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# 1.

# A REAPPRAISAL OF TRADITION. SUSTAINABLE ENGINEERING.

## From E-61 technology to T

First, society changes. Neither manufacturers nor engineers nor industrial engineers invent new needs. It is **society that demands products that are more sustainable** with improved energy efficiency, easier to use and longer-lasting.

In these new times, it is the **professional barista who demands innovative products** without compromising the espresso's

At Ascaso, our **team of engineers** has spent years working to **differentiate and perfect** our espresso coffee machines. And this has led us to reappraise our approach to tradition. To ground our projects on **sustainable engineering**.

In the '60s, the development of the E-61 group brought innovation to the espresso world. It was an instant success and became one of the most widely used systems in the history of espresso coffee Even today, many manufacturers still use it or work with its principles.

But, almost 60 years later, we needed to look for a new technology that addressed the shortcomings of the old.



# **BARISTA T**

## Sustainable Enginnering

A product incorporating latest-generation technology. Multi-group. Complete PID control. Highly energy efficient. A range of very competitive, top-quality technologically advanced coffee machines.

After the creation of our Big Dream model, in which we have changed a technical criterion used for more than 100 years (using stainless steel instead of copper and brass), we wanted to continue creating unique products.



2.

Multi-group (separate) technology with PID control. High professionalgrade performance: Thermal stability guaranteed. High steam production.

## Advantages



Clean coffee. Minimal

metal migration to the

beverage through the use

of stainless steel.

EN16889

NICKEL (NI) <0.14 MG/KG

LEAD (PB) <0.01 MG/KG

Complies with

European regulation EN 16889 Freshly Delivered Water. Avoiding the use of standing, constantly reheated water to make the coffee. Without affecting the water's oxygen content, preserving its completeness and improving the coffee's taste.



Energy efficiency. One of the T Technology's key goals was to reduce the machine's energy consumption. It had to be a sustainable product. Improving on what was available. And we've done it. We deliver a 50% average saving compared with a traditional machine.



Friendly price. Unbeatable price for a multi-group machine with independent PID control.







#### Single boiler technology.

It is not possible to regulate the temperature in each group independently or in both groups.

The machine can't be adjusted to different types of coffees and roasts. The coffee groups cannot be switched off completely independently.

#### Groups designed in 1961.

Electromechanical control. Does not save energy. In use at all times. Technology dating from 1961. Used by more than 80% of manufacturers.



#### Same boiler for both coffee and steam.

Steam boiler temperature is controlled by an electromechanical pressure switch. Imprecise control, slow and inconvenient. Recovery time is much slower. Less steam, less consistency. The quantity of steam influences the thermal stability of the coffee groups.

#### Little thermal stability. +/- 5°C (900% less stable). No repeatability. Precision of +/- 5°C in the cup. No temperature control.

Impossible to regulate the temperature.

#### Multi-group technology.

- Adjustment and PID control of the temperature in each coffee group independently (precision of 0.1°C)
- The machine can be adjusted to different types of coffees and roasts.
- The coffee groups can be switched off completely independently.

# State-of-the-art thermodynamic groups. In-house technology.

Electronic control. Saves energy by only heating the extraction water. Modern, exclusive technology.

#### Completely independent steam boiler.

Adjustment and PID control of the temperature in the steam boiler (precision of 1°C). Control by electronic sensors and thermostats. Precision, comfort and speed. It significantly reduces recovery time: more steam, more consistency. The quantity of steam does not influence the thermal stability of coffee groups.

# Professional thermal stability. Precision of +/-0.5°C.Repeatability. Consistency.



Precision of +/-0.5°C in the cup. In continuous or intermittent use. Triple temperature control (adjustable at intervals of 0.1°C). Easy and accurate temperature regulation.





## 4.1 Multi-Group System

The multi-group technology is based on coffee groups and a steam boiler that work completely independently. Each group and boiler have their own autonomous heating system, safety device and precise electronic temperature control.

#### **Advantages**

- · Aids energy saving.
- You can turn a group on or off independently. **Ready in1** minute.
- Standby function by group or for all the groups. Being independent, the power is only used for the parts of the machine you are using at that particular time.
- Excellent thermal stability.
- Excellent extraction quality for either small or large operating volumes. The quantity of steam does not influence the thermal stability of the coffee groups.
- High, consistent steam production (exclusive boiler)
- The machine can be adjusted to different types of coffees and roasts.
- Extra safety level. If there is a problem with one group, the others will continue working.





## 4.2 PID Control

(PID) (Proportional Integral Derivative) Easy and optimal temperature regulation lets you select the appropriate extraction process for each coffee, producing excellent results.

Our system offers a precision of 0.5°C which considerably reduces any heat fluctuations within the coffee group. The barista simply has to select the desired temperature and Barista T will do the rest.



**1**. Pre-heating/temperature of the water entering the coffee group.

**2.**Control of the temperature of each coffee group (PID). Each group is completely independent and easy to control by the general or individual display (precision of 0.1°C).



