

Warewashing



Rack-type dishwasher **Ecomax Plus**

C815

Installation and Operation Manual

(Original Operation Manual)

EN

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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:







- Operation Manual




For the specialised tradesman or service technician:

- Installation Instructions
- Floor plan
- Wiring Diagram
- Service Manual
- Troubleshooting List
- Maintenance schedule
- Spare Parts Catalogue

1.3 Representation convention

1.3.1 Symbols used

Symbol	Meaning
	Warning of hazardous electrical voltage
	Beware of explosion
	Warning of risk of crushing
	Beware of entanglement
	Beware of hazardous substances
	Beware of hand injuries

Symbol	Meaning
	Beware of slipping
	Beware of hazard area
	Useful additional information and tips

1.3.2 Representation in the text

Representation	Meaning
NOTE	Important information on machine operation, not a warning notice
▶	Step
↳	Outcome/result
–	Listing 1st level
•	Listing 2nd level

2 Safety instructions and regulations





2.1 Safety instructions and warning notices

- ▶ During machine operation, observe the general safety instructions and warning notices that precede each action.

2.1.1 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

2.1.2 Layout of warning notices

Warning notices are depicted with warning symbols and signal word in the corresponding safety colours.

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Safety instructions and regulations

⚠ CAUTION!



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

2.2 Basic safety instructions

2.2.1 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.

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

2.2.2 Personnel qualification

- ▶ Observe the regulations on occupational health and safety. Wear personal protective equipment.
- ▶ Carefully read through the Installation and Operation Manual before use.

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
Work on refrigeration systems	Qualified personnel	Category 1 expert certified in accordance with: <ul style="list-style-type: none"> - Ordinance (EU) No. 517/2014 Article 10 - Implementing regulation (EU) 2015/2067 - German Chemicals Climate Protection Ordinance §5
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

Activity	User group	Qualification/training
	Trainees	Only under professional supervision and examination

2.2.3 Product-specific hazards

Avoid body parts being crushed or knocked:

- ▶ Observe the instructions on the packaging for storage, lifting or transporting.
- ▶ Transport is reserved for certified and trained personnel.
- ▶ Only certified qualified personnel are permitted to install the machine, assemble the modules, tension the conveyor belt and connect the exhaust pipework.
- ▶ Ensure that the operators wear tight-fitting clothing.
- ▶ Do not reach into the conveyor system during operation.
- ▶ Carefully remove the wash arms when cleaning the machine.

Risk of body parts being cut:

- ▶ Wear personal protective equipment when removing the packing bands, unpacking the modules and tensioning the conveyor belt.
- ▶ Only certified, qualified personnel are permitted to connect the exhaust pipework and set the exhaust system.
- ▶ Wear protective gloves when cleaning the machine.
- ▶ Only certified personnel are permitted to clean the exhaust condenser.

Avoid risk of explosion:

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

Avoid electric shock:

- ▶ Do not allow water to flow over live components.
 - Make sure the machine is correctly stored (see frost damage section 2.3).
 - Do not spray the outside of the machine with a water hose or high-pressure cleaner.
- ▶ Have the machine connected to the power supply by qualified personnel.
- ▶ Have the booster and the fill booster initially filled and the motors checked only by certified, qualified personnel and in accordance with the operation instructions.
- ▶ Have wearing or faulty parts replaced only by certified, qualified personnel.

Avoid fire risk:

- ▶ Do not allow water to flow over live components.
 - Make sure the machine is correctly stored (see frost damage section 2.3).
 - Do not spray the outside of the machine with a water hose or high-pressure cleaner.
- ▶ Have the machine connected to the power supply only by qualified personnel.
- ▶ Have all modifications to the machine, repairs and maintenance carried out only 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.
- ▶ Do not open the door during operation.
- ▶ Disconnect the machine from the mains prior to cleaning.

Avoid risk of falling:

- ▶ Do not stand on the machine roof when connecting the exhaust pipework.

Avoid slipping:

Moisture can build up on the machine floor.

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

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Safety instructions and regulations

Residues on the wash ware, hygiene regulations not maintained:

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

2.2.4 Additional hazards

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

2.3 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.

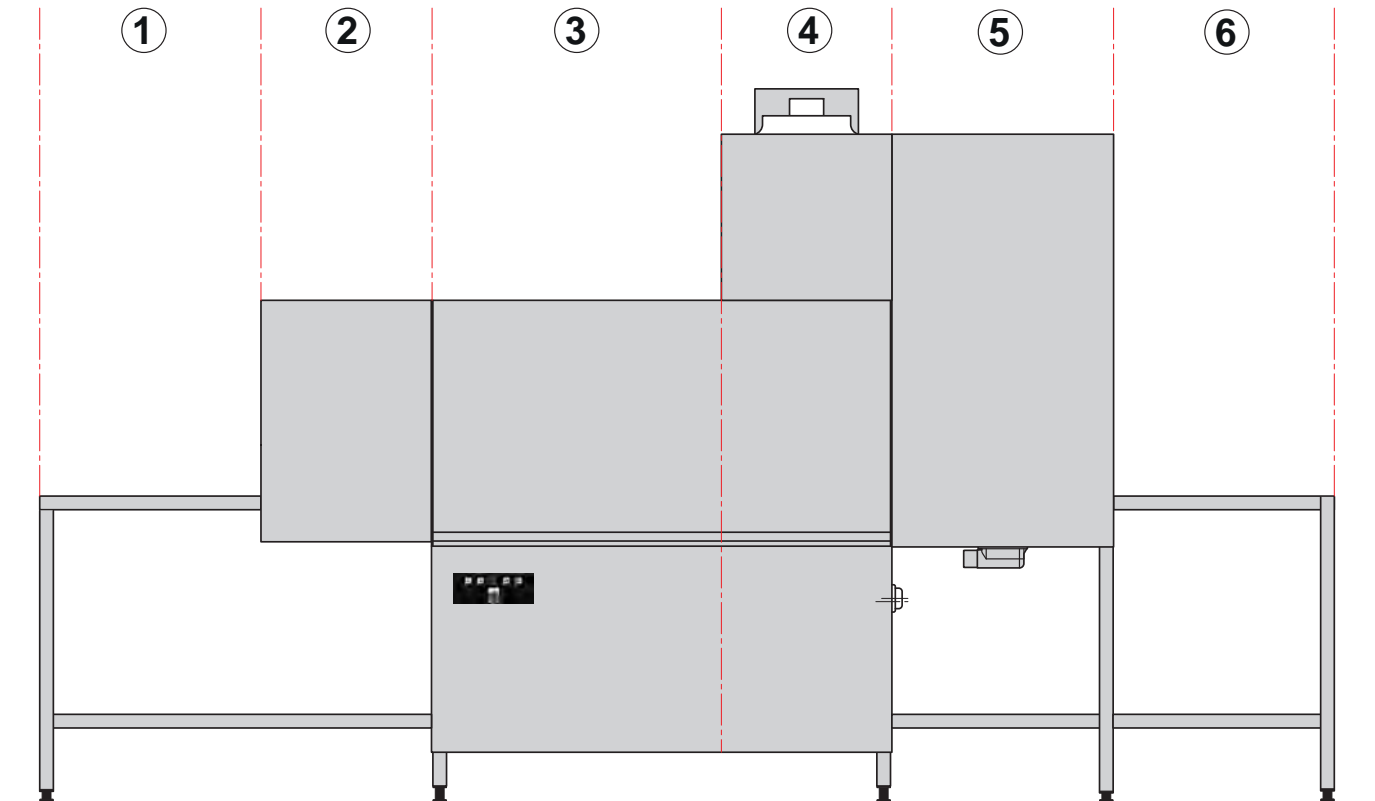
Avoid water damage:

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

3 Product description

3.1 General view and elements

Example: Model E-A-D

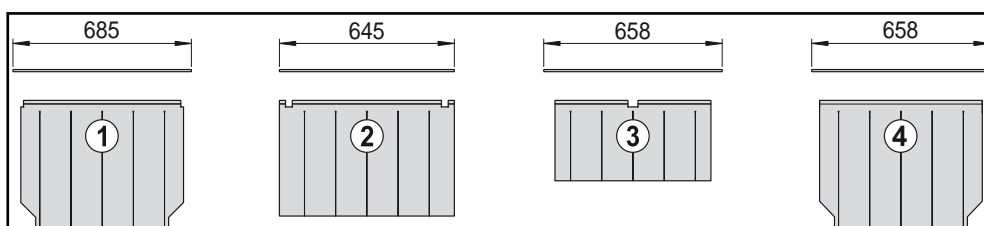


- | | |
|------------|----------|
| ① Table | ④ Rinse |
| ② Pre-wash | ⑤ Drying |
| ③ Wash | ⑥ Table |

3.1.1 Curtain arrangement

NOTE: Illustration applies to left/right running direction. The curtain arrangement is reversed for right/left running direction.

