

AUTOMATIC PLANETARY MIXER
bowl capacity 120 lt.
model PA120





Index

| | |
|------------------------------------------------------------------|-----------|
| INTRODUCTION | 4 |
| Guide to consulting this manual | 4 |
| How to consult this manual | 4 |
| Terminology | 4 |
| "CE" MARK IDENTIFICATION DATA | 6 |
| Manufacturer and machine identification data..... | 6 |
| Machine identification..... | 6 |
| 1 - GENERAL WARNINGS | 7 |
| 1.1 General warnings..... | 7 |
| 1.2 Precautions for eliminating or limiting residual risks..... | 7 |
| 1.3 Warning plates on the machine..... | 8 |
| 1.4 Emergency situations..... | 9 |
| 1.5 Storing the instruction manual..... | 9 |
| 1.6 Selling the machine..... | 10 |
| 2 - INTENDED USE OF THE MACHINE | 11 |
| 2.1 Characteristics and correct use..... | 11 |
| 2.2 Requirements of the user..... | 12 |
| 2.3 Place of use | 12 |
| 2.4 Tools, accessories and interchangeable fixtures | 12 |
| 3 - TECHNICAL DETAIL OF THE MACHINE | 14 |
| 3.1 Operation of the machine..... | 14 |
| 3.2 Mobile safety guard..... | 16 |
| 3.3 Upper guard and rear guard..... | 17 |
| 3.4 Electrical board casing..... | 17 |
| 3.5 Noise levels..... | 18 |
| 3.6 Vibrations | 18 |
| 3.7 Ventilation of the machine..... | 18 |
| 3.9 Control panel..... | 19 |
| 3.10 Speed-regulating lever..... | 20 |
| 3.11 Burner | 20 |
| 3.12 Set of tools | 22 |
| 4 - TRANSPORT AND HANDLING OF THE MACHINE | 23 |
| 4.1 Technical information | 23 |
| 4.2 Packing | 23 |
| 4.3 Lifting instructions | 24 |
| 4.4 Handling and transport instructions..... | 26 |
| 5 - INSTALLING AND STARTING UP THE MACHINE..... | 28 |
| 5.1 Installation surface and position of the machine | 28 |
| 5.2 Electrical power supply | 28 |
| 5.3 Installing and starting up the machine..... | 28 |
| 5.4 Gas connection for gas burner | 29 |
| 5.5 Storing the machine | 30 |
| 5.6 Preliminary cleaning of the machine | 30 |
| 6 - INSTRUCTIONS ON HOW TO USE THE MACHINE CORRECTLY..... | 31 |
| 6.1 Introduction | 31 |



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

| | |
|-----------------------------------------------------------------------|-----------|
| 6.2 Warnings..... | 31 |
| 6.3 Preparation of the machine for the process | 31 |
| 6.4 Working process | 32 |
| 6.4.1 Manual cycle..... | 32 |
| 6.4.2 Automatic cycle | 32 |
| 6.5 Bowl trolley..... | 33 |
| 6.6 Heating the product..... | 33 |
| 6.7 Removing the product..... | 34 |
| 6.8 Turning the machine off | 35 |
| 6.9 Stopping the machine | 35 |
| 7 - CLEANING INSTRUCTIONS | 36 |
| 7.1 The importance of cleaning..... | 36 |
| 7.2 Cleaning product..... | 36 |
| 7.3 Cleaning instruction..... | 36 |
| 7.4 Cleaning the planetary mixer's internal parts | 37 |
| 7.5 Cleaning the gas burner..... | 37 |
| 8 - MAINTENANCE INSTRUCTION | 38 |
| 8.1 The purpose of maintenance | 38 |
| 8.2 Risks connected with negligent use of the machine..... | 38 |
| 8.3 Precautions to take during maintenance | 38 |
| 8.4 Maintenance operations which can be carried out by the user | 38 |
| 8.4.1 Topping up the oil..... | 39 |
| 8.4.2 Greasing the rest's guiding rods on the pedestal..... | 40 |
| 8.4.3 Greasing the raising setscrews of the bowl's rest | 40 |
| 8.4.4 Maintenance of the gas burner..... | 40 |
| 8.4.5 Checking the tension of the transmission belts..... | 40 |
| 9 - DISMANTLING THE MACHINE | 42 |
| 9.1 Polluting parts | 42 |
| 9.2 Disposal procedure | 42 |
| 10 - TROUBLESHOOTING | 43 |
| 10.1 Foreword..... | 43 |
| 10.2 Assessment and solution of common problems..... | 43 |
| 10.3 After-sales service..... | 44 |



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

INTRODUCTION

Guide to consulting this manual

This manual has been designed to provide you with a guide to the use of the **PA120** automatic planetary mixer. It is essential to read and consult the manual in order to use the machine correctly and safely.

How to consult this manual

The structure of this manual has been organised so that you can consult it for:

- general warnings Chapter 1
- information on the purpose of the machine, who can use it and where Chapter 2
- specifications Chapter 3
- transport and handling Chapter 4
- installation and start-up Chapter 5
- correct use Chapter 6
- cleaning Chapter 7
- maintenance Chapter 8
- dismantling the mixer Chapter 9
- troubleshooting Chapter 10

Terminology

Pict. 0 shows the main parts of the **PA120** automatic planetary mixer.
These are:

- 1 the upper guard,
- 2 the control panel,
- 3 the safety guard,
- 4 the spindle rest,
- 5 the changeable utensil for working the ingredients, which moves in a crown motion,
- 6 the bowl in which the ingredients are mixed,
- 7 the burner,
- 8 the bowl-trolley,
- 9 the wheels of the bowl-trolley,
- 10 the pedestal which contains the movers and the movement transmission components,
- 11 the bowl holder rest on which the bowl is positioned,
- 12 the rear guard,
- 13 the speed-regulating lever, to regulate the utensil's rotation speed.



Pict. 0 - Main parts of the machine

- 1 upper guard
- 2 control panel
- 3 moveable guard
- 4 spindle rest
- 5 utensil
- 6 bowl
- 7 burner
- 8 bowl-trolley
- 9 wheels
- 10 pedestal
- 11 bowl holder rest
- 12 rear guard
- 13 speed-regulating lever

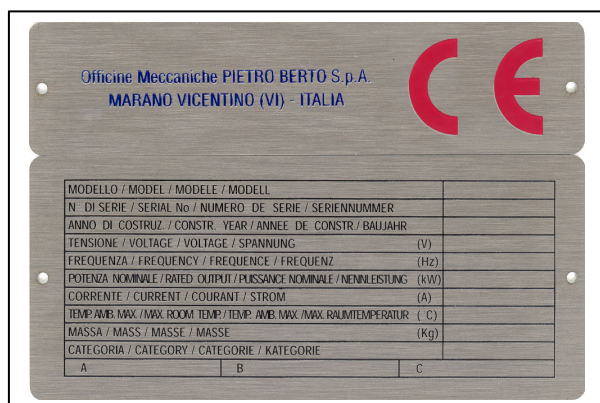


"CE" MARK IDENTIFICATION DATA

Manufacturer and machine identification data

A metal plate (see pict. x), fixed to the left lateral part of the machine gives the following information:

- Name and address of the manufacturer
- CE mark
- Machine model
- Serial number
- Year of manufacture of the machine
- Voltage
- Frequency
- Rated output
- Current
- Maximum room temperature
- Mass



Pict. x – Data plate



**It is forbidden to remove or replace the data plate.
The manufacturer must be informed if the plate is damaged or removed.**

Machine identification

- Type: AUTOMATIC PLANETARY MIXERS LT. 120
- Model: **PA120**



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**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

1 - GENERAL WARNINGS

1.1 General warnings

Design solutions have been adopted which eliminate the risks to the operator in every phase of its use, transport and maintenance.

The only correct procedures for installing and using the machine are those described by the manufacturer.

Any use other than that described in this manual shall invalidate all the customer's rights to compensation from manufacturer and represents a considerable risk to the operator who does not use the machine correctly.

The guarantee does not cover negligent use or any failure by the operator to follow the instructions in this manual, such that the manufacturer declines all responsibility for any such use.

It is therefore essential to read the instruction manual attentively to ensure the best possible use is made of the **PA120** automatic planetary mixer, exploiting its potential to the full.

1.2 Precautions for eliminating or limiting residual risks

The **PA120** automatic planetary mixer has been built in compliance with the accident prevention, hygienic and electrical standards in force.

It is supplied with an moveable accident prevention guard made in stainless steel according to the standards in force -an electric system with protection class IP 55, and a engine in class IP 44.


The user is advised to observe the following rules to ensure safe use of the machine:


- ***when using the machine all the fixed covers must be mounted in position and fixed correctly in place;***
- ***the operation of the mobile safety guard must never be tampered with for any reason whatsoever;***
- ***always disconnect the machine from the electrical power supply before carrying out any cleaning and maintenance operations to prevent the risk of accidental starts;***
- ***if you do not envisage using the machine for a long period of time, pull its plug out of the power supply socket.***




1.3 Warning plates on the machine

On the **PA120** automatic planetary mixer, there are warning/information labels which must be given attention.

On the right lateral part of top cover there is warning/information label  (see pict. 1.1). This label notifies the operator to adjust the tool rotation speed only when the machine is on.

On the right lateral part of top cover there is warning/information label  (see pict. 1.1). This label notifies the operator that when removing the upper case one have access to the belt tightening pulley of the tool.

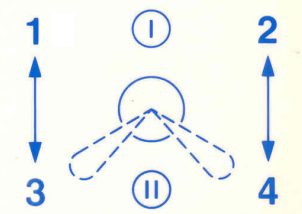
Under the lever (part. 11 pict. 0) there is warning/information label  (see pict. 1.1). This label notifies the operator to change the tool speed only when the machine stays still.

