Elen

SERVICE MANUAL

EXPOBAR®

SM_EN

Date.: 150413

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Hazard intensity levels

There are four different levels of notification intensity within this manual, as identified by signal words DANGER, WARNING, IMPORTANT, and NOTE. The level of risk and imporance of the notification is determined by the following definitions. Always observe the warnings to ensure safety and prevent potential injury and product damage.

Important:

Alerts against unsafe practices. Observe *Important* notifications to ensure food safety, prevent possible minor personal injury, or damage to the machine.

WARNING:

Indicates a potentially hazardous situation which, if the *WARNING* is ignored, could result in serious injury or even death.

DANGER:

INDICATES A IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL LIKELY RESULT IN SERIOUS INJURY AND EVEN DEATH.

Note:

Gives additional information which may be helpful during the operation, routine maintenance, and cleaning of the machine.

Introduction

Thank you for choosing an Elen espresso machine.
We hope you enjoy it !

- Read the user manual before using the machine.
- This manual contains important instructions on intended and safe use of the coffee machine.
- Keep this manual close to hand for future reference. If damaged or lost, request a copy from the manufacturer.

General instructions

- Machine installation and certain maintenance operations should only be performed by qualified service personnel.
- All safety instructions and warnings contained in this manual should be observed at all times to ensure safe installation, use, and maintenance.
- Do not attempt to remove covers or safety shields to access the interior of this machine or make repairs. Repairs should be made by an authorised technician or service centre.
- Owners are liable for ensuring that users have been properly trained to operate the machine and understand the potential risks involved.
- The owner or installer will be liable for all non-authorised modification of the machine.
- Non-authorised alteration or modification of the machine will immediately void the manufacturer's warranty.
- This manual references the machine at the time of sale. The commercial availability of subsequent versions including modifications, upgrades or adaptations does not oblige the manufacturer to apply any changes to this machine, nor is it obliged to update the documentation supplied.
- The manufacturer reserves the right to withdraw currently available manuals whenever deemed appropriate and reasonable.
- Periodically, some updates and changes may be required for this machine. In this event, a technician will be responsible for ensuring the change is made in accord with manufacturer's specifications.

Warnings

- Install the machine in a horizontal position and away from heat sources and flammable objects.
- This machine should only be installed on a water-resistant work surface that is capable of adequately supporting the machine's weight.
- Place the machine in a location accessible only to personnel trained to operate it.
- Keep all hazardous packaging materials, such as plastic bags, styrofoam, and staples, out of reach of children.
- Plug the machine into a properly installed, earth grounded electrical outlet with line voltage that matches the specifications for the machine.
- Ensure that the power supply voltage does not fluctuate by more than 6%.
- Position the power cable so that users cannot trip over it. Keep the power cable away from sharp edges and heat sources.
- Children should never be allowed to play with the machine.
- This appliance is not suitable for installation in an area where a pressure washer may be used.
- Do not use the machine outdoors, where it would be exposed to severe weather or extreme temperatures..
- If the power cable is damaged, it may only be replaced by the manufacturer or its aproved service technician.
- Do not remove or disable any of the mechanical, electrical, or thermal protection safety equipment.

- In case of emergency, (e.g., the machine catches fire or becomes unusually hot or noisy), disconnect the power immediately and turn off the water supply.
- If the machine is not going to be used for an exended period of time, disconnect the power. When disconnecting the power, pull the plug rather than the cable.
- When packed for storage, store the machine in a dry place with an ambient temperature above 5°C. Boxes may be stacked up to three units high of the same model. Do not place other heavy items on top of the box.
- If the machine is likely to be exposed to temperatures below 0 °C during handling and transport, make sure that service personnel empty the boiler and water system. (The machine's boiler and water system is empty when delivered from the factory.)
- To ensure fault-free machine operation, only use manufacturer-approved replacement parts and accessories.

Precautions

- Before performing maintenance and/or moving the machine, disconnect the machine from the power supply and wait for it to cool down.
- Do not place any liquids on the machine.
- This appliance must not be cleaned with a pressure washer.
- Never immerse the machine, plug or power cable in water, as there is a risk of electric shock.
- Do not touch the machine's hot surfaces or dispensing equipment.
- Do not touch the machine if your hands or feet are wet.
- Do not operate the machine if any part except the dispensing equipment is wet.
- Place the machine out of reach of children.
- This appliance can be used by children from age 8 and above and prsons with reduced physical, sensory, or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Do not use the machine if the power cable or plug is damaged, or the machine has been dropped. Contact a service technician for repairs or to ensure that it is safe for use.
- Do not blockthe vents with rags or other objects.
- Do not insert foreign objects into the vents.
- Check the drain regularly to make sure that waste water is empting properly.

Intended use

- The coffee machine has been designed and manufactured to make espresso coffee and other hot drinks (e.g., steaming and frothing milk). Do not use it for any other purpose.
- The machine is intended to be used by trained personnel for preparing foodstuffs.
- This machine is not intended for use in industrial kitchens, domestic kitchens, or similar locations.
- The manufacturer will not be held liable for damage to persons or property due to incorrect, improper or negligent use by non-professional personnel.
- To ensure optimal performance, install the machine in a location where these parameters will not be exceeded:
  - Maximum permissible inlet water pressure: 600 KPa (6 Bar)
  - Minimum permissible inlet water pressure: 200 KPa (2 Bar)
  - Maximum inlet water temperature: 40°C
  - Ambient temperature is between +10 °C (min.) and +40 °C (max.).

Elen MINI Control

SPECIFICATIONS	Elen MINI	
	Mini Control 1GR	Mini Control 2GR
Machine model, Standard	-	-
Machine model, Take Away	-	-
Steam wand	1 unit	1 unit
Hot water outlet	1 unit	1 unit
Temperature control	Regulated by pressure switch	Regulated by pressure switch
Temperature control by group	No	No
Programmed via display	No	No
Dispensing system for tall cups	Optional	Optional
Energy saving mode	No	No
Height, width, depth (mm)	530, 460, 590	530, 460, 590
Boiler volume (L)	6	6
Power supply	220-240V 1N~ 2770W 50/60 Hz	220-240V 1N~ 2780 W 50/60 Hz
Water connection	Female 3/8" thread	Female 3/8" thread
Machine weight (kg)	36.40	41.50
Steam boiler operating pressure	Between 0.8 and 1.2 bar	Between 0.8 and 1.2 bar
Ambient noise	< 70 db	< 70 db

Elen Display Control 2GR

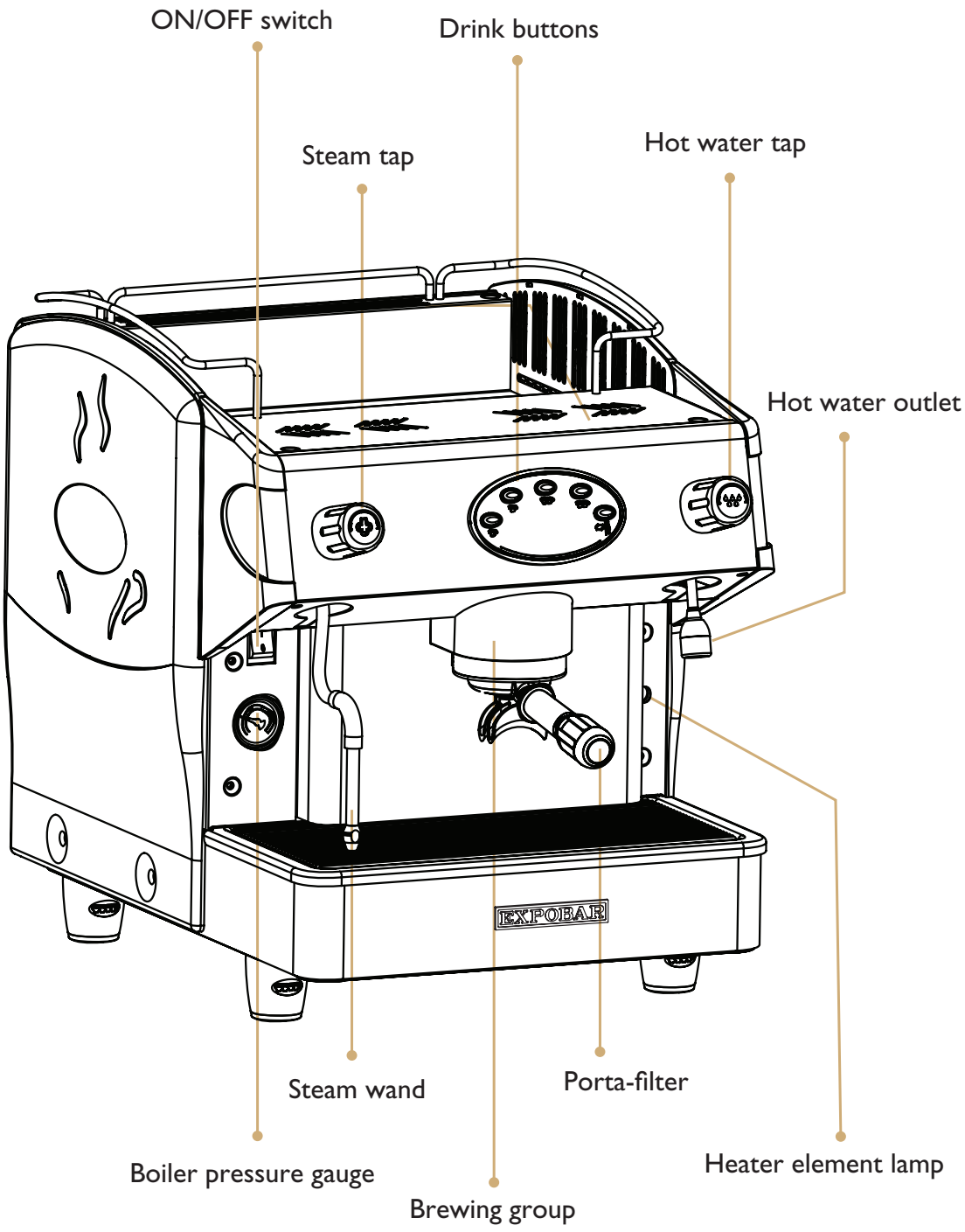
SPECIFICATIONS	Elen 2GR	
	Display control	3 Boilers display control
Machine model, Standard	EBEE-D41B-12AE 220-240V 1N~ 3200W	-
Machine model, Take Away	EBEE-D41B-22AE 220-240V 1N~ 3200W	-
Steam wand	2 units	2 units
Hot water outlet	1 unit	1 unit
Temperature control	PID regulation	PID regulation
Temperature control by group	No	Yes
Programmed via display	Yes	Yes
Dispensing system for tall cups	Optional	Optional
Energy saving mode	Yes	Yes
Height, width, depth (mm)	530, 680, 590	530, 680, 590
Boiler volume (L)	11.5	11.5 + 1.5 + 1.5
Power supply	220-240V 1N~ 3200W 50-60Hz	220-240V 1N~ 3740W 50/60 Hz
		400V 3N~ 4790W 50/60 Hz
		220-240V 3~ 4790W 50/60 Hz
Water connection	Female 3/8" thread	Female 3/8" thread
Machine weight (kg)	51.90	60.70
Steam boiler operating pressure	Between 0.8 and 1.2 bar	Between 0.8 and 1.2 bar
Ambient noise	< 70 db	< 70 db

Elen Display Control 3GR

SPECIFICATIONS	Elen 3GR	
	Display control	3 Boilers display control
Machine model, Standard	-	-
Machine model, Take Away	-	-
Steam wand	2 units	2 units
Hot water outlet	1 unit	1 unit
Temperature control	PID regulation	PID regulation
Temperature control by group	No	Yes
Programmed via display	Yes	Yes
Dispensing system for tall cups	Optional	Optional
Energy saving mode	Yes	Yes
Height, width, depth (mm)	530, 980, 590	530, 980, 590
Boiler volume (L)	17.5	17.5 + 1.5 + 1.5 + 1.5
Power supply	400V 2N~ 4290W 50/60 Hz	-
	400V 3N~ 6290W 50/60 Hz	400V 3N~ 6290W 50/60 Hz
	220-240V 3~ 4290W 50/60 Hz	220-240V 3~ 4290W 50/60 Hz
Water connection	Female 3/8" thread	Female 3/8" thread
Machine weight (kg)	51.90	60.70
Steam boiler operating pressure	Between 0.8 and 1.2 bar	Between 0.8 and 1.2 bar
Ambient noise	< 70 db	< 70 db

