

Instructions for Use



RID-300 - ENG - Rev02

thed
RID-300UC RID-300TT

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Conformity

CONFORMITY TO EUROPEAN REGULATIONS, STANDARDS AND DIRECTIVES

Device conforms with the following Regulations, Standards and Directives:

Standards and Directives	Description
	Medical Device Regulation (MDR) / Regulation (UE) n. 2017/745 for medical devices. Class IIb devices, in accordance with the Rule 16 – ANNEX VIII of the above Regulation
2012/19/EU	Waste Electrical and Electronic Equipment Directive (WEEE)
ISO 15883-1	Washer-disinfectors - Part 1: General requirements, terms and definitions and tests
ISO 15883-2	Washer-disinfectors - Part 2: Requirements and tests for washer-disinfectors employing thermal disinfection for surgical instruments, anaesthetic equipment, bowls, dishes, receivers, utensils, glassware, etc
ISO 15883-5	Washer-disinfectors - Part 5: Performance requirements and test method criteria for demonstrating cleaning efficacy
IEC 61010-1	Safety requirements for electrical equipment for measurement, control and laboratory use, general requirements

Standards and Directives	Description
IEC 61010-2-040	Safety requirements for electrical equipment for measurement, control and laboratory use; particular requirements for washer disinfectors and washer-disinfectors used to treat medical materials
IEC 61326-1	Electrical equipment for measurement, control and laboratory use - EMC requirements; general requirements
IEC 61770	Electric appliances connected to the water mains - Avoidance of backsiphonage and failure of hose-sets
UL 61010-1	Electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
CSA C22.2 No 61010-1+AMD 1	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements

Note: every new device is delivered with a Declaration of Conformity and a Warranty Card.

Symbols and messages

SAFETY SYMBOLS USED IN THIS MANUAL



WARNING: Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

These warnings indicate hazardous situations that could lead to fatal personal injury.



CAUTION: indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

SYMBOLS DISPLAYED ON THE PRODUCT



Hot surfaces!
Risk of burns.



Consult the Instructions for Use
for important cautionary
information.







Consult the Instructions for Use.









Disposal / Do not dispose of with
normal waste

PROPERTY DAMAGE MESSAGES

Notice: indicates information considered important, but not hazard-related. Typically to avoid damage to the product.

STORAGE	Storage.
TRANSPORTATION	Transportation.
MD	Medical Device.
SN	Serial Number.
REF	Catalogue number.
#	Washer disinfector type or model.
	Temperature between XX °C and XX °C.
	Manufacturing date (YYYY-MM-DD).
	Country of manufacture.
	Manufacturer.

UDI	Unique Identification. Device
HIBC	Health industry bar code in accordance with HIBC Standard.
WASHER DISINFECTOR	Washer disinfector
	This side up.
	Fragile, handle with care.
	Keep dry.
	The washer disinfector must be transported by two authorized technicians (or with a forklift truck) due to its heavy weight.
	Stand-by IEC 60417-5009.
	USB connection.

GS1 Logistic	GS1 datamatrix for logistic purpose.
WARM WATER	Warm water inlet
COLD WATER	Cold water inlet
DEMI WATER	Demineralized water inlet

Introduction

CONTENTS

This section deals with the following subjects:

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About this manual

INTRODUCTION

This manual contains the Instructions for Use of the W&H washer disinfectors RID-300UC and RID-300TT, hereinafter referred to as Thed UC and Thed TT.

FOR YOUR SAFETY AND THE SAFETY OF YOUR PATIENTS

The purpose of this manual is to provide information about Thed washer disinfectors to ensure:

- proper installation and set-up;
- optimal use;
- safe and reliable operation;
- compliance with regular maintenance and servicing requirements

Please carefully read the safety information [see "Safety warnings" on page 10].

OBLIGATIONS WITH REGARD TO THIS MANUAL

This manual is an integral part of the product and accompanies it for its entire working life. It must be consulted in all situations related to the life cycle of the product, from its delivery through to decommissioning. For this reason, it should always be accessible to operators both online and offline.

Contact customer service in the event the manual is unavailable. If the device is transferred, always attach the manual for the new owner.

MANUAL CONTENT

This manual contains the Instructions for Use and for maintenance of the following washer disinfectors models:

- RID-300UC
- RID-300TT

Models differ only for dimensions and installation procedure (e.g., they have the same hydraulic circuit, software menu, disinfection programs, etc.); furthermore a full-featured version, called Plus edition, is available.

DISCLAIMER

All pictures, graphics and illustrations provided in this manual are for the comprehension of the text. They are not meant to be an accurate representation of product details. Thus, they should be taken as indicative only, and may differ from the actual product.

For any suggestions or remarks please send an email to office.sterilization@wh.com.

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The information contained in this document is subject to change without prior notice.

Use restrictions

INTENDED USE

Washer Disinfectors are intended for cleaning and thermal disinfecting invasive and non-invasive medical devices.

The devices are intended for professional use by trained people only.

PROVIDED FEATURES

See "Washing and disinfection cycles" on page 90 for the full list of key program features, including washing and disinfection time, temperature and recommended load type.

USER QUALIFICATION

The users who may operate the Thed are the following.

User qualification	Competences
Head of the clinic/practice	Legally responsible for: <ul style="list-style-type: none"> the efficiency of the hygiene protocol in place the thermal washing disinfection process the operators' training and training documentation the correct operation and maintenance of the device
Trained operators	<ul style="list-style-type: none"> Regularly attend the training for operating and using Thed safely. Use theThed according to the Head of the clinic/practice's instructions.

ELECTROMAGNETIC COMPATIBILITY

Device intended to be used in a basic electromagnetic environment.

Safety information

CONTENTS

This section deals with the following subjects:

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Safety warnings

THERMAL HAZARDS



- Always wear appropriate PPE during use of the device (e.g. gloves for cleaning, maintenance, etc...).

ELECTRICAL RISKS



- To avoid the risk of electric shock, this device must only be connected to a supply mains with protective earth.
- The machine is installed with a dedicated circuit.
- Do not pour water or any other liquids over the device (risk of electrical short circuits).
- To power off the device, disconnect the thermal-magnetic residual-current circuit breaker.
- Switch off the device and disconnect the thermal-magnetic residual-current circuit breaker before inspecting, carrying out maintenance, or servicing the device.
- Ensure that the power receptacle of the device is connected to is properly grounded.
- All electric devices connected to the Thed must be of Insulation Class II (double insulated) or higher.
- Use only the power cord provided by the manufacturer.

IMPROPER USE OF THE DEVICE



- The device must not be used in presence of explosive or flammable gases, vapors, liquids, or solids.
- The device has not been designed for the washing of foodstuff or waste.
- Do not exceed the maximum load weight limits as specified in this manual (see "Washing and disinfection cycle management" on page 52).
- Do not drink any water that has been inside the device.
- In case of misuse of the device, the protection provided by the device may be impaired.

TAMPERING



- Do not remove the name plate or labels from the device.
- Repairs, maintenance, or service must be carried out by authorized service providers always using genuine spare parts of the manufacturer.

REQUIREMENTS



- Installation must be performed only by authorized technicians.
- Use only the power cord set and accessories provided by the manufacturer.
- Fit the device out with a backflow preventing device complying to national and local regulations.
- Serious incidents that have occurred in relation to this medical device should be reported to the manufacturer and competent authority in the country where the incident occurred.
- In case of malfunction of the device, contact an authorized technician or the manufacturer.
- Leave the condenser vent (rear side of the device) free from anything that might obstruct the air passage.
- The device must be connected to a water supply system delivering drinking water meeting the specifications listed in these instructions. Do not add any chemical/additive to the water.

CYBERSECURITY

1) Device connectivity

The accessible external ports of the device are:

- Ethernet port, where present
Intended use:
 - Network services (see description below)
- USB ports
Intended use:
 - mass storage device, such as a pen drive, for cycle report saving;
 - mass storage device, such as a pen drive, for software update;
 - report printer
 - label printer
 - QR code reader (seen as a keyboard), for EliTrace functionality, where present;
 - Wi-Fi dongle key, for network services (see description below);
 - USB to Ethernet adapter for network services (see description below).

Network services are:

- remote data storage;
- label printer sharing;
- device user management;
- cloud communication for sending cycle data and device status and for software update.

Please note that the device functionality does not require connecting to the Internet.

Recommendation for cybersecurity

- All the listed ports and uses are available for both the device users and the service personnel, except for the software update that can be performed only by authorized personnel only (W&H partners or technicians).
- Update the device software to the latest version as recommended by the manufacturer.
- Use only trusted USB mass storage devices for report saving.
- Regularly backup the cycle reports to ensure to have a copy in case of cybersecurity events or incidents.
- Don't access the device web server functionality through links in e-mails.
- Ensure the mail service provider has a spam filter.

2) Device protective features for cybersecurity

The device is designed in such a way that a cyber attack or software failure does not compromise the safety in relation to the intended use. A successful cyber attack cannot result in direct patient harm: in fact, the device is not in contact with patients.

The device does not share any data (sensible and not sensible data) related to patients.

To further protect the device and minimize successful cyber attacks, the following precautions were taken:

- the access to the device operating system is not possible (user access to the operating system is disabled);
- a firewall is active on the device; all the device network connections (to and from the external world) are managed by the firewall which, following specific rules, filters them and blocks everything that is not strictly necessary for the device;

- the update/install operations are only possible using signed and encrypted software, provided by W&H;
- during the normal use, the operating system and the application (responsible for the device functionalities) are located in a read-only memory to avoid intentional corruption;
- all the cycle data are secured by means of checksum controls.

3) Cycle data storage

The device saves cycle data on the USB pen drive. Each file contains a control code that allows to check the file integrity.

4) Cloud secure communication

A secure communication (with authentication and authorization) can be established between the device and the cloud server for the following functionalities:

- remote software update;
- setting management;
- device monitoring;
- cycle data acquisition.

The user and authorized technicians can interact with the cloud server by means of a generic device (e.g.: PC, tablet, smartphone) with a web browser and proper authorization and authentication.

5) Infrastructure requirements

In order to minimize the possibility of cyber attacks, it is user responsibility to apply the following measures:

- software update/install shall be done by authorized and trained personnel only;
- it is recommended to activate a firewall on the router/modem used for the Internet connection.

Note: further security information is mentioned in the MDS2 document, which is available on request.

6) Software Bill of Material (SBOM)

The device provides the possibility to download the SBOM to the USB pen drive, by accessing the “System Info” menu page.

7) Events possibly caused by a cyberattack detectable by the user

The following situations, visible by the user, could be caused by cybersecurity events:

- frozen screen;
- black screen;
- significant slowdown when navigating the menus;
- malfunctioning or blocked network services (such as: remote data storage, label printer sharing, etc...).

8) Instructions for users on how to respond if a cybersecurity event or incident occurs

If a cybersecurity event or incident occurred, or in case of a suspect, the following indication shall be followed to minimize the impact and prevent further damage:

- to disconnect the device from the network (Ethernet cable and/or Wi-Fi dongle) to prevent spreading the damage to other devices;
- to disconnect the USB pen drive to reduce the possibility to corrupt stored data, like cycle reports;
- to inform the IT department and an authorized technician (or device manufacturer) and follow the indications they would provide to secure the affected device.

Responsibility

USER RESPONSIBILITY

- The user is responsible for the correct use and maintenance of the device in accordance with these Instructions for Use.
- The safety devices of the Thed are impaired when the product itself is not installed, used and serviced in accordance with these Instructions for Use.
- The Instructions for Use updated to the latest version is always available at www.wh.com.
- Keep these Instructions for Use for future reference.

MANUFACTURER RESPONSIBILITY

- The manufacturer can only accept responsibility for the safety, reliability and performance of the product when the product itself is installed, used and serviced in accordance with the Instructions for Use.
- Servicing by unauthorized persons invalidates all claims under warranty and any other claims.

Getting started

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Unpacking

UNPACK THE DEVICE



WARNING! Heavy product. The device must be removed from the box and transported with a forklift truck or pallet truck, or by two authorized technicians. Do not use the Thed handles to move the device.

Weight with box:

- Thed UC: 114 kg (251.3 lbs)
- Thed TT: 86 kg (189.6 lbs)

Weight without box:

- Thed UC: 72 kg (158.8 lbs)
- Thed TT: 54 kg (119 lbs)

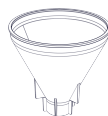
Notice: check the external condition of the box and the device. In case of any damage, immediately contact the dealer or shipping agent that has carried out the transport. Keep the packaging for shipping or transporting the device in the future.

Note: the packaging of the device is environmentally friendly and can be disposed of by industrial recycling companies.

CONTENTS OF THE PACKAGING



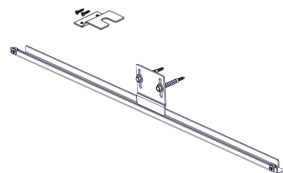
Washer disinfectant



Salt funnel

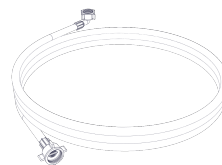


USB pen drive loaded with
Instructions for Use

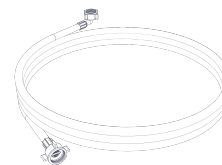


Safety bracket kit

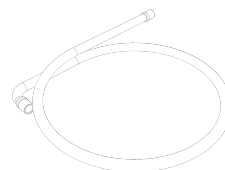
Note: different kit available according to the
device model (RID-300TT or RID-300UC)



Demineralized water tube



Cold water tube



Drain tube



Check valve (EB type)



Steam reduction kit



This manual, declaration of conformity, warranty card, work test report

ITEMS NOT PROVIDED WITH THE DEVICE

The following items are not provided:

- LAN cable for connecting the device to a network,
- chemical agent cartridges/canisters,
- salt,
- washing supports (lower rack and other washing supports).