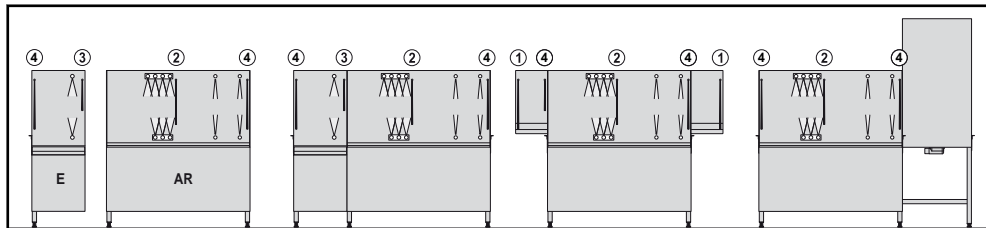
Curtain types



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Product description

Module variants



3.2 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:

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

3.3 Designation

The rating plate is located on the control box and contains the following information: model, serial number, date of manufacture, country of manufacture, voltage, connection rating, design-state number and CE mark.

3.4 Technical specifications

See separate floor plan.

Noise emission:

Workplace-related emission value:

Emission sound pressure level $L_{pA} \leq 73.0$ dB (A)

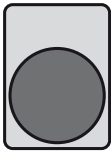
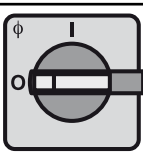
Measurement uncertainty $K_{pA} = 2.5$ dB

3.5 Operating temperatures

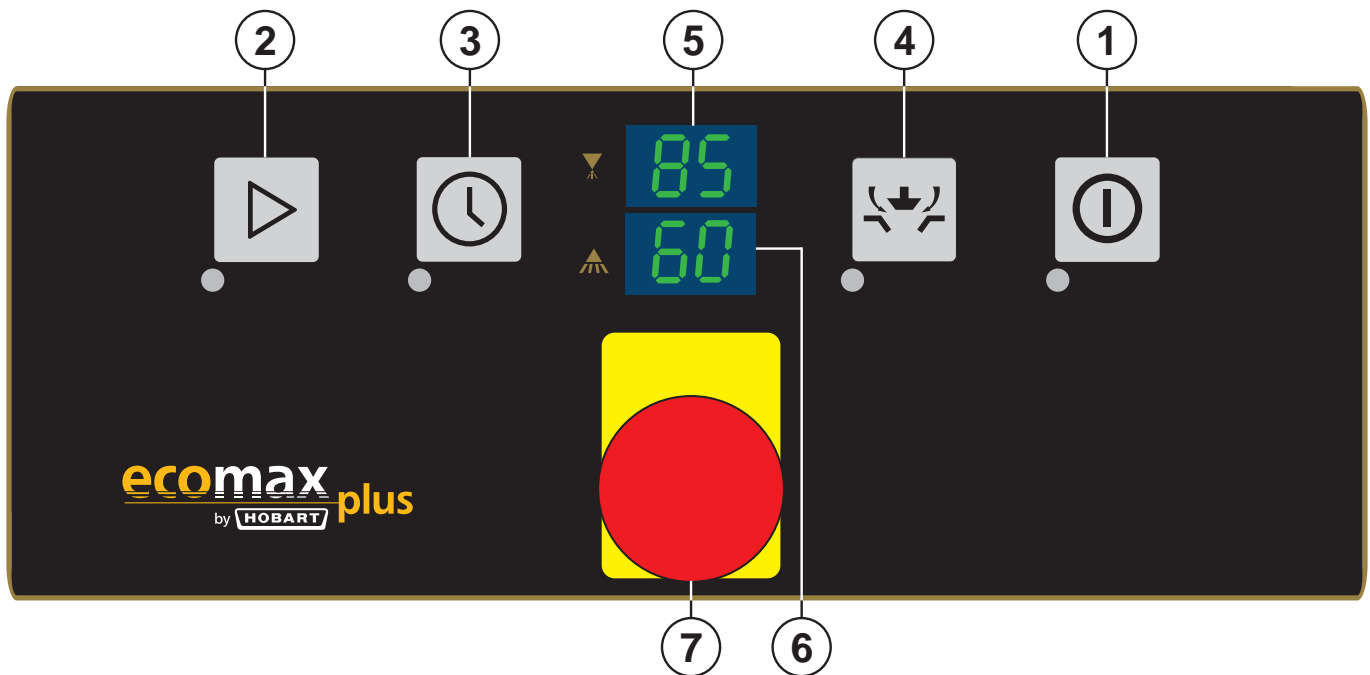
Prewash tank	45 – 55°C
Main wash tank	min. 60°C
Pumped rinse	60 – 65°C
Fresh water rinse	80 – 85°C

4 Controls

4.1 Main switch and button

	<p>EMERGENCY STOP button The machine has been shutdown, but is not voltage free. Must be unlocked for operation.</p>
	<p>Main switch For operation, must be set to position I, for repair and maintenance work to position 0.</p>

4.2 Control panel



Item	Title	Meaning
①	ON/OFF button	Pressing this button (> 3 seconds) switches the machine on or off. In case of operating error or faults, the machine can be switched off immediately without prior draining by pressing this button. After switch off, however, the machine is not voltage free.
②	Programme start key 1	Pressing this button switches the conveyor on. Washing, rinsing and drying start. Conveyor speed slow. Pressing the button again switches the conveyor off.
③	Programme start key 2	Pressing this button switches the conveyor on. Washing, rinsing and drying start. Conveyor speed fast. Pressing the button again switches the conveyor off.

Item	Title	Meaning
④	Drain (empty) button	Pressing and holding this button for > 3 seconds drains the machine. A washing or filling programme that may be active is aborted. Then the machine switches OFF automatically The machine is not voltage-free after being switched off!
⑤	Temperature display, rinsing	Indicates the current temperature of the fresh water rinse.
⑥	Temperature display, washing	Indicates the current temperature of the wash tank.
⑦	EMERGENCY STOP button	Machine is completely switched off. Must be unlocked for operation.

5 Installation

5.1 Personnel qualification

Installation must only be carried out by qualified personnel (see section 2.2.2).

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 2.3).
- ▶ Make sure that the machine does not overflow when being filled.

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

WARNING!



Risk of being crushed or knocked

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

- ▶ The machine and packages must be secured against slipping on the means of transport.
- ▶ Observe the instructions on the packaging for storage, lifting or transporting.
- ▶ Have the machine transported only by certified and trained personnel.

- ▶ If possible in its packing and on the skid.
- ▶ If a forklift is used, put a wooden frame under the machine.
- ▶ Use suitable transport means (elevating truck, crane etc.).
- ▶ Push on rollers.
- ▶ Avoid damage to floors and doors.
- ▶ Avoid damage to the machine.

5.4 Removing the packaging

CAUTION!



Risk of being cut

Removing the packing bands can cause cut injuries. When unpacking the modules, the sharp edges of the sheet parts can cause cut injuries.

- ▶ Wear personal protective equipment.

- ▶ Cut off packing bands.
- ▶ Remove outside carton.
- ▶ Remove skid.
- ▶ Remove packing materials and accessories from the machine.
- ▶ Inspect the machine for possible transport damage.

5.5 Installing the machine

CAUTION!



Risk of being crushed

Body parts can be crushed while the machine is being set down.

- ▶ Have the machine installed only by certified, qualified personnel.
- ▶ Wear protective gloves.

NOTE: If the machine is delivered in separate modules, align the largest machine part at the installation location first (see also 5.6).

- ▶ Align the machine according to the installation plan.
- ▶ Observe wall clearances according to the installation plan.
- ▶ Align machine by turning the adjusting feet according to the height of the adjacent tables, conveyors, etc.
- ▶ Level out any unevenness in the floor.
- ▶ Distribute machine weight equally onto all feet.

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Installation

5.6 Assembly of modules

⚠ WARNING!



Risk of being crushed or knocked

When assembling modules, raised machine parts can overturn or fall and cause serious injuries.

- ▶ Have the modules assembled only by certified, qualified personnel.
- ▶ Wear personal protective equipment.

⚠ CAUTION!



Risk of being cut

When assembling modules, sharp edges on sheet parts can cause cut injuries.

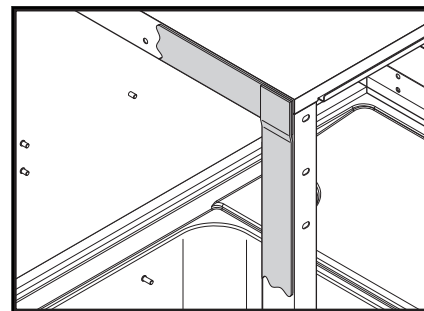
- ▶ Have the modules assembled only by certified, qualified personnel.
- ▶ Wear protective gloves.

- ▶ Remove covers.

Affixing sealing tape:

Remove any old seals.

