THE ART OF PRODUCING ITALIAN COFFEE MACHINES

With Doge, the Grimac Group intends to give new life to a historic brand linked to the world of espresso. An important name historically and geographically related to the routes of coffee, its transformation and its serving in the most historic and well-known Venetian cafes. Doge represents for the Grimac group the link between history, contemporary and projection towards the future, through sharing of objectives tied to concrete and tangible aspects such as research, innovation and sustainability, environmental and social. All machines are designed to minimize the use of plastic materials and to allow easy and fast maintenance of the internal components of the machines in a philosophy of environmental sustainability based on real elements such as the use of sustainable materials and attention to the longevity of the product.

Quattro series

Quattro is a professional machine that offers the market a new architecture of coffee machine reinterpreting two classic ideas, the machine with open groups and the covered groups, both strongly characterizing the entire panorama of the current espresso coffee machines. The architecture of Quattro offers the advantages of the current machines with covered groups (use of displays and keyboards on top of the group) with the charm of open group machines (visible mechanics). Thanks to its new architecture, Quattro is a light weighted practical machine on the counter that allows easy insertion of the filter-holder while maintaining a large control panel above the group.

In Quattro, the use of plastic components is minimised, giving space to steel in glossy, scotch brite and painted finishes.

The front of the Quattro is kept uncovered around the area occupied by the steamwands whereas keyboards and displays cover the areas dedicated to the groups. This distribution of space gives the machine lightness and improves its ease to use.

Clean lines, quality and attention to detail, predominant use of noble materials such as steel and easy repair of all components, make Quattro a timeless machine.
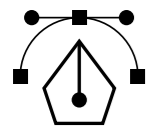
The machine's architecture, linear in shape but unique in geometry, makes Quattro a recognizable and distinctive machine on the market.
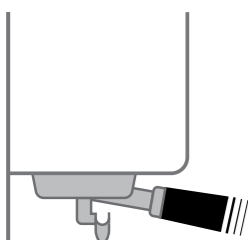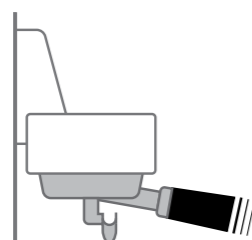

Quattro

A silent revolution

NEW ARCHITECTURE

The semi-covered architecture of Quattro combines all the advantages of traditional machines with open and covered groups.
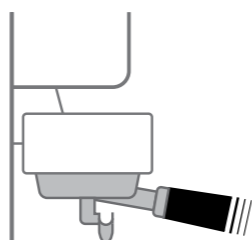
The new and spacious management interface combines ergonomics of use of the interface with the gestures of the bartender.

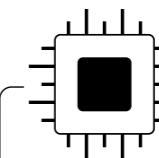COVERED GROUPS   OPENED GROUPS   **QUATTRO**

ECO

ENERGY SAVING

The traditional 2-group machines with 3.4 kW heating element on the market maintain a boiler pressure between 0.8 and 1 bar. To maintain this situation they activate the resistance about 30 times per hour, for an average duration of 18 minutes, with a feed projection of the resistance of 3.6 hours,

equal to a consumption of 12.240 kW/h, every 24 hours.

Thanks to its technologies Quattro changes the paradigm, revolutionizes the schemes and leads to considerable energy savings.
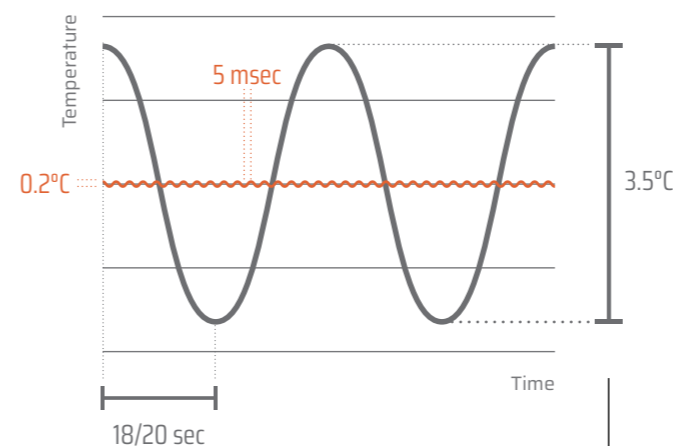
Quattro

