



# ELECTRIC GRAPE / FRUIT CRUSHER

Art. PM/PMI/PIGMO/PIPMO



## 2022 - ENGLISH MANUAL INSTRUCTIONS USE AND MAINTENANCE



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*Dear Customer,*

*Thank you for choosing a GRIFO product which has always had a name for reliability, sturdiness and functionality.*

*We are pleased to give you this manual so as to enable you to operate the machine, in the safest and most efficient way.*

*We invite you to read this technical manual carefully and to show it to anyone who will use the machine, as well as the person who installs it and carries out maintenance work.*

*We are at your complete disposal for any further information you may need and will consider any proposals in order to make this manual evermore complete for the safety requirements for which it is intended.*

*Our best wishes and enjoy working with Grifo products!*

*Grifo Marchetti S.r.l.*

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## EC Declaration of Conformity

(Directive 2006/42 CE, Annex II, A)

### Grifo Marchetti S.r.l.

Via Mantova 1,  
I-26034 Piadena (CR)  
Italy

#### DECLARES THAT

The machine  
Model

**MOTORIZED GRAPE CRUSHER  
PM, PMI, PIGMO, PIPMO**

conforms to Directives 2006/42/EC (Machines), 2006/95/EC (Low-voltage) and 2004/108/EEC (Electromagnetic Compatibility) and EMC 2014/30/EC;

conforms to the standards EN 953, EN 13850, EN 60204-1.

Conforms food contact and enological use standard EC 1935 / 2004.

Name and address of the person authorised to compile the technical file:

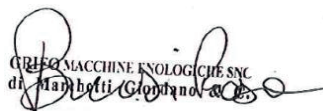
**Rosa Busi**  
**Via Mantova, 1**  
**26034 Piadena (CR)**

Identity and signature of the person empowered to draw up the declaration on behalf of the manufacturer

**osa Busi**

Place and date of the declaration

**Piadena (CR), 02 January, 2019**

GRIFO MACCHINE ENOLOGICHE SNC  
di Mantova (CR) Italy  






# 1. INTRODUCTION

## 1.1 Contents

This manual contains a description of the technical characteristics and functioning of the MOTORIZED GRAPE CRUSHER art. (PM, PMI) and FRUIT CRUSHER (PIGMO, PIPMO), and instructions for installation, use and maintenance.

The manufacturer reserves all intellectual and editorial rights relating to the technical publication, claiming all the properties, prohibiting the duplication and transfer to third parties without written consent.

This instruction manual uses the following symbols.

	Pay the utmost attention to the instructions accompanied by this symbol as indicated.
	Indications and useful tips for manipulation, mounting and installation, use and maintenance operations.
	Operations or behaviour absolutely forbidden
	Continue in the indicated, operating sequence

## 1.2 Recipients and conservation of the manual

The manual is intended for machine operators, such as persons in charge of installing, operating, maintaining, cleaning and transporting the machine.

The manual must be kept with care, in a suitable place, so that it is always available for consultation in the best state of preservation



The manual is part of the machine and must be kept for the entire life of the machine and transmitted to any other user or subsequent owner.

### ***1.3 Responsibility***

The guarantee of proper operation of the machine at the intended service depends on the correct application of all the instructions contained in the manual.



Before operating the machine it is obligatory to read what is specified in the manual

With reference to what is described in this instruction manual,

Grifo Marchetti S.r.l. **declines every responsibility** in the case of:

- not having observed the instructions for installation, use and maintenance in the manual;
- inadequacy of the installation and environmental conditions in which the machine operates;
- non authorized modifications to the machine;
- use by unauthorized or untrained personnel.



The only configurations and intended use allowed by the manufacturer are those indicated in the manual.

### **1.4 Manual update**

The manual is an integral part of the MOTORIZED GRAPE CRUSHER art. (PM, PMI) and FRUIT CRUSHER (PIGMO, PIPMO), and instructions for installation, use and maintenance.

