



Service



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USE and MAINTENANCE MANUAL

Equipment:

ELECTRIC SPIRAL MIXER with raising head and removable bowl	
Model	IMR / ITR
Capacity	15 ☐ 20 ☐ 30 ☐ 40 ☐ 50 ☐
Serial Number	
Year of Manufacturing	

POWER SUPPLY			
Tri-phase power supply	400 V / 50 Hz	☐	400 V / 60 Hz ☐
Single-phase power supply	230 / 50 Hz	☐	110 V / 60 Hz ☐

This manual provides all the technical elements necessary for a correct installation and use of the equipment.

The user is responsible for following these instructions.

The aspects concerning the protection of safety and the environment are also pointed out together with the characteristics, workings, installation and maintenance of the equipment.

It is important to read this manual carefully before using the equipment, and whenever the need arises to consult it. Adhere to the technical instructions provided and follow all the indications scrupulously. For the safety of the operator, the devices of the equipment should always be kept in good working order.

This manual is an integral part of the equipment and must be kept in an accessible place known to all operators, and made available to the authorized personnel for any eventual maintenance and repairs.

WARNINGS

THE SYMBOL  REGARDS WARNINGS FOR THE SAFETY OF THE OPERATORS, USERS AND MAINTENANCE WORKERS OF THE EQUIPMENT.



CONSERVE THIS MANUAL FOR FURTHER CONSULTATION



USE THE EQUIPMENT ACCORDING TO THE INDICATIONS AND LIMITS OF USE STATED BY THE MANUFACTURER



THE INSTALLATION MUST BE CARRIED OUT BY SPECIALIST AND AUTHORISED PERSONNEL AND ACCORDING TO THE INSTRUCTIONS OF THE MANUFACTURER



FOR ANY EVENTUAL REPAIRS AND MAINTENANCE, CONTACT EXCLUSIVELY THE MANUFACTURING FACTORY AND USE OF ORIGINAL SPARE PARTS



REFUSAL TO RESPECT THE ABOVE CONDITION JEOPARDISES THE SAFETY OF THE OPERATOR

ELECTRIC SPIRAL MIXER
with raising and removable bowl

Model:

IMR - ITR

Capacity:

15 — 20 — 30 — 40 — 50



RATING PLATE

It is located on the back of the equipment

INTRODUCTION**PICTURE OF THE EQUIPMENT**

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01.01 Safety principle e cautions for a safety work

1. Before turning on the equipment, and every time a doubt about its workings should arise, every operator is obliged to carefully read the instructions for use.
Remember: using an equipment, you run a risk. Ensure that the people using the appliance know the contents of the manual.
2. Use the Equipment indoor only.
3. Be careful, before starting every procedure.
4. Work only with all the expected safety and protective devices present and efficient. Avoid drawing the hands near the moving parts.
5. It is absolutely forbidden to neutralise, remove, modify or in any other way render inefficient, any part of the safety devices, protective devices, or controls of the equipment, wherever positioned. All the protective and safety devices must be kept in perfect condition and working order.
6. Before turning on the equipment, be sure that nobody stands in the risk area.
7. During working cycle, operator must stand out the risk area.
8. During working cycle, never leave the equipment unattended.
9. Never work different materials, as quantity, quality and type, from how described at **point 02.01**.
10. It is absolutely forbidden to use the equipment differently from how described at **point 02.01**.
11. Stop the Equipment before cleaning and before removing any safety and protective device for maintenance.
12. During any maintenance phase, take all the necessary measures to prevent any damage to people or things. Remove the electric power supply (separation of the equipment from the electric network) before approaching the protective devices.
13. At the end of any intervention that requires the removal or the neutralisation of any safety device (barriers, sensors, protections, etc.), put it back into operation.
14. Do not let unauthorized and unqualified personnel start, set and/or repair the equipment. Refer to this manual for the right operations.
15. The user power-supply main line must be equipped with safety devices like a differential switch, automatically disconnecting, before the Equipment, and with an earth installation suitable for accident prevention.
16. In case you need to work on Control main switch or nearby, turn the power supply off. All maintenance procedures must be carried out only by authorized and qualified personnel.
17. Pay attention to all the data stated on the rating plate
18. All the rating plates must be readable.
19. If equipment does not work or components are damaged, contact the maintenance-man, without proceeding in further repairs.
20. Do not repair the equipment hastily or incompletely. This can compromise the good work of the equipment.
21. Do not tamper the equipment. The manufacturer disclaims all responsibility and make the user liable toward accident prevention competent body.
22. These safety principle complete, not substitute, the safety standards and the local and national laws in force.