**3**. Control of the steam boiler/water temperature (PID)



## 4.3 Professional coffee group

#### New Thermodynamic Coffee Groups

- Large thermal mass: Brass (lead Free) and Aluminium. With Stainless Steel water circuit (1 meter).
- Total Pid control. Coffee groups and steam. Can be easily adjusted by the barista.
- Double heating element (Thermoblock + group)
- Double thermal covers. Coffee group is completely "enveloped".
- Preheating water system (80°C).
- No water inside. The group is focused on conserving energy by heating the extraction water only.

#### **Benefits**

- Thermal stability (+- 0.5°C. In continuous or intermittent use)
- Clean water. Here it is constantly renewed and clean for every coffee. The water does not stand in the boiler, being constantly re-heated.
- Flexibility. 1,2 or 3 groups independent of each other. And independent of the steam production.
- Coffee group ready in 1 minute.
- Energy efficiency.
- Food safe and Less limescale (use of Stainless Steel parts)



## 4.4 Independent steam boiler in AISI 316 stainless steel

Manufactured in 100% **AISI 316** stainless steel. Plasma-welded both inside and out. **Extremely sturdy**: Boiler thickness: 2.5 mm / Lid thickness: 10 mm



In addition, with more than **9 kg of thermal mass** in very thick AISI 316 stainless steel it provides exceptional thermal stability. This means that the steam pressure is kept constant and it uses less energy while at the same time maximising steam production.

Lime scale hardly ever adheres to stainless steel. This makes cleaning much simpler and means repairs are a thing of the past.

Our boilers (coffee and steam) include a **thermal sleeve** which reduces the machine's consumption by up to 35%.



# **5. STAINLESS STEEL**: A REMARKABLE MATERIAL

## Energy & Efficient

We guarantee a saving 50% compared to a single boiler traditional coffee machine.



## Mechanical resistance

The mechanical resistance of copper is almost nil. Stainless steel has a high mechanical resistance.

## Anti-limescale

Stainless steel is the ideal material to avoid the build-up of lime scale deposits. Filter holder after 115,000 services (35° water hardness) Lime adheres to the brass.



## 100% FOOD-SAFE

Its offers optimal corrosion resistance. It is an excellent choice from a hygiene point of view.

#### EN16889

NICKEL (NI) <0.14 MG/KG LEAD (PB) <0.01 MG/KG

ascaso



# STAINLESS STEEL: A REMARKABLE MATERIAL

## Energy & Efficient

We guarantee a saving 50% compared to a single boiler traditional coffee machine.

1. Use of stainless steel (much more stable than copper).



- 2. The Multi-Group System means that power is only used by the part of the machine in use at any time.
  - 1. Use of electronically controlled thermodynamic **coffee groups** (instead of boilers or systems with repeatedly heated water). Focused on conserving energy by heating the extraction water only. Each group can be turned off or on independently. If the group is turned off, it **reaches operating temperature in 1 minute**.
  - 2. The **steam boiler heating element** only operates when necessary and only for as long as required. It allows 'smart' control, with a much lower energy consumption than other systems on the market.
- 3. PID Control in all the coffee groups and the steam boiler. All the boilers or groups are controlled by a PID system, featuring electronic thermostats that are much more precise and act much faster than the traditional mechanical pressure gauge system.

**Electronic temperature management**. Computer software and high-precision sensors that manage the system automatically.

**4. Thermal lagging** made from high-tech material for coffee and steam boilers. Thermal lagging notably increases the quality of the coffee machine and the energy-efficient. Unit is thermally insulated from the rest of the machine.



# 6. HIGH-QUALITYCOMPONENTS



Proton pump. Stainless steel heating elements.



**R.P.M. motors**. High quality and power. (150W-1gr / 165W-2gr / 265W-3gr). Internal.



High-quality electronic components.



**3 ways solenoid ODE** Made of unleaded brass + stainless steel AISI316.



Gicar flowmeter (protected).





# ERGONOMICS



# DOUBLE DISPLAY PER GROUP





#### **Display 1**

- Independent electronic temperature control for the coffee group (PID). On/Off per group.
- Independent electronic temperature control for the steam boiler (PID). Independent On/Off.
- Counter (number of coffees, total and partial).
- Programmable pre-infusion (0 to 5 seconds). Precision 0,1 seconds. All selections adjustables.
- Pid parameters control (only technicians).
- Mutiple Alarms display.

#### **Display 2**

Coffee dose timer.



# 8. EASY TOREPAIR

The machine has been designed primarily from the point of view of the barista, but we also took the technician's perspective very much into account.

This is a nice product to repair! It is easy to dismantle with standard tools.

It has very few screws and the components are easily accessible. There is plenty of space to carry out repairs with complete assurance.

Good design presupposes that the product can be dismantled and repaired with ease. The idea is that it will last for years and years.

It is a matter of quality, productivity and also sustainability.

We have worked on this component by component.

**Easy access.** By just taking out a few screws you have access to all the components: Solenoid valves, heating elements... everything inside the machine.

