Door during operation, wait for the program to finish.

⚠ WARNING!



Burns, scalds to the hands

If the door is opened during the washing program, steam can escape and lead to serious injuries

- ▶ Do not open the door during washing program, wait for the cycle to finish.

⚠ WARNING!



Danger of slipping

Moisture can build up on the machine floor and cause slipping.

- ▶ Provide a floor covering that is guaranteed to be non-slip in case of moisture.

⚠ CAUTION!



Risk of being crushed or knocked

Covering the ventilation opening on the top of the machine may lead to the door opening suddenly during the washing procedure.

- ▶ Keep the ventilation opening clear

7.3 Preparations for washing

7.3.1 Preparing the machine

- ▶ Check correct position of wash/rinse arms and strainers.
- ▶ Open site shut-off valve.
- ▶ Turn on main switch or insert the plug.
- ▶ Check level of detergent and rinse aid containers.
- ▶ Close Door.
- ▶ Press the ON/OFF key .
 - ↳ Machine is switched on.
 - ↳ The tank is filled.

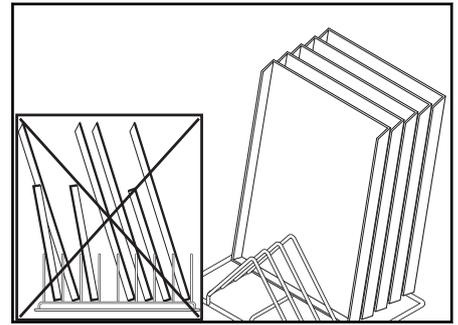
During the filling and heating processes, the key LED flashes. This process can take several minutes.

As soon as the LED is permanently lit, the machine is ready for operation.

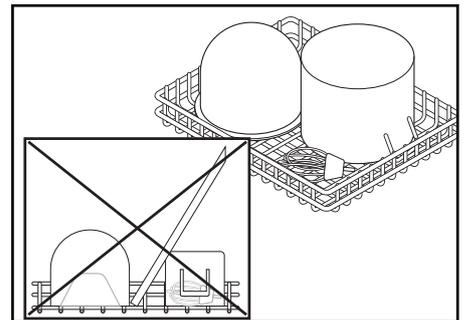
7.3.2 Preparing the washware

- ▶ Grobe Reste entfernen.
- ▶ Schaumbildende Stoffe (Eiweiß, Trennmittel, Blut u.s.w.) entfernen.
- ▶ Fest angebackenen Schmutz vorbehandeln (z.B. Einweichen).

- ▶ Bleche in die entsprechenden Einsatzgestelle setzen



- ▶ Schattenzonen und Abdeckungen vermeiden.
- ▶ Töpfe und Behälter mit der Öffnung nach unten in Körbe setzen.



- ▶ Leichtes Spülgut durch Aufsetzen eines Korbes oder des speziellen Beschwerungsrahmens sichern!

7.4 Using the deadbolt (optional)

The optional additional deadbolt automatically locks when the door is closed

- ▶ To open the door, either turn or slide the deadbolt up.



7.5 Washing

- ▶ Machines without dosing unit: Add detergent to the tank.
- ▶ Slide rack into the machine and close the door.
- ▶ Start either program 1 or 2 via the respective key.
 Key "1" = short program
 Key "2" = standard program
 - ↳ While the program is running, the program key LED flashes.
 - ↳ As soon as the LED is permanently lit, the rinsing process is complete.
- ▶ Open the door and remove the rack.
- ▶ Allow the wash ware enough time to dry.

7.6 Switch off machine

- ▶ Machines with stand pipe: Take stand pipe out of the tank.
- ▶ Close Door.
- ▶ Press the DRAIN key for three seconds.
 - ↳ During evacuation, the DRAIN key LED illuminates.



During the drain cycle, the machine interior is cleaned automatically. On machines with drain pump, the tank is emptied. At the end of the program, the machine switches off automatically. Then remove any food debris.

When the machine has been switched off:

- ▶ Turn off main switch or remove the plug.
- ▶ Close on-site shut-off valve.

7.7 Executing daily cleaning

WARNING!



Burns, scalds, chemical burns

During the cleaning process, general malfunctions with the washing, rinsing or cleaning pump or the tank heater, for example, can cause injuries from burns, scalds or chemical burns.