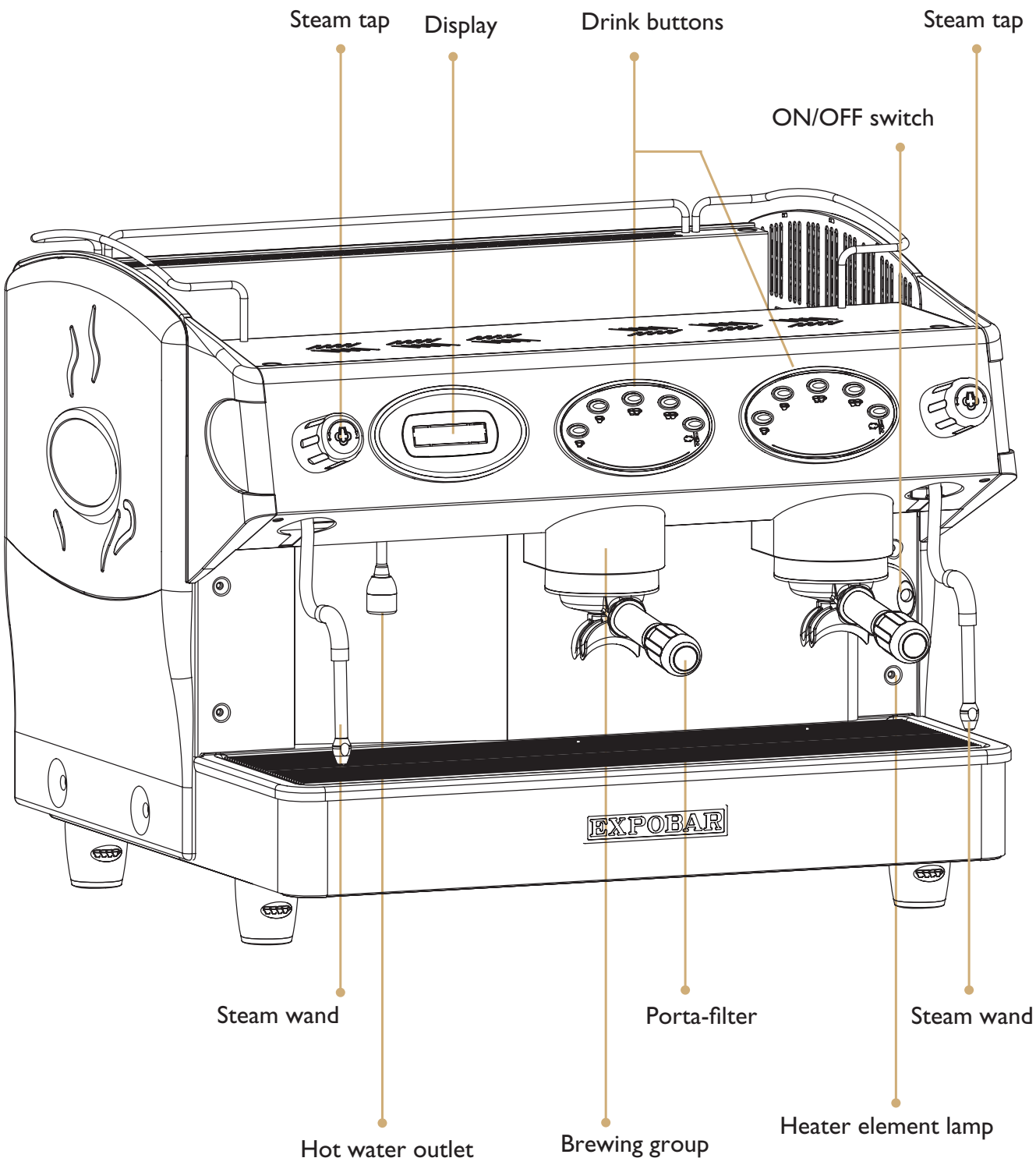
Front view

Elen MINI Control



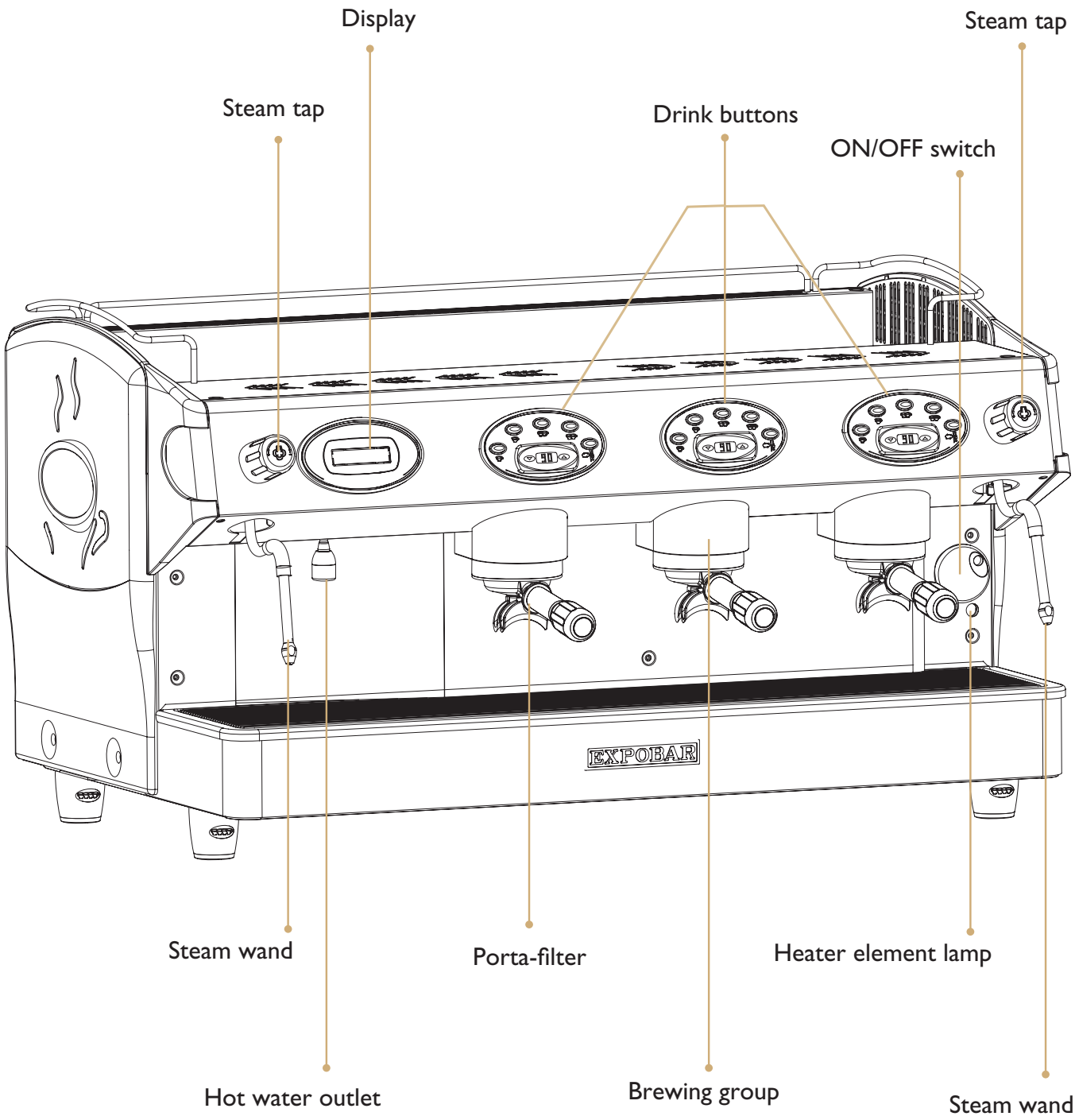
Front view of the machine

Elen Display Control 2GR



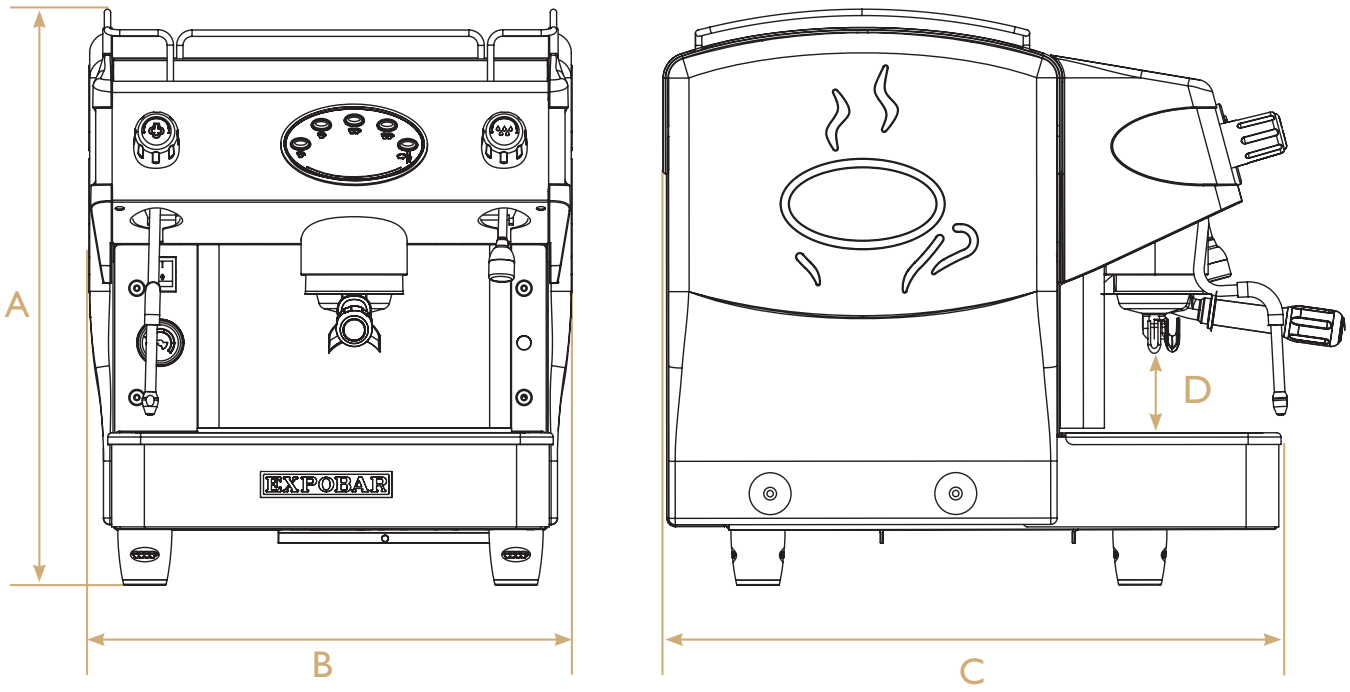
Front view of the machine

Elen Display Control 3GR



DIMENSION SKETCH

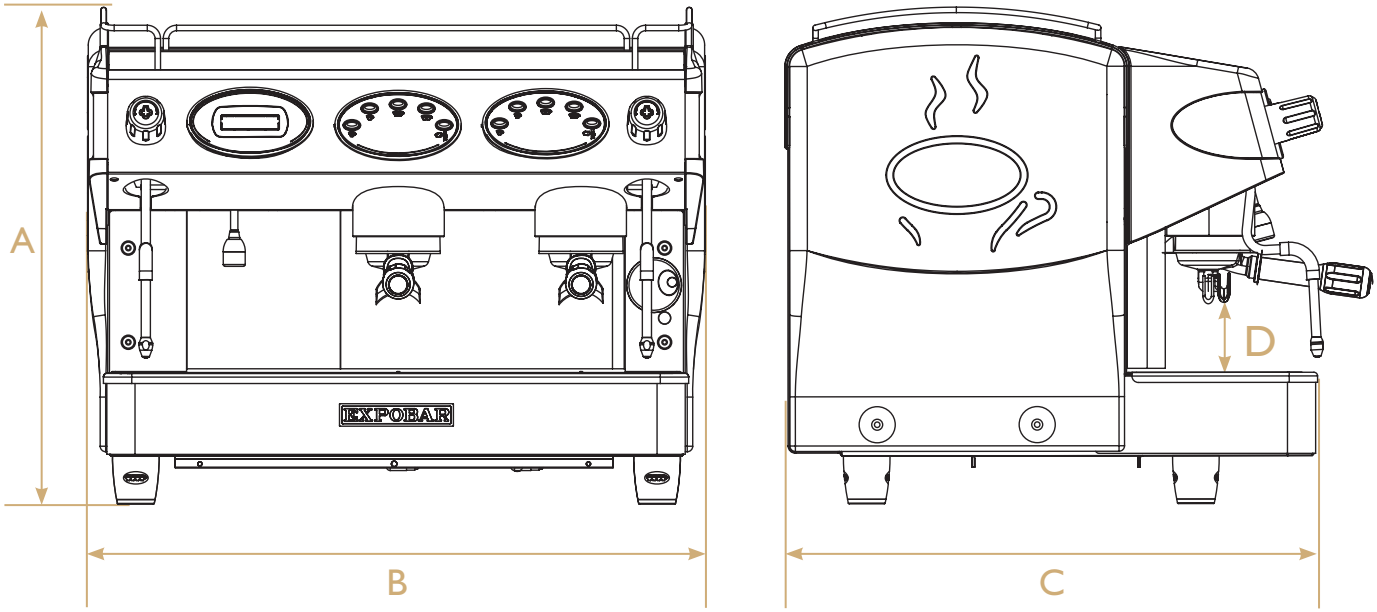
Elen MINI Control



MODEL	A	B	C	D
Elen MINI 1Gr	550 mm	460 mm	590 mm	74 mm
Elen MINI 1Gr Tall Cup	550 mm	460 mm	590 mm	124 mm
Elen MINI 2Gr	550 mm	460 mm	590 mm	74 mm
Elen MINI 2Gr Tall Cup	550 mm	460 mm	590 mm	124 mm

DIMENSION SKETCH

Elen Display Control 2GR

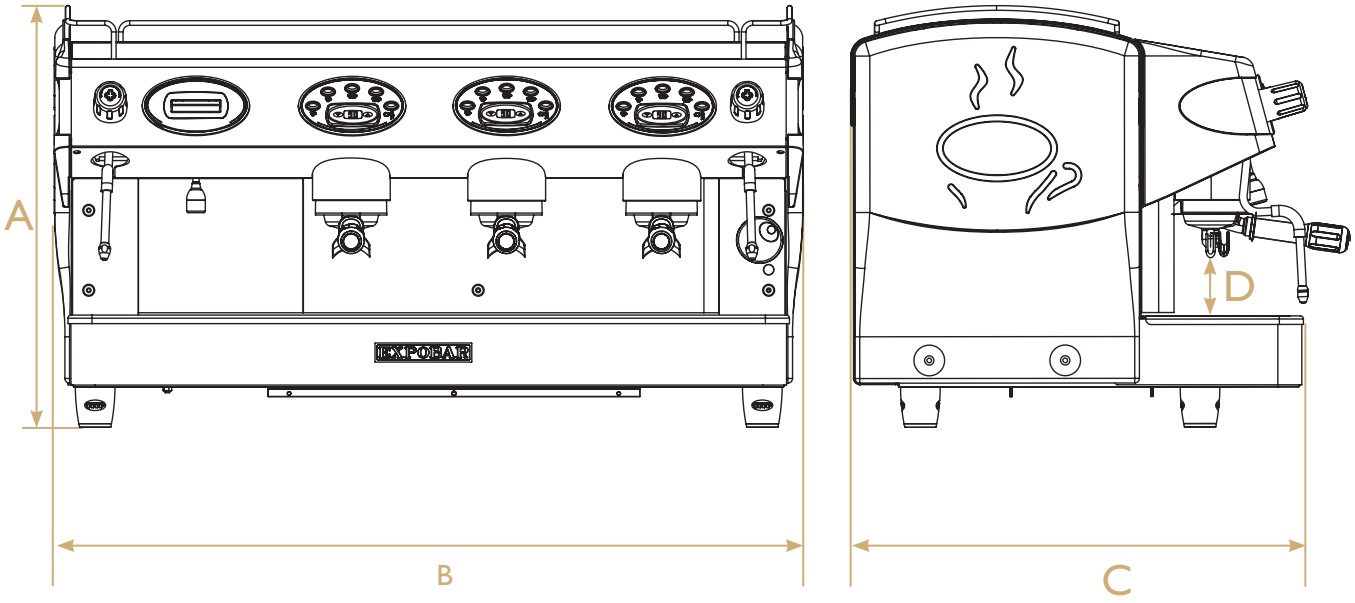


MODEL	A	B	C	D
Elen 2Gr	550 mm	680 mm	590 mm	74 mm
Elen 2Gr Tall Cup	550 mm	680 mm	590 mm	124 mm
Elen 2Gr 3 Boilers	550 mm	680 mm	590 mm	74 mm
Elen 2Gr 3 Boilers Tall Cup	550 mm	680 mm	590 mm	124 mm

DIMENSION SKETCH

Elen

G-10 DISPLAY CONTROL 3GR



MODEL	A	B	C	D
Elen 3Gr	550 mm	980 mm	590 mm	74 mm
Elen 3Gr Tall Cup	550 mm	980 mm	590 mm	124 mm
Elen 3Gr Boilers	550 mm	980 mm	590 mm	74 mm
Elen 3Gr 4 Boilers Tall Cup	550 mm	980 mm	590 mm	124 mm

Packaging

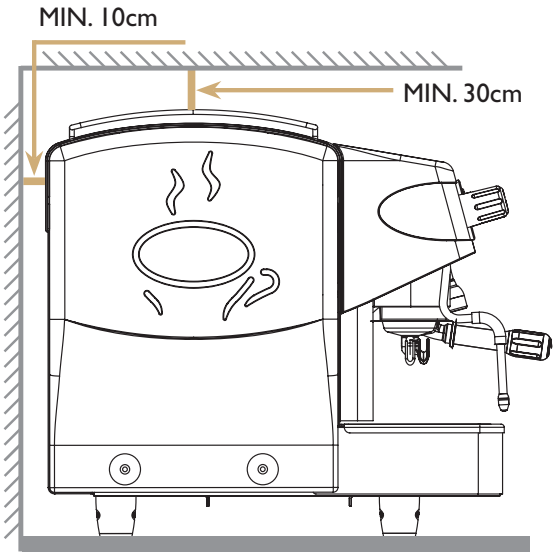
- The machine is shipped in a custom-designed carton which utilizes model-specific polystyrene cushions to protect it from damage.
- The machine's carton features standardized handling symbols to explain proper shipping and storage methods.
- The machine must remain in a horizontal position during the transport. Do not store or handle the machine except on its feet.
- During transport protect the carton and machine from impact drops, crushing, shocks, moisture and exposure to extreme temperature.

