

CARAT

TECHNICAL MANUAL



TM_EN

Part No.: I764016_02

Date: I3I I05

EXPobar®

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Hazard intensity levels

There are three different levels of hazard intensity, identified by signal words **DANGER**, **WARNING** and **IMPORTANT**. The level of hazard is determined by the following definitions.

Observe the statements to ensure safety, performance, prevent injury and machine damage.



Important:

Alerts against unsafe practices. Observe to ensure drink quality, machine performance, food safety, to prevent minor personal injury or damage to the machine.



WARNING!

Indicates a potentially hazardous situation which, if not avoided, could result in scalding, serious injury and even death.



DANGER!

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



Note:

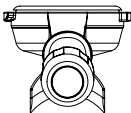
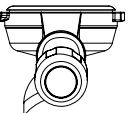
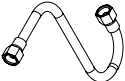
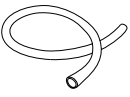
Gives additional information which may be helpful during the cleaning procedure or operation of the machine.

Carat IGR

FACTS	CARAT MINI I GROUP		
	Standard	Standard (Turbo Steamer)	Touch Button (Turbo Steamer)
Steam wand	2pcs	1pc	1pc
Hot water outlet	1pc	1pc	1pc
Turbo steamer	None	1pc	1pc
Electronic temperature control	Yes		
Stand by mode	Yes		
Height, width, depth	620, 586, 563mm		
Boiler volume	6L		
Power supply	230V AC 50/60Hz 1F+N 2750W		
Cold water connection	3/8" Internal thread		

MODEL/NAME	WEIGHT
Carat IGR standard	45kg
Carat IGR turbo steamer	45kg
Carat IGR turbo steamer with touch buttons	45kg

Accessories

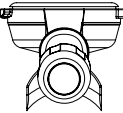
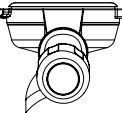
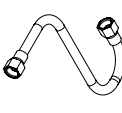
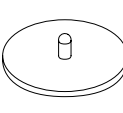
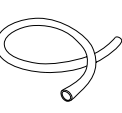
MODEL	2-spout porta-filter	1-spout porta-filter	55-cm inlet hose	Cleaning membrane	Drainage tube (150 mm)
					
MINI IGR	1 unit	1 unit	1 unit	1 unit	1 unit

Carat 2GR

FACTS	CARAT 2 GROUPS		
	Standard	Standard (Turbo Steamer)	Touch Button (Turbo Steamer)
Steam wand	2pcs	1pc	1pc
Hot water outlet	1pc	1pc	1pc
Turbo steamer	None	1pc	1pc
Electronic temperature control	Yes		
Stand by mode	Yes		
Height, width, depth	620, 774, 563mm		
Boiler volume	1.1L		
Power supply	Single-phase 230V AC 50/60Hz 1F+N 3250W Multi-phase 380V AC 50/60Hz 3F+N 4750W		
Cold water connection	3/8" Internal thread		

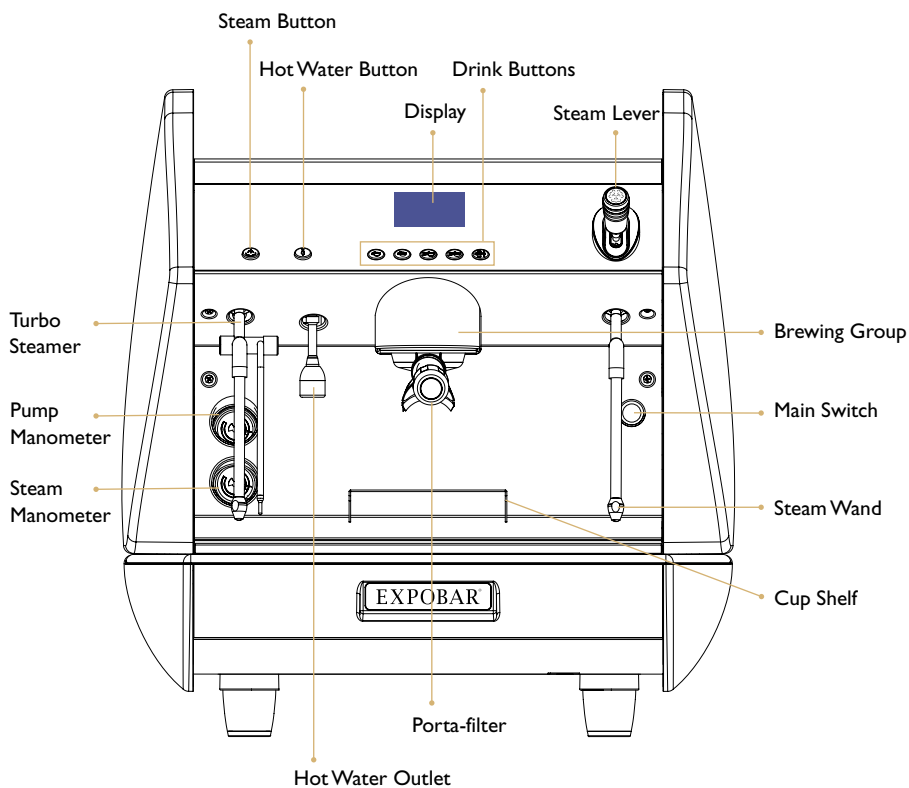
MODEL/NAME	WEIGHT
Carat 2GR standard	63kg
Carat 2GR turbo steamer	63kg
Carat 2GR turbo steamer with touch buttons	63kg

Accessories

MODEL	2-spout porta-filter	1-spout porta-filter	55-cm inlet hose	Cleaning membrane	Drainage tube (150 mm)
					
MINI 2GR	2 unit	1 unit	1 unit	1 unit	1 unit

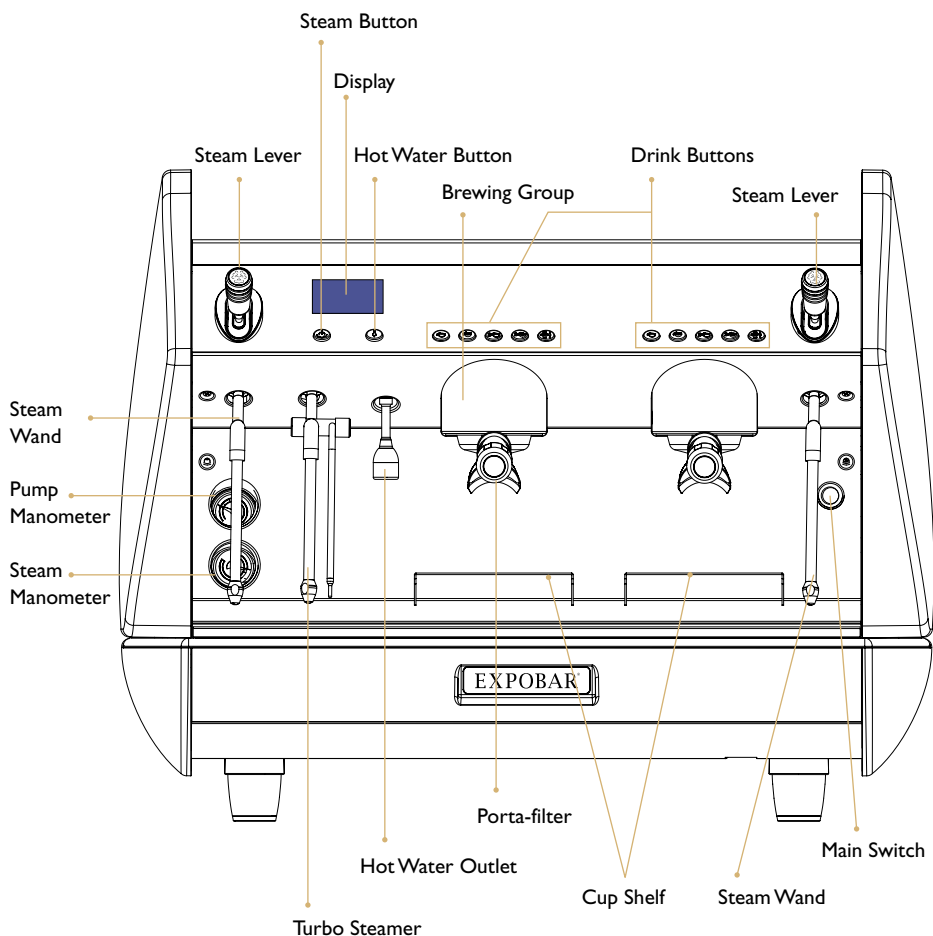
Front view of the machine

Carat I group

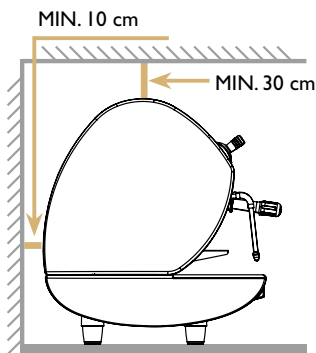


Front view of the machine

Carat 2 groups



Positioning



- Install the machine on a level surface. Adjust the feet to ensure that it dispenses coffee evenly in all of the cups.
- Select a level, dry, strong and stable installation surface at least 110 cm off the floor.
- Leave enough space above and behind the machine to ensure easy cleaning and maintenance.
- Do not install the machine whilst wet or damp. If wet or damp, leave the machine until completely dry then ask service personnel to check that none of the electrical components are affected.

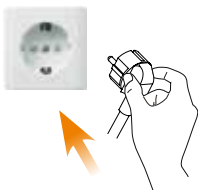


Note:

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

Electrical installation

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



- Check that the electrical specifications on the ratings plate match the specifications of the power supply at the point of installation.
- The coffee machine must be connected to an earthed socket that complies with the regulations in force in the country of installation.
- You should protect the electric line of the installation with a circuit breaker switch appropriated for the power consumption of the machine, specified on its ratings plate.
- A residual current circuit breaker must be installed in accordance with the characteristics of the area of the installation.
- Check the characteristics, power rating of the system and that the diameter of the cables are suitable for the power used by the machine.
- Do not connect the coffee machine to the power supply via extension boards, adapters or shared sockets.

The manufacturer will not be held liable for damage to persons, animals or property resulting from incorrect installation of the coffee machine.

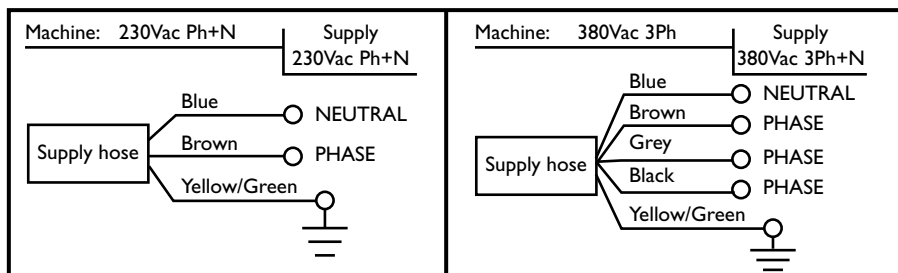


DANGER!

If the mains cable or plug is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid **SERIOUS INJURY OR DEATH!**

Connection types

- Connect the machine as per the instructions on the ratings plate.



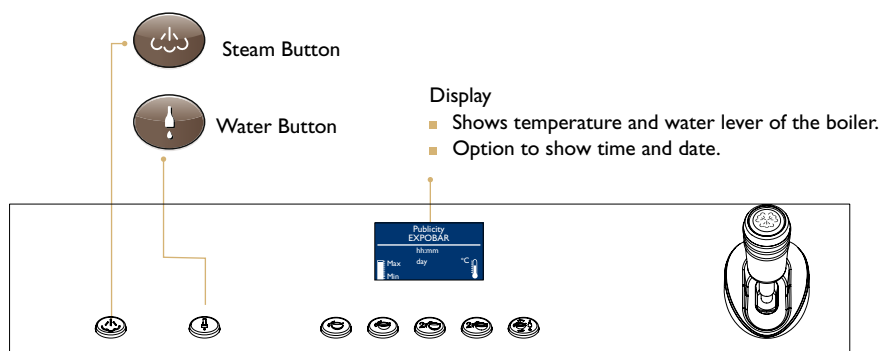
Electronic control panel

Button functions

Here some of the additional functions that the electronics offers:

- Volume control of four different espresso drinks per brewing group.
- Time-controlled hot water dispensing.
- Automatic filling and level control of the boiler.
- Automatic switch off of the heating element if not enough water.
- System supervision through alarms.
- 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.



1 Short Espresso



2 Short Espresso



1 Long Espresso



2 Long Espresso

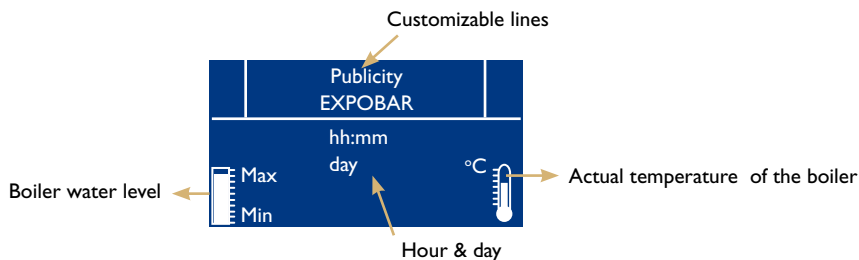


Continuous

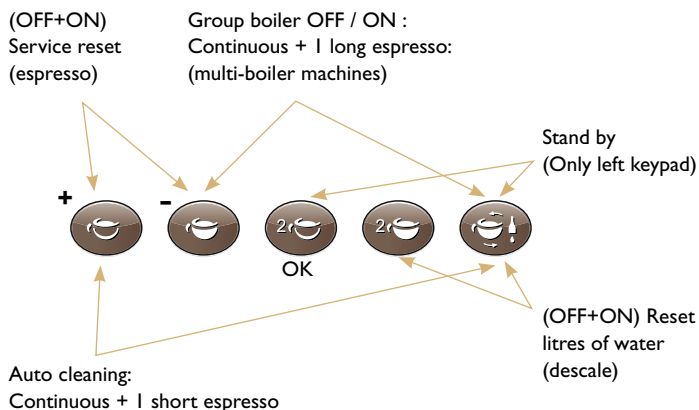
Depending on how long this button is pressed it has 3 functions:

- Less than 1 second, activates the hot water for infusions dosing.
- Between 1 and 8 seconds, activates continuous espresso dispensing, in order to stop the dispensing, press the button again.
- Over 8 seconds, activates the programming menu. This is explained later in programming part.

Additional capabilities reachable from the display



- Automatic switch ON/OFF; "Stand by" function.
- Time management: Current day and time.
- Advertising display.
- Total counter of erogated espressos and hot water services (through the display).
- Digital control and visualization of the temperature in the boiler.
- Maximum control of temperature in the boiler through PID technology.
- On-display help for reprogramming and adjusting.
- Visual alarm about the need of replacing water softener filter.
- Display language selection.



Programming the coffee dosage

This section explains how to program the doses dispensed automatically by the drink buttons.

- Keep the continuous button  pressed over 8 seconds, all the lights in the keypad will light up and continuous button will flash.
- Within 30 seconds press any selection that you want to reprogram (1 short espresso, 1 long espresso, 2 short espresso, 2 long espresso). Notice that all the lights will turn off except the selection you made and the continuous button.
- The group begins to dispense espresso, when the desired volume of espresso is reached, press the selection button that is light up to stop dispensing, this volume will now be stored as default.
- Repeat this process with all the selections that needs to be reprogrammed.

In case you only want to reprogram one of the selections, acts as previously described and only reprogram one selection. The other selections will keep the existing settings.



Important:

Use a porta-filter filled with fresh coffee for every new dose you program.



Note:

Programming any of the options on the left-hand Drink buttons (when viewing the machine from the front) automatically sets the dispensing volumes on all of the other Drink buttons. This only applies to the left-hand Drink buttons. Programming other Drink buttons only modifies the option selected.

Programming of hot water volume

- Keep the continuous button  pressed over 8 seconds, all the lights in the keypad will light up and continuous button will flash.
- Press the continuous button  for less than 1 second. Water will dispense from the hot water wand.
- Press the same button  again to stop the dispensing and store the new volume. Different water volumes can be stored in each keypad.

Programming temperature for the turbo steamer

- Keep the continuous button  pressed over 8 seconds, all the lights in the keypad will light up and continuous button will flash.
- Immerse the steam wand in the liquid to be heated up.
- Press the steam button .
- When the liquid reaches the desired temperature, press steam button  again to stop. The new temperature is now stored.

When programming this button it will only affect the temperature of the liquid, not the time steaming. Once the electronic steam wand with temperature probe reaches the programmed temperature it will automatically turn off. Different volumes of liquid will not affect the temperature.

Maximum security time

As an additional safety, all dose settings have a maximum dispensing time of 5 minutes.

Access to second level menus

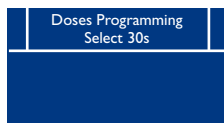


fig.A

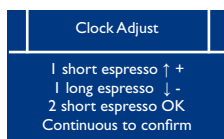


fig.B

- Keep the continuous button  pressed over 8 seconds on the left keypad.
- (Entering first level, See fig.A). Now all the lights in the keypad will light up and continuous button will flash. Do not release the continuous button  until the display shows "Clock adjust"(See fig. B). From this point we are in the second level menu.
- Enter "Clock adjust" by pressing the button  (2 short espresso) or browse through the system with button  (1 short espresso) or  (1 long espresso).

Clock adjustment, hour, minutes and day

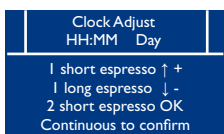


fig.C

- To adjust the clock press the button  (2 short espresso) while "Clock adjust" is displayed.(See fig. C)
- The hour starts to flash, increase or decrease its value by pressing the button  (1 short espresso) or  (1 long espresso). When the rightvalue is reached, accept it by pressing the button  (2 short espresso).
- Now the minutes starts to flash, increase or decrease its value by pressing the button  (1 short espresso) or  (1 long espresso). When the right value is reached, accept it by pressing the button  (2 short espresso).Then the day of the week can be adjusted in the same way ( ,  & ).
- When all values have been adjusted and is confirmed with button  (2 short espresso) the display will proceed to the next menu.

Auto on/off

Auto On/Off On: Hh:mm
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. A

- After accepting the adjusting made in the time and day by pressing the button  (2 short espresso), we enter in the programming of the automatic ON/OFF function of the machine.(See fig. A)
- To modify the time which the machine automatically gets into the “ON” status, while the hour is flashing, increase or decrease its value by pressing the button  (1 short espresso) or  (1 long espresso). When the right value is reached, accept it by pressing  (2 short espresso). Then the minutes will start to flash and will be adjustable in the same way ( ,  & ).



Note:

By default, this first value will be: On: - : - - this means that the function is disabled. As soon as we modify the value, and it become different from - : - - the function will be enabled. If we prefer to leave this function disabled, just accept by

pressing the button  (2 short espresso) while the adjusted value is - : - - .

Auto On/Off Off: Hh:mm
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. B

- Now the automatically OFF time is flashing, increase or decrease its value by pressing the button  (1 short espresso) or  (1 long espresso). When the right value is reached, accept it by pressing the button  (2 short espresso). Then the minutes will blink, and will be adjustable in the same way ( ,  & ). With this final confirmation, display will proceed to the next menu.(See fig. B)
- If automatic ON and OFF times have been assigned, a day off can be enabled in which the machine will not switch on at all. The day off menu will not appear if the automatic ON/OFF times is not set.(See fig. C)

Closed on Day
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. C

- To adjust the day OFF, increase or decrease its value by pressing the button  (1 short espresso) or  (1 long espresso) . When the right value is reached, accept it by pressing the button  (2 short espresso).



Note:

By default, this first value will be: On: - : - - this means that the function is disabled. As soon as we modify the value, and it become different from - : - - the function will be enabled. If we prefer to leave this function disabled, just accept by

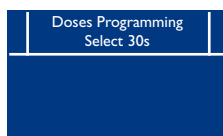
pressing the button  (2 short espresso) while the adjusted value is - : - - .

Counters

There are 4 counters available:

- Litres: litres of water which have come through the machine (help to know when decalcifying is needed)
- Service: coffee brewings needed for technical service.
- Total coffee & hot water brewings
- Coffee brewings per dose keypad

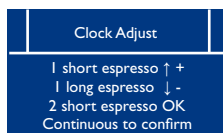
Counters access



A

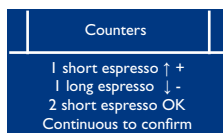
- Keep the continuous button  pressed over 8 seconds, all the lights in the keypad will light up and continuous button will flash.

The display will show:(See fig.A)



B

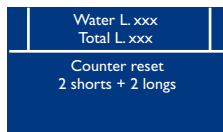
- Once again, press, and maintain pressed the continuous button  till the display shows "Clock adjust". (See fig.B)



C

- Press briefly the continuous button , the display will show the option "Counters". (See fig.C)

Counter Litres



D

This counter shows the volume of water (litres), that has been through the machine. Its main purpose is to facilitate the control of when a regeneration of the water softener is needed.

How to access:When the display shows "counters", accept by pressing



(two short espressos).

To exit and get to the next menu, press the continuous button



- In chapter 10.31 Water softener filter: Regeneration, it can be programmed how many litres of water the machine will use before giving the warning of the need to regenerate the water softener. This way, the counter counts the litres of water and warns the user when it is needed to do the regeneration of the water softener.

To reset this counter (reset litres counter):

- The espresso machine must be in the ON Status.
- Turn off the machine using the main switch.
- Maintain pressed both button  (2 short espresso) and  (2 long espresso), and while pressing them, turn on the espresso machine from the main switch.
- Press the continuous button  to confirm the reset.

Service: Warning to technical maintenance

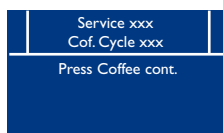


Fig.A

This counter shows on the first row (See fig.A), the number of services set for the machine to request for technical service and maintenance. On the second row it is shown the number of services brewed (individual brewed services) made by the machine since the last reset.

How to access: From the counter “Litres” get to this counter by pressing the continuous button .

To get out and get to the next menu, press the continuous button .

It can be programmed the number of brewed services before the electronics give the warning to make the technical maintenance.

To reset the counter (reset the service counter):

- The espresso machine must be in the ON status.
- Turn off the machine using the main switch.
- Keep pressed both buttons  (1 short espresso) and  (1 long espresso), and while pressing them, turn on the espresso machine from the main switch.
- Press continuous button  to confirm the reset.

Total espressos

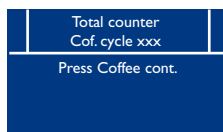


Fig. B

This totalizer adds up all the services brewed by the machine. (See fig.B) Therefore, it cannot be reset.

How to access:

- From the counter “Service”, access to this counter pressing the continuous button .
- To exit and proceed to the next menu, press the continuous button .

Partial counter

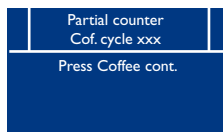


Fig.A

This counter constitutes a partial counter since last reset.(See fig.A)

Brewed services per keypad counter

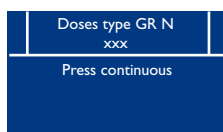
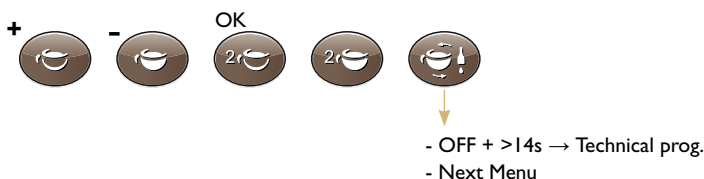


Fig. B

- This counter shows the number of brewed services brewed by each of the possible selections of the machine. (See fig.B)
- On the superior side of the display it is shown the dosis type (Espresso, long espresso, 2 espressos, 2 long espressos, continuous or hot water). On the right side it is shown which of the groups is now displayed. Underneath it is shown the amount.
- These counters can be reset as follow: While displays shows as fig.A, press at the same time both buttons  (2 short espresso) and  (2 long espresso) for more than 4 seconds.

Access to the technical programming



- The access to these adjustment menus is only possible from the left keyboard of the machine (left, facing the machine).
- With the machine in the stand by (OFF) state, keep pressed the continuous button  for more than 15 seconds till the display shows the following message: "Language: English" or "Lengua: Español".

Select language

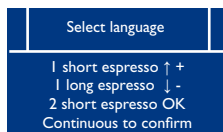


Fig.A

- When on the display it is shown: “Select Language” and the selected language(See fig.A), we can change the language used in the display.

To change the current language used, press one short espresso  (+) or one long espresso  (-).

- Spanish - German - Italian - French - English

← (-)  (one long espresso) → (+)  (one short espresso)

- To accept the selection made and proceed to the next menu, press the continuous button .

Colour option

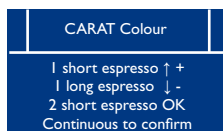


Fig. B

To accept the selection made and proceed to the next menu, press the continuous button . (See fig.B)

Mode setting

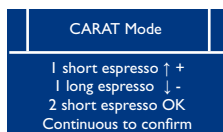


Fig. C

To accept the selection made and proceed to the next menu, press the continuous button . (See fig.C)

Colour setting

Bar Led Colour Colour
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig.A

- When on the display it is shown "Bar Led Colour"(See fig.A), the colour of the led lines on the base of the machine can be adjusted.To toggle between the different options use the one short espresso  (+) or one long espresso  (-) buttons.The effect of the option selected can be observed directly on the machine.

Off, red, green, blue, purple, light green, light blue, white.

← (-)  (one long espresso) → (+)  (one short espresso)

- To accept the selection made and proceed to the next menu, press the continuous button .
- In this menu (See fig.B), we adjust the behavior of the led lines on the base of the machine.To toggle the mode use the one short espresso  (+) or one large coffee  (-) buttons.The leds will respond immediately to the option selected.

Bar Led Colour Mode
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. B

Scrolling - Christmas – off – Fix on – blinking – dynamic -

← (-)  (one long espresso) → (+)  (one short espresso)

- To accept the selection made and proceed to the next menu, press the continuous button .

Display mode

Display Mode Normal/reverse
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. C

- The display has two working modes:"Normal" in which the letters are light against a dark background, or "Reverse" or negative, in which the letter are shaped by not lighting their shape in the background (See fig.C).
- To toggle between the two modes, use the one short espresso  (+) or one long espresso  (-) buttons.The effect can be seen directly on the display.
- To accept the selection made and proceed to the next menu, press the continuous button .

Contrast

Contrast 0 - 50
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig.A

- In this menu(See fig.A), the contrast of the display lightning is set. It can be adjusted between the values of 0 and 50. To adjust it use the one short

espresso  (+) or one long espresso  (-).

The effect can be seen directly on the display.

- To accept the selection made and proceed to the next menu, press the

continuous button .

Colour ON

Colour state ON Colour
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. B

- Here, the colour of the display while in "ON" state is set(See fig.B). This means that it can be different when the machine is in the "OFF" status.

To toggle between the different options use the one short espresso

 (+) or one long espresso  (-). The effect of the option

selected can be observed directly on the machine.

- Spanish - German - Italian - French - English

← (-)  (one long espresso) → (+)  (one short espresso)

- To accept the selection made and proceed to the next menu, press the

continuous button .

Colour OFF

Colour state OFF Colour
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. C

- Now, the colour of the display while in "OFF" state is set(See fig.C). To toggle between the different options use the one short espresso

 (+) or one long espresso  (-). The effect of the option

selected can be observed directly on the machine.

- Spanish - German - Italian - French - English

← (-)  (one long espresso) → (+)  (one short espresso)

- To accept the selection made and proceed to the next menu, press the

continuous button .

Name 1: Adjust the publicity message on the display (superior line)

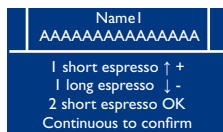


Fig.A

The message shown (See fig.A) on the 2 superior lines of the display can be adjusted here and in the following menus.

Here the first row will be adjusted.

- To modify the selected letter for the blinking character press the one short espresso  (+) or one long espresso  (-).
- To accept the selected character and proceed to the next one, press the button  (2 short espresso).

To accept the line and proceed to the next menu, press the continuous brewing button.

Name 2: Adjust the publicity message on the display (inferior line)

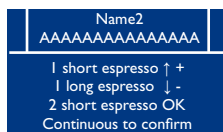


Fig. B

In this menu (See fig.B) the second row of the customizable lines is set.

- To modify the selected letter for the blinking character press the one short espresso  (+) or one long espresso  (-).
- To accept the selected character and proceed to the next one, press the button  (2 short espresso).

To accept the line and proceed to the next menu, press the continuous brewing button.

Service phone



Fig. C

In this menu (See fig.C), it is set the telephone number shown when the warning caused by reaching the number of services set for technical maintenance.

- To modify the selected number for the blinking character press the one short espresso  (+) or one long espresso  (-).
- To accept the selected character and proceed to the next one, press the button  (2 short espresso).

To accept the line and proceed to the next menu, press the continuous brewing button.

Dosed service enabling

Doses setting Enabled/disabled
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig.A

This menu Enables/disables(See fig.A) the possibility of modifying the doses volumes set. This is, makes it possible to disable (they will not work) the possibility for the user to modify the doses set in the machine.

This option prevents the final user from dis-adjusting the doses set of the machine.

- To enable modifying the setting, press the button  (one short espresso), to disable, press the button  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Continuous brewing button

Continuous key Option
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. B

This menu (See fig.B) toggles the behavior of the continuous brewing button into different working modes.

