

**thermoplan**  
Swiss Quality Coffee Equipment

# Operating Manual Black&White|4c

## CTM / CTM-RS



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## 1 Publishing Details

Original Operating Manual

Model series: Black&White4 compact

Type: BW4c-CTM / CTM-RS

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## 2 About this document

### 2.1 Purpose

This operating manual supports the user in his daily work; it is an integral component of the coffee machine.

- ▶ Carefully read the operating manual all the way through before using the coffee machine.
- ▶ Take good care of the operating manual and keep it on hand in the vicinity of the coffee machine.
- ▶ The user must have read and understood work steps and instructions, particularly the points concerning safety and hygiene.

### 2.2 Navigation

This document contains the following navigation aids in order to find specific information quickly:

- Table of contents
- Cross-references within the texts
- Symbols and emphasized text

### 2.3 Terms used

The following terms are used in this operating manual:

Term	Explanation
Coffee machine	Coffee machine with or without options (refrigerator, etc.)
Product	Hot beverage that is produced with the coffee machine
Users	Persons who operate the coffee machine (procure products) and in addition makes settings and minor maintenance tasks cleaning, filling with beans/milk
Operators	Persons who operate the coffee machine in self-service mode (procure products)
Touchscreen	Operating screen with display in order to use the machine
Display	Display on the touchscreen
Symbol	Digital button on the touchscreen
Swipe	To move the finger on the touchscreen to the left/right
Scrolling	To move with the finger on the touchscreen upward/downwards
Barista	Programmer and user level for the user (adjustment possibilities)
Manager	Programmer and user level for the manager (extended adjustment possibilities)

### 2.4 Symbols and emphasized text

Symbol	Name	Function
▶	Action	When the user must execute a work step, this is marked with an action. For example: ▶ Activate main switch.
▶ ⇒	Reaction	This emphasis is used to indicate a reaction to a proceeding action. For example: ▶ Activate main switch.

Symbol	Name	Function
		⇒ Coffee machine starts.
[Scope of delivery ► 15]	Cross-reference	This emphasis is used to refer to a page within this document. Cross-references are linked and can be executed with a mouse click.
>	Menu navigation	This emphasis is used to present the navigation in the user menu. For example: <i>Product Settings &gt; Edit View</i>
<i>Italics</i>	Tap symbol	Indicates a symbol/menu that should be tapped. Example: Tap on symbol <i>Confirm</i> .

## 3 Introduction

### 3.1 Intended use

The coffee machine is only suitable for producing coffee, hot water, and milk products.

Coffee machine is suitable for commercial use in catering sector, canteens, offices, etc.

### 3.2 Target audience

This document is intended for the users of the coffee machine.

### 3.3 Limitation of liability

The manufacturer accepts no liability whatsoever for any injuries or accidents due to failure to comply with the safety instructions contained in this operating manual. Moreover, any possible liability applies exclusively within the coffee machine limits, see Scope of delivery. In the event of problems, the manufacturer is liable in accordance with the [\[warranty conditions ▶ 7\]](#). The manufacturer accepts no liability for damage as the result of negligent or improper use of the machine.

### 3.4 Warranty conditions

The manufacturer warranty is valid for 12 months after the installation or 15 months after delivery ex-works for individual parts or components in the event of manufacturing or design faults. For malfunctions resulting from negligent use or incorrect connections there will be no replacement. Wear parts are not included in the guarantee performance. The work time for guarantee tasks is not covered by the manufacturer guarantee.

#### NOTICE

##### Cancellation of the guarantee claim



Guarantee claim is void if the prescribed maintenance cycles are not complied with, or if there is any resulting damage.

- ▶ Comply with the prescribed maintenance cycles.
- ▶ Only have qualified technicians perform maintenance.

## 4 Safety

### 4.1 General safety instructions

#### 4.1.1 Use of the coffee machine

- Only use the coffee machine if it is functioning faultlessly and there are no indications of damage. If there is a fault or damage notify your service partner immediately.
- If there is a fault or an emergency switch off the coffee machine via the main switch. Then unplug the mains plug or interrupt the power supply. Interrupt the water supply.
- Opening the housing is prohibited.
- Penetration into the coffee machine with an object or body part is prohibited.
- Modifying or manipulating the coffee machine is prohibited.

#### 4.1.2 Coffee machines with milk system

- The refrigerator must only be used to store cool milk. Do not fill the milk container with other fluids (e.g. syrup or alcohol).
- Always place the milk in the refrigerator at a maximum temperature of 5°C. The refrigerator is designed for keeping the milk cool and not for cooling it down.
- The refrigerator must not be used for the storage of any explosive substances (e.g. aerosols with flammable propellant gas).
- Electronic tools (e.g. thermometers) that are not approved by the manufacturer must not be used in the interior of the refrigerator (danger of fire).

#### 4.1.3 Prerequisites for use of the coffee machine

##### Service partner

The service partner is Thermoplan AG's local representative. If there queries or problems please contact your service partner. The service partner will, depending on the situation dispatch qualified technicians.

##### Qualified technicians

Qualified technicians are trained and certified Specialist that sell and maintain the Thermoplan products. They have the knowledge and the practical experience with the coffee machine, in particular with regard to safety and hygiene.

##### Users

Users are employees who have been instructed and trained in the use of the coffee machine (have read the operating manual) and who operate the coffee machine and can perform the maintenance steps in accordance with the operating manual.

##### Children

This coffee machine can be used by children from 8 years of age, as well as by persons with reduced physical, sensory or mental capacities or who lack experience and knowledge, if they are supervised or if they have been instructed relative to the safe use of the coffee machine, and the dangers associated with the coffee machine. Children are not allowed to play with the coffee machine. Cleaning and maintenance must not be performed by children without supervision.

#### 4.1.4 Installation and commissioning

- The coffee machine may only be set up, installed or repositioned by qualified technicians.

#### 4.1.5 Maintenance

- Perform all necessary cleaning tasks on a regular basis and in accordance with the description in this manual.
- The coffee machine must be maintained by a qualified technician at least once a year. An appropriate message appears on the touchscreen.

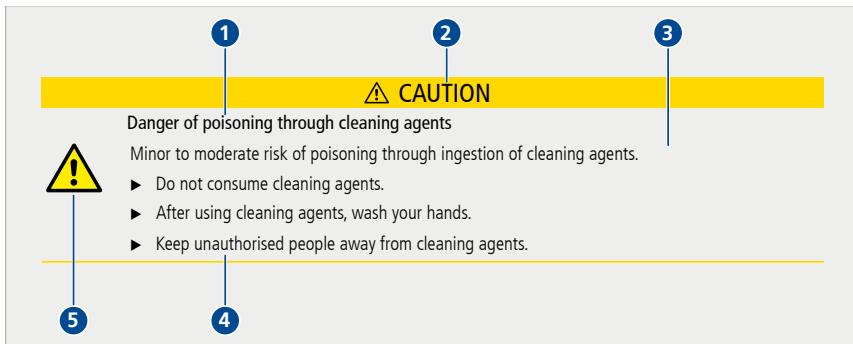
#### 4.1.6 Dismantling and disposal

- The coffee machine (incl. refrigerator) must only be dismantled by qualified technicians. The same applies for disposal of the coffee machine (incl. refrigerator) and its packaging.

### 4.2 Safety warnings

#### 4.2.1 Structure

##### Sample safety notice



1 Source of danger

4 Risk prevention

2 Signal word

5 Safety sign

3 Hazards

#### 4.2.2 Conventions

##### Hazards for personnel

## ⚠ DANGER



### Danger

The safety notice with the signal word "Danger" indicates a dangerous situation which, if it is not avoided, will result in death or serious injury.

**⚠ WARNING**

Possible, imminent danger

Indicates a possible threatening danger that can result in severe bodily injury or death.

**⚠ CAUTION**

Possible danger

Indicates a possible threatening danger that can result in minor bodily injury.

Material damage

**NOTICE**

Product damage

Indicates a situation, which if the instructions are not complied with, can damage the coffee machine or its function.

## 4.3 General safety instructions for this coffee machine

### 4.3.1 Personal injury – WARNING:

**⚠ WARNING**

Electric shock

Contact with electrical components during operation of the coffee machine can result in death or serious injury.

- ▶ Do not open the housing under any circumstances.
- ▶ Keep the coffee machine dry.
- ▶ Never immerse coffee machine, cable, or plug in water or other liquids.
- ▶ Immediately stop using the coffee machine if cable or plug are damaged.
- ▶ Keep the coffee machine or cable away from hot machine parts. Use of the coffee machine in the vicinity of open flame is strictly prohibited.
- ▶ Protect the cable from sharp edges.
- ▶ When removing the grounds container do not reach into the interior of the housing.
- ▶ Only have the coffee machine installed, relocated, removed, repaired or maintained by qualified technicians.
- ▶ Keep the coffee machine and the connecting cable out of the reach of children.

4.3.2 Personal injury – CAUTION:

## CAUTION

### Danger of scalding

Danger of minor or medium severity scalding injuries through contact with hot liquids.



- ▶ Keep your hands away from the product outlets.
- ▶ Avoid direct physical contact with hot liquids.
- ▶ Do not touch the product outlets for and after the beverage is dispensed or when cleaning.
- ▶ Carefully emptied the drip tray, ensure that contact with hot liquids is not possible.

4.3.3 Material damage

## **NOTICE**

### Damage to the coffee machine

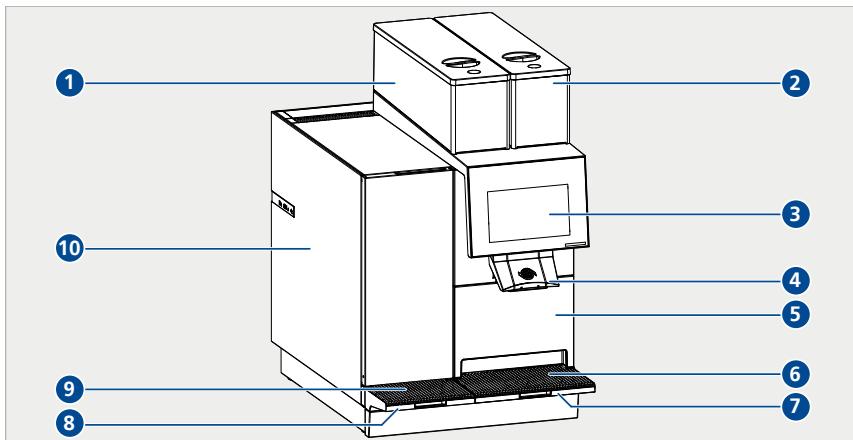
Incorrect use of the coffee machine or the wrong, defective spare parts can result in material damage.



