

thermoplan

Swiss Quality Coffee Equipment



Automatic coffee machine + refrigerator

BLACK&WHITE 3

Operating instructions for model BW3-CTMC
Software version FOX2

Operating instructions for refrigerator BW3-RF

Translation of the original operating instructions; 122.118 REV-0

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1 Introduction

Dear customers,

Thank you for choosing our product. We are certain that you will appreciate and be thoroughly satisfied with our coffee machine.

Thermoplan AG has been a company dedicated to serving the requirements of catering industry for many years. We guarantee that we will provide you with the best, top-quality products made in Switzerland.

This instruction manual is part of the product and supplied to each customer together with the machine. Therefore, please carefully read these instructions before using the product and keep them in a safe place. If you have any questions or need further information, please contact your service partner.

The BW3 operating manual is meant to make it easier for the user to operate the machine in a safe manner and to carry out reasonable care and maintenance tasks on the product. The correct operation of the coffee machine requires correct maintenance measures.

For this reason, Thermoplan AG recommends you to read the instructions carefully before starting up the machine to make using the product for the first time easier.

The coffee machine was produced according to applicable safety standards and guidelines. Nevertheless, the safe daily use of this coffee machine depends on the user reading this instruction manual and periodic maintenance of the machine. The details in certain graphics may look different from your coffee machine, but these details are not relevant to the operation of the machine.

This coffee machine was produced exclusively by:

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2 Important notes, safety

2.1 Signals and signal words



The warning triangle is found where it is considered that failure to comply with the safety instructions is likely to put the user or the machine at risk.



WARNING

WARNING indicates a hazard with an average risk level which, if not avoided, could cause death or a serious injury.



CAUTION

CAUTION indicates a hazard with a low risk level which, if not avoided, could cause a minor or moderate injury.

NOTE

NOTE provides important information about looking after the machine and useful operating options.



Warning:
Electric shock



Requirement:
Care should be taken



Requirement:
Wear protective goggles



Warning:
Risk of scalding



Requirement:
Read instructions



Prohibited:
Do not touch



Warning:
Rotating grinders



Requirement:
Wear gloves



Prohibited:
Do not reach inside

2.2 Definitions of terms

Service partner

Your service partner is your Thermoplan representative. Should you have any questions or problems, please contact your service partner. Depending on the situation, the service partner may send out trained service staff.

Trained service staff

Trained service staff are people who have been trained by Thermoplan and therefore have the relevant qualifications to sell and service Thermoplan products.

Trained operator staff

Trained operator staff are people who have been instructed on how to use the coffee machine (by reading the operating instructions) and are able to carry out the main enance steps described in this manual.

Customers and children

Customers and children are not instructed people and must therefore be kept away from the machine, unless of course it is a self-service machine.

Dispensing machines

Dispensing machines refer to devices which enable the output of for example coffee, milk and hot water products.

2 Important notes, safety

2.3 Safety instructions

General safety instructions

- In an emergency, switch off the machine using the main switch. Remove the plug or remove the fuse of the domestic electrical installation. Contact the Service partner.
- The machine is for indoor use only.
- The coffee, milk and water spout can get very hot. Avoid direct contact (risk of burning and scalding)!
- Clean the machine before taking it out of service for a longer period of time (day off, company holiday, etc.). Then unplug it from the mains and remove the remaining coffee beans from the bean hopper. Remove, empty and clean the milk container. Turn off the water tap underneath the drip tray and close the cutoff valve.
- Do not use the machine if it does not work properly or if there are signs of damage. In the event of a malfunction or if the machine has been damaged, contact your service partner.
- The machine may only be used in a hygienic and ergonomic environment. The user must have enough space and the working area must be well lit.
- If a tube, cable or plug is damaged, do not use the machine, as it will be dangerous. Have the faulty part repaired or replaced by trained service staff.
- While the grounds drawer is removed, you must not reach up inside the inner casing.
- Inserting objects of any kind into the machine or opening the casing is strictly prohibited.
- Make sure children and any other persons are kept away from the machine whilst it is being repaired. If distracted, accidents may happen.
- This dispensing machine is not intended to be used by persons (including children) with reduced physical, sensory or mental capabilities or with a lack of experience and knowledge unless they were explicitly trained by a responsible person or briefed in the use of the dispensing machine to ensure their safety. Children must be kept away from the machine at all times.

Positioning the machine

- The machine must only be set up and installed by trained service staff.
- The machine must not be installed in a warm nor in a damp environment. The ambient temperature must be between 16 °C (60.8°F) and 32 °C (89.6°F).
- Do not install the machine in an area where a water jet could be used to clean the machine.
- Never place the machine on a hot surface. Do not use the machine near open flames.
- Do not position cables near or on hot parts of the machine. Protect the cables from heat sources and any sharp edges.
- Position the machine on a flat, horizontal, stable and heat-resistant surface.
- Install the machine and any cables out of reach of children.
- The coffee machine must be free-standing so as not to affect the air circulation. Therefore leave a gap of at least 50mm next to the vent slots.
- The top of the machine must be at least 1.5 m from the floor
- Temporary storage: Store in a dust-free and dry area, the temperature must never fall below 0°C!

2 Important notes, safety

2.3 Safety instructions

Electric safety



WARNING

Risk of electric shock

The live parts are inside the housing of the coffee machine.

- Therefore never open the housing. The housing may only be opened by trained service staff.
- Keep the dispensing unit away from moisture.
- Never pour any type of liquid on top of the machine / into the bean hoppers.
- If a cable or plug is damaged, stop using the dispensing unit. Have the faulty part repaired or replaced.

Service



WARNING

Risk of injury: Do not modify the machine in any way!

It is strictly prohibited to modify Thermoplan devices!

The manufacturer assumes no liability for any consequences resulting from modifications having been made to the devices, whether inside or out.

- Never open the machine to make modifications yourself.
- The dispensing unit must only be repaired by trained service staff using original replacement parts. This ensures that the safety of the dispensing unit is not affected.

2 Important notes, safety

2.4 General operating instructions

Assembly / transport / deinstallation

- The machine must only be set up and installed, relocated to another location or removed by authorized and trained service partners of Thermoplan. Be aware and adhere to national weight lifting requirements.
- The machine must only be installed using the supplied connection cables and hoses. Any existing cables or hoses must not be reused. The manufacturer is not liable for any damages arising from improper installation. The use of incorrect connections voids the warranty!
- The water connection must only be connected to a drinking water supply system. Be aware of national requirements for installations to a drinking water supply system. Check water connections for leaks periodically.
- The voltage quoted on the rating plate must be the same as the mains voltage in your country.

Disposal

The machine and packaging is disposed of by your Service partner. Do not dispose of the machine or any of the parts yourself.

2.5 Using the Black&White3 CTMC

The Black&White3 CTMC must only be used to make coffee products, hot water products, milk products and chocolate products and is designed for commercial use in the food service industry. Please read the following instructions carefully:

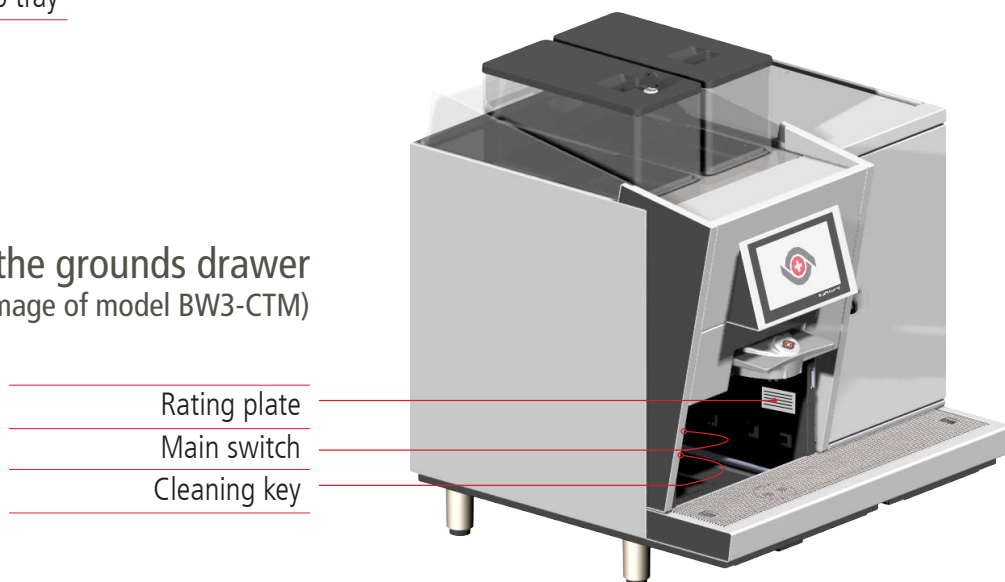
- The bean hopper must only be filled with coffee beans.
Never add liquids to the bean hopper - Risk of short-circuit!
Never put coffee powder into the grinders as this will block them.
- The chocolate hopper must only be filled with chocolate powder
Never add liquids to the chocolate hopper - Risk of short-circuit!
Never put chocolate bars or coffee beans into the chocolate hopper this will block it.
- The BW3 refrigerator must only be used to store cold milk.
Do not place any other liquids (e.g. syrup or alcohol) in the refrigerator, only milk.
Make sure that the milk is placed in the refrigerator at a temperature of below 5°C (41°F). The refrigerator is designed to keep milk cool, not cool it down.
- The water connection must only be connected to drinking water.
- Regular maintenance work must be carried out in accordance with the instructions in the operating instructions.