01.02 **Chart of Risks**

ACTIVITY/DANGER	RISK	INSTRUCTIONS
1. LOADING / UNLOADING AND HANDLING	Dropping of equipment Dropping of packaging	Handle the equipment, packaged or not, only using a forklift or a transpallet
2. INCORRECT CONNECTION TO THE POWER SUPPLY	Shock Strike	Power supply, Voltage and frequency must be those stated on the rating plate Socket must be connected to earth. Electric power supply must have a differential switch safety device, co-ordinated with the main earth power supply
3. VOLTAGE PRESENT IN CLOSED CASING	Electrocution	Do not open any panel without having unplugged the equipment first
4. WORKING WITHOUT SAFETY DEVICES	Electrocution Entanglement Crushing Abrasion	Do not remove the safety devices when the equipment is working
5. CLEANING OF THE PARTS IN CONTACT WITH THE DOUGH	Electrocution Shock Strike	Cleaning of the equipment must always be carried out when the equipment is off and disconnected (unplugged from the main power supply)

02.01 Description of the Equipment

The Electric Spiral Mixer, "IMR - ITR", capacity **15"**, **"20"**, **"30"**, **"40"**, **"50"**, has been designed to knead, both dense and creamy dough, made up of flour, salts, yeast, fats and liquids, (water, eggs,...), for foods use only. NEVER USE FROZEN INGREDIENTS.

It is an equipment equipped with a single-phase or tri-phase motor, with fixed head, and with fixed bowl, bar and whisk in stainless steel. The Bowl (or Pot) and Whisk (or Spiral) rotate clockwise.

The equipment, designed in accordance with the European regulations, has been manufactured to protect the user from the risks connected to its use; for this reason, the equipment is equipped with special protection devices to avoid risks during contact with the moving parts.

02.02 Technical Features

(*) data refers to normal dough lasting 10/12 minutes

LIMITS OF USE		IMR-ITR 15	IMR-ITR 20	IMR-ITR 30	IMR-ITR 40	IMR-ITR 50
Working capacity(*)	Kg/h	48	56	88	112	128

CASING		IMR-ITR 15	IMR-ITR 20	IMR-ITR 30	IMR-ITR 40	IMR-ITR 50
Height	mm	725	725	805	825	825
Width	mm	385	385	424	480	480
Depth	mm	670	670	735	805	805
Approx. Net Weight	kg	73	73	94,6	105,4	107,4

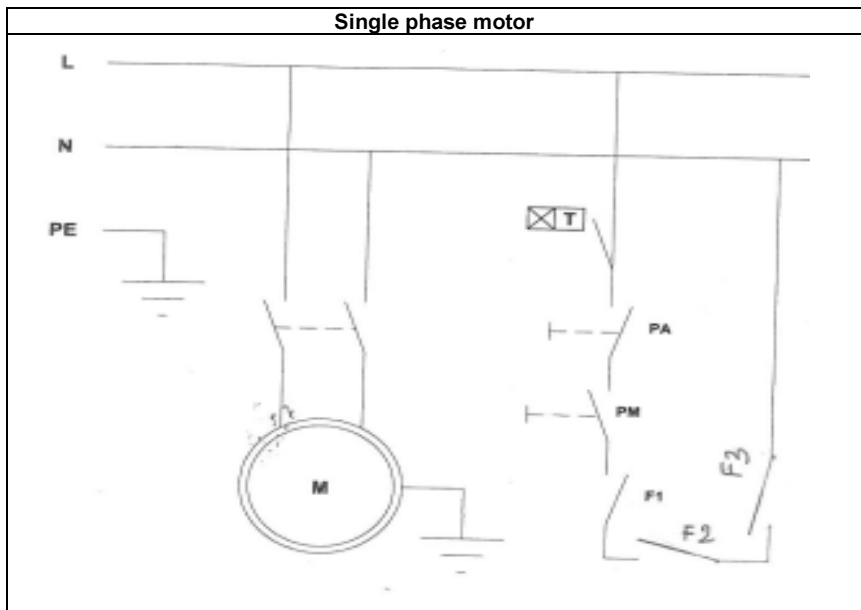
BOWL		IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR
		15	20	30	40	50
Diameter	mm	317	360	400	450	450
Height	mm	210	210	260	260	300
Volume	l	16	22	32	41	48
Capacity	kg	12	17	25	35	42