Delivery inspection

- Upon receipt and delivery ensure that the machine is in the exact condition described in the enclosed documentation, and that all accessories are included. Missing items should be reported to the manufacturer or dealer immediately.
- Damage caused during transport should be reported to the shipping agent and the machine's distributor immediately.
- Packaging materials are potentially dangerous and should be kept away from children.
- The carton and all packing materials are recyclable and should be returned to a recycling center for disposal.

INSTALLATION

Positioning



- Install the machine on a level, sturdy, and water-resistant surface approximately 110cm above floor level for ease of access and usage.
- Adjust the feet to ensure that it dispenses coffee evenly to all cups.
- Ensure enough free space is available above (>30cm) and behind (>10cm) the machine to ensure easy cleaning and maintenance and adequate ventilation.
- Do not install the machine if it is wet or damp. Allow it to dry completely and ask a service technician to ensure that none of the electrical components have been affected.

Note:
Leave an air gap of approximately 30cm above the machine and 10cm behind it to ensure adequate ventilation.

Electrical connection

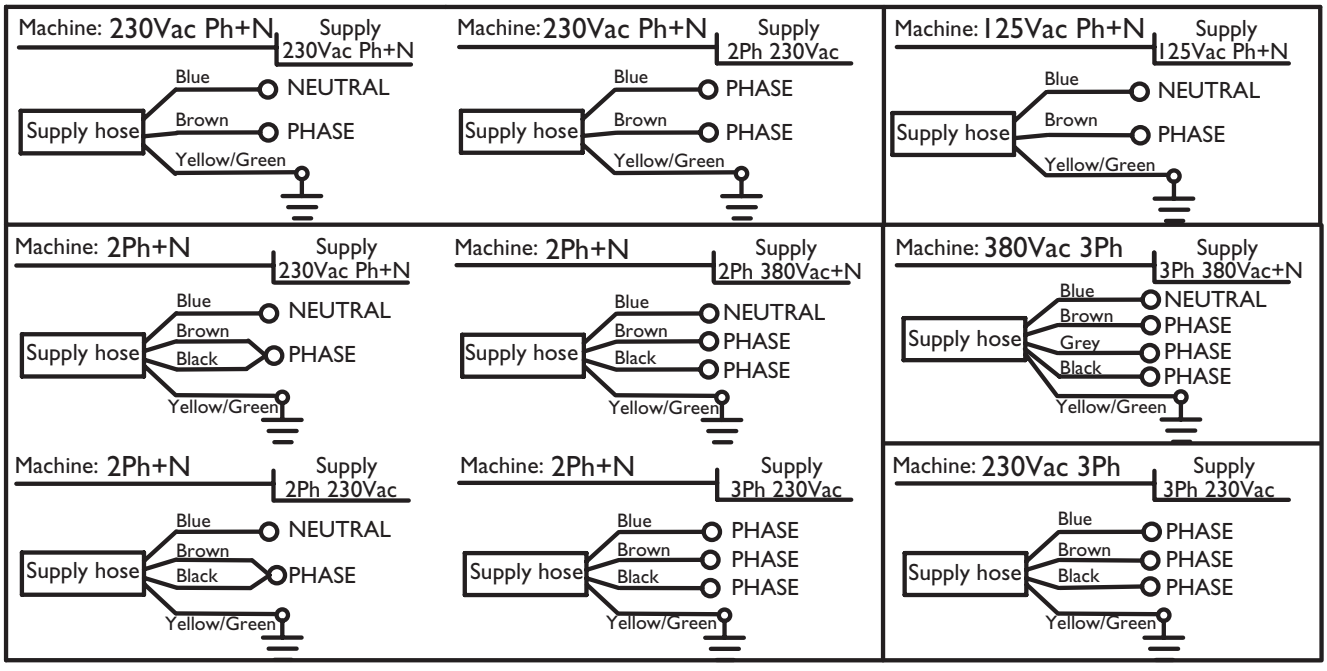
The machine should only be connected to the power supply by qualified personnel. The following safety instructions should be obeyed at all times:

- Ensure that the electrical requirements stated on the TECHNICAL SPECIFICATIONS (pages 7 - 8) match the specifications of the power supply at the outlet.
- Ensure that the domestic electrical supply where the machine is being installed is rated for and able to provide the power required by the machine. Insufficient power supply, wiring, grounding, or insulation can result in overheating and possibility of fire.
- The coffee machine must be connected to an earth grounded electrical outet that complies with the regulations in force in the country of installation.
- Ensure that a circuit breaker engineered for the power consumption of the machine is installed to protect the domestic electrical supply, as specified on the ratings plate located under the drip tray.
- Do not connect the machine to the domestic power supply via extension cords, plug adapters, or shared outlets.
- The manufacturer will not be held liable for damage to persons, animals or property resulting from incorrect installation of the coffee machine.

DANGER!
If the power cable or plug is damaged, it must be replaced by the manufacturer, distributor, or its approved service technician in order to avoid **RISK OF SERIOUS INJURY OR DEATH!**

Connection types

- Connect the machine according to the specification on the ratings plate located under the drip tray.



Water connection

- Connecting the machine to the domestic water supply must be performed by a qualified person.
- Purge at least 20 liters of water from the domestic water supply before connecting the machine to it to flush out any debris that may be in the plumbing sytem that would otherwise accumulate inside the boilers.
- The domestic plumbing system should be fitted with a brass 3/8" NPT male pipe fitting and an in-line shut-off valve. Connect the 180cm water inlet hose included with the machine to the domestic water supply and tighten the line fittings with a wrench to 15 ft. lbs. / 20N-m.
- Only use safe drinking water with a hardness rating between 5°fH and 8°fH (French hardness degrees) or 20 to 32 ppm (parts per million as calcium). If the hardness value is below this limit, corrosion of hydraulic components is likely. If the value is higher, lime-scaling inside the boiler will occur. In both cases, the proper function of the machine and quality and taste of the coffee will be negatively affected.
- If necessary, connect the machine to a water softener to reduce water hardness using the flexible 55cm hose included in the accessory box.
- Connect one end of the corrugated drain tube to the drain cup in the machine, connect the other end to the plumbing drainage system in the installation area.

Important:

- Only use the hoses supplied with the machine. Never reuse damaged hoses.
- Ensure that the drainage tube is not twisted and that it is below the level of the drain cup.

Pressure and temperature

- Boiler pressure is directly controlled by water temperature (fig. 01).
- This machine is fitted with a pressure gauge that displays the boiler pressure, if the machine is equipped with a digital display it will also indicate water temperature.

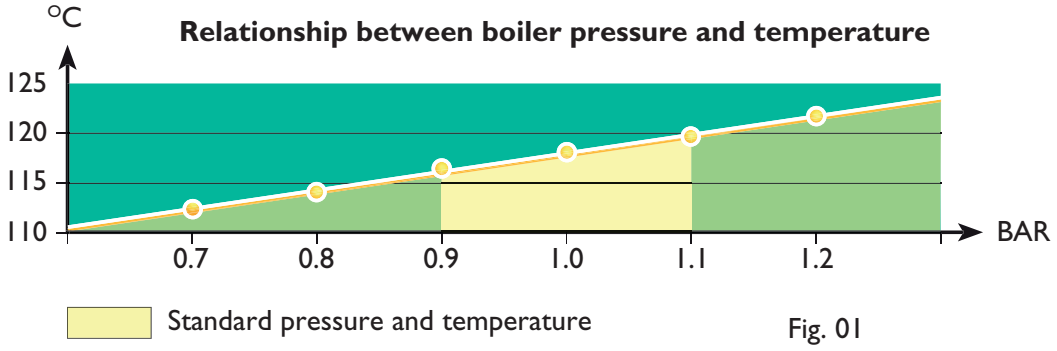
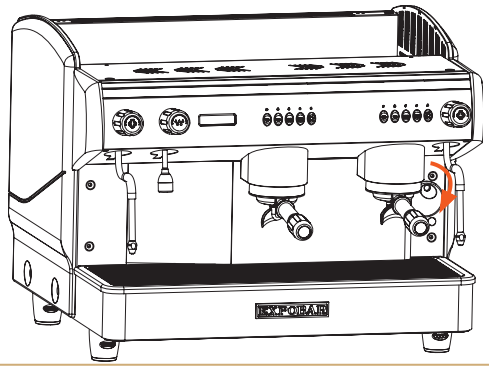


Fig. 01

Starting the machine



- Open the machine's water supply valve.
- Turn on the main power switch.
- Press a drink button at the control panel on each group, wait until water comes out continuously from each of them. This ensures that the heat exchangers in the machine are being correctly filled.
- Open the steam lever to release the air trapped in the boiler.
- The red lamp indicates that the boiler is heating. The lamp switches off automatically when the machine reaches operating temperature.
- The machine is then ready to use.

Coffee machine cleaning

Important:

- To obtain the best efficiency, quality and performance of the machine, you should always follow the cleaning and care instructions provided in this manual.
- Turn off the power switch when cleaning the exterior of the machine.
- All external surfaces should be cleaned with a wet cloth that will not get out fibers, threads or scratch the machine.
- Do not use aggressive cleaning detergents, solvents or degreasers. They can damage the machine.

Important:

Once a day or after 8 hours from the last dispensing of coffee, the following cleaning tasks must be performed for maintaining the quality and performance of the water system in the machine:

- Brewing Group: Place the empty porta-filter (without coffee) in the group head and dispense hot water for one minute.
- Steam wand: Position the wand outside the drip tray and open the steam tap for around one minute.
- Hot water outlet: Place a container under the water outlet and open the tap for 20 seconds.

Daily cleaning

- Rinse the group and porta-filter without detergent. (only using the membrane and hot water)
- Clean the external surfaces of the machine, pay special attention to the stainless steel parts.
- Clean the steam wand and the water tap. Be sure that the nozzles are not partially or fully blocked with for milk residue. If it's necessary to clean, be careful not to deform or damage any of the components.
- Clean the dip tray and the stainless steel insert grid under running water with a brush. You can slowly pour 1L of hot water into the drain cup to dissolve and remove coffee residue that has accumulated inside the cup and tubes.
- Clean the group's gasket and shower plate (page 22).

Weekly cleaning

- Clean the brewing group and porta-filter with professional cleaning powder (page 21).

Regular maintenance

Refilling the boiler

This operation should be performed by service personnel following the steps listed below:

- Switch off the machine and wait until the boiler has depressurised (leave the steam tap open until no more steam emerges) and the water has cooled.
- Open the boiler drain tap and wait until the boiler is completely empty.
  To empty machines not fitted with a boiler drain tap, remove the anti-depression valve, pump the water out of the boiler and then replace the anti-depression valve.
- Switch on the machine to refill the boiler automatically.

Important:

Make sure that the drainage tube is firmly connected to the drain, to avoid leaks.

Regenerating the water softener

To regenerate the water softener, follow the instructions in the user manual.

Cleaning the Brewing group and porta-filter

- Unlock and remove the portafilter from the group head.
- Place the blind gasket in the filter basket.
- Fill the blind basket with cleaning powder for espresso coffee machines.
- Lock the portafilter into the group head.
- Activate the auto-cleaning program:
  When the machine is in idle mode, simultaneously press the Continuous and 1 Short Espresso buttons. After cleaning starts, release the buttons and the machine will automatically repeat the cleaning cycle 5 times until cleaning is completed.

WARNING!

Never try to open the portafilter while the machine is in operation! The pressurised hot water could cause scalding or serious injury. After cleaning has finished, wait about 3 seconds before removing the portafilter.

Important:

When the cleaning process is finished, remove the portafilter and run water through the group again to rinse out any residue. Repeat the cleaning process this time without cleaning powder to remove any remaining residue. Store the blind gasket in a convenient location for future use.

Note:

- Rinse the group and portafilter with hot water (using only the blind gasket and hot water, no cleaning powder) each day.
- Clean the group and portafilter with cleaning powder once a week.

Note:

Only use professional cleaning powder designed specifically for espresso machines. It's avalible from the distributor.

Part no: 1104162

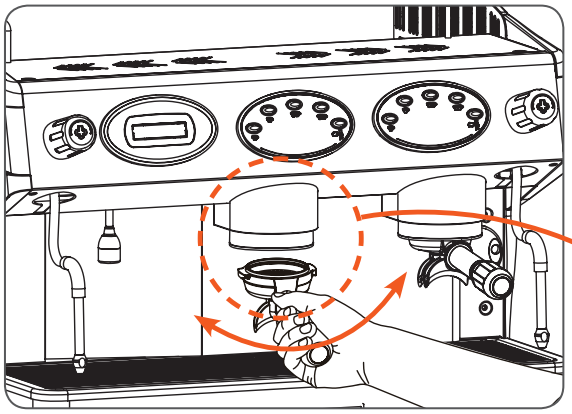
Cleaning the gasket and shower plate

Cleaning the gasket

While making espresso, coffee grounds will naturally accumalate on the group's sealing surface. Allowing an excessive amount of grounds to build up can prevent the the porta-filter from properly sealing to the group head. In extreme cases, such as leaving a used porta-filter in the group head for several days, water can even become blocked from passing through the shower plate.

To prevent these problems, perform the following cleaning procedures daily:

- Install the blind basket into the porta-filter without cleaning powder.
- Place the porta-filter loosely in the group head - do not close it fully.
- Press the Continuous button .
- Perform an opening-closing motion with the porta-filter in place without closing it fully. Water will flow over and around the porta-filter, passinging through the closing surface and washing out any coffee residue. Be very careful to avoid splashes, as this water is very hot and can cause burns.
- Press the Continuous button again to stop the water flow.



WARNING!

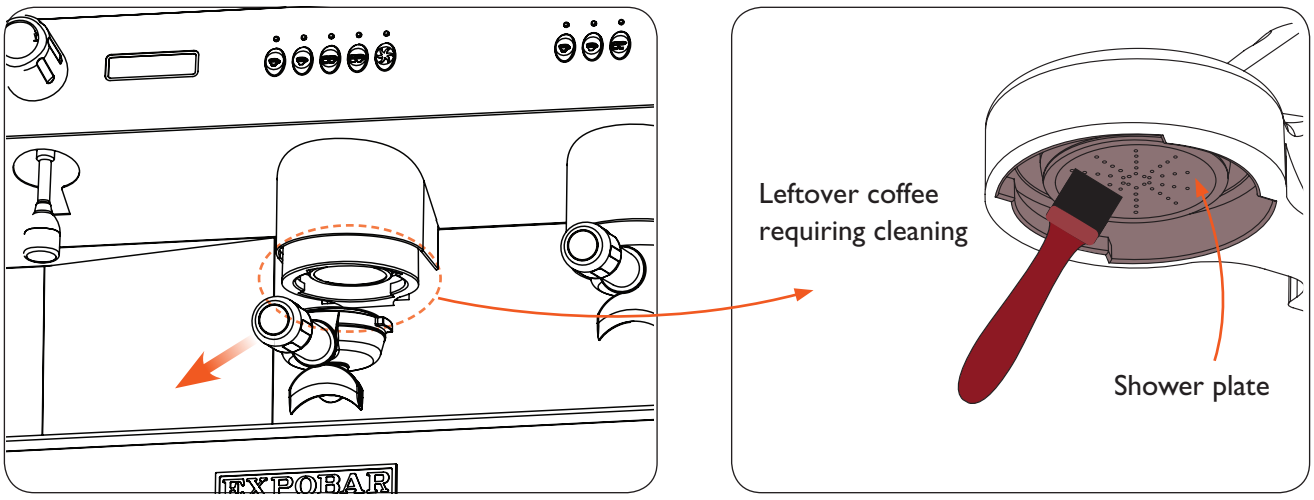
Take special care to avoid scalding when performing this operation, as hot water will spill over the sides of the porta-filter during the cleaning.