- ▶ The machine must be disconnected from the mains prior to cleaning.

NOTICE!

Property damage

The use of unsuitable agents can cause corrosion or damage to the surfaces.

- ▶ Do not use any chlorine-containing, acidic or metal-containing additives to clean the machine.
- ▶ Do not use metal sponges.

- ▶ Open the door.
- ▶ Remove sieves, remove and clean stand pipe if necessary. **Make sure that food debris does not enter pump intake!**
- ▶ Clean machine interior.
- ▶ Replace sieves and stand pipe if necessary.
- ▶ Leave the door open for ventilation.

7.8 Executing weekly cleaning

- ▶ Loosen screw or clip fastener on the wash and rinse arms. Remove the wash and rinse arms and clean..
- ▶ Reinsert wash and rinse arms.

8 Settings

The machine can be operated as soon as the commissioning procedure is complete.

The following settings can be individually set as required using the operator menu.

8.1 Opening the operator menu

NOTE: Possible only when the machine is switched off.

- ▶ Open Door.
- ▶ Press the two PROGRAM keys at the same time.
 - ↳ Key LEDs illuminate.
 - ↳ In the display , LEDs 1 and 11-20 illuminate (depending on basic setting).

8.2 Exiting the operator menu

- ▶ Open the Door and close it again, or do not press a button for 30 seconds!
 - ↳ The display switches off.
 - ↳ The configured settings will be saved.

8.3 Making the chemical settings (option)

CAUTION!



Chemical burns, sensitisation of the skin, poisoning

The use of unsuitable chemicals can cause injury.

- ▶ Use only commercial detergent and rinse aid.
- ▶ Observe the manufacturer's application and safety instructions.

Setting	Selection
Detergent dosing	One LED = approx. 3.5 s \approx 1 g/l Factory setting: LED 11-13 = 10.5 s \approx 3 g/l Possible range: 1–10 g/l
Rinse aid dosing	One LED = approx. 0.7 s \approx 0.1 g/l Factory setting: LED 11-15 = 3.5 s \approx 0.3 g/l Possible range: 0.1–1.0 g/l

Making the settings:

- ▶ Open the operator menu, see section 8.1.
 - ↳ Key LEDs illuminate.
 - ↳ In the display , LEDs 1 (left) and 11-20 (right) illuminate.
 - ↳ The right display shows the set value for the cleaner dosing time.

Setting the cleaner dosing quantity

- ▶ Press PROGRAM key "2" until the desired value is displayed.

Setting the rinse aid dosing quantity

- ▶ Press program key "1" again.
 - ↳ In the display , LEDs 1 and 2 (left) and 11-20 (right) illuminate.
 - ↳ The right display shows the set value of the rinse aid dosing time.
- ▶ Press PROGRAM key "2" until the desired value is displayed.

Problems and malfunctions

9 Problems and malfunctions

9.1 Remediating the problem

9.1.1 Poor wash result

Nature of the problem	Possible cause	Remedy
Washware not clean.	Wash arms stiff (you should be able to turn them easily by hand).	Remove wash arms and clean them thoroughly. Also check water outlet from machine to wash arms is clear.
	Wash arm nozzles are clogged (visual check).	Remove wash arms, remove cleaning caps and rinse wash arms thoroughly until all soiling is removed. Replace cleaning caps.
	Rinse nozzles clogged (usually by lime deposit).	Remove rinse arms and decalcify them in separate container. Check site softener system for function.
	Regeneration concentration is too low or too high.	Check detergent concentration setting.
	Sieves blocked.	Remove, empty and clean sieves.
	Drain clogged (water level above overflow pipe)	Clean the drain hose and check the siphon.
	Wrong program selection for heavily soiled wash ware.	Select program with longer wash cycle.
Washware does not dry properly.	Rinse aid dosing too low.	Increase concentration (see operating instructions).
	Washware still greasy.	Detergent concentration too low: increase (see operation instructions). Check if detergent is appropriate. If not, choose a stronger one. Drain contaminated water and refill machine. Clear washware more thoroughly beforehand.
	Rack is not suitable for type of dishes (sloping).	Use appropriate racks to create a sloping position which allows water to drain away from cavities.
	Washware remains in the machine too long at the end of rinse cycle.	Remove washware as soon as cycle is completed to enable it to dry.
Streaks and spots on washware.	Rinse aid concentration too high (stripe or bubble formation).	Reduce concentration (see operating instructions).
	Hard water or high mineral content.	Check water quality. Every local water works holds data on the composition of the water they supply and will provide these on request. Reference values: Ideal hard water value: 0 - 3 °d (total hardness). Ideal mineral content value: for glasses, max. conductivity 100 µS/cm, for dishes, still viable to max. 400 µS/cm.

