



S1200 MAXI FBA



USE AND MAINTENANCE MANUAL

ORIGINAL INSTRUCTIONS



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S1200 MAXI FBA

Model: EC000504

Serial Number: TR140097

USE AND MAINTENANCE MANUAL

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INDEX

| | |
|--|---------------|
| Chapter 1 General information | - 1 - |
| 1.1. INTRODUCTION..... | - 1 - |
| 1.2. PROPERTY OF INFORMATION..... | - 2 - |
| 1.3. CONTENTS | - 3 - |
| 1.4. CONVENTIONS AND DEFINITIONS | - 5 - |
| 1.4.1. <i>General information</i> | - 5 - |
| 1.4.2. <i>Terminology conventions</i> | - 5 - |
| 1.4.3. <i>Definitions</i> | - 5 - |
| 1.4.4. <i>Personal means of protection and rules of behaviour</i> | - 6 - |
| 1.4.5. <i>State of the MACHINE</i> | - 6 - |
| 1.4.6. <i>Typography conventions</i> | - 6 - |
| 1.5. GUARANTEE | - 9 - |
| 1.6. ASSISTANCE..... | - 10 - |
| 1.6.1. <i>Request for Assistance Interventions</i> | - 10 - |
| Chapter 2 Description of the machine..... | - 11 - |
| 2.2 <i>Working principles</i> | - 12 - |
| Chapter 3 Safety and technical data | - 13 - |
| 3.1. GENERAL INFORMATION ABOUT SAFETY | - 13 - |
| 3.1.1. <i>Design criteria</i> | - 13 - |
| 3.2 SAFETY DEVICES..... | - 14 - |
| 3.3 WARNINGS CONCERNING RESIDUAL RISKS..... | - 15 - |
| 3.3.1 <i>Lifting and transport</i> | - 15 - |
| 3.3.1.1 necessary individual means of protection..... | - 15 - |
| 3.3.1.2 Signage..... | - 16 - |
| 3.3.1.3 precautions to be taken during lifting and transport | - 16 - |
| 3.3.2 <i>Installation and connection</i> | - 16 - |
| 3.3.2.1 necessary individual means of protection..... | - 16 - |
| 3.3.2.2 Signage..... | - 17 - |
| 3.3.2.3 precautions to be taken during installation and connection | - 17 - |
| 3.3.2.1 signage | - 17 - |
| 3.3.3. <i>Use and cleaning</i> | - 17 - |

| | | |
|------------------|---|---------------|
| 3.3.2.2 | necessary individual means of protection..... | - 17 - |
| 3.3.2.3 | Signage..... | - 18 - |
| 3.3.2.4 | precautions to be taken during use and cleaning..... | - 18 - |
| 3.3.3 | <i>Maintenance and demolition</i> | - 18 - |
| 3.3.3.1 | Residual risks..... | - 18 - |
| 3.3.3.2 | necessary individual means of protection..... | - 18 - |
| 3.3.3.3 | Signage..... | - 19 - |
| 3.3.3.4 | precautions to be taken during maintenance and demolition..... | - 19 - |
| 3.3.4 | <i>Indications concerning Safety</i> | - 20 - |
| 3.4 | EMPLACEMENT OF THE OPERATOR | - 20 - |
| 3.5 | NOISE..... | - 21 - |
| 3.6 | <i>Proper and Improper use of the machine</i> | - 21 - |
| 3.6.1 | <i>Warnings and General Rules of Behaviour</i> | - 22 - |
| 3.7 | TECHNICAL DATA | - 24 - |
| 3.7.1 | <i>Identification plate</i> | - 24 - |
| 3.7.2 | <i>Technical data and overall sizes</i> | - 24 - |
| Chapter 4 | Transport and installation..... | - 26 - |
| 4.1. | GENERAL INFORMATION..... | - 26 - |
| 4.1.1. | <i>Environmental conditions of the installation place</i> | - 26 - |
| 4.1.2. | <i>Minimum room for installation of the machine</i> | - 26 - |
| 4.2. | TRANSPORT AND HANDLING..... | - 26 - |
| 4.2.1. | <i>Unloading and unpacking</i> | - 26 - |
| 4.3. | INSTALLATION..... | - 27 - |
| 4.3.1. | <i>Connection to the mains power supply</i> | - 27 - |
| 4.3.2. | <i>Connection to the water supply</i> | - 27 - |
| 4.3.3. | <i>Connection to mains drainage</i> | - 27 - |
| 4.4. | STORAGE | - 27 - |
| 4.4.1. | <i>Uninstalling</i> | - 27 - |
| Chapter 5 | Fine tuning | - 28 - |
| 5.1 | MACHINE FINE TUNING | - 28 - |
| 5.1.1 | <i>Fine tuning</i> | - 28 - |
| Chapter 6 | Using the machine | - 29 - |
| 6.1. | CYCLE..... | - 29 - |
| 6.1.1. | <i>Cycle steps</i> | - 29 - |



| | |
|--|---------------|
| 6.2. CHECKS | - 31 - |
| 6.2.1 Safety devices check..... | - 31 - |
| 6.2.2 Anomalous situations and alerts..... | - 32 - |
| 6.3. START/STOP PROCEDURE | - 32 - |
| 6.3.1 Start..... | - 32 - |
| 6.3.2 Stop..... | - 33 - |
| 6.3.3 Emergency stop | - 33 - |
| Chapter 7 Maintenance | - 34 - |
| 7.1. GENERAL INFORMATION..... | - 34 - |
| 7.1.1. Indications concerning safety..... | - 35 - |
| 7.2. CLEANING | - 36 - |
| 7.2.1. Hopper and pipes cleaning..... | - 36 - |
| 7.3. ROUTINE AND EMERGENCY MAINTENANCE OPERATIONS | - 36 - |
| 7.4. Clogging, obstruction..... | - 36 - |
| 7.5. Operative instructions plastic coated, on machine side..... | - 38 - |
| Chapter 8 Demolition and disposal..... | - 39 - |
| 8.1 SHUT DOWN, DISASSEMBLING AND DEMOLITION..... | - 39 - |
| 8.1.1 Shut down | - 39 - |
| 8.1.2 Disassembling..... | - 39 - |
| 8.1.3 Demolition and general information about disposal..... | - 40 - |
| Chapter 9 Failure search..... | - 41 - |
| 9.1 Failures and malfunctions..... | - 41 - |
| Chapter 10 Spare parts | - 42 - |
| Chapter 11 Technical documentation for maintenance | - 44 - |

Chapter 1

General information

1.1. Introduction

This Use and Maintenance Manual is an integral part of the S1200 MAXI FBA (identified, in the present document, by the term MACHINE) made by Ecofast Italia S.r.l.; for such a reason it has to accompany the machine in the case it should be transferred to a new user or owner.

This manual has to be kept with care and protected from any agent which could deteriorate it, for all the life cycle of the machine.

This manual has been compiled with the purpose of providing the operators and the technicians in charge of the use and maintenance of the machine with the information and the instructions essential to operate correctly and in conditions of safety.



ATTENTION: *having to be of easy and immediate consultation, the present manual has to be kept in a known and accessible place.*

This manual contains all the data and information necessary for carrying out the preliminary training of the staff in charge of managing the MACHINE correctly; it is imperative it be used to this end.



DANGER: *for reasons of clarity, some of the illustrations of this manual show the machine and its components open or dismantled; it is forbidden, however, to use the machine in these conditions.*

While highlighting all the warnings and the precautions for a correct use of the MACHINE by the operators or to allow the staff in charge of the machine to intervene correctly, this manual presupposes that, in the environments in which the MACHINE has been installed, the current rules and regulations concerning safety and hygiene are observed and that the staff in charge of operation and maintenance have a level of instruction which enables them to understand correctly the information given.



NOTE: *the User may request a copy of the present document (for example, in the case of damage of the original document) by means of a written request to the Manufacturer (see Paragraph 1.6.1 – Request for Assistance Interventions of the Present Chapter), ensuring however that the damaged copy is returned.*

1.2. Property of information

This Use and Maintenance Manual contains information of reserved property. All rights are reserved.

This manual may not be reproduced or photocopied, in its entirety or in part, without the prior written authorization of the Manufacturer. Use of this documentary material is allowed only to the client to whom the manual has been supplied together with the machine and only for reasons of installation, use and maintenance of the machine to which the manual refers.

The Manufacturer declares that the information contained in this manual is congruent with the technical and safety specifications of the machine to which the manual refers. The drawings, the diagrams and the technical data given have been updated to the date of publication of this document and are valid exclusively for the machine to which they have been attached.

The manufacturer reserves the right to modify or improve this documentary material without forewarning.

The Manufacturer is not to be held responsible in any way for direct or indirect damage to the people, things or domestic animals resulting from a use of the machine in conditions different from those foreseen.

1.3. Contents

This manual, in fact, contains, as well as a functional description of the MACHINE and of its principal parts, the instructions and the indications for:

- ✚ transporting and installing the machine correctly;
- ✚ using the machine correctly;
- ✚ carrying out correct cleaning, adjustment and maintenance operations on the machine;
- ✚ observing the basic rules of safety and prevention of accidents at work.

The above mentioned staff will be able to know about with both the potential of the MACHINE and the problems which may occur during its management.

It is necessary to read all the chapters attentively to understand the indications provided in this manual and to operate the MACHINE; for a further and more user friendly contents search please refer to

Table 1, which contains a description of the topics dealt with in the chapters.

