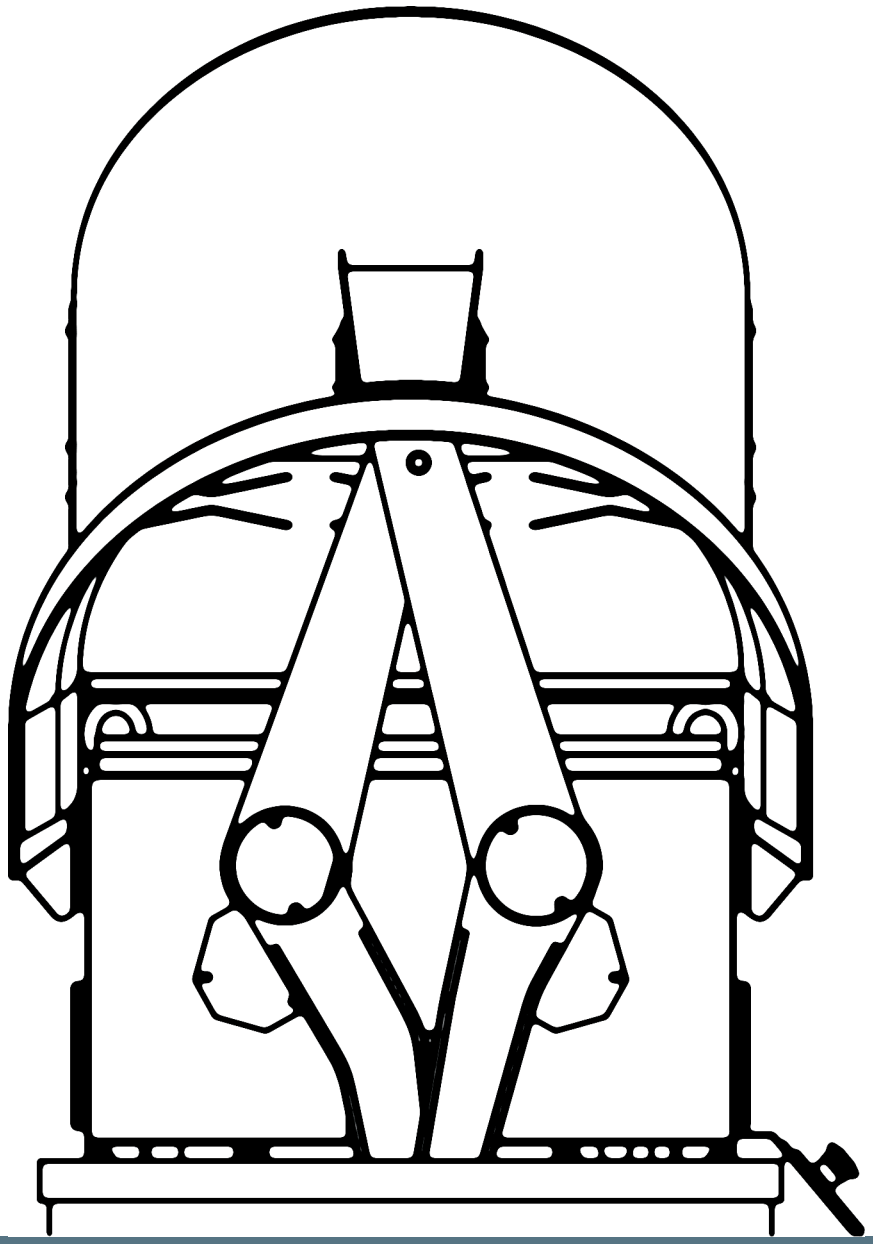
AMPTO™

user and maintenance manual



CE

Plunging arms mixer ITWIN 55

CE DECLARATION OF CONFORMITY

With the present the manufacturer

DECLARES that the machine: Serial n°...

To which this declaration refers to is in compliance with the relevant provisions of:
- Directive 2006/42/EC of the European Parliament and of the Council of May 17, 2006
- Italian Legislative Decree of January 27, 2010 No. 17 (from 06/03/10 only for ITALY)
- Directive 2006/95/EC of the European Parliament and of the Council of December 12, 2006
-Directive 2004/108/EC of the European Parliament and of the Council of December 15, 2004
(Transposed by the Italian State with Italian Legislative Decree 06/11/2007, n°194)
- Machinery Directive 89/392 or 98/37 or 2006142 type 'A'
- Electromagnetic Compatibility Directive (ECM) 89/336 or 2004/108
- Low Voltage Directive (LVD) 73123 or 2006/95
Regulation (EC) No 1935/2004 of the European Parliament and Council of October 27, 2004

MADE IN ITALY

1. INTRODUCTION

The machine has been designed for use in bakeries, pastry shops, pizzerias and in th food industry.

CDesigned to get the best in terms of soft dough, where yeasts, both natural (mother yeast) an traditional, can work in the most suitable environment possible to develop their potential.
Another strong point of this machine are the traditional Italian mixtures such as panettone Pandoro, colomba and focaccia.
Its operating system recreates the typical human movement of the arms and hands, and is at it most efficient for working leavened dough.

MACHINE COMPOSITION
It is characterised by a heavy duty load-bearing structure, a mixing bowl made from stainles steel, the safety protection is in PETG.
The mixer arms are made with a special high resistant stainless steel. Their cycle and the spee is set through the control panel.

IMPORTANT::
This appliance is exclusively for professional use.
Any other use is considered inappropriate and therefore unreasonable.

1.1 PREAMBLE

This user instruction manual is intended to be consulted by anyone employed in any capacity, who is in charge, and authorised to use and/or operate the plunging arms mixer.

It is also intended for employers, managers and supervisors of the user company, who must read it carefully and understand it, so they can use it as a valuable support for the fulfilment of their obligations as required by the current laws and regulations on safety and health in the workplace.
The employer, of production sites in which the machine is operating, as well as managers and supervisors, must ensure that operators, employees who have different specific functions, have adequate information, education and, where appropriate, training (it should be simple and comprehensible in relation to the degree of acumen that can be reasonably expected of the person concerned) concerning its proper use and in a safe manner and the general and specific risks of the workplace and/or job.
To carry out this delicate task this manual can prove to be useful, though, for obvious reasons, cannot be considered exhaustive as it does not strictly relate to the machine itself.

THE MANUAL IS MADE UP OF SEVERAL SECTIONS:

Instructions for handling, and preparation for operation.

This part, concentrated mainly in Chapter 3, is directed at personnel in charge of handling, transport, installation and initial commissioning of the machine in the work-room and is designed to provide all the basics of major importance, with the exception of those that already should be part of the background of an experienced and/or specialised operator, in order to correctly perform these operations.

Instructions for use and routine maintenance in safe conditions.

This part, consisting mostly of Chapters 2, 3 and part of Chapters 4 and 5, is directed at the employer of the staff authorised to use the machine and at the managers and supervisors of the user company and at the staff itself.
In addition to the user instructions of the machine, it also includes indications for maintenance, cleaning, and inspection which for simplicity and minimum danger, they do not require special skills or experience, and can be performed by the operator.

Instructions for extraordinary maintenance.

This part, consisting mostly of the remaining part of Chapters 4 and 5, is directed at the employer of the staff authorised to use the machine, to managers and supervisors of the user company, the operating personnel and the specialist staff responsible for carrying out both routine and/or extraordinary machine maintenance.
It includes some guidelines, important for safety purposes, to be followed for the operations of maintenance, adjustment, inspection which for complexity and/or danger level require the intervention of skilled, experienced, professionally trained personnel who possess the technical and regulatory knowledge for the execution of the work in a safe and workmanlike manner. Given the necessary specific experience that the staff responsible for such actions must have, all instructions of a technical nature are omitted that are not critical to the execution of the work in safety and/or of which, considering the professional profile, said staff cannot fail to be aware of.

Instructions for decommissioning or dismantling.

This part is covered in Chapter 6.

Before performing any operation relating to the machine carefully read the general instruction and specifications contained in this manual and obtain a good understanding of their purpose and meanings in order to acquire the necessary knowledge for the proper functioning of th machine, for proper maintenance of its parts, for an adequate knowledge of the safety devices as well as the residual risks that it presents, and therefore, for a correct use in safe conditions.

Keep

this manual and all other attachments (drawings, diagrams, etc.) in a safe place, know to the supervisor/s of the personnel in charge of operation and/or maintenance. Store it i a dry place and protected from the elements which over time could cause it to deteriorate (e.g in a transparent plastic bag). Leave a copy in the vicinity of the machine available to employee for quick reference. **In case of loss or deterioration immediately request a copy directl from the manufacturer specifying clearly all the identification data of the machine (year o manufacture, model, serial number, etc.).** This manual reflects the state of technology existin at the time of placing the machine on the market and cannot be considered inadequate if it i later updated in accordance with new experiences or new technical solutions.

The manufacturer cannot be held in any way responsible for the suitability of the place o installation and use of the machine and support services to the same, while providing in th appropriate section of this manual several important instructions for proper installation.

The company reserves the right to make updates to machines and instruction manuals, withou this implying any obligation on its part to update machines and/or manuals previously produced

IMPORTANT! Once positioning and/or installation is complete in the place of use and befor proceeding with its start-up, make sure that the machine meets the contractual provisions an that all devices are properly fitted, especially the safety devices, described in this manual an in any commercial documentation.

The manual is an integral part of the machine and must accompany it in case of transfe or sale, in any capacity, even free, of the same.

WARNING! For reasons of safety, hygiene, health and warranty it is forbidden to use the mixe for purposes and/or in different ways and/or for operations not strictly relevant to its intende use, expressly stated in par. 2.1 of this manual.

1.2 WARRANTY: VALIDITY AND CONDITIONS

The **MANUFACTURER** guarantees the correct functioning and quality of this machine.
There is a warranty period of **12 months** from the date of delivery of the machine only if the warranty certificate indicated below is duly submitted within **15 days** of receipt of the machine. The warranty is bound by a proper use of the machine and its maintenance according to the user instruction manual. The warranty is voided if there is tampering/modifications or repairs carried out to it without our permission or if **non-original parts** are used. The warranty does not extend to damage that results from normal wear and tear, or due to fault of your own or for an inadequate use.
The warranty is limited to the replacement of the defective part that is guaranteed. All other claims, such as compensation claims for interruption of production
or other, are declined by us.

If the **MANUFACTURER** considers it necessary, it can request the return of the machine to our factory to carry out the repair under warranty.

To be returned to the manufacturer.
This certificate must be sent before commissioning the machine.

WARRANTY CERTIFICATE

The manufacturer guarantees for:

Model:: .....

Serial number: .....

Date of installation or commissioning: .....

Name and full address: .....

.....

.....

.....

MADE IN ITALY

1.3 INSTRUCTIONS AND GENERAL WARNINGS

The **MANUFACTURER** disclaims all liability for damage to people, animals, property caused by failure to comply with the recommendations for the installation, use and maintenance as contained in this manual, and in particular the following:

- **Do not tamper** with the safety devices with which the machine is equipped;

- **Do not remove** the protections and do not disable the safety devices with which the machine is equipped, except to perform maintenance operations after adopting measures to highligh and to minimize as much as possible the risk they pose;

- **Restore** protections and reactivate the safety devices as soon as the reasons that necessitate their removal/deactivation cease;

- **Do not use** the machine for purposes and/or loads other than those specified by th manufacturer;

- **Carry out** daily checks on the safety devices, the levels and the state of the technologica fluids, if any, as well as the general state of the machine;

- **Perform** a thorough and proper cleaning daily;

- **Do not use** solvents, toxic or corrosive acids for cleaning the machine.

- **Adopt** when carrying out tasks that involve loading, adjusting, changing of parts, cleaning, repairs, maintenance, the necessary measures and precautions to ensure that the machine or its parts are not set in motion by others, even by accident.

For workplaces observe the European Directives, as well as the laws and regulations o the State in which the machine is installed and made operational, which relate to:

- **Safety signs and warnings,**
- **Health and safety in the workplace,**
- **Personal protective equipment,**
- **Food hygiene and consumer protection,**
- **Protection and preservation of the environment;**

- **Respect the limits permitted of climatic conditions and of use:** the proper operation of the machine is guaranteed at a temperature between **0 °C and +45 °C (32°F and +113 °F) with humidity (without condensation) of 0-85% and a maximum altitude of 3000 m above se level.**

- **The employer,** in whose production sites the machine is located, needs to ensure employees have adequate information and training regarding the specific tasks (they must be simple an comprehensible in relation to the degree of acumen that can reasonably be expected) on it proper safe use and to the general and specific risks of the workplace and/or job; for such delicate task this manual can be of help, though, of course, cannot be considered exhaustive a not strictly related to the machine itself.

1.3 INSTRUCTIONS AND GENERAL WARNINGS

•**The clothes worn by the operator** must be tight-fitting and free of flapping parts (avoid jackets, open shirts, etc.); any long hair should be tied up (e.g. in a cap); work clothing should be appropriate to the sanitary requirements of the treated/processed food.

•**Do not allow** entry to the room where the machine is used, or for anyone to approach the same, especially laymen, minors and anyone not expressly authorised;

•**If the machine is connected to other equipment** or incorporated into a complex assembly, the manufacturer of the assembly resulting from this connection or incorporation should analyse and evaluate all risks, additional or greater, resulting from this operation, and implement the appropriate measures to eliminate or reduce them as much as possible, in compliance with all the requirements laid down by Laws, Directives, Standards, etc. that are of relevance to it (definitely including Directive 2006/42/CE) and declare the compliance of the assembly with the provisions of the same.

•**If you need to replace** one or more parts, **use only original spare parts** by requesting them from the manufacturer, who, otherwise, will not assume liability for any damage to persons, property and/or animals that may result from this.

•**Any change** arbitrarily made to the machine, relieves the manufacturer from any responsibility for any resulting damage to persons, animals and/or property.

• **Do not allow** the mixer to be used in ATEX environments.

1.4 PRINCIPAL CIRCUMSTANCES IN WHICH THE MANUFACTURER DECLINES LIABILITY

The manufacturer declines all responsibility for damage to people, animals, property, as well as for loss of production, resulting from:

•Using the machine in any way or for products other than those expressly stated in this manual.

•Commissioning and/or using the machine in combination with other machines (e.g. flour and/or water dosing machines), without having first checked and formally declared that the resulting assembly conforms with the provisions of the laws, directives, regulations, etc., which are in any way relevant to it.

•Installation does not comply with the procedures contained in this manual.

•Use of the machine by personnel not sufficiently instructed and, where required, inadequately trained, in its proper and safe use.

•Use of the machine by persons under 16 years of age.

•Use of power sources other than those indicated here or unsuitable in relation to the technical data contained in this manual.

•Lack of or insufficient maintenance, periodic or not, or maintenance not performed in the manner indicated herein.

•Failure or partial compliance with the instructions in this manual.

•Arbitrary modification, without having first received formal authorisation from the manufacturer, of the features and original equipment of the machine.

•Damage caused by tools, equipment, devices, applied to the machine or not, not supplied or however not provided or not formally authorised in advance by the manufacturer.

•Connection/incorporation of parts and/or equipment with the/in the machine, applied or not to the same, not supplied or not provided or not authorised by the manufacturer; in this case the CE marking, placed on the machine by the manufacturer, would lose all validity.

•Incorporation of the machine or of its parts in a whole assembly, in the case where such an operation would entail the emergence of new or increased risks with respect to the stand alone machine as supplied.

•Failure to comply with laws and regulations in force in the country of use of the machine.

•Exceptional events and causes of force majeure not depending on the manufacturer.

1.5TERMINOLOGY

To increase the understanding of this manual, below are the terms used in it:

• **OPERATOR:** person in charge /authorised /to use a machine.

•**MIXER MACHINE:**This machine is suitable for dough used in pastry shops, bakeries, pizzerias. Its operating system which recreates the typical human movement of arms and hands, is at its most efficient for working leavened dough.
The product that is obtained is homogeneous, perfectly oxygenated without any heating of the dough and ready for a perfect leavening.

•**DOUGH:** shapeless mass sufficiently homogeneous and easily malleable, obtained through the action of the mixer arms which mix and amalgamate the ingredients in different proportions, within the limits stated in this manual, and used to make confectionery and/or bakery products with subsequent processing.

•**BOWL:** container in which the various ingredients to be mixed are placed; it is equipped with a rotary motion around its own axis.

•**KNEADING UTENSIL ARM:** these are two elongated bodies, mutually coupled at the top end and each mechanically connected to a rotating disc (the two discs rotate in opposite directions but with equal speed); their movement takes place on two parallel vertical planes.
Each of them bears a body of a different shape at the lower end (one with a spatula, and one with a C shape); the movement is so that they can alternately penetrate deep into the dough (from which comes the name “plunging arms”) until it touches the bottom of the bowl, then subsequently moving away after mixing the other ingredients in the bowl.

• **BASE:** load-bearing structure of the machine.

•**USING THE MACHINE:** the set of all the operations that are or can be reasonably related to the machine during its service life in relation to its intended use as explicitly stated in this manual.

• **PPE:** personal protective equipment (eg. Gloves, shoes, glasses, etc.).

•**ROUTINE MAINTENANCE:** operations required to maintain the machine efficient and in good condition, which does not require special training or specific skills, provided that the instructions in this manual are adhered to.

•**EXTRAORDINARY MAINTENANCE, SPECIAL:** operations to maintain the machine efficient and in good condition, which requires training and/or professional skills and/or specific expertise and which should be performed only by qualified technicians, who possess all the technical and regulatory knowledge to carry out the work in a safe and workmanlike manner.

•**DANGER ZONE:** any zone within and/or close to the machine in which there is a risk to the safety and health of a person.

• **EXPOSED PERSON:** any person wholly or partially in a danger zone.

•**WARNING:** communication of primary importance for the safety and health of the operator

•**IMPORTANT:** communications of paramount importance to avoid damaging the machine and/ or its components and/or the product.

2 FEATURES OF THE MACHINE

2.1 Description and Intended Use

The machine described in this manual is intended for the production of masses o homogeneous and workable (malleable) dough by mixing various ingredients (the mai ones are water, flour, salt and yeast) from which confectionery and bakery products ar derived with subsequent processing.
For reasons of safety, hygiene, health and warranty, it is prohibited to use such machiner in ways or for purposes other than those stated in this manual.
A professional use only of the machine is allowed in rooms where access is forbidde to unauthorised persons, in particular to the public, to strangers, to minors, etc., excep in the case of trade fairs and/or demonstrations and, however, after having adopted th appropriate measures to prevent the persons present from being exposed to any risk.

It is forbidden to use the machine for the processing of materials and/or products other tha those specified in this manual and/or those that are usually used with this machine in the bakin and confectionery sector.

It is forbidden to use the machine in environments where there is a risk of fire and/or explosio and/or however major accidents in accordance with current legislation.

It is forbidden to use the machine in environments characterised by excess water vapour and or oil vapours and/or of dust, by the presence of corrosive gases and/or substances

È vietato to use the mixer in conditions of vibration or abnormal impacts. When combined wit other equipment, machines, etc.,

It is forbidden to put into service or otherwise use the mixer, before the whole assembly has been declared, as a whole, compliant with the provisions of laws, directives, regulations, etc. which are in any way relevant to it.

It is forbidden to use the machine aboard ships, off-shore rigs, etc.

Any other use, as understood by Directive 2006/42/CE, is to be considered incorrect improper and not intended for by the manufacturer and, as such, potentially dangerou for the safety and health of exposed persons, as well as for animals and/or property.

2.1 DESCRIPTION AND INTENDED USE

1	**Stainless steel mixing bowl** Performs a rotational movement..
2	**Safety protection** Made in thermoformed transparent **PETG**, protects the operator from the motion of the utensil and prevents the dough and flour from escaping.
3	**Control panel** Allows you to program in manual, semi-automatic or automatic mode the number of turns and the start time.
4	**”START” button**
5	**’’EMERGENZA (EMERGENCY)’’ stop button**
6	**”STOP” button**
7	**Main ON/OFF switch**
9A	**‘‘Kneading tools’’ special stainless steel plunging arm** Dough hook arm
9B	**‘‘Kneading tools’’ special stainless steel plunging arm** Paddle utensil arm
10	**Rubber stabilising feet**
11	**Painted steel base** Load-bearing structure

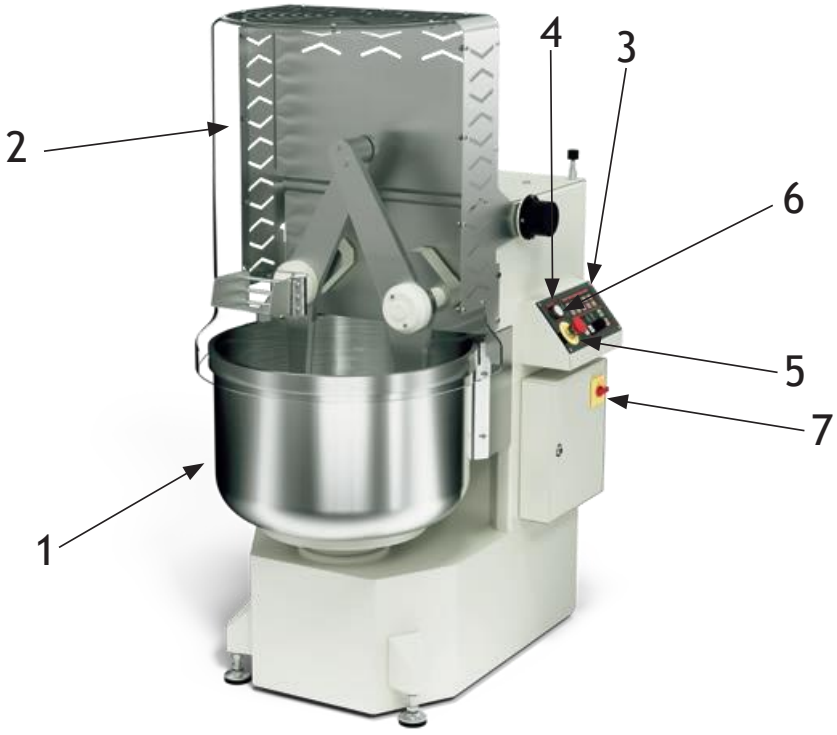


Figure 1 - Lowered protection technical description

2.1 DESCRIPTION AND INTENDED USE

The plunging arms mixer is essentially made up of:

•A load-bearing structure, which consists of a base in welded painted steel (WITHOU LEAD AND SOLVENTS, ACCORDINGTO CURRENT FOOD REGULATIONS) (11). At the bas of the load-bearing structure there are **stabilising feet (10).**

•The mixture bowl (1) is the container where the product to be mixed is put, kneading is ca ried out by the motion of the plunging arm which is made of stainless steel.
The two plunging arms consist of **a dough hook arm (9A) and a paddle arm (9B).**

•During the operation of the machine the safety protection made in transparent **PETG** is lowe red, which will prevent the operator coming in contact with the moving arms and, therefor ensuring complete safety to his **upper limbs (2).** Moreover, the protection prevents the doug and flour escaping which could cause respiratory damage.

•The start (START), stop (STOP) and emergency stop buttons (4, 5, 6).

•The Touch Screen manual or automatic controls for setting the number of turns and th start time (3).

•The mixer can also have 2-speed controls, equipped with two timers and selector switc to set a slow or fast speed or with inverter and variable speeds

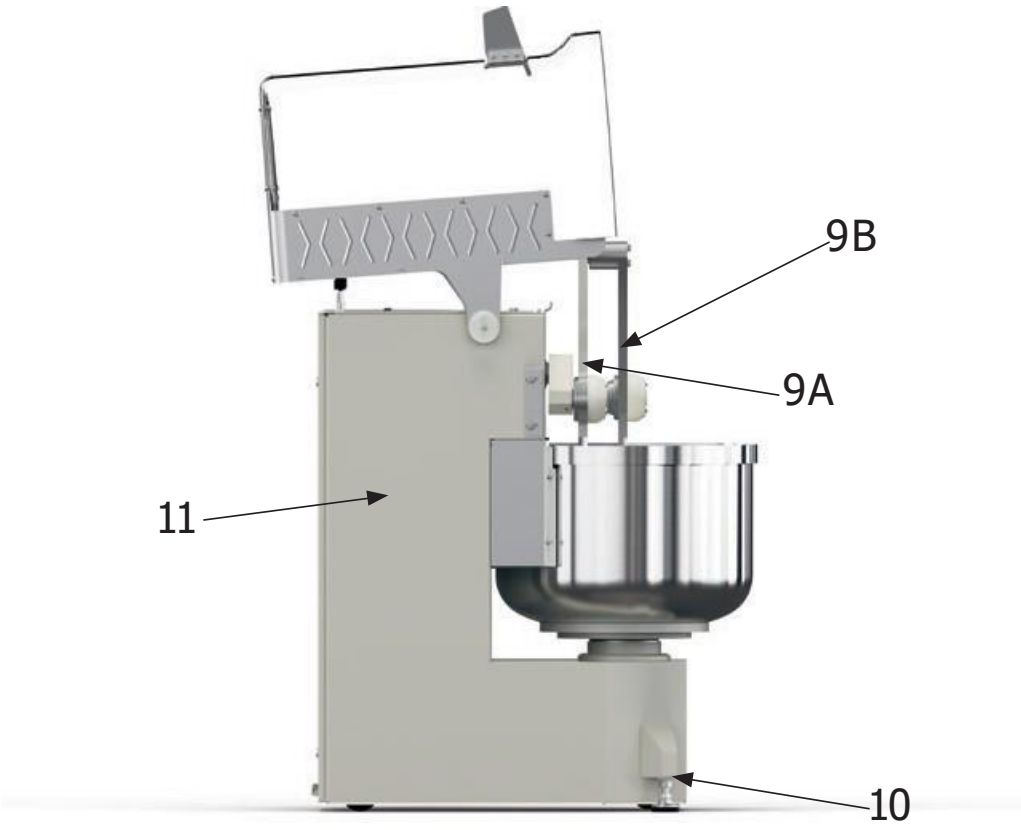
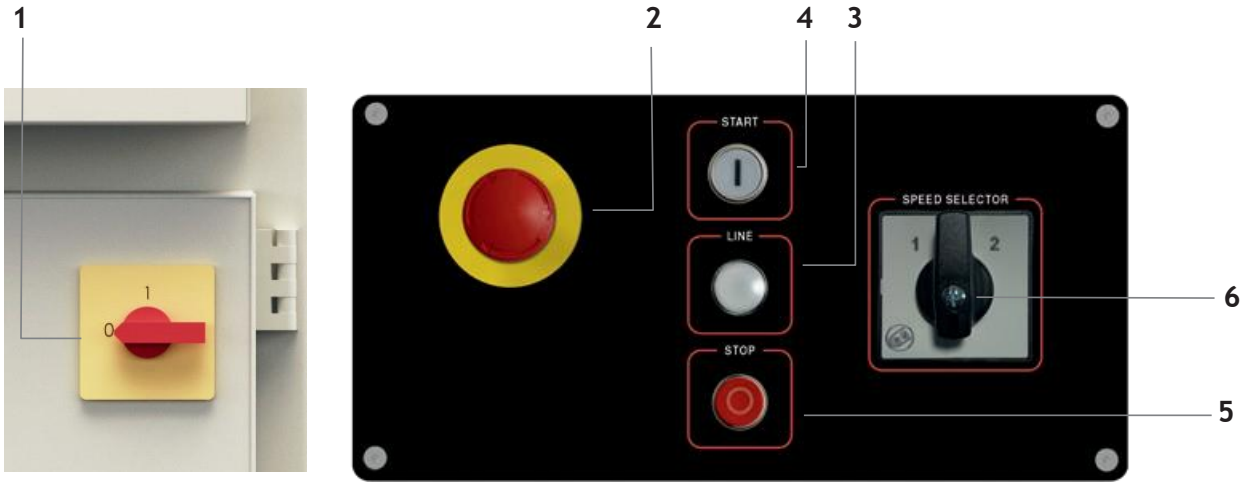


Figure 2 - Raised protection technical description

2.2 ELECTRICAL COMMAND AND CONTROL DEVICES

MAN MODEL



1 **Main ON/OFF electric switch to turn on the machine, thus** allowing it to receive power from the mains

2 Mushroom-shaped ‘‘EMERGENZA (EMERGENCY)’’ stop button which when pressed cuts power to all moving parts. To restore the motion of the machine you must release the emergency button (rotating it clockwise) It is recommended to use the emergency button only when there are emergency situations and not as a button to stop the machine.