Any additions to the manual, which the manufacturer will send to users, must be kept together with the manual and will be part of it.

### **1.5 Guarantee**



The machine warranty covers the first 12 months from the first use. In the case of non-immediate use, the warranty ends on the 18th month from delivery.



The warranty does not cover the transport of the machine, which is the responsibility of the purchaser, and ceases in the event of non-compliant use.

Conditions other than those specified may be defined in the contractual phase.

## **2. MACHINE DETAILS**

### **2.1 Machine description and functioning**

The GRAPE CRUSHER art. (PM, PMI) and FRUIT CRUSHER (PIGMO is a machine for crushing grapes, designed and built for use in small and medium-sized wine-making companies. The destemming is performed to obtain a better quality of the wine.

The models to which the manual refers differ in the material used, painted steel or stainless steel; the model catalog names are as follows:

BIG GRAPE CRUSHER BY ELECTRIC MOTOR (PM),



STAINLESS STEEL MOTORIZED GRAPE CRUSHER (PMI)



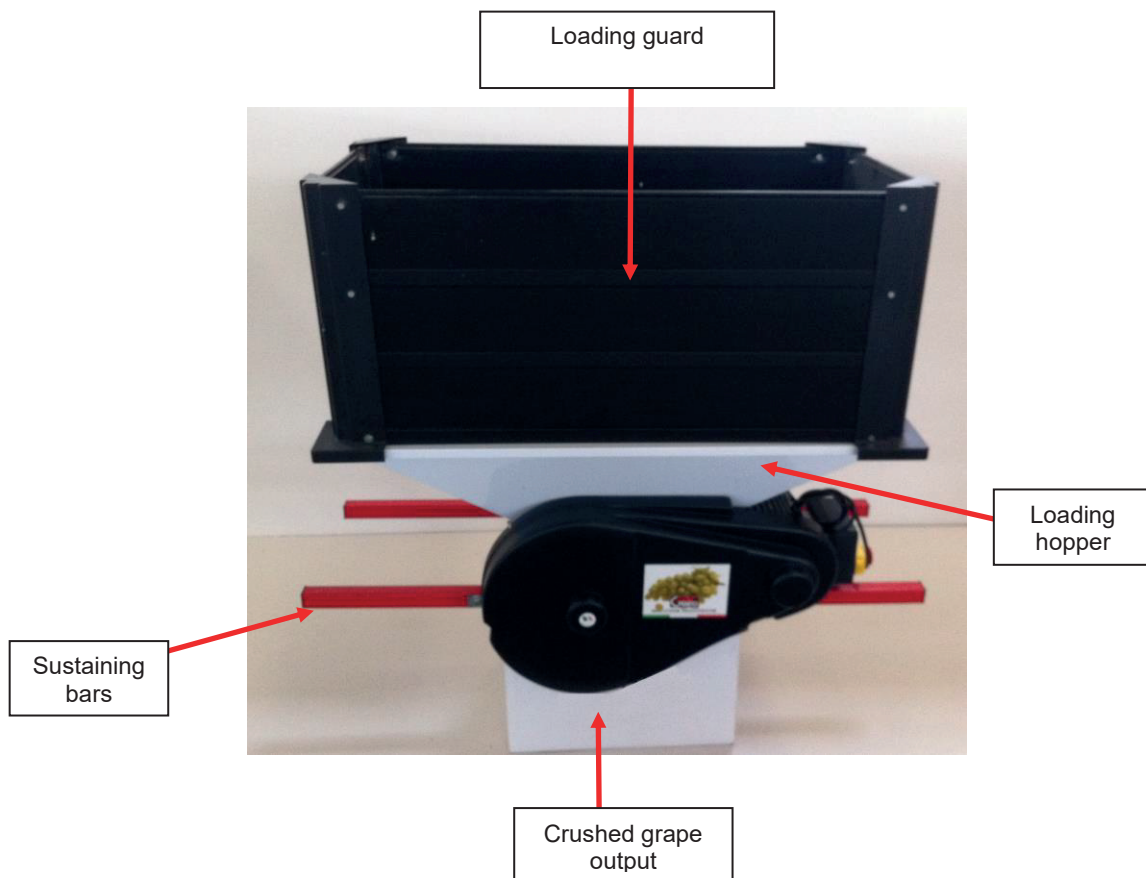
STAINLESS STEEL MOTORIZED FRUIT CRUSHER (PIGMO)