Nature of the problem	Possible cause	Remedy
	Rack is not suitable for type of dishes (sloping).	Use appropriate racks to create a sloping position which allows water to drain away from cavities.
	Inadequate rinse aid dosing causes stains.	Increase rinse aid concentration (see operating instructions).
	Machines with integrated softener: use of wrong salt (e.g. tablets).	Do not use salt tablets.

9.1.2 Other problems

Nature of the problem	Potential causes	Remedy
Machine becomes significantly louder during the wash program.	Excessive foaming from unsuitable detergent or rinse aid	Use suitable detergent and rise aid.
	Excessive foaming due from foaming substances (protein, parting agents, etc.)	Preliminary clean the wash ware thoroughly.

9.2 Malfunctions

Nature of the problem	Potential causes	Remedy
Machine switches off suddenly during operation.	Machine coupled to a maximum system or locked against other current consumers.	Have machine connected separately (electrician!).
	A site fuse has tripped.	Check site fuses.
	Temperature sensor/pressure transmitter, boiler or tank defective.	Contact your Service Partner.
All 4 key LEDs flash.	Controller faulty	Contact your Service Partner.

10 Maintenance

- In order to maintain the warranty, as well as a permanently safe, efficient, and trouble-free operation of the machine(s), the required maintenance must be carried out by authorized service technicians. We therefore recommend the conclusion of an inspection and maintenance contract, which guarantees qualified support by specially trained service technicians according to a time schedule based on the operating conditions. Genuine spare parts must be used for repairs and wearing part replacements. Wearing parts include dosing hoses, rinse arm bearings, etc. In Germany, your HOBART machines are governed by the Ordinance on Indus-

ECOMAX 702

Disposal

trial Health and Safety and must be inspected by a qualified electrician in accordance with the intervals specified by the Institute for Work and Health of the German Social Accident Insurance [DGUV V3 (BGV A3)].

11 Disposal



The machine operator is responsible for disposing of the machine and its operating materials correctly and in accordance with environmental regulations. Both national and local legal provisions and regulations must be observed!

With respect to fluorine-containing coolants in machines with heat pumps, the requirements of Regulation (EC) No. 517/2014 and supplementary national legislation must be observed in Europe.

We recommend assigning a specialist company for disposal. Alternatively, Hobart can take back the machine and its operating materials.

12 Product disclaimer

Installations and repairs carried out by non-authorised technicians or using non-genuine spare parts, and any technical alterations to the machine not approved by the manufacturer will invalidate the manufacturer's warranty and product liability.

HOBART reserves the right to make changes or improvements to its products without prior notice.

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13 Conformity



Original

EG-Konformitätserklärung

Declaration of Conformity / Déclaration de Conformité / Declaración de Conformidad / Dichiarazione di conformità / Conformiteitsverklaring / Deklaracja zgodności / Декларация соответствия / Uygunluk beyanı / Deklaracija o skladnosti / Izjava o skladnosti / Declaração de Conformidade / Prohlášení o shodě

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.
This declaration of conformity is issued under the sole responsibility of the manufacturer.
La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.
La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante.
La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.
Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant.
Niniejsza deklaracja zgodności wydana zostaje na wyłączną odpowiedzialność producenta.
Эта декларация соответствия выдается под исключительную ответственность производителя.
Bu uygunluk beyanı, tamamen üreticinin sorumluluğunda alında düzenlenmiştir.
Ova izjava o skladnosti izdaje se na isključivu odgovornost proizvođača.
Ta izjava o skladnosti je izdana na lastno odgovornost proizvajalca.
A presente declaração de conformidade é emitida sob a exclusiva responsabilidade do fabricante.
Toto prohlášení o shodě se vydává na výhradní odpovědnost výrobce.

