

D1 Master

User Manual

serial # DIM-01 00001



Art. no EN31054

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www.nordiskclean.com

Tel. +46 40 671 50 60

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EC DECLARATION OF CONFORMITY FOR MACHINERY

Original

Directive 2006/42/EC, Annex II 1A

Manufacturer (and where appropriate his authorised representative):

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

Hereby declares that

Type of machinery: Ware washing machine for commercial kitchens
No. of machinery: DI 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:

Name: Staffan Stegmark
Address: Jägershillsgatan 13, 213 75 Malmö

Signature:

Place and date: Malmö, 01.03.2024
Signature:



Name: Mikael Samuelsson
Position: CEO

1 General description and safety

1.1 Notes and warnings



NOTE

DI Master is a washing solution for commercial kitchens that is designed for washing crockery, cutlery and glasses.

This manual is your guide for the correct use of DI Master.

Nordisk Clean Solutions recommends that you study the manual thoroughly to be sure that DI 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 authorised personnel.

Any assistance required on this dishwasher must be carried out by authorised 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. Also refer to information about detergent and rinse aid in the Service manual.

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**

DI Master is a professional machine. It must be used by adults and authorised 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.

DI 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**

DI Master is designed only and exclusively to wash glasses, dishware 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.

**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 D1 Master

General

Design	Undercounter dishwashing machine Polypropylene dishware washing basket - Polypropylene glassware washing basket.
External dimensions	External dimensions H x W x D (Door open) 844 mm (+11 mm) x 600 mm x 633 mm (1072 mm)
Weight (empty / filled)	54 / 74 kg (Standard machine)
Tank volume	11 litres
Rinse tank volume	5,5 litres
Clearance	400 mm
Rinse water volume	1,3 litres
Wash water temperature***	60 °C
Rinse water temperature***	85 °C
Sound pressure level	< 56 dB(A) ISO 11203

PROGRAMS & CAPACITY

Washing programs	1 min, 30 sec. (glassware) 2 min. (dishware) 3 min. (flatware) 8 min. (utensils)
Capacity per program	18 Dinner plates or 12 Soup plates Ø 240 mm - 25 Glasses/mugs Ø 90 mm
Start-up time (filling and heating)	13 min at 55°C inlet water temperature
Water change time	8 min at 55°C inlet water temperature

ELECTRICAL CONNECTION

Voltage**	380 / 400 / 415 V / 3N~ / 50 Hz 230 V / 3N~ / 50 Hz 230 V / 1N~ / 50 Hz
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Fuse	10 A (400 V / 3N~)
	16 A (230 V / 3N~)
	25 A (230 V / 1N~)
Frequency	50 Hz
Maximum output	5,1 kW
Dishwashing pump	0,55 kW
Rinse pump	0,18 kW
Heater wash tank*	2 kW
Heater rinse tank*	4,5 kW
Enclosure rating	IPX5****

WATER CONNECTION

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

VENTILATION & DRAIN

Ventilation requirements	500 m³/h
Heat emitted to room (total/sensible/latent)	1,8 kW / 0,6 kW / 1,2 kW
Drainage	Drain hose Ø 28 mm - 1,4 m
Drain capacity requirement	50 l / min.
Drain water temperature	65 °C
Drain pump	40 W
Maximum lift height drain pump	800 mm

DETERGENT & RINSE AID

Liquid detergent and rinse aid dosing dispenser with a peristaltic pump are integrated into the machine.

Inbuilt water softener (option)	Maximum inlet water temperature 30 °C
	Pressure 300 – 500 kPa (3 – 5 bar)

**NOTE**

D1 Master must be installed according to national regulations. D1 Master is supplied with a 1,5 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 the machine rating plate.

*** Factory settings. The settings can be changed according to 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 D1 Master.

The sticker is placed in the upper right corner of the unit.



- 1 Scan the QR code on the sticker.

