

MP

Operator's manual Page 2

Manufacturer of this appliance is S.P.M. Drink Systems S.p.A. – Via Panaro 2/b 41057 Spilamberto (MO)

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The descriptions and illustrations refer to the specific machine/plant in question. The manufacturer reserves the right to make any modifications he deems appropriate to series production at any time.

This manual:

it is an integral part of the supply and must be read carefully in order to use it correctly, in compliance with the essential safety requirements;

it is drawn up according to the provisions of the Machinery Directive 2006/42/EC and contains the technical information necessary to correctly carry out all the procedures in safe conditions;

it must be stored with care (protected in a transparent and watertight casing to prevent deterioration) and must accompany the machine throughout its life, including any change of ownership. In the event of loss or deterioration, a copy can be obtained by requesting the manufacturer, reporting the data on the identification plate

The manufacturer declines all responsibility for improper use of the machine/plant and/or for damage caused as a result of operations not covered in this manual.

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1. IMPORTANT WARNINGS AND ADVICE

This operator's and installation manual is an integral part of the appliance and should be kept for future consultation. Unless otherwise stated, this manual is intended for the operator (staff using the equipment on a daily basis) and maintainer (staff qualified for installation and/or maintenance). The parts of the manual addressed only to the maintainer will be highlighted accordingly. Carefully read the instructions contained in this manual before installing and using the appliance. This appliance has been designed for the production of slushes and similar products. Upon receipt of this appliance make sure that the identification code of the same corresponds to that ordered by you and appearing on all transport documents, namely:

- "appliance name" followed by the serial number. This appliance is intended solely for the use for which it was designed and the manufacturer cannot be held responsible for any damage due to improper use.

This appliance is not intended for use by children under 8 years old nor by persons with reduced physical, sensory or mental capabilities, nor those lacking experience and knowledge, unless they have been supervised or instructed concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance. Cleaning and sanitising cannot be carried out by children if not carefully supervised.

This appliance is not suitable for outdoor use nor for installation in places where jets of water can be used. This appliance is intended for professional use and must be installed in places where it can be inspected by qualified staff. Do not place inflammable gas cylinders near this appliance.

This appliance is designed for applications such as:

- Staff kitchen areas in shops, offices and other working environments
- Common areas in hotels, motels and other residential environments

Bed and breakfast, catering and similar applications

2. SUPPLIED WITH THE APPLIANCE

At the time it is opened, inside the packaging you will find the following items:

- This Operator's manual;
- Declaration of CE Conformity
- 1 tube of lubricant (vaseline);
- 1 drip tray;
- 1 brushes kit for easy cleaning.

3. ADVICE FOR TRANSPORT

To prevent the oil contained in the hermetic compressor draining into the cooling circuit, the device must be transported, stored and handled in the upright position, following the instructions on the packaging. If the appliance has been accidentally, or intentionally for reasons of transport, held in a non-vertical position it is necessary, before starting up, to keep it for about 3-4 hours in an upright position so that the oil returns to the compressor.

4. ADVICE FOR LIFTING

Each appliance is equipped with a special wooden pallet that allows it to be moved using the usual vehicles for handling and lifting.

Attention A Never lift the appliance alone, always seek the help of another operator.

To avoid damage to the appliance, loading and unloading operations should be carried out with particular care. It is possible to lift the appliance with forklifts, motorised or manual, placing the forks under the appliance.

The following operations should always be avoided:

- overturning the appliance

- dragging the appliance with ropes or similar means

- lifting the appliance with slings or ropes

- shaking or jolting the appliance and its packaging

The appliance must be stored in a dry place with temperatures from 0°C to 40°C. In the original packaging up to 2 appliances can be stacked on top of each other, taking care to maintain the vertical position, as shown by the arrows on the packaging.

5. TECHNICAL SPECIFICATIONS

Technical and electrical characteristics of the appliance

All technical and electrical characteristics of the appliance are shown on the data plate inside the appliance.