WARNING!

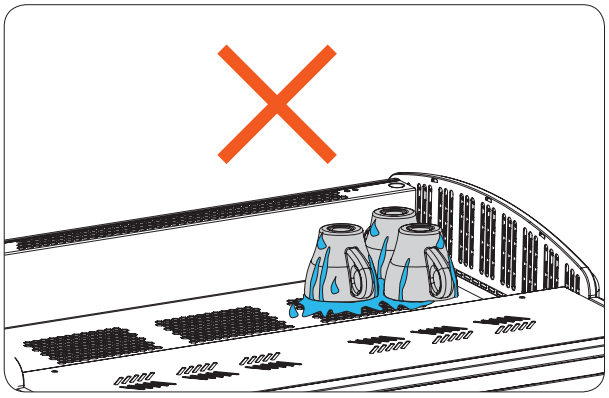
Do not fully tighten the porta-filter. If fully tightened, pressurize hot water may spray out and cause scalding or serious injury.

Cleaning the shower plate

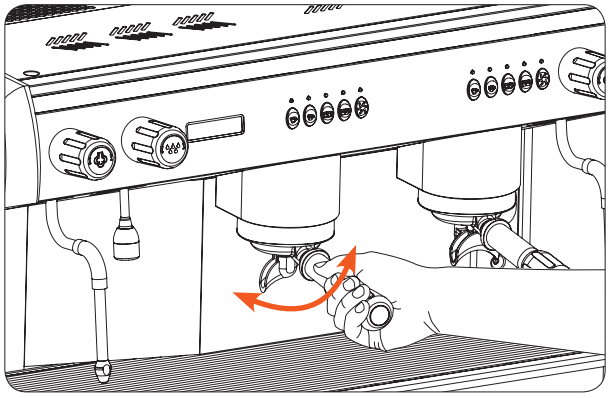
- Remove the porta-filter from the group head.
- Clean the shower and gasket with a soft brush to remove any coffee residue.



Additional handling of the machine

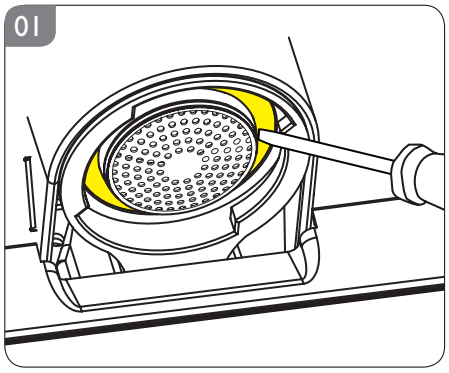


Important:
Avoid placing wet cups directly on the cup shelf, it may drip into the machine and cause machine damage.

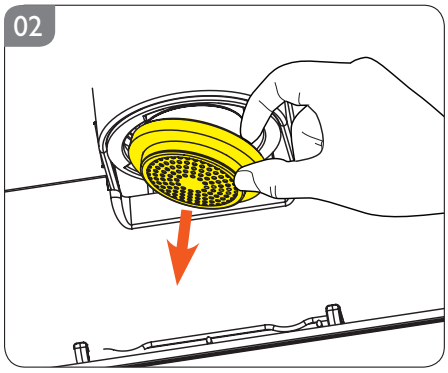


- Remove and insert the porta-filter gently. Never use excessive force to try to close the porta-filter.

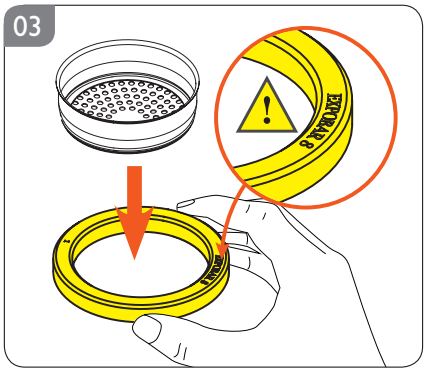
Changing the group gasket



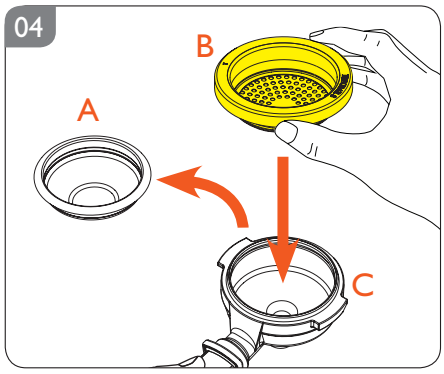
- To remove the porta-filter, use a straight-blade screwdriver to release the shower by prying down with medium force.



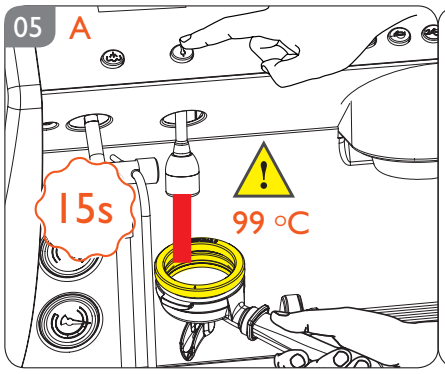
- Remove the shower and gasket.

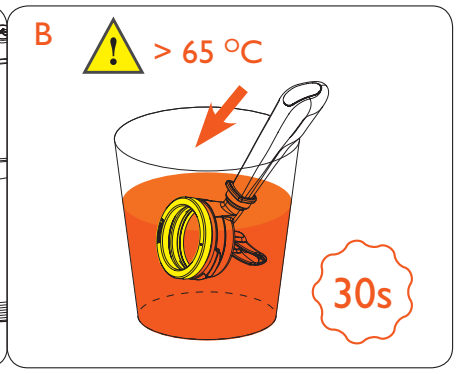


- Remove and discard the old gasket. Insert the new gasket (chamfer and EXPOBAR logo facing up) into the shower.

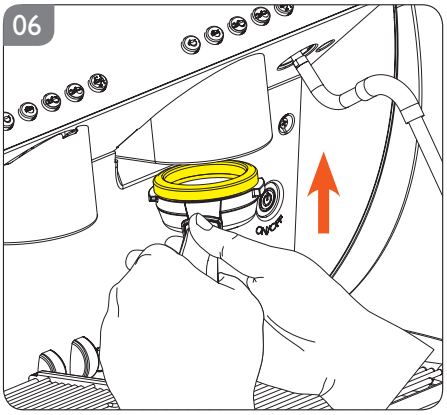


- Remove the filter basket(A), then place the new gasket and shower(B) into the porta-filter(C).

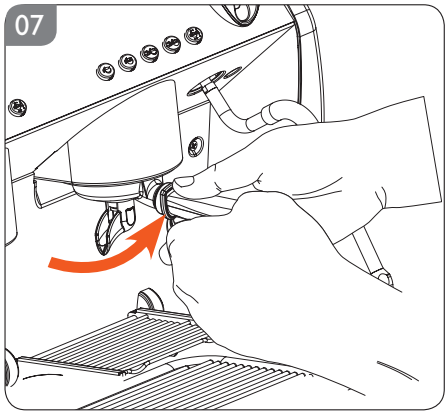




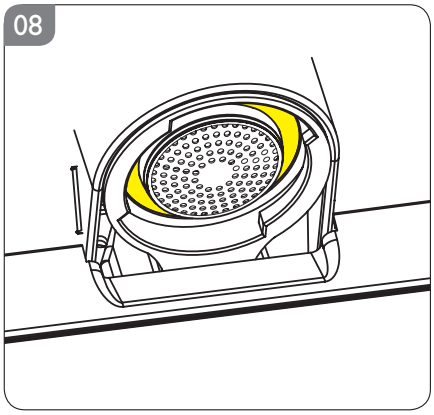
- Preheat the gasket to soften the rubber. A - heat the gasket for 15 seconds using the water from the hot water outlet, or B - place the gasket, shower, and porta-filter in hot water for 30 seconds.



- Insert the preheated gasket and shower into the head group using the porta-filter. Use both hands.



- Rotate the porta-filter into its locked position using medium force. Use both hands.



- Remove the porta-filter. The new gasket and shower will remain inside the head group. (Do not forget to replace the filter basket inside the porta-filter.)

STORAGE AND DISPOSAL OF MACHINE

How to store the machine

Before storage be sure to:

- Perform all weekly and periodic cleaning procedures described in this manual (see pages 20-22).
- Disconnect and roll up the power cord (this should be performed by a qualified person).
- Disconnect the machine's water inlet hose from the domestic water supply and drain the boilers (this should be performed by a qualified person).
- Clean the drip tray and exterior of the machine to remove any coffee or other residue.
- Cover / re-pack the machine in its original carton and store it in a dry place where it will not be exposed to extreme temperatures or humidity.
- When returning the machine to service after long-term storage, perform all weekly and periodic cleaning procedures before use.

Disposal of machine

- Make all the cleaning procedures described in this manual.
- Disconnect and roll up the power cord. (this should be performed by a qualified person).
- Disconnect the inlet hose from the machine to the water mains and empty the boiler. (this should be performed by a qualified person).
- Clean the drip tray and exterior of the machine.
- Pack and send the machine to a certified recycling center.

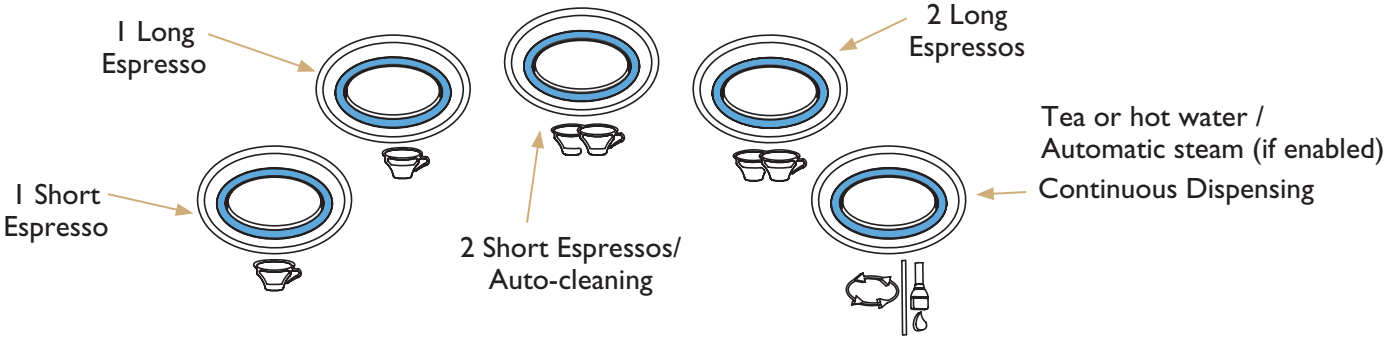
Electronic control panel

Button functions

Here is some of the additional functions that the electronics offers:

- Volume control of four different espresso drinks per brewing group.
- Time-controlled hot water dispensing. (if available)
- Automatic filling and level control of the boiler.
- Automatic switch off of the heating element if not enough water.
- System supervision through alarms.
- RS-232 serial interface with reader for connecting control panel and computer.
- Automatic cleaning of the brew groups.

The control panel is by default programmed with 4 standard drinks (these can be reprogrammed as you wish) and a continuous selection. The first four keys (1 short espresso, 1 Long Espresso, 2 short espresso, 2 Long Espresso) brew the programmed volume and then stop automatically, the fifth key brews continuously until user stops it by pressing button again.



The Continuous Dispensing button performs 3 different functions (depending on length of time pressed):

Machines equipped with display

- Under 1 second: Enables automatic water- or steam-dosing (only on machines without manual taps).
- Between 1 and 8 seconds: Enables Continuous Dispensing (press again to disable).
- Over 8 seconds: Access coffee-dose programming menu (see below).

Machines not equipped with display

- Under 4 seconds: Enables Continuous Dispensing (press again to disable).
- Over 4 seconds: Access coffee-dose programming menu (see below).

Additional button functions

To activate these functions, turn off the machine at the power switch then, while holding down the required button on the left-hand Drink buttons, turn the machine back on.

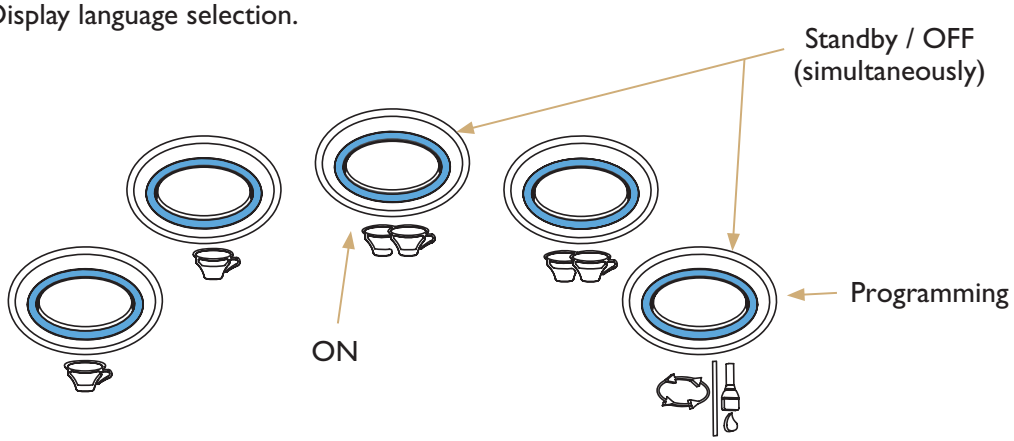
- 1 Short Espresso. = Enables electronic pre-infusion.
- 1 Long Espresso. = Disables electronic pre-infusion.
- 2 Short Espressos. = Performs auto-cleaning.

Note:
On machines equipped with a display, electronic pre-infusion may have to be enabled/disabled from the service programming menu.

Additional functions accessible from the display

Machines equipped with a display include the following additional functions:

- Automatic daily on/off timer (stand-by).
- Clock settings (current time and date).
- Welcome message
- Number of coffees/infusions dispensed.
- Digital boiler-temperature display and control.
- PID-technology boiler-temperature control.
- Programming and settings help system.
- Visual water-softener regeneration alarm.
- Display language selection.



User functions

- The Dose Programming, Clock Settings, Auto On/Off and Day Off functions are explained in the user manual.

Counters

The machine has the following 4 counters:

- Litres: Water volume dispensed by the machine (indicator used for descaling).
- Service: Number of coffees dispensed (indicator used for servicing).
- Number of coffees/infusions dispensed.
- Number of coffees dispensed per button.

Accessing the counters

Dose programming
Select 30 s

Fig. 02

- With the machine switched ON, hold down the Continuous Dispensing button for over 8 seconds (until the "Dose programming" menu is displayed, see fig. 02).

Set clock

Fig. 03

- Hold down the Continuous Dispensing button until the "Set clock" menu is displayed (see fig. 03).

Counters

Fig. 04

- Briefly press the Continuous Dispensing button. The display will show the "Counters" option (see fig. 04).

Litre counter

Litres
NN

Fig. 05

This counter displays the water volume in litres dispensed by the machine. It is principally used to monitor water-softener regeneration cycles.

How to access it: When "Counters" is displayed, press the 2 Short Espressos button. The display will show the number of litres of water dispensed by the machine (see fig. 05).

To exit and access the next menu, press the Continuous Dispensing button.

Use the *Water filter: water-softener regeneration* option in service programming mode to program the number of litres of water after which the machine displays the water-softener regeneration alert. The counter tops up the litres of water dispensed by the machine and alerts the user when it is time to regenerate the water softener.

