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Magister Sistema Caffè s.r.l.

20010 Casorezzo (Mi) – Via San cristoforo 31/33

Ph. 02 9010833 – Fax 02 9010854

e-mail : magister@magistersistemacaffe.it

internet : www.magistersistemacaffe.it

Magister

Sistema Caffè

PROFESSIONAL COFFEE MACHINES

Installation,
use and maintenance
handbook



Dear Customer,

First of all, thank you for choosing us.

We are confident that the product you have purchased will come up to all your expectations-just as all our other products are designed to do. The product that you are about to use is the outcome of painstaking research and tests, carried out by MAGISTER to make quite sure that the equipment we have supplied you with is the most functional, safe, and satisfactory of its kind to be found on the market, as regards both its design and its efficiency. The instruction manual for its correct use and maintenance will help you to get best possible service out of your machine. We trust you will find our explanations clear and we may continue, in the future, to count you among our esteemed customers.

Reserved Property.

Partial or total reproduction of this manual is forbidden without written authorisation of Magister Sistema Caffè s.r.l. Magister Sistema Caffè s.r.l. reserve the right to change the contents and the information contained in this manual at any time without prior modification.

A	E	C	D	A Manufacturer	F Element power
				B Model	G Serial number
				C Power	H 2002/96/CE standard
				D Electrical frequency	I Boiler capacity
				E Motor power	L Boiler pressure
				M Water inlet pressure	
G	L	B	M	F	H
				I	

Typographic conventions

V Please read carefully the instructions marked with this symbol to prevent damages to the machine or severe injuries.

This handbook is an essential part of the product and must be delivered to the user. For a proper use of the equipment, please read carefully the manual and follow the instructions hereby listed. Please keep this manual for future reference.

1. GENERAL SAFETY RULES

Keep the packed machine in a dry place, not exposed to atmospheric agents; room temperature must not go below 5°C and over 50°C. Do not stack more than three items of the same kind. Do not place heavy items on the packaging.

The packing elements (plastic bags, expanded polystyrene, nails, cardboard, etc.) must not be left within reach of children, as they are potential sources or danger.

Make sure that the machine features are suitable for the electric system. Do not use adaptors, multiple sockets and/or cord extensions. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. Should doubt arise, have the supply system checked by qualified personnel: the electric system must be equipped with:

- efficient earth socket; - suitable wiring section in relation to the power absorption; - efficient circuit breaker.

Place the machine on a water-repellent surface (laminated, steel, ceramic, etc...), on horizontal position in a place where room temperature never goes below 5°C. KEEP WARM.

For a proper use, make sure to keep the machine in a location where temperature is not lower than 5°C and higher than 50°C. When operating, the machine cannot freeze because of the heating element.

The machine must not be installed in locations where water jets can be used.

In case of very low temperatures/freezing do not turn the machine on. Do have a technician check for leakage or breakage because of ice.

The machine must only be installed in locations where only authorized personnel can access, operate or maintain the appliance. The appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction. Children must be supervised not to play with the appliance.

Inlet pressure must not exceed 0.6 MPa (6 bar)

In an emergency, such as event of fire, anomalous noise, overheating, etc... unplug the machine immediately, and close water taps.

Use only recommended OEM components. This will guarantee a proper and safe functioning of the equipment.

Do not expose the equipment to atmospheric agents or place it in wet environments such as bathrooms, etc.

Do not obstruct suction or dispersion grills, do not cover the cup warmer with cloths.

IF THE MACHINE IS LEFT UNATTENDED, MAKE SURE THAT WATER SUPPLY IS INTERRUPTED (CLOSE THE WATER TAP)

V *The manufacturer declines every responsibility for damages to people or things as a consequence of improper, wrong or unreasonable use by unauthorised personnel.*

2. MACHINES DESCRIPTION

Our machines have been designed to prepare espresso and hot drinks.

The working principle consists in an inbuilt volumetric pump feeding a boiler in which water is heated. By acting on the proper controls, water is pumped to the dispensers as hot water or steam, according to the requirements.