3 Line LED - current presence

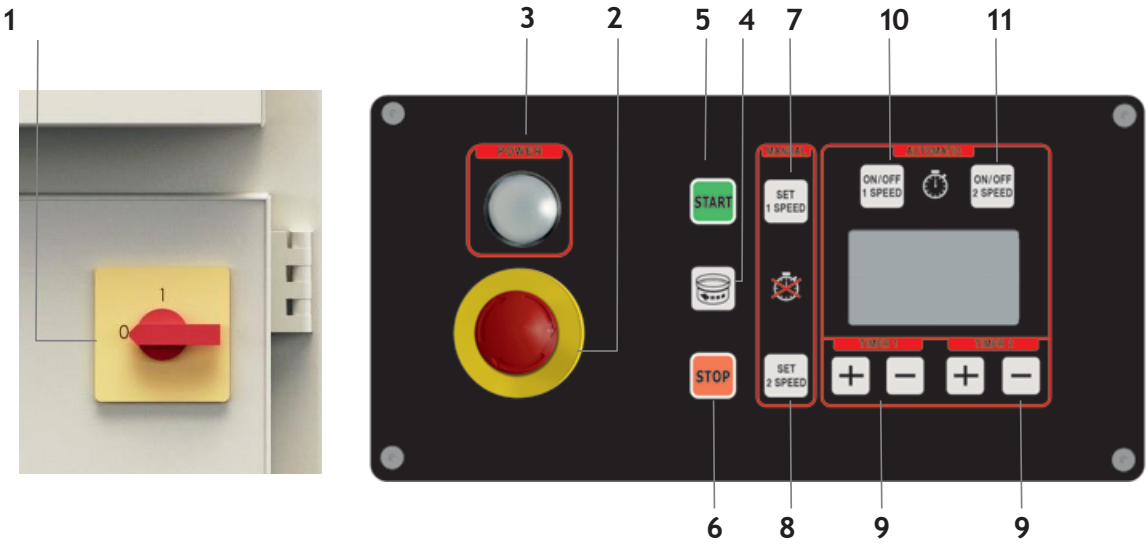
4 **START** button

5 **STOP** button

6 Manual speed selector

2.2 ELECTRICAL COMMAND AND CONTROL DEVICES

PRO MODEL



1 **Main ON/OFF electric switch to turn on the machine, thus** allowing it to receive power from the mains

2 Mushroom-shaped "EMERGENZA (EMERGENCY)" stop button which when pressed cuts power to all moving parts. To restore the motion of the machine you must release the emergency button (rotating it clockwise) It is recommended to use the emergency button only when there are emergency situations and not as a button to stop the machine.

3 Line LED - current presence

4 Impulse bowl rotation in normal direction (dough extraction)

5 **START** button

6 **STOP** button

7 First speed selection in manual use

8 Second speed selection in manual use

9 Automatic cycle timers

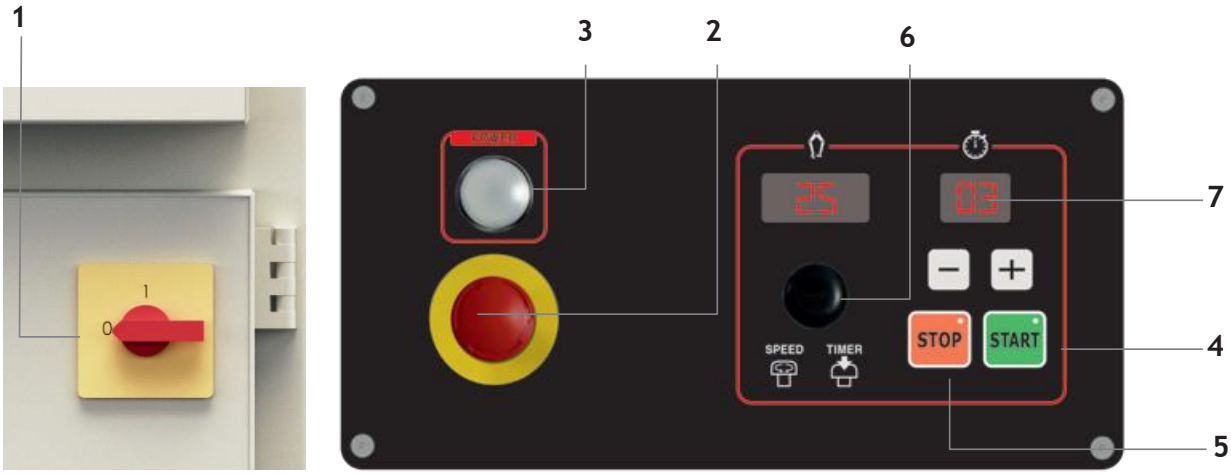
10 First speed selection in automatic use

11 Second speed selection in automatic use

MADE IN ITALY

2.2 ELECTRICAL COMMAND AND CONTROL DEVICES

INV MODEL



1 **Main ON/OFF electric switch to turn on the machine, thus** allowing it to receive power from the mains

2 Mushroom-shaped ‘‘EMERGENZA (EMERGENCY)’’ stop button which when pressed cuts power to all moving parts. To restore the motion of the machine you must release the emergency button (rotating it clockwise) It is recommended to use the emergency button only when there are emergency situations and not as a button to stop the machine.

3 Line LED - current presence

4 **START** button

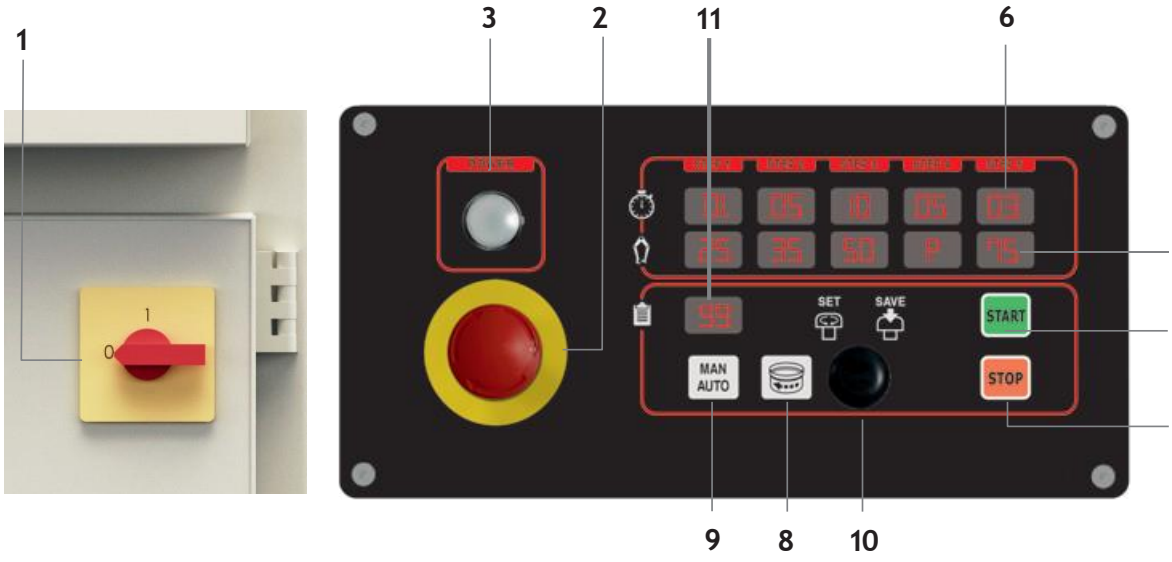
5 **STOP** button (double touch = recipe reset)

6 Speed control knob (press /release to activate the timer - led indicator)

7 Automatic cycle timer set (press knob **6** to access)

2.2 ELECTRICAL COMMAND AND CONTROL DEVICES

INV/PROG MODEL



1 **Main ON/OFF electric switch to turn on the machine, thus** allowing it to receive power from the mains

2 Mushroom-shaped "EMERGENZA (EMERGENCY)" stop button which when pressed cuts power to all moving parts. To restore the motion of the machine you must release the emergency button (rotating it clockwise) It is recommended to use the emergency button only when there are emergency situations and not as a button to stop the machine.

3 Line LED - current presence

4 **START** button

5 **STOP** button (double touch = recipe reset)

6 Automatic cycle / recipe set timers (use knob 10 to modify the value)

7 Set automatic cycle / recipe speed (use knob 10 to modify the value) - "P" = pause (zero beats / min)

8 Impulse bowl rotation in normal direction (dough extraction)

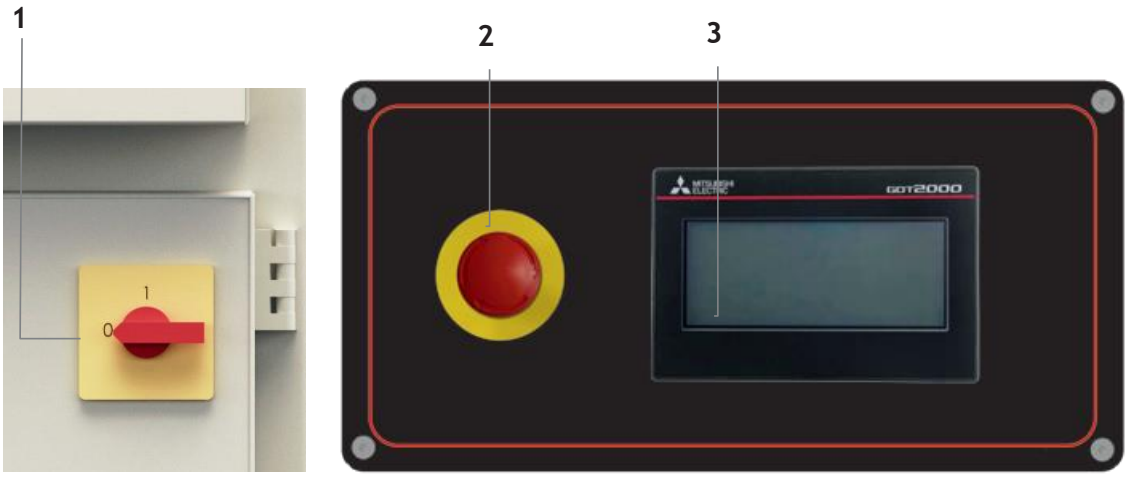
9 **MANUAL / AUTOMATIC** use selector button

10 Speed and timers control knob (press / release to switch between display to the other - led indicator)

11 Display of saved recipes (active recipe number)

2.2 ELECTRICAL COMMAND AND CONTROL DEVICES

TOUCH MODEL



1 **Main ON/OFF electric switch to turn on the machine, thus** allowing it to receive power from the mains

2 Mushroom-shaped ‘‘EMERGENZA (EMERGENCY)’’ stop button which when pressed cuts power to all moving parts. To restore the motion of the machine you must release the emergency button (rotating it clockwise) It is recommended to use the emergency button only when there are emergency situations and not as a button to stop the machine.

3 Touch screen control panel with MITSUBISHI programmer

2.3 MAIN TECHNICAL FEATURES

MODELLO MODEL				45	55	65
Dough capacity (min/max)*			kg	5/48	5/56	5/64
Flour capacity (min/max)*			kg	3/30	3/35	3/40
Water capacity (min/max)*			lt	2/18	2/21	2/24
Bowl volume			lt	70	80	90
Water / flour min			%	60	60	60
Twin arms turns	1st/2nd speed	MAN - PRO	rpm	40/60	40/60	40/60
	inverter	INV -TOUCH	rpm	from 25 to 75	from 25 to 75	from 25 to 75
Bowl turns	1st/2nd speed	MAN - PRO	rpm	8/12	8/12	8/12
	inverter	INV -TOUCH	rpm	from 5 to 15	from 5 to 15	from 5 to 15
Bowl dimension (D x H)			mm	520x330	550x340	550x390
Motor power	1st/2nd speed	MAN - PRO	Kw	1.5/2.2	1.5/2.2	1.5/2.2
	inverter	INV -TOUCH	Kw	2.2	2.2	2.2
Volt		MAN - PRO - INV -TOUCH	V	400/3/50-60	400/3/50-60	400/3/50-60
		MAN - PRO - INV -TOUCH	V	230/3/50-60	230/3/50-60	230/3/50-60
		INV -TOUCH	V	230/1/50-60	230/1/50-60	230/1/50-60
Electric motor brake				included	included	included
Net weight			Kg	320	325	330

MODELLO MODEL				110	130	150
Dough capacity (min/max)*			kg	8/110	8/130	8/150
Flour capacity (min/max)*			kg	5/70	5/80	5/95
Water capacity (min/max)*			lt	3/40	3/50	3/55
Bowl volume			lt	150	180	195
Water / flour min			%	60	60	60
Twin arms turns	inverter	INV -TOUCH	bpm	from 25 to 75	from 25 to 75	from 25 to 75
Bowl turns	inverter	INV -TOUCH	rpm	from 5 to 15	from 5 to 15	from 5 to 15
Bowl dimension (D x H)			mm	680x455	720x472	720x512
Motor power	inverter	INV -TOUCH	Kw	4.5	5.5	6.5
Volt		INV -TOUCH	V	400/3/50-60	400/3/50-60	400/3/50-60
		INV -TOUCH	V	230/3/50-60	230/3/50-60	230/3/50-60
Electric motor brake				included	included	included
Net weight			kg	670	680	690

*Doughcapacity calculated with 60% of hydration. The maximum capacity mayvary depending on the ingredients.

2.4 GENERAL DIMENSIONS

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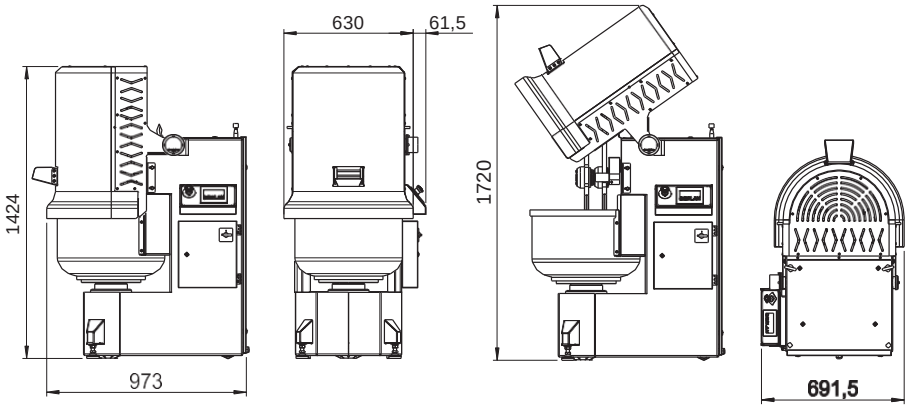

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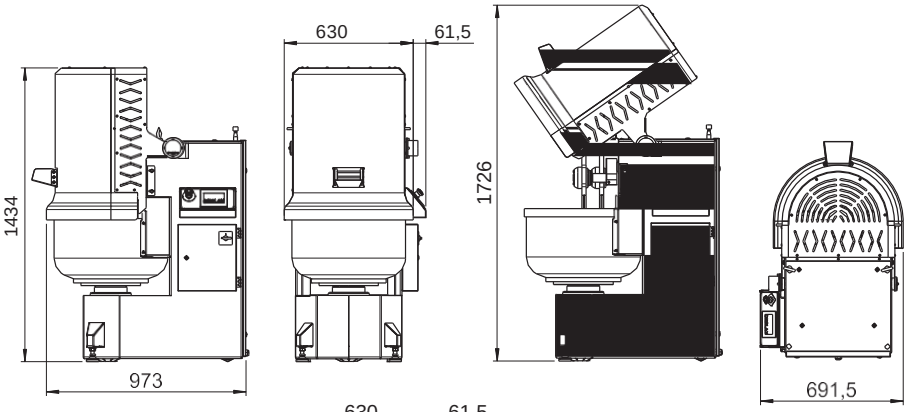

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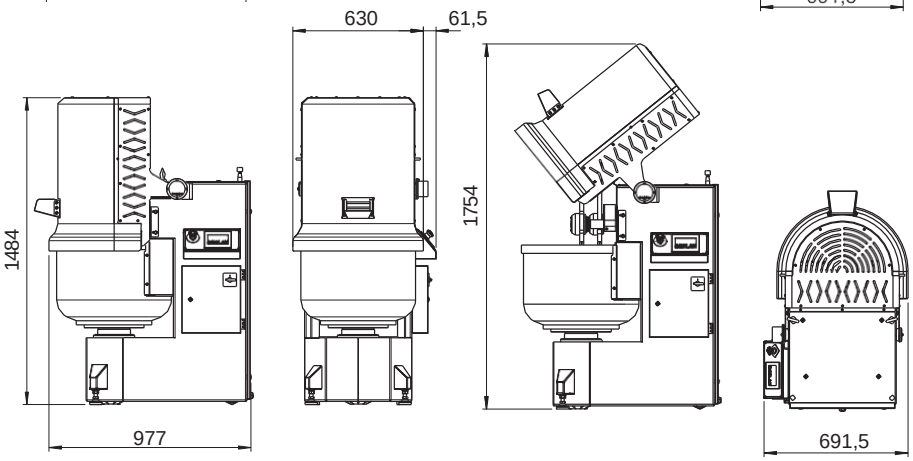

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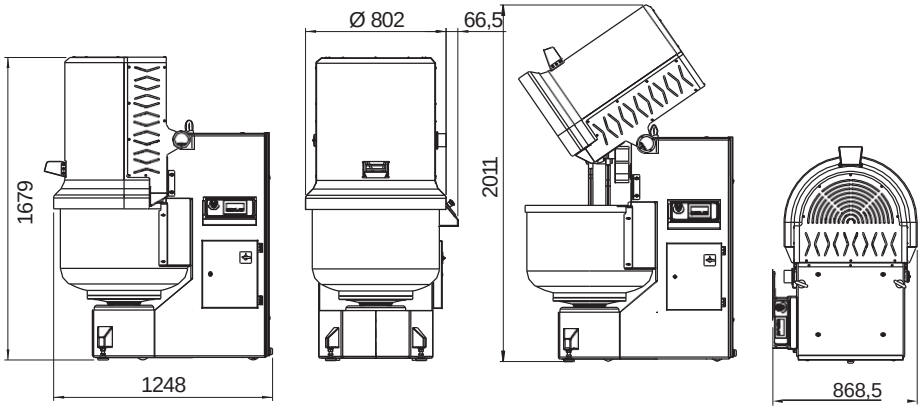

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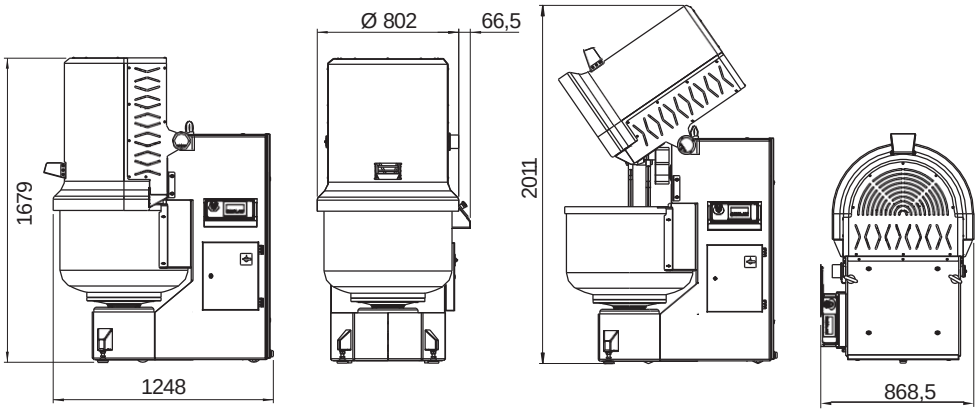

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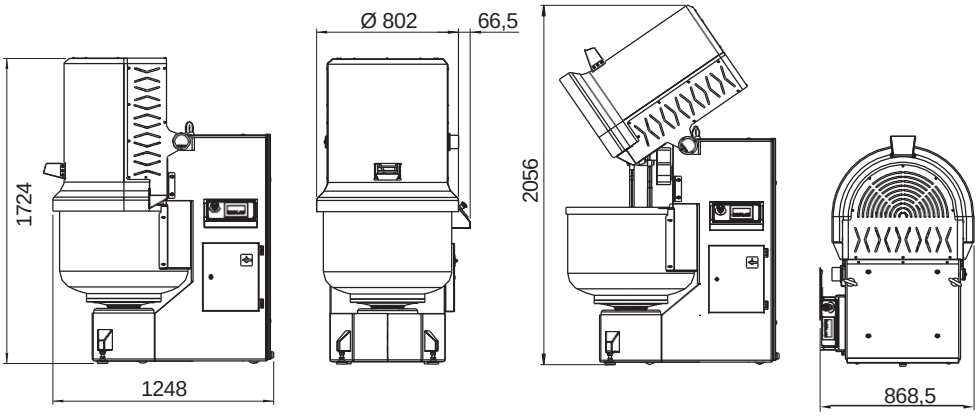


2.5 PLATE OF THE MACHINE

The figure below shows the identification plate of the machine.
The plate of the machine is in screen-printed aluminium and the data is indelible to ensure it remains over time. When replacing the aluminium plate you may find an adhesive with all the identification data of the machine, the removal of this adhesive will result in the destruction of the same.

IMPORTANT:
It is forbidden to remove or replace the "CE marking" plate, if the plate is damaged or removed, it is mandatory to inform THE MANUFACTURER

CE

MODELLO MODEL :	
N° DI SERIE SERIAL No :	
ANNO YEAR :	
VOLT – Hz :	
AMPERE :	
KW :	
Kg :	

Machine plate with CE marking

3. HANDLING, INSTALLATION, PREPARATION, USING THE MACHINE

3.1 Handling and transport of the machine

The machine is supplied on a pallet, and is fixed to it, by means of a metal bar. The machine is protected by a protective nylon film, and also by a wooden crate, then covered in cardboard, fixed by means of plastic strapping to the pallet. The loading/unloading the machine onto/from the transport vehicle is normally carried out by a forklift. Make sure the forklift used for unloading and positioning of the machine, has the capacity and size appropriate to the weight of the machine.
(SEE TABLE 1 -TECHNICAL FEATURES).
To facilitate removal from the pallet, two metal hooks are provided which are to be fixed to the top part of the machine. After checking that they are correctly positioned, the hooks can be used by the appropriate means, to lift the machine and subsequently place it in the workplace.

Instructions for transport and unloading

The loading and unloading from the transport vehicle can be done:
•By means of a forklift (Figure 4).
- Transportation is to be carried out by adopting all precautions required to not damage the machine.
•Pay attention to the insertion points of the forks for the handling of the crate on the pallet, you must be able to find the exact spot (centre of gravity) to insert them to transport the load.The insertion points of the forks have to ensure that there is no undesired shifting of the load or accidental falls.
•In particular, the machine is not to be loaded on other materials, nor are other materials to be loaded on to it, both during transport and storage.
•During transport, the machine must be placed in such a way so not to be subjected to impacts from other materials loaded on the same transport vehicle.
•Pay special attention during transport so not to hit the "surroundings" such as columns, walls, other machinery, etc.
•Before unloading from the transport vehicle you must ensure that the packaging is intact and therefore no risk of tipping.
•When unloading it is recommended to exercise caution when laying it on the ground, to avoid harmful impacts.
•Should it be necessary in the future to move the machine to a place other than that of installation, carefully follow the criteria described above.

Figure 3 - Handling and transport of the machine

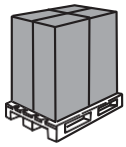
3. HANDLING, INSTALLATION, PREPARATION, USING THE MACHINE

IMPORTANT:
Do not directly expose the machine to sunlight or to heat sources (ovens, stoves, etc.), t prevent deterioration of plastic and electrical control components.

IMPORTANT:
If in the future should it be appropriate to move the machine to a place other than that of installation, carefully follow the criteria described above.

IMPORTANT:
Respect the limits permitted of climatic conditions and of use: the proper operation of th machine is guaranteed at a temperature between 0 °C and +45 °C (32°F+113 °F) with humidit (without condensation) of 0-85% and a maximum altitude of 3000 m above sea level.

WARNING!
The handling of the packaging must take into consideration the indications shown on the packaging itself. The capacity of the slings must be suitable for the weight of the packaging
Do not use metal slings.
Respect for the environment is an explicit specified obligation,
under current laws and regulations.



carton pallet on standard

40	50	60
335 kg	338 kg	340 kg

80x115x165h

wooden cage on request

40	50	60
380 kg	382 kg	385 kg

90x120x167h

wooden cageon standard

110	130	150
770 kg	780 kg	790 kg

110x150x190h

Lifting must only be carried out by qualified personnel.

Figure 4 - Loading / unloading and transport of the machine

3. HANDLING, INSTALLATION, PREPARATION, USING THE MACHINE

1)The place of installation of the machine must have the following characteristics:
- **Opening which will allow the largest parts of the machine to pass.**
- **Constructional features comply with current regulations.**
- **An electrical system complies with current regulations, particularly with respect to the earthing system, the main board with related protection devices for protection against current overloads and short circuits.**

2)Check the condition of the packaging of the appliance. The packaging must be intact on arrival, and the box must be still secured to the pallet with the plastic strapping.

3)The machine is supplied secured on a pallet and wrapped in transparent nylon, to ensure safe transport. Open the packaging by firstly cutting the plastic straps securing the machine (**Figure 7**), and then free the machine from the nylon being careful not to damage it with knives, scissors, and finally checking that the components and any accessories have not been damaged.

4)Once the machine is freed from the packaging, check its condition and integrity; then separate all the packaging materials (**wood, plastic, cardboard**) by type and place them in suitable collection points, accessible only to authorised persons, while waiting to be disposed of by specialist companies.

5)Pay attention to the screws that secure the mixer to the pallet; before lifting the machine with the hooks release the two brackets.

6)During the handling and/or transport of the machine or machine parts all possible precautions must be taken to avoid, or limit, any damage to property, animals and, above all, to persons.

7)IMPORTANT: In the event that one or more components should be missing inside the package, immediately contact the manufacturer to report that missing. Before using, visually inspect the condition of the machine, for any damage or concerns please contact the manufacturer as soon as possible.

Figure 7 - Cut the plastic straps

3.2 Checking the levelling of the machine

The levelling of the machine is important. Make sure that the machine rests correctly on th floor
and above all that there are no vibrations. The work station should be as flat as possible for th proper functioning of the machine itself. **The mixer is equipped with front and rear pivotin wheels, It needs to be levelled properly and secured through the stabilising feet.**
If this is not done the forward weight of the machine could crush the mechanism of the fron wheels with a real risk that the machine becomes difficult to move. Therefore, make sure tha the levelling is adequate. The operation is correct when the front wheels are slightly raised.

Positioning

1)The mixer remains anchored to the pallet by means of a special bracket, which must b removed before proceeding with the lifting of the machine itself.

2)After removing the bracket that holds the machine in place, you can lift the mixer in order t remove the pallet. Before lifting the machine you must ensure that the straps used for liftin and the lifting device itself, are of adequate capacity, both in relation to the load to be lifted, an the convergent layout of the said slings. In any case, the equipment used must comply wit current standards. Use a sturdy strap; during this phase pay the utmost attention and mak sure that unauthorised people are out of range of the machine.

IMPORTANT:
Rope length: 2 metres, for loads greater than or equal to 1000 kg; lifting strap according t

EN 1492-1. a norma EN 1492-1.

PROCEDURE FOR LIFTING THE MIXER WITH SLINGS

3)Remove the two caps placed at the top of the mixer.

4)Once the two caps are removed in- sert the lifting kit (Figure 8)

Figure 8 - Lifting kit

3. HANDLING, INSTALLATION, PREPARATION, USING THE MACHINE

) Once the lifting kit is inserted the plunging arm mixer can be lifted. Simply lift it using the E marked hooks which are to be hooked to the lifting brackets. We reiterate to use a sturdy trap; during this phase pay the utmost attention and make sure that unauthorised people are ut of range of the machine. Remember once the machine is raised, remove the pallet below. For the correct anchoring of the rope provided for lifting, use the two hooks supplied and a ope/strap **(Length of rope: 2 metres, for loads greater than or equal to 1000 kg; the lifting trap must be in accordance with EN 1492-1).**

) Carefully lower the mixer to the ground of the work station planned by the user; the station hould be a flat surface, dry, clean and with sufficient space for handling. For internal handling, he machine was equipped with two special wheels, in the lower part.

) Once lifting is complete, re-tighten the screws on the side caps which were removed.

) Now the mixer can be controlled by means of the castors provided as standard and which re already installed on the machine. Once you find the right place to position the mixer use he two stabilising feet **(Figure 15)**.

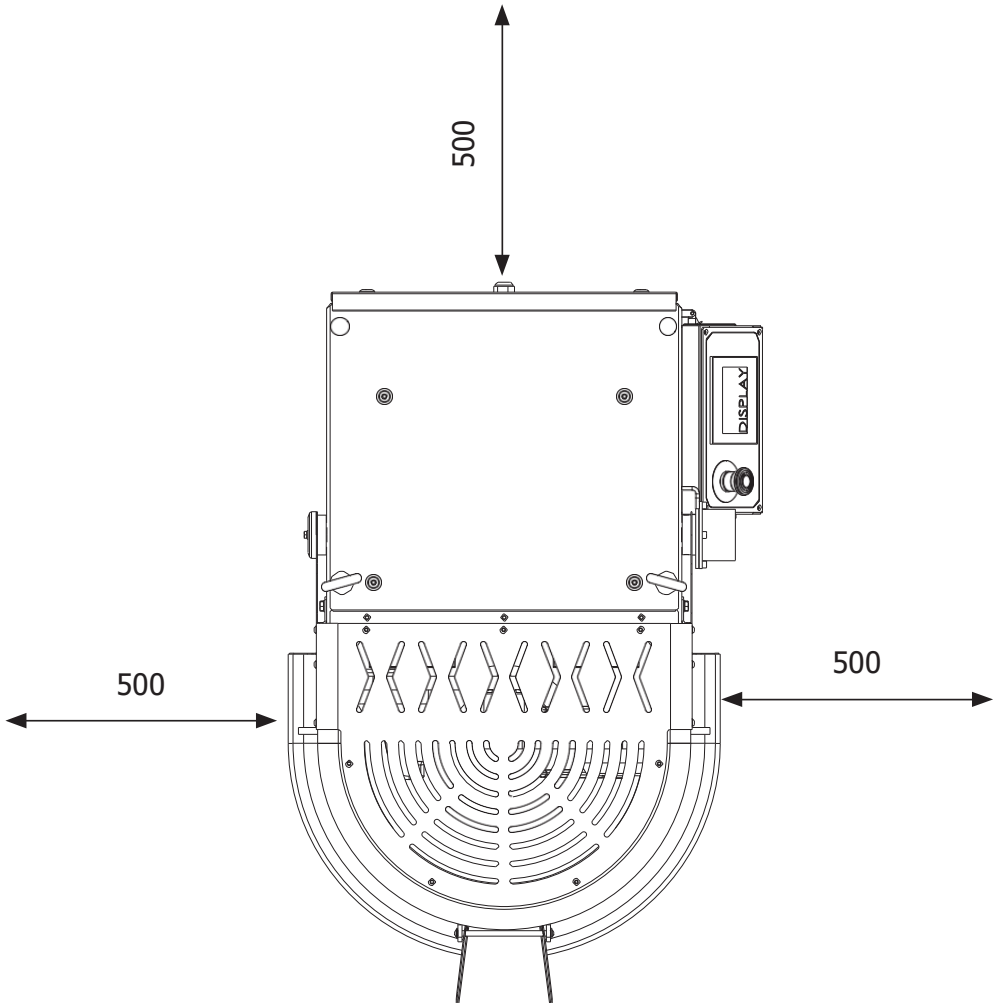
Figure 15
Stabilizing feet

Figure 9
Lifting of the mixer by hooks and ropes

Installation of the mixer

- Select a suitable place to locate the machine respecting the minimum distances from th walls. These spaces are required for cleaning and routine maintenance operations, which als allow you to operate in conditions of safety avoiding possible dragging and/or crushing.
• The room must be provided with adequate lighting and ventilation.
• Check that the connections have been prepared as specified in this manual **(electricity).**
•Having removed the machine from its packaging ensure it is intact, checking that there are no parts visibly damaged, if in doubt do not use the machine and contact a qualified technicia or your dealer.
• The packaging materials (**plastic, nails, screws, wood, etc.**) should not be left within th reach of children or adults, as they are potential sources of danger, but must be placed in th appropriate collection points, especially if.