The options are: # Tea + continuous. # Only coffee cont. # Only Tea

- To modify the selected mode press the button  (one short espresso) or  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Electronic steam wand

Steam Boiler Gr. N
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. C

In this menu, (See fig.C) it is set which keypad is physically connected (internally) to the button of the electronic steam wand. By factory default this is set to 1, and it should not be modified, as malfunctioning of the machine would occur.

- Increase or decrease the value by pressing the button  (one short espresso) or  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Pre-brewing

Pre-brewing Enabled/disabled
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig.A

This setting enables or disables the electronic pre-brewing(See fig.A). By factory default this option is disabled, as the Brilliance's brewing groups are equipped with mechanical pre-brewing systems.

- To activate this function press the button  (one short espresso), to disable, press the button  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Adjusting the pre-brewing parameters

Pre-brew. ON sec Selection type X.Xs
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. B

If in the previous menu the pre-brewing function was enabled, this menus will appear as to allow the adjusting of the parameters of the pre-brewing. As said, this machine is already equipped with mechanical pre-brewing, so it is not to activate this function.

- On this first menu, it is adjusted the pre-brewing time for each type of selection (short espresso, large coffee, 2 short espressos & 2 large espressos). in which water is pumped as to moisture the grinded coffee.
- To adjust it press the button  (one short espresso) or  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .
- Now it is adjusted the pre-brewing time for the little pause after the initial water injection, as to allow the grinded coffee to moisture depending on each type of selection.
- To accept the setting and proceed to the next menu, press the continuous button .

Pre-brew. OFF sec Selection type X.Xs
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. C

Probe sensitivity

Probe Sensitivity Low/Mid/High
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. D

Here it can be adjusted the detection sensibility of the level probes of the boiler. (See fig.D) Normally it is not needed to modify it from the "medium", but in some cases (very pure water, this is water with very low level of dissolved salts), it will be needed to select High sensibility and vice versa. By default this sensibility will be set to "Med", and generally it is not needed to modify it.

- To increase sensibility, press the button  (one short espresso), to decrease it, press the button  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Grinding notice

Grinding Notice Enabled/disabled
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig.A

This setting enables or disables the brewing monitor(See fig.A).This function analyzes the output flow when brewing, and depending on it, advises if the grinded coffee is too thin or too coarse. If the brewing flowrate was between limits, it will display “Ok” at the end of the brewing process.

- To enable it, press the button , to disable it, press the button .
- To accept the setting and proceed to the next menu, press the continuous button .

Adjusting parameters of the grinding notice

Thin Grinding X.X
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. B

If in the previous section the grinding notice was enabled, in this menu, its parameters can be adjusted. If it was disabled, this menu will not appear.

Here it is adjusted the minimum flow rate that will be considered as inferior limit of a good brewing flowrate.

- To increase this value, press the button , to decrease it, press the button .
- To accept the setting and proceed to the next menu, press the continuous button .

Thick Grinding X.X
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. C

Here it is adjusted the maximum flow rate that will be considered as superior limit of a good brewing flowrate.

- To increase this value, press the button , to decrease it, press the button .
- To accept the setting and proceed to the next menu, press the continuous button .

Grinding notice

Led Idle option
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. D

- The blinking of the keypads lights have different behavior modes that can be toggled by pressing the button  (one short espresso) and  (one long espresso).
- The options are: Enabled, disabled & Rotation leds.
- To accept the setting and proceed to the next menu, press the continuous button .

Chronometer

Crono option
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig.A

The displays (See fig.A) of each group have different working modes:

- **Brewing chronometer:** When brewing an espresso, the display acts as a chronometer measuring the time taken to erogate the espresso.
- **Pulses:** The group display, graphically shows the espresso brewing speed during the espresso erogation by displaying the flowmeter pulses.
- **Disabled:** Each group display is not affected when brewing espresso.
- To change between the different option use press the button  (one short espresso) or  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Maintenance cycle

Maintenance cycle XXXX
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. B

Here it is adjusted the Number of espresso brewings needed for maintenance cycle, (shower screen replacing, gaskets, etc.) When the service counter reaches the number set here, on the display it is shown the warning "Service needed", and the Phone of the service.

- To increase this value, press the button  (one short espresso), to decrease it, press the button  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Temperatures: °C or F

Temperature °C/°F
1 short espresso ↑ +
1 long espresso ↓ -
2 short espresso OK
Continuous to confirm

Fig. C

- To show the temperature in °F (Fahrenheit) press the button  (one short espresso),
- To show the temperature in °C (Celsius) press the button  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Boiler temperature

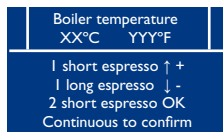


Fig.A

In this section the temperature of the boiler is set.

- To increase temperature, press the button  (one short espresso), to decrease it, press the button  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

Multi boiler setting



Fig. B

Here is set the actual number of extra boilers that the machine has. This setting is factory set, and must not be modified, as this would cause a malfunctioning.

- To modify the setting press the button  (one short espresso), or  (one long espresso). The options are:
 - GR1+GR2 (One main boiler and 2 groups boilers)
 - OFF (Only one main boiler machine)
- To accept the setting and proceed to the next menu, press the continuous button .

Groups temperature

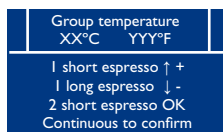


Fig. C

Here it is adjusted the temperature for each group and the main boiler. If the previous menu was set to "OFF", only the temperature for the main boiler will appear in this menus.

- To increase temperature value, press the button  (one short espresso), to decrease it, press the button  (one long espresso).
- Group temperature1 – Group temperature2 – Main boiler temperature
- Once adjusted each temperature, press the continuous button  as to adjust the next group/boiler temperature.
- Once set the temperature of the last group/boiler, when pressing the continuous button  it will proceed to the next menu.

Offset temperature set

OFFST Tset Coffee XX°C YYY°F
1 short espresso ↑ + 1 long espresso ↓ - 2 short espresso OK Continuous to confirm

Fig.A

In this setting it is set the temperature offset to be considered between the group boiler and the group head. If the Grupos Calefactados (multicaldera) was set to "OFF", this menu will not appear.

This parameter is factory set to 10°C, and it is recommended not to modify it.

- To increase temperature drop, press the button  (one short espresso), to decrease it, press the button  (one long espresso).
- To accept the setting and proceed to the next menu, press the continuous button .

PID parameters

KP KI KD 4 0,07 2,2
1 short espresso ↑ + 1 long espresso ↓ - 2 short espresso OK Continuous to confirm

Fig. B

In this menu the PID internal parameters are set. This parameters are factory set and they must not be modified, as doing so will cause the machine to malfunction. By default they are: kP=4, kI=0,07, kD=2,2.

- To adjust each parameter, press the button  (one short espresso) and  (one long espresso).
- Once adjusted each parameter, press the continuous button  to proceed to the next parameter. When having adjusted the last one, when pressing the continuous button, the next menu will appear..

Water softener filter: Regeneration

Water filter NNN
1 short espresso ↑ + 1 long espresso ↓ - 2 short espresso OK Continuous to confirm

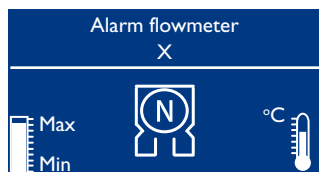
Fig. C

Here it is adjusted the liters of water after which the electronics will warn about the need of regenerating the water softener.

- To increase this number, press the button  (one short espresso), to decrease it, press the button  (one long espresso).
- In Contador Litros chapter it is shown the volume of water already used by the machine since last reset.
- To accept the setting and proceed to the next menu, press the continuous button .

Model of water softener	Quantity of water treated depending on water hardness (water hardnes units: french degrees)					Salt
	20°	30°	40°	60°	80°	
L 8	1200	1000	900	700	500	1
L 12	1900	1500	1350	1050	750	1.5

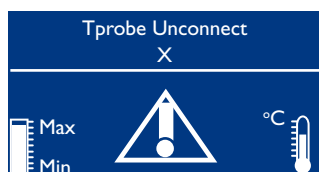
Approximated litres of water treated until regeneration of the water softener is needed.



Flowmeter X failure / No flow detected in flowmeter X



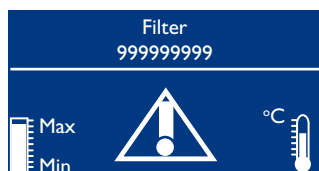
Check that the machine is receiving water.



Temperature sensor X fault.



Warning technical service needed.



The water softener filter needs to be replaced.

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.

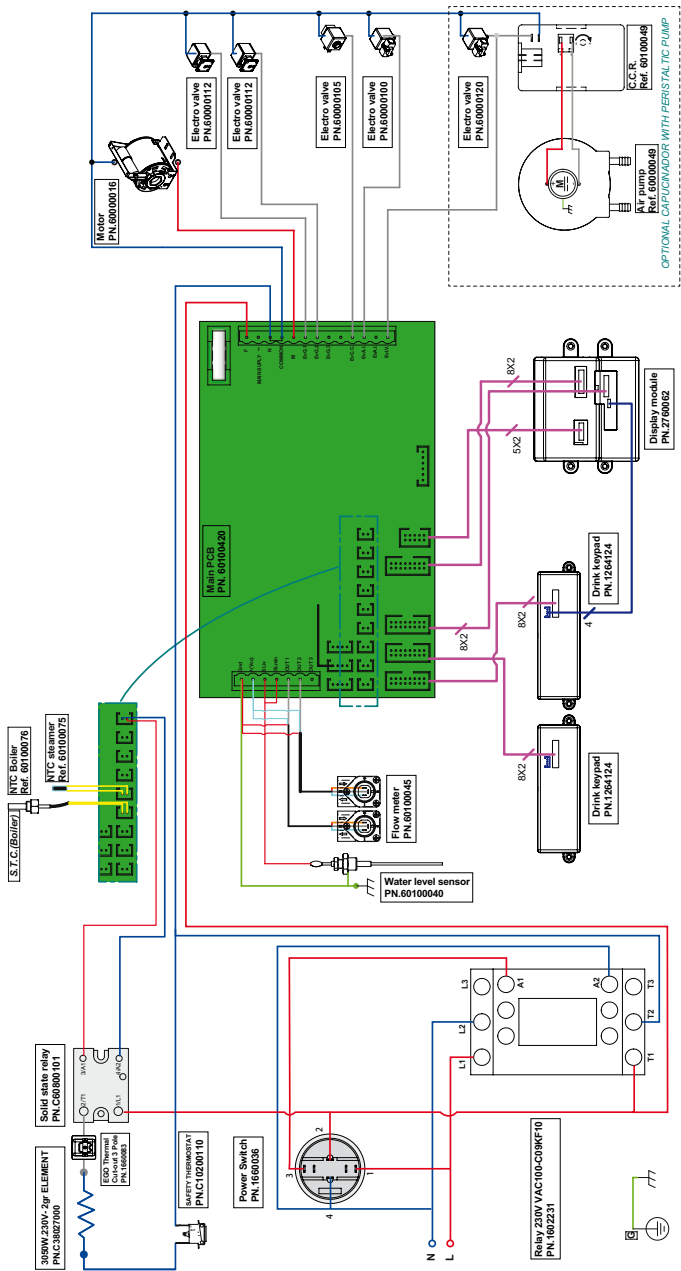
Faults produced by limescale

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.	

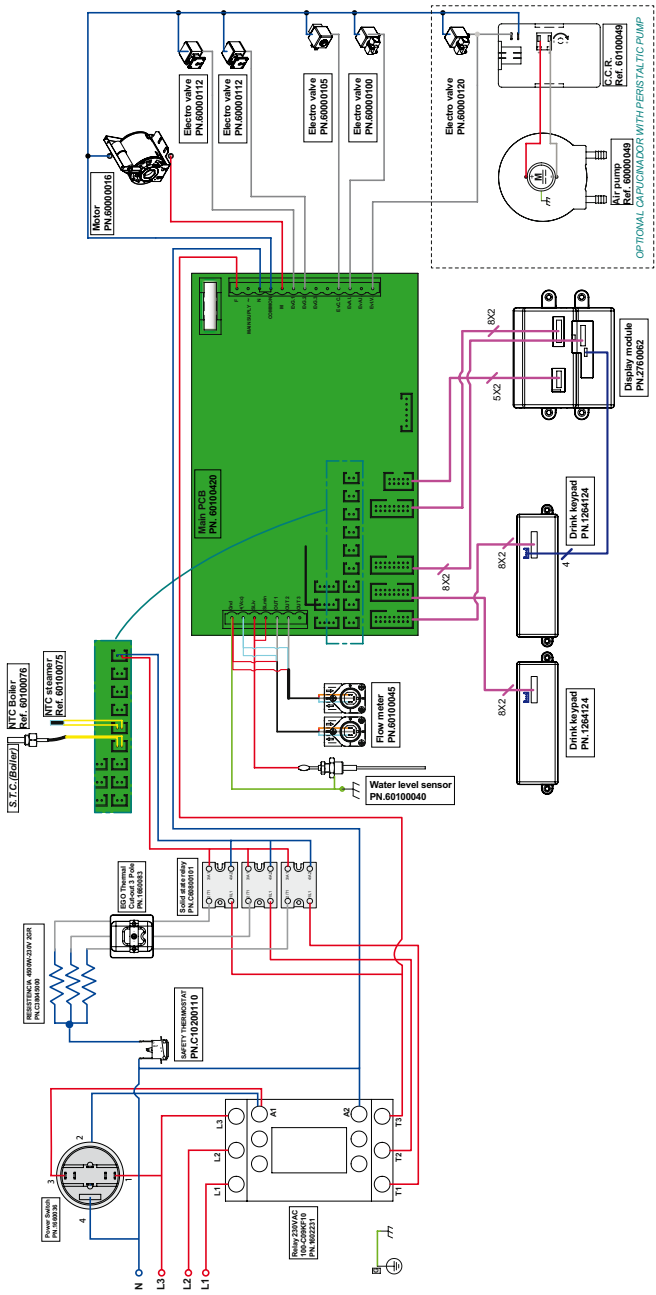
Coffee-grinding problems

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

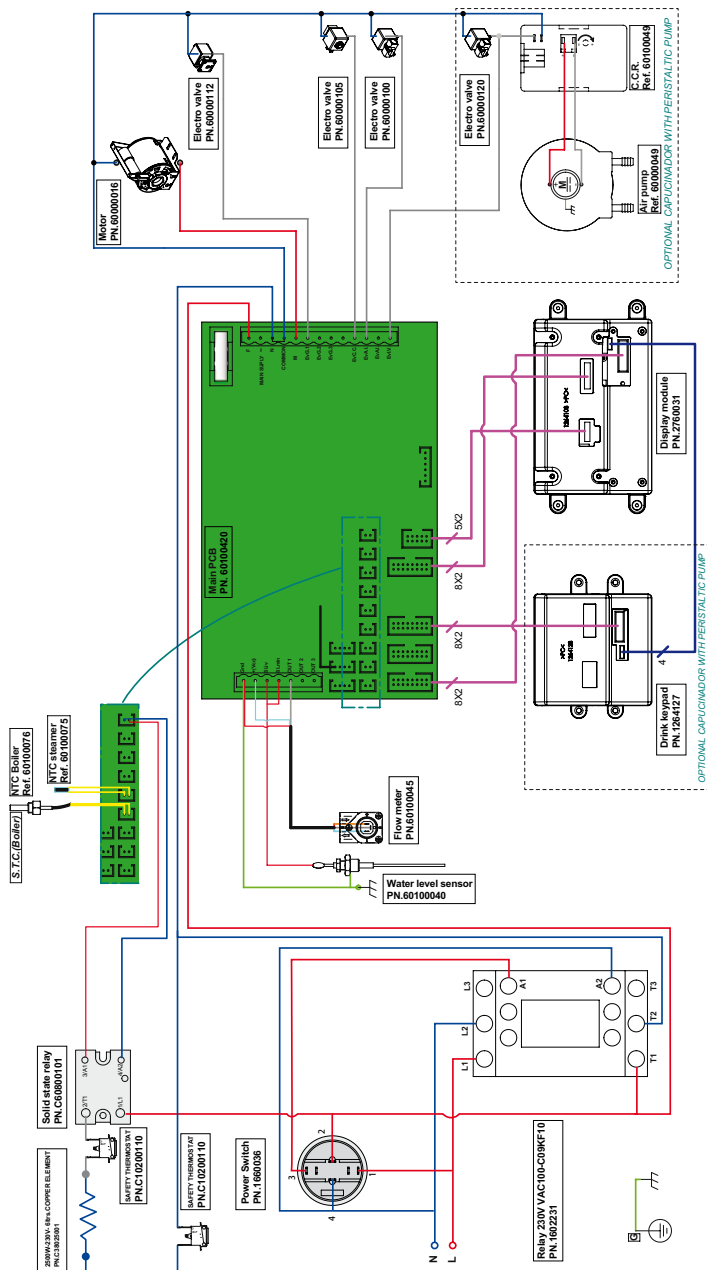
Display board and IO-Board outputs 2Gr 230V



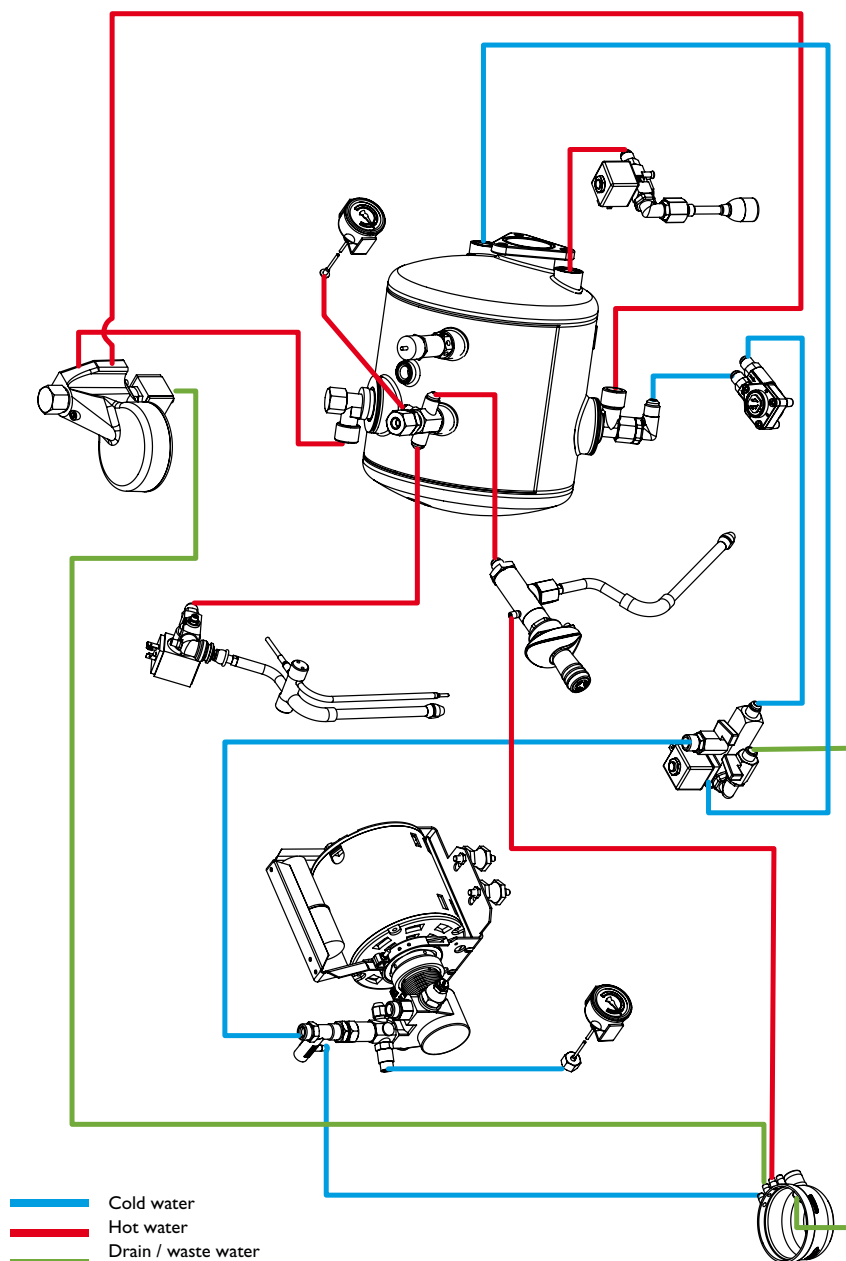
Display board and IO-Board outputs 2Gr 400V



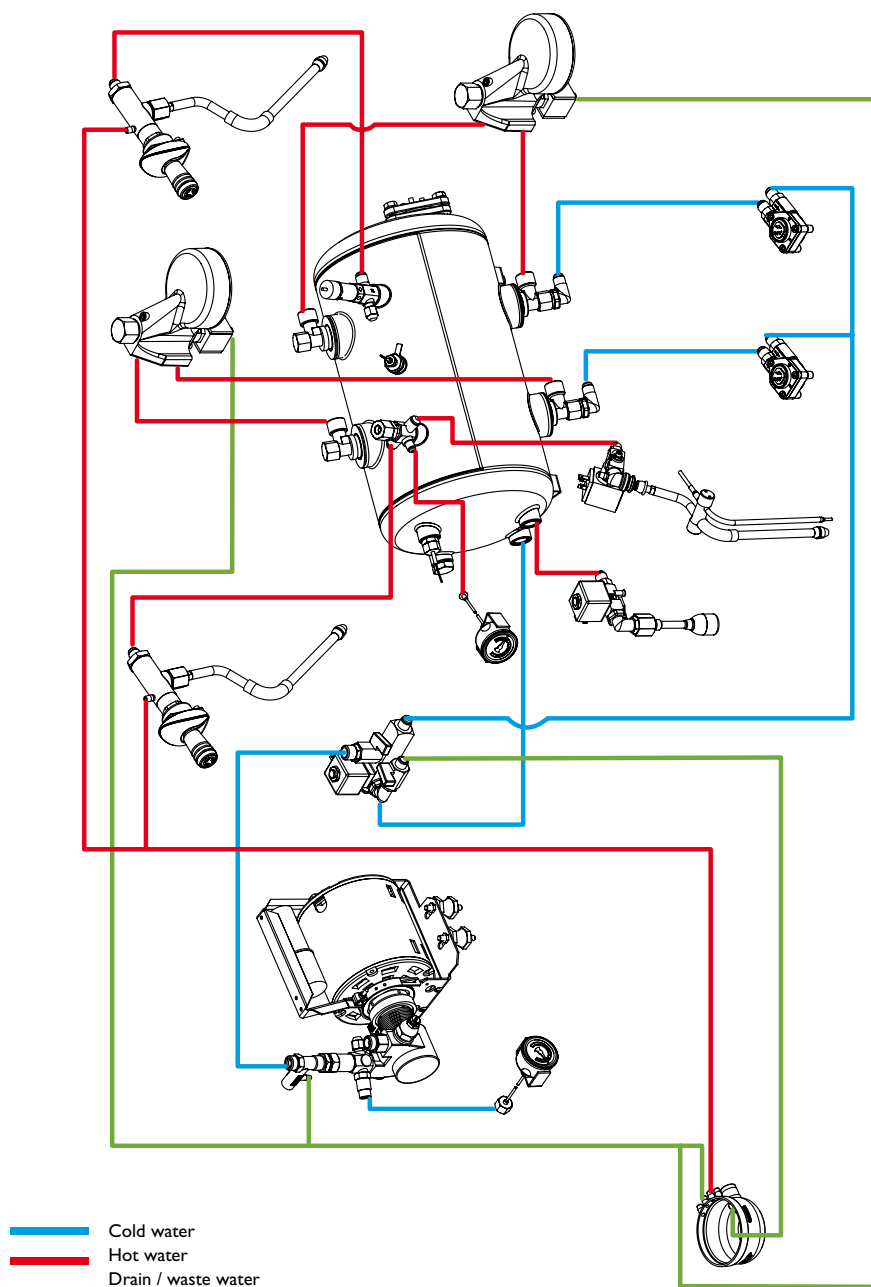
Display board and IO-Board outputs I Gr 230V



Machine with IGR

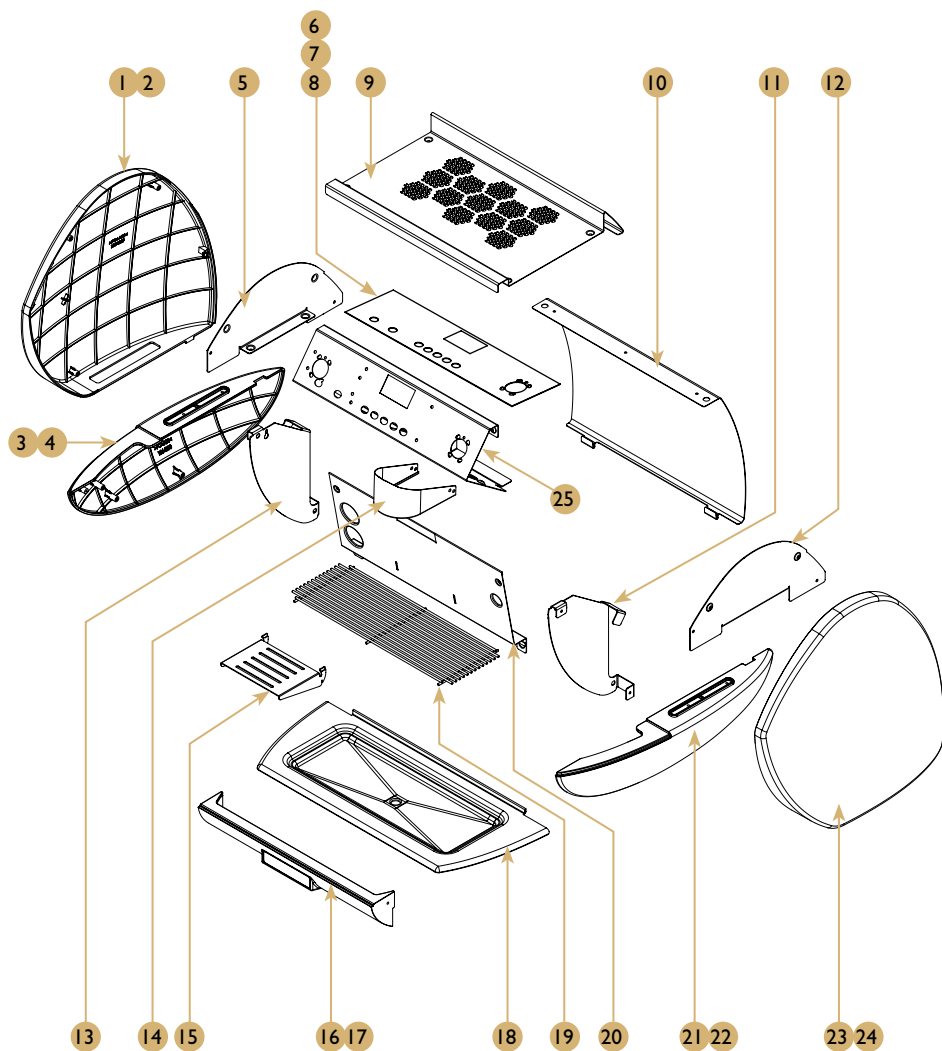


Machine with 2GR



Machine with IGR

Drawing



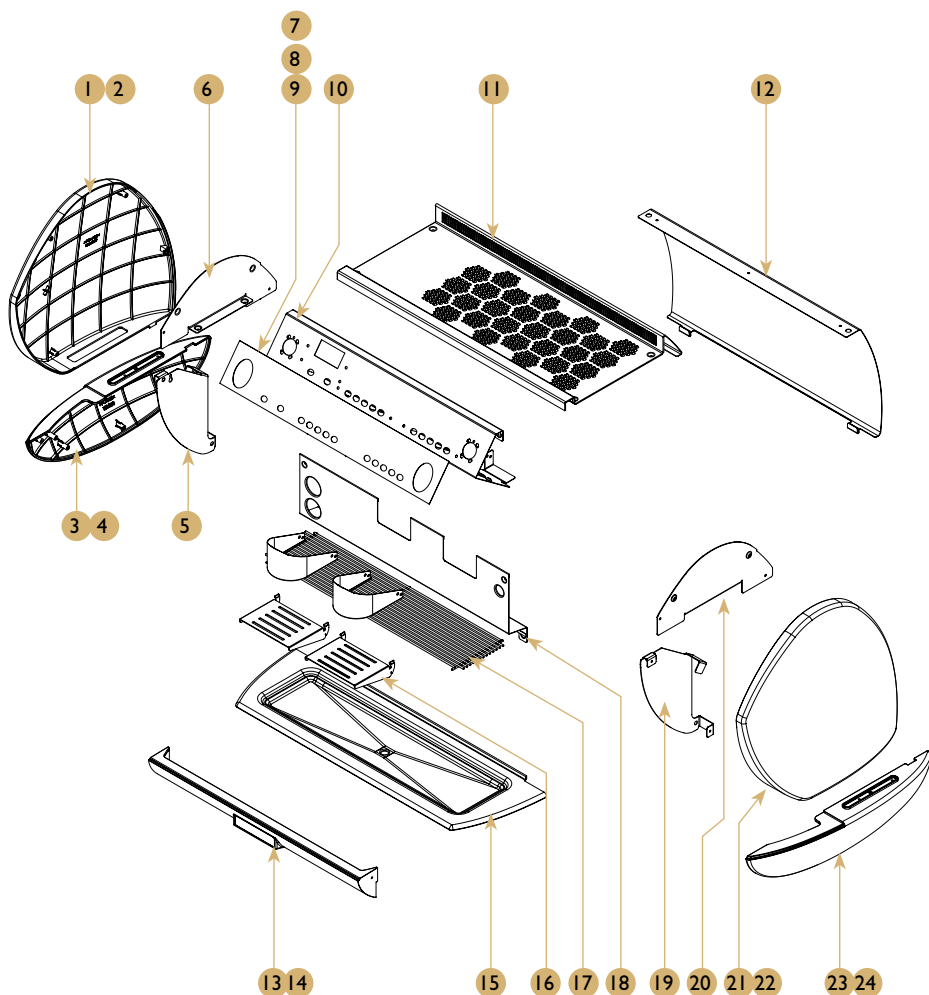
Machine with IGR

Spare parts list

POS.	PCS	Part No.	Description
1	I	1264089	Left panel upper white
2	I	1264162	Left panel upper black
3	I	1264090	Left panel lower white
4	I	1264163	Left panel lower black
5	I	260712	Left Upper Panel Cover
6	I	1264096	Display overlay IGr TS
7	I	1264119	Display overlay IGr TSTB
8	I	1264141	Display overlay IGr Standard
9	I	260719	Top Cup Tray IGR Carat
10	I	260718	Back Panel IGR Carat
11	I	260715	Right Lower Panel Cover
12	I	260714	Right Upper Panel Cover
13	I	260713	Left Lower Panel Cover
14	I	260720	Group Cover Support Carat
15	I	260687	Cup Holder Carat
16	I	1264104	Front Brand Panel
17	I	1264167	Front brand panel IGr black
18	I	260716	Drip Tray IGR Carat
19	I	260717	Grid Carat IGr
20	I	260710	Front Panel IGR Carat
21	I	1264092	Right panel lower white
22	I	1264165	Right panel lower black
23	I	1264091	Right panel upper white
24	I	1264164	Right panel upper black
25	I	260711	Display Panel Assy IGR Carat