Table 1 – Structure of the Use and Maintenance Manual

| CHAPTER | CONTENTS | ADDRESSEES |
|---|--|--|
| <p><i>Chapter 1</i> <i>General information</i></p> | <ul style="list-style-type: none"> ✚ Description of the present Use and Maintenance manual, of its structure and of the conventions used; ✚ Definitions of the terms used; ✚ Definition of the relationship between the Manufacturer and the Purchaser/User (in terms of conditions of guarantee and assistance). | All staff in charge of the machine. |
| <p><i>Chapter 2</i> <i>Description of the machine</i></p> | <ul style="list-style-type: none"> ✚ Description of the machine and of the functional process. | All staff in charge of the machine. |
| <p><i>Chapter 3</i> <i>Safety and technical data</i></p> | <ul style="list-style-type: none"> ✚ General indications about the machine, the solutions to be adopted for the protection of the operating staff, the generic warnings to be observed for a correct use and about the residual risks present during the phases of life of the machine; ✚ Description of the principal technical data concerning the machine | All staff in charge of the machine (in particular, the electrical and mechanical maintenance workers and those in charge of handling). |

| CHAPTER | CONTENTS | ADDRESSEES |
|--|--|---|
| <i>Chapter 4 Transport and Installation</i> | <ul style="list-style-type: none"> ✚ Description of the necessary requisites for the place of installation; ✚ Description of the lifting and transport procedure of the parts which constitute the MACHINE; ✚ Description of the procedure for connecting to power supplies and services; ✚ Description of the procedure for storage of the machine | All staff in charge of the machine (in particular, the electrical and mechanical maintenance workers, the technicians of the Manufacturer and those in charge of handling). |
| <i>Chapter 5 Fine tuning</i> | <ul style="list-style-type: none"> ✚ Instructions for the fine tuning of the machine | All staff in charge of the machine |
| <i>Chapter 6 Use</i> | <ul style="list-style-type: none"> ✚ Description of the procedures to follow for the start up and use of the machine. | All staff in charge of the machine. |
| <i>Chapter 7 Maintenance</i> | <ul style="list-style-type: none"> ✚ Description of the checking and control procedures for the parts and the components of the machine (in particular the parts most subject to wear); ✚ Description of the procedures which enable staff to clean the machine. | All staff in charge of the machine (in particular, the electrical and mechanical maintenance workers, the technicians of the Manufacturer and those in charge of handling). |
| <i>Chapter 8 Demolition</i> | <ul style="list-style-type: none"> ✚ Indications for carrying out the disassembly and the demolition of the machine. | All staff in charge of the machine (in particular, the electrical and mechanical maintenance workers, the technicians of the Manufacturer and those in charge of handling). |
| <i>Chapter 9 Failure search</i> | <ul style="list-style-type: none"> ✚ Indications concerning the search for the causes of possible failure and malfunctions | All staff in charge of dealing with the machine |
| <i>Chapter 10 Spare parts</i> | <ul style="list-style-type: none"> ✚ List of spare parts of the machine | All staff in charge of the machine (in particular, the electrical and mechanical maintenance workers and the technicians of the Manufacturer). |
| <i>Chapter 13 Documentation useful for maintenance</i> | <ul style="list-style-type: none"> ✚ Collection of instruction manuals of the principal components present on the machine | All staff in charge of the machine. |

1.4. Conventions and definitions

1.4.1. General information

The Use and Maintenance Manual of the MACHINE has been divided into chapters which, for each principal phase of the life of the MACHINE (transport, installation, use, adjustment, maintenance and shut down), permit the necessary information to be found more easily by the user of the MACHINE.

The entire documentation relative to the machine has been compiled developing the themes indicated by the Machines Directive (2006/42/EC) and by the existing Rules and Regulations; therefore, it is indispensable *to read all of the relative manual* in order to obtain from the machine the best performance and to ensure the maximum duration of all the organs.

The configuration of some organs or devices described or shown may differ from that with which the MACHINE is provided in the specific set up carried out according to particular requirements or safety standards; in such case, some descriptions, references or procedures advised may have a generic character while still maintaining their efficiency. The use of tools or special equipment provided with the MACHINE is strictly tied to the specific characteristics and to the existing safety standards in each country. Dimensioned drawings and photographs are provided for explanatory purposes as a reference for an easier understanding of the text.

1.4.2 Terminology conventions

MACHINE : is the term used in the present Use and Maintenance Manual to indicate the S1200 MAXI FBA.

IMP: is the acronym which indicates the Individual Means of Protection.

1.4.3 Definitions

DANGER ZONE

Any ZONE inside or in proximity of the machine, in which the presence of a person exposed, constitutes a risk for the safety and health of that person.

USER

Any PERSON (entrepreneur/enterprise) who uses the machine adequately or who entrusts its use and the operations connected to its use to prepared people.

EXPOSED PERSON

Any PERSON who is entirely or in part in a danger zone or in proximity of such a zone.

OPERATOR

Personnel, generally without specific competences, who carries out the operations necessary to run the machine and the cleaning of the machine and of the place where it is installed, if necessary they may carry out simple adjustment or start up operations on the machine.

MECHANICAL MAINTENANCE WORKER

A QUALIFIED TECHNICIAN who may intervene on any mechanical organ to carry out the adjustments, the repairs and the necessary maintenance interventions.

The mechanical maintenance worker has to have sufficient experience in the field of pneumatics, hydraulics and of the technique of control; typically he or she is not qualified to carry out interventions on electrical plants in the presence of tension.

ELECTRICAL MAINTENANCE WORKER

A QUALIFIED TECHNICIAN who is responsible for all the interventions of an electrical nature (regulating, maintenance and repairs) and, when necessary, he or she operates in the presence of tension inside the electrical boxes and of the connector blocks.

HANDLER

QUALIFIED PERSONNEL who carries out tasks of handling the machine or the materials used should the operation require the use of lifting devices.

TECHNICIAN OF THE MANUFACTURER

A QUALIFIED TECHNICIAN made available by the Manufacturer of the machine to carry out operations of a complex nature in particular situations or, anyway, when agreed with the user.

1.4.4 Personal means of protection and rules of behaviour

For each of the operations described in the present manual, means of protection are indicated which are to be used by the staff in charge (if necessary in addition to those that the staff have to wear in the place of installation of the MACHINE) and the rules of behaviour to be observed to ensure the safeguard of the operators themselves.



NOTE:

Paragraph 3.6.1 – Warnings and General Rules of Behaviour of Chapter 3 – Safety and Technical Data *gives, in particular, a series of general recommendations to be respected to avoid conditions of risk to people or damage to the machine.*

1.4.5 State of the MACHINE

The *State* of the machine is the characteristic which describes both the operational procedure. (for example, running, stopping), and the safety conditions present (for example, aprons included, aprons excluded, cutting off from the electricity supply).

1.4.6 Typography conventions

The graphic lay out of the present Use and Maintenance Manual is such as to permit an *easy recognition of the contents*; in this optic, for example, the instructions are associated with lists, as shown below:

- this symbol identifies a generic list of points or a list of points formed by simple actions (the order in which the actions are presented is not binding, but advisable);

1. in this way an explanatory numbered list is identified for a complex procedure (the order in which the actions are presented is binding for the correct and safe performance of the intervention in question).

Text in italics is used in, particular, for:

- the cross referencing used in this manual is expressed in the following way: “Paragraph/Figure/Table” with the number and, generally, the specification “of the Chapter” with the number and the relative denomination (when it is not specified it is understood that the paragraph, the table or the figure belong to the current Chapter);
- the technical and specialized technical terms, the first time they appear in the text;
- the terms in a foreign language of not common use (also, usually, only the first time they appear in the text).

✚ The **bold** text is used to highlight words, sentences or parts of procedure.

✚ In the description of the machine, its components, its use and its maintenance, explanatory figures are used of the portion in question and on it, the specific points of interest are identified, with the following wording:

number

Symbolic representation of a command or signaling device (for example, switch, selector or pilot light).

letter or number

Symbolic representation of a part of the MACHINE.

✚ What is more, to guarantee a more in depth knowledge of the machine and of the indications for a safe and correct use, the text of the present Use and Maintenance Manual is supplied with indications which complete it, providing supplementary information, indispensable precautions or particularly significant dangers to be considered; the following notation is then used:



NOTE:

indicates the notes, the warnings, the suggestions and other points to which the attention of the reader is to be drawn or it completes the explanation with further information.



ATTENTION:

indicates situations or operations in which there is the possibility of damaging the machine, the apparatus connected to it or the environment.



DANGER:

indicates situations or operations which it is compulsory to carry out or the information to which particular attention has to be paid to avoid damage to people.

GRAPHIC SYMBOLS USED TO INDICATE THE NECESSITY FOR INDIVIDUAL MEANS OF PROTECTION

In this paragraph the graphic symbols are indicated which are used in the present manual to indicate the need to wear determined IMP.



Indicates the need to use a protection for the head suitable to carry out the operation described.



Indicates the need to use protective gloves suitable to carry out the operation described (if necessary dielectric gloves for performing interventions on the electrical plant).



Indicates the need to use protective clothing suitable to carry out the operation described.



Indicates the need to use anti-accident shoes suitable to carry out the operation described.



