

**SPECIALTY FOOD SERVICE EQUIPMENT**

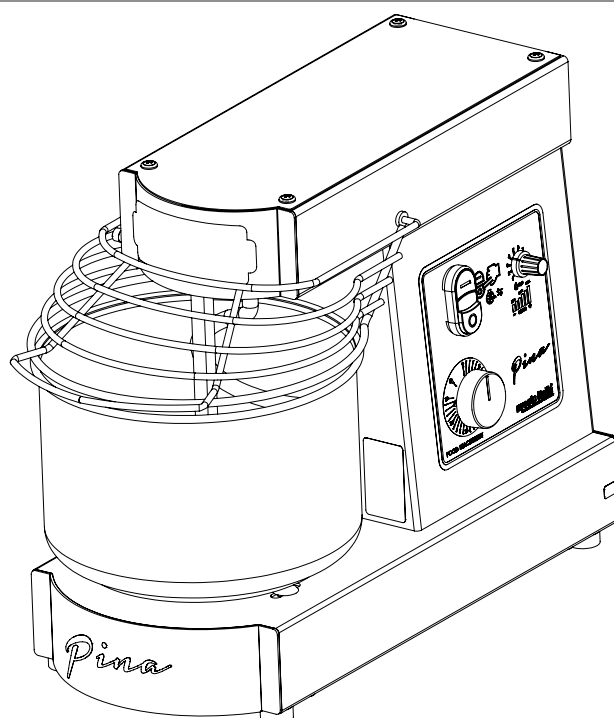
# USER MANUAL

INSTRUCTION MANUAL FOR USE

BEDIENUNGSANLEITUNG

MODE D'EMPLOI ET D'ENTRETIEN

MANUAL DE INSTRUCCIONES



## IMPASTATRICE A SPIRALE

EN: SPIRAL MIXER

DE: TEIGKNETMASCHINE

FR: ÉLECTRIQUE PÉTRINS À SPIRAL

ES: AMASADORAS CON ESPIRAL

**MOD. PINA10**

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### WARRANTY

check the terms in [www.ampto.com](http://www.ampto.com)

### SHIPMENTS

The goods travel at the risk of the customer. Any complaints on the bad condition of the material should be shown to the carrier at the time of Unloading. Please give due consideration to what the subject of the liability of the carrier and the mandatory nature of the highlight of any damage at the time of Unloading. We underline that our company is not liable for damage not identified to the carrier at the time of collection of the goods, even if the same was forwarded free port debit invoice.

### JURISDICTION

Any dispute is referred to the court with territorial jurisdiction of the office of the manufacturer.

### 1.1. PURPOSE OF THE MANUAL

This User Manual is an integral part of the Machine and it provides the information required to:

- Sensitise the operators to safety issues;
- Handle the machine (with or without packaging) under safe conditions;
- Install the machine correctly;
- Know its operations and limits;
- Use it under safe conditions;
- Perform maintenance safely and correctly;
- Dismantle the machine under safe conditions and in compliance with the occupational standards in force.



According to the national standards in force, in industrial use, the managers of the departments in which the machine is to be installed must carefully read this document and make the operators and maintenance technicians read the parts relative to their field of expertise.

The time spent doing this will be rewarded by the efficiency of the machine and its use under safe conditions.

The plants where the machine is to be installed must comply with the occupational standards in force.

The instructions, drawings, and documents contained in this Manual constitute proprietary and confidential information and they cannot be reproduced either in whole or in part.

Moreover, in the event the manufacturer applies modifications to this document, the customer must make sure that only the updated versions of the manual are available.

### 1.2. HOW TO READ THE USER MANUAL

This manual is divided into chapters, each one refers to a specific operator function (INSTALLER, OPERATOR OR MAINTENANCE TECHNICIAN) and defines the expertise required to run the machine under safe conditions.

The User Manual consists of a cover, index, and a series of chapters.

The initial page provides the identification data for the machine and model, the revision of the user manual, and a photo/drawing of the described machine to facilitate the identification of the machine and of the relative manual.

The first page of the index shows the table of revisions of the user manual and of its parts, which correlates the revision level of the manual to that of the index and chapters.

### PAGE EXAMPLE

Machine Name	Model	n° Chapter	Rev.	n° Page	
			1	0.0	1

### 1.3. STORING THE MANUAL

The user manual must be stored carefully and must remain with the machine until its disposal.

Handle the user manual with care, with clean hands and do not place it on dirty surfaces.

Parts must not be removed, torn, or be arbitrarily modified.

The manual must be stored in an environment protected against humidity and heat and in the proximity of the machine.

Upon request, the manufacturer may provide additional copies of the user manual.

### 1.4. UPDATING THE MANUAL

The manufacturer reserves the right to modify the product and improve the machine without prior notice and without updating the manual delivered to the user.

The manufacturer is liable for the descriptions provided in Italian. Any translation cannot be fully verified; therefore, refer to the Italian version if any inconsistency is detected.

### 1.5. RECIPIENTS

This user manual is addressed to the installer, operator, and qualified maintenance personnel.

The term "OPERATOR" refers to the person in charge of running, adjusting, cleaning and performing routine maintenance on the machine.

The term "MAINTENANCE TECHNICIAN" refers to the person who has attended specialist courses, training courses, etc. and has experience in installing, commissioning, repairing and transporting the machine.

The term "EXPOSED PERSON" is anyone standing within and/or near the machine area putting his safety and health at risk.

The machine is intended for industrial or domestic use. The machine must be used only by operator that:

- Have reached an appropriate age;
- Are physically and psychologically suitable for performing technically difficult operations;
- Have been trained on how to use and perform maintenance on the machine;
- Have been judged suitable by the employer for performing the tasks assigned (on industrial use);
- Are able to understand and interpret the operator manual and safety provisions;
- Are familiar with the emergency procedures and knows how to implement them;
- Are able to activate the specific type of equipment;
- Are familiar with specific standards;
- Have understood the operating procedures provided by the manufacturer of the machine.

### 1.6. GLOSSARY AND SYMBOLS

This paragraph lists uncommon terms.

Below are the abbreviations and symbols used with their meanings and descriptions. Both the abbreviations and symbols provide, quickly and unambiguously, the information required to use the machine correctly and under safe conditions.

**DANGER ZONE:** Means any zone within and/or around machinery in which a person is subject to a risk to his health or safety (Annex I, 1.1.1. Directive 98/37/EC).