Machine with 2GR

Drawing



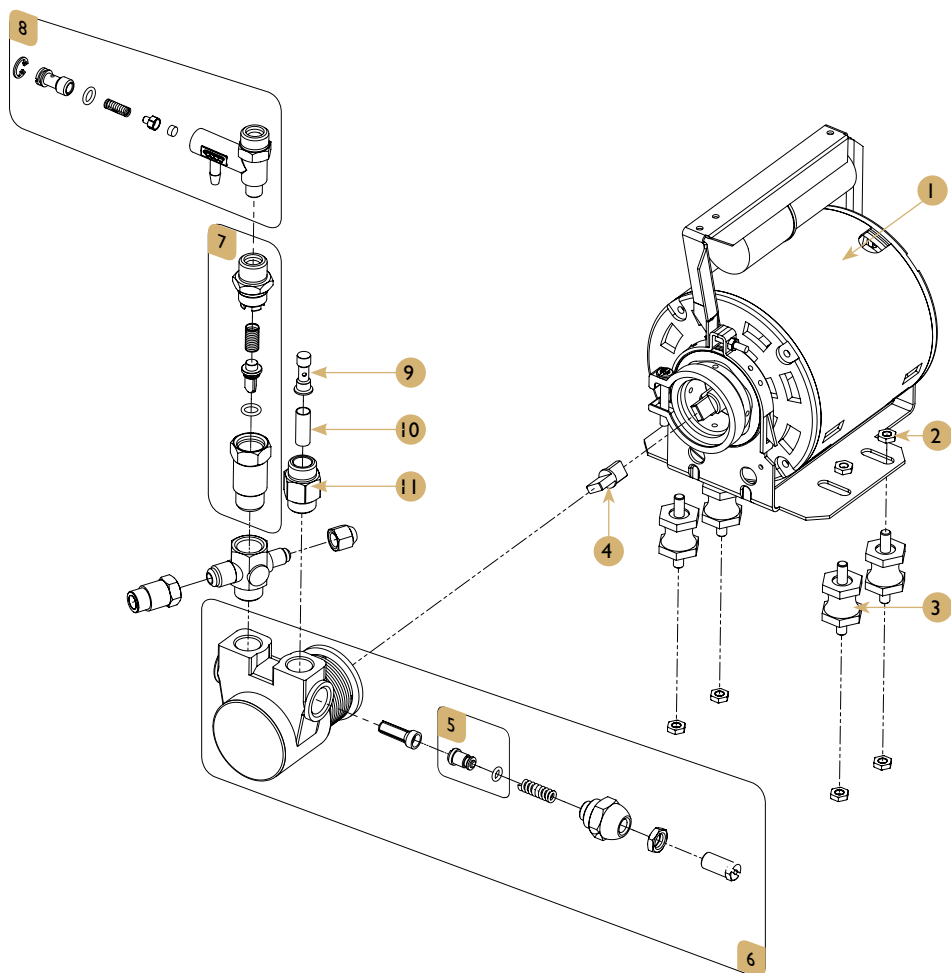
Machine with 2GR

Spare parts list

POS.	PCS	Part No.	Description
1	1	1264089	Left panel upper white
2	1	1264162	Left panel upper black
3	1	1264090	Left panel lower white
4	1	1264163	Left panel lower black
5	1	260713	Left Lower Panel Cover
6	1	260712	Left Upper Panel Cover
7	1	1264116	Display overlay 2Gr TS
8	1	1264120	Display overlay 2Gr TSTB
9	1	1264142	Display overlay 2Gr Standard
10	1	260728	Display Panel Assy 2Gr Carat
11	1	260730	Top Cup Tray 2Gr Carat
12	1	260699	Back Panel 2Gr Carat
13	1	1264115	Front brand panel 2Gr white
14	1	1264166	Front brand panel 2Gr black
15	1	260731	Drip Tray 2Gr Carat
16	2	260687	Cup Holder Carat
17	13	260700	Grid Carat 2Gr
18	1	260729	Front Panel 2Gr Carat
19	1	260715	Right Lower Panel Cover
20	1	260714	Right Upper Panel Cover
21	1	1264091	Right panel upper white
22	1	1264164	Right panel upper black
23	1	1264092	Right panel lower white
24	1	1264165	Right panel lower black

Rotary pump

Drawing



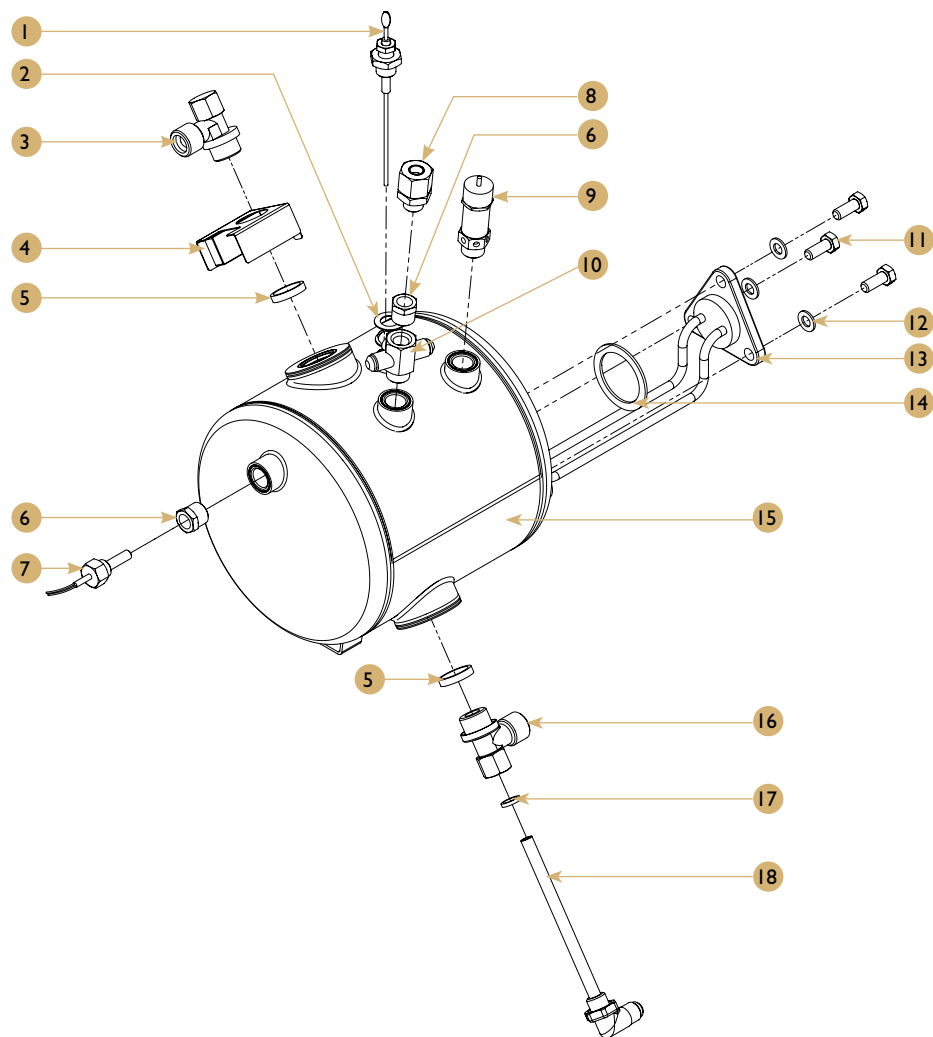
Rotary pump

Spare parts list

POS.	PCS	Part No.	Description
1	1	C60000016	MOTOR CREM 230V/50HZ
2	8	C25093420	HEXAGONAL NUT M-6 DIN-934
3	4	C50100000	SILENTBLOCK M-6
4	1	C30000019	CARDAN JOINT PUMP
5	1	C60000031	Piston Bypass Pump (Tec)
6	1	C60000030	Pump(Crem Special Treatment)
7	1	C65000010	Retention Valve 3/8*1/8 (Min-Mon-Ec)
8	1	C30400055	Pump Bypass Condor
9	1	C30100100	Inlet Water Filter Holder
10	1	C70000009	Tubular Group Filter
11	1	C30000240	PUMP ADAPTOR 3/8 X 3/8

Boiler IGR

Drawing



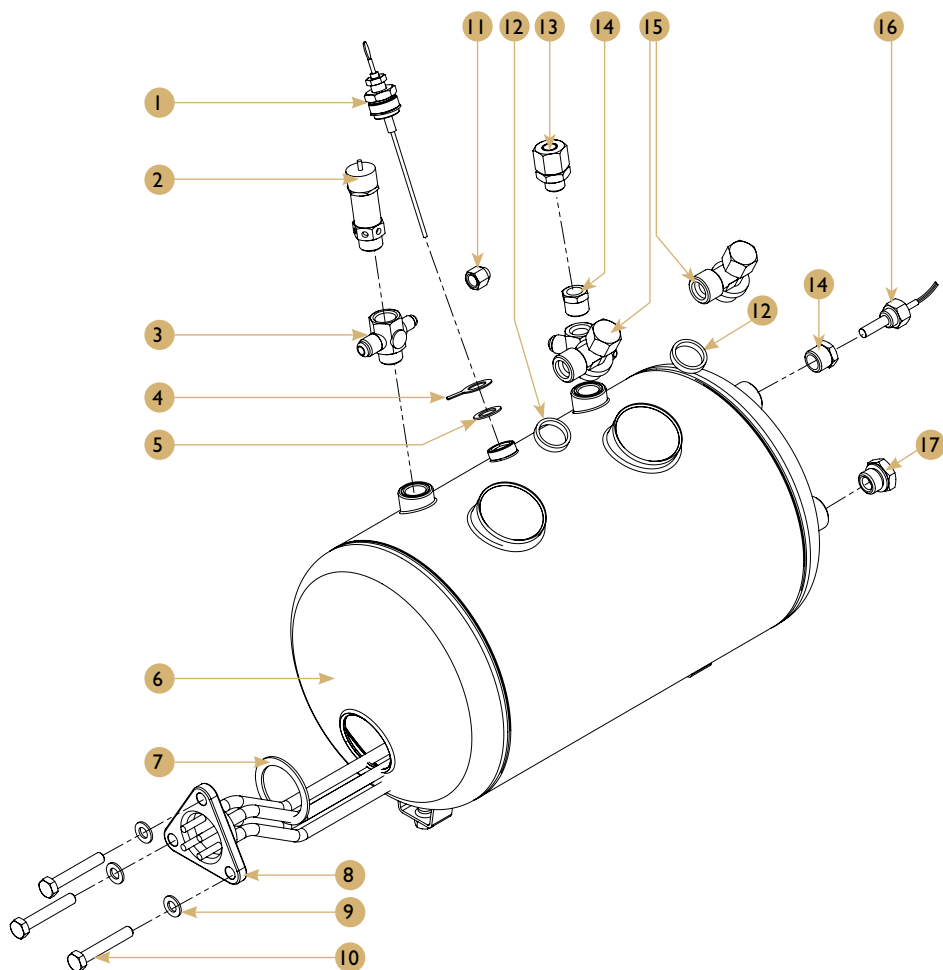
Boiler IGR

Spare parts list

POS.	PCS	Part No.	Description
1	1	C60100040	WATER LEVEL PROBE 1/4
2	1	C25000003	INOX GROUND WASHER
3	1	C30000200	THERMICS SUP.ADAPTOR 1/2 X 1/2
4	1	CESC00100	MAGNETS SET
5	2	C50010010	21.1*25.7* 1/2 TEFLON GASKET
6	2	C30000003	REDUCER MALE-FEMALE-3/8 - 1/4
7	1	C60100076	TEMP. PROBE + SUSP. STEAM PIPE ICD
8	1	C65000200	NON SUCTION VALVE
9	1	C65000100	3/8 SAFETY VALVE
10	1	C30000110	3 TRACKS ADAPTOR 1/4 * 1/4 * 1/8
11	3	C25093320	HEXAGONAL HEAD SCREW 8x20 DIN 933
12	3	C25012530	FLAT WASHER M-8 DIN-125
13	1	C38025001	2500W-230V- 6ltrs.COPPER ELEMENT
14	1	C50010030	40*52*2 ELEMENT TEFLON GASKET
15	1	C15100018	BOILER COPPER IGR 6L
16	1	C30000210	THERMICS INF.ADAPTOR-1/2X1/2X1/4
17	3	C50010050	3/8 BOILER'S CONNECTOR TEFLON GASKE
18	1	C30000220	CONE INJECTOR 1/4

Boiler 2GR

Drawing



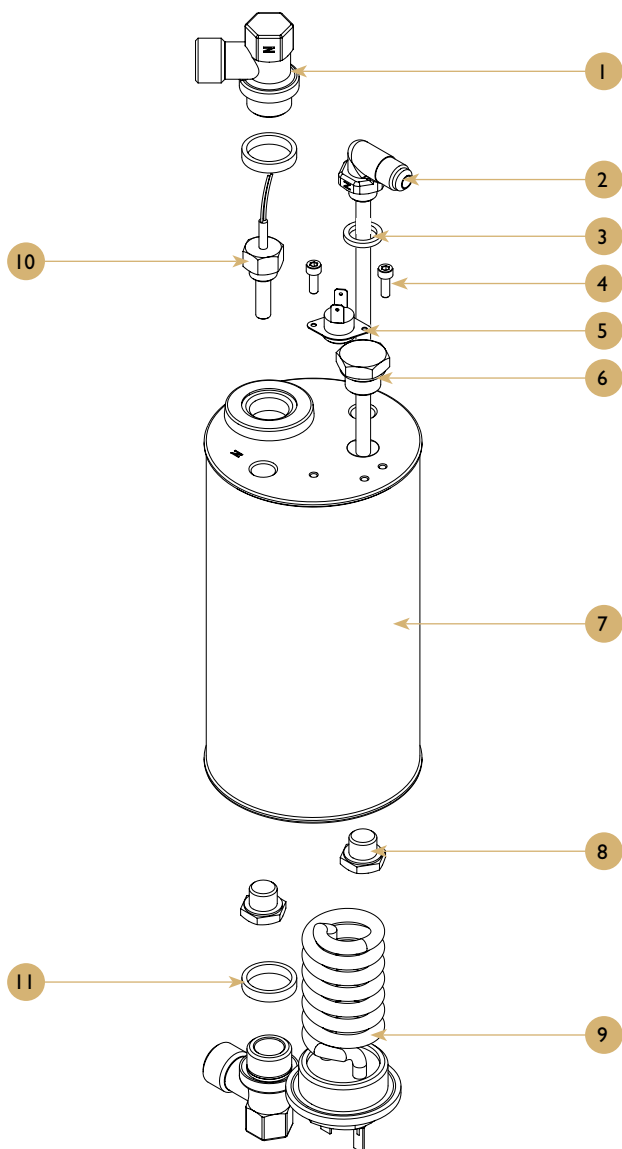
Boiler 2Gr

Spare parts list

POS.	PCS	Part No.	Description
1	1	C60100040	WATER LEVEL PROBE 1/4
2	1	C65000100	3/8 SAFETY VALVE
3	1	C30000100	2 TRACKS ADAPTOR- 1/4 x 1/8
4	1	C25000003	INOX GROUND WASHER
5	1	C25679812	M12 Washer
6	1	C15100020	BOILER 2GR 1 ILTS.
7	1	C50010030	40*52*2 ELEMENT TEFLON GASKET
8	1	C38027000	3050W.230V- 2gr ELEMENT
9	3	C25012530	FLAT WASHER M-8 DIN-125
10	3	C25093320	HEXAGONAL HEAD SCREW 8x20 DIN 933
11	1	C30000315	BLING PLUG 1/8 FEMALE
12	4	C50010010	21.1*25.7* 1/2 TEFLON GASKET
13	1	C65000200	NON SUCTION VALVE
14	2	C30000003	REDUCER MALE-FEMALE-3/8 - 1/4
15	2	C30000200	THERMICS SUP.ADAPTOR 1/2 X 1/2
16	1	C60100076	TEMP. PROBE + SUSP. STEAM PIPE ICD
17	1	C30000290	PLUG M 3/8

Heat exchanger

Drawing



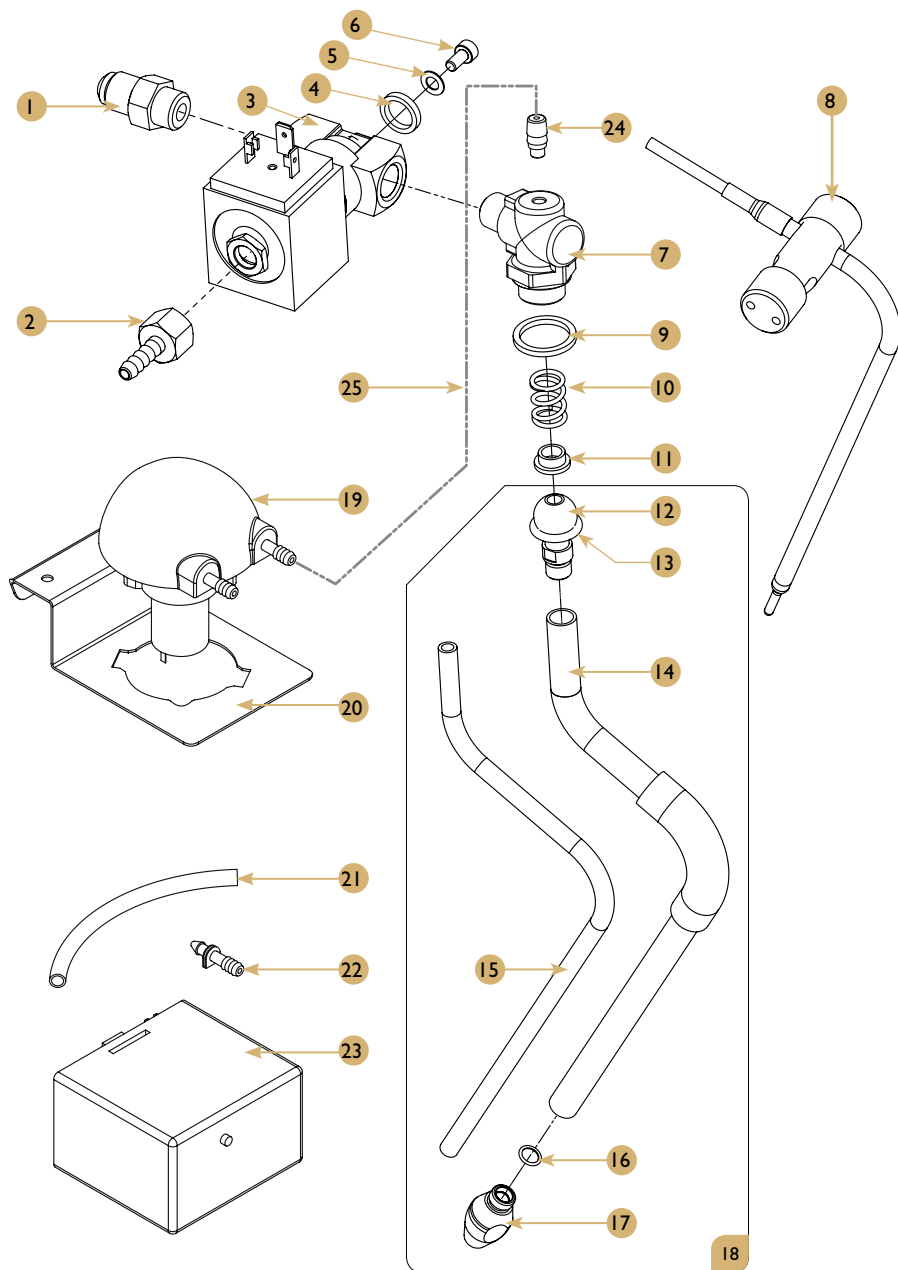
Heat exchanger

Spare parts list

POS.	PCS	Part No.	Description
1	2	C30000200	THERMICS SUP.ADAPTOR 1/2 X 1/2
2	1	C30000220	CONE INJECTOR 1/4
3	1	C50010020	13.2*18.2*2.5 1/4 TEFLON GASKET
4	2	C25091210	ALLEN SCREW 4x12 DIN-912
5	1	C10200110	OFFICE THERMOSTAT 16 A
6	1	C30000290	PLUG M 3/8
7	1	C15100010	OFFICE CAPPUCCINATOR BOILER
8	2	C30000300	BLIND PLUG 1/4 MALE
9	1	C38012000	1200W-230V OFFICE ELEMENT
10	1	C60100076	TEMP. PROBE + SUSP. STEAM PIPE ICD
11	2	C50010010	21.1*25.7* 1/2 TEFLON GASKET

Turbo steamer

Drawing



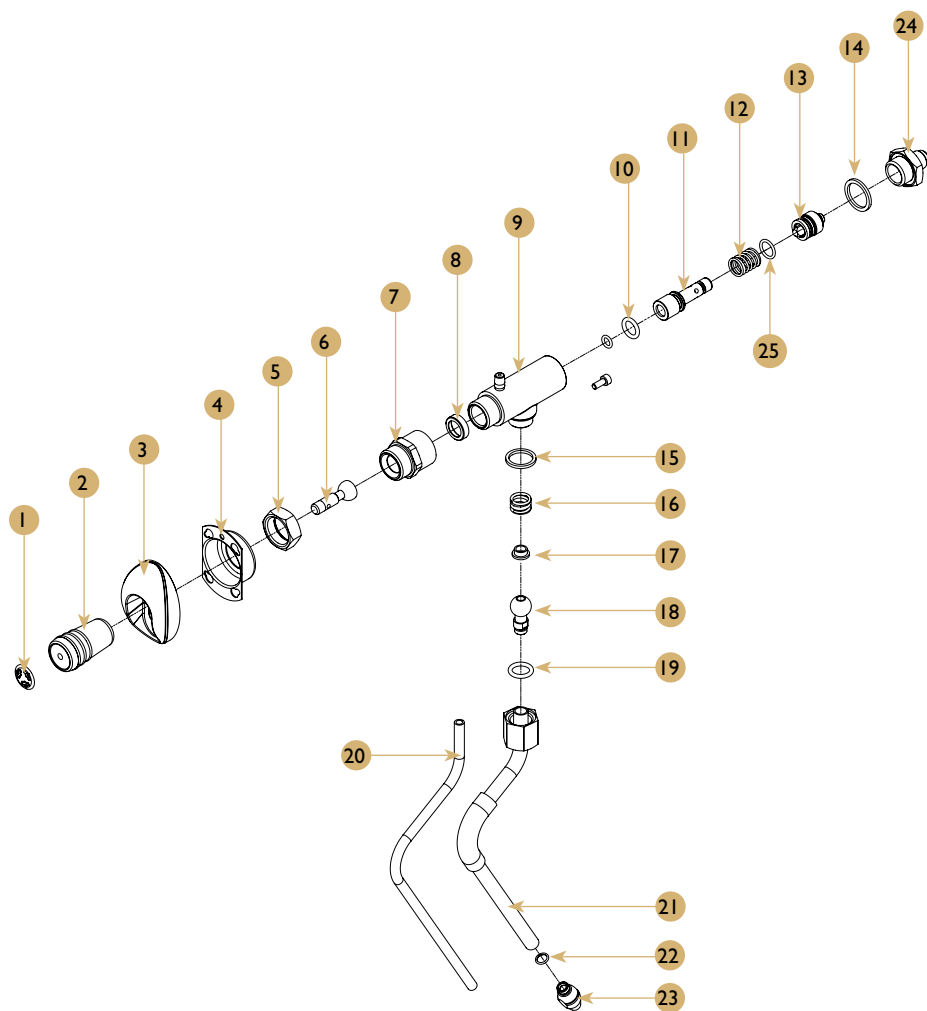
Turbo steamer

Spare parts list

POS.	PCS	Part No.	Description
1	1	C30000510	Conical Adaptor 1/4*1/4 Electron
2	1	C30700000	6Mm Barbfitting 1/8 F
3	1	C60000120	Valve Turbo Steamer
4	1	C50010050	3/8 Boiler's Connector Teflon Gaske
5	1	C25012510	Washer M-5 Din9021
6	1	C25091200	Allen Screw 4X8 Din-912
7	1	C30000235	Male Adapter 1/4*3/8*M-5 Water
8	1	C60100075	Steam Temperature Sensor
9	1	C50010080	Gasket Tap Steam/Water Teflon
10	1	C30370076	Spring Steam/Water Tap
11	1	C30370077	Gasket Tap Steam/Water Brass
12	1	C30370170	Rotate Connector For Steam Tube
13	1	C30370075	O-Ring For Steam Tap
14	1	1364018	Steam Tap Tube 10x1x220mm
15	1	C35021015	Tube Ptfе 4-6
16	1	C50010090	O-Ring 6X1
17	1	C30370180	Nozzle Steam Tap 4H M8.5 With Oring
18	1	C35010051	No Burn Steam Pipe High Group Mega
19	1	C60000049	Peristaltic Pump
20	1	C20010006	Peristaltic Pump Support
21	1	C35021011	Silicone tube for pump
22	2	C35021012	Tube connector for pump
23	1	C60100049	Adjustable Unit Trimmer
24	1	C30500005	Male Hose Adapter Elow
25	-	C35021000	Tube silicon 4-7

Steam wand

Drawing



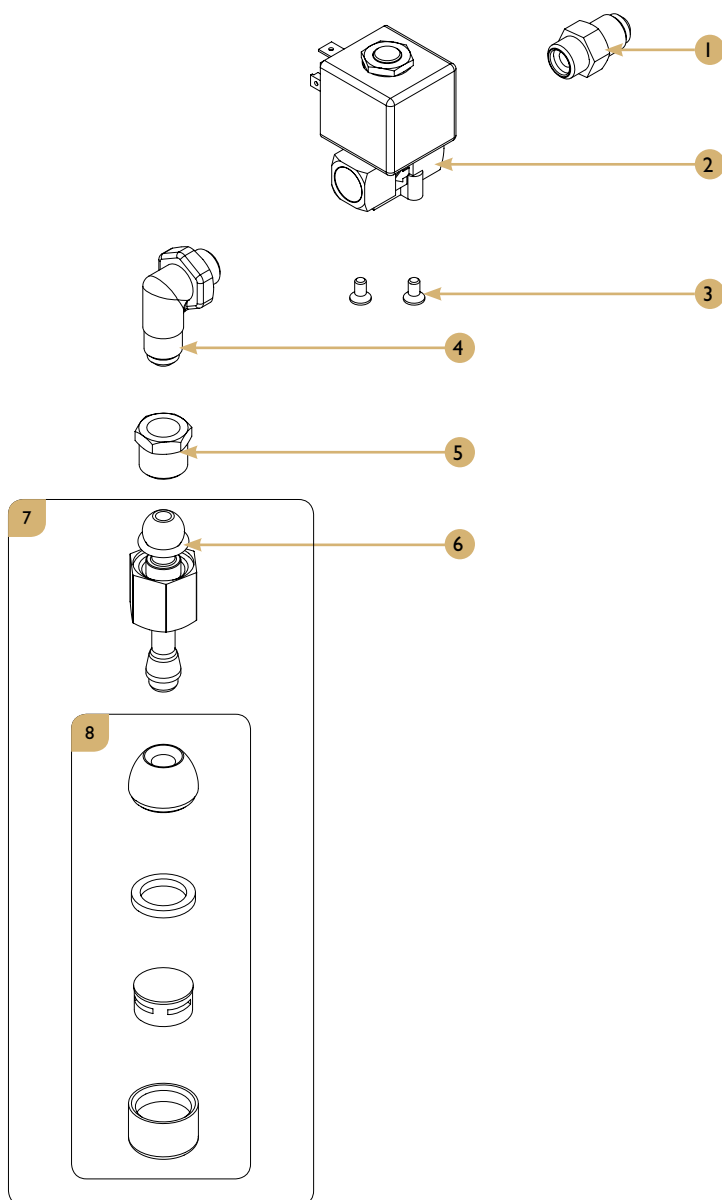
Steam wand

Spare parts list

POS.	PCS	Part No.	Description
1	1	1665068	Sticker Steam Knob OD18.8mm
2	1	C40000061	Steam Knob
3	1	C21003041	Tap Cover
4	1	C00000160	Metal Holder
5	1	C30370141	Nut G5/8 * H26
6	1	C30370161	Tap axle with nob
7	1	C30370165	Conector FemaleG1/2-Male G5/8
8	1	C30370164	Holder washer
9	1	C15000338	Tap Body and Steam Knob
10	1	C50000133	O-ring (10.77x2.62)
11	1	C30370163	Extension axle for tap
12	1	C55000070	Spring, 14X24x1,5-OA2
13	1	C30369150	Support guide
14	1	C50010070	Teflon gasket (19X24x2)
15	1	C50010080	Gasket Tap Steam/Water Teflon
16	1	C30370076	Spring Steam/Water Tap
17	2	C30370077	Gasket Tap Steam/Water Brass
18	1	C30370170	Rotate Connector for Steam Tube
19	2	C30370075	O-Ring for Steam Tap
20	1	C35021015	Tube PTFE 4-6
21	1	1364018	Steam Tap Tube 10x1x220mm
22	1	C50010090	O-ring 6X1
23	1	C30370180	Nozzle steam tap 4H M8.5 with Oring
24	1	C30370166	Connector 3/4M x G14M
25	1	C50000100	O-Ring 6.07x1.78