WARNING!
For the lighting of the environment it is obligatory to adhere to
that indicated by current legislation.



.3 Connection to the electrical mains

The machine is supplied with an electrical power cord with a CEE plug **three-phase + earth see Figure 17)**

Before supplying power to the machine, make sure that **the line voltage is equal to that tated by the manufacturer** and indicated on the identification plate.

The cable must be kept away from hot and/or moving parts and must not impede the movement or passage of persons, animals, property.

The socket, in which the plug will be inserted, must have characteristics suitable for the maximum current draw and be compliant with current laws and regulations **(including being orrectly connected to the earthing system).**

The plug must remain easily accessible and clearly visible from any position in which an perator is located, even only for a short time.

Upstream of the plug/socket connection point suitable protective devices must be installed gainst current overloads, short circuits and phase to phase, phase to earth failures..

For the sizing of the cable and its isolator see the data on the wiring diagram.

The electrical system and the earthing system of the production site must be realised, maintained, retained effective and periodically checked by professionally qualified and trained ersonnel, who can issue at each intervention any declaration of conformity as required by pplicable laws and regulations.

ONLY IF NECESSARY) At the first start-up check that the direction of movement of the tensil arm is correct; otherwise it will be necessary to reverse two phases in the power lug, entrusting the task to an experienced and qualified electrician (never disconnect the arth wire and the neutral wire from their respective terminals).

WARNING!
Work on the electrical part however minor requires
the intervention of professionally qualified personnel.

Standard for the safety of electrical plants

For Italy electrical installations must satisfy, as well as the technical specifications of the CEI also relative decrees enacted by **the Ministry of Economic Development 22/01/2008 no. 3 in implementation of article 11m, paragraph 13, letter a) of Law 248 of December 2, 2005)** In particular, it requires that the installation is carried out by a professional with the necessar technical requirements, and registered with the appropriate register.
The installer is obliged to issue the client with a "declaration of conformity". We suggest that th facilities of the old installation are checked in order to bring them into line with the latest safet standards and technology.

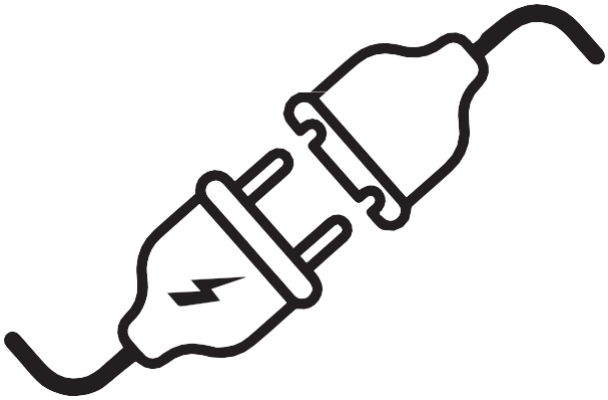


Figure 17 - Connecting the electric plug

VOLTAGE TABLE	Volt (V)	Herz (Hz)
SINGLE-PHASE + EARTH	230	50/60
THREE-PHASE + EARTH	230	50/60
THREE-PHASE + EARTH	400	50/60

3.4 Electric connection - wiring diagram

• Check that the mains voltage is equal to the voltage indicated on the CE plate of the machine.

• The installation must be protected by a circuit breaker.

• Earthing.

•Provide a power outlet in the wall type **3P + earth** and a corresponding waterproof plug to fit to the power cable (the machine is equipped with a CE socket supplied with the machine).

• **Change in voltage:**
To make a change in voltage you must contact THE MANUFACTURER as this is not provided for.

• **Before turning on, check:**
- Check that the emergency button is off.
- Protection closed.
- Check that there are no objects, tools, screws etc. inside the machine or the bowl.
- Check that the main switch is **ON**.
- Do a test run by pressing the '**START**" button.

3.5 Preparation of the machine

The machine can and should operate only one person at a time;
The turning on of the control panel will be at the side (**See Figure 20)** while the position that i normally occupies will be to the front (**See Figure 21**). Remember that the operating machin is not without residual risks.
It is therefore essential not to touch for any reason, with objects or with any part of your bod any moving parts, both during the working phase of the machine, and simply with the machin on. Please refer to the dedicated paragraphs (**4.5 / 4.8**) for the procedures to be performe when intervening in the event of failures or malfunctions or simple cleaning.

WARNING!
It is forbidden for anyone who does not have the requested requirements,
as indicated in this manual, to perform operations on and/or with the machine..

At the beginning of each day and / or shift check that guards are intact and locked an the safety devices are working

Figure 20 - Powering on the devices laterally

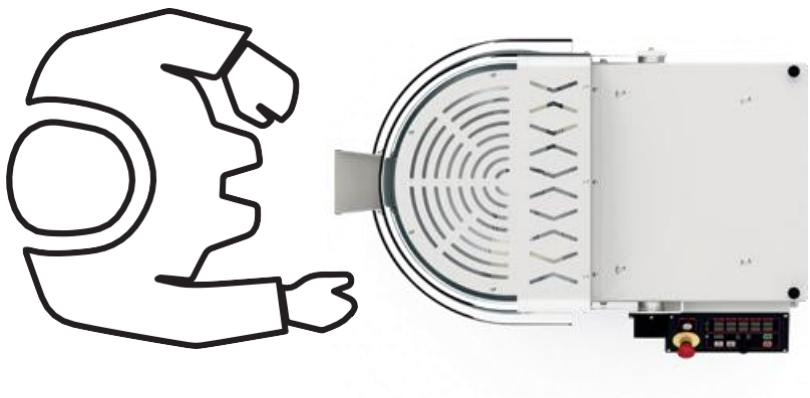


Figure 21 - Use of commands by a single operator

3.6 Using the machine

Before starting normal work remember the following important points:

1) Before using the machine you must put the ingredients inside the bowl.

N.B. Limit the dispersion of the ingredients in the environment and in the other components of the machine for reasons of hygiene and safety (for example the flour dust).
Moreover infiltration of residues in the mechanical organs can cause a malfunction of the machine.
Therefore be careful to accurately dose the ingredients.

N.B. The ingredients must be mixed so that the sum of their masses does not exceed the nominal capacity of the dough.
It is recommended to load the flour and then the water into the bowl; in this way the flour by getting wet increases its specific weight but the volume remains unchanged.

4) The ingredients, inserted manually, are loaded in the machine with the **safety protection** raised, which is made in thermoformed transparent PETG (**see Figure 23**).
The protection, positioned above the bowl, **once lowered**, prevents the risks associated with use, ensuring the safety of the operator.

5)Additional ingredients can be added during processing by opening the raw materials slide (**see Figure 26**).
N.B. The mixing operations take place with the protection lowered.
If the machine is turned on with the protection raised, it will not start.
If you raise the protection while the mixer is in operation, the safety micro-switch will turn off the machine.

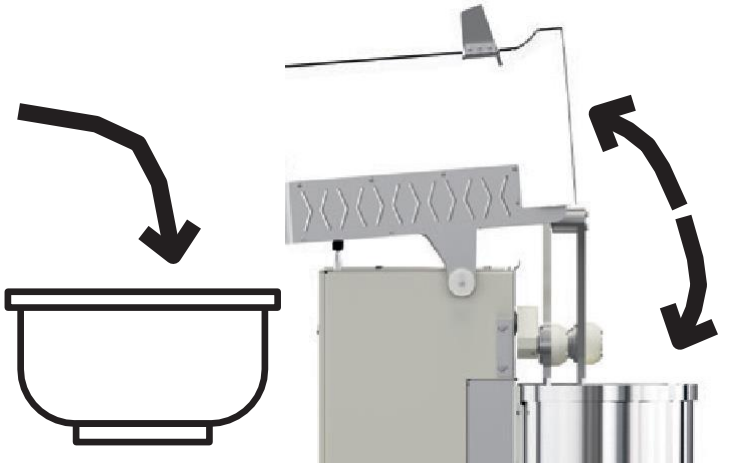


Figure 23
Safety protection

Figure 26
Opening where I can insert liquids or ingredients inside the bowl

3.7 Production cycle of a dough motion of the machine

The motor operates at a variable speed controlled via the control panel, the pulley, belt and mule pulley, which transmit the motion to the coupling shaft. The arms and the utensils follow the motion as indicated by the arrows **(Figure 27)**

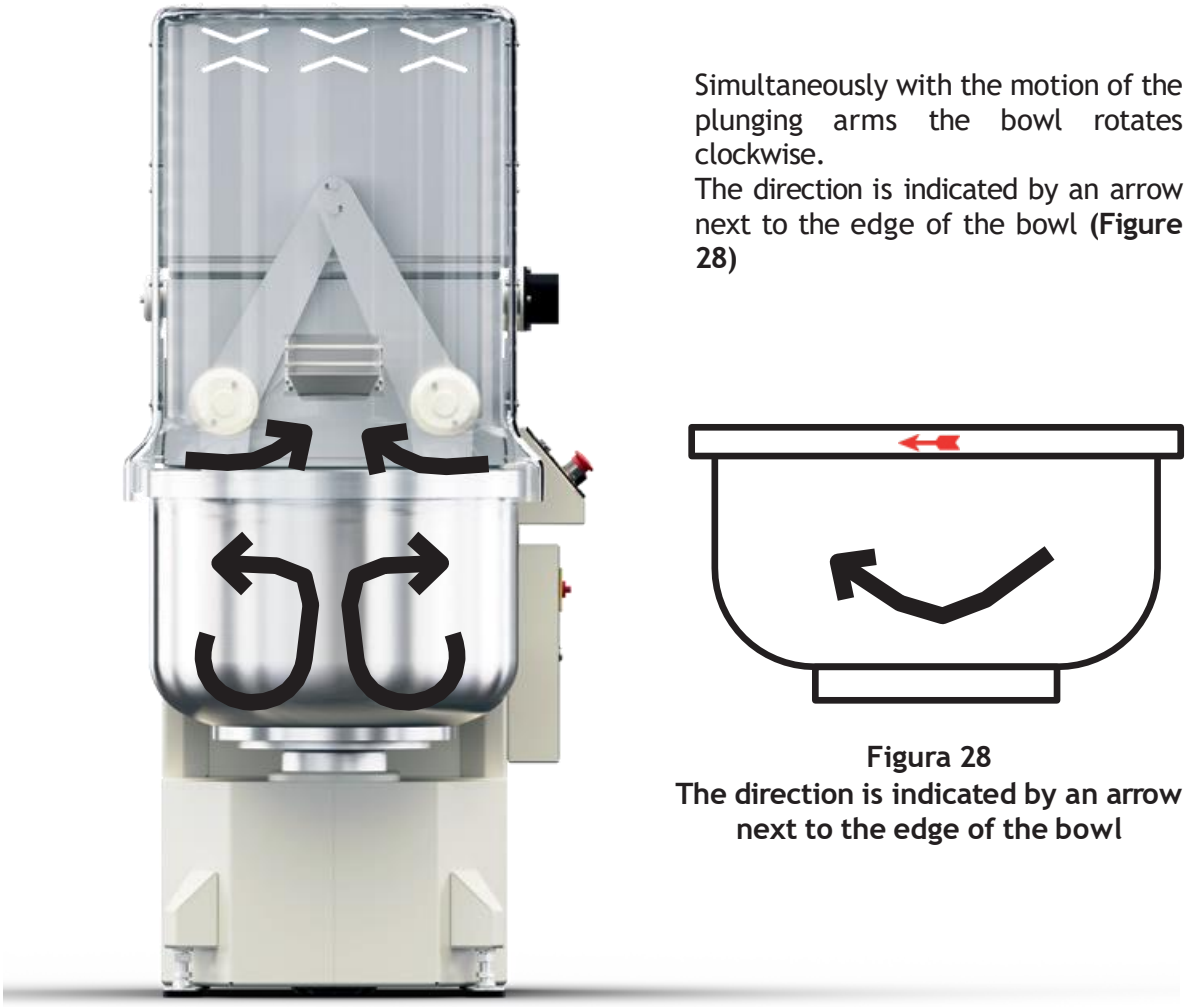


Figura 27
Motion of the utensil arms

Simultaneously with the motion of the plunging arms the bowl rotates clockwise.
The direction is indicated by an arrow next to the edge of the bowl **(Figure 28)**

Figura 28
The direction is indicated by an arrow next to the edge of the bowl

N.B. In the 2-speed mixer, there is a sticker that indicates the direction of rotation of the bowl with an arrow. If it turns backwards, reverse the phase via the plug, otherwise it won't knead.

3.8 Procedure for stopping the machine and subsequent restart

In the event of a sudden stop check if there is power.
Then check the safety devices, however the user's safety is ensured by:

- The stopping of the machine as a result of the intervention of the safety device
- **"Safety protection in PETG'' (Figure 29).**
- If you raise the protection you activate a **"Safety micro-switch"** which stops the machine.
- The stopping of the machine by pressing the **'EMERGENZA (EMERGENCY)'' (Figure 30).**
- The protection of the motor against overloads.
- Compliance with the cleaning and maintenance instructions, of this warning.
- Main **ON-OFF** switch **(Figure 31).**

Figure 29
Safety protection

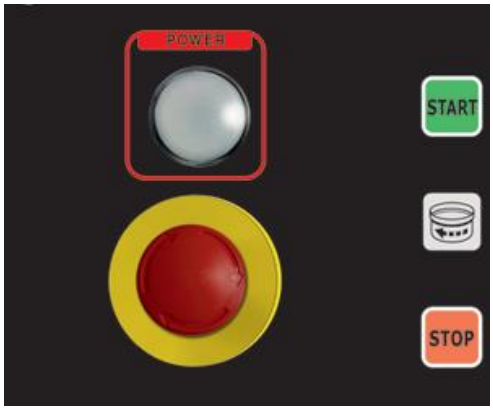


Figure 30
EMERGENCY button

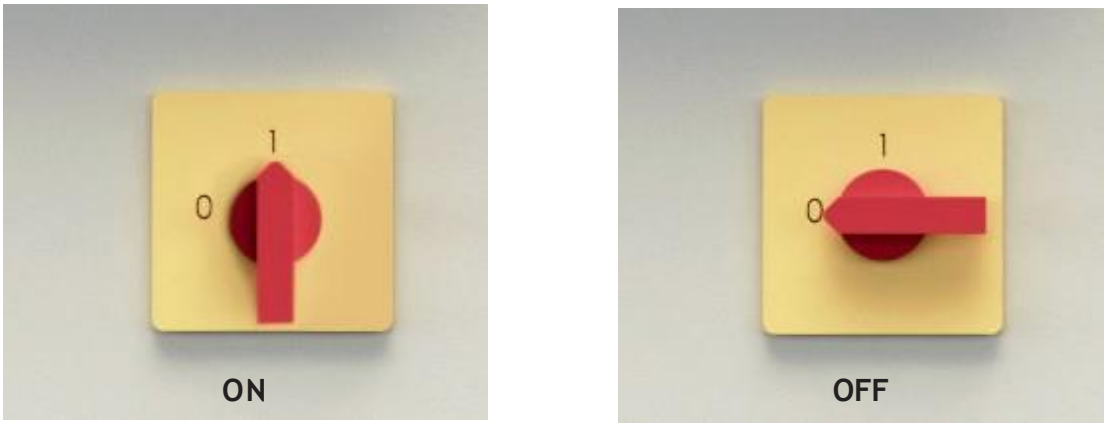


Figure 31
Main ON-OFF switch

N.B: In case of a sudden stoppage of the machine contact a qualified technician.

3.9 Education and training of personnel on machine use

As repeatedly stated in this manual, the employer must provide workers with adequat information and education, including practical (training), on the correct and safe use of th machine (it must be simple and understandable with respect to the acumen that can b reasonably expected from the concerned parties).
The following table provides a minimum list of topics to be covered as information, training an personnel training; for clarity we give the following definitions:

Information: transfer of news and knowledge, without verification of learning.
Education: transfer of news and knowledge on particular and specific topics, with verification of successful understanding of the topics covered, but without practical demonstration.
Training: transfer of news and knowledge, with practical demonstration of application of th same on particular and specific topics, and with verification of successful understanding b application to practical cases of the subject matter.

TABLE 3
EDUCATION AND TRAINING OF PERSONNEL ON MACHINE USE

Topic	Information	Education	Training
Dangers that characterise the machine and related risks (difference between danger and risk)	X		
Assembly/disassembly and adjustment of the mixer arms		X	X
Using the controls. Programming		X	X
Possible ways to stop the machine	X	X	
Possible faults and possible solutions. Error codes on display	X		
Limits and intended use of the machine. Permitted uses and prohibited uses	X		
Handling of the machine	X		X
Purpose and correct use of the opening present on the bowl guard for taking dough samples	X	X	
How to properly introduce the ingredients in the	X	X	X
Maintenance operations	X	X	X
How to carry out cleaning		X	X
Using PPE		X	X
Residual risks and related measures to adopt to limit them	X	X	
Noise emission of the machine	X		
Safety devices supplied and checking their efficiency			X
Safety signs	X	X	

4. MAINTENANCE

4.1 Preamble

Interventions can relate to routine maintenance or extraordinary maintenance. All maintenance, periodic or not, dealt with here can be understood as routine maintenance, unless otherwise specified; other interventions, not mentioned here, are to be considered as extraordinary maintenance; if in doubt contact the manufacturer.

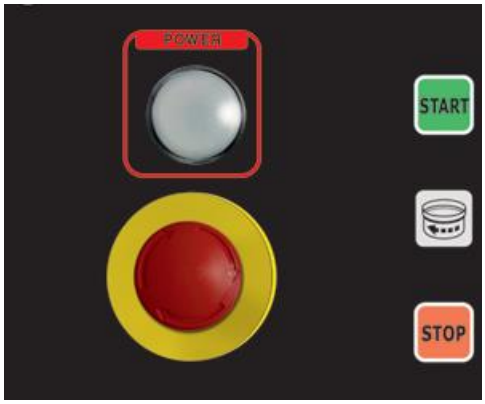
WARNING!

Before starting any maintenance and cleaning operation, even if they appear easy, one must:

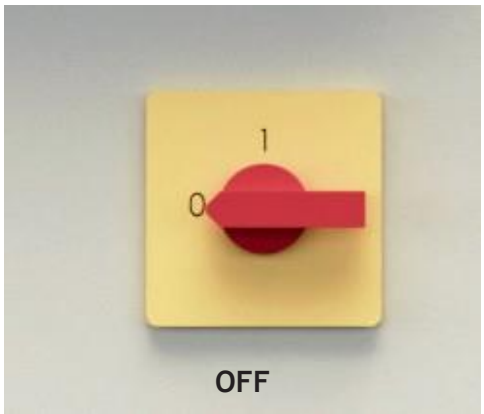
Press the emergency button (Figure 32)

Turn the main switch to O (OFF), and disconnect the power plug (Figure 33): the plug must remain visible so that anyone, and in particular the operator, can verify the absence of electrical power; this is in order to prevent someone from starting the machine, even accidentally.
If, to perform an operation, you have to remove a guard or disable a safety device, take appropriate measures so that others are not exposed to risks as a result (e.g. delimit the area with red and white chains and display warning signs of the risks as a result of the work in progress); **each guard should be put back in place and secured with the provided fixings and every safety device must be reactivated, as soon as the reasons for their removal/deactivation cease.**

Anyone who fails to comply with the instructions contained in this manual and/or for improper use, or however does not comply with the intended use of the machine, causes, directly or indirectly, damage to people, animals and property, will have to take full responsibility.



Emergency button (Figure 32)



ON/OFF switch (Figure 33)

4. MAINTENANCE

4.2 Maintenance and checks to be performed daily

- Before starting any operation, implement the safety measures described in (**chapter 4.1.).**
-At the end of the day/shift, or, if the product requires it, at the end of production, clean and disinfect the machine, paying particular attention to the parts that may come into contact, even accidentally, with food **(for details see chapter 4.9).**
At the beginning of each day or shift make sure that the safety devices are efficient.

4.3 Adjusting the tension of slings.

For adjustment of slings it is advisable to contact a specialised technician, your dealer or directly contact THE MANUFACTURER

How to replace the drive belt/s:
• Remove the rear closing housing after removing the fixing screws;
• Unscrew the tie rod nuts of the motor base until you remove the belt/s
• Replace the belt/s with the new ones and proceed with tensioning them.
• Replace the closing housing.

IMPORTANT:
It is recommended to replace all the belts of the same drive section for a greater service life and improved operation.

Replacement of the motor (EXTRAORDINARY MAINTENANCE)

• Remove the belts;
•Disconnect the electrical cables from the terminal block of the motor and place it on the ground taking care to avoid crushing your limbs;
•Separate the pulley from the motor, by loosening the side fixing screw and mount it on the shaft of the new motor, securing it with the side fixing screw, previously loosened;
• Fit the new motor on the base by securing it with the corresponding screws;
• Refit and tighten the belts;
•Reconnect the electrical cables to the terminal block of the new motor and close the cover again.
• Adhere to the connection sequence of the cables as per the previous motor;
• Refit the rear housing;
•Check that the motor turns in the right direction, otherwise reverse two phases for each third connection affected in the motor terminal block.

WARNING! For these types of maintenance always contact a specialised technician.

4.4 Replacement of components

When and why should the safety micro-switch be replaced:
A periodic monthly inspection of the proper functioning of the safety micro-switch, present inside the machine itself. The micro-switch is tested according to two basic parameters which are operation and positioning. In the event that one of these listed requirements is not met, you have to replace the micro-switch.
When making a replacement make sure to use spare parts of the same type and brand as those fitted by the manufacturer; otherwise contact the support service of THE MANUFACTURER.
The micro-switch is replaced by loosening the relevant tightening screws of the same, but be careful to replace the screws by tightening them correctly. Finally, proper operation must be verified by referring to the points previously dealt with, paying particular attention to the adjustment of the intervention limits..

Figure 34
Safety micro switch position

4. MAINTENANCE

When the mixer stops at the opening of the protection, this means that the micro-switch is working properly.

IMPORTANT:
The safety micro-switch must intervene when, in the case of the protection being lifted, a minimum opening is created between the upper edge of the bowl and the lower safety edge.

IMPORTANT:
The replacement must be carried out in complete safety and above all it should be performed by specialised technicians. Also please note that before spare parts are replaced there should be no power and the machine must be completely shut down.

WARNING!
THE MANUFACTURER does not take any responsibility for accidents or injuries as a result of the failure/positioning of the safety micro-switches and if in the replacement of the same the instructions supplied with this manual are not complied with

4. MAINTENANCE

4.5 Possible faults and/or anomalies

We list below some possible faults and/or anomalies.
The resulting action must be performed in accordance with the instructions, if existing, and in any case **only after having implemented the safety measures described in par. 4.1.**

TABLE 4
POSSIBLE FAULTS AND/OR ANOMALIES

Faults and/or anomalies	Possible causes	Solutions
The machine does not power on	No power	Check that the power plug is inserted, the main switch is on I (ON) and the protections of the power line of the premises have not been activated; if so restore them.
	Intervention of protection fuses and/or circuit breakers	Replace fuses and/or restore the tripped circuit breakers (**Extraordinary maintenance**) In this case contact a specialised technician
	Belt/s loosened	Tighten the belt/s (contact a specialised technician).
The motor is not working or the machine won't start	Emergency button pressed	Rearm the EMERGENCY button. Check that the plug is correctly inserted in the socket.
	Bowl guard open	Lower the protection grid and restart the machine by pressing the START button.
the motor makes noise but does not work	A phase is missing in the motor	Check the power supply (phase disconnected from the socket, socket connected badly or incorrect installation).
the utensils tend to jam	Dough too thick	Try adding water to the mixture or reduce the quantity of ingredients.

The display may indicate the following errors:

PANNELLO PRO:

- Emergency button /mushroom pushed
- Open bowl protection
- Motor thermal protection (current overload)

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INV PANEL:
Err = Emergency on /guard or safety carters open

INV / PROG PANEL:
EE: Emergency on /guard or safety carters open

TOUCH PANEL:
triangle with exclamation point = Emergency on /guar or safety carters open

6. Spare parts

In a separate file, which is an integral part of this manual, the assembly drawing of the machine is provided while the corresponding lists of components are provided at the end of the manual. Every detail of the design is identified by a number or a symbol, which makes it uniquely identifiable in the relevant list.
To order replacement parts, always refer to the assembly drawing and the corresponding components list, giving a brief description of the part and/or of its use and its identification number; always quote, as well, **the serial number of the machine**.

7. Electrical maintenance

Also supplied with this manual is the documentation (**assembly drawings, schematic, parts list, etc.**) required to understand the electrical installation and troubleshooting.

Electrical maintenance:
•Check weekly the power cord and the plug by visually inspecting them, as well as whenever the machine is subjected to friction, impacts and trampling,
•Check the correct operation of the safety micro-switch, by opening it and closing it again during motion.
• n the event of electrical faults, contact a qualified technician.

WARNING!
Any operation that directly or indirectly affects the electric equipment of the machine must be performed by specialised personnel, professionally qualified, formally authorised and who possesses the regulatory and technical knowledge for carrying out the work in a safe and workmanlike manner (extraordinary maintenance).

IMPORTANT:
Never modify the calibration value of parts and components, in particular if it relates to safety components.

4. MAINTENANCE

4.8 Cleaning and sanitizing the machine

Before starting any operation, implement the safety measures described in chapter 4.1. In accordance with applicable laws, it is necessary to ensure the perfect hygienic conditions of the machine; it must be cleaned and disinfected thoroughly and as deep as possible, both externally and internally at the end of each day and/or work shift.
Thoroughly clean and disinfect daily to prevent biological risks due to the possible proliferation of mould, bacteria, etc.

IMPORTANT:
Before any cleaning or maintenance make sure to always switch off the machine.

IMPORTANT:
For washing, never use water jets at high pressure.
Electrical parts, including the motor, controls and the digital display should not come in direct contact with liquid products.
Strictly follow the instructions shown in the instruction sheets and in the safety sheets of the cleaning products, in particular with regard the related use of personal protective equipment.
For cleaning at least wear shoes with a reinforced toe, waterproof gloves and a dust mask, as described above.
Do not try to recover flour that is deposited on the parts of the machine; this could lead to a contamination of the food with a consequent risk to the health of consumers, and also a risk for the safety of the operator should he try to introduce his hands, fingers, etc. in spaces characterised by the presence of moving parts (for example, between the bowl edge and guard, between bowl walls and column of the base, etc.).

It is strongly recommended to use vacuum cleaners and not compressed air tools, which do not ensure the removal of dirt from the machine, as it may go back on the carpets and consequently in the dough. They can also lead to an infiltration of residues in the mechanical parts, causing the machine to malfunction.

In order to achieve optimal processing both from a production and hygienic point of view, it is mandatory to observe some measures concerning the cleaning and periodic maintenance of the machine. Therefore the following type of cleaning is necessary:

•**DAILY:** The mixer arms and the mixing bowl should be cleaned every day including the rear bulkhead. The machine must be kept in perfect hygienic conditions and cleaned at the end of each working day.

• **WEEKLY:** clean the PETG safety protection from the inside.

•**MONTHLY:** in addition to that above use a vacuum cleaner to carry out a complete cleaning of the machine by removing residues, and any deposits.
Check the correct state and voltage of the drive belt.
Ensure the proper operation of all bearings on the machine checking their integrity, noise level and immediately reporting any operation problems. For this type of maintenance always contact a specialised technician.

4. MAINTENANCE

•**ANNUAL** : which includes all operations already listed with the addition of a general cleaning of the machine frame with a cloth and warm water.

Measures for cleaning the machine:

•Remove the residues of dough and/or flour that should rest on any part of the machine, especially in the cracks, gaps and corners.
• Remove these residues with a vacuum.