**EXPOSED PERSON:** Means any person wholly or partially in a danger zone (Annex I, 1.1.1. Directive 98/37/EC).

**OPERATOR:** Means the person or persons installing, operating, adjusting, maintaining, cleaning, repairing or moving machinery.

**MAN-MACHINE INTERACTION:** Any situation in which the operator interacts with the machine in any operating phase and in any moment of the machine duration.

**OPERATOR QUALIFICATION:** Minimum level of expertise that the operator must have to perform the described operation.

**MACHINE STATUS:** Means the operation mode (start, stop, etc.) and the condition of the safety devices installed on the machine.

**RESIDUAL RISK:** Hazard, which cannot be eliminated or reduced during the design phase and against which the protection devices are not (or not fully) effective. The manual provides the information that proves its existence and the instructions and warnings to solve them (see, 5.5 and 5.5.1 of European standards EN 292/1 and EN 292/2)

**SAFETY COMPONENT:** Is a component used to guarantee safety and prevent failure or malfunction that may affect the safety and/or health of the exposed persons.

## SYMBOLS



The descriptions before this symbol contain very important safety information/provisions. Failure to comply with this symbol may result in:

- danger for the operators;
- loss of the warranty;
- manufacturer's liability disclaimer.


## SAFETY-RELATED SYMBOLS

- The symbols contained in a triangle indicate **DANGER**.
- The symbols contained in a circle indicate **OBLIGATION/PROHIBITION**.

Symbol	Name	Symbol	Name
	General Hazard		Do not remove the safety devices
	Dangerous voltage		Respiratory protection device
	There are dangerous mobile elements in motion when fixed guards are removed		Noise
	Risk of crushing the upper limbs		Precaution
	Entanglement		Food machinery
	Stop		WEEE
	Prohibited		

## 2.2. IDENTIFICATION DATA AND MACHINE DATA PLATE

The machine is equipped with an identification plate, which provides the following data:

 MADE IN ITALY <b>IMPASTATRICE</b>	
TIPO	
MODELLO	<b>SK20MO</b>
MATRICOLA	<b>IMAI005969</b>
ANNO DI COSTRUZIONE	<b>2019</b>
POTENZA NOMINALE	<b>0,55 kW</b>
CORRENTE NOMINALE	<b>2,5 A</b>
TENSIONE NOMINALE	<b>230V 1N / 50 Hz</b>
PESO	<b>kg 58,5</b>
GRADO DI PROTEZIONE	<b>X3</b>

## 2.3. TESTS CONDUCTED BEFORE DELIVERY

Before delivery, the machine undergoes safety and operational tests at the manufacturer's premises in compliance with the standards in force. Moreover, all the installed components undergo strict visual and instrumental tests.

## 2.4. INTENDED USE AND CONSTRUCTION PARTS

The machine is designed to mix soft dough made with flour, salt, yeast, fats, liquids (water, eggs, ..) potatoes and minced meat and other food ingredients.

**The machine consists of the following components:**

1. The tank contains the food products to be mixed and it is placed on the front area of the machine to which it is fixed; the tank turns mechanically clockwise and it is started by an electric motor.
  2. The dough tool, placed on the machine head, turns inside the spiral-shaped tank. Gears controlled by the electric motor turn the tool mechanically.
  3. Kneader rod consisting of a fixed metal rod mounted on the head of the machine.
  4. Interlocked mobile guard, which covers the upper part of the moving tank. It stops the dangerous mobile elements when it is opened.
  5. The machine consists of a bearing structure, which supports and contains the components of the motor, transmission and control devices.
- The single-phase electric motors can have one or more speeds.
  - All the machine parts intended to come into contact with food products, such as the tank, tools, kneader rod, etc. are made of stainless steel.

The machine supplied and described in this user manual is manufactured with the parts indicated in the CE declaration of conformity.

## 2.5. USE CONDITIONS

DATA	PINA ** Series VV
Equivalent continuous A-weighted sound power level	Lower than 70 Dba
Current nature - Frequency	Cfr. machine identification plate
Current value	Cfr. machine identification plate
Rated voltage	Cfr. machine identification plate
Rated conditional prospective short-circuit current	6 kA Symmetrical
Earth and neutral	TT e TN
Protection rating	IP 21
Machine position	Work bench used in the food industry, with height ranging between 900 and 1000 mm from the floor, in which it is possible to move around the machine with a free space of at least 800 mm
Place of use	Indoors
Maximum room temperature	+ 40° Degrees
Minimum work environment lighting	500 lux
Additional use condition	"Machine NOT SUITABLE to run in environments containing contaminants, e.g. dust, corrosive gas, etc. Machine NOT SUITABLE to run in environments with a potentially explosive atmosphere. Machine NOT SUITABLE to run in environments with ionizing radiation, such as micro-waves, ultraviolet rays, laser and similar. Electric equipment NOT SUITABLE to run in environments in which there are vibrations and the risk of impacts. Install anti-vibration mounts if necessary"

Overcurrent protective device recommended	
Rated insulation voltage	Ui = > 690 V
Rated current	see TECHNICAL DATA table
Thermal relay adjustment	see TECHNICAL DATA table
Maximum value of the fault loop impedance	0.1 Ω

## 2.6. SET-UP RESPONSIBILITIES OF THE CUSTOMER

### A) Setting up the installation site.

- The customer must set up a support surface for the machine as indicated in the use condition table.

### B) Setting up the electrical system.

- The electric system must comply with the standards in force and must be provided with an efficient earthing system.
- Place an omnipolar disconnecting device on the power supply line, upstream of the machine.
- The power cables must be sized according to the maximum current required by the machine so that the total voltage drop, at full load, is less than 2%.

If the power cable is damaged, it must be replaced by the manufacturer or its technical assistance service or in any case by a person with similar qualifications, in order to prevent any risk.

## 2.7. TECHNICAL DATA

Max operating temperature	+ 40 C Degrees
Relative humidity	10 ÷ 80 %

SPIRAL MIXER

PINA

2

0.0

33

Model	Dim. Tank (mm)	Tank capacity (lt)	Dough (Kg)	Speed	RPM		Power (kW)	Current (A)	Electrical Connection
					Spiral	Tank			
PINA10 VV	235 x 156	7	6	1	100	20	0.22	1.5	110v-60 Hz.
				VV	42 / 269	8 / 53	0.37		

## 2.8. MACHINE DIMENSIONS MOD. PINA

measures in mm

Model	Version			A	B	C	D	Packaging Dimensions				Net Weight (Kg)	Gross Weight (Kg)
	MO	2V	VV					width	depth	height	Mc		
PINA10	X	-	X	260	540	390	620	300	560	450	0.07	28	30

### LEGEND

VV = VARIABLE SPEED



### 3.1. TRANSPORT AND HANDLING

The machine can be transported in a container or via couriers. The same type of packaging is required for both cases (see dimensions and weight table).

