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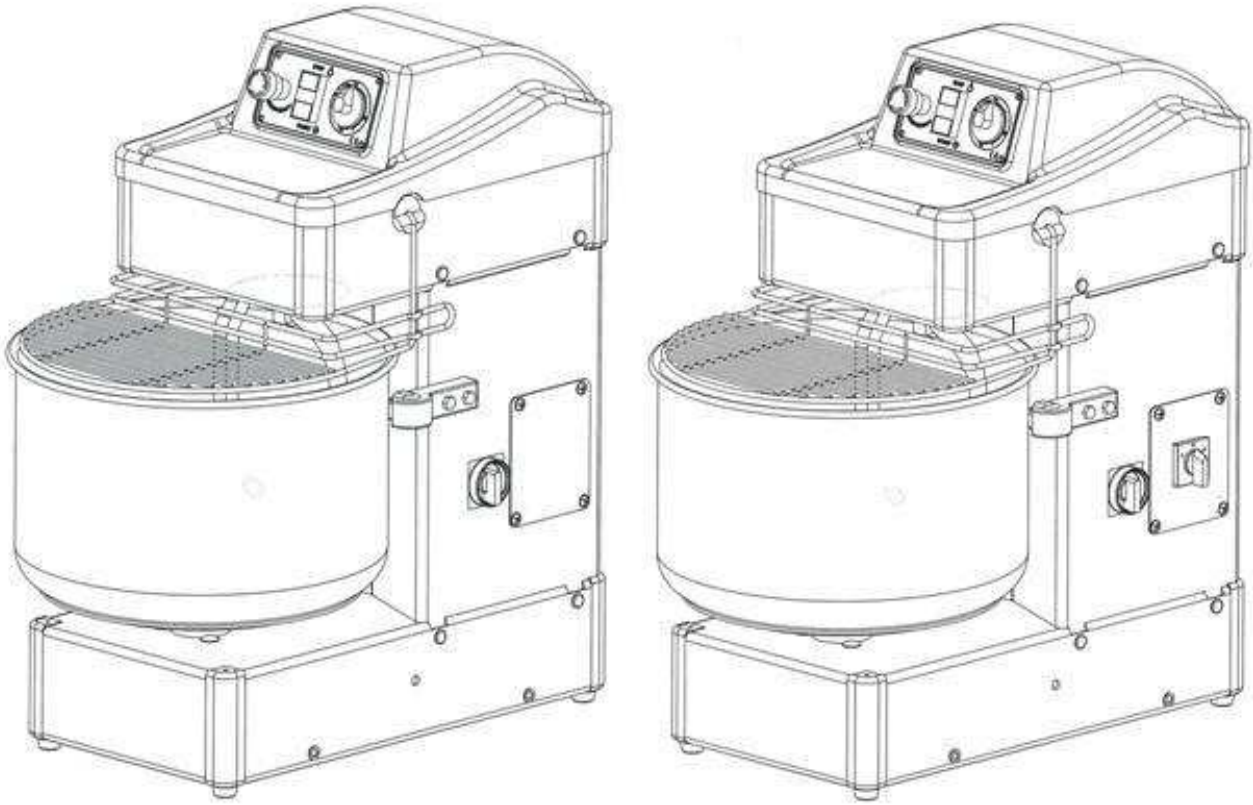
Via Artigianato 85 – 25030 Torbole Casaglia.
(BRESCIA) – ITALY – Tel 030 265 04 88 –Fax 030 265 01 43

INSTRUCTIONS, USE AND MAINTENANCE MANUAL TAURO 35 – 35 PLUS – 40 – 40 PLUS MIXER MACHINE

Translation of the original instructions



Edition date 01/01/2015

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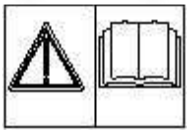
1. General information



This instructions, use and maintenance manual provides the necessary instructions for machine transportation, commissioning, use and maintenance and it must be consulted before performing any of these operations.

The manual must be read by the maintenance technicians and by the machine operators who must perform their tasks correctly.

The manual is an integral part of the machine and it must be kept in an adequate place to ensure its integrity and availability for consultation throughout the machine life-span.

In case of loss or deterioration, request a copy from the manufacturer, clearly specifying all of the machine identification data (year or manufacture, model, serial number).

All references and/or instructions in this manual relating to:

• CE marking;

• CE declaration(s) of conformity;

• declaration(s) of incorporation of the partly-completed machine;

• directives and regulations issued by the EU institutional bodies (Parliament, Council, Commission, etc.) and related transposition deeds of the EU member states;

• European harmonised standards,

are to be considered valid only for the machines intended to be placed on the EU market or for which compliance with Laws, Directives, etc. issued by the EU was expressly required by the customer and formally accepted by SIGMA SRL.

These references and instructions have no meaning and value for all machines not intended for the EU market, apart from the above exceptions.

1.1. Foreword

This manual is intended for all those in charge of installation, use and maintenance of the machinery in question, so that they can make the best use of the product features.

This manual must be kept and stay with the machine in the event of any moves, including when the machine changes hands. The manual must be kept available for reference in the interest of safe operation.

The manufacturer is not obliged to notify any subsequent product changes.

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It also reserves the right to ownership of this document in accordance with the law and prohibits tampering, reproduction and transmission to third parties without its authorisation.

The following symbols are used to highlight some parts of the text:

PERSONNEL QUALIFICATIONS: symbols used to indicate the specific competence required for the operation (they will be discussed further in the GLOSSARY chapter).

ATTENTION: indicates hazardous situations for which particular caution is required.

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2. Content of the declaration of conformity

The undersigned manufacturer:

SIGMA SRL
VIA ARTIGIANATO, 85
25030 TORBOLE CASAGLIA (Bs), Italy
VAT number: 03121980175

Through Mrs. Ornella Salvadori, as Chairwoman;

DECLARES

that the machine: TAURO 35 – 35 PLUS – 40 – 40 PLUS

Year of manufacture:

complies with the relevant provisions provided by:

-Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery and amending Directive 95/16/EC (transposed by the Italian state with L.D. 27/11/2010, no.17);

-Directive 2004/108/EC of the European Parliament and of the Council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC;

-Regulation (EC) No. 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC

-Commission Regulation (EU) No. 1183/2012 of 30 November 2012 amending and correcting Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food;

-Commission Regulation (EU) No. 1183/2012 of 30 November 2012 amending and correcting Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food;

-Commission Regulation (EC) No. 2023/2006 of 22 December 2006 on good manufacturing practice for materials and articles intended to come into contact with food;

The Chairwoman
Ornella Salvadori

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3. Warranty conditions

3.1. Validity

The warranty becomes effective from the date of shipment and lasts for twelve months, if:

- The machine was not damaged during transportation, and it was installed, commissioned, used and serviced as prescribed in this manual.
- It was not tampered with, modified and no unintended tools were installed on it.
- It has not been modified or repaired by the purchaser or by third parties in an inconsistent manner or without the prior consent of the supplier.

The following conditions constitute improper use of the machine:

- Loading more than what is allowed or use of unsuitable ingredients.
- Cleaning with unsuitable tools or instruments that can scratch the bowl or damage the machine, paint and plastic parts.
- Use of the machine in unsuitable places.

3.2. Warranty mode of provision

The purchaser must immediately notify the supplier of any detected machine defects; the supplier will quickly analyse the non-conformity and decide, in collaboration with the purchaser, on the actions to be taken.

After agreement with the supplier, the purchaser must give the same the necessary time and opportunity to carry out any changes, improvements, repairs or supply of under-warranty parts it deems necessary, otherwise the supplier is exempt from property vices.

3.3. Wear parts

Some components are sized to last longer than normal use of the machine under warranty time. The failure or malfunction of these parts depends on the use, they are therefore considered wear parts and are not covered by warranty, except for evident defects on the part or machinery.

Parts subject to wear: transmission belts, chain and bearings

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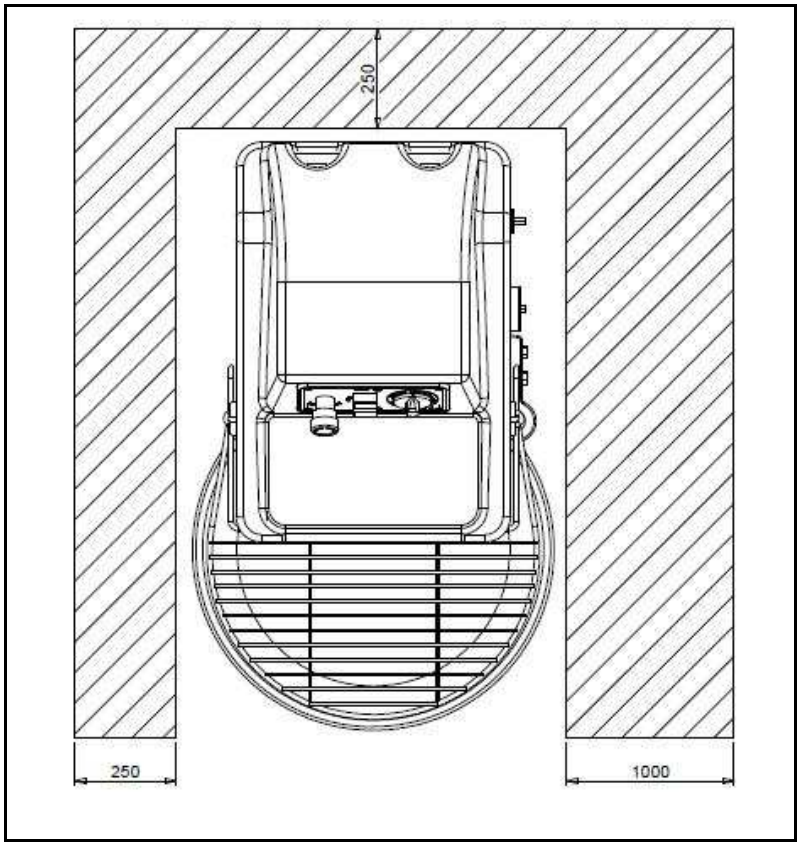
4. General safety standards

The safe and systematic use of the machine is subject to compliance with the below listed standards and behaviours.

4.1. Safety standards.

- Personnel must be in good physical and psychological conditions, and appropriately instructed on how to use the mixer by reading this document.
- Only professional use of the machine is allowed in places where access to the public, to profane, to children and to anyone not expressly authorised is forbidden.
- It is forbidden to use the machine: for operations and / or with different product(s) to those specified; if the connections to the service facilities from the site are not run as expected in this manual; in places with risk of fire and / or explosion and major incidents, high humidity or wet, excess water vapour, oily vapour, dust, presence of corrosive substances / gases, adverse weather conditions; in the vicinity of naked flame, zones with projection of sparks and heat sources; in conditions of abnormal vibration or shock.
- The safety officer, and / or the employer, and / or the owner of the company, in choosing the person who will be authorised to use the machine (suitable person to work according to applicable laws), must check the same on the basis of attitudes and skills encountered and provide training of the same, with the reading of this publication, in order to provide comprehensive knowledge of the machine and of the rules of conduct applicable to it.
- The space around the machine must be well-lit, uncluttered and clean. Leave about 250mm of free space around the machine, especially on the side where the master switch is located, leave 1000mm.



- Personnel in charge of running, cleaning and servicing the machine must wear the prescribed P.P.E. (personal protective equipment): gloves, shoes with reinforced tip, goggles, masks and helmet.

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- Do not wear loose clothing or with fluttering hems (ties, torn clothes, open jackets, etc.) to avoid the risk of entanglement.
- During maintenance and cleaning operations, the operator must release the master switch (OFF) and secure the system (for example, by removing the plug and leaving it in a clearly visible position).
- Never leave the machine unattended during operation, pay attention to unusual sounds or behaviour and keep away from rotating parts. Never open the guard unless the tool has completely stopped.
- In order to empty the machine completely, release the master switch (OFF), disconnect power by removing the plug and leaving it clearly visible, secure it and clean with water.

4.2. Safety devices.

The machine is equipped with some devices to protect its operation and the operator's safety; they must never be removed and modified and their operation must be periodically verified.

- Master switch: disconnects power to the machine, for safe maintenance.
- Circuit breaker: it interrupts power supply in case of overheating of the electric motor that moves the spiral.
- Fixed guards: all casings and protections fixed with screws or mechanical blocks can only be removed for maintenance, by qualified personnel and as prescribed. Once the work is completed, they must be immediately reassembled.
- Mobile guards: properly closed mobile guards allow the machine to be used.

A lack of these conditions prevents operation.

4.3. Safety standards applied to the machine.

As repeatedly stated in this manual, the employer must provide workers with adequate information and training, also practical, on the correct and safe use of the machine (must be simple and understandable in relation to the acumen that can reasonably be expected by those concerned).