See "Accessories, washing supports, spare parts, consumables" on page 100 for a full list of optional washing supports.

Handling

HOW TO RELOCATE THE DEVICE

Before transport:

- allow the washing chamber to cool down,
- completely empty the device,
- remove all the washing supports and the lower/upper racks,
- seal the water connections,
- close the chamber door,
- avoid vibrations of the device,
- use original packaging when shipping or transporting the device. Replacement packaging materials are available from Service W&H.

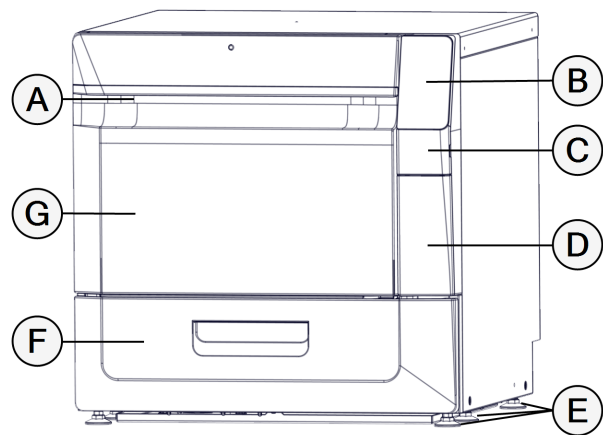


WARNING! When moving the device around, a forklift truck or pallet truck must be used. Alternatively, two authorized technicians must move the device.

Notice: refer to Service Literature for specifications and procedures to follow for installation. A technician is responsible for device installation and commissioning.

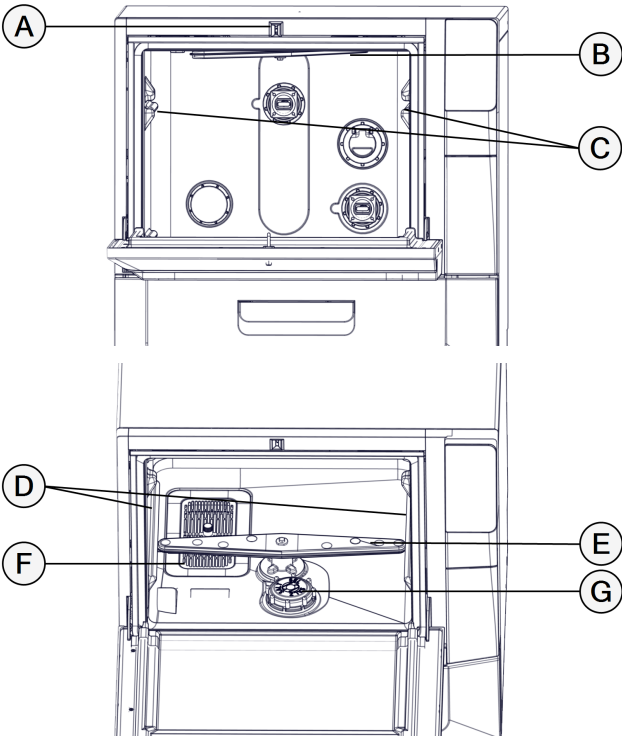
Product description

FRONT VIEW



Part	Description
A	Door handle with LED (optional)
B	Touch screen
C	Operating panel
D	Service door
E	Adjustable feet
F	Chemical drawer
G	Washing chamber door

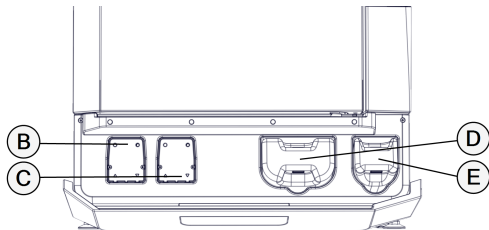
INTERNAL STRUCTURE



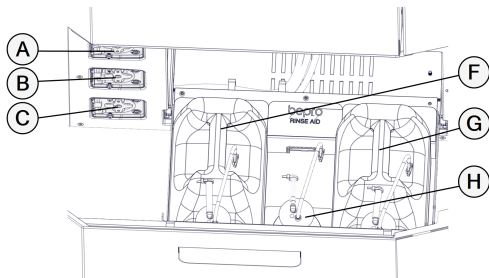
Part	Description
A	Door locking mechanism
B	Upper spray arm
C	Upper rack rails
D	Lower rack rails
E	Lower spray arm
F	Chamber filters
G	Salt tank

COMPONENTS IN THE CHEMICAL DRAWER

RID-300TT

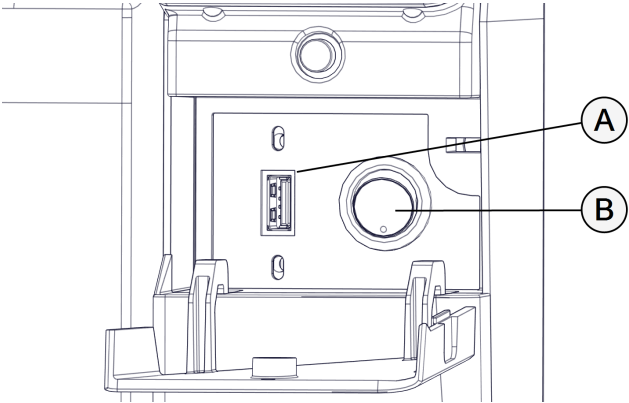


RID-300UC



Part	Description
A	Peristaltic pump (neutralizer)
B	Peristaltic pump (detergent)
C	Peristaltic pump (rinse aid)
D	Cartridge (detergent)
E	Cartridge (rinse aid)
F	Canister (detergent)
G	Canister (neutralizer)
H	Canister (rinse aid)

COMPONENTS BEHIND THE OPERATING PANEL

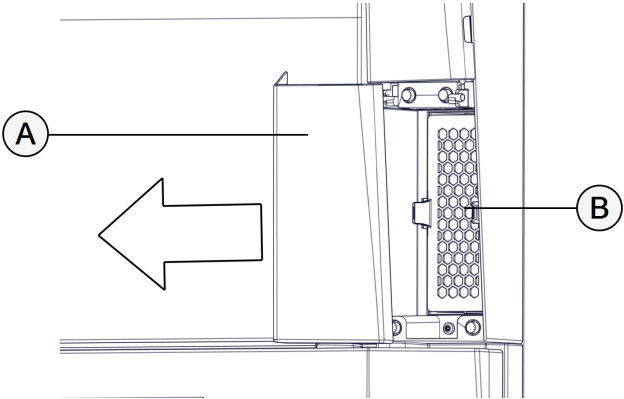


Part	Description
A	USB port
B	Mains switch



WARNING! To power off the device, disconnect the thermal-magnetic residual-current circuit breaker.

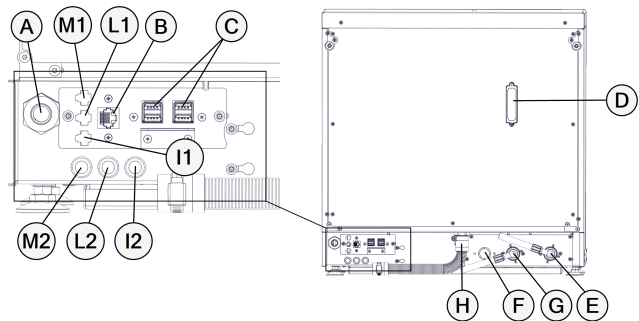
COMPONENTS BEHIND THE SERVICE DOOR



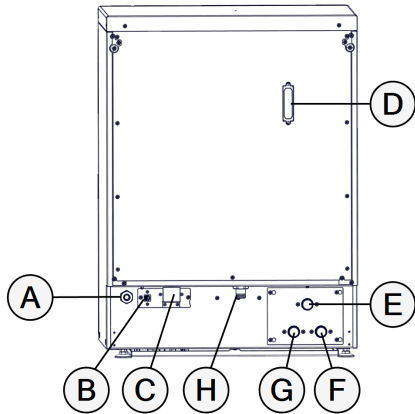
Part	Description
A	Service door
B	HEPA filter

REAR VIEW

RID-300TT



RID-300UC



Part	Description
A	Mains cable
B	LAN port
C	USB ports (optional)
D	Condenser vent
E	Cold water inlet
F	Warm water inlet (optional)
G	Demineralized water inlet
H	Water drain
Note: only for RID-300TT model (optional)	
I1	External canister (neutralizer) electrical connection
I2	External canister (neutralizer) hose inlet
L1	External canister (detergent) electrical connection
L2	External canister (detergent) hose inlet
M1	External canister (rinse aid) electrical connection
M2	External canister (rinse aid) hose inlet

Installing the device

Notice:

Refer to Service Literature for specifications and procedures to follow for installation.

A technician is responsible for device installation and commissioning.

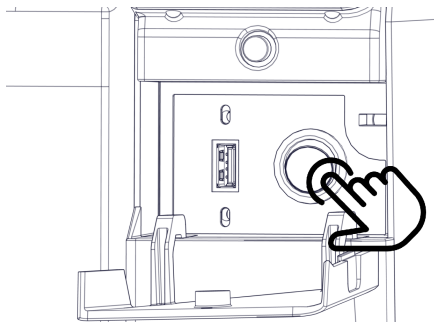


WARNING! There is a risk of tipping forward when a rack is pulled out of the washing chamber towards the door opening. To prevent this from happening, the safety bracket kit must be installed.

Operating the device

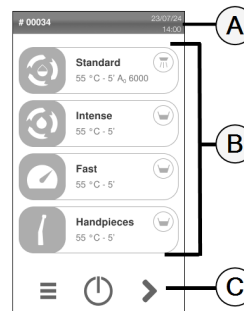
POWER THE DEVICE ON/OFF

- 1 Press the power switch on the operating panel.



- 2 After a quick autotest the device automatically enters standby mode. See "Standby mode" on page 36.
- 3 Tap . The homepage appears with the enabled washing and disinfection cycles.







HOMEPAGE DESCRIPTION











Part	Description
A	Title/purpose of the screen, or the cycle number and the current date and time.
B	Available cycles.
C	Additional buttons used to navigate the menu.

MAIN MENU FUNCTIONS

Note: this section describes the device functions. Please note that the availability of them depends on the device model and some of them might not be available for your model.

Icon	Label	Function
	Menu	Opens the menu.
	Settings	Opens the pages to washer disinfectant management.
	Traceability	Opens the pages to: <ul style="list-style-type: none"> ■ monitor the performed cycle data; ■ manage users; ■ set the label printing options.
	Accessories	Opens the pages to accessories management.
	Maintenance	Carries out the maintenance procedure.
	System Info	<ul style="list-style-type: none"> ■ Shows the system information ■ During a cycle, shows the cycle parameters.

SETTINGS MENU FUNCTIONS





Icon	Label	Function
	Device	Opens the pages to set the device.
	Language	Sets device language.
	Date & Time	Sets date and time format, current date and time and time zone.
	Device name	Sets the washer disinfectant name.
	Energy Management	Changes the standby mode delay.
	Display	Sets the display brightness.
	Audio	Manages the washer disinfectant sounds.
	Cycle	Opens the pages to manage cycles.

Icon	Label	Function
	Cycle Exclusion	Sets the cycles menu.
	Measurement Units	Sets the unit of measure.
	Connectivity	Opens the pages to manage the network connection.
	Ethernet	Manages the Ethernet network.
	Wi-Fi	Allows wireless network selection and configuration.
	Network Status	Only with a network connection set. Provides information about the network status.
	IoDent	Only if this service is supported in the country of use, and if the washer disinfectant is connected to it. Shows the status of the connection with the W&H monitoring server.
	Remote Data Storage	Only with a network connection set. Opens the page to manage the remote storage.
	Settings	Only with a network connection set. Sets the parameters of the network location.




Icon	Label	Function
	Save all	Only with a network connection set. Copies all the files in the specified location in the network.
	Test	Only with a network connection set. Checks if the files can be copied to the specified location.
	USB options	Enables/disables USB warning messages.
	Traceability Settings	Chooses if the washer disinfectant is master or slave.


TRACEABILITY MENU FUNCTIONS

Icon	Label	Function
	Cycle History	Shows all the washing and disinfection cycles and tests and prints reports and labels.
	Save	Saves all the washing and disinfection cycle reports in the USB pen drive.
	User Management	Permits managing the users.
	Add User	Administrator only. Adds a user.







Icon	Label	Function
	Delete User	Administrator only. Deletes a user.
	Reset user PIN code	Administrator only. Resets a user PIN code.
	Change your PIN code	Changes the PIN code.
	Options	Administrator only. Permits the following: <ul style="list-style-type: none"> Identify and save the operator who starts the cycle and releases the load. Protect with a password the cycle start, the cycle stop and the load release.



ACCESSORIES MENU FUNCTIONS

Icon	Label	Function
	USB Pen Drive	Opens the formatting page of the USB pen drive.
	Format	Formats the USB pen drive.
	Printer	Selects the printer model connected to the washer disinfectant. The icon appears disabled if the printer/Ethernet cable/Wi-Fi dongle key is not connected.







Icon	Label	Function
	Special Codes	Saves the codes issued by the manufacturer to activate special functions. Note: only for technical support.