3 General notes

3.1 Profile of Black&White3 CTMC



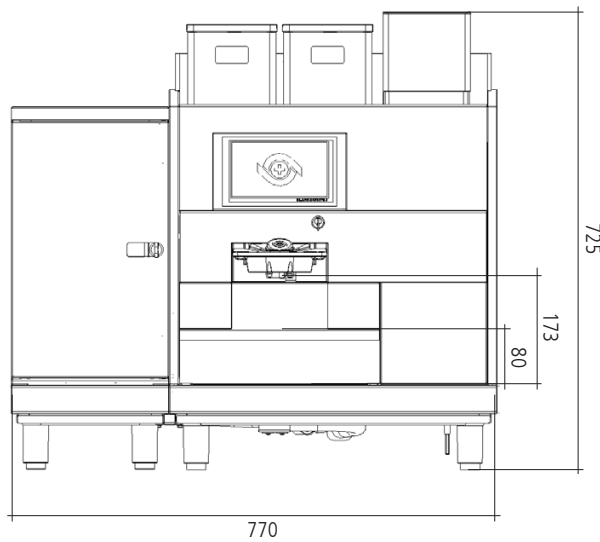
Behind the grounds drawer
(image of model BW3-CTM)



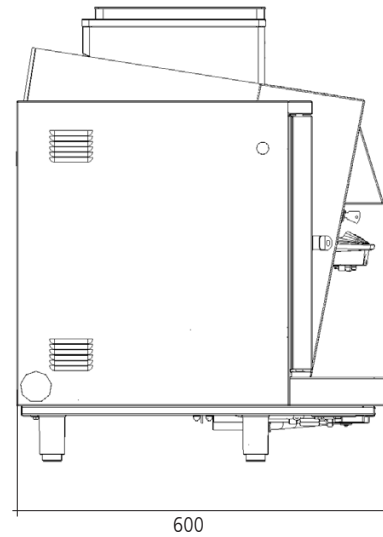
3 General notes

3.2 Technical data

Capacities	Products (per hour): 240 espressos / 200 coffee / 18l hot water / 130 cappuccino / 140 lattino / 90 choco products Refrigerator: Milk container up to 5 litres (gross volume 6.5 litres)
Electrical connection / Power	220-240 V / 16 A / 50/60 Hz / 3'200 - 3'800 W
Coffee boiler pressure	1.17 MPa (11.7 bar)
Mains water pressure	0.2 - 0.4 MPa (2 - 4 bar)
Dimensions (W/D/H)	770x600x725 mm (B / T / H) with small bean hoppers 770x600x750 mm (B / T / H) with large bean hoppers
Weight	94 kg
Noise emission	<70 dB



Height / width (view from front)



Depth (view from side)

3 General notes

3.3 Scope of delivery

All components supplied are part of your Black&White3 BW3-CTMC and are needed to operate the machine. The scope of delivery also describes the limits of the machine.

Black&White3 BW3-CTMC

Your Black&White3 BW3-CTMC consists of the coffee machine which is the main unit, and the refrigerator.

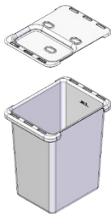


Refrigerator

Black&White3 BW3-CTMC

Cleaning accessories

You will need the following cleaning accessories. Should you need to order any additional items, please contact your service partner.



Milk container



Thermoplan „Black&White“
cleaning tablets for coffee
system cleaning



Thermoplan
„Thermo Milk Tabs“
for milk system cleaning

Connections and cables

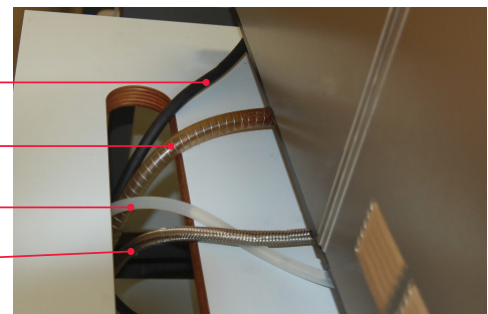
If you still have connection cables from old machines, remove them and dispose of them correctly. Only use the connection cables supplied! The machine must be connected by a qualified engineer!

Power cable (country-specific)

Water outlet pipe from coffee machine

Water outlet pipe from refrigerator

Water inlet pipe



3 General notes

3.4 Rating plate

The rating plate is located inside the BW3 coffee machine, on the right above the grounds drawer (see figure below). To see the rating plate, remove the grounds drawer. The rating plate includes the following information:

- Machine type (Autom. Coffee Machine) Mains water pressure (Net Water Pressure)
- Model range (Black&White3) Frequency ([X] Hz)
- Type (BW3-CTMC) Voltage ([X] VAC)
- Serial number (S/N [X]) Date of manufacture (Prod. Date)
- Power ([X]W) Boiler pressure (Hydraulic Boiler)

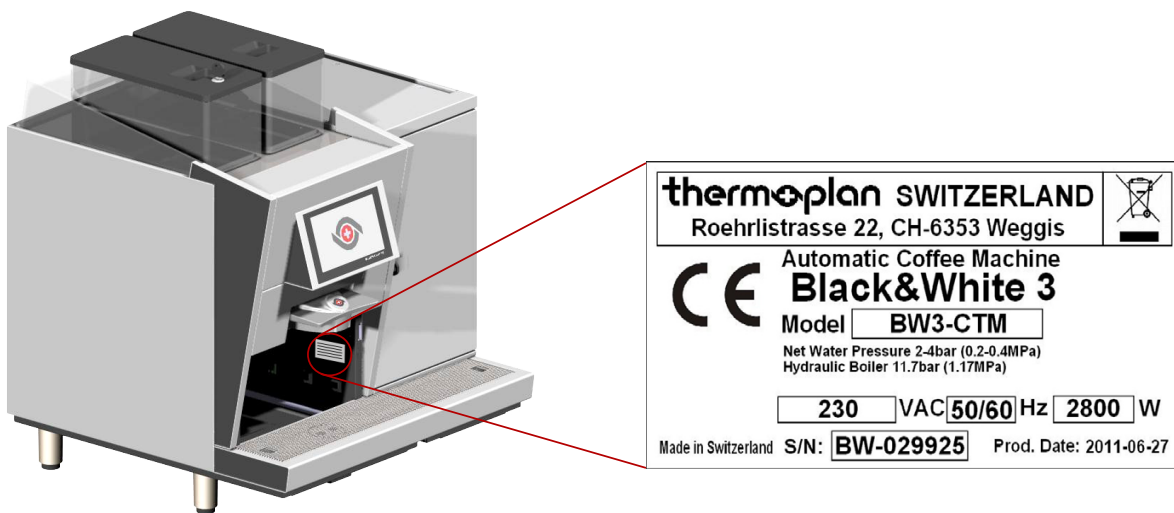


Image of model BW3-CTM

3 General notes

3.5 Food

CAUTION

Risk of illness from wrong / rotten food

General:

- Only use food with a valid sell-by date.
- Make sure all food is stored in a suitable location.
- Clean the machine regularly and according to the operating instructions to avoid any hygiene risks. Only use Thermoplan cleaning accessories!

Milk:

- Do not use unpasteurised milk! Only use heat treated (e.g. pasteurised or ultra heat treated) milk.
- When pouring milk into the container, pay attention to hygiene to ensure that no contaminated milk enters the system.
- Only pour milk that has already been cooled down (below 5 °C) into the milk container.
- Once the milk has been opened, use it up within 24 hours to prevent health hazards.