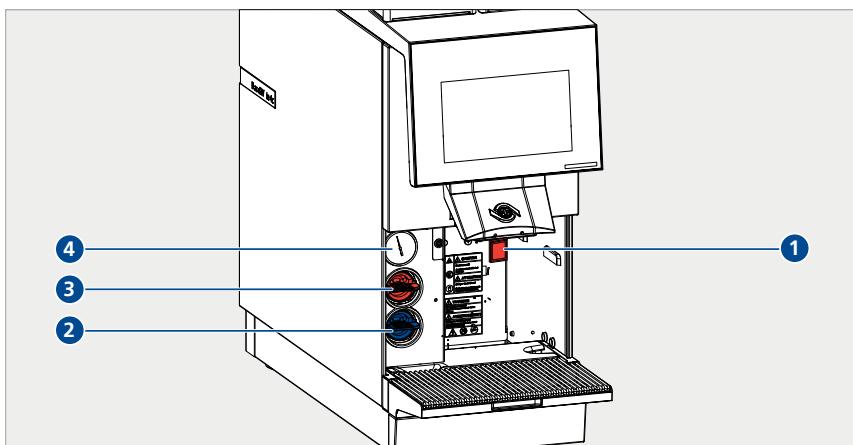
- ▶ Check whether the coffee machine to be installed complies with applicable federal, national, or municipal plumbing codes.
- ▶ The coffee machine is designed for indoor use only.
- ▶ Clean the coffee machine before longer periods of non-use. Remove and empty the grounds container, and disconnect the coffee machine from mains supply. Remove and empty milk container(s), clean and store with lid open. Leave the refrigerator door open during storage periods.
- ▶ Only operate the coffee machine at an ambient temperature of 16 °C to 32 °C.
- ▶ Set up the coffee machine on a flat, horizontal, stable and water and heat-resistant surface.
- ▶ Do not position the coffee machine where a water jet could be used for cleaning.
- ▶ Leave a free space of at least 50 mm in front of air vents.
- ▶ Always store the coffee machine at temperatures above 0 °C in a dust-free and dry environment.
- ▶ The upper edge of the coffee machine must be at least 1.5 m above the floor.
- ▶ Only use genuine Thermoplan cleaning accessories.
- ▶ Never operate the coffee machine without the drip grid.
- ▶ Do not store explosive substances such as aerosol cans with a flammable propellant in the interior of the coffee machine.

## 5 Overview

### 5.1 Coffee machine CTM RS / CTM



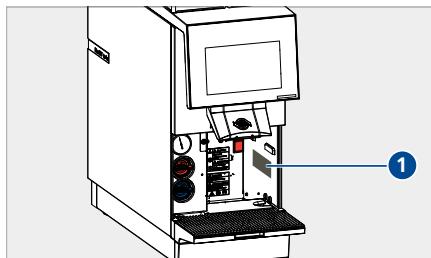
- |   |                          |    |                            |
|---|--------------------------|----|----------------------------|
| 1 | Bean container grinder1  | 6  | Cup tray – coffee machine  |
| 2 | Bean container grinder2  | 7  | Drip tray – coffee machine |
| 3 | Touchscreen with display | 8  | Drip tray – refrigerator   |
| 4 | Product outlet           | 9  | Cup grid – Refrigerator    |
| 5 | Grounds container        | 10 | Refrigerator               |



- |   |                          |   |                           |
|---|--------------------------|---|---------------------------|
| 1 | Main switch              | 3 | Coffee cleaning key (red) |
| 2 | Milk cleaning key (blue) | 4 | Pressure gauge            |

## 5.2 Type plate

- ▶ Slide outlet to the topmost position.
- ▶ Remove the grounds container.  
⇒ The type plate is on the right side in the interior.

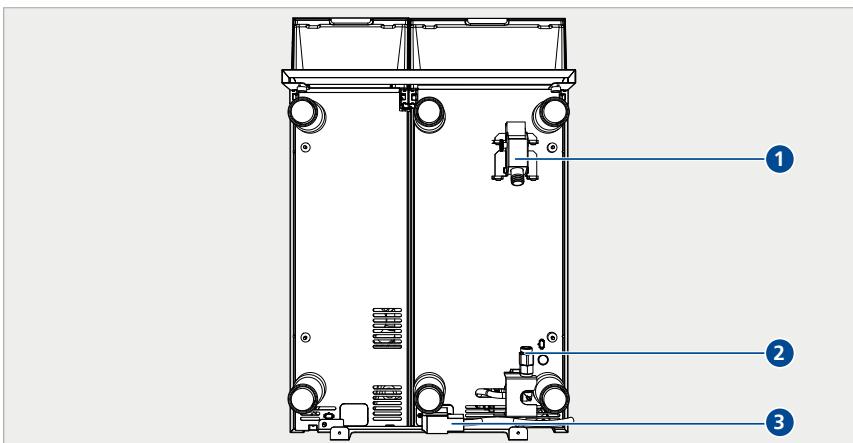


## 5.3 Capacity information

Capacities – products (per hour)	180 cups of espresso / 140 cups of coffee / 18 l hot water / 120 cups of cappuccino
Electrical connection / power	CTM (without refrigerator): 220-240 VAC / 50/60 Hz / 2700-3100 W CTM US (without refrigerator): 208 VAC/60 Hz/2700 W CTM-RS (with refrigerator): 220-240 VAC / 50/60 Hz / 2750-3150 W CTM-RS US (with refrigerator): 208 VAC/60 Hz/2750 W
Water boiler pressure	1.17 MPa (11.7 bar)
Tap water pressure	0.2-0.4 MPa (2-4 bar)
Dimensions (W/D/H)	CTM (without refrigerator): 228 x 600 x 645 mm CTM RS (with refrigerator): 398 x 600 x 645 mm
Weight	CTM (without refrigerator): 40 kg CTM RS (with refrigerator) 56 kg
Climate class* – refrigerator	5
Noise emission	<70 dB

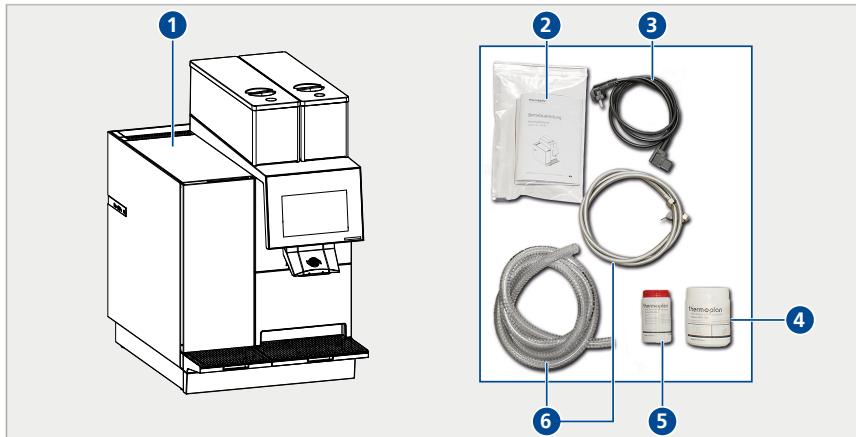
\*The climate class indicates the room temperature at which the refrigerator may be operated to achieve the full cooling capacity. The climate class is specified on the type plate [Type plate ▶ 13]. Climate class 5 corresponds to a room temperature of 10°C to 43°C. Refrigerator must not be operated outside of the specified room temperature.

## 5.4 Connections



- |   |                                   |   |   |
|---|-----------------------------------|---|---|
| 1 | Drain connection – coffee machine | 3 | Mains cable connection – coffee machine |
| 2 | Water connection – coffee machine | 4 | Mains cable connection – refrigerator   |

## 6 Scope of delivery

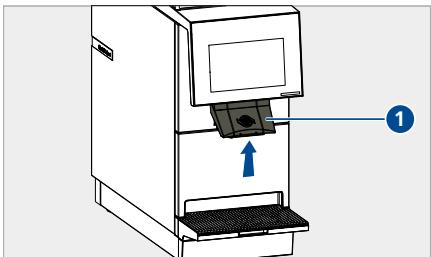


- |   |                  |   |  |
|---|------------------|---|--|
| 1 | Coffee machine   | 4 | Milk cleaning tablets (white)          |
| 2 | Operating manual | 5 | Coffee cleaning tablets (red)          |
| 3 | Mains cable      | 6 | Water connection and drain water hoses |

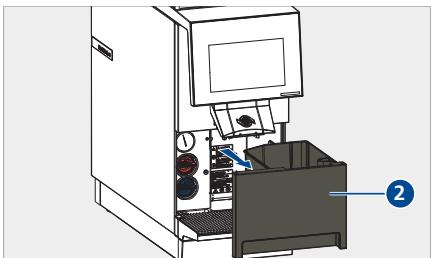
## 7 Commissioning

### 7.1 Switch coffee machine on and off

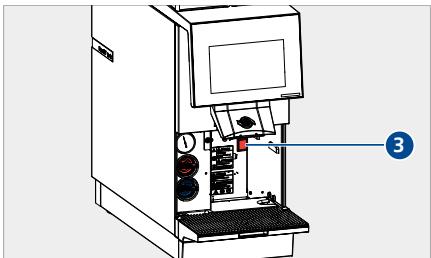
- ▶ Slide outlet (1) to the topmost position.



- ▶ Remove grounds container (1).