To reset the litre counter:

- Switch off the machine at the power switch.
- Simultaneously press and hold down the 2 Short Espressos and 2 Long Espressos buttons then turn on the machine.

Service: service alert

Service
NNNN

Fig. 06

This counter displays the number of coffees/infusions (individual servings) dispensed by the machine (see fig. 06).

How to access it: Press the Continuous Dispensing button when the litre counter is displayed.

To exit and access the next menu, press the Continuous Dispensing button again.

Use the *Maintenance cycles* option in service programming mode to program the number of servings after which the machine alerts the user of the need to service the machine.

To reset the servings counter:

- Switch off the machine at the power switch.
- Simultaneously press and hold down the 1 Short Espresso and 1 Long Espresso buttons then turn on the machine.

Total coffees dispensed

Coffees Hot Water
NNNNN NNNNN

Fig. 07

This counter tots up all the drinks dispensed by the machine (see fig. 07).
It cannot be reset. The left-hand side of the display shows the total number of coffees dispensed while the right-hand side shows the total number of cups of hot water dispensed.

How to access it: Press the Continuous Dispensing button when the Service counter is displayed.

To exit and access the next menu, press the Continuous Dispensing button again.

Number of coffees dispensed per button

Dose type Gr:N
NNNNN

Fig. 08

This counter displays the total number of coffees/infusions dispensed per option (see fig. 08).

The upper left-hand part of the display shows the dose type dispensed (espresso, coffee, 2 espressos, 2 coffees, continuous dispensing, or hot water), while the right-hand side shows the dispensing group. The lower part of the display shows the counter.

Coffees Hot Water
Totals reset

Fig. 09

To reset the counters:

- When the display shows the *Total coffees/infusions dispensed*, simultaneously hold down the 2 Short Espressos and 2 Long Espressos buttons for 4 seconds. The display will show the message "Totals reset" (see fig. 09).

Reset parameters to factory default

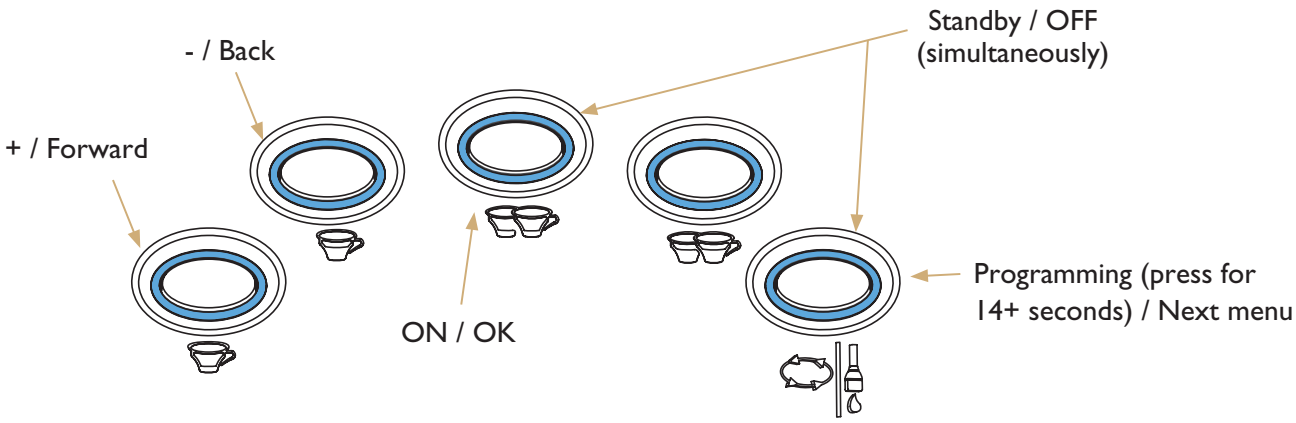
Data reset
completed

Fig. 10

To reset the control panel settings to the factory default:

- Switch off the machine at the power switch.
- Press and hold down the '1 Short Espresso' , 2 Short Espressos and Continuous Dispensing buttons then turn on the machine. Hold down the buttons until the message shown in fig. 10 is displayed.
- Turn the machine off and then on again. The machine will now be in stand-by mode.

Accessing service programming



OFF hh:mm

Fig. 11

Accessing these settings menus is only possible via the left-side button panel (when the machine is viewed from the front).

To access the settings menus:

- Turn the machine OFF (Standby mode) by pressing and holding down the Continuous Dispensing button and the 2 Short Espressos button simultaneously (see fig. 11).
- Hold down the Continuous Dispensing button for 15 seconds (until the display shows the "Language" option, see fig. 12).

Language selection

Language
Language

Fig. 12

When "Language" is displayed, select the desired language.

To change language:

- Press the 1 Short Espresso button (+) to cycle forward through the languages and the 1 Long Espresso button (-) to cycle backward through them.
- Languages available: Spanish, English, French, Italian, German and Portuguese.

To accept the language selected and access the next menu, press the Continuous Dispensing button .

Name 1: Programming the Welcome Message (upper line)

Name 1
xxxxxxxxxxxxxxxx

Fig. 13

The display comprises two rows of 16 characters. The Welcome Messages displayed on these two lines can be edited in this menu (see fig. 13) and the next one.

To edit "Name 1" (line 1):

- To change the flashing character, press the 1 Short Espresso (+) and 1 Long Espresso (-) buttons.
- To accept the character and move on to the next one, press "OK" (2 Short Espressos button).

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button.

Name 2: Programming the Welcome Message (lower line)

Name 2
xxxxxxxxxxxxxxxx

Fig. 14

This menu (see fig. 14) is used to edit the Welcome Message shown on the display's bottom line.

- To change the flashing character, press the 1 Short Espresso (+) and 1 Long Espresso (-) buttons.
- To accept the character and move on to the next one, press "OK" (2 Short Espressos button).

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button.

Helpline

Helpline
Telephone number

Fig. 15

This menu (see fig. 15) is used to edit the telephone number displayed when the service alert counter reaches the value set for the maintenance cycle.

- To edit the flashing number, press the 1 Short Espresso (+) and 1 Long Espresso (-) buttons.
- To accept the number and move on to the next one, press "OK" (2 Short Espressos button).

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button.

Dose programming

Dose programming
Enabled/Disabled

Fig. 16

This menu is used to enable/disable coffee-dose programming (see fig. 16).
When disabled, users are not able to modify the doses (as described in the user manual). This mode is intended to prevent users setting inappropriate doses.

- To enable coffee-dose programming, press the 1 Short Espresso button .
- To disable coffee-dose programming, press the 1 Long Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Continuous Dispensing button

Continuous Dispensing button
Enabled/Disabled

Fig. 17

This menu is used to enable the Continuous Dispensing button's continuous dispensing function (see fig. 17).

- To enable it, press the 1 Short Espresso button .
- To disable it, press the 1 Long Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Hot water button

Hot water button
Yes/No

Fig. 18

If the infusion hot-water spout is controlled by a manual tap:

- The function can be disabled by pressing the 1 Long Espresso button .

If the infusion hot-water spout is controlled by an electrovalve (the machine has a water spout but no tap):

- The function can be enabled by pressing the 1 Short Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Electronic steam wand

Steam tap Gr. N

Fig. 19

If the machine has an electronic steam wand (no manual steam tap), this menu is used to select (via the Continuous Dispensing button) which button panel will control the wand.

- Select which button panel (numbered from left to right) will control the steam wand using the 1 Short Espresso (+) and 1 Long Espresso (-) buttons.
- If the machine does not have a steam wand, set this option to 0.

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

After selecting which button panel will control the electronic steam wand, set the steam dispensing time (set in the same way as described for similar functions in the user manual).

If the steam wand is equipped with a temperature gauge, the parameter set will not be the steam dispensing time but the target liquid temperature.

In this mode, the steam wand will stop dispensing steam when the target temperature is reached.

Level sensor sensitivity

Sensitivity Low/Medium/High

Fig. 20

This menu sets the level sensor's sensitivity (see fig. 20). By default, sensitivity is set at "Medium" and will not normally require modification. However, it may be necessary to set the sensitivity to "High" if using very pure water with very low dissolved salt levels (or to set it to "Low" in the opposite case).

- To increase sensitivity, press the 1 Short Espresso button .
- To reduce it, press the 1 Long Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Pre-infusion

Pre-infusion Enabled/Disabled

Fig. 21

This function enables/disables electronic pre-infusion (see fig. 21). By default, this option is disabled as the dispensing group includes a mechanical pre-infusion chamber.

- To enable this function, press the 1 Short Espresso button .
- To disable this function, press the 1 Long Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Grinding alert

Grinding alert
Enabled/Disabled

Fig. 22

This setting is used to enable/disable the coffee-dispensing monitor (see fig. 22). This analyses dispensing speed and, depending on this value, indicates if the coffee is too finely or too coarsely ground. If the dispensing speed is between the pre-established values, the "OK" message is displayed.

- To enable the grinding alert, press the 1 Short Espresso button .
- To disable the grinding alert, press the 1 Long Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Grinding alert parameter settings

Grinding alert
Min. X.X cc/s

Fig. 23

If the grinding alert was enabled in the previous menu, this menu is used to set the alert parameters. If the grinding alert was disabled in the previous menu, this menu will not be displayed.

Grinding alert
Max. X.X cc/s

Fig. 24

- When the grinding alert is enabled, "Min." sets the minimum accepted dispensing speed (see fig. 23). To increase the value, press the 1 Short Espresso button (+) and to decrease it press the 1 Long Espresso button (-).
- When the grinding alert is enabled, "Max." sets the maximum accepted dispensing speed (see fig. 24). To increase the value, press the 1 Short Espresso button (+) and to decrease it press the 1 Long Espresso button (-).

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

LED flashing sequence

Flashing lights
Enabled/Disabled

Fig. 25

- To enable the button panels' flashing function, press the 1 Short Espresso button .
- To disable the button panels' flashing function, press the 1 Long Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Maintenance cycles

Maintenance cycles
N000

Fig. 26

This menu sets the number of coffees dispensed per maintenance cycle (before replacing shower plates, gaskets, etc.). When the dispensing counter reaches the number set (see fig. 26), the "Service" message will be displayed.

- To increase the number, press the 1 Short Espresso button (+). To decrease it, press the 1 Long Espresso button (-).

The *Service: alert* menu displays the number of coffees dispensed.

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Temperature unit (°C or °F)

Temperature
°C / °F

Fig. 27

- To display the temperature in °F (Fahrenheit), press the 1 Short Espresso button .
- To display the temperature in °C (Celsius/centigrade), press the 1 Long Espresso button .

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Set boiler temperature

Boiler temperature
XXX °C

Fig. 28

This menu sets the boiler temperature.

- To increase the temperature, press the 1 Short Espresso button (+). To decrease it, press the 1 Long Espresso button (-).

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Water filter: softener regeneration

Water filter
No. of litres

Fig. 29

This menu sets the volume of water in litres at which the control panel generates the water-softener regeneration alert.

- To increase the number, press the 1 Short Espresso button (+). To decrease it, press the 1 Long Espresso button (-).

The *Litre counter* menu displays the volume of water used by the machine.

To accept the setting selected and move on to the next menu, press the Continuous Dispensing button .

Water-softener model	Quantity of water softened, by hardness (expressed in French degrees)					Salt
	20°	30°	40°	60°	80°	KG
L 8	1200	1000	900	700	500	1
L 12	1900	1500	1350	1050	750	1.5

Approximate number of litres of water softened per regeneration.

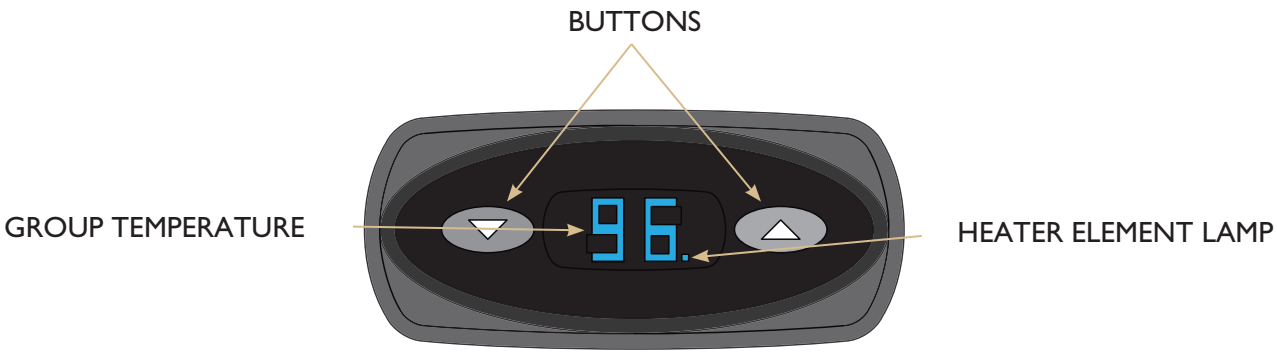
Digital thermostat functions

In multi-boiler models, each dispensing group has an independent digital boiler-temperature adjustment system.

The following multi-boiler G-10 models are available:

- 2 dispensing groups and 3 boilers.
- 3 dispensing groups and 4 boilers.

Temperature is controlled by a digital thermostat to ensure optimal temperature stability at each group spout.



- Each group has a numerical display and two buttons: and .
- During operation, the displays show the groups' current temperature.
- The dot indicates when the heater elements are active.

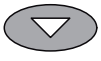
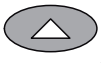
Connecting/disconnecting each thermostat

Fig. 30

- To disconnect the thermostat:

  Press the button for 2 seconds. The thermostat selected will be disconnected, "OFF" (see fig. 30) will be displayed and the group will start to cool down.

- To connect the thermostat:

  If the thermostat is "OFF", press either the  or  button. The thermostat will be connected, the group's current temperature will be displayed and the group will start to heat up.

Setting group temperature

Fig. 31

Fig. 32

To adjust the group temperature maintained by the thermostat, follow the instructions below with the machine turned on and the thermostat connected:

- Briefly press the button. The thermostat will display the "PrG" message (see fig. 31).
- Immediately and briefly press the button. The programmed temperature will be displayed (see fig. 32).
- Raise or lower the temperature value using the and buttons.

Note:
The digital thermostat will exit automatic programming mode 3 seconds after the last button press.

Reset parameters to factory default

Fig. 33

If the thermostat's operating parameters are lost, or in the case of abnormal group temperature, reset the system to the factory defaults.
To reset the parameters:

- Turn off the machine, press and hold down the button, then turn on the machine at the power switch.
- Release the button when the system displays the "PrS" message (see fig. 33).
- Turn the machine off and on again at the power switch to restart the thermostat.

Thermostat alarms

Fig. 34

Fig. 35

- If the temperature gauge in the group's boiler has short-circuited, the system will display the "A1" error message (see fig. 34).
- If the temperature gauge cable is disconnected, the system will display the "A2" error message (see fig. 35).

Alarm Counter Vol. Gr. N	Fault in volumetric counter N / Flow fault detected in counter N
Time-out alarm Boiler filling	Check that the machine is receiving water.
Sensor fault	Temperature gauge fault
Service 999999999	Service the machine. To disable the alarm and reset the counter: Turn off the machine. Simultaneously press and hold down the 1 Short Espresso and 1 Long Espresso buttons. Turn on the machine.
Change the filter 999999999	Regenerate the filter. To disable the alarm and reset the counter: Turn off the machine. Simultaneously press and hold down the 2 Short Espressos and 2 Long Espressos buttons. Turn on the machine.