1.5 Guarantee

The Manufacturer, ECOFAST ITALIA S.R.L., guarantees the S1200 MAXI FBA is free from defects of material or machining, for a period of twelve months from the date of installation.

During the guarantee period, the Manufacturer undertakes to remove within the required time the evident defects of material or machining in the case of malfunction or breakages; that is on condition the machine has been assembled with the assistance of the technicians of the Manufacturer and that it has been used correctly in compliance with the best rules of behavior and maintenance indicated in this manual.

The defective parts under guarantee will be repaired or replaced for free by the Manufacturer, if proven that the defects already existed.

Transport or shipping costs, if not otherwise stated in the contract of sale, as well as the travelling expenses relative to the intervention of the technicians of the Manufacturer to the premises of the User are at the expense of the user

For the construction of the machine, the Manufacturer uses materials, organs and mechanisms of a type, state and quality, which are retained to be, in his unquestionable opinion, suitable for the function the machine has to carry out; the Manufacturer, in carrying out a policy of constant development and updating of the product, reserves the right to modify both the functional characteristics and the aesthetic ones, to alter the design of whatsoever functional organ or accessory, or to stop the production and the supply without undertaking to inform of this without any obligation. What is more, ECOFAST ITALIA S.R.L. reserves the right to carry out any structural or functional modification, as well as modifying the supply of spare parts and accessories without being under obligation to communicate this to whosoever for whatever reason.

The Manufacturer, ECOFAST ITALIA S.R.L., although providing general information about the best execution of the electrical and water connections, is not responsible in any way of the execution of the same or of any direct or indirect damages related to them, by reason of the fact that these information are provided for only information purpose, and they want to get the best performance in the use of the MACHINES.

In addition, the Manufacturer ECOFAST ITALIA S.R.L., not being able to perform any checks on power lines, hydraulic lines and masonry, as well as not being liable for the realization of the same, reserves the right to disconnect the MACHINES, if these connections should be prejudicial to the proper functioning and / or use of the MACHINES.

1.6 Assistance

As concerns the maximum exploitation of the performance provided by the machine and the operations of extraordinary maintenance, this manual does not replace the experience of installers, users and maintenance staff both qualified and trained.

In this case, the Technical Assistance Service of ECOFAST ITALIA S.R.L. provides:

- Telephone support for the characteristics and the most simple interventions to be carried out on the machine;
- The sending of documentary material;
- Interventions of training of the User's staff in charge of the MACHINE;
 - Interventions to modify the machine (only on request).



ATTENTION: *in case of doubts on the correct interpretation of the instructions given in the present Use and Maintenance Manual, call the Technical Assistance Service (as shown below) to obtain the NECESSARY clarifications.*

1.6.1.

Request for Assistance Interventions

To contact the Technical Service of the Manufacturer, please refer to:

ECOFAST ITALIA SERVICE DEPARTMENT

Piazza Franco Martelli, 5

20162 Milano (MI) – ITALY

Phone: (+39) 02 66111618

Fax: (+39) 02 66112000

Email: info@ecofast.eu

During the requests for assistance interventions specify the name and the model of the machine.

Chapter 2

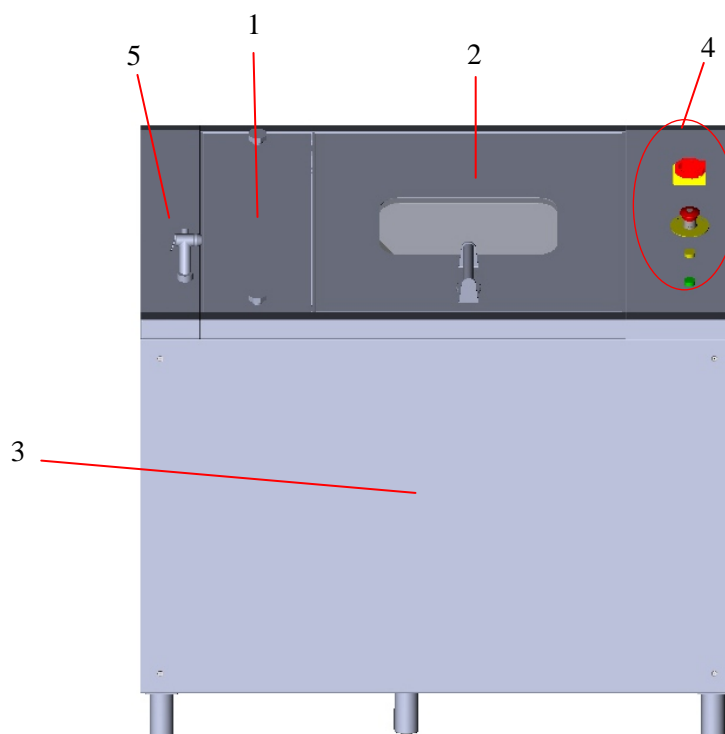
Description of the machine

2.1 Machine description

The machine is designed to grind food waste produced in large commercial establishments, in a BATCH FEED working cycle, with the following targets:

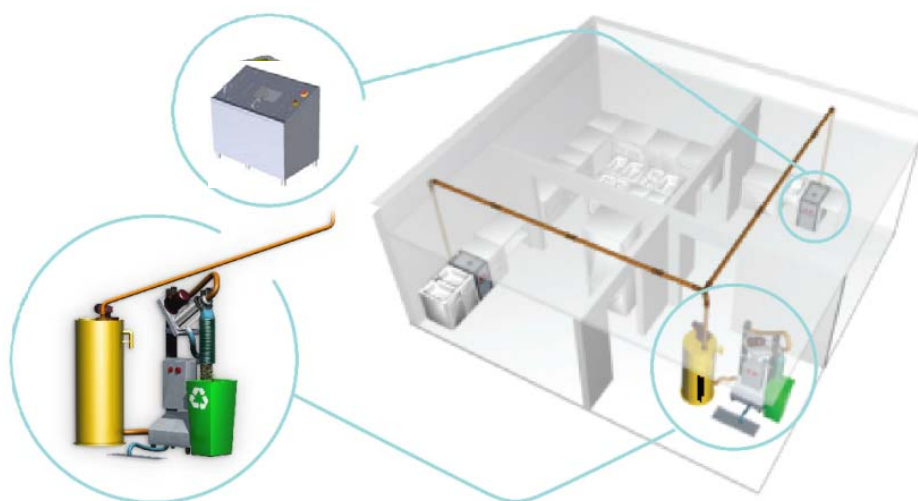
- To minimize the labour cost in the food waste management and more in general, to improve the efficiency of the internal organization;
- To be in compliance with HACCP sanitary rules and regulations;
- To perform a real separate collection of the organic fraction.

The MACHINE is made up by a stainless steel cabinet containing a commercial food waste disposer (1) and an auger-equipped “intake hopper” (2); the MACHINE is run by a PLC unit, located inside the board covered by the front panel (3), by means of a working software which informs the maintenance staff about any possible failures or malfunctions of the unit. Next to the hopper lid are the controls (4), while next to the disposer lid is located the hose spray (5) to wash the MACHINE. The rear side is open, allowing easy access for the maintenance staff.



The MACHINE is equipped with a double active safety system which stops the disposer or the auger when opening of the respective lids.

The MACHINE is predisposed to be connected, by means of appropriate pipes, to a storage tank and to a dehydration unit, (for more details see the use and maintenance manuals of the tank and dehydration units).



2.2 Working principles

After the operator has dropped the food waste into the hopper, the auger pushes it into the disposer. The hopper is fed with water by the drilled pipe close to the upper side, which helps the food to be moved and then ground. The auger rotates at a fixed rate and in both directions, in order to avoid cloggings.

If the MACHINE is installed in a multi-room system, once the food waste has been ground, it is sent to a storage tank, by means of a dedicate drainage line, and then to the de-water unit which physically carries out the hydro-extracting activity, separating the liquid from the ground waste.

While the liquid component goes into the sewer, the solid component (food waste), drastically reduced in weight (by about 50%) and volume (by about 80%) and, therefore, with reduced fermentation, may be easily stored and recycled for a possible re-use.

An electrical panel placed inside the steel cabinet automatically controls and manages all the functioning cycles by a PLC; the display of the PLC (inside the panel) indicates to the operator any failure and/or malfunction of the machine. The parameters of the operation (cycle and phases) may be modified exclusively by the manufacturer, in a simple and fast way intervening on the PLC software.

The operational procedure is clearly described in chapters 6 and 7 “Use and Maintenance of the Machine”, while in paragraph 7.5 are available the “Operational Instructions” which, printed and plasticized, have to be affixed to the side of the machine so that they may be consulted by the operator(s).

Safety and technical data

3.1. General information about safety

3.1.1. Design criteria

The rules and regulations indicated in *Table 2* have been taken into account while designing the MACHINE.