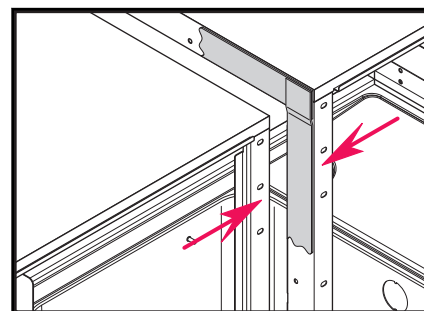
- ▶ Affix sealing strip no. 168 834-14 all the way around one of the two contact surfaces.



- ▶ Allow the strip ends to overlap in the corners.

Adding next modules:

- ▶ Level the height (see 5.5).
- ▶ Connect modules (use screws SK M6 x 12, washers, spring rings and nuts supplied).

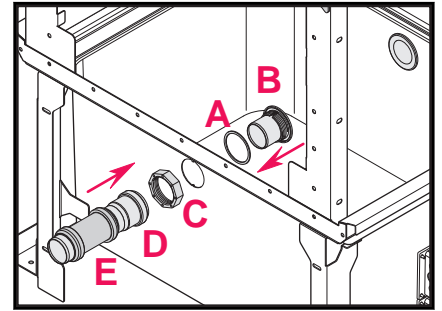


- ▶ Cut off protruding sealing tape with knife.
- ▶ Connect the drain pipes.

Connecting wash tanks:

- ▶ **Install overflows. :**

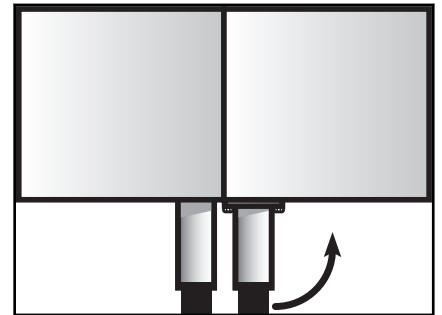
- ▶ Set sealing ring (A) on the overflow pipe (B).



- ▶ Put the overflow pipe (B) from the inside of the tank through the pre-punched hole and tighten it with the nut (C).
- ▶ Push coupling (E) over pipe (D). Attach the pipe to the overflow (B) and connect with the overflow pipe of the opposite wash tank.

Remove transport feet (if present):

- ▶ Unscrew transport feet.



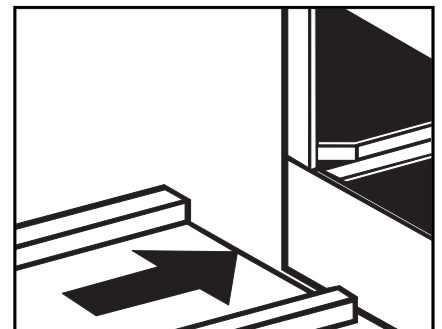
5.7 Attach electrical consumers

NOTE: Follow the wiring diagram and the labels on wires and terminals.

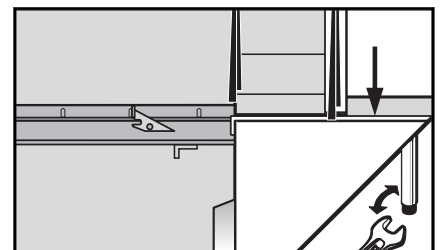
- ▶ Unroll cable bundles and draw through the front cable channel.
- ▶ Screw the cables to the connection terminals of the consumers.

5.8 Tables and accessories

- ▶ Seal screw holes.



- ▶ Position the machine on a slight incline (by adjusting the feet if necessary).



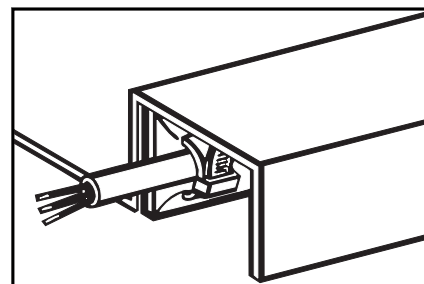
- ▶ Make sure that the bearing surface of the rack on the table or roller conveyor coincides with the bearing surface on the machine.

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Installation

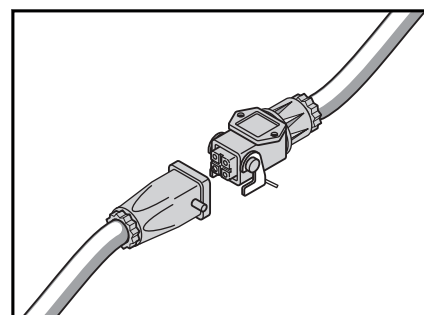
Table limit switch:

- ▶ Protect the cable from the limit switch to the control cabinet.



Tables on castors:

- ▶ Close the connector of the limit switch and secure with clamps.



- ▶ Create equipotential bonding between swivel table and machine.

5.9 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 connected on site to the equipotential bonding connection. The connecting screw () provided for this purpose is located on the floor of the base frame below the cable inlet.

These fundamental safety requirements and the professional design of the on-site installation must be verified by a qualified electrician.

Hobart does not accept any liability for damage caused by improper installation! Any applicable 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.

- ▶ Open the control box and take out the wiring diagram from the inside of the door.
- ▶ Fuses and cable cross section must be designed accordingly.
- ▶ Draw mains cable (H07-RN-F) through the cable gland.
- ▶ Connect wires to main terminals or to main switch (if built-in).
- ▶ Tighten all terminal screws in the control box.
- ▶ Tighten cable gland.

5.10 Connecting the water

NOTE: The machine must be operated with potable water. For water with an extremely high mineral content, an external demineralisation unit is recommended.

Any applicable local installation instructions must be observed!

- ▶ Connect water supply and drain pipes according to installation plan.

Line strainer and air gap are fitted to the machine as standard.

Water hardness:

- Fresh water rinse: max. 3 °d = 0.5 mmol/l; 80 – 120 µs/cm
- Tank filling: max. 3° d = 0.5 mmol/l.; 150 – 400 µs/cm

Flow pressure:

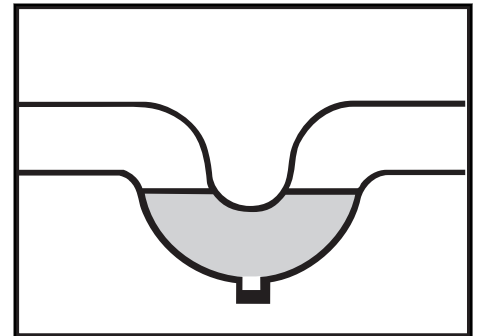
- Fresh water rinse: 1.5 – 6 bar at 500 l/h
- Tank filling: 1.5 – 6 bar min. 1200 l/h
- If the flow pressure is above 6 bar: provide pressure reducing valve.

Temperature:

- Fresh water rinse without the CLIMATE option: 12 – 60 °C;
- Fresh water rinse with CLIMATE: 12 - 20°C;
- Tank filling: 50 – 60 °C
- ▶ Connect the machine (via 3/4" external thread) to site water supply.
- ▶ Provide site shut-off valve.

5.11 Connecting the drain

- ▶ Connect central drain DN 50 (HT pipe) to site wastewater system. Any applicable local installation instructions must be observed!



- ▶ Connect drip water drains on the table modules, sinks and other adjacent elements to the site waste water system.
- ▶ Equip all drains, either individually or in groups, with odour traps (siphon).
- ▶ Fit bottom drain of scullery with siphon.

5.12 Connecting the exhaust

NOTE: Applies only for machines requiring an exhaust air connection. All measures must be agreed in consultation with the responsible ventilation engineer. Observe the locally-applicable provisions (Germany e.g. VDI 2052). The notes on the connection diagram must be observed.

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Installation

⚠ CAUTION!



Risk of falling

Risk of falling when stood connecting the exhaust pipework to the machine roof. The machine roof can deform or buckle.

- ▶ Do not stand on the machine roof.

⚠ CAUTION!



Chemical burns, sensitisation of the skin, poisoning, burning

The air escaping from the machine can contain low quantities of aerosol and, in this case, must be purged through suitable suction systems.

⚠ CAUTION!



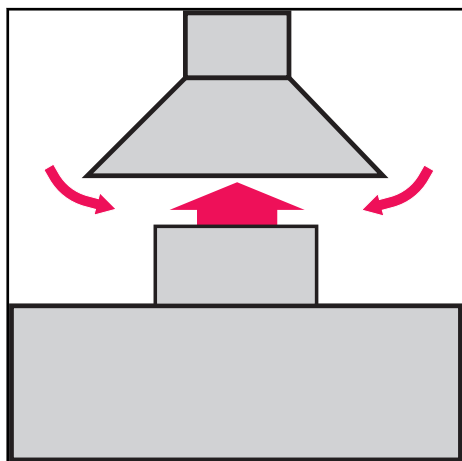
Risk of being cut or crushed

Rotating parts can cause crushing or cut injuries when connecting the exhaust pipework.

- ▶ Have exhaust pipework connected only by certified, qualified personnel.

