

X2 Master

User Manual



serial # X2-02 00001

NOR:DISK
CLEAN SOLUTIONS

Jägershillgatan 13
SE-213 75 MALMÖ, Sweden

Art. no EN28277

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EC DECLARATION OF CONFORMITY FOR MACHINERY

Original
Directive 2006/42/EC, Annex II 1A

Manufacturer (and where appropriate the authorised representative):

Representative: Nordisk Clean Solutions
Address: Jägershillsgatan 13, 213 75 Malmö

Hereby declares that

Type of machinery: Ware washing machine
commercial kitchens
No. of machinery: X2 Master

Complies with the requirements of Machinery Directive 2006/42/EC.

Complies with the applicable requirements of the following EC directives:

2014/35/EU, LVD

2014/30/EU, EMC

The following harmonized standards have been applied:

EN 60335-2-58:2017

EN 60335-2-58:2005/A12:2016

EN 55014-1:2017/A11:2020

EN 55014-2:2015

EN 61000-3-2:2019

EN 61000-3-3:2013/A1:2019

EN 61000-6-2:2019

EN 61000-6-3:2007/A1:2011/AC:2012

The following other standards and specifications have been applied:

SS-EN 1717:2000

Authorized to compile the technical file:

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Place and date: Malmö, 01.03.2024

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Position: CEO

1 General description and safety

1.1 Notes and warnings



NOTE

X2 Master is a universal washing solution for commercial kitchen that is designed for washing crockery, cutlery and glasses as well as pots, pans and containers.

Nordisk Clean Solutions recommends that you study the manual thoroughly to be sure that X2 Master is installed and used correctly and safely.

Ensure that the manual is always available during the whole lifetime of the unit.

Nordisk Clean Solutions accepts no responsibility for damage to the equipment or other damage or injury caused by not following the directions in this manual.

The user must not carry out any repairs or maintenance works on the dishwasher. Service and maintenance must be carried out by qualified and authorized personnel.

Any assistance required on this dishwasher must be carried out by authorized personnel.

Use exclusively original spare parts, otherwise the product warranty issued and the manufacturer's responsibility will become void.

The machine is designed for commercial kitchens with a room temperature between minimum 5°C and maximum 35°C.

Regarding the handling and use of detergent and rinse aid with the product, please see the chemical manufacturer's instructions. Use high quality products for best wash result.

Use protective gloves and eye protection when handling the chemicals.

User manual in original.

**WARNING**

The following fundamental rules must be observed when using this appliance:

- Never use the appliance with bare feet.
- Do not put your bare hands into water containing detergent. Wash the hands thoroughly under running water straightaway if by accident this happens.

**WARNING**

X2 Master is a professional machine. It must be used by adults and authorized personnel only. It must be installed and repaired exclusively by a qualified technician. The manufacturer declines all forms of responsibility for improper use, maintenance and repairs.

X2 Master must not be used by children or anybody who has restricted physical, sensorial or mental capacity or by anybody who has not been appropriately trained or properly supervised.

**WARNING**

X2 Master is designed only and exclusively to wash glasses, dish ware and cookware soiled with residues of human food.

Do not use it to wash objects soiled with petrol or paint. Do not wash pieces of steel or metal, fragile objects or objects made of material that will not withstand the washing process. Do not use acid or alkaline corrosive chemical products, solvents or chlorine based detergent.

**WARNING**

The machine uses hot water. Risk of scalding.

Do not open the hood when machine is running. The dishwasher is equipped with a safety device that will immediately stop the machine to avoid leakage of water if the hood is opened accidentally.

**WARNING**

Do not place any items on top of the hood.

Do not stand on the machine, it is not designed to hold the weight of people.

**ELECTRICAL**

Do not use water to extinguish fire on electrical parts.

**NOTE**

When cleaning the machine, please follow carefully the instructions in chapter 4 Daily cleaning.