- If boiler filling time exceeds the programmed time (2 minutes), all of the button panel lights will flash and the machine will be disabled. To re-enable it, turn the machine off and on again at the power switch.
- If the electronic control panel does not receive a pulse from the volumetric counter (coffee too fine or volumetric counter fault) within 5 seconds of pressing one of the espresso buttons, the light for the dose selected will start to flash. To turn it off, press the dose button again.
- Maximum dispensing time. As a safeguard, all dose settings have a maximum dispensing time of 5 minutes.

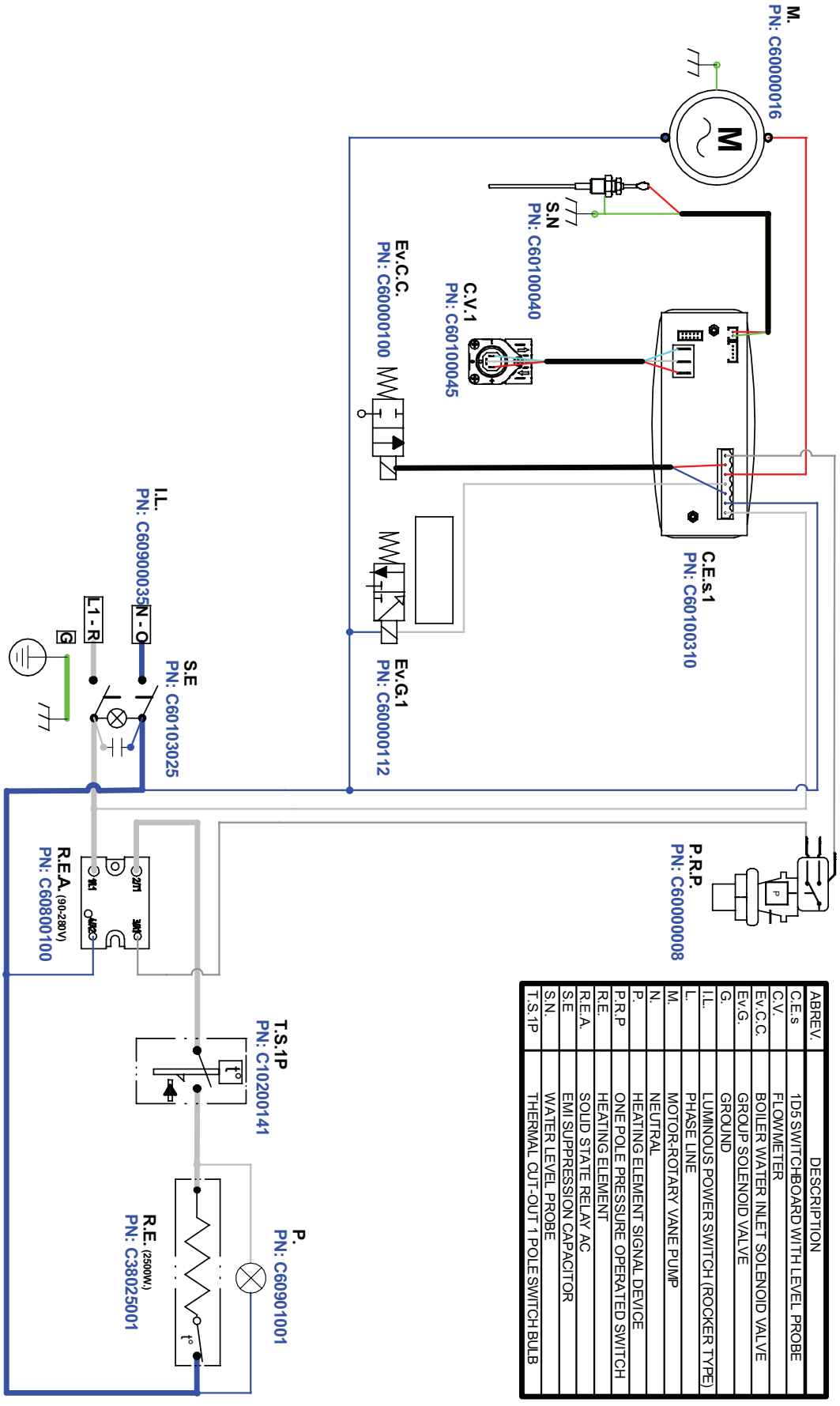
The following checks can be carried out by users once the machine has been turned off and disconnected from the power supply. For all other non-specified machine faults, disconnect the machine from the power supply and immediately contact authorised and qualified service personnel.

Problem	Possible cause	Solution
The machine does not start up	The plug is not correctly inserted into the power socket	Check that the plug is correctly inserted and that the power socket is operational.
	The circuit breaker and/or differential are disconnected.	Check that they are connected.
	The cable and/or plug are damaged.	Call service personnel to replace them.
The steam wand does not dispense steam	The steam wand is clogged by milk	Clean the wand and, if necessary, remove the nozzle and unclog it using a pin or needle.
Water is found underneath the machine	The drainage tube is blocked.	Clean the drainage tube.

Faults produced by limescale	
Coffee not dispensed at right temperature:	Heat-exchanger outlet pipes clogged by limescale.
Brewing groups do not dispense water:	Water system is clogged by limescale.
90% of faults are due to limescaling inside the coffee machine (due to not softening the water). To avoid these faults, maintain the water softener regularly.	

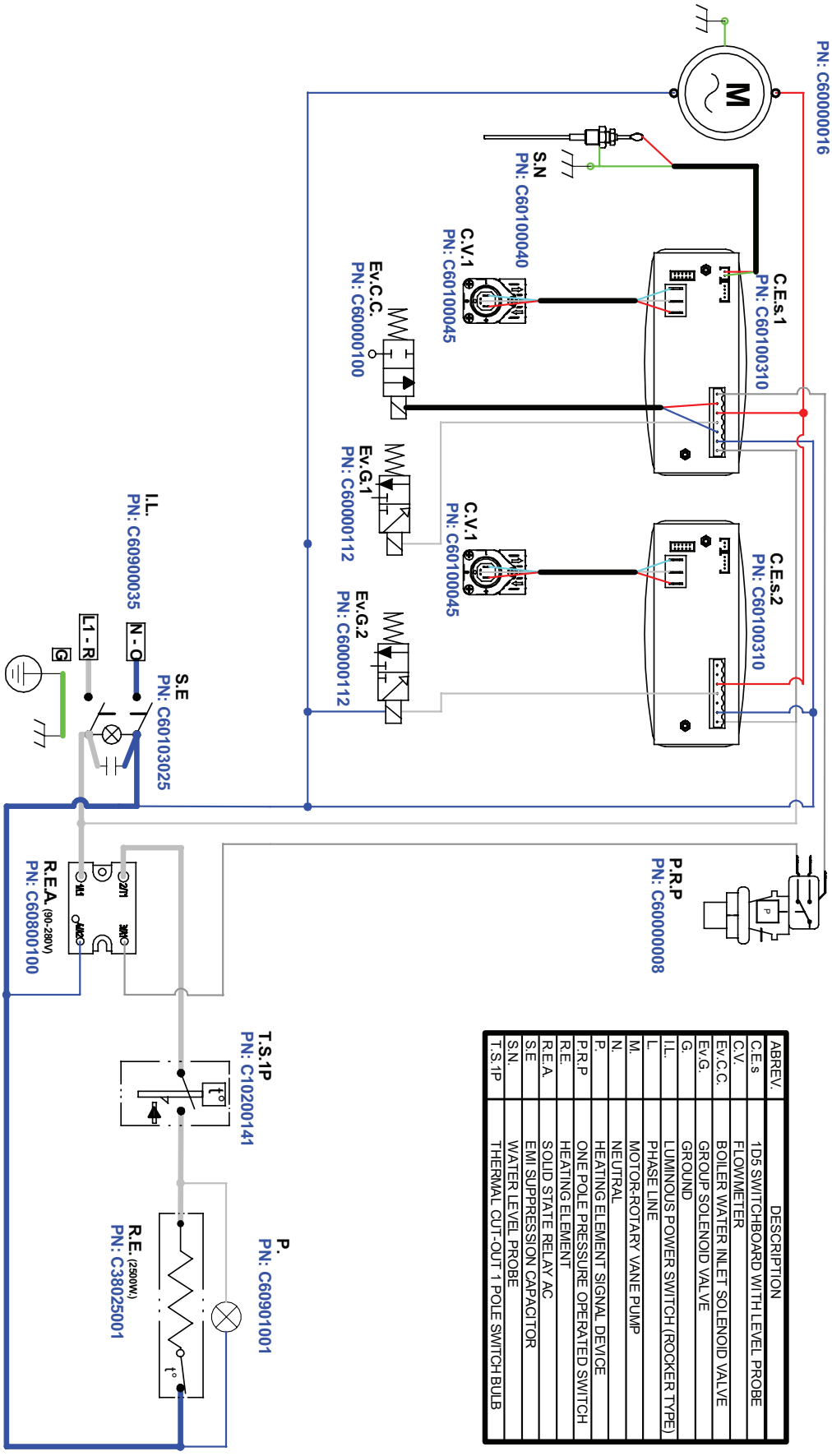
Coffee-grinding problems	
Coffee dispensing is very fast:	The coffee grinding is to coarse. Adjust the coffee-grinding setting.
Coffee dispensing is very slow:	The coffee grinding is to fine. Adjust the coffee-grinding setting.

Elen Mini Control 1Gr



ABREV.	DESCRIPTION
C.E.s	1D5 SWITCHBOARD WITH LEVEL PROBE
C.V.	FLOWMETER
Ev.C.C.	BOILER WATER INLET SOLENOID VALVE
Ev.G.	GROUP SOLENOID VALVE
G.	GROUND
I.L.	LUMINOUS POWER SWITCH (ROCKER TYPE)
L.	PHASE LINE
M.	MOTOR-ROTARY VANE PUMP
N.	NEUTRAL
P.	HEATING ELEMENT SIGNAL DEVICE
P.R.P	ONE POLE PRESSURE OPERATED SWITCH
R.E.	HEATING ELEMENT
R.E.A.	SOLID STATE RELAY AC
S.E	EMI SUPPRESSION CAPACITOR
S.N.	WATER LEVEL PROBE
T.S.1P	THERMAL CUT-OUT 1 POLE SWITCH BULB

Elen Mini Control 2Gr



ABREV.	DESCRIPTION
C.E.s	1DS SWITCHBOARD WITH LEVEL PROBE
C.V.	FLOWMETER
Ev.C.C.	BOILER WATER INLET SOLENOID VALVE
Ev.G.	GROUP SOLENOID VALVE
G.	GROUND
I.L.	LUMINOUS POWER SWITCH (ROCKER TYPE)
L.	PHASE LINE
M.	MOTOR-ROTARY VANE PUMP
N.	NEUTRAL
P.	HEATING ELEMENT SIGNAL DEVICE
P.R.P	ONE POLE PRESSURE OPERATED SWITCH
R.E.	HEATING ELEMENT
R.E.A.	SOLID STATE RELAY AC
S.E	EMI SUPPRESSION CAPACITOR
S.N.	WATER LEVEL PROBE
T.S.1P	THERMAL CUT-OUT 1 POLE SWITCH BULB

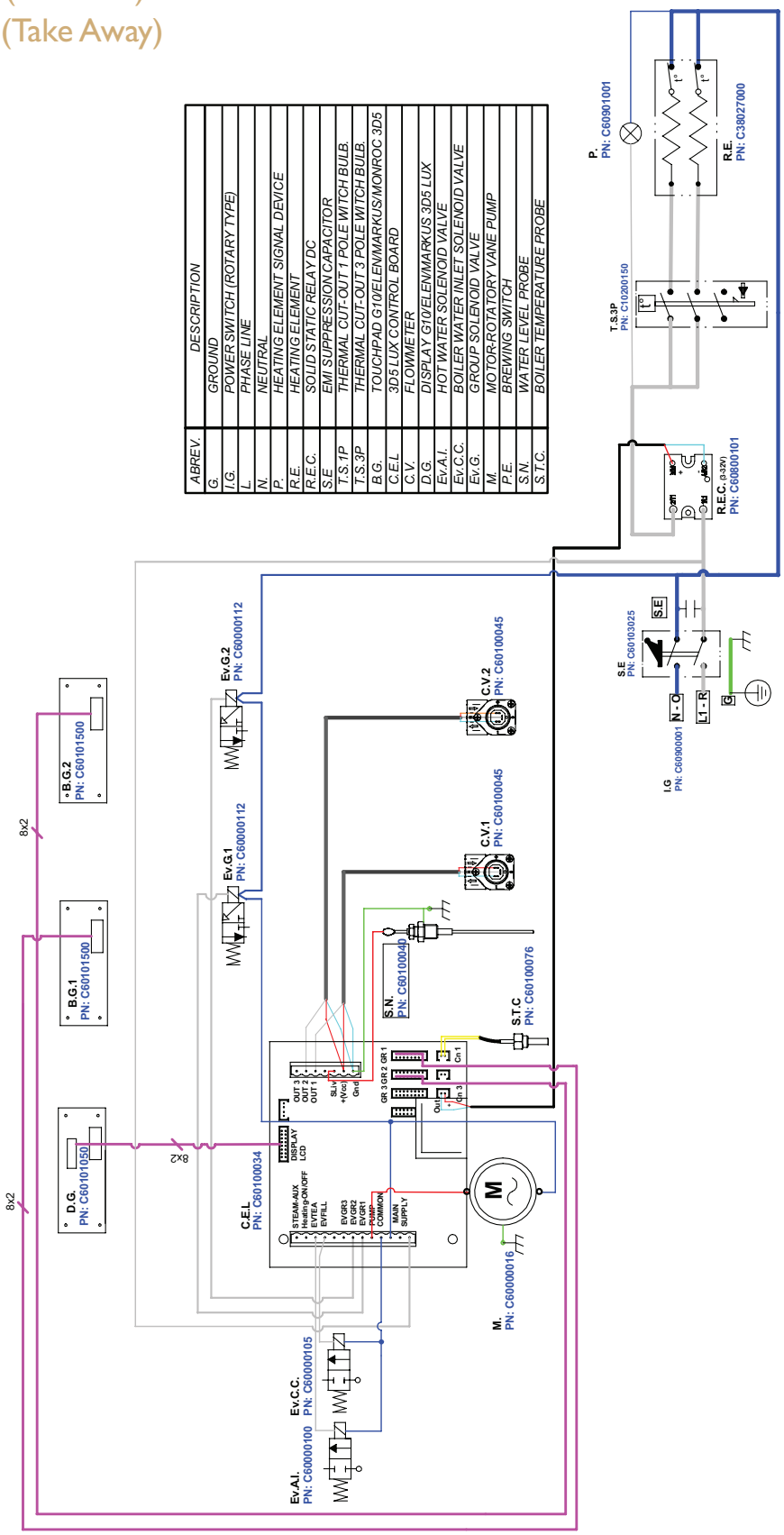
Elen Display Control 2Gr (220-240V 1N~ 3200W)

Machine Code:

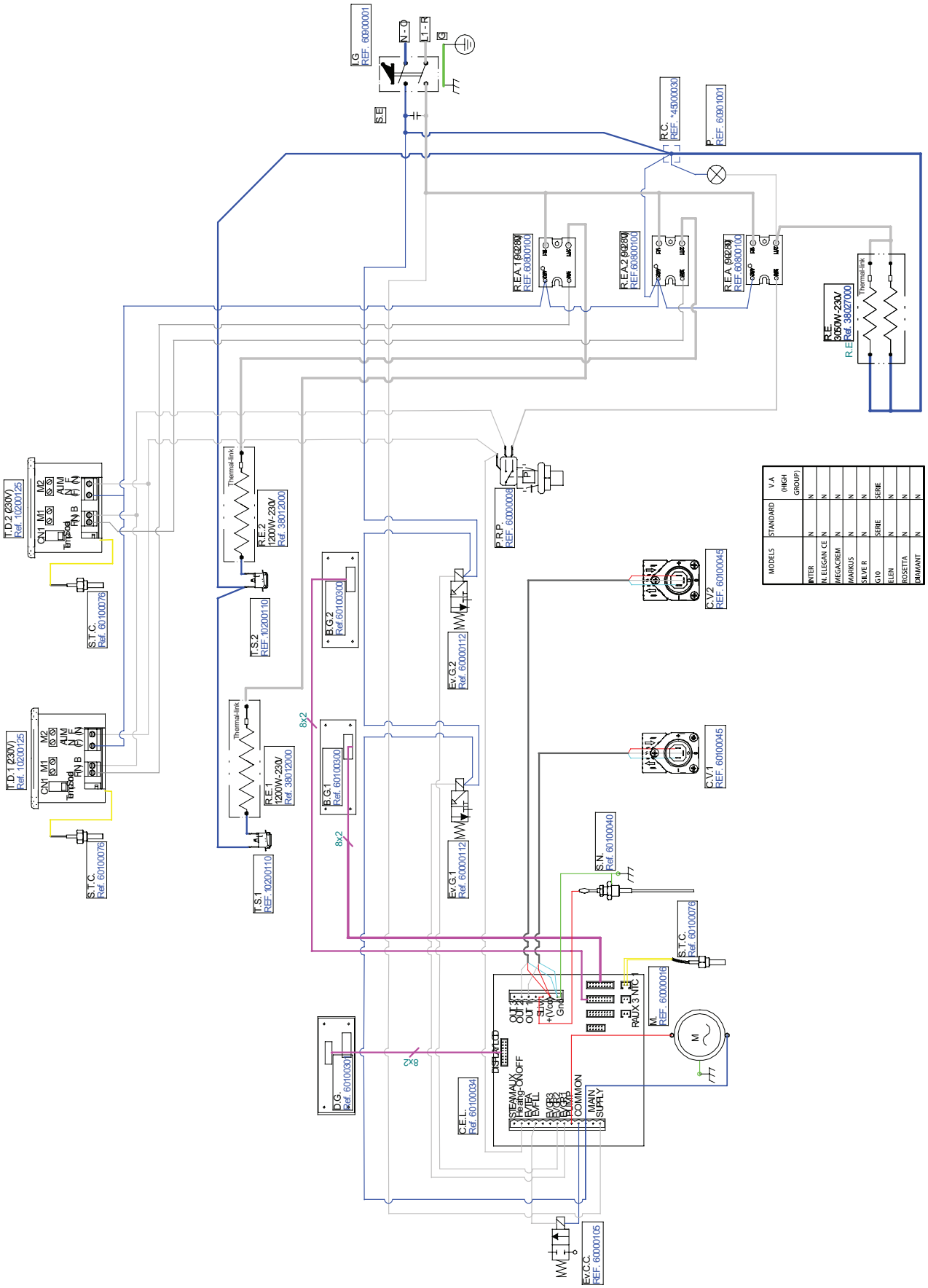
EBAE-D41B-12AE (Standard)

EBBE-D41B-22AE (Take Away)

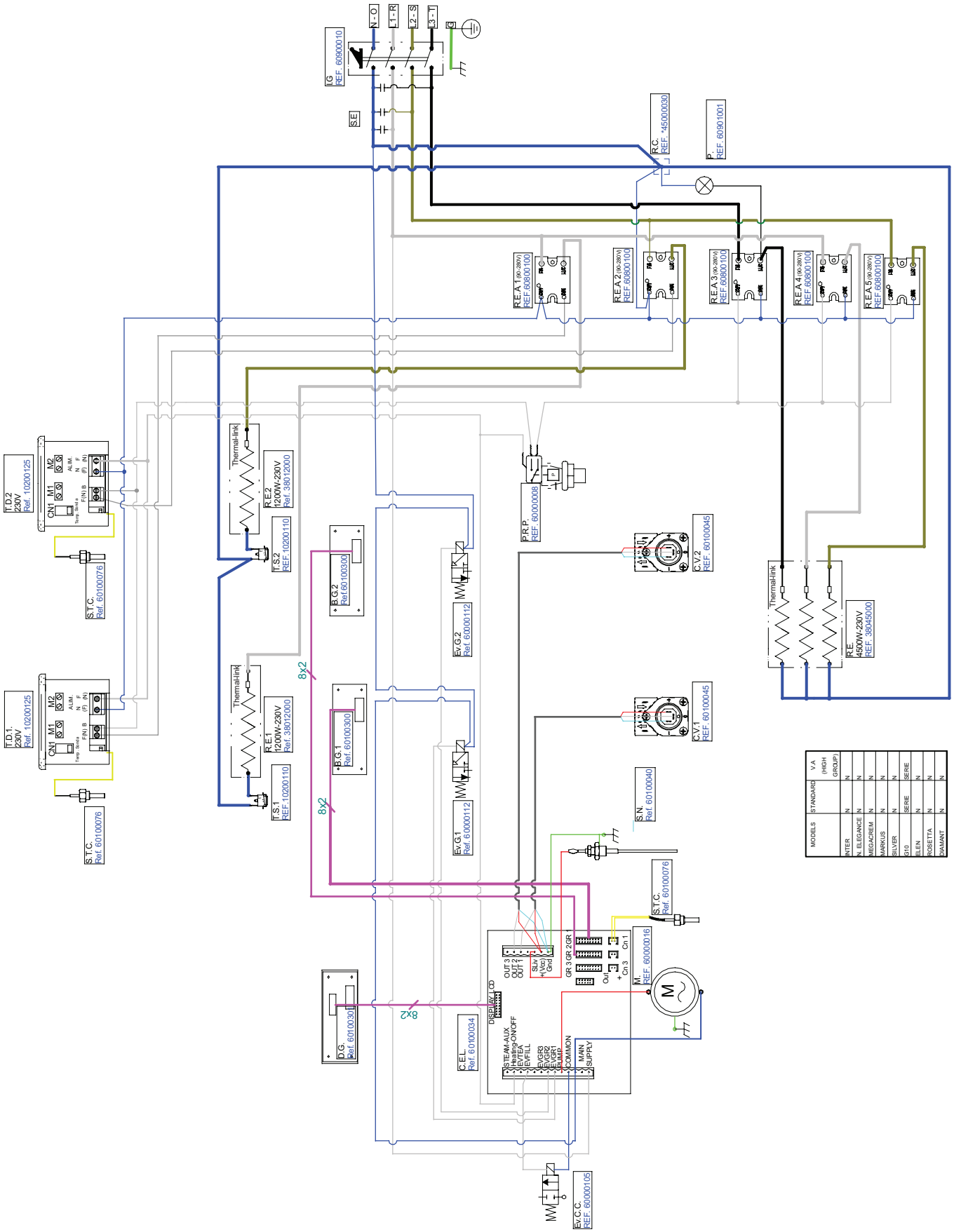
ABREV.	DESCRIPTION
G.	GROUND
I.G.	POWER SWITCH (ROTARY TYPE)
L.	PHASE LINE
N.	NEUTRAL
P.	HEATING ELEMENT SIGNAL DEVICE
R.E.	HEATING ELEMENT
R.E.C.	SOLID STATIC RELAY DC
S.E	EMI SUPPRESSION CAPACITOR
T.S.1P	THERMAL CUT-OUT 1 POLE WITCH BULB.
T.S.3P	THERMAL CUT-OUT 3 POLE WITCH BULB.
B.G.	TOUCHPAD G10/ELEN/MARKUS/MONROC 3D5
C.E.L.	3D5 LUX CONTROL BOARD
C.V.	FLOWMETER
D.G.	DISPLAY G10/ELEN/MARKUS 3D5 LUX
Ev.A.I.	HOT WATER SOLENOID VALVE
Ev.C.C.	BOILER WATER INLET SOLENOID VALVE
Ev.G.	GROUP SOLENOID VALVE
M.	MOTOR-ROTATORY VANE PUMP
P.E.	BREWING SWITCH
S.N.	WATER LEVEL PROBE
S.T.C.	BOILER TEMPERATURE PROBE