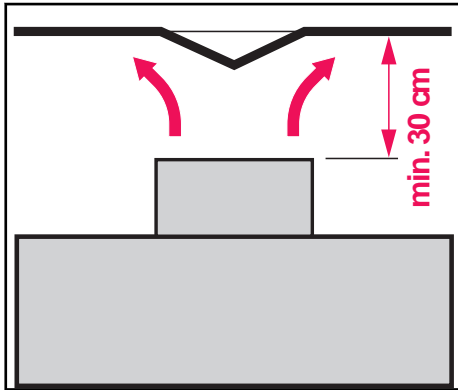
5.12.1 Connect exhaust to the ventilation system

- ▶ To prevent corrosion damage, execute exhaust channel in plastic or CrNi.
- ▶ Leave a clearance (approx. 10 cm) between machine and site exhaust channel.



- ▶ Provide an exhaust fan in the exhaust system. The fan installed in the machine has no compression.
- ▶ The air volume to be evacuated from site has to be greater than the exhaust volume of the machine (see installation diagram).
- ▶ For outdoor pipework: Provide insulation and automatically self-closing anti-freeze shutter.

5.12.2 Connect exhaust air free in the room



NOTE: Provide adequate room ventilation. Observe the locally-applicable provisions (Germany e.g. VDI 2052).

NOTICE!

Property damage

Escaping waste steam can cause damage due to condensate formation.

- ▶ Ensure that waste steam is swirled with the room air immediately after exiting the machine.

5.13 Connect detergent and rinse aid

⚠ WARNING!



Risk of electric shock

Mounting the additional feed tanks, touching live parts (boiler heater, tank heating, pumps) when working under voltage.

- ▶ Have additional dosing tanks mounted by qualified personnel.

⚠ 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.

NOTICE!

Property damage

The insulated covers can be damaged when if the dispenser is mounted on the machine itself.

- ▶ Do not fasten the detergent and rinse aid container and their controls to the machine itself.

Normally, dispensers and their control are delivered and installed by the product suppliers.

NOTE: Observe separate installation instructions.

Mounting the dispensers and their controls:

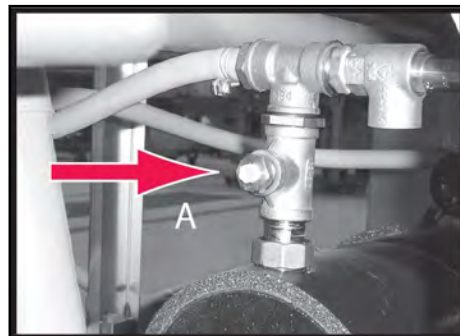
- ▶ Install dispensers, containers and controls in such a way that they are easily accessible, easily visible, easy to service and do not disrupt machine operation.

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Commissioning

Terminals for the electrical power supply (230 V~) are located in the control box (see wiring diagram).

- ▶ Connect the rinse aid above the continuous-flow heater (A) to the rinse water line (R 1/8" internal).



6 Commissioning

6.1 Personnel qualification

Commissioning must only be carried out by qualified personnel (see section 2.2.2).

6.2 Special safety instructions

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

WARNING!



Risk of electric shock

When initially filling the boiler and the fill boiler and checking the motors, contact with live components can lead to serious injury.

- ▶ Have these activities carried out only by certified, qualified personnel and in accordance with the operation manual.
- ▶ Wear personal protective equipment (protective gloves, safety goggles).

6.3 Preparing the machine

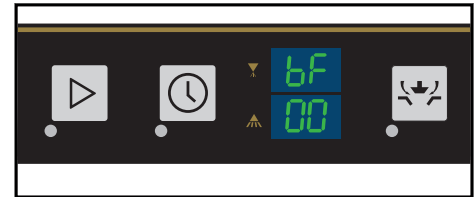
- ▶ Switch off main switch.
- ▶ Open site shut-off valves.
- ▶ Ensure that the detergent and rinse aid containers are full.
- ▶ Pull the EMERGENCY STOP button.
- ▶ Close control cabinet and inspection doors, attach the covers.
- ▶ Turn on main switch.

6.4 Fill continuous flow heater

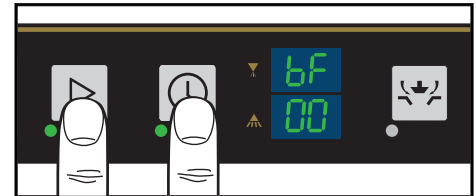
Before initial startup, the boiler must be filled with water.

- ▶ Open site inflow valve
- ▶ Press the ON/OFF button and close the doors

- ▶ The display shows "bF": initial boiler filling necessary!



- ▶ Start filling the boiler by pressing the conveyor start button and the programme selection button at the same time



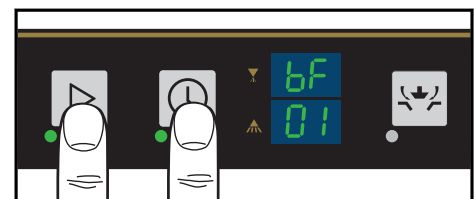
- ↳ The display flashes while the boiler is being filled
- ↳ Once the boiler has been filled, the bottom display shows "01"

- ▶ Open the door and check whether water has leaked out of the final rinse arms.



- ↳ If the initial filling was not successful, filling can be repeated by closing the door.

- ▶ If the initial filling was successful, before closing the door, this must be confirmed by pressing the conveyor start button and the programme selection button at the same time.



- ↳ Display shows the temperature values

6.5 Carry out checks

- ▶ Switch off main switch.
- ▶ Remove all covers.
- ▶ Turn on the main switch.
- ▶ Turn on machine, see section 7.4.2.
- ▶ **Checking safety functions:**
 - ▶ Check EMERGENCY STOP.
 - ▶ Check conveyor limit switch.
 - ▶ Check conveyor blockage.
 - ▶ Check the door contacts.
- ▶ **Check rotational direction of the motors (see rotational direction arrows):**
 - ▶ Check drive motor.
 - ▶ Check pumps.
 - ▶ Check dryer (if fitted).
 - ▶ Check extractor (if fitted).
- ▶ **Search for and eliminate any leaks:**
 - ▶ Check drain pipes.
 - ▶ Check heating lines.
 - ▶ Check water pipes.

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Operation

- ▶ Check machine housing.
- ▶ Check tank bottom.
- ▶ Check extraction system.
- ▶ Switch off main switch.
- ▶ Re-attach all covers.

6.6 Making the chemical settings

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 can lead to serious injuries.

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

The setting of the detergent and rinse aid is carried out by the chemicals supplier.

6.7 Adjusting the exhaust system

CAUTION!



Risk of being cut

When adjusting the exhaust system, sharp edges of sheet parts can cause cut injuries.

- ▶ Have the exhaust system adjusted only by certified, qualified personnel.
 - ▶ Wear protective gloves.
-

- ▶ Set the required site exhaust volume in accordance with the values in the installation plan.
- ▶ Please inform customer service of any modifications.

7 Operation

7.1 Personnel qualification

The machine must be operated by instructed personnel (see section 2.2.2).

7.2 Special safety instructions

WARNING!



Crushing or entanglement hazard

Loose items of clothing can be caught in the transport system belt and cause serious crushing injuries as the machine is being operated.

- ▶ Ensure that the operators wear tight-fitting clothing.

WARNING!



Crushing or entanglement hazard

The operator can be caught in the drive when reaching into or between the conveyor system at the loading or unloading sections. This can cause serious crushing of the fingers or hands.

- ▶ Do not reach into the conveyor system during operation.

CAUTION!



Chemical burns, sensitisation of the skin, poisoning

If the door is opened during operation, wash water can spurt out and cause injury.

- ▶ Press the ON/OFF button before opening the door.
- ▶ Do not open the door during operation.

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.

7.3 Notes for optimum washing result

The rinse result is significantly affected by the water quality. If the mineral content is high, the minerals dissolved become visible on the glasses in the form of spots and streaks during the drying process.



Authorised HOBART service personnel can determine the content of minerals by measuring the electrical conductivity. Values of less than 80 $\mu\text{S}/\text{cm}$ are non-critical for rinsing glasses and cutlery. If the values are higher, we recommend the use of a HOBART HYDROLINE desalination cartridge or a reverse osmosis system.

If you have any questions, please contact your authorised HOBART service partner.

7.4 Preparations for washing

7.4.1 Preparing the machine

- ▶ Hanging the curtains.



- ▶ Inserting the tank cover strainers.



- ▶ Inserting the strainer baskets.



- ▶ Inserting the strainer in the rinsing area.



Inserting wash arms:

- ▶ Upper: insert wash arm in side guides, move over retaining lug and click into place.



- ▶ Lower: move wash arm in side guides to end position and click into place.



- ▶ Close cleaning opening of the wash arms.

Inserting rinse arms:

- ▶ Upper: insert rinse arm into back opening, move from below into front guide and click into place.