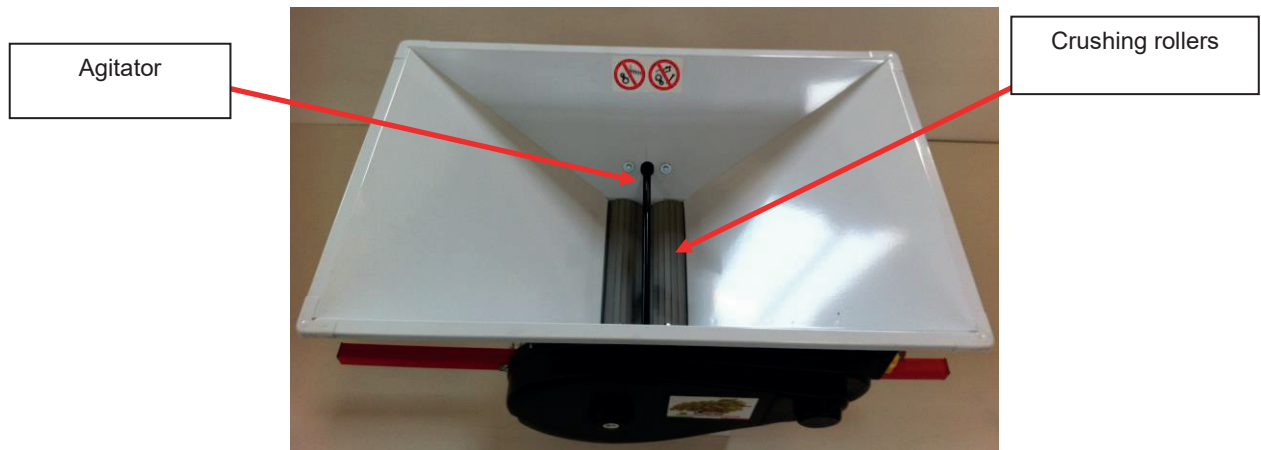


## SMALL STAINLESS STEEL GRAPE CRUSHER (PIPMO)



PM, PMI machines have a loading hopper where the grapes are inserted. At the center of the hopper there is a stirrer that pushes the grapes into the two rollers that crush it. The crushed product falls into the container placed under the machine. The PIGMO and PIPMO items have a stainless steel loading hopper that collects the fruit (first pitted) to be chopped. The fruit passing through the rollers and knives (in the PIPMO inserted in the rollers, in the PIGMO inserted in the agitator) are able to chop and press any type of fruit, ready to be collected in the containers and squeezed to obtain juices.





**Fig. 1 Main parts of the GRAPE CRUSHER**

Above the hopper must be mounted the protection box supplied (in assembly kit), which prevents access of the upper limbs to the area of action of the auger and the rollers.

The machine must be placed on a container for the collection of the pressing.

## **2.2 Correct use**

The GRAPE CRUSHER art. PM - PMI and the FRUIT CRUSHER art. PIGMO – PIPMO, the operations performed by the machines are:

pressing with the two rollers inserted inside the hopper (PM, PMI);

chop with the knives inserted inside the hopper (PIPMO, PIGMO).



