CE

User manual
Washer-extractors

WH5 500H — WHB5 500H
WS5 500H — WSB5 500H Clarus TS

Electrolux PROFESSIONAL

original instructions

Contents

Contents

The manufacturer reserves the right to make changes to design and component specifications.

1 . Safety precautions

This machine should be installed in conformance to the health and safety regulations, and only used in a sufficiently aerated area. Check the instructions before installing or using the machine.
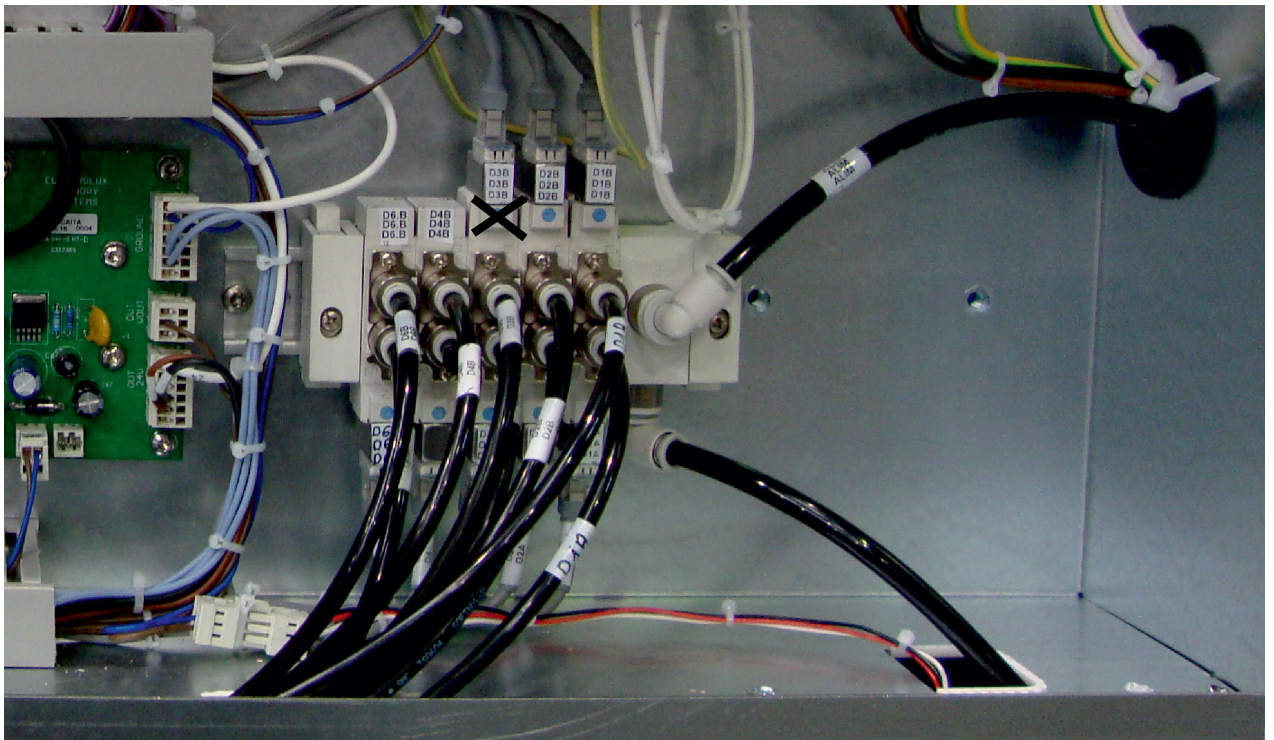
⚠ # CAUTION ⚠

Before any use, to retire all the parts needed to install the machine put in the drum , please follow these actions

1. connect compressed air.
2. Remove the side housing cabinet.
3. Press with a screwdriver on D3B (see picture below).
4. Open the loading door.
5. Open the drum doors , with precautions, maintain the 2 doors.
6. Get the package and instructions.

⚠ **CAUTION** ⚠

Before any use, it is compulsory to read the instruction handbook.
Users must have learnt how the machine operates.
This device must not be installed in places accessible to the public.
The machine is only intended for water-wash use.
Do not allow minors to use the machine.
Do not hose down the machine with water.
Only use detergent intended for water-wash of textiles Never use dry cleaning agents.
It is forbidden to wash textiles soaked with solvents.
The machine's door lock must under no circumstances be bypassed.
If the machine develops a fault, this must be reported to the person in charge as soon as possible. This is important both for your safety and that of others.
DO NOT MODIFY THIS APPLIANCE.
Servicing shall be carried out only by authorized personnel.
Only authorized spare parts shall be used.
When performing service or replacing parts, the power must be disconnected.
When the power is disconnected, the operator must see that the machine is disconnected (that the plug is removed and remains removed) from any point to which he has access. If this is not possible, due to the construction or installation of the machine, a disconnection with a locking system in the isolated position shall be provided.
In accordance with the wiring rules : mount a multi-pole switch prior to the machine to facilitate installation and service operations.
In order to prevent damage to the electronics (and other parts) that may occur as the result of condensation, the machine should be placed in room temperature for 24 hours before being used for the first time.
In case of a gas heated machine, do not assemble the machine on premises containing a dry cleaning machines or other similar machines.
Please wash only items offering appropriate distribution inside the drum. Do not wash items such as mattresses or shoes. Call our technical departments before washing nonstandard items. Noncompliance with these instructions may void the manufacturer's guarantee in case of abuse of the washer-extractor.

⚠ **CAUTION** ⚠

For the following countries : AT, BE, BG, HR, CY, CZ, DK, EE, FI, FR, DE, GR, HU, IS, IE, IT, LV, LT, LU, MT, NL, NO, PL, PO, PT, RO, SK, SI, ES, SE, CH, TR, UK : This appliance shall not be installed where the public has access.
For other countries : This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety and understand the hazards involved. Children should be supervised to ensure that they do not play with the appliance.

⚠ **IMPORTANT** ⚠

The identification plate is located on the right side near the main switch.

⚡ ⚡
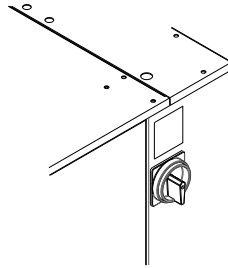
Never use the main switch as an emergency stop. Use it only when the machine does not work in progress. Instead of that, use the emergency stop buttons in both sides of the machine.

⚠ **IMPORTANT** ⚠

Make sure note to over load the machine. Maximum mass of dry cloth is found in Technical data.
Sound pressure level is found in Technical data.

⚠ **IMPORTANT** ⚠

Never try to open the outer drum door before the complete stop of the cage.

⚠ **CAUTION** ⚠

Disconnect all the sources of energy before any intervention on the machine.

⚡ ⚡

The machines comply with the European Directive EMC (Electromagnetic Compatibility). They have been tested in laboratory and approved as such. It is so prohibited to add wires or nonshielded electric cables in the cabinets, strands or cables' troughs. Considering that the volume of the outer drum is superior to 150 litres, the standard kept for the electric part is the IN 60204.

⚠ **CAUTION** ⚠

With AIDO(Automatic Inner Door Opening) option, Take care of the disc of the opening system above your head. Risk of cutting with the edge of the disc!!
Take care also of the locking system on your side; risk of cutting with the edge of the plate!!

⚠ **CAUTION** ⚠

When you put your hands into the drum, take care of the edge of the outer drum doors on yours sides. Risk of cutting with the edge of the metal plate!!

⚠ **CAUTION** ⚠

The machine can work without the protective casing when the electric supply is not cut off.
Interlock the main isolating switch with a padlock.
Close the steam or gas inlet valves.

⚠ **IMPORTANT** ⚠

Ensure that the machine is not loaded beyond its nominal capacity (see "Specific load" in the instruction booklet's technical characteristics).
An excessive load has consequences for the lifetime of the machine's organs, as follows:

• Rapid destruction of the suspension elements (springs, shock absorbers);
• Excessive fatigue of motorization elements (engine, belt);
• Rapid reduction of lifetime of drum bearings (rolling bearings);
• Opening and destruction of drum doors and tank doors during oil dehydration.
This is particularly important for your safety and that of others.
The consequence is an immediate cancellation of the warranty.

⚠ **THINK OF THE ENVIRONMENT!** ⚠

The use and handling of chemical products such as detergent, chlorine, acids, descaling agents, etc may create hazards for health and environment ; the following precautions should be taken:

- Do not breathe the dusts or steam;
- Avoid contact with skin or eyes (may cause burns);
- In case of important spillage, wear a protecting mask, gloves, and eye protectors;
- Handle with care;
- Consult the use and first aid advice on the packing;
- Do not dispose pure products in the environment.

⚠ **WARNING** ⚠
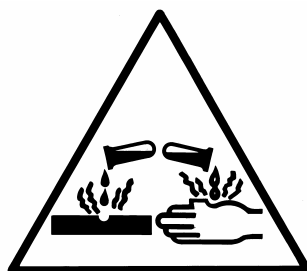
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- Avoid contact with skin or eyes (may cause burns).
- In case of important spillage, wear a protecting mask, gloves, and eye protectors.
- Handle with care.
- Consult the use and first aid advice on the packings.
- Do not dispose pure products in the environment.

1.1 Symbols

⚠	Caution.
⚡	Caution, presence of dangerous current.
📖	Read the instructions before using the machine.

1.2 Personal protection equipment

Given below is a summary table of the Personal Protection Equipment (PPE) to be used during the various phases of the machine's service life.

Phase	Protection garments	Safety footwear	Gloves	Glasses	Ear protectors	Mask	Safety helmet
Transport		X	O				
Handling		X	O				
Unpacking		X	O				
Installation		X	O				
Normal use	X	X	X	X			
Adjustments	O	X					
Routine cleaning	O	X	X	O			
Extraordinary cleaning	O	X	X	O			
Maintenance	O	X	O				
Dismantling	O	X	O				
Scrapping	O	X	O				

Legend : **X** : PPE required ; **O** : PPE available or to be used if necessary.

Normal use : Safety footwear must be defined for a use on a wet floor. And use glasses and gloves to manipulate chemical products.

1.3 Preliminary instructions

> ⚠ **WARNING** ⚠
>
> Risk of jamming when opening the lower door for unloading

> ⚠ **WARNING** ⚠
>
> Risk of jamming with trolley and lower door when opening (if trolley height = 900mm)
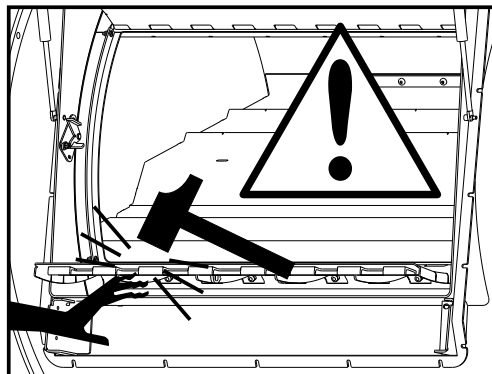
⚠️ **WARNING** ⚠️

Risk of the upper door being raised quickly on loading
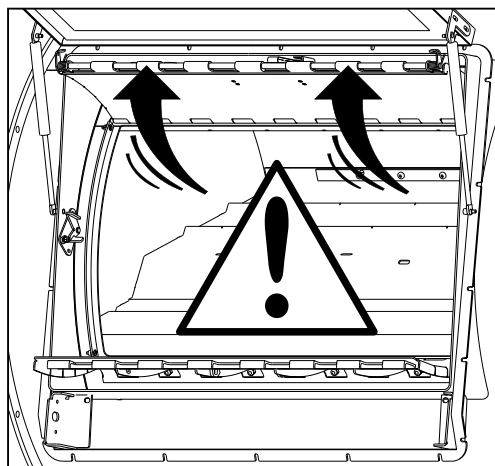
⚠️ **WARNING** ⚠️

After the installation, Send back the commissionning form ,signed document, to Electrolux to validate the warrantly of the product.