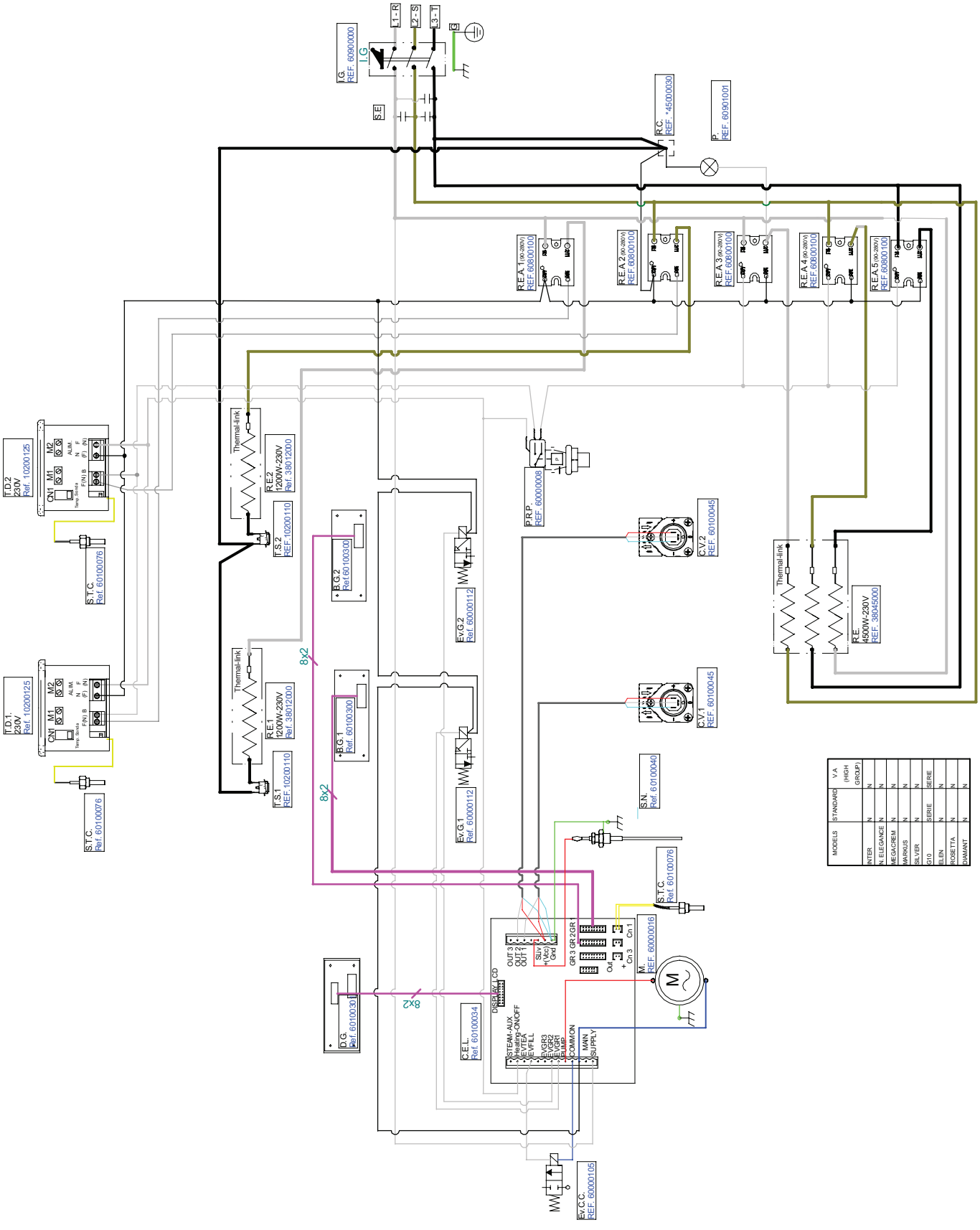
Elen 2Gr 3 Boilers 230V 1N~



Elen 2Gr 3 Boilers 400 V 3N~

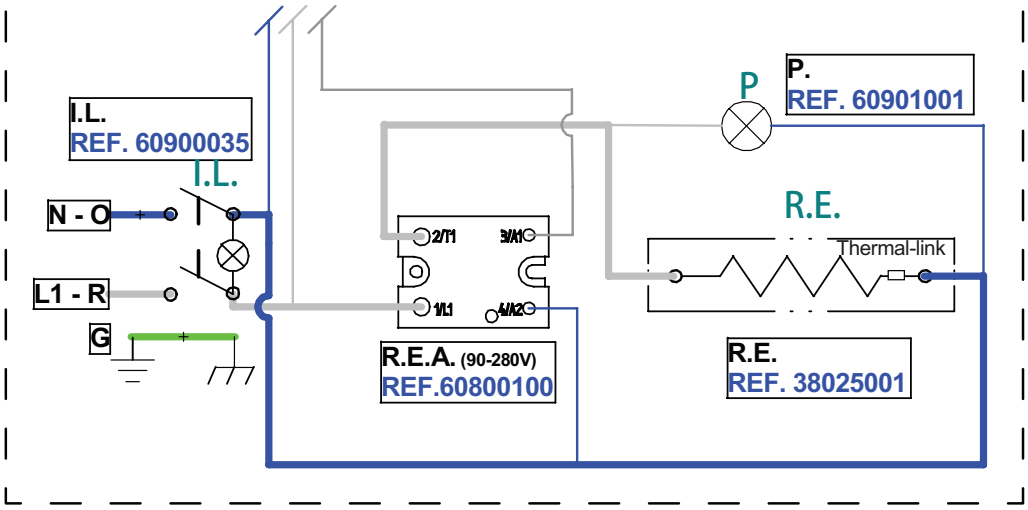


Elen 2Gr 3 Boilers 230V 3N~

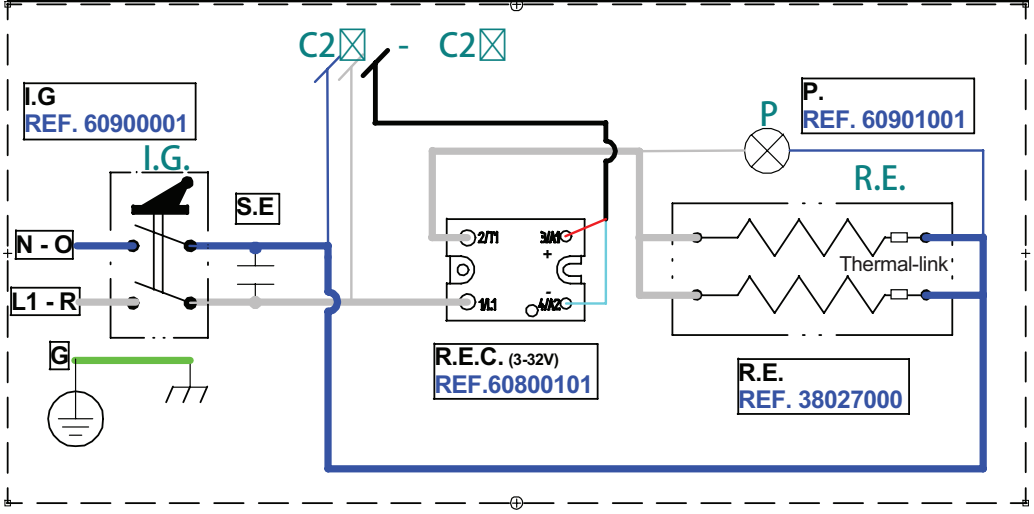


High current schematics

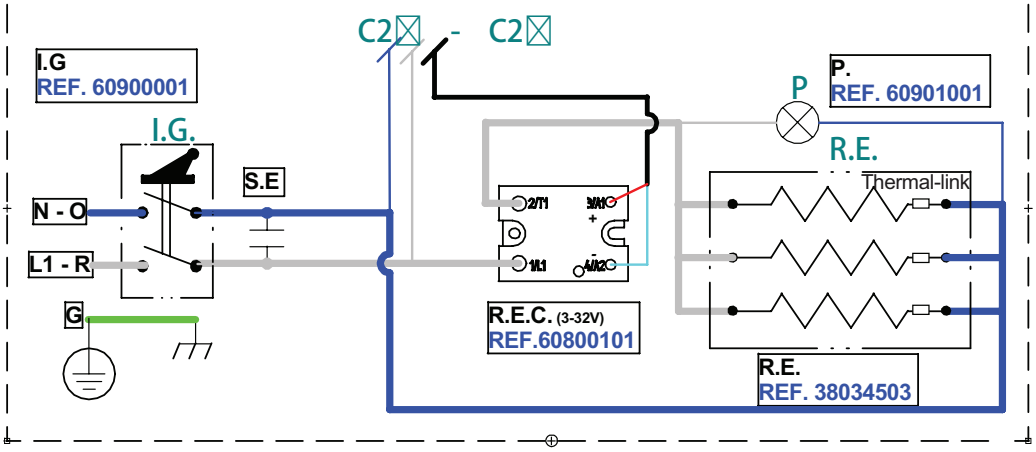
230V 1N~ HEATING ELEMENT 2500W



230V 1N~ HEATING ELEMENT 3050W- 2GR

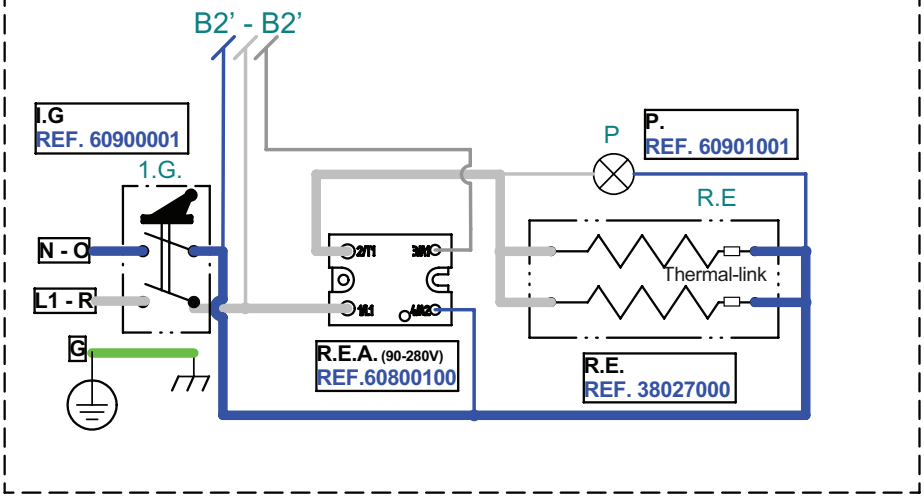


230V 1N~ HEATING ELEMENT 3450W- 2GR

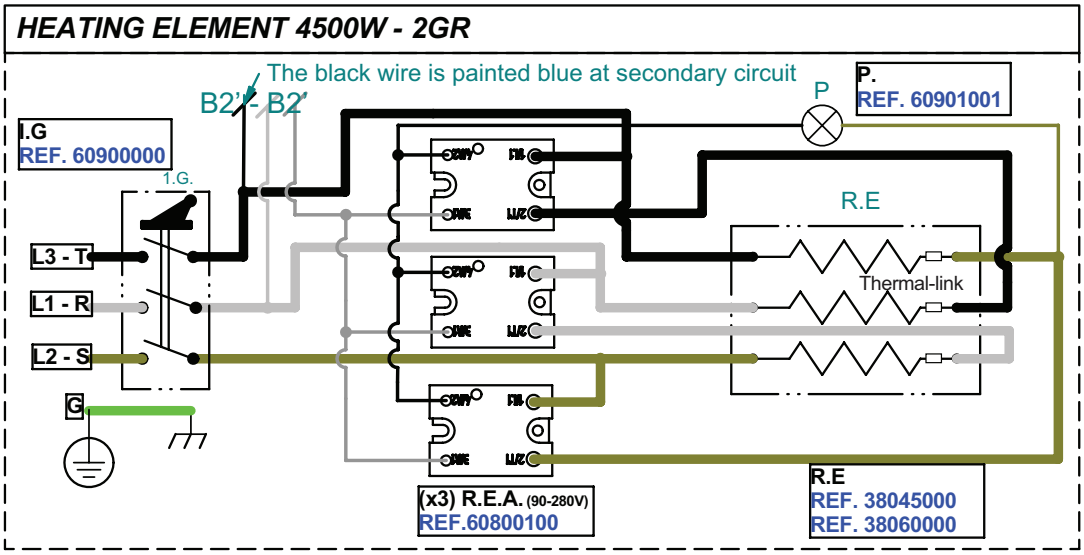


High current schematics

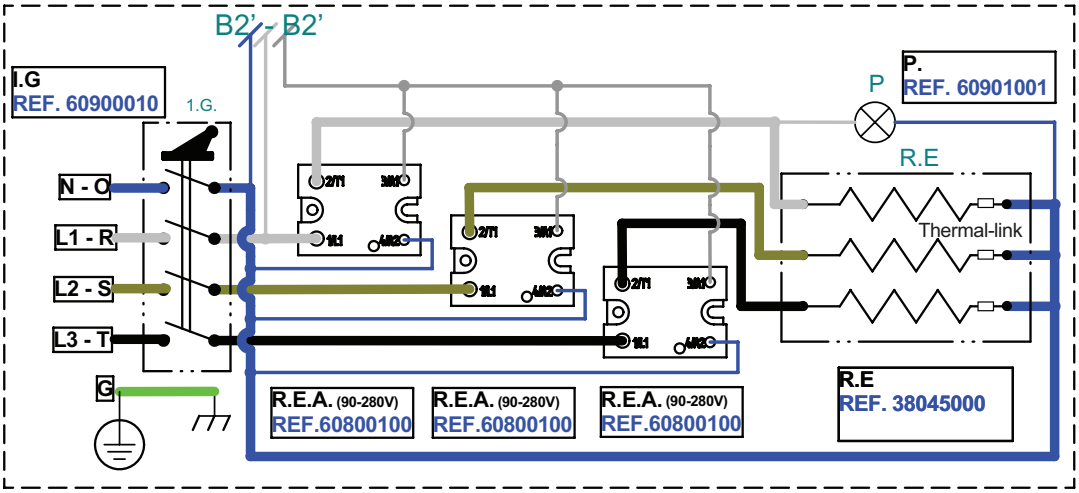
230V 1N~ HEATING ELEMENT 3050W- 2GR



HEATING ELEMENT 4500W - 2GR

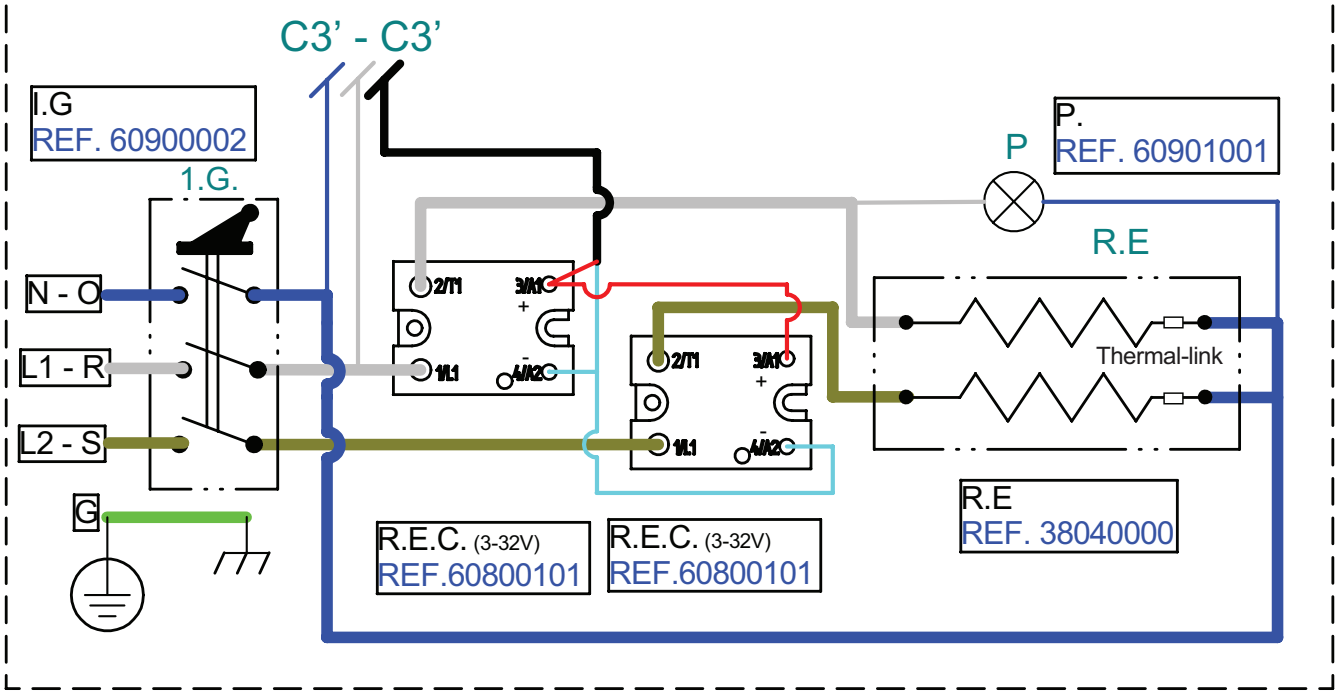


400V 3N~ HEATING ELEMENT 4500W-2GR

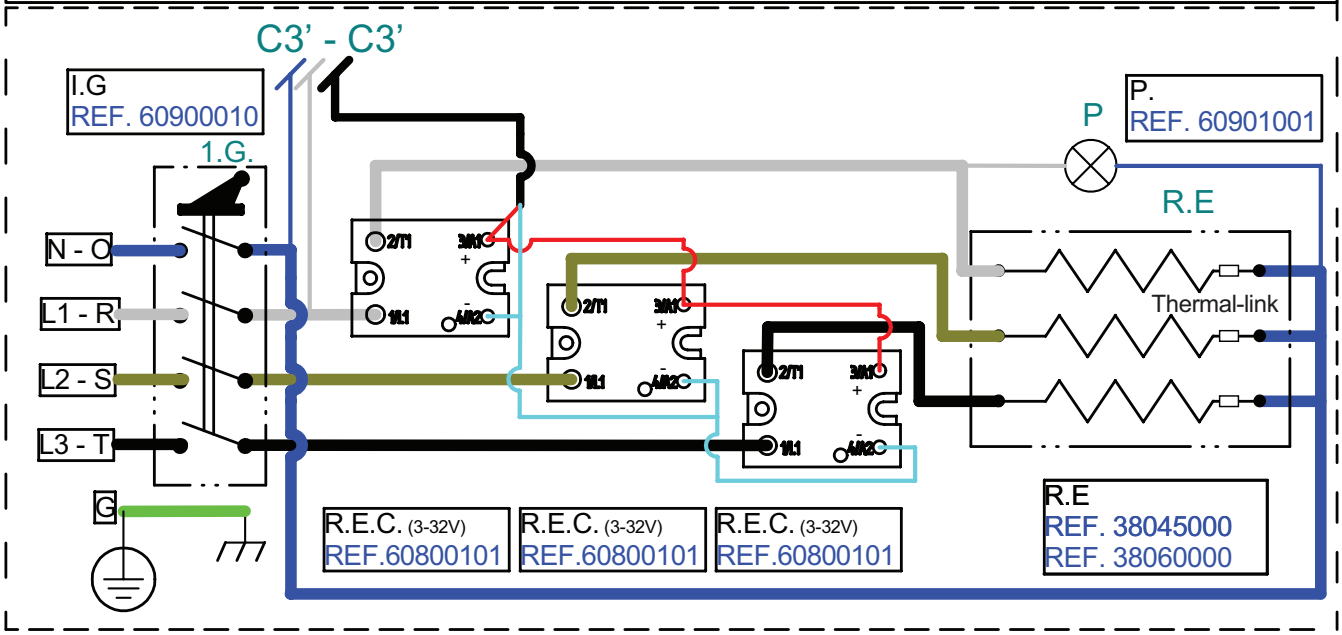


High current schematics

400V 2N~ HEATING ELEMENT 4000W- 3GR



400V 3N~ HEATING ELEMENT 6000W- 3GR



Elen Mini Control 1Gr & 2Gr

Main components	Part No.	Months (Cycles)			
		6 (12500)	12 (25000)	18 (37500)	24 (50000)
Boiler					
Non suction valve	C65000200		Replace		Replace
1/4 X 1/4 Electrovalve Parker 220V	C60000100				Replace
Thermics Sup. Adaptor 1/2 X 1/2	C30000200		Check		Replace
Thermics Inf. Adaptor-1/2X1/2X1/4	C30000210		Check		Replace
Cone Injector 1/4	C30000220		Check		Replace
Brewing group					
Gro Head Electrov. Parker 220V	C60000112				Replace
Showers	C75000010	Replace	Replace	Replace	Replace
8mm group head gasket	C75000081	Replace	Replace	Replace	Replace
Taps					
Steam tap body	C15000325		Clean	Replace	
Water tap body	C15000325				Replace
Motor-pump					
Pump head	C60000030				Replace
Retention Valve	C65000010				Replace
Pump Bypass Condor	C30400055				Replace

Important:

6 months service interval for joints and showers of the brewing group is estimated for a machine where cleaning was carried out properly. Never use excessive force to try to close the porta-filter on the brewing group.

Elen Display Control 2Gr & 3Gr

Main components	Part No.	Months (Cycles)			
		6 (12500)	12 (25000)	18 (37500)	24 (50000)
Boiler					
Non Suction Valve	C65000200		Replace		Replace
Solenoid Electrovalve 50/60Hz 220V	C60000105				Replace
Thermics Sup. Adaptor 1/2 X 1/2	C30000200		Check		Replace
Thermics Inf. Adaptor-1/2X1/2X1/4	C30000210		Check		Replace
Cone Injector 1/4	C30000220		Check		Replace
Brewing group					
Gro Head Electrov. Parker 220V	C60000112				Replace
Showers	C75000010	Replace	Replace	Replace	Replace
Group Head Gasket	C75000081	Replace	Replace	Replace	Replace
Taps					
Steam tap body	C15000325		Clean	Replace	
Water tap body	C15000325				Replace
Motor-pump					
Pump head	C60000030				Replace
Retention Valve	C65000010				Replace
Retent+Expans. Valve Set No Hole	C65000031				Replace

Important:

6 months service interval for joints and showers of the brewing group is estimated for a machine where cleaning was carried out properly. Never use excessive force to try to close the porta-filter on the brewing group.

For the warranty to be valid, the conditions for maintenance must have been followed in accordance with our instructions, proper care must have been taken and any claim against the warranty must be sent without delay.
The equipment in question may not be used while awaiting service if there is any risk that the damage or defect would worsen.
The warranty will not cover the consumption of supplies such as glassware, normal maintenance such as the cleaning of filters, water contamination, limescale or problems associated with incorrect voltages, pressure or amounts of water.
The warranty will not cover damages of defects caused by the incorrect handling and operation of the appliance.

TECHNICAL SUPPORT

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