TRI-PHASES MOTOR		IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR
		15	20	30	40	50
Voltage	V	400	400	400	400	400
Frequency	Hz	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
Power	KW	0,75	0,75	1,1	1,1	1,5

SINGLE-PHASE MOTOR		IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR
		15	20	30	40	50
Voltage	V	230 / 110	230 / 110	230 / 110	230 / 110	230 / 110
Frequency	Hz	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
Power	KW	0,75	0,75	1,1	1,1	1,5

PACKAGING		IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR	IMR-ITR
		15	20	30	40	50
Type	pallet	pallet	pallet	pallet	pallet	pallet
Height	mm	800	800	900	940	940
Width	mm	430	430	480	540	540
Depth	mm	745	745	765	825	825
Approx. Gross Weight	kg	80	80	103	116	118

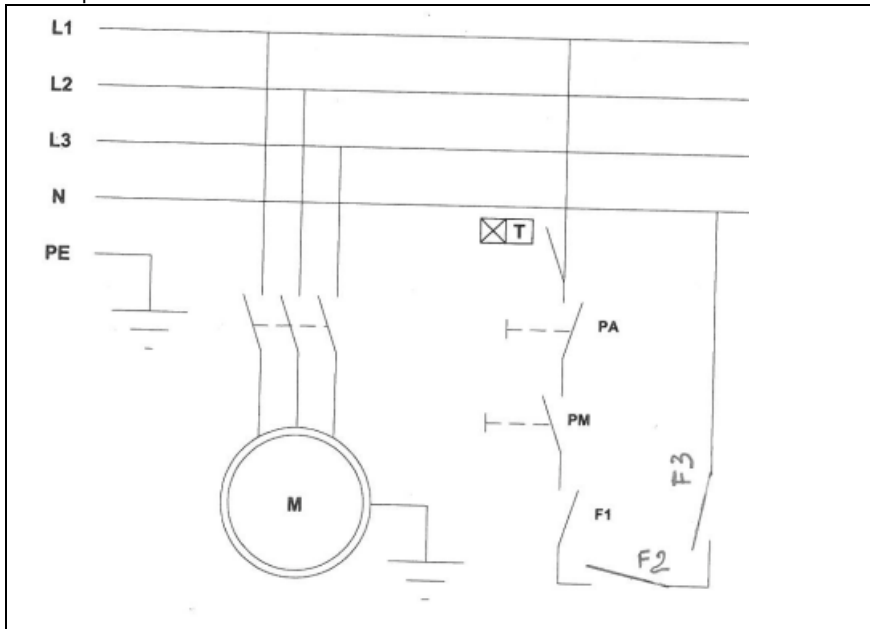
02.03 Electric Diagram



LEGEND:

- F1: Bowl sensor
- F2: Top sensor
- F3: Grid sensor
- T: Timer
- PM: Start button
- PA: Stop button
- M: Motor

Three phase motor



LEGEND:

F1: Bowl sensor

F2: Top sensor

F3: Grid sensor

T: Timer

PM: Start button

PA: Stop button

M: Motor

03.01 Noise

The Equipment presents a Lep,d value of less than 80 dB(A).

If positioned in areas with a noise value of more than 80 dB(A), the employer must form and inform the operator of the risks from exposure to the noise and must take the necessary precautions according to the authorised doctor.

03.02 Packaging

Do not throw away the packaging, separate it according to the type of material (e.g. cardboard, wood, plastic material, etc.) and dispose them in compliance with the local and national laws in force.

03.03 Disposal

Operate in accordance with the local and national laws in force.

03.04 Out of order

At the end of the Equipment's working life:

- Turn off the Equipment, by disconnecting it from the electric power supply and cutting the supply line cable;
- Disassemble all the electric/electronic part;
- Disassemble the components, separating the various types and send them to the scrapyard or dispose them according to the local and national laws in force.