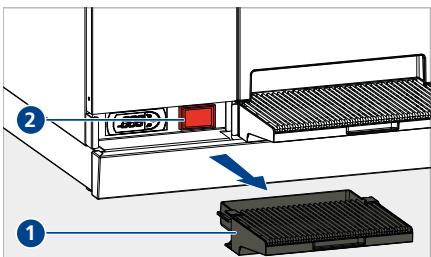


- ▶ Activate main switch (1).



### 7.2 Switch refrigerator on and off

- ▶ Remove drip tray (1).
- ▶ Activate main switch (2).
- ▶ Follow the instructions on the display.



## 7.3 Fill bean hopper

### **WARNING**

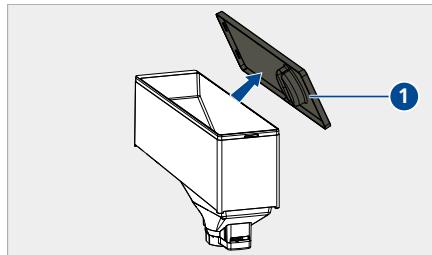
Danger of injury due to grinders



Danger of medium-severe or severe injuries when touching the grinders.

- ▶ Only instructed personnel are allowed to remove the bean hoppers.
- ▶ Never reach into the grinders.

- ▶ Remove the lid of the bean container (1).
- ▶ Feel the bean container with fresh coffee beans.
- ▶ Fit the lid back on the bean container (1).
  - ⇒ Coffee products can now be served  
[Dispensing the product ▶ 18].



## 7.4 Filling the milk container

### **CAUTION**

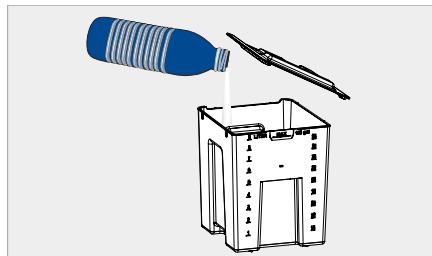
Health risk

Danger of minor to medium severity illness through consumption of spoiled milk.



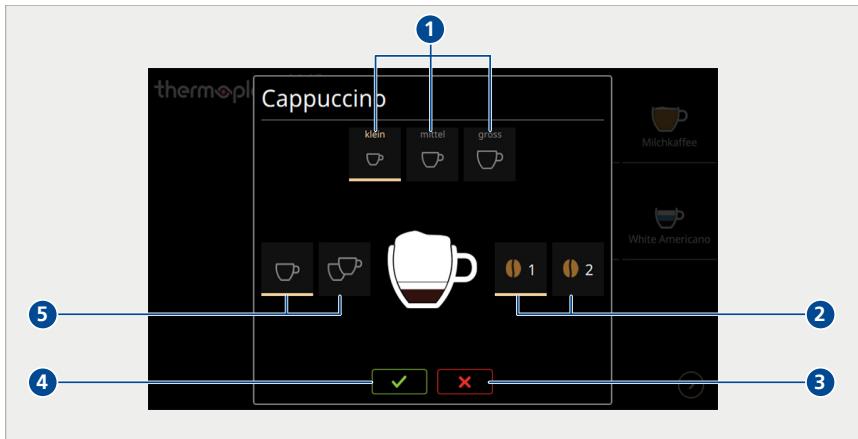
- ▶ Only use heat-treated (e.g. pasteurised or UHT) milk.
- ▶ Only touch milk containers with clean hands.
- ▶ Fill milk container with cooled milk (max.5°C).
- ▶ Use milk from opened milk containers within 24 hours.

- ▶ Remove milk container from the refrigerator.
- ▶ Fill milk container with fresh, cooled milk.
- ▶ Insert milk container.
- ▶ Guide milk hose/sensor hose of the refrigerator directly into the milk in the milk container.
  - ⇒ Milk products can now be dispensed  
[Dispensing the product ▶ 18].



## 8 Operation

### 8.1 Product options



- 1 Select product size *small, medium or large*
- 2 Select beans from grinder 1 or grinder 2 (e.g. if there are two types of coffee beans)
- 3 Cancel product selection
- 4 Confirm product dispensing
- 5 Select single or double product

### 8.2 Dispensing the product

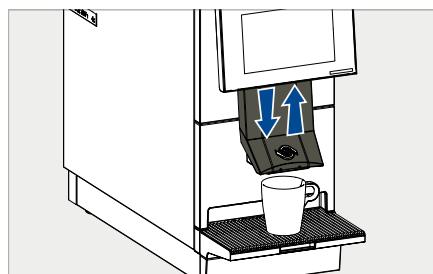
#### **⚠ CAUTION**



#### Danger of scalding

Danger of minor or medium severity scalding injuries through contact with hot liquids.  
► Avoid direct physical contact with hot liquids.

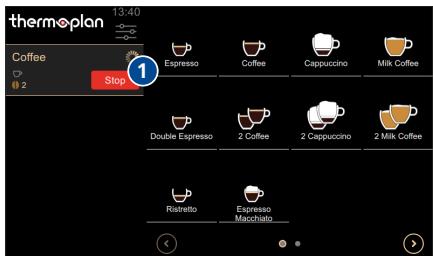
- Slide outlet upward or downward depending on cup size.
- Place the cup under the outlet.



- ▶ Page to the left (2) or ride (3) or swipe to see more products.
- ▶ Select product (1).



- ▶ Select desired product options [Product options ▶ 18].
- ▶ Confirm product selection (1) or cancel (2).
  - ⇒ Selected product will be dispensed.
  - ⇒ Display shows when the product has been produced.
- ▶ The symbol *Stop* (1) to stop product outlet prematurely.



- ▶ Take the cup out of the cup rack.
  - ⇒ Product is ready for consumption.



## 8.3 Pre-selecting a product

If multiple products should be produced in succession, these can be preselected.

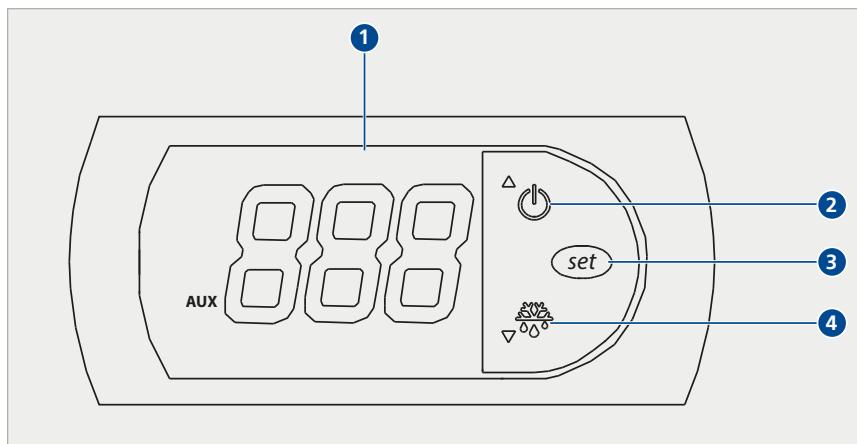
- ▶ Tap the desired product symbols (1) one after the other.
- ▶ Products will be displayed in the queue on the left and the first product will start.
- ⇒ When the first product is finished, the next product will start (2).
- ▶ Delete individual product from the queue (3).
- ▶ Delete all products from the queue (4).



## 8.4 Operation – refrigerator

The refrigerator is a component of the coffee machine and can only be operated in conjunction with the coffee machine.

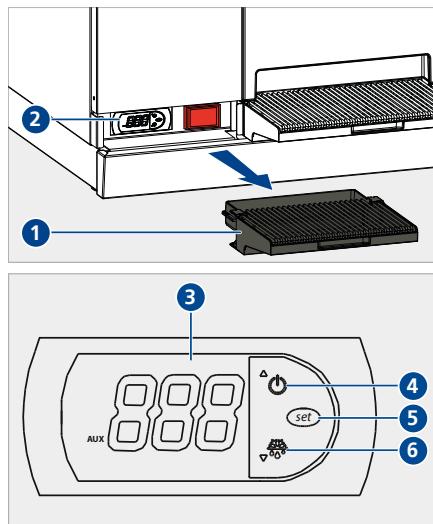
### 8.4.1 Operating element



1	Temperature display	Shows the momentary temperature in the refrigerator
2	ON/OFF button	Activate/deactivate the refrigerator
		Increase value
3	COOLING button	Decrease value
4	SET button	Confirm value

#### 8.4.2 Adjusting the temperature

- ✓ Refrigerator must be switched on.
- Remove drip tray (1).
- ⇒ Operating element (2) is inside on the left.

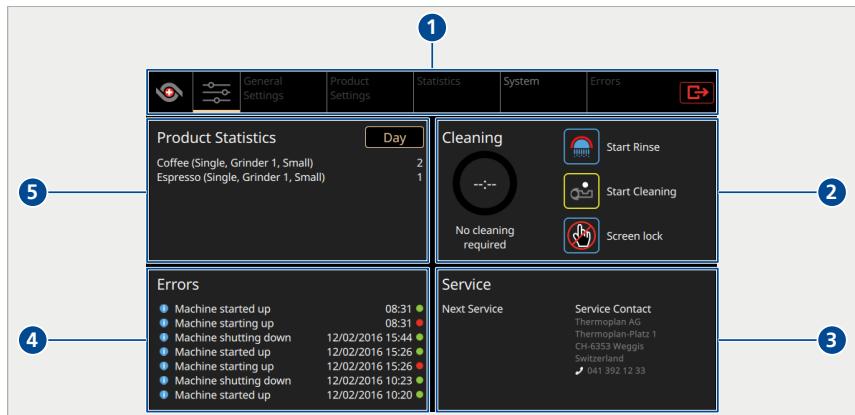


- Keep the SET button (3) depressed.
- ⇒ Numbers on the temperature display (1) are flashing.
- With ON/OFF button (2) and the COOLING button (4) set the desired temperature.
- Press the SET button (3).
- ⇒ Temperature will be saved.