1.2 Technical data

General

Design	Compact and versatile cookware and dishware washing equipment
	Stainless steel cookware washing basket - Polypropylene dishware washing basket - Polypropylene glassware washing basket
External dimensions	H x W x D (open and table height 860 mm)
	1950 mm x 655 mm (+ handle 100 mm) x 745 mm (+ handle 95 mm) (Standard machine)
	1950 mm x 655 mm (+ handle 100 mm) x 785 mm (+ handle 95 mm) (with option automatic hood lift)
	2125 mm x 655 mm (+ handle 100 mm) x 785 mm (+ handle 95 mm) (with option EcoExchanger)
Weight (empty / filled)	138 / 178 kg (Manual hood lift version)
	150 / 190 kg (with option automatic hood lift version)
	160 / 200 kg (with option EcoExchanger version)
	168 / 208 kg (with option automatic hood lift and EcoExchanger version)
Tank volume	30 litres
Rinse tank volume	12 litres
Clearance	430 mm
Rinse water volume	2,0 litres
Wash water temperature***	60 °C
Rinse water temperature***	85 °C

Sound pressure level	< 64 dB(A) ISO 11203
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PROGRAMS & CAPACITY

Cookware washing mode	4 min. (carbonized cookware) 2 min. (cookware)
Dishware washing mode	2 min. (plates, cutlery, utensils) 1 min. (glasses)
EcoExchanger (option)	Extends washing cycle by 30 seconds.
Capacity per program (cookware washing mode)	2 GN 1/1 Depth 65 mm – 4 GN 1/2 Depth 65 mm – 1 Pot up to Ø 450 x H 380 mm or sub sized – 1 GN 1/1 Depth 200 mm or sub-sized
Capacity per program (dishware washing mode)	18 Dinner plates or 12 Soup plates Ø 240 mm – 25 Glasses/mugs Ø 90 mm
Start-up time (filling and heating)	9 min. at 55 °C inlet water temperature
Water exchange time	5 min. at 55 °C inlet water temperature

ELECTRICAL CONNECTION

Voltage**	380 / 400 / 415 V / 3N~ / 50 Hz 230 V / 3N~ / 50 Hz
Fuse	16 A (400 V) 32 A (230 V)
Frequency	50 Hz
Maximum output	10 kW
Pot washing pump	1,5 kW
Dish washing pump	1,1 kW
Rinse pump	0,18 kW
Heater wash tank*	8 kW
Heater rinse tank*	8 kW
Enclosure rating	IPX5****

WATER CONNECTION

Hardness/Connection	Total hardness: < 4 °dH (7 °fH, 70 PPM)
	Inlet hose with ¾" female - 1,3 m
	200 - 500 kPa (2 - 5 bar)

VENTILATION & DRAIN

Ventilation requirements	500 m³/h
Ventilation requirements with EcoExchanger	250 m³/h
Heat emitted to room (total/sensible/latent)	2,3 kW / 1,4 kW / 0,9 kW
Heat emitted to room with EcoExchanger (total/sensible/latent)	1,9 kW / 1,4 kW / 0,5 kW
Drainage	Drain hose Ø 28 mm - 1,3 m
Drain capacity requirement	50 l / min.
Drain water temperature	65 °C
Maximum lift height drain pump	800 mm
Drain pump	40 W

DETERGENT & RINSE AID

Liquid detergent and rinse aid dosing dispenser with peristaltic pumps are integrated into X2 Master.

Prepared for dosing installation.

**NOTE**

X2 Master must be installed according to national regulations. X2 Master is supplied with a 2 metres long electric cable to be connected to an approved supply disconnecting device on the wall. The supply disconnecting device is not included in the delivery.

* Not in use simultaneously

** For specific data regarding delivered units, please see rating plate

*** Factory settings. The settings can be changed according to the local standards.

**** Do not clean the machine with high-pressure water.

1.3 SIMpel – easy access to information

To make it easier for the operator to find information and how to use the unit there is a QR-code on X2 Master.

The sticker is placed in the lower right corner of the hood.



- 1 Scan the QR code on the sticker.

See Fig. 1 *Sticker*



Fig. 1 Sticker

2 When you scan the QR code, you enter the following menu.

(Note that the interface may vary depending on the device used). See Fig. 2 Menu



Fig. 2 Menu

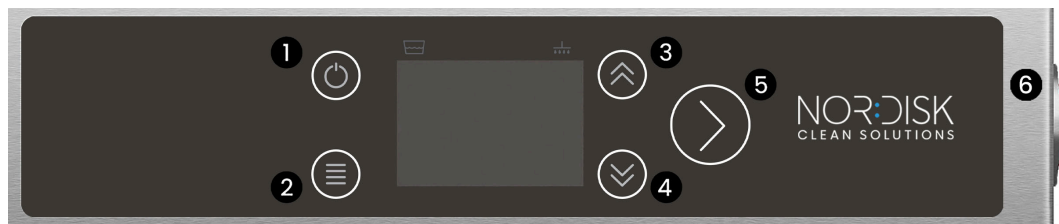
3 Select the language in the upper right corner. English is default.