**Any changes in the conditions of use of the machine, both in terms of performed operations and of processed materials, must be considered as a new commissioning pursuant to the Machinery Directive 2006/42 / EC and relieve the manufacturer of any responsibility.**

## 2.3 Directives and standards

The GRAPE CRUSHER art. PM and PMI and the PIGIAFRUTTA art. PIGMO and PIPMO have been designed and built in compliance with the provisions of the European Directives 2006/42 CE (Machines), 2006/95 / CE (Low Voltage), 2004/108 / CE (Electromagnetic compatibility) and in compliance with the EN 953 standards , EN 13850, EN 60204-1

## 2.4 Technical informations

The basic characteristics of the machine and those required by the environment for correct functioning are reported in Table 1.

	PM, PMI	PIGMO	PIPMO
Dimensions	950x600 mm	430X360 mm	950x600
Weight	37 kg	37 kg	37 kg
Motor power	1 hp	1 hp	1 hp
Voltage and frequency	230 V - 50 Hz	240 V - 50 Hz	240 V - 50 Hz
Operating temperature	5°C ÷ 45°C	5°C ÷ 45°C	5°C ÷ 45°C

Tab. 1 Technical data

The plate on the machine shows the identification data of the manufacturer and of the machine.

## 3. SAFETY

### 3.1 General information

With regard to the obligations of information and training of workers required by law, the employer, and the managers of the company using must supply personnel who will carry out operations of installation, use and maintenance all the necessary information in order to guarantee their safety while using the machine.

In particular, they must request and control that:

all the workers in charge respect the procedures contained in the manual and the general accident prevention measures provided;  
 no operations other than those provided by the manufacturer are carried out;  
 no tampering or modifications to the machine must be made and the machine is used exclusively in its original configuration.

### 3.2 Risks and preventive measures

The GRAPE CRUSHER art. PM and PMI and the PIGIAFRUTTA art. PIGMO and PIPMO it has been designed and built in such a way as to eliminate or reduce as far as possible the risks for people destined for use.

The preventive measures to ensure safe use of the machine are shown below.

#### Risk of machine falling

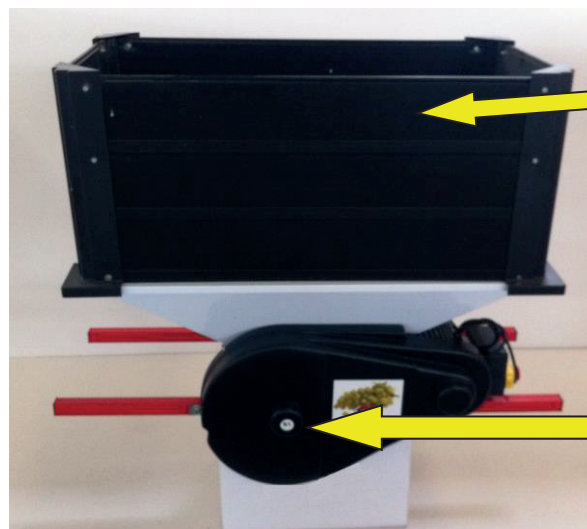


- Ensure the stability of the machine, compatibility between the length of the support tubes and the size of the container where the machine will be placed (par. 4.3).
- Use safety boots with steel toecaps.

#### Risk of contact with mobile organs



- Do not put your hands near the moving parts for any reason. If necessary, first stop the machine (see the following figure).
- Do not remove the protection guards (transmission casing, stem guard, upper casing).



### Risks in lifting the machine



- The weight of the machine requires it to be lifted by at least two people, to avoid back injury.

### Electrical risks



- Check that the mains voltage is the same as that indicated on the machine plate.
- Periodically check the integrity of the cables and replace them if necessary.
- Protect cables and electrical panels from humidity.
- Carry out maintenance operations with the machine disconnected.
- Authorize only personnel authorized to work on electrical components.
- When using multiple sockets or extensions, check that the power is respected to avoid overloading and overheating.
- Avoid leaving exposed connection cables, especially in transit areas; they can cause a stumbling block or be damaged.
- Keep your fingers away from power outlets. When inserting the plug, keep your fingers on the insulating body of the socket, not touching metal parts. Do not touch electrical components with wet hands.
- Do not tamper with equipment, sockets or plugs, or force the plug in if it is difficult to get into the socket.