## 9 Settings in the user menu

The user of the coffee machine can make various settings in the user menu. There are three different user groups for controlling access authorization. The user groups are protected with a number code via the login window. The number codes are transferred at installation and instruction by the service partners qualified technician.

### 9.1 Overview – user menu



- |   |                     |   |                    |
|---|---------------------|---|--------------------|
| 1 | Menu tab            | 4 | Events             |
| 2 | Cleaning status     | 5 | Product statistics |
| 3 | Service information |   |                    |

### 9.2 Calling up the user menu

- Tap the *user menu* symbol (1).
- ⇒ The start screen (dashboard) of the user menu is displayed.



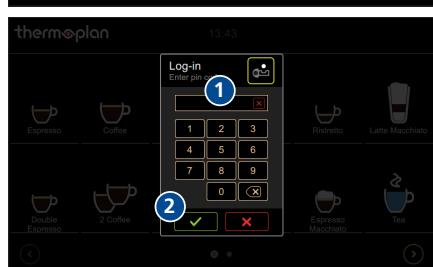
## 9.3 Calling up the user menu in self-service mode

If self-service mode is active the user menu can only be called up via a password. This function protects the settings against undesired manipulation.

- Tap and hold *time* (1) until the login window appears.



- Enter the appropriate code (1) and confirm (2).
- ⇒ The start screen (dashboard) of the user menu is displayed.



## 9.4 User login

### Variant 1: barista / manager active

- Tap and hold the *user menu* symbol (1).
- Enter the barista / manager code in the login window and confirm.
- ⇒ The user menu is displayed.



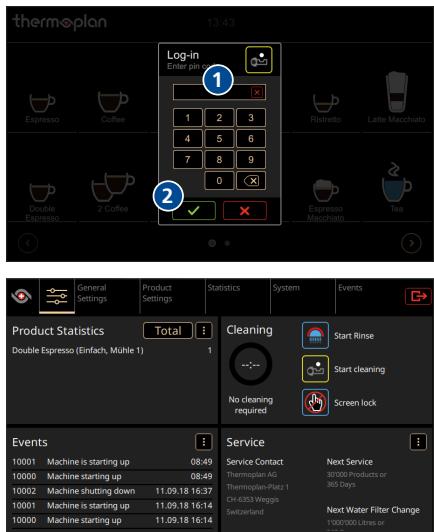
### Variant 2: self-service active

- Tap and hold *time* (1) until the login window appears.



- ▶ Enter the barista / manager code in the login window and confirm.

⇒ The start screen (dashboard) of the user menu is displayed.



## 9.5 User logout



- ▶ Tap the *logout* symbol to logout the active user.
- ⇒ After logout the user group set as standard user is automatically active.

## 9.6 Menu tab and access rights

	1	2	3	4	5	6	7
Pos.	Activity		Self-service	Barista	Manager	Comments	
	Dispensing of product					[Dispensing the product ▶ 18]	
	Cleaning/rinsing					[Execute automatic cleaning ▶ 39]	

Pos.	Activity	Self-service	Barista	Manager  Manager	Comments
1	Return to the product screen				
2	Call up user menu (dashboard)				[User login ▶ 23]
3	General settings <ul style="list-style-type: none"><li>• Regional settings</li><li>• Screen settings</li><li>• Screen saver</li><li>• Energy management</li><li>• User settings/ standard user settings</li></ul>				[General settings ▶ 25]
4	Product settings <ul style="list-style-type: none"><li>• Product list</li><li>• Edit products</li><li>• Edit views</li></ul>				[Product settings ▶ 30]
5	Statistics <ul style="list-style-type: none"><li>• Product ranking list</li><li>• Machine counters</li></ul>				[Statistics ▶ 33]
6	System <ul style="list-style-type: none"><li>• Information</li><li>• Recording</li></ul>				[System ▶ 34]
7	Errors <ul style="list-style-type: none"><li>• Error log</li></ul>				[Events ▶ 36]

## 9.7 General settings

General settings can only be made by the user group manager.

### 9.7.1

#### Regional settings

- ▶ Select *General Settings > Regional Settings* (1).
- ▶ Make regional settings (2).
- ▶ Tap the *Logo* symbol (3) to return to the product screen or to make other settings.

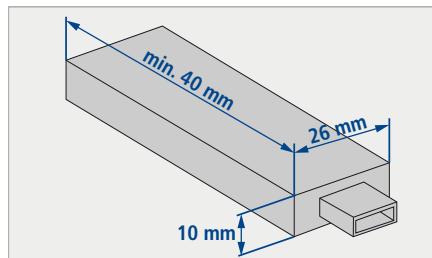


### 9.7.2

#### Screen saver

##### USB stick requirements

- ▶ Purchase branded goods.
- ⇒ Dimensions: Max. 10 mm x 26 mm, length min. 40 mm.
- ⇒ Memory space: Max. 32 GB.
- ▶ Format FAT32 (before use).



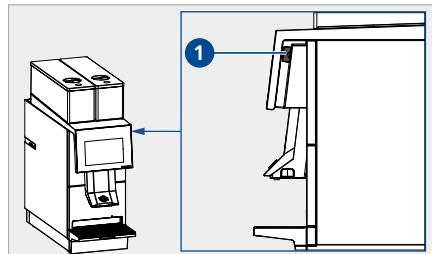
##### Photographic material requirements

- Size: 800x480 pixels, 50 px reserved for information bar.
- Format: JPG
- < 5 MB

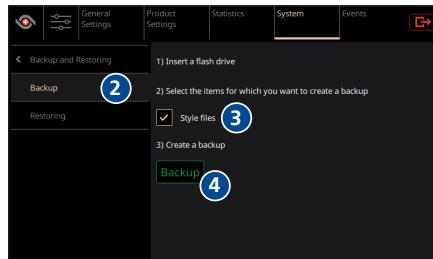


#### Installing screen saver

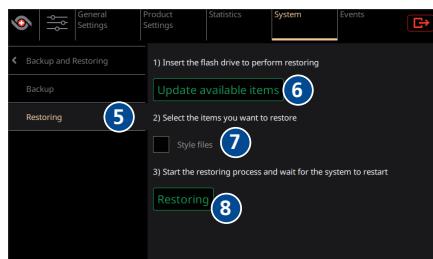
- ▶ remove the USB cover (1).
- ▶ Insert empty USB stick.



- ▶ Select *System > Data backup and recovery* (1).
- ▶ Select *Style files* (2).
- ▶ Tap the *Data backup* symbol (3).
- ⇒ Screen saver graphics are backed up.

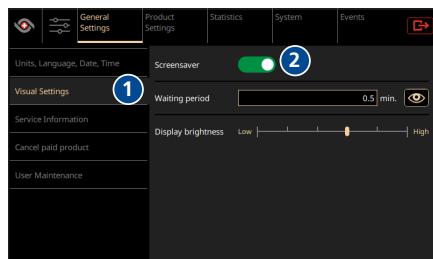


- ▶ remove the USB stick.
- ▶ Open directory ...\\Backup\\Style\\ScreenSaver on the USB stick.
- ▶ Replace or supplement the graphics in the directory with your own graphics.
  - ⇒ **Attention:** The ScreenSaver folder must not be larger than 5 MB, otherwise it cannot be uploaded to the machine.
- ▶ Insert the USB stick into the coffee machine again.
- ▶ Select *System > Recovery* (1).
- ▶ Tap the *Update available articles* symbol (2).
- ▶ Select *Style files* (3).
- ▶ Tap the *Restore* symbol (4).
  - ⇒ The screen saver is installed.

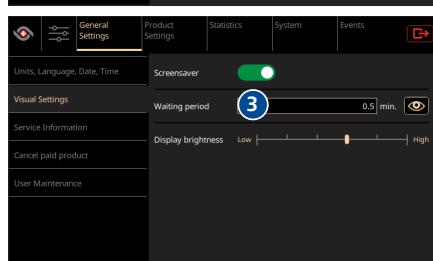


### 9.7.3 Configuring Screen Saver

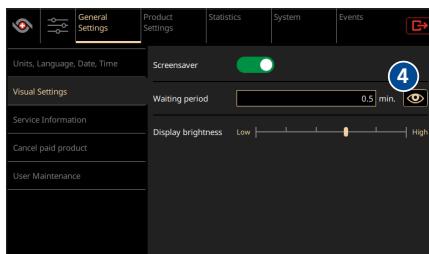
- ▶ Select *General Settings > Screen Settings* (1).
- ▶ Switch on screen saver with slider (2).



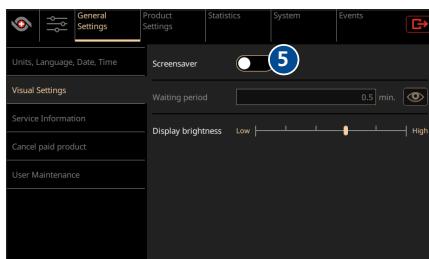
- ▶ For *wait time* (3) specify the time (min) after which the screensaver will be activated.



- Select *preview* (4) to test the screensaver.

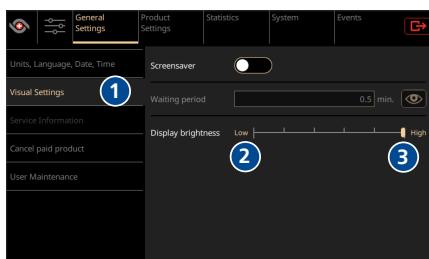


- Switch off screen saver with slider (5).



### 9.7.4 Adjusting screen brightness

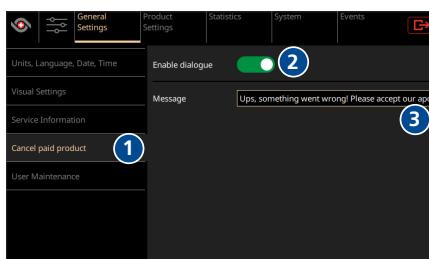
- Select *General Settings > Visual Settings* (1).
- Adjust the screen brightness with the slider: To the left (2) = darker, to the right (3) = brighter.