The following table provides a minimum list of topics to be covered as information, training and educating of personnel; for clarity we provide the following definitions:

information: transfer of information, knowledge, etc…, without verification of learning;

training: transfer of information, knowledge, etc ..., on special and specific topics, with verification of understanding of the topics covered, but without practical demonstration;

training: transfer of information, knowledge, etc ..., with practical demonstration of their implementing on special topics

Topics	Information	Educating	Training	Chapter
Hazard characterising the machine and related risks. Use of PPE. Machine limits and destination. Intended and/or prohibited uses.	**X**	**X**	**X**	4
Safe operating method and procedures	**X**	**X**		6
Safety signs	**X**	**X**		6.1
Residual risks and measures to take to limit them	**X**	**X**		6.2
Organisation of the manual and how to consult it	**X**	**X**		7
Machine description	**X**			8
Control panel description	**X**	**X**		10.2
Storage and conservation of the machine	**X**			10.4

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Topics	Information	Educating	Training	Chapter
Noise emitted by the machine	X			10.6
Machine handling and transportation	X		X	11.1
Description of the adjustment and commissioning operations	X	X		11.2
Adopted safety devices	X	X	X	12
Instructions on using and loading the ingredients (machine use and how to insert the ingredients)	X	X	X	13
Replacements and/or scheduled maintenance (routine and extraordinary maintenance)		X	X	14
Cleaning the machine		X	X	14.6
Troubleshooting	X			15

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5. Customer set-ups

The environmental conditions of the location where the machine is installed must have the following features:

- Humidity-free.
- Water and heat sources at an appropriate distance.
- Appropriate ventilation and lighting that is compliant with the hygiene and safety standards required by the laws in force. The floor must be level and compact in order to favour proper cleaning.
- Do not place in the immediate vicinity of the machine, obstacles of any nature that may affect the normal operation and ventilation of the machine in question (leave about 250 mm free around the machine, especially on the side, where the master switch is located, leave 1000mm).
- Upon machine arrival, ensure it is intact. Any damages incurred during transport or delivery must be immediately reported.
- Ensure that the power supply matches that of the machine: check the plate on the machine and on the wiring diagram (chap. 18). Connection to the line MUST be done via a CE standard blocked socket, fitted with three valves adequate to the amount of current absorbed during machine operation.

The electrical mains must have an automatic circuit breaker with adequate features to those of the machine, where the opening distance between contacts is at least 3 mm. In particular, an earthing system compliant with current regulations is essential.

Check that the system power supply voltage and frequency are compatible with the values indicated in the technical features and on the plate affixed to the machine.

5.1. Instructions for ordering spare parts

SIGMA S.r.l., reserves to make all changes it deems necessary to its machine models.

It is, therefore, always necessary to specify:

- Type of machine
- Year of manufacture
- Position
- Description
- Serial no.
- Required number of parts.

Address your request to:

Sigma S.r.l.

via Artigianato 85,

25030 Torbole Casaglia (BS) Italy

Tel 030 265 04 88 - Fax 030 265 01 43

www.sigmasrl.info - Email: info@sigmasrl.info

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6. Safe work methods and procedures

READ THESE INSTRUCTIONS CAREFULLY BEFORE USING THE MACHINE

In order to prevent hazardous conditions and/or possible injuries caused by: electric current, mechanical parts, fire, or of hygienic nature, the following safety warnings must be observed:

- Keep your work station tidy. Clutter can cause accidents.
- Assess the environmental conditions. Do not use or leave the machine in a wet, damp or poorly lit environment, or in the vicinity of flammable liquids or gases.
- Keep children and unauthorised personnel away. Do not allow these people to approach the machines or work station.
- Use the machine within its operating range and for the purpose for which it was designed. It works best and at its safest when it is not overloaded.
- Wear appropriate clothing. Do not wear dangling clothes or accessories that may get entangled in moving parts. Use the shoes with reinforced tip and non-slip sole. For health and safety reasons, long hair should be gathered in the appropriate net and gloves should be worn.
- Protect the power supply cable. Do not pull the cable to disconnect the plug. Do not expose the cable to high temperatures, in contact with sharp edges, water or solvents.
- Avoid unsafe positions. Find the most suitable position that ensures absolute stability.
- Always exercise extreme caution.
- Always take the plug out of the socket after use and before cleaning and maintenance and before moving the machine, and leave it in a clearly visible place.
- Never use extension cables outdoors.
- Make sure that the machine is not damaged. Carefully check the effectiveness of the safety devices before using the machine. Make sure that: the mobile parts are locked in place, there are no damaged components, all the parts have been assembled correctly and the machine can be run normally in optimal conditions. (See chapter 14)
- Entrust repairs to qualified personnel. Repairs must only be performed by qualified personnel using original spare parts.

FAILURE TO OBSERVE THESE REQUIREMENTS MAY BE CAUSE OF HAZARD FOR THE USER.

6.1. Risks for the operator

Gripping and dragging hazard: it is present between bowl and structure, between bowl and contrast wheels

Electrocution hazard: the machine must not be used without adequate earthing, and it must be connected to a system built according to building regulations in force in the country of installation.

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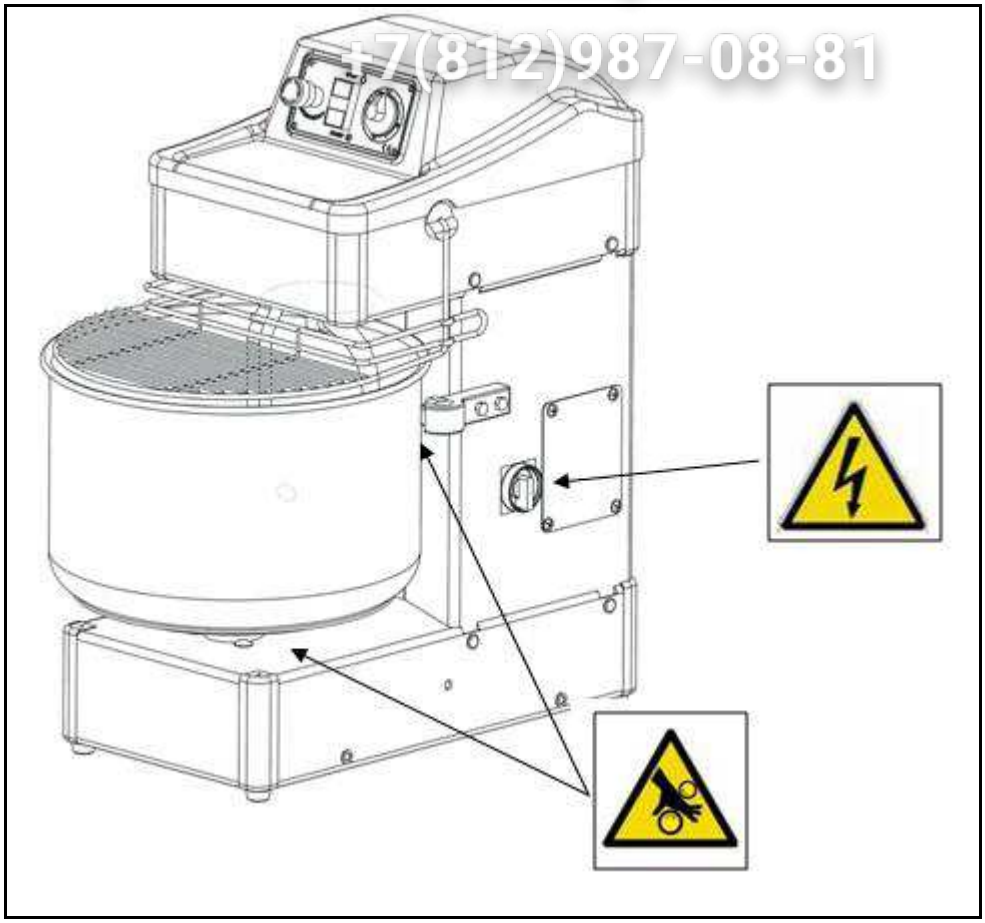

Earthing obligation

Prohibition to clean and lubricate moving parts

Prohibition to remove the safety devices and guards

ATTENTION!

Wear the provided PPE during operation (e.g. shoes with reinforced tip, gloves, goggles and masks).

Clean the machine thoroughly after use.

Do not remove the safety devices or protective casings.

Do not put any objects through the bowl guard with the parts in motion.

Before any manoeuvre wait for the machine to completely stop, turn it off and disconnect it from the mains.

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6.2. Residual risks

In short, the residual risks are:

-**Gripping and dragging risk (very low) between bowl and base**: despite the distance between the bowl and base meets the UnI EN 453 requirements, there is still a residual risk of being caught and dragged if a person inserts a body part in this space. The risk is even greater, the greater the thrust with which the person forces the passage (e.g. of an upper limb);

-**Risk (very low) of crushing, shearing, dragging, impact in case of contact with the moving spiral:** the bowl guard meets the requirements of UNI EN 453, however there is the remote possibility that a person reaches the moving spiral through the gap between guard and bowl, which forms by lifting the guard before the safety microswitch trips commanding the emergency stop or, once the guard is open, before the spiral completely stops (maximum stopping time allowed by Standard UNI EN453 is 4 seconds);

-**Risk (very low) of bruising by dragging** when the bowl is made to turn with guard open via the hold-down control device: if the operator places his hand in the dough near the spiral and/or column, as the dough rotates it may drag the hand and push it against the parts with risk of a slight bruising;

-**Health risk from inhaling flour powder** which, despite the measures taken in accordance with UNI EN 453, inevitably develops even if minimally, and due to inadequate cleaning of the machine;

-**Risk of muscle - skeletal injury**: due to ergonomic factors and/or abnormal stresses during the manual lifting of bags of flours and/or buckets of water to be poured into the bowl, and during the dough extraction operations.

As far as possible and relevant, adequate safety signs have been affixed on the machine; the affixed signs and their position on the machine are described in the instruction manual.

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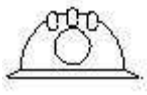
7. Organisation of the manual and how to consult it

7.1. Glossary

Symbol	Description	Features
	OPERATOR	Person informed on machine operation, adjustment and programming, on the safety and protection systems, who knows the possible manufacturing cycles and the ingredients to be used with related maximum quantities allowed, and has read and understood the operating and maintenance manual.
	ELECTRICAL MAINTENANCE TECHNICIAN	Person in good health conditions who is qualified by title, appointment and/or experience as an electrical maintenance operator and has read and understood the operating and maintenance manual.
	MECHANICAL MAINTENANCE TECHNICIAN	Person in good health conditions who is qualified by title, appointment and/or experience as a mechanical maintenance operator and has read and understood this operating and maintenance manual.
	HANDLING OPERATOR	Person in good health conditions who is qualified by title, appointment and/or experience to handle loads and has read and understood this operating and maintenance manual.
	ASSISTANCE Tel.+39030.265.04.88 Fax+39030.265.10.82 www.sigmasrl.info Email: info@sigmasrl.info	Requests for manual updates. Telephone assistance on the operation, commissioning or failure of the machinery. Requests for spare parts, product repairs, system revisions, on-site interventions. Training courses.
	ATTENTION	This type of signal urges to pay particular attention in the indicated operations. Failure to comply may cause injury to people in charge or damage the machine.

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8. Machine description

MACHINE DESCRIPTION AND USE:

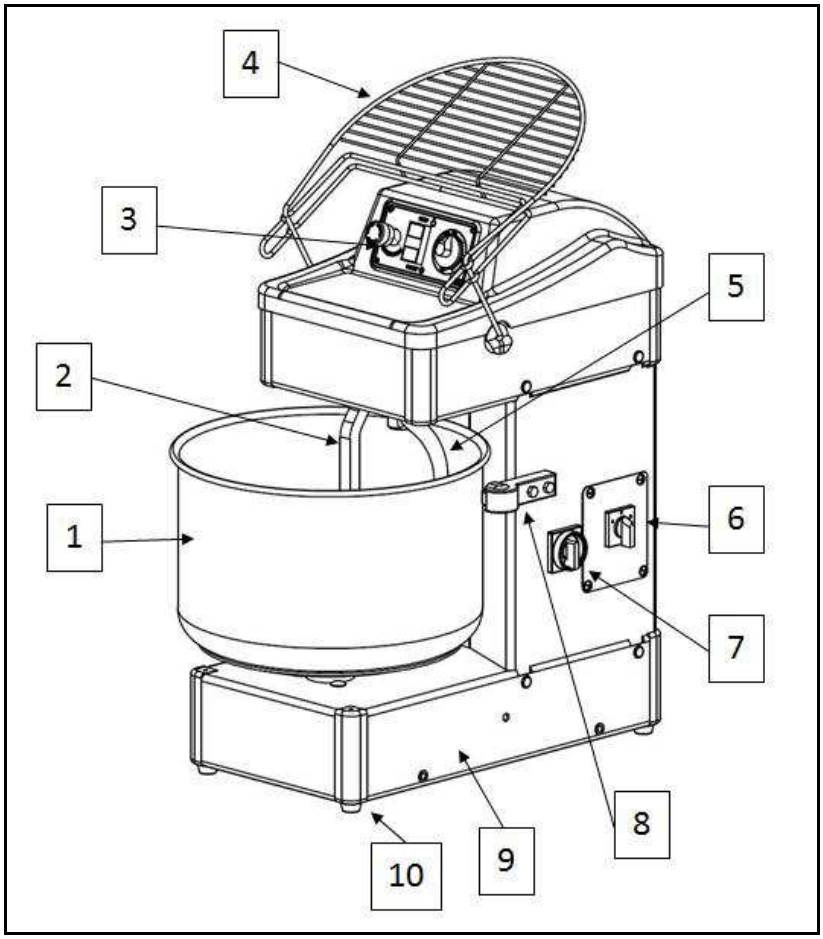
MACHINE DESCRIPTION AND USE:

The TAURO mixing machines are designed for professional use only, to mix water and flour-based food dough for bread-making and pastry workshops. A spiral rotates mixing, refining and oxygenating the mix contained in a rotary bowl and, thanks to the vigorous mechanical action performed by the system, the mix is quickly and effectively prepared.