IMPORTANT:

Failure to observe hygiene standards can cause changes in the food product and constitute a health risk with possible physical, chemical and microbial contaminations.

• All parts in contact with the product are suitable for food use
• For cleaning, never use abrasive tools, or metal scrapers.
In any case, do not use tools that could damage the surfaces, alternatively, use soft plastic utensils, soft bristle brushes and rags.

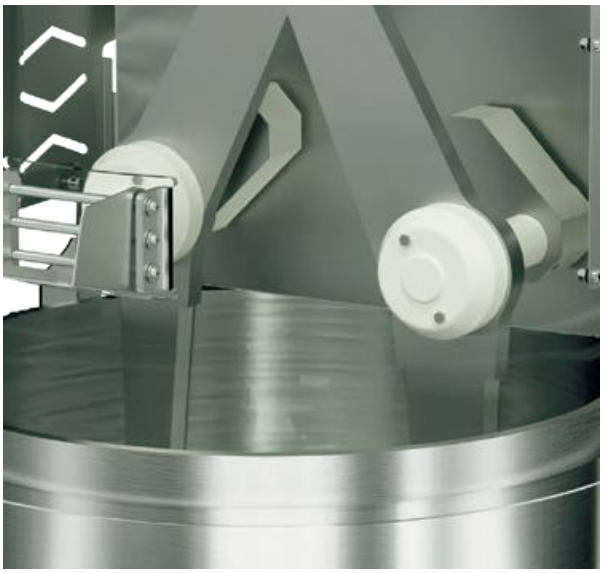


Figure 35
DAILY CLEANING
Bowl and mixer arm

Figure 36
WEEKLY CLEANING
Safety protection (internal)

4. MAINTENANCE

TABLE 5
CLEANING DIAGRAM

Work phases	Detergent	Procedure	Tools/equipment	Note
Roughly clean, eliminate product residues, if necessary, remove small parts		manual, mechanical	Spatula, scraper, prop	Start straight after the end of production
Disassemble and clean the small parts		After thoroughly washing with water (max. 60 °C) foam or manual; action time approx. 15'	Foamer at low pressure Brush	
Pre-wash thoroughly	Drinking water	Manual	Sponge Bowl	Including the small parts
Check the external cleaning		Visual		
Alkaline cleaning		Manual foamer for approx. 15 minutes	Foamer at low pressure Manual sprayer Brush Bowl	Every day Do not forget the small parts
Acid cleaning if required instead of alkaline cleaning		Manual, mechanical foaming for approx. 15 minutes	Foamer at low pressure Manual sprayer Brush to remove lime deposits	
Wash	Drinking water	Manual	Sponge Bowl	Machine and small parts
Check the external cleaning Visual		Visual		Observe individual warnings: check areas and critical points
Disinfect	According to the data sheet of the product	Spray, foam Sponging time according to the data sheet of the product	Hand sprayer	
Rinse	Drinking water	Manual	Pre-rinse bowl Final rinse bowl	
Dry		Manual	Clean cloths not releasing residues	
Protection	cooking oil	Spray	Hand sprayer	

IMPORTANT:

- **Ensure the compatibility of the products used for washing, with the materials of the machine elements.**
- **Do not use abrasive detergents that may scratch or score the surfaces.**
- **In addition, it is recommended to clean the surrounding environment after each use.**

4. MAINTENANCE

PERIODIC OPERATIONS:

- **Oil check:**

Check the oil level of the gear holder vat, the lowest pinion must draw oil to lubricate the other gears. To add oil only use: ' **LUBREN OIL 1500**".

- **Tensioning of the belts:**

Regularly check that all the machine belts are taut, inspect their wear and if necessary provide for their replacement which must however be carried out at the slightest sign of attachment and/ or wear of the rubber of which they are made.
For this operation contact a specialised technician.

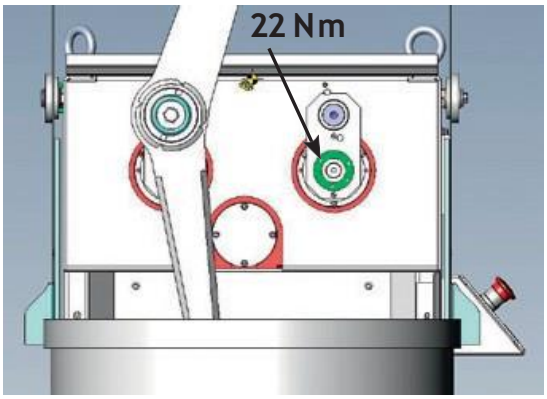
9. Removing from service or extended stop

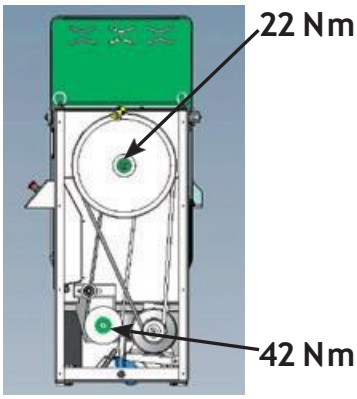
In the event of storage or prolonged exclusion from service, the machine must be disconnected from the mains power supply; it must be cleaned in all its parts and protected with a waterproof sheet, so it is protected from dust, insects, rodents, etc.
If the machine is moved to an unattended place, make sure that it is not subjected to impacts, tampering or abuse; put it in a dry place and protected from the elements. Once it is restored to service a careful preliminary examination is required to check its integrity and act as if it was the first start.

10. Replacement of oil seal rings

When and why rings need to be replaced:

A periodic monthly check of the proper functioning of the sealing rings must be carried out of the oil, present inside the machine itself. Check carefully there is none oil leakage from the front seal rings (mounted on the connecting rods) and / or rear (mounted on the large pulley). In the event that one of these leaks oil, it must be replaced of the component. During replacement, care must be taken to use spare parts of the same type and brand as those mounted by the manufacturer; otherwise contact the assistance service. The replacement of the oil sealing rings is carried out by removing the shrink discs, unscrewing the appropriate tightening screws of the same, but paying particular attention to the fact that the screws are restored with an appropriate tightening 22 or 42 Nm using the use of a torque wrench.





4. MAINTENANCE

Phasing the connecting rods:
When we replace the oil sealing rings and then loosen the locking screws, it is very important to reposition the connecting rods in their original position.

ATTENTION: tightening in the wrong position causes serious mechanical damage to the bowl, the kneading arms and the gears !!!

When repositioning the locking elements, before tightening the screws, we must put the connecting rods in phase, positioning them with extreme precision. The connecting rods must create a perfect plane between them (use a leveler to find the perfect alignment).
Also pay close attention to the position of the gear counterweights with respect to the position of the connecting rods, as shown in the figure.
Once this is done, proceed by tightening the screws with the correct force and using a torque wrench.

4.11 Adjustment of the damping force

Important Information
Rotary dampers can not be used as end stop; external stop must be provided before the end of the stroke.

Temperature
WRD-H: -10 °C - +60 °CReference temperature for all technical information:20°CAt a higher temperatures the energy absorption or torque is reduced.Fix the rotary damper at the intended bores and flats. It is not allowed to loaded rotary dampers in astatic way or to fix them by welding. Rotary damper can not be used with agressive fluids.

Adjustment
If the mass in a trial run impacts excessively hard on the end position select the next model with higher torque for the seriesRotary dampers of the series WRD-H 2515, 3015, 4025 and 6030 are adjustable. If the damping is not suffi-cient, increase the damping continously by rotating the adjustment to „+“. If the mass don t reach the end position or the time is to long, decrease the damping continously by rotating the adjustment to „-“. If the adjustmentis not sufficient in an end position contact Weforma.Rotary dampers should under no circumstance be loaded over the damping angle mentioned in the

painted

welded

held with clamps

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5. SAFETY

5.1 Preamble

The considerations, in the following chapter, are based on the assumption that:

•The operator has read and understood the instructions and directions of this manual and, in particular, that the conditions and the intended use of the machine is known.
•The machine is designed for a working environment for the processing of food products.
•Workers authorised to use the machine must be properly trained and informed of the specific risks present in the work environment, also in compliance with applicable laws and regulations.
• Access to the work environment is closed to unauthorised persons, laymen and minors.

2. Hazards, safety devices and residual risks

Pursuant to **Directive 2006/42/CE** information is provided below on the hazards that characterise the machine, the corresponding risks and the measures taken to eliminate or reduce them; where a risk has not been eliminated, information is provided on its residual risk and on any additional measures to be taken by the user to limit them further.

1. Hazards which characterise the machine

The mixer is characterised by the following hazards:

Of a mechanical nature
• Crushing, dragging, impact: movement of the mixer arms.
• Dragging, abrasion: between rotating bowl and stationary parts
•Impact, crushing, injury in case of rapid descent of the guard: between the bowl top edge and the guard
Of an electrical nature:
• Electrocution: due to contact with live parts (e.g. inside the electrical box).
• **Of a biological nature**
•Presence of decomposable substances and development of organisms, in the event of no or poor and/or infrequent cleaning, disinfection, disinfestation.
•Alterations of the food product (for example, contamination by the development of micro-organisms or foreign matter)
•For the inhalation of flour dust and/or other airborne substances Damage to the respiratory tract (asthma, rhinitis, etc.)

WARNING!
•The danger of flour dust is harmful to the operator's health because it can be generate possible rhinitis, lachrymations, "professional" asthmas
•Remember not to work in an ATEX environment due to the possible explosive properties of airborne dust
• Avoid cleaning with compressed air, water jets, and use instead vacuums and wet cloths.
•Also please note that the machine works in an environment subject to the risk of explosion because of the presence of finely ground organic dust and smoking is therefore prohibited during processing.

• For non-observance of ergonomic principles

•Injuries/damage to the body as a result of incorrect posture and/or movements and/or as a result of lifting and handling heavy loads (putting flour sacks into the bowl or containers with large quantities of water, removing masses of dough from the bowl, etc.)

N.B. The corresponding risks were eliminated or reduced as much as possible, with the safety measures and devices described in chapter 5.2.2 and/or they can be further reduced if the user adopts the measures described in 5.2.3 - 5.2.4 - 5.3

5.2.2 Safety devices of the machine

A safety device is used to prevent a possible accident.

• Safety protection:

The protection, positioned above the bowl, **once lowered**, prevents the risks associated with use ensuring the operator's safety (**see Figure 37**).
Additional ingredients can be added during processing by opening the protection.

N.B. The mixing operations only take place with the protection lowered.
If you raise the protection with the machine on, the micro-switch will intervene which will turn off the mixer.

• Mushroom shaped emergency stop button:

This is the mushroom shaped red button. When you press it, it remains in the depressed position and the safety system ensures that the mixer is stopped, the electricity to parts which would otherwise be dangerous is zeroed and that the machine cannot start. (**see Figure 38**).
It is important that the safety devices are checked scrupulously and that any abnormality is immediately reported to THE MANUFACTURER or your own dealer or specialised technician.

Figure 37
Safety protection

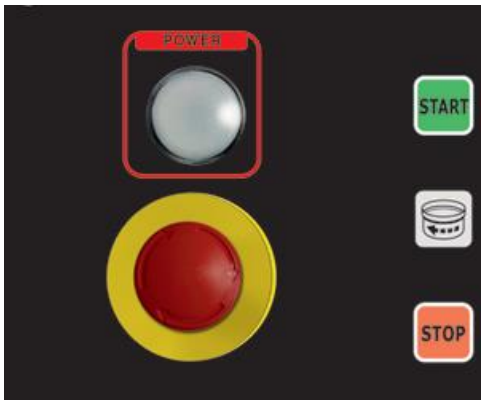

Figure 38
Emergency button

5.2.3 How to check the safety devices

Checks on safety devices must be carried out at the beginning of each day or shift.

- **Safety protection in PETG:**

A slight lifting even minimal of the protection causes the machine to stop immediately. In order to restart the machine simply lower the protection; to restart the mixer press the ‘‘START’’ button to safely resume processing. This safety device prevents the operator from putting his limbs in dangerous areas of the machine during the processing of the product.
Additional ingredients can be added during processing by opening the protection (**Figure 39**).

Figure 39
Safety protection (Opening and Closing)

5. SAFETY

• **Emergency stop button:**

With machine on (**main switch to ON**), press the emergency button: the button must remain pressed and mechanically held. By pressing the **START** button, no part of the machine should start. In order to control the **START** of the machine it is first necessary to return the switch to its normal up position, turn it clockwise to release it (**Figure 40**).

• The button should be easily identifiable by the operator.

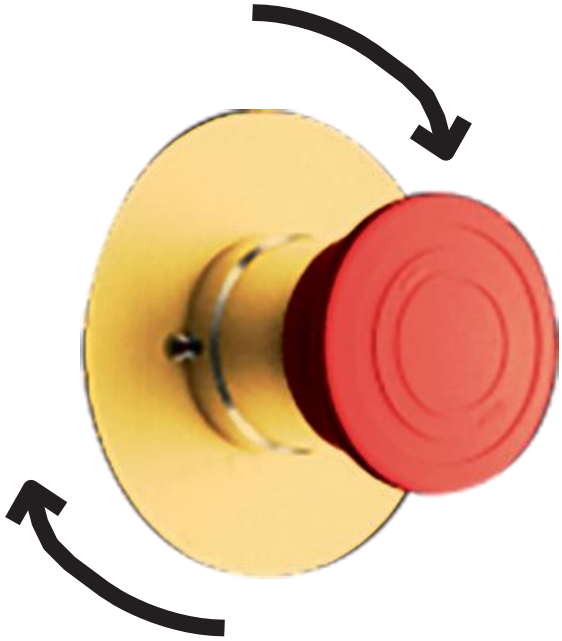

Figure 40
Mushroom shaped emergency button

• **Fixed guards**
Check that each guard present is in position, locked with all the fixing means provided, intact and free from obvious dents, cracks, breaks, etc.

IMPORTANT:
Checks on safety devices must be carried out at the beginning of each day or work shift.

5. SAFETY

4. Residual risks

The residual risks that characterise the machine are the following and/or are related to the following stages:

1. residual risk of gripping and dragging between bowl and base

A residual risk of gripping and dragging remains if a person were to introduce a body part in the space between the bowl and the machine structure, the risk is greater, the greater the thrust with which the exposed person forces it (e.g. of an upper limb).
Similar residual risk, but to a lesser extent remains in the area between the bowl bottom and the lower part of the base, therefore it is prohibited to bring parts of the body near to the danger zone in question when the machine is in motion; if necessary you then must turn off the machine beforehand and remove the plug from the power socket.

2.residual risk of crushing, dragging, impact in case of contact with the moving mixer arms.

There is the possibility, however remote, that a person can reach the mixer arms when in motion through the opening when taking dough samples and when pouring in ingredients. In fact there is a small clear space between the guard and the safety protection.
Avoid any attempt to reach the utensil through these spaces, there is also no reasonably plausible motive for doing so and would unnecessarily expose one to serious safety risks.
To further reduce risk, keep your hands at a safe distance; meticulously follow the instructions provided by the employer during education and training activities.
To avoid risks the safety protection is connected to a micro-switch with normally closed contacts and whenever one tries to open it, this creates a mechanical action which requires the forced opening of the contacts of the micro-switch. The micro-switch ensures that at the opening of the contacts there is no power supply to the motor.

If the power trips or if the plug is removed during operation of the mixer, wait for the machine to stop; however do not try to raise the protection and touch the mixer arms, this is to avoid the risk of dragging and crushing on contact with the same..

3.residual risk of dragging in the event of putting your hand in the dough

The risk can exist if, with the bowl in motion, you insert your hand into the mixture through the opening on the protection (for taking samples of dough or for adding ingredients): in fact a collision could occur and/or a painful pressure on your arm against the edge of the guard opening. Prevent similar actions and simply take samples from the surface of the dough.

4. Residual risk of flour dust

This residual risk is almost irrelevant because the residual openings of the protection are so small that they do not permit flour dust to escape.
Despite this it is still advisable to always start the machine at low speed and to keep it at that speed for at least the **first 5 minutes,** when there are ingredients in the bowl that are not mixed well, in order to limit as much as possible the emission of flour dust which at higher speeds would be much more relevant.

5. Residual risks of biological origin

It remains important to perform a thorough cleaning at least daily following the instructions in (**chapter 4.8**); this impedes the generation and proliferation of mould, bacteria, etc., due to the stagnation of putrescent organic material.
Periodically (**the frequency depends on how often you use it**) disinfect or have the machine disinfected by assigning the task to a specialist company.

6.Residual risks of musculoskeletal injuries due to ergonomic factors

When you pull out the finished dough from the bowl, divide it into small portions, whose size and mass are such that they can be manipulated easily and without risk. A serving of dough which is very heavy and bulky, is difficult to lift; dough, in fact, is extremely unstable (and it is all the more, the greater the water/flour ratio is), it tends to extend downward and it is difficult to grasp with your hands, if it does not consist of small portions; this instability, results in a continuous variation of the centre of gravity of the mass and, therefore, the equilibrium conditions and the effort that the operator must make to hold on to it. If you consider, then, that the operator must inevitably significantly bend his upper body to take and lift the portion, it is easy to imagine how much greater the ergonomic risk is (and musculoskeletal injuries), with the increasing mass of the portion you would want to move by hand.

7. Residual risk of crushing your hand

There is a residual risk, albeit remote, of crushing your hand during the closure of the protection. Therefore, keep your hand away from the edge of the bowl while the other proceeds in lowering the protection (**Figure 41**).

5.3 Risks of electrical origin

The machine's electrical equipment meets the main requirements of CEI EN 60204-1, depending on the type of machine and its intended use. It is reiterated that access to any electrical part, which is not a control device of normal use, and all operations of an electrical nature, even seemingly simple, should only be permitted to specialist technicians, with a high level of education, professionalism and experience and who possess the required knowledge to correctly and safely carry out the works.
As repeatedly stated, it is mandatory to unplug it from the electrical socket before carrying out any operation; the removed plug must remain clearly visible so that anyone can be satisfied of the absence of power to the machine (**Figure 42**).

IMPORTANT:
It should not be forgotten the hazardous nature of the machine during its operation. It reiterates the importance of not using your body or objects to touch in any way the moving parts of the machine

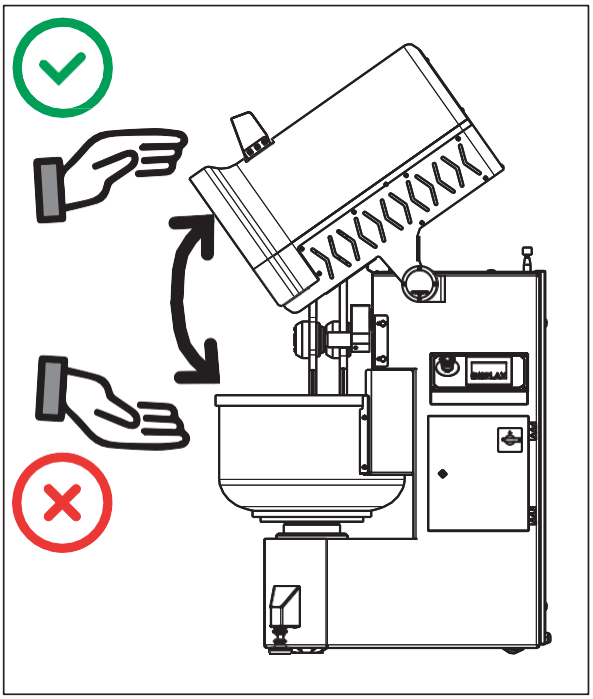

Figure 41
Safety protection
(Residual risk of crushing your hand).

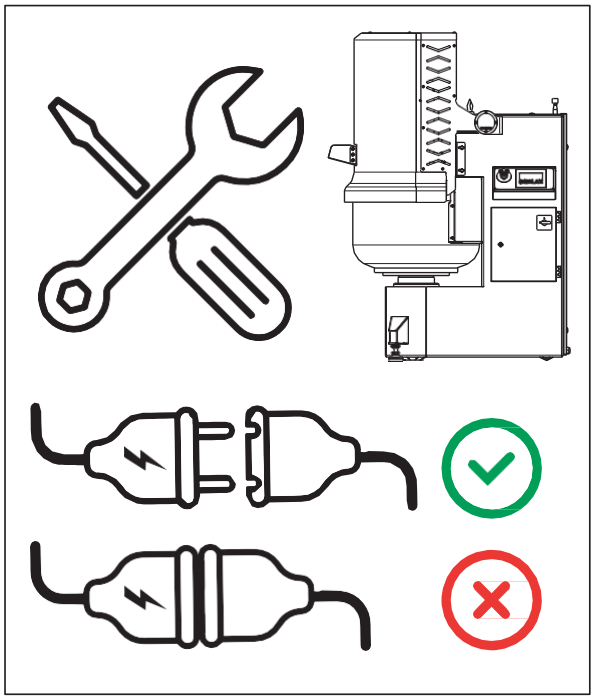

Figure 42
Maintenance of the machine.
(Disconnect the plug)

5.4 Information on the noise emitted from the machine

The machine running empty, rated as the worst case condition, emits an equivalent continuous sound pressure level A-weighted of less than **70 dB**.

The measurement was carried out with an instrument such as QUEST MOD. 1800 class I°. From this data we can infer that the machine does not produce annoying, harmful noise or requiring the use of headphones or earplugs.

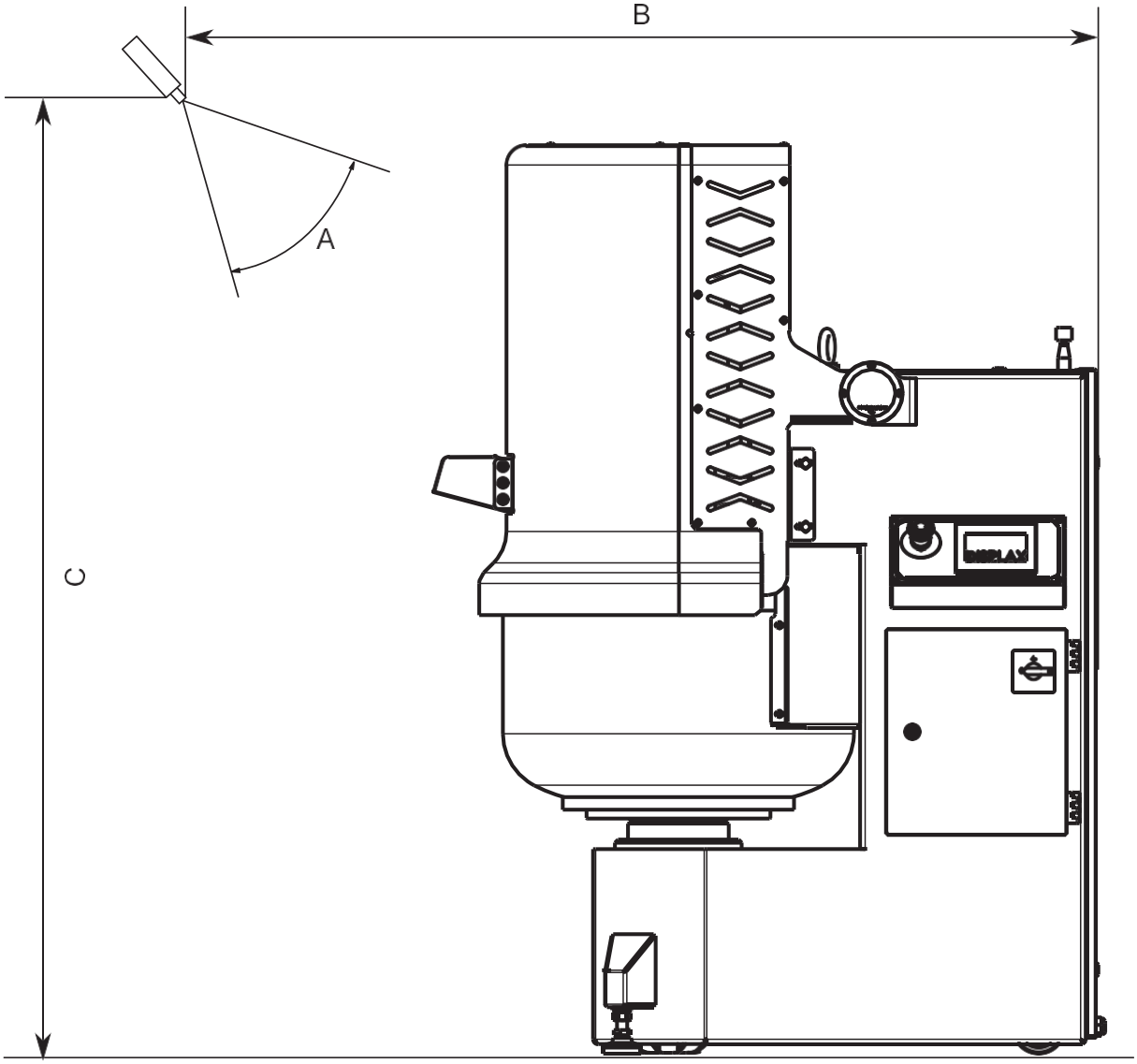

Figure 43
Testing noise emitted from the machine

5.5 Safety signs

The following safety signs are applied to the machine:

- 6 -

RISK OF
ELECTRIC SHOCK! (400VOLT)
(Yellow background, black drawing and edges)

6. DISMANTLING

Should you wish to proceed with the dismantling of the machine, you must separate its various components by material type and then arrange for their disposal in compliance with applicable laws and regulations. Contact companies who are specialised in the specific field of waste disposal who will undertake to perform the above in compliance with the applicable laws and regulations.

EXAMPLES OF MATERIALS CONSTITUTING THE PARTS OF THE MACHINE

- **Painted steel** e.g. load-bearing structure.
- **Stainless steel** e.g. the bowl.
- **Plastic** e.g. the protection in PETG.
- **Rubber** e.g. oil seals, o-rings.
- **Various material** e.g. motor (copper windings), electrical components.

Proceed as follows for scrapping:

1. Remove the electrical power cable.

2. Dismantle the movable parts that can be dangerous.

3. Dispose of most parts as iron scrap and place in waste disposal centres as required by law.

4. The other parts, such as plastic, must be disposed of in accordance with applicable regulations, and if necessary by specialised companies.