Table 2 – main harmonized rules and regulations used for the machine design

| RULES AND REGULATIONS | TITLE |
|--------------------------|--|
| UNI EN ISO 12100-1: 2005 | Safety of the machinery – Fundamental concepts, general principles of design - Part 1: Basic terminology, methodology |
| UNI EN ISO 12100-2: 2005 | Safety of the machinery – Fundamental concepts, general principles of design- Part 2: Technical principles |
| UNI EN ISO 14121-1: 2007 | Safety of machinery – Evaluation of risk – Part 1: principles |
| UNI EN 954-1: 1998 | Safety of the machinery – Parts of the command system connected to safety. General design principles |
| UNI EN ISO 13857: 2008 | Safety of the machinery – Safety distances to prevent the upper and lower limbs from reaching dangerous zones |
| UNI EN 349:2008 | Safety of the machinery – Minimum distances to avoid crushing of parts of the human body |
| UNI EN 953: 2009 | Safety of the machinery – Protection guards – General requisites for the design and construction of fixed and mobile protection guards |
| CEI EN 60204-1: 2006 | Safety of the machinery – Electrical equipping of the machines - Part 1: General rules |

The compliance of the pertinent paragraphs to the above mentioned harmonized rules and regulations has led to risk elimination or reduction in the best way possible, both during normal working and during the adjustment and maintenance operations, for all the lifecycle of the MACHINE.

The components have been accurately chosen amongst those available on the market and the materials used are devoid of risks for health and people's integrity. All parts provided by third parties are EC marked (when foreseen) and conform to the relevant directives. All the particulars have been strictly checked according to the quality standards as prescribed by the current rules and regulations.

What is more, the necessary measures of warning and protection concerning residual risks have been adopted for the machine (see *Paragraph 3.3 – Warnings concerning Residual Risk*).

3.2 Safety devices

The safety devices of the MACHINE have been selected, designed, built and installed according to the actual risks; the designers have taken note of the Essential Safety Requirements and of the regulations regarding:

- the general principles concerning the safety of the machinery;
- the design and construction of safety mechanisms;
- the safe distances required to prevent reaching dangerous areas with upper limbs;

Fixed safety devices

The fixed devices are installed to increase the MACHINE safety level meeting the requirements listed below. They are firmly fixed to the metal structure of the MACHINE and they are set so that their removal is only possible with special tools (because they are welded or fixed by means of appropriate fasteners, e.g. screws or bolts) and thus they can only be removed by purpose. Where possible, these devices will not stay in place without their fixings.

The fixed safety devices are:

1. the emergency stop button in the control panel – it immediately stops the MACHINE



2. the cover above the disposer chamber



Picture 1



Picture 2



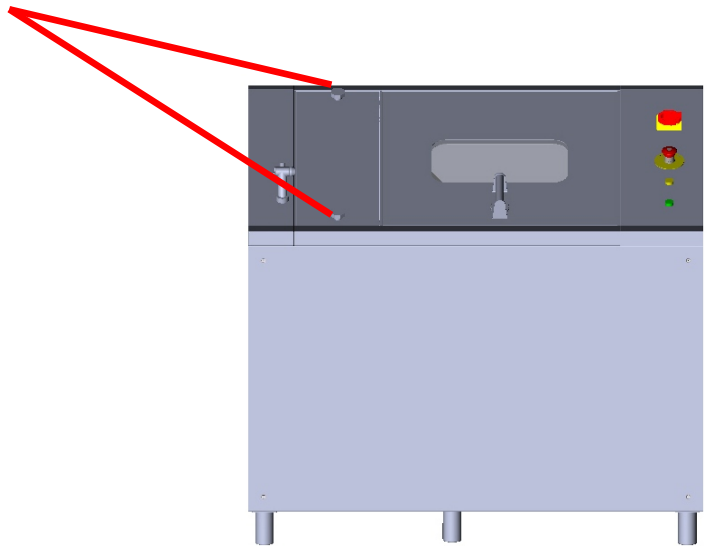
Picture 3

To access the disposer, it's needed to open the cover (picture 1). When closed, the cover is locked by a steel plate (picture 3) preventing the food waste to open it when hardly pushed by the auger.

3. The proximity sensors for both the hopper and disposer lids: opening the hopper lid makes the hopper sensor to stop the auger, opening the disposer lid makes the disposer sensor to stop the disposer

Removable safety devices

The removable device, the disposer lid, is fastened on the machine through two screws, which can be (un)screwed rotating the knobs.



The lid is equipped with a proximity sensor, so that if the lid is removed while the disposer is running, the sensor contact opens and stops the disposer immediately. Touching the rotating parts of the disposer while it's running is therefore definitely prevented, as required by rule UNI EN ISO 13857.

In proximity of the areas of potential risks are displayed appropriate danger and/or forbid warning signs as shown in paragraph 3.3.5

The controls on the control panel are set out in such a way as to guarantee the safe operation of the system. They are protected so that the command cannot take place unintentionally. They have been manufactured to resist foreseeable strain during normal operation. As well as the safety devices described above, the PLC placed inside the control panel manages any anomalies of function and/or sequence of actions.

3.3 Warnings concerning residual risks

3.3.1 Lifting and transport

3.3.1.1 NECESSARY INDIVIDUAL MEANS OF PROTECTION



3.3.1.2 SIGNAGE

The machine is provided with appropriate signs of danger and prohibition, see *Paragraph 3. 5 – Indications Concerning Safety*.

3.3.1.3 PRECAUTIONS TO BE TAKEN DURING LIFTING AND TRANSPORT

The MACHINE has been designed to be easily transportable in accordance with the following precautions:

- it is of such a shape that the normal lifting devices can easily adapt to it;
- it has been designed and built to permit the removal or fixing of the mobile components during transport and handling operations.

Transport of the machine takes place on wooden pallets after the machine has been wrapped in protective plastic sheeting so that the mobile parts are not protruding from the machine. Feet have to be removed before a long lasting transport, and the machine has to be set on the pallet without feet.

As well as plastic sheeting, cardboard is used to guarantee adequate protection.

As concerns the lifting and transport procedure of the MACHINE the general indications given below are valid.

The means of lifting and transport (for example, cranes, hoists, lifts, fork lift trucks) have to be appropriate, as concerns safety, to the nature, to the form, to the volume and weight of the loads the lifting and transport of which they are to be used for, as well as the conditions of use.

The means for lifting and transport have to be used in a way which corresponds to their characteristics, in particular, they have to adopt necessary measures to ensure the stability of the means and of its load (if necessary in a sling), in relation to the type of means, its speed, its acceleration in the phases of start up and stop and to the characteristics of the itinerary, to prevent the load from being damaged or to avoid its falling or its movement from its original position so as to become a source of danger to people and/or things.

The risks present in the handling activity of the load, both manual and mechanical, may be reduced using the appropriate IMP, such as, for example, safety hat, gloves, anti-accident shoes and, if necessary lumbar protection (able to re-establish the realignment of the backbone and to maintain uniform compression between the discs of the backbone).

The staff who carry out these operations have to be competent and trained for this specific task.

It is prohibited to transit below the suspended loads.

3.3.2. Installation and connection

3.3.2.1 NECESSARY INDIVIDUAL MEANS OF PROTECTION



3.3.2.2 SIGNAGE

The machine is provided with appropriate signs of danger and prohibition, see *Paragraph 3.5 – Indications Concerning Safety*.

3.3.2.3 PRECAUTIONS TO BE TAKEN DURING INSTALLATION AND CONNECTION

The assembly and installation of the MACHINE have to be carried out on the premises of the user by qualified staff: this consists in staff who have specific training relative to (electrical and mechanical setting up and maintenance) of industrial and civil machinery.

In fact, the MACHINE is delivered as a whole to the final client requiring exclusively installation rather than a real assembly.

There is, however, the risk of assembling or reassembling in an incorrect manner some elements of the MACHINE due to distraction or insufficient instruction of the operators in charge of such operations; it is recommended, therefore, to have the reassembly of the MACHINE carried out by (chosen and authorized for this task) a member of staff who has undergone specific training

In case of doubts concerning the correct installation always refer to the technical office of the constructor (Par. 1.6.1)

The MACHINE, in the operating conditions foreseen, is stable and does not comport any risks of falling or undue movement.

The MACHINE has been designed and constructed to be installed in a closed environment sheltered from atmospheric agents.

The MACHINE has not been designed nor built to be installed in an explosive environment.

3.3.2.1 SIGNAGE

The machine is provided with appropriate signs of danger and prohibition, see *Paragraph 3.5 – Indications Concerning Safety*.

3.3.3 Use and cleaning

3.3.3.1 NECESSARY INDIVIDUAL MEANS OF PROTECTION



3.3.3.2 SIGNAGE

The machine is provided with appropriate signs of danger and prohibition, see *Paragraph 3. 5 – Indications Concerning Safety*.

3.3.3.3 PRECAUTIONS TO BE TAKEN DURING USE AND CLEANING

The MACHINE has to be used **exclusively** for grinding food waste (including bones) deriving from preparation and/or cleaning up and for the successive de-watering of the ground material.

The use of the MACHINE for other operations could cause damage to the people or the machine and are therefore to be considered **improper use** for which the Manufacturer is not to be held responsible.

The MACHINE carries out, at the end of every cycle, an automatic cleaning cycle of the hydro-extractor and at every start up a wash of the feed hopper. However, it may be necessary for the operator to carry out this operation manually thanks also to the hose-spray with which the machine is provided.

The staff in charge of the cleaning operations of the MACHINE has to have the competency necessary to carry out the cleaning interventions and will have to follow the instructions given in the Use and Maintenance Manual of the MACHINE.

All cleaning and maintenance interventions have to be carried out with the MACHINE at a standstill and with the engine and the apparatus cold and they have to be carried out in the absence of free flames or high temperatures.

