CE

# USER AND MAINTENANCE MANUAL

English

## SPIRAL MIXER

**MOD. SM21/SM32/SM41/SM48**

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English

# INDEX



**WARRANTY**

All component parts, equipment, excluding electrical parts, have a warranty of 12 months, provided that the defects are due to the construction. The shipment of the pieces in question will be COD. Parts replaced under warranty will be invoiced; upon receipt of the pieces (returned free port), which was requested replacement, we will provide with a credit note. The warranty does not cover the replacement of the machine. The warranty does not cover labor charges for replacement of parts and any other additional expenses.

**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 Uploading. 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 Uploading. 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 FOREWORD

## 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, 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

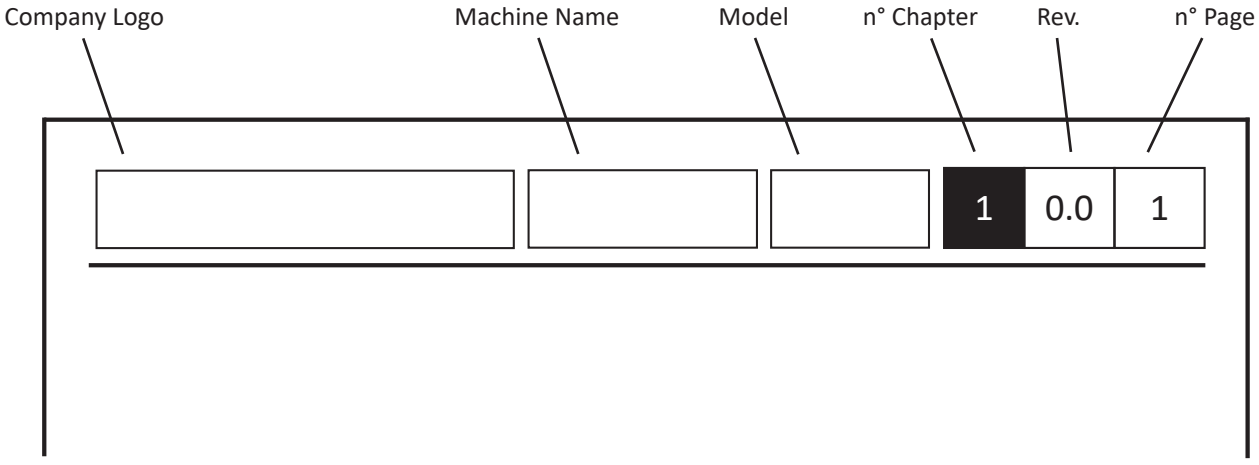
This manual is divided into chapters, each one refers to a specific operator function (INSTALLER, OPERATOR OR MAINTENANCE TECHNICIAN) and defines the expertise required to run the machine under safe conditions.

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**




English

English

**1.3. STORING THE MANUAL**

The user manual must be stored carefully and must be 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 project 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 personnel in charge of running, adjusting, cleaning and performing routine maintenance on the machine.

The term “MAINTENANCE TECHNICIAN” refers to those persons who have attended specialist courses, training courses, etc. and have 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.

Qualification of the recipients

The machine is intended for industrial and professional use; therefore it can be used only by qualified personnel, in particular by those who:

- 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.;
- 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 |
|---|---|
|  | General Hazard |
|  | Dangerous voltage |
|  | There are dangerous mobile elements in motion when fixed guards are removed |
|  | Risk of crushing the upper limbs |
|  | Entanglement |
|   | Stop |
|  | Prohibited |

| Symbol | Name |
|---|---|
|  | Do not remove the safety devices |
|  | Respiratory protection device |
|  | Noise |
|  | Precaution |
|  | Food machinery |
|  | WEEE |

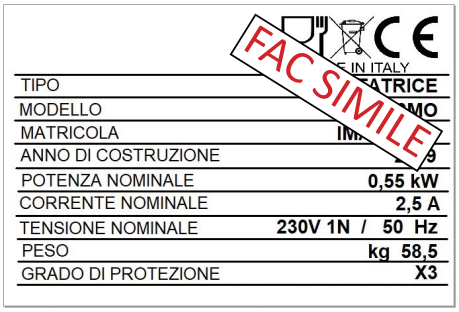
English

# 2 GENERAL INFORMATION

## 2.1. IDENTIFICATION DATA OF THE MANUFACTURER

## 2.2. IDENTIFICATION DATA AND MACHINE DATA PLATE

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




## 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 or three-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 | GH10/20/30/40/50 ** Serie TR/MO/2V<br>GHRF20/30/40/50 ** Serie TR/MO/2V<br>GHR20/30/40/50 ** Serie TR/MO/2V |
| 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.<br>Machine NOT SUITABLE to run in environments with a potentially explosive atmosphere.<br>Machine NOT SUITABLE to run in environments with ionizing radiation, such as microwaves, ultraviolet rays, laser and similar.<br>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 recommed<br>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 % |

English

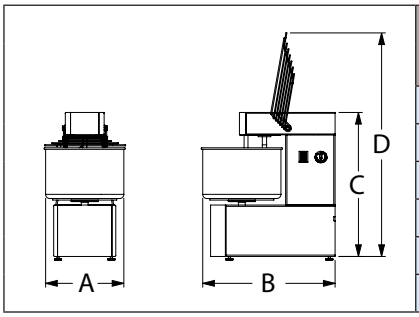
| Model | Dim. Tank (mm) | Tank capacity (lt) | Dough (Kg) | Speed | RPM | | Power (kW) | Current (A) | Electrical Connection |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Spiral | Tank | | | |
| GH10MO | 235 x 156 | 7 | 6 | 1 | 70 | 10 | 0.22 | 1.0 | 230V- 1- 50 Hz. |
| GH10MO2V | | | | 2 | 70 / 140 | 10 / 20 | | | |
| GH15TR | 320 x 210 | 16 | 12 | 1 | 85 | 10 | 0.55 | 1.0 | 400V- 3- 50 Hz. |
| GH15MO | 320 x 210 | 16 | 12 | 1 | 85 | 10 | 0.55 | 2.5 | 230V- 1- 50 Hz. |
| GH152V | 320 x 210 | 16 | 12 | 2 | 85 / 170 | 10 / 20 | 0.75 / 1.10 | 1.1 | 400V- 3- 50 Hz. |
| | | | | 2 | 85 / 170 | 10 / 20 | 0.75 | 2.5 | 230V- 1- 50 Hz. |
| GH20TR | 360 x 210 | 21 | 17 | 1 | 85 | 10 | 0.75 | 1.0 | 400V- 3- 50 Hz. |
| GH20MO | 360 x 210 | 21 | 17 | 1 | 85 | 10 | 0.75 | 2.5 | 230V- 1- 50 Hz. |
| GH202V | 360 x 210 | 21 | 17 | 2 | 85 / 170 | 10 / 20 | 0.75 / 1.10 | 1.1 | 400V- 3- 50 Hz. |
| | | | | 2 | 85 / 170 | 10 / 20 | 0.75 | 2.5 | 230V- 1- 50 Hz. |
| GH30TR | 400 x 260 | 32 | 25 | 1 | 92 | 10 | 1.10 | 2.0 | 400V- 3- 50 Hz. |
| GH30MO | 400 x 260 | 32 | 25 | 1 | 92 | 10 | 1.10 | 5.0 | 230V- 1- 50 Hz. |
| GH302V | 400 x 260 | 32 | 25 | 2 | 92 / 184 | 10 / 20 | 1.25 / 1.80 | 1.7 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 1.50 | 7.0 | 230V- 1- 50 Hz. |
| GH40TR | 450 x 260 | 41 | 36 | 1 | 92 | 10 | 1.10 | 2.0 | 400V- 3- 50 Hz. |
| GH40MO | 450 x 260 | 41 | 36 | 1 | 92 | 10 | 1.10 | 5.0 | 230V- 1- 50 Hz. |
| GH402V | 450 x 260 | 41 | 36 | 2 | 92 / 184 | 10 / 20 | 1.25 / 1.80 | 1.7 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 2.20 | 7.0 | 230V- 1- 50 Hz. |
| GH50TR | 450 x 300 | 48 | 43 | 1 | 92 | 10 | 1.50 | 2.0 | 400V- 3- 50 Hz. |
| GH50MO | 450 x 300 | 48 | 43 | 1 | 92 | 10 | 1.50 | 7.0 | 230V- 1- 50 Hz. |
| GH502V | 450 x 300 | 48 | 43 | 2 | 92 / 184 | 10 / 20 | 1.80 / 2.20 | 2.5 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 2.20 | 10.0 | 230V- 1- 50 Hz. |

