

MANUAL DE INSTRUCCIONES

MANUEL D'INSTRUCTION

INSTRUCTIONS MANUAL

BEDIENUNGSANLEITUNG

MANUALE D'ISTRUZIONE



COMBINED ELECTROMECHANICAL OVENS

Mods:

HEM-10/21

HEI-10/21



Dear customer



We would like to thank you for your confidence in our product on purchasing a professional appliance. We are totally convinced that in time you will be completely satisfied with your purchase.

Take a few minutes of your time and get to know the machine with this instructions manual and "to work": the easy to understand graphical information replaces pages full of writing.

Nevertheless, we advise you to read this manual which has been put together by FAGOR's kitchen supervisors, at great length, in order to benefit to the maximum from the multiple possibilities and advantages that this appliance offers you.

Keep this manual near to the appliance make sure it is always to hand.

Lastly, we wish you success and hope that you will be fully satisfied with your new oven.

FAGOR

General safety instructions

General information

During prolonged periods of appliance inactivity, it is recommended to cut off the water, gas and electric supplies.

Warning

The installation, incorrect adjustment or inappropriate maintenance of the appliance and manipulating it can cause material damages and injuries. Before commissioning the appliance, carefully read the instructions contained in this manual. Do not store nor use gases or explosive liquids near the appliance, nor introduce liquids containing alcohol inside the machine.

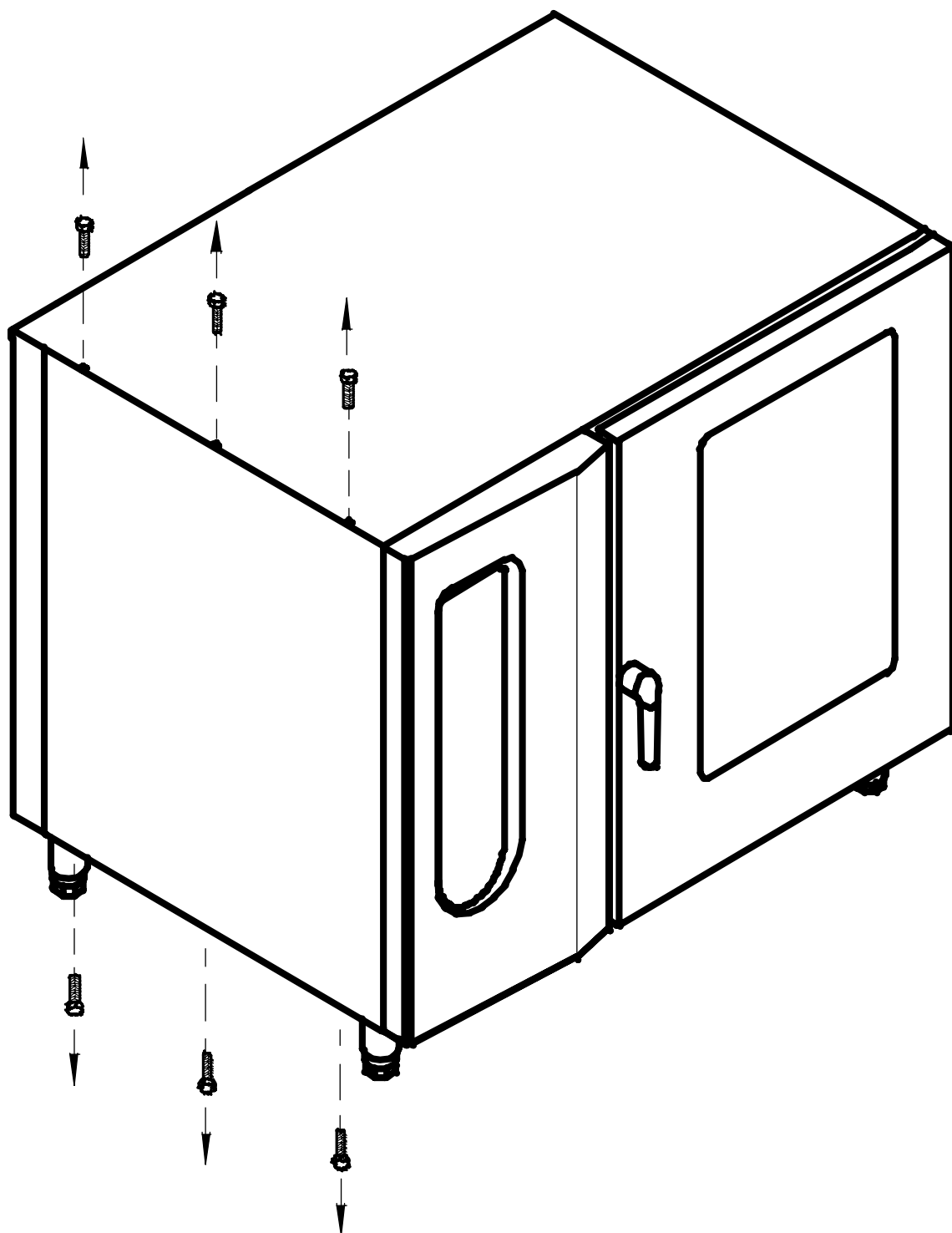
When the oven is hot, do not open the door suddenly (danger of burns due to hot steam).

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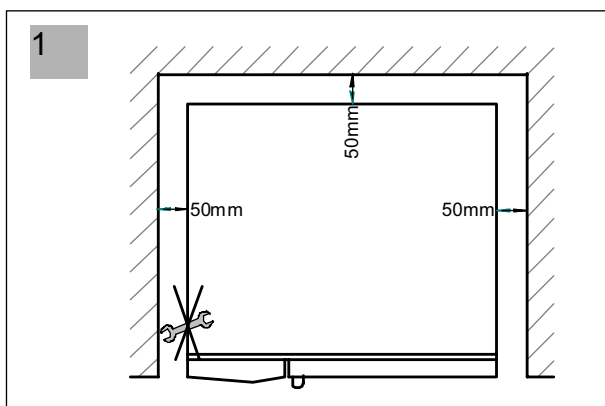
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Installation manual



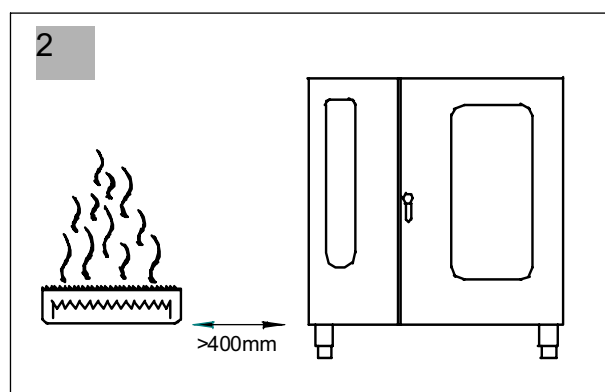


Minimum Distance



Minimum distance for left/right/rear sides 50 mm.

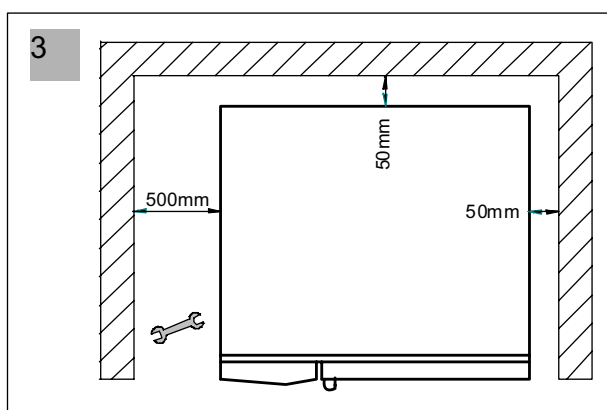
Fig. 1



Minimum distance from heat sources from the left side 400 mm.