3.6 Limitations of liability

- Thermoplan accepts no liability for any injuries or accidents if the safety instructions covered in this manual are not adhered to. Additionally, liability is only accepted within the boundaries of the machine (see „Scope of delivery“). Thermoplan shall be liable for faults on the machine in accordance with the warranty regulations.
- The manufacturer cannot be held liable for any damage caused by misuse or inappropriate handling of the machine.

3.7 Warranty regulations

The Thermoplan manufacturer's warranty shall apply to individual components or assemblies for 12 months from installation or for 15 months after delivery ex works in the event of manufacturing or construction errors. Malfunctions due to misuse or connecting unsuitable connections shall not be compensated.

Wear and tear parts are not covered by any warranty. The working time is not covered by the Thermoplan factory warranty.

Each warranty claim must be recorded by the corresponding Thermoplan service partner using a fully completed form that is submitted to Thermoplan.

Thermoplan reviews the claims, issues RMA numbers to them and informs the affected reseller which spare parts need to be returned.

4 Operation, maintenance and cleaning

4.1 Operational safety

Cleaning

Cleaning the machine on a daily basis is not only an absolute must, but it also guarantees the necessary hygiene and neutral taste as well as a longer life of the machine. When touching the coffee machine, in particular the spouts, bacterial contamination must be avoided. Plastic parts must not be dried in the microwave. For reasons of hygiene, the machine must be cleaned before it is started up. There are two types of cleaning:

External cleaning:

- Clean the exterior of the machine with a damp cloth or sponge soaked in a soap solution. Please pay particular attention to the product dispensing parts. Surfaces such as the touch screen must be cleaned with particular care. Only use mild detergents and non-scratch cloths.
- Cloths or sponges must be wrung out thoroughly to ensure that they are only moist, not wet, otherwise there is a risk of electric shock.
- Do not clean plastic parts with alcohol, ethanol, methanol, methylated spirit or disinfectants. Detergents with strong acid agents such as acetic acid must also not be used.
- The machine must not be cleaned with water jets.
- The grounds drawer must be emptied when the corresponding notification appears on the display. Rinse the grounds drawer with warm water and wash it with soap water solution whenever you have finished using it.
- The bean hopper must be emptied weekly and wiped with a clean, dry towel.
- Remove the drip tray if the corresponding notification is displayed and clean it with soap water solution.
- Do not clean any parts in the dishwasher!

Automatic cleaning of the internal components:

The automatic cleaning process with the Thermoplan cleaning solutions must be run daily as described in the „Daily cleaning“ chapter (see page 18). Use only the Thermoplan cleaning solutions for this purpose.

Descaling, disinfection and sterilization of the machine

The descaling, disinfection and sterilisation of the machine must only be made by trained service staff.

Operation

- The machines must only be operated by trained operator staff.
- Keep your workspace clean and tidy. Disorder and unlit workspaces can lead to accidents.
- Do not remove the grounds by beating against the grounds drawer.
- This dispensing machine is not intended to be used by persons (including children) with reduced physical, sensory or mental capabilities or with a lack of experience and knowledge unless they were explicitly trained by a responsible person or briefed in the use of the dispensing machine to ensure their safety. Children must be kept away from the machine at all times.

4 Operation, maintenance and cleaning

4.1 Operational safety

Ventilation / protection against water

Do not cover the vent slots on the machines. Do not allow liquids to run into the vent slots.

Servicing by the Service partner

A message appears on the display of the coffee machine to indicate when the machine needs servicing. The machine must be serviced every 50'000 cycles or at least every 6 months by trained service staff.

4.2 Possible safety hazards



WARNING

Risk of severe injury by the grinders!

Never reach into the grinders, not even if the bean hopper has been removed.
The finger guard in the bean hopper must not be removed.
Non-adherence to this warning may lead to severe injuries to your hands and fingers.



WARNING

Hazard of chocolate input!

Never reach into chocolate hopper with hands!
The finger guard in the chocolate hopper must not be removed.
Non-adherence to this warning may lead to severe injuries to your hands and fingers.



CAUTION

Risk of scalding from the spouts

- Do not place your hands under the spouts.
- Coffee, milk and tea products can cause scalding if touched.
- Do not touch any of the abovementioned dispensing devices during or after the product has been dispensed.
- The contents of the grounds drawer may be very hot.
- Careful when emptying the drip tray. The water can be very hot.

4 Operation, maintenance and cleaning

4.3 Operating tips for making the perfect coffee

NOTE

Follow the tips below to achieve the perfect, high quality coffee.

Coffee

- Only use quality coffee. The type, roasting, mixture and strength should meet the wishes of your customers. You will be able to see the result by how much coffee you sell.
- Always seal your supplies of coffee and close the bean hopper immediately.
- Do not fill the bean hopper if it is not going to be used for a longer period of time (overnight, days off, etc.).
- After a longer period of not being used, we recommend that you make a double coffee and pour it away. The next coffee will then be of good quality.
- Store your coffee supplies in a cool and dry area. By deep-freezing the coffee, you can keep it for several months without affecting the quality.

For coffee lovers

In addition to being able to select the quantity of powder, your coffee machine also has for each type of product, special setting options for the three important steps in the brewing process, namely for:

1 cup grinder 1	1 cup grinder 2
2 cups grinder 1	2 cups grinder 2

Chocolate

Only use chocolate powder made for vending machines!

Setting

Trained service staff can set the prebrewing steps „Prebrew time“, „Relax time“ and „Press after“.

4 Operation, maintenance and cleaning

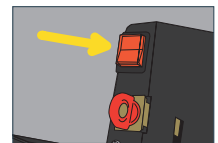
4.4 Start-up

Preparation

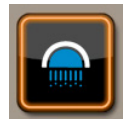
- Check the sell-by date of the beans
- Make sure that you have enough beans
- Preheat the cups

Start-up

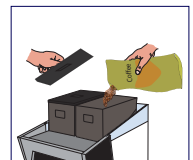
- Switch on the Coffee machine and refrigerator**
Remove the grounds drawer and press the red button on the left and above the tablet holder. Switch on refrigerator (main switch on bottom side of refrigerator). For security matters the refrigerator needs 5 minutes start-up time until the compressor begins to work.



- Cold start rinse**
The machine demands to rinse the unit. Press the rinse button on the display (takes about 50 sec.).



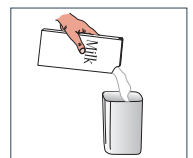
- Coffee boiler heats up
- Fill the bean hopper with fresh coffee beans



- Coffee products can now be dispensed
- Fill the milk container with milk

Ready

 **Caution:**



When pouring milk into the container, pay attention to hygiene to ensure that no contaminated milk enters the system. The milk container must be clean and dry!

Do not use unpasteurised milk! Only use heat treated (e.g. pasteurised or ultra heat treated) milk. Only use milk with a sell-by date that has not yet expired. Only pour milk that has already been cooled down (below 5°C) into the milk container. Once the milk has been opened, use it up within 24 hours to prevent health hazards.

- Fill chocolate powder for vending machines into the chocolate hopper



- All products can now be dispensed

Ready

4 Operation, maintenance and cleaning

4.5 Cleaning

Preparation

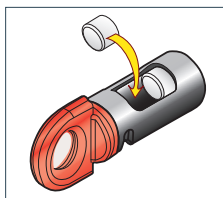
- ✓ „Black&White“ cleaning tablets
- ✓ Thermoplan milk cleaning solution
- ✓ Gloves and protective goggles



NOTE

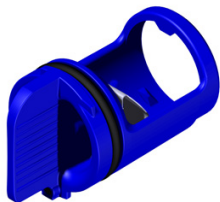
Only use cleaning products recommended by Thermoplan. Items available to order can be found in chapter "5 Orders"

Cleaning Keys



Cleaning key

The cleaning key is cleaning the coffee way of the machine and is placed inside the machine. It can be found on the bottom left side in the housing of the grounds drawer (must be removed). Use the Black&White Cleaning tablets for this key.



Milk cleaning key (large)

The milk cleaning key is for cleaning the milk system. It is located at the top on the refrigerator in the coffee machine. The "Thermo Milk Tabs" are used for this cleaning key.

Automatic and manual cleaning

There are two different kinds of cleaning that must be done after using the machine. One is the automatic daily cleaning process which will clean the inside of your machine. The whole outer part of the machine cannot be cleaned automatically, therefore it is essential to follow the additional cleaning steps for a good machine hygiene.