| Model | Dim. Tank (mm) | Tank capacity (lt) | Dough (Kg) | Speed | RPM | | Power (kW) | Current (A) | Electrical Connection |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Spiral | Tank | | | |
| GHRF20TR | 360 x 210 | 21 | 17 | 1 | 85 | 10 | 0.55 | 1.0 | 400V- 3- 50 Hz. |
| GHRF20MO | 360 x 210 | 21 | 17 | 1 | 85 | 10 | 0.55 | 2.5 | 230V- 1- 50 Hz. |
| GHRF202V | 360 x 210 | 21 | 17 | 2 | 85 / 170 | 10 / 20 | 0.75 / 1.10 | 1.1 | 400V- 3- 50 Hz. |
| | | | | 2 | 85 / 170 | 10 / 20 | 0.75 | 1.1 | 230V- 1- 50 Hz. |
| GHRF30TR | 400 x 260 | 32 | 25 | 1 | 92 | 10 | 1.10 | 2.0 | 400V- 3- 50 Hz. |
| GHRF30MO | 400 x 260 | 32 | 25 | 1 | 92 | 10 | 1.10 | 5.0 | 230V- 1- 50 Hz. |
| GHRF302V | 400 x 260 | 32 | 25 | 2 | 92 / 184 | 10 / 20 | 1.25 / 1.80 | 1.7 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 1.5 | 5.0 | 230V- 1- 50 Hz. |
| GHRF40TR | 450 x 260 | 41 | 36 | 1 | 92 | 10 | 1.10 | 2.0 | 400V- 3- 50 Hz. |
| GHRF40MO | 450 x 260 | 41 | 36 | 1 | 92 | 10 | 1.10 | 5.0 | 230V- 1- 50 Hz. |
| GHRF402V | 450 x 260 | 41 | 36 | 2 | 92 / 184 | 10 / 20 | 1.25 / 1.80 | 1.7 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 2.2 | 7.0 | 230V- 1- 50 Hz. |
| GHRF50TR | 450 x 300 | 48 | 43 | 1 | 92 | 10 | 1.50 | 2.0 | 400V- 3- 50 Hz. |
| GHRF50MO | 450 x 300 | 48 | 43 | 1 | 92 | 10 | 1.50 | 7.0 | 230V- 1- 50 Hz. |
| GHRF502V | 450 x 300 | 48 | 4 | 2 | 92 / 184 | 10 / 20 | 1.80 / 2.20 | 2.5 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 2.2 | 7.0 | 230V- 1- 50 Hz. |

| Model | Dim. Tank (mm) | Tank capacity (lt) | Dough (Kg) | Speed | RPM | | Power (kW) | Current (A) | Electrical Connection |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Spiral | Tank | | | |
| GHR20TR | 360 x 210 | 21 | 17 | 1 | 85 | 10 | 0.55 | 1.0 | 400V- 3- 50 Hz. |
| GHR20MO | 360 x 210 | 21 | 17 | 1 | 85 | 10 | 0.55 | 2.5 | 230V- 1- 50 Hz. |
| GHR202V | 360 x 210 | 21 | 17 | 2 | 85 / 170 | 10 / 20 | 0.75 / 1.10 | 1.1 | 400V- 3- 50 Hz. |
| | | | | 2 | 85 / 170 | 10 / 20 | 0.75 | 1.1 | 230V- 1- 50 Hz. |
| GHR30TR | 400 x 260 | 32 | 25 | 1 | 92 | 10 | 1.10 | 2.0 | 400V- 3- 50 Hz. |
| GHR30MO | 400 x 260 | 32 | 25 | 1 | 92 | 10 | 1.10 | 5.0 | 230V- 1- 50 Hz. |
| GHR302V | 400 x 260 | 32 | 25 | 2 | 92 / 184 | 10 / 20 | 1.25 / 1.80 | 1.7 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 1.5 | 5.0 | 230V- 1- 50 Hz. |
| GHR40TR | 450 x 260 | 41 | 36 | 1 | 92 | 10 | 1.10 | 2.0 | 400V- 3- 50 Hz. |
| GHR40MO | 450 x 260 | 41 | 36 | 1 | 92 | 10 | 1.10 | 5.0 | 230V- 1- 50 Hz. |
| GHR402V | 450 x 260 | 41 | 36 | 2 | 92 / 184 | 10 / 20 | 1.25 / 1.80 | 1.7 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 2.2 | 7.0 | 230V- 1- 50 Hz. |
| GHR50TR | 450 x 300 | 48 | 43 | 1 | 92 | 10 | 1.50 | 2.0 | 400V- 3- 50 Hz. |
| GHR50MO | 450 x 300 | 48 | 43 | 1 | 92 | 10 | 1.50 | 7.0 | 230V- 1- 50 Hz. |
| GHR502V | 450 x 300 | 48 | 43 | 2 | 92 / 184 | 10 / 20 | 1.80 / 2.20 | 2.5 | 400V- 3- 50 Hz. |
| | | | | 2 | 92 / 184 | 10 / 20 | 2.2 | 7.0 | 230V- 1- 50 Hz. |

## 2.8. MACHINE DIMENSIONS MOD. GH

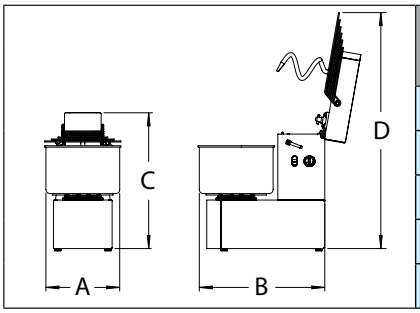
measures in mm




| Model | Version | | | A | B | C | D | Packaging Dimensions | | | | Net Weight (Kg) | Gross Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MO | TR | 2V | | | | | width | depth | height | Mc | | |
| GH10 | X | - | - | 270 | 465 | 515 | 760 | 390 | 520 | 700 | 0.16 | 28.5 | 34.0 |
| GH15 | X | X | X | 390 | 690 | 680 | 1010 | 450 | 770 | 840 | 0.28 | 56.5 | 66.5 |
| GH20 | X | X | X | 390 | 690 | 680 | 1010 | 450 | 770 | 840 | 0.28 | 58.5 | 68.5 |
| GH30 | X | X | X | 445 | 775 | 760 | 1090 | 510 | 790 | 930 | 0.38 | 83.5 | 95.0 |
| GH40 | X | X | X | 485 | 830 | 780 | 1160 | 570 | 850 | 940 | 0.44 | 92.0 | 105.0 |
| GH50 | X | X | X | 485 | 830 | 780 | 1160 | 570 | 850 | 940 | 0.44 | 96.0 | 109.0 |

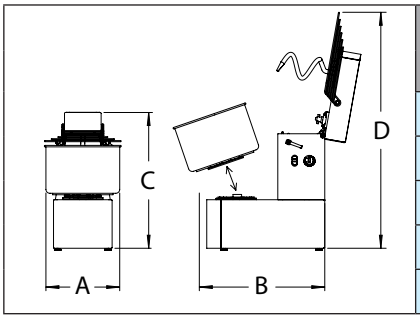
English

## 2.9. MACHINE DIMENSIONS MOD. GHRF - SPIRAL MIXERS WITH RISING TOP




| Model | Version | | | A | B | C | D | Packaging Dimensions | | | | Net Weight (Kg) | Gross Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MO | TR | 2V | | | | | width | depth | height | Mc | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GHRF20 | X | X | X | 390 | 690 | 680 | 1060 | 450 | 770 | 840 | 0.28 | 71.0 | 81.0 |
| GHRF30 | X | X | X | 445 | 775 | 760 | 1070 | 510 | 790 | 930 | 0.38 | 99.0 | 110.0 |
| GHRF40 | X | X | X | 485 | 830 | 780 | 1190 | 570 | 850 | 940 | 0.44 | 114.0 | 126.0 |
| GHRF50 | X | X | X | 485 | 830 | 780 | 1190 | 570 | 850 | 940 | 0.44 | 116.0 | 128.0 |

## 2.10. MACHINE DIMENSIONS MOD. GHR - SPIRAL MIXERS WITH RISING TOP AND EXTRACTABLE BOWL




| Model | Version | | | A | B | C | D | Packaging Dimensions | | | | Net Weight (Kg) | Gross Weight (Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MO | TR | 2V | | | | | width | depth | height | Mc | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GHR20 | X | X | X | 390 | 690 | 680 | 1060 | 450 | 770 | 840 | 0.28 | 71.0 | 81.0 |
| GHR30 | X | X | X | 445 | 775 | 760 | 1070 | 510 | 790 | 930 | 0.38 | 99.0 | 110.0 |
| GHR40 | X | X | X | 485 | 830 | 780 | 1190 | 570 | 850 | 940 | 0.44 | 114.0 | 126.0 |
| GHR50 | X | X | X | 485 | 830 | 780 | 1190 | 570 | 850 | 940 | 0.44 | 116.0 | 128.0 |

Height shown (C-D) is without wheels and without feet.

- height increases of 90mm with wheels (+15 adjustment)
- height increases by 10mm with feet (+20 adjustment)

**LEGEND**

MO = MONOPHASE
TR = THREE-PHASE
2V = 2 SPEED

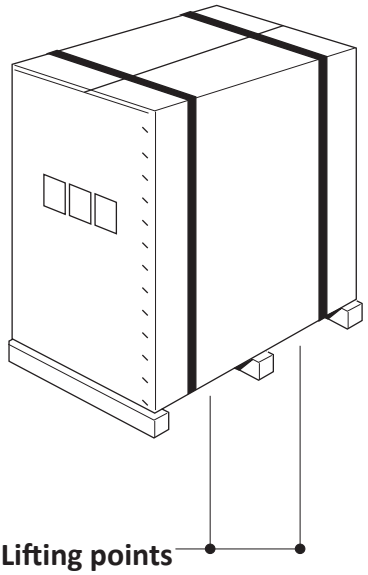
English

# 3 INSTALLATION

## 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. The box must be handled and transported by means of forklift trucks or pallet trucks, making sure that the attachments of the lifting means are positioned as shown in figure (FIG. 1) Keep the load at the minimum height from the ground during handling operations in order to improve the stability of the load.**




(FIG.1)

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 as specified in section (see pos. 3.3/chap 3)**
**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:
see Fig. 2.