The plate indicates:

- Model
- Serial number
- Electrical characteristics volts/Hz
- Max consumption watts
- Max current amps
- Weight kg

Ambient operating temperature for the appliance is between **75 and 97°F**.

The dimensions of the appliance are:

MP

- Height 80 cm
- Width 36 cm
- Depth 70 cm
- Weight 70 kg

MP1HC

- Height 86 cm.
- Width 54 cm.
- Depth 71 cm.
- Weight 86 kg.

MP2

- Height 86 cm.
- Width 54 cm.
- Depth 71 cm.
- Weight 101 kg.

<u>Noise</u>

A-weighted equivalent continuous sound pressure level is less than 70 dB.

In case of breakdown:

In most cases, technical problems can be resolved with minor interventions. We therefore recommend you to read this manual carefully before contacting the manufacturer or service centre.

<u>Disposal</u>

Important

The packaging must be kept out of the reach of children as it represents a potential safety/health hazard.

Important

For the sake of the environment, do not dispose of the packaging, but keep it so that you can reuse it if necessary (i.e. winter storage).



The **A** symbol means that the appliance cannot be disposed of as common waste. It must be handled in compliance with the provisions of European directive 2003/108/EC (Waste Electrical and Electronic Devices - WEEE) and the resulting national legislation, in order to prevent any potential damage to the environment and to avoid health risks. For correct disposal of the appliance, contact the store at which you bought the appliance or our after-sales service.







Fig. 2

6. POSITIONING

FOR MAINTENANCE STAFF ONLY Installation and subsequent maintenance operations must be carried out by staff qualified and trained in the use of the appliance in accordance with the regulations in force.

a) After removing the packaging, **preserve all parts of it for winter storage** and ensure the integrity of the appliance (fig. 1).

!IMPORTANT! The packaging must be kept out of the reach of children as it represents a potential safety/health hazard.

b) Place the appliance on a solid and flat surface leaving at least 8 inches of free space on all sides to allow for good ventilation (fig.2). Install the appliance in a dry area and avoid installing it near heat sources. **The ambient operating temperature should be between 75 and 97°F.**

c) Check that the mains voltage corresponds to that indicated on the data plate and the power available is appropriate for the requirements of the appliance.

Insert the plug into an earthed socket, avoiding multiple sockets.

FOR FURTHER PRECAUTIONS, READ THE "CONNECTING TO MAINS POWER SUPPLY" SECTION CAREFULLY.

d) The installation must be performed according to the manufacturer's instructions. Failure to comply with these instructions may impair operation of the appliance.

Important

Earthing is necessary and required by law. Before carrying out any cleaning or extraordinary maintenance be sure to disconnect the appliance from the mains by removing the power plug. In case of breakdown or malfunction switch off the appliance and unplug it.

7. CONNECTING TO MAINS POWER SUPPLY

FOR MAINTENANCE STAFF ONLY

Before inserting the plug into the power socket, as already explained in the previous section, it is necessary that you carefully read the following instructions for your own safety:

- Make sure the connection is made to a system with an effective earth as required by current safety standards (fig. 3). The manufacturer cannot be held responsible for any damage caused by failure to earth the system.

- Always check the electrical specifications on the data plate of each appliance which will always supersede those shown in this manual.

- It is essential, for proper and safe installation, to provide a socket controlled by a circuit breaker with contact opening distance equal to or greater than 3 mm, in accordance with applicable national safety regulations (fig. 3).

- Never use extension cables or multiple sockets.

- Make sure that the power lead is not crushed in any way along its full length.

- To remove the plug, having always first disconnected the main switch, grasp the plug and pull gently.

Important

IF THE POWER LEAD IS DAMAGED, IT MUST BE REPLACED BY THE MANUFACTURER OR BY ITS SERVICE CENTRE OR BY A SUITABLY-QUALIFIED PERSON IN ORDER TO AVOID HAZARDS.