Fig. 2

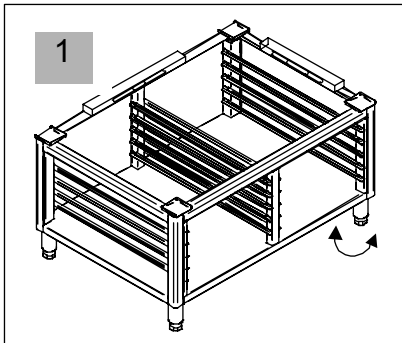
Attention: An excessive room temperature on the left-hand side of the appliance can activate the appliance's safety disconnection.



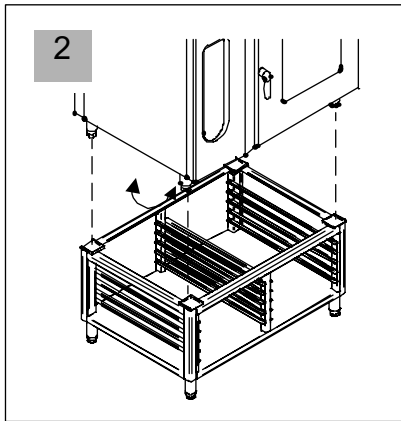
We advise keeping a distance of 500 mm on the left-hand side of the machine for carrying out repair and maintenance work.

Fig. 3

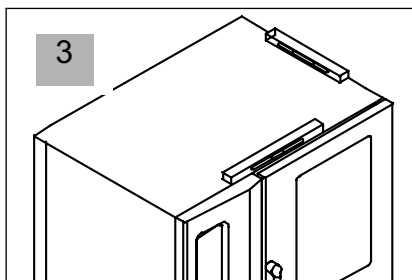
Installation of table models



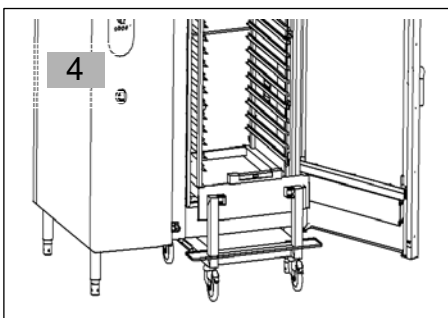
Level the frame horizontally before putting the oven on it. **Fig.1**



Place the oven on the frame matching up the supports with the points on the frame. **Fig. 2**



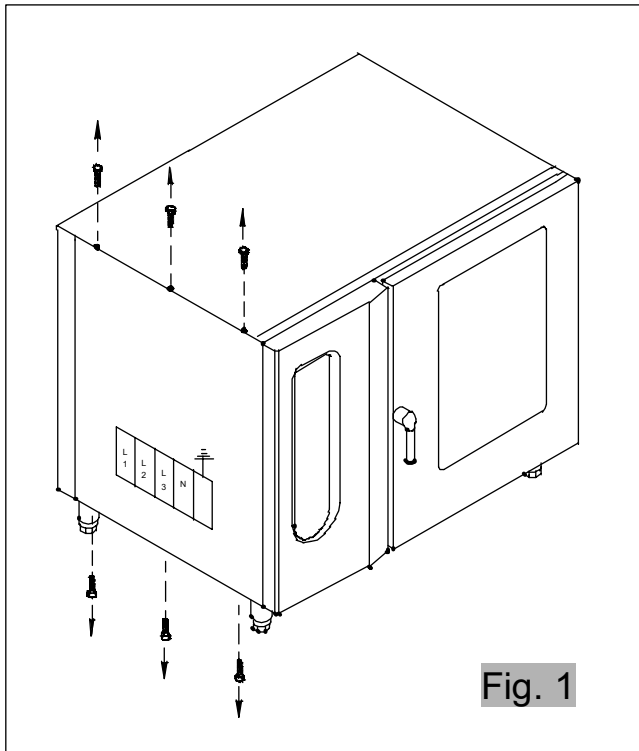
The appliance must be leveled horizontally. **Fig. 3**



The mobile loading trolley must be horizontal inside the appliance **Fig. 4**



Electrical Connection



For appliance connection, exact measurements and connection points, see page 10.

VOLTAGE POWER SUPPLY	SECTION HOSE	FUSE MASTER SWITCH	DEVICE DIFFERENTIAL
400V 3N 50-60Hz	3x10mm ² +N+T	63A	300mA
230V 3 50-60Hz	3x25mm ² +T	100A	300mA
TOTAL POWER KW			31.5

No. 2

The electrical connection of the appliance must always be carried out by an **AUTHORISED TECHNICIAN**

The current legal regulations of each country should be taken into account regarding connections to mains supplies.

Make sure that the mains voltage corresponds to the value indicated on the name plate.

Use a polychloroprene or similar material cable for connections (Ho5RN-F).

A switching device for all the phases should be installed near to the appliance, with a gap of a minimum of 3 mm between the contacts. This switch will be equipped with fuses.

It is obligatory to earth the appliance from the connection strip to the mains supply's earth.

The manufacturer takes no responsibility for any possible damage caused by the failure to comply with this requirement.

The section of cable-hose and the fuses to install in the master switch are indicated in table No. 2.

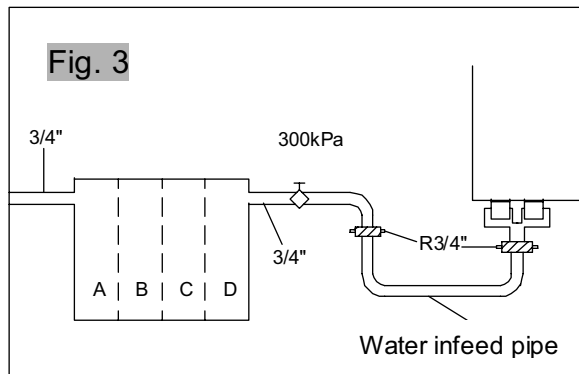
Lift off the left hand side panel to access the appliance's electric connection. Pass the cable-hose through the stuffing box located on the outer base and connect it to the strip as indicated. **Fig. 1**

VERY IMPORTANT: tightly secure the electrical feed hose to the stuffing box before replacing the left hand side.

When several appliances are being connected in series, they should be connected to earth amongst each other from the point set aside for this end on the base of the oven at the rear.



Water connection



Water connection

Connect only drinking water to the appliance.

Carry out the connection to the water mains at point 1 (Fig. 3), using the hose supplied.

The water input pressure must be between 50 and 400 KPa. 200 KPa is recommended.

Install a water filter and a cutoff key in the water inlet.

A decalcifier should be installed for water harder than 10°F.

Water conductivity 50-2000 μ S, optional lower conductivity.

Maximum Cl chloride concentration below 150 mg/litres.

In the majority of cases, a water connection without an additional filter can be used as well as without water treatment.

The generator is equipped with an automatic emptying system that runs every 23 hours to regenerate the wash drum's water. In practice, this means that the intervals between decalcifications are substantially longer. When the state of the water is critical, filtering and/or treatment is required to guarantee reliable long term functioning and to avoid corrosion. Depending on the water quality and on the results water analyses, filters can be installed either individually or one after the other.

A) Thin filter.

If the water contains impurities such as sand, iron particles or floating substances, we advise the use of a thin filter in the inlet.