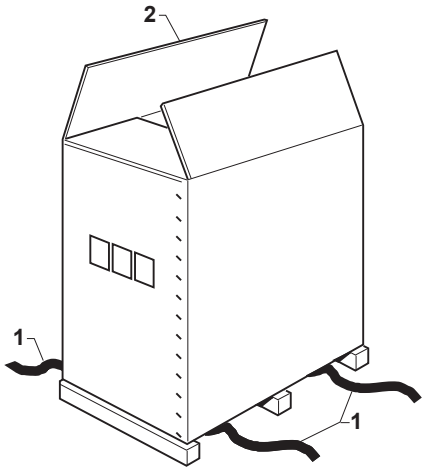
- **Cut the straps (1) that block the cardboard**
- **Open the cardboard packaging (2) removing the staples**
- **Remove the cardboard casing (2)**
- **Make sure that everything is intact (see Pos. 3.3/Chap 3)**
- **Make sure that the supply complies with that indicated with the PACKING LIST.**

### 3.5. LIFTING THE MACHINE (FIG. 3)

The machine (12 kg-18 kg versions) must be lifted by two operators from the base. All the other models must be lifted with a crane or hoist, as follows:

- **Insert two belts (1), suitably sized according to the machine weight, under the base (2) and connect them to the hook (3) of a crane or hoist.**

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



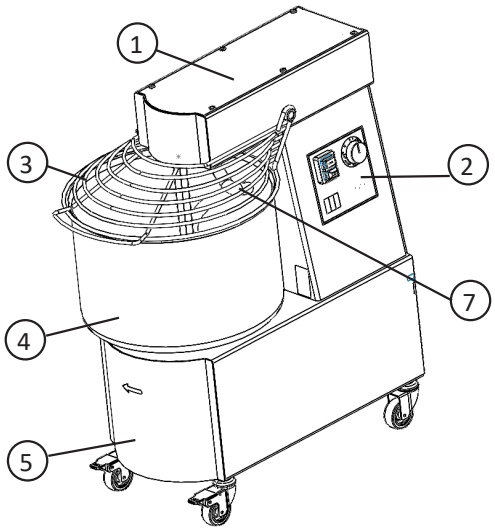

(FIG. 2)

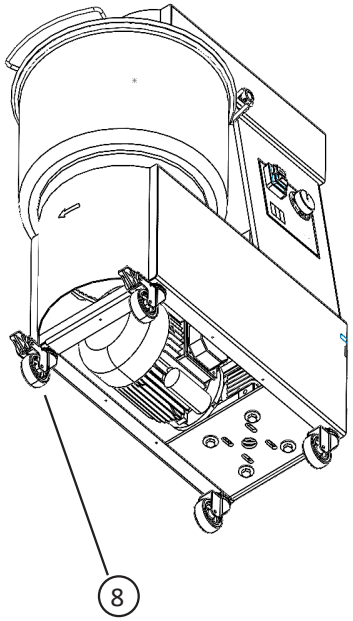

(FIG. 3)

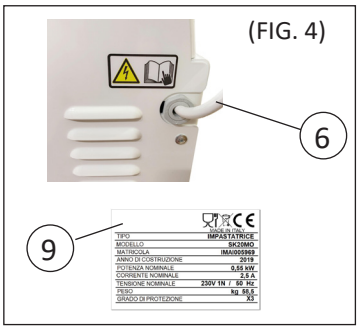
English

### 3.6. IDENTIFICATION OF THE COMPONENTS

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




### 3.7. IDENTIFICATION OF THE MACHINE (FIG. 4)

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. ASSEMBLING THE WHEELS (FIG. 5)

Depending on the models and for transport reasons, the machines are always shipped with the adjustable feet/wheels removed. Mount them as follows:

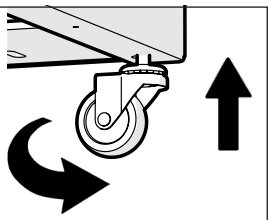
**Assembling the wheels**

1. Lift the machine as indicated in the previous paragraph.
2. Loosen the existing feet.
3. Tighten the wheels (8) under the machine base until you reach the end of travel; the braking wheels must be tightened on the machine front.

**! ! ! WARNING ! ! !**

**TO AVOID IRREPARABLE DAMAGE OR OVERFLOW OF THE MACHINE**

**COMPLETELY SCREW THE WHEELS UP TO THE END OF TRAVEL**



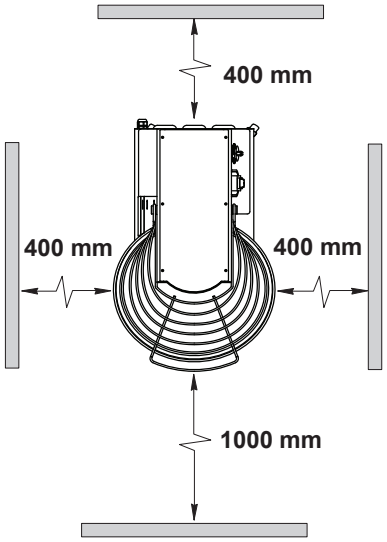
English

### 3.9. MACHINE POSITIONING AND STABILITY

Make sure that the support surface is suitable to support the loads indicated in Tab. 2.7.

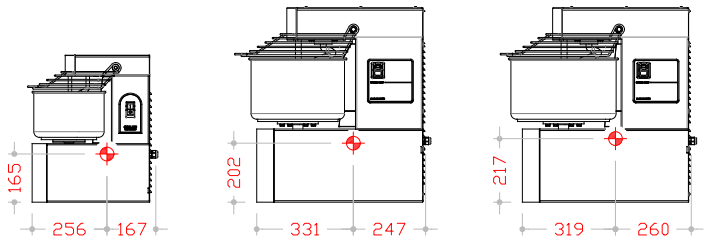
Position the machine scrupulously respecting the indications given in Fig. 3.9.1. As they indicate the minimum distances necessary for the operator or technician to correctly carry out each sequence of work and/or maintenance.

Taking into account the conformation of the machine, in operating conditions, it appears to be stable without the need for fixing to the floor, excluding the risk of overturning or falling Fig.3.9.1.

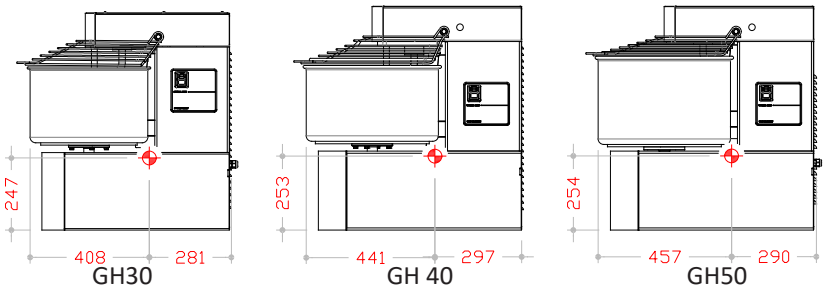



(FIG. 3.9.1)

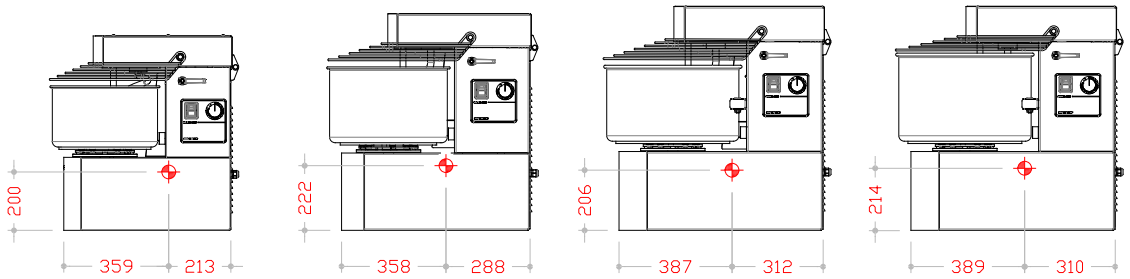
Fig. 3.9.2. - Center of gravity of the machine