Fig. 3

- If required by local regulations, it is possible to have the appliance permanently connected to electrical power supply, ref. National Electrical Code (NEC) and NFPA 70. If this is the case, it is necessary to remove the right side panel, disconnect the power cable from the machine wiring, remove it from the machine and replace it with the permanent cable by respecting the local codes.

8. START-UP PROCEDURES AND METHOD OF USE

!CAUTION!

THE MP RANGE IS SUPPLIED WITH A LOCK SCREW PLACED ON THE REAR PANEL, REMOVE THIS SCREW BEFORE STARTING THE EQUIPMENT (FIG.4) AND KEEP IT CAREFULLY SO THAT IT CAN BE RE-ASSEMBLED IN CASE OF NEXT SHIPMENTS.

!ATTENTION! BEFORE STARTING THE APPLIANCE, THE FIRST TIME, CARRY OUT THE CLEANING AND SANITISING PROCEDURES DESCRIBED IN CHAPTER 9.

- Dilute and mix the product in a separate container according to the manufacturer's instructions (see fig.4); never pour dry powder, crystals, or concentrate into a dry bowl.

A Caution A

Make sure that the mixture has a sugar content near the **12-14%**; a lower concentration could seriously damage the mixing parts, as well as the gear motors. **NEVER USE ONLY WATER.**

!ATTENTION!

Never use the appliance with unsuitable products different from the specific slush ones. Failure to observe this instruction may cause irreparable damage to components of the appliance or causing unexpected performances during the functioning.

- Pour the mix obtained into the upper tank (fig.6) and wait until it has drained into the freezing cylinder considering that the cylinder capacity is almost 8 litres (2.1 gallons) while that of the upper tank is about 10 litres (2.6 gallons) for the MP and MP2, about 20 (5.3 gallons) for the MP1HC.

- Reposition the lid on the tank, insert the plug and activate the equipment according to the desired mode.



Fig. 4



Fig. 5



Fig. 6

Revision 0



Control panel

MP1

E: three position main switch:



I/O: machine off



<u>Snoflake</u>: refrigeration system on



Wash: washing, refrigeration system off

F: refrigerating system mode selection



Granita: freezing mode



<u>Defrost</u>: night mode (stand-by)

D: upper tank low product level orange light.



Fig. 8a

MP1HC ed MP2

A: main switch (only in the MP1HC it also activates the rotation of the agitator).

B (MP2 only): right and left agitator rotation activation switch according to position.

C: refrigeration system management switch:



Wash

Wash: washing mode



CO (Cut Out): the lighting of one of the two red CO lights underlines the intervention of the safety pressure switch.

When the internal temperature of the machine exceeds the limit value set by the manufacturer, one of the two red CO lights turns on (fig.8b) and the operation of the refrigeration system is inhibited in order to avoid damaging the compressor.

The system automatically goes into "OFF" mode where the compressor is deactivated and only the agitators continue to operate in order to avoid the formation of ice blocks.

When this happens, it is necessary:

- Turn off all switches.
- Consider the conditions and related actions to be taken outlined in the troubleshooting guide.
- Press the manual reset button located under the machine near the right side (towards the rear).

D: upper tank low product level orange light.





Fig. 8b

- During the wash mode only the mixing unit rotation will be activated while the refrigerating system will be off.

- During the freeze mode, the machine will work in order to produce slush at the set consistency; during the defrost mode (stand-by or night mode as well), the machine will work in order to keep the product at a low positive temperature set by the internal thermostat.

!Important!

During defrost mode make sure that the upper tank is empty.

!Important!

Defrost or wash modes are not to be used in lieu of proper cleaning or sanitization procedures.

Adjusting the consistency

- In order to modify the consistency of the product, turn the screws located on the back of the machine in the following way: clockwise to make the product less dense, counter-clockwise to make the product denser (see figure 9).

!Important!