APRIRE A MACCHINA FERMA
OPEN WHEN MACHINE IS OFF
OTVORITE KADA JE STROJ ISKLJUČEN


TENDICINGHIA ALL' INTERNO
BELTSTRETCHER INSIDE
ZATEZAČ REMENA SE NALAZI UNUTRA



**PRIMA DI ESEGUIRE LE OPERAZIONI DI PULIZIA
E MANUTENZIONE SCOLLEGARE LA MACCHINA
DALLA RETE DI ALIMENTAZIONE ELETTRICA**
**DISCONNECT POWER SUPPLY BEFORE
CLEANING AND SERVICING**
**BEI WARTUNGS UND REINIGUNGSARBEITEN
HAUPTSCHALTER AUSSCHALTEN**
**PUOR TOUTES OPÉRATIONS DE NETTOYAGE,
RÉGLAGE, ENTRETIEN, IL EST OBLIGATOIRE
D'ARRÊTER LA MACHINE ET DE LA DÉBRANCHER
DU RESEAU ÉLECTRIQUE**



CAMBIARE A MACCHINA FERMA
CHANGE WHEN MACHINE IS OFF
PROMIJENITE KADA JE STROJ ISKLJUČEN



Pict. 1.1 - Warning plates

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| | 09/11/2009 | HANDBOOK |

On the left side of the pedestal there is warning/information label  (see pict. 1.1). This label warn the operator that before any maintenance and cleaning operation, the machine must be switched off and disconnected from the building main power supply board.

On the left side of the CE plate  there is warning/information label  (see pict. 1.2) with the bin symbol crossed. Such symbol indicates that the machine at the end of its life must be disposed separately from other waste.



Pict. 1.2 - Warning plates



Should one of the information plates deteriorate due to wear and tear, the user is advised to contact the manufacturer immediately for a replacement plate.

1.4 Emergency situations


If the operator's safety is ever threatened by one of the planetary mixer's moving parts (tool, transmission parts), the machine must be stopped in the shortest time possible by taking one of the actions below:

- switch off the power by turning the main switch to its "0" position, or by pulling the machine's power supply plug out of the mains socket;
- press the STOP button.

Follow the basic rules of first aid if the operator has been injured.

1.5 Storing the instruction manual

The instruction manual is supplied together with the machine and forms an integral part of it. It must be stored for future reference until such time as the machine is finally dismantled. Should the manual ever be lost or damaged, it is advisable to contact the manufacturer or importer for a new copy, indicating the model and date of purchase of the planetary mixer.

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| | 09/11/2009 | H A N D B O O K |

The manual should be stored correctly by keeping it in a dry place protected from direct sunlight.

1.6 Selling the machine

If the machine is ever sold to third parties, it is advisable to inform the manufacturer or importer of the new owner's address to facilitate sending them any changes or additions to the instruction manual.



2 - INTENDED USE OF THE MACHINE

2.1 Characteristics and correct use

The **PA120** pastry dough, and for producing any other type of amalgams with similar characteristics.

Typical ingredients used are flour, sugar, chocolate, eggs, and oily substances.

It is also adapted for mixing small quantities of dough for bread.

The final product must not overpass the capacity written on the technical data table (bowl volume).

The working position of the bowl holder rest is when it is completely raised -the bowl being present.

It's foreseen use is composed of placing the ingredients into the bowl, working them with the utensils that have been furnished as equipment, and, finally, emptying the final product.

It is possible to heat the product during the working phase by using the burner placed underneath the bowl.

The your main characteristics are:

- The machine is particularly sturdy because the pedestal is made of cast iron;
- The internal drive operates in oil bath;
- Ideal for small and medium pastry shop processing, with two speeds controlled by gear system and two motor speeds to give maximum versatility;
- The bowl trolley is lifted and lowered electrically by operating on two buttons set on the control panel; bowl insertion and centring are very quick and easy, an automatic device locks and unlocks the bowl-holder carriage;
- A timer determines the length of a working cycle and a selector disables automatic operation;
- Stainless steel tools suitable for any process desired by the operator, depending on the type of product;
- Stainless steel bowl can be heated by the burner. The system is equipped with a safety thermocouple that cuts off the gas supply if the flame goes out;
- Stainless steel bowl;
- The electric system and control panel are class IP 55; motor is graded protection class IP 44.

The machine considered in this manual has been designed exclusively for use in food preparation companies and shops.



Any other use that has not been formally authorised in writing by the manufacturer is strictly forbidden.

In particular, one should never under any circumstances ever use it for:

- mixing materials other than those used in the food industry (thus excluding its use, in particular from the pharmaceutical, chemical and paint industries),
- mix quantities exceeding the capacity of the machine.



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09/11/2009

HANDBOOK

2.2 Requirements of the user

The user must be professionally trained and qualified.
No prior training in the use of the machine is provided.

2.3 Place of use

The **PA120** automatic planetary mixer must be installed in a place complying with the food hygiene regulations that has the following characteristics:

- ambient temperature between +5 °C and +40 °C,
- relative humidity between 30 and 95% (without condensation),
- no ionising or non-ionising radiation,
- non-corrosive atmosphere.

The machine is not fitted with a light, since the natural or artificial lighting provided in the various different places of use is sufficient.



Under no circumstances ever use the machine in places where there is a an explosion or fire hazard due to the presence or release of explosive or inflammable gases or mixtures or due to the manufacture, handling or storage of explosive materials.

2.4 Tools, accessories and interchangeable fixtures

The **PA120** automatic planetary mixer is to be used exclusively with the utensils furnished as equipment for the machine (thin wire whisk, thick wire whisk, spatula and hook) or available as accessories upon request (stainless steel spiral tool).

Other accessories available upon request are:

- the additional bowl.



Pict. 2.1 – Set of equipment tools

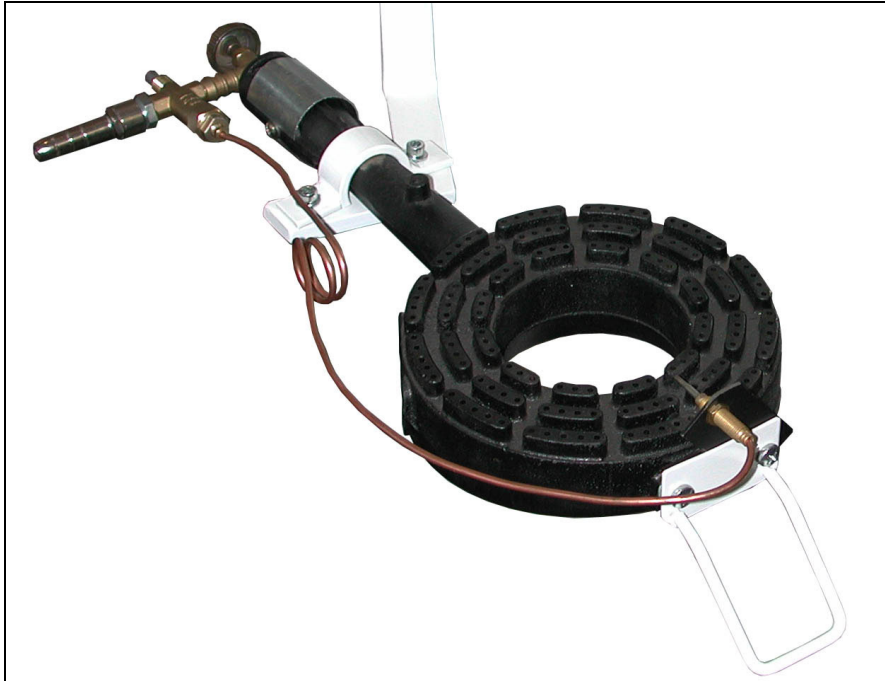


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**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009


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Pict. 2.2 – Gas burner



Pict. 2.3 – Stainless steel spiral tool and additional bowl (upon request)

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| | 09/11/2009 | H A N D B O O K |

3 - TECHNICAL DETAIL OF THE MACHINE

3.1 Operation of the machine

The **PA120** automatic planetary allows the transfer of energy necessary to obtain the product to the ingredients placed inside the bowl, by using the electric energy absorbed from the power supply to rotate the mixing utensil.

The utensil (part. **5 pict. 0**) is equipped with a crown motion and is activated by a dual speed, threephase asynchronous motor.

More interchangeable utensils are available, depending on the product you wish to produce (see paragraph **3.12**).

The unusual length of the utensils allows perfect mixing: there are no areas which are left unworked.

The product can be heated with a burner.

The mixer tool has 4 speeds, achieved by the combinations between the 2 motor speeds and the 2 gear changes.

The transfer of motion to the utensil occurs first by means of a transmission stage with an expandable belt and pulley, followed by a reduction gear unit that, by means of another gear unit, transmits the crown motion to the utensil.

All the gears work in an oil bath.

The bowl (part. **6 pict. 0**) in which the ingredients are worked is placed on the bowl holder rest from which it can be withdrawn and placed on the trolley supporting bowl (part. **8 pict. 0**). The trolley has 3 wheels (part. **9 pict. 0**) for an easy moving and to remove the product at the end of the working process.

The bowl holder rest (part. **11 pict. 0**) can be lowered and raised electrically by means two push buttons (part. **F** and **G pict. 3.3**).

The machine works only if the bowl holder rest is completely raised and if the bowl is positioned properly. This is obtained by means of a limit switch that “feels” the position of the rest with the bowl in place.

Lowering the bowl holder rest allows you to remove the bowl from the rest at the end of the process without having to remove the utensil.

The machine’s working cycle can be manual or automatic, just by turning a selector on the control panel. It is possible to go from the 1st speed to the 2nd without stopping the machine.

The specifications of the machine **PA120** are summarised in Table **3.1**.

Use the power supply voltage and frequency shown on the machine's rating plate to identify which column to consult.