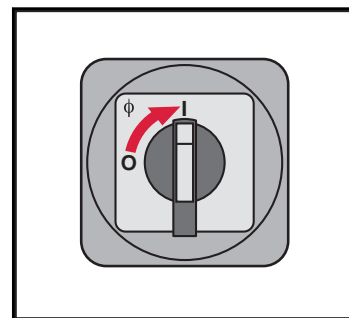


- ▶ Lower: move rinse arm back in guides and click into place.

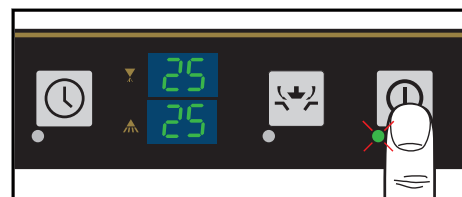
7.4.2 Turn on machine

- ▶ Open site shut-off valves.
- ▶ Check fill level of detergent and rinse aid containers.
- ▶ Close inspection doors.
- ▶ Pull the EMERGENCY STOP button.

- ▶ Turn on the main switch.



- ▶ Press the machine ON/OFF button.



- ↳ Machine is filled automatically
- ↳ During the filling and heating processes, the LED of the 7 segment display (boiler and wash tank) flashes if the heating is active. This process can take several minutes
- ↳ As soon as the LED is permanently lit, the machine is ready for operation and displays the current wash tank and heating temperature.

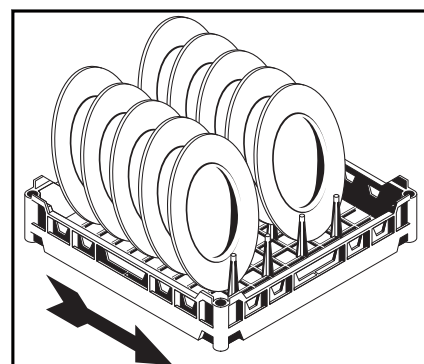
7.4.3 Fill racks

NOTE: Remove coarse food soiling before washing. .

- ▶ Load plates in the rack crosswise.



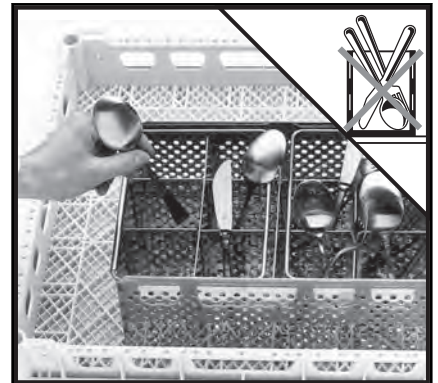
- ▶ Observe running direction.



- ▶ Load trays in the rack crosswise.



- ▶ Place cutlery vertically with handle downwards into cutlery racks. Load cutlery unsorted. Place the cutlery racks on a utensil rack.



- ▶ Load cups in the racks with opening downwards. Use a suitable rack!

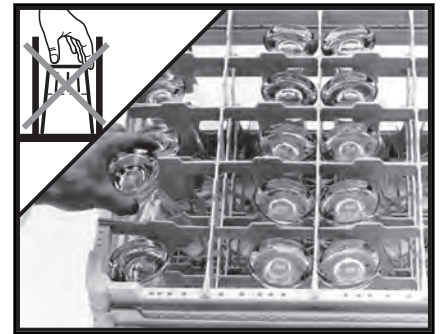


- ▶ Load glasses in the racks with opening downwards. Glasses should not touch each other (break fracture). Use a suitable rack! Use inclined racks wherever possible.

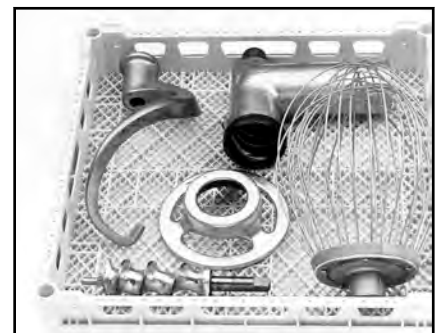


- ▶ Load glasses in the racks with opening downwards. Glasses should not touch each other (break fracture). Use a suitable rack!

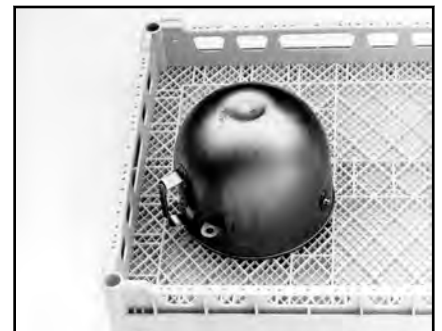
Use inclined racks wherever possible.



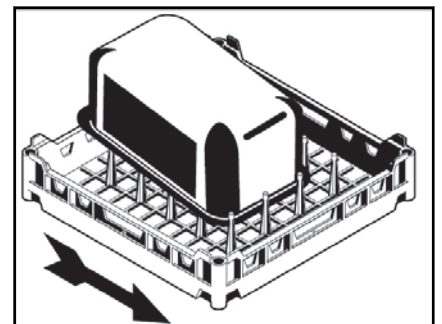
- ▶ Wash items and utensils in utensil rack.
Do not allow grips, handles etc. to protrude over the edge of the rack.
Place the rack on the conveyor.
Utensils must not protrude beyond the rack.
Secure lightweight wash ware by placing a grid on top.



- ▶ Place gastronorm pans and other bowls with opening downwards.
Wash ware may not exceed maximum loading height and width.



- ▶ Observe running direction.



7.5 Functions and operating modes

7.5.1 Overview of functions

Name	Description	Features
EMERGENCY STOP	The machine can be shutdown in case of emergency.	See section 7.6

Name	Description	Features
Conveyor speed	There are two (optionally three) speeds to choose from: (slow), normal, fast.	See section 7.8
Emergency operation	The machine can be operated even if the required temperatures are not reached.	See section 8.7
Drain wash tanks	Drain the wash tanks if required	See section 7.11

7.5.2 Operating modes

Washing

The machine is ready to rinse as the conveyor is switched on. The rinse process starts only when wash ware is running in the machine. Prewashing, washing, rinsing and drying (if fitted) are activated automatically. If no wash ware follows, these functions switch off automatically.

Exhaust fan, drying blower and drive run on for a set time. The run-on times can be changed by authorised service personnel.

Standby mode

If no wash ware is delivered for a pre-defined time, the Autotimer switches off the conveyor. As soon as a new rack is pushed in, the conveyor starts automatically.

Alternatively, press the conveyor start button.

Emergency operation

The machine can be operated even if the required temperatures are not reached. When emergency operation is activated, the machine no longer conforms to DIN 10534, DIN 10510, and DIN 10522.

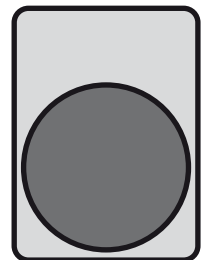
Emergency operation activation, see Chapter 8.7.

7.6 Pressing the EMERGENCY STOP button

The machine can be **shutdown** in case of emergency.

The EMERGENCY STOP button must be unlocked during operation.

- ▶ Press the EMERGENCY STOP button.



- ↳ The machine is being shutdown.
- ↳ However, the machine is not voltage free.

7.7 Washing

The machine is ready to rinse as soon as the conveyor is switched on.

- ▶ Briefly press the conveyor start button
Selectively choose a slow, normal or fast speed (see chapter 7.8):
slow speed = for heavy soiling (option)
normal (DIN) speed = for normal soiling

fast speed = for slight soiling



- ↳ The LED under the conveyor start button illuminates permanently
- ↳ The conveyor switches on
- ↳ Pre-washing, washing, rinsing and drying are activated only if wash ware is running in the machine
- ▶ Allow the wash ware enough time to dry.



If no further wash ware is delivered over a pre-defined time, the machine switches to standby mode. If another rinse is required, a rack must be inserted until the Autotimer switch is enabled. The conveyor and wash cycle start.

7.8 Selecting the conveyor speed

When a wash programme is active, you can change to the other wash programme at any time.

Example: Press the programme selection button. The selected transport speed is shown on the display. You can switch to the next speed by pressing the programme selection button again.

7.9 Switch off conveyor

If required, the conveyor can be switched off manually.

Switching off the conveyor:

- ▶ Briefly press the conveyor start button
Alternatively, briefly press the ON/OFF button.
 - ↳ The conveyor and washing switch off
 - ↳ The tanks are not drained
 - ↳ The heaters are not switched off
 - ↳ Exhaust fan and drying blower continue to run

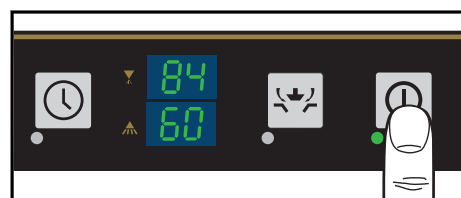
7.10 Switch off machine

NOTE: the machine is not voltage-free after being switched off!