Hot water outlet

Drawing



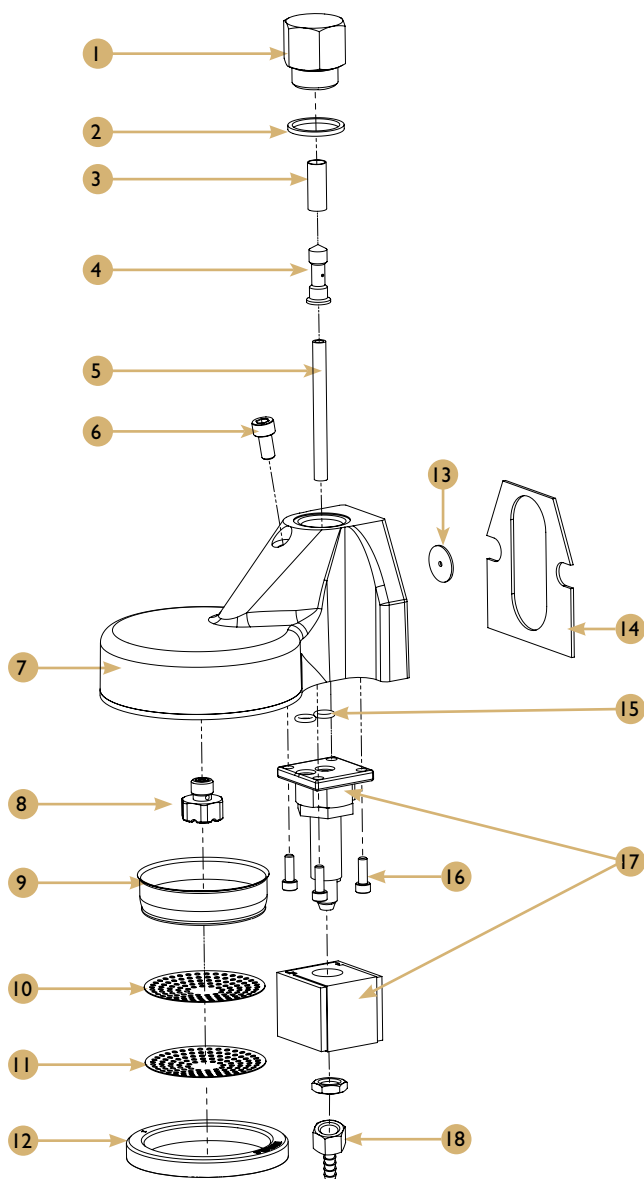
Hot water outlet

Spare parts list

POS.	PCS	Part No.	Description
1	1	C30000510	CONICAL ADAPTOR 1/4*1/4 ELECTRON
2	1	C60000100	1/4 x 1/4 ELECTROVALVE PARKER 220V
3	2	C25096510	ROSE SCREW PHILIPS 4*8 (DIN 965)
4	1	C30000215	CONICAL BEND ADAPTOR 1/4 X 1/4
5	1	C30000003	REDUCER MALE-FEMALE-3/8 - 1/4
6	1	C30370075	O-Ring for Steam Tap
7	1	C30370080	Hot Water Tap Classic
8	1	C30000050	Nozzle Water Tap Complete

Group head

Drawing



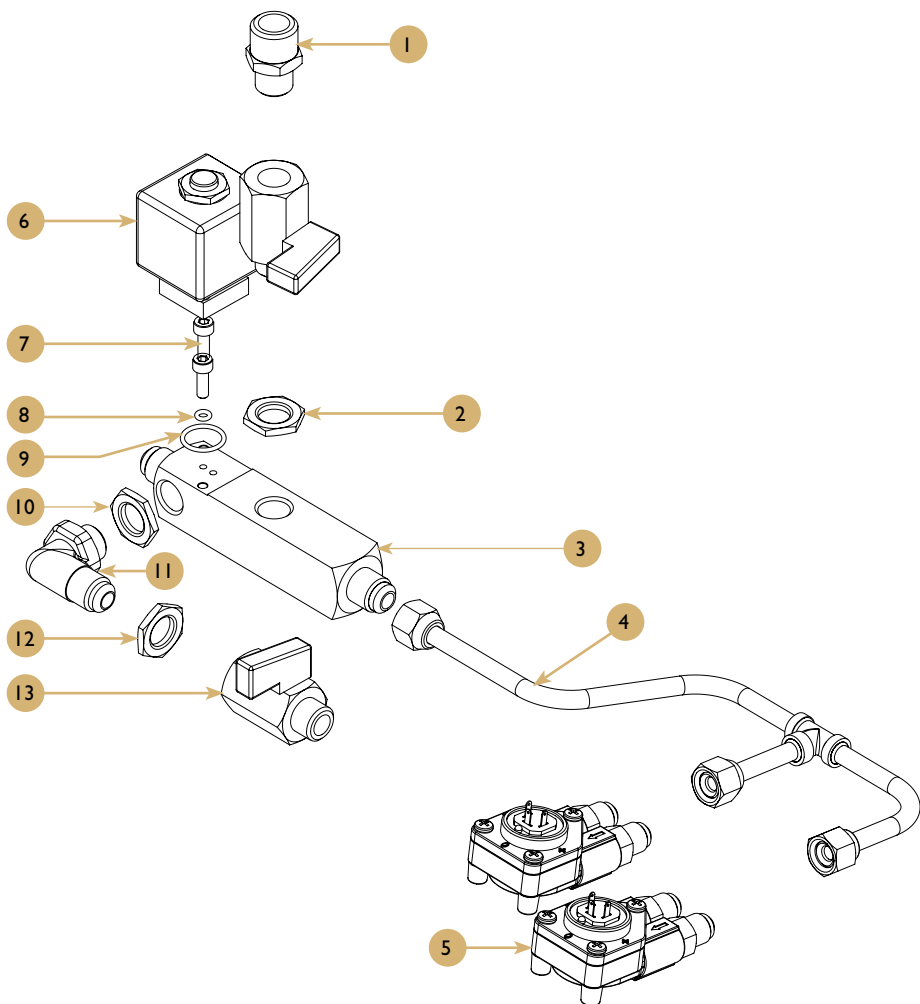
Group head

Spare parts list

POS.	PCS	Part No.	Description
1	1	C30200035	LONG PLUG 1/2 GROUP
2	1	C50010040	21.7*25.7*2 G/C-G TEFLON GASKET
3	1	C70000009	TUBULAR GROUP FILTER
4	1	C30200061	GROUP TEFLON INJECTOR Rev3
5	1	C30200026	TEFL WATER REDUC. HOLDER 4X6X65
6	1	C25091250	ALLEN SCREW 6*10 DIN-912 GROUP
7	1	C30200010	CREM BREWING GROUP BODY
8	1	C30200040	DIFFUSER
9	2	C75000010	SHOWER
10	1	C75000085	Filter 9mm
11	1	C75000083	Filter 8.5mm
12	1	C75000081	8mm GROUP HEAD GASKET
13	1	C50020020	2.5*18.2*2 TEFLON HOT WATER REDUCTO
14	1	C50000010	GREEN BODY FLAT GROUP JOINT
15	1	C50000100	O-Ring 6.07*1.78
16	4	C25091211	Allen Screw M4x16 DIN 912
17	1	C60000112	GRO HEAD ELECTROV. PARKER 220V
18	1	C30700000	6mm barbfitting 1/8f

Lower water system

Drawing



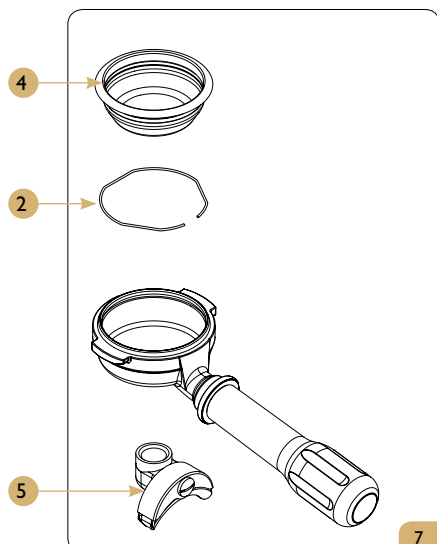
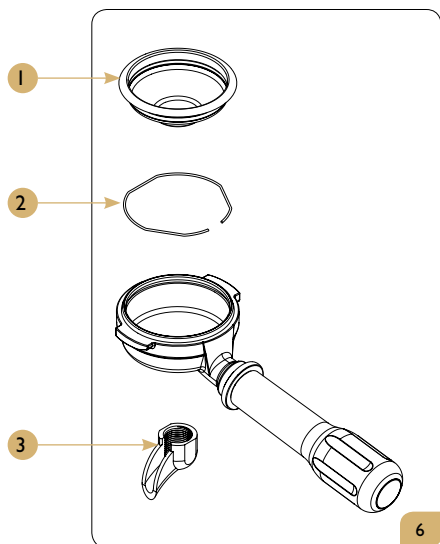
Lower water system

Spare parts list

POS.	PCS	Part No.	Description
1	1	C30000002	BUTTRESS 1/4-3/8 MINI
2	1	C30100010	HEXAGONAL NUT 1/4 PRESSOSTAT
3	1	C30100033	DISTRIBUTOR MC
4	1	I364029	Distributor Tube ø8mm Carat 2Gr
4	1	I364021	Copper Tube 8.0*100mm 1Gr
5	2	C60100045	FLOWMETER UL/NETW. BRASS TEF+LED
6	1	C60000105	50/60HZ 220V SOLENOID ELECTROVALVE
7	2	C25091210	ALLEN SCREW 4x12 DIN-912
8	1	C50000110	SMALL AUTOFILL SOLENOID GASKET
9	1	C50000105	LARGE AUTOFILL SOLENOID GASKET
10	1	C30100010	HEXAGONAL NUT 1/4 PRESSOSTAT
11	1	C30000215	CONICAL BEND ADAPTOR 1/4 X 1/4
12	1	C30100010	HEXAGONAL NUT 1/4 PRESSOSTAT
13	2	I860016	Tap drainage G1/4M-G1/4F Right

Porta-filter

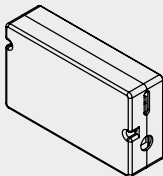
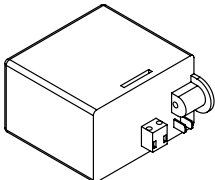
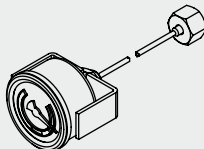
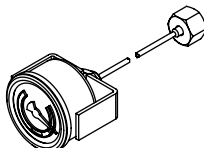
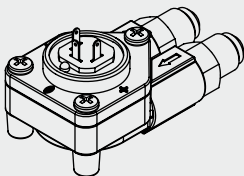
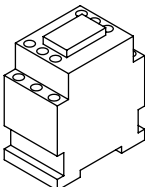
Drawing



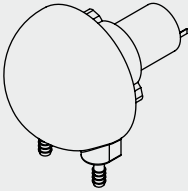
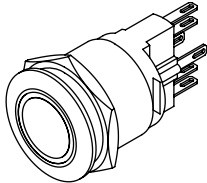
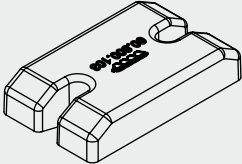
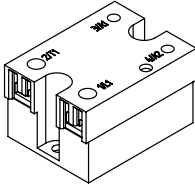
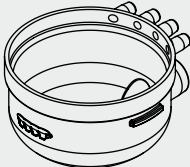
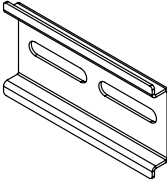
Spare parts list

POS.	PCS	Part No.	Description
1	1	C75000031	1 CUP FILTER (7GR)
2	2	C75000120	FILTER SPRING
3	1	C75000050	Spout 1Cup
4	1	C75000041	2 CUP FILTER (14GR)
5	1	C75000060	Spout 2Cups
6	1	C75001500	PORTAFILTER 1 CUP STD incl FILTER
7	1	C75002500	PORTAFILTER 2 CUPS STD Incl FILTER

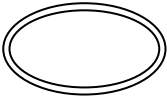
Machine components

DRAWING	PART NO.	MODEL/NAME
	C60100420	Main control box
	C60100049	Centralita Trimer Regulable 230V
	C60000072	Manometro D40 0_16 BAR
	C60000052	Manometro D40 0_2.5 BAR
	C60100045	Flowmeter UL Red TEF Led
	I602231	Relay 230V VAC I00-C09KF10

Machine components

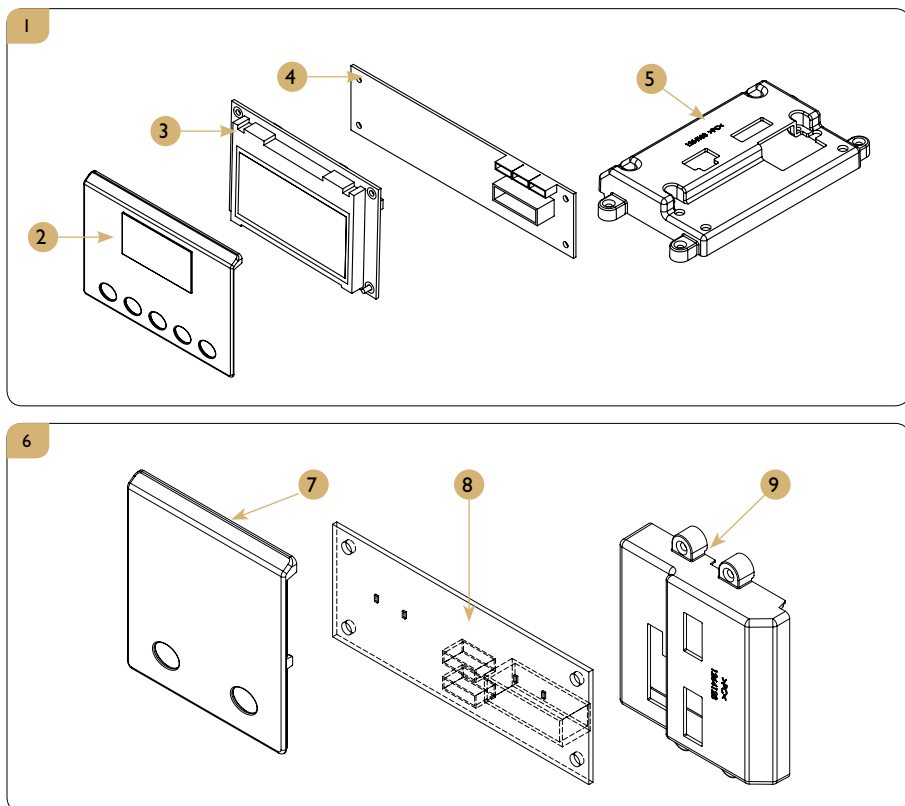
DRAWING	PART NO.	MODEL/NAME
	C60000049	Peristaltic Air Pump
	I660036	Power Switch Blue 22mm
	C60800103	Solid State Relay Cover
	C60800101	STATIC RELAY 4-32
	C70001000	DRAIN FILTER + HIGH GROUP
	I60546	DIN Connection 65MM<M>

Machine components

DRAWING	PART NO.	MODEL/NAME
	I666031	Turbo steamer cable
	I666032	NTC extension cable
	I666039	Signal cable
	C16660028	Harness complete Carat 1Gr
	C16660029	Harness complete Carat 2Gr
	C60102020	O-ring flowmeter

Machine components

Drawing

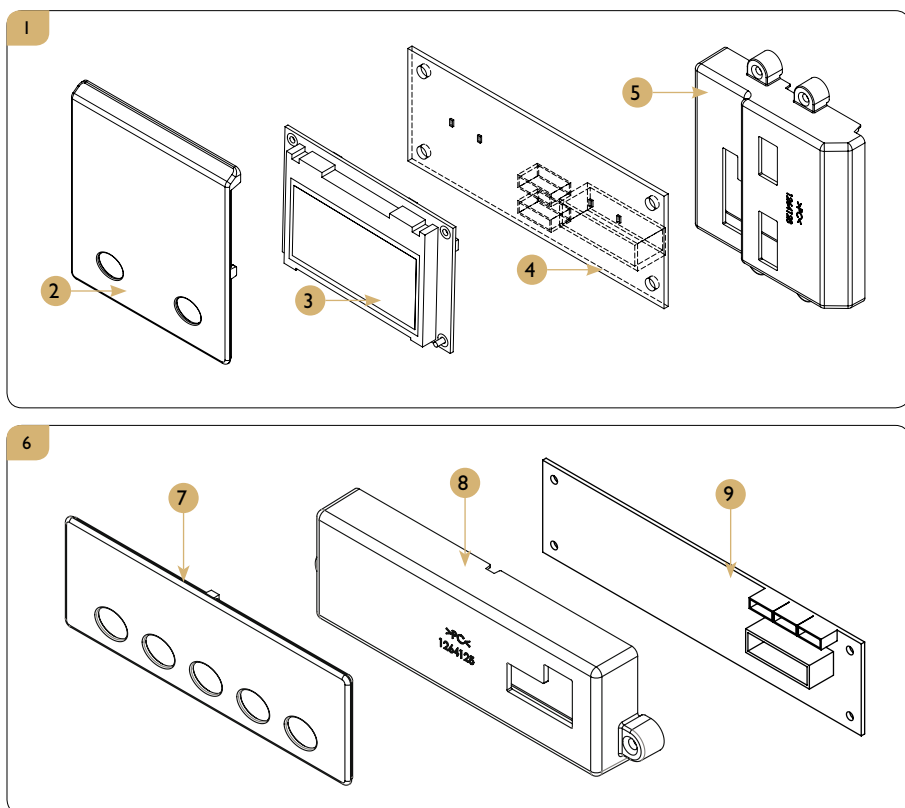


Spare parts list

POS.	PCS	Part No.	Description
1	1	2760058	Display PCB Assy Capa Carat 1 Gr
2	1	1264139	Display PCB Box Upper 5Key 1 Gr Capa
3	1	C60101060	Graphic Display Gicar
4	1	1660041	PCB Capacitive Type 5 Buttons
5	1	1264108	Display PCB Box Bottom Carat
6	1	2760059	PCB Box Assy 2 Buttons Capa Carat
7	1	1264129	Display PCB Box Upper 2 Buttons
8	1	1660042	PCB Capacitive Type 2 Buttons
9	1	1264128	Display PCB Box Bottom 2 Buttons

Machine components

Drawing

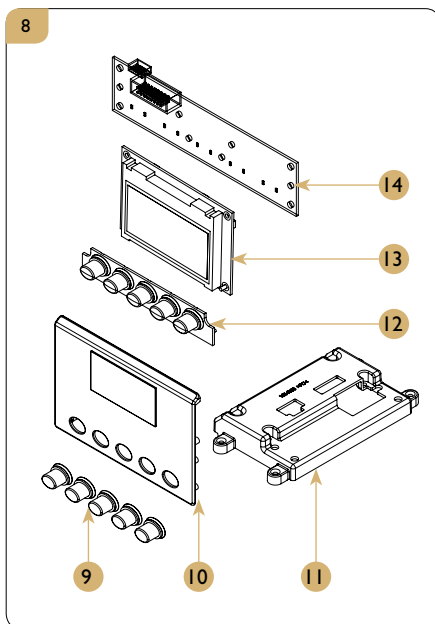
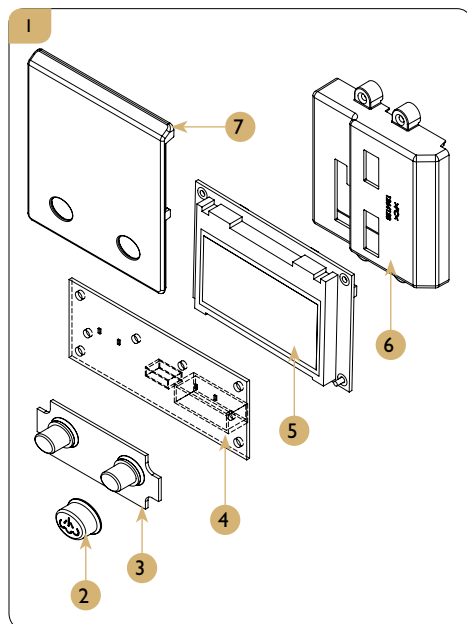


Spare parts list

POS.	PCS	Part No.	Description
1	1	2760060	Display Assy with 2 Button Carat TB
2	1	1264129	Display PCB Box Upper 2 Buttons
3	1	C60101060	Graphic Display Gicar
4	1	1660042	PCB Capacitive Type 2 Buttons
5	1	1264128	Display PCB Box Bottom 2 Buttons
6	1	2760061	Button Box Assy Carat TB
7	1	1264126	Button Box Upper
8	1	1264125	Button Box Bottom
9	1	1660041	PCB Capacitive Type 5 Buttons

Machine components

Drawing

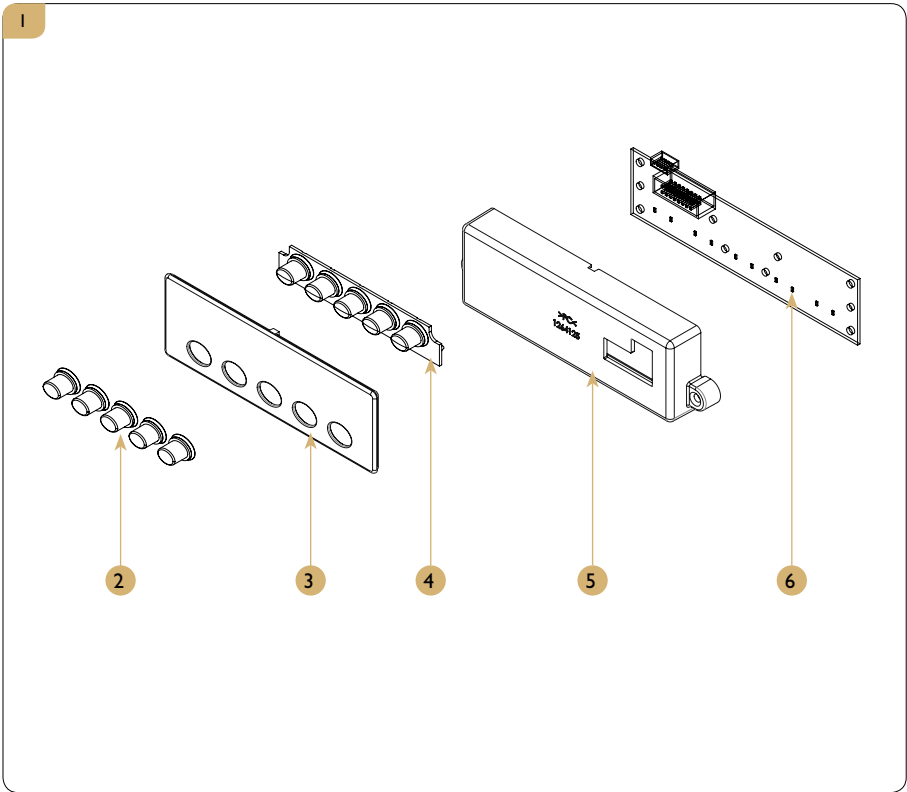


Spare parts list

POS.	PCS	Part No.	Description
1	1	2760062	Display PCB Assy with 2 Buttons
2	1	C*60101513	Metal button set cover water/steam
3	1	1264156	Conductive Control Button 2 Keys
4	1	1660040	PCB Mechanical Type 2 Buttons
5	1	C60101060	Graphic Display Gicar
6	1	1264128	Display PCB Box Bottom 2 Buttons
7	1	1264129	Display PCB Box Upper 2 Buttons
8	1	2760031	Display PCB Assembly Carat
9	1	C*60101512	METAL BUTTON SET COVER (x5)
10	1	1264107	Display PCB Box Upper Carat
11	1	1264108	Display PCB Box Bottom Carat
12	1	1264095	Conductive Control Button
13	1	C60101060	Graphic Display Gicar
14	1	1660039	PCB Mechanical Type 5 Buttons

Machine components

Drawing



Spare parts list

POS.	PCS	Part No.	Description
1	1	1264124	Button Box Assy Carat
2	1	C*60101512	METAL BUTTON SET COVER (x5)
3	1	1264126	Button Box Upper
4	1	1264095	Conductive Control Button
5	1	1264125	Button Box Bottom
6	1	1660039	PCB Mechanical Type 5 Buttons

For the warranty to be valid the conditions for maintenance must have been followed according to our instructions, proper precaution has been made and warranty claim been issued without delay.

The affected equipment may not be used during awaiting service if there is any risk that the damage or defect would worsen.

The warranty will not cover consumption supplies such as glassware, normal maintenance such as cleaning of filters, contaminations in water, lime, incorrect voltages, pressure or adjustment of water amounts.

The warranty will not cover damages of defects caused by incorrect handling and operation of the appliance.