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**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

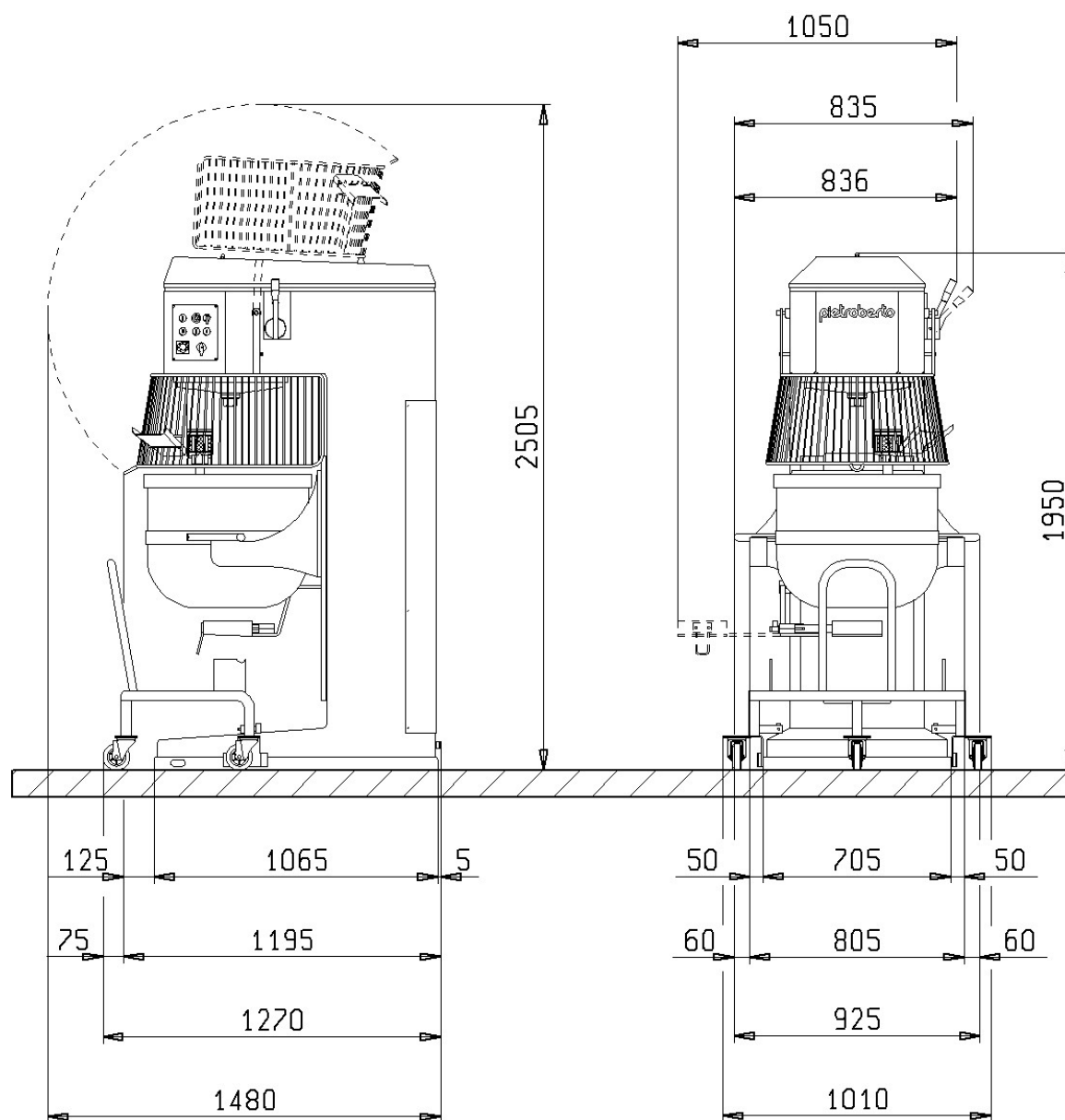
H A N D B O O K

| PA120 | | | |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| Power supply voltage (three phase) | 230 V | 400 V | 220 V |
| Power supply frequency | 50 Hz | 50 Hz | 60 Hz |
| Rated power | 4.5 kW | 4.5 kW | 4.5 kW |
| Current strength | 10 A | 7 A | 10 A |
| Max. ambient temperature | 40 °C | | |
| Weight | 805 kg. | | |
| Bowl volume | 129 lt. | | |
| Inside diameter of bowl | 600 mm. | | |
| Depth of bowl | 500 mm. | | |
| Revolutions of tool support | 28 rpm (1 st speed) – 42 rpm (2 nd speed) 56 rpm (3 rd speed) – 84 rpm (4 th speed) | | |
| Revolutions of tool | 90 rpm (1 st speed) – 136 rpm (2 nd speed) 181 rpm (3 rd speed) – 272 rpm (4 th speed) | | |
| Weighted (A) equivalent continuous sound pressure level | < 70 db | | |
| Protection class of electrical system housing | IP 55 | | |
| Protection class of control panel | IP 55 | | |
| Protection class of motor | IP 44 | | |
| Dimensions | See pict. 3.1 | | |

Tab. 3.1 – Specifications of the machine



Pict. 3.1 shows the dimensions of the machine in millimetres.



Pict. 3.1 - Dimensions of the machine

3.2 Mobile safety guard

The machine is fitted with a stainless steel moveable guard (part 3 pict. 0) which prevents the operator from gaining access to the tool's work zone when it is moving, thus protecting against the risks of crushed, severed, trapped, broken or bruised limbs.

In detail, it is a jointly-blocked guard; in functional terms, this means that:

- the utensil cannot rotate until the guard has been closed;
- if the guard is opened during rotation of the utensil, the machine stops;
- closing the guard allows the utensil to begin rotating, but does not control its start.

This function is obtained by fitting the guard with a safety device, namely a cam-type safety limit switch.



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mod. PA120**

09/11/2009

HANDBOOK

3.3 Upper guard and rear guard

The upper guard (part **1** pict. **0**) and the rear guard (part **12** pict. **0**) are fixed guards that allow the risk of dragging to be eliminated, as well as consequential crushing or shearing connected with the components which transmit motion to the utensil.

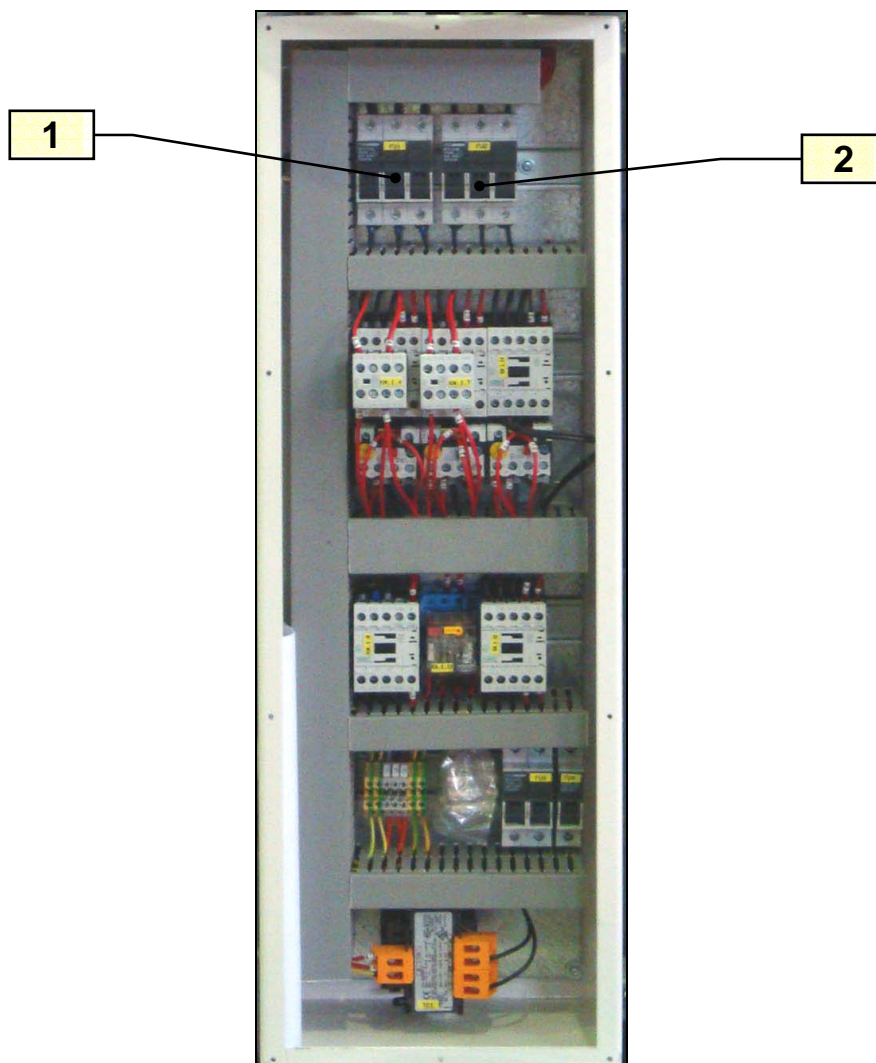
The guards in question, removable only when the machine is off and disconnected from the power supply, allow access to the movement transmission components when they require maintenance.

3.4 Electrical board casing

The control board is enclosed in a components holder case to which you have access by dismantling the rear guard (part **12** pict. **0**).

Such a cover, aside from guaranteeing the necessary protection against solid foreign matter and water from entering, protects the operator from accessing dangerous electrical parts and, in particular, from contacting them directly, which can cause injury or death by electrical shock and scalding.

The degree of protection of the cover is shown in Tab. **3.1**.



Pict. 3.2



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**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

3.5 Noise levels

The automatic planetary mixer's noise levels have been measured with it operating empty and at maximum speed.

The sound pressure level has been measured in compliance with ISO standard 11201, namely by placing the measuring instrument's microphone at a height of 1.6 m above the installation surface and 1 m in front of the planetary mixer (along the axis of the machine in front of the control panel).

*The weighted equivalent continuous sound pressure level is less than **70 dB**.*

Notwithstanding these low noise levels, the noise of the machine in the room where it is installed can lead the differential value for the residual noise in the area to be exceeded. This can happen in very quiet geographical areas and/or during night-time hours.

In these cases measures need to be taken in the room where the machine is installed to obtain the necessary acoustic insulation levels.

3.6 Vibrations

The vibrations emitted by the machine, thanks to its robust structure and low speed of rotation, are present in a limited manner.

3.7 Ventilation of the machine

There are ventilation slots in the rear cover and upper cover to prevent the motors from overheating.



It is essential to ensure the ventilation slots are under no circumstances ever obstructed for the machine to operate correctly.