GH 10 GH 15 GH 20




GH30 GH 40 GH50

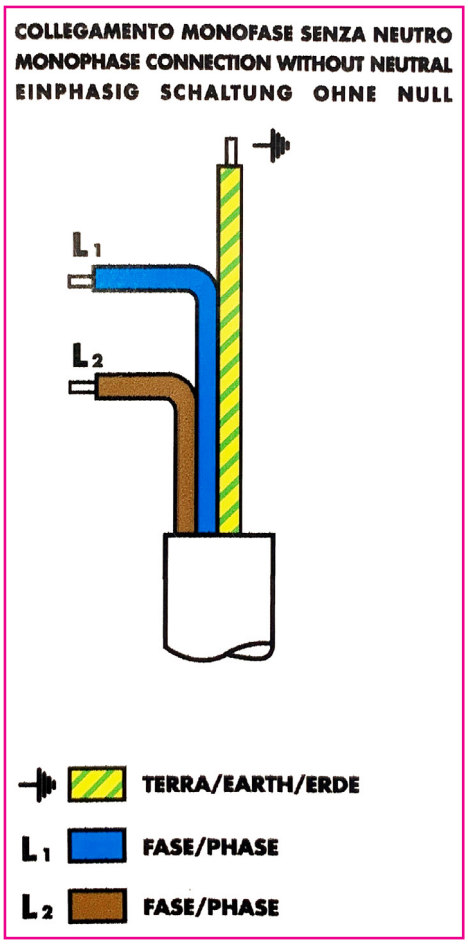


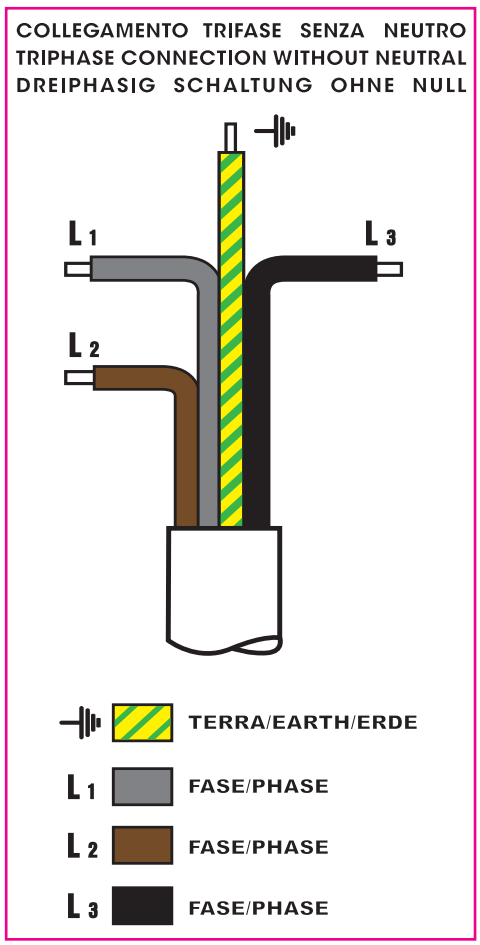

GHRF20/GHR20 GHRF30/GHR30 GHRF40/GHR40 GHRF50/GHR50

English

### 3.10. POWER SUPPLY

The electrical connection must be made in compliance with the national standards
Der Anschluss an das Stromnetz der Maschine erfolgt dort über das mitgelieferte Netzkabel, an das bei einphasiger Ausführung 16/32 A für 3-polige Kabel (F, N, T) angeschlossen werden müssen und 4-polige Prüfungen (3F, T) für die dreiphasigen Versionen.
Die Netzsteckdose muss leicht zugänglich sein und darf keine Bewegung erfordern. Der Abstand zwischen Maschine und Steckdose muss so sein, dass die Spannung des Stromversorgungskabels nicht beeinträchtigt wird. Darüber hinaus darf sich das Kabel niemals unter den Stützen der Maschine befinden.




**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

English

### 3.11. CHECKING THE ELECTRICAL CONNECTION (FIG. 7)

For the 230/400 V three-phase connection, make sure that the motor rotation is correct by following the procedure below:

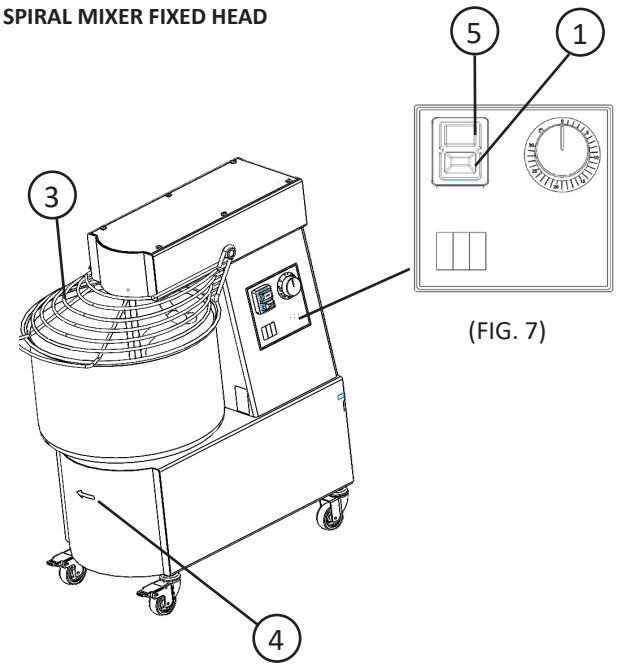
- Set the main switch upstream the machine to ON.
- Turn the timer knob (2) to “30 Minutes” (for the models provided with timer)
- Press key (1) “ I ” .
- Visually check that the tank (3) rotates in the direction indicated by the arrow (4).
- Switch the machine off by pressing key “ O ” (5) .
- If the rotation is in the opposite direction indicated by the arrow, act as follows:

Before modifying the electrical connection, make sure that the LINE DISCONNECTING SWITCH is disabled (line not live), therefore:
**INVERT TWO OF THE THREE PHASE WIRES ON THE MAIN SWITCH AND CHECK FOR CORRECT ROTATION AGAIN.**

### 3.12. FIRST START-UP (FIG. 8)

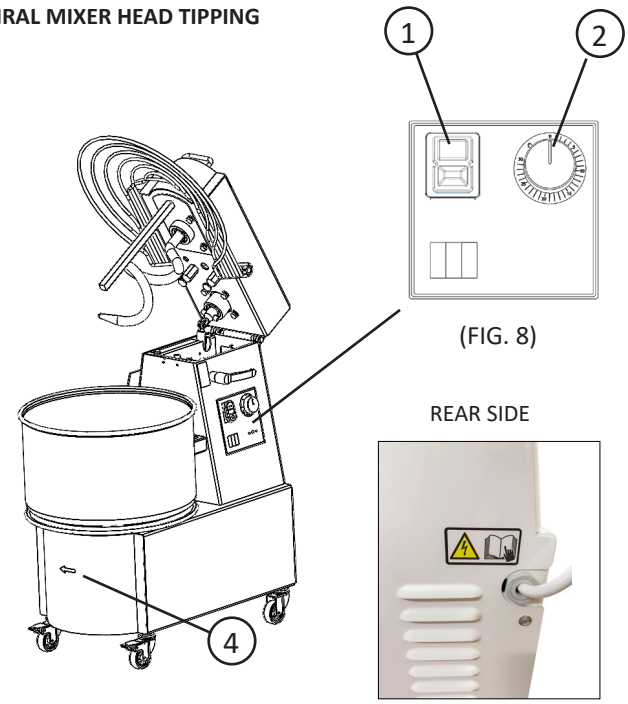
- **Set the main switch upstream the machine to ON.**
- **Turn the timer knob (2) to “30 Minutes” (for the models provided with timer)**
- **Press key (1) “ I ”.**
- **Make the machine run with no load for a few minutes and make sure that rotation is smooth.**
- **Switch the machine off by pressing key “ O ” (5).**

**SPIRAL MIXER FIXED HEAD**




(FIG. 7)

**SPIRAL MIXER HEAD TIPPING**




(FIG. 8)

REAR SIDE

English

# 4 SAFETY

## 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 (FIG. 9)

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) In the tilting head mixer (40 and 50kg) there are idle rollers that help keep the bowl of the mixer aligned during rotation.

(6) If the mixer has wheels, it has front wheels with a brake. It is recommended to always keep the machine braked.

(7) The fixed head machine is equipped with a microswitch, which blocks the operation of the machine when the protection grid (1) is raised;

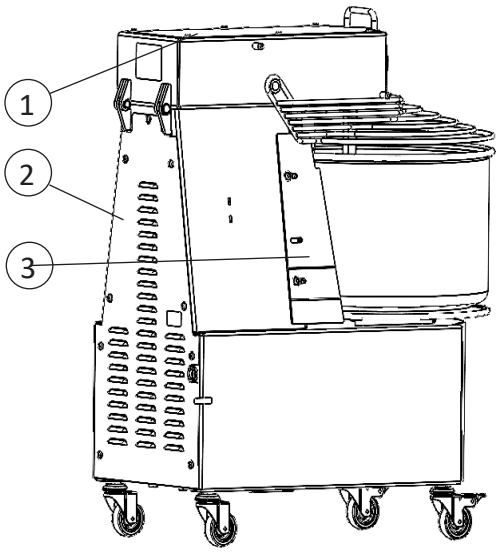
(8) The tilting head machine is equipped with a inductive sensor, which blocks the operation of the machine when the protection grid is raised and when the head of the kneader is raised.

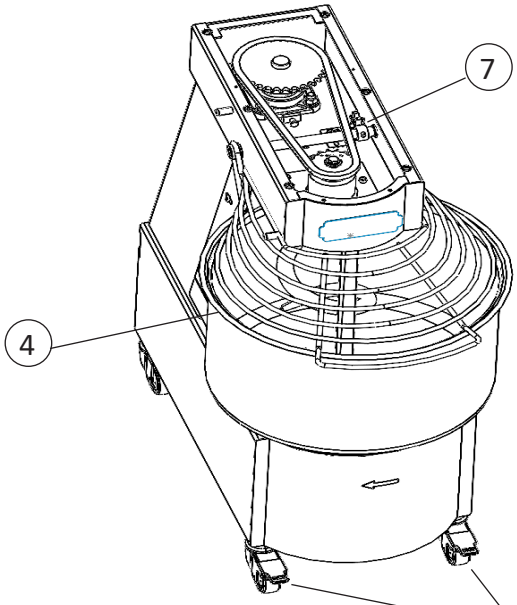
When the machine stops due to the insertion of one of the two safety microswitches, it is necessary to press the “I” or “II” key again, depending on the model, to restart the machine.