MAINTENANCE MENU FUNCTIONS










Icon	Label	Function
	HEPA Filter	<ul style="list-style-type: none"> Shows the status of the consumables; Resets the cycle counter; Displays the consumable replacement procedure videos.
	Chemicals	Manages the chemicals.
	Detergent	Manages the detergents.
	Neutralizer	Manages the neutralizer.
	Rinse	Manages the rinse.
	Priming	Allow the automatic priming of each chemical agents.









Icon	Label	Function
	Chamber filters	Manages the maintenance of the chamber filter.
	System Update	Installs and upload the software.

Common commands and icons

Icon	Function
	Enters/exits the standby mode.
	Moves to the previous/next screen.
	Opens the homepage.
	Accesses to the sub-menus.
	Provides access to the setting screen of a specific area.
	Shows the list of all operating parameters of the Thed.






Icon	Function
	Opens a screen with other settings/options.
	Refreshes the page.
	Indicates the value that may be changed and appears by clicking on it.
	<ul style="list-style-type: none"> Confirm the active option. Saves a setting or a parameter. Answers YES to a question.
	<ul style="list-style-type: none"> Aborts the action/function. Moves to the previous screen without confirming/making any changes nor saving any parameters. Answers NO to a question.
	Indicates that the ECO DRY mode with extended drying is operating automatically.
	Increases/decreases the value.

Icon	Function
	Indicates that an error occurs.
	Indicates that the option checked is working properly.
	<ul style="list-style-type: none"> Plays a video. Starts a procedure.
	Pauses a video.
	Indicates that the chamber door is locked.
	Indicates that the chamber door is locking/unlocking.
	Indicates that the chamber door is unlocked and can be open.
	Indicates that the option is ON and allows to set it OFF by touching it.
	Indicates that the option is OFF and allows to set it ON by touching it.

Icon	Function
	Indicates that the option is active/not active.
	Indicates that the option is enabled/disabled.
	Indicates that the user is using the administrator credentials.
	Gives information about the function displayed.
	Confirms the active option and saves a setting or a parameter.
	Copy the system info to the USB pen drive.
	Shows an animation about the replacement procedure.
	Shows a washing and disinfection summary.








Device setup

SET THE LANGUAGE

- 1 On the homepage tap  >  >  > .
- 2 Tap the language you prefer.
- 3 Tap  to confirm and return to the homepage.







SET THE DATE AND TIME

To change the current date and time:

- 1 On the homepage tap  >  >  > .
- 2 Tap the value you want to change (time, date, format): the highlighted value can be changed.
- 3 Tap  or  to change the value.
- 4 Tap  to confirm and return to the previous page.








SET THE DEVICE NAME

To change the device name that appears in the cycle reports:

- 1 On the homepage tap  >  >  > .
- 2 Tap the text box: a keyboard appears.
- 3 Enter the new device name.
- 4 Tap  to confirm.
- 5 Tap  to return to the previous page.






SET THE DISPLAY BRIGHTNESS

To change the display brightness:

- 1 On the homepage tap  >  >  > .
- 2 Tap  or  to change the value.
- 3 Tap  to confirm and return to the previous page.






SET THE AUDIO

To change the audio settings:

- 1 On the homepage, tap  >  >  > .
- 2 Tap the settings you want to change (select melodies or tones, volume setting and/or all sounds enabling/disabling).
- 3 Tap  to confirm and return to the previous page.







SET THE MEASUREMENT UNITS



To change the measurement units:

- 1 On the homepage, tap  >  >  > .
- 2 Tap the measurement unit you prefer.
- 3 Tap  to confirm and return to the previous page.

CONNECT TO A NETWORK

If you connect through an Ethernet cable, in most cases the device will connect to the network automatically. If it does not connect automatically, or if you are using a Wi-Fi dongle key, follow the procedure under supervision of your IT manager / network administrator.

- 1 On the homepage tap  >  > .
- 2 If the connection is through the Ethernet cable, tap : the TCP/IP screen appears.
- 3 If the connection is through the Wi-Fi key, tap : after a while, the device shows the available networks found. Choose the network, enter the credentials in the further screen, then tap  to confirm: the TCP/IP screen appears.

Note: the  and  icons are disabled if the connectivity means (cable or Wi-Fi key) are not properly plugged.

Note: in the TPC/IP screen, the ✓ icon is visible only if you make any change. The Wi-Fi icon at the bottom will not be visible if you connect through Ethernet cable.

- 4 If your network supports dynamic IP addresses (ask your IT manager), enable the options **Dynamic** both in **IP Configuration** and in the **DNS Configuration** fields, then tap ✓ to confirm: all entry fields are disabled.
- 5 If your network does not support dynamic IP addresses (ask your IT manager), enable the options **Static** both in **IP Configuration** and in the **DNS Configuration** fields. Tap on each entry field and enter the IP addresses (ask your IT manager for details). Then tap ✓ to confirm.

H₂O HARDNESS

For setting the water hardness value, contact a technician.





ioDent

DESCRIPTION

It allows to save the data securely and automatically on the cloud and it ensures intelligent and networked reprocessing of instruments, with a wide selection of smart solutions and options.

ACCESS TO IODENT



For the ioDent access proceed as follows:

- 1 On the homepage, tap  >  >  > .

Note: for more information see the dedicated documentation.

User authentication (optional)

FUNCTION AVAILABILITY

To access the user management functions, depending on the device version, it may be necessary to enter the **User Management** activation code. The activation code is required only at the first access to the **User Management**  or the **Options**  menus:









after the code was entered, the function is enabled and there is no need to enter the code again.
To acquire the activation code please refer to the Activation code instructions.

PIN MANAGEMENT

PIN “0000” is assigned as default to each new user. It has to be changed at the first login. When the PIN is reset the default value “0000” is reassigned.

CHANGE YOUR PIN

Change your PIN the first time you use the washer disinfectant and if your PIN has been reset. This will prevent other users from accessing your account.

- 1 On the homepage tap  >  > 
- 2 Tap your user name.
- 3 Enter your current PIN and tap  to confirm.
- 4 Tap .
- 5 Enter your new PIN and tap  to confirm: a confirmation message with your new PIN appears.
- 6 Tap  and then  to return to the previous page.

WHAT TO DO IF YOU FORGET YOUR PIN

If...	Then...
you are a common user	contact the administrator
you are the administrator	contact your authorized service provider


EliTrace (optional)

DESCRIPTION

EliTrace allows to create/manage the database for tracking the status of the single instrument or kit.

ACCESS TO ELITRACE

For the EliTrace access proceed as follows:

- 1 On the homepage tap  >  > 

Note: for more information see the dedicated documentation.

EliLight (optional)

LED STATUS

Status	Description
Visual cycle status	
Moving green	Cycle program in progress
Fixed green	Cycle program ended
Moving red	Cycle error in progress
Fixed red	Cycle error or manual stop
Various	
Blinking white	Attention messages with active message/pop-up
Blinking yellow	
Moving white	Suggestion/tips and messages







USB pen drive

DESCRIPTION

A USB pen drive is available to be installed in order to automatically record all the washing and disinfection cycle reports. The USB pen drive can be inserted either into the front or rear port.

Notice: periodically remove the USB pen drive to save the cycle data on a computer or on another safe support.

FORMAT THE USB PEN DRIVE

- 1 On the homepage tap  >  > .
- 2 Insert the USB pen drive in one of the two USB ports.
- 3 Tap .
- 4 Tap  to confirm: all data will be erased.
- 5 Tap  to confirm and return to the previous page.


Notice: formatting erases all data from the pen drive. Be sure you have already saved your data on a safe support before formatting.

Standby mode


DESCRIPTION

When in standby mode, the device display remains dark to save energy. If the device is not used for a certain period of time, it automatically switches to standby mode.








ENTER THE STANDBY MODE MANUALLY

- 1 Homepage
- 2 Tap .

EXIT THE STANDBY MODE

Tap  or open or close the chamber door.

CHANGING STANDBY MODE DELAY TIME

- 1 On the homepage tap  >  >  > .
- 2 Tap  or  to change the delay.
- 3 Tap  to confirm and return to the previous page.

Administrator

CONTENTS

This section deals with the following subjects:

User management (optional)	38
Traceability options (optional)	39
Hide/Unhide a cycle	40

User management (optional)

FUNCTION AVAILABILITY











To access the user management functions, depending on the device version, it may be necessary to enter the **User Management** activation code. The activation code is required only at the first access to the **User Management** (👤) or the **Options** (⚙️) menus: after the code was entered, the function is enabled and there is no need to enter the code again.

To acquire the activation code please refer to the Activation code instructions.







WHO CAN MANAGE USERS AND RESET THEIR PIN

Only a user with administrator rights can create and delete users and reset the PIN code of a user to "0000".








ADD A USER




- 1 On the homepage tap  >  > .
- 2 Tap your user name.
- 3 Enter the PIN and tap  to confirm.
- 4 Tap .
- 5 Tap the text box: a keyboard appears.
- 6 Enter the new user name and tap  to confirm.
- 7 If desired, tap ☐ to give the administrator authority to the new user.
- 8 Tap  to confirm: the PIN of the new user is set to "0000" and a confirmation message appears.
- 9 Tap  and then  to return to the previous page.
- 10 Tap  to return to the homepage.

DELETE A USER

- 1 On the homepage tap  >  > .
- 2 Tap your user name.
- 3 Enter the PIN and tap  to confirm.
- 4 Tap .
- 5 Tap the user name you want to delete.
- 6 Tap  to confirm.



RESET A USER PIN

- 1 On the homepage tap  >  > .
- 2 Tap your user name.
- 3 Enter the PIN and tap  to confirm.
- 4 Tap  and the user name for which you want to reset the PIN.
- 5 Tap  to confirm: the PIN is set to "0000" and a confirmation message appears.
- 6 Tap  to return to the homepage.

Note: remember the user to change its PIN before reusing the device ( >  > ).

Traceability options (optional)

FUNCTION AVAILABILITY






To access the user management functions, depending on the device version, it may be necessary to enter the **User Management** activation code. The activation code is required only at the first access to the **User Management** () or the **Options** () menus: after the code was entered, the function is enabled and there is no need to enter the code again.

To acquire the activation code please refer to the Activation code instructions.

WHO CAN SET THE TRACEABILITY OPTIONS

Only a user with administrator rights can set the traceability options.

SET THE TRACEABILITY OPTIONS









- 1 On the homepage tap  >  > .
- 2 Tap your user name.
- 3 Enter your PIN and tap  to confirm.
- 4 Tap the information to be requested to the users at the beginning and at the end of the cycle.
- 5 If you want the user to check the load and release it as valid at the end of the cycle, tap ☐.
- 6 Tap  to confirm and return to the previous page.

Hide/Unhide a cycle

WHO CAN HIDE/UNHIDE A CYCLE

Only a user with administrator rights can hide a cycle or make it available to users on the homepage.

HIDE/UNHIDE A CYCLE

- 1 On the homepage tap  >  >  > .
- 2 Tap your user name.
- 3 Enter your PIN and tap  to confirm.
- 4 Tap  to hide a cycle from the homepage.
- 5 Tap  to unhide a cycle from the homepage.
- 6 Tap  to confirm and return to the previous page.

Managing printers

CONTENTS





This section deals with the following subjects:

Printer selection (optional) 41

Printer selection (optional)

SELECT THE PRINTER

Note: the device only supports the specific printer models available through the manufacturer/distributor.

- 1 On the homepage tap  >  > .
- 2 Tap the model of the printer to use.
- 3 Tap  to confirm and return to the previous page.

Washing and disinfection programs

CONTENTS

This section deals with the following subjects:

Preparing the device	42
Chemical agents and dispensing system	44
Managing the softener	46
Load maintenance and preparation	48
Washing and disinfection program description	52
Washing and disinfection cycle management	52
Unloading	56
Washing and disinfecting cycle report	56

Preparing the device

WARNINGS



WARNING! In case the device has not been used for 24 hours, run a program with a washing and disinfection phase with no load for processing.

In case of recommissioning after a long period, follow the instructions in the section "Extraordinary maintenance" on page 77.

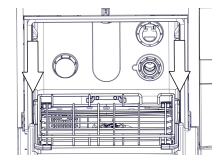
Use only W&H racks and washing supports.

INSERTING THE LOWER RACK INTO THE DEVICE

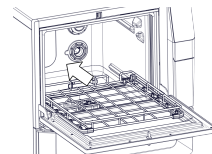


CAUTION! Risk of burns. Before touching the chamber rack or contents, ensure that the washing chamber is not hot.

- 1 Open the door and place the lower rack on the lower rack rails.



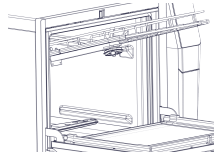
- 2 Push the lower rack gently into position.



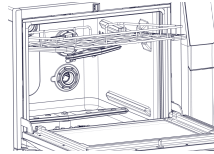
- 3 If necessary, insert washing supports. For load requirements see "Load maintenance and preparation" on page 48 and Instructions for Use of specific washing supports .
- 4 Close the chamber door.
- 5 Turn the device ON: after the initialization the homepage appears.

An optional upper rack can be used. In this case, with the door open:

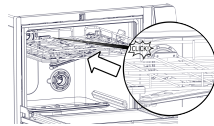
- 1 Tilt the upper rack and place it on the rails.



- 2 Gradually, straighten the upper rack up while letting it slide until the end of the rails.



- 3 Push the upper rack gently until it clicks into place. Make sure to fit the opening valve.

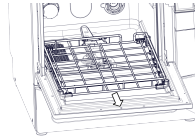


- 4 Close the door.

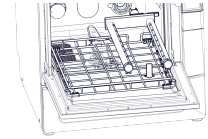
MOUNTING THE INJECTION MANIFOLD (OPTIONAL)

If required, the injection manifold must be mounted on the chamber rack.