FOR SERVICE

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CARAT

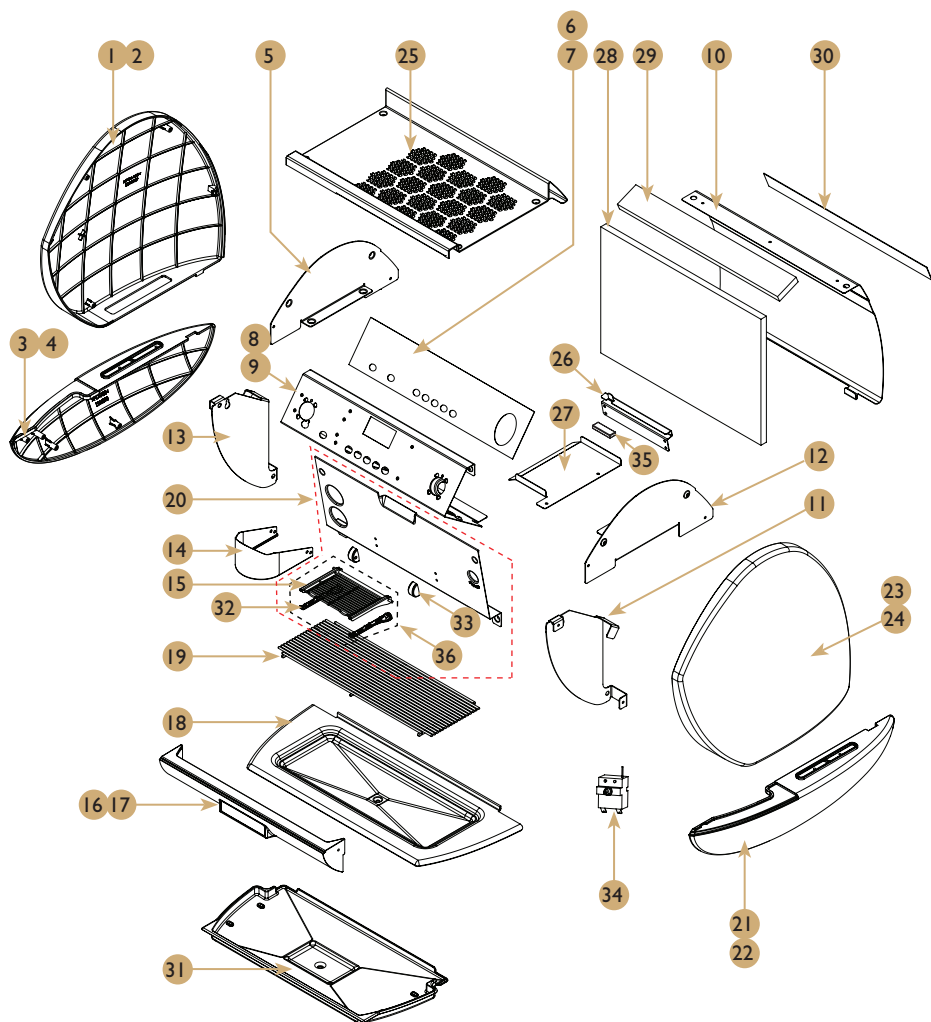
MANUAL DE DESPIECE



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Máquina de IGR

Plano



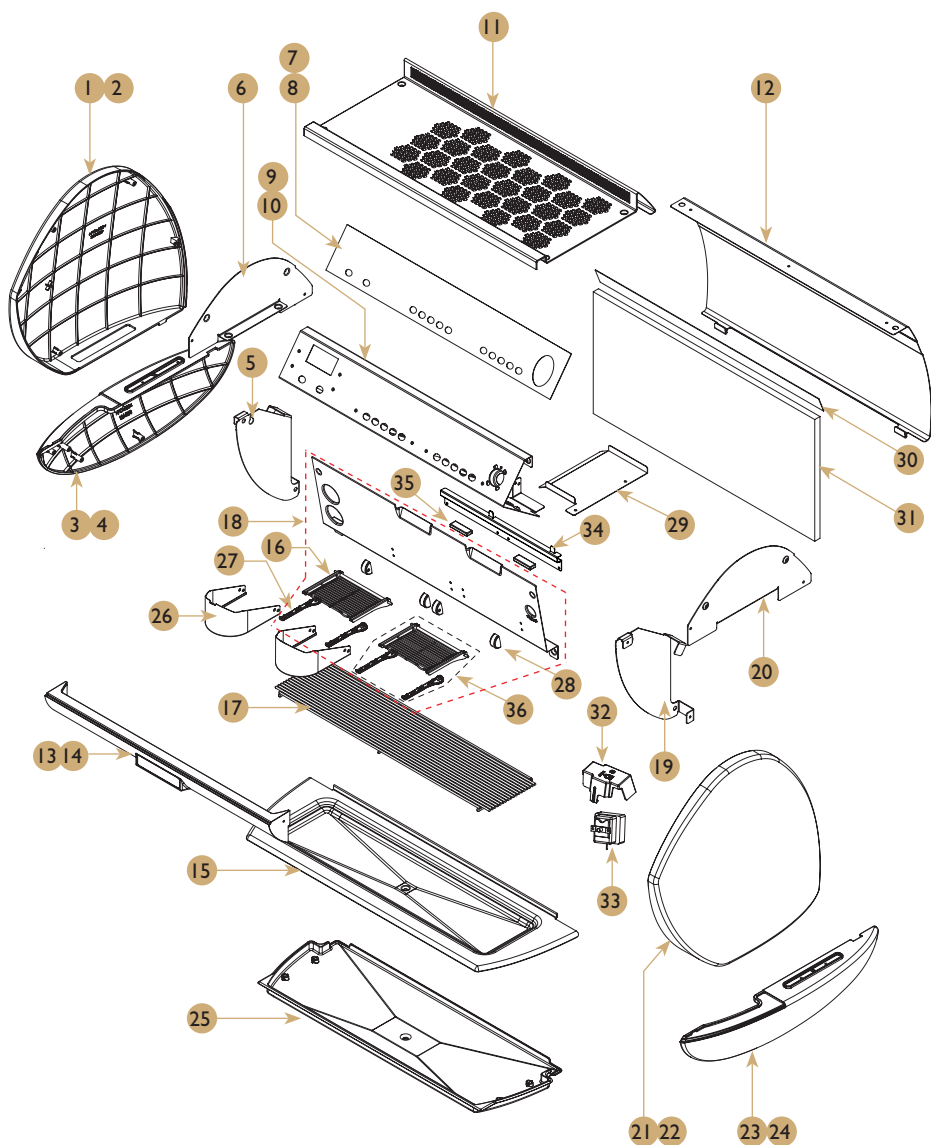
Máquina de IGR

Lista de piezas

Nº	UD	COD	Descripción
1	1	Q01264089	LATERAL SUPERIOR IZQUIERDO BLANCO CARAT
2	1	Q01264162	LATERAL SUPERIOR IZQUIERDO NEGRO CARAT
3	1	Q01264090	LATERAL INFERIOR IZQUIERDO BLANCO CARAT
4	1	Q01264163	LATERAL INFERIOR IZQUIERDO NEGRO CARAT
5	1	260712	Left Upper Panel Cover
6	1	1264096	Display overlay IGr TS
7	1	1264141	Display overlay IGr Standard
8	1	260688	Display Panel IGr Standard
9	1	260711	Display Panel Assy IGr Carat
10	1	260718	Back Panel IGr Carat
11	1	Q00260715	EMBELLECEDOR INFERIOR DERECHO
12	1	260714	Right Upper Panel Cover
13	1	Q00260713	EMBELLECEDOR INFERIOR IZQUIERDO
14	1	260720	Group Cover Support Carat
15	1	260674	Cup Holder Carat
16	1	Q01264104	EMBELLECEDOR INFERIOR BLANCO MINI CARAT
17	1	Q01264167	EMBELLECEDOR INFERIOR NEGRO MINI CARAT
18	1	Q00260716	BANDEJA IGR CARAT
19	1	Q00260717	REJILLA MINI CARAT
20	1	Q00260710C	FRONTAL COMPLETO CARAT MINI VASO ALTO
21	1	Q01264092	LATERAL INFERIOR DERECHO BLANCO CARAT
22	1	Q01264165	LATERAL INFERIOR DERECHO NEGRO CARAT
23	1	Q01264091	LATERAL SUPERIOR DERECHO BLANCO CARAT
24	1	Q01264164	LATERAL SUPERIOR DERECHO NEGRO CARAT
25	1	Q00260719	POSATAZAS IGR CARAT
26	1	260679	Strengthen Panel IGr
27	1	260677	Water Proof Top
28	1	1260005	Insulation Back Panel Carat IGr
29	1	1260015	Insulation Top Tray IGr
30	1	1264208	Back Overlay IGr
31	1	Q01264241	SUB-BANDEJA RECOGEGOTAS CARAT IGR
32	2	Q01264234	EMBELLECEDOR PLASTICO REJILLA V.A. CARAT
33	2	Q00260676	SOPORTE CARAT
34	1	10200141	DISYUNTOR TERMICO CON BULBO IP
35	1	Q01608281	IMAN 39x13x6
36	1	Q00260687	REJILLA VASO ALTO CARAT

Máquina de 2GR

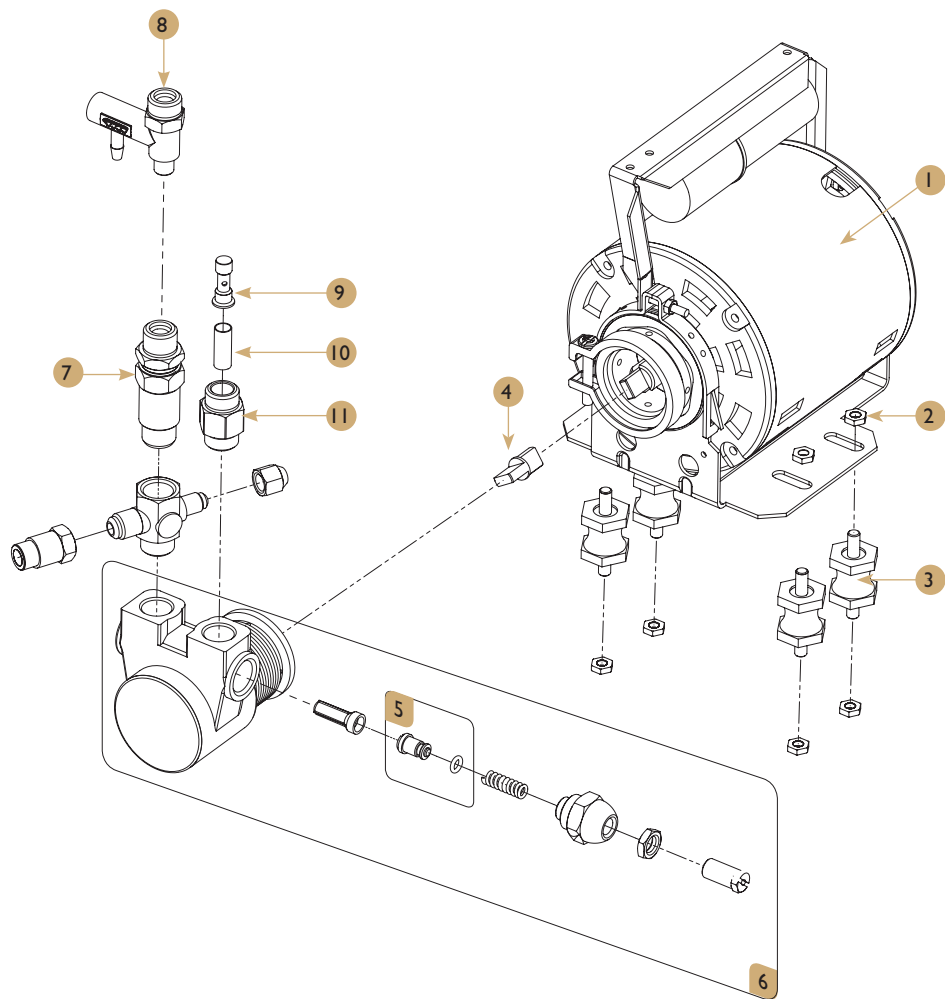
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Máquina de 2GR

Lista de piezas

Nº.	UD	COD	Descripción
1	1	Q01264089	LATERAL SUPERIOR IZQUIERDO BLANCO CARAT
2	1	Q01264162	LATERAL SUPERIOR IZQUIERDO NEGRO CARAT
3	1	Q01264090	LATERAL INFERIOR IZQUIERDO BLANCO CARAT
4	1	Q01264163	LATERAL INFERIOR IZQUIERDO NEGRO CARAT
5	1	260713	Left Lower Panel Cover
6	1	260712	Left Upper Panel Cover
7	1	1264116	Display overlay 2Gr TS
8	1	1264142	Display overlay 2Gr Standard
9	1	260689	Display Panel 2Gr Standard
10	1	260728	Display Panel Assy 2Gr Carat
11	1	Q00260730	POSATAZAS 2GR CARAT
12	1	260699	Back Panel 2Gr Carat
13	1	Q01264115	EMBELLECEDOR INFERIOR BLANCO 2GR CARAT
14	1	Q01264166	EMBELLECEDOR INFERIOR NEGRO 2GR CARAT
15	1	Q00260731	BANDEJA 2GR CARAT
16	2	260674	Cup Holder Carat
17	1	Q00260700	REJILLA 2GR CARAT
18	1	Q00260729C	FRONTAL COMPLETO CARAT 2GR VASO ALTO
19	1	Q00260715	EMBELLECEDOR INFERIOR DERECHO
20	1	260714	Right Upper Panel Cover
21	1	Q01264091	LATERAL SUPERIOR DERECHO BLANCO CARAT
22	1	Q01264164	LATERAL SUPERIOR DERECHO NEGRO CARAT
23	1	Q01264092	LATERAL INFERIOR DERECHO BLANCO CARAT
24	1	Q01264165	LATERAL INFERIOR DERECHO NEGRO CARAT
25	1	1264242	Water Proof Pan 2Gr
26	1	260720	Group Cover Support
27	4	Q01264234	EMBELLECEDOR PLASTICO REJILLA V.A. CARAT
28	4	Q00260676	SOPORTE CARAT
29	1	260677	Water Proof Top
30	1	1264209	Back Overlay 2Gr
31	1	1260011	Insulation Back Panel Carat 2Gr
32	1	Q01264261	PROTECTOR DE 3 POLOS
33	1	10200150	DISYUNTOR TERMICO CON BULBO 3P
34	1	260678	Strengthen Panel 2Gr
35	2	Q01608281	IMAN 39x13x6
36	2	Q00260687	REJILLA VASO ALTO CARAT



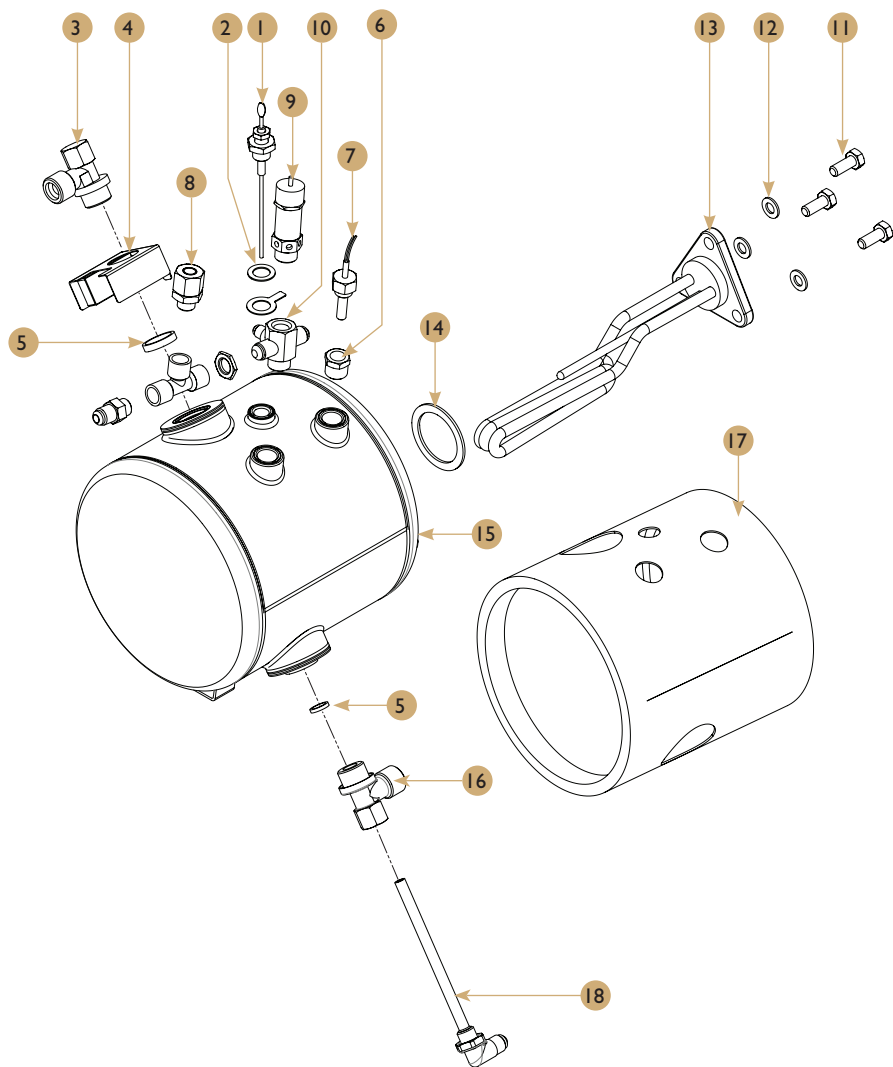
Motobomba

Lista de piezas

Nº.	UD	COD	Descripción
1	1	60000016	MOTOR CREM 230V/50HZ
2	8	25093420	TUERCA DIN 934 - M6 A2 HEX
3	4	50100000	SILENTBLOCK M-6
4	1	30000019	CARDAN BOMBA
5	1	60000031	PISTON BYPASS BOMBA (TEC)
6	1	60000030	BOMBA (Tratamiento espec.CREM)
7	1	65000010	VALVULA DE RETENCION
8	1	30400055	BYPASS BOMBA
9	1	30100100	PORTA-FILTRO TEFLON ENTRADA AGUA
10	1	70000009	FILTRO TUBULAR GRUPO
11	1	30000240	RACOR BOMBA 3/8 x 3/8 PORTA FILTRO

Caldera I GR

Plano



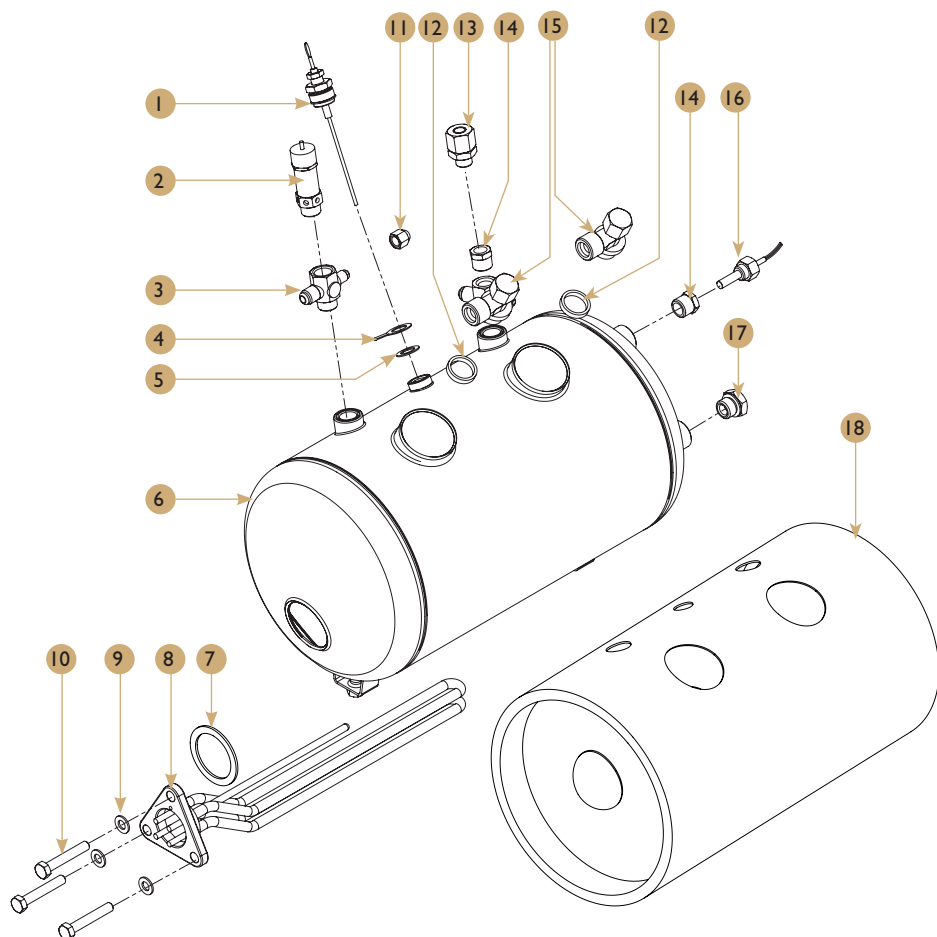
Caldera IGR

Lista de piezas

Nº.	UD	COD	Descripción
1	1	60100040	SONDA NIVEL 1/4 LATON
2	1	25679812	ARAND. DIN 6798 - M12 (A) A2 DENTADA
3	1	30000200	RACOR SUP. TERMICOS 1/2 X 1/2
4	1	ESC00100	CONJUNTO IMANES
5	2	50010010	JUNTA TEFLON TERMICO 1/2 (21.2x25.7x5)
6	2	30000003	REDUCTOR MACHO HEMBRA 3/8x1/4
7	1	60100076	SONDA TEMPERATURA CALDERA
8	1	65000200	VALVULA ANTIDEPRESION
9	1	65000110	VALVULA SEGURIDAD 3/8 CN 10 PTFECE
10	1	30000110	RACOR 3 VIAS 1/4 * 1/4 * 1/8
11	3	25093320	TORN. DIN 933 - 8x20 A2 HEX
12	3	25012530	ARAND. DIN 125 - M8 A2 PLANA
13	1	38025001F	RESISTENCIA 2500W-230V 6L. CON BULBO
14	1	50010030	J. RESISTENCIA TEFLON (40x52x2)
15	1	15100018	CALDERA 6LT. IGR.
16	1	30000210	RACOR INF. TERMICO 1/2X1/2X1/4
17	1	1260003	Insulation Boiler Carat IGr
18	1	30000220	INYECTOR G1/4M CONICO

Caldera 2GR

Plano



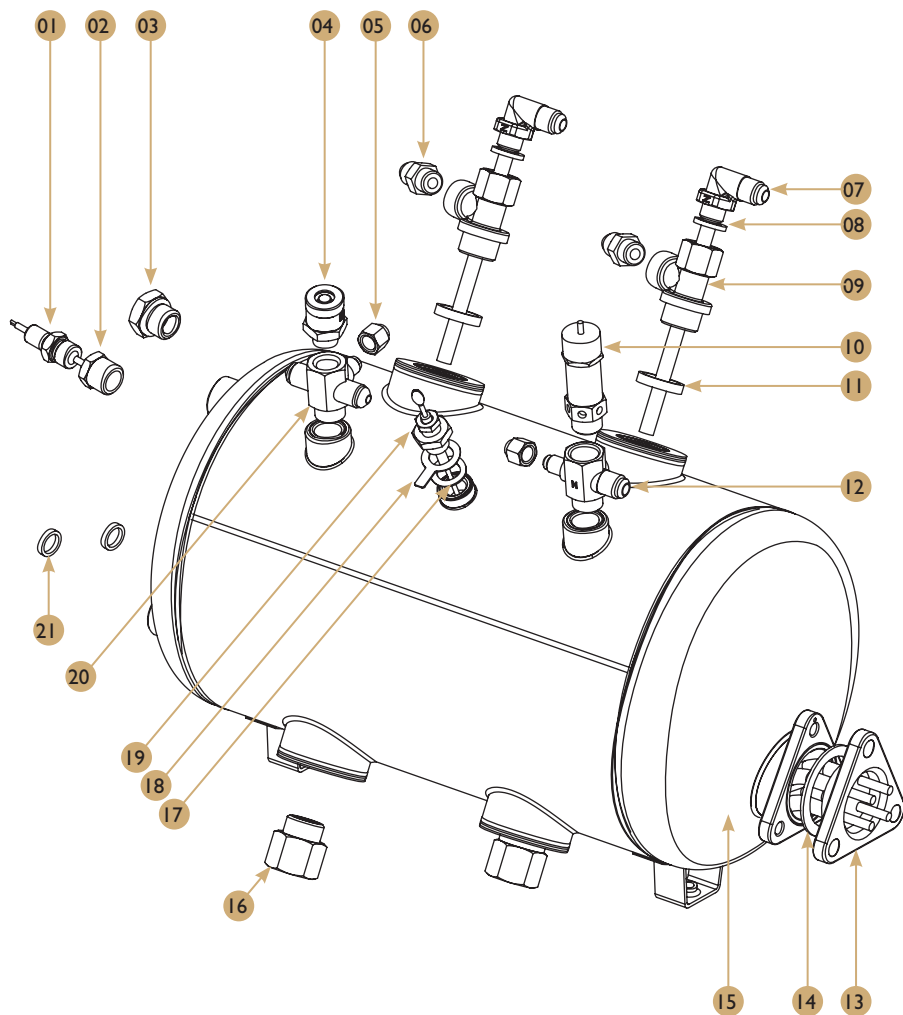
Caldera 2Gr

Lista de piezas

Nº.	UD	COD	Descripción
1	1	60100040	SONDA NIVEL 1/4 LATON
2	1	65000110	VALVULASEGURIDAD 3/8 CN10 PTFECE
3	1	30000100	RACOR 2 VIAS 1/4 * 1/8
4	1	25000003	ARANDELA TOMA TIERRA INOX
5	1	25679812	ARAND. DIN 6798 - M12 (A) A2 DENTADA
6	1	15100020	CALDERA 2 GR 11 LITROS
7	1	50010030	J.RESISTENCIA TEFLON (40x52x2)
8	1	38027000F	RESISTENCIA 3050 W- 230V 2GR CON BULBO
9	3	25012530	ARAND. DIN 125 - M8 A2 PLANA
10	3	25093320	TORN. DIN 933 - 8x20 A2 HEX
11	1	30000315	TAPON CIEGO 1/8 HEMBRA
12	4	50010010	JUNTA TEFLON TERMICO 1/2 (21.2x25.7x5)
13	1	65000200	VALVULA ANTIDEPRESION
14	2	30000003	REDUCTOR MACHO HEMBRA 3/8x1/4
15	2	30000200	RACOR SUP. TERMICOS 1/2 X1/2
16	1	60100076	SONDA TEMPERATURA CALDERA
17	1	30000290	TAPON G 3/8
18	1	1260004	Insulation Boiler Carat 2Gr

2Gr 3 Calderas: Caldera principal

Plano



2Gr 3 Calderas: Caldera principal

Lista de piezas

Nº.	UD	COD	Descripción
01	I	60100076	SONDA TEMPERATURA CALDERA
02	I	30000003	REDUCTOR MACHO HEMBRA 3/8x1/4
03	I	30000290	TAPON G 3/8
04	I	65000200	VALVULA ANTIDEPRESION
05	2	30000315	TAPON CIEGO 1/8 HEMBRA
06	2	30000510	RACOR CONICO 1/4 x 1/4 ELECTRON
07	2	30000220	INYECTOR G1/4M CONICO
08	2	50010020	JUNTA TEFLON 1/4 (13.2x18.2x2.5)
09	2	30000210M	RACOR INF. TÉRMICO MECANIZADO 1/2*1/2*1/4
10	I	65000110	VALVULA SEGURIDAD 3/8 CN10 PTFE CE
11	2	50010010	JUNTA TEFLON TERMICO 1/2 (21.2x25.7x5)
12	I	30000100	RACOR 2 VIAS 1/4 * 1/8
13	I	38027000F	RESISTENCIA 3050 W- 230V 2GR CON BULBO
*13	I	38045000F	RESISTENCIA 4500 W-230V 2GR CON BULBO
14	I	50010030	J.RESISTENCIA TEFLON (40x52x2)
15	I	15100020	CALDERA 2 GR 11 LITROS
16	2	30200035	TAPON LARGO G1/2M GRUPO
17	I	25679812	ARAND. DIN 6798 - M12 (A) A2 DENTADA
18	I	25000003	ARANDELA TOMA TIERRA INOX
19	I	60100040	SONDA NIVEL 1/4 LATON
20	I	30000110	RACOR 3 VIAS 1/4 * 1/4 * 1/8
21	2	50010050	J. TEFL. RACOR CALDERA 3/8 (10 x 15 x 1)

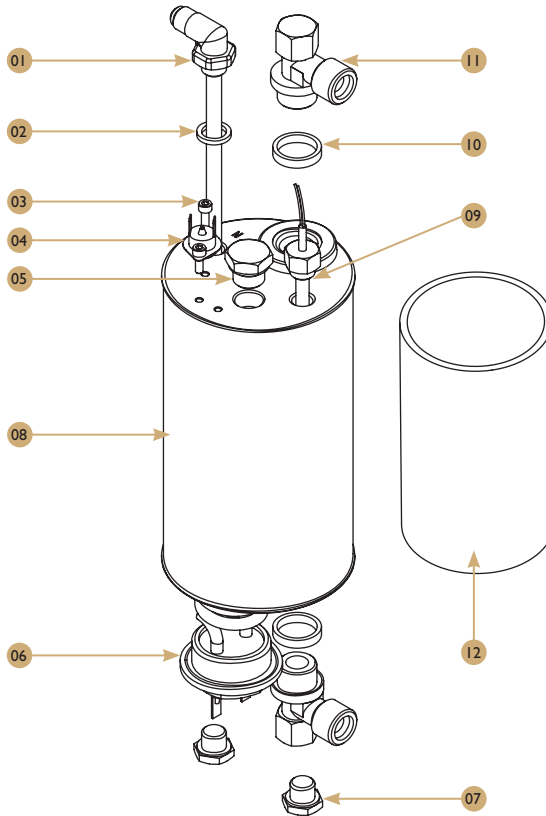


Nota:

Las piezas marcadas * son opcionales para modelos trifásicos.