Explanation of the different boxes:

1. CALL OUT REQUEST	Not in use
2. VIDEO AND DOCUMENTATION	User manuals and videos of accessories/ daily cleaning
3. TECHNICIAN AREA	Only for technicians/service partners
4. CODES AND INFORMATION	List of error codes
5. ABOUT NOR:DISK	Link to nordiskclean.com
6. CONTACT INFORMATION	Not in use

2 Operating

2.1 Control panel



1. ON/OFF
2. MENU – to enter the User settings.
3. Arrow UP – to toggle up in the display.
4. Arrow DOWN – to toggle down in the display.
5. CONFIRM
6. If **automatic hood**: deactivate the hood by pressing the red button on the right side of the panel.

When deactivated the hood can be used manually.

2.2 Start and operation

- 1 Switch on the main electrical switch.

The display lights up and goes in OFF-mode.

If **automatic hood**: the hood goes down to calibrate.

- 2 Press and hold the ON/OFF button in the upper left corner. The display lights up and X2 Master starts to fill with water and heat up to the correct temperatures in the wash and rinse tank.

If automatic hood: the hood goes up and will remain open during the filling and heating phase.

The filling and heating time is approx. 9 min at 55 °C water inlet temperature.

The CONFIRM button is yellow during the filling and heating phase.

See Fig. 3 *Filling with water*

- 3 X2 Master is ready to operate when the CONFIRM button has turned green.

See Fig. 4 *Ready to use*



Fig. 3 *Filling with water*



Fig. 4 *Ready to use*

- 4 Choose wash program with the buttons UP and DOWN.

X2 has 2 wash modes. Which one is activated depends on which basket is loaded.

1.
 - Glassware – 1 min
 - Cookware – 2 min
2.
 - Dishware – 2 min
 - Burnt cookware – 4 min

See Fig. 5 *Glassware/Cookware* and Fig. 6 *Dishware/Burnt cookware*



NOTE

30 seconds will be added to each cycle if X2 Lean Wash Center® has the option EcoExchanger.



Fig. 5 *Glassware/Cookware*

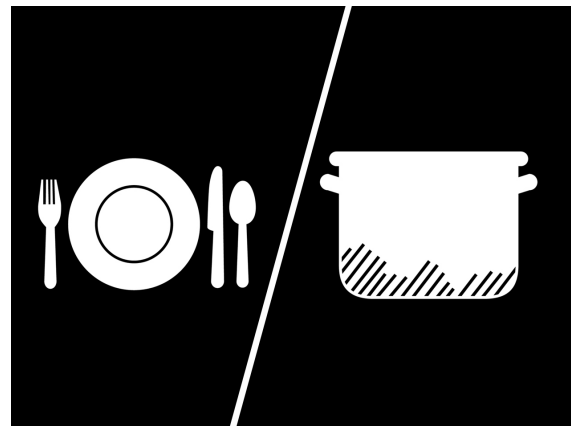


Fig. 6 *Dishware/Burnt cookware*

- 5 Start X2 Master by:

- **Automatic hood:** By using the foot mechanism or pressing the CONFIRM button.

See Fig. 7 *Foot mechanism*

- **Manual hood:** the operator has to lower the hood manually.



Fig. 7 *Foot mechanism*

- 6 When X2 Master is running the display will show a count-down of the wash cycle and the CONFIRM button turns blue.

See Fig. 8 *Countdown*



Fig. 8 *Countdown*

- 7 The program is ready when the CONFIRM button turns green.
- **Automatic hood**— the hood goes up automatically.
 - **Manual hood**— lift up the hood manually.
- 8 If water change is needed, press and hold the ON/OFF button and choose by arrow down "Water change"

See Fig. 9 *Choose Water change*

Confirm by pressing the CONFIRM button.

Draining, filling and heating the tank again takes about 5 min at 55° inlet temperature.