As specified above, the machines are for professional use only, by educated, trained and authorised personnel.

Any other use is forbidden, any particular needs and specifications must be examined by the SELLER on request.

The machine, filled with water, flour and additives as described below, is started from the control panel and the spiral, rotating together with the bowl, mixes the ingredients. To empty the bowl, stop the machine by pressing the stop button, lift the guard and manually remove the dough from the bowl. Help yourself using a plastic or wooden spatula to avoid scratching the bowl.



1) BOWL: container in which the various ingredients to be mixed are inserted, is equipped with rotation;

2) CONTRAST ROD: tool contrasting the spiral, to improve product mixing;

3) CONTROL PANEL: device used to start or stop the machine, and set the processing time;

4) MOBILE GUARD: it is a guard used prevent spilling dough and flour from the bowl and/or prevent injuring the upper limbs; it is connected to a safety micro switch;

5) SPIRAL: tool used to mix the dough, through rotational movement;

6) SPEED SELECTOR (ONLY FOR 2-SPEED TAURO): select the wanted speed;

7) MASTER SWITCH: electrical device that connects/disconnects the machine power supply;

8) BOWL CONTRAST WHEEL: used to facilitate rotating the bowl;

9) BEARING STRUCTURE: machine body;

10) FEET: used as support on the surfaces and to stabilise the machine during operation.

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9. Machine identification

There is a plate on the machine casing, like the one illustrated, which carries indications concerning the manufacturer, type of machine, serial number, electrical features, frequency, rated power, number of phases, year of manufacture and mass.

9.1. Main components

- Raw materials used: the machine is almost completely made of steel, cast iron, brass and plastic. All of these components can be easily disposed of and are not dangerous to the environment and/or a hazard to personal safety. Adequately separate the different materials for subsequent reuse or separate disposal.
- Surface treatment: paint, electrolytic galvanising, chemical nickel-plating, Teflon coating, electro polishing, to ensure high technical performance, hygiene and durability.
- The Sigma packages fully meet the requirements of Directive 94/62/EC and Legislative Decree 05/02/97 no. 22 (and subsequent amendments and additions) and so become waste similar to urban, that can be easily inserted in any separate collection program.

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10. Technical data and features

10.1. Units of measurement

The units of measurement used in the manual are:

- Millimetres [mm]
- Kilograms [kg]
- Kilowatts [kW]
- Litres [l]

10.1.1. Technical data

MODEL	MACHINE MASS [kg]	POWER [kW]	BOWL [litres]	BOWL diameter x H [mm]	ELECTRICAL POWER SUPPLY
TAURO 35	92	1.1	48	Ø 450x300	230V 50Hz 1 phases + PE 400V 50Hz 3 phases + PE
2-Speed TAURO 35	92	1.2/1.55	48	Ø 450x300	400V 50Hz 3 phases + PE
TAURO 35 PLUS	92	1.2/1.55	48	Ø 450x300	400V 50Hz 3 phases + PE
TAURO 40	96	1.1	60	Ø 500x300	230V 50Hz 1 phases + PE 400V 50Hz 3 phases + PE
2-Speed TAURO 40	96	1.2/1.55	60	Ø 500x300	400V 50Hz 3 phases + PE
TAURO 40 PLUS	96	1.2/1.55	60	Ø 500x300	400V 50Hz 3 phases + PE

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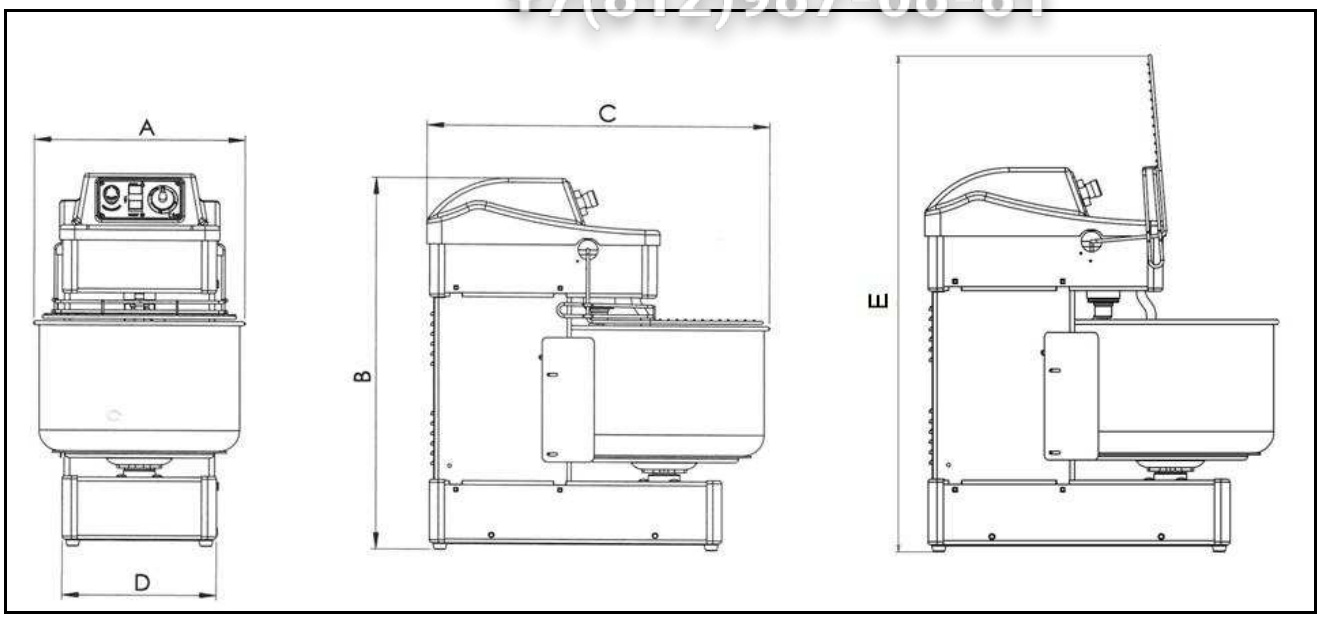
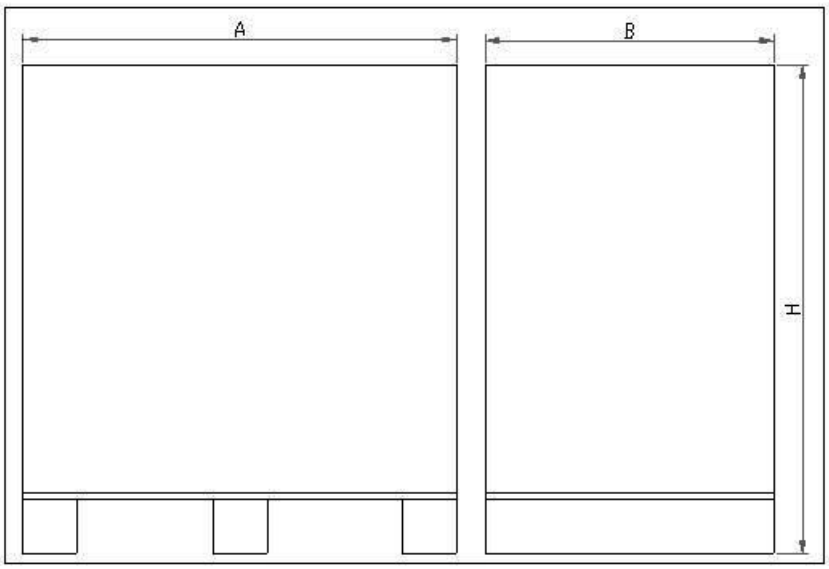
10.1.2. Dimensions



MODEL	A	B	C	D	E
TAURO 35 - 35 PLUS	490	830	750	310	1130
TAURO 40 - 40PLUS	490	830	780	310	1130

10.1.3. Packaging



MODEL	A	B	H
TAURO 35-35PLUS-40	810	570	880

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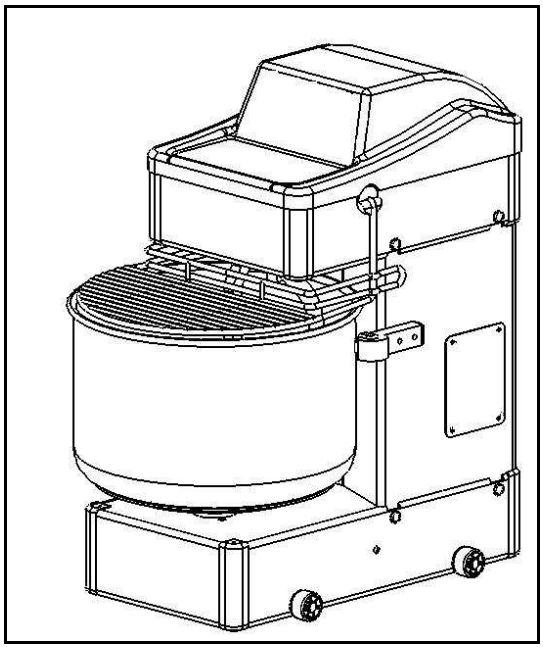
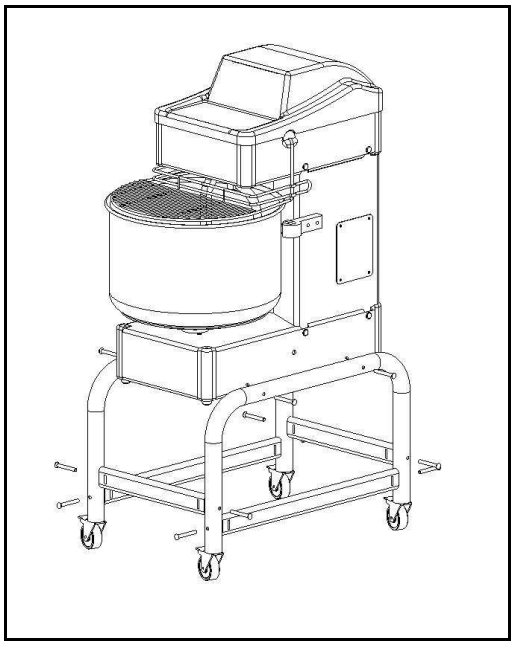
10.1.4. Optional

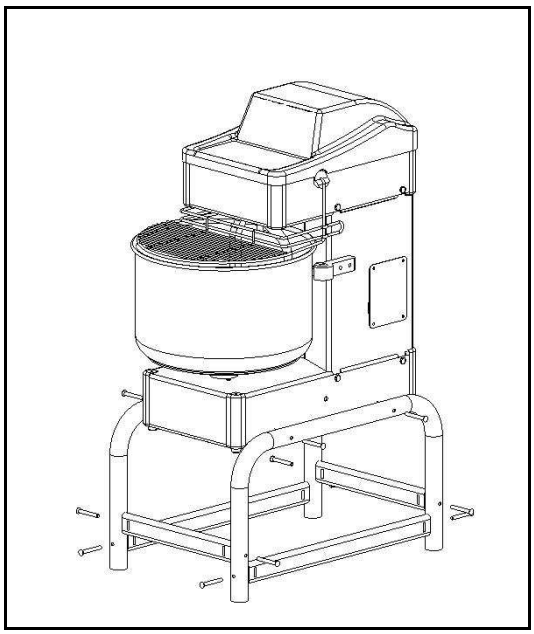
On request, the mixer is supplied with: ship connection, fixed base, base with wheels, or with wheels only (these options are supplied in kit to be assembled).