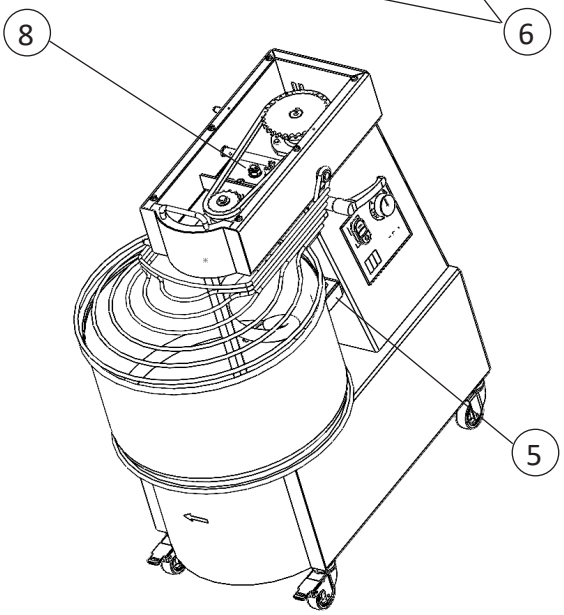
## 4.3. OPERATOR ZONES (FIG. 4.1)

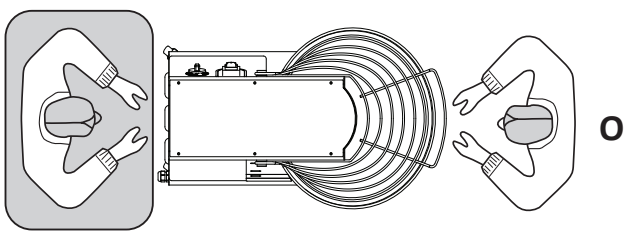
During the operation of the machine, the operator is positioned in front of it so that the dough can be easily inserted and removed in the bowl; for the various allowed positions see position (O).

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




(FIG. 4.1)

### 4.4. NORMAL USE, IMPROPER USE, PROHBITED 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.

English

**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 THAY 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 PARST**

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 feet-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 healt. 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**

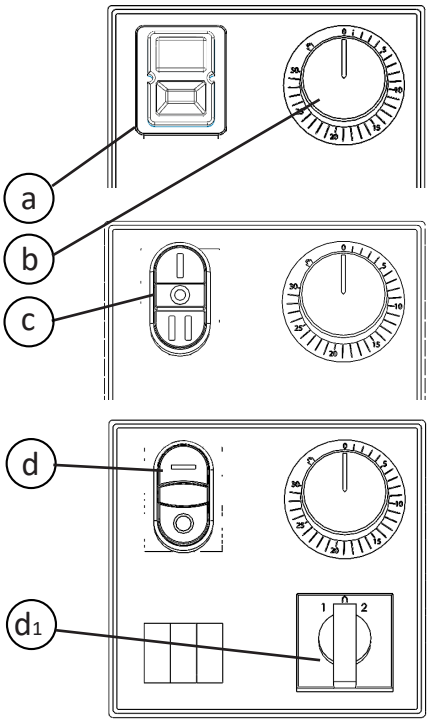
Airborne dust may form while loading dry products in the tank or during processing. Ingredients must be handled with care, minimising the load height of the tank in which they are poured. The operator must use breathing devices, such as dust-proof masks or other suitable devices.

English

# 5 USE OF THE MACHINE

**5.1. CONTROL PANEL**

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




**a) START/STOP Button.**

Green Button "I", if pressed it starts the machine
Red button "O", if pressed it stops the machine

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

Turn the timer knob (1) clockwise to set the operating minutes (from 0 to 30 minutes); then, to start the cycle, press "I" or "II", depending on the models; the cycle ends when the timer knob (1) reaches position "O" and the machine operation is disabled.

**c) 2-SPEED START/STOP Button**

Green Button "I", if pressed it starts the machine at speed 1
Green Button "II", if pressed it starts the machine at speed 2
Red button "O", if pressed it stops the machine

**d) Speed selector**

The selector has 3 positions:
d1 - 0. Operetion of the machine is disabled
d1 - 1. Machine works on standard velocity
d1 - 2. Machine works on second velocity

Once you set the speed, you must press the starter **Green Button "I"** to start the machine.

**5.2. COMMISSIONING SPIRAL MIXER Mod. GH, GHRF, GHR**

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 (Chap 5.1)

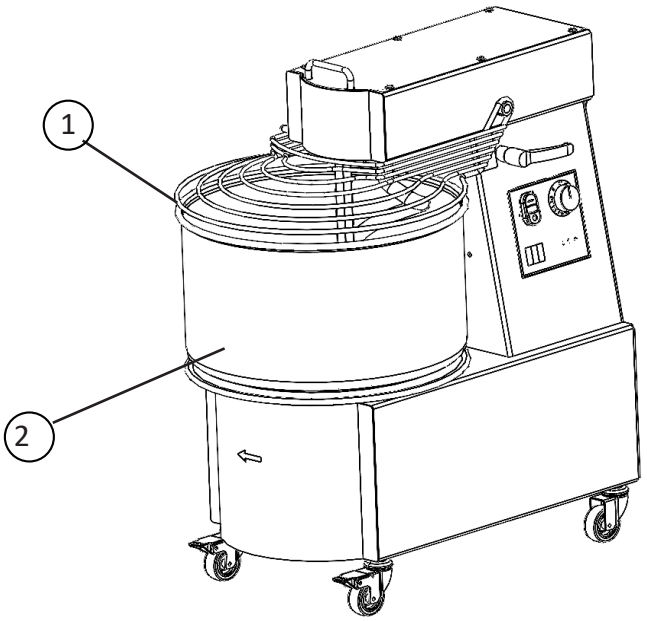
**Moreover**

**MANUAL MODE**

- The processing lasts until it is stopped by the user.
- Set the "slow" speed or the "fast" speed" to rotate.
- Press button **I - II** (**O**) to start the machine.

**MODE WITH TIMER**

- The processing lasts until the **TIMER** is set
- Set the "**slow**" speed or the "**fast**" speed to rotate
- Press button **I - II (O)** to start the machine



English

### 5.3. STOP

Press the red key "**O" OFF** 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**

### 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" OFF
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.**

### 5.8. REMOVING THE TANK (where provided) (FIG. 15)

**If the mass of the removable tank plus the content exceeds 25 kg, handling by a single operator is strictly prohibited. In any case, it is recommended to remove the dough from the bowl and then proceed with the extraction for cleaning.**

- Stop the machine, disconnect the plug, unscrew the head-blocking handles (a) Fig.5.8.1 and lift the head (b) Fig.5.8.2
- Grab with both hands the disc (c) placed under the bowl and turn it clock-wise Fig.5.8.3.
- Lift the bowl (d) and extract it, one or two operators might be required, according to the weight Fig.5.8.4
- Place the bowl back in the working position, using the dedicated housing and turn the disc (c) counterclockwise till it blocks.
- Put the machine head down back in the working position and screw the head-blocking handles (a).

**It is strictly prohibited to run the machine with the tank positioned improperly**

**Fig. 5.8.1**

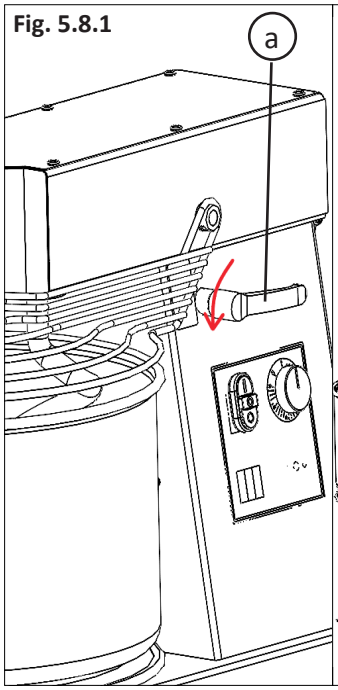



**Fig. 5.8.2**

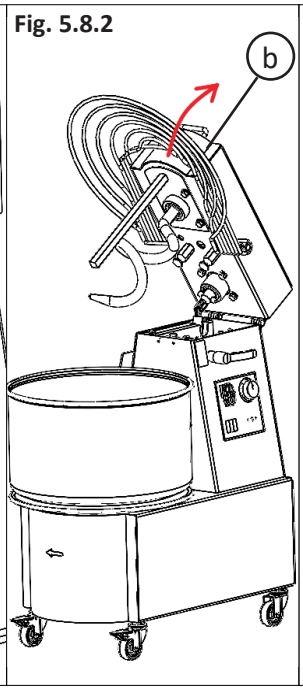



**Fig. 5.8.3**

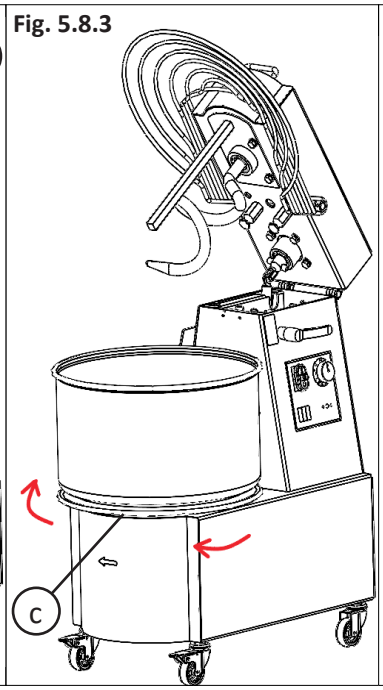
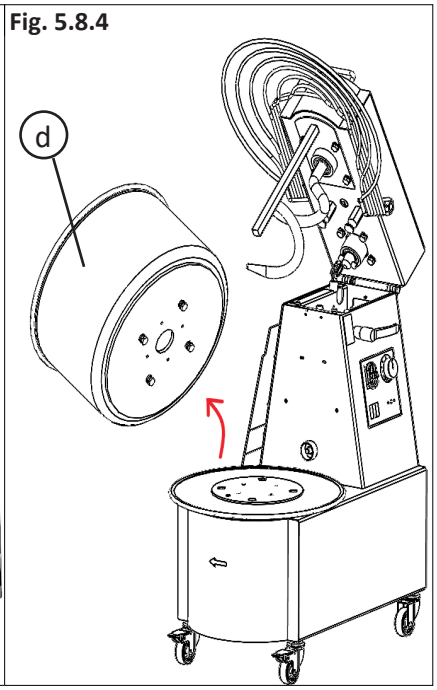