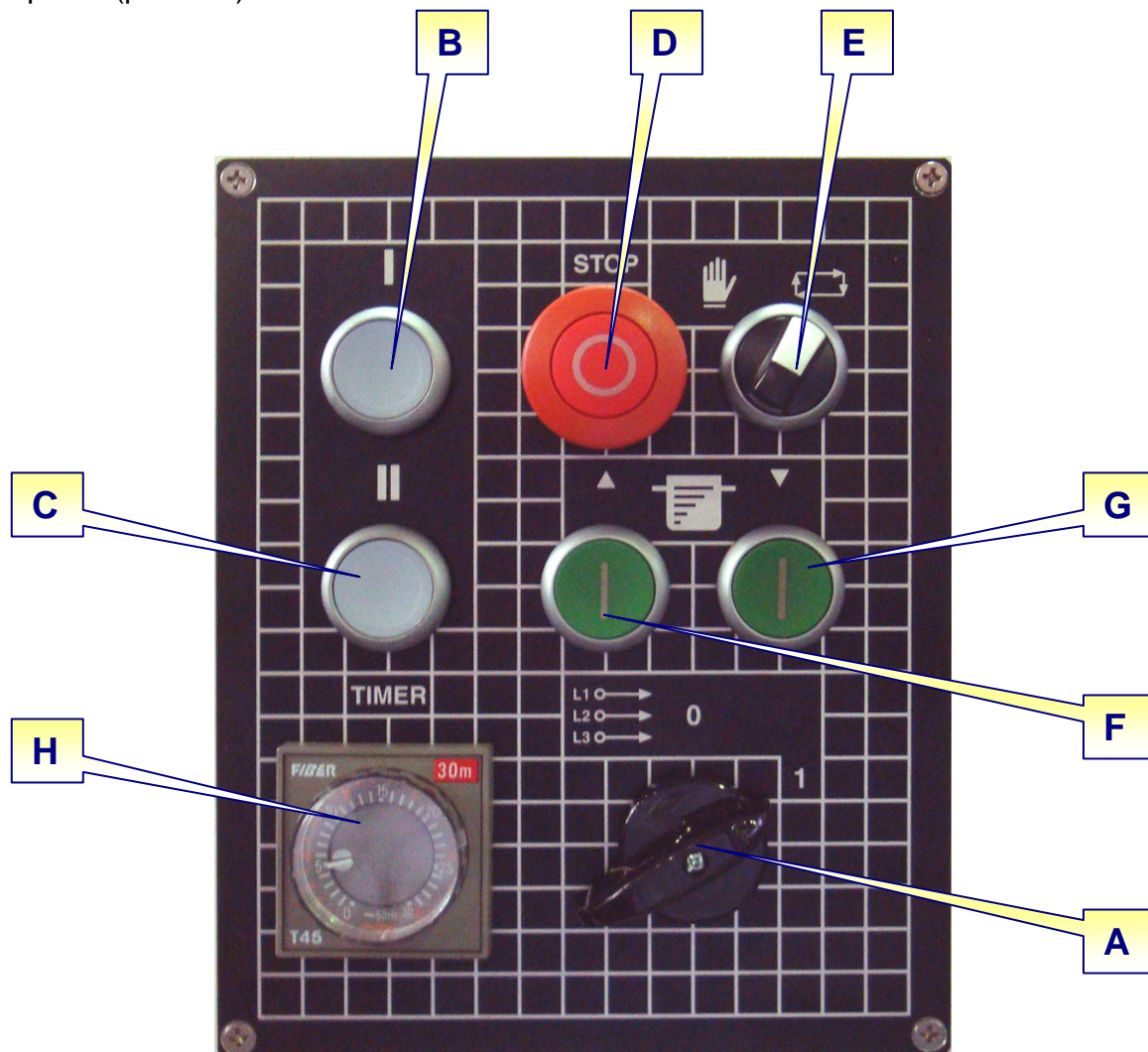
3.8 Parts in contact with food products

Every part of the machine which comes into contact with food products is suitable for such contact as required by the regulations in force.



3.9 Control panel

Only one operator is need to control the machine using the following controls on the frontal control panel (pict. 3.3).



Pict. 3.3 – Control panel

A Main switch.



This switch has two position:

- "0": the machine is disconnected from the mains power supply,
- "1": the machine is connected to the mains power supply;

The main switch also serves the function of an emergency stop switch for directly cutting off the power supply to all the electric circuits.

- B** 1st and 3rd speed ON push-button (green color): allows rotation of the utensil at 1st and 3rd speed;
- C** 2nd and 4th speed ON push-button (green color): allows rotation of the utensil at 2nd and 4th speed;
- D** Stop button (red color): it stops the machine function;



E Manual/automatic selector: allows to select the manual cycle (position ) or automatic cycle (position );

F Up pushbutton (green color): causes the bowl holder rest to ascend;

G Down pushbutton (green color): causes the bowl holder rest to descend;

H Timer for 1st, 2nd, 3rd, 4th speed: for setting the mixing time at 1st, 2nd, 3rd, 4th speed;

The protection class of the panel casing is shown in tab. 3.1.

3.10 Speed-regulating lever

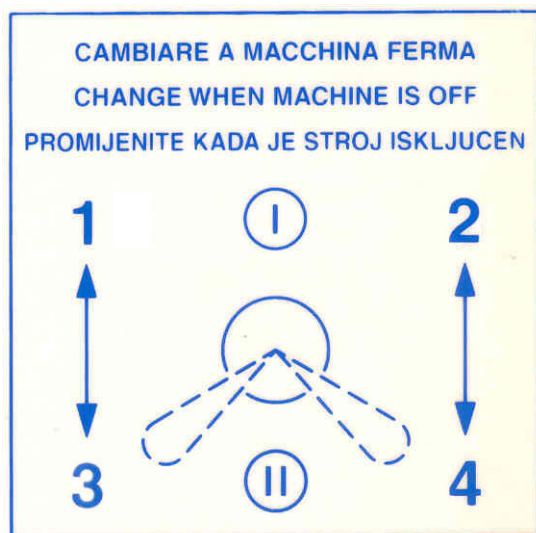
The speed-regulating lever (part 13 pict. 0) allows you to select one of 4 tool rotation speeds. **The lever is activated exclusively when the machine is stopping** as shown on the plate (pict. 3.4).

Positioning the lever (part 13 pict. 0) to the left:

- pressing the start button (part B pict. 3.3) the mixer tool will work at the 1st speed;
- pressing the start button (part C pict. 3.3) the mixer tool will work at the 3rd speed;

Positioning the lever (part 13 pict. 0) to the right:

- pressing the start button (part B pict. 3.3) the mixer tool will work at the 2nd speed;
- pressing the start button (part C pict. 3.3) the mixer tool will work at the 4th speed;



Pict. 3.4

3.11 Burner

The gas burner for heating the product is available upon request.

It is fixed (by means of the pivot, part A pict. 3.5) to the bowl holder rest and, thanks to a rotating support (part B pict. 3.5), it can be positioned underneath the bowl according to the need required. It is equipped with a thermocouple (part C pict. 3.5) that sends the "OK" to the valve to close, preventing gas to escape should the flame go out accidentally.

A device (part D pict. 3.5), fixed on the bowl holder rest makes the burner displacing while the bowl holder rest is moving down.



It is forbidden to tamper with or neutralize the thermocouple because it could constitute a danger to the operator's safety with all the consequences related to it.

The kinds of gas that can be used are:

- town gas (density = 0.45 kg/m³)
- natural gas (density = 0.60 kg/m³)
- LPG gas (density = 1.70 kg/m³)

The maximum operating pressure is 500 mbar.

The maximum operating temperature is 150°C.

The thermal capacity is 12000 kcal/h (if the feeling is by means of natural gas, the calorific power is reduced by 3000 to 4000 calories).



Pict. 3.5



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**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

HANDBOOK

3.12 Set of tools

Different tools are used depending on the product to be processed:

| | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
|  | <p>Stainless steel thin wire whip used to process fluid products, such as creams and sponge cake.</p> |
|  | <p>Stainless steel thick wire whip used to process plum-cake, butter whipped cream, meringues.</p> |
|  | <p>Hook used to process medium-dense products, such as leavened and cookie doughs.</p> |
|  | <p>Spatula used to process semi-dense products, such as "spumiglie" and "maddalena dough"</p> |



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**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

4 - TRANSPORT AND HANDLING OF THE MACHINE

4.1 Technical information

The technical information of interest for handling and transport operations are the dimensions and the weight of the machine.

The weight and dimensions of the **PA120** are shown in tab. 3.1 and in pict. 3.1.

4.2 Packing

The machine may be delivered to the customer using either of two means of packaging:

-machine in palletised crate.

-machine fixed on pallet.

A) Palletised crate

N°1 item: crate composed of nailed wooden boards (see pict. 4.1)

Content: complete assembled machine

Handling: the crate is designed to be lifted with a lift truck.