B) Activated carbon filter.

In the event of the water containing a high concentration of Cl₂ chlorine above 0.2 mg/l (ppm) (this information can be obtained from the water supplier company) an activated carbon filter should be inserted.

C) Installation of osmosis recirculation.

When the CL chlorine concentration is over 150 mg/l (ppm) (this information can be obtained by the water supplier company), osmosis recirculation should be installed. In this case, take into account that the minimum conductance value must be 50 μ S/cm.



Water connection

D) Water decalcification:

is recommended for water treatment when the level of calcination has been found to be high (without chloride). Systems: H+. Ion exchanger or Kleensteam. We strongly advise against the use of sodium exchangers (commonly used in dishwashers) due to the sodium sediments and the boiling delay with common salt.

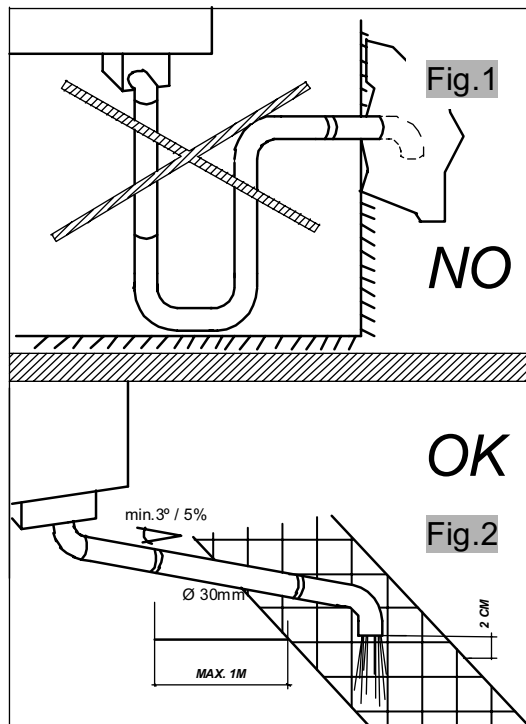
On choosing filter systems (A, B, C, D) we recommend the following manufacturers: Schuhmacher, Grünbeck, Culligan, Cuno, Everpure, Britta, Christ, Seral.

Warning

Before connection, check the label showing which is the water inlet.



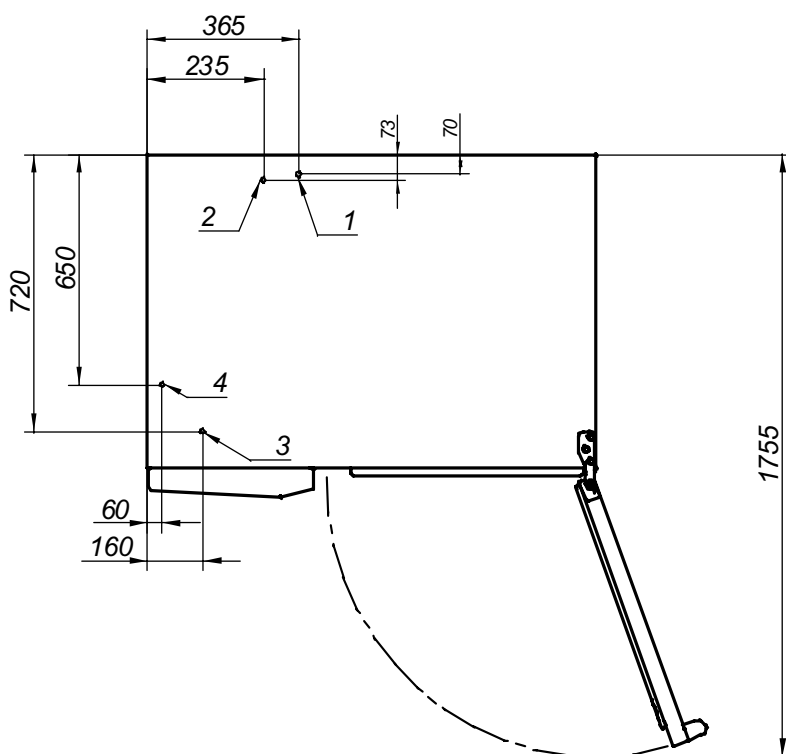
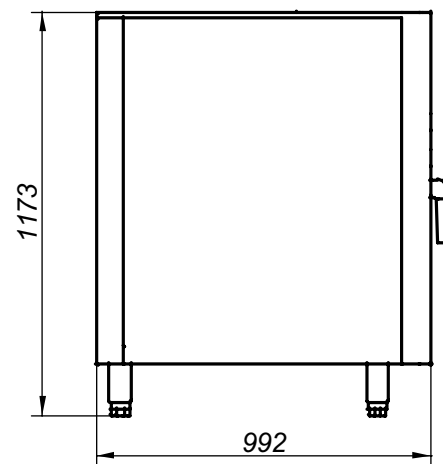
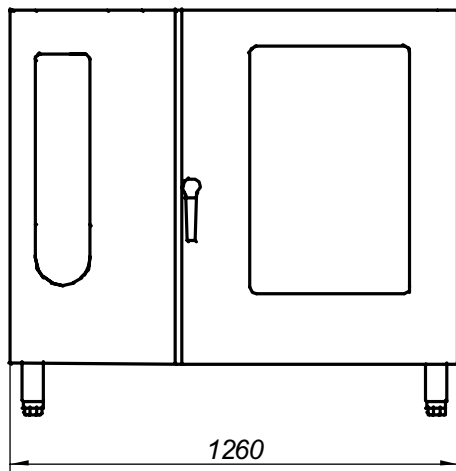
Connection of waste water



- The appliance complies with the corresponding regulations (DVGW, SVG, KIWA, WRC).
- **Pipe resistant to steam temperature, no flexible pipes.**
- **Ø 30 pipe** with a constant gradient (minimum 5% or 3°), do not reduce the diameter of the pipe.
- Fixed connection with a U-bend is allowed standar. Fig. 1
- Adhere to the appropriate drainpipe measurements: pumping volume of the steam generator in a short space of time: 0.7 l/sec.
- Average temperature of waste water: 65°C
- Regulation in force: DIN 1986, T1
- In the event of outputs without a U-bend, maintain a distance of 2 cm between the appliance's output and the floor drain.