2Gr 3 Calderas: Caldera de grupo

Plano

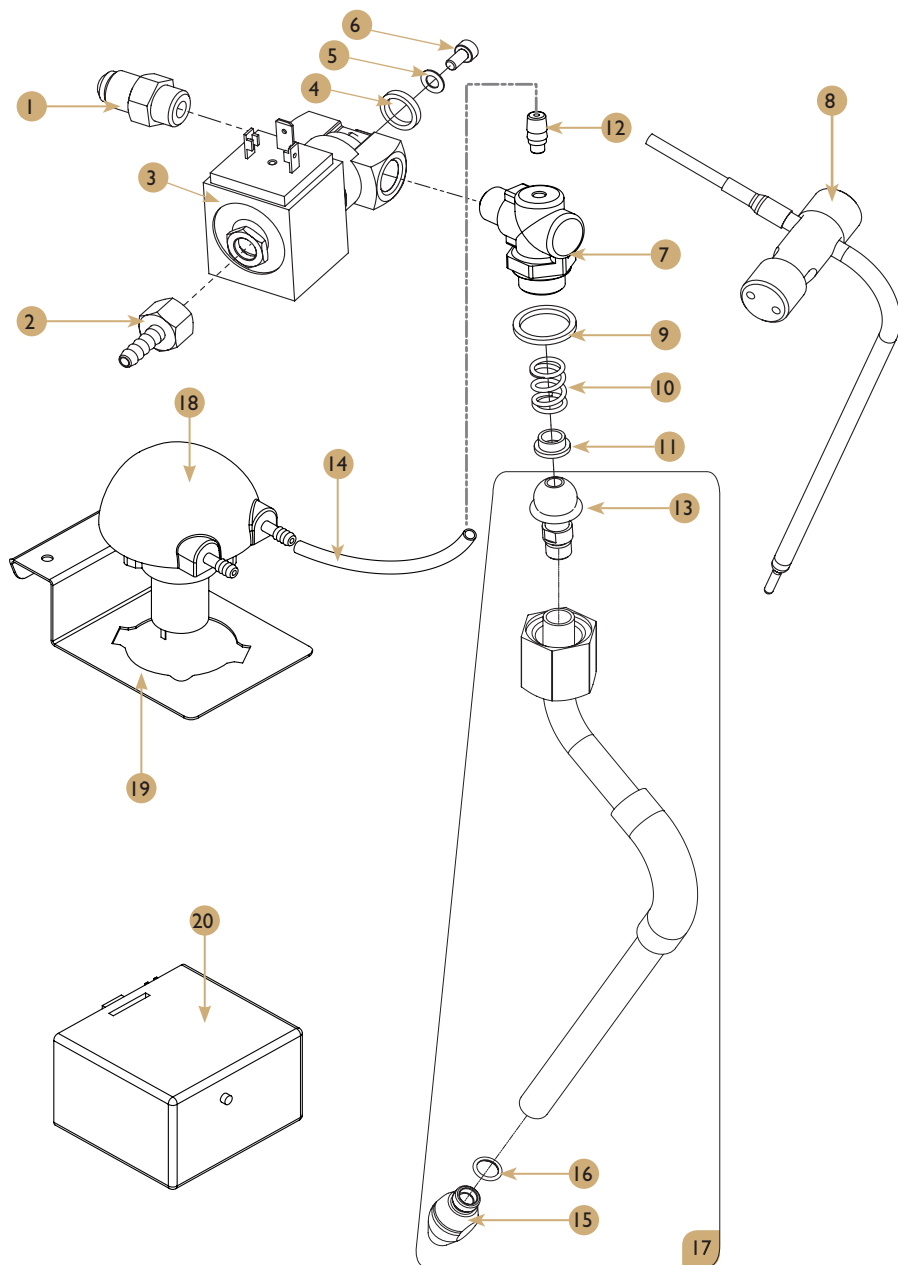


Lista de piezas

Nº.	UD	COD	Descripción
01	1	30000220	INYECTOR G1/4M CONICO
02	1	50010020	JUNTA TEFLON 1/4 (13.2x18.2x2.5)
03	2	25091210	TORN. DIN 912 - 4x12 A2 ALLEN
04	1	10200110	TERMOSTATO SEGURIDAD OFFICE I6 A
05	1	30000290	TAPON G 3/8
06	1	38012000	RESISTEN. MULTI BOILER 1200 W-230 V
07	2	30000300	TAPON CIEGO 1/4 MACHO
08	1	15100010	CALDERA CAPUCINADOR OFFICE
09	1	60100076	SONDA TEMPERATURA CALDERA
10	2	50010010	JUNTA TEFLON TERMICO 1/2 (21.2x25.7x5)
11	2	30000200	RACOR SUP. TERMICOS 1/2 X1/2
12	1	1260017	Insulation Boiler Office

Turbo steamer

Plano



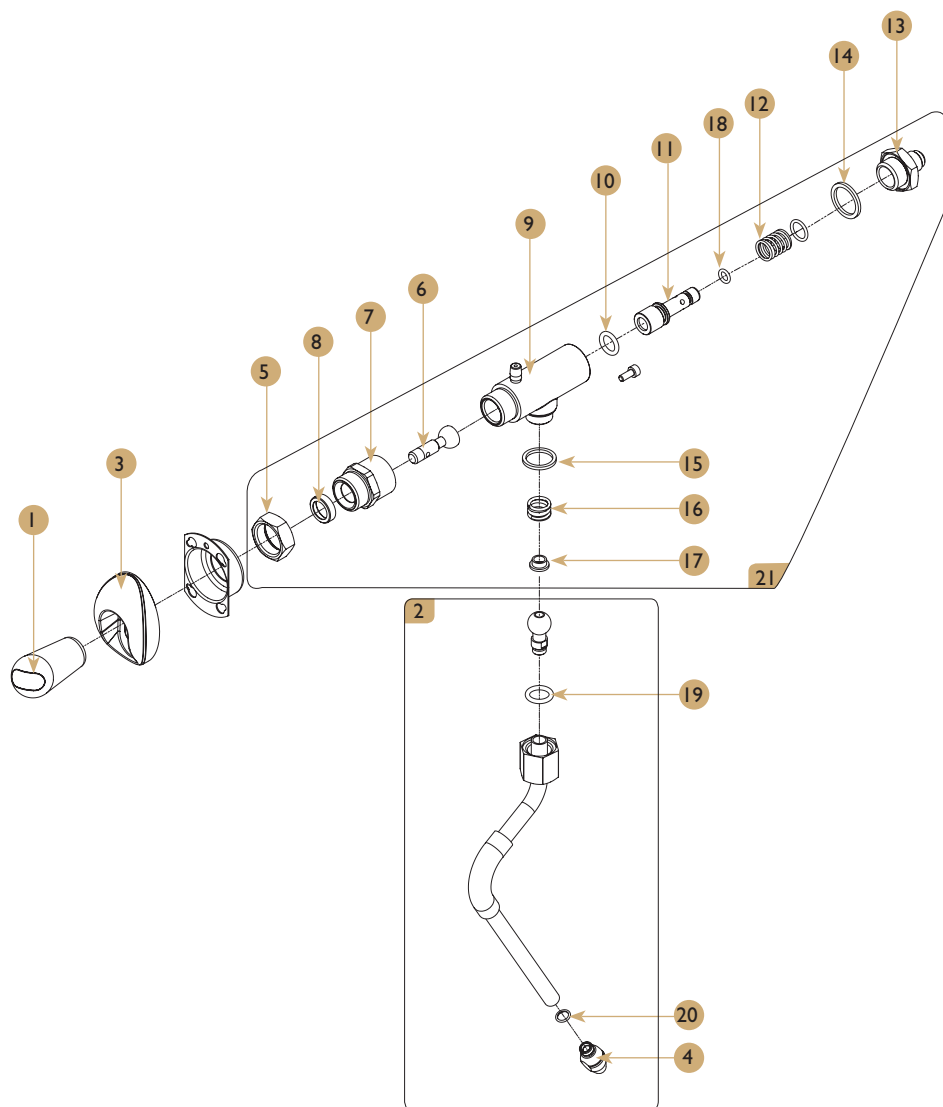
Turbo steamer

Lista de piezas

Nº.	UD	COD	Descripción
1	I	30000510	RACOR CONICO 1/4 x 1/4 ELECTRON
2	I	30700000	ESPIGA 1/8 H TUBO 6
3	I	60000120	E.V. VAPOR 1/4" 3 VIAS DIA.3 (ICD) 220V
4	I	50010050	J. TEFL. RACOR CALDERA 3/8 (10 x 15 x 1)
5	I	25012510	ARAND. DIN 9021 - M5 A2
6	I	25091200	TORN. DIN 912 - 4x8 A2 ALLEN
7	I	30000235	RACOR CODO 1/4*3/8*M-5 LANZA AGUA*
8	I	60100075	SONDA TEMP.+SOP. LANZA V. ELEG. V. ALT
9	I	50010080	JUNTA TEFLON LANZA GRIFO A/V
10	I	30370076	MUELLE LANZA AGUA/VAPOR (12x6,5x1,5)
11	I	30370077	CASQUILLO MUELLE LANZA
12	I	30500005	ESPIGA MACHO CILINDRICA M5
13	I	30370075	JUNTA TORICA 12.1x2.7 LANZA AGUA/VAPOR
14	0.35m	35021000	MTS TUBO SILICONA 4x7 ENTRADA BOMBA
15	I	30370190	BOQUILLA VAPOR I F. M-8,5
16	I	50010090	JUNTA TORICA 6x1 BOQUILLA LANZA
17	I	Q02760028	LANZA VAPOR CARAT
18	I	60000049	BOMBA PERISTALTICA
19	I	20010006	SOPORTE BOMBA PERISTALTICA
20	I	60100049	CENTRALITA CAPUCHINADOR

Lanza de vapor

Plano



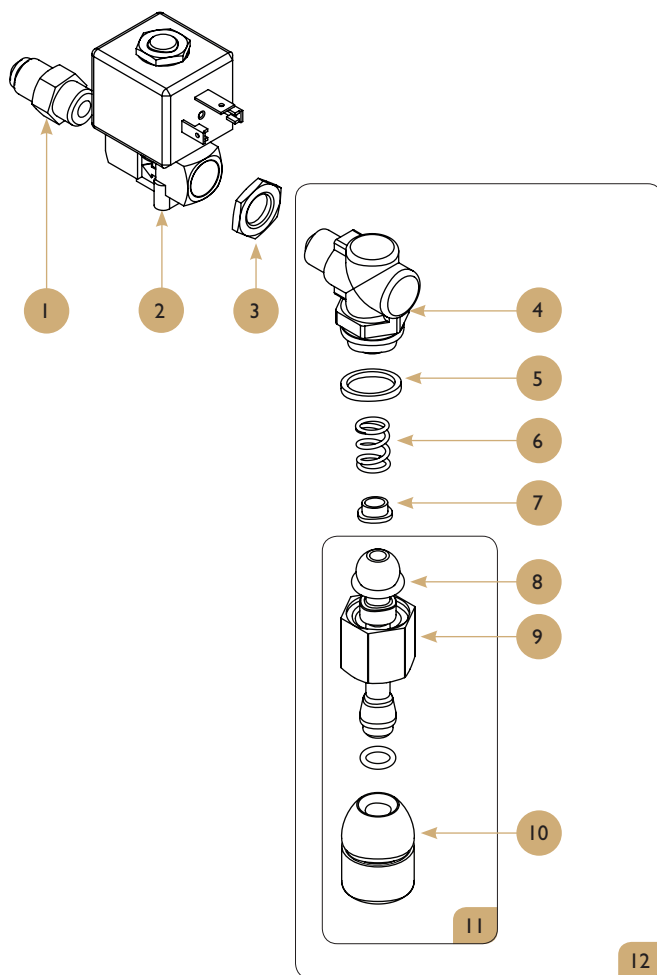
Lanza de vapor

Lista de piezas

Nº.	UD	COD	Descripción
1	1	Q01264215	POMO GRIFO CARAT/ DIAMANT (NUEVO)
2	1	Q02760028	LANZA VAPOR CARAT
3	1	21003041	EMBELL. GRIFO BASCULANTE ROSETTA / CARAT
4	1	30370195	BOQUILLA VAPOR 3 F M8,5
5	1	30370141	TUERCA G5/8 x H26 SUJECION GRIFO BASCULA
6	1	30370161	EJE INOX GRIFO BASCULANTE
7	1	30370165	RACOR H26 - G1/2 * G5/8M GRIFO BASCULANT
8	1	30370164	CASQUILLO EJE GRIFO BASCULANTE
9	1	30370071	CUERPO GRIFO BASCULANTE
10	1	50000133	JUNTA TORICA GR. BASC. (10,77x2,62)
11	1	30370163	EJE EMPUJE PORTA OR GRIFO BASC.
12	2	55000070	MUELLE GRIFO BASC. (14x24x1,5)
13	1	30370166	RACOR W3/4M x G14M GRIFO BASCULANTE
14	1	50010070	JUNTA TEFLON GR. BASC. (19x24x2)
15	1	50010080	JUNTA TEFLON LANZA GRIFO A/V
16	1	30370076	MUELLE LANZA AGUA/VAPOR (12x6,5x1,5)
17	2	30370077	CASQUILLO MUELLE LANZA
18	1	50000100	JUNTA ELECTROVALVULA VITON OR 6.07x1.78
19	2	30370075	JUNTA TORICA 12.1x2.7 LANZA AGUA/VAPOR
20	1	50010090	JUNTA TORICA 6x1 BOQUILLA LANZA
21	1	15000338	GRIFO BASCULANTE SIN LANZA

Salida de agua caliente

Plano



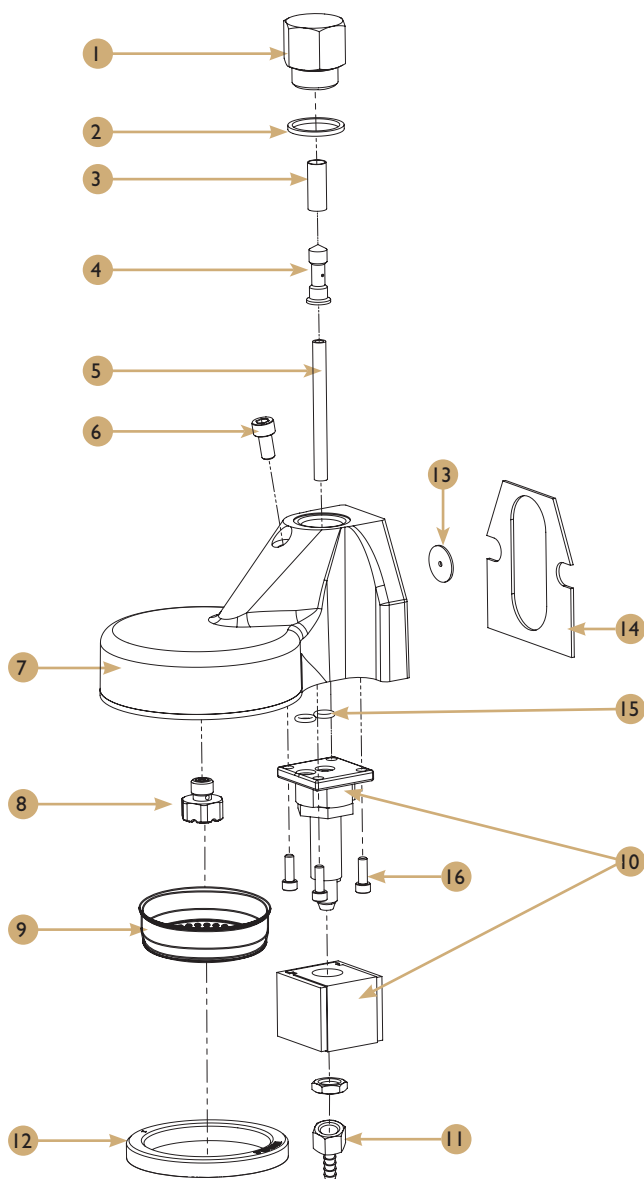
Salida agua caliente

Lista de piezas

Nº.	UD	COD	Descripción
1	I	30000510	RACOR CONICO 1/4 x 1/4 ELECTRON
2	I	60000100	ELECTROVALVULA 1/4 PARKER 220 V
3	I	30100010	CONTRATUERCA HEXAGONAL G1/4
4	I	30000236	RACOR CODO 1/4 x 3/8 LANZA AGUA +
5	I	50010080	JUNTA TEFLON LANZA GRIFO A/V
6	I	30370076	MUELLE LANZA AGUA/VAPOR (12x6,5x1,5)
7	I	30370077	CASQUILLO MUELLE LANZA
8	I	30370075	JUNTA TORICA 12.1x2.7 LANZA AGUA/VAPOR
9	I	*70000010	TUERCA 3/8" - HEX 22 PARA LANZA
10	-	30000050	BOQUILLA COMPLETA GRIFO AGUA
11	-	30370080	LANZA AGUA MOD. CLASSIC
12	I	30370081	LANZA AGUA MOD. CLAS. + 1/4 RAC. ELV.

Grupo

Plano



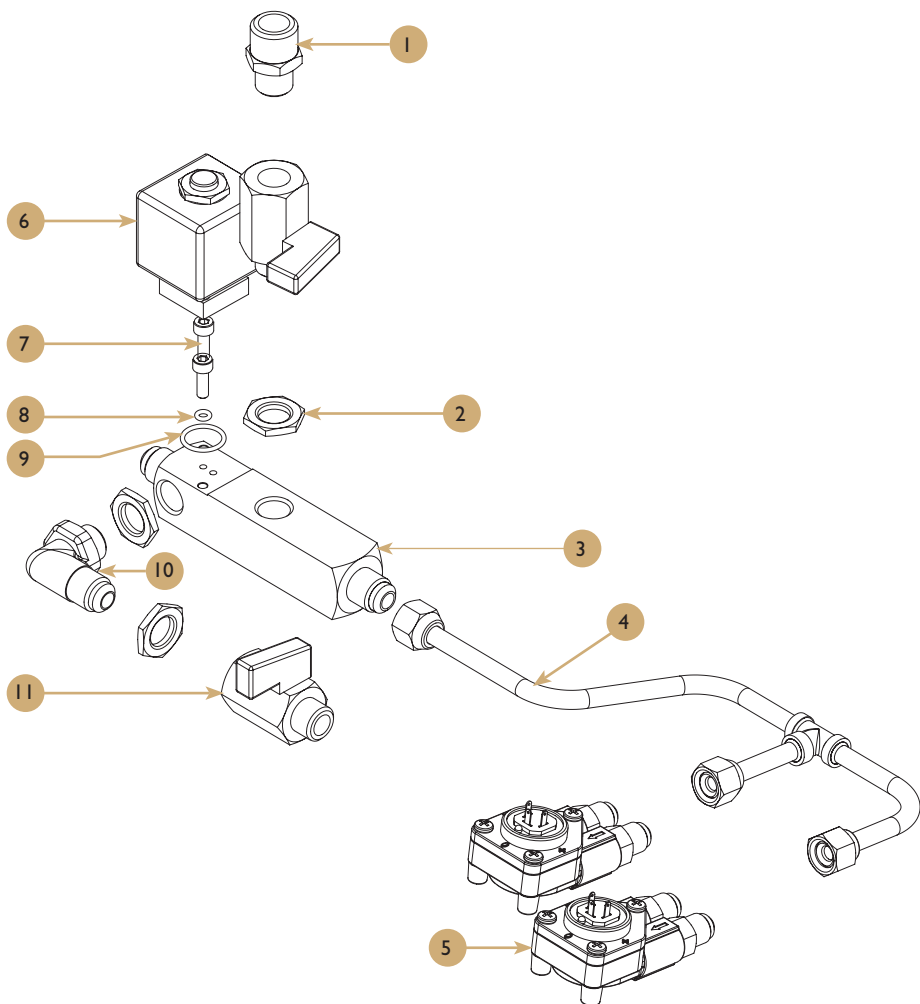
Grupo

Lista de piezas

Nº.	UD	COD	Descripción
1	1	30200035	TAPON LARGO G1/2M GRUPO
2	1	50010040	JUNTA TEFLON GRUPO (21.7x25.7x2)
3	1	70000009	FILTRO TUBULAR GRUPO
4	1	30200061	CHICLE PORTAFILTRO TEFLON
5	1	30200026	PORTACHICLE TEFLON 4x6x65
6	1	25091250	TORN. DIN 912 - 6x10 A2 ALLEN
7	1	30200010	CUERPO GRUPO CREM
8	1	30200040	DIFUSOR GRUPO CREM
9	1	75000010	DUCHA
10	1	60000112	ELECTROVALVULA GRUPO PARKER 220V
11	1	30700000	ESPIGA 1/8 H TUBO 6
12	1	75000081	JUNTA PORTA 8 EXPOBAR
13	1	50020000	CHICLES TEFLON 3'5 (3'5x18'2x1)
13	1	50020020	CHICLE TEFLON 2'5 (2'5x18'2x1)
14	1	50000010	JUNTA PLANA GRUPO CHASIS VERDE
15	2	50000100	JUNTA ELECTROVALVULA VITON OR 6.07x1.78
16	4	25091210	TORN. DIN 912 - 4x12 A2 ALLEN

Laberinto distribución

Plano



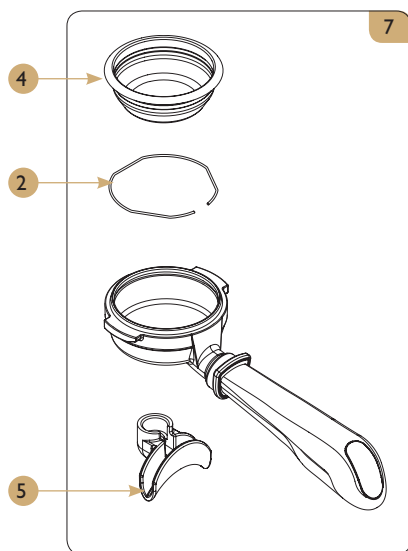
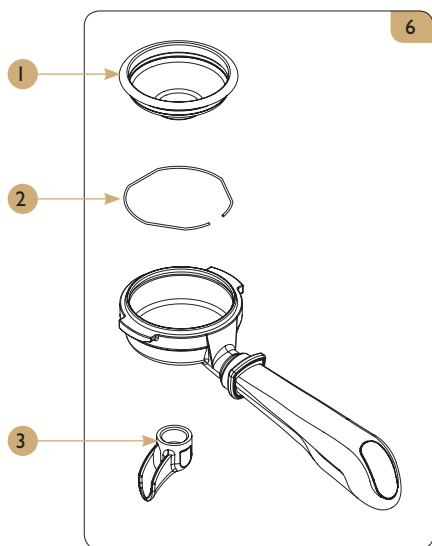
Laberinto distribución

Lista de piezas

Nº.	UD	COD	Descripción
1	1	30000002	MACHO REDUCTOR G1/4M-G3/8M (MINI)
2	3	30100010	CONTRATUERCA HEXAGONAL G1/4
3	1	30100033	DISTRIBUIDOR MC
4	1	Q01364029	TUBO DISTRIBUIDOR 8mm CARAT 2Gr
4	1	1364021	Copper Tube 8.0*100mm 1Gr
5	2	60100045	DOSIFICAD. VOL. UL/RED LATON TEF+LED
6	1	60000105	ELECTROVALVULA PLACA BASE PARKER+JUNTAS
7	2	25091210	TORN. DIN 912 - 4x12 A2 ALLEN
8	1	50000110	OR PLACA BASE PEQUEÑA
9	1	50000105	OR PLACA BASE GRANDE
10	1	30000215	RACOR CODO CONICO G1/4M x G1/4M
11	2	15000310	GRIFO VACIADO CALDERA

Portacacillos

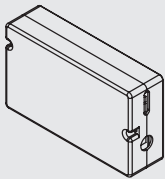
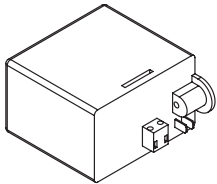
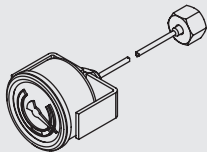
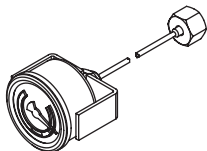
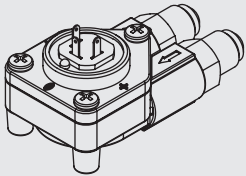
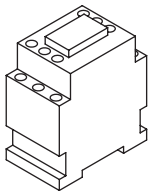
Plano



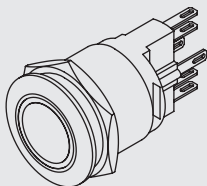
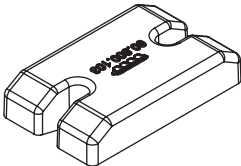
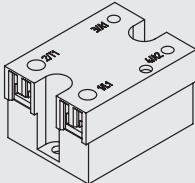
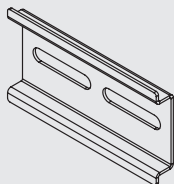
Lista de piezas

Nº.	UD	COD	Descripción
1	1	75000031	CACILLO 1 TAZA 7 GR.
2	1	75000120	MUELLE CIERRE PORTACACILLO
3	1	75000050	SALIDA 1 TAZA CURVA
4	1	75000041	CACILLO 2 TAZAS (14 GR.)
5	1	75000060	SALIDA 2 TAZAS
6	1	Q02760126	PORTAFILTRO COMPLETO 1 SALIDA CARAT
7	1	Q02760127	PORTAFILTRO COMPLETO 2 SALIDAS CARAT

Otros componentes

PLANO	COD	Descripción
	60100420	CENTRALITA 3D5 ORQUESTA
	60100049	CENTRALITA CAPUCHINADOR
	60000072	MANOMETRO D-40 0-16 BAR (Con tubo)
	60000062	MANOMETRO I LECTURA D40
	60100045	DOSIFICAD. VOL. UL/RED LATON TEF+LED
	Q01660097	CONTACTOR 230V LC1D18P7C

Otros componentes

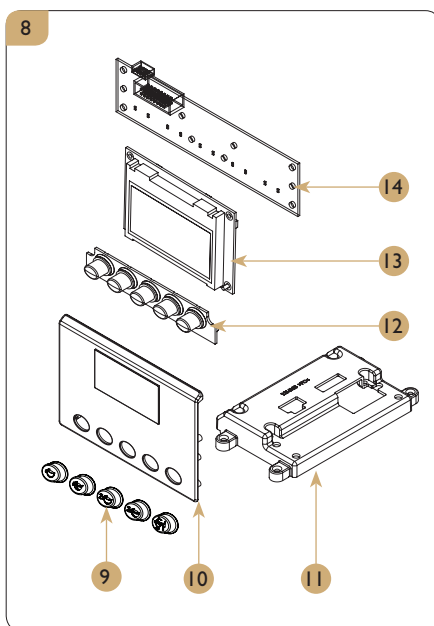
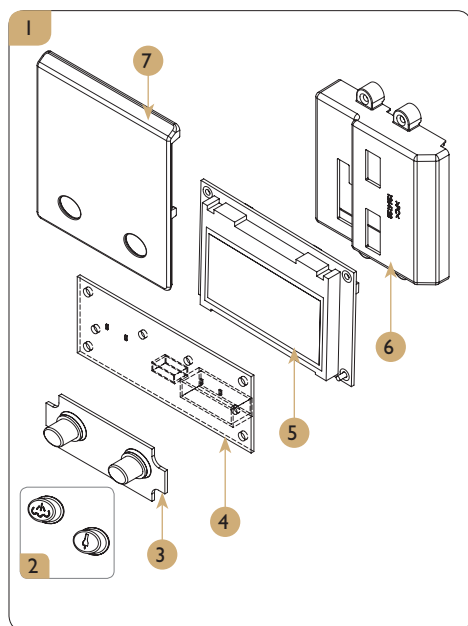
PLANO	COD	Descripción
	Q01660036	INTERRUPTOR GENERAL CARAT (AZUL)
	60800103	TAPA PROTECCION RELE
	60800101	RELE ESTATICO 3-32
	70001001 70001005	CACILLO DESAGÜE M-8 TAPA CACILLO DESAGÜE
	260177	DIN Connection SS 65MM

Otros componentes

PLANO	COD	Descripción
	ESC00013	BOMBA PERISTALTICA + CONECTOR + CABLES
	I666032	Harness NTC Extension
	Q01666039 Q01666061	CABLE DE SEÑAL CARAT CABLE DE SEÑAL LARGO CARAT
	C16660028	Harness complete Carat 1Gr
	C16660029 I666042	Harness complete Carat 2Gr Harness complete Carat 2Gr 3phase
	60102020	JUNTA TAPA VOLUTRON

Otros componentes

Plano

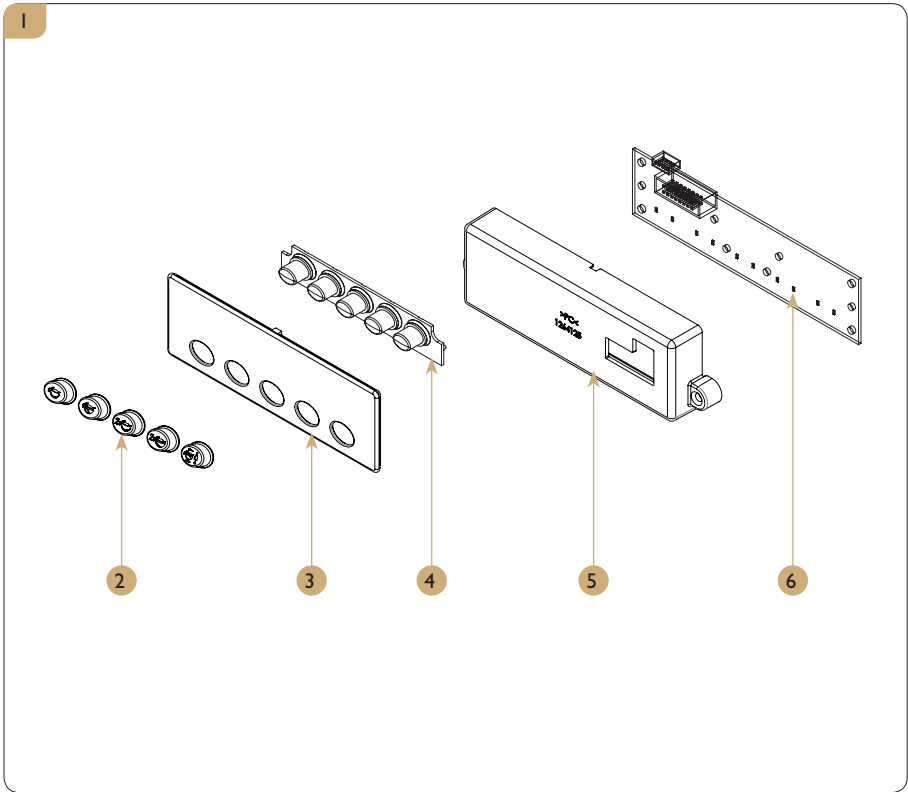


Lista de piezas

Nº.	UD	COD	Descripción
1	1	Q02760062	DISPLAY COMPLETO CARAT A/V (2 BOTONES)
2	1	*60101513	CONJ. PULS. BOT. DIAMANT-CARAT A/V (X2)
3	1	Q01264156	MEMBRANA BOTONERA CARAT A/V (x2)
4	1	Q01660040	PLACA PCB BOTONERA CARAT x 2
5	1	60101060	DISPLAY DIAMANT- CARAT
6	1	Q01264128	CAJA TRASERA DISPLAY CARAT A/V (x2)
7	1	Q01264129	FRONTAL DISPLAY BOTONERA CARAT (x2)
8	1	Q02760031	DISPLAY COMPLETO CARAT (x5)
9	1	*60101512	CONJ. PULSADORES BOT. DIAMANT-CARAT (X5)
10	1	Q01264107	FRONTAL DISPLAY CARAT (x5)
11	1	Q01264108	CAJA TRASERA DISPLAY CARAT (x5)
12	1	Q01264095	MEMBRANA BOTONERA CARAT (x5)
13	1	I660175	Display LCD 2.7" RGB 128x64
14	1	Q01660039	PLACA PCB BOTONERA CARAT (x5)

Otros componentes

Plano



Lista de piezas

Nº.	UD	COD	Descripción
1	1	Q01264124	BOTONERA COMPLETA CARAT
2	1	*60101512	CONJ. PULSADORES BOT. DIAMANT-CARAT (X5)
3	1	1264126	Button Box Upper
4	1	Q01264095	MEMBRANA BOTONERA CARAT (x5)
5	1	1264125	Button Box Bottom
6	1	Q01660039	PLACA PCB BOTONERA CARAT (x5)