3.3.4 Maintenance and demolition

3.3.4.1 RESIDUAL RISKS

None of the materials used for the construction of the components of the machine is dangerous for the people in charge of its management (during all the phases of life of the MACHINE); in the specific, the materials used for the construction of the MACHINE are, principally:

- derivatives of iron (prevalently);
- derivatives of plastic (for example for the sleeves of the command panels and for the isolation of the electric cables);
- derivatives of copper (for example, for cabling and electric wires).

3.3.4.2 NECESSARY INDIVIDUAL MEANS OF PROTECTION



3.3.4.3 SIGNAGE

The machine is provided with appropriate signs of danger and prohibition, see *Paragraph 3.5 – Indications Concerning Safety*.

3.3.4.4 PRECAUTIONS TO BE TAKEN DURING MAINTENANCE AND DEMOLITION

It is to be underlined that for any eventual disposal of oils and fats it is necessary to comply with the current rules and regulations in charge in the country of installation of the MACHINE.

When the MACHINE has finished its life cycle, before proceeding to the final disassembly, certain operations are necessary with the purpose to minimize the environmental impact tied to the disposal of the components of the system, as required by current rules and regulations on waste disposal.

The operations are:





- recovery and disposal of oils: any oil contained in the components or sections of the MACHINE has to be drained and collected in suitable containers, the disposal has to be carried out by appropriate structures (Compulsory Consortium for Used Oils)
- separation and storage of the parts of environmental impact: the various parts which could cause pollution are (particulars in plastic or rubber, electric cables and electrical/electronic components) these have to be separated from the others and destined to a different separate waste collection, carrying out a selection of the materials with the objective of helping recycling
- disposal of the casing: having concluded the removal and the storage of the polluting elements, it is necessary to entrust the disposal of the casing to specialized companies

At the end of the interventions, it is necessary to inform the Manufacturer of the completed disposal of the MACHINE

3.3.5 Indications concerning Safety

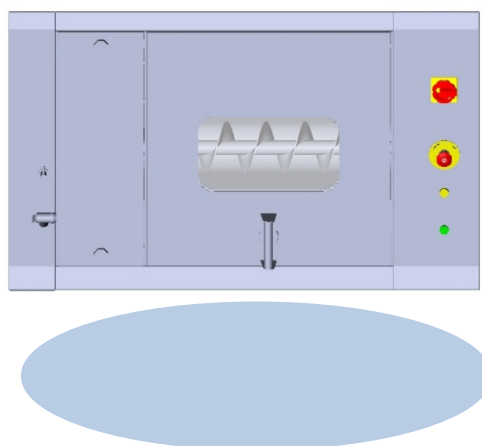
On the MACHINE there are sign plates relative to the potential dangers and prohibitions shown in Table 3.

Table 3 – Description of the sign plates present on the MACHINE

| | SIGNAL | DESCRIPTION |
|---|---|---|
| A |  | Indicates the prohibition to remove the safety devices and aprons installed and is usually accompanied by the explanatory words: DO NOT REMOVE THE PROTECTION DEVICES. |
| B |  | Indicates the prohibition to carry out any intervention (including lubrication and cleaning) in correspondence of moving organs; typically, it is accompanied by the explanatory words: DO NOT REPAIR OR REGISTER WHILE MOVING. |
| C |  | Indicates the danger of dragging in correspondence of the zone where the MACHINE is situated |
| D |  | Indicates danger of the presence of electric tension (typically positioned in correspondence of electric control panels). |

3.4 Emplacement of the operator

During operation, the position of the operator is in proximity of the loading hopper, approximately inside the blue area in the picture below.. The operator has to stand in front of the hopper and has to be able to quickly manoeuvre and reach the various commands and/or emergency switches.



3.5 Noise

The MACHINE has been designed and constructed to reduce the level of noise emitted during normal operation to a minimum.

In compliance with criteria imposed by the current rules and regulations, the level of acoustic pressure weighed and measured in correspondence to the operator's emplacement during operation is equal to 79 dB (A).

3.6 Proper and Improper use of the machine

The MACHINE is designed to **exclusively** process mixed food waste including (but not limited to): meat, fish, bones, vegetables, fruits, sauces, bread, rice and pasta. The processing of single (i.e. non-mixed) food stuffs such as rice and pasta, or bakery ingredients such as dough and flour, may cause malfunctions to the dewatering unit, if present.

The MACHINE is not designed to grind:

- Oyster and other hard shells
- Fats, grease and oil
- Anything different from food waste

The introduction of such non-organic matters may seriously damage the MACHINE and greatly reduce its lifespan.

The MACHINE has been designed, **built** and equipped to limit the operator work to the mere handling of the food waste to be ground.

Use of the machine for other operations could cause damage to people or to the machine and is therefore considered **improper use** for which the Manufacturer is not responsible.

Unforeseen uses are all those uses not explicitly indicated in Foreseen uses, in particular:

- processing waste other than that indicated in Foreseen uses, in particular the machine is not suitable for
- grinding **PLASTIC, METALS or RAGS;**
- cleaning the command and control instruments with water;
- installing and using the MACHINE in an aggressive environment or with a high concentration of dust or oily substances in suspension in the air;
- installing and using the MACHINE in the open.
- installing and using the MACHINE in a potentially explosive environment.

The MACHINE has been designed and constructed to work in a **not potentially explosive environment** and it itself cannot generate a potentially explosive environment.

It is a good precaution to dispose anyway a powder extinguishers in the vicinity of the machine. To foresee the possibility of fire it is necessary to keep the machine free from pieces of plastic, oils, solvents, paper and rags.



ATTENTION: *in case of a different use it is indispensable to consult the Manufacturer beforehand.*

3.6.1 Warnings and General Rules of Behaviour

In order to avoid whatever condition of risk to people or damage to the machine, it is recommended to follow scrupulously the warnings and the general rules of behaviour given here.



DANGER: *the Manufacturer declines all responsibility for any eventual possible damage to things and/or people deriving from improper interventions carried out by unqualified, untrained or unauthorised staff.*

The operators in charge of the management of the machine have to be opportunely instructed to use the machine to its best without risks and they have to operate in a comfortable environment which guarantees the best safety and hygienical conditions possible



DANGER: *prevent the machine from being used by unauthorised staff or staff who are not instructed to operate without supervision: in fact, before start working, each operator has to be perfectly aware of the position and the function of all the commands and of the characteristics of the machine; and has, what is more, to have read the present manual IN ITS ENTIRETY.*

- Before using the machine check that whatever condition dangerous for safety has been opportunely eliminated and that no operators are present in the dangerous zones in proximity of the machine itself.
- Before using the machine, check that all the protection apparatus are in their place and that all the safety devices are present and efficient.
- Warn the person in charge about every irregularity of operation of the machine or of every problem relative to the integrity of the protections of the machine.
- Consult the present manual concerning the current safety measures and the specific IMP to adopt for personal safety, in particular, however, the staff in charge of the machine have to wear suitable clothing, avoiding and paying due attention to:
 - Flapping clothes,
 - Loose sleeves,
 - Loose ties or scarves,
 - Necklaces, bracelets and rings.
- To avoid causing damage to the machine and triggering dangerous situations, it is recommended not to try to climb on to the machine.
- Staff in charge of machine maintenance have to be aware of all the procedures given in *Chapter 7 – Maintenance of the Machine* and should have an adequate technical preparation to interpret correctly the instructions and the diagrams attached to the present manual and to intervene on the machine.

- The area where the maintenance operations are to be carried out (ordinary and extraordinary) has always to be clean, dry and with the suitable equipment always available and efficient.
- The work area should never be occupied as to interfere with the freedom of movement of the operator. In the case of an emergency immediate access to the machine by the staff in charge has to be guaranteed.
- Access to the above mentioned area is forbidden to people who are not directly in charge of the operation of the machine thus to avoid dangers due to distraction or negligence during intervention on the machine
- If it were necessary to carry out interventions in proximity of electrical components operate with properly dried hands and use dielectric gloves (operating on the electrical components with wet hands may cause a near certain danger of electric shock).