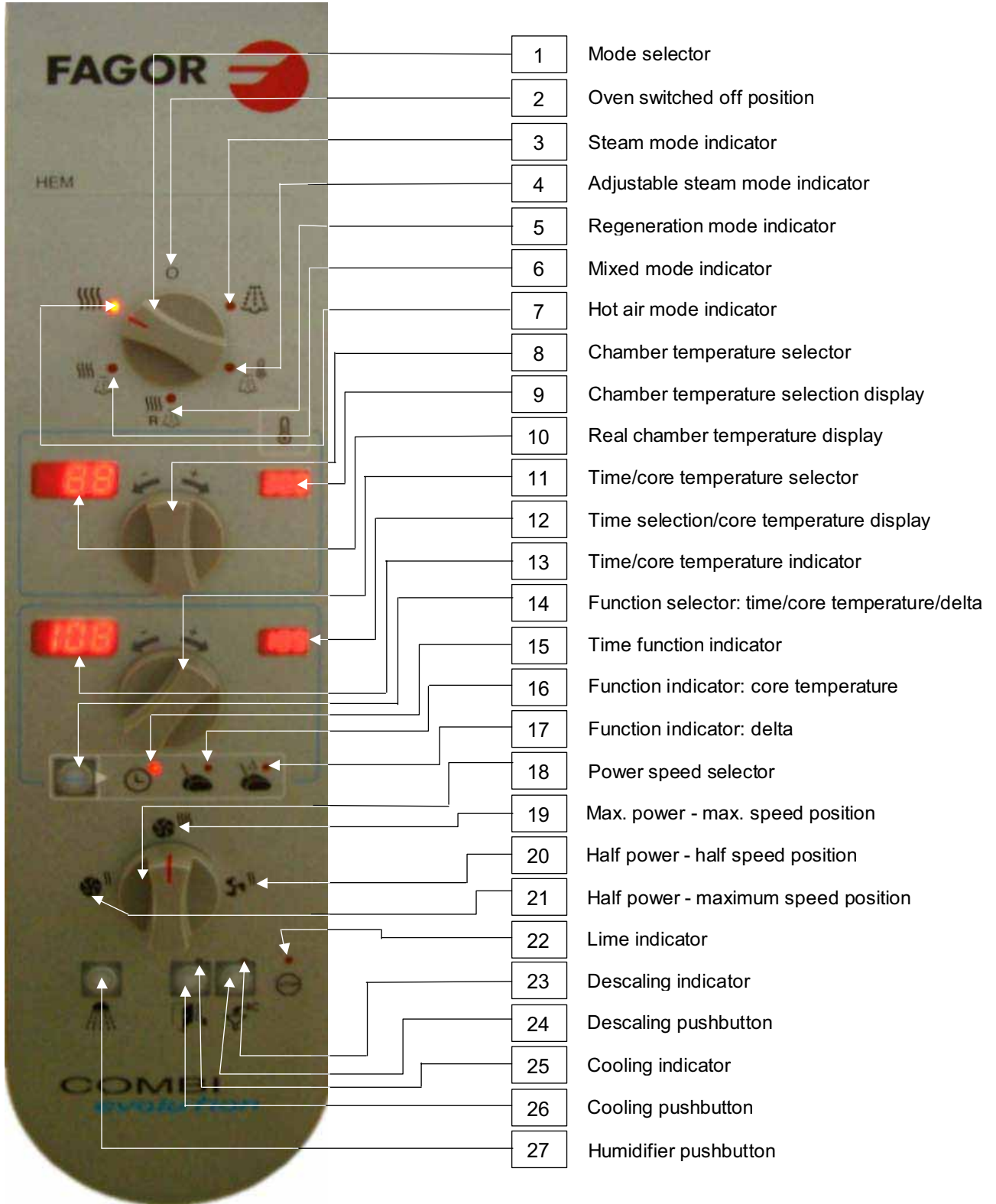


General and connection dimensions

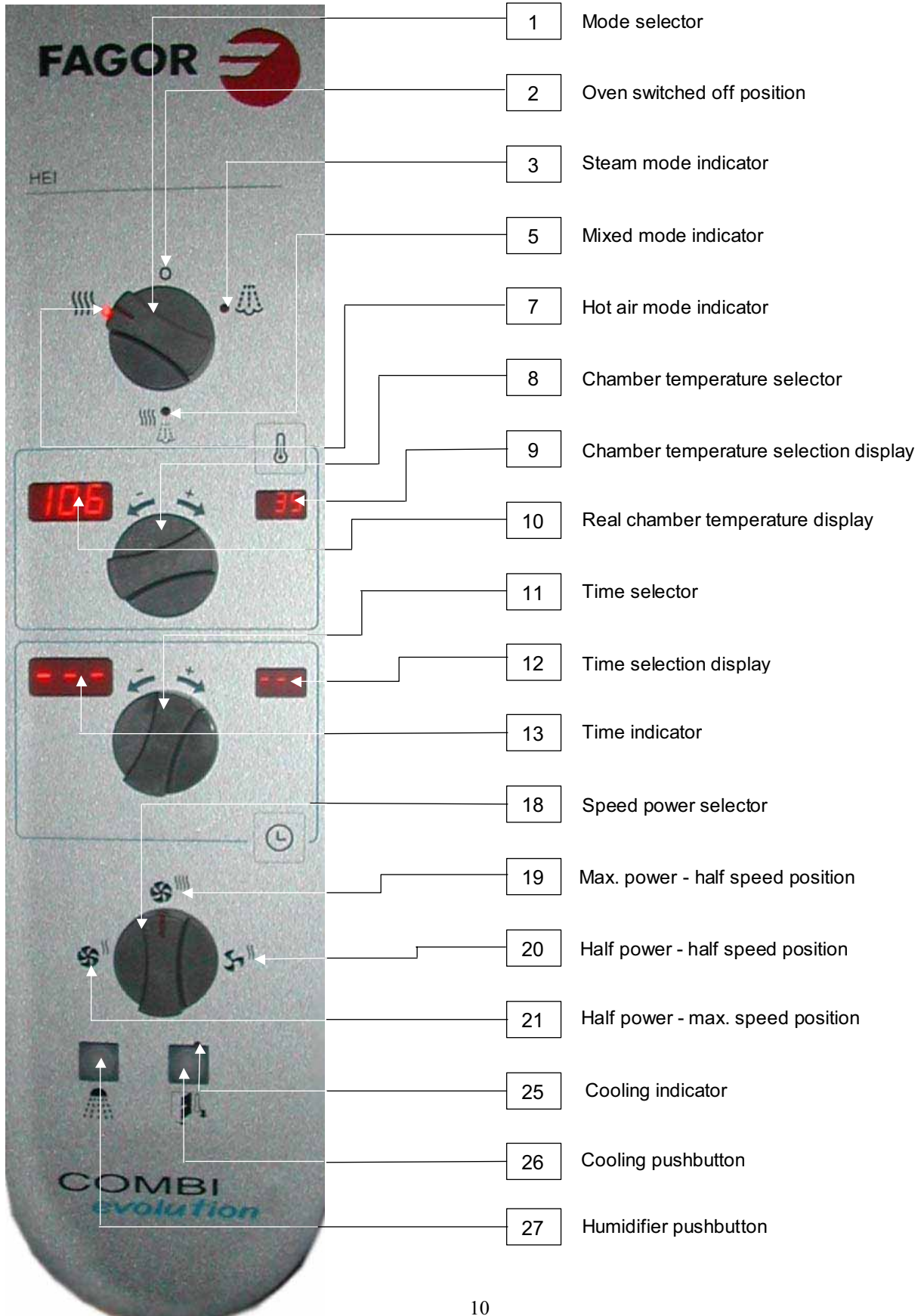


- 1 = Drainpipe plug for cleaning
- 2 = General drainpipe RG1"
- 3 = Electricity inlet adaptor.
- 4 = Soft water inlet RG 3/4"

HEM Control elements



HEI Control Elements





General usage information

Before running the appliance for the first time after installation, it is advisable to clean the inside with a damp soapy cloth and then to run it empty for ½ hour in Steam mode to get rid of the typical smell of a new appliance.

Before turning the machine on, check that the water stopcock is turned on.

When the oven is to be left unused for a long time, it is advisable to close the stopcock and empty the water out of the generator.

To empty the water out of the generator, simply press keys 14(Select) and 26(Cooling) simultaneously for 5 seconds, with the door open (HEM MODEL).

Open the oven door carefully in order to avoid being burnt by steam.

The oven can operate in five different modes in the HEM models and three in the HEI models:

HEM MODELS

- **HOT AIR:** heating is carried out solely by hot air (dry heat).
- **STEAM:** heating is generated by water vapour at 99°C and at atmospheric pressure, produced by a steam generator.
- **ADJUSTABLE STEAM:** the heating is produced by steam and the required temperature can be selected from 35° to 125°C.
- **MIXED:** heating is produced by hot air and steam at the same time, but with more powerful hot air.
- **REGENERATION:** heating is produced by hot air and steam at the same time, but with more powerful steam.

