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thermoplan	Activity log for documents	FORM 10072-0_E

Document:	Manual CT/CTM/CTS short REV-3

Modification journal

Revision:	Date:	Modifications	Visa:
0	2003-12-11	Ground document, premier edition EPROM 5.00	MH
1	2004-07-08	Changes due to EPROM 5.01	FC
2	2005-07-20	Supplement of the article disposal	KR
3	2006-07-03	Supplement of the CE Decleration of conformity	KR
4			
5			
6			
7			
8			
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10			

Overview modifications

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
1	X																																		
2	X																																		
3	X																																		
4	X			X																															
5	X		X	X																															
6	X		X	S																															
7	X		S	S																															
8	X		S	S																															
9	X		S	S																															
10	X		S	S																															
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24	X	X	S	S																															
25	X		S	S																															
26	X		S	S																															
27	X		S	S																															
28			S	S																															
29				S																															
30				S																															

X	Modifications in contents, corrections
S	New paging

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EU/UE
KONFORMITÄTSERKLÄRUNG
DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE

Wir
We **Thermoplan AG**
Nous

(Name des Anbieters) (supplier's name) (nom du foumisseur)

Röhrlistrasse 22 CH-6353 Weggis

(Anschrift) (address) (adresse)

erklären in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the produot
deolarons sous notre seule responsabilite que le produit

Kaffeemaschine Black&White

Typen CTS 1, CTS 2, CTM 1, CTM 2, Ct 1, CT 2

(Bezeichnung Typ oder Modell, Los-, Chargen- oder Seriennummer, moglichst Herkunft und Stuckzahl)
(name, type or model, lot, batch or serial number, possibly sources and numbers of items)
(nom, type ou modele, nom de lot, d'echantillon ou de serie, eventuellement sources et nombres d'exemplaires))

auf das sich diese Erklärung bezieht, mit der / den folgenden Norm(en) oder normativen Dokument(en) übereinstimmt.
to which this declaration relates is in conformity with the following standard(s) or other normative
document(s)
auquel se refere cette deolaration est conforme a la (aux) norme(s) ou autre(s) document(s) normatif(s)

EN 60335-1:1996 / EN60335-2-15:1996 / EN 55014-1 / EN 55014-2

(Titel und/oder Nummer sowie Ausgabedatum der Norm(en) oder der anderen normativen Dokument(e)
(title and/or number and date of issue of the standard(s) or other normative document(s)
(titre eSou no. et date de publication de la (des) norme(s) ou autre(s) documentfis) nofmatif(s)

Gemäss den Bestimmungen der Richtlinie(n); following the provisions of Directive(s); conformement aux disposition de(s) Directive(s)
(falls zutreffend) (if applicable) (le cas échéant)

73 / 23 / EWG +89 / 336 / EWG

CH-6353 Weggis, 28.08.1998 — Domenic Steiner

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

(Name und Unterschrift oder gleichwertige Kennzeichnung des Befugten) (name and signature or equivalent marking of authorized person) (nom et signature du signataire alitorise)

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declare under our sole responsibility that the produot
deolarons sous notre seule responsabilite que le produit

Zusatzgeräte zu Kaffeemaschine Black&White

Typen CH, TS, MF5

(Bezeichnung Typ oder Modell, Los-, Chargen- oder Seriennummer, moglichst Herkunft und Stuckzahl)
(name, type or model, lot, batch or serial number, possibly sources and numbers of items)
(nom, type ou modele, nom de lot, d'echantillon ou de serie, eventuellement sources et nombres d'exemplaires))

auf das sich diese Erklärung bezieht, mit der / den folgenden Norm(en) oder normativen Dokument(en) übereinstimmt.
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CH-6353 Weggis, 28.08.1998 Domenic Steiner

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

(Name und Unterschrift oder gleichwertige Kennzeichnung des Befugten)
(name and signature or equivalent marking of authorized person)
(nom et signature du signataire autorise)

Important hints

MOUNTING

Only an instructed service-engineer may mount the unit.
The manufacturer is not liable for injuries caused by an improper mountig of the unit.

It is a prescription to:
a) mount the unit on a massive base.
b) The unit may not have a direct contact to the customer. The only exception are automatical coffee-machines which are made for the self-service use.

POSITION AND ENVIRONS

It is recommended to mount the unit at a free place for not taking influence on the air-circulation.

Do not install the machine at a warm or moist place.

POWER SUPPLY

The power supplies have to correspond with the nameplate datas.

This appliance is electrically safe only when properly earthed as set forth in the current electric safety specifications. Check for compliance and, when in doubt, have the wiring thorougly inspected by skilled personnel. The manufacturers shall not be liable for any damage caused by faulty earthing.

Using adapters, multiple plugs and cable extensions is not recommended. Should they be indispensable, use simple or multiple adapters and extensions that comply with the current safety regulations, take care not to exceed the limit current load shown on simple adapters and extensions, and the limit power load shown on multiple adapters.

To prevent dangerous overheating, uncoil the power cable to its full length.

WATER CONNECTION

The unit requires a water connection of 3/8-inch.

The distance between the machine and the water connection should not be more than 1 meter. The water pressure must be between 2 and 4 bar. If the water pressure is more than 4 bar, you have to build in a reduction-valve.

WATER QUALITY

For getting a good and tasty coffee, the water qualitiy is an important factor.
It is important to use drink-water only!

The optimal total water-hardness is 5-8 dH° / 8-14 fH°. In the most cases, the use of an acitv-coalfilter is necessary. Ask a specialist.

WATER DRAIN

The distance between the water drain and the machine should not be more than 1 meter.

It is important that the water drain (tube) does not hang down.

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Important hints

OPERATION

The unit may be used only by trained personnel.

The units must not be used to produce other products than described in the manual.

General safety notes

Beside the hints and notes the following general safety notes have to be observed in any case:

SCALD DANGER

Operations with hot water have to be made carefully.

- Do not handle underneath the product-outlets.
- Coffee-, milk-, tea- and steam-products cause scalding if coming in touch with.
- Do not touch any of these outlets during or after dispensing a product.
- Keep attention if you handle with milk in a unit with a milk-heater (Foamer/MilkFoamer). Touching the milk- and heating-basin could cause scald.

AIRING / WATER-PROTECTION

Do not cover the ventilation-grating.

Take care that no water enter into the ventilation-grating.

CLEANING OF THE UNIT

The daily cleaning is not only an absolutely „must", it is also a guarantee for a constant good neutrality of taste and a longer life for the machine.

AFTER-SALES SERVICE

On the display of the coffee-machine appears a message, if a service is required.