DANGER: *before any intervention on the machine or in correspondence of its components or accessory equipment, it is necessary to cut off the power supplies; if that were is not possible it is necessary to foresee measures which permit, anyway, operation in complete safety on the machine.*



DANGER: *mishandling or unauthorised replacement of one or more parts of the machine and the use of accessories, tools, consumer materials other than those indicated by the Manufacturer may generate the danger of accidents at work.*



ATTENTION: *all material of environmental impact which it is necessary to dispose of after any interventions or operations on the machine have to be disposed of according to current rules and regulations. If necessary, refer to specialized companies for their disposal.*

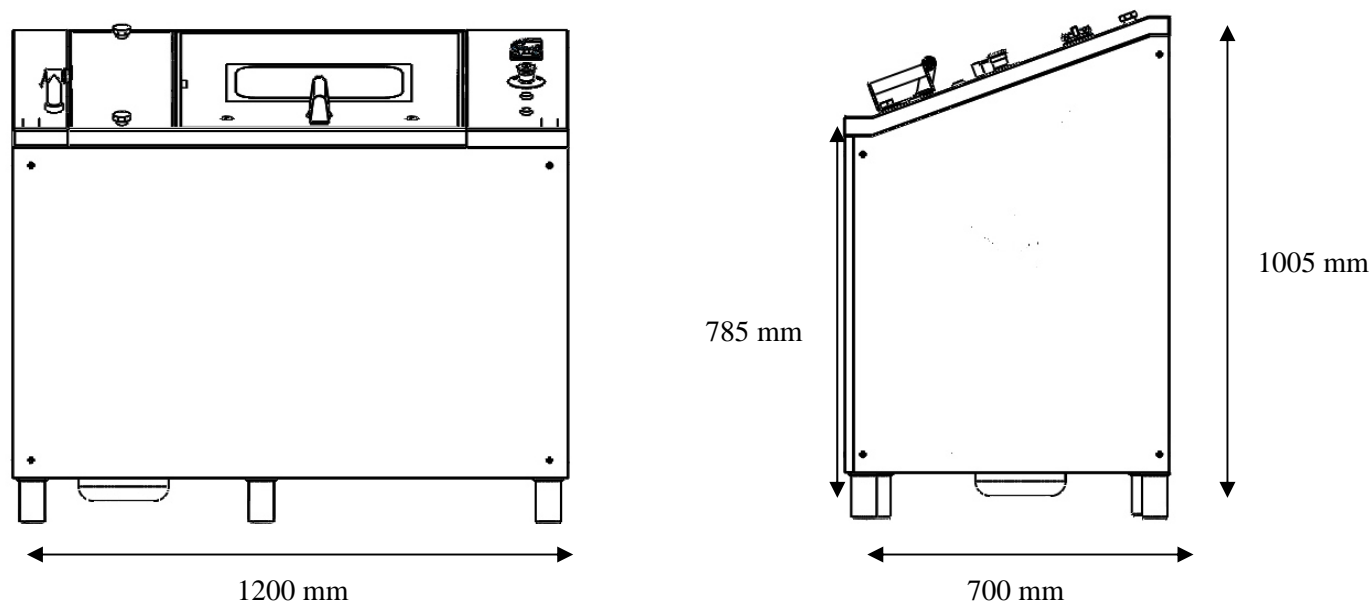
3.7 Technical data

3.7.1 Identification plate

For the identification of the machine, the identification plate shown in the picture below has been affixed: the identification data given on this plate have to be communicated to the offices of the Manufacturer at every request for intervention or for ordering spare parts. The plate is placed on the external side of the hopper and is visible on the MACHINE's rear side.



3.7.2 Technical data and overall sizes



Feet height is adjustable from 80 to 110 mm.

Dry mass – 245 Kg

Input supply – three phases 400 V, 50 Hz

①

Input power – 3.50 KW

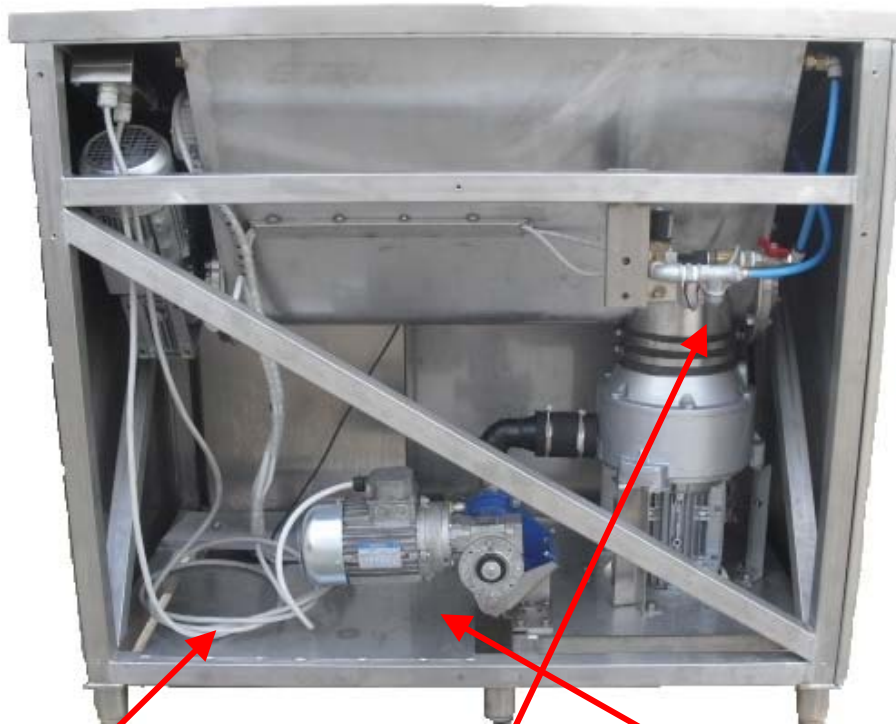
Socket – 3P + earth, 16A (4 wires)

Cold water connection – Ø 3/4", 3.0 bars max

②

Pump connection – Ø 50 mm

③



Chapter 4

Transport and installation

4.1. General information

4.1.1. Environmental conditions of the installation place

The MACHINE (including all the command and indication devices) has been designed and constructed in such a way that it can operate and be cleaned and maintained in safety in environments with normal lighting. To this effect the machine does not dispose of supplementary illumination.

The MACHINE has been designed to be installed in a closed environment and sheltered from atmospheric agents.

Do not install the MACHINE in an aggressive environment or one where there is a high concentration of dust or oily substances in suspension in the air.

Please remember that the MACHINE has NOT been designed to operate in potentially explosive environments.

4.1.2. Minimum room for installation of the machine

Overall dimension of the machine are available in the chapter 3.8 “Technical Data and Overall Sizes”.

The machine may be aligned with other machines in the kitchen but, nevertheless, it is preferable to have a room to be able to carry out maintenance on site, avoiding any displacement.

To this end it is useful to assess the ease of assembly/disassembly or a simple displacement of any working table by the machine side.

4.2. Transport and handling

See paragraph 3.3.1.2.

4.2.1. Unloading and unpacking

Once the MACHINE has been positioned in the workplace proceed to remove, with the most opportune means, the supports and the wooden, plastic and cardboard protection, disposing of the packaging material according to the nature of each one

4.3. Installation

It is recommended to always have the connection and/or installation operations carried out by qualified and sufficiently trained staff

4.3.1. Connection to the mains power supply

The MACHINE is intended to be set on the floor of an commercial kitchen or room for food waste disposal. The power supply line of the MACHINE requires a connection to the electrical current by means of an interlocked socket with an ON/OFF switch with suitable fuses or circuit breakers/RCD, as shown here:



Please ensure that the power supply is suitable and correctly sized for the specific power requirement of the machine. Ensure that the supply line upstream of the electrical socket is protected with suitable fuses or circuit breakers/RCD.

The keys for control panel and emergency switch are fastened to the control panel, to get them remove the stainless steel front panel with an Allen wrench n. 5. Inside the panel are the electrical drawings.

4.3.2. Connection to the water supply

The MACHINE needs to be connected to the cold water supply to feed the disposer. A pressure resistant flexible pipe is required to be piped to the solenoid valve as close to the machine as possible. A tap has to be installed to disconnect the machine for maintenance.

4.3.3. Connection to mains drainage

Use a pipe equipped with a nonreturn valve if foreseen.

4.4. Storage

4.4.1. Uninstalling

If the MACHINE has to be disconnected from the workplace and from the various power supplies proceed, first of all, to carry out several cleaning cycles to ensure that no residual organic material remains inside the various functional parts. Protect the MACHINE adequately from dust and other atmospheric agents by means of suitable packaging. Position the machine in a safe way on a stable surface and away from transit zones indicating its presence. When proceeding to demolition and disposal, refer to chapter 8.

Chapter 5

Fine tuning

5.1 Machine fine tuning

5.1.1 Fine tuning

Besides a simple check of the connections (see paragraph 4.3) and an initial functional test, the only needed tuning is adjusting the water tap depending on the desired water flow into the hopper (see page 25, picture 2).

It is possible to personalize the PLC timings for specific uses (programming and tests have to be previously agreed beforehand and this activity can take place exclusively on the premises of the Manufacturer).

Chapter 6

Using the machine

6.1. Cycle

6.1.1. Cycle steps

The sequence of the working program and any other system functions are handled automatically by the PLC housed in the control panel. At the time of sale, a default program has been uploaded in the PLC: this program is able to meet the normal needs required by the operators.

To start and shutdown the working cycle, the operator has only to press the START/STOP button on the control panel.

The default program uploaded in the PLC includes the following features:

- By briefly pressing the green button START/STOP, the working cycle program starts following a precise sequence of instructions predetermined by the manufacturer
- The total cycle time predetermined by the manufacturer is about 10 minutes. Before the end of the working cycle, the MACHINE automatically performs a cleaning cycle to wash the hopper and pipes, then the unit switches to stand-by.
- The working cycle can be stopped by pressing the START/STOP button again. In this case the machine, before stopping, will perform the cleaning cycle to wash hopper and pipes.
- At the end of the day, normally during the night, the dewatering unit – if present – is scheduled to start its own cleaning cycle. This task, if foreseen by the management, may involve or not the MACHINE. For this reason, it is recommended that the MACHINE remains in stand-by and electrically powered.