### 9.7.5 Cancel paid product

If the coffee machine is operated in the self-service mode and with a payment system, a message can be displayed if a paid product abort occurs.

- Select *General settings > Paid Product Abort* (1).
- Enable the dialogue with the slider (2).
- Tap on the text field (3) to adapt the text of the message.



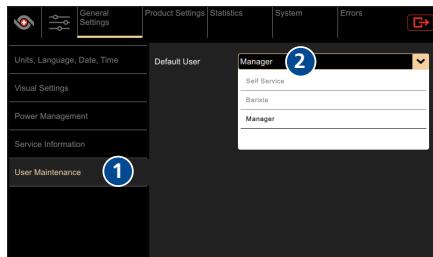
- ▶ Enter the desired text (4).
- ▶ Confirm the entry (5).



#### 9.7.6 User settings / standard user settings

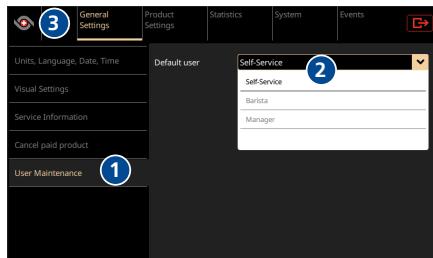
The standard user is the user group that is automatically set after restarting the machine or logging out of the user menu. The barista, self-service and the manager can be set as a standard user. The standard user can only be specified by the manager user group.

- ▶ Select *General Settings > User Settings* (1).
- ▶ Set standard user (2).
- ▶ Tap the *Logo* symbol (3) to return to the product screen or to make other settings.



#### 9.7.7 Activating and deactivating self-service mode

- ▶ Select *General Settings > User Maintenance* (1).
- ▶ Change the standard user (2) to self-service.
- ▶ Tap the symbol *Logo* (3) to return to the product screen).
  - ⇒ Products will be distributed over the entire screen.
  - ⇒ Self-service mode also remains active while logging off or restarting the machine.



## 9.8 Product settings



Product settings can only be made by the manager user group.

### 9.8.1 Product list

The coffee machine is delivered with preset product categories. These serve as the basis for individual coffee recipes. Different product parameters influence the coffee recipes, such as the quantity of water or coffee powder used. Only the manager user group can adapt existing products.

- Select *Product Settings > Product List* (1).
- ⇒ All preprogrammed products will be displayed.
- Tap *Process*(2) to go directly to the menu *Process products*.
- Tap the *Logo* symbol to return to the product screen or to make other settings.

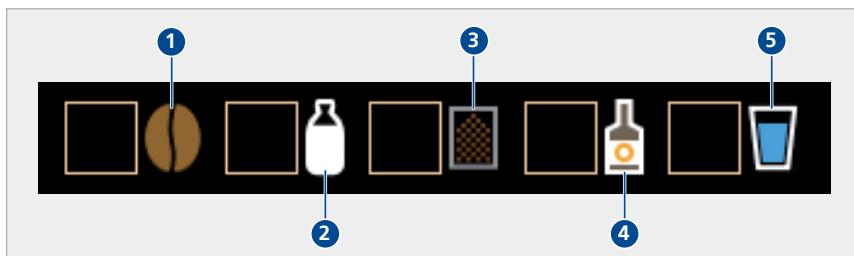


Product name	Category	Filter
Cappuccino	Cappuccino	<input checked="" type="checkbox"/>
Coffee	Coffee	<input checked="" type="checkbox"/>
Double Espresso	Double Espresso	<input checked="" type="checkbox"/>
Espresso	Espresso	<input checked="" type="checkbox"/>
Espresso Macchiato	Espresso Macchiato	<input checked="" type="checkbox"/>
Hot Chocolate	Hot Chocolate	<input checked="" type="checkbox"/>

### 9.8.2 Filtering product categories

The list of product categories can be filtered for better clarity.

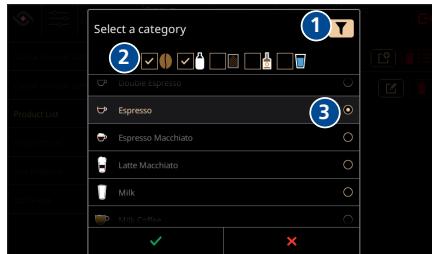
Overview of filter symbols



- |   |   |   |   |
|---|---|---|---|
| 1 | Products with coffee  | 4 | Products with syrup (only with BW4c-CTM-F and BW4c-CTM-P-F) |
| 2 | Products with milk  | 5 | Products with water   |
| 3 | Products with chocolate (only with BW4c-CTM-P and BW4c-CTM-P-F) |   |   |

## Using filters

- ▶ Tap on the *Filter* (1) symbol.
- ▶ Select the desired filter (2).
- ⇒ The products to which one or more of the filters apply are displayed.
- ▶ Select the desired product (3).



### 9.8.3 Edit products

- ▶ Select *Product Settings > Edit Products > Adaptations* (1).
- ▶ Use the slider to increase (2) or decrease (3) product parameters.



- ▶ Tap the *test product* symbol (1) to test the product.
- ▶ Click the *Change product* symbol (2) to change to a different product.
- ▶ Click the *Save* symbol (3) to save the configuration for the product. Click the *reset* symbol (4) to discard the configuration.
- ▶ Tap the *Logo* symbol to return to the product screen or to make other settings.



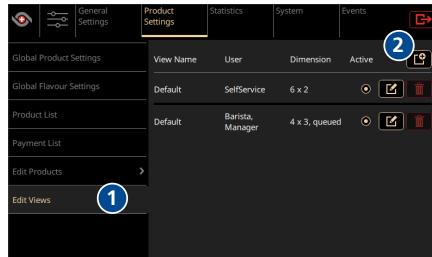
### 9.8.4 Edit products

- ▶ Select *Product Settings > Edit Products > Adaptations* (1).
- ▶ Use the slider to increase (2) or decrease (3) product parameters.
- ▶ Tap the *test product* symbol (1) to test the product.
- ▶ Click the *Change product* symbol (2) to change to a different product.
- ▶ Click the *Save* symbol (3) to save the configuration for the product. Click the *reset* symbol (4) to discard the configuration.
- ▶ Tap the *Logo* symbol to return to the product screen or to make other settings.

### 9.8.5 Edit views

#### Create new product screen

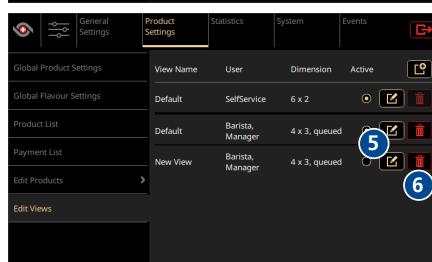
- ▶ Select Product Settings > Edit Views (1).
- ▶ Tap the symbol *add* (2) to add a new product screen.



- ▶ Select the desired user group (1).
- ▶ Activate or deactivate queue mode (2) (queue mode active: In the product screen the product queue is displayed).
- ▶ Activate the selection.



- ▶ Click the symbol *edit* (1) to adapt the created product screen in the views editor.
- ▶ Click the symbol *delete* (2) to delete the product screen.



- ▶ Adapt the name (1) in the views editor.
- ▶ Select dimensions (2).



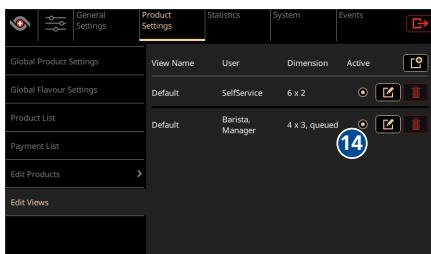
- ▶ Tap the symbol *Add* (1) to place a product at the desired location.
- ▶ Tap the symbol *delete* (2) to delete a product.
  - ⇒ Products can be moved through "drag&drop": Select product and drag to the desired position (3).



- ▶ Tap the symbol *add* (1) to add a new page.
- ▶ Tap the symbol *close* (2) to accept the changes and return to the *product settings*.



- ▶ Activate the new product screen (1).
- ▶ Tap the *Logo* symbol to return to the product screen or to make other settings.



## 9.9 Statistics

- ▶ Select *Statistics > Product Ranking List* (1).
  - ⇒ All products since the last reset will be displayed.
  - ⇒ The product ranking list can be sorted by day, week, month and year.
- ▶ Tap the *Delete statistics* symbol (2) to reset the statistics.
  - ⇒ The statistics can only be deleted by the manager user group.
- ▶ Select *Statistics > Machine Counters* (1).
  - ⇒ The following counters will be displayed:
    - Number of cleaning cycles
    - Products counter
    - Water.
  - ⇒ These counters cannot be deleted.

- ▶ Tap the *Logo* symbol to return to the product screen or to make other settings.

### 9.9.1 Product ranking list

- ▶ Select *Statistics > Product Ranking List > Total* (1).

  - ⇒ All products since the last reset (3) will be displayed.
  - ⇒ The product ranking list can be sorted by product name or quantity (2).
  - ⇒ The statistics can only be deleted by a service technician.

- ▶ Select *Statistics > Product Ranking List > Manager* (4).

  - ⇒ All products since the last reset will be displayed.
  - ⇒ The product ranking list can be sorted by product name or quantity.
  - ⇒ The statistics can be deleted by the user group manager (5) at any time.

**Total View (Top Screenshot):**

Product Name	Count
Coffee (Grinder 1, Small)	17
Milk Coffee (Grinder 1, Milk 1, Small)	5
Latte Macchiato (Grinder 1, Milk 1, Small)	4
Tea (Small)	3
Cappuccino (Grinder 1, Milk 1, Small)	2
Cappuccino (Grinder 1, Milk 1, Small)	2
Americano (Grinder 1, Small)	1
Mocca (Grinder 1, Milk 1, Small)	1

**Manager View (Bottom Screenshot):**

Product Name	Count
Coffee (Grinder 1, Small)	13
Latte Macchiato (Grinder 1, Milk 1, Small)	4
Tea (Small)	3
Milk Coffee (Grinder 1, Milk 1, Small)	3
Cappuccino (Grinder 1, Milk 1, Small)	2
Americano (Grinder 1, Small)	1
Mocca (Grinder 1, Milk 1, Small)	1
Cappuccino (Grinder 1, Milk 1, Small)	1

### 9.9.2 Machine counters

- ▶ Select *Statistics > Machine Counters* (1).