Dimensions: 1400 x 1100 x 2150(H) mm

Weight: 870 kg

B) Machine on pallet

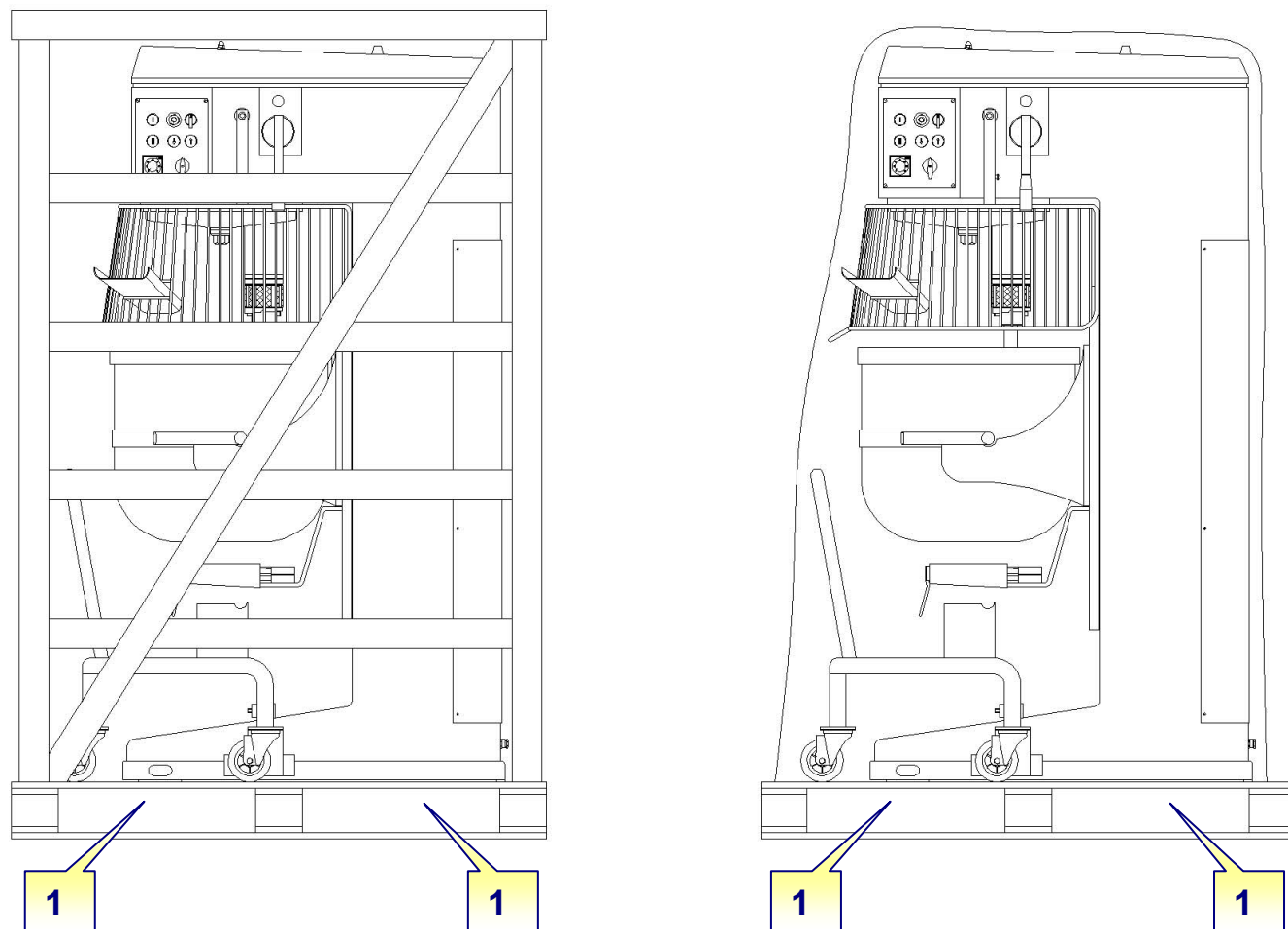
N°1 item: standard sized wooden (see pict. 4.1)

Content: complete assembled machine

Handling: the pallet is designed to be lifted with a lift truck.

Dimensions: 1300 x 1000 x 2050(H) mm

Weight: 850 kg



Pict. 4.1 – Machine in palletised crate and fixed on pallet

4.3 Lifting instructions

Warnings for non-packaged machine:

- a) under no circumstances use fork lift trucks or steel ropes or chains for lifting;
- b) use exclusively belts with rings fitted at the ends.
- It is forbidden to climb onto the machine and/or the package, or to transit underneath it during handling.
- Access to the lifting and handling area is prohibited to anyone not directly involved in the operation.
- All operators must maintain a safety distance in order to avoid the risk of crushing if the machine should fall.
- Before beginning operations, identify and inspect the entire machine handling area for dangerous points. This includes the area where the transport vehicle is parked and the area where the machine is to be installed.
- Use a crane, bridge crane or fork lift truck (for packaged machine only) of adequate capacity. The use of inadequate lifting equipment can lead to accidents causing injury to the personnel performing the operation or damage to the machine.
- Check that the lifting belts display the label with all the manufacturer's data and that the capacity of the belts is clearly legible.
- Inspect the belts before using them: they must show no signs of damage, cuts or wear.



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

- Do not twist or tie the belts in knots and follow the manufacturer's instructions for use.

For lifting of the packaged machine use a fork lift truck of sufficient capacity with minimum length of truck forks = 1000 mm.

For lifting of the non-packaged machine use a crane/bridge crane of sufficient capacity and belt with rings fitted at the end of minimum length = 3000 mm.

Lifting packaged machine:

A) *Condition of machine: crate on transport vehicle platform.*

Personal protection equipment to be used:

- Protective gloves
- Safety helmet
- Protective footwear

The crate must be unloaded from the transport vehicle using the lifting equipment as follows:

- a) Insert the lift truck forks completely into the special openings located in the bottom of the crate/pallet (part 1 pict. 4.1).
- b) Lift the crate the minimum distance necessary to unload it, avoiding jerks or jolts.
- c) Place the crate in the chosen position.

B) *Condition of machine: crate resting on the ground.*

Personal protection equipment to be used:

- Protective gloves
- Safety helmet
- Protective footwear

The crate must be lifted using the lifting equipment as follows:

- a) Insert the lift truck forks completely into the special openings located in the bottom of the crate/pallet (part 1 pict. 4.1).
- b) Lift the crate the minimum distance necessary to unload it, avoiding jerks or jolts.
- c) Place the crate in the chosen position.

Lifting non-packaged machine:

A) *Condition of machine: automatic planetary mixer on transport vehicle platform, or mixer placed on the ground.*

Personal protection equipment to be used:

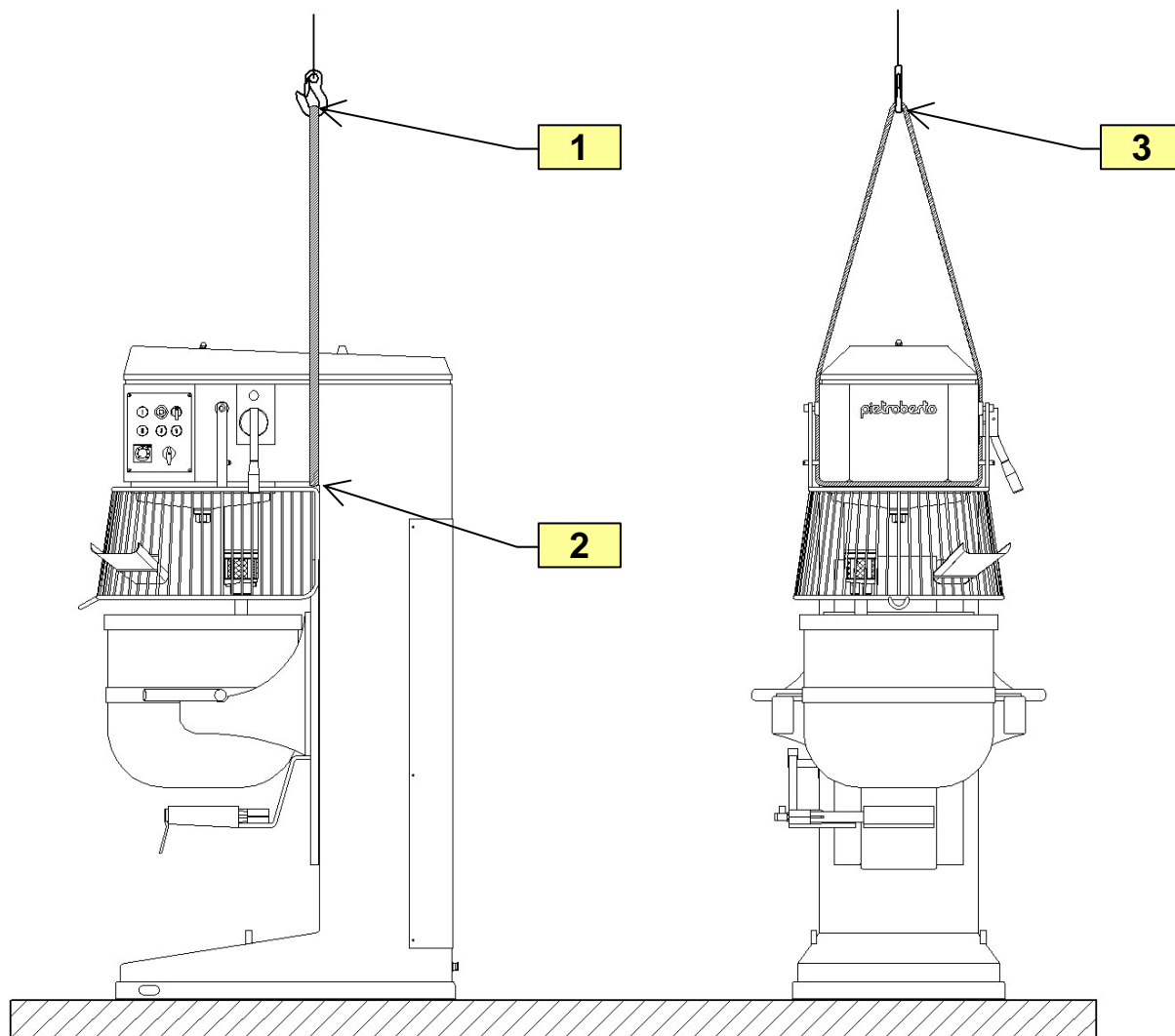
- Protective gloves
- Safety helmet
- Protective footwear

The machine must be unloaded from the transport vehicle using the lifting equipment as follows:

- a) Attach the ring on one end of the belt to the crane/bridge crane lifting hook (part 1 pict. 4.2).



- c) Pass the central portion of the belt underneath the projecting section of the head (part 2 pict. 4.2).
- d) Attach the ring on the other end of the belt to the lifting hook (part 3 pict. 4.2).
- e) Lift the machine carefully, without allowing it to sway and without dangerous jerks, jolts or strain.
- f) Lower the machine into the chosen area until it is resting in a stable position.
- g) Remove the belt from the machine.



Pict. 4.2 – Position of slings for hoisting the machine

4.4 Handling and transport instructions

Condition of machine: automatic planetary mixer on floor.