Optional wheels only



Optional base with wheels



Optional fixed base

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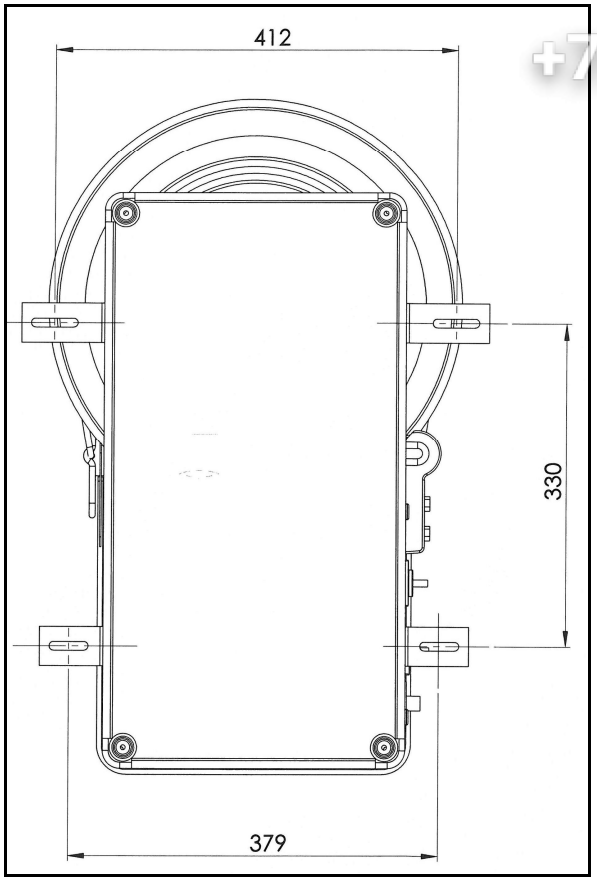
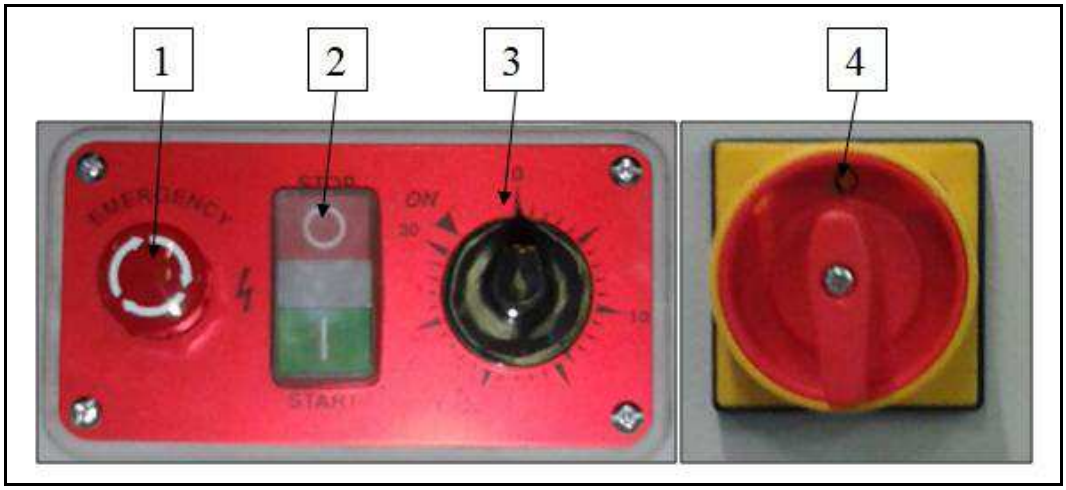


SHIP CONNECTION (OPTIONAL)

Machine stability in case of slipping on wet or greasy surfaces, equipment positioning in unstable places (ships, aeroplanes or other), use the specific connections for stable fixing (4 anchoring devices with 300 kg resistance, M8 screws).

10.2. Control panel

Tauro 35-40



1) EMERGENCY BUTTON

2) START & STOP BUTTON

3) TIMER

4) MASTER SWITCH

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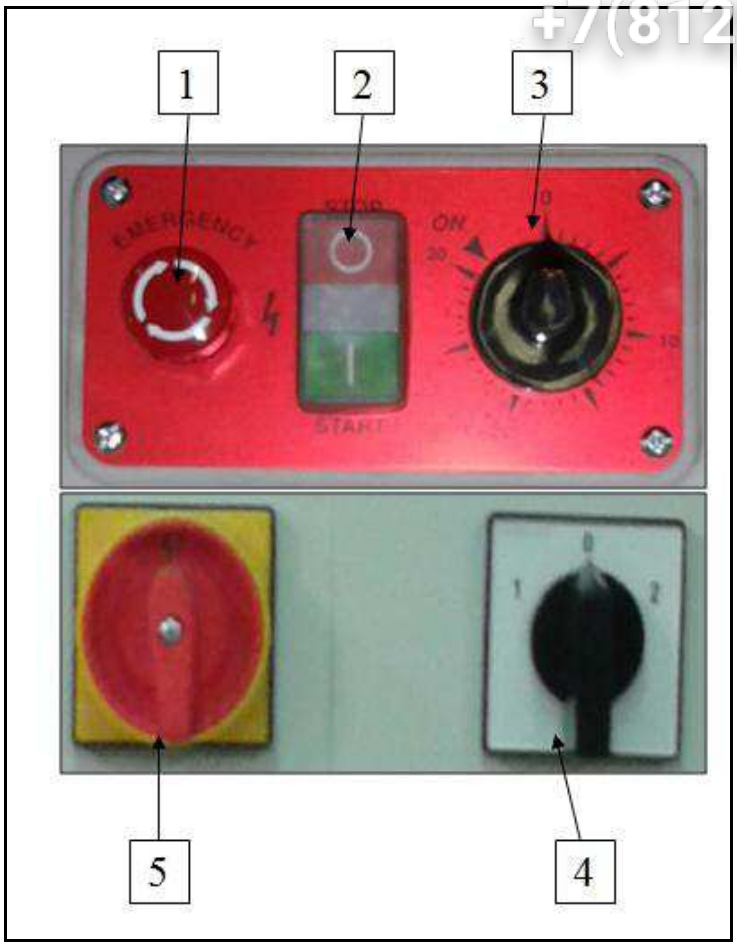
2-Speed Tauro 35-35PLUS-40



1) EMERGENCY BUTTON
2) START & STOP BUTTON
3) TIMER
4) SPEED SELECTOR
5) MASTER SWITCH

10.3. Storage and conservation of the machine

10.3.1. Storing the packaged machine:

The machine must be stored in a closed and covered place, on a smooth and solid surface protected from dust and dirt, from atmospheric agents and in a hygienically safe place.

The temperature must be between 5 and 40°C, humidity must not exceed 90%.

10.3.2. Storing the unpackaged machine.

If the machine has already been unpackaged, in addition to the above, it should be lifted off the ground with a pallet or other and covered to protect it from damp, dust and dirt. If it is wrapped with cellophane or another type of plastic, do not hermetically seal underneath the machine to avoid corrosion due to condensation.

ATTENTION

Storing the machine outdoors is not allowed.

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10.3.3. Storing the machine

Storage before a long period of inactivity:

- Clean the machine thoroughly.
- Disconnect it from the electrical system.
- If possible, put it back in its original packaging.

10.4. Type of drive, motors.

TYPE OF DRIVE: MECHANICAL

MOTOR FOR TAURO 35-40 - T80: 230-400V 2/4P 50Hz 1.1/0.8 kW 3.4-2.2A

MOTOR FOR TAURO 35-35PLUS-40 2-SPEED - T90: 2/4P 1.4/1kW 400V 50Hz 3.4/2.66A THREE-PHASE

10.5. Types and features of the product and of the treated materials

CONDITIONS OF USE:

- Environmental conditions: the machine must be installed inside a lit, ventilated building, on a solid level support. Temperature from 5 to 40°C with humidity not exceeding 90%.
- Lighting: the light available to the operator must comply with the type of work performed, in relation to general lighting, according to current regulations and, however, sufficient to read the controls, the hazard signals and such not to blind the operator.

10.6. Type and features of machine emissions

- Vibrations: in proper operating conditions, the vibrations are not such to give rise to hazardous situations.
- Sound emissions: 70-75 dBA under normal use.

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11. Transport and installation

11.1. Transport and handling

11.1.1. Machine on pallet

Make sure that the lifting equipment capacity is adequate to the load.

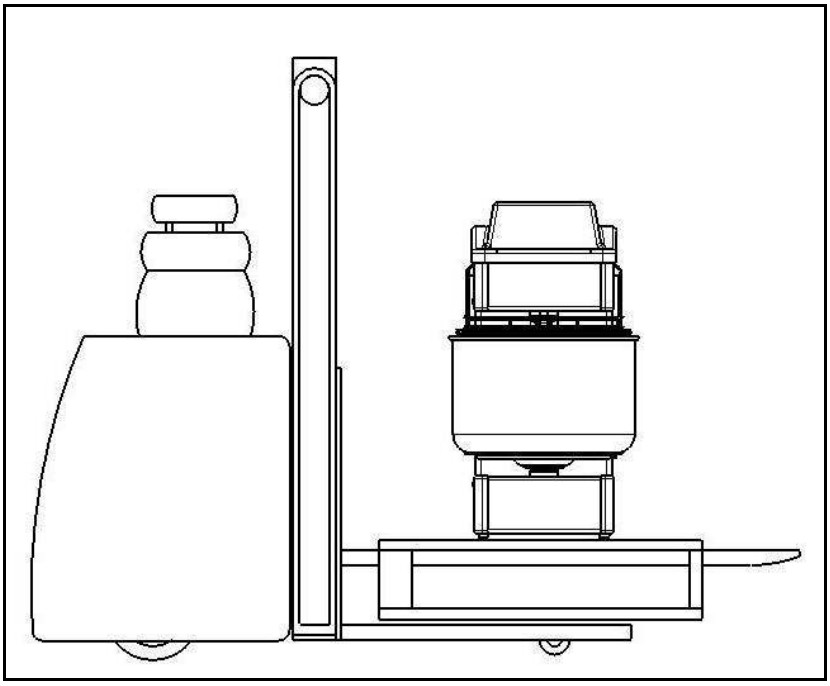
Widen the lifting forks as much as possible and make sure they stick out from the pallet.

Work in an area free from persons and animals.

During movement, always keep the load as close to the ground as possible.

Use the required P.P.E. (e.g. shoes with reinforced tip).

Standards on lifting using a forklift truck: always use a pallet to move the machine.



11.1.2. Machine without pallet

To remove the machine from the pallet, lift it as shown in the figure below, with appropriately robust straps.

Make sure the lifting equipment is adequate for the load. Work in an empty area. During movement, always keep the load as close to the ground as possible.

Use the required P.P.E. (e.g. shoes with reinforced tip and non-slip sole, gloves and helmet).

During lifting the machine may be slightly tilted (10-15 degrees)

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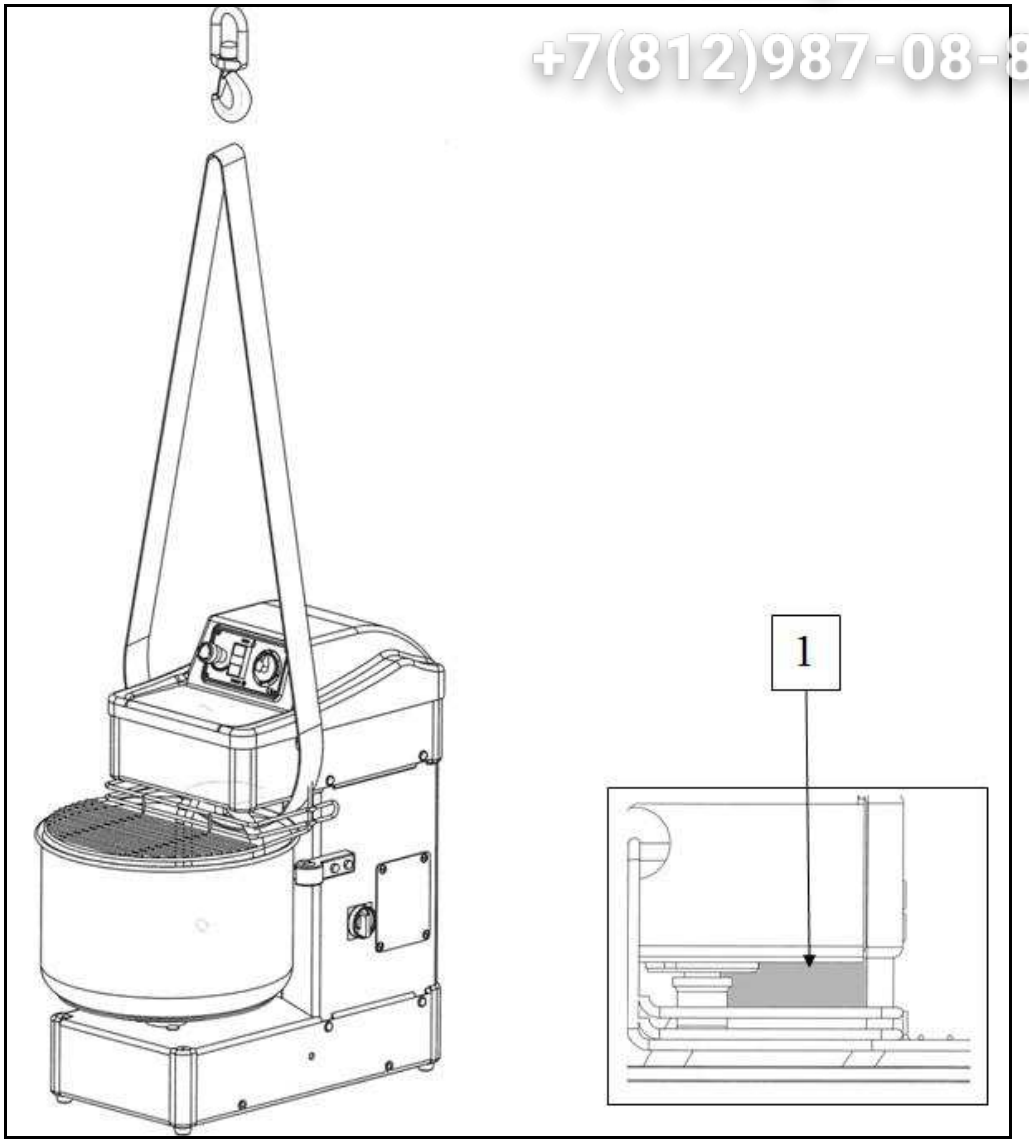

1) Insert the belt between the scraper and the spiral.

11.2. Description of the adjustment and commissioning operations

11.2.1. Installation

The machine must be positioned vertically on a smooth surface and able to support the weight (floor with resistance above 20 kgcm^2). The walls, the table and the floor must be in good condition and easy to clean.

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11.2.2. Electric line connection

The electrical connection must be done by a qualified electrician, according to the methods and regulations in force in the country of installation.