**The machine packaging must be protected against atmospheric agents. It is strictly prohibited to place other crates or various materials on it.** Handle the box with care.

Keep the load at the minimum height from the ground during handling operations in order to improve the stability of the load.

Lifting and handling operations must be performed by specialist and authorised personnel.

The manufacturer declines any liability for damage to persons or objects resulting from failure to comply with the safety standards in force relative to lifting and moving materials inside and outside the plant.

### 3.2. STORAGE

The machine crate must be stored in an environment protected from atmospheric agents. It is strictly prohibited to place other crates or various materials on it.

### 3.3. CHECKS UPON RECEIPT

Upon receiving the material, it is important to check:

1. crate number
2. weight and dimensions
3. correspondence between that indicated on the transport document and the material received
4. state and integrity of the packaging
5. that the packaging has not suffered damage during transport.



**If everything is intact, remove the packaging. Any damage, faults, and non-conformities must be promptly communicated within 8 days from the date of receiving the machine. Otherwise, the goods will be considered as accepted**



**On this point, the manufacturer reminds the user that, according to national and international standards, the goods travel at the buyer's own risk.**

### 3.4. UNPACKING

Follow the instructions below to remove the machine from the packaging:

- Cut the straps that block the cardboard
- Open the cardboard packaging removing the staples
- Remove the cardboard casing
- Make sure that everything is intact
- Make sure that the supply complies with that indicated with the PACKING LIST.

### 3.5. LIFTING THE MACHINE

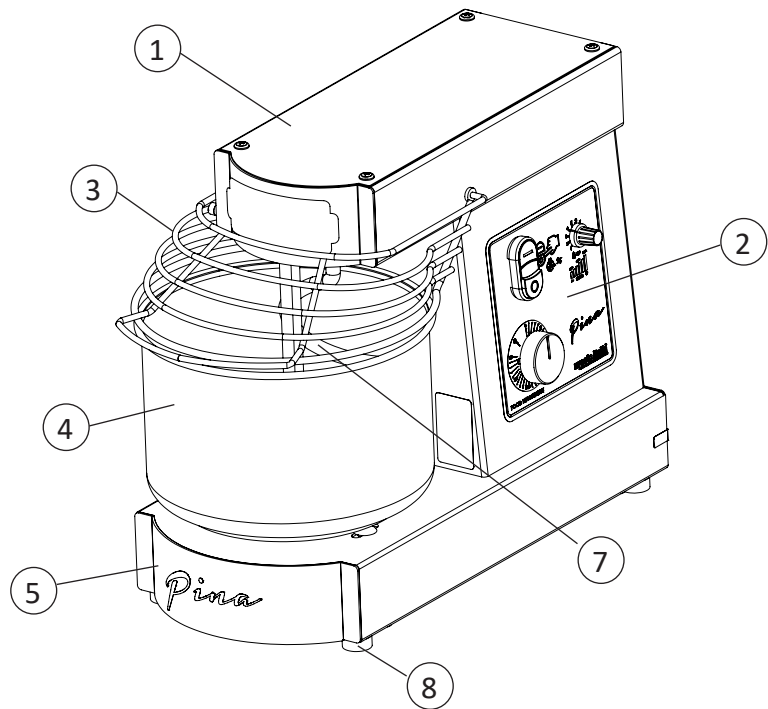
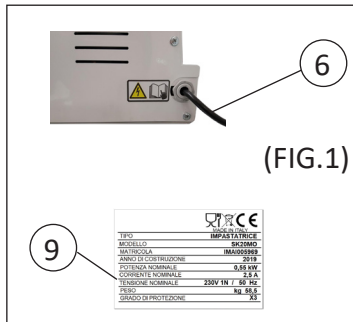
The machine must be lifted by two operators from the base.



**All the packaging components must be collected and sent to specific recycling centres as described below.**

### 3.6. IDENTIFICATION OF THE COMPONENTS

1. Head
2. Control panel
3. Protective grid
4. Tank
5. Base
6. Electric cable
7. Spiral
8. Feet
9. Data plate



### 3.7. IDENTIFICATION OF THE MACHINE (FIG. 1)

The serial number and machine identification data are stamped on the plate (9) on the machine base.



**Always state the serial number and model of the machine to request Technical Assistance and order spare parts.**

### 3.8. MACHINE POSITIONING AND STABILITY



Make sure that the support surface is suitable to support the loads indicated in Tab. 2.8 & position the machine scrupulously respecting the minimum distances necessary for the operator or technician to correctly carry out each sequence of work and/or maintenance.

### 3.9. POWER SUPPLY

The connection of the power supply must be in accordance with the legislation relating to the country in which the machinery is used.

The connection to the power supply of the machine where it is made via the supplied power cable.

The mains socket must be easily accessible, it must not require any movement. The distance between the machine and the socket must be such as not to cause the tension of the power cable, also said cable must never be under the supports of the machine.

### USER'S ELECTRICAL SYSTEM

The user's system upstream the machine control equipment must be designed and installed in compliance with the safety rules concerning "user's low voltage systems" (IEC3644/HD384/CEI 64-8-latest editions).

In relation to the energy distribution system, which powers the machine control equipment, the machine must belong to one of the normalised TT or TN systems, in compliance with IEC364\_4\_41/HD382\_4\_41/CEI 64.8 (4\_41) (latest editions).

According to the above provisions/indications, the relative earthing system must fully comply with the applicable requirements for the coordination with the associated active devices, in compliance with IEC364-5-54/HD382-5-54/CEI 64.8 (5-54) (latest editions).

### PROTECTION DEVICE AGAINST OVERCURRENT

The equipment is designed to withstand a symmetrical short circuit of short duration, which does not exceed 6kA. If the rated conditional prospective short-circuit current in the installation point is greater than the value indicated, it must be suitably limited. Since the electrical equipment used to control the machine is not fitted with d. c. electronic circuits, we recommend taking action to guarantee protection against indirect contact. In order to protect against automatic power supply interruption be equipped with SUITABLE DIFFERENTIAL DEVICES.