FASTER PROCESSORS

The use of very fast processors and a very high precision pressure transducer allows to increase the number of readings (with a dynamic response of less than 5 ms) and to have a greater accuracy in the reading of pressure variations (reading accuracy of 0,01 bar). These characteristics allow to have stability and thermal capacities much higher than other machines with insulated boiler's circulation with traditional groups.
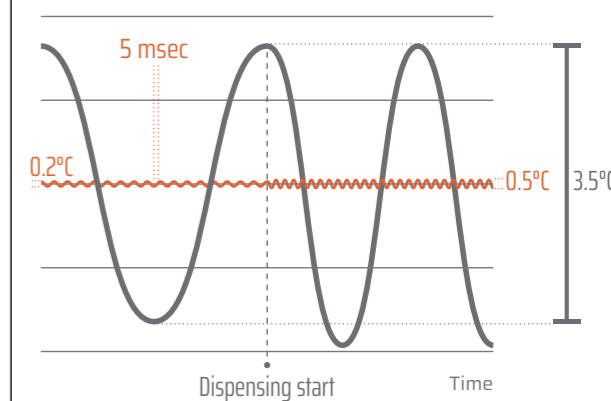
Thermal stability with machine in stand-by

In the maintenance phase, Quattro limits the thermal variations of the water in the boiler by 0.2°C (compared to 3.5°C of the most common traditional machines).

Temperature

5 msec

0.2°C   3.5°C

Time

18/20 sec

— Precision pressure switch of Quattro.
— Temperature control with normal pressure switches.

Thermal capacity with machine under stress

Thanks to the increased speed of dynamic reaction to pressure changes in the boiler (given by speed and accuracy of reading) Quattro maximizes the thermal capacity even during the intensive use phases of the machine by containing the thermal variations of the water in the boiler within 0.5°C.

5 msec

0.2°C   0.5°C   3.5°C
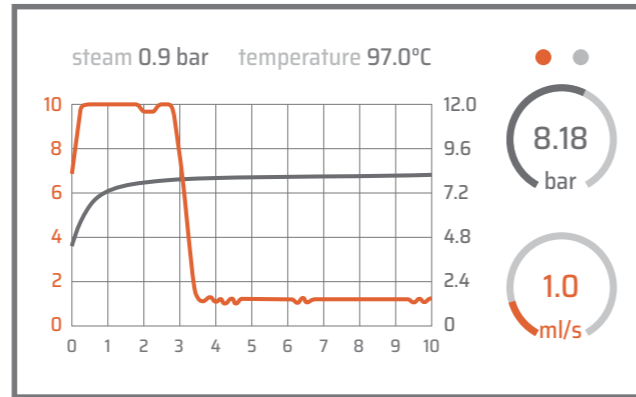
Dispensing start   Time

— Quattro maintains consistent thermal stability under both normal and intensive use conditions due to its speed and accuracy in reading and subsequent data processing.
— Temperature control with traditional coffee machines under intensive use.

Conventional machines have lower accuracy of pressure readings in the boiler and fewer readings over time, so they have a large thermal fluctuation in the boiler during heavy use phases.
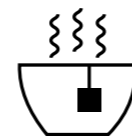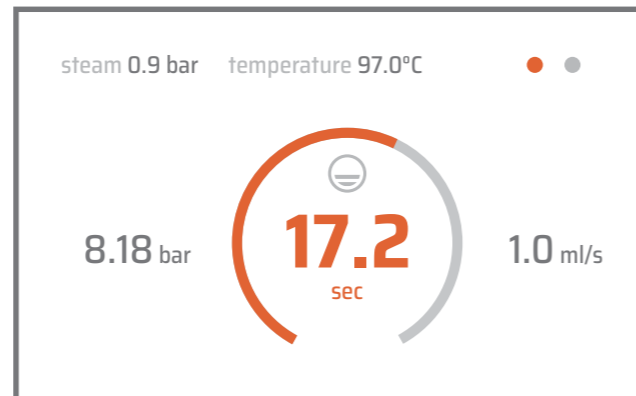
EXTRACTION CONTROL

On a large 4.3" TFT colour display you can real-time control the coffee extraction of each group of the machine.

steam **0.9 bar**   temperature **97.0ºC**

8.18
bar

1.0
ml/s

Through a flow-pressure graph it is possible to display the flow of extraction (ml), the extraction's pressure (bar) and the temperature of the group (ºC).