The machine is supplied with power cable without plug. The cable must be kept away from hot and/or moving parts and must not obstruct the movement or transiting of people and things. The socket into which the plug will be inserted must have adequate features to the maximum current of absorption of the load and comply with the laws and regulations in force (including being correctly connected to the earthing system, which must be periodically checked by an authorised and competent technician).

Make sure that the system voltage and frequency match those on the machine identification plate, incorrect connection voids the warranty.

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12. Adopted safety devices

The safety devices adopted for this machine are: PROTECTION GRID AND EMERGENCY BUTTON

The alarm and signal devices on the machine in question are: CROUZET MICRO-SWITCH.

This micro works as follows: by lifting the mobile guard (by 20-30 mm) a cam is connected to it that stops the machine (in 4 seconds) by acting on the micro-switch.

Mobile guard lifting micro-switch

ATTENTION: Do not use the safety device as STOP

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13. Operating instructions and for loading the ingredients

13.1. Operating instructions

For the machine to work, the mobile guard must be lowered, otherwise the safety systems prevent its operation. Check the correct rotation direction of the bowl (clockwise), if not correct contact a qualified electrician for intervention.

The machine MUST be used by a single operator at a time.

DO NOT REMOVE OR TAMPER WITH THE PROTECTIONS AND ELECTRICAL OR MECHANICAL SAFETY DEVICES FITTED ON THE MACHINE.

13.1.1. To start the machine

- Connect the machine electrically.
- Turn the master switch to position 1.
- Lower the safety grid and bring the timer index to position ON.
- Select the wanted speed 1 or 2 (ONLY FOR 2-SPEED TAURO).
- Press START: the machine will start beginning to knead.
- The mixer immediately stops when the bowl protection grid is lifted. To restart it, lower the grid and press START.
- Press STOP to stop the machine at any moment.
- To set a work time, turn the TIMER index and press START. The machine starts and will stop when the index returns to zero position.

13.1.2. Working with the machine.

The machine is now ready to mix. Follow some simple rules:

- Firstly, pour the necessary amount of water in the bowl.
- Add the correct amount of flour, the dough will gradually harden until the right consistency is obtained. On the contrary, adding water to flour creates masses of flour on the bottom that will require longer machining time with consequent dough damage.
- The other ingredients (salt, yeast, oil, etc.) are added as desired

ATTENTION: wear the dust-proof masks with filtering capacity appropriate to the particle size of the powder (given in the technical data sheet of the flour, if available, otherwise to be defined and measured by the employer) when inserting the FLOUR to avoid risks to the respiratory tract due to inhalation of the dust, make sure there is no one nearby before pouring the flour in the bowl. Wear the PPE: mask, shoes with metal tip and non-slip sole and gloves.

Lift moderate amounts of water, pouring only a few litres at a time instead of full buckets, to avoid muscle-skeletal injuries and/or problems. To load the flour in the bowl DO not suddenly overturn the container (e.g. the bag), lighten it by removing as much flour as possible (e.g. with a scoop) and only when there is little flour left, lift it manually. Do not tip the bag in the bowl, but put the bag in the bowl, being careful not to rest it on the bottom, cut the lower part and let the flour slowly come out so as to minimise the formation of dust. If necessary, add small amounts of flour to the dough in progress, gradually pour it without strong jolts, again to minimise the dispersion of dust in the environment. These operations are necessary to prevent muscle-skeletal problems (if possible, avoid bending your bust, rather bend your

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knees and keep the bust straight) and respiratory problems.

When unloading the dough, do not add flour to prevent dust forming.

To remove the dough from the bowl, portion the dough into balls of adequate weight.

Do not attempt to recover the flour deposited on the external parts of the machine and/or floor; this could contaminate the food with consequent heath risk for consumers.

Do not place your hands, fingers, etc.., in spaces characterised by the presence of moving parts (e.g. between bowl edge and guard, between bowl bottom and base, etc.).

The following table is to be considered a general indication of the factory.

For doughs with a different water percentage to that indicated, contact the manufacturer.

MODEL	DOUGH CAPACITY [kg]	WATER [%]
TAURO 35 – 35 PLUS	31 ÷ 35	55÷60%
TAURO 40 – 40 PLUS	36 ÷ 40	55÷60%

The use of flour rich in gluten gives rise to very elastic doughs, which absorb a lot of power. In this case, like in the case of dough with lower percentage of water to that indicated in the table, it is necessary to reduce the maximum dough capacity of the machine.

P/L	0.5÷0.7	60% OF WATER ON FLOUR
W	≤ 300	60% OF WATER ON FLOUR
W	> 300	65% OF WATER ON FLOUR

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14. Scheduled maintenance and/or replacement interventions

FOR ANY MAINTENANCE AND CLEANING OPERATIONS, THE MACHINE MUST BE OFF AND DISCONNECTED FROM THE ELECTRIC LINE.

Scheduled maintenance and/or replacement interventions of high wear parts with instructions for the MAINTENANCE AND CLEANING OPERATIONS to be performed, allow the machine to last longer.

Scheduled replacement interventions relating to high wear parts with instructions for the MAINTENANCE AND CLEANING OPERATIONS to be performed.

	CHECKING THE INSTALLED SAFETY SYSTEMS AND ELECTRICAL SYSTEM **The installed safety systems and the electrical system are subject to periodical checks carried out by a specialised electrician.**

Key of the inspection intervals:INTERVALS	Key of the method of execution of the checks:METHODS
g = daily. m = monthly. s = six-monthly. a = annually.	O = Observation: requires simple visual check (e.g. alarm light) F = Function: requires a physical check of the action (e.g. the machine should stop by pressing the emergency button) M = Measurements: a check with specific instrument is required (e.g. check of earthing values).

14.1. Master switch

Purpose: protection of the power supply line.

Function: They are used to connect-disconnect any type of electric circuit, this equipment separates the machinery from the mains, it is placed on one side of the machine.

VERIFICATION:

INTERVAL	METHOD
m	F

14.2. Stop circuit and mobile guard safety micro-switch

Purpose: stop the machine.

Function: the machine stops by pressing the STOP button, ONLY in an emergency does the mobile guard lift. To restore machine operation, the operator must restart the cycle by pressing the START button, after having completely closed the guard. (In case of failure and/or malfunction, see par. 14.5).

VERIFICATION:

INTERVAL	METHOD
g	F

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14.3. System checks

Periodically inspect the operation of machine automation and its earthing. Inspect the methods of operation, the safety functions, the contacts on the terminal board and the integrity of the cables, of the luminous indicators and of the earthing.

VERIFICATION:

INTERVAL	METHOD
m	F, M

14.4. Routine maintenance

Check the external components of the machine: tools, bowl, protection grid.

Check the belt wear after the first few months of processing.

Check bolt tightening of the entire machine

INTERVAL	METHOD
m	F,M

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14.4.1. Tensioning of belts and chains

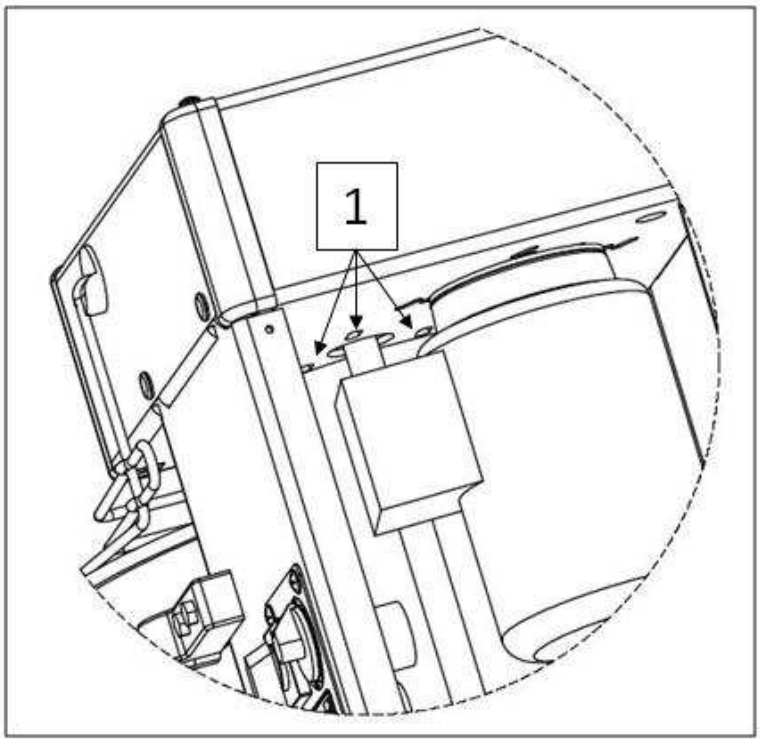
FOR ANY MAINTENANCE AND CLEANING OPERATIONS, THE MACHINE MUST BE OFF AND DISCONNECTED FROM THE ELECTRIC LINE.

Before performing any of the following operations, wear PPE such as: shoes with reinforced tip and non-slip sole, gloves.

To tension the spiral belt, remove the screws holding the upper casing together with the structure, place the upper casing onto a flat surface and make sure that the sheath containing the wires is not taut. Remove the rear casing also, Remove the rear casing also. As shown in the figure, loosen the three nuts (1) and by leveraging the return shaft, tension the belt. Once tensioned, tighten the nuts (1), put the casing back and test the machine.

To ensure the correct belt tension, see chap. 14.4.2.

ATTENTION: it is recommended to change the full series of belts to prevent the formation of dust.



INTERVAL	METHOD
s	F,M

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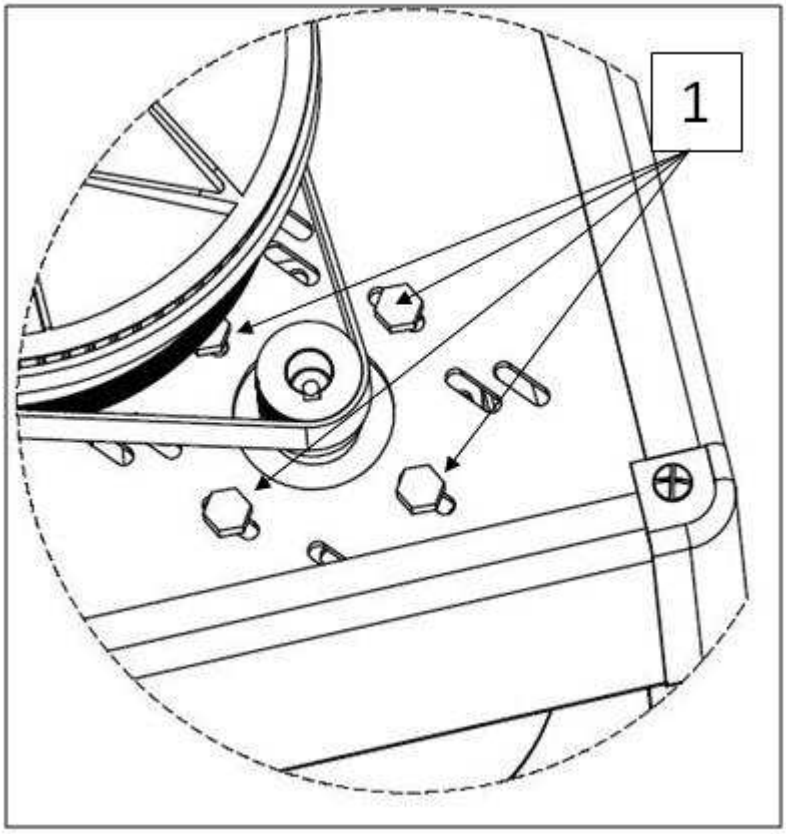
After tensioning the spiral belt, remove the screws holding the upper casing together with the structure, place the upper casing onto a flat surface and make sure that the sheath containing the wires is not taut, loosen the screws of the motor carrier plate (1) and force the motor to tension the belt. After tensioning the belt, fasten the screws (1), reposition the upper casing and test the machine.

To ensure the correct belt tension, see chap. 14.4.2.



INTERVAL	METHOD
s	F,M

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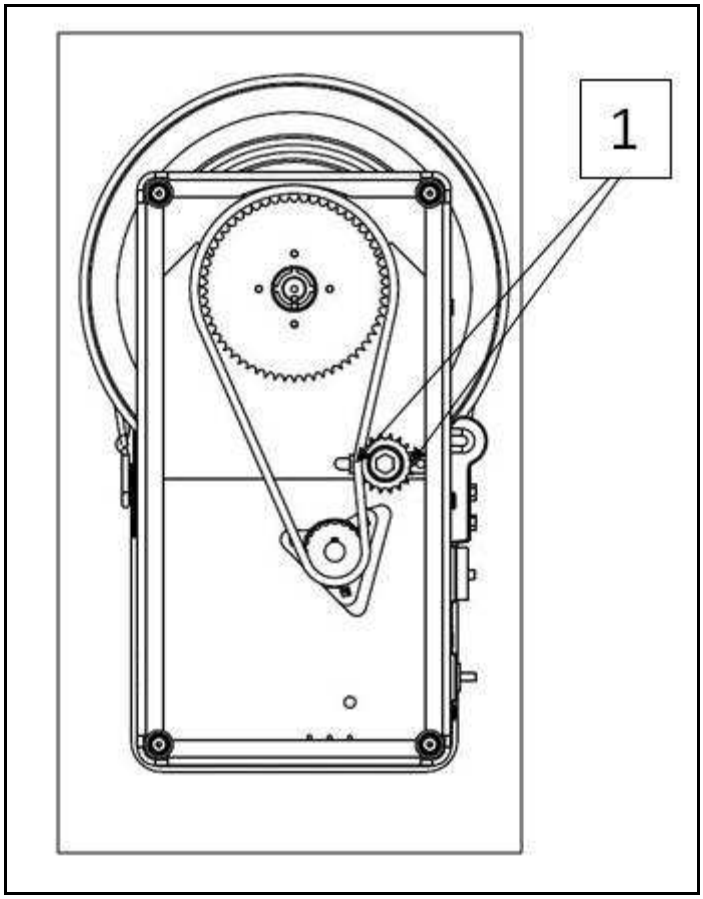
FOR ANY MAINTENANCE AND CLEANING OPERATIONS, THE MACHINE MUST BE OFF AND DISCONNECTED FROM THE ELECTRIC LINE.