See Fig. 1



Fig. 1

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

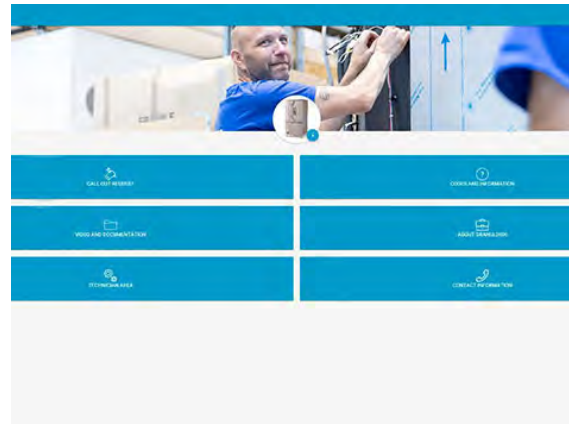
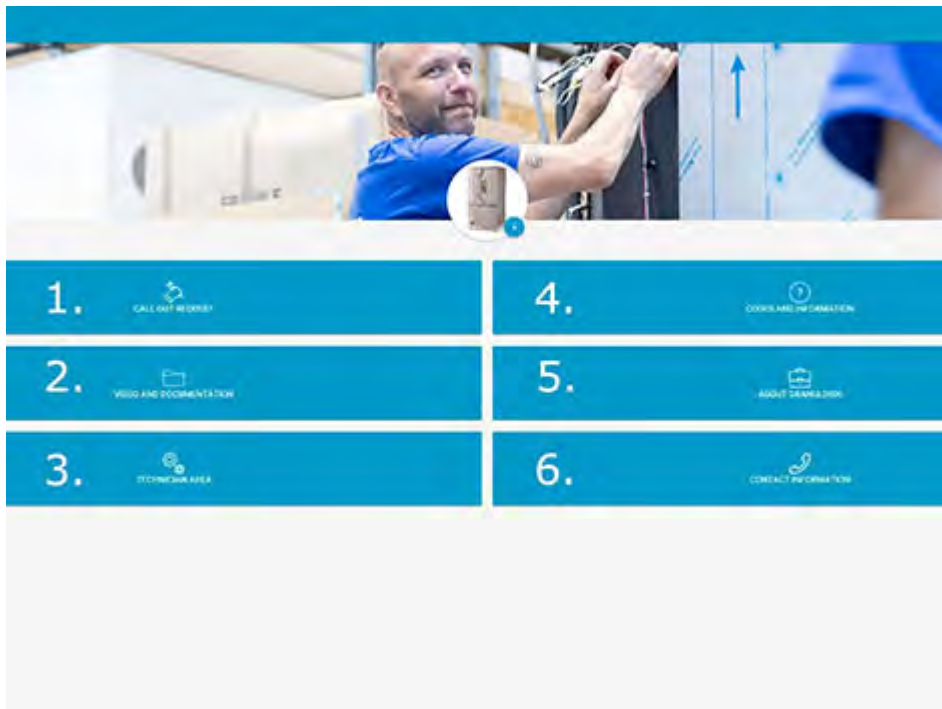


Fig. 2 Menu

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

Explanation of the different boxes:



1. CALL OUT REQUEST	Make a service call on the machine
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	Contact information to service partner

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

2.2 Start and operation

- 1 Switch on the main electrical switch.

The display lights up and goes in OFF-mode.

- 2 Press and hold the ON/OFF button in the upper left corner. The display lights up and D1 Master starts to fill with water and heat up to the correct temperatures in the wash and rinse tank.

The filling and heating time is approx. 11 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 D1 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.
- Glassware 1 min, 30 sec
 - Dishware 2 min
 - Flatware 3 min
 - Utensils 8 min

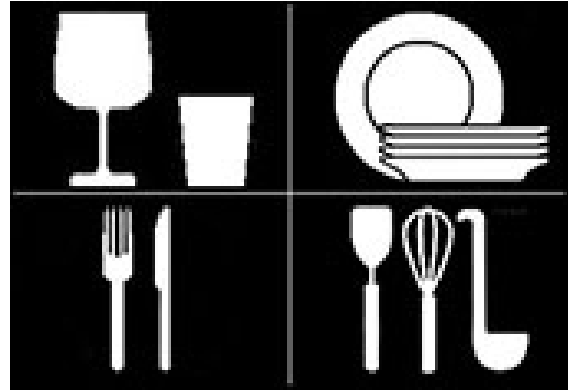


Fig. 5 4 programs

- 5 Choose the appropriate program and start DI Master by pressing the CONFIRM button in green.
- 6 When DI Master is running the display will show a count-down of the wash cycle and the CONFIRM button turns blue.

See Fig. 6 *Countdown*



Fig. 6 Countdown

- 7 The program is ready when the CONFIRM button turns green.
- 8 If water change is needed, press and hold the ON/OFF button and choose by arrow down "Water change"

See Fig. 7 *Choose Water change*

Confirm by pressing the CONFIRM button.

Draining, filling and heating the tank again takes about 8 min at 55° inlet temperature.



Fig. 7 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. 8 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. To exit the function, press any button or open the hood.

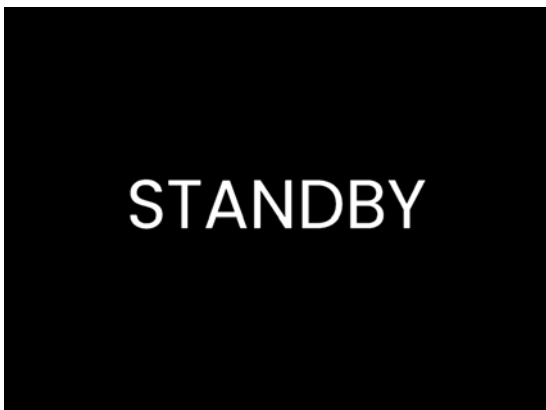


Fig. 9 Standby mode

2.3 Loading washware

Dishware basket for dinner or soup plates (28148)

Capacity: 18 dinner or 12 soup plates ø 240 mm.