CARAT

SPARE PARTS MANUAL



SPM_EN

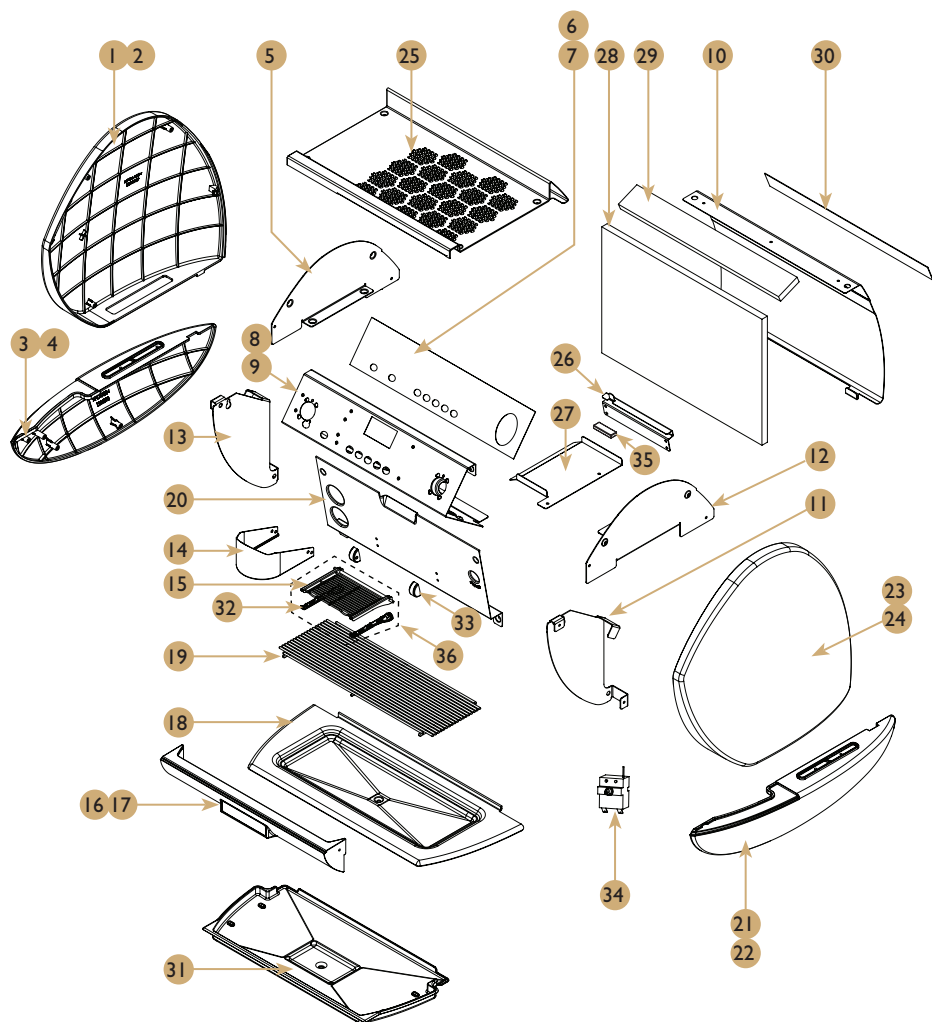
Date: May 08, 2018

EXPOBAR®

CONTENT	2
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Porta-filter	26
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Machine with IGR

Drawing



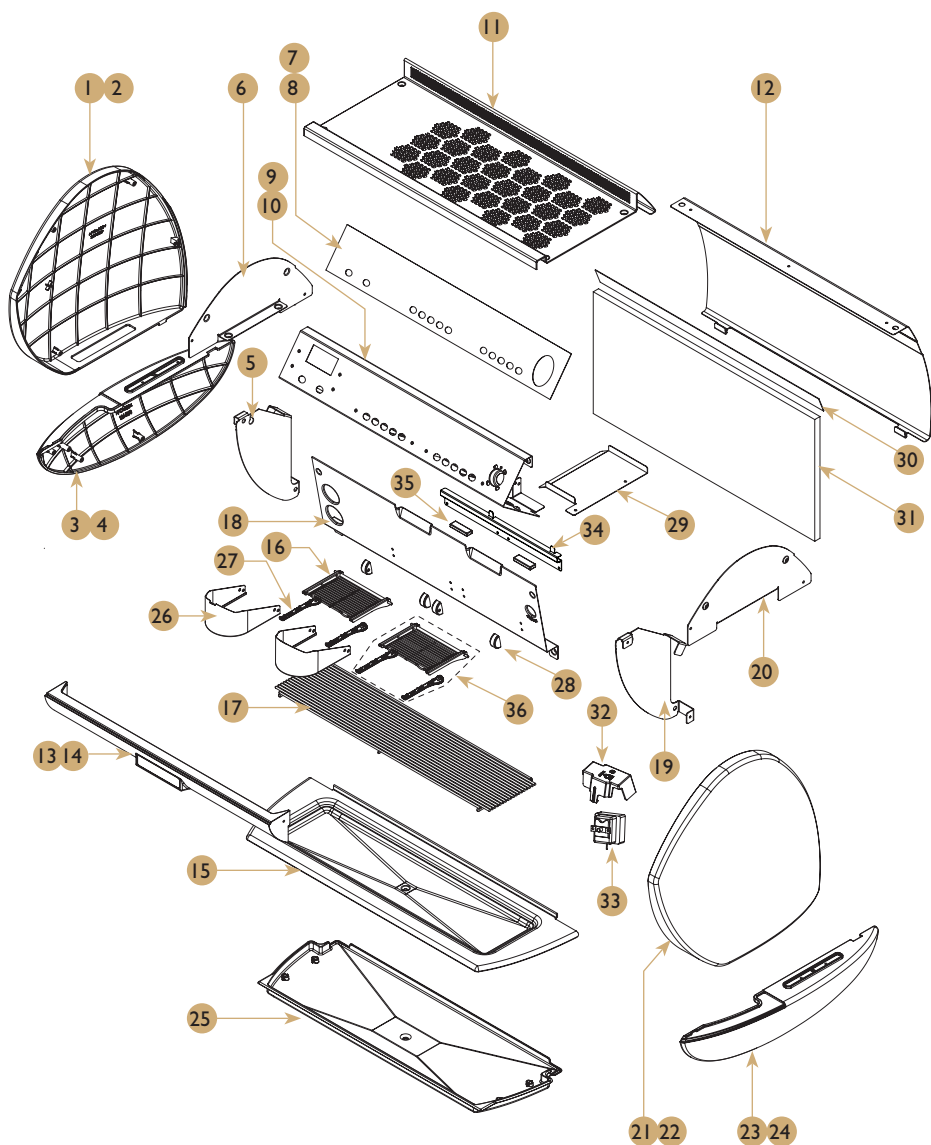
Machine with IGR

Spare parts list

POS.	Part No.	Description
1	1264089	Left panel upper white
2	1264162	Left panel upper black
3	1264090	Left panel lower white
4	1264163	Left panel lower black
5	260712	Left Upper Panel Cover
6	1264096	Display overlay IGr TS
7	1264141	Display overlay IGr Standard
8	260688	Display Panel IGr Standard
9	260711	Display Panel Assy IGR Carat
10	260718	Back Panel IGR Carat
11	260715	Right Lower Panel Cover
12	260714	Right Upper Panel Cover
13	260713	Left Lower Panel Cover
14	260720	Group Cover Support Carat
15	260674	Cup Holder Carat
16	1264104	Front Brand Panel
17	1264167	Front brand panel IGr black
18	260716	Drip Tray IGR Carat
19	260717	Grid Carat IGr
20	260710	Front Panel IGR Carat
21	1264092	Right panel lower white
22	1264165	Right panel lower black
23	1264091	Right panel upper white
24	1264164	Right panel upper black
25	260719	Top Cup Tray IGR Carat
26	260679	Strengthen Panel IGr
27	260677	Water Proof Top
28	1260005	Insulation Back Panel Carat IGr
29	1260015	Insulation Top Tray IGr
30	1264208	Back Overlay IGr
31	1264241	Water Proof Pan IGr
32	1264234	Plactic Strip
33	260676	Bearing
34	C10200141	Pole thermal cut-out with bulb
35	1608281	Magnet 39x13x6
36	2760325	Cup Holder with Strip (complete assy)

Machine with 2GR

Drawing



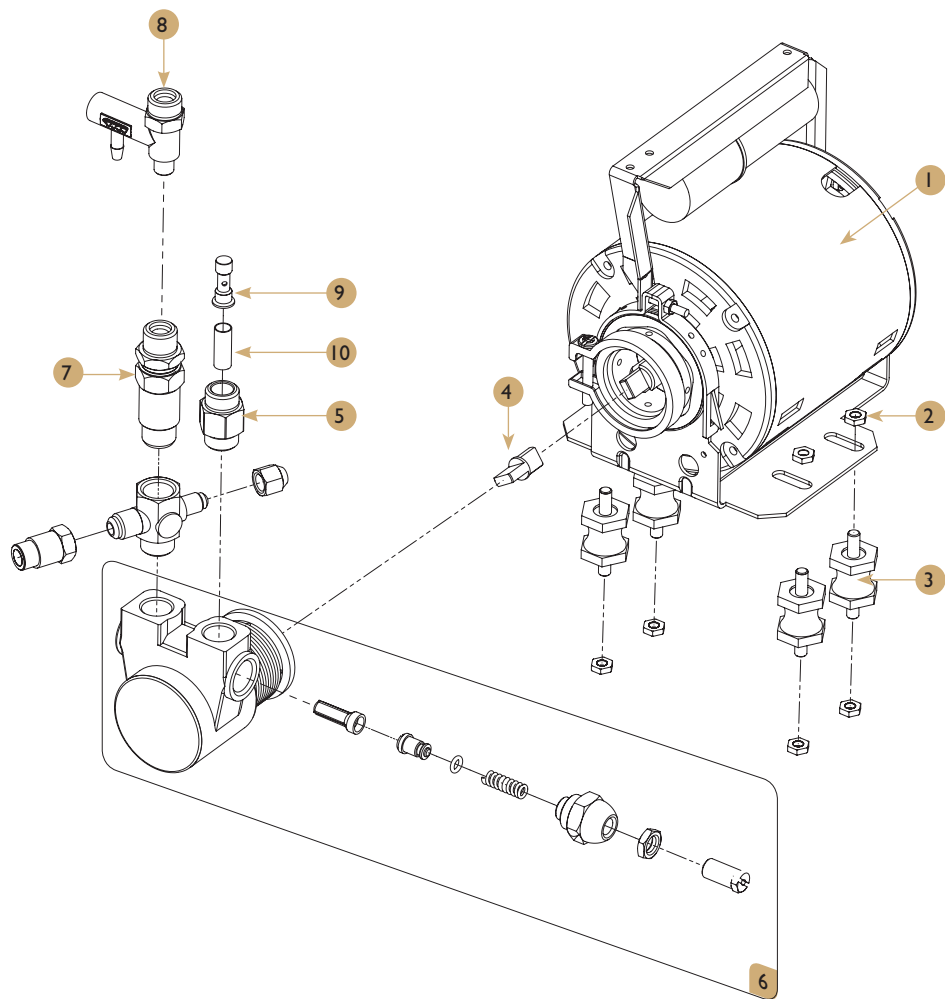
Machine with 2GR

Spare parts list

POS.	Part No.	Description
1	1264089	Left panel upper white
2	1264162	Left panel upper black
3	1264090	Left panel lower white
4	1264163	Left panel lower black
5	260713	Left Lower Panel Cover
6	260712	Left Upper Panel Cover
7	1264116	Display overlay 2Gr TS
8	1264142	Display overlay 2Gr Standard
9	260689	Display Panel 2Gr Standard
10	260728	Display Panel Assy 2Gr Carat
11	260730	Top Cup Tray 2Gr Carat
12	260699	Back Panel 2Gr Carat
13	1264115	Front brand panel 2Gr white
14	1264166	Front brand panel 2Gr black
15	260731	Drip Tray 2Gr Carat
16	260674	Cup Holder Carat
17	260700	Grid Carat 2Gr
18	260729	Front Panel 2Gr Carat
19	260715	Right Lower Panel Cover
20	260714	Right Upper Panel Cover
21	1264091	Right panel upper white
22	1264164	Right panel upper black
23	1264092	Right panel lower white
24	1264165	Right panel lower black
25	1264242	Water Proof Pan 2Gr
26	260720	Group Cover Support
27	1264234	Plastic Strip
28	260676	Bearing
29	260677	Water Proof Top
30	1264209	Back Overlay 2Gr
31	1260011	Insulation Back Panel Carat 2Gr
32	1264261	EGO 3 Pole Cover
33	C10200150	3 Pole Thermal cut-out with bulb
34	260678	Strengthen Panel 2Gr
35	1608281	Magnet 39x13x6
36	2760325	Cup Holder with Strip (complete assy)

Rotary pump

Drawing



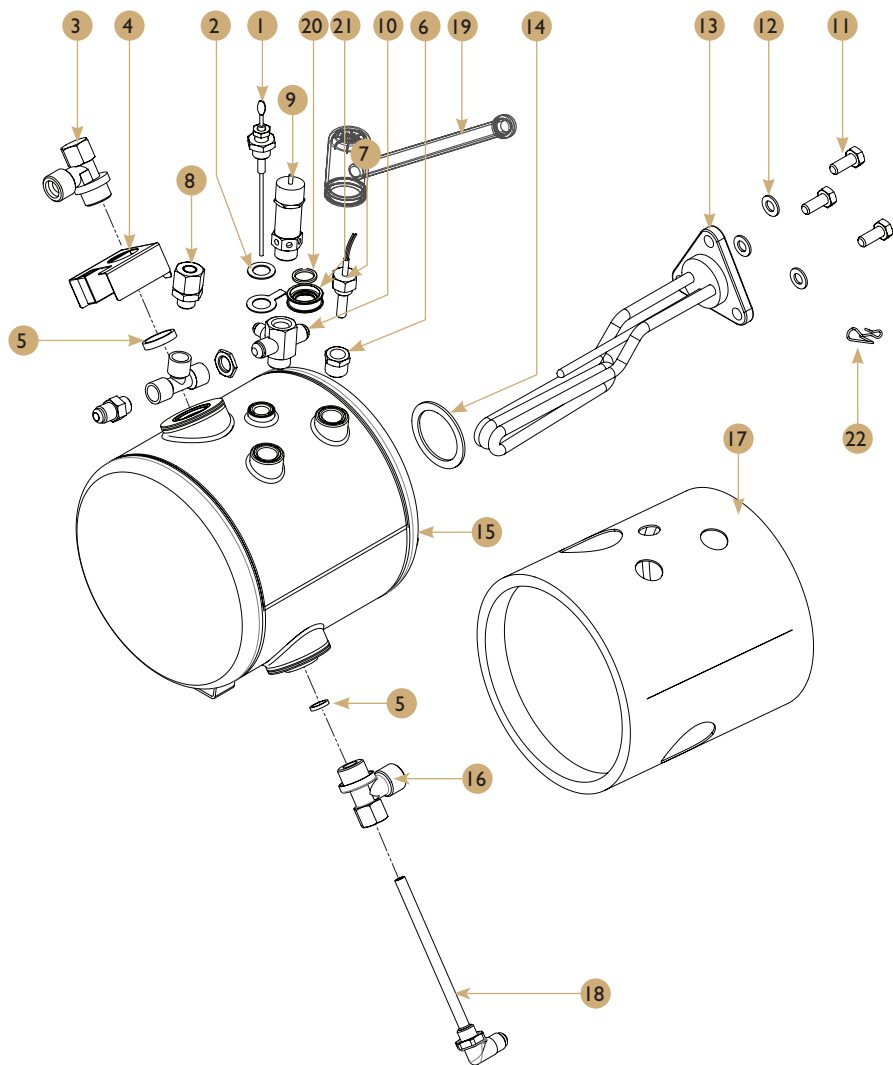
Rotary pump

Spare parts list

POS.	Part No.	Description
1	60000016	MOTOR CREM 230V/50HZ
2	25093420	HEXAGONAL NUT M-6 DIN-934
3	50100000	SILENTBLOCK M-6
4	30000019	CARDAN JOINT PUMP
5	30000240	PUMP ADAPTOR 3/8 X 3/8
6	C60000030	Pump(Crem Special Treatment)
7	65000010	Retention Valve 3/8*1/8 (Min-Mon-Ec)
8	30400055	Pump Bypass Condor
9	30100100	Inlet Water Filter Holder
10	70000009	Tubular Group Filter

Boiler IGR

Drawing



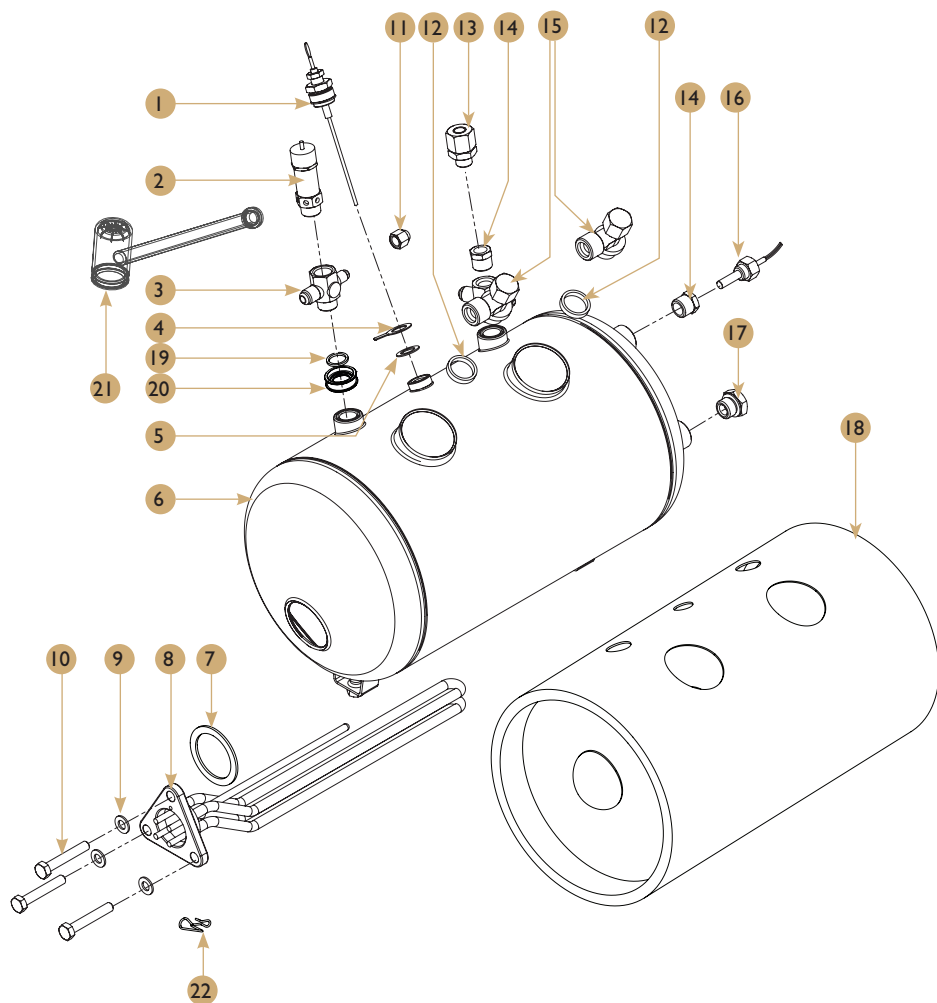
Boiler IGR

Spare parts list

POS.	Part No.	Description
1	60100040	Water Level Probe 1/4
2	25679812	Inox Ground Washer
3	30000200	Thermics Sup.Adaptor 1/2 X 1/2
4	ESC00100	Magnets Set
5	50010010	21.1*25.7* 1/2 Teflon Gasket
6	30000003	Reducer Male-Female-3/8 - 1/4
7	60100076	Temp. Probe + Susp. Steam Pipe Icd
8	65000200	Non Suction Valve
9	65000115	Safety Valve C10/A-3/8 NGI
10	30000110	3 Tracks Adaptor 1/4 * 1/4 * 1/8
11	25093320	Hexagonal Head Screew 8X20 Din 933
12	25012530	Flat Washer M-8 Din-125
13	38025001F	2500W-230V- 6Ltrs.Copper Element with fuses
14	50010030	40*52*2 Element Teflon Gasket
15	15100018	Boiler Copper IGr 6L
16	30000210	Thermics Inf.Adaptor-1/2X1/2X1/4
17	1260003	Insulation Boiler Carat IGr
18	30000220	Cone Injector 1/4
19	1560003	Safety Valve Protector
20	50010080	Gasket Tap Steam/Water Teflon
21	1364084	Safety Valve Hold Washer
22	1364062	Clip EGO

Boiler 2GR

Drawing



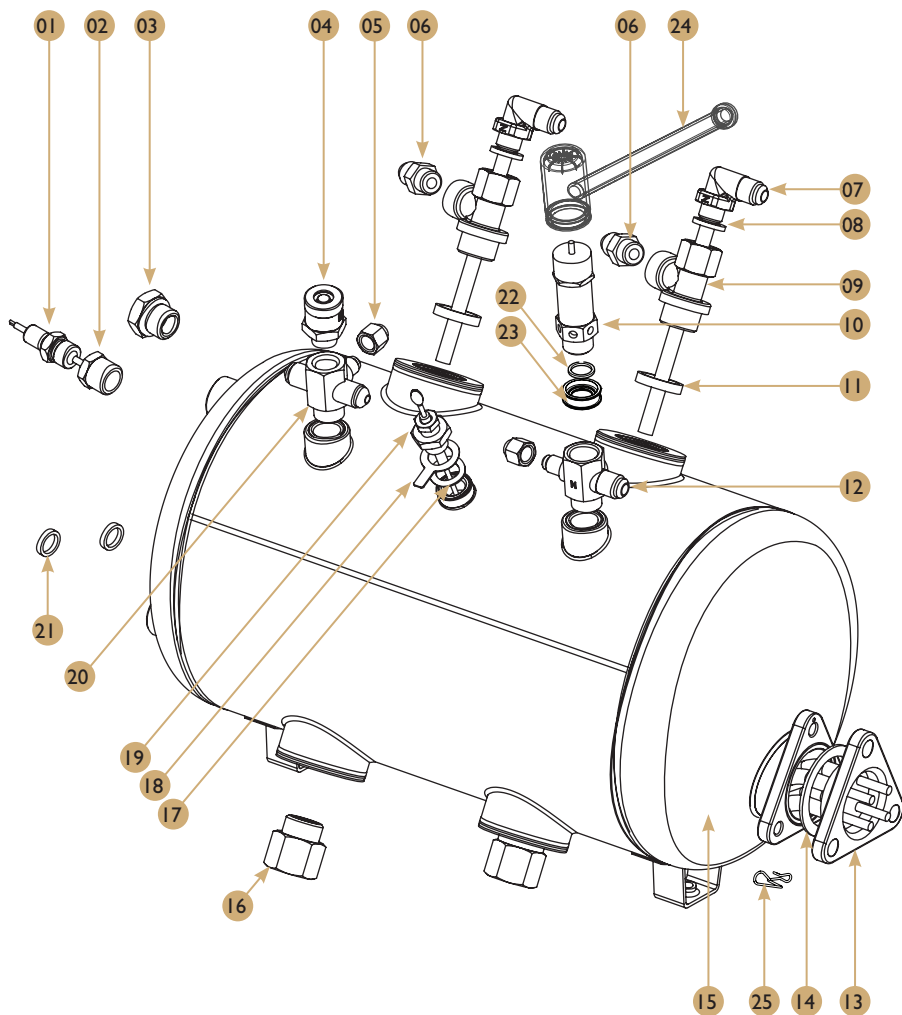
Boiler 2Gr

Spare parts list

POS.	Part No.	Description
1	60100040	WATER LEVEL PROBE 1/4
2	65000115	Safety Valve C10/A-3/8 NGI
3	30000100	2 TRACKS ADAPTOR- 1/4 x 1/8
4	25000003	INOX GROUND WASHER
5	25679812	M12 Washer
6	15100020	BOILER 2GR 1 ILTS.
7	50010030	40*52*2 ELEMENT TEFLON GASKET
8	38027000F	3050W.230V- 2gr ELEMENT with fuses
9	25012530	FLAT WASHER M-8 DIN-125
10	25093320	HEXAGONAL HEAD SCREW 8x20 DIN 933
11	30000315	BLING PLUG 1/8 FEMALE
12	50010010	21.1*25.7* 1/2 TEFLON GASKET
13	65000200	NON SUCTION VALVE
14	30000003	REDUCER MALE-FEMALE-3/8 - 1/4
15	30000200	THERMICS SUP.ADAPTOR 1/2 X 1/2
16	60100076	TEMP. PROBE + SUSP. STEAM PIPE ICD
17	30000290	PLUG M 3/8
18	1260004	Insulation Boiler Carat 2Gr
19	50010080	Gasket Tap Steam/Water Teflon
20	1364084	Safety Valve Hold Washer
21	1560003	Safety Valve Protector
22	1364062	Clip EGO

2Gr 3 Boilers: boiler assembly (main boiler)

Drawing



2Gr 3 Boilers: boiler assembly (main boiler)

Spare parts list

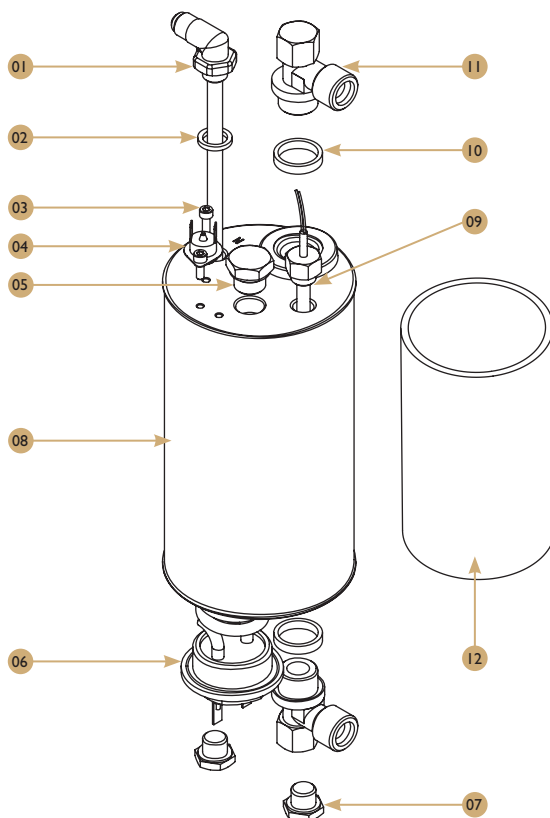
POS.	Part No.	Description
01	C60100076	Temp. Probe + Susp. Steam Pipe Icd
02	C30000003	Reducer Male-Female-3/8 - 1/4
03	C30000290	Plug M 3/8
04	C65000200	Non Suction Valve
05	C30000315	Bling Plug 1/8 Female
06	C30000510	Conical Adaptor 1/4*1/4 Electron
07	C30000220	Cone Injector 1/4
08	C50010020	13.2*18.2*2.5 1/4 Teflon Gasket
09	C30000210	Thermics Inf.Adaptor-1/2X1/2X1/4
10	C65000115	Safety Valve C10/A-3/8 NGI
11	C50010010	21.1*25.7* 1/2 Teflon Gasket
12	C30000100	2 Tracks Adaptor- 1/4 X 1/8
13	C38027000F	3050W-230V- 2Gr Element with fuses
*13	C38045000F	4500W-230V 2GR Element with fuses
14	C50010030	40*52*2 Element Teflon Gasket
15	C15100020	Boiler 2Gr 11Lts.
*15	C15100030	Boiler 3Gr 17Lts.
16	C30200035	Long Plug 1/2 Group
17	C25679812	M12 Washer Form A
18	C25000003	Inox Ground Washer
19	C60100040	Water Level Probe 1/4
20	C30000110	3 Tracks Adaptor 1/4 * 1/4 * 1/8
21	C50010050	3/8 Boiler's Connector Teflon Gaske
22	50010080	Gasket Tap Steam/Water Teflon
23	1364084	Safety Valve Hold Washer
24	1560003	Safety Valve Protector
25	1364062	Clip EGO

Note:

Parts marked with * are options on three-phase models.