The structure consists in an iron frame whereto mechanical and electrical components are fitted. Everything is closed with covering panels.

The front side of the machine, where all the controls and dispensers are placed, is where all the operations take place.

On the top part of the machine there is a cup warming surface.

Electrical safety devices.

The electrical safety devices are:

- low tension touch pad controls (5Volt);
- Thermal protection on the pump's motor;
- Thermal switch on the heating element;

Mechanical protections.

The mechanical protections are:

- Complete panel protection on heat sensitive parts and on hot water/ steam production circuit;
- Working side with drip tray;
- Controls over the groups on a safe place;
- Expansion valve on piping and over pressure valve on boilers;
- Relief valve on piping to prevent backflow.

Vibrations.

The machines are equipped with anti-vibration rubber feet. In normal working conditions they do not generate dangerous vibrations for the operator and the environment.

Noise.

In the working area the noise level does not normally exceed 70dB(A).

3. PROPER USE.

The machines have been designed, assembled and produced to prepare espresso and hot drinks (tea, cappuccino, etc..). Every other use has to be consider as improper and therefore dangerous.

V *The manufacturer declines every responsibility for damages to people or things as a consequence of improper, wrong or unreasonable use.*

The user must always refer to the instructions for use and maintenance contained in this manual.

In case doubt or anomalous functioning, stop the machine, refrain from repairing the machine and address the technical assistance.

The operator must not:

touch brewing areas and hot surfaces; leave containers with liquids on the machine; put his/ her hands under the spouts during brewing; assist or move the machine while it is plugged in and hot; wash the machines with a water jet; dip totally or partially the machine into water; expose the machine to heat sources; use the machine when the cord is damaged; touch the machine with wet or damp hands and/ or feet; use the machine when people of minor age are nearby; let untrained or minors operate the machine; use the machine if it is wet or very damp.

Use contraindications.

The machines are only suitable for food related use; it is therefore forbidden to use different liquids or substances, to warm up liquids or to fill the handles with substances that may damage or pollute the groups.

V *The manufacturer declines every responsibility for damages to people or things as a consequence of improper, wrong or unreasonable use by unauthorised personnel.*

4. TRANSPORT

Package

The machine is supplied in a package made with strong carton and protective foam.

- ✓** *Handle the machine keeping the package in vertical position, do not turn it upside down or lay it on one side, carefully avoid knocks and exposure to atmospheric agents.*

Preliminary check on receipt.

Make sure that the machine you received is the one listed on the transport note, including any accessories. Make sure it has not been damaged during transport, and if so, immediately address the transport company and our Customer care service.

- ✓** *The packing elements (plastic bags, expanded polystyrene, nails, cardboard, etc.) must not be left within reach of children, as they are potential sources or danger. Do not dispose of the packing materials in the environment, but refer to the institutions in charge.*

5. INSTALLATION

- ✓** *The appliance must not be installed in areas where water jets can be used.*
- ✓** *If the machine is wet or very damp, do not install it until it will be completely dry. It is however necessary to ask the technician to perform a preliminary check, to make sure that the electric components have not been damaged.*

The place where the machine will be placed must be flat, dry, smooth, solid, stable and approximately 85cm high. The machines are equipped with rubber feet.

It is not necessary to fasten the machine to the working surface or to use any device to reduce vibrations.

It is advisable to leave some free space around the machine to make use and assistance easier.

It is also advisable to leave some space on one side of the machine to place the coffee grinder (please refer to the related documents).

It is advisable to use the machine with a water softener, to be installed by a qualified technician in accordance to the existing laws; please refer to the related technical documents.