See Fig. 10 *Dishware basket*



Fig. 10 Dishware basket

Glassware basket for glasses and mugs (28149)

Capacity: 25 glasses/mugs ø 90 mm.

See Fig. 11 *Glassware basket*



Fig. 11 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
- Hood type (Auto Start)
- Auto Opening (only available on hood type dishwashers)

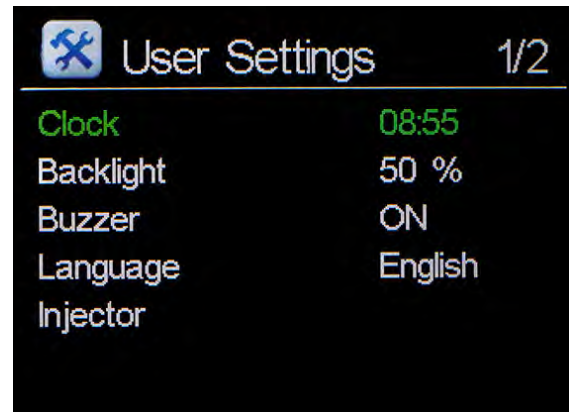


Fig. 12 User settings 1st page

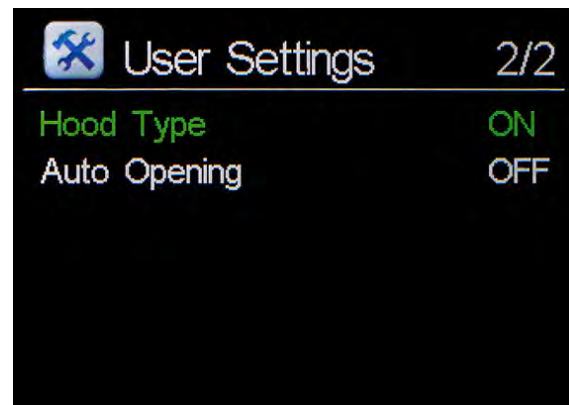


Fig. 13 User settings 2nd page

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.

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.

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

See Fig. 14 *Remove tank grid and filter*



Fig. 14 *Remove tank grid and filter*

- 2 EmptyDI 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.

See Fig. 15 *Switches off*



Fig. 15 *Switches off*

- 3 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. 16 *Auto Clean symbol*

Emptying and cleaning DI Master will take about 3 minutes.

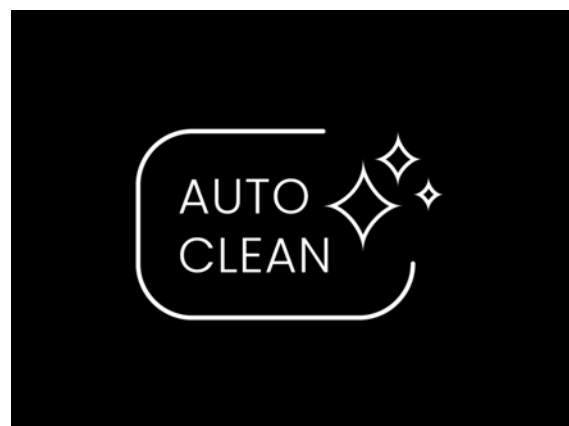


Fig. 16 *Auto Clean symbol*

4 Daily cleaning

- 4 Take out the filter at the bottom of the tank.

See Fig. 17 *Remove the filter*



Fig. 17 Remove the filter

- 5 Flush and clean the filters and the tank grid.
- 6 Put all parts back in place. The two round filters are identical.
- 7 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. 18 *Lower and upper wash and rinse arms*



Fig. 18 Lower and upper wash and rinse arms

- 8 Leave the door open to let air circulate.

- 9 **If option softener**, refill with new salt if the icon refill salt comes up in the display.

Turn off the machine and the main switch before refilling salt.

See Fig. 19 *Icon salt*



Fig. 19 Icon salt

- 10 Refill salt in the dispenser at the bottom of the wash tank. Use the funnel supplied. Make sure to clean any spilled salt from inside the tank.

See Fig. 20 Refill salt



Fig. 20 Refill salt



NOTE

Remove any spilled salt from the tank immediately, otherwise it could damage the surface of the tank with rust or similar marks.



NOTE

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







NOTE

If DI 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

ERROR ICONS	MEANING	SOLUTION
	Low water level in the wash tank.	Check the mains water inlet. Press CONFIRM to re-set the count. 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.
	Anomaly or breakage of the temperature sensor in the wash- or rinse tank.	Switch off and on again. If the problem persists, 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 re-set the count.</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 are not connected.	Check the electric mains connection.
The wash cycle fails to start.	The machine has not yet been 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. Plates/glasses not positioned correctly. Too low wash temperature. The set cycle is unsuitable.	Dismantle and clean the spray arms. Check the type and concentration of detergent/rinse aid. Arrange the plates/glasses correctly. Check the temperature – if too low, call for technical assistance. Choose a longer program.
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