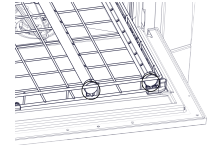
- 1 Pull out the lower rack.



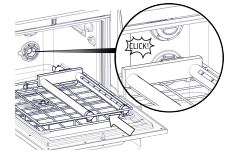
- 2 Place the injection manifold on the lower rack.



- 3 Make sure that the injection manifold rails fit the lower rack.



- 4 Push the injection manifold until it clicks into place. Make sure that the injection manifold arm fits into the check valve.



Chemical agents and dispensing system

WARNINGS



WARNING! The effectiveness and correct functioning of the device cannot be guaranteed in the event of use of chemical agents other than those recommended here.

Check the expiration date and do not use chemical agents beyond their expiration date.

In case of accidental contact refer to the product Safety Data Sheet. Handle chemical agents with care, they may be toxic. Wear individual protection device when handling them. Refer to their Safety Data Sheet for all the safety information.

RECOMMENDED CHEMICAL AGENTS

Detergent	BePro Cleaner TE
Rinse aid	BePro Rinse

Other available chemical agent:

Detergent	BePro Cleaner MA
Neutralizer	BePro Neutralizer C

CHEMICAL AGENT REFILLING



WARNING! Use the entire cartridge or canister. Do not attempt to refill any chemical agent cartridge or canister. Cartridges must be at room temperature when they are inserted.

The cartridge spike in the medical device is sharp. Be careful not to injure yourself on the projecting spike.

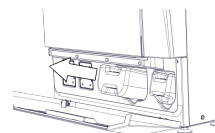
Whenever you replace a cartridge:

- always clean the cartridge compartment,
- perform the initial filling.

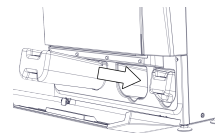
Before use, read the manufacturer's instructions on the use of each chemical agent carefully.

Theed TT

- 1** Remove the exhausted cartridge.



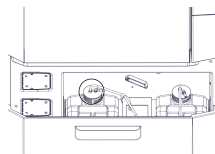
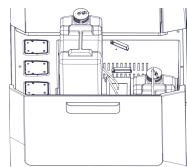
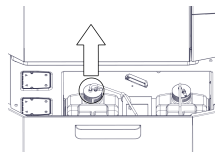
- 2** Insert the new cartridge in its correct slot until it goes to the end.



Notice: if the cartridge does not fit in a slot, it is not in the correct place. Do not force it to enter.

Thed UC

- 1** Pull the suction lance out of the exhausted canister. Place it in the suction lance holder.
- 2** Remove the exhausted canister.
- 3** Place the container in its correct slot.
- 4** Insert the suction lance.



DISPOSE OF CHEMICAL AGENTS

To dispose of chemical agents, refer to the information reported in the Safety Data Sheets.

DISPENSING SYSTEM

The RID-300UC is equipped with three peristaltic pumps for dispensing:

- the detergent,
- the rinse aid,
- the neutralizer.

The RID-300TT is equipped with two peristaltic pumps for dispensing:

- the detergent,
- the rinse aid.

A flow meter is installed in line with the detergent and neutralizer pumps to control the flow rate in their lines.

Note: an additional kit is available to provide the RID-300TT with an external neutralizer cartridge.

CONNECTION OF THE INTAKE SYSTEM



WARNING! The label on the intake pipe must correspond to the type of chemical agent being used. Refer to the following color code:

Detergent	Blue
Neutralizer	Red
Rinse aid	Yellow

Managing the softener

WARNINGS



WARNING! The hardness of water processed through the softener must be in the range 0-40 °F.

To regenerate the resins, use only coarse-grain regeneration salt (additive-free NaCl). Do not use cooking salt, table salt, cattle salt or road salt. Do not pour any chemical agent into the salt container.

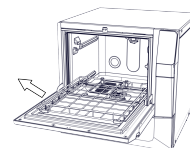
RE-FILLING THE SALT CONTAINER

To guarantee the correct functioning of the softener, resins must be regenerated periodically. To regenerate, there must be enough salt. The device software checks at each cycle the amount of salt and, if re-filling is needed, a message appears on the display.

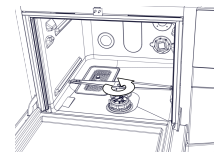
To refill the salt tank:

1 Open the chamber door.

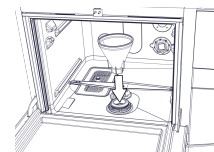
2 Remove the lower rack.



3 Open the salt tank by turning the cap anti-clockwise.



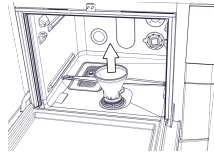
4 Insert the filling funnel in the salt tank.



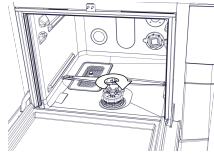
5 Fill up the salt tank.

6 Remove any residues from the salt tank opening.

- 7** Remove the funnel.



- 8** Screw on the tank cap.



- 9** Put the lower rack back in position.

RE-GENERATING THE SOFTENER

Regeneration is performed automatically through a specific cycle at certain intervals.

Load maintenance and preparation

WARNINGS



WARNING! Process only instruments designed by their manufacturer for automatic reprocessing in a washer disinfecter. In case of plastic instruments, they must be thermostable.

If necessary, the load must be pre-cleaned and pre-treated in accordance with the instrument manufacturer's instructions. W&H is not responsible for any damages due to improper pre-cleaning and pre-treatment. Pre-cleaning and pre-treatment must be performed in accordance with national regulations.

Immediately after use, before reprocessing, remove any large residues (e.g., dental cement, material used for lead sealing, acid substances used for removing cement) by soaking, treatment or rinsing. Rinse thoroughly chemically pre-treated instruments to avoid foaming inside the chamber.

Do not pre-treat any contaminated medical devices. Put them directly into the chamber.

Avoid long time intervals between pre-cleaning and processing into the device.

Injuries can occur during inappropriate loading procedures. To avoid injuries, wear protective gloves, proceed with caution when

sorting sharp and pointed instruments and arrange the instruments to prevent any danger.

PRE-TREATMENT OF DENTAL HANDPIECES



CAUTION! Before processing any instrument in the device, follow the instructions of the instrument manufacturer regarding pre-cleaning and pre-treatment as necessary. In case of doubt, contact the manufacturer of the instrument.

Cleaning

- Remove any residue (e.g., dental cement) from the external surfaces.
- Use a soft, damp brush and take care not to scratch the surface of the light ports.
- Air and spray channels must be entirely clear.

Care of adapters

Regularly check the adapters for dirt. Clean each adapter component under running water when necessary. Gently rub with a cloth the silicone inserts.

PRE-TREATMENT OF OTHER INSTRUMENTS



CAUTION! Before processing any instrument in the device, follow the instructions of the instrument manufacturer regarding pre-cleaning and pre-treatment as necessary. In case of doubt, contact the manufacturer of the instrument.

Preparation

- Empty all residual liquids from containers.
- Open hinged instruments because they must be washed in open position.
- Disassemble instruments that can be disassembled according to manufacturer instructions.

CORRECT LOAD PLACEMENT



WARNING! Do not lean on the device door.



WARNING! Do not overload rack/s and the chamber. Adhere to the maximum load weight limits (see "Washing and disinfection program description" on page 52). Never place the load directly into the washing chamber without the chamber rack. Risk of burns. Before touching, ensure the washing chamber is cold.



WARNING! Refer to the instructions for use specific for each washing support reported in the following list.

Use the correct washing support for placing each instrument in the device.

Arrange the instruments to prevent them from touching or overlapping.

Avoid spray shadow to increase cleaning outcome.

Arrange containers with their opening pointing downwards. Arrange instruments with openings or compressions at an angle effective to let the water flow out.

Ensure that the instruments do not stick out from the rack/s to avoid damages to the surfaces of the washing chamber or to the instruments.

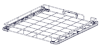
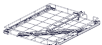
Instruments must not block the spray arm, which must be able to rotate freely.





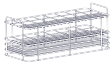
The following washing supports can be used for each type of cycle (refer to "Washing and disinfection cycles" on page 90) to prepare the load.






More washing supports are available; the complete list of available washing supports is available in "Accessories, washing supports, spare parts, consumables" on page 100.






Refer to the download center for detailed instructions about the washing supports.

Follow these requirements for placing the load:

Item	Dimensions	Load type	Placement
Lower rack 	1	Other washing supports are placed on the rack.	Place it into the chamber.
Upper rack 	1	Other washing supports are placed on the rack.	Place it into the chamber.

Item	Dimensions	Load type	Placement
Basket (1/4) 	1/4	Solid instrumentation [e.g.: scalpels, scissors, pliers, curettes]	Lean the load in the basket.
Lid for basket (1/4) 	1/4		
Basket (1/2) 	1/2		
Vertical support (1/4) 	1/4	Solid instrumentation [e.g.: pliers, scissors]	Arrange the load vertically in the support spots.
Vertical support (1/2) 	1/2		

Item	Dimensions	Load type	Placement
Cassette support 	1/2	Cassettes	Each cassette must be positioned in a spot.
Tray support 	1/2	Trays	Each tray must be positioned in a spot.
Clamp, scissors and impression tray support 	1/4	Open hinged instruments and dental impression plates	Insert the instruments in the special grips / in their specific spot.
Injection manifold 	1/2	Handpieces, hollow instruments and other accessories	Mount the specific adapter/nozzle on the injection manifold opening and then plug the instrument to be washed and disinfected. Follow the specific instructions for each instrument.
Tip support 	-	Tips	Put the tips into the support and place the support on the rack.

Item	Dimensions	Load type	Placement
Handpiece adapter 	-	Handpieces	Choose the correct size and plug the handpieces to be washed.
3-way deviator adapter 	-	Handpieces with external water pipe irrigation Different tips	After mounting the 3-way deviator adapter in the injection manifold, use the correct support: <ul style="list-style-type: none"> ■ Tip adapter (intermediate) for handpieces with external spray channels, ■ Tip adapter (standard) for standard tips, ■ Tip adapter (US) for US tips.
Tip adapter (intermediate) 			
Tip adapter (standard) 			
Tip adapter (US) 			

PARTIAL LOAD

If the chamber is only partially loaded, place the load in such a way that the space in-between the washing supports is maximized. Spread items evenly across multiple washing supports.

When using the injection manifold close all the spare openings with the injector cap or the caps provided with the handpiece adapter kit.




Washing and disinfection program description




AVAILABLE WASHING AND DISINFECTION PROGRAMS

See "Washing and disinfection cycles" on page 90 for the full list of key program features, including washing and disinfection time, temperature and recommended load type.

Washing and disinfection cycle management







RUN A WASHING AND DISINFECTION CYCLE IMMEDIATELY

- 1** On the homepage tap the desired cycle.
Tap  to display further cycles on the next page, if any.
- 2** Check the cycle requirements.
- 3** Tap  :
 - to change the ECO DRY mode (see "Change the ECO DRY mode (optional)" on page 54).
 - to disable the ECO DRY mode (see "Set the drying time (optional)" on page 54).
- 4** If the door gasket is new, hold the door gently closed until the beginning of the cycle
- 5** Tap  and enter your credentials if required: the door locks. If you have not set a different start time, the washing and disinfection will start immediately.

- 7 Wait for the end of the washing and disinfection. Tap  to view the cycle parameters in real time. See "View the cycle parameters" on the next page.
- 8 The washing and disinfection cycle is completed. Tap  to view the cycle summary or tap  to view the cycle information. See "View the cycle parameters" on the next page.
- 9 Tap **OPEN**: the door unlocks and the homepage appears.
- 10 If required, enter your credentials and confirm the load release.

SET THE WASHING AND DISINFECTION CYCLE START




You may schedule the start of the washing and disinfection cycles at a certain date and time (e.g., if you want to load the device in the evening and run standard washing and disinfection cycle early the next morning before office hours). You can set the cycle start date and time and enable or disable it for each cycle.

- 1 On the homepage tap the cycle and .
- 2 Tap the leaf icon to set the ECO DRY mode.
- 3 Tap the ECO DRY mode you desire.
- 4 Tap  to confirm and return to the previous page.
- 5 To change the start time, tap **Start cycle at**.
- 6 Tap the time or the date: a settings page opens.
- 7 Tap the number you want to change and tap  or  to increase it or decrease it.
- 8 Tap  to confirm and return to the previous page. This date and time become the scheduled default start time for all next washing and disinfection cycles.
- 9 Tap  to lock the door; a new page appears.


Note: if nothing else is pressed, the cycle will start at the programmed time. The page allows also to start the cycle immediately ("Start now") or to delete the operation and the programmed cycle ("Stop").

SET THE DRYING TIME (OPTIONAL)



For each ECO DRY mode, the drying time is automatically adjusted to the total amount of load and cannot be modified. To set a new drying time for the program, you should disabled the ECO DRY mode first.

- 1 On the homepage tap the cycle and .
- 2 Select **Fixed** to disable the ECO DRY mode.
- 3 Tap the wording **Fixed** to modify the fixed mode minutes.
- 4 Tap  or  to increase the minutes or decrease them.

Note: for the minimum value of the drying time for each cycle see "Washing and disinfection cycles" on page 90.




- 5 Tap  to confirm and return to the previous page. This becomes the new fixed value.

CHANGE THE ECO DRY MODE (OPTIONAL)

- 1 On the homepage tap the cycle and .
- 2 Tap the leaf icon to set the ECO DRY mode.
- 3 Tap the ECO DRY mode you desire.
- 4 Tap  to confirm and return to the previous page.