GENERAL DIMENSIONS / DIMENSIONI GENERALI

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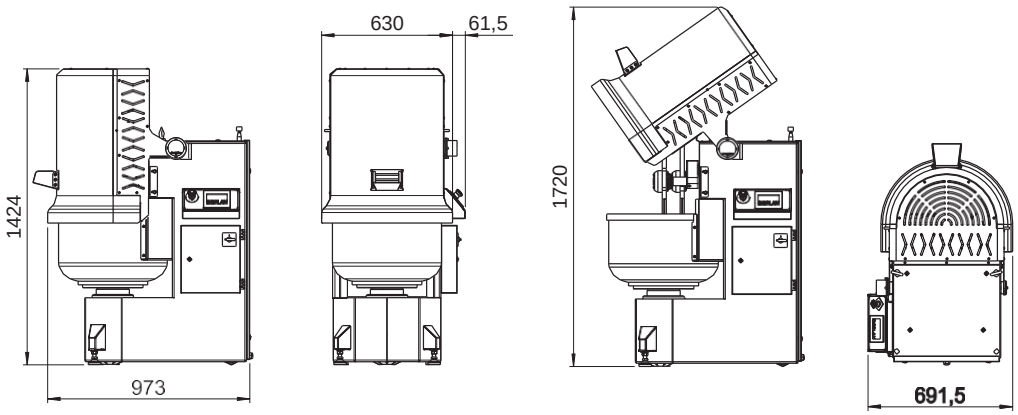

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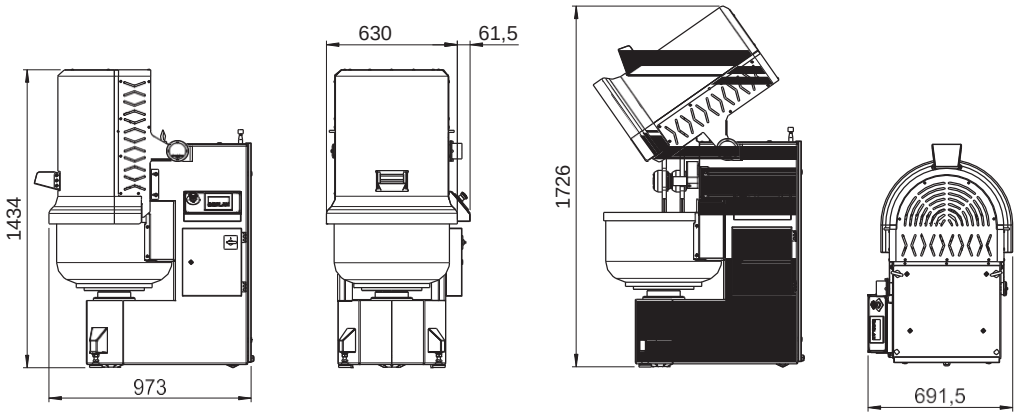

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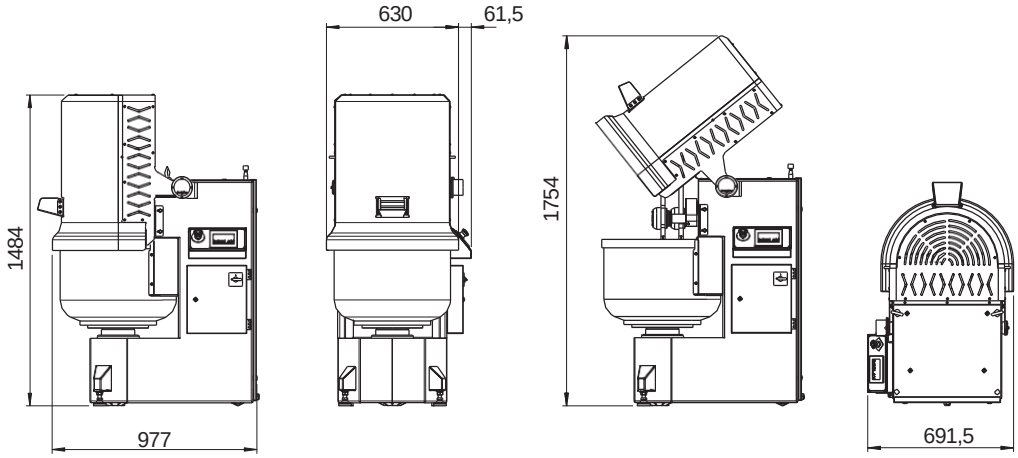

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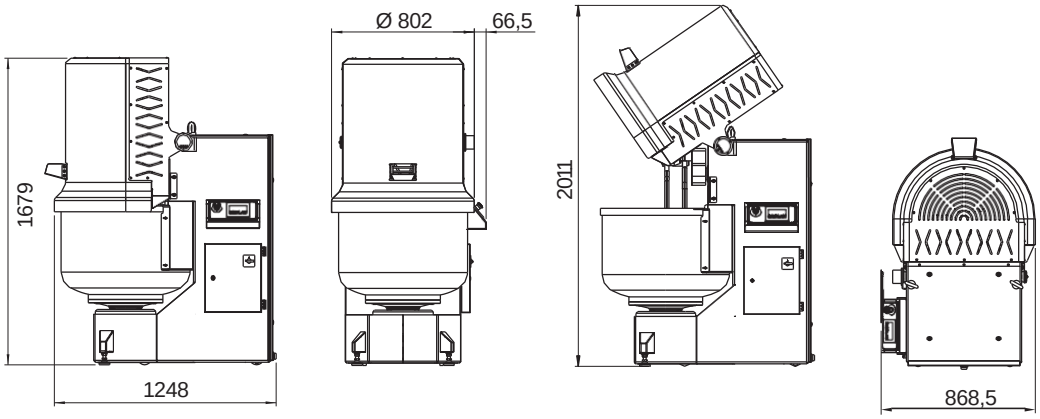

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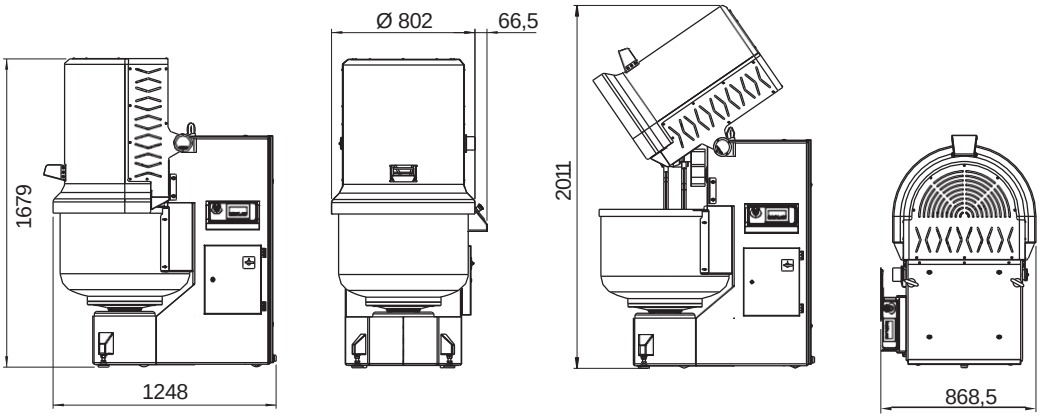

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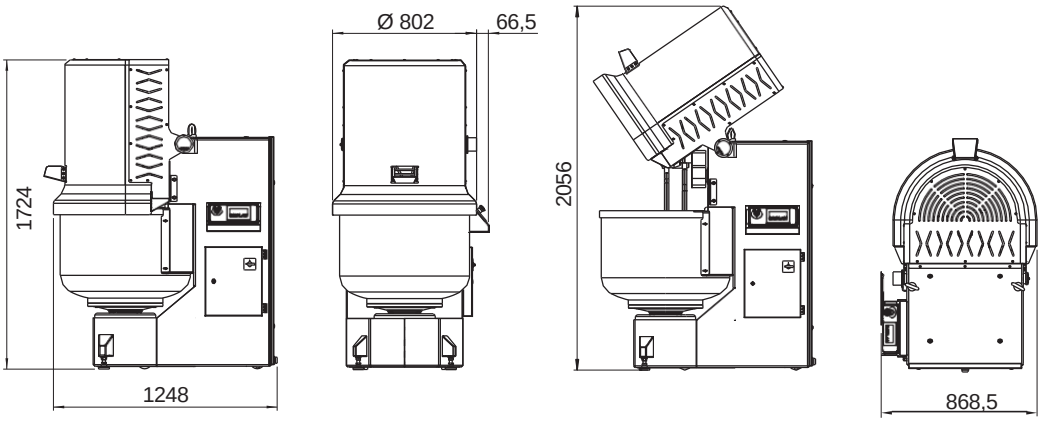

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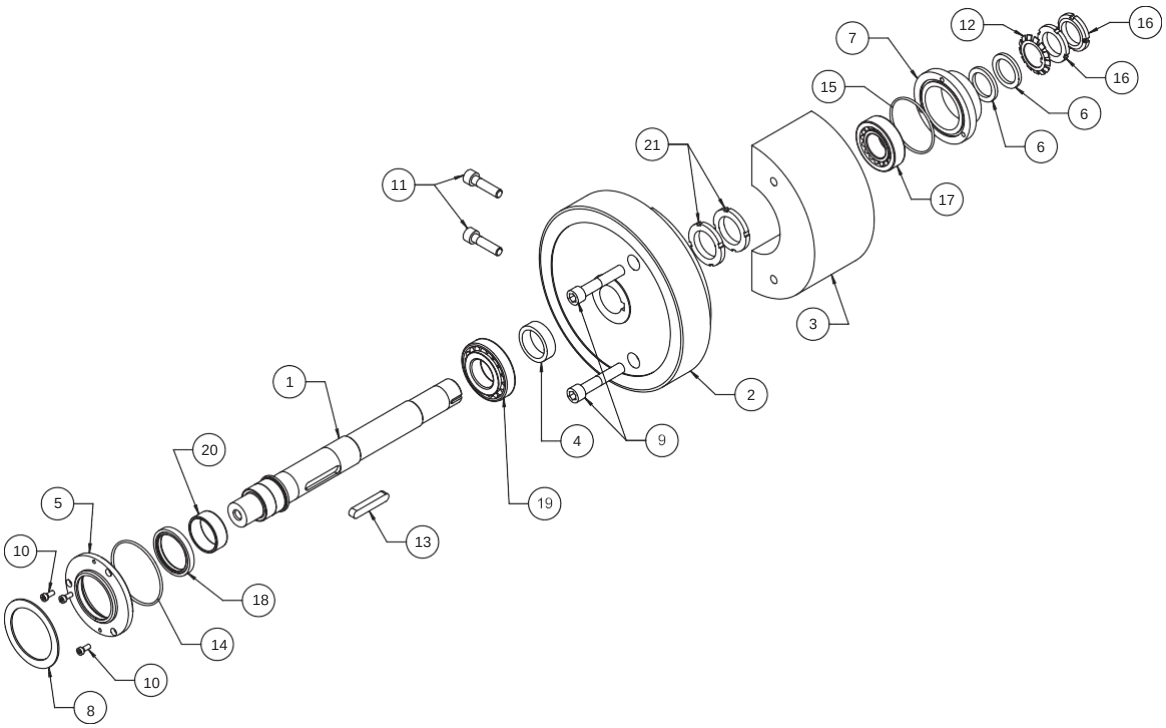
SPARE PARTS
ITWIN 45-55-65

ASSIEME ALBERO DX - RIGHT SHAFT ASSEMBLY



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SPARE PARTS
ITWIN 45-55-65

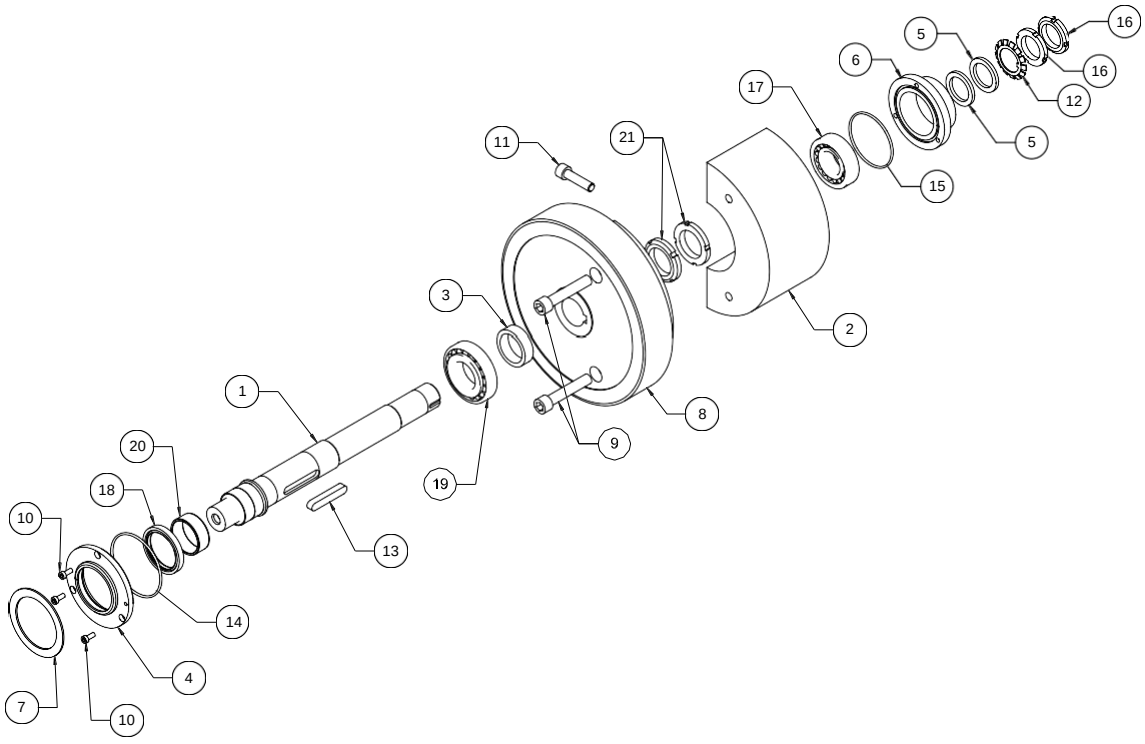
COD. A310101

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310245-3**	ALBERO CORONA DESTRO/SINISTRO	RIGHT / LEFT CROWN SHAFT
2	1	**A310246**	CORONA DENTATA DESTRA	RIGHTTOOTHED CROWN
3	1	**A310247**	CONTRAPPESO INGRANAGGI	GEAR COUNTERWEIGHT
4	1	**A310248**	DISTANZIALE ALBERO	SHAFT SPACER
5	1	**A310250**	FLANGIA PORTA PARAOLIO	FLANGE HOLDER OIL SEAL
6	2	**A310251**	DISTANZIALE CUSCINETTO	BEARING SPACER
7	1	**A310252**	COPERCHIO CHIUSURA POSTERIORE	REAR CLOSING COVER
8	1	**A310253**	SPUGNA ADESIVA	ADHESIVE SPONGE
9	2	**C00000427**	VITETCEI M 12 X 65 UNI 5931	SCREW TCEI M 12 X 65 UNI 5931
10	3	**C00000455**	VITETCEI M 5 X 12 UNI 9327	SCREW TCEI M 5 X 12 UNI 9327
11	2	**C00000505**	VITETCEI M 10 X 40 UNI 5931	SCREW TCEI M 10 X 40 UNI 5931
12	1	**C00001252**	ROSETTA SICUREZZA MB6 D.30	SAFETY WASHER MB6 D.30
13	1	**C00003621**	LINGUETTA 10 X 8 X 56 A UNI 6604	TAB 10 X 8 X 56 A UNI 6604
14	1	**C00004065**	GUARNIZIONE OR	GASKET OR
15	1	**C00004091**	GUARNIZIONE OR	GASKET OR
16	2	**C00004884**	GHIERA DI FISSAGGIO KM6 M 30X1,5	FIXING NUT KM6 M 30X1.5
17	1	**C00008237**	CUSCINETTO	BEARING
18	1	**C00008254**	PARAOLIO	OIL SEAL
19	1	**C00008256**	CUSCINETTO	BEARING
20	1	**C00008257**	ANELLO INTERNO	INTERNAL RING
21	2	**C00008258**	GHIERA KM7 M 35X1.5	NUT KM7 M35X1.5

MADE IN ITALY

SPARE PARTS
ITWIN 45-55-65

ASSIEME ALBERO SX - LEFT SHAFT ASSEMBLY



MADE IN ITALY

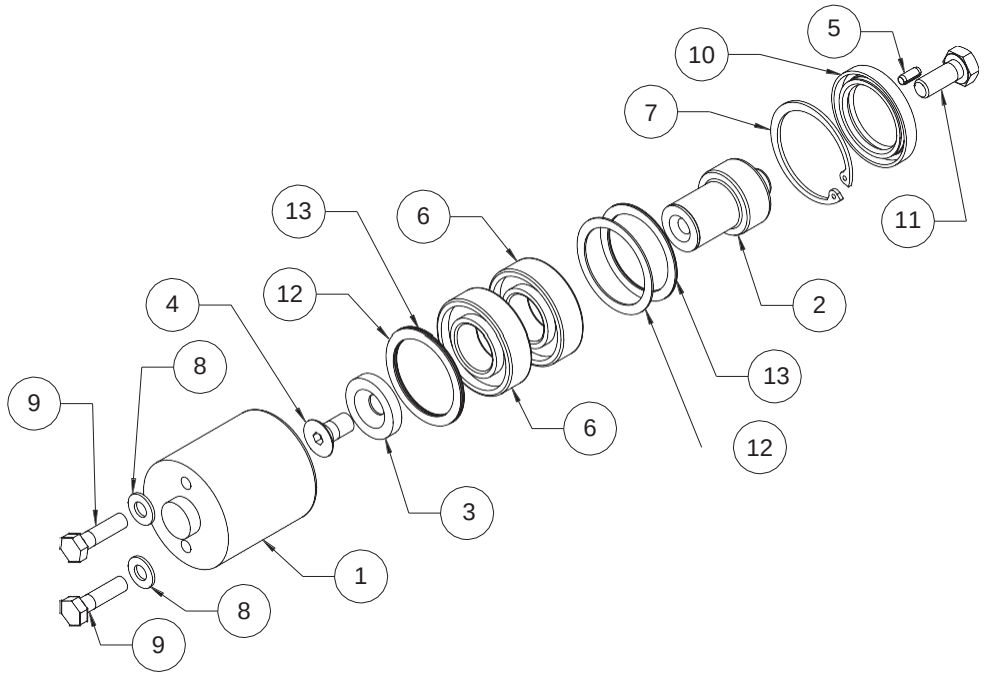
SPARE PARTS
ITWIN 45-55-65

COD. A310102

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310245-3**	ALBERO CORONA DESTRO/SINISTRO	RIGHT / LEFT CROWN SHAFT
2	1	**A310247**	CONTRAPPESO INGRANAGGI	GEAR COUNTERWEIGHT
3	1	**A310248**	DISTANZIALE ALBERO	SHAFT SPACER
4	1	**A310250**	FLANGIA PORTA PARAOLIO	FLANGE HOLDER OIL SEAL
5	2	**A310251**	DISTANZIALE CUSCINETTO	BEARING SPACER
6	1	**A310252**	COPERCHIO	REAR CLOSING COVER
7	1	**A310253**	SPUGNA ADESIVA	ADHESIVE SPONGE
8	1	**A310292**	CORONA DENTATA SINISTRA	LEFT TOOTHED CROWN
9	2	**C00000427**	VITE TCEI M 12 X 65 UNI 5931	SCREW TCEI M 12 X 65 UNI 5931
10	3	**C00000455**	VITE TCEI M 5 X 12 UNI 9327	SCREW TCEI M 5 X 12 UNI 9327
11	2	**C00000505**	VITE TCEI M 10 X 40 UNI 5931	SCREW TCEI M 10 X 40 UNI 5931
12	1	**C00001252**	ROSETTA SICUREZZA MB6 D.30	SAFETY WASHER MB6 D.3
13	1	**C00003621**	LINGUETTA 10 X 8 X 56 A UNI 6604	TAB 10 X 8 X 56 A UNI 6604
14	1	**C00004065**	GUARNIZIONE OR	GASKET OR
15	1	**C00004091**	GUARNIZIONE OR	GASKET OR
16	2	**C00004884**	GHIERA DI FISSAGGIO KM6 M30X1,5	FIXING NUT KM6 M30X1.5
17	1	**C00008237**	CUSCINETTO	BEARING
18	1	**C00008254**	PARAOLIO AS	OIL SEAL AS
19	1	**C00008256**	CUSCINETTO	BEARING
20	1	**C00008257**	ANELLO INTERNO IR	INTERNAL RING IR
21	2	**C00008258**	GHIERA KM7 M35X1.5	NUT KM7 M35X1.5

SPARE PARTS
ITWIN 45-55-65

ASSIEME FULCRO BRACCIA - ASSEMBLY ARMS FULCRUMS



MADE IN ITALY

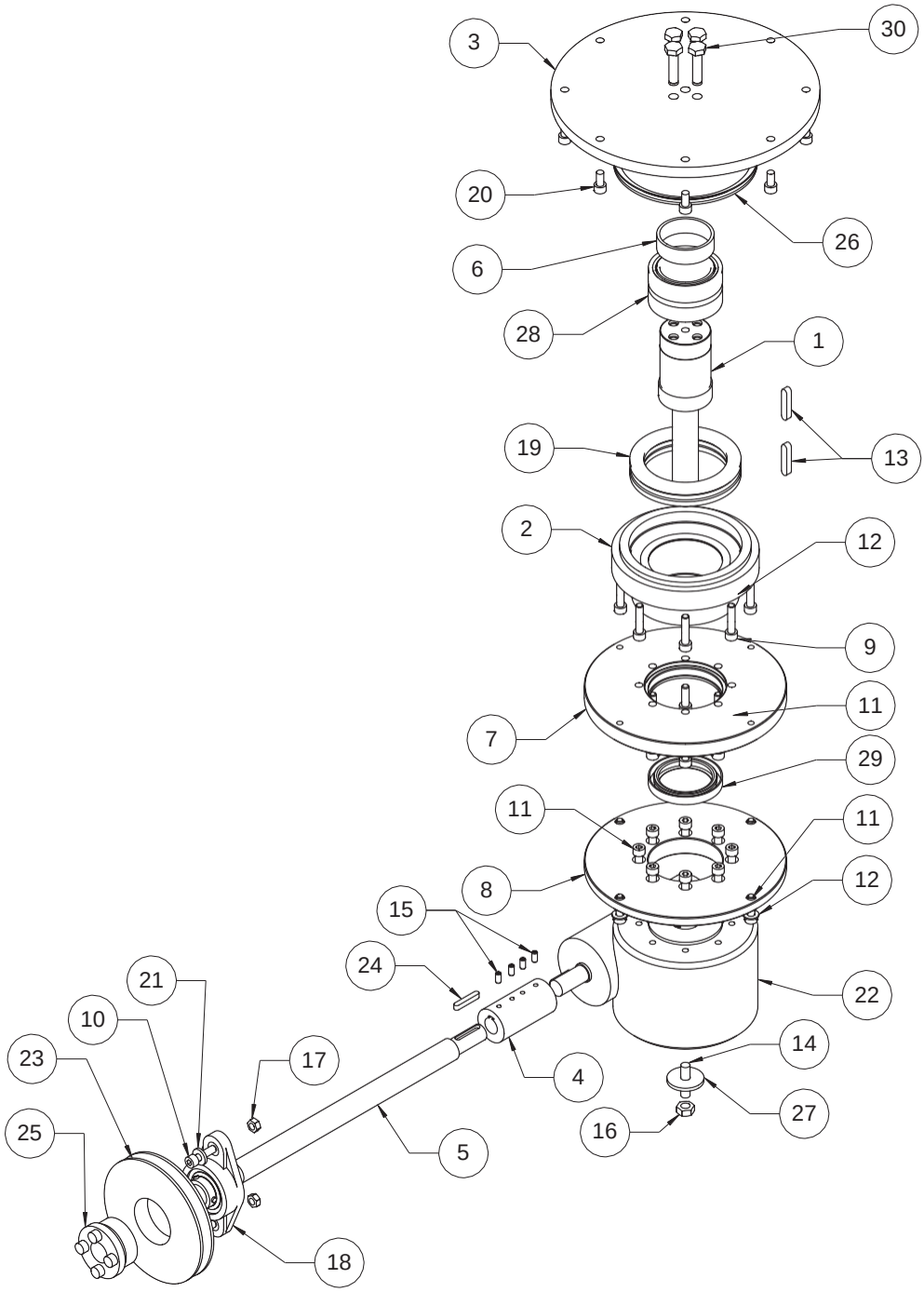
SPARE PARTS
ITWIN 45-55-65

COD. A310103

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310254**	CILINDRO FULCRO BRACCIA	CYLINDER PIVOT ARMS
2	1	**A310255**	ALBERO FULCRO BRACCIA	SHAFT PIVOT ARMS
3	1	**A310273**	RONDELLA CALETTATORE BIELLA	WASHER, LOCKING ROD
4	1	**C00000163**	VITE TSPCEI M 10 X 20 UNI 5933	SCREW TSPCEI M 10 X 20 UNI 5933
5	1	**C00001008**	SPINA ELASTICA UNI 6874 5 X 12	ELASTIC PIN UNI 6874 5 X 12
6	2	**C00005710**	CUSCINETTO	BEARING
7	1	**C00006621**	ANELLO SEEGER øI 52 UNI 7437	SEEGER RING øI 52 UNI 7437
8	2	**C00007468**	RONDELLA UNI 6592 M8 INOX A2	WASHER UNI 6592 M8 INOX A2
9	2	**C00008448**	VITE TE M 8 X 30 UNI 5737 INOX A2	SCREW TE M 8 X 30 UNI 5737 INOX A2
10	1	**C00008558**	PARAOLIO	OIL SEAL
11	1	**C00008559**	VITE TE M 10 X 25 UNI 5739 INOX A2	SCREW TE M 10 X 25 UNI 5739 INOX A2
12	4	**C00008560**	RONDELLA PS 42/52/1 DIN 988	WASHER PS 42/52/1 DIN 988
13	2	**C00008561**	RONDELLA PS 42/52/0.5 DIN 988	WASHER PS 42/52 / 0.5 DIN 988

SPARE PARTS
ITWIN 45-55-65

ASSIEMETRASMISSIONE VASCA - BOWL TRANSMISSION ASSEMBLY



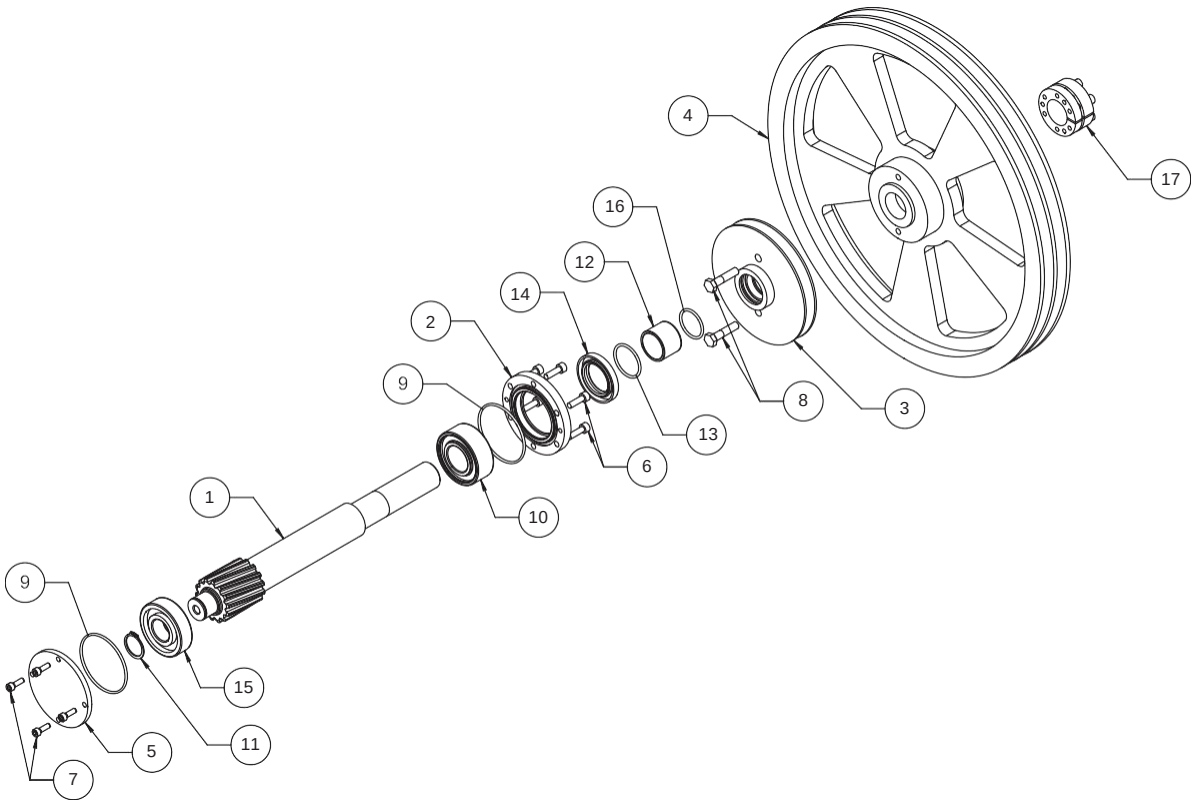
SPARE PARTS
ITWIN 45-55-65

COD. A310104

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	A310258-3	ALBERO VASCA	BOWL SHAFT
2	1	A310259-3	FLANGIA CUSCINETTO VASCA	BOWL BEARING FLANGE
3	1	A310260-2	FLANGIA VASCA	BOWL FLANGE
4	1	A310263	GIUNTO RIGIDO	RIGID JOINT
5	1	A310264	ALBERO TRASMISSIONE RIDUTTORE	REDUCERTRANSMISSION SHAFT
6	1	A310316-1	DISTANZIALE CUSCINETTO VASCA	BOWL BEARING SPACER
7	1	A310317-2	FLANGIA CENTRAGGIO RIDUTTORE	REDUCER CENTERING FLANGE
8	1	A310318_	FLANGIA CENTRAGGIO RIDUTTORE	REDUCER CENTERING FLANGE
9	8	C00000522	VITE TCEI M 8 X 35 UNI 5931	SCREW TCEI M 8 X 35 UNI 5931
10	2	C00000523	VITE TCEI M 8 X 30 UNI 5931	SCREW TCEI M 8 X 30 UNI 5931
11	20	C00000524	VITE TCEI M 8 X 25 UNI 5931	SCREW TCEI M 8 X 25 UNI 5931
12	12	C00001245	RONDELLA UNI 6592 M8	WASHER UNI 6592 M8
13	2	C00003673	LINGUETTA 8 X 7 X 40 A UNI 6604	TAB 8 X 7 X 40 A UNI 6604
14	1	C00004503	GRANO UNI 5923 10 X 40	GRAIN UNI 5923 10 X 40
15	4	C00004521	GRANO UNI 5923 6 X 12	GRAIN UNI 5923 6 X 12
16	2	C00005023	DADO ESAGONALE UNI 5588 M 10	HEX NUT UNI 5588 M 10
17	2	C00005024	DADO ESAGONALE UNI 5588 M 8	HEX NUT UNI 5588 M 8
18	1	C00005128	SUPPORTO	SUPPORT
19	1	C00005431	CUSCINETTO	BEARING
20	8	C00007464	VITE TCEI M 8 X 16 UNI 5931 INOX A2	SCREW TCEI M 8 X 16 UNI 5931 INOX A2
21	2	C00007562	RONDELLA UNI 6592 M8/19/3	WASHER UNI 6592 M8 /19/3
22	1	C00008280	RIDUTTORE	REDUCER
23	1	C00008323	PULEGGIA	PULLEY
24	1	C00008437	LINGUETTA 6X6X36 A UNI 6604	TAB 6X6X36 A UNI 6604
25	1	C00008440	CALATTATORE	LOCKER
26	1	C00008546	GUARNIZIONE FRONTALE	FRONT SEAL
27	1	C00008553	RONDELLA UNI 6592 M10-10/40/4	WASHER UNI 6592 M10-10 /40/4
28	1	C00008700	CUSCINETTO	BEARING
29	1	C00008701	PARAOLIO AS	OIL SEAL AS
30	4	C00008702	VITE TE M 10 X 40 UNI 5739 CLASSE 10.9	SCREW TE M 10 X 40 UNI 5739 CLASS 10.9