In any case the machine has to be serviced all six months through a trained technician. Plug out the power-supply before servicing the machine.

Important: The power-supply must be disconnected before working on the unit.

TRANSPORT

- Before the transporting the milk-container has to be emptied.
- Pay attention to the weight of the machine
- Use gloves for moving by hand.

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General safety notes

DISPOSAL

Packaging Material

- The packaging material (cardboard, plastic foil PE and polystyrene EPS) shall be properly recycled.

Disassembly of Equipment

- Disconnect equipment from power. If the equipment is hard-wired it must be disconnected by an authorized service agent!

Safety Instructions

- In order to avoid any accidents caused by inappropriate use or in particular by playing children the equipment must be put out of operation.
- Unplug unit from power source or in case of have hard-wired installations have it disconnect by an authorized service agent! Subsequently, cut off plug from power cord.

Disposal Instructions

- The proper disposal of your old appliance will help prevent damages to the environment and injuries to human health.
- The old equipment is not worthless waste. If disposed properly it is possible to recycle its raw materials.
- Make sure that the old equipment is disposed of or recycled according to local regulations.
- For any further information about disposal, please contact your manufacturer agent.

CHANGES WORK

It is forbidden to change something at the unit. The manufacturer is not liable for accidents caused by changes made inside or outside the machine.

Only trained technical personnel is allowed to work on the inside of the machine.

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The way to the perfect coffee enjoyment

COFFEE

- Use only high qualitiy coffee.
  Type, roasting, mixture and the strength of the coffee should correspond to the desires of your customers. You will be able to see the result in your coffee-turnover and profit.

- Never open a receptacle which contains coffee longer than necessary.

- Do not refill the bean-hoppers before longer breaks (night, holidays...).

- We recommend to supply and empty a double-portion coffee after a longer break. Afterwards you get a coffee of good quality.

- Store your coffee in a cool and dry place. You can store the coffee deep-freezed for several months without loosing quality.

FOR COFFEE-ENJOY-ERS

Your coffee-machine,besides the choice of the powder quantity, has special setting-possibilities for the three most important steps for the whole product-range for:

1 cup mill 1	1 cup mill 2
2 cups mill 1	2 cups mill 2

Pre-brew time
This time shows how long the coffee-powder will be moistend in the brewing chamber. This time chosen is perfect, if no water drips into the cup yet.

Relax time
During the relax time it is possible for the coffee-powder to swell. The coffee-powder gives in this time already the first aroma to the water. For the ristretto and espresso this time is to choose longer than for a long coffee, where only a short or no pre-brew and relax time should be set. The relax time is about the same or slightly higher than the pre-brew time.

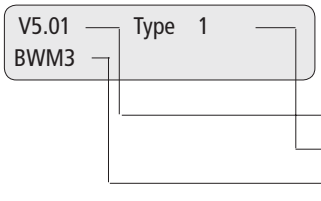
Press after
This is the last but most important setting of the pre-brew-cycle. Here, the swollen powder will be pressed after. For smaller coffee quantities as there are for Ristretto and Espresso the press after time is set stronger to access the right outlet time. The basic rule is, that the brewing time should be the same for all products. That means, if the water quantity is low (Ristretto, Espresso), the outlet time is smaller.

SETTING

User
As an exclusivity your machine offers the menu „coffee aroma".
An automatic harmonized possibilty to change the pre-brew steps in one menu. See page 14 and P106-P109.

Service-Engineer
The trained service-engineer and coffee-specialist may set these steps separately too.
See P204-P207 and P312-P314.

EPROM/CPU-Version



When you turn on the machine, the display shows several information. The meaning of it is the following:

V4.03 = EPROM-version
Type 1 = Configuration
BWM3 = CPU-version

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General view CTM

Milk container cover
Air supply cover
Keyboard
Hopper mill 2
Powder dispenser
Hopper mill 1
Display

Coffee outlet
Milk outlet
Coffee grounds container
Hot water outlet
Cup platform
Drip container
Programming key

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General view CTS

Programming key
Keyboard
Display
Hopper mill 2
Powder dispenser
Hopper mill 1

Coffee grounds container
Coffee outlet
Cup platform
Drip container
Hot water outlet
Steam outlet

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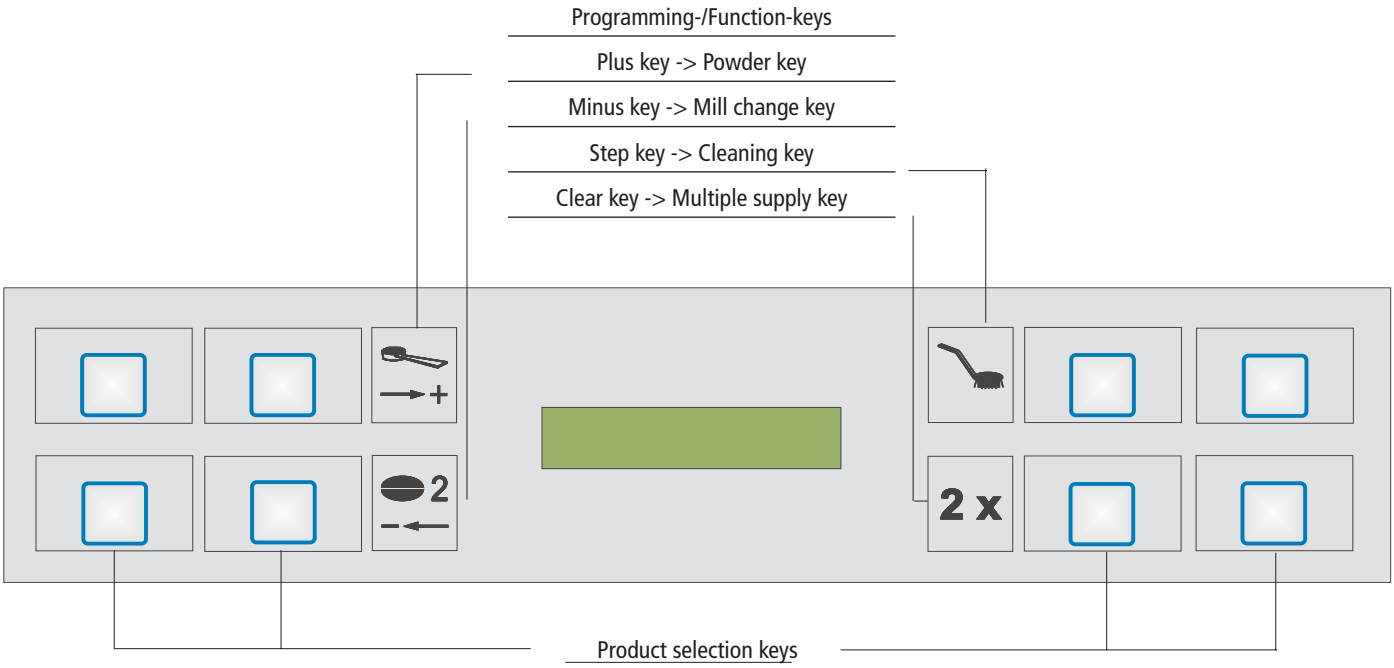
Programming- / Function-keys and product selection keys