The oven can operate in three different functions in the HEM models and in the TIME function in HEI models:

- **TIME:** from 1 to 120 minutes or even indefinitely.
- **CORE PROBE:** selection from 0 to 99°C.
- **DELTA:** selection from 0 to 50 or 99°C depending on the work mode.

STEAM GENERATOR

When the oven is turned on, the "VAC 3" display may appear.

This means that the oven is automatically emptying the generator.

After the three minutes it takes to empty, the oven will return to its normal functioning.

HEI MODELS

- **HOT AIR:** heating is carried out solely by hot air (dry heat).
- **STEAM:** heating is generated by steam at 99°C produced by water injection and at atmospheric pressure.
- **MIXED:** heating is produced by hot air and steam at the same time.

The smoke pipe opens automatically in the Hot air mode whilst in the other modes it remains closed.

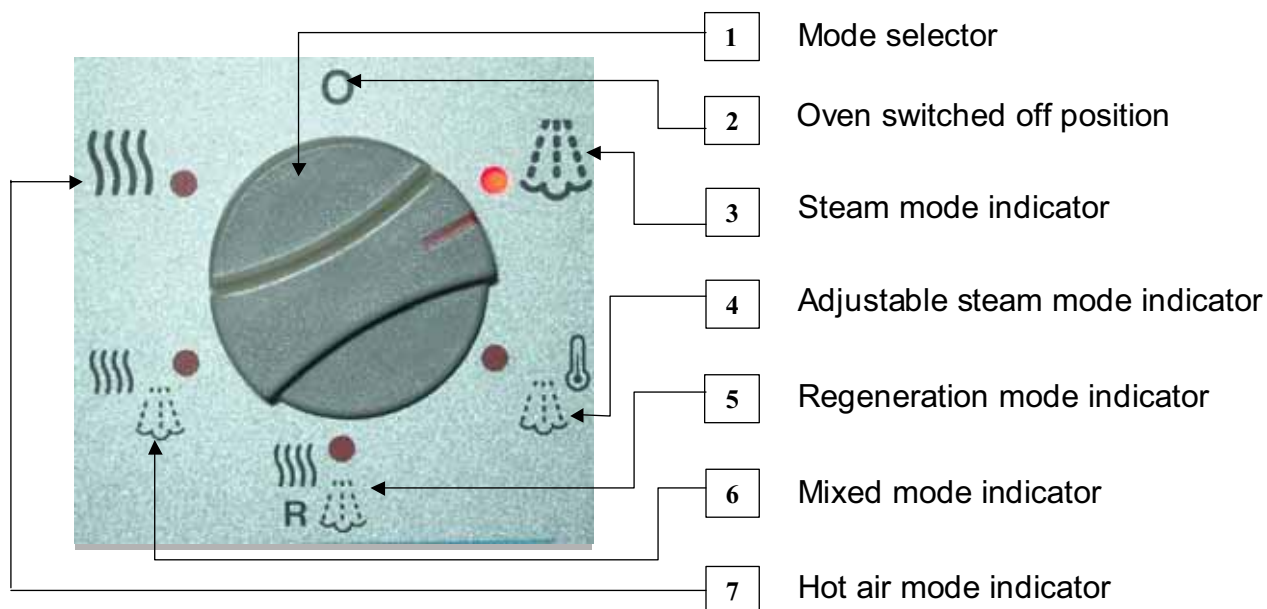


General usage information

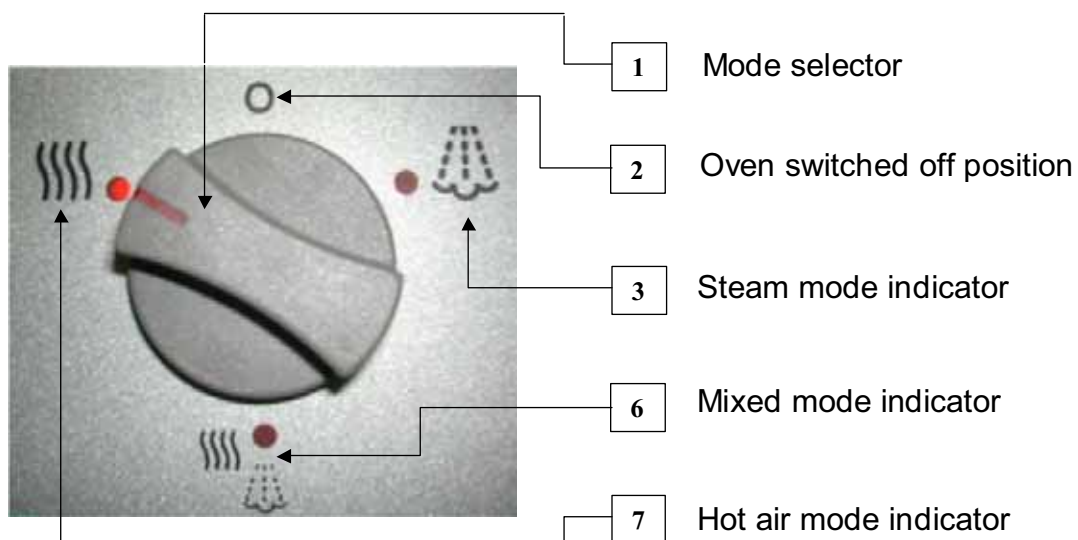
Selection of HEM Cooking modes

This is carried out using the mode 1 selector.

On selecting any of the working modes the corresponding led is lit up.



Selection of HEI Cooking modes





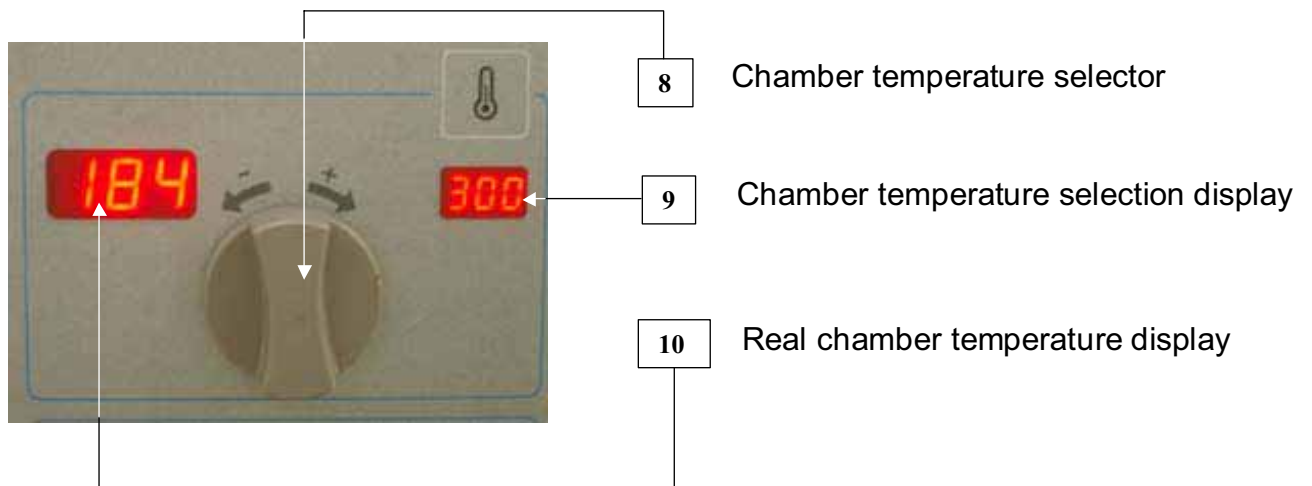
General usage information

Temperature selection

This is performed using the temperature selector 8.