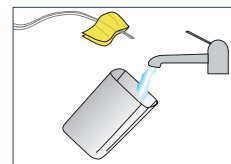
4 Operation, maintenance and cleaning

4.5 Cleaning

Daily cleaning actions (machine internal automatic cleaning process)

1. Empty milk container

Remove and empty milk container. Rinse it with fresh water and put it back into the fridge.



2. Start automatic cleaning process

Press the cleaning button  and hold it until the cleaning request appears.

Now follow the instructions shown on the display.

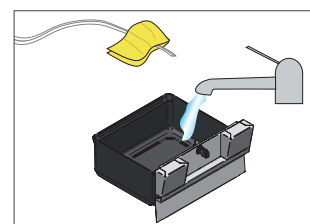
The cleaning process takes about 20 minutes.



Additional daily cleaning (manual cleaning)

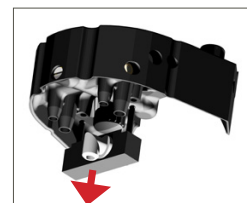
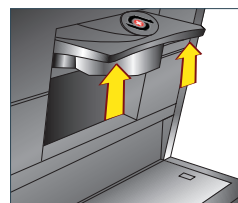
1. After cleaning process

- Clean milk container thoroughly.
- Clean suction tube thoroughly.
- Empty grounds drawer and clean it thoroughly.
- Clean drip tray thoroughly.
- Switch off machine. Empty and clean the bean hoppers (Instruction on the next page).



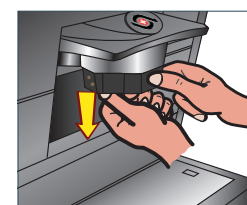
2. Clean choco spout

Pull the outlet head to the top position and remove the little choco outlet clip from the spout. Clean thoroughly with a small brush that no choco remains are left behind.



3. Clean coffee outlet

With the choco spout removed unscrew the central screw. Pull down the distribution block, clean it and reinstall the block with the central screw.



4. Clean choco module (weekly)

The choco module has to be cleaned weekly. The step-by-step instructions to this are on page 21 in the chapter „4.7 Weekly cleaning of the choco module“.

4 Operation, maintenance and cleaning

4.6 Removing and cleaning of the bean hoppers



Remove grounds drawer and **turn off machine on the main switch**. Use the appliance key to remove the front panel of the machine.

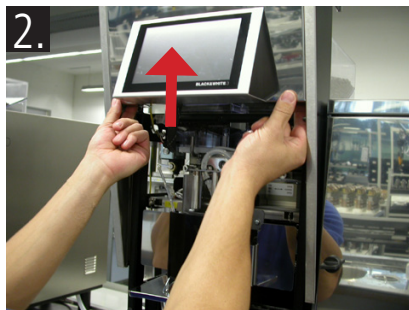
Important: Store the key at a secure place where unauthorized people or children have no access!

WARNING

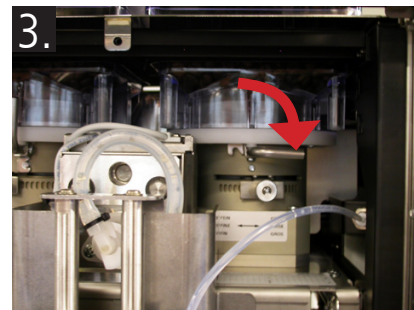
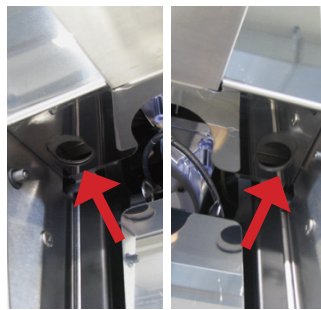
- Electric shock hazard
- Do not touch
- Switch off machine

WARNING

- Grinder hazard
- Do not reach inside
- Switch off machine



Use holes (left and right) to lift up the front. Unhook the two locks with your fingertips. Lift up the front to the top position and let go.



Turn the lever of the bean hopper clockwise to unlock it.



Use both hands to pull out the bean hopper.

Remove the beans from the bean hopper and store them vacuum packed in the fridge.

Remove the remaining beans with a vacuum cleaner from the grinders.



Use lukewarm water to clean the bean hopper. Dry it thoroughly afterwards.

To reinstall the bean hopper do all steps in reversed order.

4 Operation, maintenance and cleaning

4.7 Weekly cleaning of the choco module

WARNING

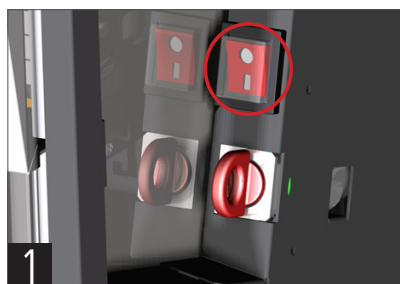
Hazard of electric shock!

Before working shut down the machine completely and remove from power supply!

WARNING

Hazard of chocolate input!

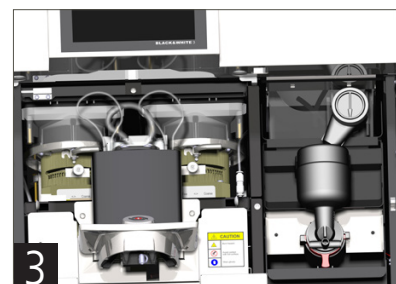
Never reach into chocolate module with hands! The hands could take serious injury.



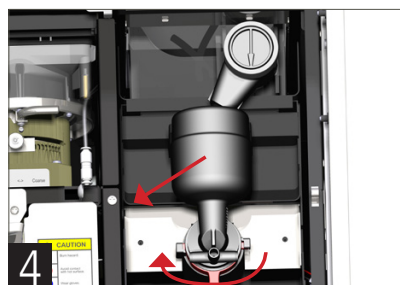
1 Switch off machine and disconnect from power.



2 Open machine front with key.



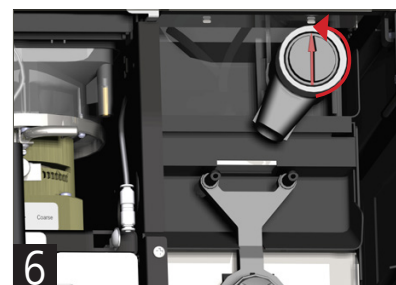
3 Push up front (like p. 20, No. 2) to set free the chocolate module.



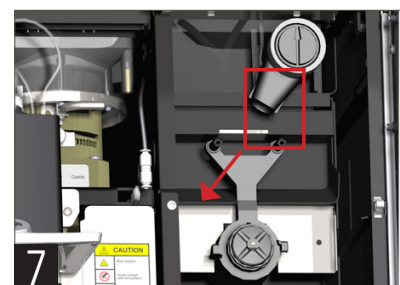
4 Remove mixing bowl by turning the bayonet lock and take out to the left.



5 Clean thoroughly with a wet cloth and dry well.



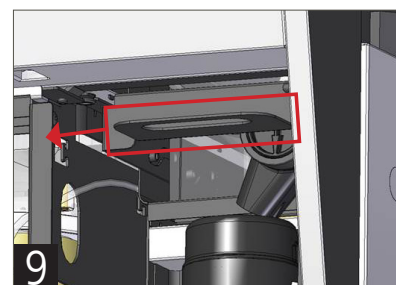
6 Turn the switch so the arrow points up.



7 Remove chute (by pulling) and clean thoroughly with a wet cloth and dry well.



8 Check for chocolate remains within the machine.



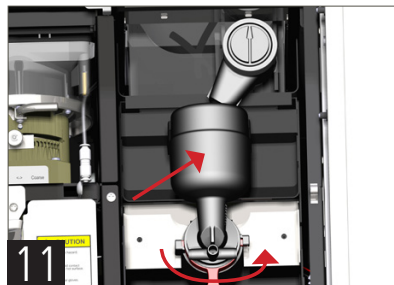
9 Pull the lever below the chocolate hopper out to remove chocolate hopper. Clean thoroughly and reinsert.