**Fig. 5.8.4**



**5.9. PRODUCTIVITY AND CYCLE TIME:**

For each model, the maximum production capacity per cycle is indicated as shown in the following tables.

| Bowl dimension (L) | 10 | 15 | 20 | 30 | 40 | 50 |
|---|---|---|---|---|---|---|
| Effective capacity bowl (Kg) | 6 | 12 | 17 | 25 | 36 | 43 |
| Production capacity(Kg/h) | 18 | 36 | 54 | 75 | 108 | 129 |

Tab. 1 - Table for three-phase and single-phase single-speed mixers only

| Bowl dimension (L) | 10 | 15 | 20 | 30 | 40 | 50 |
|---|---|---|---|---|---|---|
| Effective capacity bowl (Kg) | 4,8 | 9,6 | 13,6 | 20 | 28,8 | 34,4 |
| Production capacity(Kg/h) | 14,4 | 28,8 | 40,8 | 60 | 86,4 | 103,2 |

Tab. 2 - Table for single-phase 2-speed and variable speed mixers

The duration of each working cycle, depending on the machine model, can vary from about 14 to 20 minutes. The working time can be set from 1 to 30 minutes by turning the timer knob to the desired position and starting the machine.
Once the set time limit has been reached, the timer stops the machine.
Do not exceed the amount of dough the machine can produce in each operating cycle as indicated in Tables 1 and 2. The addition of water and the other ingredients to the mass, already partially kneaded inside the tank, must be gradual.
It is important to provide breaks between one working cycle and the next.

In the case of low dough hydration values or long processing times, allow a rest period of 15 to 20 minutes between one processing cycle and the next.

In the case of high processing room temperatures, allow a rest period of 15 - 20 minutes between one processing cycle and the next.

English

# 6 MAINTENANCE

## 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.

**The maintenance technician is in charge of:**

Adjusting the machine, calibrating the internal gears, even within the danger zones with closed and blocked fixed guards, and dangerous mobile components powered off and blocked.
Cleaning the internal parts of the machine, performing maintenance, providing technical assistance, troubleshooting, and replacing worn parts.

## 6.2.MAINTENANCE PRESCRIPTION

**REMOVAL OF GUARDS AND SAFETY DEVICES:**

Some interventions involve the removal of some guards from their position.

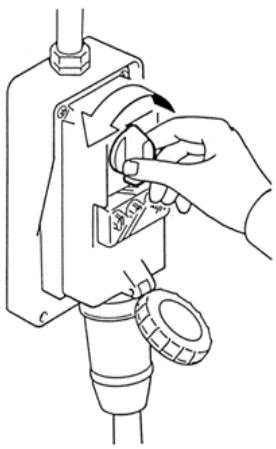
**ONLY A QUALIFIED MAINTENANCE TECHNICIAN CAN REMOVE THESE GUARDS.**

Once maintenance operations are complete, restore the initial position of the guards and block them with the provided fixing systems.

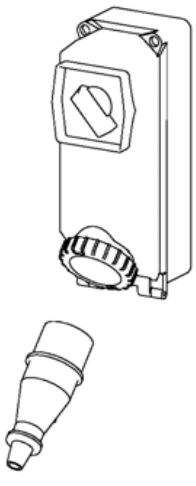
**ISOLATION FROM EXTERNAL SOURCES:**

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”.



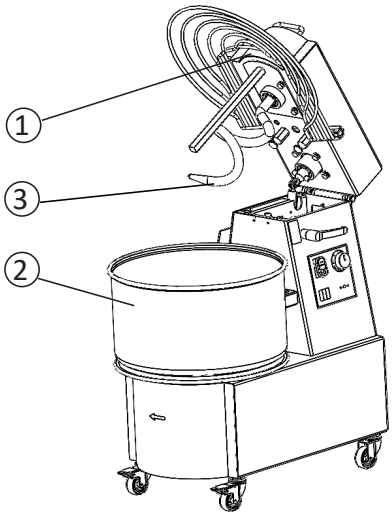
Switch off the main breaker and protect the plug by appropriate means.



Maintenance operations are divided into two categories:

- **ROUTINE MAINTENANCE:**
  Includes all the operations that must be carried out on the machine every day

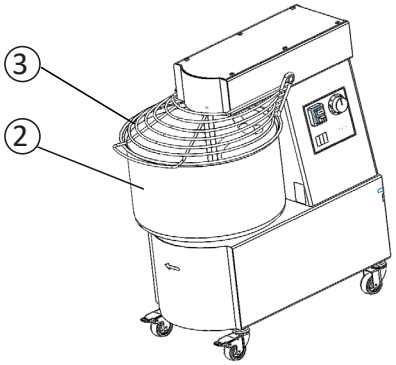
- **SCHEDULED MAINTENANCE:**
  Lists all the operations that must be carried out at fixed intervals to guarantee the machine's proper operation.




### 6.3. ROUTINE MAINTENANCE INTERVENTION

**Cleaning the machine**

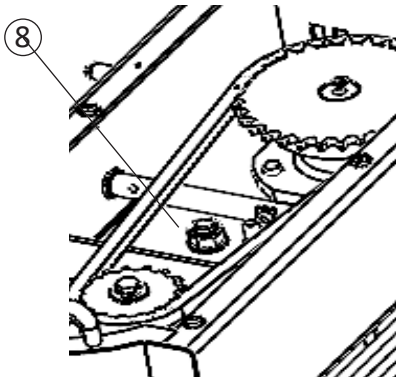
- Clean the machine externally with a cloth dampened with water.
- Lift the head (1) (if provided) and remove tank (2) as indicated in the relative chapters.
- Clean the tank (2) with soap and with detergents or other degreasing but not aggressive agents suitable for food-processing equipment.
- Clean the spiral (3) 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

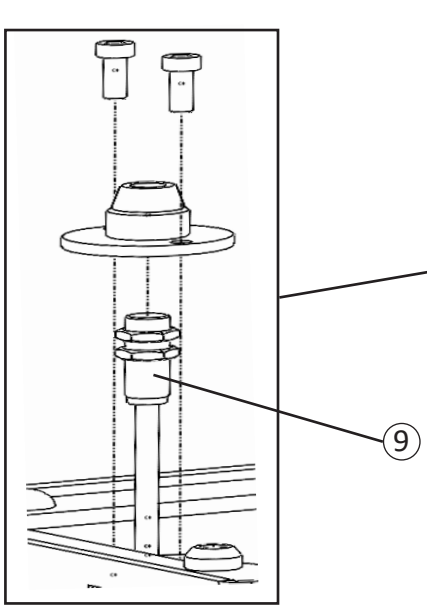
**Replacement of limit switch for GH**

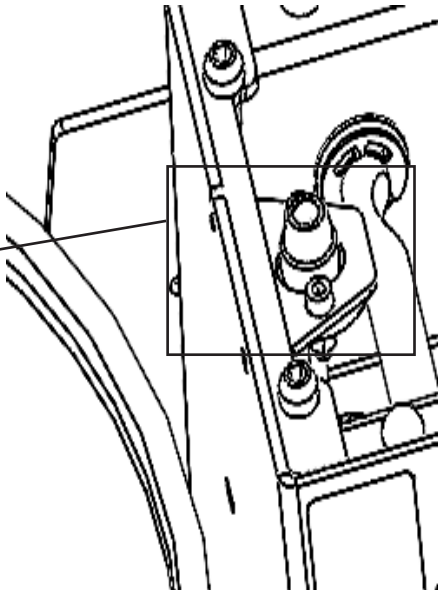
- Remove the upper casing (5) by unscrewing the screws
- Disconnect the microswitch cables (6)
- Replace the microswitch (7) with a new one with higher equivalent characteristics
- Reconnect the cables in the contacts indicated by the arrows shown in (fig. 6.4.1) (ATTENTION the contacts must be connected 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 (4)
- Close the machine with the upper casing