Fig. 9 *Choose Water change*



NOTE

If correct temperature is not achieved before the wash cycle or during the rinse cycle, thermostop will be activated.

The countdown will stop and the temperature for wash or rinse will start blinking. The icon thermostop will be shown in the display.

When correct temperature is reached the program and countdown continues.

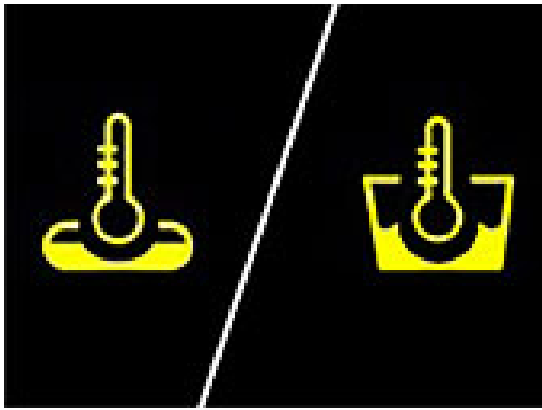


Fig. 10 Thermostop wash or rinse tank



NOTE

When the unit is not used for 20 minutes (this time can be programmed from the technicians menu) it will enter Standby mode, keeping the temperatures lower to save energy. Machines with an automated hood will close automatically when they enter standby mode. To exit the function, press any button or open the hood/door.



Fig. 11 Standby mode

2.3 Loading washware

Cookware basket (28147)

Capacity: 2 GN 1/1 depth 65 mm or 4 GN 1/2 depth 65 mm or 1 GN 1/1 depth 200 mm.

See Fig. 12 *Cookware basket with 4 GN 1/2*



Fig. 12 Cookware basket with 4 GN 1/2

The cookware basket can be loaded with 1 GN 1/1 and small pots/containers on the other side.

See Fig. 13 *Cookware basket with 1 GN 1/1 and two pots*

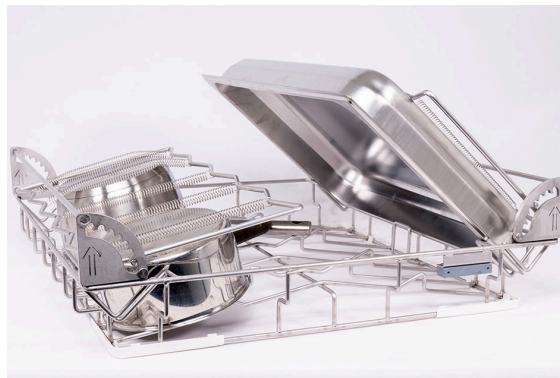


Fig. 13 Cookware basket with 1 GN 1/1 and two pots

The cookware basket can be loaded with one large pot.

Capacity: Pot up to \varnothing 450 mm H 380 mm.

See Fig. 14 *Cookware basket with one large pot*



Fig. 14 Cookware basket with one large pot

The cookware basket can be loaded with **one** baking tray size 600 X 400 mm.

See Fig. 15 *Cookware basket with one baking tray*

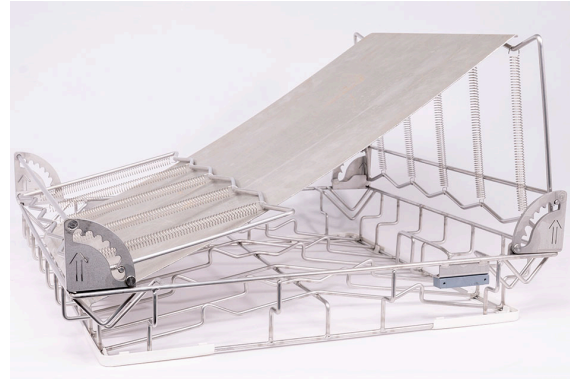


Fig. 15 *Cookware basket with one baking tray*

Reversible wash basket (28575)

Dishware wash mode capacity: 9 X GN 1/1, 18 x GN 1/2 serving trays max. depth 20 mm.

Cookware wash mode capacity: 18 GN 1/1 grids, 9 x GN 1/1 lids or chopping boards depth 200 mm or 2 baking trays or chopping boards depth 20 mm.