2 Warranty terms and exclusions

If the purchase of this product includes warranty coverage, warranty is provided in line with local regulations and subject to the product being installed and used for the purposes as designed, and as described within the appropriate equipment documentation.

Warranty will be applicable where the customer has used only genuine spare parts and has performed maintenance in accordance with Electrolux Professional user and maintenance documentation made available in paper or electronic format.

Electrolux Professional strongly recommends using Electrolux Professional approved cleaning, rinse and descaling agents to obtain optimal results and maintain product efficiency over time.

The Electrolux Professional warranty does not cover:

- service trips cost to deliver and pick up the product;
- installation;
- training on how to use/operate;
- replacement (and/or supply) of wear and tear parts unless resulting from defects in materials or workmanship reported within one (1) week from the failure;
- correction of external wiring;
- correction of unauthorized repairs as well as any damages, failures and inefficiencies caused by and/or resulting from;
– insufficient and/or abnormal capacity of the electrical systems (current/voltage/frequency, including spikes and/or outages);
– inadequate or interrupted water supply, steam, air, gas (including impurities and/or other that does not comply with the technical requirements for each machine);
– plumbing parts, components or consumable cleaning products that are not approved by the manufacturer;
– customer's negligence, misuse, abuse and/or non-compliance with the use and care instructions detailed within the appropriate equipment documentation;
– improper or poor: installation, repair, maintenance (including tampering, modifications and repairs carried out by third parties not authorized third parties) and modification of safety systems;
– Use of non-original components (e.g.: consumables, wear and tear, or spare parts);
– environment conditions provoking thermal (e.g. overheating/freezing) or chemical (e.g. corrosion/oxidation) stress;
– foreign objects placed in- or connected to- the product;
– accidents or force majeure;
– transportation and handling, including scratches, dents, chips, and/or other damage to the finish of the product, unless such damage results from defects in materials or workmanship and is reported within one (1) week of delivery unless otherwise agreed;
- product with original serial numbers that have been removed, altered or cannot be readily determined;
- replacement of light bulbs, filters or any consumable parts;
- any accessories and software not approved or specified by Electrolux Professional.

Warranty does not include scheduled maintenance activities (including the parts required for it) or the supply of cleaning agents unless specifically covered within any local agreement, subject to local terms and conditions.

Check on Electrolux Professional website the list of authorized customer care.

3 Ergonomics certification

The human body is designed for movement and activity but physical stress injuries as a result of static and repetitive movements or unfavorable working postures may occur.

The ergonomic features of our product, the ones which may influence your physical and cognitive interaction with it, have been assessed and certified.

A product which exhibits ergonomic features, in fact, shall fulfil specific ergonomic requirements, belonging to three different areas: Polytechnic, Biomedical and Psychosocial (usability and satisfaction).

For each of these areas, specific tests with real users have been performed. The product was therefore compliant with the ergonomic acceptability criteria requested by the standards applied.

The product that you use is specifically studied and tested in order to minimise any physical problems associated to the interactions with the product.

The loading and unloading of the linen and the interaction with the product may bring to incongruous postures and to the handling of heavy weighs, inherent characteristics of the activity you do we tried to alleviate.

We would like to point out some operating procedures we suggest to adopt:

- Handle the linen in a balanced way, trying not to arch your back during the loading/unloading.

- Take in/out the laundry in small quantities. For example in 20 to 25 times for a WHB5 500, which induces a load of approximately 3 kg with each manipulation.

- In order to avoid the entanglement of laundry including large dishes, add more rotation time in each direction.

- In case of linen entanglement, we advise you to add 30-45s of drain at the end of the program.

- We advise you to use a gripper to catch the laundry at the bottom of the drum. (as picture below)

- If possible, flex your legs and don't bend forward your back during the placement of the linen in the lower box and during the achievement of any lower maintenance actions or items.

- If possible, push the tray cart and pull it in order to reduce the distances.

- Keep the viewing distance in order to understand properly the information displayed in the interface or to view you interest in the drum, reducing as much as possible the time spent with the eyes up (neck extensions).

In case several machines are managed by the same operator the repetitive movements will increase and as a consequence of this the related biomechanical risk will increase exponentially.

Follow the below recommendations to avoid, as much as possible, operators acquiring bodily injury.

• Make sure there are suitable trolleys or baskets for loading, unloading and transportation.

• We advise you to use a mobile bottom trolley with a maximum height of 850mm.

• Organize job rotation in the working place in the case several machines are managed by the same operator.

4 Distributor Letter

Chemical System Responsibility

Disclaimer

The following policy should be considered and understood as a warranty/disclaimer to customers operating textile care installations where liquid supply (chemical) systems use or may use peristaltic pumps to inject supplies into equipment.

To Whom it May Concern:

We, the undersigned, accept no responsibility for loss or damage when, during periods of non-use, concentrated chemicals leak, spray or "dribble" onto any part of our machines or their contents.

It is well known that many pumped liquid chemical systems tend to permit concentrated chemicals to dribble out of the injection tubes when the system has not been used for relatively long periods of time – as after working hours and during weekends. This puts highly concentrated corrosive chemicals in direct contact with dry stainless steel surfaces and often directly on any textiles left in the machine. Chemical deterioration (rusting) of the stainless steel and damage to the textiles is the inevitable result.

It is absolutely useless to flush the affected sites after each injection because the *harmful dribble always occurs later* – after the machine is no longer in use. One seemingly foolproof solution for "dribbling chemicals" (which we highly recommend but obviously cannot guarantee) is to locate the chemical tanks and pumps well below the injection point on the machine (so the contents of the injection tube(s) cannot siphon into the machine) and to completely purge the just-used chemical injection tube(s), or manifold, with *fresh water after every injection* so that only fresh water (which cannot cause a problem) can dribble out. Naturally, this – or any other solution – is the sole responsibility of the pump and/or chemical supplier (not the machine manufacturer).

Additionally, external chemical leakage is dangerous to personal health and safety, and will also cause severe damage to machines and/or their surroundings. The installer and/or user of the chemical injection system must make sure there are no external chemical leaks and that excessive pressure can never build up in any chemical delivery tube, *because excessive pressure can burst the tube, or disconnect it from the machine, and spray dangerous concentrated chemicals about the premises*.

The machinery manufacturer is not, and cannot be, responsible for compliance with the above.

5 Note about the A.C. power

According to the EN 60204-1:1997 standard, the machine is provided for A.C. supplies corresponding to the extracted characteristics below :

4.3.2 A.C. supplies

Voltage:

Steady state voltage: from 0.9 to 1.1 of nominal voltage.

Frequency:

from 0.99 to 1.01 of nominal frequency continuously.

from 0.98 to 1.02 short time.

Harmonics:

Harmonic distortion not to exceed 10 % of the total r.m.s. voltage between live conductors for the sum of the second through to the fifth harmonic. An additional 2 % of the total r.m.s. voltage between live conductors for the sum of the sixth through to the 30th harmonic is permissible.

Voltage unbalance:

Neither the voltage of the negative sequence component nor the voltage of the zero sequence component in three-phase supplies shall exceed 2 % of the positive sequence component.

Voltage interruption:

Supply interrupted or at zero voltage for not more than 3 ms at any random time in the supply cycle. There shall be more than 1 second between successive interruptions.

Voltage dips:

Voltage dips shall not exceed 20 % of the peak voltage of the supply for more than one cycle. There shall be more than 1 second between successive dips.

6 Preparation

⚠	**Important**	⚠
	Sort the linen according to the instructions mentioned on the care labels. Empty the pockets and clasp the slide fasteners. Take care to spread the load of laundry and type of laundry evenly in the two compartments.	

6.1 Loading

Loading side

Press key "Door unblocking".
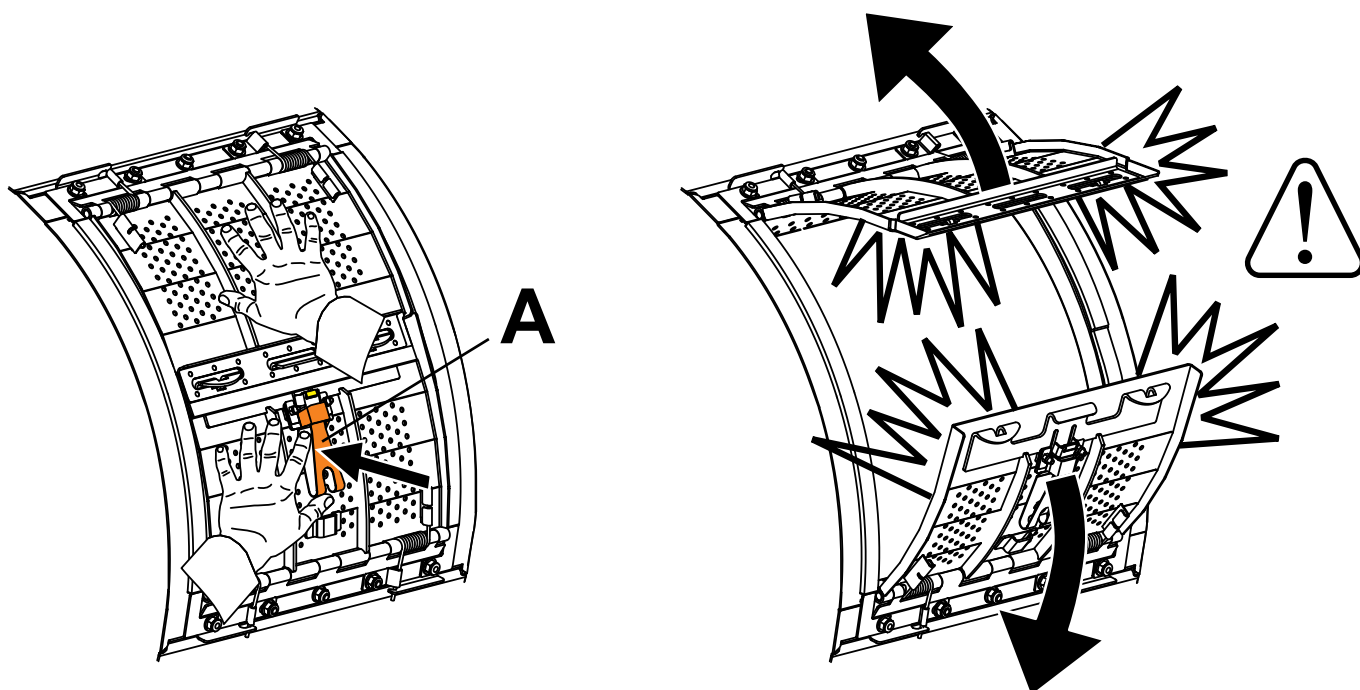
Open the inner drum doors.

Press the safety latch (A) and at the same time on the upper and lower doors with both hands.

Caution, maintain the doors until they are widely open.

Attention, risk of jamming when opening the doors.

Load the linen in the inner drum. Be careful to distribute it correctly.

⚠	**Caution**	⚠
Make sure not to overload the machine.		

Maximum load (1/10)	
WH5500	50 kg = 2 x 25kg by compartment

⚠	**Caution**	⚠
With AIDO(Automatic Inner Door Opening) option, Take care of the disc of the opening system above your head. Risk of cutting with the edge of the disc!!		