CT

- 1 Ristretto
- 2 Ristretto
- 1 Espresso
- 2 Espresso
- 1 Coffee
- 2 Coffee
- House coffee
- Hot water
- Brew coffee
- Choko (optional)

CTMF5

- Ristretto
- Espresso
- Coffee
- House coffee
- Milk
- Cappuccino
- Milk coffee
- Hot water
- Brew coffee
- Latte Macchiato (optional)
- Choko (optional)

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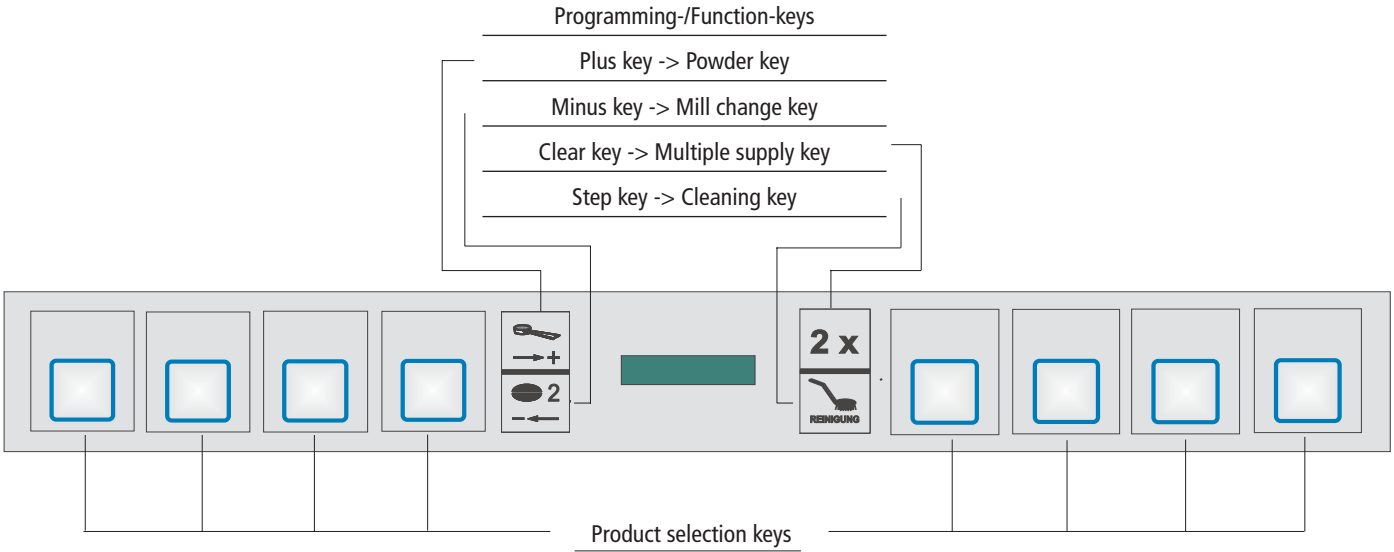
Programming- / Function-keys and Product selection keys



CTM

- Ristretto
- Espresso
- Coffee
- House coffee
- Hot water
- Cappuccino
- Milk coffee
- Milk
- Brew coffee
- Latte Macchiato (optional)
- Choko (optional)

CTS

- Ristretto
- Espresso
- Coffee
- House coffee
- Hot water
- Steam manual
- Steam auto
- Brew coffee
- Choko (optional)
- empty

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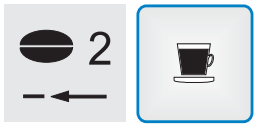
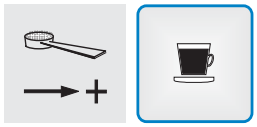
Product selection: examples

The keyboard consists of
- 8 product selection keys and
- 4 function keys.

The product selection keys are preprogrammed at the factory (see page 13), but can be easily reprogrammed at any time by the user to suit individual needs.

The „Mill change" key and the Double-portion key make it possible to program four different product variations (such as four espresso portions) using the same proudct selection key. The „Powder" key expands the range by 2 additional products.

	Espresso from Mill 1
	Double espresso from Mill 1
	Espresso from Mill 2
	Double espresso from Mill 2
	Powder espresso (decaffeinated)
	Double powder espresso (decaffeinated)