Alternatively, the extraction can be displayed by monitoring the time, pressure and flow of extraction.

steam **0.9 bar**   temperature **97.0ºC**

8.18 bar   **17.2**
sec   **1.0** ml/s

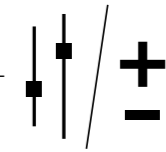## QUALITY AND TEMPERATURE CONTROL OF WATER FOR SERVICES

Most insulated boiler's circulation coffee machines use water coming directly from the boiler, too hot for the infusions and organoleptically compromised for its statics.

Quattro uses fresh water from the water supply, mixed with small amounts of water and steam from the boiler allowing the barista to quickly vary the water temperature and providing quality hot water.

PROGRAMMING OF THE PREINFUSION

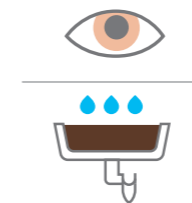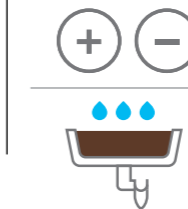Quattro allows the programming of preinfusion timing in parametric or simulated mode.

Simulated

By performing test extraction it is possible to define the timings, and therefore the quantities of water, of the preinfusion.

Parametric

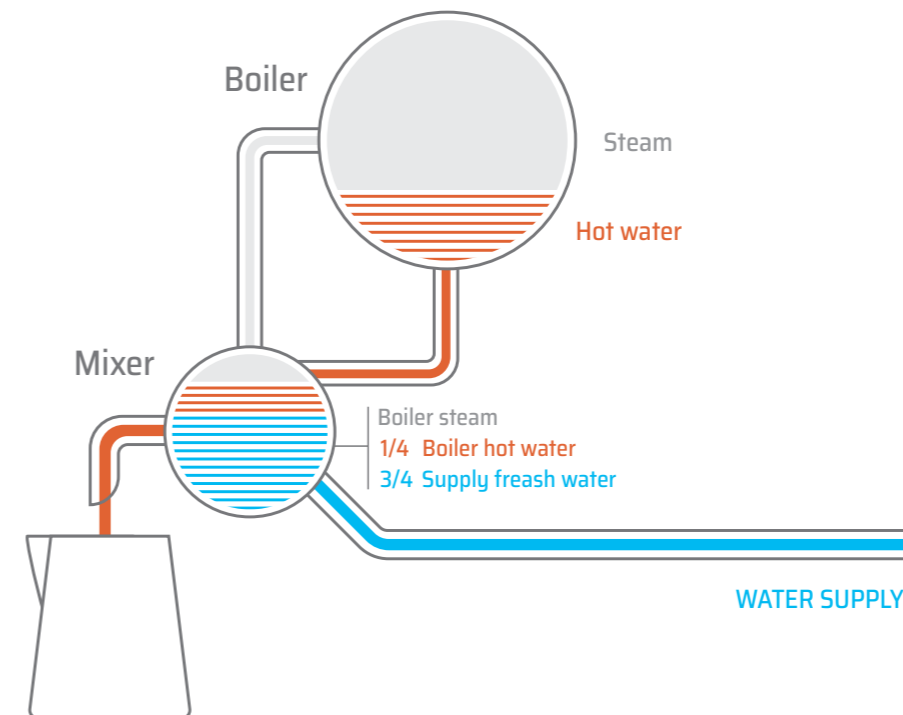You can set the preinfusion time for each dose type.

+ −

VOLUME PROGRAMMING

Quattro allows the programming of the volume of doses for each individual group in parametric or simulated mode.

Parametric

You can set the volume in ml for each dose type.

+ −

Simulated

Performing test extractions until the final ones are saved.

Boiler

Steam

Hot water

Mixer

Boiler steam
1/4 Boiler hot water
3/4 Supply freash water

WATER SUPPLY

RECYCLABLE MATERIALS
Packaging completely in cardboard.