Note!
Washing in nets

You must note, that it is better to use several nets, three or four in the same compartment rather than one or two. More over, you should finish your load using loose linen if necessary. Divide the number of threads in the two compartments.
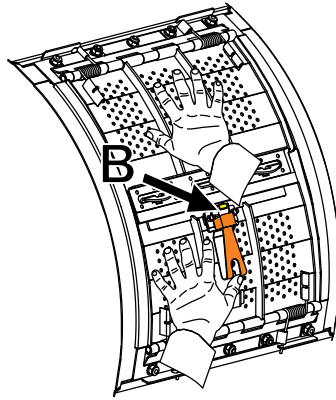
Close the inner drum doors and press them to check the good working of the mechanical safety device (B).

If doors are not properly closed, they might open during a washing cycle and strongly damage the machine.
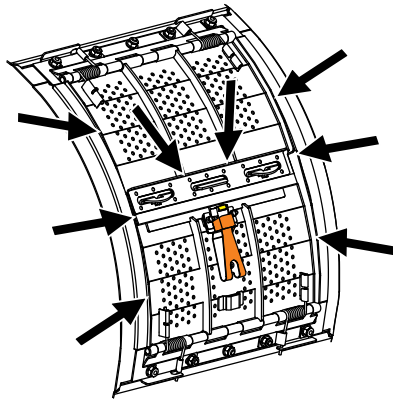
Check that no piece of linen is wedged between the doors and the inner drum.

Close the outer drum door and lock it with the handle. The machine is now ready to start the washing cycle.

6.2 Detergents

Add the correct amount of detergent and softener according to recommendations.

⚠	**Warning**	⚠
Take care when adding laundry products. Powder or liquids left in the compartments (scoops) may be corrosive.		

⚠	**Caution**	⚠
Do not open the cover when the water valves are flushing water through the detergent dispenser. Take care when adding laundry products.		

6.3 Detergent container

The detergent container has five compartments. Each compartment is connected to a water valve. The water supply to individual compartment is as follows :

	Softener, liquid.
	Main wash for liquid detergent. Alt. for mop machines, liquid mop chemicals in last rinse.
	Pre-wash, powder or liquid detergent, if option "pre-wash" has been selected.
	Main wash for powder detergent.

6.4 Maintenance

⚠️ **Important** ⚠️

Rinse the inside, every days with water, the detergents container.
Clean the detergent container at regular basis to avoid that it is being clogged by detergent residue.
Clean the detergent container and siphons with hot water and for example a small brush.

6.5 Explanation of accelerometer

The WHB5 appliance has an accelerometer to control the unbalance of the machine during the extraction (spinning) process.

It controls and adjusts speed during spinning process, if the level is not obtain, your linen may be not enough spinned.

In this case, check your loading linen, it must be the same in the two compartments !

And after, select another spinning program.

How does it work?

If the accelerometer detect a problem, then the speed is adjusting and wait several minutes to obtain the right speed.

Then, it can increase the speed to the next level. If not , you never obtain the high speed to obtain a good spinning level.

7 Control panel

General

This washer extractor is controlled by a microprocessor-based program control unit placed on the loading side. There are many advantages to this equipment, including:

- Timing, levels and temperatures are controlled with great precision and flexibility.
- The large display screen means that detailed information on wash programs, machine status and operations, wash times and temperatures can be accessed in plain language.
- It is possible for the user to create new wash programs, and to adapt programs with great precision, on the basis of experience and to suit various types of textile, degrees of soiling etc.
- A very high level of machine safety through continuous monitoring and built-in safety interlocks.
- The program control unit has a reader for "smart cards". These are cards the size of a credit card which contain a memory chip. Smart cards allow the user to :
– transfer wash programs between a PC and the washer extractor, or from one washer extractor to another;
– run programs straight from a card.
- Great flexibility during program operation:
– rapid advance both forwards and backwards in the program;
– the user can change temperatures, program module lengths and extraction speeds directly, during program operation;
– change to running a different wash program, at any time during program operation of the washer extractor.
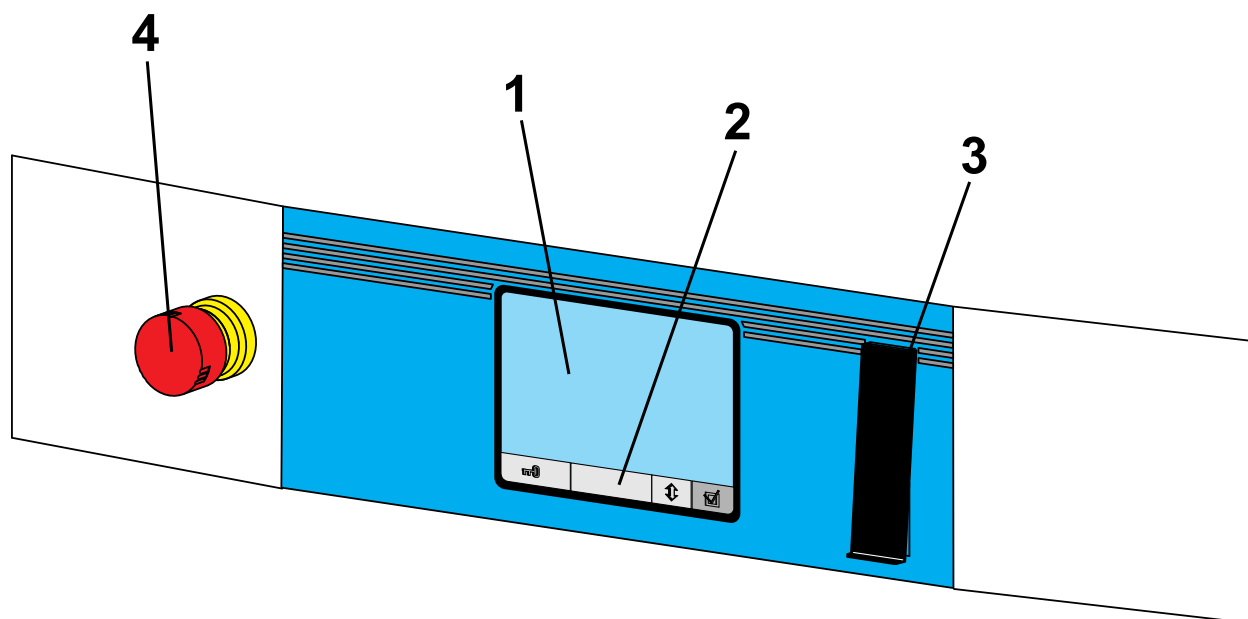
1	Display screen
2	Function keys. The functions of these keys change, depending on which menu or part of a menu you are using.
3	Card reader for memory cards
4	Emergency stop

Emergency stop

⚠	**Important**	⚠
	The emergency stop must be unblocked, if not the machine will not work (to unblock, turn the red button to the right).	

<table>
<tr><td>⚠</td><td>**Caution**</td><td>⚠</td></tr>
</table>

If the machine for some reason has to be stopped, abnormal or dangerous running, press emergency stop button.

⚠   ⚠

Release the emergency stop, by turning it clockwise only after checking what motivated this stop.
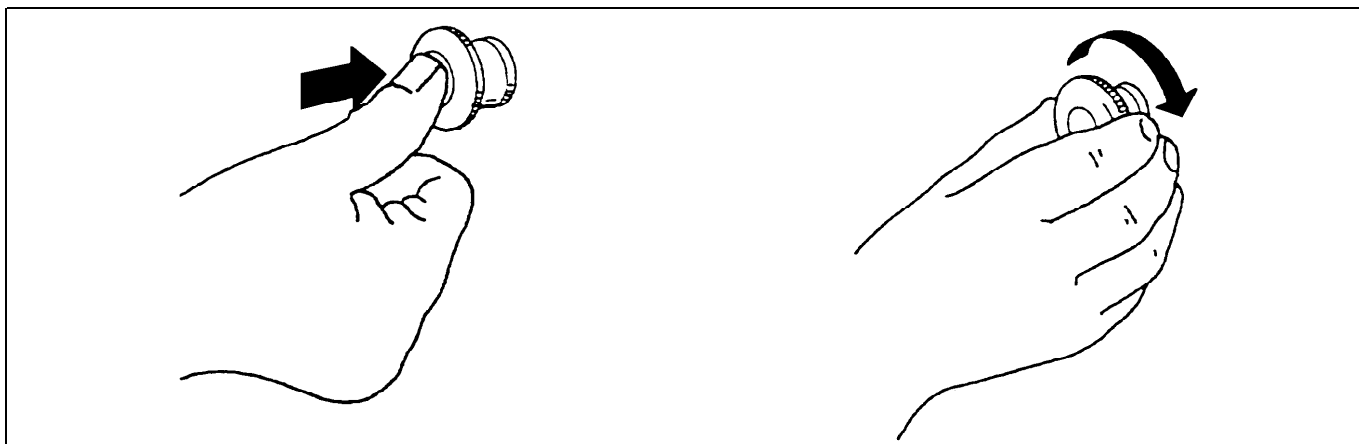
A very high working safety level of the machine is achieved thanks to a continuous monitoring and built-in safety devices.

Even the compound textile fabrics can be washed at a high temperature with no crumpling risk thanks to a special cooling process before the rinsing cycle.

In order to avoid an excessive mechanical fatigue during the hydro-extraction process, the machine is equipped with an unbalance detector. If the latter detects the least unbalance of the load, the hydro-extraction cycle is interrupted and the machine fills with water to make a new distribution of the linen possible.

The machine then resumes the distribution speed and another hydro-extraction cycle begins.

The machine can also be controlled sequence by sequence and is equipped with a tactile display for the manual control of certain functions.

8 To run a wash program

The "Move back" key

If you find you are in the wrong place, or if you want to undo earlier key presses:

Press the `Move back` key one or more times.

Each press of the "Move back" key moves you back one menu, in reverse order.

By pressing this key repeatedly you can return to this menu at any time.

```
CLARUS CONTROL TS
START WASH PROGRAM
OPTIONS MENU
```

8.1 Door opening

To unlock the door,
Press this key :
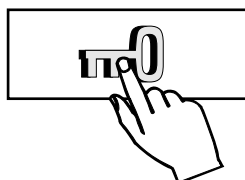
When a door opening is requested, the window `DRUM INDEXING. WAIT` is displayed.

The indexing is operating, the keys of the tactile display become totally inactive.

When the operation is realized, the window disappears.

The both loading doors must be closed, the locking is next automatic.

In case of one of the door is not closed, the machine can not start and the display stays inactive.

8.2   To start the wash program

Select the `START WASH PROGRAM` by pressing the⇕ key, then valid with ☑ key.

```
┌─────────────────────────────┐
│      CLARUS CONTROL TS       │
├─────────────────────────────┤
│      START WASH PROGRAM      │
├─────────────────────────────┤
│        OPTIONS MENU          │
└─────────────────────────────┘
```

The wash program modules

|	
Prewash	Used for prewash and brief soaking.
Main wash	Used as the main wash module, with heating and detergent dispensing.
Rinse	Rinsing of the load.
Drain	Drain stage after wash and rinse stages.
Extract	Centrifuging
Cool-down	Used for controlled cooling of the wash water to prevent creasing of the wash load.
Soak	Used for longer soak stages.

8.3   SELECT WASH PROGRAM menu

By starting from the program library

If you are unsure about the programs available, you can select a program from the program library, where the programs are listed with their descriptions.

What is the program library?