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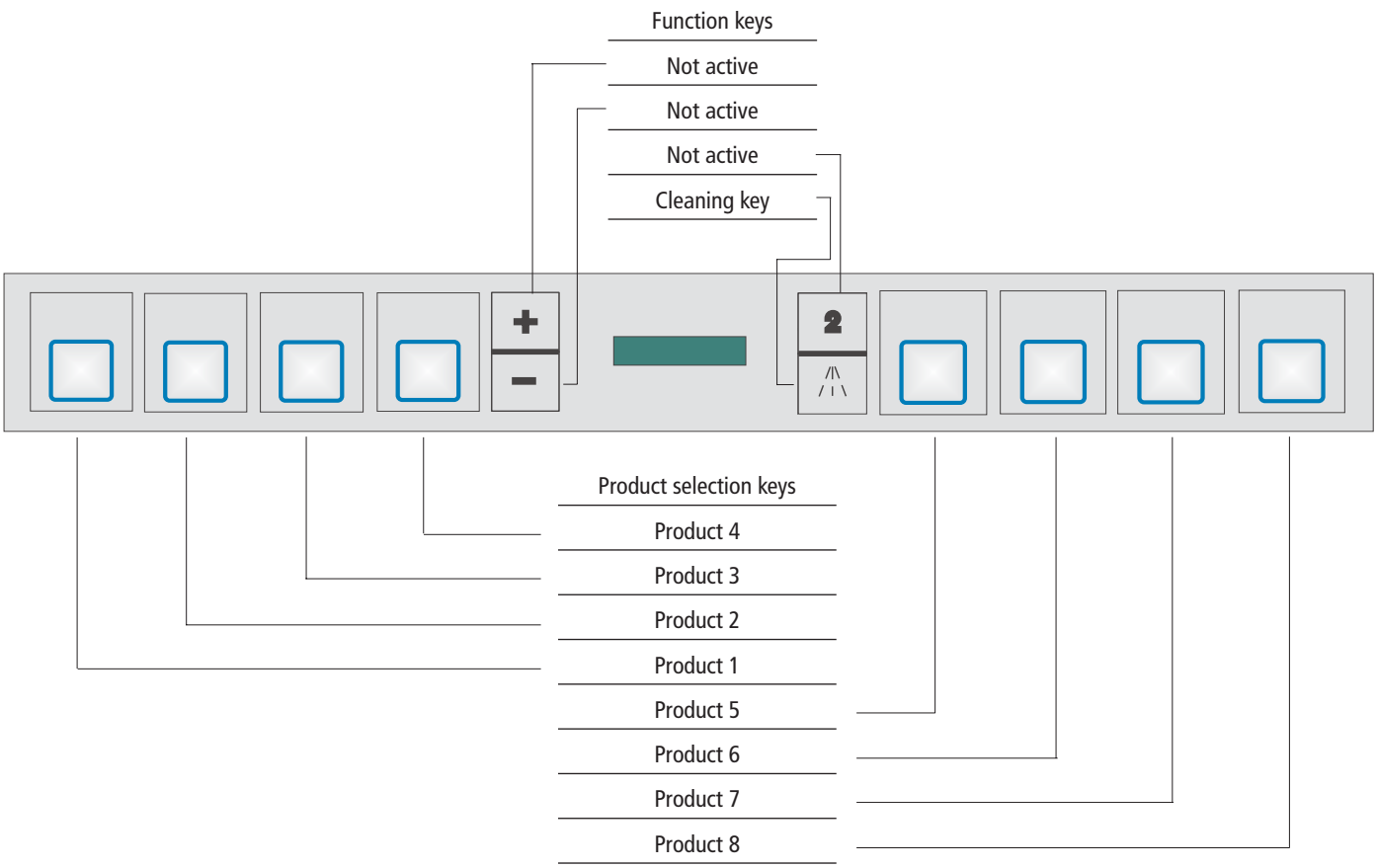
General hints



In units set on „self-servcie" only the product keys are active for the customer.

The employers are able to activate the cleaning as follows:

Rinse

Turn the programming key to the right and back. The „cleaning"-key is unlocked and you can do the Rinse now. The „cleaning"-key is unlocken untill you cover a product. If you want to rinse again repeat this operation.

Major cleaning

The automatical cleaning-procedure, according to page 31, can be started by the same way: Turn the programming key to the right and back. The „cleaning"-key is unlocked now.

It is also possible to unlock the „cleaning"-key with the „service master card":
Enter the card and press the „cleaning"-key. „Supplies total" appears on the display. Pull out the card. The „cleaning"-key is unlocked now.

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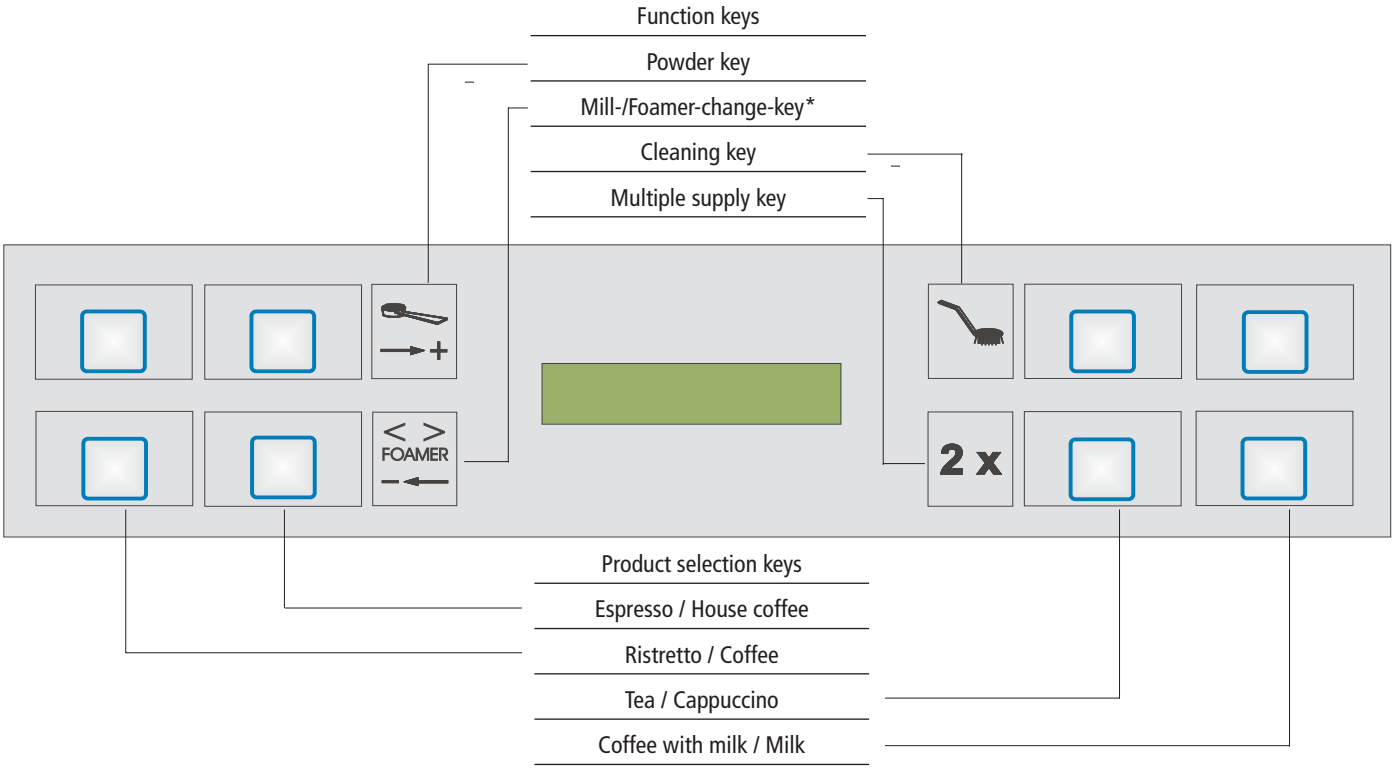
Function and product selection keys



*Function of the Mill-/Foamer-change-key in the model CT plus 2x MF5/10.
In the combination of a CT with one Milk-Foamer the change-key has the function to program a mill to a product. See P211.

In the combination of a CT with two Milk-Foamer the change-key has the function to change the MilkFoamer.