04.01 Packaging Contents

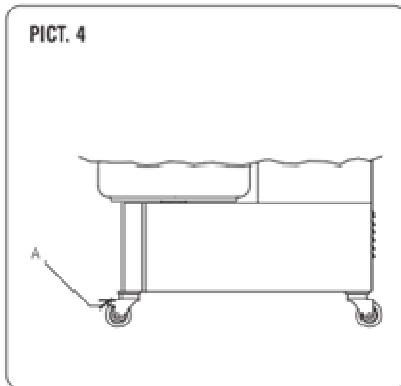
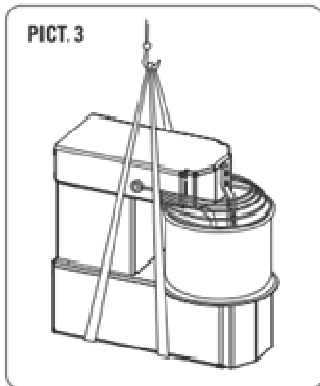
On delivery, the Manual for the Use and Maintenance containing the Declaration of Conformity of the product in compliance with the competent EC regulations is included in the packaging and it consist on an integral part of the supply.

The Equipment is packaged and delivered in a single cardboard package ready for use.

To lift the Equipment it is necessary to use a forklift or a transpallet: insert the forks under the pallet. To lift the Equipment by ropes or belts, cross them under the pallet.

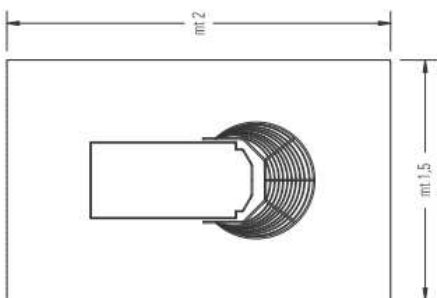
Take care to handle the box only manually, always keeping it in an upright position as indicated on the box

On receiving, check the packaging and the equipment to verify transport's damages. Indicate all defects on the note.



04.02 *Positioning*

Before positioning the Equipment, ensure that the bearing surface is a horizontal level. In the normal working conditions and to have the best exploration of the potentiality of the machine, the operator needs the area represented in pict. Below:



04.03 *Installation*

The Equipment does not require any further installation operation other than its connection to the electric system, after that it is ready for use.

04.04 **Connections**

Once positioned, connect the equipment to the electric power supply, after having:

- ensured that the voltage and frequency of the power supply correspond to what stated on the plate;
- ensured that that socket is connected to earth;
- installed the proper plug (16 ÷ 32A). Use a 3 poles cable (phase, neutral and earth), for single-phase versions, or a 5 poles cable (3 phases, neutral and earth), for tri-phases versions. The installation of the a.m. plug and cables must be carried out by specialized and trained personnel.

The Manufacturer specifies that the main line should be equipped with safety devices by a differential switch, co-ordinated with the general earth installation, in conformity with the local and national laws.

Check that the safety devices of the Equipment are present and assembled before switching on the equipment.

Check also that the Whisk (or Spiral) and Bowl (or Pot) rotate clockwise: if this is not the case, invert the connection of the phases.

When using the Equipment for the first time, clean it as described in the instructions.



CONNECT THE EQUIPMENT ONLY TO PARTS OF THE ELECTRICAL PLANT WHICH ARE INDIVIDUALLY PROTECTED



REFER TO THE ELECTRICAL REGULATIONS OF THE COUNTRY IN WHICH THE EQUIPMENT IS INSTALLED



DO NOT REMOVE THE SAFETY DEVICES WHEN THE EQUIPMENT IS IN USE

05 **OPERATION**

05.01 **Safety features**

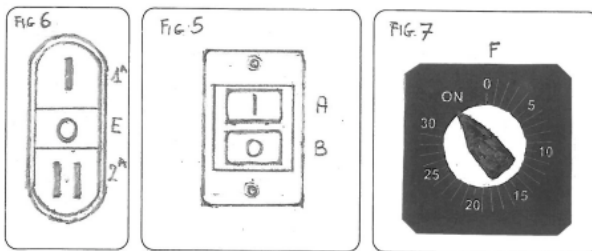
The Equipment is equipped with fixed suitable safety devices and a suitable distance between the Bowl and the Equipment's Body, designed to avoid contact between parts of the human body (upper limbs) and parts of the equipment in movement during working procedures, in order to eliminate risks of dragging, and crushing.