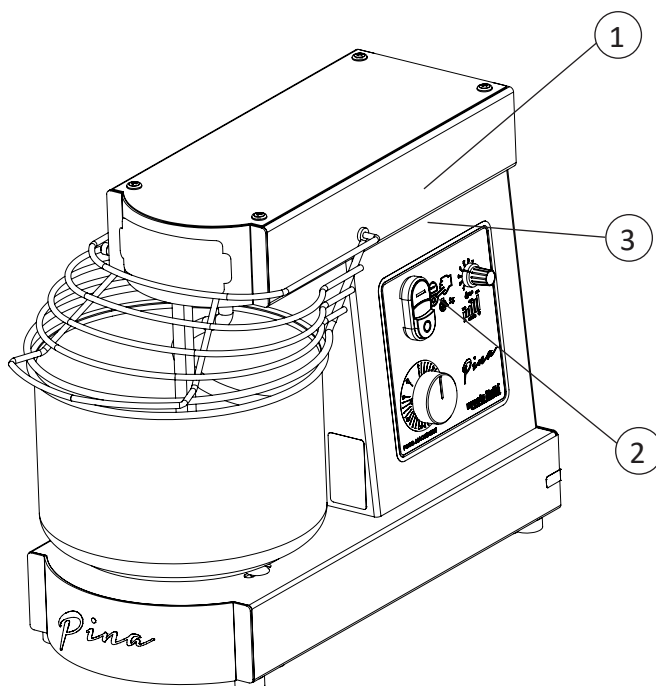
The differential switch must withstand an impulse voltage of atmospheric origin and switching surges (cfr. EN 61008-1 latest editions).

Moreover,

1. the power supply disconnecting device on the top of the electrical panel has no rated breaking capacity, as it is a socket/plug combination; moreover, it must be protected against short circuit with a protection device with rated current not higher than the technical data,
2. upstream of the electrical equipment power cable there must be the protection device against over-current in compliance with the technical rules

### 3.10. FIRST START-UP

- Set the main switch upstream the machine to "ON".
- Turn the timer knob (2) to "30 Minutes" (for the models provided with timer)
- Press key (1) "I".
- Make the machine run with no load for a few minutes and make sure that rotation is smooth.
- Switch the machine off by pressing key "O" (3).



#### 4.1. SAFETY INSTRUCTIONS



Failure to apply safety rules and procedures can cause sources of danger and damage.

The machine is understood to be bound in its use by the end user.

1. All the rules of conduct of people established by the laws in force in your country are applicable, with particular reference to the electrical system upstream of the machine for its connection/operation.
2. All further instructions and warnings for use that are part of the graphic documentation admitted to the machine.

#### 4.2. SAFETY DEVICES

The protections and safety devices of the machine must not be removed. If they are to be removed for extraordinary maintenance needs, measures must be taken to minimize the resulting danger.

The machine is protected by a bodywork, which does not allow access to any dangerous part, except in the front of the work, protected by an interlocking mobile guard that covers the front of the moving tank.

**The machine is equipped with the following safety systems:**

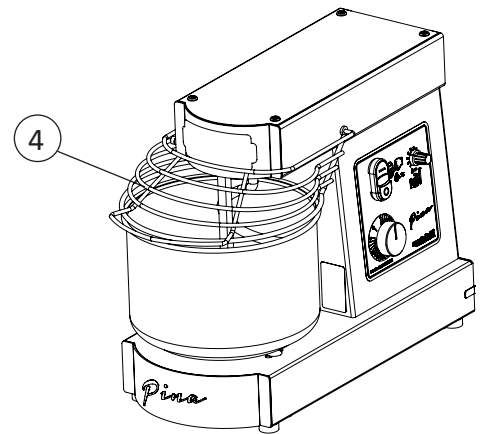
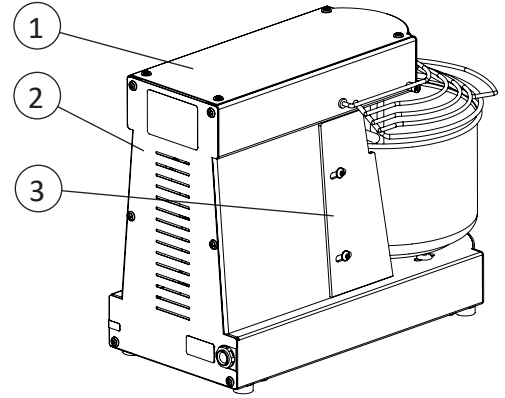
- (1) (2) All dangerous areas are closed by carters fixed with screws.
- (3) Protective casing between the kneading body and the bowl the space remaining between the crankcase and the bowl must be adjusted at a distance equal to less than 5mm.
- (4) The tank protection grid prevents access to the tank when the mixer is running
- (5) The machine is equipped with a microswitch, which blocks the operation of the machine when the protection grid (4) is raised;

When the machine stops due to the insertion the safety microswitch, it is necessary to press the "I" key again, to restart the machine.

#### 4.3. OPERATOR ZONES

During the operation of the machine, the operator is positioned in front of it so that the dough can be easily inserted and removed in the bowl; for the various allowed positions see position.

The technician is allowed to position on the rear of the machine for maintenance operations.



#### 4.4. NORMAL USE, IMPROPER USE, PROHIBITED USE

The machine described in this user manual is intended to be used BY ONE SINGLE trained OPERATOR, who is informed on the residual risks and safety rules, and by the maintenance technicians.



The machine is normally used to mix soft dough made with flour, salt, yeast, fats, liquids (water, eggs, ..) potatoes and minced meat and other food ingredients.



The machine must not be used IMPROPERLY, in particular:

1. It must not run with parameters other than those indicated in the TECHNICAL DATA table.
2. Any use of the machine running with parameters other than those indicated in this manual.

#### THE MANUFACTURER DECLINES ANY LIABILITY

1. The user is liable for damage resulting from failure to comply with this manual.
2. **DO NOT RUN THE MACHINE WITH NO LOAD.**
3. Do not tamper with, wear, remove, or hide the labels.



The machine must not be used IN A PROHIBITED WAY as it may cause damage or injuries to the operator.