In the version CT plus 2x MF5/10 the MilkFoamer on the right side of the CT „>" is used as standard. Press the Mill-/Foamer-change-key if you want to use the MilkFoamer on the left side „<„.

If you want to supply the milk definitely from the Foamer „<„, press the Mill-/Foamer-change-key for 5 seconds. The return to the Foamer „>"-supply works in the same way.

The orders „cleaning" or „Foamer Off/On" are given to both MF in the same time. If you want to use just one MF, you have to turn off the main switch of the second one.

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Base settings - Quantities

Model CT

Models CTM + CTMF5/10

Model CTS

	Ristretto	Espresso	Coffee	House coffee
	W:80 C:20 M: -	W:150 C:20 M: -	W:270 C:20 M: -	W:270 C:20 M: -
2 x	W:160 C:30 M: -	W:300 C:30 M: -	W:540 C:30 M: -	W:540 C:30 M: -

Model CT

Models CTM + CTMF5/10

Model CTS

	Tea	Cappuccino	Coffee with milk	Milk	Steam
	W:270	W:160 C:20 M:30	W:160 C:20 M:20	W: - C: - M:60	S:90 C: - M: -
2 x	W:6 (CTS)	W:320 C:30 M:60	W:320 C:30 M:40	W: - C: - M:120	

	Latte Macchiato	Brew coffee
	W:160 C:20 M:30	W:270 C:20 M: -
2 x	W:320 C:30 M:60	W:540 C:30 M: -

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Coffee products

Ristretto/Espresso/ 1 cup

		Coffeearoma less					Coffeearoma more	
COFFEEAROMA	ms	-30	-20	-10	**0**	10	20	30
Pre-brew	ms	-180	-120	-60	**500**	60	120	180
Relax time	ms	-360	-240	-120	**1000**	120	240	360
Press after	Tic /ms	-15	-10	-5	**10**	5	10	15
Powder quantity	ms	450	-300	-150	**20**	150	300	450
		About - 1.5 gr						+1.5 gr

Ristretto/Espresso/2 cups

		Coffeearoma less					Coffeearoma more	
COFFEEAROMA	ms	-30	-20	-10	**0**	10	20	30
Pre-brew	ms	-180	-120	-60	**500**	60	120	180
Relax time	ms	-360	-240	-120	**1000**	120	240	360
Press after	Tic /ms	-15	-10	-5	**5**	5	10	15
Powder quantity	ms	450	-300	-150	**30**	150	300	450
		About -1.5 gr						+1.5 gr

Coffee/House coffee/Cappuccino/LatteMacchiato/Coffee with milk/1 cup

		Coffeearoma less					Coffeearoma more	
COFFEEAROMA	ms	-30	-20	-10	**0**	10	20	30
Pre-brew	ms	-180	-120	-60	**500**	60	120	180
Relax time	ms	-360	-240	-120	**500**	120	240	360
Press after	Tic /ms	-15	-10	-5	**5**	5	10	15
Powder quantity	ms	450	-300	-150	**20**	150	300	450
		About -1.5 gr						+1.5 gr

Coffee/House coffee/Cappuccino/LatteMacchiato/Coffee with milk/2 cups

		Coffeearoma less					Coffeearoma more	
COFFEEAROMA	ms	-30	-20	-10	**0**	10	20	30
Pre-brew	ms	-180	-120	-60	**0**	60	120	180
Relax time	ms	-360	-240	-120	**0**	120	240	360
Press after	Tic /ms	-15	-10	-5	**0**	5	10	15
Powder quantity	ms	450	-300	-150	**30**	150	300	450
		About -1.5 gr						+1.5 gr

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General hints for the programming

Turn programming key clockwise to access programming level 1.

The service-engineer may enter to the programming levels 1-4 by inserting the service-master-card. Now, he can choose all the menus directly by pressing the „step"-key, without entering into the single programming levels.

„Supplies total" menu is displayed.

Supplies total

FUNCTION OF THE „STEP-"KEY

Press the „step"-key to enter the programming-menus.

Step forward
Press „step"-key.

Step backwards
1. Press and hold „2x"-key.
2. Now, you are able to step backwards by pressing the „step"-key.

TEST-COFFEE

It is necessary to test the values, changed in the programming-mode, immediately. By pressing the corresponding product-key for 2sec., a test-coffee can be supplied without leaving the programming-mode.

For the test-coffee, the waiter-, cash- and coin-systems are not active.

INSTRUCTION MODELS

The manuals and programming instruction for the single models CT, CTM, CT MF5/10 and CTS you find on the following pages.

All the models have 8 product-keys.

With the „2x"-key it is possible to supply 2 cups of the desired coffee-product.

DOUBLE-PRODUCT KEYS

Important hint

On the other hand it is possible to programm the keys for double-product supplies.
In the CT-model for example, with double-products ex works (values see page 14), resp. through the service-engineer on customers demand.

Important is, that double-product settings or changes in the menus
- Water quantity
- Coffeearoma
- Powder quantity
- Bypass

are made in the program **„1 cup"**.

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Keys	Action	Display messages
	Turn programming key clockwise to access Programming level 1. The **service-engineer** may enter to the Programming levels 1-4 by inserting the service-master-card. Now, he can choose all the menus directly by pressing the step-key, without entering into the single Programming levels.	
	„Supplies total" menu is displayed.	Supplies total
RINSE	Press „Step key" repeatedly to access other menus.	Milk quantity 1 cup
		Milk quantity 2 cups
		* Macchiato Waittime 0 s
		Water quantity 1 cup
		Water quantity 2 cups
		Coffee aroma M1 1 cup
		Coffee aroma M1 2 cups
		Coffee aroma M2 1 cup
		Coffee aroma M2 2 cups
RINSE	Press „Step key" in „Coffee aroma M2 2 cups" menu to return to first menu „Supplies total".	Supplies total
	To return to working level turn programming key counterclockwise or take out the service-master-card.	Save data
	After a few seconds „Ready" message appears on display.	Ready
Note:	In machines with combination with milk (CTM, CTMF5/10, CT+2x MF5/10) is always announced the operating state of the foamer on the display „Foamer ON" or „Foamer OFF". „Foamer ON" = The foamer is ON. „Foamer OFF" = The foamer is OFF. How to turn on and off the foamer see page 26.	Ready Foamer ON/OFF

* Appears only, if „LatteMacchiato" is programmed on one of the product keys.