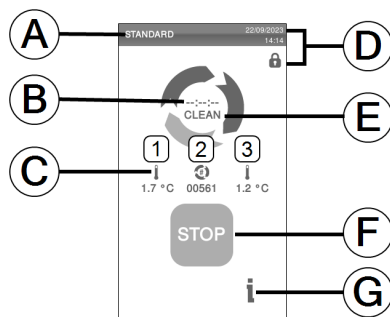
VIEW THE CYCLE PARAMETERS

You can check real-time cycle parameters or the cycle parameters at the end of the cycle. Following is an example:

- 1 While the washing and disinfection cycle is running or when cycle ends tap  : the cycle information page opens.
- 2 Tap  or  to scroll the pages.

WASHING AND DISINFECTION CYCLE PAGE

Following are the information displayed while a cycle is running:



Part	Description
A	Washing and disinfection cycle name
B	Countdown clock (time until the cycle completion)
C	1 : 1 - Water temperature (Tv) 2 : 2 - Cycle counter 3 : 3 - Water temperature (Tc)
D	Date and time and door securely locked symbol
E	Current cycle phase
F	Stop button
G	Button to open the cycle information page

END OF A WASHING AND DISINFECTION CYCLE

When a cycle is successfully finished, the "Cycle completed" message appears on the screen. To end the cycle:

- 1 Tap to view the cycle summary or tap to view the cycle parameters. See "View the cycle parameters" on the previous page.
- 2 Tap **OPEN** to open the door: the door unlocks and the home page appears.

Note: if an error message appears see "Troubleshooting" on page 84



CAUTION! Risk of burns. Before touching, ensure the device chamber is cold.



- 3 Wait for the door to unlock.
- 4 Open the chamber door.
- 5 Remove the load.

STOP A WASHING AND DISINFECTION CYCLE




WARNING! You can stop the cycle at any time. Instruments must not be considered washed and disinfected if this occurs before the DRY phase.

A cycle can be manually aborted at any time. To stop a cycle:

- 1 Tap **STOP**: a confirmation request appears.
- 2 Tap  to abort the stop command. The cycle continues as programmed.
- 3 Tap  to abort the cycle: the device starts a reset phase.

Notice: do not switch off the device during the reset phase: it takes some time to reset the system and reach safe conditions in the device chamber.

- 4 Check the message. See "Messages of a stopped washing and disinfection cycle" below.
- 5 Tap  to view the cycle parameters. See "View the cycle parameters" on page 54.
- 6 Open the chamber door.
- 7 Reprocess the load if necessary.



Note: water could be present in the chamber when opening the door. To prevent spilling place a towel below the chamber door.

MESSAGES OF A STOPPED WASHING AND DISINFECTION CYCLE

Following are the messages:

- Load not washed and disinfected: Do not use items on patients!
- Drying interrupted: The load might be wet.



WARNING! In case of incompleted cycle, instruments must not be considered washed and disinfected. Be careful while handling them.

Unloading

WARNINGS



CAUTION! Risk of burns. Before touching, ensure the device chamber is cold.

Washing and disinfecting cycle report

WHERE CYCLE DATA ARE STORED

The device stores in its memory the summarized reports of the last 400 cycles and the analytical reports of the last 50 cycles. All reports can also be saved on the USB pen drive or in a specific remote folder in the network if the device is connected to a LAN.

STORED REPORT FORMAT




The summarized reports are stored in HTML format and the analytical reports in SCL format. All parameters are recorded every second.

WHAT HAPPENS WITH UNSAVED CYCLES






If for any reason (e.g. USB memory full, USB pen drive disconnected, etc.) some cycles cannot be saved, no alert is shown. If still stored in memory, the unsaved cycles will be copied to a working USB pen drive connected to the device as soon as a new cycle starts.

VIEW CYCLE HISTORY

To view the washing and disinfection cycle history:

- 1 On the homepage tap  >  > : all the washing and disinfection cycles are listed with number, date, time and washing and disinfection program. The washing and disinfection cycle interrupted due to a cycle error or problem appears in red.
- 2 Scroll the list and tap the desired washing and disinfection cycle: the report opens.

PRINT OR SAVE A CYCLE REPORT ON THE USB PEN DRIVE

- 1 On the homepage tap  >  > 
- 2 Scroll the list and tap the desired washing and disinfection cycle: the report opens.
- 3 Tap
- 4 Tap  to print the report, or tap  to save the report on the USB pen drive.

SAVE ALL THE CYCLE REPORTS ON THE USB PEN DRIVE






The number of reports that can be saved on the USB pen drive depends on the USB capacity. To save all the cycle reports:

- 1 On the homepage tap  >  > .
- 2 Tap : after the confirmation all washing and disinfection cycle reports are stored in the USB.




SET THE REMOTE FOLDER FOR SAVING THE REPORTS

Procedure

To activate the remote storage and set the necessary parameters do the following:







- 1 On the homepage tap  >  >  > .
- 2 Tap  to enable the remote data storage: the first four fields in the page and the check box turn dark grey.
- 3 In **Path** enter the name of the shared folder followed by the sub-folder name, if any, where to save reports. Do not enter the full path.

Note: the folder name must include letters and numbers only. Do not use other characters like space-bar, slash, accent, etc.

- 4 Enter the host name or the IP address: if the data are complete, the fields highlight.
- 5 Not mandatory. Enter the domain name.
- 6 Tap  to require the authentication credentials to access the remote storage folder and enter the user name and password.
- 7 Tap  to save.
- 8 Tap  to return to the previous page.
- 9 To check if the parameters entered are valid, see "Test the data storage " below.

TEST THE DATA STORAGE






Note: the test function is available only if the remote data storage is enabled. See "Set the remote folder for saving the reports" above.

- 1 On the homepage tap  >  > .
- 2 Tap : a sequence of tests is automatically performed.
- 3 If a test fails, check the relevant settings and tap  to repeat the test sequence, if the error persists call your IT manager.
- 4 Tap  to return to the previous page.

SAVE ALL THE CYCLE REPORTS IN A REMOTE FOLDER

Note: the save all function is available only if the remote data storage is enabled. See "Set the remote folder for saving the reports" above.

Only the last 400 cycles in HTML and 50 cycles in SCL in the device memory can be saved in the remote folder.

- 1 On the homepage tap  >  >  > .
- 2 Tap  to start the remote saving.

CYCLE REPORT STRUCTURE

The following is the structure of a cycle report:

Cycle Report 1/2					Rinsing 2/2				
W&H Serial number: 101024 Software rev.: 005.047 Device name: Thed TT Cycle name: Standard Cycle ID: 217 Upper rack: --- Lower rack: --- Cycle number: 01321 Inizio ciclo a: 30/10/2024 07:13:01					Step Time Tc [°C] Target Verified Draining 19:44 --- --- W.W. load. 20:57 19.6 6.0 I 6.0 I Holding 21:57 23.1 --- 23.0 °C Hol. time 21:57 --- 01:00 01:00				
Pre-cleaning					Therm. disinfect.				
Step Time Tc [°C] Target Verified Start 00:00 --- --- --- Draining 00:17 --- --- --- C.W. load. 01:27 23.9 6.0 I 6.0 I Holding 04:27 36.7 --- 36.6 °C Hol. time 04:27 --- 03:00 03:00					Step Time Tc [°C] Target Verified Draining 22:43 --- --- --- D.W. load. 23:55 18.6 6.0 I 6.0 I Rin. inj. 29:29 80.1 1.8 ml 1.8 ml Heating 31:04 94.0 93.0 °C 94.0 °C H01 31:34 94.9 93.0 °C 94.9 °C H02 32:04 94.4 93.0 °C 94.5 °C H03 32:34 94.6 93.0 °C 94.6 °C H04 33:04 94.9 93.0 °C 94.9 °C H05 33:34 94.6 93.0 °C 94.6 °C H06 34:04 94.3 93.0 °C 94.3 °C H07 34:34 95.0 93.0 °C 95.1 °C H08 35:04 94.8 93.0 °C 94.8 °C H09 35:34 94.5 93.0 °C 94.6 °C H10 36:04 94.3 93.0 °C 94.3 °C Holding 36:04 94.3 93.0 °C 94.3 °C Hol. time 36:04 --- 05:00 05:00				
Cleaning					Thermal Disinfection Summary				
Step Time Tc [°C] Target Verified Draining 05:12 --- --- --- W.W. load. 06:22 20.3 6.0 I 6.0 I Det. inj. 07:48 40.2 36 ml 36 ml Heating 08:58 56.1 55.0 °C 56.1 °C Holding 13:58 57.1 55.0 °C 57.1 °C Hol. time 13:58 --- 05:00 05:00					Tc [°C] Tv [°C] Pw [mbar] MIN 94.0 94.0 571.8 MAX 95.1 95.1 600.9 A0: 7561 a 36:04				
Cleaning Summary					Drying				
Tc [°C] Tv [°C] Pw [mbar] MIN 56.1 56.1 497.6 MAX 57.5 57.5 554.6					Step Time Target Verified Draining 36:52 --- --- Drying 1:09:52 110.0 °C 110.0 °C Dry. time 1:09:52 33.00 33.00 Draining 1:10:22 --- ---				
Rinsing					Ciclo completato				
Step Time Tc [°C] Target Verified Draining 14:45 --- --- --- W.W. load. 15:58 21.0 6.0 I 6.0 I Holding 18:58 31.5 --- 31.5 °C Hol. time 18:58 --- 03:00 03:00					Fine ciclo a: 30/10/2024 08:23:23 Tempo di ciclo: 1:10:22 Firma: _____ Tracking #: CD18AA/001321				

Data	Description
W&H	Device: Thed TT
Serial Number	Device serial number
Software rev.	Software revision number
Device name	Name of the device
Cycle	Name of the executed cycle
Cycle ID	Cycle number
Upper rack	Washing support not present ("---"), not available ("N.A."), "basic"
Lower rack	Washing support not present ("---"), not available ("N.A."), "basic"
Cycle log number	Cycle counter
Cycle start at:	Cycle start date and time
Phase	Specific phase of the cycle: Pre-cleaning, Cleaning, Neutralizing, Rinsing, Thermal Disinfection or Drying
Step	Specific step during the phase
Time	Step start time
Target	Target quantity in terms of volume dispensed (loading steps) or temperature (heating/holding steps)
Verify	Actual quantity value registered during the step in terms of volume dispensed or temperature
Summary	Recap of registered temperatures during Cleaning and Thermal Disinfection phase

Data	Description
Tc [°C]	Control temperature (water temperature)
Tv [°C]	Verification temperature (water temperature)
Pw [mbar]	Pressure of water
MIN	Minimum value registered
MAX	Maximum value registered
AO value	Value of A_0 and time of the cycle when it has been reached
"Cycle completed"	Cycle outcome
Cycle end at	Cycle end date and time
Cycle time	Cycle time
Signature	Signature for traceability
Tracking #	Tracking code for traceability management

Maintenance

CONTENTS

This section deals with the following subjects:

- Warnings for maintenance operations62
- Ordinary maintenance 62
- Regular checks 64
- 10-cycle maintenance71
- 400-hour maintenance 74
- 1000-cycle or two-year maintenance 76
- Extraordinary maintenance77
- Qualification77
- Disposal 78

Warnings for maintenance operations

WARNINGS



WARNING! Turn the device OFF before beginning any maintenance or servicing. Follow all health, safety, cross-infection and cross-contamination protocols. Disconnect the circuit breaker before inspecting, carrying out maintenance or servicing the device.

Maintenance operation must be done at illumination level of 215 lx (± 15 lx) to 1500 lx (± 15 lx).

Before making any operation, ward off unauthorized personnel from the working area.

If for any reason you are unable to remove the power supply or if you have to walk away from the unit, always place a "WORK IN PROGRESS" sign, to warn other people that might walk up to the device.

Perform any maintenance or servicing after the completion of a successful washing and disinfection cycle.




CAUTION! Before accessing the chamber and the connected parts, be sure that the device is cold.

Notice: follow the instructions in this chapter when carrying out any maintenance on the device.

Ordinary maintenance

MAINTENANCE BY THE USER

Frequency ¹	Number of cycles / hours ¹	Operation
Regular checks		Check and clean the injector nozzles (if clogged - optional). See "Checking and cleaning the injector nozzle (optional)" on page 64
		Check and clean the injection manifold (optional). See "Checking and cleaning the injection manifold (optional)" on page 65
		Clean the door gasket. See "Cleaning the door gasket" on page 65
		Check the free movement of the clapet valve flap (replace it if it's blocked). See "Checking the clapet valve" on page 66 Note: the clapet valve replacement must be carried out by an authorized technician
		Check the spray arm free rotation. See "Cleaning the spray arms" on page 66
		Clean the external surfaces. See "Cleaning the external surfaces of the device" on page 70

Frequency ¹	Number of cycles / hours ¹	Operation
Regular checks		WARNING! Check the salt tank cap correct closure
		CAUTION! Check the spray arms free rotation and clean the spray arm openings (remove extraneous objects if required). See "Cleaning the spray arms" on page 66
		CAUTION! During the periodic cleaning, check for the lower rack and upper rack (optional) integrity. Check the washing supports integrity (visual check). See "Checking the washing supports " on page 70
-	10 cycles	Clean the chamber and sump filters. See "Cleaning the chamber and sump filters" on page 71
10 months See note ²	400 hours	Replace the HEPA filter. See "Replacing the HEPA filter" on page 74
2 years	1000 cycles	General check and service. See "1000-cycle or two-year maintenance" on page 76

¹: whichever occurs first.



²: even if the maximum cycle number is not reached, it is recommended to replace the consumable parts every year, or if they appear worn or damaged, or if the filter is clogged or discoloured.