  - ⇒ The following counters will be displayed:
    - Number of cleaning cycles
    - Products counter
    - Water.
  - ⇒ These counters cannot be deleted.

Category	Value
Number of cleanings	
Complete	5
Incomplete	10
Product Counters	
Service	0
Warranty	0

## 9.10 System

### 9.10.1 System information

System information can be viewed by the user groups Barista and Manager.

- Go to *System > Information* (1)
- ⇒ The following information is displayed:
  - Machine (serial number)
  - Software (version/specifications)



## 9.10.2 Machine configuration

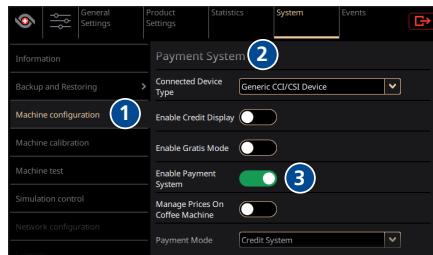


Changes in this menu can only be made by the Manager user group.

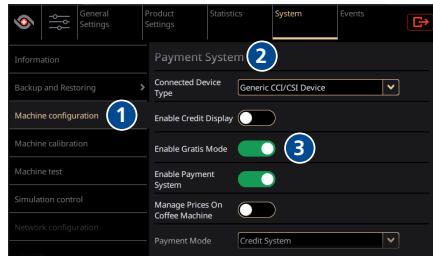
Payment system settings can be made in the machine configuration menu. Provided that a payment system is connected to the coffee machine.

### Activate payment system

- Go to *System > Machine configuration* (1).
- Scroll to *Payment System* (2).
- Activate or deactivate the payment system with the slider (3).



- Go to *System > Machine configuration* (1)
- Scroll to *Payment System* (2).
- Activate or deactivate *Gratis Mode* with slider (3).
  - ⇒ If the free mode is activated, products can be purchased without being charged.
  - ⇒ If the free mode is deactivated, the prices stored for the products on the coffee machine or the prices managed via the payment system are charged.



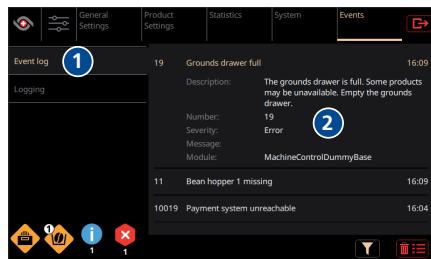
## 9.10.3 Licences

All legally relevant license information is listed under *System > Licenses*.

## 9.11 Events

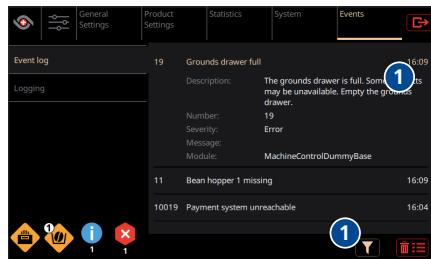
### 9.11.1 Event log

- Got to *Event > Event log* (1).
- ⇒ All previous events (2) are displayed.
- ⇒ The event log can only be deleted by a service technician.

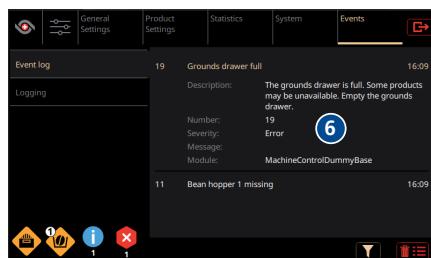
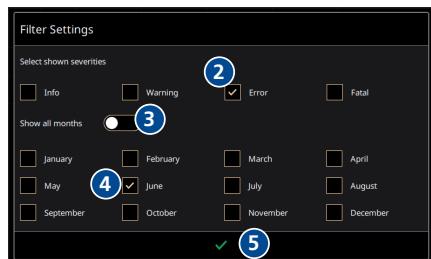


#### Filter events

- Touch the filter symbol (1).



- Select the severity (2) of the event you want to display.
- Select *Display all months* (3) to display the events for the whole year.
- Select one or more months (4) to narrow down the results.
- Apply filters (5).



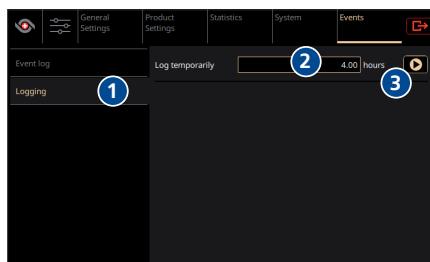
### 9.11.2 Logging



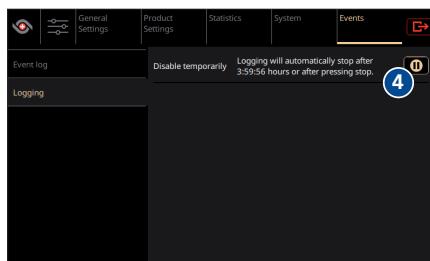
Changes in this menu can only be made by the Manager user group.

The *Logging* menu allows you to record machine activity for a certain period of time. These recordings can then be evaluated by a service technician.

- ▶ wählen. Go to *Events > Logging* (1)
- ▶ Enter the desired time period (2) during which the machine activities are to be logged.
- ▶ Start recording (3).



- ▶ Press *Stop* (4) to abort the recording prematurely.



## 10 Cleaning

### 10.1 Cleaning agents and accessories

#### CAUTION

Danger of poisoning through cleaning agents



Minor to moderate risk of poisoning through ingestion of cleaning agents.

- ▶ Do not consume cleaning agents.
- ▶ After using cleaning agents, wash your hands.
- ▶ Keep unauthorised people away from cleaning agents.

#### NOTICE

Coffee machine damage through use of the wrong cleaning agents



The coffee machine is damaged through the use of the wrong cleaning agents and accessories.

- ▶ Only use the cleaning agents prescribed by Thermoplan.
- ▶ Cloths for cleaning should only be slightly moistened. Dripping cloths or sponges can cause a short circuit.
- ▶ Cloths used to clean the machine components which come into contact with food must be germ-free.
- ▶ Alcohol, ethanol, methylated spirits, disinfectants or acidic cleaning agents, such as acetic acid must not be used for cleaning.

Additional accessories for cleaning:

- Warm soap solution
- Cloth for damp cleaning
- Cloth for dry cleaning
- Cleaning tablets for the coffee system
- Cleaning tablets for the milk system

### 10.2 Cleaning schedule

The cleaning schedule describes which cleaning steps must be executed daily or weekly. This cleaning schedule must be strictly complied with to ensure hygiene and product quality.

Daily	Weekly	Cleaning step	Comment
1x		Execute automatic cleaning	[Execute automatic cleaning ▶ 39]
1x		Clean exterior components	[Clean exterior components ▶ 41]
1x		Clean the grounds container and drip tray	[Clean the grounds container and drip tray ▶ 43]
1x		Clean the product outlet block	[Clean product outlet ▶ 43]

Daily	Weekly	Cleaning step	Comment
	1x	Clean bean container	[Clean bean container ▶ 44]
1x		Clean the milk system	Only for coffee machines with milk system [Clean the refrigerator ▶ 45]

## 10.3 Cleaning prompt



The cleaning prompt appears after a defined period or after a specific number of dispensed products.

Execute the automatic cleaning as soon as possible. The products remain available. The message appears 24 hours after the first dispensed milk product or 48 hours after the first dispensed coffee product.



Execute the automatic cleaning immediately. The products are no longer available. The message appears 26 hours after the first dispensed milk product or 50 hours after the first dispensed coffee product.

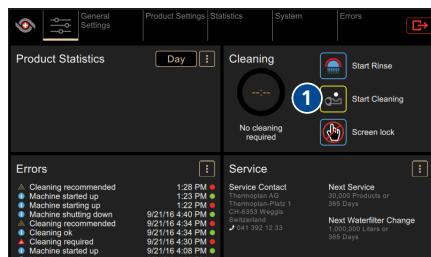
## 10.4 Execute automatic cleaning

The automatic cleaning can be executed in three ways.

Variant 1: Via the user menu (possible any time)



- ▶ Call up the user menu [Calling up the user menu ▶ 22].
- ▶ Tap the symbol *cleaning* (1).
- ⇒ Cleaning starts.
- ▶ Follow the instructions on the display.
- ⇒ The cleaning process takes several minutes.



Variant 2: Note on the machine display

A cleaning prompt appears on the product screen as soon as the predefined time after the first dispensing of product has elapsed.

- ▶ Tap the symbol *cleaning* (1).
- ⇒ Cleaning starts.
- ▶ Follow the instructions on the display.
- ⇒ The cleaning process takes several minutes.



## Variant 3: Via the login window (possible any time)

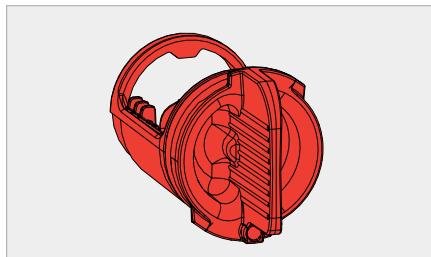
- ▶ Tap and hold the *user menu* symbol.
  - ⇒ The login window appears.
- ▶ Tap the symbol *cleaning* (1).
  - ⇒ Cleaning starts.
- ▶ Follow the instructions on the machine display.
  - ⇒ The cleaning process takes several minutes.