Maschine: Universalspülmaschine
Machine: Utensil - Washer
Machine: Lave ustensiles
Máquina: Lava utensílios
Macchina: Lavautensili
Machine: Gereedschappen wasmachine
Urządzenie: Zmywarka do garnków i przyborów kuchennych
Машина: Универсальная посудомоечная машина
Makine: Kazan yıkama
Stroj: Perilica snopg posuđa
Stroj: Univerzalni pomivalni stroj
Máquina: Máquina lava-loiça universal
Stroj: Univerzální myčka

Hersteller / Dokumentationsbevollmächtigter: HOBART GMBH / Verena Wiedenhöfer
Manufacturer / authorized to compile the technical file: Robert-Bosch-Straße 17
Fabricant / autorisée à constituer le dossier technique: 77656 Offenburg / Germany
Fabricante / autorizado para unificar la información técnica:
Fabbricante / Responsabile della documentazione:
Fabrikant / Geautoriseerd om de technische documentatie samen te stellen:
Producent / autoryzowany przedstawiciel:
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Üretici / Dokümantasyon yetkilisi:
Proizvođač / ovlašten za sastavljanje tehničkog spisa:
Proizvajalec / pooblaščen za dokumentacijo:
Fabricante / Responsável pela documentação:
Výrobce / osoba zplnomocnená sestavením dokumentace:

Type: Ecomax 702 - Serie **Design State:** U-15-01 **Serial No.:** 86 56 XXXXX

Hiermit bestätigen wir, dass die genannte Maschine entsprechend den nachfolgend aufgeführten Normen gefertigt und geprüft worden ist.

Herewith our confirmation that the named machine has been manufactured and tested in accordance with the following standards.
Par la présente, nous déclarons que la machine citée ci-dessus a été fabriquée et testée en conformité aux normes.
Por la siguiente confirmamos que la máquina mencionada ha sido fabricada conforme a las siguientes normas.
Con la presente confirmamos que la macchina indicata è stata costruita in conformità alle norme di seguito riportate.
Hierbij bevestigen wij dat de genoemde machine is gefabriceerd en getest volgens de hiervolgende voorwaarden.
Niniejszym deklarujemy, że wymieniony produkt spełnia wymogi następujących norm.
Настоящим мы подтверждаем, что указанная машина изготовлена в соответствии с приведенными ниже нормами.
İbni belge ile belirttiğimiz makinenin aşağıda listelenen normlar doğrultusunda hazırlanmış beyan ederiz.
Ovimе потврдјујемо да је горе наведени stroj произведен и тестиран суkladно сједједим стандардима.
S temi izjavljamo, da je naveden stroj izdelan in preizkušen v skladu s spodaj navedenimi standardi.
Com a presente declaramos que a máquina supracitada foi construída e inspecionada segundo as normas referidas a seguir.
Tímto potvrzujeme, že uvedený stroj byl vyroben a zkontrolován podle následujících norem.

DIN SPEC 10534:2019-02
EN 55014-1:2017 + A11:2020
EN 55014-2:2015
EN 60335-2-58:2005 + Corr. 2007 + A1:2008 + A11:2010 + A2:2015 + A12:2016
EN IEC 61000-6-2:2019
EN 61000-6-4:2007 + A1:2011
EN ISO 12100:2010
EN IEC 63000:2018

Die Maschine stimmt mit den folgenden Richtlinien überein:

The product complies with the following directives:
La machine est conforme aux directives fixées:
La máquina armoniza con las siguientes Directivas:
La macchina è conforme alle direttive seguenti:
Het product voldoet aan de volgende richtlijnen:
Urządzenie spełnia wymogi następujących dyrektyw:
Машина соответствует требованиям следующих директив:
Makine, aşağıdaki yönetmelikler ile uyumludur:
Ovaj stroj je u skladu sa slijedećim direktivama:
Stroj ustreza zahtevam sledećih direktiv:
A máquina está em conformidade com as seguintes diretivas:
Stroj je v souladu s ustanoveními následujících směrníc:

2006/42/EG (Maschinenrichtlinie, Machinery-Directive)
2014/30/EU (EMV-Richtlinie, EMC-Directive)
2011/65/EU (RoHS Richtlinie, RoHS Directive)

Die Schutzziele der Niederspannungsrichtlinie 2014/35/EU wurden gemäß Anhang I Nr. 1.5.1 der Maschinenrichtlinie 2006/42/EG eingehalten.