This device only changes the consistency of the product to be dispensed. It does not affect the cooling temperature of the product.

- When the level of the slush inside the upper tank is below the minimum the D orange light (fig.7) turns on the machine front side; to prevent the product from becoming too thick inside the freezing cylinder, it is necessary to refill the upper tank. Failure to do so could damage some mechanical components of the unit. - To dispense, place a glass under the tap and pull the lever as shown in fig.10.

!ATTENTION!

On pushing the power button on the snowflake position, the cooling system comes into operation. To prevent the appliance being damaged, always make sure you have already introduced the mix into the cylinder before activating the cooling system.



Fig. 9



Fig. 10

9. DAILY CLEANING AND SANITISING

In order that the appliance always functions correctly and to comply with the applicable hygiene regulations, it is essential to carry out the procedures for cleaning and sanitising described below frequently and step by step, ensuring that the person performing such operations has previously washed and disinfected hands and forearms.

In the case of prolonged disuse (seasonal) of the appliance, always perform these operations before restarting the appliance.

Attention A

To avoid the danger of electrical shock during cleaning, do not spray water on the switches and ensure that the internal electrical components do not come into contact with the water and products used.

Attention A

To prevent the formation of bacteria only use products approved for sanitising plastic, rubber and stainless-steel objects. Failure to comply with these procedures may result in risks to health.

NOTE: It is the responsibility of the operator to be aware of current federal, state or local regulations on the frequency of cleaning and conservation of products used.

The procedures described below are essential to prevent the formation of bacteria and keep the appliance in good hygienic condition.

We recommend that you perform these procedures **daily** and in any case in accordance with current regulations at the frequency of federal, state or local regulatory agencies.

Neither the manufacturer of the appliance, nor the producer of the food preparation introduced into it, shall be held liable for any damage that may directly or indirectly occur to persons as a result of failure to observe all the instructions given in this manual, and especially concerning the warnings regarding cleaning and sanitising the appliance. - Switch off the cooling system by switching the power button A on the wash position.

- Bring KAY-5[®] Sanitizer/Cleaner with a 100ppm dilution (1 Oz packet of KAY-5[®] +2 $\frac{1}{2}$ gallons of water) (the sanitizing product shall comply with 40 CFR §180.940).

IMPORTANT! The type and concentration of sanitizing agent shall comply with 40 CFR §180.940

!IMPORTANT! Carefully follow the instructions of the sanitizer manufacturer with regard to timing and method of use.

- Remove the cover as shown in fig. 11.

- Empty the remaining product from the freezing cylinder using the dispenser lever until nothing further comes out.

- Fill the top tank with hot water (fig. 12) and wait a few minutes.

- Empty the cylinder and repeat the same steps until the water coming out is clear (fig. 13).



Fig. 11



Fig. 12



Fig. 13

Attention

To avoid risk of electrical shock or contact with moving parts during dismantling and reassembly, make sure all switches are in the off position and that the power lead is disconnected from the mains.

- Turn off the main switch A (neutral position) and disconnect the power lead from the mains.

- Unscrew the security knobs and remove the front flange (fig. 14 and 15).

- Wash and disinfect hands thoroughly before performing cleaning operations otherwise use clean and sanitized gloves.

- Simultaneously apply pressure to the two securing tabs (Q), and lift the dispensing tap (I) to pull it out of its fixed position (see figure 16).

- Disassemble the dispensing tap by keeping the indicated part (R) pressed down and slipping off the dispensing lever (L) (see figure 17).

- Thoroughly wash each single part with hot water and mild dishwashing detergent/soap, rinse well, and dip each piece in the sanitising product according to the doses and immersion times suggested by its manufacturer.

A Caution A

To prevent bacteria growth, remove all o-rings when cleaning. Failure to do so could create a health hazard.



Fig. 14



Fig. 15



Fig. 16



Fig. 17

- Extract the beater and all components mounted on it (fig. 18).