The verification of the place of use of the machine is the user's responsibility. The following are some useful indications:

<b>Positioning</b>	The machine must be positioned so as not to constitute an obstacle to the movement of men and equipment
<b>Environment</b>	The environmental conditions (temperature, humidity, magnetic fields, etc.) must guarantee the correct operation of the electrical components
<b>Noise</b>	The noise level of the machine is less than 70 dBA. The distribution of tasks to operators must be such that exposure to noise is within the limits allowed by law.



Any tampering with parts of the machine, and parts connected with safety, relieves the manufacturer of any civil or criminal liability in the event of accidents.

## 4. INSTALLATION

### *4.1 Preparation for installation*

Before installing the machine it is necessary to assess the place where it is to be positioned. The following are some important general rules:

Check the overall dimensions of the machine, leaving a distance of at least 70 cm from any type of fixed obstacle (walls, columns, walkways) to allow the operator to move without impediments. Check that the foreseen location of the machine does not interfere with any other machinery.

Check that the positioning of the machine does not involve interference with other machines.

Check the flooring for stability, cleanliness and slope.

Ensure constant and uniform lighting to avoid risks due to shaded areas.

In the case of positioning the machine near transit areas, prepare suitable barriers around it to protect it from accidental impacts.

If positioning is to be performed on mezzanines, upper floors or elevated areas, check that the maximum capacity is greater than the total weight of the parts to be supported and of any accessory weights such as lifting equipment, etc.

## 4.2 Transport, unloading and installation

The machine is supplied already assembled, ready for use.

Transportation must be carried out by qualified transporters able to guarantee the correct handling of the transported material.



**The company Grifo Marchetti S.r.l. assumes no responsibility for transport damage. The goods are intended as delivered ex-works.**

Upon delivery, check the integrity of the various parts of the machine and that there are no missing accessories essential for installation.



**Check that the supply corresponds to the order specifications.**

Complaints relating to the goods supplied must be sent, by e-mail, to the company Grifo Marchetti S.r.l. within 15 days of receipt of the goods.

The handling of the machine must be carried out by two adults, holding the four support tubes at the end.

## 4.3 Positioning

When positioning the GRAPE CRUSHER art. PM and PMI and the PIGIAFRUTTA art. PIGMO and PIPMO in addition to complying with the indications of paragraphs 3.2 and 4.1, care must be taken to ensure compatibility between the support tubes and the container where the machine is placed.

The containers used must have shape and dimensions able to guarantee the stability of the machine.

When positioning the machine, the height must be chosen so as to avoid contact with the auger and the rollers placed on the bottom of the hopper. there is a protection box to be fixed to the hopper with screws.

The box has a height of 450 mm, the upper end of the rise must have a height not less than 1600 mm.