Personal protection equipment to be used:

- Protective gloves
- Safety helmet
- Protective footwear

The machine must be handled using the equipment as follows:



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

- a) Attach the ring on one end of the belt to the crane/bridge crane lifting hook (part **1** pict. **4.2**).
- c) Pass the central portion of the belt underneath the projecting section of the head (part **2** pict. **4.2**).
- d) Attach the ring on the other end of the belt to the lifting hook (part **3** pict. **4.2**).
- e) Lift the machine carefully, without allowing it to sway and without dangerous jerks, jolts or strain.
- e) Lower it into the transport vehicle platform or into the chosen area until it is resting in a stable position.
- f) Remove the belt from the machine.

If the machine has to be moved a certain distance and it is not possible to use cranes or bridge cranes, a fork lift truck may be used for handling, but under the following conditions:

- a) Lift the machine as described above.
- b) Place it in a well-centred position on the lift truck forks so that the supporting feet are outside the forks.
- c) Move the machine slowly and with the utmost caution.



5 - INSTALLING AND STARTING UP THE MACHINE

5.1 Installation surface and position of the machine

The section of floor on which the machine is to rest must be perfectly level (as shown on a spirit level), smooth and at the same height as the floor in the zone around it.

It is advisable to ensure there is sufficient free space around the machine to allow the freedom of movement necessary to use, maintain and clean the machine without difficulty. Position the machine in the desired area and make sure that it is resting in a stable and safe manner.

Personal protection equipment to be used:

- Protective gloves
- Safety helmet
- Protective footwear.

5.2 Electrical power supply

The electrical power supply must be a three-phase power supply with the voltage and frequency shown on the machine's rating plate.

The machine's power supply plug is a "EUROPA" 3x16A+E+N.

Since the machine will be working in a very dusty atmosphere due to the large amounts of dust from flour and other cereals raised during work, special attention should be devoted to protecting the electrical components against penetration by this dust.



The power supply conductors and connections must comply with the regulations in force.

It is always best to have any work required carried out by qualified electricians able to ensure the system complies with the law.

5.3 Installing and starting up the machine

Proceed as follows to install the mixer:

- make sure that the crate shows no obvious signs of damage;
- remove the machine from its packaging, checking its wholeness;
- remove the set of utensils from the bowl, checking that the bowl is complete and whole;
- place the machine in the desired position;
- make sure that it is stable in this position.



Always follow the handling instructions when installing the machine.





The machine can now be connected to the electrical power supply, enabling it to be started.

This is done by carrying out the following instructions in the order shown below, first lowering the mobile guard until it is in its full down position:

- 1 make sure the main power supply voltage is the same of the one written in the machine plate;



Warning! Proceed operating only if the machine voltage corresponds to the main power supply. Failure to comply with this instruction will damage the machine.

- 2 fit the machine plug in the power supply socket;
- 3 turn the main switch  (part **A** pict. **3.3**) to position “1”;
- 4 press for an instant the button  (part **F** pict. **3.3**): the bowl holder rest (part **11** pict. **0**) should now start moving;
- 5 if the bowl holder rest (part **11** pict. **0**) **goes up** go to point **10**;
- 6 if the bowl holder rest (part **11** pict. **0**) **does not go up** turn immediately the main switch  (part **A** pict. **3.3**) to position “0”;
- 7 pull the machine plug out of the power supply socket;
- 8 exchange the phase conductor (part **L1** pict. **5.1**) round with the phase conductor (part **L2** pict. **5.1**) of the plug and make sure that the round wire (part  pict. **5.1**) remains in the ground plug;



Pict. 5.1 - Plug

- 9 repeat the sequence of operations in order, starting from point **2**;
- 10 the start-up procedure has now been completed.

5.4 Gas connection for gas burner

Connect the burner to the gas feeding system: if you use LPG gas, install the appropriate pressure reducing valve onto the cylinder.

Choose a gas feeding pipe suited to the connection and change it by the expiration date which is printed on the pipe itself.

Fix the pipe to the coupling intake carrier and to the power supply output pipe (or to the cylinder), using small metal bands. Make sure that the pipe does not have any chokings due to kinkings or pinchings.



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

5.5 Storing the machine

If you do not intend to install the machine immediately, store it in a dry place.

If it is not packaged, it should be raised from the ground by means of wooden planks positioned under the base.

The storage area must not be subject to large temperature variations (+5°C < temperature < +40°C) so as to avoid the risk of electrical faults.

If the machine is not packaged, cover it with protective sheets to prevent dust or dirt from accumulating.

5.6 Preliminary cleaning of the machine



WARNING: before cleaning the machine, the electrical power supply must be turned off by turning the main switch to "0" and pull the machine's plug out of the power supply socket.

Clean the machine of dirt accumulated during transport and handling.

Remove any foreign matter in the bowl, then clean all parts (except for internal parts) with a cloth moistened with biodegradable phosphate- and chloride-free detergent.

Detailed instructions on cleaning the machine may be found in Chapter 7.



6 - INSTRUCTIONS ON HOW TO USE THE MACHINE CORRECTLY

6.1 Introduction

Reading section 3.9 (control panel) will help the user fully understand the contents of this chapter, ensuring they are able to use the machine correctly.



6.2 Warnings



Inhalation of flour dusts or other ingredients can be dangerous to your health, causing rhinitis, eyes to water, and asthma. When carrying-out operations which can produce dusts, we recommend the operator to always begin operations at a low speed and/or to use a protective dust mask.


6.3 Preparation of the machine for the process

Carry-out the following operations in order:

- 1 lift the moveable guard completely (part 3 pict. 0);
- 2 turn the main switch  (part A pict. 3.3) to position "1";
- 3 lower completely the bowl holder rest (part 11 pict. 0) pressing the button  (part G pict. 3.3) and keeping it pressed;
- 4 properly engage and lock the mixing utensil (part 5 pict. 0) most suitable to the process to be carried-out;
- 5 place the bowl (part 6 pict. 0) with the ingredients on the bowl holder rest (part 11 pict. 0);



Warning: the bowl must be placed on the rest only when the rest is completely lowered.

- 6 lift completely the bowl holder rest (part 11 pict. 0) pressing the button  (part F pict. 3.3) and keeping it pressed;



Warning: the machine operates only when the bowl is placed on the rest and when the rest is raised to its maximum height.

- 7 lower the movable guard (part 3 pict. 0);




Caution: support the guard as you lower it, to prevent it dropping violently.

At this point, the machine is ready to work the ingredients.



6.4 Working process

Depending on the position of the manual/automatic selector  (part E pict. 3.2) the processing cycle can be carried out in the following two ways:






6.4.1 Manual cycle

Once the machine is prepared as indicated in point 6.3, continue as the following instructions indicate:

- 1 position the lever (part 13 pict. 0) to the left to work at the 1st or 3rd speeds or to the right to work at the 2nd or 4th speeds. The lever position on the desired speed will depend on the product to be processed;



Warning: the speed-adjustment lever should be activated exclusively when the machine is stopping.

- 2 turn the main switch  (part A pict. 3.3) to position "1";
- 3 turn the selector  (part. E pict. 3.3) to the manual position ();
- 4 press the start button  (part B pict. 3.3) to mix in 1st speed (lever to left) or 2nd speed (lever to right);
- 5 press the start button  (part C pict. 3.3) to mix in 3rd speed (lever to left) or 4th speed (lever to right);

It is possible to pass from the low speeds to the high speeds, or viceversa, when the machine is working by pressing the corresponding ON push-button.

During the working process, you can add ingredients to the product using the special chute placed on the moveable guard, without having to open the guard and without having to stop the machine.

To stop the machine, press the STOP button  (part D pict. 3.3).



The user is reminded that the common rules of hygiene make it essential that any dough removed from the surface of the machine or the floor must never be re-mixed.

6.4.2 Automatic cycle

Once the machine is prepared as indicated in point 6.3, continue as the following instructions indicate:



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**


09/11/2009



H A N D B O O K


- 1 position the lever (part **11** pict. **0**) to the right to work at the 1st or 2nd speeds or to the left to work at the 3rd or 4th speeds. The lever position on the desired speed will depend on the product to be processed;





Warning: the speed-adjustment lever should be activated exclusively when the machine is stopping.

- 2 turn the main switch  (part **A** pict. **3.3**) to position "1";

- 3 turn the selector  (part. **E** pict. **3.3**) to the automatic position ();

- 4 set the speed mixing time desired on the timer  (part **H** pict. **3.3**) in minutes

- 5 press the start button  (part **B** pict. **3.3**) to mix in 1st speed (lever to left) or 2nd speed (lever to right);

- 6 press the start button  (part **C** pict. **3.3**) to mix in 3rd speed (lever to left) or 4th speed (lever to right);

The machine will start turning for the time set on the timer, stopping when the time has elapsed.

It is possible to pass from the low speeds to the high speeds, or viceversa, when the machine is working by pressing the corresponding ON push-button.

During the working process, you can add ingredients to the product using the special chute placed on the moveable guard, without having to open the guard and without having to stop the machine.

To stop the machine, press the STOP button  (part **D** pict. **3.3**).



The user is reminded that the common rules of hygiene make it essential that any dough removed from the surface of the machine or the floor must never be re-mixed.

6.5 Bowl trolley

It allows to help the bowl movement through the 3 twirling wheels.