EXPIRED MAINTENANCE

The device monitors the wear of consumables by counting the number of cycles executed since the last replacement.





When the number of cycles is close to the maximum, a pre-alert about the concerned consumable is displayed. Please check that you have the requested spare part available, buy one if not. When the maximum number of cycles has been met, a message to replace the consumable will be displayed.

If you can not replace the consumable immediately, the device will operate anyway but the message will appear again some cycles later.

- 1 Tap  to see an animated replacement procedure.
- 2 When you have replaced the consumable tap  to confirm: the executed cycle counter is reset.

REPLACE THE CONSUMABLE BEFORE THE MAINTENANCE DUE DATE

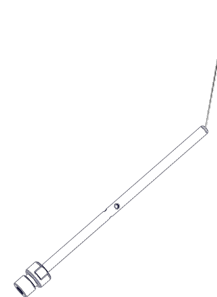
If you replace the consumables before the request of replacement appears, you should manually reset the counters through the following procedure.

- 1 On the homepage tap  > 
- 2 Select the consumable you want to replace: a message appears showing the current worked hours of the part.
- 3 Tap  to see an animated replacement procedure.
- 4 When you have replaced the consumable tap  to confirm: the executed cycle counter is reset.

Regular checks

CHECKING AND CLEANING THE INJECTOR NOZZLE (OPTIONAL)

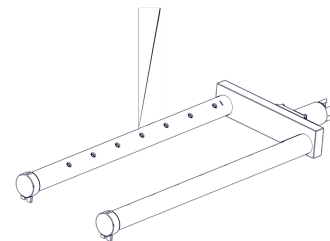
- 1** Put the injector nozzle under water, keeping it upright.
- 2** If water flows freely through the openings, they are not blocked. Otherwise, clean the openings with a pointed tool.



- 3** Rinse the injector nozzle under running water.

CHECKING AND CLEANING THE INJECTION MANIFOLD (OPTIONAL)

- 1 Put the injection manifold under water, keeping it upright.
- 2 If water flows freely through the openings, they are not blocked. Otherwise, clean the openings with a pointed tool.



- 3 Rinse the injection manifold under running water.

CLEANING THE DOOR GASKET

Proceed as follows:

- 1 Clean the door gasket with a damp, lint-free cloth moistened with clean water.
- 2 Rinse with clean water.

Note: when the gasket is new it might be necessary to hold the door gently closed at the start of washing and disinfection.

CHECKING THE CLAPET VALVE

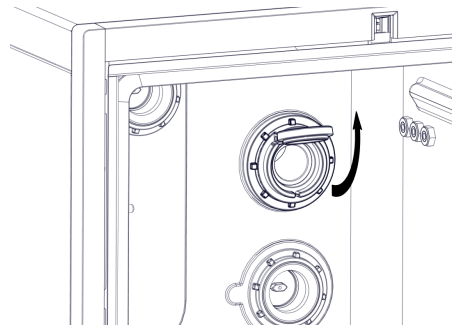
- 1 Open the chamber door.
- 2 Check the free movement and the correct opening of the clapet valve.

- 3 If the clapet valve doesn't move freely or is broken, replace it.

Note: the clapet valve replacement must be carried out by an authorized technician

CLEANING THE SPRAY ARMS

- 1 Remove the lower rack and, if present, the upper rack. Follow the reverse of the procedures outlined in "Preparing the device" on page 42.
- 2 Inspect the upper and the lower spray arms for soil and blocked nozzles.
- 3 Verify that the spray arms rotate freely.

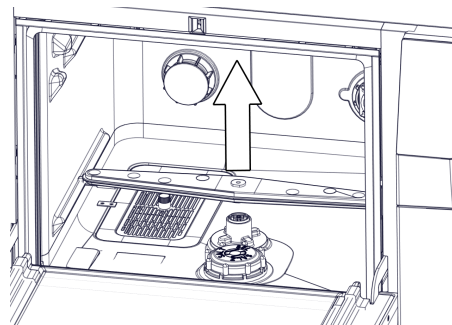
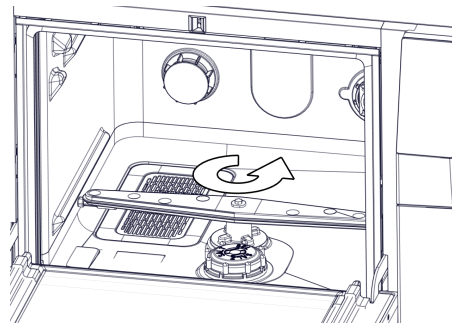


4 If cleaning is necessary, unscrew the spray arm nut.

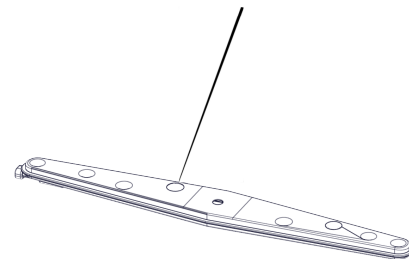
Note: to unscrew the spray arm nut:

- upper and lower spray arms > anti-clockwise,
- upper rack spray arm > clockwise.

5 Disassemble the spray arm.

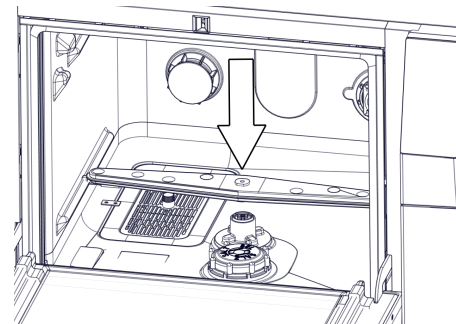


6 Clean the spray arm openings using a pointed tool.



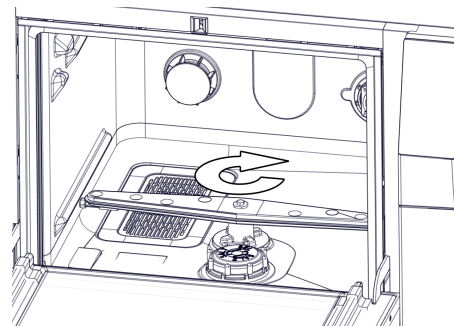
7 Rinse the spray arm under running water.

8 Mount the spray arm.



9 Screw the nut. The spray arm must be loose.

10 Check that the spray arm rotates freely.



CLEANING THE EXTERNAL SURFACES OF THE DEVICE



WARNING! If device covers are not intact, do not use any cleaning detergent.

Proceed as follows:



Clean all external device covers with a slightly damp cloth moistened with water.

Notice: never use disinfectants, detergents, or abrasive products.

CHECKING THE WASHING SUPPORTS



WARNING! During the periodic cleaning, check the integrity of washing support. In particular, make sure to check the lower rack mesh.

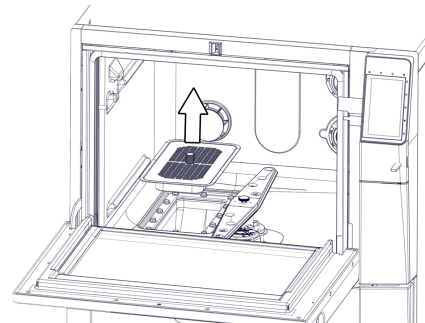
Check the integrity of the washing supports.

To clean the lower rack, disassemble it following the reverse of the procedures outlined in the section "Inserting the lower rack into the device" on page 42.

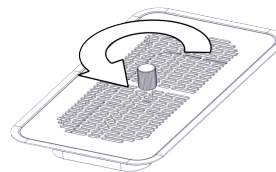
10-cycle maintenance

CLEANING THE CHAMBER AND SUMP FILTERS

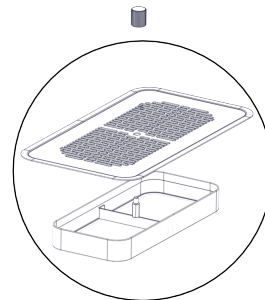
1 Remove the chamber filters.



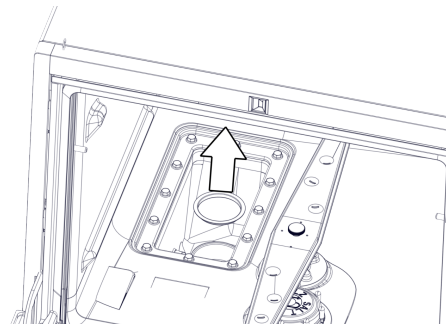
2 Disassemble the knob that keeps together the upper and lower filters.



- 3** Rinse both filters under running water.

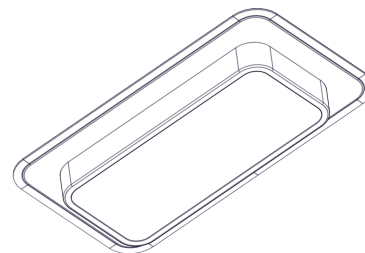


- 4** Remove the sump filter.



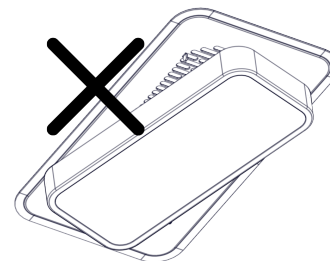
- 5** Rinse the sump filter under running water.

- 6** Couple the upper and lower filters, making sure to fit them properly.



- 7** Fix the upper and lower filters with their knob.

Note: check the correct coupling between upper and lower filters.



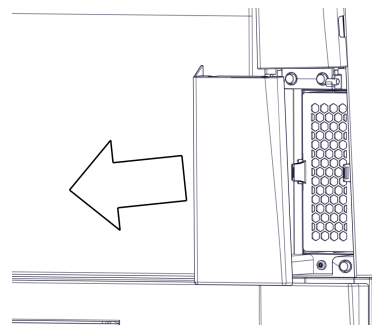
400-hour maintenance

REPLACING THE HEPA FILTER

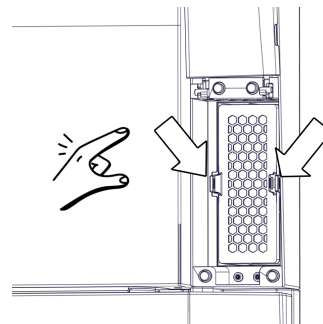
Notice: if you replace this consumable before the maintenance due date you have to reset the cycle counter. See "Replace the consumable before the maintenance due date" on page 63.

Proceed as follows:

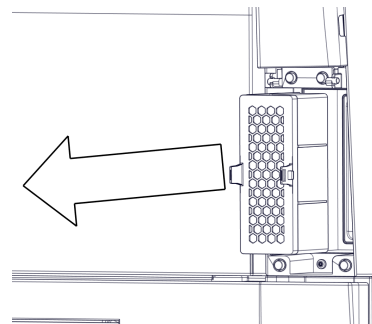
- 1 Open the service door.



2 Squeeze the flaps.



3 Pull the HEPA filter.



4 Place the new HEPA filter and tighten it snug.

1000-cycle or two-year maintenance

GENERAL CHECK AND SERVICE REQUIRED

Notice: regular service is mandatory to ensure continuous and effective operation of the device.

A general check and service should be carried out every 1000 cycles or two years by an authorized service technician.

The service required includes the following:

- the replacement of consumables and other important internal components;
- a check of the entire device with special care for the safety systems;
- the cleaning of areas and components that cannot be accessed by the user.

Extraordinary maintenance

WHAT TO DO IN CASE OF IDLE PERIOD

If you are not going to use the device for a long period (*i.e.*, more than two weeks):

- Empty the device.
- Run a thermal disinfection program with no load.
- Disconnect the electricity supply.
- Leave the door slightly open.
- Turn off the water tap/s.

If the device has not been used for a long period (more than two weeks) follow the instructions before using it:

- Restore electricity supply.
- Reconnect water and turn on the water tap/s.
- Run a thermal disinfection program with no load.

Qualification

According to ISO 15883-1 Standard, performance qualification must be performed:

- After completion of installation qualification and operational qualification.
- It is recommended once per year.
- On the introduction of new or modified items to be cleaned and disinfected or new washing supports unless equivalence either to a validated reference load or to a previously validated item or washing support has been demonstrated.

Disposal

DISPOSAL RESPONSIBILITY



- Separate the various components according to the materials they are made of.
- The electronic board battery must be disposed of separately.
- Remove any detergent canisters/cartridges before disposal.
- Drop the device with a company that specializes on the recycling of related products.
- Do not abandon the device in unsecured places.
- Always refer to current/applicable laws and rules in the country of use.

The same instructions apply to disposal of all used consumable parts.

MATERIALS

The device is mainly built from fiber-reinforced polymers, metals and electric / electronic components.

Diagnostics

CONTENTS

This section deals with the following subjects:

Errors	79
Troubleshooting	84
Emergency door opening	88

Errors

CHECKS AND ACTIONS

Notice: for any error not listed in this table, call technical service.



Code	Description	Actions
1xx	Washing and disinfection cycle cannot be considered successfully ended.	Repeat the cycle. If the problem persists, call service.
	Check the presence of foam in the chamber.	
	Run an empty cycle to rinse the device.	
	Verify the correct load placement.	
	Check the cleaning of spray arms.	
	Verify correct installation of spray arms.	
2xx	Some components may be damaged or not working properly.	Repeat the cycle. If the problem persists, call service.
	Check if HEPA filter is clogged.	