Before performing any of the following operations, wear PPE such as: shoes with reinforced tip and non-slip sole, gloves.

The chain is loose when it admits clearance of the bowl with machine off. To tension the belt in the lower part of the machine, as shown in the figure, place the machine on a surface suitable for the weight of the TAURO, and remove the lower casings (see chap. 16.1). As shown in the following figures (1), loosen the two screws from the belt tightener plate and tension the chain. After completing this operation, tighten the two screws (1) and put the lower casings back and reposition the Tauro correctly. Turn on the machine to test it.

To ensure the correct chain tension, see chap. 14.4.2.



INTERVAL	METHOD
s	F,M

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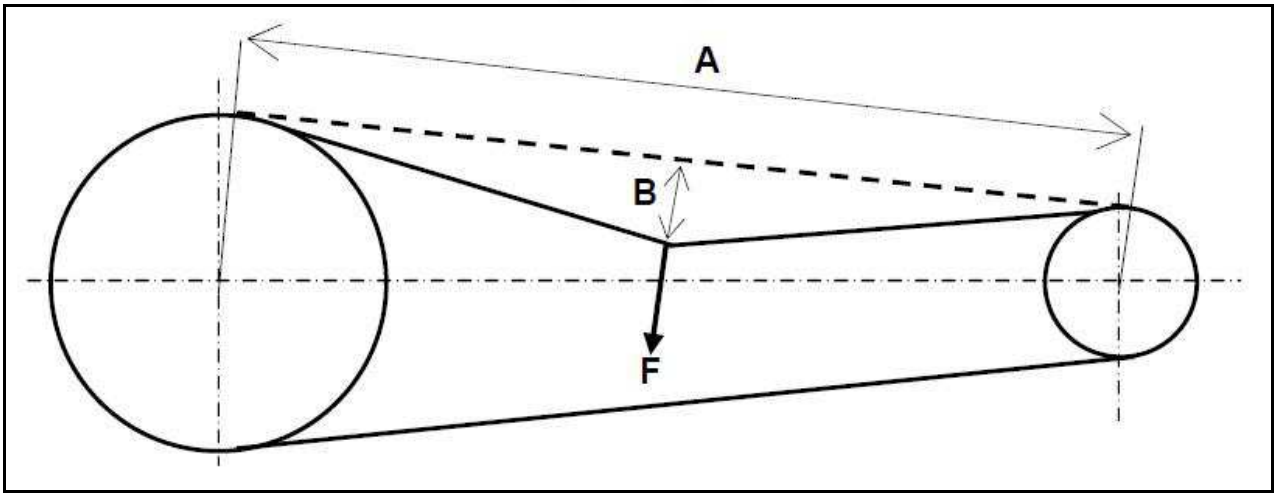
14.4.2. How to tension belts and chains

-) Describe how to properly tension a drive belt is very complicated.



- measure the length of free section A in mm
- halfway on free section A and perpendicularly to the same, apply force F required to bend the belt (arrow) B (mm) equal to A/100 (e.g. if A=500 mm, B=5,0 mm), use a millimetric reference to measure arrow B;
- the belt tension is correct if the force F applied for arrow B is between 12 and 18 N; measure the force using a dynamometer or, even better, a tensiometer, which normally allows detecting arrow B; both are readily available on the market.

For further information contact the seller or consult these sites: http://www.sitspa.it/it-IT/Trasmissioni_a_cinghia_Poly-V.html e http://www.megadyneveneto.it/index.php/it/component/k2/item/223-pluriband.

-) Describe how to properly tension a drive chain is also very complicated.

The chain tension is correct when, by pushing it with your thumb halfway on the free section, it is not rigid (otherwise it could break), but gives slightly and when released it goes back as it was; the chain meshes must be free enough to rotate on the pins but not sag (otherwise they might come out of the gears).

If the user reasonably doubts his ability to to adjust the chain tension, do not use the machine and contact the manufacturer as soon as possible for instructions.

http://www.ognibenechaintech.it/.

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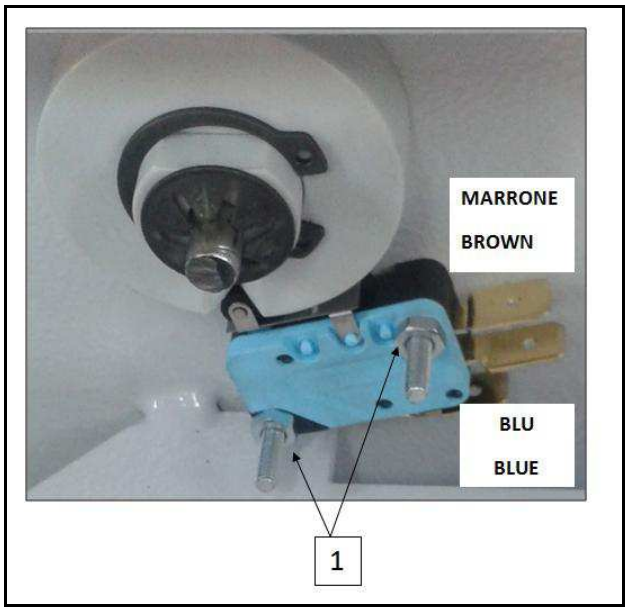
14.5. Special maintenance

For operations that are not specifically mentioned in the manual, you must refer to personnel authorised by the seller. To replace the motor and electronic boards or following a machine fall, contact our customer service (for on-site assistance or an in-factory inspection).

Faults - replacement of the mobile guard micro-switch: remove the screws holding the upper casing together with the structure, place the upper casing onto a flat surface and make sure that the sheath containing the wires is not taut.

Check the micro-switch, change it in case of failure and/or breakage. Loosen/tighten the screws (1) when disassembling/assembling the head micro-switch.



Please note that both the cam screws and the micro-switch screws are blocked with Bblock230, which is a product suitable for clamping screws and/or nuts that come loose due to vibrations (Bblock230 is a highly resistant product and can only be removed by heating the product at about 250°C (with naked flame or furnace); obviously, check that the product does not contain material flammable at this temperature). Before using Bblock230, make sure that the micro-switch is correctly positioned on the head and fasten the screws (1), put the upper casing and the head front casing back and tighten the screws. Turn on the machine, if it works properly it should stop in FOUR seconds from lifting the mobile guard. Ensured that the machine works properly, release the master switch, remove the upper casing and the head front casing, loosen the micro-switch nut, put the thread locker and tighten the nut, then do the same for the other screw. Put the casings back and tighten the screws

Should the power cable be damaged, replace it with a H07RN/F cable with a 3x1.5 mm cross-section^2.

Electrical interventions: they must be carried out by a qualified electrician, referring to the diagrams attached at the end of the manual.

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14.6. Machine cleaning

Daily Checks

Always keep the machine clean to prevent the formation of micro-organism colonies that can alter the end product and be harmful to health. It is also important that flour does not deposit on moving parts, thus creating annoying squeaks and abnormal wear.

FOR ANY MAINTENANCE AND CLEANING OPERATIONS, THE MACHINE MUST BE OFF AND DISCONNECTED FROM THE ELECTRIC LINE.

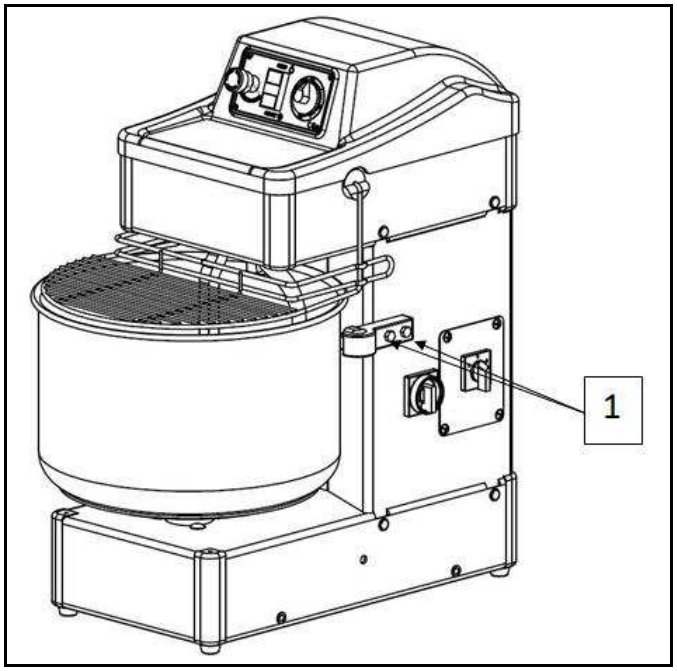
Cleaning: the machine is not spray-proof; it must not be cleaned with running water or compressed air, to minimise dust movement. To vacuum the dust, use a professional vacuum equipped with adequate filters depending on the grain size of the flour.

Cleaning the bowl: use a damp cloth and/or PLASTIC spatulas with water only.

N.B.: it is not advisable to use metal spatulas to clean the bowl.

Cleaning the column and spiral: use a damp cloth with water only. Mop between the bowl and column and/or between the bowl and spiral to avoid the formation of contaminated areas.

INTERVAL	METHOD
g	F,M



Cleaning the bowl contrast block:

Remove the two bowl contrast blocks by loosening the screws (1). Remove the block and wearing a mask, clean the wheel using a clean brush and then a damp cloth.

Then tighten the contrast block back on the column via screws (1).

ATTENTION: check that the distance between the bowl and its contrast block is 4 mm.

DO NOT MODIFY THIS SAFETY VALUE.

INTERVAL	METHOD
m	F,M

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15. Troubleshooting

15.1. Machine lock-up and necessary solutions

Operating anomalies	Possible causes	Repairs	Performed by
Turning the master switch into position 1, the indicator light does not come on.	Plug not inserted properly, or its wires are detached	Check the connection	Personnel authorised by the employer and/or qualified personnel in possession of the technical knowledge of the work.
Pressing the START button, the machine does not start.	1) The protection grid is open. 2) Safety micro switches anomalies.	1) Rotate it and reposition it in closed position. 2) Replace the micro switch.	Personnel authorised by the employer and/or qualified personnel in possession of the technical knowledge of the work.
The spiral does not rotate smoothly.	1) Loose chain or belt. 2) Worn belt.	1) Tension the chain or belt. 2) Replace the belt.	Personnel authorised by the employer and/or qualified personnel in possession of the technical knowledge of the work.
The bowl does not rotate smoothly.	1) Loose chain. 2) Worn chain.	1) Tension the chain. 2) Replace the chain.	Personnel authorised by the employer and/or qualified personnel in possession of the technical knowledge of the work.