1. It is prohibited to move the machine when connected to the power supply
2. It is prohibited to pull the power cable or the machine to disconnect the plug
3. It is prohibited to place weights on the machine while running.
4. It is prohibited to place the power cable on sharp parts.
5. It is prohibited to leave the machine unattended when it is loaded.
6. It is prohibited to place any object under the machine base or between the support feet and base
7. It is prohibited to introduce products or objects with features other than those indicated for normal use
8. It is prohibited to run the machine with protective and fixed guards fully removed.
9. It is prohibited to use products that may put the operator and maintenance technician's health at risk; moreover, they must not determine potentially explosive zones, as the machine is not designed to process potentially explosive ingredients
10. **It is prohibited to use direct water jets or other liquids.**



**THE USER IS LIABLE for damage resulting from failure to comply with the specified normal use conditions. FOR ANY DOUBTS, PLEASE CONTACT THE AUTHORISED ASSISTANCE CENTRE.**

#### 4.5. WARNINGS ON RESIDUAL RISKS



The employer must train the personnel on the risk of injury, safety devices, and general accident-prevention rules set-forth in the European standards and laws in force in the country of installation of the machine.

Therefore, **THE USER MUST:**

1. Attend professional training courses, in collaboration with the machine manufacturer, so that the OPERATORS AND MAINTENANCE TECHNICIANS are suitably trained.
2. Provide personal protective equipment in compliance with Directive 89/656/EEC and subsequent amendments.
3. Use, cleaning, and maintenance operations must be performed by QUALIFIED personnel

#### 4.6. RESIDUAL RISKS

##### RESIDUAL RISK DUE TO NOISE



The machine produces an A-weighted sound power level lower than 70 dB.  
Wear ear plugs or a headset to protect your ears.

**RESIDUAL RISK DUE TO FIRE**

The employer must set up fire-fighting systems (e.g. first aid portable fire extinguishers) suitable for the type of materials that can catch fire, near the machine work area. **NEVER USE WATER TO FIGHT FIRE.**

**RESIDUAL RISKS DUE TO CONTROL SYSTEMS**

- Upon activation of the machine or due to lack of power supply, **BEFORE ACCESSING THE MOBILE PARTS, MAKE SURE THEY HAVE ACTUALLY STOPPED.**
- Entanglement after opening the protection grid for accidental actuation of the start button.
- Moving organs after opening the protection grid for accidental actuation of the start button

**RESIDUAL RISK DUE TO THE OPENING OF THE PROTECTION GRID**

- Entanglement after opening the protection grid for accidental actuation of the start button.
- Moving organs after opening the protection grid for accidental actuation of the start button

**RESIDUAL RISK DUE TO REMOVAL OF FIXED PARTS**

The operator must never open or remove a fixed guard or tamper with a safety device.

**RISK DUE TO LIFTING OPERATIONS**

There is the residual risk of impacting, abrasion, and crushing during maintenance, cleaning, and other manual operations.

**RISK OF SLIPPING AND/OR FALLING**

To prevent the risk of slipping and/or falling, the operator or maintenance technician must always use suitable foot-protection devices, such as anti-slip shoes.

**RISK DUE TO THE NATURE OF THE PRODUCT**

The machine is designed to mix dough made with flour, salts, yeast, fats, and liquids and other food ingredients. In the presence of dust or powder, wear a suitable protective mask during the manual work cycle and when the machine is running. Additional ingredients must not be a risk for the operator's health. Moreover, no potentially explosive atmospheres must be created.

**RISK DUE TO THE NATURE OF THE PRODUCTS**

The machine is designed to mix dough made with flour, salts, yeast, fats, and liquids and other food ingredients. In the presence of dust or powder, wear a suitable protective mask during the manual work cycle and when the machine is running. Additional ingredients must not be a risk for the operator's health. Moreover, no potentially explosive atmospheres must be created.

**RISK DUE TO DUST**

Airborne dust may form while loading dry products in the tank or during processing. Ingredients must be handled with care, minimising the load height of the tank in which they are poured. The operator must use breathing devices, such as dust-proof masks or other suitable devices.

**5.1. CONTROL PANEL**

On the machine, depending on the models, the following commands are positioned:

**a) START/STOP Button\***

Button "I", if pressed it starts the machine

Button "O", if pressed it stops the machine\*\*

**b) Timer** The timer is in position "OFF" at 0/30 minutes

Turn the timer knob clockwise to set the operating minutes (from 0 to 30 minutes);

then, to start the cycle, press "I"; the cycle ends when the timer knob reaches

position "O" and the machine operation is disabled.

**c) SPEED variator (only to PINA VV)**

Turning the knob clockwise increases the rotation speeds of the machine. Turning the

knob counterclockwise reduces the speed of the machine.

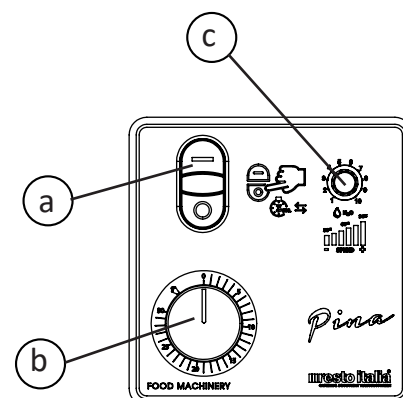
\* To start the machine without activating the timer, the knob of the timer itself must be in the "hand" position.

**\*\* Reverse rotation (only to PINA VV)**

It is possible to start the reverse rotation (anticlockwise) of the spiral and the tank by

keeping the "O" button pressed for more than 3 seconds. Stop the machine and press

button "I" again to reactivate standard rotation (clockwise).

**5.2. COMMISSIONING SPIRAL MIXER PINA**

Once the operator has checked that all safety conditions are met, he can start the machine according to the procedure below:

Insert the food ingredients into the tank manually making sure the guard is OPEN. During machine operation, the remaining ingredients can be inserted into the tank with the guard CLOSED.



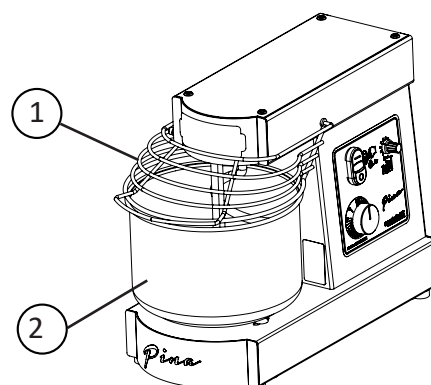
Handle the food ingredients with care, reducing the minimum height from the tank edge.