Code	Description	Actions
3xx	Drying is not effective	Repeat the cycle.
	Check if HEPA filter is clogged.	If the problem persists, call service.
	Verify that water tap is open and properly connected.	
4xx	Verify that water tap is open and properly connected.	Repeat the cycle.
	Check that salt tank is not empty.	If the problem persists, call service.
5xx	Check if the door can move freely without touching the trays or the load when closing.	Repeat the cycle. If the problem persists, call service.
6xx	Chemical agents are not loaded properly.	Repeat the cycle.
	Check that chemical agents withdraw is done correctly.	If the problem persists, call service
	Verify that you are using compliant cartridges.	
	Check that cartridges are correctly inserted in their slots.	

MESSAGES AND ALERTS

Notice: for any message/alert not listed in this table, contact technical service.

Note: this section describes messages and alerts. Please note that the availability of them depends on the device model and some of them might not be available for this model.

Message/Alert	Description	Action
Please close the door.	The door must be locked, but you have not closed it.	Close the door so it can be locked.
Non-conform water	The clean water quality is bad.	You may run a cycle but the water must be replaced soon, otherwise the unit will automatically lock-out to prevent damage.
Unacceptable water	The clean water quality is very bad .	Running a cycle is inhibited to prevent damage. Replace the clean water.
The HEPA filter requires replacement every ... hours. Have you replaced the HEPA filter?	These are pre-alerts advising that one of the consumables has to be replaced within a small number of cycles.	Tap  if you have the consumable available for replacement. Tap  if you don't have the consumable in stock and must order one. In this case, the pre-alert will appear again after some cycles. See "Maintenance" on page 61.
HEPA filter replacement is due. Have you replaced it?	These message advises that one consumable must be replaced.	
The cleaning of the chamber filters is required every ... cycles	The chamber filter must be cleaned at regular intervals.	-
Salt tank empty. Refill with salt.	This message advises that salt tank is empty.	Refill the tank following the procedure reported in "Re-filling the salt container" on page 46.

Message/Alert	Description	Action
Detergent priming required. Please perform priming. Neutralizer priming required. Please perform priming. Rinse aid priming required. Please perform priming.	This message advises that priming is required for one of the chemical agents.	Tap on the specific priming icon on the menu. Refer to "Homepage description" on page 25.
Low detergent level. Is the new cartridge/canister available? Low neutralizer level. Is the new cartridge/canister available? Low rinse aid level. Is the new cartridge/canister available?	These are pre-alerts advising that one of the chemical agents has to be replaced within a small number of cycles.	Ensure that you have new canisters/cartridges.
Detergent cartridge/canister empty. Have you replaced it? Neutralizer cartridge/canister empty. Have you replaced it? Rinse aid cartridge/canister empty. Have you replaced it?	These messages advise that one of the chemical agent must be replaced.	Follow the procedure in "Chemical agent refilling" on page 44

Message/Alert	Description	Action
<p>The detergent cartridge/canister must be replaced. Residual:... Have you replaced the detergent cartridge/canister?</p> <p>The neutralizer cartridge/canister must be replaced. Residual:... Have you replaced the neutralizer cartridge/canister?</p> <p>The rinse aid cartridge/canister must be replaced. Residual:... Have you replaced the rinse aid cartridge/canister?</p>	These messages permit the user to know the effective level of chemical agents.	-
Maintenance must be performed in ... working hours. Have you already booked the maintenance?	The message permits the user to organize maintenance in time.	
The device has completed ... working hours. Please call your technical support to organize service.	This message permits the user to contact service in time.	

Troubleshooting

MANAGING ERRORS

If during a washing and disinfecting cycle an error occurs do the following:

- 1 Wait until the end of the reset phase.



CAUTION! Do not switch off the device during the reset phase: it takes some minutes to reset the system and reach safe conditions in the device chamber.

- 2 When the **OPEN** button appears, tap it to unlock the door.
- 3 Confirm the opening of the door.

Notice: water could be present in the chamber when opening the door: prevent spilling (e.g., place a towel below the chamber door).

VIEW AND SAVE THE ERROR LOG

- 1 On the homepage tap > > : a list of the recent errors appears.
- 2 Tap the desired cycle error/problem: the report opens.
- 3 Tap .
- 4 Tap to save the report in the USB pen drive.


ERROR PAGE

During the washing and disinfecting cycle, the device is continuously monitored by a control system. If an anomaly is detected, the cycle is aborted automatically, and the device starts a reset phase.

The following page appears:

Part	Description
A	Current washing and disinfecting cycle
B	Error number, See "Errors" on page 79.
C	Warning messages.
D	Open button that appears after the reset phase had finished.

WARNING MESSAGES

Message	Description
Load not washed and disinfected	The load is not properly washed and disinfected.  WARNING! Do not use items on patients!
Drying interrupted	The load might be wet.

TROUBLESHOOTING TABLE

Note: if your problem is not resolved, call your authorized service provider.

Notice: before sending the device for technical service, follow indications reported in "How to relocate the device" on page 17.

Problem	Possible cause	Solutions
The device remains switched OFF.	The mains switch or network circuit breaker is OFF.	Turn on the mains switch or network circuit breaker (ON).
	No voltage at the socket.	Check the electric circuit.
	The power cord is not connected properly.	Check and connect properly the power cord .
Water is leaking at the front of the device.	Leaks through the chamber door gasket.	Clean or replace the door gasket. Clean the chamber face side. Call technical service.
	Internal leak.	Call technical service.
Corrosion or spots on instruments.	Use of water of poor quality.	Check the water connections. Use water of good quality.
	Organic or chemical residues on the instruments.	Clean, rinse and dry instruments before placing them in the device. See "Load maintenance and preparation" on page 48
	Chamber, trays, chamber rack dirty.	Clean the chamber and wash the chamber furniture.
	Contact between instruments of different materials.	Ensure that instruments of different materials do not touch (aluminum, carbon or stainless steel, etc.); place them on different trays or cassettes or pouch them. See "Load maintenance and preparation" on page 48
	Scale deposits on the chamber.	Clean the chamber and use water of good quality.
Instruments are turning brown or black.	Incorrect temperature selected.	Select a washing and disinfection cycle featuring a lower disinfection temperature. Follow the instructions of the instrument manufacturer.
The cycle report printer does not work.	Printer not properly connected or not powered on.	Check the data and the power connection to the printer.

Problem	Possible cause	Solutions
No cycles are stored in the cycle history menu.	An electronic board was replaced by service.	None. The memory of the old board cannot be restored. Periodically save the history on the USB pen drive.
When starting a cycle, the chamber door locks but re-opens immediately. The "Open the door" message appears.	Door gasket not properly placed; seal sticking out.	Ensure that the door gasket is evenly inserted on the entire circumference.
	Door jammed by external objects or by the load itself.	Remove any objects interfering with the chamber door. Check the door does not force against the load or the chamber furniture.
The device enters into standby mode immediately after opening the chamber door.	The chamber door has not been opened after the previous cycle had finished and the standby mode delay has expired.	Press the standby button to exit.
Warning about USB saving (HTML and SCL files).	The USB pen drive is not connected or not properly connected to the device.	Check presence and connection of the USB pen drive. If the problem persists, call service.
Warning about programmed maintenance.	A component must be replaced for the programmed maintenance of the device.	Call service to order the requested component (HEPA filter...). See "Ordinary maintenance" on page 62

Emergency door opening

WARNING ABOUT OPENING THE DOOR IN EMERGENCY



WARNING! Carry out the following procedure only if necessary. Any attempt to open the door while the unit is still hot could expose the operator and the surrounding personnel to serious risk.

In case of uncompleted cycle, instruments must not be considered washed and disinfected. Be careful while handling them.



CAUTION! High temperature. Risk of burns. Carry out the following procedure only when the device has completely cooled down. The device must be disconnected from the mains power supply.

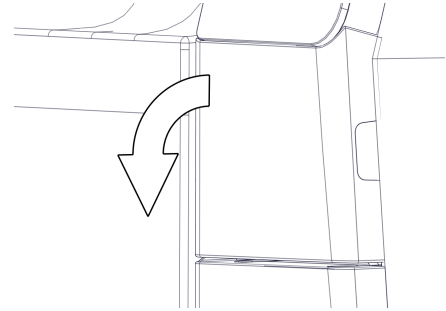
Notice: carry out this procedure only as instructed and when the device is in the specified conditions. Any attempt to open the door in a different way can seriously damage the device.

OPEN THE DOOR IN EMERGENCY

1 If a cycle is running, stop it. The device must be in stand-by.

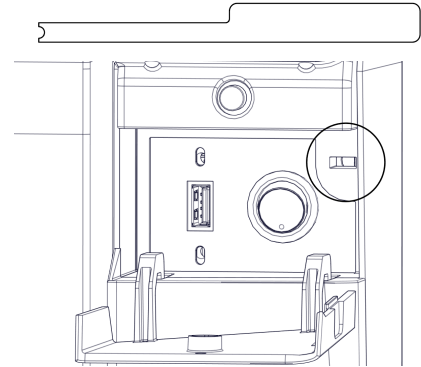
2 Disconnect the device.

3 Open the service door.



4 Take the opening tool provided with the device.

5 Insert the opening tool in the emergency slot.



5 Push the opening tool until the door locking system unlocks.

Technical data

CONTENTS

This section deals with the following subjects:

Washing and disinfection cycles	90
Washing and disinfection cycle phases	93
Technical data	96
Diagrams	99
Accessories, washing supports, spare parts, consumables	100
Authorized W&H service partners	103

Washing and disinfection cycles

WARNINGS

For your safety and for the safety of your patients:



WARNING!

Never process objects different from those specified in the cycle program table and never exceed the maximum load weight limits specified in it as this could impair the washing process. Such actions are considered improper use of the device for which the manufacturer cannot be held responsible.

All indications of washed and disinfected load or successful completion of the cycle at the end of the cycle are not valid if the type and quantity of the load are not complied with.

STANDARD WASHING AND DISINFECTION CYCLES AVAILABLE

Cycles are compliant with ISO 15883.

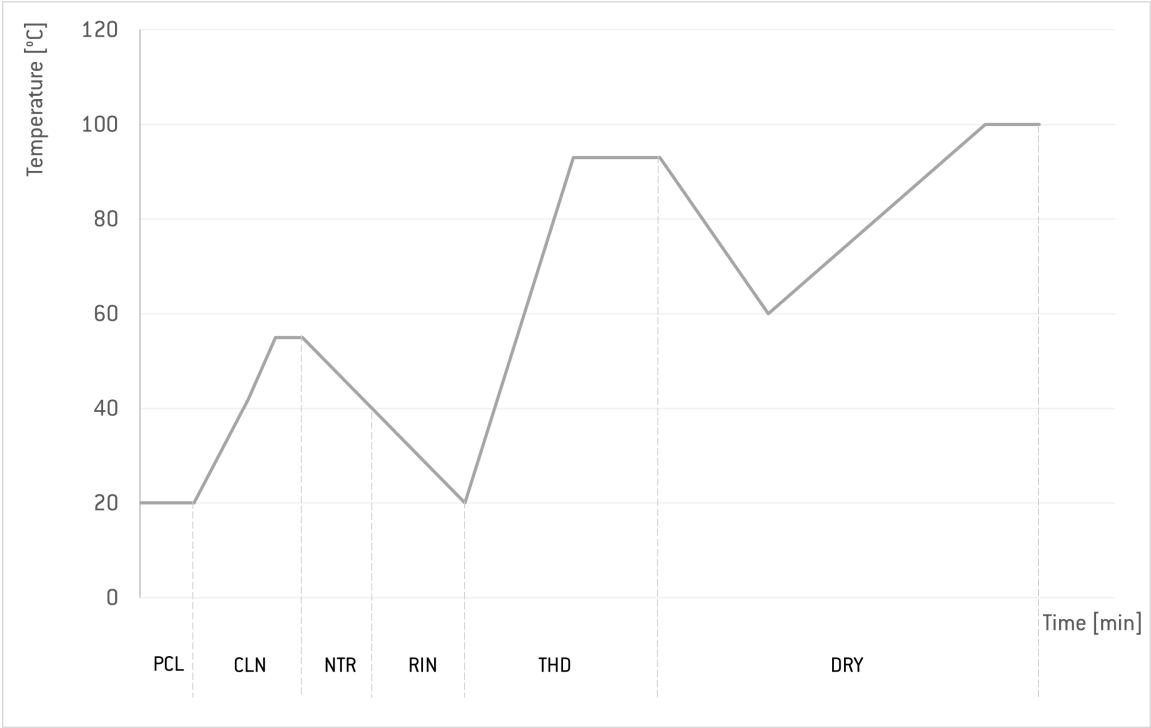
Program	Load type
STANDARD	Designed for moderately soiled items.
INTENSE	Designed for heavily soiled items.
FAST	Specifically designed for fast processing of lightly soiled items.
HANDPIECES	Specifically designed only for dental handpieces.

COMMON WASHING AND DISINFECTION CYCLE PHASES

Following is the description of the washing and disinfection phases.

Code	Name	Description
PCL	Pre-cleaning	Pre-cleaning is performed with cold water to remove coarse dirt and foam. It allows to avoid protein fixation that can occur at higher temperatures.
CLN	Cleaning	Cleaning is performed with a specific detergent (alkaline or neutral) added to water at a specific temperature (40-55 °C).
NTR	Neutralizing	Neutralizing eliminates alkaline residues or rinse any detergent.
RIN	Rinsing	Rinsing is performed with cold water to effectively dilute chemical additives.
THD	Thermal disinfection	Thermal disinfection achieves an A ₀ , according to ISO 15883. It is performed with demineralized water at high temperature.
DRY	Drying	The drying phase consists of a slow drying at low temperature to safely remove humid air from the chamber and a second phase involving high temperature to dry off the load.