The program library lists all wash programs, both user and standard programs, showing their program numbers and a description, for example:

1 MY OWN 40 °C (104 °F)

2 MY OWN 60 °C (140 °F)

3 MY OWN 90 °C (194 °F)

4 NORMAL 95 °C (203 °F) STD

5 NORMAL 60 °C (140 °F) STD

6 NORMAL 40 °C (104 °F) STD

7 INTENSIVE 95 °C (203 °F)

8 INTENSIVE 60 °C (140 °F)

9 PERM. PRESS 60 °C (140 °F)

10 PERM. PRESS 40 °C (104 °F)

11 LOW EXTRACT 1 MIN

12 HIGH EXTRACT 2 MIN

Select the program by pressing the ⇧ or ⇩ keys then valid with ☑ key.

8.4   DELAYED START menu

Delayed start

Delayed start means that the machine will start the wash program at the day and the hour you have programmed.

This function allows you, for example, to load the machine in the evening but delay the start of the wash the night to profit of a reduced electric rate, or to use the machine the next morning (production in masked time).

Adjust the programmed day date.

Adjust the hour by step of 30 minutes.

To enter, push on "Valid" key ☑.

Immediate start

The machine indicates the day date and the current hour; for an immediate start, just push on "Valid" key ☑.

DELAYED START waiting display

DELAYED START ACTIVATED

The pushing on MOVE BACK key will cancel the programmed delayed start.

8.5 OPERATING CYCLE

During the wash program, the display shows the current program step and the opposite informations.

WASH CYCLE PAUSED display

To put the machine in stand-by, push on PAUSE key.

When the machine pauses:

• program operation is halted
• filling is halted (where applicable)
• heating is halted (where applicable)
• the motor stops
• the drain valve remains closed
• the door cannot be opened.

Press green key to restart.

WATER AND DETERGENT BOX display

Water/Drain : Visualize the state of all water valves and the drain valve.
Soap box compartment : Visualize the state of the soap box compartments.
Heating : Visualize the state of heating.

Press green key to restart.

LIQUID CHEMICALS STATUS display

Detergent valves : Visualize the state of valves in the detergent compartment or in external detergent supply system.

Press green key to restart.

Actually out of service

Press green key to restart.

RAPID ADVANCE display

Rapid advance works in forward directions.
Using rapid advance to move forwards allows you to skip one or more program steps.

Use the ⇧ or ⇩ keys, then press the green key to restart.

8.6 EMERGENCY STOP display

⚠	**Important**	⚠
	If the machine for some reason has to be stopped, abnormal or dangerous running, press emergency stop button. Release the emergency stop, by turning it clockwise only after checking what motivated this stop.	

After a pushing on the emergency stop, the opposite display appears.

`EMERG. STOP ACTIVE`

After the emergency stop releasing, push on "Valid" ☑ key .

8.7 POWER IS BACK display

If a power outage occurs during the execution of a program, or the main switch is moved to the «Off» position, the screen opposite is displayed after power returns or the main switch is moved to the «On» position.

`POWER IS BACK`

To escape the program, press "Move back" key.

`Do you want to continue wash cycle ?`

To continue wash cycle, press the "Valid" ☑ key.

8.8 How the filling cycle works

The laundry loaded in the drum will absorb some of the water put into the machine.

To compensate for this absorption, which lowers the water level in the machine, the machine may need to take several water intakes (in the same program step) to maintain the programmed level.

One way to limit these times is to program a first water level higher than the desired final level (second level).

This first level takes into account the type of linen and its capacity to absorb bath water.

These water uptakes in no way affect the detergent dilution ratio because the programmed water level will be reached.

9 Unloading

9.1 Unloading side (barrier washer)

At the end of the wash

When a program has finished, the indicating lamp on the clean side will show when the clean side unloading door can be opened.

⚠   **Caution**   ⚠

With AIDO(Automatic Inner Door Opening) option, Take care of the disc of the opening system above your head. Risk of cutting with the edge of the disc!!
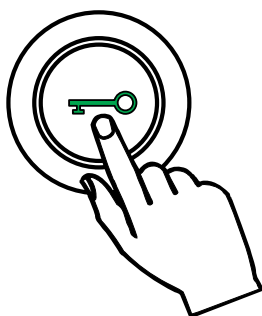
The green key indicator blinks to indicate you can open the outer door.

Push on the "Door unblocking key".
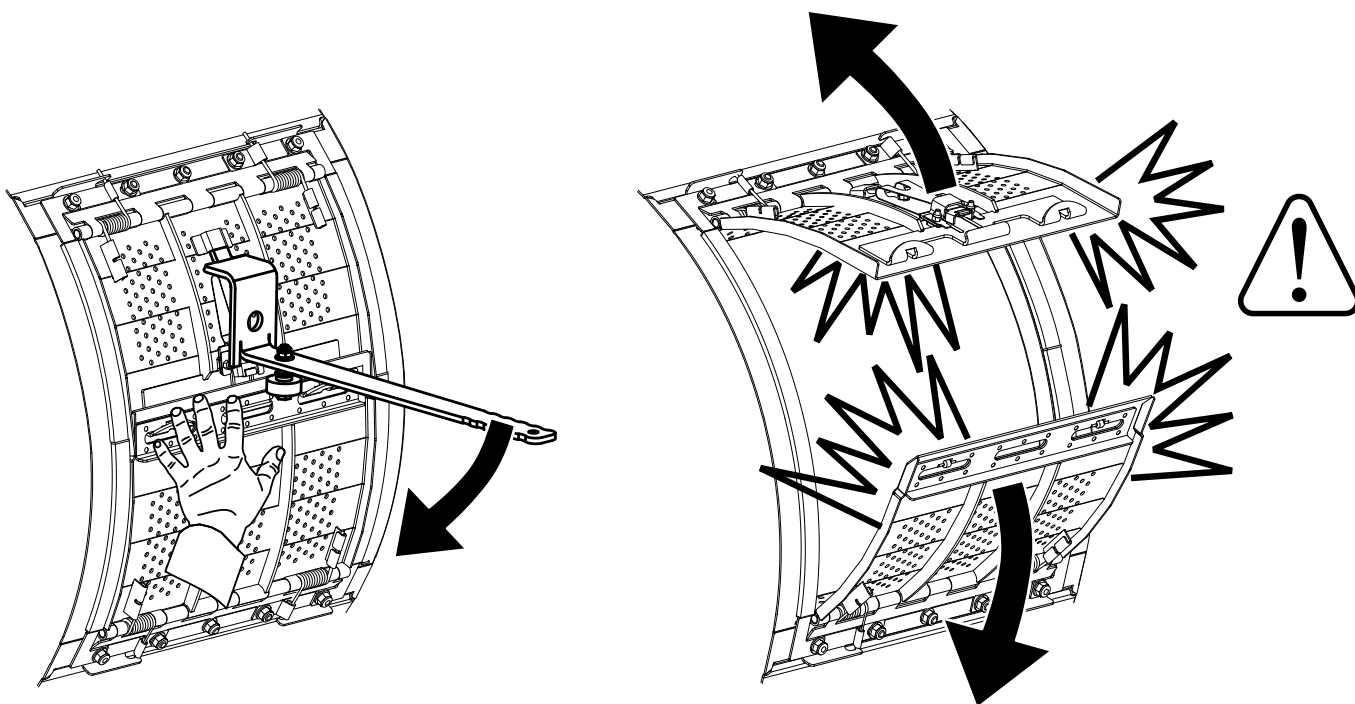
Open the inner doors using the lever.

Caution, maintain the doors until they are widely open.

Attention, risk of jamming when opening the doors.

Unload the linen from the inner drum.
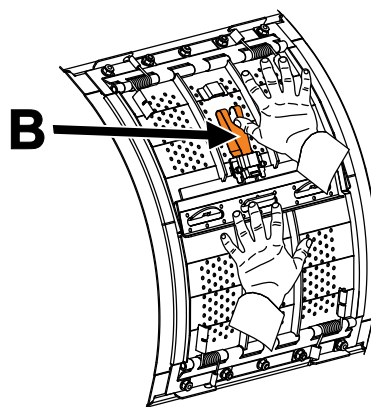
B

Close the inner drum doors and press them to check the good working of the mechanical safety device (B).

If doors are not properly closed, they might open during a washing cycle and strongly damage the machine.

Close the outer drum door and lock it with the handle.

The clean side unloading door is now locked and the dirty side loading door can be opened.

The clean side unloading door will only unlock when a program has been successfully completed. If the program has been fast forwarded or an error has occurred (no heating, water missing, other errors, etc.) the machine control system will unlock the dirty side loading door. Then the outer loading door has to be opened and closed again and a program has to be run again in order to secure the wash process*.

* This is the case for all programs including sluice programs and rinse + extra programs. Opening the unloading door after a sluice program presents cross contamination issues. The load might not be hygienically clean after only a

sluice program. Therefore it is recommended to add a sluice step to a "normal" program via the option menu when required as opposed to using a sluice program alone.

The machine is now ready for launching a new washing cycle.

9.2   At the end of the day

Leave the door open when ready. This is to prevent that moisture stays in the machine and develop bacteria and mould.

10 Machine operation

Clarus Control TS

10.1 Main menu

The display show the version software on the screen.

The main menu is used for example to:

- start a wash program
- configuration of the machine

The display lists the submenus available in the MAIN MENU.

Select the OPTION MENU by pressing the⇕ key, then valid with ☑ key.

CLARUS CONTROL TS
START WASH PROGRAM
OPTIONS MENU

10.2 Manual mode

All manual settings (such as door, motor, temperature and drain) will be cancelled when you exit manual operation.

The door is unlocked, the motor stops, the drain opens, heating halted and the temperature is reset to zero.

The manual mode menu is used for example to:

Water/Drain	Allows manual operation of all water valves and the drain valve #1 (drain #2 is an option).
Drum rotation	Motor on/off after program has ended.
Soap box compartment	This function will either : a) use water to dispense detergent from machine compartments or; b) dispense detergent from an external system. The number of valves present will vary according to the machine type.
Heating	Allows you to heat the water at the required temperature.
Detergents valves	Allows you to control all valves in the detergent compartment or in external detergent supply system.

Select the MANUAL MODE menu by pressing the⇧ or ⇩ keys then valid with ☑ key.

```
       OPTIONS MENU
       MANUAL MODE
      BASIC SETTINGS
    ADVANCED SETTINGS
        STATISTICS
      USER LANGUAGE
      WASHPROGRAMS
```

The display will now show the following submenus:

- Drain Valve 1
- Drain Valve 2
- Hot Water Valve
- Cold Water Valve
- Soft Water Valve
- Motor action
- Detergent box pocket 1
- Detergent box pocket 2
- Detergent box pocket 3
- Detergent box pocket 4
- Detergent box pocket 5
- Heating
- Liquid signal 1
- Liquid signal 2
- Liquid signal 3
- Liquid signal 4
- Liquid signal 5
- Liquid signal 6
- Liquid signal 7
- Liquid signal 8
- Liquid signal 9
- Liquid signal 10

- Liquid signal 11
- Liquid signal 12
- Liquid signal 13
- Water From Tank 1 signal
- Water From Tank 2 signal

Select the wished function by pressing the⇧ or ⇩ keys.

Make the selected function active or inactive.

OPEN = Active

CLOSED = Inactive
Put the function OPENED on by pressing the OPEN key.
Put the function CLOSED off by pressing the CLOSE key.

⚠   **Caution**   ⚠

ATTENTION Never program a temperature above to 90 °C.

⚠   **Warning**   ⚠

If you happen to make your own program, you must not input cold water in the cage while this later has a washing bath at 85 °C (185 °F), with the cage stopped. It is compulsory that the cage turns while letting in cold water. A bad programming can, in this particular case, be the cause of the breakage of the doors' windows.