Ask the technician to prepare a knock-out draw

6. CONNECTIONS TO BE MADE BY THE CUSTOMER

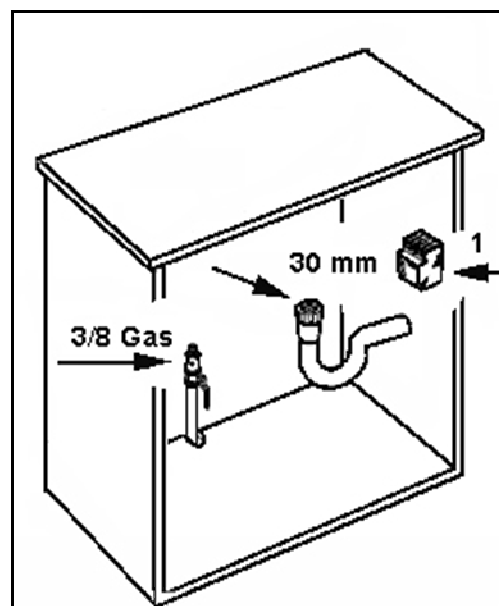
- ✓** *The following operations have to be performed authorized qualified personnel in compliance to the existing laws.*

Hydraulic connections

The connections must be placed nearby the machine. Use a drain hose with an inner diameter of at least 30 mm with an easy-to-inspect siphon.

Water supply hose with 3/8" gas - tap and anti backflow valve.

Inlet pressure must not exceed 0.6 MPa (6 bar)



Power supply

The machine is supplied according to the required electric features.

Make sure that the machine features are suitable for the electric system.

The power cord is to be connected directly to the related socket, in compliance to the local laws. Make sure that the ground socket complies with local safety laws.

The earth socket and the system against lightning has to be compulsory developed in compliance to the existing laws.

Use only proper cords, with earth wire.

For 3-phase supply use a 5-end wire (3 phases + neutral + earth).

Make sure that the power cord is connected to an automatic differential switch, with magnetic connections in accordance to the values printed on the machine's label..

The contacts must have a span of at least 3 mm.

Please note that each and every machine will have to be connected to its own safety devices.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard

V *The manufacturer declines every responsibility for damages to people or things as a consequence of improper, wrong or unreasonable use*

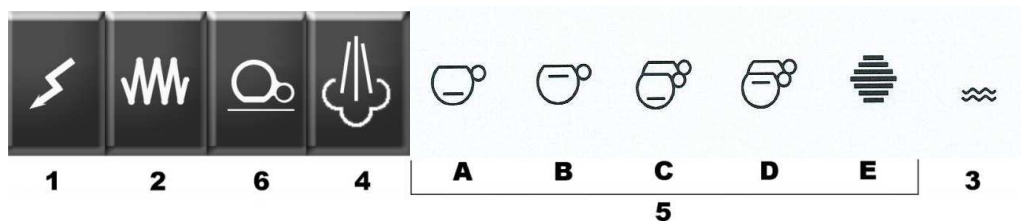
7. PLACING

Place the machine on a horizontal surface.

Before connecting the machine, carefully rinse the hydraulic hoses:

- Open the mains tap completely and let water flow for a few minutes.
- Connect the inlet hose (Pressure 2,5BAR).
- Plug in the machine;
- Carefully rinse the machine's piping system:
- Open the mains tap completely;

8. STARTING THE MACHINE



Symbols and controls use

- 1 MAIN SWITCH** 2-position switch with LED. By pressing the switch (LED on) the machine is powered up and the pump fills the boiler in with water
- 2 HEATING ELEMENT SWITCH.** By pressing the switch (LED on) the heating element into the boiler is powered up.
- 3 HOT WATER SWITCH.** Switch with LED; if pressed hot water is dispensed.
HOT WATER BUTTON. Press to get the pre-set quantity of hot water.
- 4 CUP WARMER SWITCH** (if available). Switch with LED. If pressed (LED on) the cup warmer is activated.
- 5 COFFEE SWITCH.** Switch with LED. If pressed (LED on) coffee is brewed.
COFFEE BUTTON on touch pad.
A, B C, D KEYS. By pressing one of the buttons coffee is brewed and the related LED turns on. The LED turns off as the pre-set quantity is reached.
E KEY. Continuous delivery. By pressing this button coffee is brewed; the dispensing will be interrupted when the button will be newly pressed.
- 6 STEAM VALVE.** Turn the knob anticlockwise to open the valve, turn the knob clockwise to close it.
 - **GREEN LEVEL LAMP (if available).** Indicates that water into the boiler has reached the proper level .
 - **BOILER PRESSURE GAUGE.** Simple single-scale gauge for an immediate check of the boiler pressure.
 - **BREWING GROUP**
 - **PUMP PRESSURE GAUGE** Single scale pressure gauge for an easy check of the pump pressure.
 - **ORANGE LEVEL LAMP (if available).** This lamp indicates that the water level has gone below the optimal level and the self level device has started