Here is a summary of the default working cycle steps:

| TIME [min] | ACTION |
|-----------------------|---|
| 0 | Connection to the AC mains |
| 0:05" | The green button lights up: the MACHINE is ready |
| 0 | The operator pushes the green button, the cycle begins. The pump rotates to empty the pipes |
| 0:06" | Water is let in the hopper |
| 0:08" | The auger starts rotating, soon after the disposer starts too |
| 7':00 | the auger is stopped, water continues flowing. The disposer works |
| 7':30" | The disposer, pump and auger are stopped, water continues flowing |
| 8':30" | Pump and auger are on and empty the hopper |
| 9':00 | End of cycle, the machine stops |

Booster

The boost function modifies the auger rotating timings. The default auger rotations during the working cycle are set as follows:

Onwards rotation → 5 secs stop → Backwards rotation → 1 sec stop

By pressing the booster button (the yellow led lights up), the operator can extend the onwards rotation time so that more material is pushed into the disposer. The boost function is enabled or disabled using the same yellow button, which lights up when boost is enabled. If the hopper lid is opened during the working cycle while boost is enabled, the boost function is automatically disabled.

Pump

While the machine is powered and not performing any cycle, the pump can be manually operated by pressing and holding the green button.

In the design stage or later, some parameters of the default program can be modified, customizing the working cycle to some specific needs requested by the operator. This job is reserved to the manufacturer only, modifying the default PLC program is absolutely forbidden to the customer and/or operators.

6.2. Checks

6.2.1 Safety devices check

Periodically, at least once a week, it is required to perform a functional test to verify the following components, having the MACHINE empty and with the emergency reset key in your hands:

Hopper lid sensors

Start a normal working cycle and open the lid (the auger should stop immediately)

Disposer lid sensors

Start a normal working cycle and open the lid (the disposer should stop immediately)

Emergency switch

1. Start a normal working cycle and try to activate the emergency switch (the machine should stop immediately)
2. At the end of the test remember to re-activate the emergency switch again, using the reset key

Shouldn't the MACHINE stop immediately during one of these tests, please do the following:

1. immediately stop the MACHINE
2. disconnect the mains input
3. affix a notice with the wording "out of order"
4. inform the person in charge or the assistance service describing in detail the occurrence and referring information and/or codes provided by the PLC.

6.2.2 Anomalous situations and alerts

Anomalies and alerts are pointed out by useful tips on the PLC screen, located inside the control panel. The following table gives a brief description of the anomalies types:

| PLC message | Solution |
|----------------------------------|--|
| emergency on | The emergency switch has been pressed: rearm it using the dedicated key |
| hopper lid opened | Close the hopper lid |
| disposer lid opened | Close the disposer lid |
| disp. / auger thermal protection | Indicates the intervention of the thermal trip which protects the disposer or auger motor. Check and remove any extraneous objects involuntarily dropped into the disposer. Then open the control panel and reset the thermal protection by clicking on the disposer thermal trip switch in the control panel. If the machine does not restart, report immediately to the Service Manager or to the outsourced Service describing in detail what happened |
| pump thermal protection | Indicates the intervention of the thermal trip which protects the pump motor. Maybe the pump is blocked. Before asking for service, reset manually the pump thermal trip switch, in the control panel, and try to un-jam the pump by contacting the service. If the machine does not restart, report immediately to the Service Manager or to the outsourced Service describing in detail what happened |
| low water pressure | No cold water in the machine. Open the gate valve of the cold water. To reset the alarm push again the START/STOP button |
| stopped by remote unit - wait | If present, the system PLC has stopped the MACHINE because of a problem with another unit. Check the main PLC unit and remove the cause of stopping |

6.3. Start/Stop procedure

6.3.1. Start

Being sure that the water and power inputs are properly connected and the main switch is ON, simply press the START/STOP button. The MACHINE can receive a command by the operator only while the START/STOP button is steadily lighted on. Every start command of the working process is given by the operator through a voluntary action on the START/STOP button, even in the case of a restarting of the machine after a shutdown (eg. if caused by a lack of supply) or after any voluntary disconnection.

6.3.2. Stop

The stop can be carried out performing the following stopping functions:

- **normal stop:** by pressing the START/STOP button on the control panel (the stop is pre-set by a timer).
- **emergency stop (never use as a normal stop):** by pressing the EMERGENCY SWITCH, which disconnect the main power supply by means of a safety switch.
- **general stop:** by cutting off the electric power supply to the machine, by opening the interlocked socket on the control panel or disconnecting the MACHINE's plug from the interlocked socket.

It is forbidden to use the emergency switch to stop the machine during the normal working cycle. The emergency switch is provided to ONLY stop the machine in case of a real emergency.

6.3.3. Emergency stop

To stop the machine in case of a real emergency press the emergency switch, provided with a key which has to be held by the kitchen's manager. To prevent clogging after an emergency stop, after the emergency has been solved and before starting a new cycle, it is recommended to manually clean the hopper and disposer, then drain the water by pressing and holding the START/STOP button.

AN IMPROPER USE OF THE EMERGENCY SWITCH MAY CREATE BLOCKAGES IN THE DRAINAGE LINE BECAUSE IT PREVENTS THE CORRECT EXECUTION OF THE WORKING AND CLEANING CYCLES. IN ORDER TO AVOID ANY IMPROPER USE, THE EMERGENCY SWITCH IS PROVIDED WITH A KEY TO BE HELD BY THE KITCHEN'S MANAGER.

In case of accidental drop of improper object into the hopper

If during the working cycle an improper object is dropped into the hopper, it is recommended not to stop the cycle by the START/STOP button but to follow these steps:

1. immediately press the emergency switch
2. disconnect the power supply
3. open the lids and remove the object
4. connect the power supply and restart the cycle

Chapter 7

Maintenance

7.1. General information

The MACHINE must always be fully disconnected from the electric power supply before any necessary repair or maintenance work is carried out.

To ensure the maximum reliability to the machine and to avoid conditions of danger keep strictly to the instructions and the warnings given in the following pages.



DANGER: *for reasons of safety, all maintenance operations illustrated in the present chapter have to be carried out only by qualified and specifically trained staff. What is more, the technicians in charge have to be equipped with all the instruments and the IMP necessary to operate safely.*



ATTENTION: *to guarantee the operators complete efficiency and safety of the machine all the time and to prevent problems tied to the deterioration of the safety measures or machine stoppages which may be onerous, it is necessary to activate an efficient **preventive maintenance** planning interventions at programmed intervals, with the objective of renewing or replacing the parts of normal wear such as: **the grinding system of the disposer, the elastic impeller of pump body, the cochlea brushes of the hydro-extractor** and checking the general state of the mechanical and electrical components of the machine (and its auxiliary equipment), thus providing indications on any eventual extraordinary operations which may be necessary.*

Before carrying out any maintenance or cleaning operation as shown in the present paragraph it is necessary to disconnect the machine (and its auxiliary equipment) from the power supplies:

- Remove tension from the general control panel by means of the general switch putting it on **OFF**
- Predispose a visible notice with the wording "MACHINE IN MAINTENANCE" and at the same time cordon off the machine.



DANGER: the manufacturer declines any responsibility for any possible damage to things and/or people deriving from improper interventions carried out by unqualified, untrained, inadequately equipped or unauthorised staff.

7.1.1. Indications concerning safety

In order to correctly carry out cleaning and maintenance operations, it is indispensable to take into consideration the following.

- In the meanwhile the maintenance is being executed, it's necessary to properly inform all concerned people about the ongoing maintenance job.
- During the interventions **only authorised staff** may access the workplace
- All material of environmental impact which has to be eliminated as a result of maintenance operations has to be disposed of according to current rules and regulations.



ATTENTION: the maintenance and cleaning operations have to be carried out only by expert staff who have read and understood all the indications given in the present Use and Maintenance Manual.



DANGER: only dismantle the really needed parts to carry out the specific maintenance operation. What is more, before handing the machine back to the operators, it is necessary to check its integrity and functionality.



ATTENTION: for the disposal of materials of high environmental impact, if required, refer to specialized companies.

In any case, to carry out all the maintenance and cleaning operations given below, the following Individual Means of Protection are necessary:



7.2. Cleaning

The machine doesn't need any routine maintenance by the user, but a few simple cleaning actions only.

7.2.1. Hopper and pipes cleaning

Using a soft cleanser and the supplied hose spray, clean the hopper completely. After this, (which is usually to be performed at the end of every shift in order to leave the machine clean for the following operator) press the START/STOP button to start the working cycle to remove leftovers and water from the hopper. This also performs, at the same time, a cleaning cycle of the pipes.

7.3. Routine and emergency maintenance operations

Routine and emergency maintenance are in charge to the assigned staff, authorized by the seller. The user must only clean as described in chapter 7.2.1 and check the safety devices as described in chapter 6.2.1

7.4. Clogging, obstruction

Routine and emergency maintenance are in charge to the assigned staff, authorized by the seller. Nevertheless, in case of clogging or obstruction, before asking for a technical action by the assigned staff, the user has to perform some simple tasks aimed to a possible immediate recovery:

JAMMING: the machine can't grind metallic or plastic parts, nor rags!! In case of accidental fall, immediately stop the machine using the dedicated emergency "stop switch" button.



In case of jamming it is recommended to perform the following procedure:

CLOGGING: reset of the machine after emergency stop



Verify that there is no water in the hopper by lifting the hopper's lid (cover). If any, **press and hold the green button for the time required to empty the hopper**. The pump starts working while the disposer does not start. When finished (the hopper is emptied) release the button.



Turn off the electric power by switching off the main switch and disconnect the unit from the electric power supply



Wearing special gloves, try to remove any non food object dropped into the hopper or disposer



Reconnect electrically the machine, only after having well checked the drawback has been solved.