10.3 Basic settings

⚠   ⚠

Numeric keyboard
A password (a four-digit number), protects the access to the "Basic settings" functions.

The basic setting menu is used for example to:

Rapid advance allowed	Allows the rapid advance function.
Water reduction allowed	Allows the water reduction function.
Number of auto restart	Allows to repeat the same program one or more time. The program will restart immediately, and the door will remain locked.
Temperature units in ° Celsius	Allows to change the temperature scale used for all temperature displayed.
Quick level cool down	Adjusts the level for cool water admission.
Out of balance level	Adjusts the level after out of balance.
Low water level	Adjusts the low level in the outer drum.
Medium water level	Adjusts the medium level in the outer drum.
High water level	Adjusts the high water level in the outer drum.
Middle cool down temperature	Adjusts the intermediate temperature of cool down.
Motor on time	Adjusts the motor on time in standard pace.
Motor off time	Adjusts the motor off time in standard pace.
Flush delay time	Adjusts the flush delay time of the soap box.
Flush duration time	Adjusts the flush duration time.
Maximum filling time	Adjusts the maximum fill time.
Maximum heating time	Adjusts the maximum heating time.
Password for basic settings	Allows to change the password for basic settings.
Buzzer activated at wash program end	Set the buzzer at wash program end.

Buzzer activated when machine error	Set the buzzer when machine error.
Code at wash program start	Shield with a code at wash program start.
CMIS address	Allows to adjust CMIS address.
CMIS machine type	Allows to adjust the machine type for the CMIS (7=WSB5180; 8=WSB5250; 9=WSB5350; 10=WS5180; 11=WS5250; 12=WS5350).
DMIS Address	Allows to adjust DMIS address.
Day	Adjusts the day.
Month	Adjusts the month.
Hour	Adjusts the hour.
Minutes	Adjusts the minutes.

Select the `BASIC SETTING` menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
           OPTIONS MENU
          MANUAL MODE
          BASIC SETTING
        ADVANCED SETTINGS
           STATISTICS
         USER LANGUAGE
         WASHPROGRAMS
```

The display will now show the following submenus:

- `Rapid Advance allowed`
- `Water Reduction allowed`
- `Number of auto restart`
- `Temperature units in ° Celsius`
- `Quick Level cool down`
- `Out of balance level`
- `Low Water Level (mm)`
- `Medium Water Level (mm)`
- `High Water Level (mm)`
- `Middle Cool Down Temperature`
- `Motor On Time`
- `Motor Off Time`
- `Flush Delay Time`
- `Flush Duration Time`
- `Maximum Filling Time`
- `Maximum Heating Time`
- `Password for Basic Settings`
- `Buzzer activated at Washprogram End`
- `Buzzer activated when Machine Error`
- `Remote Pause Mode`

- `CMIS Address`
- `CMIS Machine Type`
- `DMIS Address`
- `Day`
- `Month`
- `Hour`
- `Minutes`

Select the wished function by pressing the ⇧ or ⇩ keys.

Decrease or increase the value by pressing the (+) or (-) keys then valid with ☑ key.

10.4 Advanced settings

> ⚠   ⚠
>
> Numeric keyboard
> A password (a four-digit number), protects the access to the "Advanced settings" functions.

The advanced setting menu is used for example to:

Level machine empty	Adjusts the level machine empty.
Level machine full	Adjusts the level machine full.
Temperature hysteresis	Temperature hysteresis is the number of degrees between the wash temperature and the temperature at which heating needs to restart.
Cool down rate	Adjusts the maximum temperature reduction per minute during the first cool down phase.
Default low extract time	Adjusts the low extract time.
Default medium extract time	Adjusts the medium extract time.
Default high extract time	Adjusts the high extract time.
Default drain time	Adjusts the default drain time.
Default distribution time	Adjusts the default distribution time.
Start extract time	Actually out of service.
Rollout time	Adjusts the fill time after extract.
Maximum number of unbalances	Adjusts the out of balance maximum number.
Drain time when overfill	Adjusts the drain time after overfill.
Delay heating relay 2	Actually out of service.
Oil lubrication hours	Actually out of service.
Pulse lubrication time	Actually out of service.
Maximum drain time	Adjusts the maximum drain time.
Maximum pause duration	Adjusts the maximum pause time.

Temperature increase	Adjusts the minimal temperature increase for the heating.
Door opening pulse	Actually out of service.
Maximum extract speed	Adjusts the maximum extraction speed.
Drum positioning speed	Adjusts the drum indexing speed.
Default wash speed	Adjusts the standard wash speed.
Default distribution speed	Adjusts the distribution speed.
Default low extraction speed	Adjusts the standard low extract speed.
Default medium extraction speed	Adjusts standard medium extract speed.
Default high extraction speed	Adjusts the standard fast spin speed.
Start extract speed	Adjusts the initial spin speed.
Wash acceleration	Adjusts the wash acceleration.
Extract acceleration	Adjusts the extract acceleration.
Distribution acceleration	Adjusts the distribution acceleration.
Start extract acceleration	Adjusts the 1st extract acceleration.
Extract acceleration	Adjusts the extract deceleration.
Maximum speed during filling	Adjusts the maximum speed during filling.
Door lock pulse	Actually out of service.
Barrier machine	Defines if the machine is barrier.
Gear ratio	Adjusts the gear ratio.
Number of motor poles	Adjusts the number of motor poles.
Default boost	Adjusts the default boost.
Boost while positioning	Adjusts the boost while positioning.
Default switching frequency	Adjusts the default switching frequency.
Switching frequency while positioning	Adjusts the switching frequency while positioning.
Restore factory settings	Allows to come back to factory settings.
Password for advanced settings	Allows to change the password for advanced settings.
Weighing cell limit	0 = start is possible if the linen quantity is over than the machine capacity (factory setting). 20 = start is impossible if the linen quantity is over than 20 kg. 27 = start is impossible if the linen quantity is over than 27 kg. 35 = start is impossible if the linen quantity is over than 35 kg. 50 = start is impossible if the linen quantity is over than 50 kg.
Buzzer on overweight	Buzzer is possible on overweight of the machine capacity. 0 = buzzer inactivated (factory setting). 1 = buzzer activated.
Inverter (0=KEB 1=MITSU) type	Frequency inverter management. 0 = inverter KEB (factory setting). 1 = inverter MITSU.

Select the ADVANCED SETTINGS menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
OPTIONS MENU
MANUAL MODE
```

```
        BASIC SETTING
       ADVANCED SETTINGS
          STATISTICS
         USER LANGUAGE
         WASHPROGRAMS
```

The display will now show the following submenus:

- Level Machine Empty
- Level Machine Full
- Temperature Hysteresis
- Cool down Rate
- Default Low Extract Time
- Default Medium Extract Time
- Default High Extract Time
- Default Drain Time
- Default Distribution Time
- Start Extract Time
- Rollout Time
- Maximum Number of unbalances
- Drain Time When Overfill
- Delay Heating relay 2
- Oil lubrication Time
- Pulse Lubrication Time
- Maximum Drain Time
- Maximum Pause Duration
- Temperature Increase
- Door Opening Pulse
- Maximum Extract Speed
- Drum Positioning Speed
- Default Wash Speed
- Default Distribution Speed
- Default Low Extraction Speed
- Default Medium Extraction Speed
- Default High Extraction Speed
- Start Extract Speed
- Wash Acceleration
- Extract Acceleration
- Distribution Acceleration
- Start Extract Acceleration
- Extract Acceleration
- Maximum Speed During Filling
- Door Lock Pulse
- Barrier Machine
- Gear Ratio
- Number of Motor Poles
- Default Boost
- Boost While Positioning
- Default Switching Frequency
- Switching Frequency While Positioning
- Restore Factory Settings
- Password for Advanced Settings
- Weighing Cell Limit
- Buzzer on Overweight
- Inverter (0=KEB 1=MITSU) type

Select the wished function by pressing the ⇧ or ⇩ keys.

Decrease or increase the value by pressing the (+) or (-) keys then valid with ☑ key.

10.5 Statistics

The Statistics function gives you access to the following information:

- `Run Time Historic`
- `Wash Historic`
- `Error Historic`

The run time historic gives you access to the following information:

Total hours since new	Shows the total operating time for the machine since it was installed.
Hours since last maintenance	This register shows the time elapsed since the last service. The register can also be used to generate a signal on the display to show when service is needed (see the section «Advanced settings» in the manual).
Used hours	Shows the total using time.(max. 99999 h)
Machine ready hours	Shows the total using availability time.
Cold water (litres)	Cold water counter (0-99999 l).
Hot water (litres)	Hot water counter (0-99999 l).
Soft water (litres)	Soft water counter (0-99999 l).
Cumulative weight (Kilograms)	Cumulative weight counter (0-99999 kg).

The wash historic gives you access to the following information:

Date	Shows the date of the program used.
Time	Shows the start hour of the program.
Prog	Shows the program number used.
Therm	Shows a fall of the temperature during the program. (YES or NO).
Barrier	Shows if the rapid advance was used during the program. (YES or NO).

The error historic gives you access to the following information:

Date	Shows the date of the message.
Time	Shows the hour of the message.
Prog	Shows the program number used about the message.
Message	Shows the text of the message.

Select the STATISTICS menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
         OPTIONS MENU
         MANUAL MODE
        BASIC SETTINGS
      ADVANCED SETTINGS
         STATISTICS
        USER LANGUAGE
        WASHPROGRAMS
```

The run time historic menu displays following information:

* Total hours since new
* Hours since last maintenance
* Used hours
* Machine ready hours
* Cold water (litres)
* Hot water (litres)
* Soft water (litres)
* Cumulative Weight (Kilograms)

Press the ☑ key to change the function.

The wash historic menu displays following information:

* Date
* Time
* Therm
* Barrier

Press the ☑ key to change the function.

The error historic menu displays following information:

* Date
* Time
* Prog
* Message

To move back, press the move back key.

10.6 Language setting

Select the USER LANGUAGE menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
        OPTIONS MENU
       MANUAL MODE
      BASIC SETTINGS
    ADVANCED SETTINGS
        STATISTICS
      USER LANGUAGE
      WASHPROGRAMS
```

The available languages are shown in a list:

Package A

- English
- Français
- Deutsch
- Español
- Italiano
- Nederlands

Package B

- English
- Svenska
- Dansk
- Norsk
- Suomi
- Polski

If another language Is highlighted press the ⇧ or ⇩ keys.

When the wished language is highlighted then valid with ☑ key.

10.7 Washprograms

⚠   ⚠

Numeric keyboard
A password (a four-digit number), protects the access to the "Washprograms" functions.

Select the WASHPROGRAMS menu by pressing the⇧ or ⇩ keys then valid with ☑ key.

```
        OPTIONS MENU
       MANUAL MODE
      BASIC SETTINGS
    ADVANCED SETTINGS
        STATISTICS
      USER LANGUAGE
      WASHPROGRAMS
```

10.8 Create wash program

An introduction to programming

You can create a completely new wash program by programming a number of individual program modules which are arranged in a logical order to form a new program.

Wash programs can be programmed directly on the machine, via the PCU control panel, which is the method described in this manual.

Wash programs can also be written on a personal computer and later transferred to the machine's PCU using a memory card. This option is described in a separate manual.

It is for you to decide which mode you wish to program in.

⚠️   **Caution**   ⚠️

Following the addition of one or more steps in an existing program from the Clarus TS and after saving either by overwriting the old program or by creating a new program, the parameters of the unmodified steps are reset to their default values. To modify / edit a washing program, it is recommended to use the "Laundry program Manager" software.