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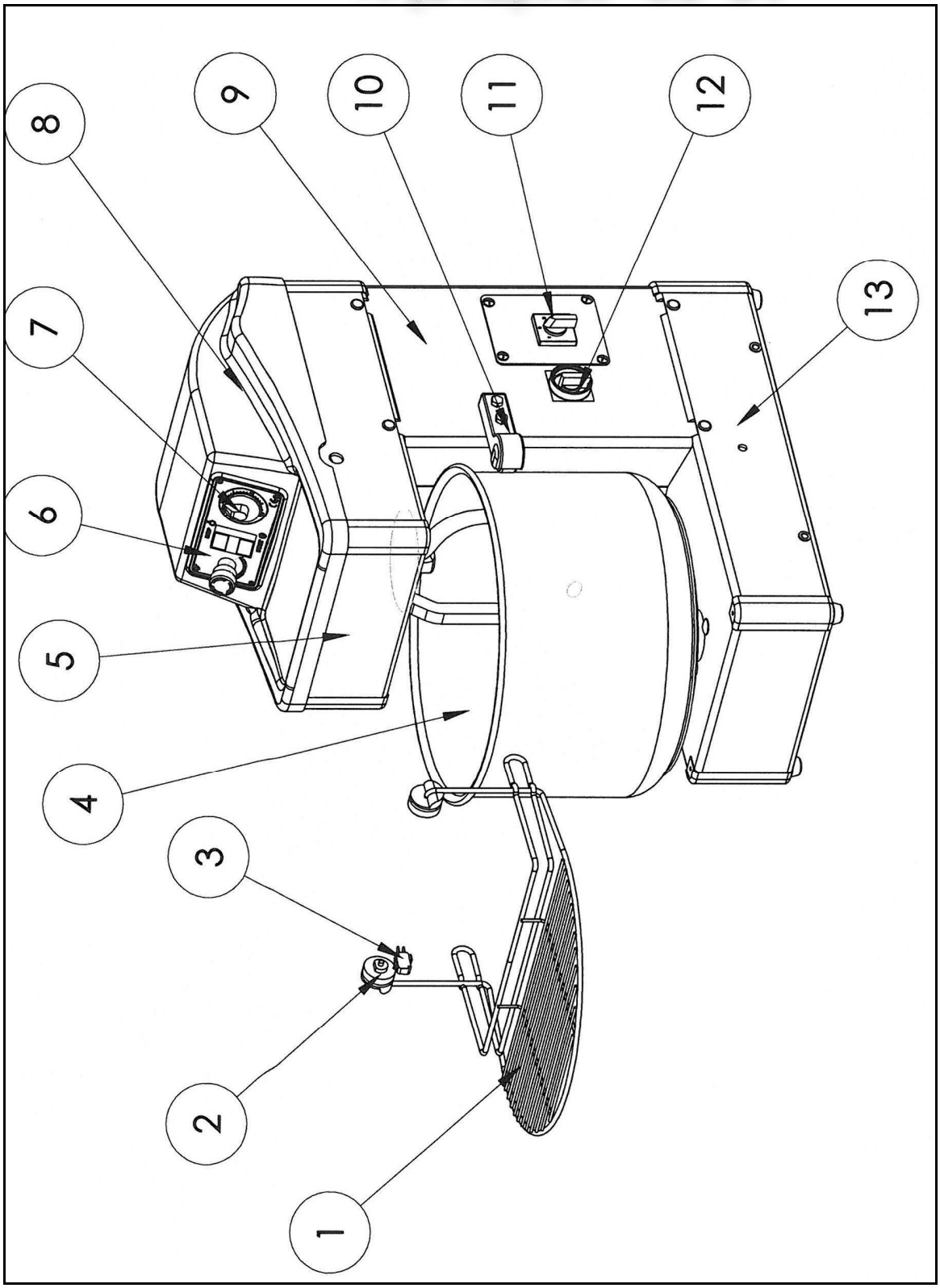
16. Machine exploded view



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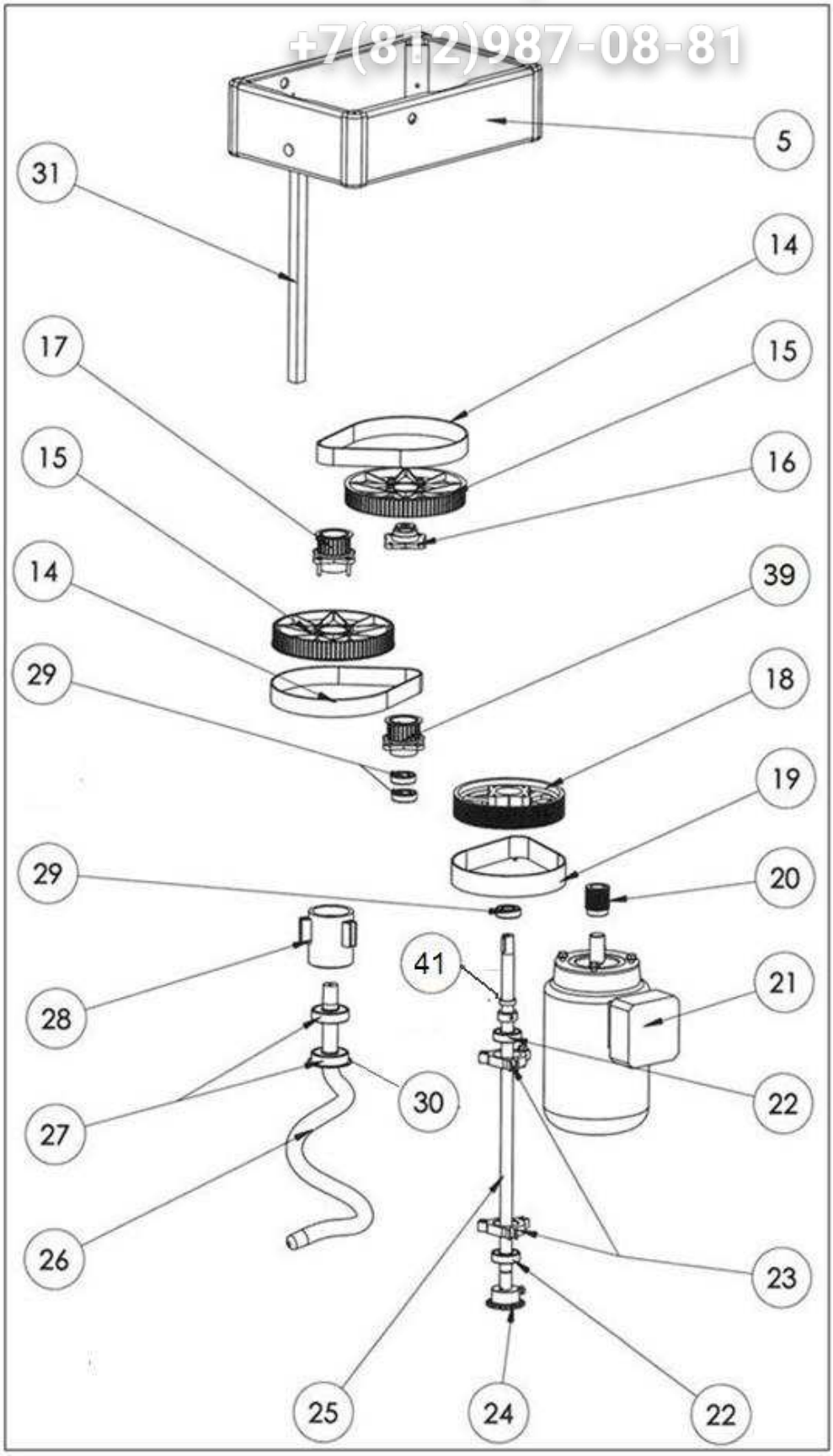

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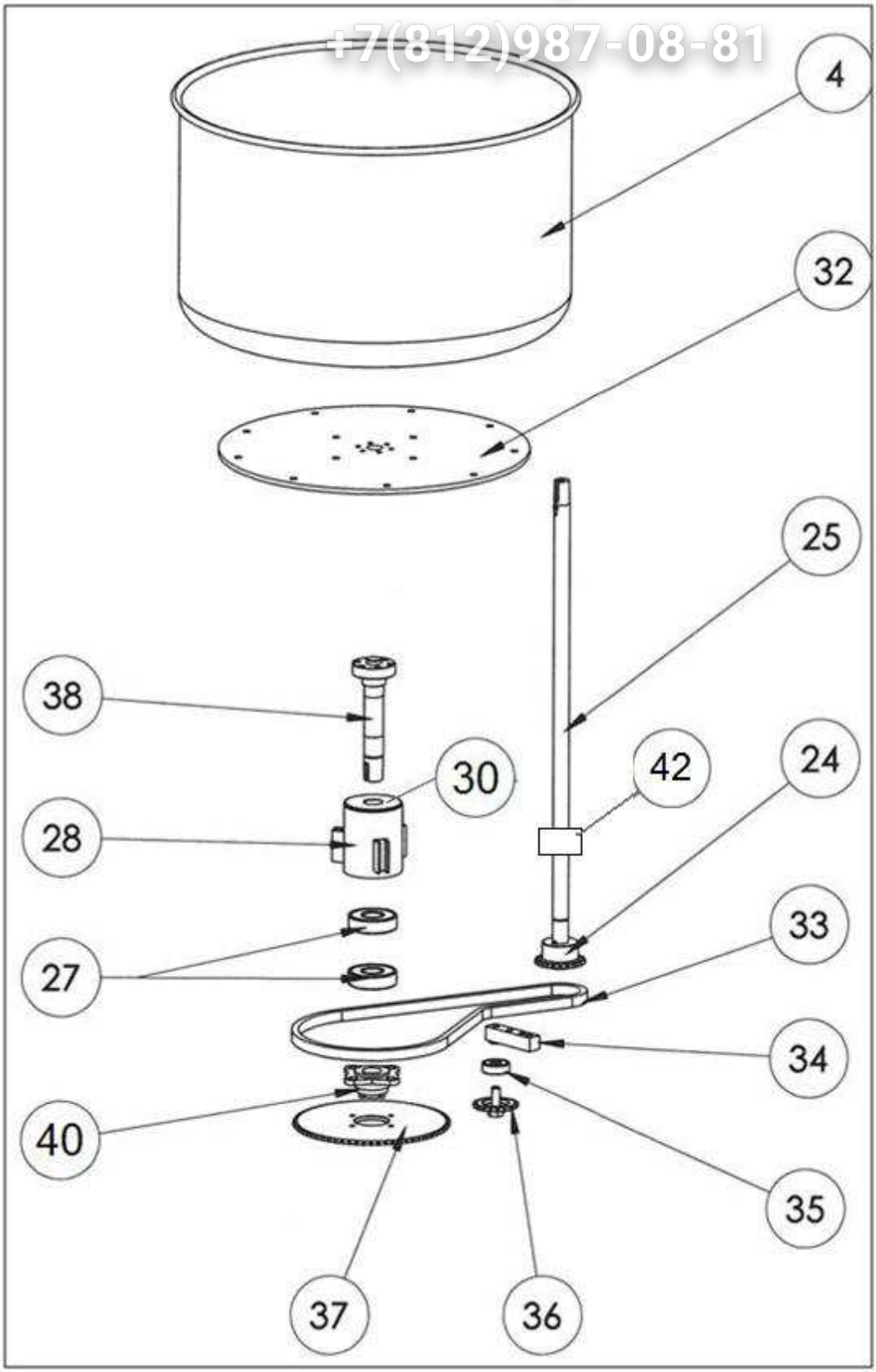

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Pos	Q.ty	Description	Drawing
1	1	TAURO 35 - 35 PLUS PROTECTION GRID	87144011-5
1	1	TAURO 40 - 40 PLUS PROTECTION GRID	87145011-5
2	2	PROTECTION SUPPORT	01150019
2	1	MICRO-SWITCH CAM	01150018
3	1	CROUZET MICRO-SWITCH	25001311
4	1	TAURO 35 – 35 PLUS BOWL	87056018-1
4	1	TAURO 40 – 40 PLUS BOWL	87056010-1
5	1	TAURO HEAD	86164004-1
6	1	EMERGENCY BUTTON	25009050
6	1	START & STOP BUTTON	25009058
7	1	TIMER	25007039
7	1	TIMER KNOB	25007038
8	1	UPPER CASING	03182011
9	1	TAURO COLUMN	87181012
10	2	SIDE WHEEL SUPPORT UNIT	51440008
11	1	SWITCH (ONLY FOR 2-SPEED AND PLUS TAURO)	25004001
12	1	MASTER SWITCH	25003009
13	1	TAURO 35 – 35 PLUS BASE	86179008-2
13	1	TAURO 40 – 40 PLUS BASE	86179007-2
14	2	TOOTHED BELT	12003909
15	2	TOOTHED PULLEY 720 RPP8 29 HPPD720	01144063-3
15	2	TOOTHED PULLEY FOR 35 PLUS – 40 PLUS	01182016-1
16	1	CONE ALUMINIUM HUB	01182004
16	1	PLUS CONE ALUMINIUM HUB	01182004
17	1	TOOTHED HUB Z22 8M HTD CONE 25	01179014
17	1	TOOTHED HUB FOR 25 CONE PLUS	01182015-1
17	1	CONTAINMENT RING	23010557
18	1	IDLE PULLEY	01179010
18	1	IDLE PULLEY FOR 35 PLUS – 40 PLUS	01182022-1
19	1	POLY-V BELT	12003943
20	1	MOTOR PULLEY	01179009-1
20	1	MOTOR PULLEY 35 PLUS – 40 PLUS	01182012
21	1	MOTOR T80 2P 1.4/1KW 230-400V/50HZ (FOR TAURO 35-40)	11000618
21	1	MOTOR T90 2P 1.1KW 220V/60HZ (FOR TAURO 40 PLUS)	11001103

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Pos	Q.ty	Description	Drawing
21	1	THREE-PHASE MOTOR T90 2/4P 1.4/1.0KW 400V/50HZ (FOR 2-SPEED TAURO 35-30 AND PLUS)	11001109
22	2	6204 BEARING	13000315
23	2	BEARING SUPPORT	01179012
24	1	BOWL RETURN PINION	01179016
25	1	RETURN SHAFT	01179013-2
25	1	RETURN SHAFT FOR 35 PLUS – 40 PLUS	01182021
26	1	SPIRAL	01144012-2
27	4	6305 BEARING	13000326
28	2	SPIRAL BUSH	01144001
29	3	6004 BEARING	13000304
30	2	SPIRAL BEARING PROTECTION	01056036
31	1	CONTRAST ROD	01179015
32	1	BOWL PLATE FOR TAURO 35 – 35 PLUS	86107034-1
32	1	BOWL PLATE FOR TAURO 40 – 40 PLUS	86109027-3
33	1	SINGLE CHAIN + JUNCTION MESH	12002903+5002
34	1	TENSIONER BLOCK	01180008-1
35	1	6300 BEARING	13000323
36	1	BELT TIGHTENER CROWN	01180006
37	1	BOWL CROWN	80179017
38	1	BOWL SHAFT	01144025-8
39	1	HUB Z22 8M WITH BEARING SEATS	01164011
39	1	BEARING HUB 40 PLUS	01182013-1
39	1	CONTAINMENT RING	23010557
40	1	CONE ALUMINIUM HUB	01144054
41	1	SPACER	01179011
42	1	DRIVE SHAFT BLOCH	01181008