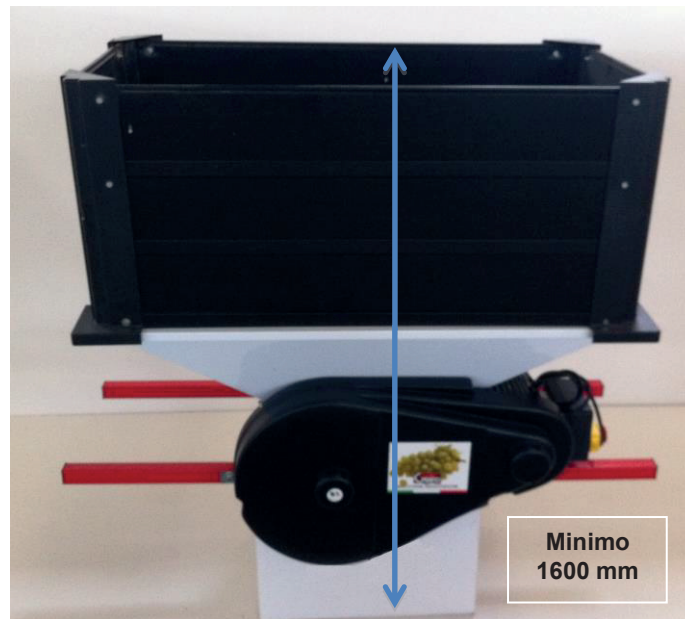


Fig. 3 Dimensional limits in the positioning



The positioning of the protection box, supplied in assembly kit, on the hopper is mandatory.

#### 4.4 Electrical connections

Connection to the mains requires the plug to be inserted. The socket must comply with safety regulations.



It is mandatory to connect the machine to a grounded outlet. The system must be fitted with a life-saving differential switch.

The simplicity of the connection must not underestimate the importance of compliance with general security measures. It's important:

- control that the mains voltage is the same as that indicated on the engine plate
- check the integrity of the electrical cable before use and replace it if it is damaged;

- avoid leaving the cable exposed to collisions, passage of people or vehicles or any other situation that could be a threat to its integrity;

- protect the cable, plug-wall socket connection and any other electric parts from humidity.



In case the use of an extension cable is necessary, it is advisable to use an electric 1.5 mm cable for lengths of up to 20 m and a 2.5 mm cable for over 20m.

#### 4.5 Lubrication

The machine does not need particular servicing. Before starting it up you should check oil levels, as indicated in chapter 6.








**Grifo Marchetti S.r.l. decline all responsibility for damages to people or things caused by failure to comply to the installation instructions set out in this section.**

## 5. USE

### 5.1 Preliminary operations

Before starting up, check that all the moving parts have been lubricated, then periodically the lubrication status must be checked and, if necessary, intervene if necessary. For the execution modalities, check paragraph 6.1.1.

The following controls must be made before starting of every work session

	clean the machine, taking care not to wet the engine.
	Control the state of connections to the power mains.
	Check that there are no foreign bodies inside the machine that prevent correct operation.
	Control the presence of all protective covers.
	Check the correct functioning of the controls, in particular the emergency stop.



In case the preliminary checks are not successful, disconnect the machine from the power supply and notify the department manager.

## 5.2 Starting up

Once the preliminary checks have been carried out, the machine can be switched on by pressing the start button on the control panel.



-  Emergency stop
-  Stop
-  Start

Fig. 4 Controls

After starting the engine, insert the bunches of grapes into the hopper which, through the auger, are taken to the rollers where the crushing takes place. Once pressed, the bunch passes where there is the flapping tree that divides the grapes from the bunch by performing the destemming. The stems come out at the back of the machine, while the berry, passing through the holes in the grill, is ready for fermentation.

The dimensions of the stems' outlet are determined by safety requirements and functional requirements, favoring the removal of the stalks. In the event of abnormal accumulations that could obstruct the mouth, the machine must be stopped and the obstructions removed.



It is forbidden to bring your hands close to moving parts, in particular to the stems' exit mouth.

### 5.3 Instructions in case of blocking

If the machine is used for its use, the engine power is sufficient to prevent blockages. In the event of a blockage occurring, action must be taken to remove the obstacle.



**Before carrying out any inspection and / or removal of foreign bodies, the power supply must be disconnected by removing the plug.**

**To facilitate the removal operations avoiding to lean out and fall, the machine must be removed from the box on which it was placed and placed on the ground or on a supporting surface.**



**If the material is removed by hand, gloves must be worn.**

### 5.4 Taking out of service

To turn off the machine it is sufficient to activate the stop button.