Select the CREATE WASHPROGRAM menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
         WASHPROGRAMS
    CREATE WASHPROGRAM
    MODIFY WASHPROGRAM
    DELETE WASHPROGRAM
    COPY CARD TO CLARUS
    COPY CLARUS TO CARD
```

The display will now show the following menu:

10.8.1 Program edition

The PROGRAM EDITION display contains two parts.
The left part proposes the different stages of a washprogram.
The right part allows to select this stages to constitute a personalized program.
The parameters of each stage are accessible and can be modified.

⮌	To escape, push on "Move back" key.
⬍	Allows to choose a program stage.
�➤	Allows to choose a stage.
✕	Allows to delete a stage.
⬍	Allows to choose a stage for deleting.
🔍	Allows to access the modifiable default values.

10.8.1.1 PREWASH stage

Pause with buzzer	1 = with, the washer extractor will stop and the buzzer will sound before the program module starts. 0 = without, the program module will start without pause or buzzer.
Tome	Adjusts the prewash time (from 0 to 9999 seconds).
Temperature	Adjusts the prewash temperature (from 0 to 99 °C).
Temperature hysteresis	Temperature hysteresis is the number of degrees between the wash temperature and the temperature at which heating needs to restart (from 1 to 9 °C).
Minimal temperature increment	This parameter, expressed in degrees per minute, is used to determine the rate at which the water may be heated to wash temperature (from 0 to 10 °C). If you program a too fast temperature increase which is to fast for the machine, the heating will be made without any interruptions. If the value is set to 0 the function is not activated and the heating is done without any interruptions.
First water level	After water is first added to a drum containing a dry load, the level always falls slightly because the load absorbs water. For this reason you are able to program a «first level» (i.e. the initial filling level) which is slightly higher than the level used during the rest of the wash, to avoid a situation where the water has to be topped up repeatedly during the first part of the wash (from 0 to 200 units).
Second water level	The «fill level» is measured in «scale units», which correspond to different water levels for different machines (from 0 to 200 units).
Level hysteresis	Once the drum has filled with water, the water level is monitored during both heating and washing. If the water level falls below a certain level (which you determine using this function), more water will be added to achieve the correct level. Level hysteresis is the number of «scale units» between the current water level set and the level at which filling (topping up) restarts (from 0 to 20 units).
Soft water	1 = with, the drum will fill with cold water until the correct water level is reached. 0 = without, no cold water filling.
Hot water	1 = with, the drum will fill with hot water until the correct water level is reached. If only hot water valve is open and the water temperature is higher than the programmed, the cold water valve will automatically open to adjust the temperature. 0 = without, no hot water filling.
Cold hard water	1 = with, the drum will fill with cold hard water until the correct water level is reached. 0 = without, cold hard water will not be added.
Tank 1/2	1 = with, the drum will be filled from the specified tank (i.e. a tank for reuse of water or a special laundry product). 0 = without, no filling from these sources.
Motor action during heating	Adjusts the motor action during heating (1 = slow, 2 = normal).
Motor action during washing	Adjusts the motor action during washing (1 = slow, 2 = normal).
Drum speed during heating	Adjusts the drum speed during heating (from 10 to 50 rpm).
Drum speed during washing	Adjusts the drum speed during washing (from 10 to 50 rpm).
Acceleration during washing	Allows to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed you set (from 2 to 100 rpm/mn).
Detergent box compartment 1/2/3/4/5	Allows to determine the length of time water will be flushed through each individual compartment (from 0 to 251 seconds).
Liquid Signal 1/2/3/.../11/12/13	For machines with an external detergent supply system there are thirteen control signals which can open external supply valves for a specified time. The valves open for the time set, starting from when the water filling in the drum is finished (from 0 to 251 seconds).

Select the wished function by pressing this ⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.2 WASH stage

Pause with buzzer	1 = with, the washer extractor will stop and the buzzer will sound before the program module starts. 0 = without, the program module will start without pause or buzzer.
Time	Adjusts the prewash time (from 0 to 9999 seconds).
Temperature	Adjusts the wash temperature (from 0 to 99 °C).
Temperature hysteresis	Temperature hysteresis is the number of degrees between the wash temperature and the temperature at which heating needs to restart (from 1 to 9 °C).
Minimal temperature increment	This parameter, expressed in degrees per minute, is used to determine the rate at which the water may be heated to wash temperature (from 0 to 10 °C). If you program a too fast temperature increase which is to fast for the machine, the heating will be made without any interruptions.
First water level	After water is first added to a drum containing a dry load, the level always falls slightly because the load absorbs water. For this reason you are able to program a «first level» (i.e. the initial filling level) which is slightly higher than the level used during the rest of the wash, to avoid a situation where the water has to be topped up repeatedly during the first part of the wash (from 0 to 200 units)
Second water level	The «fill level» is measured in «scale units», which correspond to different water levels for different machines (from 0 to 200 units).
Level hysteresis	Once the drum has filled with water, the water level is monitored during both heating and washing. If the water level falls below a certain level (which you determine using this function), more water will be added to achieve the correct level. Level hysteresis is the number of «scale units» between the current water level set and the level at which filling (topping up) restarts (from 0 to 20 units).
Soft water	1 = with, the drum will fill with cold water until the correct water level is reached. 0 = without, no cold water filling.
Hot water	1 = with, the drum will fill with hot water until the correct water level is reached. If only hot water valve is open and the water temperature is higher than the programmed, the cold water valve will automatically open to adjust the temperature. 0 = without, no hot water filling.
Cold hard water	1 = with, the drum will fill with cold hard water until the correct water level is reached. 0 = without, cold hard water will not be added.
Tank 1/2	1 = with, the drum will be filled from the specified tank (e.g. a tank for reuse of water or a special laundry product). 0 = without, no filling from these sources.
Motor action during heating	Adjusts the motor action during heating (1 = slow, 2 = normal).
Motor action during washing	Adjusts the motor action during washing (1 = slow, 2 = normal).
Drum speed during heating	Adjusts the drum speed during heating (10 to 50 rpm).
Drum speed during washing	Adjusts the drum speed during washing (10 to 50 rpm).
Acceleration during washing	Allows to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed you set (from 2 to 100 rpm/mn).
Detergent box compartment 1/2/3/4/5	Allows to determine the length of time water will be flushed through each individual compartment (from 0 to 251 seconds).
Liquid Signal 1/2/3/.../11/12/13	For machines with an external detergent supply system there are thirteen control signals which can open external supply valves for a specified time. The valves open for the time set, starting from when the water filling in the drum is finished (from 0 to 251 seconds).

Select the wished function by pressing this ⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.3 RINSE stage

Pause with buzzer	1 = with, the washer extractor will stop and the buzzer will sound before the program module starts. 0 = without, the program module will start without pause or buzzer.
Time	Adjusts the prewash time (from 0 to 9999 seconds).
Temperature	Adjusts the prewash temperature (from 0 to 99 °C).
Temperature hysteresis	Temperature hysteresis is the number of degrees between the wash temperature and the temperature at which heating needs to restart (from 1 to 9 °C).
Minimal temperature increment	This parameter, expressed in degrees per minute, is used to determine the rate at which the water may be heated to wash temperature (from 0 to 10 °C). If you program a too fast temperature increase which is to fast for the machine, the heating will be made without any interruptions.
First water level	After water is first added to a drum containing a dry load, the level always falls slightly because the load absorbs water. For this reason you are able to program a «first level» (i.e. the initial filling level) which is slightly higher than the level used during the rest of the wash, to avoid a situation where the water has to be topped up repeatedly during the first part of the wash (from 0 to 200 units).
Second water level	The «fill level» is measured in «scale units», which correspond to different water levels for different machines (from 0 to 200 units).
Level hysteresis	Once the drum has filled with water, the water level is monitored during both heating and washing. If the water level falls below a certain level (which you determine using this function), more water will be added to achieve the correct level. Level hysteresis is the number of «scale units» between the current water level set and the level at which filling (topping up) restarts (from 0 to 20 units).
Soft water	1 = with, the drum will fill with cold water until the correct water level is reached. 0 = without, no cold water filling.
Hot water	1 = with, the drum will fill with hot water until the correct water level is reached. If only hot water valve is open and the water temperature is higher than the programmed, the cold water valve will automatically open to adjust the temperature. 0 = without, no hot water filling.
Cold hard water	1 = with, the drum will fill with cold hard water until the correct water level is reached. 0 = without, cold hard water will not be added.
Tank 1/2	1 = with, the drum will be filled from the specified tank (e.g. a tank for reuse of water or a special laundry product). 0 = without, no filling from these sources.
Motor action during heating	Adjusts the motor action during heating (1 = slow, 2 = normal).
Motor action during washing	Adjusts the motor action during washing (1 = slow, 2 = normal).
Drum speed during heating	Adjusts the drum speed during heating (from 10 to 50 rpm).
Drum speed during washing	Adjusts the drum speed during washing (from 10 to 50 rpm).
Acceleration during washing	Allows to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed you set (from 2 to 100 rpm/mn).
Detergent box compartment 1/2/3/4/5	Allows to determine the length of time water will be flushed through each individual compartment (from 0 to 251 seconds).
Liquid Signal 1/2/3/.../11/12/13	For machines with an external detergent supply system there are thirteen control signals which can open external supply valves for a specified time. The valves open for the time set, starting from when the water filling in the drum is finished (from 0 to 251 seconds).

Select the wished function by pressing this ⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.4 REPEAT RINSE stage

Pause with buzzer	1 = with, the washer extractor will stop and the buzzer will sound before the program module starts. 0 = without, the program module will start without pause or buzzer.
Time	Adjusts the prewash time (0 to 9999 seconds).
Temperature	Adjusts the prewash temperature (0 to 99 °C).
Temperature hysteresis	Temperature hysteresis is the number of degrees between the wash temperature and the temperature at which heating needs to restart (1 to 9 °C).
Minimal temperature increment	This parameter, expressed in degrees per minute, is used to determine the rate at which the water may be heated to wash temperature (0 to 10 °C). If you program a too fast temperature increase which is to fast for the machine, the heating will be made without any interruptions.
First water level	After water is first added to a drum containing a dry load, the level always falls slightly because the load absorbs water. For this reason you are able to program a «first level» (i.e. the initial filling level) which is slightly higher than the level used during the rest of the wash, to avoid a situation where the water has to be topped up repeatedly during the first part of the wash (0 to 200 units).
Second water level	The «fill level» is measured in «scale units», which correspond to different water levels for different machines (0 to 200 units).
Level hysteresis	Once the drum has filled with water, the water level is monitored during both heating and washing. If the water level falls below a certain level (which you determine using this function), more water will be added to achieve the correct level. Level hysteresis is the number of «scale units» between the current water level set and the level at which filling (topping up) restarts (0 to 20 units).
Soft water	1 = with, the drum will fill with cold water until the correct water level is reached. 0 = without, no cold water filling.
Hot water	1 = with, the drum will fill with hot water until the correct water level is reached. If only hot water valve is open and the water temperature is higher than the programmed, the cold water valve will automatically open to adjust the temperature. 0 = without, no hot water filling.
Cold hard water	1 = with, the drum will fill with cold hard water until the correct water level is reached. 0 = without, cold hard water will not be added.
Tank 1/2	1 = with, the drum will be filled from the specified tank (e.g. a tank for reuse of water or a special laundry product). 0 = without, no filling from these sources.
Motor action during heating	Adjusts the motor action during heating (1 = slow, 2 = normal).
Motor action during washing	Adjusts the motor action during washing (1 = slow, 2 = normal).
Drum speed during heating	Adjusts the drum speed during heating (10 to 50 rpm).
Drum speed during washing	Adjusts the drum speed during washing (10 to 50 rpm).
Acceleration during washing	Allows to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed you set (from 2 to 100 rpm/mn).
Detergent box compartment 1/2/3/4/5	Allows to determine the length of time water will be flushed through each individual compartment (from 0 to 251 seconds).
Liquid Signal 1/2/3/ .../11/12/13	For machines with an external detergent supply system there are thirteen control signals which can open external supply valves for a specified time. The valves open for the time set, starting from when the water filling in the drum is finished (from 0 to 251 seconds).

Select the wished function by pressing this ⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.5 SOAK stage

Pause with buzzer	1 = with, the washer extractor will stop and the buzzer will sound before the program module starts. 0 = without, the program module will start without pause or buzzer.
Time	Adjusts the prewash time (from 0 to 9999 seconds).
Temperature	Adjusts the prewash temperature (from 0 to 99 °C).
Temperature hysteresis	Temperature hysteresis is the number of degrees between the wash temperature and the temperature at which heating needs to restart (from 1 to 9 °C).
Minimal temperature increment	This parameter, expressed in degrees per minute, is used to determine the rate at which the water may be heated to wash temperature (from 0 to 10 °C). If you program a too fast temperature increase which is to fast for the machine, the heating will be made without any interruptions.
First water level	After water is first added to a drum containing a dry load, the level always falls slightly because the load absorbs water. For this reason you are able to program a «first level» (i.e. the initial filling level) which is slightly higher than the level used during the rest of the wash, to avoid a situation where the water has to be topped up repeatedly during the first part of the wash (from 0 to 200 units).
Second water level	The «fill level» is measured in «scale units», which correspond to different water levels for different machines (from 0 to 200 units).
Level hysteresis	Once the drum has filled with water, the water level is monitored during both heating and washing. If the water level falls below a certain level (which you determine using this function), more water will be added to achieve the correct level. Level hysteresis is the number of «scale units» between the current water level set and the level at which filling (topping up) restarts (from 0 to 20 units).
Soft water	1 = with, the drum will fill with cold water until the correct water level is reached. 0 = without, no cold water filling.
Hot water	1 = with, the drum will fill with hot water until the correct water level is reached. If only hot water valve is open and the water temperature is higher than the programmed, the cold water valve will automatically open to adjust the temperature. 0 = without, no hot water filling.
Cold hard water	1 = with, the drum will fill with cold hard water until the correct water level is reached. 0 = without, cold hard water will not be added.
Tank 1/2	1 = with, the drum will be filled from the specified tank (e.g. a tank for reuse of water or a special laundry product). 0 = without, no filling from these sources.
Motor action during heating	Adjusts the motor action during heating (1 = slow, 2 = normal).
Motor action during washing	Adjusts the motor action during washing (1 = slow, 2 = normal).
Drum speed during heating	Adjusts the drum speed during heating (from 10 to 50 rpm).
Drum speed during washing	Adjusts the drum speed during washing (from 10 to 50 rpm).
Acceleration during washing	Allows to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed you set (from 2 to 100 rpm/mn).
Detergent box compartment 1/2/3/4/5	Allows to determine the length of time water will be flushed through each individual compartment (from 0 to 251 seconds).
Liquid Signal 1/2/3/.../11/12/13	For machines with an external detergent supply system there are thirteen control signals which can open external supply valves for a specified time. The valves open for the time set, starting from when the water filling in the drum is finished (from 0 to 251 seconds).

Select the wished function by pressing this ⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.6 COOL DOWN stage

Quick cool down	If you answer 1 (yes) : The machine will fill with cold water to a fixed higher level. The machine does not monitor the drop in temperature of the wash water. This function is used mainly for reducing the temperature of the water before it is discharged. Do not use this function to prevent creasing of the wash load. If you answer 0 (no) : The machine makes a controlled cool down as described earlier.
Motor action	Allows you to determine drum action during cool-down (1 = slow, 2 = normal).
Valve opening time 98 °C to 70 °C	You program the length of time during which the cold water valve opens every 30 seconds, but the machine monitors constantly to ensure that the cool-down rate does not exceed the limit value, which is 4 ° C/minute when the machine is delivered. If the limit value is exceeded, no water will be added until the mean value is acceptable again (from 1 to 30 seconds).
Valve opening time 70 °C to End	You program the length of time during which the cold water valve opens every 30 seconds. The rate of cooldown is not monitored during this stage. The valve opens and closes depending on the programming mode (from 1 to 30 seconds).
Final Temperature	Enter the temperature you require for the water at the end of cool-down (from 1 to 90 °C).
Drum Speed	You can determine the drum speed during cool-down (from 10 to 50 rpm).
Drum Acceleration	This function allows you to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed you set in the last function (from 2 to 10 rpm/mn).

Select the wished function by pressing this⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.7 DRAIN stage

Pause before drain	If you answer 1 = pause : The washer extractor will stop and the buzzer will sound before the drain opens. If you answer 0 = normal : The program module starts, with no pause.
Motor action	Allows you to determine drum action during drain (1 = slow, 2 = normal).
Normal drain	The drain will be open. The motor may be at a standstill, on gentle action. During this time the drum water will be discharged (1 = selected).
Optional drain	Actually out of service (2 = A ;4 = B ;8 = C ;16 = D).
Drain time	Here you can determine the drain time (from 0 to 250 seconds).
Distribution time	Here you can determine the length of time the drum operates at distribution speed (from 0 to 250 seconds).
Drum speed	Here you can determine the drum action during the time programmed for the drain cycle (from 10 to 50 rpm).
Drum acceleration	This function allows you to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed you set in the last function (from 2 to 10 rpm/mn).

Select the wished function by pressing this⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.8 EXTRACTION stage

Normal drain	The drain will be open. The motor may be at a standstill, on gentle action. During this time the drum water will be discharged (1 = selected).
Optional drain	Actually out of service.
Extraction time	The period during which the drum is reaching its correct speed is not included in the extraction time (from 0 to 900 seconds).
Drum speed	Here you can determine the drum action during the time programmed for the spin cycle (from 127 to 710 rpm).

Select the wished function by pressing this ⇧ or ⇩ keys.

Decrease or increase the value by pressing this (-) or (+) keys.

Then valid with ☑ key.

10.8.1.9 END OF PROGRAM stage

The «End of program» stage is necessary to valid the created program.

Select `End of program`   ⇕

To valid, press the `Selection` key   ▐▌▐▶

10.8.1.10 NUMERIC KEYBOARD menu

A numeric keyboard allows to give a program name (formed by letters).

Each of the numeric keys gives access to several characters as follows.

1 = abc ; 2 = def ; 3 = ghi ; 4 = jkl ; 5 = mno ; 6 = pqr ; 7 = stu ; 8 = vwx ; 9 = yz & 0.

The first time you press a given key, the first character available through that key will appear on the display. One press on 1 produces A. One press on 2 produces D.
Simply press the relevant key the required number of times until the character you want appears on the display. For example, to insert the letter C, press key 1 three times. To insert F, press 2 three times.
When the character you want is on the display, wait a moment the cursor sets after.

Compose your program name with the numeric keys, by pressing 1, 2 or 3 times on each key.

You can correct a bad capture by pressing this key ⇦.

Then valid with ☑ key.

10.9 Modify wash program

An introduction to programming

You can create a new program on the basis of an existing one by modifying, adding and deleting program modules, then saving the new program.

Wash programs can be programmed directly on the machine, via the PCU control panel, which is the method described in this manual. Wash programs can also be written on a personal computer and later transferred to the machine's PCU using a memory card. This option is described in a separate manual.

It is for you to decide which mode you wish to program in.

Select the MODIFY WASH PROGRAM menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

⚠️   **Caution**   ⚠️

Following the addition of one or more steps in an existing program from the Clarus TS and after saving either by overwriting the old program or by creating a new program, the parameters of the unmodified steps are reset to their default values. To modify / edit a washing program, it is recommended to use the "Laundry program Manager" software.

WASHPROGRAMS
CREATE WASHPROGRAM
MODIFY WASHPROGRAM
DELETE WASHPROGRAM
COPY CARD TO CLARUS
COPY CLARUS TO CARD

The display will now show the following menu: SELECT WASH PROGRAM.

10.9.1 SELECT WASH PROGRAM menu

Allows to choose the program ⇧ or ⇩ keys.

Previous and following page ◀◀ or ▶▶

To enter, push on Valid ☑ key.

10.9.2 PROGRAM EDITION menu

The modification of a wash program is realized in the same way than the creation.
The parameters of each stage are accessible and can be modified.
The left part proposes the different wash program stages which could be added.
The right part allows to select the stages which could be deleted.

Allows to choose a stage for adding or deleting.   ⇕

Allows to add or to delete a stage.   ▥▶

10.9.3 END OF PROGRAM stage

Select End of program.
To valid, press the Selection ⇨ key.

10.9.4 KILL THE EXISTING PROGRAM

DO YOU WANT TO OVERWRITE EXISTING WASHPROGRAM ?

When the validation executed, the previous program is definitely lost and replaced by the new one.

To escape, push on Move back key.

Otherwise, push on Valid ☑ key.

10.10 Delete wash program

Select the `DELETE WASH PROGRAM` menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
        WASHPROGRAMS
    CREATE WASHPROGRAM
    MODIFY WASHPROGRAM
    DELETE WASHPROGRAM
    COPY CARD TO CLARUS
    COPY CLARUS TO CARD
```