Before switching off the machine, drain the tanks and clean the interior.

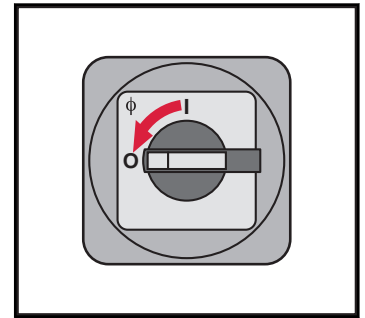
Switching off the machine:

- ▶ Press the machine ON/OFF button for min. 3 seconds



- ↳ The machine switches off
- ↳ Exhaust air blower and dryer blower may run on

- ▶ Switch off main switch.



7.11 Executing daily cleaning

WARNING!



Risk of electric shock, fire hazard

If the machine is cleaned from the outside with a jet of water, water can penetrate the machine and flow over live components. This can cause injuries through electric shock or fire.

- ▶ Do not spray the outside of the machine with a water hose or high-pressure cleaner.

CAUTION!



Risk of being cut

When cleaning the machine, sharp edges of sheet parts can cause cut injuries.

- ▶ Wear protective gloves.

CAUTION!



Burning

When cleaning the machine interior after the tanks have been emptied, certain areas (tank heaters, dryer nozzles, water inlets, etc.) can still be hot and cause burning.

- ▶ Wear protective gloves.

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.

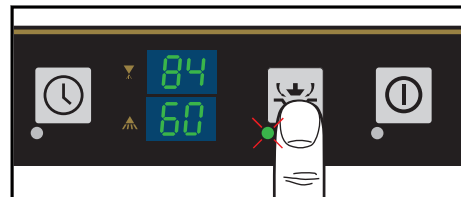
Please observe your in-house hygiene guidelines.

End the active wash programme:

- ▶ Briefly press the conveyor start button
Alternatively, briefly press the ON/OFF button.
- ↳ Transport and washing switch off

Drain wash tanks:

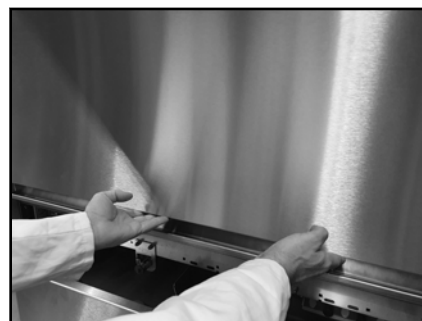
- ▶ Press and hold the drain button (min. 3 seconds)



↳ All tanks are drained

↳ During the draining process, the button LED flashes. This process takes several minutes

- ▶ Open inspection doors.



- ▶ Remove and clean curtains.
- ▶ Unhook curtains and pull forwards.



- ▶ Remove the strainer baskets.



- ▶ Remove the flat strainers.



- ▶ Remove the rinse strainer.



- ▶ Hose down and brush the strainers.
ATTENTION! Damage to property!
Do not strike the strainers! Strainer could get bent and will no longer fit.
- ▶ Remove and clean wash arms.
CAUTION! Risk of crushing!
When removing the wash arms, the upper wash arm can fall down and cause crushing. Carefully remove the wash arms.
- ▶ Upper: Lift the wash arm via the retaining lug and pull it out to the front.



- ▶ Lower: Lift the wash arm and pull it out to the front.



- ▶ To clean, slide open the closure and hose down the wash pipes.
- ▶ Check the jet openings and clean as required.
- ▶ Remove and clean rinse arms.
- ▶ Upper: Pull the spring to the front and remove the rinse arm.

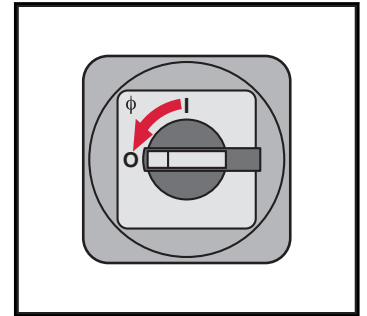


- ▶ Lower: Lift the rinse arm and pull it out to the front.

Check the jet openings and clean as required.



- ▶ Turn off the main switch.



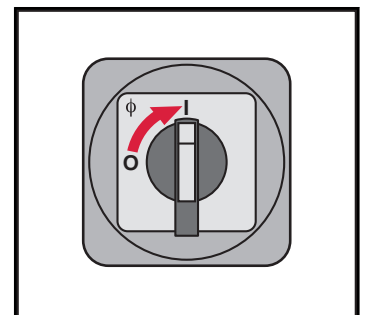
- ▶ Hose down the machine interior and clean.



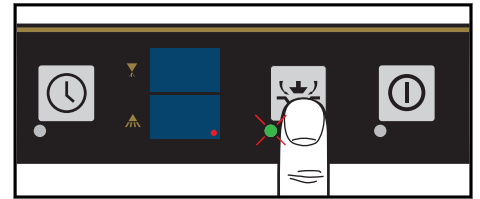
- ▶ Check the interior for residual soiling and wash ware parts and remove as required.

Drain wash tanks:

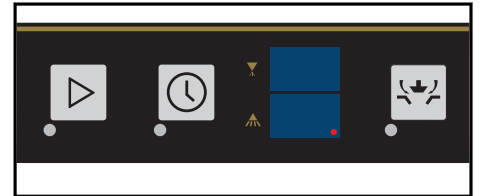
- ▶ Switch on main switch



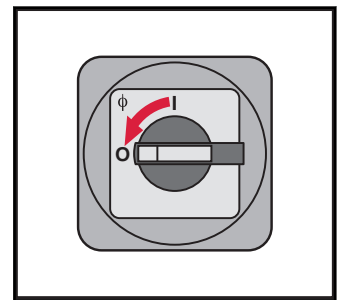
- ▶ Press and hold the drain button (min. 3 seconds)



- ↳ All tanks are drained
- ↳ During the draining process, the button LED flashes. This process can take several minutes
- ▶ The machine switches off automatically after draining but is, however, not voltage free



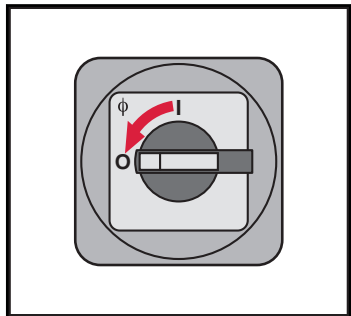
- ▶ Switch off main switch.



- ▶ Close site shut-off valves.
- ▶ Leave inspection doors open for ventilation.

7.12 Performing monthly cleaning

- ▶ Switch off main switch



- ▶ Remove covers at the condenser cover

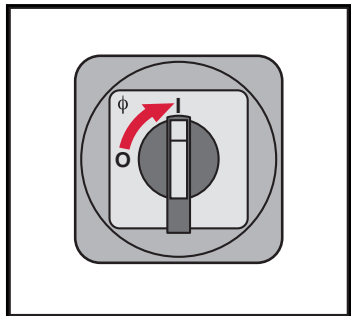


- ▶ Clean condensers (hose down with a water hose)

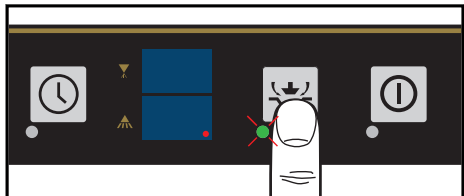


Drain wash tanks:

- ▶ Switch on main switch

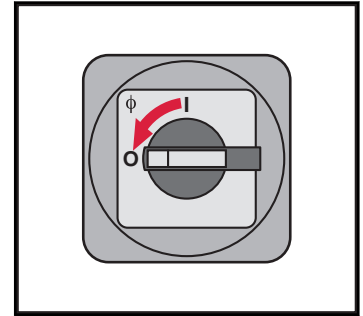


- ▶ Press and hold the drain button (min. 3 seconds)



- ↳ All tanks are drained
- ↳ During the draining process, the button LED flashes. This process can take several minutes

- ▶ Switch off main switch.



- ▶ Close site shut-off valves.
- ▶ Leave the inspection doors open for ventilation.

8 Setting options

8.1 Overview of operator menu

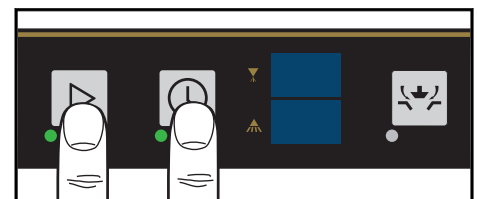
In the operator menu, machine functions can be selected and operating data can be read out.