Display 9 indicates the selected temperature

Display 10 indicates the real temperature of the oven chamber





General usage information

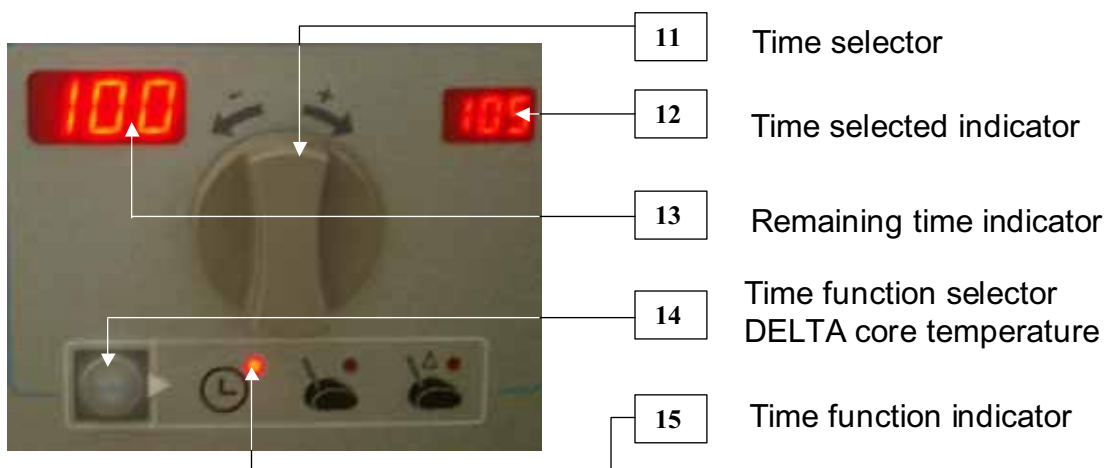
Time selection display HEM

Select the time function with key 14 (Select), led 15 lit.

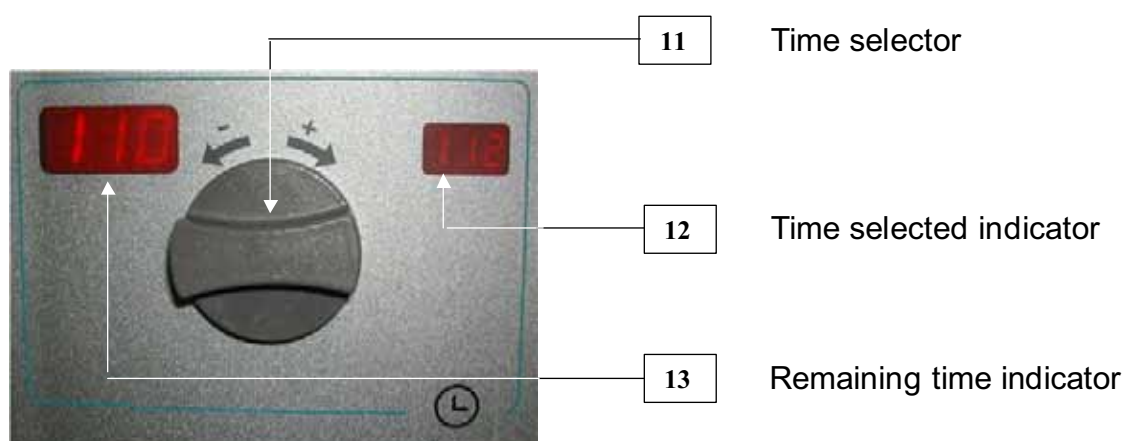
Turning control 11 will display the time chosen in displays 12 and 13 and can be from 1 to 120 minutes.

Turning the control more will take us to the position --- where the oven runs indefinitely.

Display 13 shows us the time remaining before finishing.



Time selection display HEI





General usage information

Selection of the core probe temperature HEM

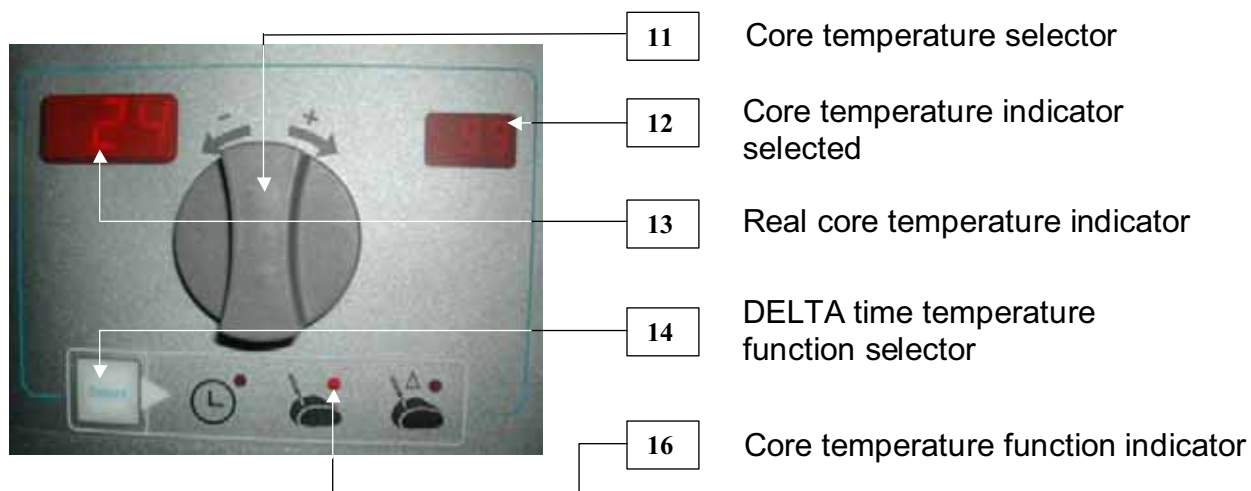
Select the core temperature function with key 14 (Select), led 16 lit.

Turning control 11 will select the desired core temperature.

Display 12 indicates the selected core temperature from 0 to 99°C.

Display 13 indicates the real temperature in the core probe.

When the core temperature reaches the selected temperature, the oven stops and the alarm will start to ring.





General usage information

Selection of the HEM DELTA Function

DELTA function: difference between the core temperature and the oven temperature.

The oven temperature is always 50°C above the temperature registered by the core probe.

Select the core temperature function with key 14 (Select), led 17 lit.

Turning control 11 will select the desired core temperature, for example 70°C is indicated in display 12.

Insert the probe tip into the food, for example display 13 indicates 15°C.

The oven will heat up to 15+50°C - 65°C and as the core temperature raises the oven temperature will rise with a constant difference of 50°C.