The display will now show the following menu: `SELECT WASH PROGRAM`.

10.10.1 SELECT WASH PROGRAM menu

Allows to choose the program ⇧ or ⇩ keys.

Previous and following page ◂◂ or ▸▸

To enter, push on `Valid` ☑ key.

10.10.2 DELETE THE WASH PROGRAM

`DO YOU WANT TO DELETE THE WASHPROGRAM ?`

When the validation executed, the program is definitely deleted.

To escape, push on `Move back` key.

Otherwise, push on `Valid` ☑ key.

10.11 Card Reader

Memory card

A `MEMORY CARD` is a plastic card, the size of a credit card, with an electronic memory chip inside it.
This memory card is capable of storing 10 to 15 wash programs of normal size. If the programs are mostly small ones, more of them can be stored, whereas larger programs will reduce the number which can be held by the memory card.
Memory cards of this type can be used to:

* Transfer wash programs from a PC to a memory card and from a memory card to a PC.
* Transfer wash programs from a memory card to a machine and from a machine to a memory card.

C = MEMORY SHIP
R = CARD READER

R **C**
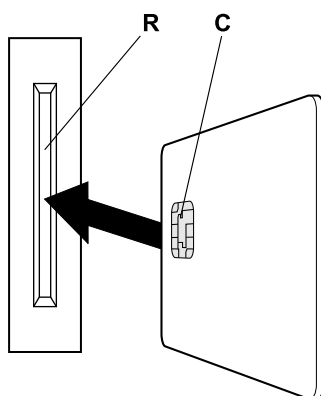
Turn the memory card so its memory chip is at the far end and on the left of the card then insert the memory card into the program control unit.

10.11.1 CARD READER

What happens when a program is copied ?

Both the memory card and the program control unit have memory chips capable of storing wash programs. The chip on the card can hold about 10 to 15 programs of normal size, while the chip in the program control unit has a capacity of several hundred programs.

When a program is copied from a memory card to the machine's program control unit, it is copied, not moved (not deleted from the card). A copy is transferred from the chip on the memory card to the storage chip of the machine program control unit.