6.6 Heating the product

Turning on the burner for the first time:

- open the cock (part **A** pict. **6.1**) by rotating it counter clockwise 2 times;
- press the vacuum valve's (part **B** pict. **6.1**) push-button (part **C** pict. **6.1**) for about 20 seconds;

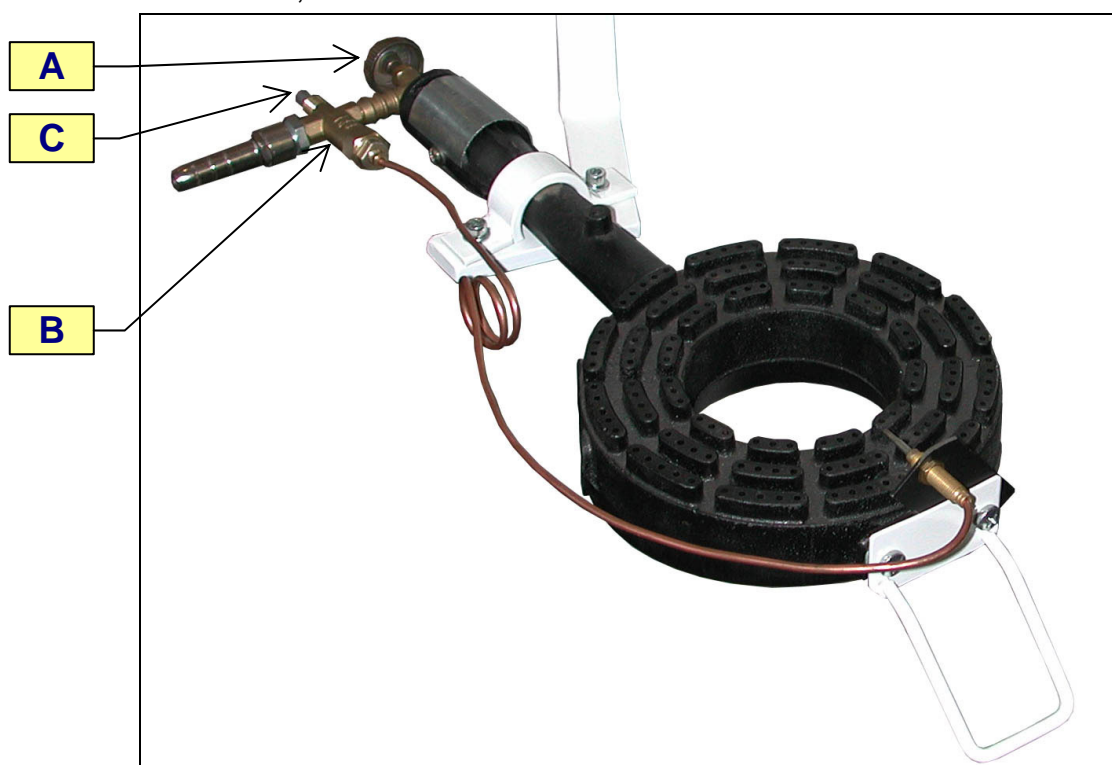


This action empties the air from the feeding pipe that is found in the passage between the burner and the system cock which is fixed to the wall (or the cylinder's valve if you're using LPG).

This operation must be carried-out each time you remove the feeding pipe.

Routine operation for turning on the burner:


- press the valve's push-button (part **C** pict. **6.1**) and light the burner with a match;
- when the burner is lit, wait about 30 seconds before releasing the push-button (time necessary to heat the thermocouple);
- carry-out the calibration operations by using the cock (part **A** pict. **6.1**) which is placed at the burner's entry: it will open if you rotate it clockwise, it will close if you rotate it counterclockwise;
- to turn the burner off, close the cock.



Pict. 6.1

6.7 Removing the product

At the end of the working process, after having stopped the machine by pressing the STOP button (only for manual cycle), remove the product in the following manner:

- lift the movable guard completely (part **3** pict. **0**);
- lower completely the bowl holder rest (part **11** pict. **0**) pressing the button  (part **G** pict. **3.3**) and keeping it pressed;
- remove the bowl (part **6** pict. **0**) from the bowl holder rest;
- empty the bowl.




LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K**6.8 Turning the machine off**


At the end of each working process, turn off the machine by rotating the main switch  (part **A** pict. **3.3**) to position “0”.

If the machine is furnished with a gas burner, close the feed cock.

6.9 Stopping the machine

You can interrupt the working process at any time in one of the two following ways:

1 - pressing the STOP button  (part **D** pict. **3.3**);

2- turning the main switch  (part **A** pict. **3.3**) to position “0”.

As opposed to stopping the machine by pressing the STOP push-button, stopping the machine by rotating the main switch allows you to disconnect the machine from the power supply.

If the machine stops during the (automatic) working cycle, even due to a power failure, pressing one of the two start buttons will restart the cycle from the beginning.

During normal working operations, it is easier to stop the machine by pressing the STOP push-button.

The main switch is used instead for turning off the machine before each operation, which is done when the machine is no longer running.



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

7 - CLEANING INSTRUCTIONS

7.1 The importance of cleaning

Correct and prompt cleaning of the machine not only contributes to keeping it in perfect operating conditions but is also of fundamental importance, since poor hygiene is the cause of health risks and the unacceptable alteration of the food product concerned.

The user should therefore scrupulously follow the cleaning instructions below, ensuring that they only ever use the recommended products to avoid damaging the different parts of the machine.

The machine must be cleaned at the end of every production shift.



Warning: do not use water jets to clean the machine.

Personal protection equipment to be used:
-protective gloves.

7.2 Cleaning product

Use phosphorous and chloride-free biodegradable detergents to clean the mixer, with the exception of its internal parts.

7.3 Cleaning instruction



Danger! All cleaning operations should be carried out with the machine stopped and disconnected from the power supply to ensure total safety.

To disconnect the machine from the power supply, turn the main switch to position "0" and pull the machine's plug out of the power supply socket.



Table 7.1 presents the instructions for cleaning the various different parts of the mixer with the exception of its internal parts.

| PART TO BE CLEANED | CLEANING INTERVALS | CLEANING PROCEDURE |
|------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------------------------|
| Dovetail guides where the bowl holder rest slides | Every day | Wipe using a cloth moistened with detergent |
| Bowl coupling area, resting base and pins | Every day | Clean with a plastic scraper and wipe using a cloth moistened with detergent |
| Bowl holder rest (part 11 pict. 0) | Every day | Clean with a plastic scraper and wipe using a cloth moistened with detergent |
| Bowl (part 6 pict. 0) and utensils (part 5 pict. 0) | Every day | Clean with a plastic scraper and wipe using a cloth moistened with detergent |
| Movable safety guard (part 3 pict. 0), chute for inserting ingredients | Every day | Wipe using a cloth moistened with detergent |
| Control panel (part 2 pict. 0), including push-buttons | Every day | Clean with a plastic scraper and wipe using a cloth moistened with detergent |
| Lever (part 13 pict. 0) | Every day | Wipe using a cloth moistened with detergent |
| Painted parts: pedestal (part 10 pict. 0) and covers (part 1 and 12 pict. 0) | At least once per week | Wipe using a cloth moistened with detergent |

Tab. 7.1 – Cleaning

7.4 Cleaning the planetary mixer's internal parts

The machine's internal parts should be cleaned at least once per month using a vacuum cleaner after having removed the appropriate cover.



Warning! Removing the cover enables one to gain access to the transmission components. In order to ensure maximum safety, the machine must be stopped and disconnected from the power supply before removing the cover to enable the cleaning operations. Fix the covers in place when the cleaning operations have been completed.

7.5 Cleaning the gas burner

Clean the burner with compressed air at least once a week.



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

8 - MAINTENANCE INSTRUCTION

8.1 The purpose of maintenance



Maintenance operations have the purpose of keeping the machine's designed technical, production and safety conditions unaltered over time. The user is therefore advised to follow the maintenance instructions scrupulously.



Correct maintenance will ensure the machine enjoys a long service life and keep undesirable machine stops down to a minimum.

8.2 Risks connected with negligent use of the machine

Negligent use of the machine (and failure to observe the maintenance program in particular) can cause risks to the operator and poor mixer performance.

In particular it can lead to premature wear of the machine's parts and mechanical damage, demanding more frequent repair operations.

The machine's noise levels tend to increase in line with the total hours operation in its service life. Negligent use of the mixer accentuates this phenomenon.

8.3 Precautions to take during maintenance



Danger! All maintenance operations should be carried out with the machine stopped and disconnected from the power supply to ensure total safety.

To disconnect the machine from the power supply, turn the main switch to position "0" and pull the machine's plug out of the power supply socket.

Personal protection equipment to be used: protective gloves.

8.4 Maintenance operations which can be carried out by the user

This section provides information on those maintenance operations which do not require specialist personnel and can therefore be carried out by the user. The relevant instructions are also provided below.



All the other maintenance and repair operations should be carried out by specialist or authorised personnel.

The oil contains in the spindle rest (part 3 pict. 8.1) is of the type **ExxonMobil Cyclesstic 1500** or equivalent with these characteristics:



| FEATURES | UNIT | TYPICAL PROPERTIES |
|-------------------------------------|---------|--------------------|
| VISCOSITY GRADE TO 40 °C | cSt | 1500 |
| VISCOSITY GRADE TO 100 °C | cSt | 60 |
| VISCOSITY INDEX | | 92 |
| POUR POINT | °C (°F) | 3 (37) |
| FLASH POINT | °C (°F) | 313 (595) |
| SPECIFIC GRAVITY AT 15.6 °C (60 °F) | | 0.93 |

8.4.1 Topping up the oil

Check the oil level in the tank every 50 hours work/weekly through the sight glass (part. 1 pict. 8.1), when the machine is a stopped.

If the level has fallen below the red line, proceed as follows:

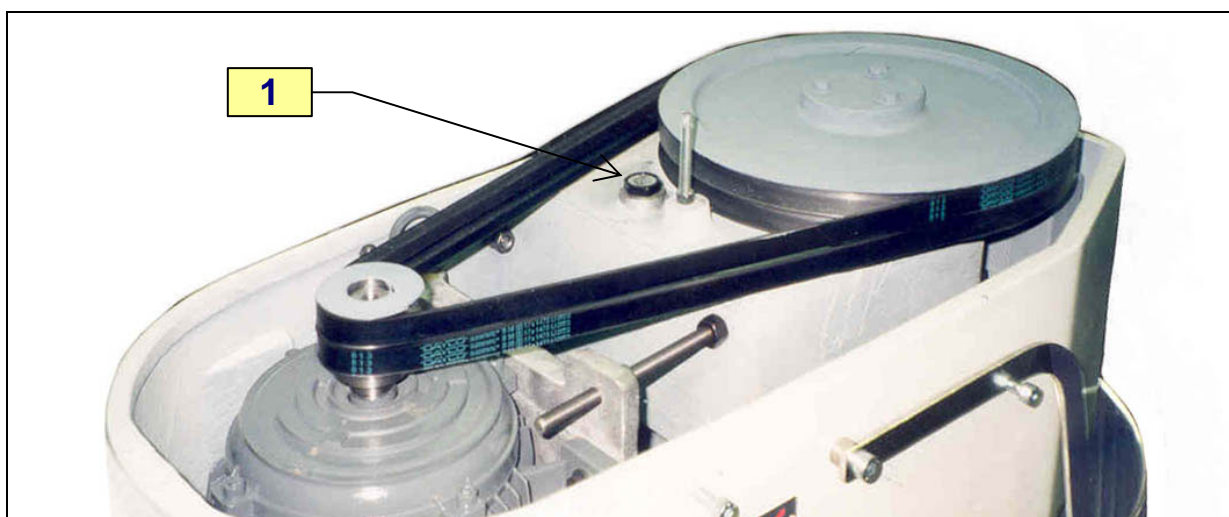
- remove the upper cover (part 2 pict. 8.1) so that the oil pan is accessible;



Pict. 8.1 – Oil level indicator

- remove the stopper (part 1 pict. 8.2) in the top of the oil tank;

- top up until the oil level reaches the red line.