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Keys	Action	Display messages
	Turn programming key clockwise to access Programming level 1. The **service-man** may enter to the Programming levels 1-4 by inserting the service-master-card. Now, he can choose all the menus directly by pressing the step-key, without entering into the single Programming levels.	
	„Supplies total" menu is displayed.	Supplies total
	Press „Step key" repeatedly to access other menus.	Water quantity 1 cup
		Water quantity 2 cups
		Tea/Steam time
		Coffee aroma M1 1 cup
		Coffee aroma M1 2 cups
		Coffee aroma M2 1 cup
		Coffee aroma M2 2 cups
	Press „step" key in „coffee aroma M2 2 cups" menu to return to first menu „supplies total".	Supplies total
	To return to working level turn programming key counterclockwise or take out the service-master-card.	Save data
	After a few seconds „Ready" message appears on display.	Ready

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Menus

P101

Supplies total

The „Supplies total" menu provides information on the number of products served. Press desired product selection key to display corresponding number of servings. Three different product totals are available:

- **Supplies without „Mill change" key** (that means all products which are fixed on M1 or M2)
  This appears automatically at first. Firstly the total and after pressing the single product keys, the product totals appear on the display.
  Reset product totals to zero: Press and hold „Clear"-key. Afterwards press the specific product key and the counter will be set to 0.

2 x
„Clear"-key

- **Supplies with „Mill change" key**
  Press „Mill change" key. The total appears again and the product totals which were supplied with the „Mill change" key. Reset product totals to zero as described above.

„Mill change"-key

- **Supplies of powder coffee manualy fed**
  Press „Powder" key to leave the menu „Supplies total" and to enter supplies of powder coffee manually fed. Now you can see the total and product supplies. Reset product totals to zero as described above.

„Powder"-key

Note
It is possible to get into this program without the programming key by pressing the „Minus" and the „Step" key simultaneously. Hold these keys for 5 seconds until the message „supplies total" appears. Now, you see the total of supplied products, but you can not reset it to zero.

Press „Step" key to return to the programm. „Ready" appears on the display.

P102

Milk quantity
1 cup

In this menu, you can set the level of milk filling. Once the product is selected, you can do it by pressing the „Minus" and „Plus" keys. Nevertheless, we recommend the following method:
- Press the milk-product key you wish to set; a setting range is displayed. Press rapidly twice the same product key. The product will flow into the cup. As soon as the desired level is reached, press the same product key: the flow stops and the quantity is memorized.

MF5+CT+MF5

2 x

Milk quantity
1 cup <

For the model CT with 2 MF5 the milk quantity of each Foamer can be setted separately.
„ < '' appears additive on the display and shows wich Foamer can be setted.
By pressing the „2x"- Key, the second Foamer can be setted. „ > '' appears additiv on the display.

P103

Milk quantity
2 cup

In this menu, you can set the level of milk filling. Once the product is selected, you can do it by pressing the „Minus" and „Plus" keys. Nevertheless, we recommend the following method:
- Press the milk-product key you wish to set; a setting range is displayed. Press rapidly twice the same product key. The product will flow into the cup. As soon as the desired level is reached, press the same product key: the flow stops and the quantity is memorized.

MF5+CT+MF5

Milk quantity
2 cups <

To set the milk quantity for 2 cups do as described in Menu 102 „Milk quantity 1 cup".

P104

Macchiato
Waittime 0 s

When this menu is displayed, you can set the standby time between the producing of milk and coffee in the „Latte Macchiato" product.
Ex works: 0 seconds. That means after you press „Latte Macchiato", the milk gets supplied. Then the machine waits 0 sec. until the coffee gets produced. With this setting, you make sure, that the milk calm down in the glass before the coffee flows in it. So the hot milk stays on the bottom and the foamed milk gets up with the coffee. So you have straight borders between milk, coffee and steamed milk.

P105

Water quantity
1 cup

When this menu is displayed, you can set the level of coffee or tea filling for 1 cup (maximal water quantity is 0.8 liter). Once the product is selected, you can do it by pressing the „Minus" and „Plus" keys. Nevertheless, we recommend the following method:
- Press the coffee- or tea-product key you wish to set; a setting range is displayed. Press rapidly twice the same product key. The product will flow into the cup. As soon as the desired level is reached, press the same product key: the flow stops and the quantity is memorized.

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Menus

P106 Water quantity 2 cups

When this menu is displayed, you can set the level of coffee or tea filling for 2 cups (maximal water quantity is 0.8 liter). Once the product is selected, you can do it by pressing the „Minus" and „Plus" keys. Nevertheless, we recommend the following method:

- Press the coffee- or tea-product key you wish to set; a setting range is displayed. Press rapidly twice the same product key. The product will flow into the cup. As soon as the desired level is reached, press the same product key: the flow stops and the quantity is memorized.

P107 Tea/Steam time

When this menu is displayed, you can set the quantity of water or steam. Once the product is selected, you can do it by pressing the „Minus" and „Plus" keys. Nevertheless, we recommend the following method:

- Press the „Tea" key; a setting range is displayed. Press rapidly twice the „Tea"key. The water will flow into the cup. As soon as the desired level is reached, press the „Tea" key again: the flow stops and the quantity is memorized. Activate then the „Steam"-key andpress it rapidly twice. If the desired heating-time is reached you can memorized it by pressing again the „Steam" key. Press „Step" key and „Tea/Steam time" appears on the display.

P108 Coffee aroma M1 1 cup

The coffee aroma of single-portion products from Mill 1 can be adjusted to personal taste in the „Coffee aroma M1 1 cup" menu. This redefines the prebrew process and the quantity of coffee powder very simply.

- Press desired coffee product selection key, then adjust coffee aroma by pressing „Minus" (weaker) or „Plus" (stronger) key.

Note
The quantity of coffee powder can also be adjusted in the „Powder quantity M1 1 cup" menu (P204) at Programming level 2.

P109 Coffee aroma M1 2 cups

The coffee aroma of double-portion products from Mill 1 can be adjusted to personal taste in the „Coffee aroma M1 2 cups" menu. This redefines the prebrew process and the quantity of coffee powder very simply.

- Press desired coffee product selection key, then adjust coffee aroma by pressing „Minus" (weaker) or „Plus" (stronger) key.

Note
The quantity of coffee powder can also be adjusted in the „Powder quantity M1 2 cups" menu (P205) at Programming level 2.

P110 Coffee aroma M2 1 cup

The coffee aroma of single-portion products from Mill 2 can be adjusted to personal taste in the „Coffee aroma M2 1 cups" menu. This redefines the prebrew process and the quantity of coffee powder very simply.

- Press desired coffee product selection key, then adjust coffee aroma by pressing „Minus" (weaker) or „Plus" (stronger) key.

Note
The quantity of coffee powder can also be adjusted in the „Powder quantity M2 1 cup" menu (P206) at Programming level 2.