Submenu	Submenu no.	Function
Hour counter "Machine ON"	01	Display
Hour counter "Conveyor ON"	02	Display
Hour counter "Washing ON"	03	Display
Hour counter "Rinsing ON"	04	Display
Emergency operation activation Emergency Operation	EO	Setting

8.2 Opening the operator menu

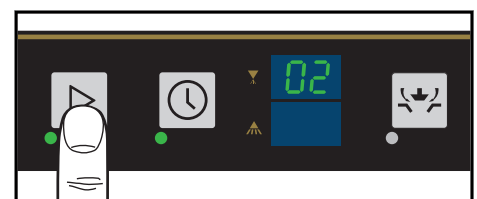
NOTE: possible only when the machine is switched off

- ▶ Open the door
- ▶ Press the conveyor start button and the programme selection button at the same time.



↳ The menu opens, button LEDs illuminate

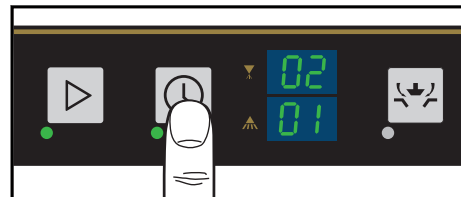
- ▶ Close the door
 - ↳ The first submenu item "01" is displayed as soon as the door is closed
- ▶ Press the conveyor start button to scroll through the customer menu



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Setting options

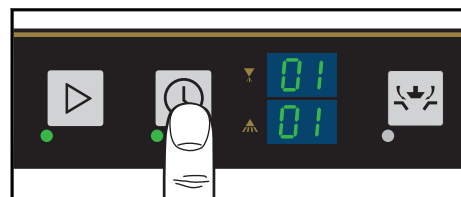
- ▶ Press the programme start button 2 to activate the submenu displayed



- ▶ The customer menu can be exited again by opening the door

8.3 Display hour counter "Machine ON"

- ▶ Open submenu 01 (see section 8.2).

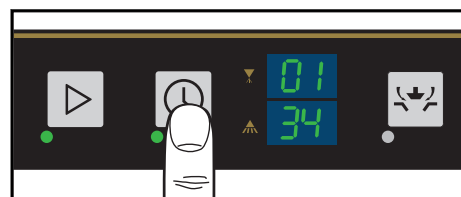


- ↳ The display at the top still shows the selected submenu
- ↳ The display at the bottom shows the first part of the operating hours

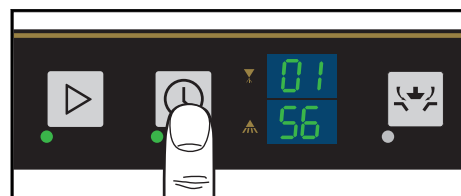
Due to the bottom display being limited to 2 places, the value of the operating hours (max. 6 places) is shown in three steps.

In this example: 013456 hours

- ▶ The next two places are shown when the programme selection button is pressed again.



- ▶ The next two places are shown when the programme selection button is pressed again.



8.4 Display hour counter "Conveyor ON"

- ▶ Open submenu 02 (see section 8.2).
 - ↳ The display at the top still shows the submenu selected
 - ↳ The display at the bottom shows the first part of the operating hours

Display and procedure as section 8.3.

8.5 Display hour counter "Washing ON"

- ▶ Open submenu 03 (see section 8.2).
 - ↳ The display at the top still shows the submenu selected
 - ↳ The display at the bottom shows the first part of the operating hours

Display and procedure as section 8.3.

8.6 Stundenzähler „Spülung EIN“ anzeigen

- ▶ Open submenu 04 (see section 8.2).
 - ↳ The display at the top still shows the submenu selected
 - ↳ The display at the bottom shows the first part of the operating hours

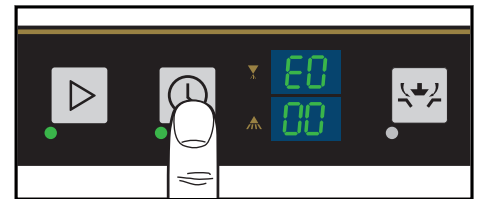
Display and procedure as section 8.3.

8.7 Activating emergency mode

If the necessary temperature cannot be reached due to a defect, individual error messages may be ignored by means of emergency operation. See section 9.2.

NOTE: When emergency operation is activated, the machine no longer conforms to DIN SPEC 10534, DIN 10510, and DIN 10522.

- ▶ Open submenu EO (see section 8.2)



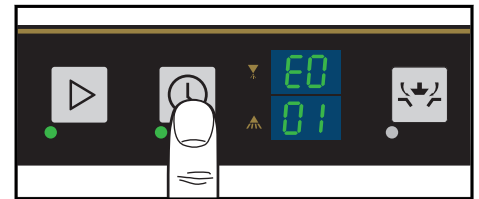
- ↳ The display at the top still shows the selected submenu
- ↳ With display "00", the display at the bottom shows that the emergency operation is inactive

- ▶ The change is activated by pressing the ON/OFF button



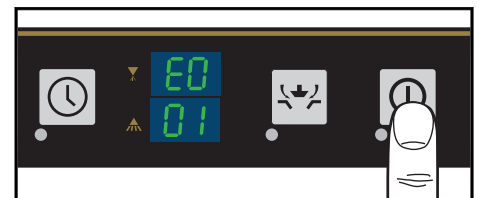
- ↳ The bottom display flashes

- ▶ By pressing the programme selection button, you can set the emergency operation to active (=01)



- ↳ The bottom display flashes

- ▶ The value is saved by pressing the ON/OFF button for 3 sec



- ↳ You exit the customer menu
- ↳ Emergency operation is now active

If the emergency operation has been activated, this is displayed by a message "EO" (Emergency Operation) alternating between the top and bottom 7 segment display.

Emergency operation is deactivated by switching off the machine.

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Faults and problems

9 Faults and problems

9.1 Special safety instructions

WARNING!



Risk of electric shock

When replacing worn or faulty parts, contact with current-carrying parts can cause serious injuries through electric shock.

- ▶ Have these activities carried out only by certified, qualified personnel.

9.2 Troubleshooting guide

NOTE: Operation may be restricted depending on the fault type.

Error code	Fault message	Possible cause	Acknowledgement	Measure
Er 01	Tank fill time exceeded	Flow rate during filling too low. Faulty filling valve or fault in the filling system.	Machine OFF/ON	Check site water supply If this continues, contact your customer service
Er 02	Tank fill time exceeded	Flow rate during filling too low. Faulty filling valve or fault in the filling system.	Self reset after troubleshooting	Check site water supply If this continues, contact your customer service
Er 03	Fill start temperature	Fault in the control circuit of the boiler	Machine OFF/ON or switch to emergency operation	Contact your customer service
Er 04	Boiler not reaching temperature	Boiler not reaching temperature. Curtains missing or positioned incorrectly. Fresh water too cold	Conveyor ON/OFF	Wait until the target temperature has been reached To acknowledge, start conveyor If this continues, contact your customer service
Er 05	Fill time exceeded Tank	Flow rate during filling too low. Faulty filling valve or fault in the filling system.	Machine OFF/ON	Check site water supply If this continues, contact your customer service
Er 06	Wash tank not reaching temperature	Wash tank not reaching temperature. Curtains missing or positioned incorrectly	Conveyor ON/OFF	Wait until the target temperature has been reached To acknowledge, start conveyor If this continues, contact your customer service
Er 07	Doors / covering opened	Doors / covering opened or not closed completely	Self reset after troubleshooting	Close doors and / or covering
Er 08	Conveyor blockage	Conveyor blocked by the wash ware	Conveyor ON/OFF	Remove the blockage

Error code	Fault message	Possible cause	Acknowledgement	Measure
Er 09	Table limit switch	Rack jam, table limit switch has tripped	Self reset after troubleshooting	Remove rack jam
Er 10	Water level wash tank low	Water carried over by the wash ware	Self reset after troubleshooting	Wait until the machine has sufficiently refilled with water To acknowledge, start conveyor If this continues, contact your customer service
Er 11	Autotimer error	Autotimer blocked or defective	Machine OFF/ON	Contact your customer service
Er 12	Drain fault complete drain	Fault in the drain system, valve defective, drain clogged	Machine OFF/ON	Wait until the machine has cooled own Turn off the power supply to the machine Check the wash tank drain for clogging If this continues, contact your customer service
Er 13	Total value of pressure sensor for wash tank exceeded	Sensor defective	Machine OFF/ON	Contact your customer service
Er 14	Total value of pressure sensor for pre-wash tank exceeded	Sensor defective	Machine OFF/ON	Contact your customer service
Er 15	Total value pressure sensor wash tank undercut	Sensor defective	Machine OFF/ON	Contact your customer service
Er 16	Total value pressure sensor pre-wash tank undercut	Sensor defective	Machine OFF/ON	Contact your customer service
Er 17	Emergency stop active	EMERGENCY STOP pressed	Machine OFF/ON	Remove the hazard (if present), Pull the EMERGENCY STOP button
Er 18	Hardware communication error	Interruption between CU and HMI	Self reset after troubleshooting	Contact your customer service
Er 21	Boiler temperature sensor defective	Temperature sensor interrupted	Machine OFF/ON or switch to emergency operation	Contact your customer service
Er 22	Tank temperature sensor defective	Temperature sensor interrupted	Machine OFF/ON or switch to emergency operation	Contact your customer service
Er 23	Boiler temperature sensor defective	Temperature sensor short-circuit	Machine OFF/ON or switch to emergency operation	Contact your customer service
Er 24	Tank temperature sensor defective	Temperature sensor short-circuit	Machine OFF/ON or switch to emergency operation	Contact your customer service