Protective Goals of the Low Voltage Directive 2014/35/EU are in compliance with Appendix I No 1.5.1 of the Machinery Directive 2006/42/EC.
Les objectifs de protection de la directive sur les basses tensions 2014/35/UE ont été respectés conforme à l'annexe I Nr. 1.5.1 der de la directive relative aux machines 2006/42/EC.
Directiva de protecciones de baja tensión 2014/35/UE estan en acuerdo con el apéndice I No 1.5.1. de la directiva de maquinaria 2006/42/EC.
Gli obiettivi di protezione della direttiva per basse tensioni 2014/35/UE è stata rispettata secondo allegato I n. 1.5.1 della Direttiva per macchine 2006/42/EC.
De veiligheidsdoelstellingen van de laagspanningsrichtlijn 2014/35/EU zijn nageleefd in overeenstemming met nr. 1.5.1 van bijlage I van de machine richtlijn 2006/42/EC.
Produkt spełnia wymogi bezpieczeństwa dyrektywy niskonapięciowej 2014/35/UE, zgodnie z załącznikiem I nr. 1.5.1 dyrektywy maszynowej 2006/42/WE.
Цели, охраняемые Директивой по высоковольтному оборудованию 2014/35/EU, соблюдены в соответствии с приложением № 1.5.1 Директивы по машинному оборудованию 2006/42/EC.
Alçak Gerilim Yönetmeliği 2014/35/EU'nin koruyucu hedeflerini, Makine Yönetmeliği 2006/42/EC, ek 1 no. 1.5.1'e göre uyulmuştur.
Sigurnosni ciljevi direktive o niskom naponu 2014/35/EU udovoljavaju dodatku I br. 1.5.1. Direktive o strojevima 2006/42/EC.
Upoštevali smo zaštitni cilji Direktive o niski napetosti 2014/35/EU u skladu s prilogom I, št. 1.5.1 Direktive o strojih 2006/42/EC.
Os objetivos de proteção da Diretiva de Baixa Tensão 2014/35/UE foram cumpridos de acordo com o Apêndice I, n.º 1.5.1 da Diretiva de Máquinas 2006/42/EC.
Cile ochrany die niskonapětové směrnice 2014/35/EU byly splněny dle přílohy I č. 1.5.1 směrnice o strojních zařízeních 2006/42/ES.

Bestätigt durch:
Confirmed by:

Offenburg, 30.03.2021

ppa.

Harald Disch
Direktor Produktentwicklung Europa
Director Warewash Engineering Europe



Original

Declaration of Conformity

Authorized to compile the technical file:

HOBART UK
Southgate Way, Orton Southgate,
Peterborough, PE2 6GN, UK

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Machine: *Utensil - Washer*

Trade mark: ecomax by HOBART

Type: Ecomax 702 - Series Design State: U-15-01 Serial No.: 86 56 XXXXX

Herewith our confirmation that the named machine has been manufactured and tested in accordance with the following designated standards.

- DIN SPEC 10534:2019-02
- BS EN 55014-1:2017+A11:2020
- BS EN 55014-2:2015
- BS EN 60335-2-58:2005+A12:2016
- BS EN IEC 61000-6-2:2019
- BS EN IEC 61000-6-4:2019
- BS EN ISO 12100:2010
- BS EN IEC 63000:2018

The product complies with the following regulations:

- SI 2008/1597 (The Supply of Machinery (Safety) Regulations 2008)
- SI 2016/1091 (The Electromagnetic Compatibility Regulations 2016)
- SI 2012/3032 (The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012)

Protective Goals of the Electrical Equipment (Safety) Regulations 2016 (SI 2016/1101) are in compliance with Appendix I No 1.5.1 of the Supply of Machinery (Safety) Regulations 2008 (SI 2008/1597).

Confirmed by: Offenburg, 01.07.2021

ppa.

Harald Disch
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