SPARE PARTS
ITWIN 45-55-65

ASSIEME PIGNONE CENTRALE - CENTRAL PINION ASSEMBLY



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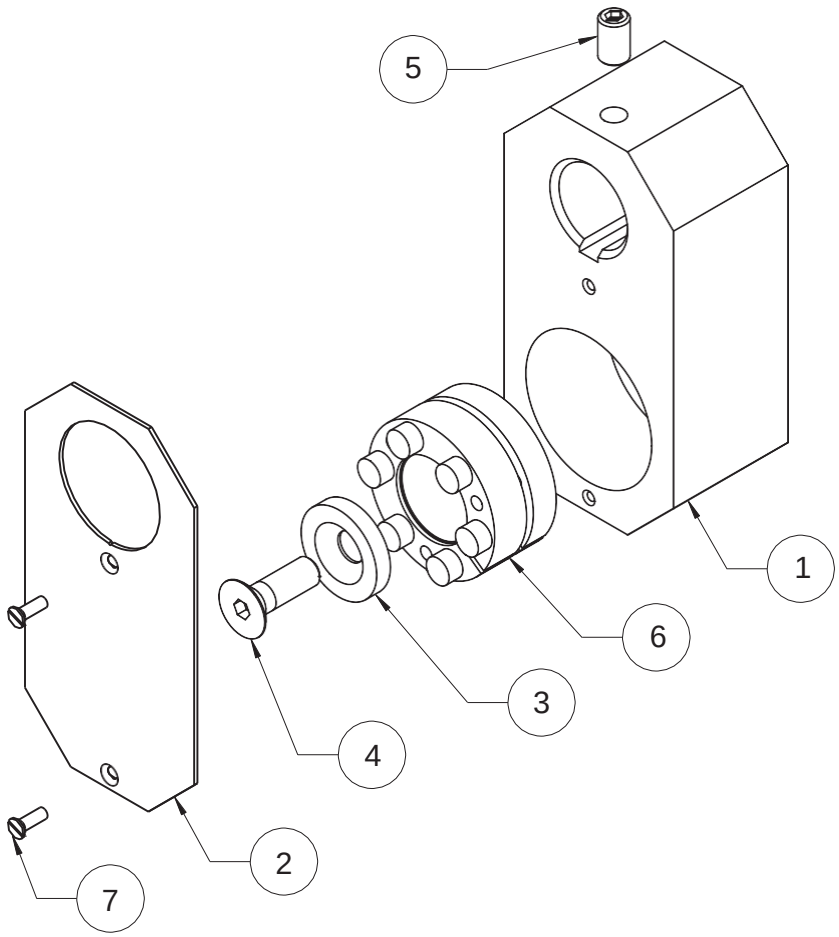
SPARE PARTS
ITWIN 45-55-65

COD. A310105

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310265**	PIGNONE DI COMANDO	CONTROL PINION
2	1	**A310266**	COPERCHIO POSTERIORE DEL PIGNONE	SPROCKET REAR COVER
3	1	**A310267**	PULEGGIA DI COMANDO DELLA VASCA	BOWL CONTROL PULLEY
4	1	**A310268**	PULEGGIA DI COMANDO	CONTROL PULLEY
5	1	**A310269**	COPERCHIO ANTERIORE PIGNONE	SPROCKET FRONT COVER
6	6	**C00000536**	VITE TCEI M 6 X 20 UNI 5931	SCREW TCEI M 6 X 20 UNI 5931
7	4	**C00000546**	VITE TCEI M 5 X 16 UNI 5931	SCREW TCEI M 5 X 16 UNI 5931
8	2	**C00000830**	VITE TE M 8 X 35 UNI 5737	SCREW TE M 8 X 35 UNI 5737
9	2	**C00004091**	GUARNIZIONE OR	GUARNIZIONE OR
10	1	**C00005541**	CUSCINETTO	BEARING
11	1	**C00006666**	ANELLO SEEGER	SEEGER RING
12	1	**C00007374**	ANELLO INTERNO IR	INTERNAL RING IR
13	1	**C00007476**	GUARNIZIONE OR	GASKET OR
14	1	**C00008285**	PARAOLIO	OIL SEAL
15	1	**C00008321**	CUSCINETTO	BEARING
16	1	**C00008324**	GUARNIZIONE OR	GASKET OR
17	1	**C00008336**	CALETTATORE	LOCKER

SPARE PARTS
ITWIN 45-55-65

ASSIEME BIELLA DX - RIGHT CONNECTING ROD ASSEMBLY



MADE IN ITALY

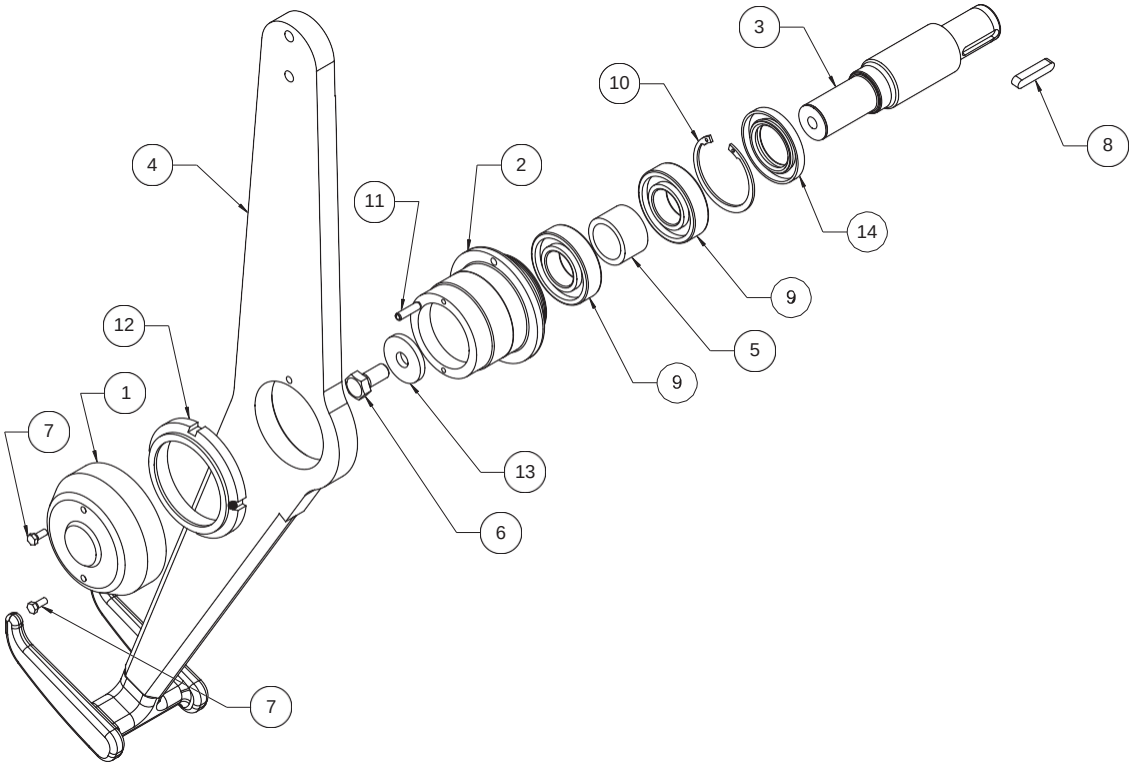
SPARE PARTS
ITWIN 45-55-65

COD. A310106

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310270**	BIELLA	CONNECTING ROD
2	1	**A310272**	LAMIERA COPERTURE BIELLA	SHEET COVER CONNECTING ROD
3	1	**A310273**	RONDELLA	WASHER
4	1	**C00000161**	VITE TSPCEI M 10 X 30 UNI 5933	SCREW TSPCEI M 10 X 30 UNI 5933
5	1	**C00004506**	GRANO UNI 5923 10 X 16	GRAIN UNI 5923 10 X 16
6	1	**C00008336**	CALETTATORE	LOCKER
7	2	**C00008447**	VITE M 4 X 12 UNI 6109 INOX	SCREW M 4 X 12 UNI 6109 INOX

SPARE PARTS
ITWIN 45-55-65

ASSIEME BRACCIO DX - RIGHT ARM ASSEMBLY



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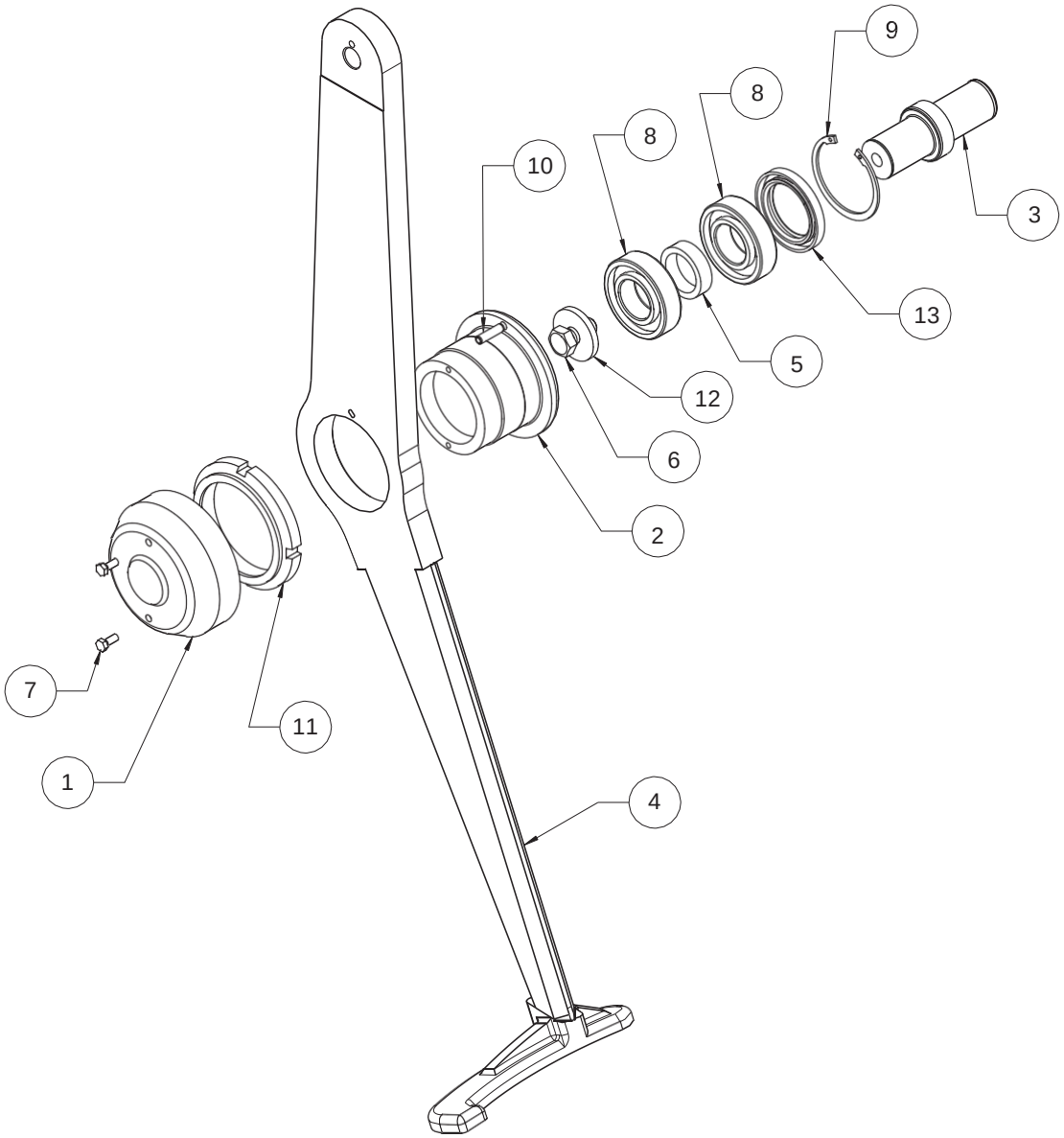
SPARE PARTS
ITWIN 45-55-65

COD. A310107

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310275**	COPERCHIO BRACCIA	ARM COVER
2	1	**A310276**	MOZZO BRACCIO DESTRO	RIGHT ARM HUB
3	1	**A310277**	PERNO BRACCIO DESTRO	RIGHT ARM PIN
4	1	**A310298T50T601**	ASSIEME BRACCIO E FORCA 55/65 KG	ASSEMBLY ARM AND FORK 55/65 KG
4	1	**A310298T40-1**	ASSIEME BRACCIO E FORCA 45 KG	ASSEMBLY ARM AND FORK 45 KG
5	1	**A310505**	DISTANZIALE CUSCINETTO BRACCIO DX	RIGHT ARM BEARING SPACER
6	1	**C00000794**	VITE TE M 12 X 25 UNI 5739	SCREW TE M 12 X 25 UNI 5739
7	2	**C00000872**	VITE TE M 5 X 12 UNI 5739	SCREW TE M 5 X 12 UNI 5739
8	1	**C00003673**	LINGUETTA 8 X 7 X 40 A UNI 6604	TAB 8 X 7 X 40 A UNI 6604
9	2	**C00005708**	CUSCINETTO	BEARING
10	1	**C00006617**	ANELLO SEEGER øI 62 UNI 7437	SEEGER RING øI 62 UNI 7437
11	1	**C00007922**	SPINA UNI 6364-B 6X24	PLUG UNI 6364-B 6X24
12	1	**C00008127**	GHIERA AUTOBLOCCANTE	SELF-LOCKING NUT
13	1	**C00008334**	RONDELLA	WASHER
14	1	**C00008335**	PARAOLIO AS	OIL SEAL AS

SPARE PARTS
ITWIN 45-55-65

ASSIEME BRACCIO SX - LEFT ARM ASSEMBLY



MADE IN ITALY

SPARE PARTS
ITWIN 45-55-65

COD. A310108

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310275**	COPERCHIO BRACCIA	ARM COVER
2	1	**A310279**	MOZZO BRACCIO SINISTRO	LEFT ARM HUB
3	1	**A310280**	PERNO BRACCIO SINISTRO	LEFT ARM PIN
4	1	**A310296T50T60-1**	ASSIEME BRACCIO E FORCA 55/65KG	ASSEMBLY ARM AND FORK 55/65 KG
4	1	**A310296T40-1**	ASSIEME BRACCIO E FORCA 45 KG	ASSEMBLY ARM AND FORK 45 KG
5	1	**A310304**	DISTANZIALE	SPACER
6	1	**C00000794**	VITE TE M 12 X 25 UNI 5739	SCREW TE M 12 X 25 UNI 5739
7	2	**C00000872**	VITE TE M 5 X 12 UNI 5739	SCREW TE M 5 X 12 UNI 5739
8	2	**C00005708**	CUSCINETTO	BEARING
9	1	**C00006617**	ANELLO SEEGER øI 62 UNI 7437	SEEGER RING øI 62 UNI 7437
10	1	**C00007922**	SPINA UNI 6364-B 6X24	PLUG UNI 6364-B 6X24
11	1	**C00008127**	GHIERA AUTOBLOCCANTE	SELF-LOCKING NUT
12	1	**C00008334**	RONDELLA	WASHER
13	1	**C00008446**	PARAOLIO AS	OIL SEAL AS

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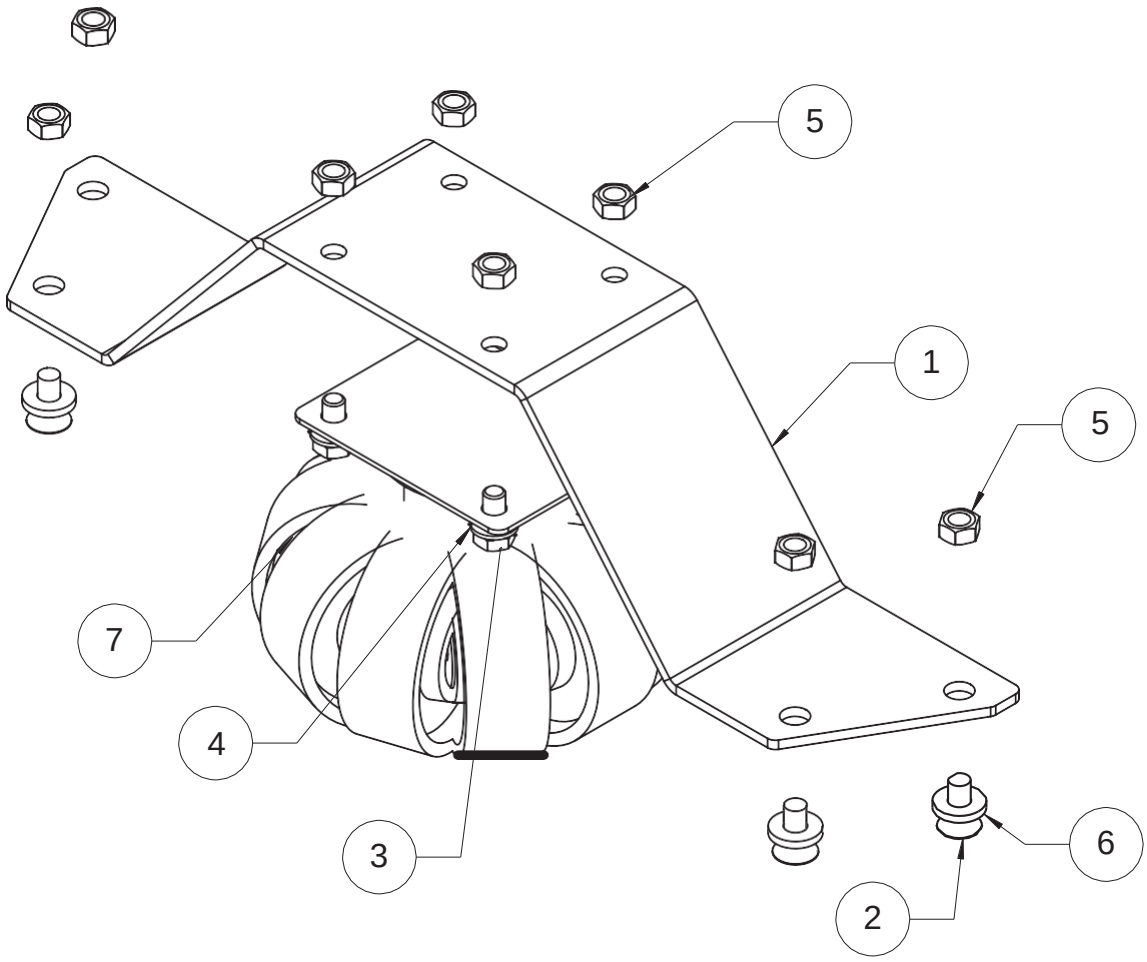
SPARE PARTS
ITWIN 45-55-65

ASSIEME RUOTA ANTERIORE - FRONT WHEEL ASSEMBLY



MADE IN ITALY

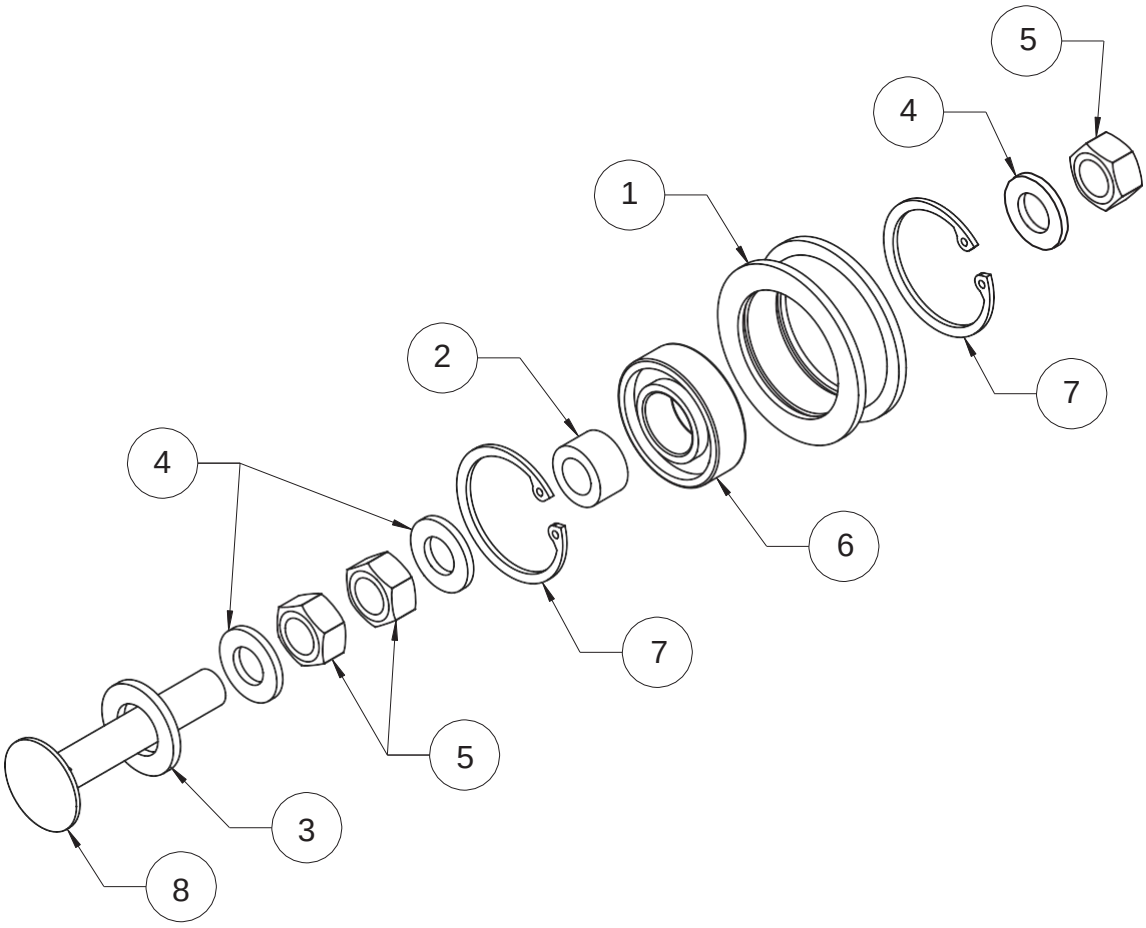
SPARE PARTS
ITWIN 45-55-65

COD. A310110

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310281**	SUPPORTO RUOTA ANTERIORE	FRONT WHEEL SUPPORT
2	4	**C00000172**	VITE TSPCEI M 8 X 20 UNI 5933	SCREW TSPCEI M 8 X 20 UNI 5933
3	4	**C00000859**	VITE TE M 8 X 16 UNI 5739	SCREW TE M 8 X 16 UNI 5739
4	4	**C00001245**	RONDELLA UNI 6592 M8	WASHER UNI 6592 M8
5	8	**C00005024**	DADO UNI 5588 M 8	NUT UNI 5588 M 8
6	4	**C00007562**	RONDELLA UNI 6592 M8/19/3	WASHER UNI 6592 M8 / 19/3
7	1	**C00008439**	RUOTA GIREVOLE	REVOLVING WHEEL

SPARE PARTS
ITWIN 45-55-65

ASSIEME TENDICINGHIA - BELT TENSIONER ASSEMBLY



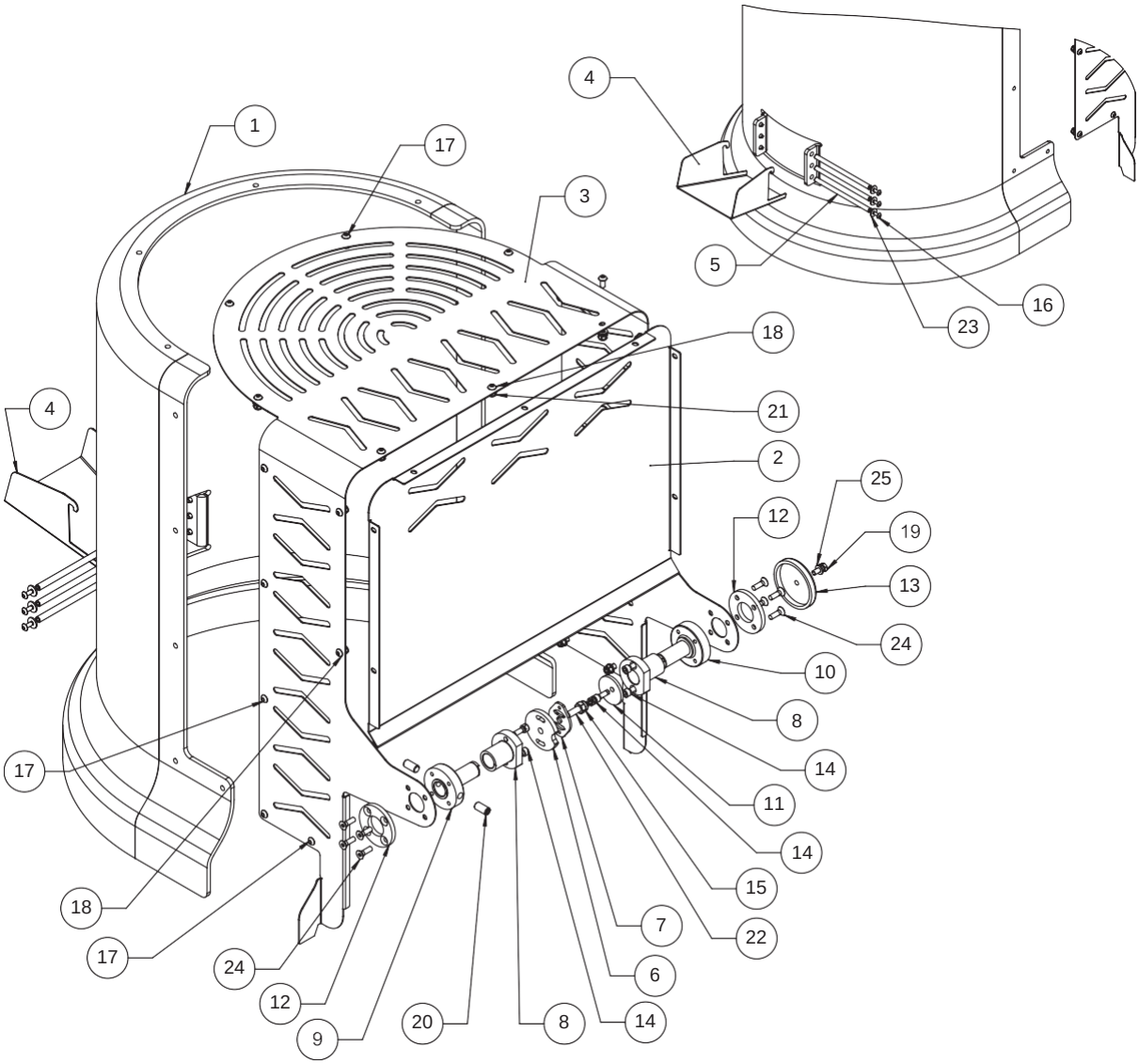
SPARE PARTS
ITWIN 45-55-65

COD. A310111

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310210**	TENDI CINGHIA	BELT TENSIONER
2	1	**A310284**	DISTANZIALE TENDI CINGHIA	SPACER BELT TENSIONER
3	1	**C00001241**	RONDELLA UNI 6592 M16	WASHER UNI 6592 M16
4	3	**C00001243**	RONDELLA UNI 6592 M12	WASHER UNI 6592 M12
5	3	**C00005022**	DADO UNI 5588 M 12	NUT UNI 5588 M 12
6	1	**C00005742**	CUSCINETTO	BEARING
7	2	**C00006625**	ANELLO SEEGER øI 42 UNI 7437	SEEGER RING øI 42 UNI 7437
8	1	**C00008328**	VITE M12X70 UNI 5592	SCREW M12X70 UNI 5592