4 Operation, maintenance and cleaning

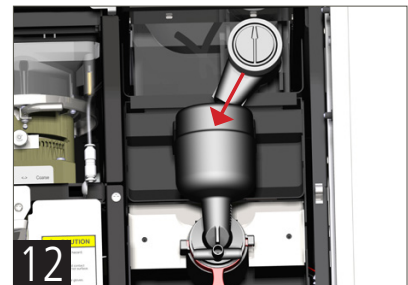
4.7 Weekly cleaning of the choco module



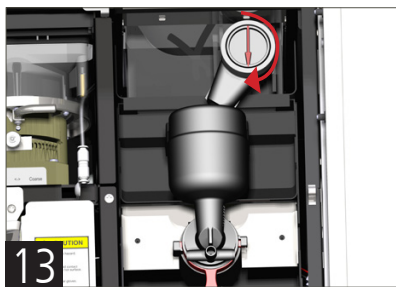
Reinsert the chute.



Reinsert the mixing bowl and close the bayonet lock.



Adjust the chute so it points into the mixing bowl.



Turn the switch with the arrow back, so the arrow points back down.



Close machine. Cleaning of chocolate module done.

4 Operation, maintenance and cleaning





4.8 Function / programming / product selection buttons



The control panel consists of:

- 8 (2x4), 12 (3x4) or 15 (3x5) product selection buttons
- 4 function buttons

Description of function buttons

	Double product	Press to obtain a double product (not for choco!)
	Cancel button	Stops the product being dispensed
	Switch grinder button	Switch between grinder 1 and grinder 2
	Cleaning button	To start daily cleaning process hold until request appears. Press shortly for a short rinse (duration approx. 50s).

4 Operation, maintenance and cleaning

4.9 Examples of product selection

The product selection buttons are preprogrammed at the factory but can be reprogrammed at any time by the user to meet the individual requirements of his/her business.

The grinder selection button and double product button enable you to program 4 different kinds of coffee with the same product selection button.



4 Operation, maintenance and cleaning

4.10 Product dispensing

Product extraction



The BW3-CTMC coffee machine by Thermoplan offers the following products:

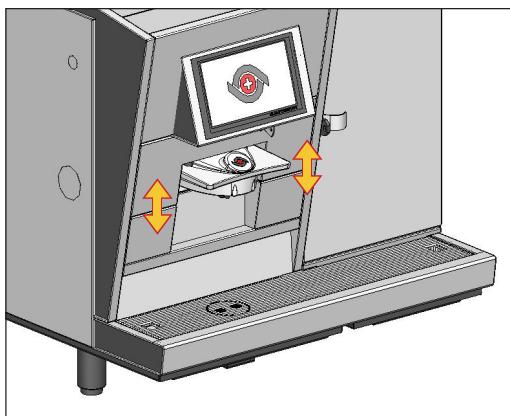
Espresso, Coffee, Cappuccino, Latte Macchiato, Milk coffee, Lattino, Lattino flavour, drinkable chocolate, hot water

To dispense a product, proceed as follows:

1. Place the cup under the coffee spout
2. Press the desired product on the display

To dispense a double product, press the Double product button before selecting the product.

An "X" appears at the top in the middle of the screen to confirm your selection.



The coffee spout can be pushed up or down depending on the size of cup being used.


To do so, hold the coffee spout in both hands and move it to the desired position.

4 Operation, maintenance and cleaning

4.11 Service Menu

Various settings such as Product parameters, Date or Language can be determined in the Service menu.

Proceed as follows to access the user level:

1. Press "Ready" in the top left of the display.
2. The PIN entry window is displayed. Enter Code 111111 and confirm with .



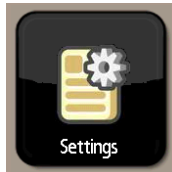
3. The following screen appears:



To return to the product selection screen, press the top left display area.

4 Operation, maintenance and cleaning

4.11 Service Menu



Settings

Menu is inactive



Product Settings

The individual products can be adapted to the individual requirements in the "Product parameters" menu.

To do so, in the lefthand side of the screen, select the product to be changed. The product can then be adapted to the individual requirements in the righthand side of the screen.



Test grinding
 Double product
 Switch grinder button
 Sample product

4 Operation, maintenance and cleaning

4.11 Service Menu

Product name	Enter the desired product name.
Coffee aroma M1 1 cup	In the "Coffee flavour" menu, the coffee flavour of the individual products passing through the grinders can be set to the individual taste. This is the easiest way to influence the brewing process and quantity of ground coffee. The flavour of the coffee can be changed by increasing (stronger flavour) or decreasing the percentage value (weaker flavour). Tip: Change value at a rate of 5% and test the result.
Coffee aroma M1 2 cups	
Coffee aroma M2 1 cup	
Coffee aroma M2 2 cups	
Water quantity 1 cup	The quantity of water of the product is changed here. Adapt values and take a sample to test the new settings.
Water quantity 2 cups	
Milk quantity 1 cup (milk products only)	The quantity of milk and frothy milk is changed in these menus. Adapt values and take a sample to test the new settings.
Milk quantity 2 cups (milk products only)	
Milk froth quantity 1 cup (milk products only)	
Milk froth quantity 2 cups (milk products only)	
Set water amount (coffee and tea products only)	Press "Add Water" to manually determine the quantity of water of a product. Press the button to start adding water, press it again to stop the process and save the quantity taken.
Set milk quantity (milk products only)	Press "Add Milk" to manually determine the quantity of milk of a product. Press the button to start adding milk, press it again to stop the process and start adding froth. Press it again to stop the process and save the quantity taken.
Choco quantity (choco products only)	The amount of chocolate powder (time in seconds) can be set here to adjust chocolate flavour. Increase time for sweeter taste, reduce time for a little bit less sweetness.
Powder right / Powder left (choco products only)	Intensity of the choco powder in percent, which is taken from the left or right choco hopper.

4 Operation, maintenance and cleaning

4.11 Service Menu



Product Prices

If the machine is linked to a POS system, the prices of the individual products can be set in the „Product prices“ menu.



Statistics

This list shows among other things how often a product has been dispensed and how often the machine has been cleaned.



Press the Products list to delete the products counter.

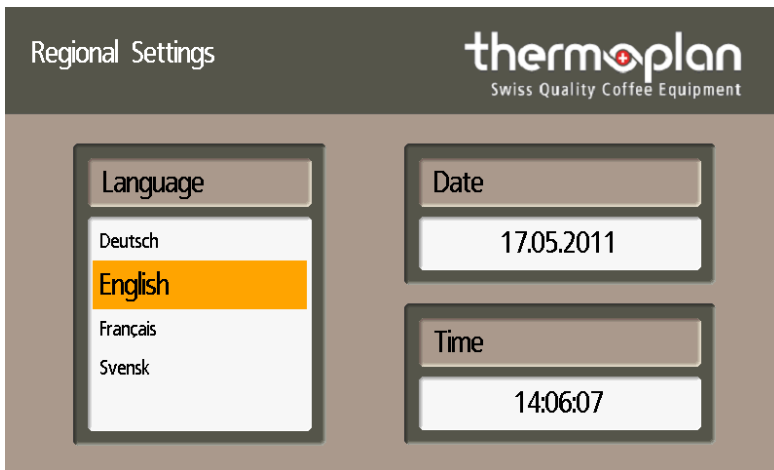
4 Operation, maintenance and cleaning

4.11 Service Menu



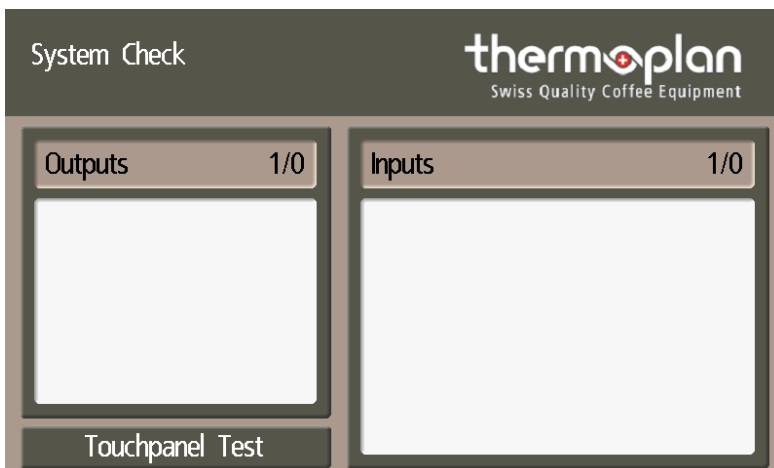
Regional Settings

Here you can adjust the language, date and time by pressing the corresponding option.



System Check

The touchscreen is checked for errors. Press "Touchpanel Test" and a grid appears. A red dot should appear each time it is pressed.



To exit the test screen, press the screen for 2 seconds.