Error code	Fault message	Possible cause	Acknowledgement	Measure
Er 25	Boiler temperature control	Boiler temperature limit exceeded	Machine OFF/ON	Contact your customer service
Er 26	Tank temperature control	Tank temperature limit exceeded	Machine OFF/ON	Contact your customer service
Er 29	Plausibility check	Error in the safety chain	Machine OFF/ON	Inform your HOBART Service Partner

9.3 Remediating the problem

9.3.1 Poor wash result

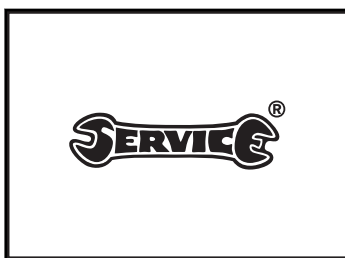
Nature of the problem	Possible cause	Remedy
Washware not clean.	Strainers wrongly positioned.	Check strainers.
	Curtains not or incorrectly hung.	Check curtains.
	Wash jets clogged.	Clean wash arms.
	Insufficient detergent.	Check detergent dosing, or have supplier reset as required.
	Excess foam.	Use non-foaming detergent.
	Not properly pre-scraped.	Pay attention to better pre-scraping.
	Temperatures too low.	Check heaters.
	Conveyor speed too high.	Select lower speed.
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. Ensure better pre-scraping of the washware.
	Temperature or humidity of the drying air incorrect.	Check heating rods and dryer fan.
	Conveyor speed too high.	Select lower speed.
Streaks and spots on washware.	Strainers wrongly positioned.	Check strainers.
	Wash water splashes into rinse section.	Check curtains.
	Rinse jets clogged.	Clean jets.
	Incorrect rinse aid dosing.	Check dosing device and have it adjusted.
	Mineral content of rinse water too high.	Check mineral content of the water.

9.3.2 Other problems

Nature of the problem	Potential causes	Remedy
No initial fill of boiler possible.	Site water supply is closed off.	Open water valve at building side and restart.

Nature of the problem	Potential causes	Remedy
	Fault in the filling system.	Inform customer service.
Tank filling takes too long.	Dirt trap clogged.	Clean dirt trap.
	Faulty solenoid valve.	Inform customer service.
	Site shut-off valve opened incorrectly.	Shut-off valve fully open.
Tank does not fill.	Fill time too short.	Inform customer service.
	Site shut-off valve opened incorrectly.	Shut-off valve fully open.
Steam escaping at loading section or exit end.	Vapour extraction too low.	Inform customer service.
	Curtains hung incorrectly.	Check curtains.
	Too much wash water splashes into the loading section.	Check wash arms, curtains and baffle plate. Position wash ware correctly.
	Dryer baffle plate mis-aligned.	Adjust the slide at the drying nozzle.
Temperatures too low.	Vapour extraction too high.	Inform customer service.
	Heaters faulty.	Check heaters, inform customer service as required.
Wash ware is overturned.	Water pressure from below too strong.	Inform customer service.
	Upper wash arms clogged.	Clean wash arms.
Machine not operating, no information in display.	Main switch turned off, machine is completely without power.	Switch on the main switch, restart the machine.
	Display defective.	Inform customer service.
	Power outage.	Check site fuses.

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.

In Germany, your machines and systems are governed by the Ordinance on Industrial Health and Safety and must be inspected by a qualified electrician in accordance with the intervals specified in DGUV V3 (BGV A3).

Additional nationally-applicable directives must be observed accordingly.

Ecomax Plus

Disposal

11 Disposal

- ▶ The machine operator is responsible for disposing of the machine and its operating materials correctly and in accordance with environmental regulations. Observe the national and local legal provisions and regulations.



12 Product disclaimer

Product disclaimer

Installations and repairs carried out by non-authorized 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 / Deklaracja o zgodności / Izjava o skladnosti / Declaração de Conformidade / Prohlášení o shodě

Hersteller / Dokumentationsbevollmächtigter:

Manufacturer / authorized to compile the technical file:
 Fabricant / autorisée à constituer le dossier technique:
 Fabricante / autorizado para unificar la información técnica:
 Fabricante / Responsabile della documentazione:
 Fabrikant / Geautoriseerd om de technische documentatie samen te stellen:
 Producent / autoryzowany przedstawiciel:
 Изготовитель / ответственный за составление документации:
 Üretici / Dokümantasyon yetkilisi:
 Proizvođač / ovlašten za sastavljanje tehničkog spisa:
 Proizvajalec / pooblaščen za dokumentacijo:
 Fabricante / Responsável pela documentação:
 Výrobce / osoba zplnomocněná sestavením dokumentace:

HOBART GMBH / Verena Wiedenhöfer
 Robert-Bosch-Straße 17
 77656 Offenburg / Germany

Maschine: **Korbtransport - Spülmaschine**
 Machine: **Rack - Conveyor - Dishwasher**
 Machine: **Lave vaisselle à avancement automatique de casiers**
 Máquina: **Túneles de cestas**
 Macchina: **Lavastoviglie a cesto trainato**
 Machine: **Rekentransport vaatwasmachine**
 Urządzenie: **Zmywarki tunelowe z transportem koszy**
 Машина: **Посудомоечная машина тунельного типа**
 Makine: **Basketli Konveyörlü Bulaşık Makinası**
 Stroj: **Tračna perilica posuda za kašarama**
 Stroj: **Transport košar - pomivalni stroj**
 Máquina: **Transporte do cesto - máquina lava-loiça**
 Stroj: **Pleprava košů - mycí zařízení**

Marke: **HOBART**
 Trade mark / Marque / Marca
 comercial / Marchio / Merk /
 Marka / Mapka / Marka / Zaštitni
 znak / Znamka / Marca / Značka

Type: **CS-Serie** Design State: **CS-20-01** Serial No.: **86 43 XXXXX**
Ecomax plus C815-Serie

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 confermiamo che 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.

Išbu belge ile belirlenen makinenin aşağıda listelenen normlar doğrultusunda hazırlanmış beyan ederiz.

Ovime potvrđujemo da je gore navedeni stroj proizveden i testiran sukladno sljedećim standardima.

S tem 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 55011:2016 + A1:2017
 EN 50416:2005 + A1:2015
 EN 60204-1:2018
 EN 61000-4-3:2006 + A1:2008 + A2:2010
 EN IEC 61000-6-2:2019
 EN 61000-6-4:2007 + A1:2011
 EN ISO 12100:2010
 EN 62368-1:2014/A11:2017 + AC:2015 + AC:2017-03
 EN 62311:2008
 EN 301 489-1 V2.2.3
 Draft EN 301 489-17 V3.2.2
 EN 300 328 V2.1.1

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 sljedećim direktivama:

Stroj ustreza zahtevam sledećih direktiv:

A máquina está em conformidade com as seguintes diretivas:

Stroj je v skladu s ustanovenimi následujících směrníc:

2006/42/EG (Maschinenrichtlinie, Machinery-Directive)
 2014/30/EU (EMV-Richtlinie, EMC-Directive)
 2014/53/EU (Funkanlagen-Richtlinie, RED)
 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/EU 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/EU están en acuerdo con el apéndice I No 1.5.1. de la directiva de maquinaria 2006/42/EC.

Gl obiljivi di protezone della direttiva per basse tensioni 2014/35/EU 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/EU, zgodnie z załącznikiem I nr. 1.5.1 dyrektywy maszynowej 2006/42/EC.

Цели, охраняемые Директивой по высоковольтному оборудованию 2014/35/EU, соблюдены в соответствии с приложением № 1.5.1 Директивы по машинному оборудованию 2006/42/EC.

Ajak Gerilim Yönetmeliği 2014/35/EU'nin koruyucu hedeflerini, Makine Yönetmeliği 2006/42/EC, ek I no. 1.5.1'e göre uylmuştur.

Sigurnosni ciljevi direktive o niskom naponu 2014/35/EU udovoljavaju dodatku I br. 1.5.1. Direktive o strojevima 2006/42/EC.

Uspoštveni so zaštitni cilji Direktive o niski napetosti 2014/35/EU v skladu s priložo I št. 1.5.1 Direktive o strojih 2006/42/EC.

Os objetivos de proteção da Diretiva de Baixa Tensão 2014/35/EU foram cumpridos de acordo com o Apêndice I, nº 1.5.1 da Diretiva de Máquinas 2006/42/EC.

Cile ochrany die niskonapíťové 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, 24.11.2020**

ppa.

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