The Equipment is equipped with a micro safety switch of opened bowl grid, designed to avoid contact between parts of the human body (upper limbs) and parts of the equipment in movement during processing phases, in order to eliminate risks of dragging, crushing and abrasion.



DO NOT REMOVE THE SAFETY DEVICES WHEN THE EQUIPMENT IS WORKING. THE MANUFACTURER DECLINE ALL RESPONSIBILITY IF THE INSTRUCTIONS ARE NOT FOLLOWED

05.02 Control Board



COMMAND	ACTION	POSITION
ON Push button	Activates (ON) the movement of rotating parts	Side of Equipment
OFF Push button	Deactivates (OFF) the movement of rotating parts	Side of Equipment

05.03 Switching the Equipment on

– STARTING THE EQUIPMENT WHEN TOTALLY DISCONNECTED

To start the process when the equipment is unconnected to the main supply, use the following procedure:

- on the User's power supply line: turn the differential switch (safety devices) ON.
- on the equipment: push the Switch ON, this activates the movement of rotating parts (Bowl and Whisk).

– STARTING THE EQUIPMENT WHEN ALREADY CONNECTED TO THE POWER SUPPLY

To restart the process, following a period of suspension, it is necessary to push the ON Switch, when the grid is closed.

– STARTING THE EQUIPMENT AFTER AN EMERGENCY SITUATION

- Turn the Equipment off, following to the instructions at **point 05.04**;
- Wait for about 30 min to allow the motor cooling down;

– Switch the Equipment on again, following to the instructions at **point 05.03** – section "STARTING THE EQUIPMENT WHEN ALREADY CONNECTED TO THE POWER SUPPLY"

05.04 Switching the Equipment off

To totally switch the equipment off, use the following procedure:

- on the equipment: push the Switch OFF, this deactivates the movement of rotating parts (Bowl and Whisk).
- on the User's power supply line: turn the differential switch (safety devices) OFF.

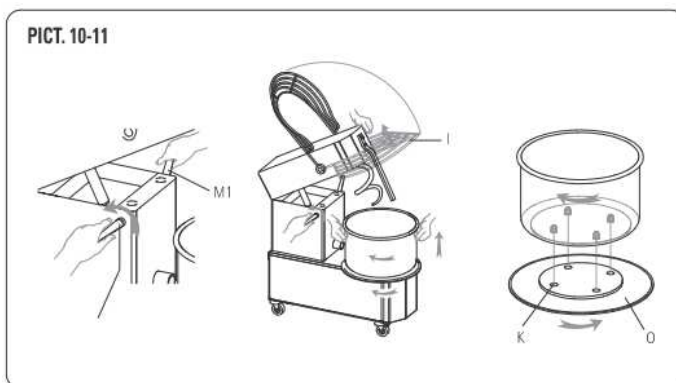


WHEN THE EQUIPMENT IS NOT ACTIVATED, IT IS ADVISABLE TO TURN OFF THE MAIN ELECTRICAL POWER SUPPLY, OR DISCONNECT THE EQUIPMENT FROM THE PLUG

05.05 Raising the top and taking of the bowl off

In order to raise the top and to take the bowl off proceed as follows:

- stop the machine, unplug the electrical connection, raise the grid completely (PICT. 10), pull the pin M as far as the top is blocked,
- raise the top by means of the little piston underneath, rotate clockwise the disk O as far as the bowl is unlocked, raise the bowl and take it off



05.06 Repositioning of the bowl and top

Once the dough is off and / or cleaning is done, put the bowl back on and make sure that the four pins underneath (PICT. 11) are correctly fixed in the four holes K; then block the bowl rotating the disk O clockwise. Put the top down pushing it downwards as far as it is blocked by the pin M.

05.07 Use of the Equipment

Pour the ingredients into the bowl (do not use any frozen ingredient), close the grid and activate the rotation of the Bowl (or Pot) and the Whisk (or Spiral), by pushing the ON Switch.

To control the consistency of the dough, or to add further ingredients, open the Lid.