The packaging on the lower part of the tank must be open to facilitate the removal of the flour powder within the shortest time possible

Lift the protective grid (1) and introduce the ingredients into tank (2) to obtain the dough. The machine capacity is suitable for standard dough (about 65% of flour and 35% of water). **The capacity decreases for more compact dough.**

Lower the protective grid (1) and turn the main switch on to power the machine.

Start the machine according to the instructions provided in the previous chapter.



### 5.3. STOP

Press the key “O” to stop the machine

In the case of a temporary or prolonged stop, before restarting the machine, remove all the food ingredients inside the machine. In the case of a prolonged stop, isolate the main system from the power supply, i.e. position **the MAIN switch to “O” OFF**.

The machine work until the set time end, when the **TIMER** is active.

### 5.4. SWITCHING OFF

Follow the procedure below to switch the machine off:

1. Wait for the machine to complete the operation, before switching it off;
2. Stop the machine by activating the control device “O”;
3. Remove the dough from the tank;
4. Position the **MAIN switch** to “O” OFF;
5. Clean the machine.

### 5.5. OPERATION SAFETY

**In the event the machine is stressed or overloaded, it stops immediately as soon as the gear motor thermal protection is triggered. In this case, wait for the machine to cool down completely before restarting it.**

### 5.6. NO VOLTAGE

In the case of a power failure, it can be restored by following the start-up procedure.

### 5.7. OPENING THE MOBILE GUARD

By lifting the interlocked mobile guard, the machine stops immediately as soon as the safety micro switch is triggered.

**The machine can be restarted only after you have fully lowered the guard and followed the start-up procedure.**



### 6.1. REQUISITES OF THE MAINTENANCE TECHNICIAN

The term "maintenance" does not refer just to the periodical check of the machine's normal operation but also includes resolving all those causes that put the machine out of service.

Personnel must read and understand this manual and be aware of the residual risks before carrying out maintenance operations.

Maintenance operations, replacements, gear adjustments, and trouble shooting must be carried out by qualified and authorised personnel.



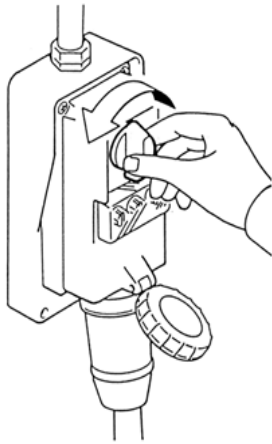
**ALL MAINTENANCE, CLEANING, AND REPLACEMENT OPERATIONS MUST BE PERFORMED WITH THE MACHINE AT STANDSTILL AND ISOLATED FROM EXTERNAL POWER SUPPLY SOURCES.**

Pay attention to the labels on the machine before carrying out maintenance, cleaning and replacement operations. **IMPORTANT:** During maintenance, cleaning, and replacement operations, never tamper with or remove the warning labels and the safety devices.

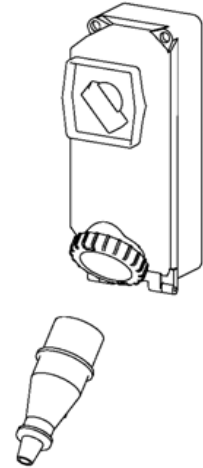
### 6.2. MAINTENANCE PRESCRIPTION

- **REMOVAL OF GUARDS AND SAFETY DEVICES:** Some interventions involve the removal of some guards from their position.
- **ONLY A QUALIFIED MAINTENANCE TECHNICIAN CAN REMOVE THESE GUARDS.** Once maintenance operations are complete, restore the initial position of the guards and block them with the provided fixing systems.
- **ISOLATION FROM EXTERNAL SOURCES:** The maintenance manager must isolate the machine from any external power supply source before removing the fixed guards.

Position the upstream equipment electrical power line protection device on "ZERO".



Switch off the main breaker and protect the plug by appropriate means.



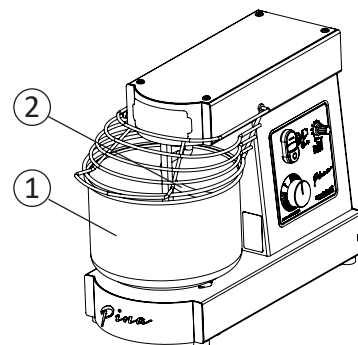
Maintenance operations are divided into two categories:

- **ROUTINE MAINTENANCE:**  
Includes all the operations that must be carried out on the machine every day
- **SCHEDULED MAINTENANCE:**  
Lists all the operations that must be carried out at fixed intervals to guarantee the machine's proper operation.

### 6.3. ROUTINE MAINTENANCE INTERVENTION

#### Cleaning the machine

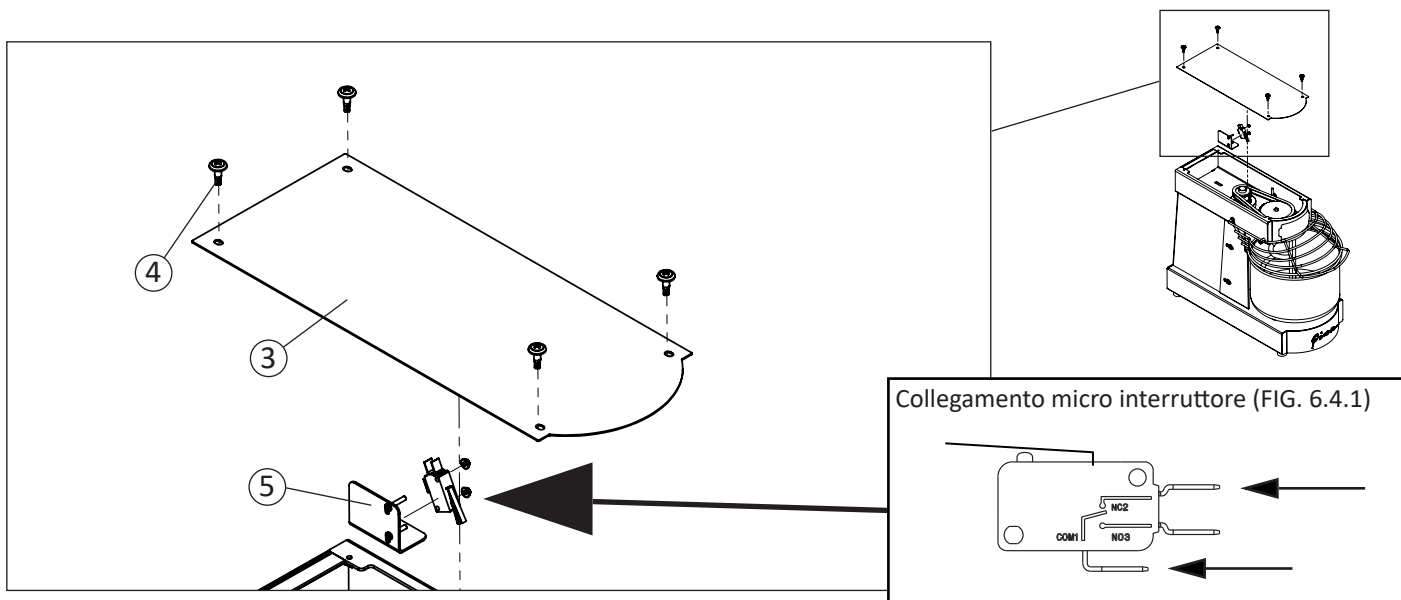
- Clean the machine externally with a cloth dampened with water.
- Clean the tank (1) with soap and with detergents or other degreasing but not aggressive agents suitable for food-processing equipment.
- Clean the spiral (2) with a sponge dampened with water.
- Dry the various components and remount the tank and lower the head, if provided.