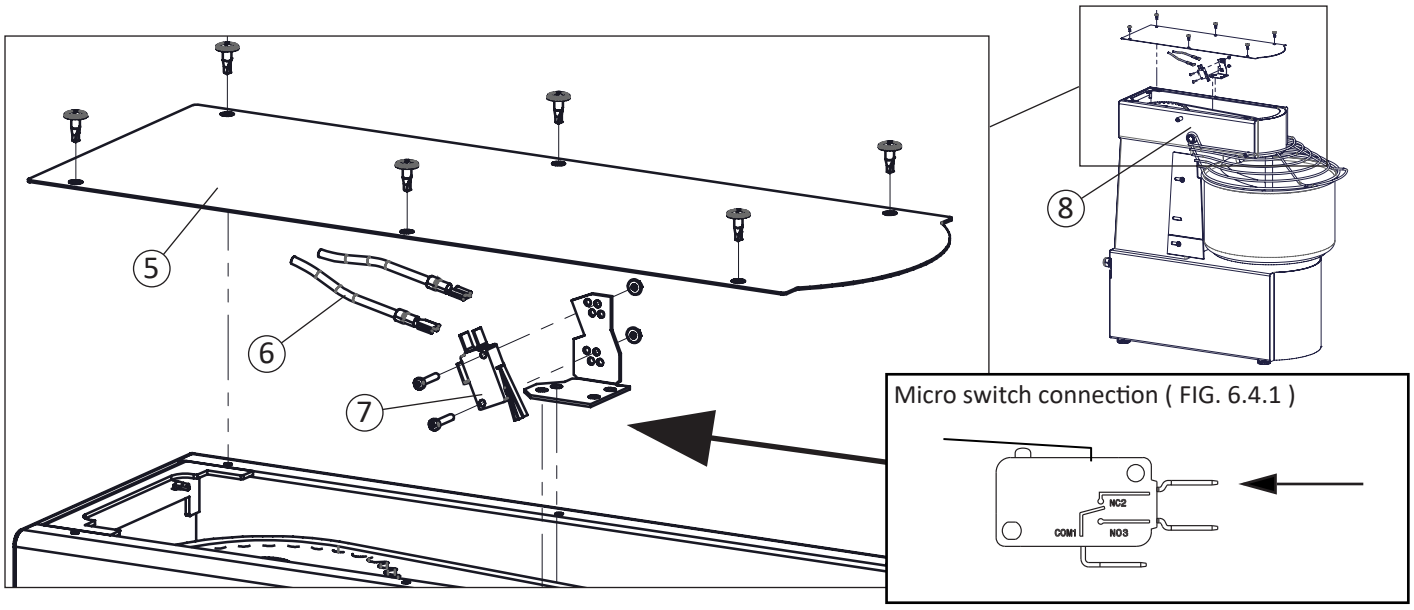

**Replacement of limit switch for GHR/GHRF kneading head raised**

- Raise the head of the tilting machine;
- Unscrew the screws of the inductive sensor holder (9);
- Replace the sensor with a new one with equivalent or better characteristics;
- Adjust the position of the sensor magnet in such a way that it stops machine operation as soon as the protective grid (4) and the machine head (1) are raised
- Close the machine

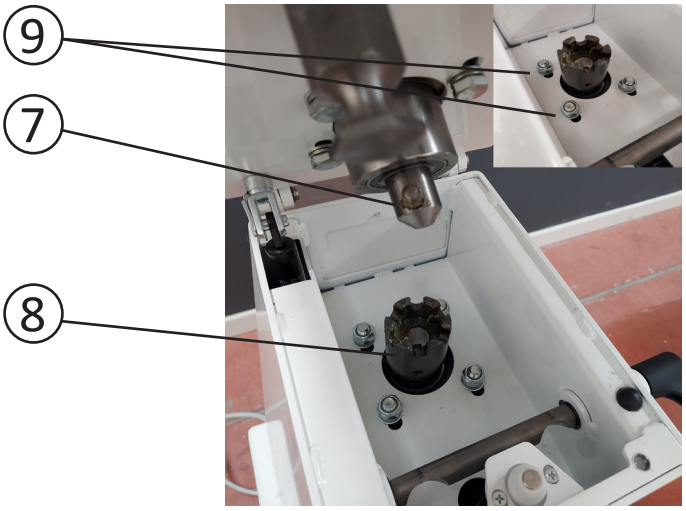


English




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

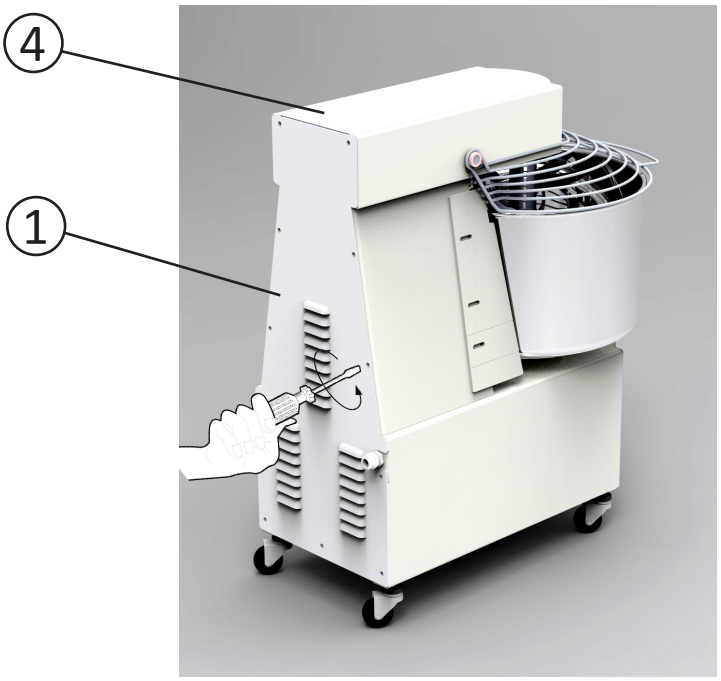


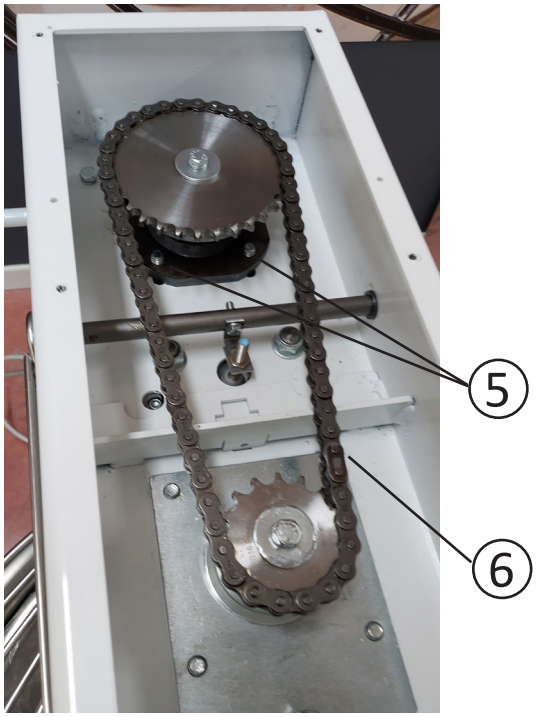

**Chain tensioning**

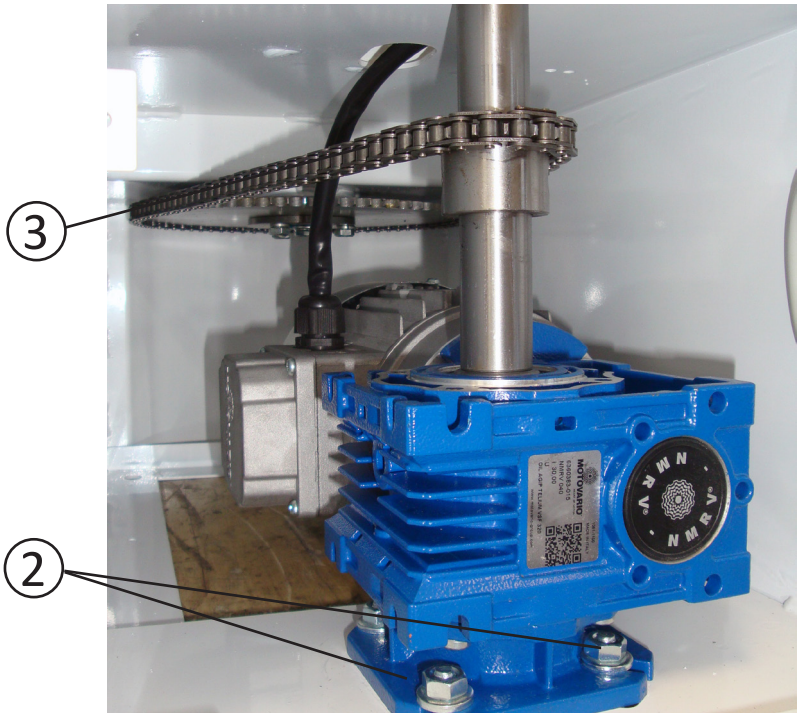
- Remove the rear casing (1) by loosening the relative screws.
- Loosen the nuts (2) of the gear motor and the screws
- Tension the chain (3) of the gear motor, stretch the chain. and fully tighten the nuts (3).
- Grease the chain with grease suitable for gears.