SPARE PARTS
ITWIN 45-55-65

ASSIEME MONTAGGIO PROTEZIONI - ASSEMBLY OF PROTECTIONS



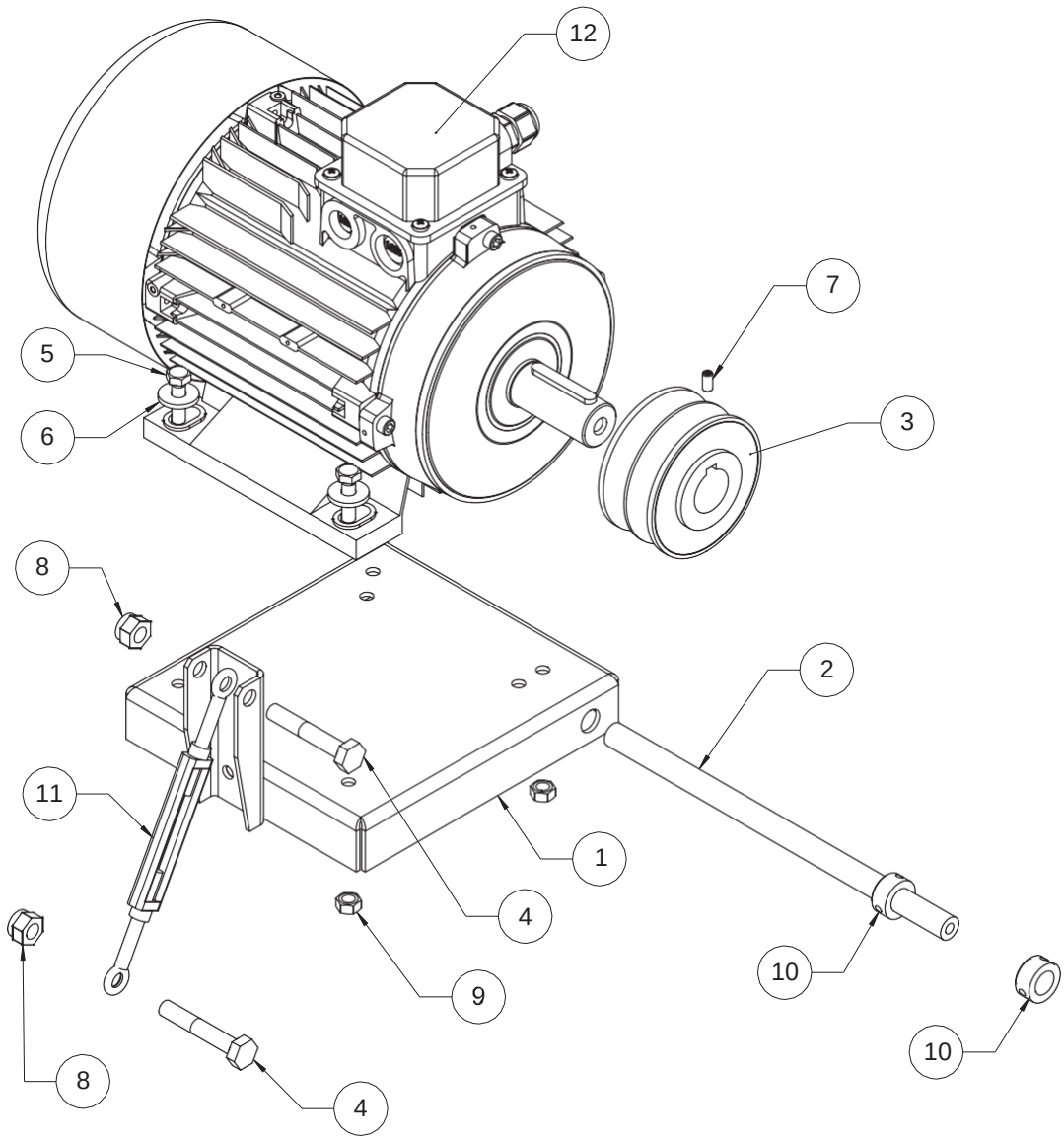
SPARE PARTS
ITWIN 45-55-65

COD. A310113

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	A310224-2	PROTEZIONE IN PETG	BOWL PROTECTION IN PETG
2	1	A310293T60-3	LAMIERA POSTERIORE 65KG	REAR SHEET 65KG
3	1	A310299T60-2	LAMIERA ELLA PROTEZIONE 65KG	65KG PROTECTION SHEET
2	1	A310293T50-3	LAMIERA POSTERIORE 55KG	REAR SHEET 55KG
3	1	A310299T50-2	LAMIERA ELLA PROTEZIONE 55KG	55KG PROTECTION SHEET
2	1	A310293T40-3	LAMIERA POSTERIORE 45KG	REAR SHEET 45KG
3	1	A310299T40-2	LAMIERA DELLA PROTEZIONE 45KG	45KG PROTECTION SHEET
4	1	A310305	SCIVOLO INGREDIENTI	INGREDIENTS RAMP
5	3	A310309	TONDINI IN ACCIAIO ANTI INTRUSIONE	ANTI-INTRUSION STEEL RODS
6	1	A310627	CAMMA INTERRUTTORE DI SICUREZZA	SAFETY SWITCH
7	1	A310628	FISSAGGIO CAMMA INTERRUTTORE DI SICUREZZA	SAFETY SWITCH CAM FIXING
8	2	A310629	BRONZINA ROTAZIONE DELLA PROTEZIONE	BUSHING ROTATION OF THE PROTECTION
9	1	A310630-1	PERNO DESTRO	RIGHT PIN
10	1	A310631-1	PERNO SINISTRO	LEFT PIN
11	1	A310632	RONDELLA PERNO SINISTRO	LEFT PIN WASHER
12	2	A310639	FLANGIA FISSAGGIO DELLA PROTEZIONE	PROTECTION FIXING FLANGE
13	1	A310640	COPERCHIO LATERALE DELLA PROTEZIONE	SIDE PROTECTION COVER
14	6	C00000537	VITE TCEI M 6 X 16 UNI 5931	SCREW TCEI M 6 X 16 UNI 5931
15	1	C00004974	DADO UNI7473 M 8	NUT UNI7473 M 8
16	6	C00007423	VITE M 5 X 12 UNI 7380-INOX A2 15 1	SCREW M 5 X 12 UNI 7380-INOX A2
17	14	C00007581	VITE M 6 X 16 UNI 7380 INOX A2	SCREW M 6 X 16 UNI 7380 INOX A2
18	7	C00007585	VITE M 6 X 12 UNI 7380 INOX A2	SCREW M 6 X 12 UNI 7380 INOX A2
19	1	C00007669	VITE TE M 6 X 16 UNI 5739 INOX A2	SCREW TE M 6 X 16 UNI 5739 INOX A2
20	2	C00007847	GRANO UNI 5923 10 X 20	GRAIN UNI 5923 10 X 20
21	21	C00008071	DADO NI7473 M 6 INOX A2	NUT NI7473 M 6 INOX A2
22	1	C00008426	GRANO UNI 5923 8 X 35	GRAIN UNI 5923 8 X 35
23	6	C00008427	RONDELLA UNI6593 M5 INOX A2	WASHER UNI6593 M5 INOX A2
24	8	C00008463	VITE TSPCEI M6 X 20 UNI5933 INOX A2	SCREW TSPCEI M6 X 20 UNI5933 INOX A2
25	22	C00008578	RONDELLA UNI 6592 M6 INOX A2	WASHER UNI 6592 M6 INOX A2

SPARE PARTS
ITWIN 45-55-65

ASSIEME MOTORE VASCA - BOWL MOTOR ASSEMBLY



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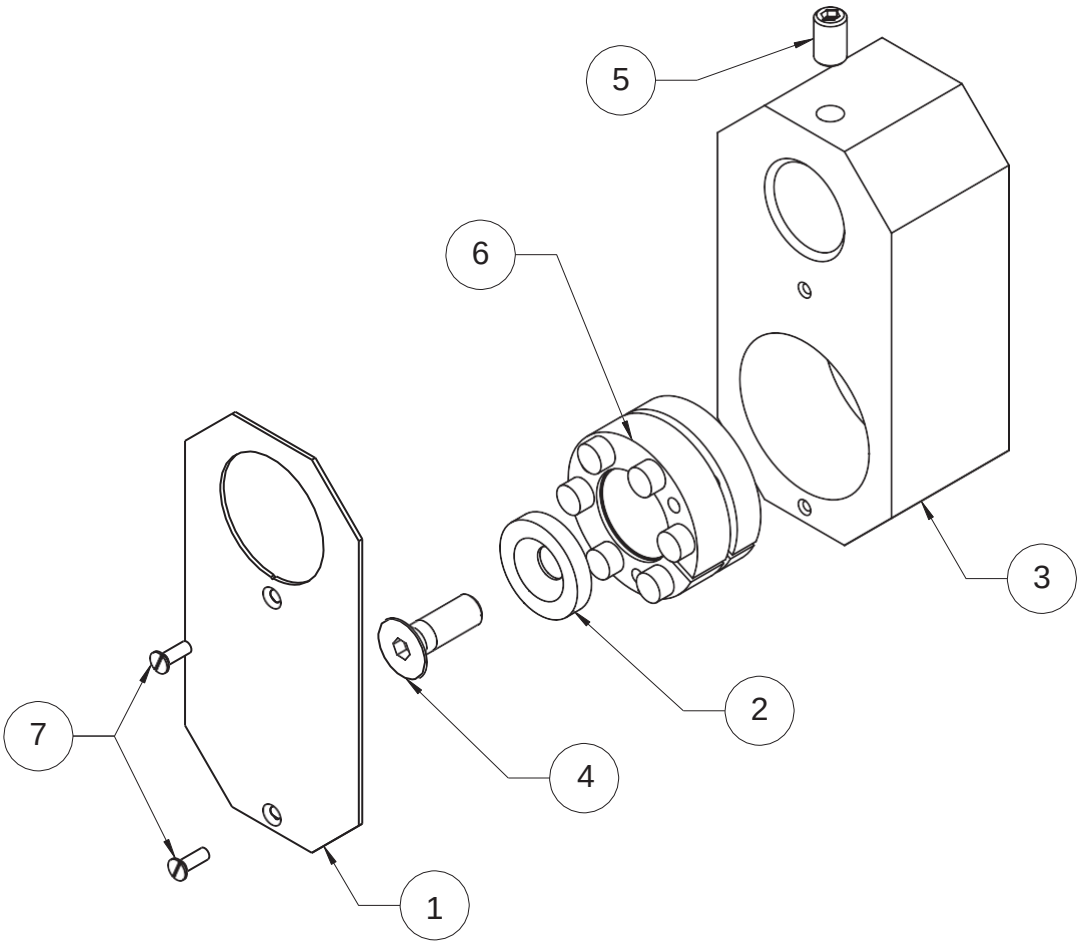
SPARE PARTS
ITWIN 45-55-65

COD. A310114

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310227-1**	LAMIERA TIRAGGIO MOTORE	SHEET FOR MOTOR TENSIONING
2	1	**A310228**	PERNO DELLA PIASTRA DEL MOTORE	MOTOR PLATE PIN
3	1	**A310645**	PULEGGIA DEL MOTORE 50 Hz	MOTOR PULLEY 50 Hz
4	2	**C00000822**	VITE TE M 10 X 60 UNI 5737	SCREW TE M 10 X 60 UNI 5737
5	4	**C00000856**	VITE TE M 8 X 30 UNI 5739	SCREW TE M 8 X 30 UNI 5739
6	4	**C00001194**	RONDELLA UNI6593 M8/24/3	WASHER UNI6593 M8 / 24/3
7	1	**C00004521**	GRANO UNI 5923 6 X 12	GRAIN UNI 5923 6 X 12
8	2	**C00004973**	DADO UNI7473 M 10	NUT UNI7473 M 10
9	4	**C00005024**	DADO ESAGONALE UNI 5588 M 8	HEX NUT UNI 5588 M 8
10	2	**C00007815**	ANELLO DI BLOCCAGGIO C-ABU	C-ABU LOCK RING
11	1	**C00008625**	TIRANTE M8 DX-SX	RIGHT-LEFT M8TIE ROD
12	1	**C00008663**	MOTORE ELETTRICO 2.2KW	ELECTRIC MOTOR 2.2KW

SPARE PARTS
ITWIN 45-55-65

ASSIEME BIELLA SX - LEFT CONNECTING ROD ASSEMBLY



MADE IN ITALY

SPARE PARTS
ITWIN 45-55-65

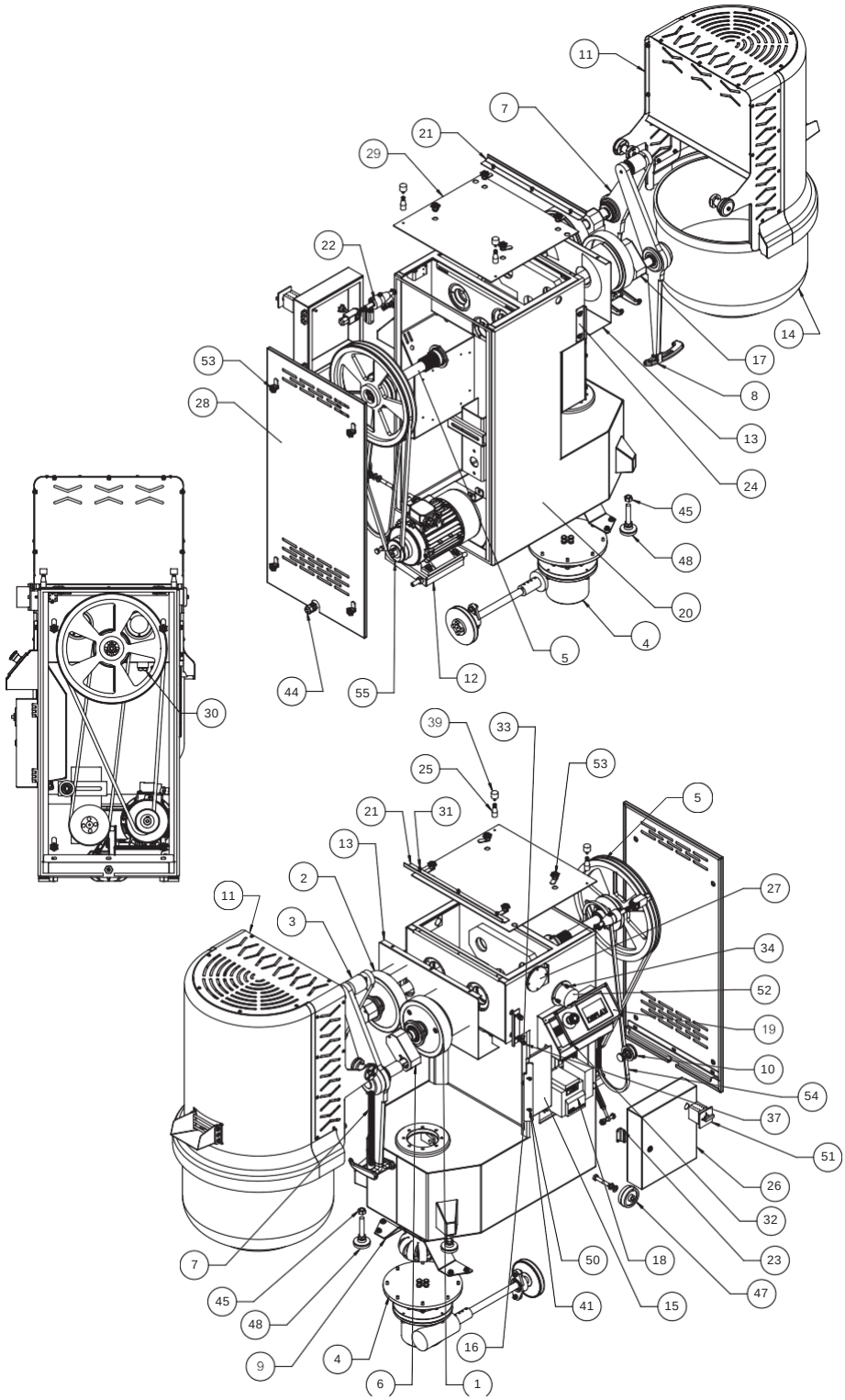
COD. A310313

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310272**	LAMIERA COPERTURE BIELLA	ROD COVER SHEET
2	1	**A310273**	RONDELLA CALETTATORE BIELLA	WASHER, LOCKING ROD
3	1	**A310312**	BIELLA	CONNECTING ROD
4	1	**C00000161**	VITE TSPCEI M 10 X 30 UNI 5933	SCREW TSPCEI M 10 X 30 UNI 5933
5	1	**C00004506**	GRANO UNI 5923 10 X 16	GRAIN UNI 5923 10 X 16
6	1	**C00008336**	CALETTATORE	LOCKER
7	2	**C00008447**	VITE M 4 X 12 UNI 6109 INOX	SCREW M 4 X 12 UNI 6109 INOX

MADE IN ITALY

SPARE PARTS
ITWIN 45-55-65

ASSIEME GENERALE MACCHINA - GENERAL MACHINE ASSEMBLY



MADE IN ITALY

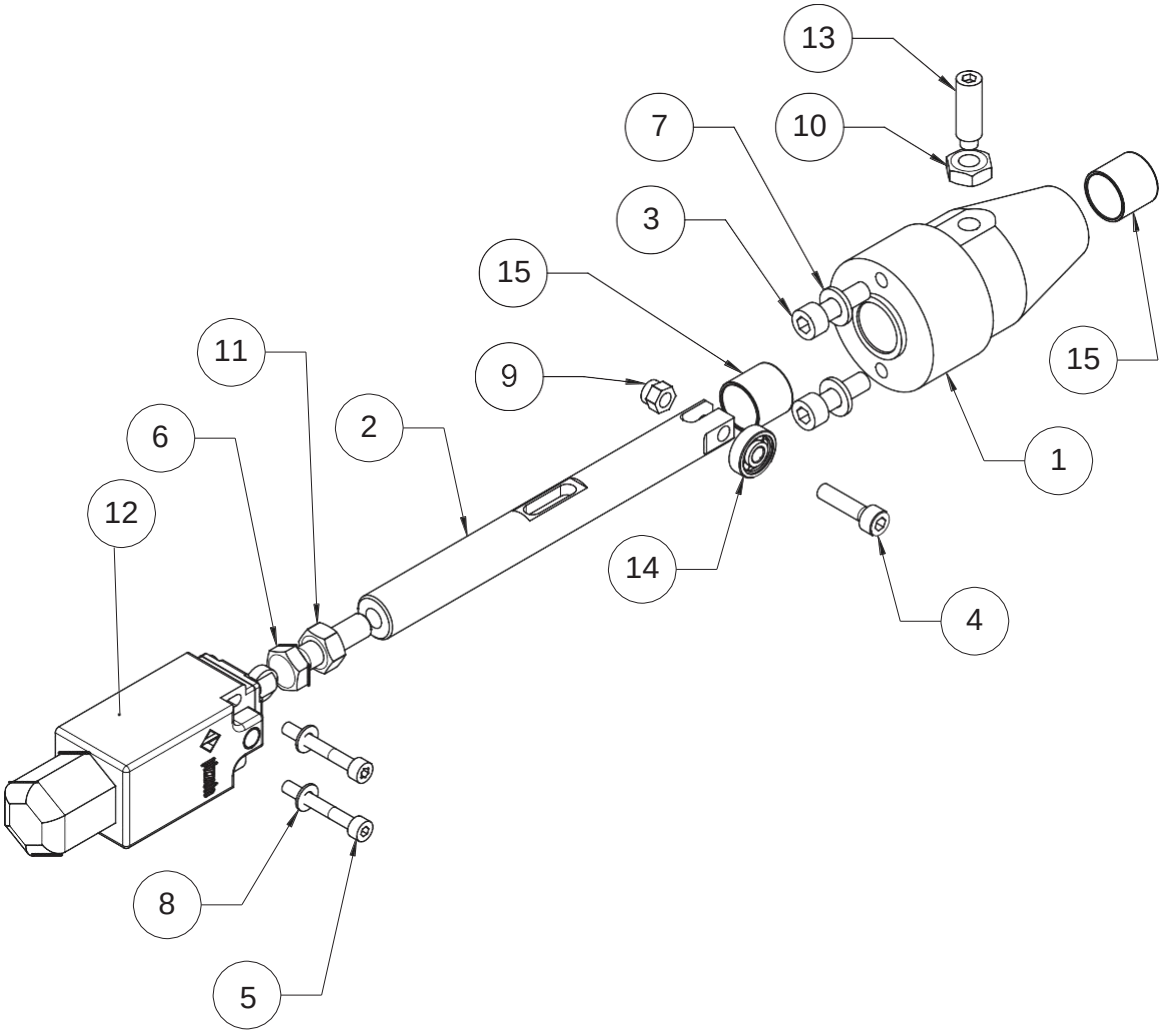
SPARE PARTS
ITWIN 45-55-65

COD. A310600

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	A310101	ASSIEME ALBERO DESTRO	RIGHT SHAFT ASSEMBLY
2	1	A310102	ASSIEME ALBERO SINISTRO	LEFT SHAFT ASSEMBLY
3	1	A310103	ASSIEME FULCRO BRACCIA	PIVOT ARMS ASSEMBLY
4	1	A310104	ASSIEME ALBERO VASCA	BOWL SHAFT ASSEMBLY
5	1	A310105	ASSIEME PIGNONE CENTRALE	CENTRAL PINION ASSEMBLY
6	1	A310106	ASSIEME BIELLA DESTRA	RIGHT CONNECTING ROD ASSEMBLY
7	1	A310107T50-T60	ASSIEME BRACCIO DESTRO 55/65KG	ASSEMBLY RIGHT ARM 55 /65KG
8	1	A310108T50-T60	ASSIEME BRACCIO SINISTRO 55/65KG	ASSEMBLY LEFT ARM 55 /65KG
7	1	A310107T40	ASSIEME BRACCIO DESTRO 45KG	ASSEMBLY RIGHT ARM 45 KG
8	1	A310108T40	ASSIEME BRACCIO SINISTRO 45 KG	ASSEMBLY LEFT ARM 45 KG
9	1	A310110	ASSIEME RUOTA ANTERIORE	FRONT WHEEL ASSEMBLY
10	1	A310111	ASSIEME TENDI CINGHIA	BELT TENT ASSEMBLY
11	1	A310113T60	ASSIEME MONTAGGIO PROTEZIONI 65KG	65KG PROTECTION ASSEMBLY
11	1	A310113T50	ASSIEME MONTAGGIO PROTEZIONI 55KG	55KG PROTECTION ASSEMBLY
11	1	A310113T40	ASSIEME MONTAGGIO PROTEZIONI 45KG	45KG PROTECTION ASSEMBLY
12	1	A310114	ASSIEME MOTORE VASCA	BOWL MOTOR ASSEMBLY
13	1	A310229-4	LAMIERA COPERTURA FRONTALE	FRONT COVER SHEET
14	1	A310236T60-1	VASCA 65KG	BOWL 65KG
15	1	A310288T60-2	PROTEZIONE LATERALE VASCA 65KG	SIDE PROTECTION BOWL 65KG
16	2	A310291T60	RASCHIATORE VASCA 65KG	65KG BOWL SCRAPER
14	1	A310236T50-1	VASCA 55KG	BOWL 55KG
15	1	A310288T50-2	PROTEZIONE LATERALE VASCA 55KG	SIDE PROTECTION BOWL 55KG
16	2	A310291T50	RASCHIATORE VASCA 55KG	55KG BOWL SCRAPER
14	1	A310236T40-1	VASCA 45KG	BOWL 45KG
15	1	A310288T40-2	PROTEZIONE LATERALE VASCA 45KG	SIDE PROTECTION BOWL 45KG
16	2	A310291T40	RASCHIATORE VASCA 45KG	45KG BOWL SCRAPER
17	1	A310313	ASSIEME BIELLA SINISTRA	LEFT ROD ASSEMBLY
18	1	A310321	ASSIEME MONTAGGIO INVERTER 45/55/65KG	INVERTER ASSEMBLY 45/55 /65KG
19	1	A310606	ASSIEME PANNELLO UTENTE	ASSEMBLY PANEL USER
20	1	A310612	ASSIEME CARPENTERIA	ASSEMBLY OF CARPENTRY
21	1	A310623	LAMIERA DI PROTEZIONE	PROTECTION SHEET
22	1	A310635	ASSIEME INTERRUTTORE DI SICUREZZA	SAFETY SWITCH ASSEMBLY
23	1	A310641	AGGANCIO PORTA QUADRO ELETTRICO	ELECTRICAL PANEL HOLDER HOOK
24	2	A310643	LAMIERA DI POSIZIONE	STOP-POSITION SHEET
25	2	A310644	DISTANZIALE	SPACER
26	1	A310646	ASSIEME PORTA QUADRO ELETTRICO	ELECTRICAL PANEL DOOR ASSEMBLY
27	1	A310647	CHIUSURA AMMORTIZZATORE IDRAULICO	HYDRAULIC SHOCK ABSORBER CLOSURE
28	1	A310651	ASSIEME PANNELLO POSTERIORE	REAR PANEL ASSEMBLY
29	1	A310653	COPERCHIO	COVER
30	1	C00000024	TAPPO DI CHIUSURA	CLOSING CAP
31	3	C00000127	VITE M 6 X 12 UNI 7380	SCREW M 6 X 12 UNI 7380
32	4	C00000188	VITE TSPCEI M 4 X 12 UNI 5933	SCREW TSPCEI M 4 X 12 UNI 5933
33	4	C00000537	VITE TCEI M 6 X 16 UNI 5931	SCREW TCEI M 6 X 16 UNI 5931
34	4	C00000539	VITE TCEI M 6 X 10 UNI 5931	SCREW TCEI M 6 X 10 UNI 5931
35	2	C00000733	VITE TE M 12 X 65 UNI 5737	SCREW TE M 12 X 65 UNI 5737
36	6	C00001243	RONDELLA UNI 6592 M12	WASHER UNI 6592 M12
37	4	C00001246	RONDELLA UNI 6592 M6	WASHER UNI 6592 M6
38	2	C00005025	DADO ESAGONALE UNI 5588 M 6	HEX NUT UNI 5588 M 6
39	2	C00007357	ANTIVIBRANTE M6x15 d.20x10	ANTIVIBRATION M6x15 d.20x10
40	4	C00007468	RONDELLA UNI 6592 M8 INOX A2	WASHER UNI 6592 M8 INOX A2
41	4	C00007510	RONDELLA UNI 6592 M5 INOX A2	WASHER UNI 6592 M5 INOX A2
42	4	C00007574	VITE TE M 8 X 20 INOX A2 UNI 5739	SCREW TE M 8 X 20 INOX A2 UNI 5739
43	2	C00007667	VITE TE M 6 X 20 UNI 5739 INOX A2	SCREW TE M 6 X 20 UNI 5739 INOX A2
44	3	C00007924	PRESSACAVO PG16	CABLE GLAND PG16
45	2	C00008107	DADO ESAGONALE UNI 5588 M 16 INOX A2	HEX NUT UNI 5588 M 16 INOX A2
46	1	C00008318	PRESSACAVO PG9	CABLE GLAND PG9
47	2	C00008438	RUOTA	WHEEL
48	2	C00008508	PIEDINO	FOOT
49	2	C00008578	RONDELLA 6592 M6 INOX A2	WASHER 6592 M6 INOX A2
50	4	C00008579	VITE TE M 5 X 16 UNI 5739 INOX A2	SCREW TE M 5 X 16 UNI 5739 INOX A2
51	1	C00008657	SEZIONATORE ABB	DISCONNECTOR ABB
52	1	C00008671	AMMORTIZZATORE ROTANTE	ROTATING SHOCK ABSORBER
53	8	C00008672	CHIUSURA ELESA	ELESA CLOSURE
54	1	Cinghia A67		

SPARE PARTS
ITWIN 45-55-65

ASSIEME MICRO PROTEZIONE - SAFETY SWITCH ASSEMBLY



MADE IN ITALY

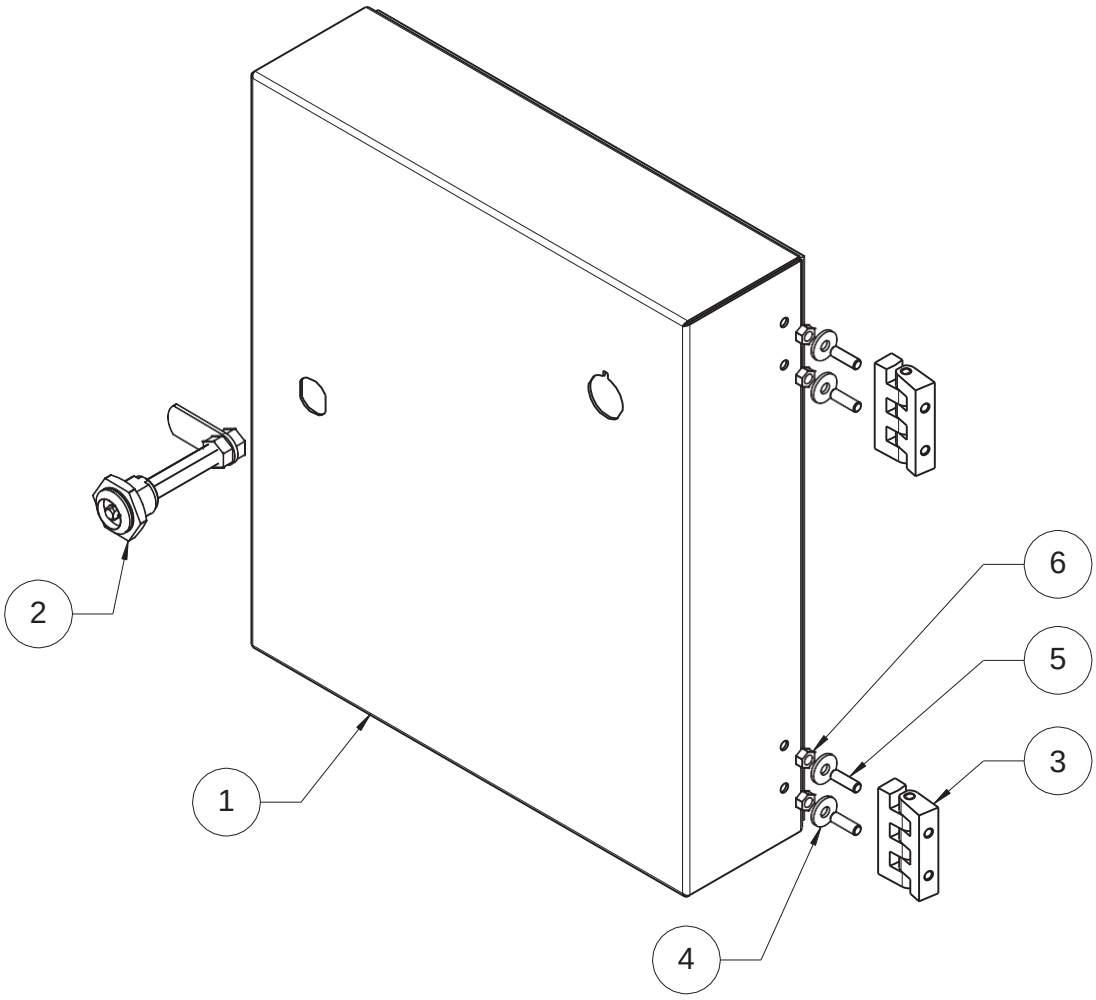
SPARE PARTS
ITWIN 45-55-65

COD. A310635

N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310633**	BUSSOLA GUIDA ASTA	ROD GUIDE BUSH
2	1	**A310634**	ASTA PREMI INTERRUTTORE DI SICUREZZA	SAFETY SWITCH ROD
3	2	**C00000536**	VITE TCEI M 6 X 20 UNI 5931	SCREW TCEI M 6 X 20 UNI 5931
4	1	**C00000545**	VITE TCEI M 5 X 20 UNI 5931	SCREW TCEI M 5 X 20 UNI 5931
5	2	**C00000554**	VITE TCEI M 4 X 30 UNI 5931	SCREW TCEI M 4 X 30 UNI 5931
6	1	**C00000856**	VITE TE M 8 X 30 UNI 5739	SCREW TE M 8 X 30 UNI 5739
7	2	**C00001246**	RONDELLA UNI 6592 M6	WASHER UNI 6592 M6
8	2	**C00001248**	RONDELLA UNI 6592 M4	WASHER UNI 6592 M4
9	1	**C00004976**	DADO UNI7473 M 5	NUT UNI7473 M 5
10	1	**C00004994**	DADO UNI 5589 M 8	NUT UNI 5588 M 8
11	1	**C00005024**	DADO UNI 5588 M 8	NUT UNI 5588 M 8
12	1	**C00007404**	INTERRUTTORE DI SICUREZZA	SAFETY SWITCH
13	1	**C00007687**	GRANO UNI 5925 8 X 25	GRAIN UNI 5925 8 X 25
14	1	**C00008667**	CUSCINETTO	BEARING
15	2	**C00008670**	BOCCOLA	BUSH