2Gr 3 Boilers: boiler assembly (group boiler)

Drawing

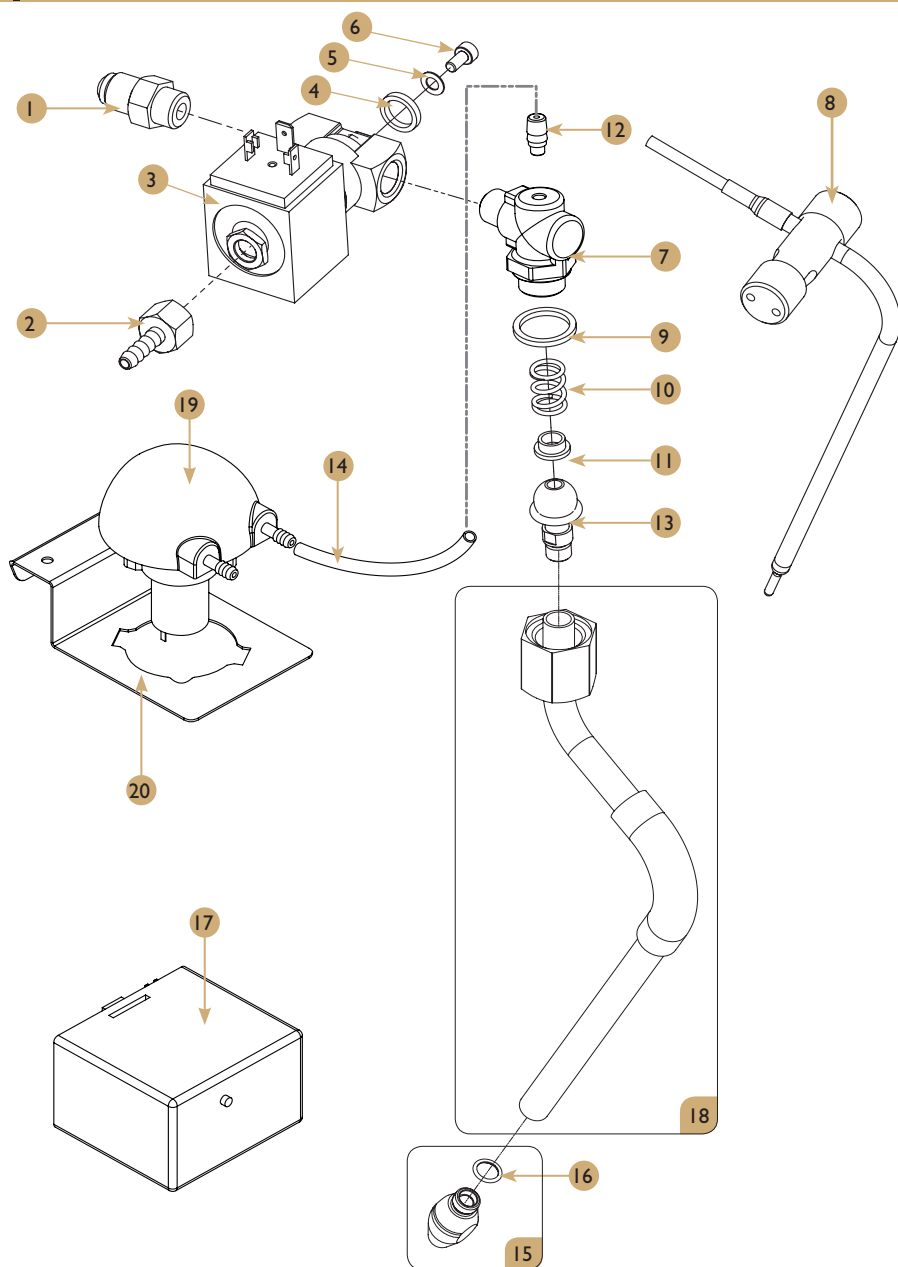


Spare parts list

POS.	Part No.	Description
01	C30000220	Cone Injector 1/4
02	C50010020	13.2*18.2*2.5 1/4 Teflon Gasket
03	C25091210	Allen Screw 4X12 Din-912
04	C10200110	Office Thermostat 16 A
05	C30000290	Plug M 3/8
06	C38012000	1200W-230V Office Element
07	C30000300	Blind Plug 1/4 Male
08	C15100010	Office Cappuccinator Boiler
09	C60100076	Temp. Probe + Susp. Steam Pipe Icd
10	C50010010	21.1*25.7* 1/2 Teflon Gasket
11	C30000200	Thermics Sup. Adaptor 1/2 X 1/2
12	I260017	Insulation Boiler Office

Turbo steamer

Drawing



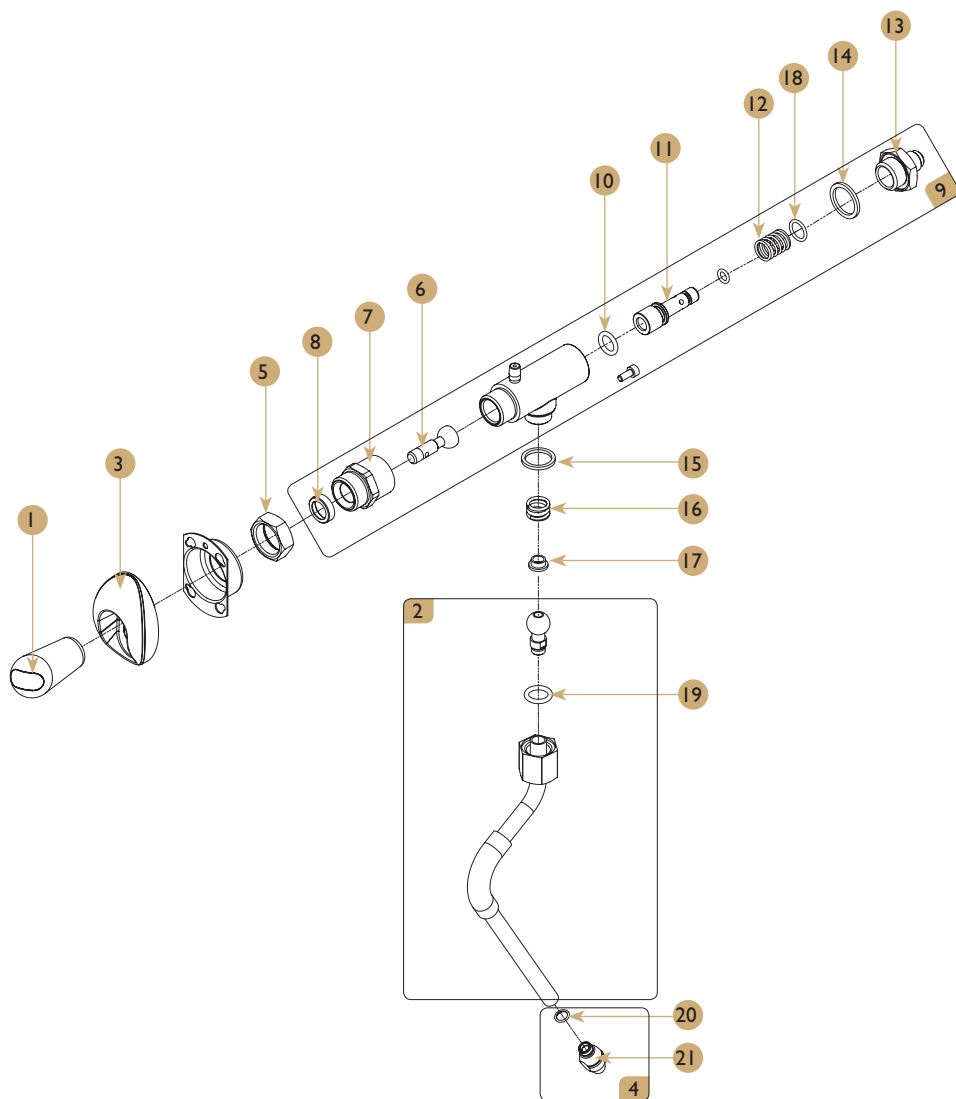
Turbo steamer

Spare parts list

POS.	Part No.	Description
1	30000510	Conical Adaptor 1/4*1/4 Electron
2	30700000	6Mm Barbfitting 1/8 F
3	60000120	Valve Turbo Steamer
4	50010050	3/8 Boiler's Connector Teflon Gaske
5	25012510	Washer M-5 Din9021
6	25091200	Allen Screw 4X8 Din-912
7	30000235	Male Adapter 1/4*3/8*M-5 Water
8	60100075	Steam Temperature Sensor
9	50010080	Gasket Tap Steam/Water Teflon
10	30370076	Spring Steam/Water Tap
11	30370077	Gasket Tap Steam/Water Brass
12	30500005	Male Hose Adapter Elow
13	30370075	O-Ring For Steam Tap
14	35021000	Silicon Hose DIA4*7mm
15A	30370190	Nozzle steam tap-1H M8.5 with oring
15B	30370195	Nozzle steam tap-3H M8.5 with oring
15C	30370180	Nozzle steam tap-4H M8.5 with oring
16	50010090	O-Ring 6X1
17	60100049	Adjustable Unit Trimmer
18	2760028	Steam Tap Assembly Carat
19	60000049	Peristaltic Pump
20	20010006	Peristaltic Pump Support

Steam wand

Drawing



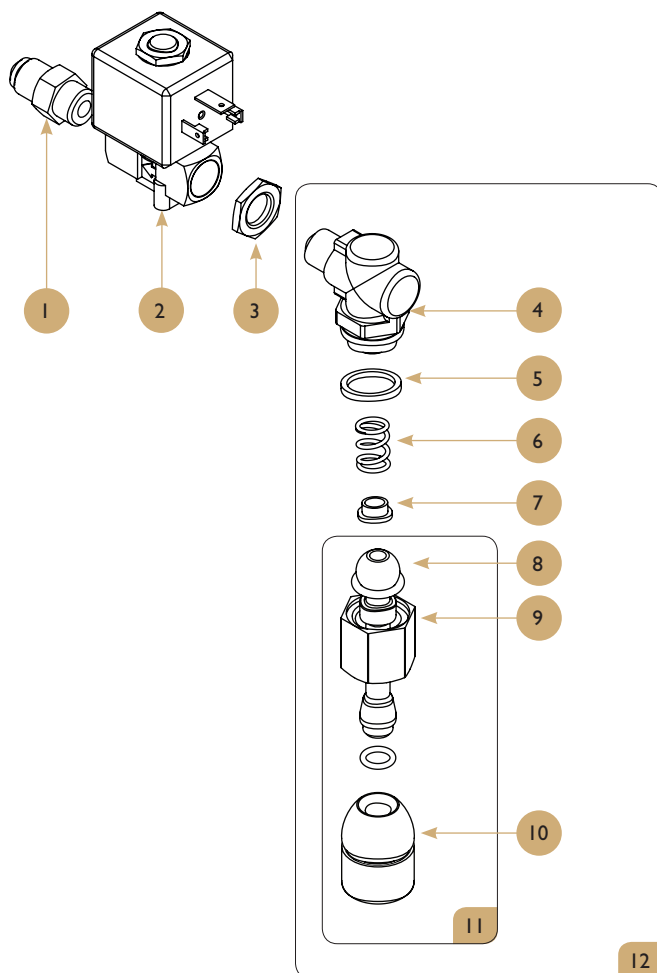
Steam wand

Spare parts list

POS.	Part No.	Description
1	1264215	Steam Tap Lever Espresso Filter
2	2760256	Steam Pipe Assembly 1Hole (Standard Group)
2	2760028	Steam Pipe Assembly (Take-Away Group)
3	21003041	Tap Cover
4A	30370190	Nozzle steam tap-1H M8.5 with oring
4B	30370195	Nozzle steam tap-3H M8.5 with oring
4C	30370180	Nozzle steam tap-4H M8.5 with oring
5	30370141	Nut G5/8 * H26
6	30370161	Tap axle with nob
7	30370165	Conector Female G1/2-Male G5/8
8	30370164	Holder washer
9	15000338	Tap Body and Steam Knob Assy. (also incl. parts 15,16,17)
10	50000133	O-ring (10.77x2.62)
11	30370163	Extension axle for tap
12	55000070	Spring, 14X24x1,5-OA2
13	30370166	Connector 3/4M x G14M
14	50010070	Teflon gasket (19X24x2)
15	50010080	Gasket Tap Steam/Water Teflon
16	30370076	Spring Steam/Water Tap
17	30370077	Gasket Tap Steam/Water Brass
18	50000100	O-Ring 6.07x1.78
19	30370075	O-Ring for Steam Tap
20	50010090	O-ring 6X1
21	30370195	Nozzle Steam Tap 3H M8.5 with Gasket

Hot water outlet

Drawing



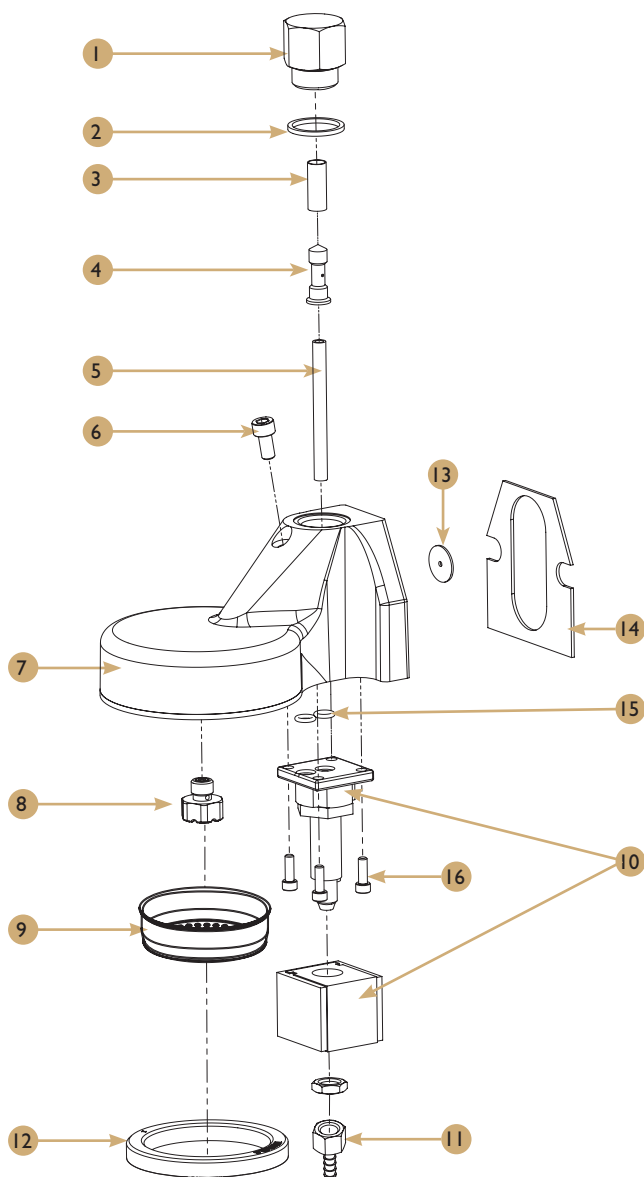
Hot water outlet

Spare parts list

POS.	Part No.	Description
1	30000510	Conical Adaptor 1/4*1/4 Electron
2	60000100	1/4 X 1/4 Electrovalve Parker 220V
3	30100010	Hexagonal Nut 1/4 Pressostat
4	30000236	Elbow Racor G1/4Xg3/8
5	50010080	Gasket Tap Steam/Water Teflon
6	30370076	Spring Steam/Water Tap
7	30370077	Gasket Tap Steam/Water Brass
8	30370075	O-Ring 12.1X2.7mm
9	70000010	Nut 3/8 For Steamer
10	30000050	Nozzle Water Tap Complete
11	30370080	Water Tap Classic
12	30370081	Water Tap + Connector Kit

Group head

Drawing



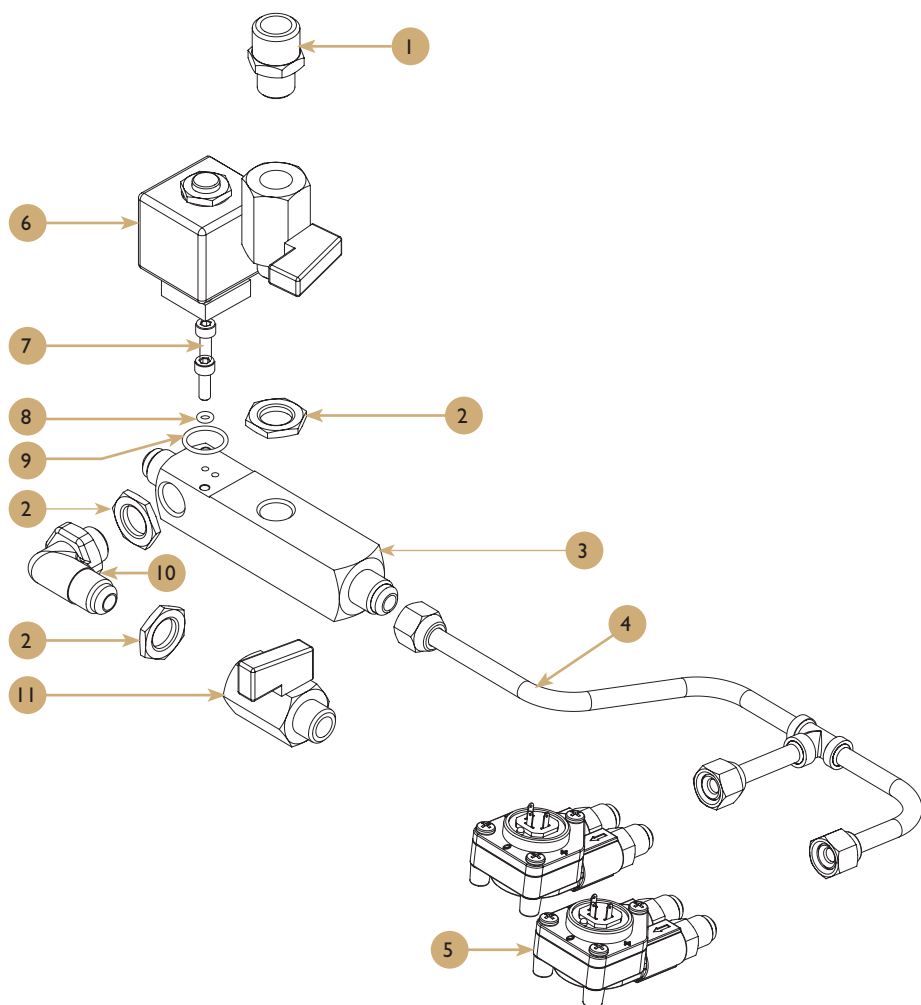
Group head

Spare parts list

POS.	Part No.	Description
1	30200035	Long Plug 1/2 Group
2	50010040	21.7*25.7*2 G/C-G Teflon Gasket
3	70000009	Tubular Group Filter
4	30200061	Group Teflon Injector Rev3
5	30200026	Tefl Water Reduc. Holder 4X6x65
6	25091250	Allen Screw 6*10 Din-912 Group
7	30200010	Crem Brewing Group Body
8	30200040	Diffuser
9	75000010	Shower
10	60000112	Gro Head Electrov. Parker 220V
11	30700000	6Mm Barbfitting 1/8F
12	75000081	8Mm Group Head Gasket
13A	50020020	2.5*18.2*2 Teflon Hot Water Reducto
13B	50020000	3.5*18.2*2 Teflon Hot Water Reducto
14	50000010	Green Body Flat Group Joint
15	50000100	O-Ring 6.07*1.78
16	25091211	Allen Screw M4x16 Din 912

Lower water system

Drawing



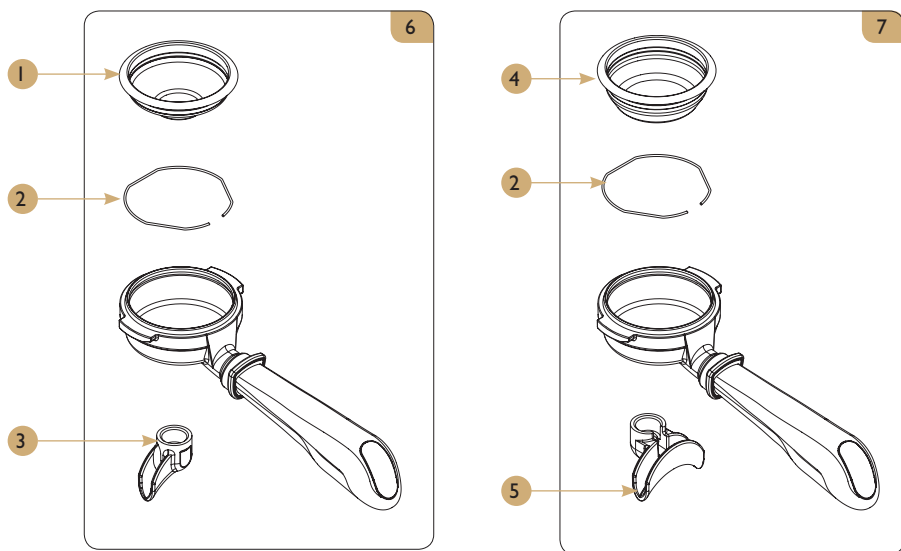
Lower water system

Spare parts list

POS.	Part No.	Description
1	30000002	BUTTRESS 1/4-3/8 MINI
2	30100010	HEXAGONAL NUT 1/4 PRESSOSTAT
3	30100033	DISTRIBUTOR MC
4A	1364029	Distributor Tube ø8mm Carat 2Gr
4B	1364021	Copper Tube 8.0*100mm 1Gr
5	60100045	FLOWMETER UL/NETW. BRASS TEF+LED
6	60000105	50/60HZ 220V SOLENOID ELECTROVALVE
7	25091210	ALLEN SCREW 4x12 DIN-912
8	50000110	SMALL AUTOFILL SOLENOID GASKET
9	50000105	LARGE AUTOFILL SOLENOID GASKET
10	30000215	CONICAL BEND ADAPTOR 1/4 X 1/4
11	15000310	Tap drainage G1/4M-G1/4F Right

Porta-filter

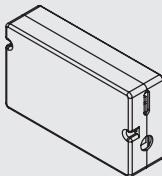
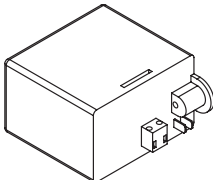
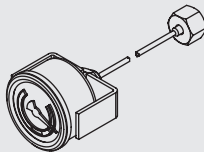
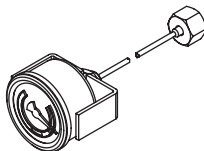
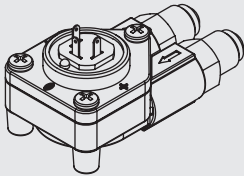
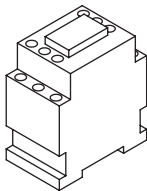
Drawing



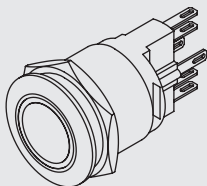
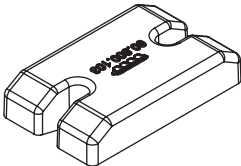
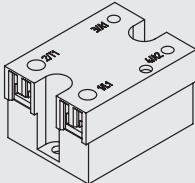
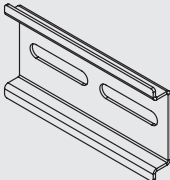
Spare parts list

POS.	Part No.	Description
1	75000031	1 Cup Filter (7Gr)
2	75000120	Filter Spring
3	75000050	Spout 1Cup
4	75000041	2 Cup Filter (14Gr)
5	75000060	Spout 2Cups
6	2760216	Filter Handle Assy 1 Cup
7	2760217	Filter Handle Assy 2 Cup

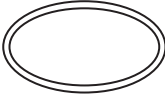
Machine components

DRAWING	PART NO.	MODEL/NAME
	60100420	Main control box
	60100049	Adjustable Unit Trimmer
	60000072	Manometro D40 0_16 BAR
	60000062	Manometro D40 0_2.5 BAR
	60100045	Flowmeter UL Red TEF Led
	I660097	Contactor 230V LCID18P7C

Machine components

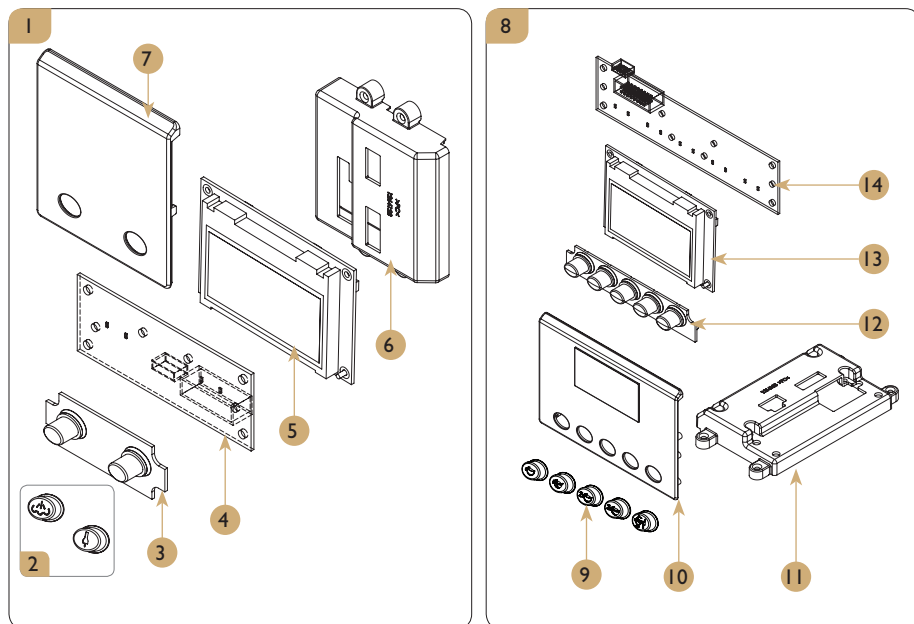
DRAWING	PART NO.	MODEL/NAME
	I660036	Power Switch Blue 22mm
	C60800103	Solid State Relay Cover
	C60800101	STATIC RELAY 4-32
	C70001001 C70001005	Drain cup with thread Drain cup cover
	260177	DIN Connection SS 65MM

Machine components

DRAWING	PART NO.	MODEL/NAME
	ESC00013	Peristaltic Pump with Harness
	I666032	Harness NTC Extension
	I666039 I666061	Signal cable Long Cable Signal Carat
	C16660028	Harness complete Carat 1Gr
	C16660029 I666042	Harness complete Carat 2Gr Harness complete Carat 2Gr 3phase
	C60102020	O-ring flowmeter

Machine components

Drawing

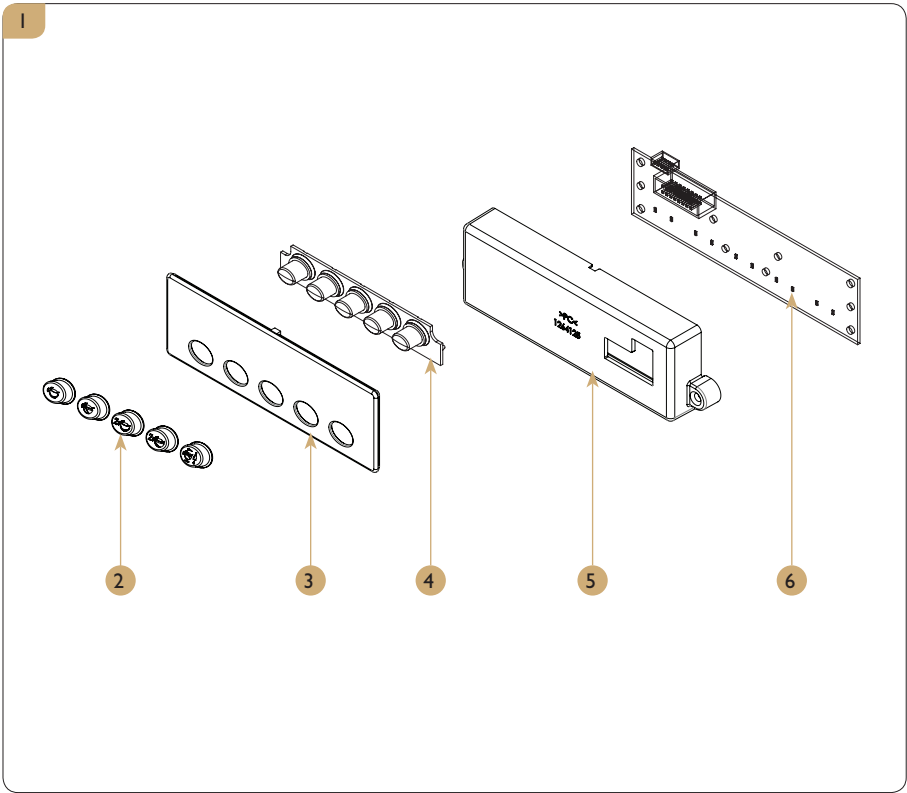


Spare parts list

POS.	Part No.	Description
1	2760062	Display PCB Assy with 2 Buttons
2	60101513	Metal button set cover water/steam
3	1264156	Conductive Control Button 2 Keys
4	1660040	PCB Mechanical Type 2 Buttons
5	60101060	Graphic Display Gicar
6	1264128	Display PCB Box Bottom 2 Buttons
7	1264129	Display PCB Box Upper 2 Buttons
8	2760031	Display PCB Assembly Carat
9	60101512	METAL BUTTON SET COVER (x5)
10	1264107	Display PCB Box Upper Carat
11	1264108	Display PCB Box Bottom Carat
12	1264095	Conductive Control Button
13	1660175	Display LCD 2.7" RGB 128x64
14	1660039	PCB Mechanical Type 5 Buttons

Machine components

Drawing



Spare parts list

POS.	Part No.	Description
1	I264124	Button Box Assy Carat
2	60101512	METAL BUTTON SET COVER (x5)
3	I264126	Button Box Upper
4	I264095	Conductive Control Button
5	I264125	Button Box Bottom
6	I660039	PCB Mechanical Type 5 Buttons

For the warranty to be valid the conditions for maintenance must have been followed according to our instructions, proper precaution has been made and warranty claim been issued without delay.

The affected equipment may not be used during awaiting service if there is any risk that the damage or defect would worsen.

The warranty will not cover consumption supplies such as glassware, normal maintenance such as cleaning of filters, contaminations in water, lime, incorrect voltages, pressure or adjustment of water amounts.

The warranty will not cover damages of defects caused by incorrect handling and operation of the appliance.

FOR SERVICE
Please contact your dealer

Your Dealer

Models covered by this manual:

EAED-C32B-22AM
EBED-C32B-22AM
EBEE-D32B-22AM
EAED-C41B-22AM
EAED-C41B-22AM
EBEE-D41B-22AM
EBAE-D41B-22AM
EBGE-G41B-22AM

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