The basket is equipped with a magnet on one side, which means this basket can operate on both dishware and cookware mode depending on how soiled the items are.

See Fig. 16 *Reversible basket with one magnet*



Fig. 16 *Reversible basket with one magnet*

To run the **dishware wash mode** put the basket with the magnet pointing outwards. Program lengths to choose from is 1 or 2 minutes.

To run the **cookware wash mode** put the basket with the magnet to the inside of the cabinet. Program lengths to choose from is 3 or 6 minutes.

Put the items in the different brackets.

See Fig. 17 *Reversible basket loaded with grids, lids and chopping boards*



Fig. 17 Reversible basket loaded with grids, lids and chopping boards

To load pastry/baking trays 600 X 400 mm put them on the diagonal.

See Fig. 18 *Reversible basket with pastry/baking trays*



Fig. 18 Reversible basket with pastry/baking trays

Dishware basket for dinner or soup plates (28148)

Capacity: 18 dinner or 12 soup plates \varnothing 240 mm.

See Fig. 19 *Dishware basket*



Fig. 19 Dishware basket

Glassware basket for glasses and mugs (28149)

Capacity: 25 glasses/mugs ø 90 mm.

See Fig. 20 *Glassware basket*



Fig. 20 Glassware basket

3 User settings

There are in total 6 (six) settings that can be changed as an operator of the machine.

- Clock
- Backlight
- Buzzer
- Language
- Injector
- Hood type (Auto Start)
- Auto Opening (only available on hood type dishwashers)

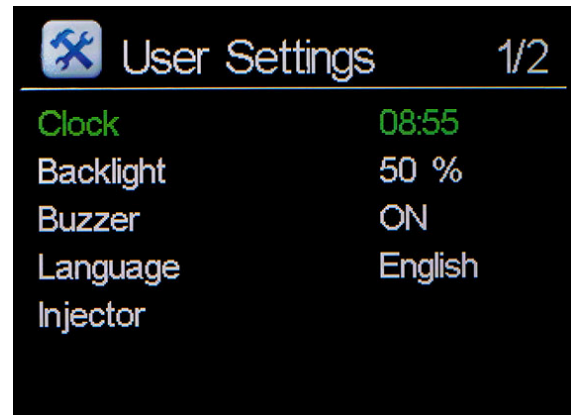


Fig. 21 User settings 1st page

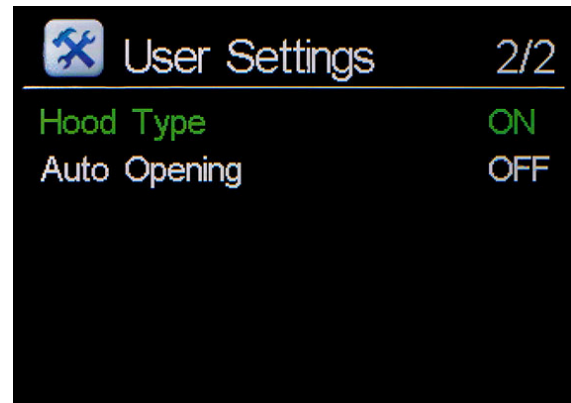


Fig. 22 User settings 2nd page

To enter the User settings press and hold the MENU button for 3 seconds.

Choose which parameter to change by toggling up and down with the arrows.

Confirm your choice with the CONFIRM button.

Clock – change date and time

Choose Clock in the User settings menu with the CONFIRM button.

Choose which parameter to change. Move up and down with the arrows.

The parameter to be modified is shown in green.

Change the value (in yellow) with the arrows.

Confirm with the CONFIRM button.

To exit the menu: press the ON/OFF button.

Switch off backlight

Choose Backlight in the User settings menu with the CONFIRM button.

Change the value (in yellow) to NO with the arrows.

Confirm with the CONFIRM button.

To exit the menu: press the ON/OFF button.

Switch off buzzer

Choose Buzzer in the User settings menu with the CONFIRM button.

Change the value (in yellow) to NO with the arrows.

Confirm with the CONFIRM button.

To exit the menu: press the ON/OFF button.

Change language

Choose Language in the User settings menu with the CONFIRM button.

Change the value (in yellow) with the arrows.

Confirm with the CONFIRM button.

To exit the menu: press the ON/OFF button.

Injector

Adjustment of detergent and rinse aid.