- Wash each of these components thoroughly with hot water and washing-up liquid.

- Rinse well and dip each piece in the sanitising product according to the doses and immersion times suggested by its manufacturer (KAY-5 sanitizer suggest 1-2 minutes).

- Once the correct times for sanitising have been followed, remove and dry all components on a clean surface. DO NOT RINSE.

- Wash the freezing cylinder and top tank thoroughly, removing any remaining product with a clean sponge soaked with the sanitizing solution making sure to completely wet all surfaces for at least 60 seconds. Let air dry. Follow local health ordinances (see figure 19).

- Remove the drip tray by pulling it gently outwards (fig. 20)

- Wash it with hot water and mild dishwashing detergent/soap and then rinse well.



Fig. 18



Fig. 19



Fig. 20

Once you have performed all these cleaning and sanitising operations thoroughly, you can reassemble the components.

The correct assembly of the appliance is very important to prevent mix leakage and damage to the appliance. To assemble the appliance you must have an approved lubricant (Vaseline) available. Always make sure that all parts have been properly washed and sanitised and that the person carrying out the reassembly has thoroughly washed and disinfected hands and forearms.

- Insert the beater carefully into the cylinder making sure that the rear shank fits perfectly in its seat within the cylinder (fig. 21).

!ATTENTION!

During the insertion of the beater inside the cylinder, grasp both the scrapers in order to keep them in position during the insertion.

- Reassemble the parts of the dispensing tap, making sure that the gaskets (J) are lubricated with Vaseline grease so that the tap slides smoothly back into its fixed position, until it's completely inserted.

Important! The not perfect sliding of the tap compromises its own seal.

- Carefully lubricate the sealing gasket of the front flange and refit it back so that the locating pin mates with its seat (fig. 22).

- Once you have correctly mounted the flange, screw the security knobs right down tightening them alternatively in order to avoid any risk of wrong coupling.

- Place the drip tray back into their position.

- Once cleaned, before starting up the machine perform the sanitizing procedure as described in the next page.



Fig. 21



Fig. 22



Fig. 23

SANITISATION

If the appliance has not been used for some days after being thoroughly cleaned and sanitised as described in Chapter 9, at restart the following sanitising operations should be carried out.

- Take off the lid.

- Fill the top tank with water and sanitizer for objects for food use (use KAY-5[®] Sanitizer/Cleaner with a 100ppm dilution (1 Oz packet of KAY-5[®] +2 $\frac{1}{2}$ gallons of water) (the sanitizing product shall comply with 40 CFR §180.940), carefully following the doses prescribed by the manufacturer of the same.

- Start the appliance in wash mode and leave for the time specified by the manufacturer.

IMPORTANT

Do not leave the sanitizer in the tank for periods in excess of those prescribed by the manufacturer

- Empty the tank by opening and closing the tap at least 10 times in order to sanitise the mix flow zone too.

- Rinse thoroughly by repeating the same steps but using only clean water in place of the sanitizer.

- After carefully performing these operations the appliance is ready for use.

10. EXTRAORDINARY MAINTENANCE

Attention A

Before carrying out any maintenance, you must switch off the appliance and unplug the power lead from the socket.

Cleaning the condenser

In order to ensure good performance of the cooling system, it is essential to clean the condenser at least **once a month**, **or whenever the level of clogging necessitates it**.

To gain access:

- Switch off the power to the appliance by turning off the main switch and disconnect the power lead.

- Clean the condenser positioned under the machine or on the left side with a vacuum until all the dust has been removed.

IMPORTANT Never use a screwdriver or any other sharp object to remove dirt accumulated between the fins of the condenser.

Checking and replacing the seals

FLANGE SEAL

The front side flange seal should be replaced every 6 months depending on the state of wear and the level of maintenance and lubrication.

TAP (O-RING) SEALS

The o-ring seals of the dispensing tap should be replaced whenever they appear worn. These seals should be lubricated each time the appliance is reassembled after cleaning and checked carefully in order to avoid unwanted leaks.