### 6.4. SCHEDULED MAINTENANCE INTERVENTION

#### Grid limit switch replacement

- Remove the upper casing (3) by unscrewing the screws (4)
- Disconnect the microswitch cables
- Replace the microswitch (5) with a new one with higher equivalent characteristics
- Reconnect the cables in the contacts indicated by the arrows shown in (fig. 6.4.1) (ATTENTION the contacts must be connected in normally closed in the rest position)
- Adjust the position of the microswitch in such a way that it stops the operation of the machine as soon as the protection grid is raised (2)
- Close the machine with the upper casing.

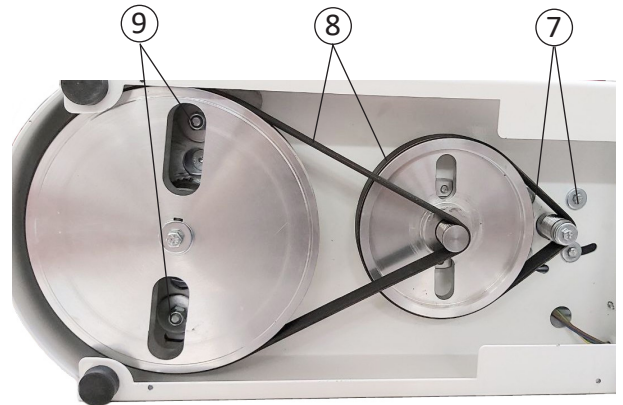




**THIS OPERATION MUST BE CARRIED OUT BY A QUALIFIED TECHNICIAN.**

### Transmission belts tensioning

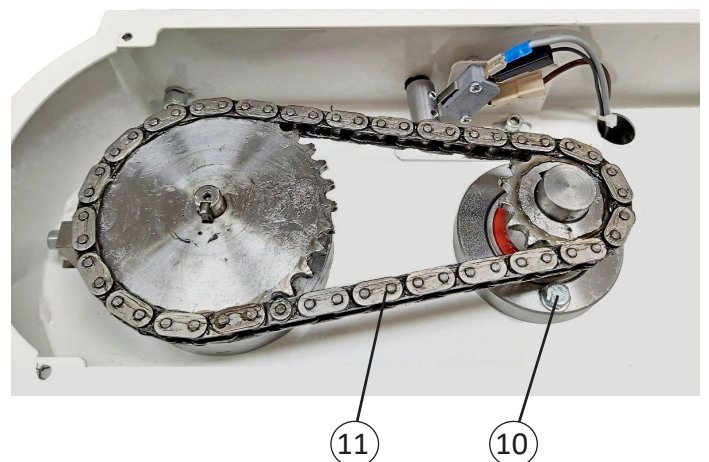
- Gently lay the machine on its side, taking care not to damage the machine;
- Remove the lower cover (6) of the casing by unscrewing the screws;
- Loosen the screws (7) of the motor and/or the screws of tank support (9);
- Tension the two belts (8) and fully tighten the screws(7-9).




### Spiral rotation chain tensioning

- Remove the upper casing (3) of the head by unscrewing the screws (4);
- Loosen the screws (10) of the shaft support.
- Tension the chain (11) and then fully tighten the screws (10).
- Grease the chain and the bearing supports with grease suitable for gears.

**ATTENTION:** the adjustments of the belts and the chain must be made in such a way that the distance between the spiral and the tank allows effective processing of the mixture and without collisions.



**6.5. CHECK LIST - ROUTINE MAINTENANCE**

FREQUENCY	VERIFICATION/CHECK	METHODS AND FEEDBACK
Before each working cycle	Check operation: <ul style="list-style-type: none"> <li>Safety devices</li> <li>Stop functions</li> </ul>	Make a visual inspection and a functional test of the control devices, of the provided interlocks and the stop functions in order to ensure their proper operation and the stopping of the moving parts.   <p style="text-align: center;"><b>!!! WARNING !!!</b></p> <p>In case of safety devices and shutdown functions malfunction, immediately insulate the machine from the power supply and call a qualified maintenance technician to check and analyse the fault.</p>
Before every work shift	Check the work area: <ul style="list-style-type: none"> <li>It must be clean and free from dust</li> </ul>	The workplace and all the external parts of the electrical equipment must be clean; moreover it should be removed any part placed on the equipment supplied that could prevent proper operation and that could invalidate the safety conditions originally present in the electrical equipment.
At least once a week	Visual integrity check: <ul style="list-style-type: none"> <li>All identification plates must be intact and not worn</li> </ul>	If it is unreadable, ask your service technician to replace identical plaques.
At least once a month	Visual integrity check: <ul style="list-style-type: none"> <li>Tool and tank</li> </ul>	The use of the parts indicated, determines their wear over time. After cleaning, visually inspect the absence of chipping, cracking or breaking. Where there are admissions of failure to proceed with their Replacement. <b>IMPORTANT:</b> Any replacement must be made with the original products of the manufacturer.