See instructions in the Service Manual. We recommend this to be done by a service technician.

Enable/disable Hood type (Auto start)

Choose Hood type in the User settings menu with the CONFIRM button.

Change ON or OFF (in yellow) with the arrows.

Confirm with the CONFIRM button.

To exit the menu: press the ON/OFF button.

Enable/disable Auto opening (only available on hood type dishwashers)

Choose Auto opening in the User settings menu with the CONFIRM button.

Change ON or OFF (in yellow) with the arrows.

Confirm with the CONFIRM button.

To exit the menu: press the ON/OFF button.

4 Daily cleaning

- 1 Remove the pot wash arms (A and B). Unhook and pull the arm towards you to be able to remove it.

Clean and flush the inside and put them back again.

See Fig. 23 *Remove pot wash arms*

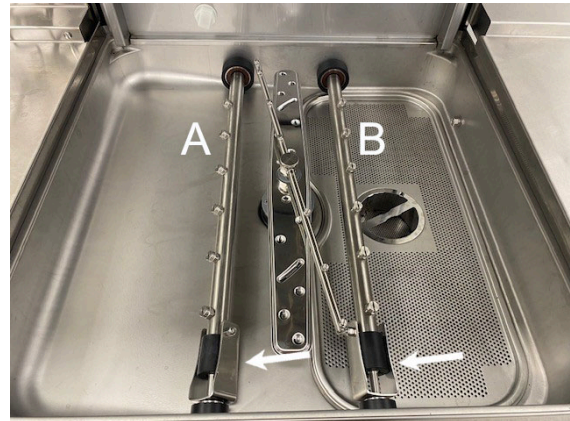


Fig. 23 *Remove pot wash arms*

- 2 Undo the nut and remove the upper and lower wash and rinse arms.

Clean and flush carefully.

After cleaning put them back again.

See Fig. 24 *Remove lower wash and rinse arms*

See Fig. 25 *Remove the upper wash and rinse arms*



Fig. 24 *Remove lower wash and rinse arms*

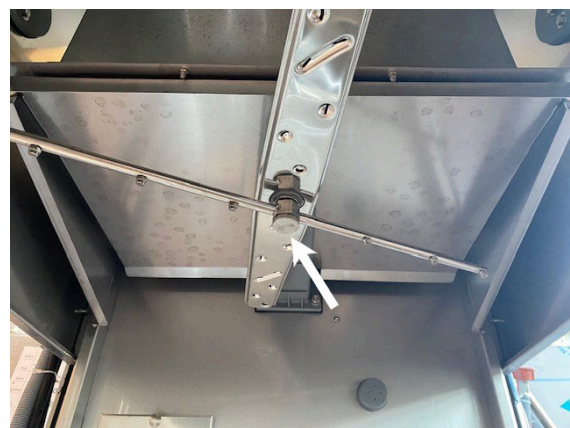


Fig. 25 *Remove the upper wash and rinse arms*

4 Daily cleaning

- 3 Take out the tank grid (A) and remove the filter (B).

See Fig. 26 *Remove tank grid and filter*

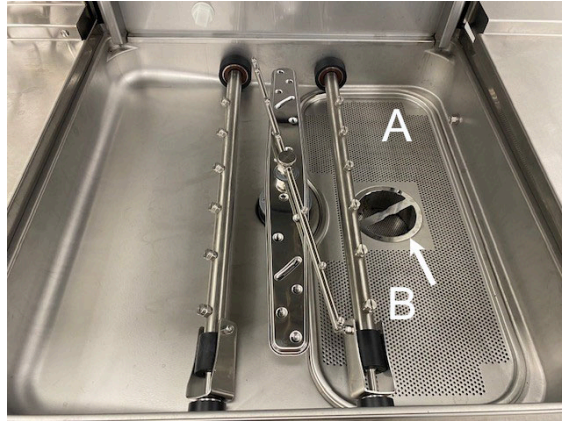


Fig. 26 *Remove tank grid and filter*

- 4 Empty X2 Master by pressing the ON/OFF button in the upper left corner. Choose "Switches off" in the display and CONFIRM.

The display will show the symbol for empty machine and a countdown of 20 seconds starts.

Emptying X2 Master will take about 3 minutes.