The program remains on the memory card, but another copy of it has now been stored in the program control unit.

Select the COPY CARD TO CLARUS menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
          WASHPROGRAMS
     CREATE WASHPROGRAM
     MODIFY WASHPROGRAM
     DELETE WASHPROGRAM
     COPY CARD TO CLARUS
     COPY CLARUS TO CARD
```

After pushing on Valid key, the opposite display appears. So the card is read.

The display will now show the following menu: Card reading. Wait !.

After returning to the CLARUS CONTROL TS menu, run a wash program as already shown on the section START WASH PROGRAM.

```
     CLARUS CONTROL TS
     START WASH PROGRAM
        OPTIONS MENU
```

The display will now show the following menu: SELECT WASH PROGRAM.

The microprocessor card can be removed from the drive and you can then choose a wash program from those saved on the machine.

10.11.2CARD WRITING

What happens when a program is copied ?

Both the memory card and the program control unit have memory chips capable of storing wash programs. The chip on the card can hold about 10 to 15 programs of normal size, while the chip in the program control unit has a capacity of several hundred programs.

When a program is copied from the machine's program control unit to a memory card, it is copied, not moved (not deleted from the program control unit). A copy is transferred from the storage chip of the machine program control unit to the chip on the memory card.

The program remains on the program control unit, but another copy of it has now been stored in the memory card.

Select the COPY CLARUS TO CARD menu by pressing the ⇧ or ⇩ keys then valid with ☑ key.

```
         WASHPROGRAMS
   CREATE WASHPROGRAM
   MODIFY WASHPROGRAM
   DELETE WASHPROGRAM
   COPY CARD TO CLARUS
   COPY CLARUS TO CARD
```

After pushing on Valid key, the opposite display appears. So the card is written.

The display will now show the following menu: Card writing. Wait !.

After returning to the CLARUS CONTROL TS menu, run a wash program as already shown on the section START WASH PROGRAM.

```
       CLARUS CONTROL TS
     START WASH PROGRAM
         OPTIONS MENU
```

The display will now show the following menu: SELECT WASH PROGRAM.

The microprocessor card can be removed from the drive and you can then choose a wash program from those saved on the machine.

11 Daily maintenance

11.1 General

It is the responsibility of the owner of the machine/the laundry manager to make sure that the following maintenance is performed.

Note!
Lack of maintenance may deteriorate the performance of the machine and may cause damage to components.

Note!
This is recommended time intervals. Depending on the use of the machine other intervals may be necessary.

11.2 Every day

Check that the "emergency stop button" works properly.

Check that the opening safety devices of the drum doors and of the outer doors are working correctly.

Check that the door is locked during a program. Make sure the door cannot be opened until after the program is complete.

If the door can be opened before program end, the machine must be placed out of order until repairs are made.

Check that the door does not leak.

Clean the door, door glass and door gasket.

Clean the external parts.

⚠	Warning	⚠

Do not clean the washer with bleach or oxygenated water to avoid damaging the logos and the control panel of the machine.
We recommend you to use ECOLAB product to clean the washer.

11.3 Detergent container

⚠	Important	⚠

Rinse the inside, every days with water, the detergents container.
Clean the detergent container at regular basis to avoid that it is being clogged by detergent residue.
Clean the detergent container and siphons with hot water and for example a small brush.

11.4 Descaling

When descaling is needed:

Use the special machine cleaning program. If it is not available, contact authorized service personnel to get access to the program.

It is also possible to use a program with high temperature , 95 °C, for descaling. Add a descaling agent, for example citric acid.

11.5 Maintenance to be carried out by qualified service personnel

Contact qualified service personnel to perform the following maintenance:

Once a year

• Inspect the interior of the machine during an actual wash cycle to ensure that no leaks are noticed.

12 Error codes

In order to limit the risk of failure in the electronic controls of the programming unit of the machine, the machine should be earthed. Should interferences happen, the first thing to be checked is the earthing of the machine.

A fault in the program or in the machine is indicated by an error code on the display.
Some of these error codes can be solved easily without contacting service personnel.

Error code	Text	Cause	Action
10.16	**EMERGENCY STOP** This error code is displayed if the emergency stop switch has been activated on the machine.	• The cause can be inadvertent activation of the emergency stop, defective emergency stop switch, an electrical connection fault, etc.	• Check that emergency stop is not activated. If so, release it.
11.1	**NO WATER** When filling with water, the level specified by the program must be attained within a certain time. This time is normally set to 10 minutes but can vary depending on the type of machine and the software. If the filling time exceeds the maximum allowed filling time, this error code will be displayed.	• Electrovalve's filters are blocked. • Long filling times can be caused by a blocked filler valve, defective filler valve, a break in the cable between the filler valve control board, defective valve control board, leaking level system, etc.	• Clean electrovalve's filters. • Check water in main supply. • Open taps. • Check function of drain valve. • Check that level tube is sound and his connection.

11.2	**LOADING DOOR OPENED** **UNLOADING DOOR OPENED** This error code can only arise during an on-going program.	• Door unlocked.	• Test whether door really locked. • Switch off power to machine. Wait a minute or so, switch on power supply, open and close door again and try restarting.
11.3	**DOOR UNLOCKED** This error code can arise at program start. If the door lock doesn't lock within a certain time after program start, this error code will be displayed.	• Door position acknowledgement not received in time. • This error code will also be displayed if the door switch for locked door signals that the door has been unlocked during an on-going program.	• Open or close the door.
11.10	**DRAIN DEFAULT** This error code is displayed if the water in the drum is not below a predetermined level when a drain period has been completed in the program.	• This error code can be caused by for example a blocked drain, blocked level hose, a water drop in the level hose, defective level control, restricted drain lines to the machine, too many machines emptying simultaneously into drain pipes that are too narrow, etc.	• Check the drain installation and that the waste water can flow freely out from the machine without any restrictions. • Check the drain valve in the machine with regard to dirt.

For other error codes or repeated error codes, disconnect the power for 30 seconds. If the error code keeps coming back, contact authorized service personnel.

13 Lubricant table

MACHINE LUBRICATION								
USES	Rolling bearings Bearings	Rolling bearings Bearings high temperature	Assembly paste (fretting corrosion)	Bare gears Chains shafts Thread Slides	Flange joints Union pipes Steam circuits	Reducers with wheels and screws	Reducers with gears	Circuits and pneumatic devices
TYPES OF LUBRI-CANTS AND STANDARDI-ZATION	Lithium soap grease	Lithium soap grease + sili-cone oil	Lithium soap paste + min-eral oil + min-eral solid greases	Lithium soap grease with MOS2 additive	Graphite grease mini 60% graphite, special leakproof	Extreme high pressure oil	Extreme high pressure oil	Inhibited oil SAE5
	Grade ISO NLGI2	Grade ISO NLGI3	Grade ISO NLGI1	Grade ISO NLGI2	Grade ISO NLGI2	Grade ISO VG150	Grade ISO VG220	Grade ISO VG22
TEMPERATURE LIMIT RANGE	-20°C + 140°C -4°F + 284°F	-40°C + 200°C -40°F + 392°F	-20°C + 150°C -4°F + 302°F	-20°C + 135°C -4°F + 275°F	-30°C + 700°C -22°F + 1292°F	-0°C + 100°C -32°F + 212°F	-20°C + 120°C -32°F + 248°F	+10°C + 65°C +50°F + 149°F
RECOMMENDED	CELTIA G2	NTN SH44 M	ALTEMP Q NB 50	MI-SETRAL 43N	GRACO AF 309	REDUCTELF SP150	REDUCTELF SP200	LUBRAK ATL SAE 5W
PRODUCT CODE	96 011 011	96 011 019	96 011 014	96 011 000	96 011 004	96 010 001	96 010 004	96 010 030
CORRESPONDENCE								
ANTAR	ROLEXA 2			EPOXA MO2		EPONA Z150	EPONA Z220	MISOLA AH
BP	LS EP2					ENERGOL CRXP150	ENERGOL CRXP220	SHF 22
CASTROL	SPEEROL EP2					ALPHA SP150	ALPHA SP220	
ELF	EP2			STATERMA MO10		REDUCTELF SP150	REDUCTELF SP220	SPINEF 22
ESSO	BEACON EP2			MULTI PUR-POSE GREASE MOLY			SPARTAN EP150	SPARTAN EP220	SPINESSO 22
FINA	MARSON EP2					GIRAN SR150	GIRAN SR220	
GBSA					BELLEVILLE N			
GRAFOIL					GRACO AF309			
KLUBER	CENTOPLEX 2	UNISILKON L50Z	ALTEMP Q. NB50	UNIMOLY GL82	WOLFRA-COAT C	LAMORA 150	LAMORA 220	CRUCOLAN 22
MOBIL	MOBILUX					MOBILGEAR 629	MOBILGEAR 630	DTE 24
KERNITE	LUBRA KLC			LUBRA KMP		TOP BLENB ISO 80W90	TOP BLENB ISO 220	LUBRA K ATL SAE5W
SETRAL				MISETRAL 43N				
SHELL	ALVANIA R2			RETINA AM		OMALA 150	OMALA 220	TELLUS 22
TOTAL	MULTISS EP2					CARTER AP150	CARTER EP220	EQUIVIS 22
MOLYKOTE		MOLYKOTE 44	PATE DX					
OPAL	GERVAIR SP			SUPER MOS2		GEAROPAL GM65 ISO 150	GEAROPAL GM75 SO 220	HYDROPAL HO110 HM+ +22
ITECMA	GRL-ULTRA	VULCAIN	SILUB-P	GMO	LHT-C	DURAGEAR BL	DURAGEAR BL	AEROSYN
DOW CORNING		SH 44M						

To lubricate door mecanism of WSB5, use reference 96010068 Loctite LB 8001.

14 Explanation of washing symbols

(ISO 3758:2005 standard)

To overcome language barriers, the following are symbols used internationally to give you guidance and recommendations when washing different textiles.

14.1 Washing

The tub symbolizes washing.

Symbols	Max. washing temperature in °C	Mechanical action
95	95	normal
95	95	mild
70	70	normal
60	60	normal
60	60	mild
50	50	normal
50	50	mild
40	40	normal
40	40	mild
40	40	very mild
30	30	normal
30	30	mild
30	30	very mild
(hand)	40	wash by hand
(crossed out)	-	do not wash

14.2 Bleaching

The triangle symbolizes bleaching.

Symbols	Explanation
	Bleaching allowed (chlorine or oxygen).
	Bleaching allowed (only oxygen).
	Do not bleach.

14.3 Drying

The circle in a square symbolizes tumble drying.

Symbols	Explanation
	Can be put in a tumble dryer. Normal temperature.
	Can be put in a tumble dryer. Lower temperature.
	Do not put in a tumble dryer.

14.4 Ironing

The iron symbolizes the domestic ironing and pressing process.

Symbols	Explanation
	Max. temperature 200 °C.
	Max. temperature 150 °C.
	Max. temperature 110 °C. The steam can cause irreversible damages.
	Do not iron.

14.5 Dry or water cleaning

The circle symbolizes dry or water cleaning.

Symbols	Explanation
	Normal dry cleaning with perchloroethyl, solvent of hydrocarb.
	Mild dry cleaning with perchloroethyl, solvent of hydrocarb.
	Normal dry cleaning with solvent of hydrocarbon.

Ⓕ	Mild dry cleaning with solvent of hydrocarbon.
⊗	Do not dry clean.
Ⓦ	Normal water cleaning.
Ⓦ	Mild water cleaning.
Ⓦ	Very mild water cleaning.

Electrolux
PROFESSIONAL