8.1 STARTING THE MACHINE

1. Open up the water mains tap.
2. Press the main switch (1) to start the pump, and fill the boiler.
3. Press the coffee brewing switch on each group and press it again only after ensuring that water is actually flowing through the brewing group.
4. Press the element switch (2). Wait for the boiler to be at the right operational pressure, and for the machine to reach the optimal thermic balance.

9. OPERATING THE MACHINE

The machines are equipped with an upper tray where cups are stored and warmed up before being used. This is very important to get a good coffee, as a warm cup prevents coffee from cooling down too quickly.

9.1 How to brew coffee.

Remove the handle from the brewing group, empty it on the drawer by knocking it upside down (be careful, not to damage the filter basket).

Use a single or double filter according to your needs.

Fill in the filter with ground coffee, then slightly level and press coffee using a tamper.

Remove from the filter's edge any traces of ground coffee .

V *If some ground coffee is left on the filter's edge, the filter itself will not perfectly adhere to the group seal, thus leading to water and coffee leakage.*

Lock properly the handle to the group seal.

Place the cups below the spouts. Start brewing.

Do not remove the handle from the group until the following brewing.

V *While coffee is brewed, some parts of the machine will be extremely hot, with particular reference to the brewing groups, steam arms and water tap. Never put hands below the groups, the steam wands and the water taps when they are operating.*

To get a good coffee, make sure that the grinder's settings lead to a brewing time of approximately 25/ 30 seconds. If grinding is too coarse, coffee will be light, bright and with few cream, while a too fine grinding will lead to dark coffees with no cream at all. It is also important that coffee is fresh and evenly ground (to be obtained will well-kept grinder burrs) and that the dosage is correct (approximately 6 grams each coffee).

It is advisable to grind only the required quantity, as round coffee tends to lose quickly its aroma and the fat components tend to become rancid.

9.2 How to prepare a cappuccino

Brew an espresso into a cappuccino cup.

Fill with milk half of a tall jug.

Place the jug under a steam arm, so that the steam nozzle touches the bottom of the jug itself.

Open up the steam valve and move down the jug until that the steam nozzle will be almost on the milk surface.

Keep moving the jug up and down to froth milk (foamy cream).

Turn the steam valve close and pour milk into the cup.

V *Once the milk has been frothed, immediately wipe the wand with a cloth or a sponge to prevent milk from encrusting the wand. Be careful, as the wand is very hot and may lead to severe burning.*

9.3 How to warm up a drink

Dip the steam wand into the liquid to be warmed up.

Gradually turn the steam valve open. The drink will be warmed up by steam coming out from the steam nozzle up to the required temperature.

Close the steam wand once the desired temperature has been reached.



V *Immediately wipe the wand with a cloth or a sponge to prevent warm liquid encrusting the wand. Be careful, as the wand is very hot and may lead to severe burning.*

9.4 How to prepare tea, camomile tea, etc.

Place a jug under the hot water dispenser, then press the water delivery button. When the required quantity will be dispensed, press the button again. The self level device will fill in the boiler.

10. MAINTENANCE

All maintenance operations must be performed while the machine is off and cold, and making sure that it is unplugged. Some specific operations require the machine to be working.