See Fig. 27 *Empty the X2 Master*

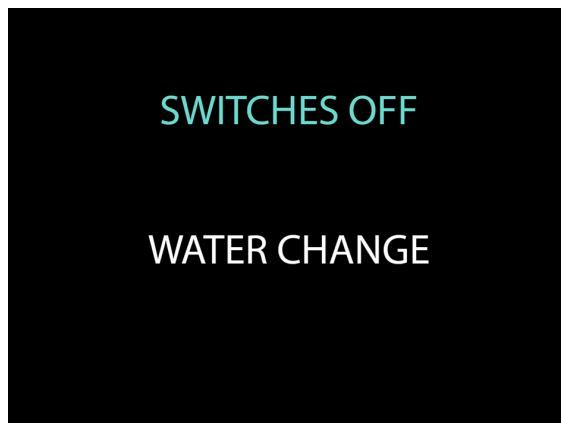


Fig. 27 *Empty the X2 Master*

- 5 If you want to activate the Auto Clean Program press the CONFIRM button again. The symbol for Auto Clean will show in the upper right corner of the display.

See Fig. 28 *Auto Clean symbol*

- **Automatic hood:** The hood goes down automatically.
- **Manual hood:** The hood must be lowered manually.

Emptying and cleaning X2 Master will take about 3 minutes.



Fig. 28 *Auto Clean symbol*

- 6 Take out the two filters at the bottom of the tank.

See Fig. 29 *Remove the filters*



Fig. 29 *Remove the filters*

- 7 Flush and clean the filters and the tank grid.

See Fig. 30 *Clean the filters and the tank grid*

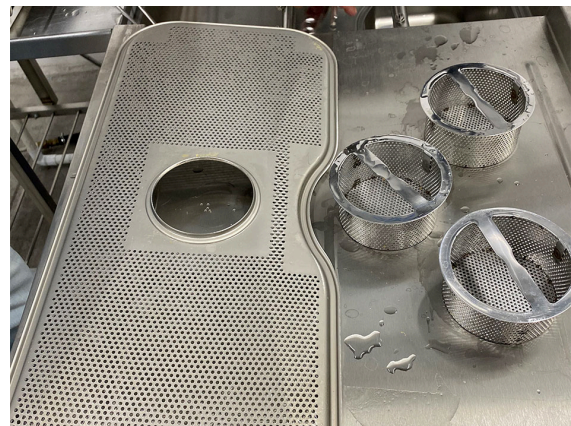


Fig. 30 *Clean the filters and the tank grid*

- 8 Put all parts back in place.

The three round filters are identical. They fit all at the bottom of the tank and in the tank grid.

- 9 Wipe along the edges of the tank with a wet cloth.

See Fig. 31 *Wipe along the edges*

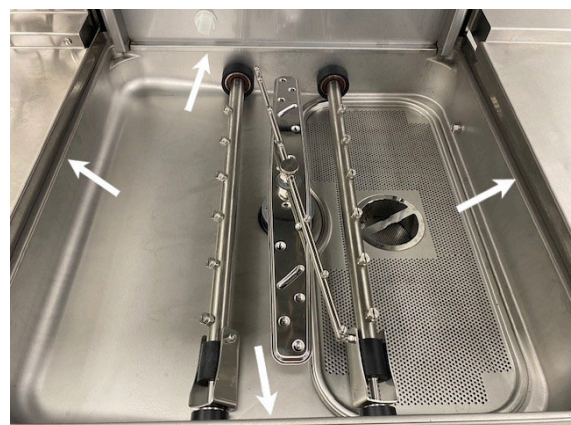


Fig. 31 *Wipe along the edges*

10 X2 Master is now ready for the next serving.

Leave the hood open to let air circulate.



NOTE

Do not leave X2 Master switched on if it is not used for some time or if the operator is not able to monitor it directly.