**6.6. CHECK LIST - SCHEDULED MAINTENANCE**

FREQUENCY	VERIFICATION/CHECK	METHODS AND FEEDBACK
At least every month	Check: <ul style="list-style-type: none"> <li>inside the casing - motor compartments</li> </ul>	All the internal parts, motor compartments must be kept clean and dry. Suction any dust or powder with a suction device.
At least every month	Check effectiveness: <ul style="list-style-type: none"> <li>Mechanical connections</li> </ul>	Use suitable tools to check the tightness of the clamps, screws, nuts, bolts, and connections in general. Adjust the tension of the motor transmission chain & belts
At least every 3 months	Check functionality: <ul style="list-style-type: none"> <li>motor drive contactors and all the relays of the control circuit.</li> </ul>	Visually inspect the state of the relays and control circuits.
At least every 12 months	Check effectiveness: <ul style="list-style-type: none"> <li>Equipotential and protection circuit</li> </ul>	Use suitable instruments to measure the resistance of the system to the earth, to allow the values to fall within the limits of acceptability in compliance with the standards in force in the country where the machine is installed.
At least every 3 months	General checks: <ul style="list-style-type: none"> <li>Electrical appliances</li> </ul>	Make the entire equipment electric for operational requirements. Electrical equipment is subject to wear.

## 6.7. CHECK LIST - SCHEDULED COMPONENT REPLACEMENT

In any requests for technical assistance or in ordering spare parts, always quote the serial number of the machine plus the model.

FREQUENCY	COMPONENT TO REPLACE	INTERESTED MACHINES
At least every 5 years	Toggle microswitch that controls the opening of the metal grid that protects the tank	All models of mixer

## 6.8.TROUBLESHOOTING

Before starting any intervention

**Affix a sign indicating that maintenance is in progress.**



1. Before starting the machine, always make sure that no one is carrying out cleaning or maintenance operations.
2. Ask qualified and enabled electricians to check and perform small electrical repair operations.
3. Contact the authorised assistance service to repair mechanical parts.

Below is the list of interventions useful to resolve faults and to release the mobile elements, which can be carried out by maintenance technicians.

Type	Potential cause	Mode
No mains voltage	General black out	Contact the electrical energy supplier.
	Intervention of fuses or circuit breakers upstream of the power supply to the machine	Restore the protection device once you have solved the cause that triggered it. In the event the problem persists, contact an electrician.
"Operation interruption"	Intervention of the protection device inside the machine	Restore the protection device once you have solved the cause that triggered it. In the event the problem persists, contact an electrician.
"The machine does not work both the tank and tool fail to rotate"	No voltage	Check and restore the power supply.
	Disconnecting devices "OFF"	Turn the disconnecting devices to position "ON"
	Fuses triggered or Magneto-thermal switches do not work	Replace the triggered fuses, check the state of the circuit breakers.
	Failure start button	Check the efficiency of the START button
	Thermal trip	Wait for the machine to cool down before restarting it

## 6.9. CLEANING



**BEFORE ANY CLEANING OPERATION, MAKE SURE THAT THE EQUIPMENT IS NOT CONNECTED TO THE POWER SUPPLY**

It is prohibited to clean the machine with components in motion.

All cleaning operations must be carried out only after having removed the food product from the machine and having deactivated the power supply line.

Do not use detergents or tools to clean the machine that may scratch or damage the surfaces. Do not use abrasive sponges or aggressive/corrosive products. Avoid using foam products, i.e. self-cleaning products for ovens.

Do not clean the equipment with water or pressurised steam jets, as they may damage the electrical system. Use commercial and approved products. Comply with the use methods and use suitable personal protective equipment.

### IMPORTANT

The machine must be cleaned upon every work shift. All the surfaces and machine parts intended to come into contact with the food product, i.e. food areas (internal surface of the tank and of the mobile guard, tool, kneader rod, and front part of the machine) and external surface of the machine must be cleaned and disinfected.

### CLEANING DIAGRAM

- Clean the surfaces from any residue of food product with plastic scrapers;
- Suction the residue of flour or food products with a suction device;
- Clean the food surfaces and spray areas with a soft and damp cloth;
- Clean inside the tools with a sponge. Use liquid products specific for steel. Do not use abrasive, cream or paste products or products containing chlorine. Use denatured alcohol to clean greasy substances.

### IMPORTANT

Once the stainless steel products, especially the external surfaces of the appliance, are fully dry, they must be protected with products commonly available on the market (i.e. Vaseline oil), which eliminate various halos, restoring the shine to steel and preventing humidity and dirt, which are causes of corrosion, from penetrating.

### USEFUL TIPS WHEN PERFORMING MAINTENANCE ON STAINLESS STEEL COMPONENTS

Stainless steel is resistant to corrosion because it has a thin oxide protective film which forms on the surface at a molecular level and it is caused by oxygen being absorbed by the metal after exposure to air.

It is clear that any external cause (such as foreign material placed on it, residue of food or salts, etc.), which prevents this film from forming and its prolonged presence on the surface, reduces its resistance against corrosion.

### 7.1. SCRAPPING

Scrapping is the end of the equipment's life cycle. It becomes necessary when overall the elements that compose it do not ensure safe and efficient operating conditions. Most of the components are recyclable.

### 7.2. DEMOLITION

The principal sequential steps for the disassembly and demolition include:

- Remove all components installed on the machine and send them to waste collection institutions or companies in compliance with applicable law;
- All the metal or plastic bodywork, the screws and any other parts in steel or plastic must be sent to waste collection institutions or companies in compliance with applicable law;



### 7.3. DISPOSAL

The electrical equipment can not be disposed as urban waste, the separate collection introduced by the special rules for the disposal of waste material derived from electric equipment (Id No. 151 of 07/25/05 - 2002/96/EC - 2003/108 /EC) must be complied with. Electrical equipment is marked with a symbol showing a barred trash container on wheels. The symbol indicates that the equipment has been placed on the market after August 13, 2005 and that it should be subject to separate waste collection. The inadequate or illegal disposal of the equipment can cause harm to people and the environment, due to the substances and materials contained therein. The disposal of electrical waste that does not meet the applicable standards implies the application of administrative and penal sanctions.

8.2. PINA 110V - 60 Hz MONOFASE - Velocità variabile / Variable speed / Unterschiedliche Geschwindigkeit  
Vitesse variable / Velocidad variable

- PINA10 MO VV