P111 Coffee aroma M2 2 cups

The coffee aroma of double-portion products from Mill 2 can be adjusted to personal taste in the „Coffee aroma M2 2 cups" menu. This redefines the prebrew process and the quantity of coffee powder very simply.

- Press desired coffee product selection key, then adjust coffee aroma by pressing „Minus" (weaker) or „Plus" (stronger) key.

Note
The quantity of coffee powder can also be adjusted in the „Powder quantity M2 2 cups" menu (P207) at Programming level 2.

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Milk circuit: turn Foamer on and off

Keys	Action	Display messages
	Foamer on.	
2	Press „Mill change" key and one of the Milk product selection keys. Hold both keys until the message „Foamer ON" appears on display.	Foamer ON
	On the display appears „Ready Foamer ON" as long as the foamer will be turned off again.	Ready Foamer ON
	Foamer off.	
2	Press „Mill change" key and one of the Milk product selection keys. Hold both keys until the message „Foamer OFF" appears on display.	Foamer OFF
	On the display appears „Ready Foamer OFF" as long as the foamer will be turned on again.	Ready Foamer OFF

CTMF5/10 and CT with 2 MF5/10

If the F5/10 is switched off at the main switch, and one try to turn on the Foamer as described on the command unit, the display shows „Main switch Foamer Off".

Main switch
Foamer Off

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Display messages		Action
Please wait	Boiler is heating, temperature setting not yet reached. No servings possible.	Wait. Heating time approx. 3 minutes
Ready	Coffee machine ready for next serving.	-
Ready Foamer on	If you use the model CTM or CT MF5 the message „Ready Foamer on" or „Ready Foamer off" appears on Display instead of „Ready".	
Milk not ready	Milk or milk foam being heated. Temperature setting for milk or milk foam not yet reached. No milk servings possible	Wait. Heating time for milk products approx. 12 minutes.
Empty Drawer	Drawer full. No coffee servings possible.	Empty grounds drawer.
Drain tub	Tub under drawer full of water. Servings still possible.	Water must be removed from tub using a cloth or sponge. If this happens frequently, call customer service.
Drawer missing	Drawer missing or incorrectly inserted. All coffee product selection keys are blocked. The tea and milk product selection keys are unaffected by this message.	Insert grounds drawer.
Fill hopper M1	Hopper Mill 1 is empty or A foreign body has entered the mill, preventing it from rotating.	Fill hopper with beans. Reverse the direction of rotation with „Mill change" key and press a coffee product key, then try again to select a product on Mill 1.
Fill hopper M2	Hopper Mill 2 is empty or A foreign body has entered the mill, preventing it from rotating.	Fill hopper with beans. Reverse the direction of rotation by selecting a product on Mill 1, then try again to select a product on Mill 2.
Milk low	Indicate that the container of milk is half empty.	Fill it if it's necessary.

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Display messages		Action
Foamer off	Milk circuit out of service. If the milk-product-keys are not programmed for products without milk, no servings with these keys are possible.	If desired, switch on Foamer. Press and hold the „mill 2" key, then press and hold a milk-product key until on the display „Foamer ON" appears.
Powder error	Too much coffee powder in powder shaft or „Mill 1" or „Mill 2" is producing too much coffee powder	Reduce quantity of coffee powder, flush system and press desired product selection key again.
Change filter	Water filter is saturated. This message is displayed until the filter is changed and the water counter is set to zero. All products can be served.	Call technical service. Change water filter and reporgram it in „Filter" menu (P213) at Programming level 2. Press „Clear" key three times to reset counter to zero. This will be confirmed with „OK" on the display.
Service required	Preprogrammed number of servings has been reached. This message is displayed until service counter is set to zero. All products can be served.	Call technical service. Service machine and reprogram in „Service interval" menu (P307) at Programming level 3. Press „Clear" key three times to reset counter to zero. This will be confirmed with „OK" on the display.
Clean appliance	Preprogrammed number of servings before cleaning has been reached. This message is displayed until the machine is cleaned with the appropriate tablets. All products can still be served.	Start cleaning process for coffee water system only. See pages 37-39.
Flow error	The water-supply is interrupted or the coffee powder is grinded too fine.	Check water-supply. If it is okay, set a coarser grind by moving the mill regulating lever to the right. Afterwards press the product selection key again.
Piston error	The brew chamber can't move.	Check if the piston is blocked through a foreign body. Afterwards rinse the system and press the desired product selection key again. If problem remains, call technical service.
Overtime error	Coffee water flow is too slow. The coffee powder thrown into the powder shaft is too fine or the setting of the grinder is wrong.	Rinse system and press the desired product selection key again. If problem remains, call technical service.

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Display messages		Action
NTC coffee def.	The boiler temperature sensor is damaged. Water circuit is out of order. - With the model CTM all milk servings are not possible. - With the model CTS tea- and steam-servings are still available.	Call technical service.
NTC foamer def.	The Foamer temperature sensor is damaged. Milk circuit is out of order. Coffee- and tea servings are still available.	Call technical service.
Save data	The parameters edited at the single „Programming level" are saved.	-
Tension high/low	The option „voltage control" is working.	Call technical service because you are too much variation of tension.
Main switch Foamer Off	One tries to turn on the Foamer although the main switch on the Foamer is switched off.	Switch Milkfoamer on.
Waterflowerror	The flowmeter notices a water flow although no product is dispensed.	Call technical service because a valve is leaking, that can cause a submersion.
No water in steam boiler	The steam boiler is empty and will not be refilled.	Call technical service.

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Cleaning instructions

The following steps should be conducted at the end of each days service and additionally if the „Clean appliance" message is displayed. **Use only the Black&White cleaning tablets (art.no. 70.00.06/1 box with 90 tablets or 70.00.05/carton with 36 boxes) for the water circuit, for the milk circuit use only the Thermoclean cleaning detergent (art.no. 70.00.01/2.5l or 70.00.02/5l).**

Cleaning of water circuit

Keys	Action	Display message
	Press and keep depressed „cleaning"-key.	
	The message „Add tablet Press cleaning key" appears on display. Put a cleaning tablet into the powder channel. Make sure that the tablet is not stuck in the channel.	Add tablet press cleaning key
	If you press the cleaning key without adding a tablet the message „No tablet press cleaning key" appears on display. Put in a tablet now and press the „cleaning" key again. If you do not add a tablet, the cleaning process starts without a tablet.	No tablet press cleaning key
	The automatic cleaning program lasts approx. 12 minutes.	
	During the process the cleaning counter appears on display. „Co: 1 „Mi: 0" means the coffee part has been cleaned 1 time before and the milk part never.	Cleaning Co: 1 Mi: 0
	After the cleaning „Ready" message is displayed.	Ready

Note: If the power-supply gets interrupted during the cleaning, the display will show, after the return of the power-supply, „rinse machine". By pressing the rinse key the machine will rinse the system 10 times. In this way, all the cleaning detergent remaining will be flushed away.