## 10.5 Cleaning key

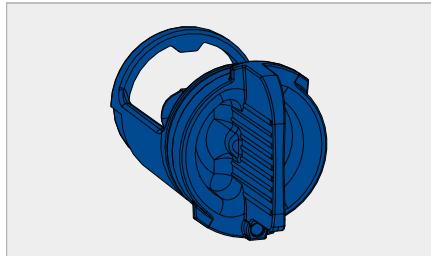
### Coffee cleaning key (red)

The coffee cleaning key (red) is used for cleaning the coffee system. It is located inside the machine behind the grounds container.

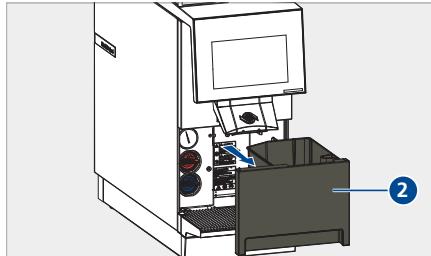


### Milk cleaning key (blue)

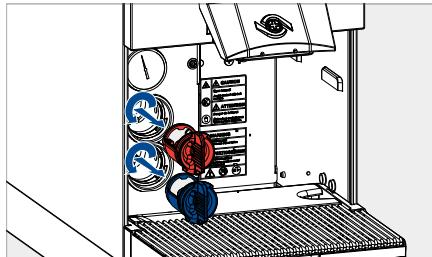
The milk cleaning key (blue) is used for cleaning of the milk system. It is located inside the machine behind the grounds container.



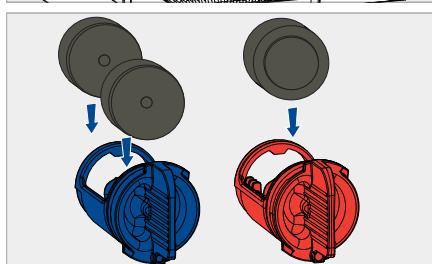
- ▶ Remove grounds container (1).



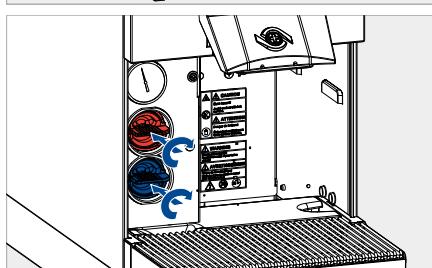
- ▶ Turn the cleaning key 90° anticlockwise and then pull it out.



- ▶ Insert 2 milk cleaning tablets and/or 1 coffee cleaning tablet in the respective cleaning key as shown on the display.

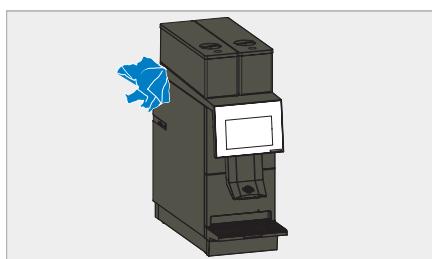


- ▶ Insert the cleaning key and turn 90° clockwise.
- ▶ Re-insert the grounds container.
- ▶ Start cleaning via the display.

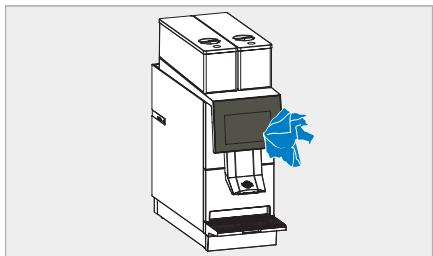


## 10.6 Clean exterior components

- ▶ Moisten a non-abrasive cloth with a soap water solution.
- ▶ Carefully clean the outside of the coffee machine.



- ▶ Moisten a non-abrasive cloth with a soap water solution.
- ▶ Carefully clean the touchscreen.



## 10.7 Clean the grounds container and drip tray

### NOTICE

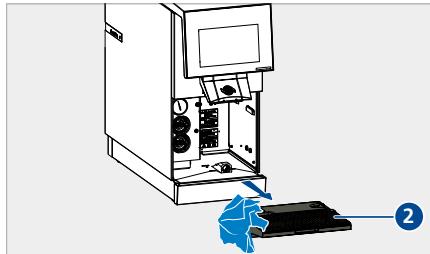


#### Damage of the grounds drawer

The grounds drawer can be damaged if not cleaned properly.

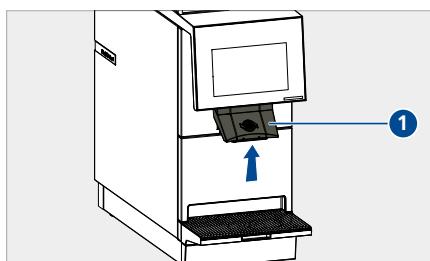
- ▶ Carefully tap the coffee grounds out of the grounds drawer.

- ▶ Empty the grounds container (1) and wash out with a soap water solution. Then dry.
- ▶ Empty drip grid (1) and wash out with a soap water solution. Then dry.

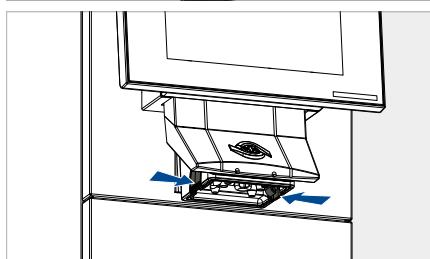


## 10.8 Clean product outlet

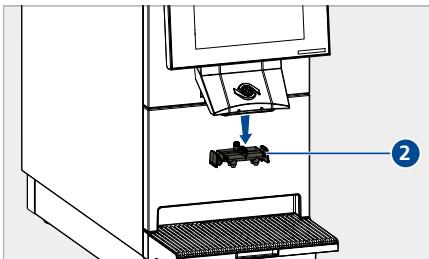
- ▶ Slide product outlet upwards.



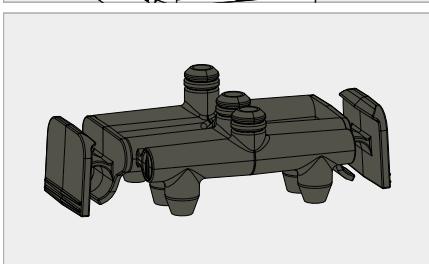
- ▶ Press the retaining clips together and loosen the product outlet.



- ▶ Pull the product outlet block out of the product outlet.

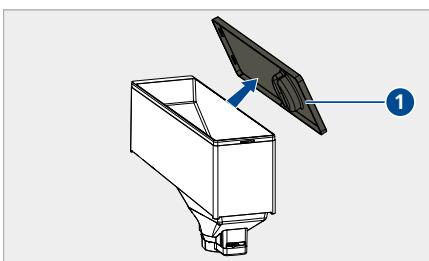


- ▶ Thoroughly flush out the product outlet block thoroughly with a soap water solution. Then rinse out with clean water.
- ▶ Rub out product outlet with a small brush.
- ▶ Dry and re-insert product outlet block.

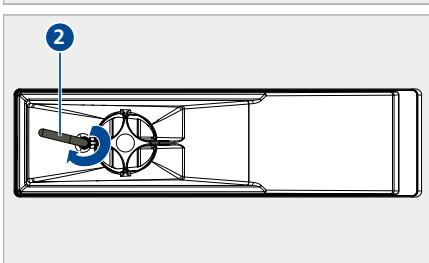


## 10.9 Clean bean container

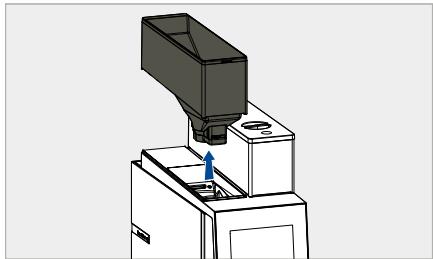
- ▶ Remove the lid of the bean container (1).



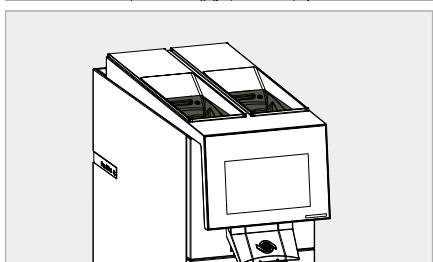
- ▶ Turn the lever in the bean container anticlockwise to detach the bean container.



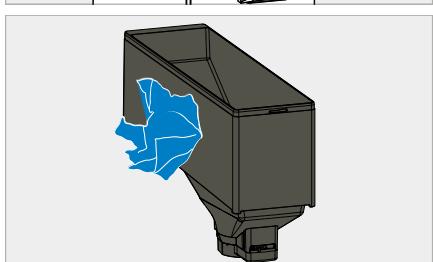
- ▶ Lift bean container with both hands and remove it.
- ▶ Remove beans from the bean container.
- ▶ Store beans in cool and dry location.



- ▶ Remove the remaining beans from the grinders with a hand vacuum.

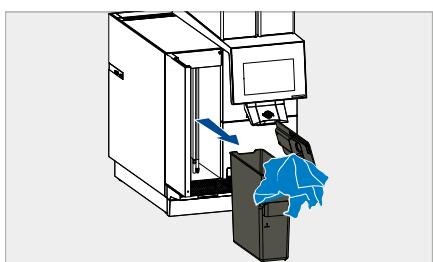


- ▶ Thoroughly flush out bean container with a warm soap solution. Then rinse out with clean water.
- ▶ Thoroughly dry the bean container and re-insert it.

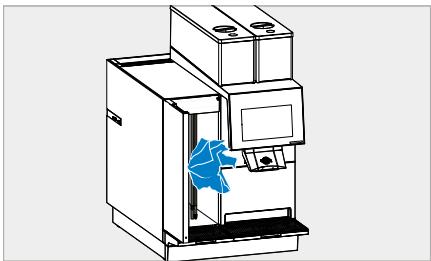


## 10.10 Clean the refrigerator

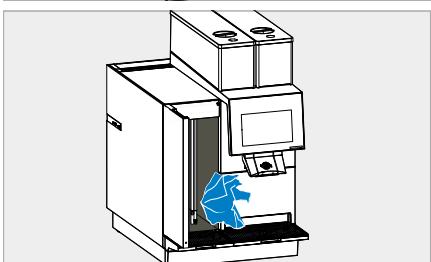
- ▶ Remove milk container from the refrigerator.
- ▶ Rinse out milk container with warm water and then dry it.