In case of setting aside or taking out of service for a long time, it is necessary:

1. Disconnect the machine from the electricity power mains.
2. Cover it and possibly place it in a storage warehouse.



**When using it after a storage period, follow all the instructions in chapters 3, 4 and 5.**

## 6. MAINTANANCE

### 6.1 Maintenance, inspections and controls

Careful maintenance extends the life of parts subject to wear.

To ensure the safe and efficient operation of the machine, maintenance operations must be properly programmed and promptly performed.



**Any maintenance operation must be performed by authorized personnel when the machine is disconnected from the mains.**



For a correct and precise management of the machine, it is advisable to record each intervention, taking care to indicate the date and type of intervention.



For cleaning operations, non-polluting and non-polluting detergents must be used.

The periodicity of the interventions depends on the conditions of use of the machine.

### **6.1.1 Lubrication and controls**

Before use and later on, the lubrication status of the moving parts of the machine must be checked (see par. 5.1).

OPERATION	FREQUENCY
A thorough cleaning of the hopper and rollers, paying attention not to wet the engine	After every grape crushing session
Oiling of all engine transmission parts	Monthly
Oiling of roller shafts through the holes situated on each support	Monthly
Oiling of agitator supports	Monthly

In lubrication operations care must be taken that the lubricant does not dirty the elements that come into contact with the grapes and the crushed grapes. The position of the lubrication points has been designed to facilitate operations.



**it is forbidden to disassemble the motor. If necessary, contact Grifo Marchetti S.r.l. or authorized dealer.**

### ***6.1.2 Machine cleaning***

To clean the machine, use a jet of water and detergent for washing dishes or alcohol by hand.



**During washing, take care not to wet the motor and the electrical components.**

### ***6.1.3 Replacement parts***

All spare parts are available at Grifo Marchetti S.r.l. or the authorized dealer.



**The unauthorized use of spare parts other than those supplied by the Grifo Marchetti S.r.l. or by an authorized retailer entails the forfeiture of the guarantee, and the Declaration of Conformity of the machine. Use is not recommended.**

## 6.2 Demolition

If the machine is demolished, it must be broken down into its parts, and must be disposed of separately according to the laws.

The replaced parts must not be dispersed in the environment, but disposed of according to the laws.