In this condition, the equipment automatically stops itself: when the grid is closed, push the ON Switch again to reactivate the rotation of the Bowl and the Whisk.

DO NOT REMOVE THE SAFETY DEVICES WHEN THE EQUIPMENT IS IN USE. THE MANUFACTURER DISCLAIMS ALL RESPONSIBILITY IF THE INSTRUCTIONS ARE NOT FOLLOWED



05.08 Malfunctioning

PROBLEM	PROBABLE CAUSES	POSSIBLE REMEDIES
1. THE MOTOR STOPS ITSELF	☐ The motor circuit breaker feels the overheating of the electric motor	• wait for about 30 min to allow the motor cooling down; then re-start the process
	☐ malfunction and/or breakage of any electric component	• contact the Manufacturer
HOW DO YOU KNOW THAT...	EVIDENCE	
2. ELECTRIC PHASES ARE NOT ALL ACTIVE	• if the supply line is tri-phase, the speed of the rotation drops to 1/3 of its power, each inactive phase implies a loss of power • if the supply line is single-phase, the drop of the phase implies the lack of electrical power supply.	

06.01 Cleaning

The Equipment needs to be cleaned, before using it.

- At the end of processing, clean all parts that have been in contact with the dough, Bowl (or Pot), Bar and Whisk (or Spiral).
- Lift the grid.
- Use water and common detergent, using a soaked cloth.
- Remove the water using a sponge cloth and dry.

Ensure that the above cleaning operations have been carried out before using the equipment.



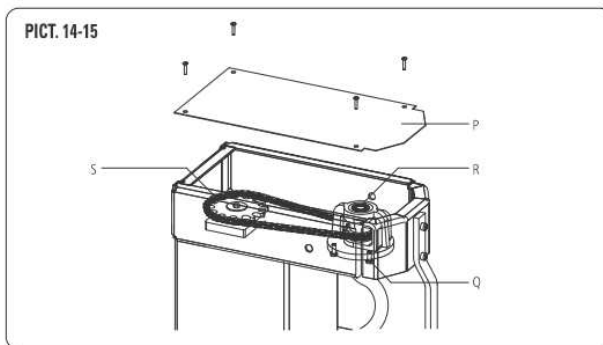
ALWAYS CLEAN THE PARTS OF THE EQUIPMENT IN CONTACT WITH THE DOUGH WHEN THE EQUIPMENT IS SWITCHED OFF AND UNPLUGGED

06.02 Routine Maintenance

The Equipment requires the following periodic Maintenance.

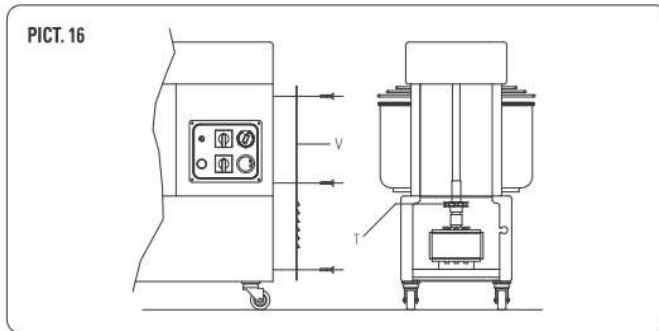
Tensioning of the upper chain:

The chain must be tensioned if, by checking it, it becomes loose or if the rotation of the spiral is not constant. Unscrew the panel P, (PICT. 14) loosen the screws Q, pull the support of the spiral R as far as the tension of the chain is optimized, lock the support R with the screws Q, put the panel P on once more and fix it.



Lubricating the chains

After unscrewing the fixing screws, take away the upper P and the back V panels, put on the chains S-T (PICT. 15-16) a reasonable amount of proper grease, sufficient to lubricate all the links of the chain. Once this is done, mount the 2 panels and secure again with screws.



06.03 Emergency Maintenance

In the case of malfunctioning, call only qualified, authorised personnel



THE MANUFACTURER CONSIDERS THE TERMS OF THE GUARANTEE NULL AND VOID
FOLLOWING UNAUTHORISED INTERVENTIONS ON THE EQUIPMENT

Mastro GmbH
Hüserstraße 53 – DE 59075 Hamm
Germany
VAT number DE814055285