EASY SERVICE
Easy access to internal components for quick and easy technical assistance. System optimisation, both electronic and hydraulic.
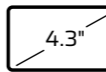
SYSTEM DIAGNOSTICS
At each start of the coffee machine, the software performs, through a specially developed algorithm, a complete analysis of the efficiency of the internal systems of the machine.
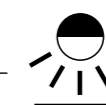
CUP WARMER
Dedicated heating element, adjustable in temperature, to maintain the cups in optimal conditions, always ready to use.

COLOURING OF THE SELECTION BUTTONS
Through a specific software system, it is possible to change the colouring of the selection keys.

MULTIFUNCTION TFT 4,3" DISPLAY
High-resolution graphic colour display for navigation within the various configuration and programming menus, machine status analysis and graphical visualizations to monitor coffee extractions.
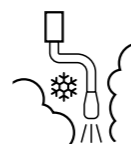
WORKSPACE LEDS
It is possible to vary the lighting intensity of the workspace that allows to work effectively in any ambient lighting condition.
Optional rear panel lighting.

ENERGY SAVING SYSTEM
Through the insulation of the boiler and the stand-by functions, both manual and automatic, the automatic switching on and off of the machine, with the possibility of setting one or more days of complete shutdown, a considerable energy saving is achieved.

DOSE PROGRAMMING
The software offers the possibility to program the doses according to the desired volume for each selection so that the user can set, and/or modify, the millilitres of water used for each selection.

ELECTRONIC BOILER WATER AUTO-LEVEL
An electronically controlled level probe is used to maintain the correct volume of water in the boiler automatically.
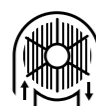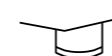
"COOL TOUCH" STAINLESS STEEL STEAM WANDS
Steam wands that do not cause burns even in conditions of prolonged use. The steam wands are also equipped with steam nozzles for "Latte Art" high performances.
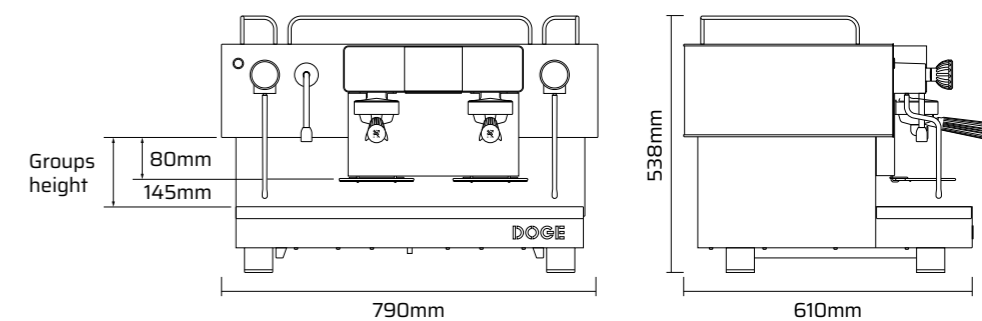
GROUP FLUSHING (PURGE)
Simply pressing the "start/stop" button, and you can set the PURGE function, to obtain the group flushing, before each extraction.

BREWING GROUP
Group type GR61 in chromed brass, equipped with hydraulic pre-infusion; ensures maximum reliability and performance for professional use.

BOILER'S PRESSURE MANAGEMENT
Static relays for steam management in the boiler. An electronic pressure transducer is used to regulate the pressure of the boiler with maximum precision and reactivity.

HOT WATER
The standard equipment of the machine allows to obtain, by mixing with cold water, different temperatures depending on the needs, for tea and herbal teas. Instant mixing of fresh water-hot water and steam optimises the organoleptic qualities of hot water.

STAINLESS STEEL FEET
The stainless steel feet, adjustable in height, are necessary to ensure the flatness of the machine.

VOLUMETRIC PUMP
and motor with high performance and reliability, to maintain the constant pressure of delivery even with prolonged and simultaneous use of multiple functions and groups.

Groups height: 80mm / 145mm

790mm

538mm

610mm

Groups	Model	Control	Supply	Resistance	Voltage	Boiler	Dimensions	Weight	Logo and details	Body and front components	Colours
2	Quattro	Electronic	Water supply	3500W	220-240V 380-415V	12 L	L 790 mm W 610 mm H 538 mm	75 kg	Matte black	Brushed steel	Jet Black Gloss RAL9005