The symbol

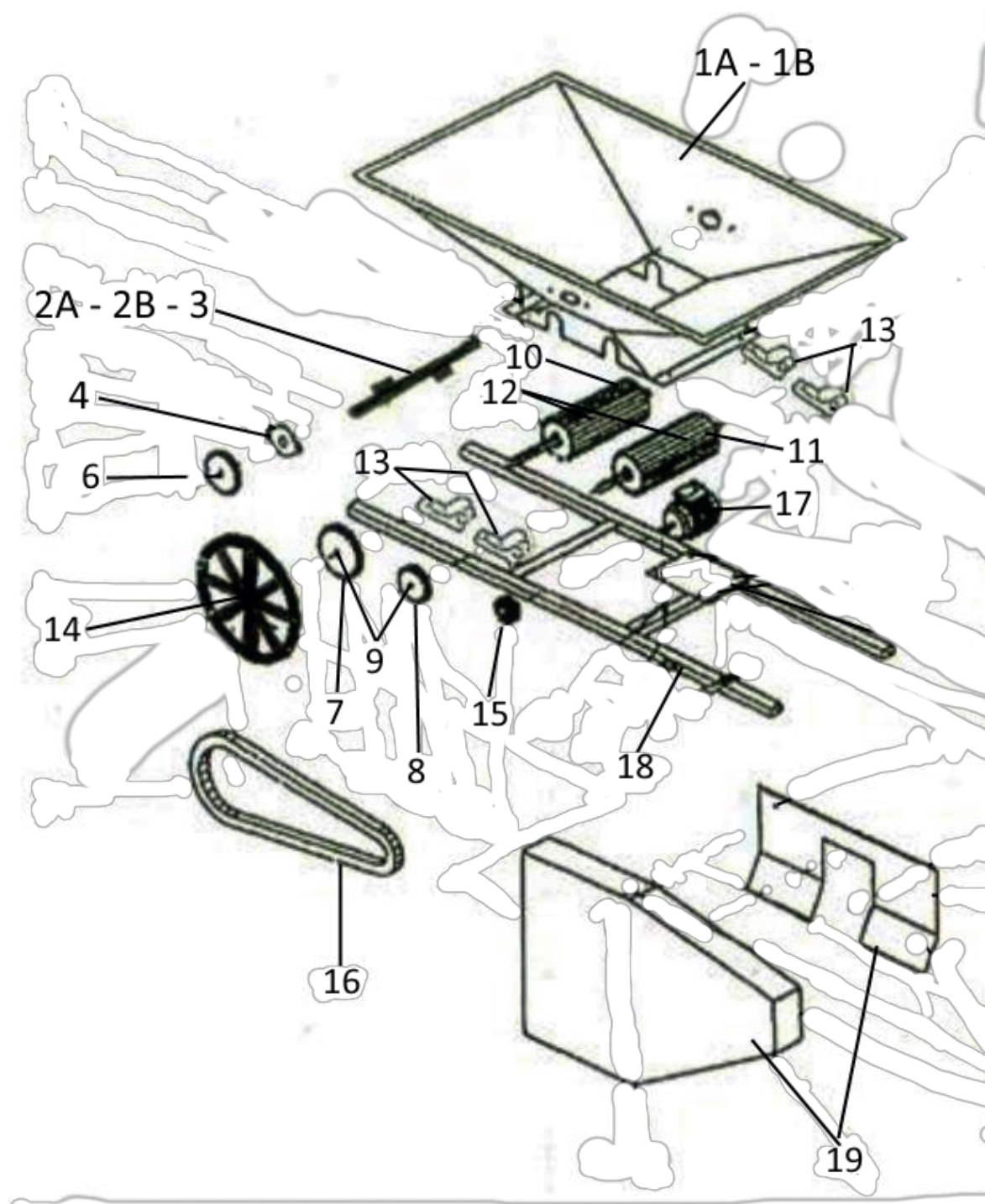


reported on the equipment indicates that the waste must be subject to a "separate collection".

The user must take the waste to the differentiated waste collection centers, or deliver it to the retailer by purchasing a new piece of equipment.

Separate waste collection and subsequent treatment, recovery and disposal operations favor the production of equipment with recycled materials and limit the negative effects on the environment and on health caused by improper handling of waste.

Unauthorized disposal of the product by the user entails the application in Italy of the administrative sanctions referred to in Article 255 and following of Legislative Decree no. 152/06. For other countries it refers to the reference legislation



CODE	POS.	DESCRIPTION
SP-PM-001A	1A	Painted loading hopper PM
SP-PM-001B	1B	S/steel loading hopper PMI - PIGMO
SP-PM-002A	2A	Painted agitator
SP-PM-002B	2B	S/steel agitator
SP-PIGMO-003	3	S/steel agitator with knives for PIGMO
SP-PM-004	4	Inclined support for agitator
SP-PM-005	5	Spacing agitator
SP-PM-006	6	Gear for agitator
SP-PM-007	7	Big roller gear
SP-PM-008	8	Small roller gear
SP-PM-009	9	Gear series PM-PMI-PIGMO
SP-PM-010	10	Long left roller
SP-PM-011	11	Short right roller
SP-PM-012	12	Couple of rollers
SP-PM-013	13	Set n° 4 roller supports
SP-PM-014	14	Big pulley
SP-PM-015	15	Small pulley for motor
SP-PM-016	16	Trapezoidal belt (A49)
SP-PM-017	17	Electric motor CE Hp 1 230/50
SP-PM-018	18	Painted stretcher
SP-PM-019	19	Complete carter for PM-PMI-PIGMO



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