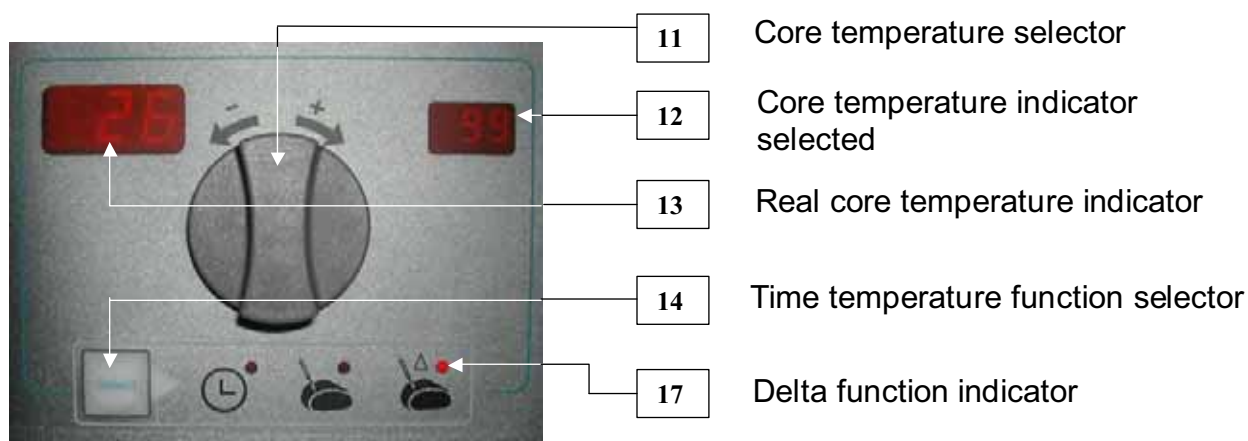
When the core temperature reaches the selected 70°C, the oven will be at 120°C and the alarm will ring.

In this function, control 8 that selects the oven temperature is cancelled out.

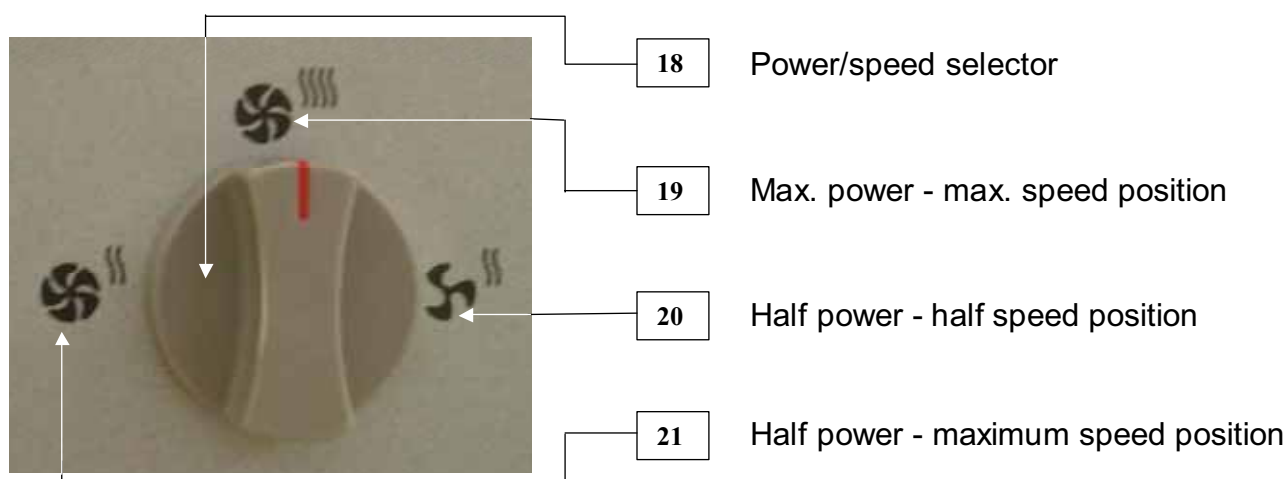
In the steam mode at a fixed 99°C, the field for adjustment is only 0 to 50°C.

In the adjustable steam mode at 35° ÷ 125°C, the field for adjustment is 0° to 75°C.

In the rest of modes, the field for adjustment is from 0° to 99°C.



Power/speed selection





General usage information

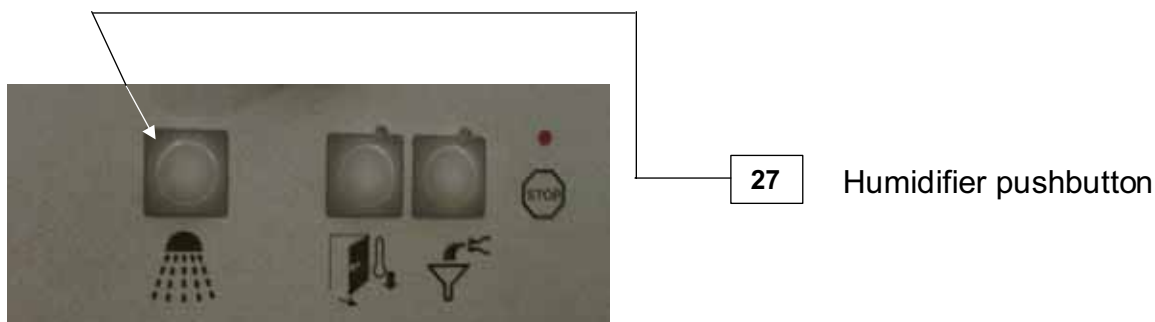
Auxiliary functions

Humidifier pushbutton: the entry of humidity only works when key 27 is pressed.

Bakery products rise very well with this function due to the quick introduction of humidity.

Smooth and shiny baked products.

It is advisable to use this function in short intervals of 2÷5 seconds.



Cooking chamber cooling: the following procedure should be used to cool the cooking chamber:

Close the door and press key 26. Then open the door. The mode selector 1 must not be in position 0.

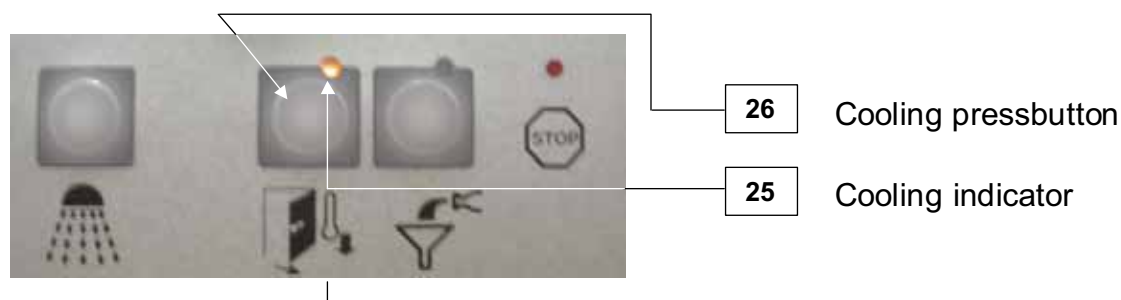
The turbine starts and indicator 25 lights up. It stops automatically when the chamber temperature reaches 45°C.

The cooling cycle stops by pressing 26 again or by closing the door, and indicator 25 turns off.

Warning Do not cool the oven directly applying cold water in the tub.

SAFETY MEASURES: both the fan cover and the tray guides must be securely attached during this cycle.

The cooking chamber should not be cooled down with cold water.





General usage information

Lime descaling: when led 22 flashes, it is advisable to carry out the descaling cycle or the lime elimination in the steam generator.

Key 24 should be pressed for 5" to turn on indicator 23 permanently.

The door should be kept closed and mode 1 selector in the operating position.