All cycles feature the same basic temperature profile as shown in the graph below. Duration and temperature phases differ among the various cycles.



Washing and disinfection cycle phases

COMMON WASHING AND DISINFECTION CYCLE PHASE DATA

	Cycles			
	Fast	Standard	Intense	Handpieces
Load type	Instruments			Handpieces
Max. load single washing level ¹	8.0 kg (17.6 lb) / 120 instruments / 6 cassettes			max. 14
Max. load double washing level (optional) ²	16.0 kg (35.2 lb) / 240 instruments / 0 cassettes			max. 14

¹: lower rack weight is not included.

²: upper (optional) and lower rack weights are not included.

Fast, standard and intense cycles

Phase	Water volume [l]			Water type	Chemical agent type	Injection temperature (°C)	Concentration [ml/L]			Holding time [s]			Holding temp (°C)		
	FAST	STANDARD	INTENSE				FAST	STANDARD	INTENSE	FAST	STANDARD	INTENSE	FAST	STANDARD	INTENSE
Pre-cleaning	8.0 [2]			Cold	-	-	-			180	180	600	-		
Cleaning	8.0 [2]			Warm 3	ENZYMATIC: BePro Cleaner TE	40	6	6	8	300	300	600	55		
					ENZYMATIC & ACID: BePro Cleaner TE				8						
					ALKALINE & ACID: BePro Cleaner MA				10				55	65	
Neutralizing / Rinsing [1]	8.0 [2]			Warm 3	ENZYMATIC: -	-	-			180		300	-		
					ENZYMATIC & ACID: BePro Neutralizer C	-	3			180		300			
					ALKALINE & ACID: BePro Neutralizer C	-	4	4	6	240		300			
Rinsing	8.0 [2]			Warm 3	-	-	-			60	60	300	-		
Thermal disinfection	8.0 [2]			Demi	BePro Rinse	80	0.3			120	300	300	90	93	93
Drying	-			-	-	-	-			600	1320 ⁴	2400 ⁴	115		

1: with the Enzymatic process, there is no neutralizing phase. In that case, the neutralizing phase is replaced by a rinsing phase.

2: water consumptions is optimized in some versions.

3: if the warm water is not available, the cold water is used.

4: drying time is optimized via ECO DRY mode (optional).

Handpiece cycle

Phase	Water volume (l)	Water type	Chemical agent type	Injection temperature (°C)	Concentration (ml/L)	Holding time (s)	Holding temp (°C)
Pre-cleaning	6.5	Cold	-	-	-	60	-
Cleaning		Warm 1	ENZYMATIC: BePro Cleaner TE	40	4	180	45
Rinsing		Warm 1	-	-	-	60	-
Thermal disinfection		Demi	BePro Rinse	80	0.3	120	90
Drying	-	-	-	-	-	600	115

1: if the warm water is not available, the cold water is used.

Technical data

WATER SUPPLY SYSTEM

Cold water*

Pressure range	1.5 - 8 bar
Max. incoming temperature	35 °C
Max. water hardness	40 °F
Max. conductivity	-
Max. iron	< 2 mg/l
Required flow rate	> 3 l/min
On-site threaded union in accordance with DIN 44991 (flat sealing)	3/4 G
Length of inlet hose	2 m
Minimum microbiological quality	Potable water

*: for the UK the supplied double check valve must be fitted.

Warm water* (optional)

Pressure range	1.5 - 8 bar
Max. incoming temperature	60 °C
Max. water hardness	40 °F
Max. conductivity	-
Max. iron	< 2 mg/l

Required flow rate	> 3 l/min
On-site threaded union in accordance with DIN 44991 (flat sealing)	3/4 G
Length of inlet hose	2 m
Minimum microbiological quality	Potable water

*: for the UK the supplied double check valve must be fitted.

Demineralized water

Pressure range	1.5 - 8 bar
Max. incoming temperature	60 °C
Max. water hardness	2 °F
Max. conductivity	15 µS/cm
Max. iron	< 0.2 mg/l
Required flow rate	> 3 l/min
On-site threaded union in accordance with DIN 44991 (flat sealing)	3/4 G
Length of inlet hose	2 m
Minimum microbiological quality	-

Waste water

Drainage temperature	93°C
Hose length	1.8 m
Max. drain pump head height (from bottom edge of the machine)	1.0 m Note: only for RID-300UC model
Max. transient flow rate	16 l/min
On-site sleeve for drain hose (diameter x length)	22 x 30 mm
Minimum microbiological quality	-

POWER SUPPLY SYSTEM

Model Thed UC

Version	V00	V01	V02	V03	V04	V05	V06	V07	V17
Mains supply	3N 380- 415 V 50 Hz 16 A	220- 240 V 50 Hz 32 A	220- 240 V 50 Hz 16 A	220- 240 V 50 Hz 13 A	3N 380- 415 V 60 Hz 16A	220- 240 V 60 Hz 32 A	220- 240 V 60 Hz 16 A	208- 240 V 60 Hz 12 A	220- 240 50 Hz 16 A
Overcurrent protection circuit breaker (min)	16 A	32 A	16 A	13 A	16 A	32 A	16 A	12 A	16 A

Model Thed TT

Version	V08	V09	V10	V11	V12	V13	V14	V15	V16
Mains supply	3N 380- 415 V 50 Hz 16 A	220- 240 V 50 Hz 32 A	220- 240 V 50 Hz 16 A	220- 240 V 50 Hz 13 A	3N 380- 415 V 60 Hz 16 A	220- 240 V 60 Hz 32 A	220- 240 V 60 Hz 16 A	208- 240 V 60 Hz 12 A	220- 240 V 50 Hz 16 A
Overcurrent protection circuit breaker (min)	16 A	32 A	16 A	13 A	16 A	32 A	16 A	13 A	16 A

All models

Contact position indicator/Actuator Marking	ON/OFF (I/O)
Ground Fault Interrupter (GFCI)	30 mA
Protection required	Suitable circuit breaker and a Ground Fault Circuit Interrupter (GFCI). All protection devices must be certified according to the applicable standard. A grounded connection is essential



WARNING: The circuit breaker must be designed to operate at the rated voltage of the machine.

Each device must employ a switch or a circuit breaker as the means for disconnection.

Characteristics:

- it must be an omnipolar switch (it must disconnect all the current-carrying conductors),
- it must be located suitably and easily accessible,
- it must be easily operated (without any tool),
- it must be placed close to the device,
- it must be marked as the disconnecting device for the equipment.

It is still recommended to have a protection device dedicated to the equipment in the electrical cabinet: (e.g., thermal-magnetic circuit breaker or fuses on each phase, properly dimensioned according to the electrical characteristics mentioned above)

Communication with other devices	1 USB port at the front 1 USB port at the rear (4 USB ports at the rear - optional) 1 LAN port at the rear
---	--

INSTALLATION REQUIREMENTS

Working temperature	From +5 °C to +40 °C (from +41 °F to +104 °F)
Working relative humidity	Max. RH 80% up to 31 °C (88 °F), linearly decreasing to 50% at 40 °C (104 °F)

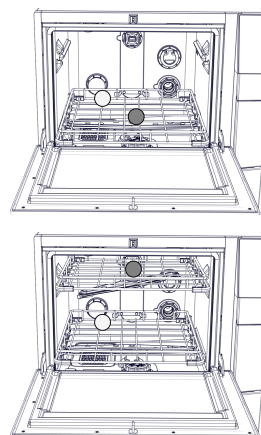
Storage temperature / rel. humidity	From -20 °C to +60 °C (from -4 °F to +140 °F) / 0–90 % (with empty canisters)
Max altitude	3800 m asl 1
Overall dimensions	Thed TT W: 598 mm, H: 599 mm, D: 628 mm (W: 23,54", H: 23,58", D: 24,72") Thed UC W: 598 mm, H: 815 mm, D: 628 mm (W: 23,54", H: 32,09", D: 24,72")
Min. space required	Thed TT W: 600 mm, H: 603 mm, D: 630 mm (W: 23,62", H: 23,74", D: 24,80") Thed UC W: 600 mm, H: 818 mm, D: 630 mm (W: 23,62", H: 32,20", D: 24,80")
Size of the door movement	Thed TT D: 372 mm (D: 14,65") Thed UC D: 372 mm (D: 14,65")
Size of the drawer movement	Thed TT D: 127 mm (D: 5") Thed UC D: 358 mm (D: 14,09")
Weight empty	Thed TT 54 kg (119 lbs) Thed UC 72 kg (158.8 lbs)
Max. weight (fully loaded)	Thed TT 76 kg (167.6 lbs) Thed UC 104 kg (229.3 lbs)
Max. weight with packaging	Thed TT 86 kg (159.6 lbs) Thed UC 114 kg (251.4 lbs)
Chamber volume	64 l (W: 400 mm, H: 400 mm, D: 400 mm)
Machine feet height	0-4 mm
Machine feet diameter	41 mm
Insert for machine foot, size of thread	M8
Environment pollution	Degree 2
Usage environment	Indoor

HEPA filter H13

Max . heat output 0.30 kWh

Note 1: if installation site is above 1300 m (4265 ft), the boiling point of the water will be lower. In this case, the disinfecting temperature and the holding time must be adjusted by an authorized W&H technician.

TEMPERATURE POINTS

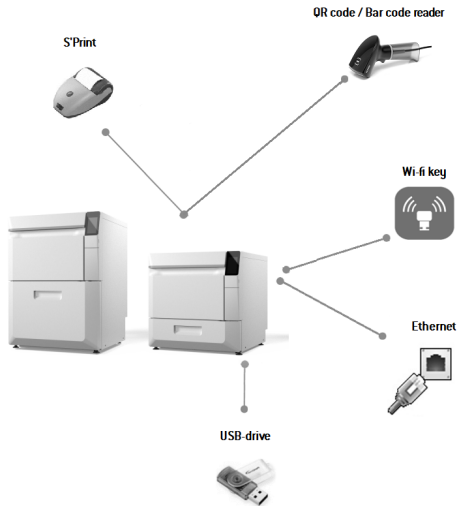


Part	Description
	Hottest points
	Coldest points

Diagrams

CONNECTION DIAGRAMS

Data communication



Water system



[*]: the water filtration system must be fitted with a backflow preventing device complying with IEC 61770 and with national and local regulations.


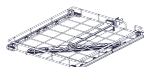

For water requirements see " Technical data" on page 96.

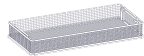






Accessories, washing supports, spare parts, consumables





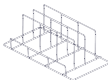
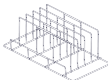


LIST OF WASHING SUPPORTS, ACCESSORIES AND SPARE PARTS









Note: use only accessories, spare parts and consumables recommended by W&H.

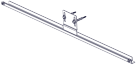







Note: before purchasing, check that the accessories fulfill all applicable standards in the country of use.


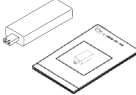


Picture	Part	Part number
	Lower rack	19721500
	Upper rack	19721501
	Basket (1/4)	19721502

Picture	Part	Part number
	Basket (1/2)	19721503
	Vertical support (1/4)	19721504
	Vertical support (1/2)	19721505
	Clamp, scissors and impression tray support	19721507
	Injection manifold	19721509
	Injector nozzle	19721510
	Injector cap	19721511


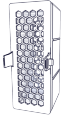
Picture	Part	Part number
	Handpiece adapter kit	19721512
	3-way deviator adapter	19721516
	Adapter filter	F364514X
	Tip adapter (intermediate)	19721517
	Cassette support	19721522
	Tray support	19721523
	Lid for basket (1/4)	19721524
	Tip adapter (standard)	19721526

Picture	Part	Part number
	Tip adapter (US)	19721527
	Salt funnel	F540904X
	Drain tube	W232500X
	Demineralized water tube	W232501X
	Cold water tube	W232502X
	Check valve (EB type)	W320507X
	Ethernet cable, 3 m	A801500X
	Safety bracket kit - RID-300TT	X051125X





Picture	Part	Part number
	Safety bracket kit - RID-300UC	X055032X
	Steam reduction kit	X055044X
	USB pen drive	V000004X
	USB hub (4 ports)	19721129
	Report printer	19721141
	USB-serial converter	A801503X
	Roll of thermal paper	A810504X
	QR code / Bar code reader for labels	19721132



Picture	Part	Part number
	Emergency door opening tool	F542622X
	Wi-Fi dongle key Wi-Fi dongle key (only for North America)	19721136 19721137
	External canister kit (detergent and rinse aid) Note: only for RID-300TT model.	X055022X
	External canister kit (neutralizer) Note: only for RID-300TT model.	X055023X

CONSUMABLES

Picture	Part	Part number	When replace it
	Salt (1 kg)	M102000X	-
	HEPA filter	A821208X	Every 400 cycles

CHEMICAL AGENTS

Picture	Part	Part number
	BePro cleaner TE (5000 ml canister)	19500200
	BePro cleaner MA (5000 ml canister)	19500201
	BePro neutralizer C (5000 ml canister)	19500202
	BePro cleaner TE (1500 ml cartridge)	19500204

Picture	Part	Part number
	BePro rinse (800 ml cartridge)	19500205
	BePro rinse (1000 ml canister)	19500206

ACTIVATION CODES

Activation code	Description	Part number
Traceability	Activates the User Management and Options menus	19730072

Authorized W&H service partners

A list and a map with your nearest W&H service partner are available at www.wh.com.



 **W&H Sterilization Srl**

via Bolgara, 2
Brusaporto (BG)

Italy

www.wh.com

+39 035 66 63 000

RID-300
Instructions for Use
ENG
Rev02
03/03/2025
Subject to changes