**Spiral rotation chain tensioning.**

- Remove the rear casing (1) by loosening the relative screws.
- Remove the head casing (4) by loosening the relative screws; lift the head, if provided.
- Loosen the nuts (5) of the bearing support and tension the chain (6). Tighten the nuts (5).
- For the models equipped with folded head, centre the transmission joint (7) with the relative hook joint (8) placed on the machine structure.
- To perform adjustments, loosen nuts (9), check the coupling of the joint and tighten nuts (9).
- Grease the chain and the bearing supports with grease suitable for gears.






**6.5. CHECK LIST - ROUTINE MAINTENANCE**

| FREQUENCY | VERIFICATION/CHECK | METHODS AND FEEDBACK |
|---|---|---|
| Before each working cycle | Check operation:<br>• Safety devices<br>• Stop functions | 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.<br>  <br>!!!WARNING!!!<br>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. |
| Before every work shift | Check the work area:<br>• It must be clean and free from dust | 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 equipement. |
| At least once a week | Visual integrity check:<br>• All identification plates must be intact and not worn | If it is unreadable, ask your service technician to replace identical plaques. |
| At least once a month | Visual integrity check:<br>• Tool and tank | 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. Any replacement must be made with the original products of the manufacturer. |

English

### 6.6.CHECK LIST - SCHEDULED MAINTENANCE

| FRQUENCY | VERIFICATION/CHECK | METHODS AND FEEDBACK |
|---|---|---|
| At least every month | Check:<br>• inside the casing - motor compartments | All the internal parts, motor compartments must be kept clean and dry.<br>Suction any dust or powder with a suction device. |
| At least every month | Check effectiveness:<br>• Mechanical connections | Use suitable tools to check the tightness of the clamps, screws, nuts, bolts, and connections in general.<br>Adjust the tension of the motor transmission chains |
| At least every 3 months | Check functionality:<br>• motor drive contactors and all the relays of the control circuit. | Visually inspect the state of the relays and control circuits. |
| At least every 6 months | Check effectiveness:<br>• Equipotential and protection circuit | 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:<br>• Electrical appliances | Make the entire equipment electric for operational requirements<br>Electrical equipment is subject to wear |
| At least every 6 months | Check:<br>• the electric isolation of the motors | Use suitable instruments to measure the motor isolation resistance 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 6 months | Check:<br>• the consumption of the single phases of the motor | Use suitable instruments to measure the consumption on every motor utility power conductor.<br>Values that fail to fall within a 10% range indicate a motor failure. |
| At least every 12 months | Check effectiveness:<br>• of the electric component connections outside the casings | Check for any loosening. If detected, restore the connections, making them durable and lasting. |

### 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 | Inductive sensor that controls the opening of the kneading machine and the metal grid that protects the bowl | Kneaders with lifting head |
| At least every 5 years | Toggle microswitch that controls the opening of the metal grid that protects the tank | Kneaders with fixed head |
| At least every 5 years | Replace the KM1 and KM2 contactors | One speed, single-phase tilting kneaders |

### 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 opera tions.
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.<br>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.<br>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<br>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.

English

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

Stainless steel is resistant to corrosion because it has a thin oxide protective filmwhich 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 SCRAPPING, DEMOLITION AND DISPOSAL



## 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:

- Disconnect the cables from all components inside the electrical panel and all the components installed on the machine and send them to waste collection institutions or companies in compliance with applicable law;
- Remove all components from inside the electrical panel and 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 of 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 (ld 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.

# DICHIARAZIONE CE DI CONFORMITÀ

*DECLARATION OF CONFORMITY / KONFORMITÄTSERKLÄRUNG / DECLARATION CE DE CONFORMITEE / DECLARACIÓN DE CONFORMIDAD CE*

**IT: Io sottoscritto, rappresentante il seguente costruttore:**
*EN: The undersigned, representing the following manufacturer:*
*DE: Der Unterzeichner, der den nachstehenden Hersteller vertritt:*
*FR: Le soussigné, représentant le fabricant suivant:*
*ES: Yo, abajo firmante, en representante y fabricante:*

Tecno A s.r.l.
Via del lavoro, 4 - loc. Canavaccio
61029 URBINO ( PU ) - Italy
C.F. / P.IVA 01444690414
Tel. +39 0722 354048 Fax +39 0722 354049

**IT: dichiaro che i modelli di impastatrice con vasca rotativa utilizzata per amalgamare i vari ingredienti:**
*EN: The undersigned as a manufacturer, declares that the models of spiral mixer:*
*DE: Der unterzeichnende Hersteller erklärt, dass die Modell der teigknetmaschinen:*
*FR: Le fabricat soussigné déclare que les modèles de électrique pétrins à spiral:*
*ES: El abajo firmante declara como fabricante que los modelos amasadora de espiral:*

| MODELLI / MODELS | GH | GHRF | GHR |
|---|---|---|---|
| | GH10MO - GH10MO2V | GHRF30TR2V | - |
| | GH15MO - GH15TR - GH15MO2V - GH15TR2V | | - |
| | GH20MO - GH20TR - GH20MO2V - GH20TR2V | | GHR20MO - GHR20TR - GHR20MO2V - GHR20TR2V |
| | GH30MO - GH30TR - GH30MO2V - GH30TR2V | GHRF50TR2V | GHR30MO - GHR30TR - GHR30MO2V - GHR30TR2V |
| | GH40MO - GH40TR - GH40MO2V - GH40TR2V | | GHR40MO - GHR40TR - GHR40MO2V - GHR40TR2V |
| | GH50MO - GH50TR - GH50MO2V - GH50TR2V | | GHR50MO - GHR50TR - GHR50MO2V - GHR50TR2V |

**IT: sono conformi a tutte le disposizioni legislative pertinenti previste dalle seguenti direttive comunitarie (comprese tutte le modifiche applicate):**
*EN: are conformed to the following CE laws (including all applicable amendments):*
*DE: allen betreffenden Rechtsvorschriften entspricht, die von den folgenden EU-Richtlinien (einschließlich aller angewandten Änderungen):*
*FR: ils sont conforme à toutes les normatives pertinentes aux suivantes directives CE (inclus tous changements appliqués):*
*ES: Y cuando cumplan con las siguientes leyes de la UE (incluyendo todas las modificaciones aplicables):*

**2006/42/CE** **IT: Direttiva Macchine -** EN:Machinery Directive - FR:Directive Machines - DE:Maschinenrichtlinie - ES:Directiva de Máquinas

**2014/30/UE** **IT: Direttiva Compatibilità Elettromagnetica -** EN:Electromagnetic Compatibility Directive - FR:Directive Compatibilité Electomagnétique - DE:EMV-Richtlinie - vorgesehen sind - ES:Directiva de Compatibilidad Electromagnética

**2011/65/UE** **IT: Direttiva RoHS II inclusa la direttiva 2015/863/UE** - EN:Directive RoHS II included directive RoHS III 2015/863/UE - FR:Directive RoHS II comprend directive RoHS III 2015/863/UE - DE:RoHS II -Richtlinie enthält RoHS III 2015/863/UE- Richtlinie - ES:Directiva RoHS II incluida directiva RoHS III 2015/863/UE

**1935/2004** **IT: Regolamento riguardante i materiali e gli oggetti destinati a venire a contatto con prodotti alimentari**
EN: Regulation on materials and articles intended to come into contact with food
FR: Règlement concernant les matériaux et objets destinés à entrer en contact avec des denrées alimentaires
DE: Verordnung über Materialien und Gegenstände, die dazu bestimmt sind, mit Lebensmitteln in Berührung zu kommen
ES: Reglamento sobre los materiales y objetos destinados a entrar en contacto con alimentos

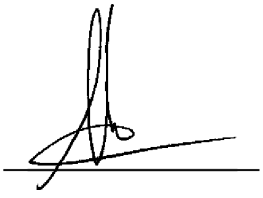
**IT: e inoltre dichiara che sono state applicate le seguenti norme armonizzate:**
*EN: and also declares that have been applied the following harmonized rules:*
*DE: und erklärt ebenfalls, welche angewandten folgende harmonisierten Normen benutzt warden:*
*FR: et déclare également qui ont été appliquées les normes harmonisées suivantes:*
*ES: e incluso que se han aplicado para declarar las siguientes normas armonizadas:*

**norme armonizzate di tipo "A"** */ harmonized rules type "A" / hormonisierten Normen typ "A" / normes harmonisées de type "A"/ normas armonizadas de tipo "A"*
**UNI EN ISO 12100:2010**

**norme armonizzate di tipo "C"** */ harmonized rules type "C" / hormonisierten Normen typ "C" / normes harmonisées de type "C" / normas armonizadas de tipo "C"*
**UNI EN 453:2014**

**Urbino 11 / 04 / 2022**

**IT: Firma del legale rappresentante**
*EN: Authorized Signature*
*DE: Rechtsverbindliche Unterschrift*
*FR: Signature autorisée*
*ES: Firma del Representante Legal*



**Andrea Scopa**

**IT: La persona autorizzata a costituire e conservare il fascicolo tecnico è il rappresentante di:**
*EN: the person authorised to compile and store the technical file is the representative of:*
*DE: die person mit der Erstellung und Aufbewahrung der folgenden technischen Unterlagen beauftragt ist der Vertreter von:*
*FR: La personne autoriséèe à constituer et à garder le dossier technique est le représentant de:*
*ES: La persona facultada para elaborar y mantener el expediente técnico es el representate de:*

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