SPARE PARTS
ITWIN 45-55-65

ASSIEME PORTA QUADRO ELETTRICO - ELECTRICAL BOX DOOR ASSEMBLY



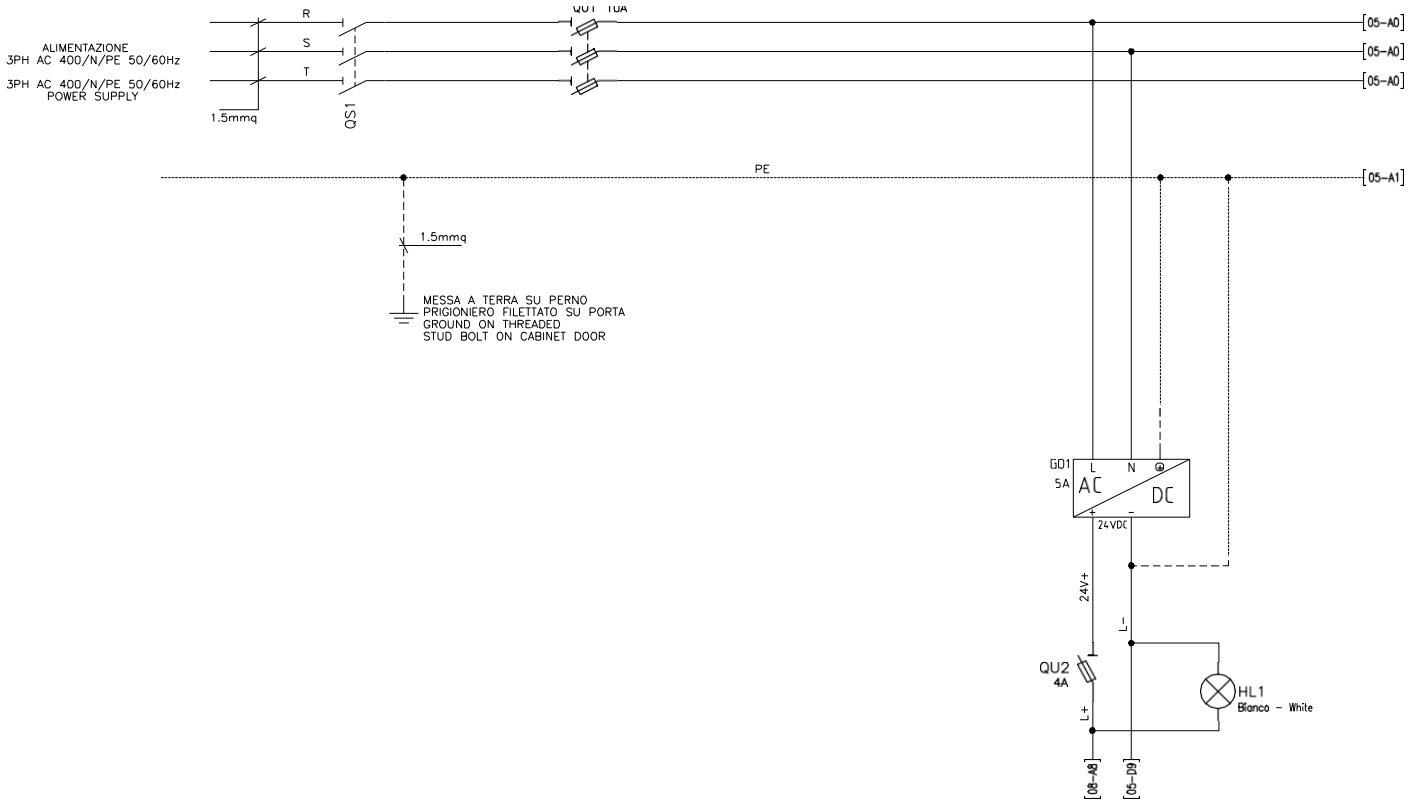
MADE IN ITALY

SPARE PARTS
ITWIN 45-55-65

COD. A310646

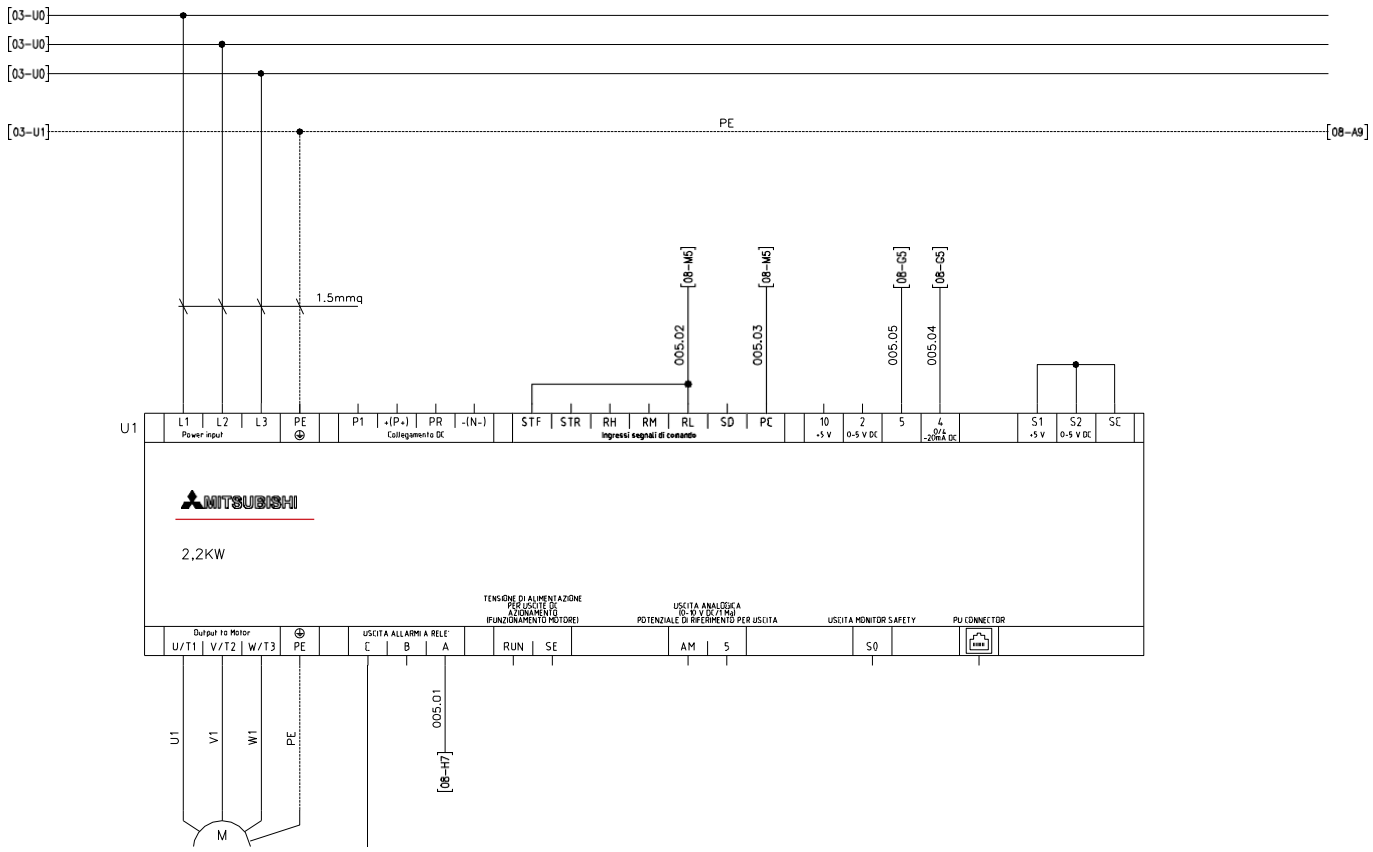
N.	Q	COD	DECRIZIONE	DESCRIPTION
1	1	**A310638**	ASSIEME PORTA QUADRO ELETTRICO	ELECTRICAL PANEL DOOR ASSEMBLY
2	1	**C00008677**	CHIUSURA ELESA	ELESA CLOSURE
3	2	**C00008676**	CERNIERA ELESA	ELESA HINGE
4	4	**C00007425**	RONDELLA UNI6593 M5	WASHER UNI6593 M5
5	4	**C00004495**	GRANO UNI 5923 5 X 16	GRAIN UNI 5923 5 X 16
6	4	**C00005026**	DADO UNI 5588 M 5	NUT UNI 5588 M 5

WIRING DIAGRAM
PLUNGING ARMS MIXER
INV-INV PROG



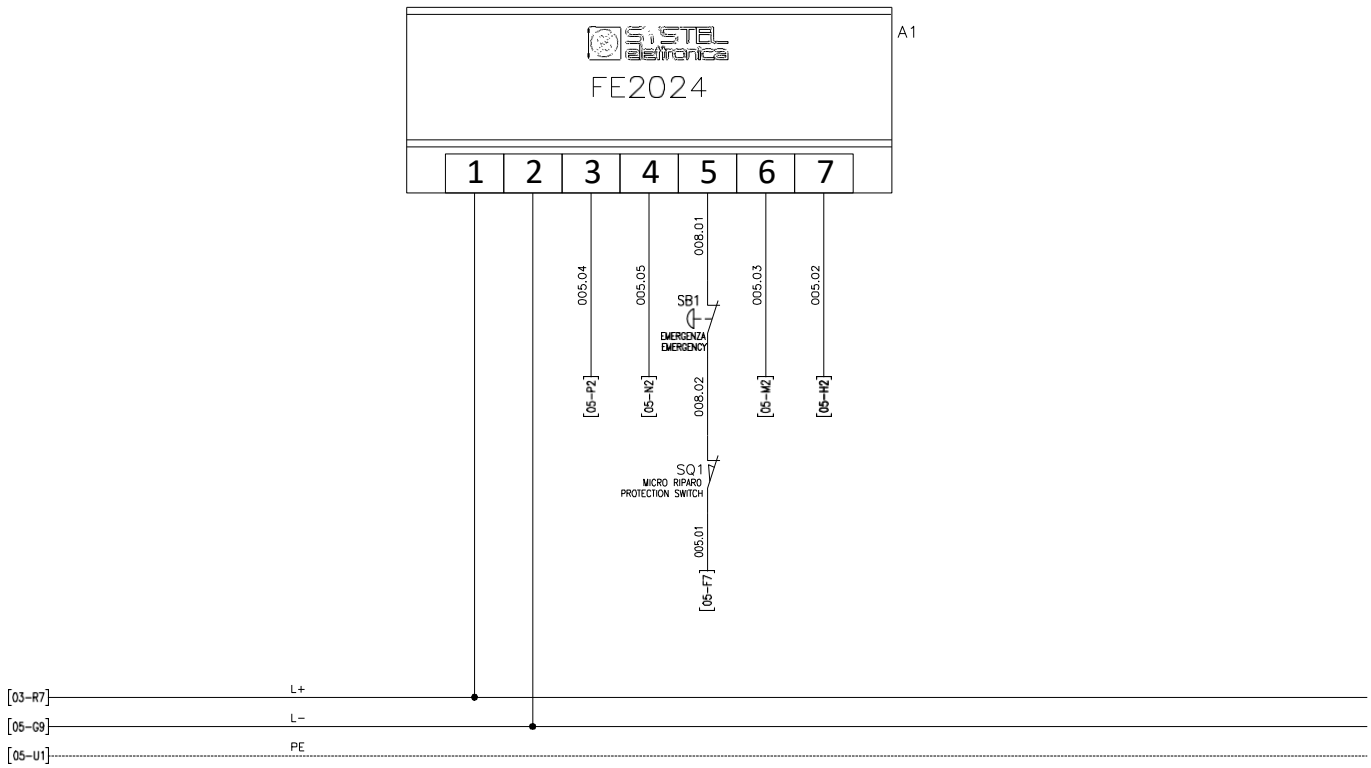
MADE IN ITALY

WIRING DIAGRAM
PLUNGING ARMS MIXER
INV-INV PROG



MADE IN ITALY

WIRING DIAGRAM
PLUNGING ARMS MIXER
INV-INV PROG

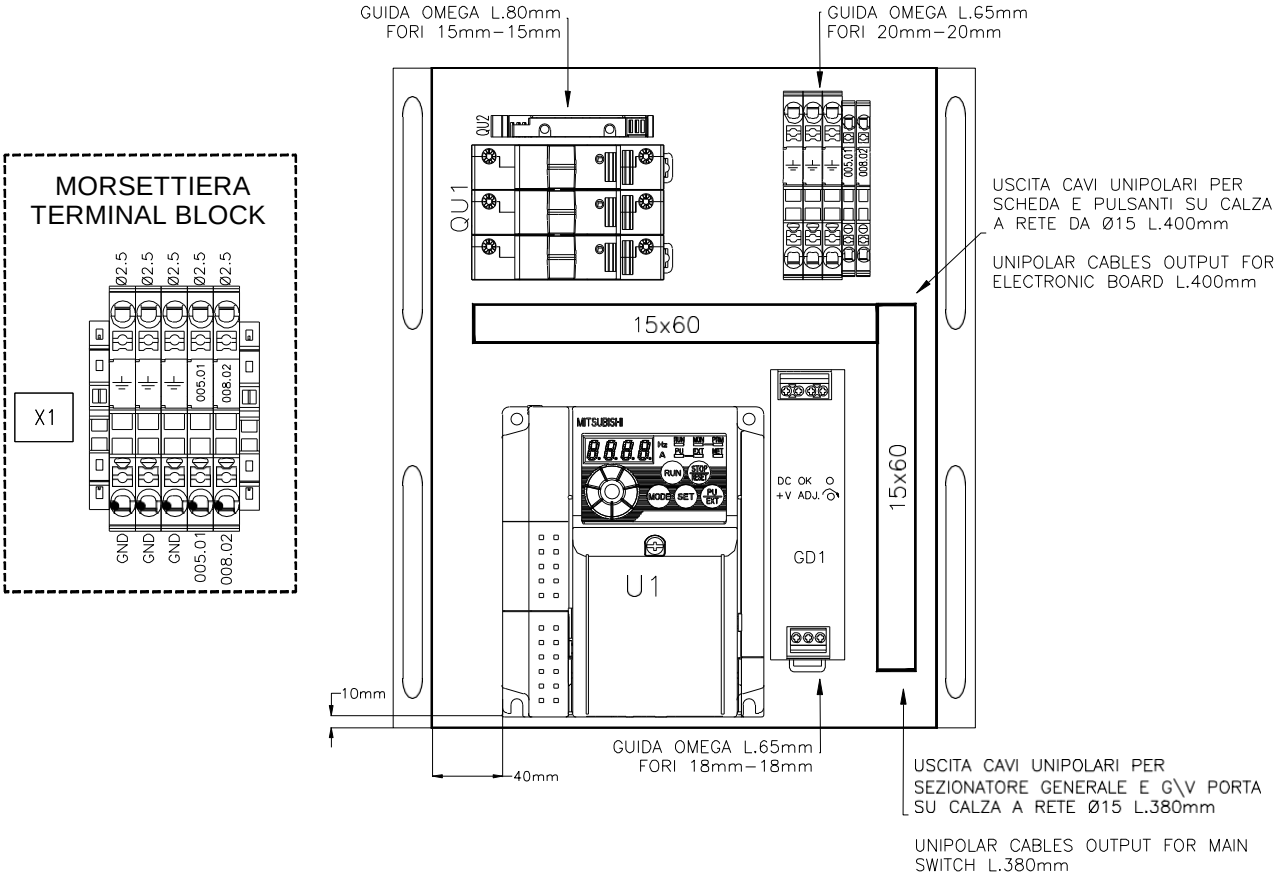


MADE IN ITALY

WIRING DIAGRAM

PLUNGING ARMS MIXER

INV-INV PROG

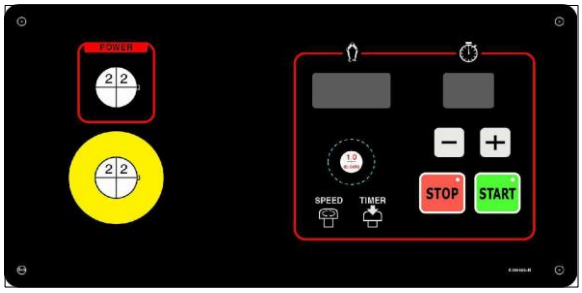


MADE IN ITALY

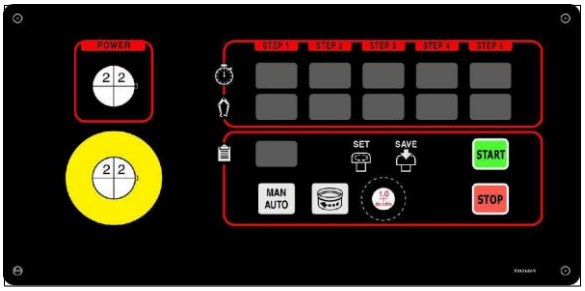
WIRING DIAGRAM

PLUNGING ARMS MIXER

INV-INV PROG



SCHEDA A 1 STEP
ELECTRONIC BOARD 1 STEP
CODICE: FE2024



SCHEDA A 5 STEP
ELECTRONIC BOARD 5 STEP
CODICE: FE2060

MADE IN ITALY

WIRING DIAGRAM

PLUNGING ARMS MIXER

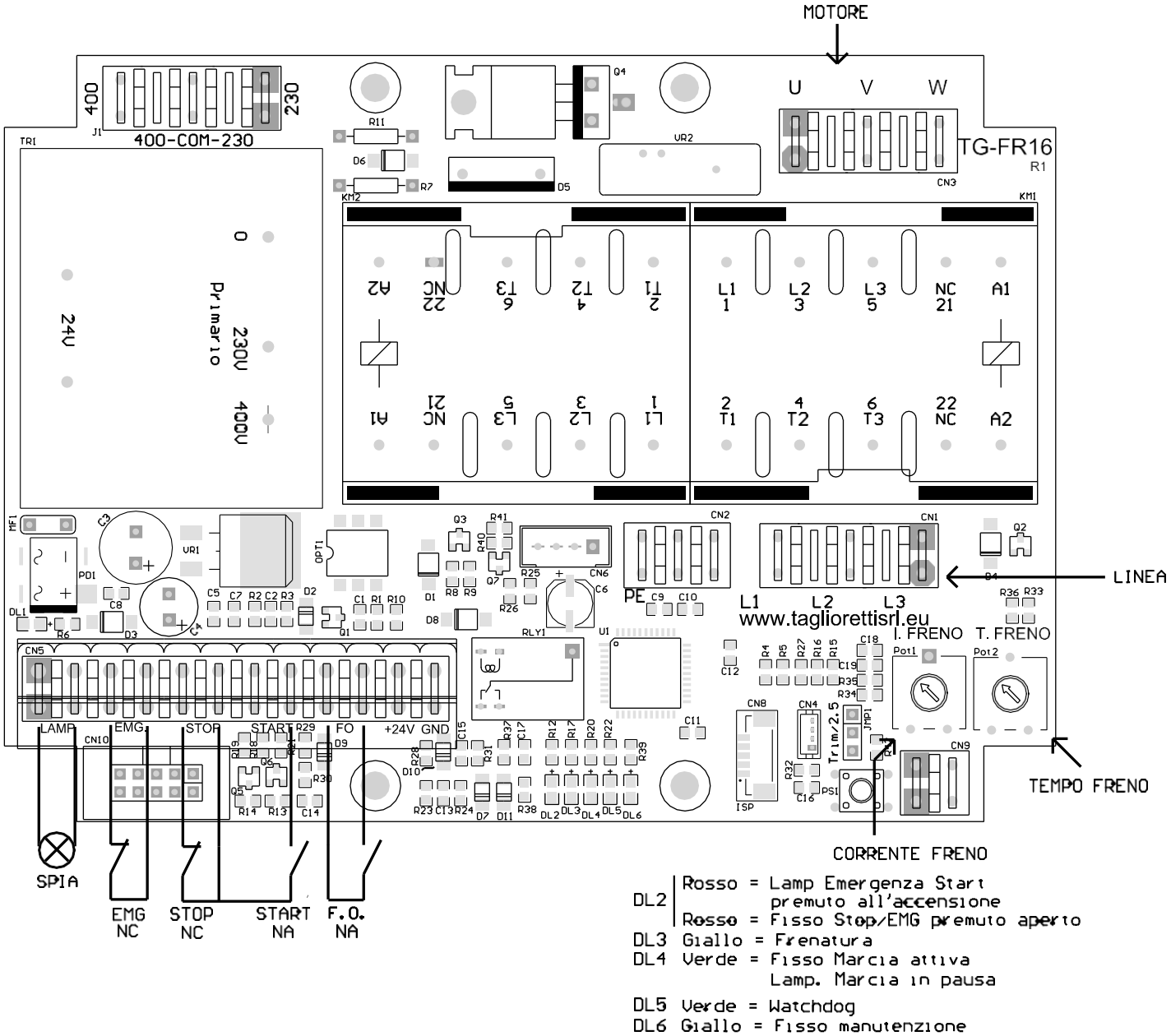
INV-INV PROG

Item	Pos.	Q.ty	Code	Description	Marker
GD1	3-R4	1	WDR-120-24	ALIMENTATORE MEAN WELL WDR-120-24 DIN RA // **POWER SUPPLY MEAN WELL WDR-120-24 DIN RA**	SYSTEL ELETTRONICA
HL1	3-S7	1	ZB4BV013	TESTA LAMPADA SPIA BIANCA LED // **WHITE LED LAMP HEAD**	SCHNEIDER ELECTRIC
		1	ZBVB15	ELEMENTO A LED LUMINOSO BIANCO 24V // **WHITE BRIGHT LED ELEMENT 24V**	SCHNEIDER ELECTRIC
		1	ZB4BZ009	BASE DI FISSAGGIO // **FIXING BASE**	SCHNEIDER ELECTRIC
QS1	3-D0	1+1	OT16FT3	SEZIONATORE 16A 3P A PANNELLO // **PANEL DISCONNECTOR 16A 3P**	A.B.B.
		1	OHYS2PJ	MANIGLIA BLOCCOPORTA GIALLO ROSSA // **RED YELLOW DOOR LOCK HANDLE**	A.B.B.
QU1	3-G0	1	57010018	PORTAFUSIBILE TRIPOLARE 10x38 // **THREE-POLE FUSE HOLDER 10x38**	SOCOMEC
		3+3	54001100	FUSIBILE 10X38 10 A RAPIDO NORME CE // **FUSE 10X38 10 A QUICK CE STANDARDS**	WIMEX
QU2	3-R6	1	UK 5-HESI	3004100 - PORTAFUSIBILE 5X20 // **3004100 - PORTAFUSIBILE 5X20**	PHOENIX
		1	SF522240	FUSIBILE 5X20 4 A RAPIDO A NORME CE-UL // **5X20 4 A QUICK FUSE ACCORDING TO CE-UL STANDARDS**	OMEGA
SB1	8-H4	1	ZB4BS844	TESTA PULSANTE A FUNGO ROSSO DI SICUREZZA // **RED SAFETY MUSHROOM BUTTON HEAD**	SCHNEIDER ELECTRIC
		1	ZB4BZ1025	CORPO CONTATTI N.C. // **CONTACT BODY N.C.**	SCHNEIDER ELECTRIC
SQ1	8-H6	1	XCKN2102G11	FINECORSA PLASTICA 1NO + 1NC PG11 // **PLASTIC LIMIT SWITCH 1NO + 1NC PG11**	SCHNEIDER ELECTRIC
U1	5-G5	1	FR-D740-050SC-EC	INVERTER TRIFASE 3X380-480V 2,2Kw In=5A // **THREE-PHASE INVERTER 3X380-480V 2,2Kw In = 5A**	MITSUBISHI

Materials list

WIRING DIAGRAM
PLUNGING ARMS MIXER
MAN

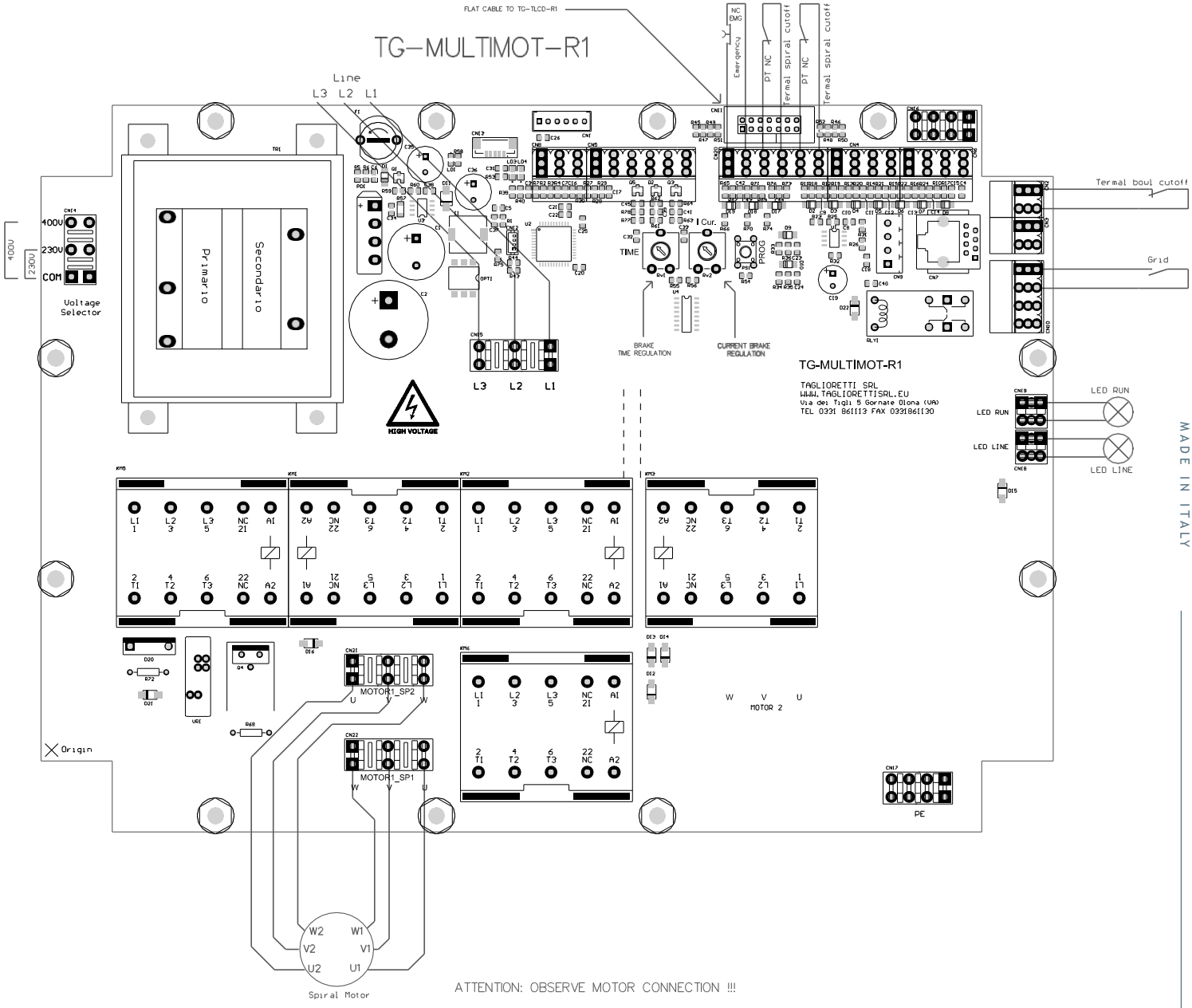
TG-FR16 R1



DL2 | Rosso = Lamp Emergenza Start premuto all'accensione
Rosso = Fisso Stop/EMG premuto aperto
DL3 Giallo = Frenatura
DL4 Verde = Fisso Marcia attiva
Lamp. Marcia in pausa
DL5 Verde = Watchdog
DL6 Giallo = Fisso manutenzione

MADE IN ITALY

WIRING DIAGRAM
PLUNGING ARMS MIXER
PRO



MADE IN ITALY


AMPTO