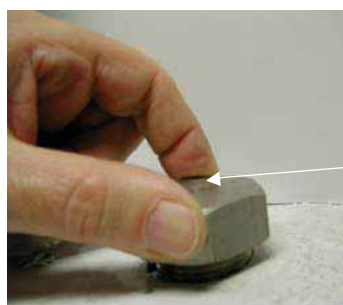
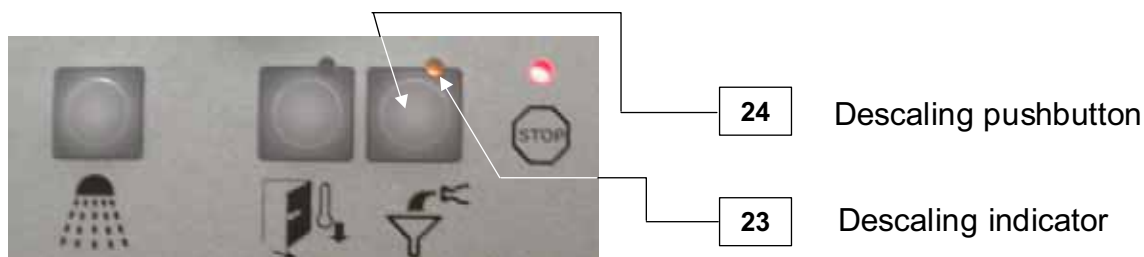
After 3', display 13 will indicate F2 and led 23 will start to flash, and the 3,5 L of descaler should be inserted by taking off the cap (No. 1).

The cap should be put on again (No. 1) and key 24 pressed for the descaling cycle to start.

The cycle ends when display 9 indicates FIN.

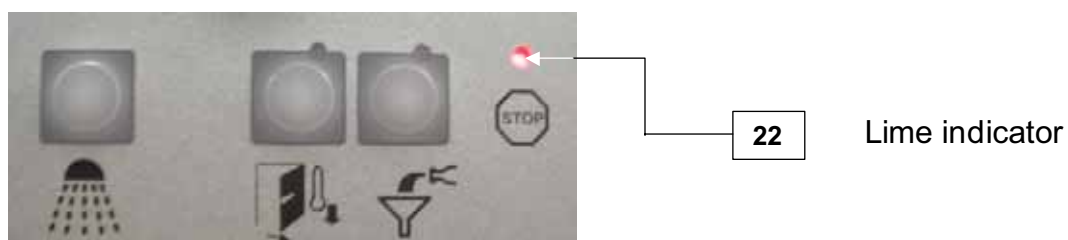
NOTE: If key 24 is pressed for 5" during the descaling cycle, the cycle is suspended.

If the oven is turned off, the cycle will continue when it is turned on again.



1 Descaler entry cap

If the lime indicator 22 is on continuously, the oven is blocked (call the technical assistance service)



As measure of security the maker advises to close the key in passing of water after using the oven

Maintenance



Daily cleaning

Cleaning should always be performed with the appliance turned off.

Clean the appliance daily with specialised degreasing products in order to ensure proper functioning and up keep.

VERY IMPORTANT: gritty or abrasive detergents should not be used nor hose pipes either for the cleaning of the outer part of the appliance, as these could damage its internal components.

Cleaning should be performed as follows:

- 1 Cool the oven to 60°C, (using the oven's cooling function) and then remove the solid residues.
- 2 Spray the detergent evenly around the inside of the chamber.
- 3 Close the door and leave the detergent to work for 5 or 10 minutes (depending on how dirty the oven is).
- 4 Run a steam cycle for 5 to 10 minutes, then stop and carefully open the door.

BEWARE: the detergents are highly active, and therefore care should be taken as they could cause skin and eye irritation. Follow the manufacturer's instructions precisely.

- 6 Rinse with plenty of water. The shower provided with the appliance (optional for all versions) can be used to this end.

Note: Given the design characteristics of the appliance, water can be applied to all the parts of the oven's cooking chamber with absolutely no risk.

- 7 Dry the oven, for which the hot air mode can be used for 5 minutes. Then turn of the power supply, close the water stopcocks and leave the door ajar to ensure that the air inside the oven is clean.

If cleaning is carried out daily, the operation can be performed in as little as 15 minutes, with the advantage of keeping the appliance in perfect condition and ready for the next day's work.

As the inner door is glass, it is very easy to clean in the same way and with the same products used to clean glass-ceramic hob cookers.

- 1 Use the scraper to remove the encrusted grease from the glass.
- 2 Spray the product on the glass.
- 3 Wipe the glass with a cloth.

Note: do not use products or utensils that scratch the surface of the glass.

Maintenance



Irregularities

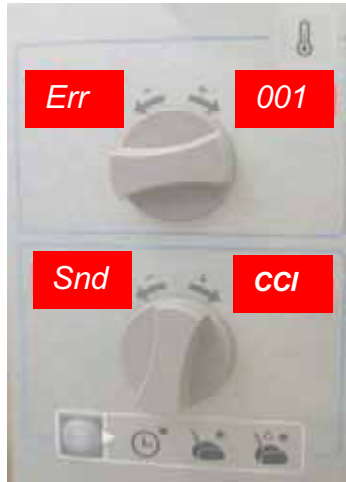
In the event of a breakdown or the malfunction of the appliance, please check the following before calling the technical assistance service:

- ❖ The fuses are correct.
- ❖ The voltage in the machine is correct
- ❖ The mains water supply pressure is correct.
- ❖ Steam coming out of the door could be due to the door's joint being dirty. If so, clean the joint.
- ❖ If water is seen on the floor, this could be due to the waste pipe being blocked. If so, clean it by opening the cap on the lower part of the appliance (Fig. 1).

This model has an auto diagnosis programme, which blocks when the appliance breaks down and an error message appears in the digital indicators.

- ❖ The bell rings intermittently.
- ❖ A message appears intermittently in the displays.
- ❖ When the problem is resolved, the outputs start to operate normally again.

Types of errors



Err 1 Snd CCI

When the chamber temperature probe fails



Err 2 Snd ncl

When the core probe fails



Err 3 TEM FLI

When the oven temperature goes above 330 °C

Types of errors



Err 4 Snd nIL

The water level probes are not functioning correctly.



Err 5 Snd UAP

When the steam generator temperature probe fails.



Err 6 Snd gnr

When the steam generator temperature probe fails.

Types of errors



Err 7 Snd CAL

If after 15' calibration is not achieved



Err 8 CTL HUM

When the humidity control is detected not to work



Err 9 PrG OFF

When the controller is detected not to work

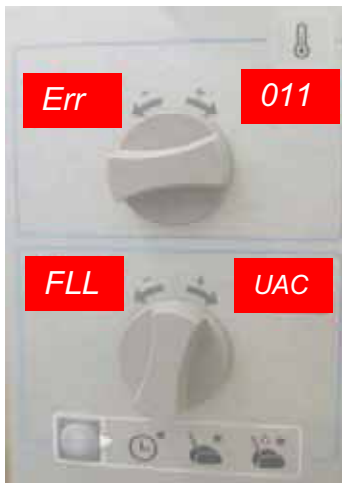


Types of errors



Err 10 FLt H20

When the steam generator filling valve is activated for 7 or more minutes.



Err 11 FLL UAC

When the emptying pump is activated for more than 1 minute and the minimum level does not lower



Err 12 FLL tco

When cc acts and in three minutes Tc does not raise 3 or more degrees or if Tg is less than 93°C.
When Cv acts and in three minutes Tg does not raise three or more degrees.



Types of errors



Err 13 FLL tco

When Cc and Ca operate for 12 minutes, Tc does not rise 30 degrees or more.



Err 14 PtM FLI

When the steel sheet temperature reaches or exceeds 60 °C.
Above 50 °C, the four displays flash, warning of abnormal heating of the steel sheet.

The TECHNICAL ASSISTANCE SERVICE will solve all of these problems

T-326507