Pict. 8.2



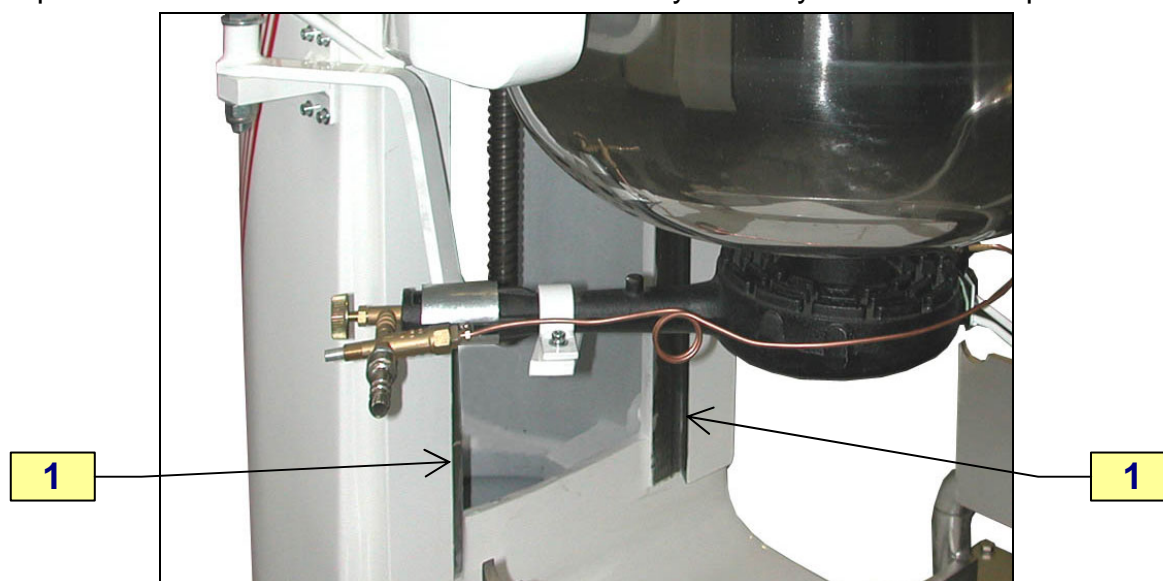
- replace the stopper (part 1 pict. 8.2) in the oil tank cover;
- replace the upper cover (part 2 pict. 8.1).

Only ever use **NURAY 680 (ESSO)** or equivalent oils with an Engler viscosity of 44 at 50°C for the oil topping-up operations.

8.4.2 Greasing the rest's guiding rods on the pedestal

Check and then grease, if necessary, the rest's guiding rods (part 1 pict. 8.3) on the pedestal using a soft bristle brush.

Use grease type Castrol Spheerol APT3 or similar with a penetration coefficient of 220/250. These operations should be carried-out either monthly or every 200 hours of operation.



Pict. 8.2

8.4.3 Greasing the raising setscrews of the bowl's rest

Check and, if necessary, grease the raising setscrews of the bowl's rest using a soft bristle brush.

Use grease type **ACCA CU - grease HD 43**.

This operation must be carried-out either annually or every 2000 hours of operation.

8.4.4 Maintenance of the gas burner

The burner must be checked at least every 6 months, making sure that the components and the small bands are fixed properly.

It is important that there be enough air vents near the machine for ventilation.

8.4.5 Checking the tension of the transmission belts

The tension of the transmissions belts must be checked when the machine has been in operation for 50 hours after installation.

Proceed as follows:

- remove the upper cover (part 2 pict. 8.1);
- check the tension of the belts:



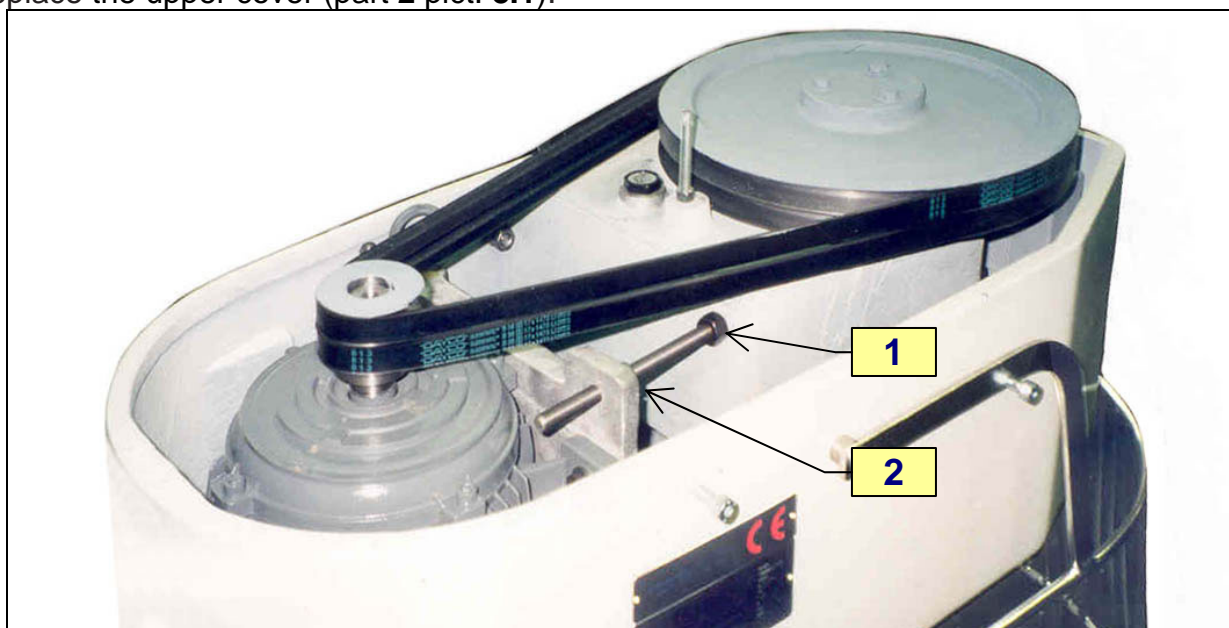
LI152460.doc

AUTOMATIC PLANETARY MIXERS mod. PA120

09/11/2009

HANDBOOK

- press the belt with one finger at a point midway between the motor pulley and the control pulley to check whether belt flexure exceeds 5 millimeters;
- if the belts flexes by more than 5 millimetres, take up the excess slack as follows:
 - loosen the screw (part. 1 pict. 8.4) until the belts is correctly tensioned (belt flexure < 5 mm.);
 - screw and relock the nut (part. 2 pict. 8.4) to the motor bracket;
- replace the upper cover (part 2 pict. 8.1).



Pict. 8.4

This check should be carried out regularly every 200 hours operation.



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

9 - DISMANTLING THE MACHINE

9.1 Polluting parts

A number of the planetary mixer's components, particularly those in plastic and rubber, are polluting.

When the machine is being dismantled, these parts should be disposed of with respect for the environment and in compliance with the regulations in force.

9.2 Disposal procedure

The machine can be dismantled by the user or third parties.

In the first case, the various different materials should be sorted according to type and disposed of by companies authorised for each of the individual types of materials concerned.

In the second case, one should use firms which are authorised for the collection and disposal of the materials in question.



10 - TROUBLESHOOTING

10.1 Foreword

This chapter list possible causes and relevant remedies to any faults.



For the sake of safety, any servicing herein requiring access to the electric system and/or removal of casings, will be performed when the machine is stopped and unplugged.



Where clearly specified, and for all maintenance services that are not specifically described, contact manufacturer (or other skilled technicians) for assistance.

10.2 Assessment and solution of common problems

| TROUBLE | CAUSE | REMEDY |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| The machine does not work | No power | Plug in. Check that the main switch (detail A pict. 3.3) is turned to "1" position |
| | The movable guard's limit switch is not well adjusted. | Call the Assistance Service for adjustment. |
| The tool does not turn | The bowl holder rest (part 11 pict. 0) is not completely raised | Raise the bowl holder rest completely. |
| | The bowl holder rest (part 11 pict. 0) is completely raised but the bowl (part. 6 pict. 0) is not present. | Position the bowl on the rest and raise the support itself completely. |
| | The thermal cutout of the motor has tripped. | Wait 5 minutes before restarting the machine |
| | The fuses in the fuses in the fuse carrier have tripped (part. 1 pict. 3.2) | Check the fuses and if necessary replace them with similar ones |
| The bowl holder rest don't move | The thermal relay of the lifting motor has tripped | Wait 5 minutes before restarting the machine |
| | The fuses in the fuses in the fuse carrier have tripped (part. 2 pict. 3.2) | Check the fuses and if necessary replace them with similar ones |



LI152460.doc

**AUTOMATIC PLANETARY MIXERS
mod. PA120**

09/11/2009

H A N D B O O K

10.3 After-sales service

In case of faults and malfunctioning, user can contact manufacturer's After-sales service.
To identify the machine with dispatch, user should quote:

- Model,
- Serial number,
- Year of make,
- Voltage,
- Frequency.

These data are reported on machine data plate.