Electronic components protected and insulated. Easy access for repairs.

Flexible: It can be connected single or three phase.



# 9.





1GR Black&Wood



### BARISTA T PLUS MODELS







2GR White&Wood







**ASCASO** BARCELONA

# 9.







### **BARISTA T ONE MODELS**















## BARISTA T ZEROMODELS



2GR Black



2GR Black&Wood



2GR White&Wood



# Customize your Barista T!

Play with the **new configurator** for the Barista T and share your design.





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## Main features

- Multi Group technology (on/off by group). Professional Thermodynamic Groups.
- Independent steam boiler. Stainless steel Aisi 316. Extremely sturdy. Large capacity.
- Independent and regulable electronic temperature control for each group.
- External Pid control (0,1°C) for each group and steam boiler.
- External timer for each group.
- Digital Display in each group. Multiple functions. Total control.
- Thermal lagging on steam boiler and groups.
- Thermal stability (+/- 0.5°C).
- Dynamic preheating (coffee groups).
- Energy efficient (-50%).
- High performance volumetric pump. Constant pressure even after a prolonged and simultaneous use of more groups
- Powerful steamer (10 mm anti-lime scale tube. Stainless Steel. Cool touch).
- High-precision filters in AISI 304 stainless steel.
- Active cup warmer. (Plus model)
- Designed for baristas: joystick steam controls, LED in work area, 5 volume selections, Pid controls...
- Different colours and customization options.



## **12.** TECHNICAL DATA

I LOI INIOAL DATA	Zero		One			Plus	
	2GR	1GR	2GR	3GR	1GR	2GR	3GR
W/h/d dimensions (mm)	700/475/535	440/450/540	700/475/535	920/475/535	440/450/540	700/475/535	920/475/535
Boiler power (230 v)	3500W 50-60Hz	1200W 50-60Hz	3500W 50-60Hz	3500W 50-60Hz	1200W 50-60Hz	3500W 50-60Hz	3500W 50-60Hz
Coffee group power (w)	1000 x 2	1000	1000 x 2	1000 x 3	1000	1000 x 2	1000 x 3
Weight (kg)	71	40	71	93	40	71	93
Steam boiler capacity (I)	8	5	8	8	5	8	8
Steam	2	1	2	2	1	2	2
Water	1	1	1	1	1	1	1
Dynamic pre-heating	•	•	•	•	•	•	•
Adjustable feet	•	•	•	•	•	•	•
Pump/boiler pressure double gauge	•	٠	٠	٠	•	•	•
Rotary pump motor (2001)	•	٠	٠	٠	•	٠	•
Filter holder 1 coffee/2 coffees	1/2	1/1	1/2	1/3	1/1	1/2	1/3
Electronic autolevel	•	•	•	•	•	•	•
Boiler drain valve	•	٠	٠	٠	•	٠	•
Empty valve/safety valve	•	٠	٠	٠	•	٠	•
Volumetric dosing	•	٠	٠	٠	•	•	•
Barista lights	•	٠	٠	٠	•	٠	•
Heating element & rotary pump stainless	•	٠	٠	٠	•	٠	•
Coffee temperature pid control (0,1°c precision)	1°C	•	٠	٠	•	•	•
Steam temperature pid control (1°c precision)	No. By Sirai	•	•	•	•	•	•
Digital multifunction display		•	•	•	•	•	•
Pre-infusion	Ajustable On/Off + 4 sec.	100% ajustable (0,1s precisión)					
Group extra heating element		•	•	•	•	•	•
Coffee group insolation		•	•	•	•	•	•
Hot water with solenoid			•	•	•	•	•
Steam boiler insulation					•	•	•
Joy-stick taps					•	٠	٠
Water temperature control (fixed)					٠	٠	٠
Safety switch per group					٠	٠	٠
Active cupwarmer					•	•	•
Wood accessories					•	•	٠
Chromed foots. Great thickness					•	•	•





# Barista T

## T Technology. Sustainable technology.





## Certifications Thermal Stability: E61 - T Tech - Saturated Group Tech



REPETEABILITY OF THE WORK CYCLE	3,84
THERMAL STABILITY OF THE MACHINE	1,38

## Certifications Thermal Stability: E61 - T Tech - Saturated Group Tech



REPETEABILITY OF THE WORK CYCLE	0,95
THERMAL STABILITY OF THE MACHINE	0,52

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14.

## Certifications Thermal Stability: E61 - T Tech - Saturated Group Tech

14.



REPETEABILITY OF THE WORK CYCLE	0,41
THERMAL STABILITY OF THE MACHINE	0,35



## Certifications Energy Efficiency: E61 - T Tech - Saturated Group Tech





# tradition & future

#### Since 1962 in the espresso world

Endeavour, determination, passion and a love of work. These have been our values for over 57 years. Today, each and every one of the 90 people who work in this firm does so with the same will and enthusiasm.

#### www.ascaso.com

**ASCASO** BARCELONA