V *Never use metal or abrasive tools such as steel wool, steel brushes, needles, etc..., or generic detergents (alcohol, solvent and so on). Where required, use specific detergents for coffee machines, available by most of the technical service centres.*

The appliance must not be washed with a water jet or with high pressure water and must not be dipped, not even partially, into water

10.1 Daily maintenance

Use a clean cloth or sponge having no threads (cotton would be ideal).

Carefully clean the body following the pattern of the satin finish.

Disassemble handles and filters, remove any traces of coffee and rinse them with hot water to remove the fat substances.

Clean the showers and the group seals.

Clean the steam wands with hot water, check that the nozzle holes are clean from crusts (if they have to be cleaned, be careful not to change their shape).

WARNING: *If the machine has not brewed coffee for more than 8 hours, clean the internal components before operating the machine, as listed here below:*

V **GROUPS:** *Fit the empty handles under the groups. Brew for one minute.*

HOT WATER: *deliver hot water for approximately one minute.*

STEAM: *activate the steam from each steam valve for approximately one minute.*

10.2 Weekly maintenance

Operations to be performed with machine under pressure. Fit the supplied blind filter into the handle, fill in a spoonful of detergent for coffee machines then fit the handle under the group to be cleaned. Press the brewing switch on the desired group. Start and stop the delivery repeatedly. Remove the handle, take away the blind filter and fit in a normal one, fit the handle under the group and activate the brewing a few times to rinse the group. Brew a coffee to remove bad taste.

10.3 Filter cleaning

Fill a heat-resistant container with at least half a litre of boiling water and add three or four spoonfuls of detergent. Remove the filters and dip them together with the handles into the liquid solution for at least 20/ 30 minutes. Remove the components from the container and rinse them with fresh water. Remove the cup tray and the drip tray and clean them. Check the drain bowl as well and clean it using a coffee spoon, to remove any traces of ground coffee.

WARNING: coffee machines must be fed with soft water, and consequently limestone deposits are very rare. The water softener is not supplied with the machine.

V **If the machine needs to be descaled, this operation must be carried out in a specialized workshop (this cannot be performed on site, where the machine is installed and operated).**

11. PUTTING THE MACHINE OUT OF SERVICE

• **Temporarily:** Clean and maintain the machine. Wrap up the cord and paste it on the machine with some tape. Cover the machine and store on a dry place, away from atmospheric agents and out of reach (especially of minors and untrained people). Address qualified personnel to disconnect the machine from the mains.

• **Definitively:** Further to the operations listed above, cut the cord, pack up the machine in a carton box, and deliver it to an authorized centre for disposal of special waste or collection of used equipment.

12. TROUBLE SHOOTING

Direct interventions to be performed by the user before contacting the technical assistance service. To avoid unnecessary costs, check the list here below:

- A) Cold machine, not brewing - (ELECTRICAL HEATING)
 - Main switch off (1) – SWITCH ON
 - No power from the socket - CHECK
 - Room main switch cut off – CHECK
- B) Hot machine, not brewing
 - Either mains or softener tap closed - OPEN
 - No water from the mains – CHECK
- C) Self level device working continuously
 - Either mains or softener tap closed – OPEN
 - No water from the mains – CHECK
- D) No pressure in the boiler - (ELECTRICAL HEATING)
 - Element switched off – SWITCH ON
 - Thermic safety cut off – ask for a technician
- E) Leakage from the handle edge
 - Group seal dirty with coffee - CLEAN
 - Filter edge worn –REPLACE THE FILTER
- F) Coffee is brewed drop by drop
 - Filter holes clogged or handle holes dirty - CLEAN
 - Too fine grinding – MAKE COARSER
- G) Too fast brewing
 - Make the grinding finer
 - Too old coffee – CHANGE
- H) Leakage below the machine
 - Clogged shaft – CLEAN
 - Dirty drain bowl holes - CLEAN
- I) Irregular steam delivery
 - Check if the nozzle holes are clogged.