Close the lids and reset the emergency switch



Start a new working cycle to be sure to have cleared the trouble, otherwise ask for the service.

OBSTRUCTION: checking and recovery procedure



Press and hold the green button to start the suction pump, in order to dry all liquid leftovers in the hopper



Using safety gloves, remove the exceeding material in the hopper. [*always remembering that the hopper must be fed gradually, especially avoiding to overload it. The operator, after an initial training, must have the needed awareness to see and understand the actual process capacity of the machine*]



Reconnect electrically the machine, only after having well checked the drawback has been solved.














Close the hopper's lid and reset the emergency switch by rearming it using the dedicated key



Start a normal working cycle to be sure to have cleared the trouble; ask for customer service only if recovery has failed

7.5. Operative instructions *plastic coated, on machine side*

| PRELIMINAR CHECKS [after downtime] | |
|---|--|
|  | Check if the unit is correctly powered: switch to ON |
|  | Turn the main switch ON |
|  | Check the emergency “stop switch” is armed, in case reset it using the unlocking key |
|  | Open the tap water supply water. The unit needs cold water to run. Check if the water is on by using the supplied hose spray |
|  | Check if there is no water inside the hopper; in case, press and hold the START button until the hopper is empty |
| ELECTRIC AND HYDRAULIC INPUTS: machines must never be disconnected from electric nor hydraulic inputs, except for the time strictly needed for cleaning or service | |
|  | STARTING THE WORKING CYCLE Press the START/STOP button (the working cycle program starts working, its running time is predetermined by the manufacturer (about 10 minutes) |
|  | SHUTTING DOWN THE WORKING CYCLE Press the START/STOP button again. The shutdown of the working cycle is executed. The stop sequences are predetermined by the manufacturer. During the shutdown do not pour any food waste into the hopper. |
|  | HOPPER EMPTYING Press and hold the START/STOP button for the time required to empty the hopper. (only the pump works, while the auger and disposer don't. The pump is designed to work with water, therefore it is recommended not to keep pressed the START/STOP button if no water is in the hopper) |
|   | END OF DAY/ END OF EACH WORKING SHIFT With the of hose spray provided, clean the hopper by using non aggressive, non foaming products, following the schedule indicated by the internal HACCP regulations Lift the hopper lid, press and hold the START/STOP until the hopper is empty Press the START/STOP button to start the working cycle thereby removing the last leftovers in the hopper. When the work is completed, press the START button again to shut down the working cycle, correctly |
| SUMMARY | <p>The green button named START/STOP is the only button to be pressed for daily routine tasks:</p> <ul style="list-style-type: none"> ○ First pushing: it starts the working cycle program ○ Second pushing: it shuts down the working cycle working ○ Pressing and holding: it starts working the pump |
|  | |
| Using the emergency “STOP switch” is forbidden unless STRICTLY NEEDED IT IS FORBIDDEN OPENING THE HOPPER’S LID DURING THE WORKING CYCLE, UNLESS STRICTLY NEEDED ABUSE OF THE EMERGENCY “STOP SWITCH ” CAN LEAD TO DRAINAGES PROBLEMS | |
| <p>This machine is provided with micro-switches which cut off the electrical power supply of the disposer when one of the lids is opened, rendering it harmless. Nevertheless, even if the machine is OFF, to access or clean the areas close to the rotating parts of the disposer, it is always recommended to disconnect the unit from the electric supply.</p> | |

Demolition and disposal

8.1 Shut down, disassembling and demolition

To carry out the disassembly and demolition operations the following Individual Means of Protection are necessary:



8.1.1 Shut down

To shut down the machine for a long period, carry out the following operations:

- 1 Switch off the main switch.
- 2 Clean the machine.
- 3 Carry out the ordinary maintenance operations, then cover the machine with a canvas.

8.1.2 Disassembling

If it should be necessary to disassemble the machine, follow the procedure below.

- 1 Isolate the machine and the auxiliary equipment from power and water inputs.
- 2 Referring to *paragraph 4.4.1*, proceed with disassembling the machine; contact, besides, the manufacturer's technical department to obtain the necessary assistance during such an intervention.
- 3 To proceed with the handling of the machine components, operate according to the instructions given in *paragraph 4.2*.
- 4 Arrange opportunely the components to be transported to other premises (refer to *paragraph 4.2*), to be stocked (refer to *paragraph 4.4*) or to be demolished (refer to *paragraph 8.1.3*).



DANGER:

the Manufacturer declines all responsibility for any eventual damage to things and/or people deriving from improper interventions carried out by unqualified, untrained, inadequately equipped or unauthorised staff.

8.1.3 Demolition and general information about disposal

When the machine (and its auxiliary equipment) has come to the end of its life cycle, before proceeding with its final disposal, it is necessary to carry out a series of operations destined to minimize the environmental impact connected to the disposal of the components of the machine, as required by the current rules and regulations on waste disposal.

Such operations are:

1. Recovery and disposal of oils, that is:
 - a. By means of an appropriate pump, drain any oil which may be contained in components of the machine, collecting it in suitable containers;
 - b. Store the recovered oil in cans or drums;
 - c. Dispose of the recovered oil via appropriate companies;
2. Separate and stock the parts of environmental impact, that is:
 - a. Separate the various parts which could be a source of pollution;
 - b. Carry out a selection of the materials with the purpose to benefit the separate collection and recycling of these waste materials.



NOTE: *for further details on the disposal of components not made by the Manufacturer and integrated in the machine, consult the relative Use and Maintenance Manual.*

3. Dispose of the casing, that is:
 - a. Having finished the removal and storage of the polluting elements, refer to specialized companies for the disposal of the metal casing.



ATTENTION: *Before scrapping the machine, **make obsolete** the identification plate of the machine and the relative technical documentation. It is the Duty of the Purchaser to return such elements to the Technical Office of the Manufacturer who will undertake to destroy them. The mere keeping of the above mentioned elements in an inaccessible place is not allowed. At the end of these operations **communicate** to the Technical Office of the Manufacturer the completed dismantling and scrapping of the machine.*

Chapter 9

Failure search

9.1 Failures and malfunctions

In case the operator is not able to solve the problem as described in chapter 7.4, all faults and inconveniences have to be reported to the assistance service who, in order to proceed in the best way and best time, should be informed on any possible causes by means of a simple description of what happened, referring the information reported by the PLC and by the appropriate flashing light on the panel (see anomalies and alarms in chapter 6.2.2).

The user is not required to have a specific instruction on a failure search.

Chapter 10

Spare parts

10.1 Procedure for ordering spare parts

To contact the technical service of the Manufacturer, please refer to:

ECOFAST ITALIA TECHNICAL DEPARTMENT

Piazza Franco Martelli, 5

20162 Milano (MI) – Italy

Phone: (+39) 02 66111618

Fax: (+39) 02 66112000

Email: INFO@ECOFAST.EU

It is recommended to specify the model and serial number of the machine being serviced.

10.2 Spare parts list

The following components are normally available at the manufacturer's store as spare parts.

pompa

EC050901 impeller Minor NITRILE NBR

EC050904 pump casing MINOR 1"1/2 gas, est.,m, Nitrile

EC050898 pump circlip 7435 inox 25 est. 3174023

EC050899 spacer for pump sealing 3174022

EC050902 sealing D.25 minor/midex 3174009

EC050903 oring 1185 Culatte Minor 3174002 85,10 x 2,20

EC050905 blind breech 3174001

EC050906 perforated breech 3174008

EC050907 circlip SB 50 int.

EC050013 Motor kW 0,75 - 3.000 rpm - 400 Volt std

EC090253 reduction gear SRS40 PC-PC R=5/1 PAM G3

coclea

EC050006 Motor kw 0,55 P.4 B14 IP55 CH71C4 V.230/400/50

EC090255 reduction gear Chiaravalli CHB06U PAM i45



EC060046 sensor PIZZATO SR BD40AN2-B02F w/ actuator (2 NC)
EC090331 lid spring
EC070036 solenoid valve coil - 22mm 24V 50/60Hz (type 30B)
EC070034 solenoid valve ACL d.1/2" 24 volt-50 Hz
EC060075 upper green button
EC060076 upper yellow button
EC060077 yellow button
EC060078 green button
EC060069 emergency switch w/ key
EC060079 mains switch
EC070019 gargoye Sirio Rain w/ accesories + pipe Nyl NE 140 F1/2" M3/8"
EC050920 connector PVC/NBR -SG/PVC NBR 175x181 x L=0.15mt
EC090626 st. steel clamp ø 190 mm
EC050922 connector PVC/NBR -SG/PVCNBR 63.5x77.5 L=0.10mt
EC070067 st. steel clamp ø 76 mm
EC060065 Logo Siemens 24 RC
EC060065-1 Logo Siemens 24 RC w/ program
EC060074 Lamp Lombardo LL677H

Chapter 11

Technical documentation for maintenance

The electrical diagram is inserted in the electric panel.

To contact the technical service of the Manufacturer, please refer to:

ECOFAST ITALIA SERVICE DEPARTMENT

Piazza Franco Martelli, 5

20162 Milano (MI) – Italy

Phone: (+39) 02 66111618

Fax: (+39) 02 66112000

Email: INFO@ECOFAST.EU

It is recommended to specify the model and serial number of the machine being serviced.