4 Operation, maintenance and cleaning

4.11 Service Menu



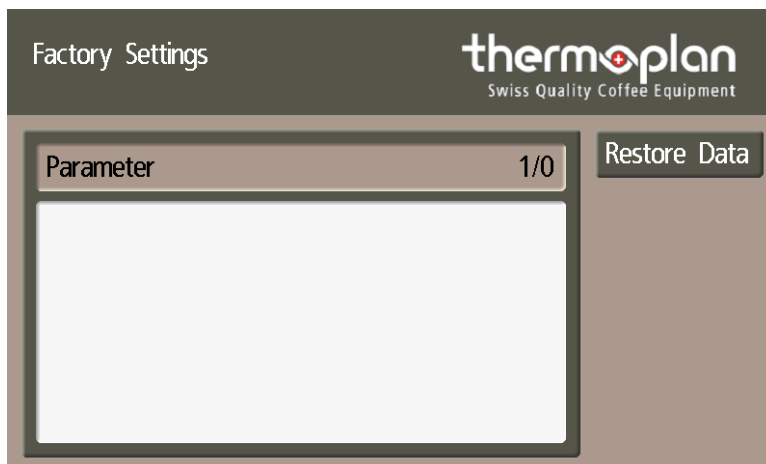
Error History

The last 63 error messages are logged. The most recent error appears at the top of the list.




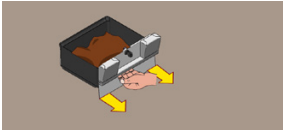
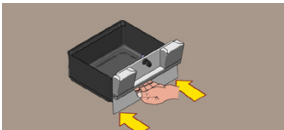


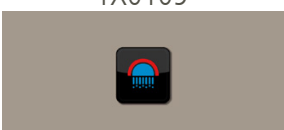


Factory Settings

If problems occur after the settings have been adjusted (e.g. Products parameters), the basic settings of the coffee machine can be restored. Press "Restore Data" to restore the basic settings.



4 Operation, maintenance and cleaning

4.12 Display messages

Error No. + Picture	Text	Cause	Clearing
TX0001	Ready	Machine is ready	-
TX0101 	NTC coffeeboiler open	Problem with temperature check in coffee boiler	Call service
TX0104 	Empty grounds drawer	Grounds drawer is full	Remove and empty grounds drawer, than reinsert
TX0106 	Grounds drawer missing	Grounds drawer is not correctly inserted	Insert grounds drawer again
TX0107 	Bean hopper empty (left-hand side)	The left bean hopper is empty	Refill coffee beans on the left bean hopper
TX0108 	Service required	Amount of programmed brew cycles is reached	Call service
TX0109 	Clean appliance	Amount of programmed brew cycles or hours to clean the machine is reached	Clean the machine
TX0110 	Voltage low	Voltage is too low	1. Wait for the voltage to normalize 2. Call service
TX0111 	Voltage high	Voltage is too high	1. Wait for the voltage to normalize 2. Call service


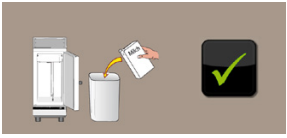


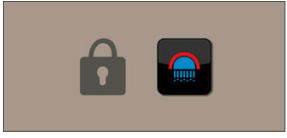
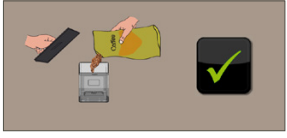


4 Operation, maintenance and cleaning

4.12 Display messages

Error No. + Picture	Text	Cause	Clearing
TX0113 	Piston error	Piston cannot move	1. Try dispensing again 2. Rinse the machine 3. Call service
TX0114 	Bean hopper empty (right-hand side)	The right bean hopper is empty	Refill coffee beans on the right bean hopper
TX0115 	Flow error	No water flow	1. Open water connection 2. Empty grounds drawer 3. Rinse the machine 4. Call service
TX0116 	Overtime error	Machine cannot dispense properly, too little water	1. Try to dispense again 2. Call service
TX0117 	Change water filter	The programmed amount of water has flown through the water filter	Change water filter.
TX0118 	Interface error	Interface is active: - Wrong interface chosen - No interface connected	Check interface settings or turn them to „off“
TX0119 	Powder error	Grinders blocked	1. Empty grounds drawer + vacuum grinders (p. 20) 2. Rinse machine 3. Call service
TX0125 	Waterflow error	No water flow or flow-meter defective	1. Open water connection 2. Empty grounds drawer 3. Rinse the machine 4. Call service

4 Operation, maintenance and cleaning

4.12 Display messages

Error No. + Picture	Text	Cause	Clearing
TX0136 	Please ask for assistance	Machine demands a service	Call service
TX0137 	Please add milk	Milk is empty	Refill milk
TX0139 	Bean hopper missing	Bean hopper removed or control panel on top	1. Install bean hopper 2. Close control panel
TX0141 	NTC coffee boiler short-circuit	The temperature check in the coffee boiler had a short	Call service
TX0143 	Machine locked Start cleaning	Machine reached the programmed amount of brew cycles or hours.	Clean the machine
TX0145 	Refill coffee beans Press OK to proceed with product dispensing	Coffee beans run out while product dispensing or product loop.	Refill coffee beans and confirm with the ok button
TX0151 	No waterflow detected	No water pressure or flow meter defective	1. Open water connection 2. Empty grounds drawer 3. Rinse the machine 4. Call service
TX0153 	Cleaning done Standby	After cleaning the machine changes to standby mode	Press OK to get the machine into ready mode again.

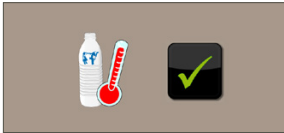
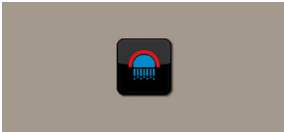
4 Operation, maintenance and cleaning

4.12 Display messages

Error No. + Picture	Text	Cause	Clearing
TX0154 	Milk pump: no pulse	Milk pump not identified	Call service
TX0155 	Water pump: no pulse	Water pump not identified	Call service
TX0161 	Please wait	Machine is rinsing	Wait until rinsing process is done
TX0162 	Error grinder 1	Grinder error left grinder	Call service
TX0163 	Error grinder 2	Grinder error right grinder	Call service
TX0164 	Cleaning break Please press rinse key	Cleaning failed	Press cleaning button to restart the cleaning
TX0167 	Cleaning interrupted Remove grounds drawer	Cleaning abort	Remove grounds drawer
TX0174 	Remove grounds drawer	Grounds drawer must be removed for next action	Remove grounds drawer

4 Operation, maintenance and cleaning

4.12 Display messages

Error No. + Picture	Text	Cause	Clearing
TX0188 	Check milk temperature	Milk temperature too high	1. Check milk temperature 2. Switch on refrigerator 3. Call service
TX0201 	Cold start rinse Pleas press rinse key	Rinse to warming up the machine	Press rinse button

4 Operation, maintenance and cleaning

4.14 Self-service mode

The Self-service mode can be activated by a service technician and functions as follows:

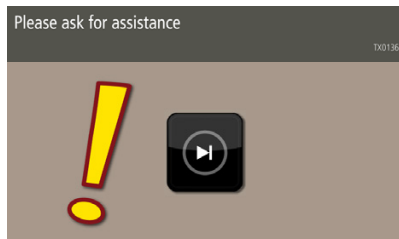


The user interface still looks perfectly normal after setting the Self-service mode.

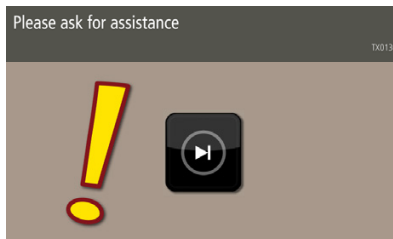



The function buttons disappear after a product has been dispensed. The Self-service mode is now enabled.

Display messages



Display messages are now always shown with the message "Please ask for assistance".



Hold down  button until the actual fault message appears (approx. 5 seconds).

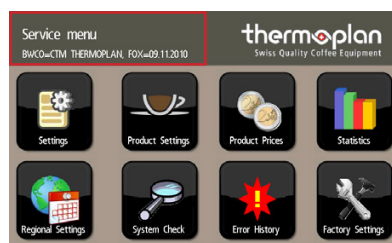


The actual display message is now displayed (for details see section "4.13 Display messages")

Restoring the function buttons



Enter the user menu to restore the function buttons. Press and hold "Ready" until the PIN input window appears (PIN 111111).