Selfservice: In the selfservice-mode the „cleaning" key is locked. To unlock turn the programming key to the clockwise and back. Now the „cleaning" key is unlocked and you can start cleaning.

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Cleaning instructions

The following steps should be conducted at the end of each days service and additionally if the „Clean appliance" message is displayed. **Use only the Black&White cleaning tablets (art.no. 70.00.06/1 box with 90 tablets or 70.00.05/carton with 36 boxes) for the water circuit, for the milk circuit use only the Thermoclean cleaning detergent (art.no. 70.00.01/2.5l or 70.00.02/5l).**

Cleaning of water circuit

Keys	Action	Display message
	Press and keep depressed „cleaning"-key. The messages „Select Coffee", „Select Milk", „Select Milk and Coffee" (each for approx. 4 sec.) appear consecutively on display. When message „Select Coffee" appears, release cleaning-key immediately. The message „Add tablet Press cleaning key" appears on display. Put a cleaning tablet into the powder channel. Make sure that the tablet is not stuck in the channel.	Select Coffee
		Add tablet press cleaning key
	If you press the cleaning key without adding a tablet the message „No tablet press cleaning key" appears on display. Put in a tablet now and press the „cleaning" key again. If you do not add a tablet, the cleaning process starts without a tablet.	No tablet press cleaning key
	During the process the cleaning counter appears on display. „Co: 1 Mi: 2" this means the coffee part has been cleaned once before and the milk twice.	Cleaning Co: 1 Mi: 2
	After the cleaning „Ready Foamer ON/OFF" message is displayed.	Ready Foamer ON/OFF

Cleaning of milk circuit

Keys	Action	Display message
	Lift milk suction pipe out of the container. Press a milk key to empty it.	
	Disconnect air supply tube from air supply cover.	
	Remove milk tube from air supply cover and container from its housing by pulling upwards. Clean these parts.	
	Cleaning milk container: Remove any remainig water from under the milk bucket. After cleaning fill 0,7 dl (CTM) or 0,5 dl (MF5/MF10) water into the heating tank (use measuring cup). Then reassemble suction pipe and milk container. Attention: Milk container is hot! Take care.	
	Dispose of milk bag. Remove the foamer head. Press security release button, turn it counterclockwise until it stops. Then pull towards you.	
	Separate the different head elements and clean them with lukewarm water. After cleaning reassemble the foamer head and refit.	
	Fill up milk bucket with two litres of warm water (40° - 50°C). Add 0.6 dl of special cleaning agent.	
	Press and keep depressed „cleaning"-key. The messages „Select Coffee", „Select Milk", „Select Milk and Coffee" (each for approx. 4 sec.) appear consecutively on display. When message „Select Milk" appears, release cleaning-key immediately. The cleaning process starts. During the process the cleaning counter appears on display. „Co: 1 Mi: 2" means the coffee part has been cleaned once before and the milk twice.	Select Milk
		Cleaning Co: 1 Mi: 2
	After the automatic cleaning, „Ready Foamer OFF F" message appears on the display. The heating is off.	Ready Foamer OFF F
	Empty milk bucket of remaining detergent before filling with 2 litres of cold water into the milk bucket (WITHOUT DETERGENT).	
	Afterwards press and hold any milk- or white coffee selection key until milk bucket is empty. Dry bucket and insert new bag for next day operation.	
	To turn the Foamer OFF and exit the cleaning program press and hold „Minus" key and push additionally any milk key. „Foamer OFF„appears on display.	Foamer OFF

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Cleaning instructions

The following steps should be conducted at the end of each days service and additionally if the „Clean appliance" message is displayed. **Use only the Black&White cleaning tablets (art.no. 70.00.06/1 box with 90 tablets or 70.00.05/carton with 36 boxes) for the water circuit, for the milk circuit use only the Thermoclean cleaning detergent (art.no. 70.00.01/2.5l or 70.00.02/5l).**

Cleaning of milk and water circuit simultaneously

Keys	Action	Display message
	Lift milk suction pipe out of the container. Press a milk key to empty it.	
	Disconnect air supply tube from air supply cover. Remove milk tube from air supply cover and container from its housing by pulling upwards. Clean these parts.	
	Cleaning milk container: Remove any remainig water from under the milk bucket. After cleaning fill 0,7 dl (CTM) or 0,5 dl (MF5/MF10) water into the heating tank (use measuring cup). Then reassemble suction pipe and milk container. **Attention: Milk container is hot! Take care.**	
	Dismount the foamer head. Press security release button, turn it counterclockwise until it stops. Then pull towards you.	
	Separate the different head elements and clean them with lukewarm water. After cleaning reassemble the foamer head and refit.	
	Fill up milk bucket with two litres of warm water (40° - 50°C). Add 0.6 dl of detergent.	
	Press and keep depressed „cleaning"-key. The messages „Select Coffee", „Select Milk", „Select Milk and Coffee" (each for approx. 4 sec.) appear consecutively on display. When message „Select Coffee and Milk" appears, release cleaning-key immediately. The message „Add tablet Press cleaning key" appears on display. Put a cleaning tablet into the powder channel. Make sure that the tablet is not stuck in the channel.	Select Coffee and Milk
	Press „cleaning" key. The automatic cleaning process starts and will last approx. 12 minutes. If you press the cleaning key without adding a tablet the message „No tablet press cleaning key" appears on display. Put in a tablet now and press the „cleaning" key again. If you did not add a tablet, the cleaning process starts without a tablet.	Add tablet press cleaning key No tablet press cleaning key
	During the process the cleaning counter appears on display. „Co: 1 Mi: 2" means the coffee part has been cleaned once before and the milk twice.	Cleaning Co: 1 Mi: 2
	After the automatic cleaning, „Ready Foamer OFF F" message appears on the display. The heating is off.	Ready Foamer OFF F
	Empty milk bucket of remaining detergent before filling with 2 litres of cold water into the milk bucket (WITHOUT DETERGENT).	
	Afterwards press and hold any milk- or white coffee selection key until milk bucket is empty. Dry bucket and insert new bag for next day operation.	
	To turn the Foamer OFF and exit the cleaning program press and hold „Minus" key and push additionally any milk key. „Foamer OFF„appears on display.	Foamer OFF

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