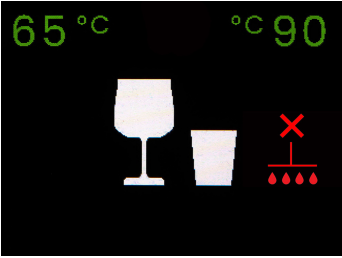
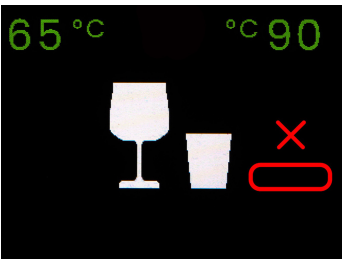
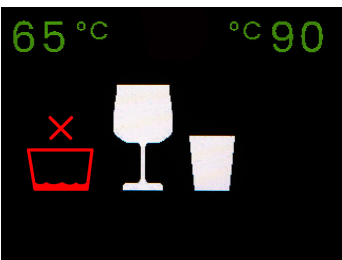
NOTE

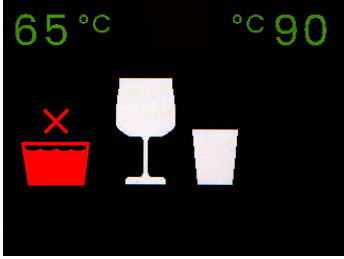

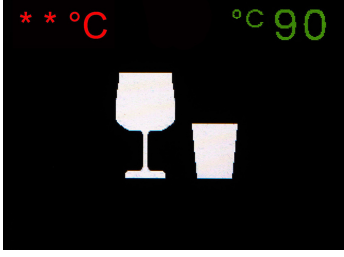
If X2 Master is not going to be used for quite some time you have to empty the detergent and rinse aid dispensing device to avoid crystallizations and damages to the pump. Remove the priming pipes from the detergent and rinse aid containers and soak them in a container of clean water. Run some wash cycles and empty the machine completely. To finish switch off the main off/on switch and shut off the water inlet tap.

5 Error icons and troubleshooting

5.1 Error icons in the display

SERVICE ICON	MEANING	SOLUTION
	Time for periodic service. The "tool" symbol indicates that it is time for service.	Call for technical assistance. The machine will work while waiting for service.

ERROR ICONS	MEANING	SOLUTION
	Low rinse volume.	Check the rinse arms for any debris or obstructions. If the problem persists after switching off and on again, call for technical assistance.
	Low water level in the rinse tank.	Check the mains water inlet. If the problem persists after switching off and on again, call for technical assistance.
	Low water level in the wash tank.	Check the mains water inlet. Press CONFIRM to reset the count. If the problem persists after switching off and on again, call for technical assistance.

	<p>High water level in the tank.</p>	<p>Check if there are any obstructions in the drain pipe.</p> <p>Check if the drain pump is working correctly.</p> <p>Press CONFIRM to reset the count.</p> <p>Switch off and on again. If the problem persists, call for technical assistance.</p>
	<p>Anomaly or breakage of the temperature sensor in the rinse tank.</p>	<p>Switch off and on again. If the problem persists, call for technical assistance.</p>
	<p>Anomaly or breakage of the temperature sensor in the wash tank.</p>	<p>Switch off and on again. If the problem persists, call for technical assistance.</p>

5.2 Troubleshooting

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
The mains light fails to switch on.	Mains not connected.	Check the electric mains connection.
The wash cycle fails to start.	The machine has not yet filled. The machine has not reached the appropriate temperature yet.	Wait until the CONFIRM button has turned green.
Poor washing result.	The spray arms are clogged, or scale is obstructing them. Not enough or unsuitable detergent or rinse aid. Baskets not fitted properly. Too low wash temperature. The set cycle is unsuitable. Machine does not run in pot washing mode	Dismantle and clean the spray arms. Check the type and concentration of detergent/rinse aid. Fit the baskets properly. Check the temperature – if too low, call for technical assistance. Choose a longer program. Check that the pot symbol is visible in the display when pot-washing basket is used. Make sure the magnet is close to the sensor for cook ware.
Insufficient rinsing.	The spray nozzles are clogged, or scale is obstructing them.	Dismantle and clean the spray nozzles.

The glasses and cutlery are stained.	The rinse aid is unsuitable or is not dispensed correctly. Water hardness above 4 °dH or high dissolved salt content.	Check the rinse aid container and if it is suitable for the type of mains water. If the problem persists, contact chemical supplier.
Water in the tank after draining.	The drain pipe is not positioned correctly or is partially obstructed.	Check if the pipe and the dishwasher drain are obstructed and if the drain is positioned too high up; maximum 800 mm. Check the sieves in the machine.

6 Notes