Exit the service menu right after entering it (touch surface at left top)



The function buttons are now available again until the next action (e.g. product dispensing, cleaning) is performed.

5 Items available to order



Black&White cleaning tablets

Art. No	Description
105.371	Cleaning tablets (bin, qty. 90 tablets)
105.365	Cleaning tablets (box containing 36 bins)



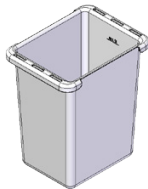
Thermoplan milk system cleaning tablets „Thermo Milk Tabs“

Art. Nr.	Beschreibung
120.528	Thermo Milk Tabs (bin, qty. 62 tablets)
120.900	Thermo Milk Tabs (box containing 12 bins)



Milk container 5.0 l, complete

Art.no.: 120.009



Milk container cover 5.0 l

Art. no.: 119.017

Milk container 5.0 l

Art.no.: 120.008

6. Declaration of conformity

EG-KONFORMITÄTSERKLÄRUNG EC-DECLARATION OF CONFORMITY CE-DÉCLARATION DE CONFORMITÉ

Wir/We/Nous Thermoplan AG, Roehrlistrasse 22, CH-6353 Weggis, Switzerland

erklären in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the product
déclarons sous notre seule responsabilité que le produit

Product	Automatic Coffee Machine
Model	BLACK&WHITE 3
Type	BW3-CT, BW3-CTS, BW3-CTM, BW3-CTMS, BW3-CBT, BW3-CBTM, BW3-CTMC

auf das sich diese Erklärung bezieht, mit den folgenden Normen übereinstimmt.
to which this declaration relates is in conformity with the following standards.
auquel se réfère cette déclaration est conforme aux normes.

EN 12100:11
EN 60335-1:02 + A1:04 + A2:06 + A11:04 + A12:06 + A13:08 + A14:10 + A15:11
EN 60335-2-15:02 + A1:05 + A2:08
EN 60335-2-75:04 + A1:05 + A2:08 + A11:06 + A12:10
EN 55014-1:06 + A1:09 + A2:11
EN 55014-2:97 + A1:01 + A2:08
EN 61000-3-2:06 + A1:09 + A2:09
EN 61000-3-3:08
EN 62233:08

gemäss den Bestimmungen folgender Richtlinien
following the provisions of Directives
conformément aux disposition des Directives

2004/108/EC (EMC)
2006/42/EC (MD)
2011/65/EU (RoHS)

Dieses Produkt entspricht auch den grundlegenden Sicherheitsanforderungen der Niederspannungsrichtlinie
This product also complies with essential safety requirements of the Low Voltage Directive
Ce produit satisfait aux exigences essentielles de sécurité de la directive sur le matériel électrique à basse tension

2006/95/EC (LVD)

(Ort und Datum der Ausstellung)
(Place and Date of issue)
(Lieu et date)

CH-6353 Weggis, 16.04.2012

(Name, Funktion und Unterschrift des Befugten)
(Name, function and signature of authorized person)
(Nom, fonction et signature du signataire autorisé)



Adrian Steiner, CEO

Verantwortlich für die technische Dokumentation
Responsible person for technical documentation
Personne responsable pour documentation technique

Andreas Zimmermann

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BLACK&WHITE 3

Operating instructions for refrigerator BW3-RF

For models: BW3-CTM, BW3-CTMS, BW3-CBTM, BW3-CTMC

Original operating instructions in German; 805.396 REV-0

Record of revisions

Revision	Date	Amendments made	Initials
0	2010-11-15	Basic document	SO
1	2011-09-02	Added EC declaration of conformity	SO
2	2011-11-22	Added security note + rating plate details	SO
3			
4			
5			
6			
7			
8			
9			
10			

Overview of modifications made

Page	REVISION											Page	REVISION											Page	REVISION										
	0	1	2	3	4	5	6	7	8	9	10		0	1	2	3	4	5	6	7	8	9	10		0	1	2	3	4	5	6	7	8	9	10
41	S																																		
42	S																																		
43	S																																		
44	S		X																																
45	S																																		
46	S																																		
47	S																																		
48	S		X																																
49	S																																		
50	S																																		

X	Changes to content, correction
S	New page layout

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1 Important notes, safety

Before start-up

- Read the instruction manual carefully.
- If this device is replacing an old model, follow the instructions concerning the disposal of the old equipment (p. 45).



Safety

- In an emergency, switch off the refrigerator using the main switch. Remove the plug or remove the fuse of the domestic electrical installation. Contact the service partner.
- The refrigerator is for indoor use only.
- Clean the refrigerator before taking it out of service for a longer period of time (day off, company holiday, etc.). Then unplug it from the mains. Remove, empty and clean the milk container.
- If a tube, cable or plug is damaged, do not use the machine, as it will be dangerous. Have the faulty part repaired or replaced by trained service staff.
- Disconnect the device from the mains before performing any maintenance or cleaning work.
- Keep your working area clean and tidy. Messy and unlit working areas can cause accidents.
- Make sure children and any other persons are kept away from the device whilst it is being repaired. If distracted, accidents may happen.
- Never remove the shielding (housing) of the refrigerator.
- This device is not designed to be used by persons (including children) with reduced physical, sensory or mental abilities or with no experience or knowhow, unless they have been explicitly trained or instructed by a responsible person on how to use the device safely. Children must be kept away from the device at all times.
- For security matters the refrigerator's compressor starts 5 minutes after actually starting up the refrigerator.
- This refrigerator is a climate class 6 appliance. The ambient temperature must be between 16°C (60.8°F) and 32°C (89.6°F).

1 Important notes, safety

Use

- The device must only be used for storing cold milk.

Cleaning and maintenance

- Always perform the maintenance steps described in this documentation.
- Switch off the device and clean using a damp cloth. Never spray the cleaning agent directly onto the device.

Disposing of the device

Packaging The packaging material (cardboard box, plastic film PE and polystyrene EPS) must be recycled and disposed of according to directions.

Deinstallation Disconnect the device from the mains. Fixed installed devices must be disconnected by trained service staff!

Safety To prevent accidents from happening due to improper use, especially by children, the device must be rendered unusable. Remove the plug from the socket or have the device disconnected by an trained service staff. Then cut the power cable off the device.

Disposal Disposing of your old device correctly helps prevent any possible negative effects on the environment and to people. The waste equipment is not worthless rubbish. By disposing of it correctly, the raw materials can be recycled. Make sure that the old waste equipment is disposed of according to the local legislation in force. For further information concerning the disposal of equipment, please contact your service partner. The illegal or improper disposal of the device will result in strict legal and/or criminal sanctions, according to the current jurisdiction.



2 General notes

2.1 Purpose of this manual

The manual for the Black&White3 refrigerator should make it easier for the user to operate the equipment safely and provides details on how to look after and service the equipment.

The refrigerator will work correctly if it is serviced correctly. Thermoplan AG therefore recommends that you carefully read the instruction manual before using the equipment in order to familiarise yourself with the equipment. The refrigerator has been manufactured according to the safety standards and guidelines in force. We nevertheless recommend that you read the instruction manual carefully and service the refrigerator regularly to ensure the safe daily operation of the machine.

The details of some of the images may differ from your refrigerator, but do not affect the operation.