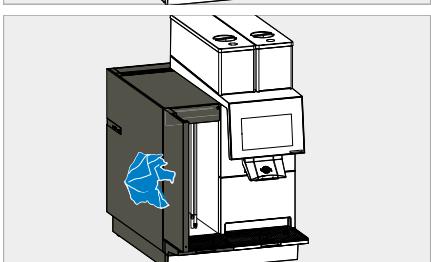
- ▶ Moisten a non-abrasive cloth with a soap water solution.
- ▶ Clean milk hoses.



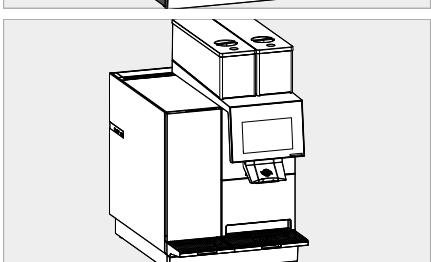
- ▶ Moisten a non-abrasive cloth with a soap water solution.
- ▶ Clean the interior of the refrigerator.



- ▶ Moisten a non-abrasive cloth with a soap water solution.
- ▶ Clean the exterior of the refrigerator.



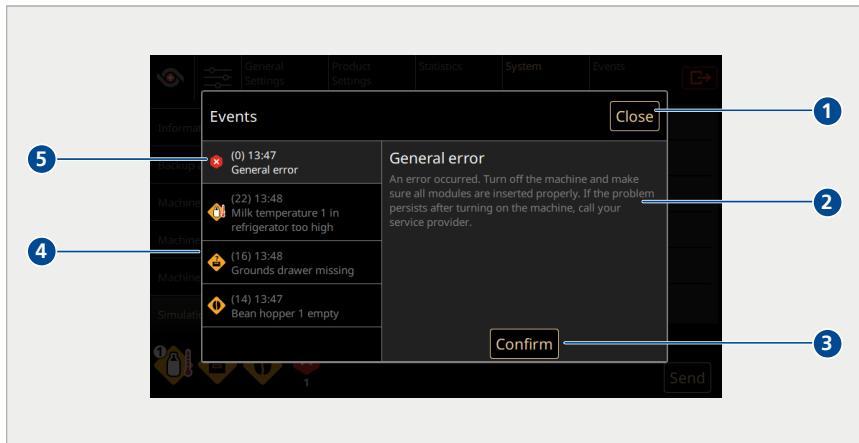
- ▶ Place the milk container in the refrigerator.
- ▶ Guide milk hoses back into the milk container.
- ▶ Close the refrigerator door.



# 11 Troubleshooting

## 11.1 Overview

Indications and error messages appear on the product screen (4). Details concerning the messages can either be shown by tapping the appropriate symbol or in the "error messages" menu. If the error is rectified, the error message disappears.



- |                   |   |
|-------------------|---|
| 1 Close message   | 4 Error symbol  |
| 2 Message details | 5 Indication / error symbol / error no. / error time / error category |
| 3 Confirm message |   |

## 11.2 Possible indications and errors and their rectification

The following indications and error messages can appear in the display:

Symbol	Meaning / cause	Rectification
	information e.g. "Machine starts"	Follow the display instructions
	Warnings e.g. "Excessive coffee quantity"	Follow the display instructions
	Errors e.g. "brewing piston error"	Follow the display instructions
	Serious error e.g. "general error"	Follow the display instructions
	Cleaning recommended	Perform cleaning as soon as possible
	Cleaning required	Execute cleaning immediately
	Grounds container almost full	Empty grounds container as soon as possible
	Grounds container full	Empty grounds container

Symbol	Meaning / cause	Rectification
	Grounds container is missing	Insert grounds container
	Bean container is missing	Insert bean container
	Bean container 1 is missing	Insert bean container 1
	Bean container 2 is missing	Insert bean container 2
	Milk level low	Top up with fresh, cooled milk as soon as possible
	Milk temperature high	Check refrigerator Door correctly closed?
	Milk temperature too high	Empty milk container immediately Top up fresh, cooled milk; check refrigerator Door correctly closed?
	Milk is empty	Top up with fresh, cooled milk
	Error chassis fan	Follow the display instructions

## 12 Accessories and consumables

### 12.1 Cleaning agents

Thermoplan Coffee Cleaning Tablets

Art. no.	Description
128.540	Tub Thermo Coffee Tabs (31 tabs)

Thermoplan Milk Cleaning Tablets

Art. no.	Description
120,528	Tub Thermo Milk Tabs (62 tabs, Schulz)
120.259	Tub Thermo Milk Tabs (62 tabs, Urnex)

### 12.2 Milk container

Art. no.	Description
127,148	Milk container 4.0 l, complete
127.181	Milk container 4.0 l, lid

## 13 EU Declaration of Conformity

Product model BW4c-CTM, BW4c-CTM-RS, BW4c-CTM-P, BW4c-CTM-P-RS,  
BW4c-CTM-F, BW4c-CTM-F-RS, BW4c-CTM-P-F, BW4c-CTM-P-F-RS

Trade mark Black&White4 compact

Name und Anschrift des Herstellers:

Name and address of the manufacturer:

Nom et adresse du fabricant:

Thermoplan AG, Thermoplan-Platz 1, 6353 Weggis, Switzerland

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.

Gegenstand der Erklärung:

Object of the declaration:

Objet de la déclaration:

Automatic coffee machine

Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union:

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable:

2006/42/EC (MD)

1935/2004/EC (FCM)

2014/30/EU (EMC)

2023/2006/EC (GMP)

2015/863/EU (RoHS)

Angabe der einschlägigen harmonisierten Normen, die zugrunde gelegt wurden, oder Angaben der anderen technischen Spezifikationen, in Bezug auf die Konformität erklärt wird:

References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:

Références des normes harmonisées pertinentes appliquées ou des autres spécifications techniques par rapport auxquelles la conformité est déclarée:

EN 55014-1:06 + A1:09 + A2:11

EN 61000-3-3:13

EN 55014-2:15

EN 61000-4-13:02 + A1:09 + A2:16

EN 60335-1:12+A11:14

EN 61000-6-3:07 + A1:11

EN 60335-2-75:04+A1:05+A2:08+A11:06+A12:10

EN 62233:08

EN 60335-2-89:10+A1:16

EN 50581:12

EN 61000-3-2:14

Unterzeichnet für und im Namen von:

Signed for and on behalf of:

Signé par et au nom de:

CH-6353 Weggis, 30.09.2019

(Ort und Datum der Ausstellung)

(Place and Date of issue)

(Lieu et date)



Adrian Steiner, CEO

(Name, Funktion und Unterschrift des Befugten)

(Name, function and signature of authorized person)

(Nom, fonction et signature du signataire autorisé)

Verantwortlich für die technische Dokumentation ist:

Responsible for the technical documentation is:

Responsable de la documentation technique:

Peter Naef

**thermoplan**  
Swiss Quality Coffee Equipment

## 14 UK Declaration of Conformity

Trade mark Black & White 4 compact

Product model	BW4c-CTM BW4c-CTM-RS	BW4c-CTM-P BW4c-CTM-P-RS	BW4c-CTM-F BW4c-CTM-F-RS	BW4c-CTM-P-F BW4c-CTM-P-F-RS
---------------	-------------------------	-----------------------------	-----------------------------	---------------------------------

Name und Anschrift des Herstellers:  
Name and address of the manufacturer:  
Nom et adresse du fabricant:

Thermoplan AG, Thermoplan-Platz 1, 6353 Weggis, Switzerland

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.  
This declaration of conformity is issued under the sole responsibility of the manufacturer.  
La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.

Gegenstand der Erklärung:  
Object of the declaration:  
Objet de la déclaration:

**Automatic coffee machine**

Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Rechtsvorschriften von UK:  
The object of the declaration described above is in conformity with the relevant UK legislation:  
L'objet de la déclaration décrit ci-dessus est conforme à la législation de UK applicable:

UK SI 2016 No. 1101 (LVD)	UK SI 2012 No. 2619 (FCM)
UK SI 2016 No. 1091 (EMC)	UK SI 2005 No. 1803 (General Product Safety)
UK SI 2012 No. 3032 (RoHS)	

Angabe der einschlägigen Normen, die zugrunde gelegt wurden, oder Angaben der anderen technischen Spezifikationen, in Bezug auf die die Konformität erklärt wird:  
References to the relevant standards used or references to the other technical specifications in relation to which conformity is declared:  
Références des normes pertinentes appliquées ou des autres spécifications techniques par rapport auxquelles la conformité est déclarée

EN 55014-1:06 + A1:09 + A2:11	EN 61000-3-2:14
EN 55014-2:15	EN 61000-3-3:13
EN 60335-1:12 + A11:14	EN 61000-4-13:02 + A1:09 + A2:16
EN 60335-2-75:04 + A1:05 + A2:08 + A11:06 + A12:10	EN 61000-6-3:07 + A1:11
EN 50581:12	EN 62233:08

Unterzeichnet für und im Namen von:  
Signed for and on behalf of:  
Signé par et au nom de:



CH-6353 Weggis, 12.12.2020  
(Ort und Datum der Aussstellung)  
(Place and Date of issue)  
(Lieu et date)

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

Verantwortlich für die technische Dokumentation ist:  
Responsible for the technical documentation is:  
Responsable de la documentation technique:

Peter Naef

**thermoplan**  
Swiss Quality Coffee Equipment

## 15 FCC/IC compliance statements

### FCC compliance statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

**Warning:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. (Part. 15.21).

### IC compliance statement

This device complies with RSS-210 of the IC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including any interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to RSS-210 of the IC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

**Warning:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. (RSS-210).

### Radiation exposure statement

To comply with FCC and Industry Canada RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 29mm from all persons and operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.







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