Winter storage

To protect the appliance during periods of inactivity such as winter, it is important to store it properly as described below:

- Disconnect the appliance from the power source.

- Dismantle, wash and sanitise all parts in contact with the mix as described in Chapter 9.

- Also clean the exterior panels.
- Reassemble all components carefully.

- Cover the completely-reassembled appliance with the original packaging so that it is protected from dust and other contaminants.

- Position the appliance in a dry place.

Product storage

Since the conservation of the product used depends on the temperature and duration of storage, it is absolutely necessary to refer to the instructions and specifications of the manufacturer in order to avoid health risks due to deterioration of the product under incorrect conservation conditions.

11. DISCLAIMER

The manufacturer declines any liability for damage that may occur directly or indirectly to persons, property and animals as a result of failure to observe all the instructions given in this manual and especially the warnings concerning installation, use and maintenance of the appliance.

The manufacturer is not liable for any inaccuracies due to printing, transcription or translation errors contained in this manual. The right is reserved to make any necessary or useful changes, also those in the interest of the user, without compromising the essential functional and safety features.

12. TROUBLESHOOTING GUIDE

NOTE: The following procedures must be performed by qualified technical staff

Problem Possible cause Solution			
The appliance does not cool, or cools only partially, and the compressor is running	 The space around the appliance is inadequate for ventilation The appliance is operating in wash mode The fan is not functioning There is a loss of coolant 	 Allow at least 20 cm of free space around the appliance and place it away from other heat sources Turn on the cooling system by turning off wash mode and activating cooling mode Check the electrical connections, if necessary, replace the fan Find the leak, eliminate it and recharge the system 	
The appliance does not cool, or cools only partially, and the compressor is not running	 The safety pressure switch has tripped Electrical components of the compressor are not functioning Some electrical connections are disconnected Defective compressor 	 Reset the pressure switch after resolving the cause of intervention Replace non-functioning components Check electrical connections Replace the compressor 	
The appliance is noisy	 The beater and its components have not been installed correctly The fan blades are impacting internal components 	 Dismantle the beater and reassemble the parts correctly Check and adjust 	
The main switch is in the ON position but the appliance does not run	 The front flange has not been positioned correctly Some electrical connections are disconnected The switch is broken The electronic panel is defective The agitator motor is defective 	 Correctly position the front flange Check electrical connections Replace the switch Replace the electronic panel Replace the agitator motor 	
The appliance is running and the top tank is filled with liquid product but nothing comes out of the tap	 The pipe connecting the upper tank with the lower freezing cylinder is clogged The heating wire of the connecting tube does not work 	 Check and unclog the connecting pipe Establish the causes of the malfunction and resolve 	
The tap is leaking	 The tap has not been reassembled correctly The movement of the tap is impeded The O-ring seals are damaged or worn 	 Dismantle and reassemble the tap correctly Clean the tap and its housing and lubricate with the Vaseline supplied Replace the O-rings 	
The front flange is leaking	 The sealing o-ring has not been lubricated The sealing o-ring has not been assembled correctly The fixing knobs have not been tightened correctly 	 Disassemble the flange and carefully lubricate the o-ring Disassemble the flange and the o-ring and then proceed with the correct assembly of the same Remove the flange and tighten the knobs again 	
The beater does not turn	 The front flange is not mounted correctly Some electrical connections are disconnected The electronic panel is defective The agitator motor is defective 	 Mount the front flange correctly Check electrical connections Replace the electronic panel Replace the agitator motor 	
The beater is noisy during rotation Buttons do not respond to being pressed	 The beater, scrapers and/or rear seals are not fitted correctly The keypad is defective The electronic panel is blocked or defective 	 Remove and install the mixing unit components correctly Replace the keypad Turn the appliance off and on and if the problem persists, replace the panel 	



13. WIRING DIAGRAM



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