2.2 Identification of manufacturer

This refrigerator has been manufactured by:

Thermoplan AG

Röhrlistrasse 22

CH-6353 Weggis

Switzerland

Tel. +41 (41) 392 12 00

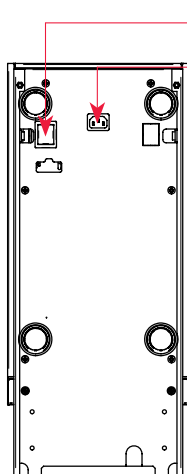
Fax +41 (41) 392 12 01

Email thermoplan@thermoplan.ch

Website www.thermoplan.ch

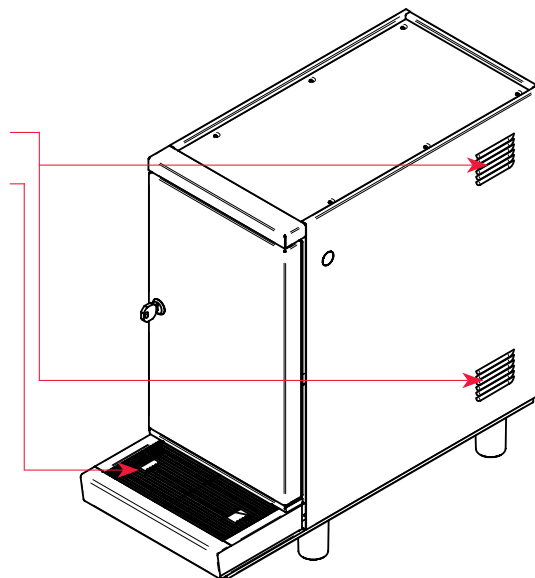
2 General notes

2.3 Profile of refrigerator

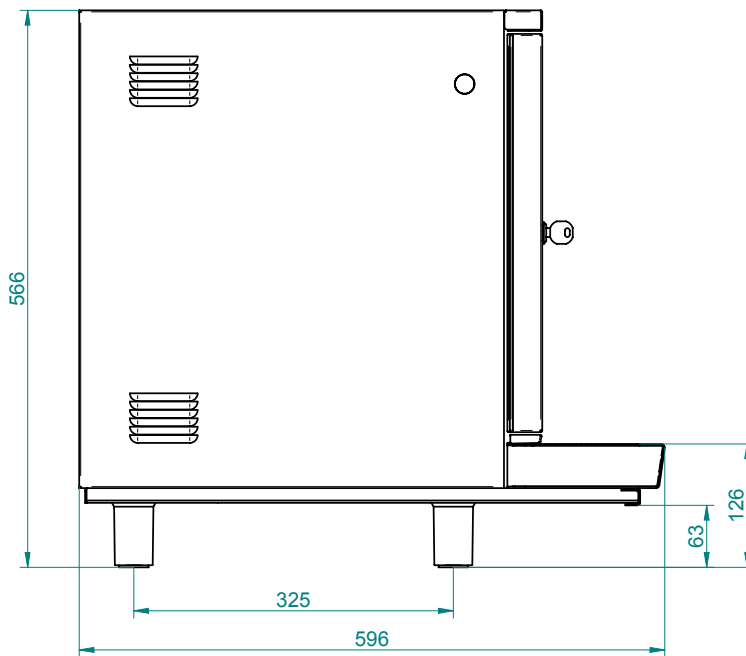
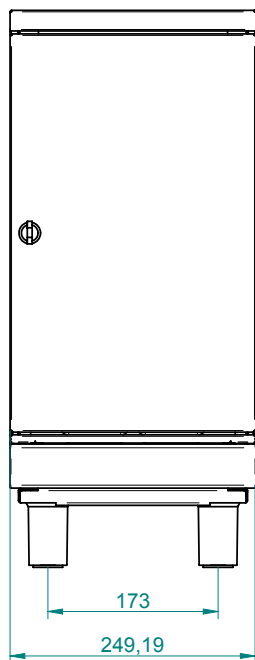


View from below

- Main switch
- Mains cable connection
- Vent slots
- Drip tray



2.4 Technical data



Capacities	Milk container up to 5 litres (gross volume 6.5 litre)
Electrical connection	220-240 VAC / 50/60 Hz / 0.75-0.85 A
Dimensions	250x596x565mm (W/D/H)
Weight	17 kg

2 General notes

2.5 Rating plate

The rating plate is on the side behind the drip tray of the refrigerator and includes the following information about the refrigerator:

- Equipment type (Refrigerator)
- Model (Model)
- Internal capacity (Volume)
- Cooling agent (Refrigerant)
- Cooling agent quantity (Charge)
- Insulation gas (1,1,1,3,3-Pentafluoropropane)
- Voltage (220 - 240 VAC)
- Frequency (50/60 Hz)
- Current (0.75 - 0.85 A)
- Serial number (S/N)
- Date of manufacture (Prod. Date)

2.6 Installation

Make sure that there is enough space next to the Black&White3 coffee machine for the refrigerator. Have the refrigerator connected to the Black&White3 by trained service staff.

The refrigeration system must be sufficiently ventilated. To do so, make sure that there is enough space on the free side of the refrigerator (opposite side to the Black&White3) for the air to circulate. Make sure that there is a gap of at least 50cm on the refrigerator side.

The refrigerator must be connected to a Black&White3 machine (models CTM, CTMS, CBTM or CTMC) and must not be used separately.

2.7 Cleaning

Clean the refrigerator daily.

Make sure the refrigerator is disconnected from the mains before cleaning it.

Clean the outside of the refrigerator using a cloth and lukewarm water and dry it using a soft cloth.

To clean the inside, use a cloth and lukewarm soda water or vinegar and water and then dry it using a soft cloth.

2.8 Electrical connection

This device complies with EC standard 89/336 in terms of radio interference suppression. Before connecting the machine, make sure that the mains supply corresponds to the voltage indicated on the rating plate.

The refrigerator must be wired in accordance with the legal requirements. Ensure that the electrical equipment is wired according to directions. In the event of personal injury or damage to property, the manufacturer assumes no liability if these have been caused by failure to comply with the regulations.

Do not use any adapters, multiple plug or extension lead for the connection. If this cannot be avoided, only use equipment which complies with the relevant safety regulations and does not in any way exceed the specified current-carrying capacity limits.

If the plug and socket do not match, replace the socket with a suitable socket. This should only be done by qualified personnel. Ensure that the cable cross-section of the socket is adapted for the power input of the device.

2 General notes

2.9 Defrosting

As soon as the layer of ice exceeds 3mm, the refrigerator must be defrosted. This is an important prerequisite to ensure the faultless and energy-saving operation of the machine.

Switch off the refrigerator and open the refrigerator door to defrost the refrigerator.

Never remove the layer of ice using a pointed or sharp object, e.g. metal objects. This could definitely damage the cooling plate.

Once defrosted, switch the refrigerator back on again.

2.10 Storing the milk

- Do not use unpasteurised milk! Only use heat treated (e.g. pasteurised or ultra heat treated) milk.
- When pouring milk into the container, pay attention to hygiene to ensure that no contaminated milk enters the system.
- Only pour milk that has already been cooled down (below 5 °C) into the milk container.
- Once the milk has been opened, use it up within 24 hours to prevent health hazards.

2.11 Faults and corrective actions

1. The machine does not work. Check if...:

- the current supply has been interrupted
- the circuit breaker of the electrical system is thrown.
- the plug is damaged or not correctly plugged in.
- the socket is defective. To test it, connect a device which definitely does work.
- the power supply cable is broken.

2. Loud noise during operation. Check if...:

- the refrigerator or cooling unit is level.
- the refrigerator is touching any furniture which may cause vibrations.
- the cooling pipes are in contact with the back of the machine and are therefore moving freely.

3. Insufficient cooling. Check if...:

- the door closes properly.
- the refrigerator is installed near heat sources.
- the refrigerator has sufficient ventilation.
- the evaporator is iced over.
- the condenser is hampered because of dust.
- the fan rotates freely.

If the refrigerator still does not work once these checks have been carried out, contact an trained service staff.

3 EC declaration of conformity

EG-KONFORMITÄTSERKLÄRUNG EC-DECLARATION OF CONFORMITY CE-DÉCLARATION DE CONFORMITÉ

Wir/We/Nous Thermoplan AG, Roehrlistrasse 22, CH-6353 Weggis, Switzerland

erklären in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the product
déclarons sous notre seule responsabilité que le produit

Product	Refrigerator
Model	BLACK&WHITE 3
Type	BW3-RF

auf das sich diese Erklärung bezieht, mit den folgenden Normen übereinstimmt.
to which this declaration relates is in conformity with the following standards.
auquel se réfère cette déclaration est conforme aux normes.

DIN EN 60335-1: 2010-11
DIN EN 60335-2-24: 2010-12
DIN EN 55014-1: 2010-02
DIN EN 55014-2: 2009-06
DIN EN 61000-3-2: 2010-03
DIN EN 61000-3-3: 2009-06
DIN EN 62233: 2008-11

gemäss den Bestimmungen folgender Richtlinien
following the provisions of Directives
conformément aux disposition des Directives

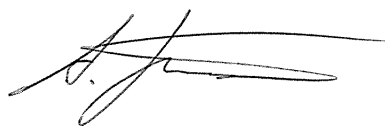
2004/108/EC
2006/95/EC

(Ort und Datum der Ausstellung)
(Place and Date of issue)
(Lieu et date)

CH-6353 Weggis, 22.08.2011

(Name, Funktion und Unterschrift des Befugten)
(Name, function and signature of authorized person)
(Nom, fonction et signature du signataire autorisé)

Adrian Steiner, CEO



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