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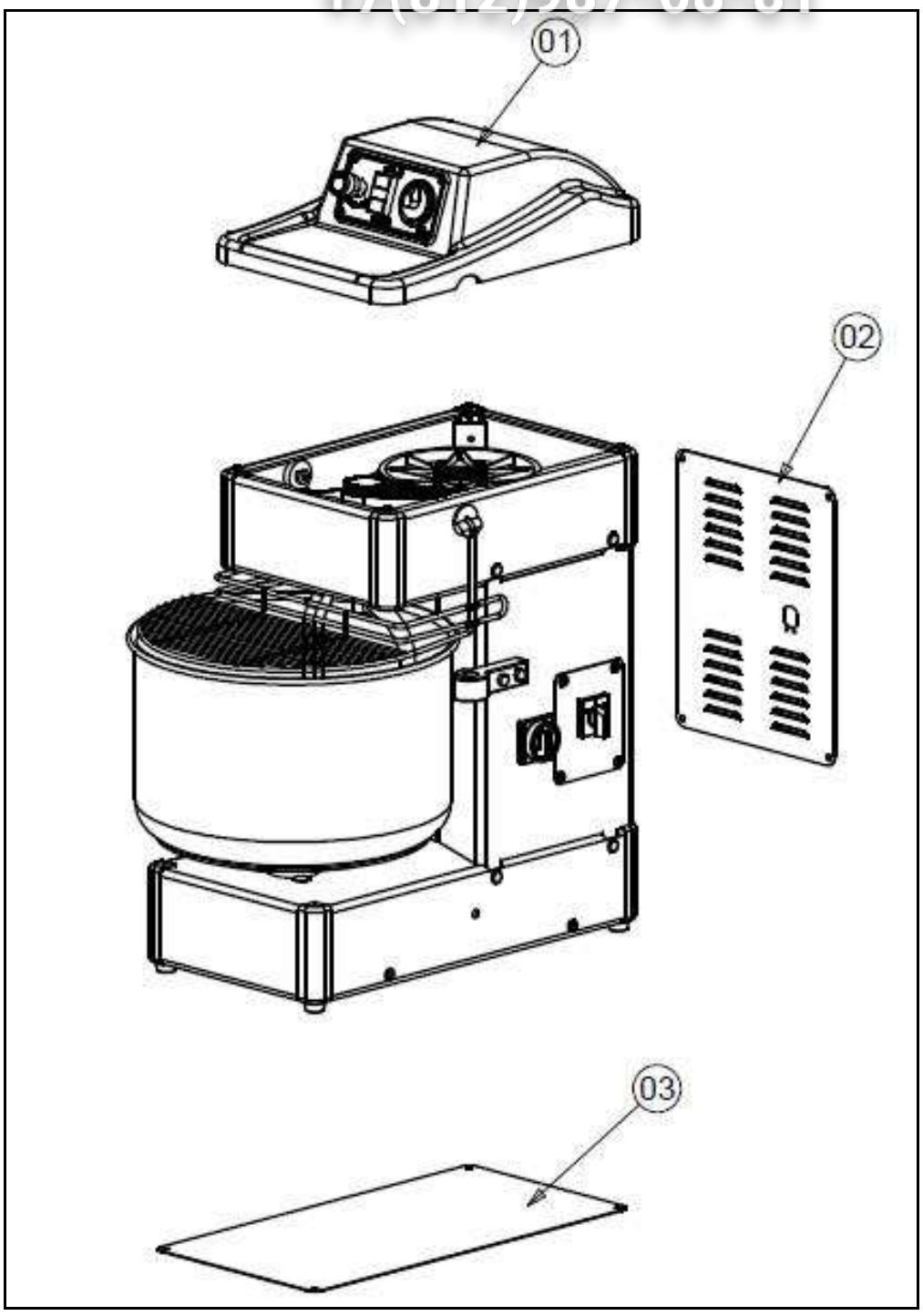
16.1. Casing exploded view



Pos.	Q.ty	Description	Drawing
1	1	UPPER CASING	03182011
2	1	REAR CASING	02182005-1
3	1	LOWER CASING	86144028

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17. Recommended spare parts

Description	Q.ty	Drawing
SIDE WHEELS SUPPORT UNIT	2	51440008
TOOTHED BELT 720 RPP8 29 HPPD720	1	12003909
POLY-V BELT	1	12003923
MULTIGRIP BELT	1	12003952
CHAIN	1	12002903 + 12005002
CONE ALUMINIUM HUB	1	01144054
TOOTHED HUB Z22 HTD CONE 25	1	01179014
HUB Z22 8M WITH BEARING SEATS	1	01164011
TOOTHED PULLEY	2	01144063-3
TOOTHED PULLEY FOR 35 PLUS	2	01182016-1
MOTOR PULLEY	1	01182002
IDLE PULLEY	1	01179010
IDLE PULLEY FOR 35 PLUS	1	01182022-1
SPIRAL	1	01144012-2
6004 BEARING	3	13000304
6204 BEARING	3	13000304
6300 BEARING	1	13000323
6305 BEARING	4	13000326

17.1. Recommended spare parts

Description	Q.ty	Drawing
MICRO-SWITCH + LEVER	1	25001311
MASTER SWITCH	1	25003009
TIMER	1	25007039
TIMER KNOB	1	25007038
START & STOP BUTTON	1	25009058
2-SPEED SWITCH	1	25004001
REMOTE CONTROL SWITCH	1	25005108
TRANSFORMER	1	52008001
EMERGENCY BUTTON	1	25009050

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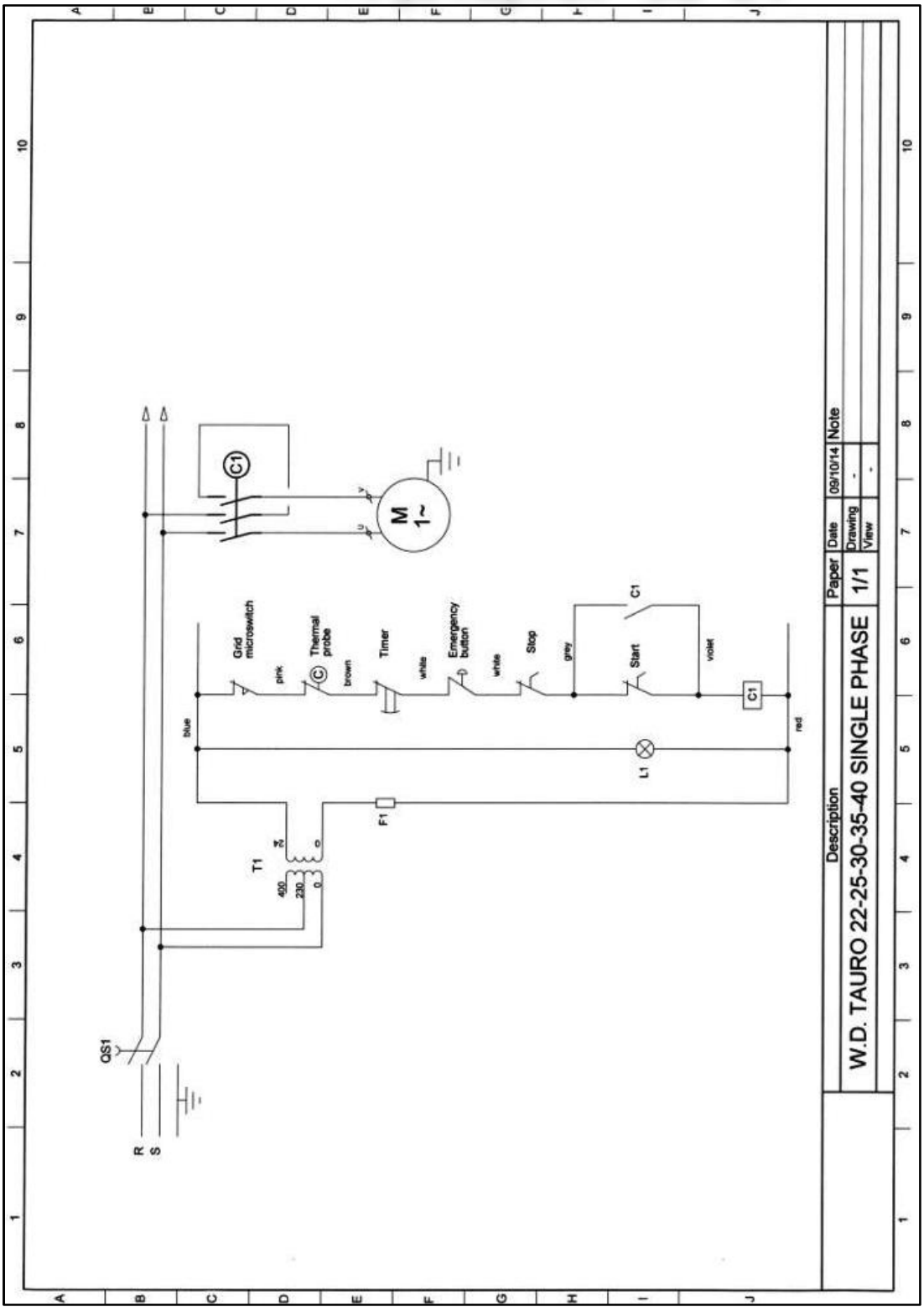
18. Electrical Drawing



Single-phase wiring diagram

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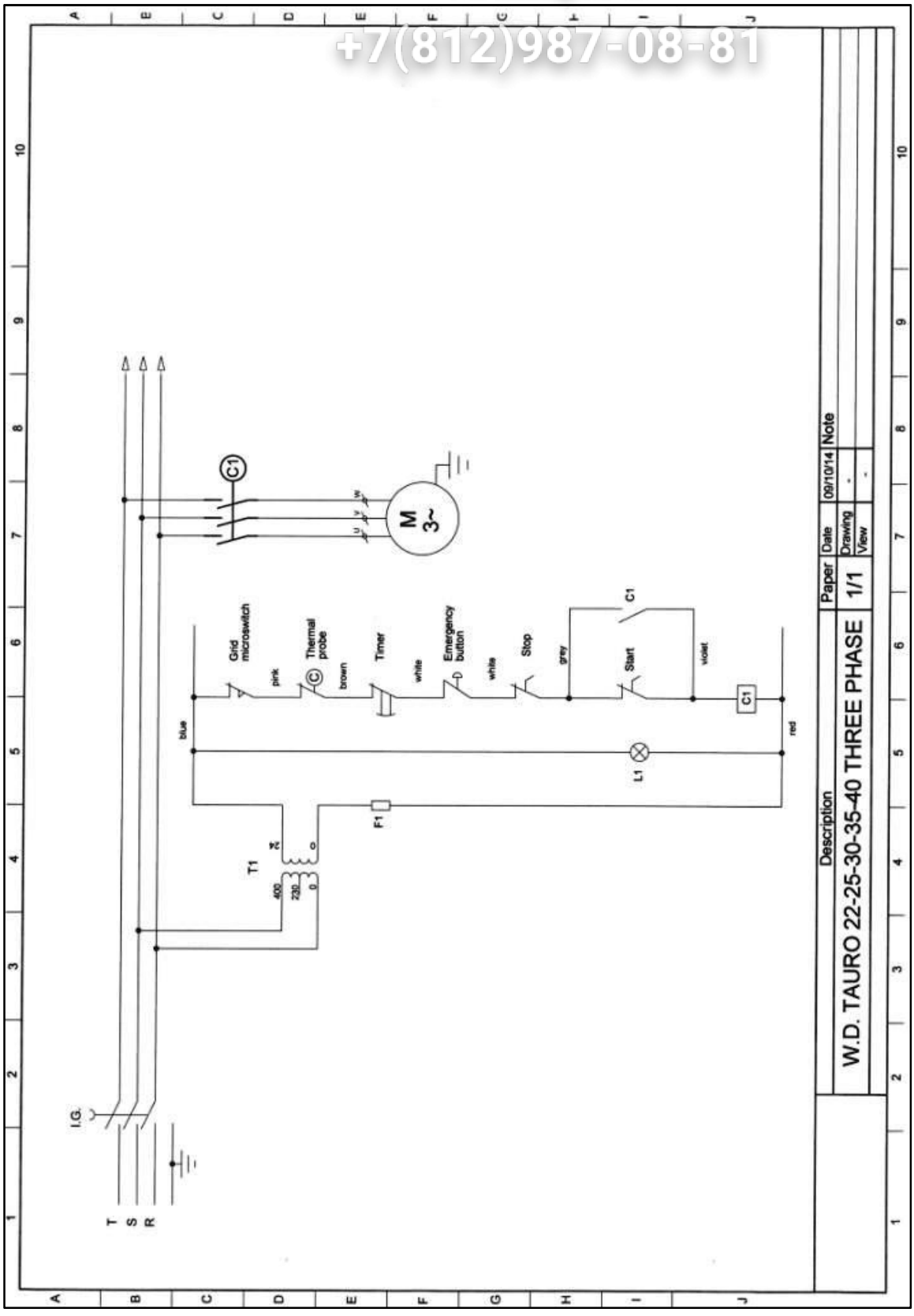

Three-phase wiring diagram

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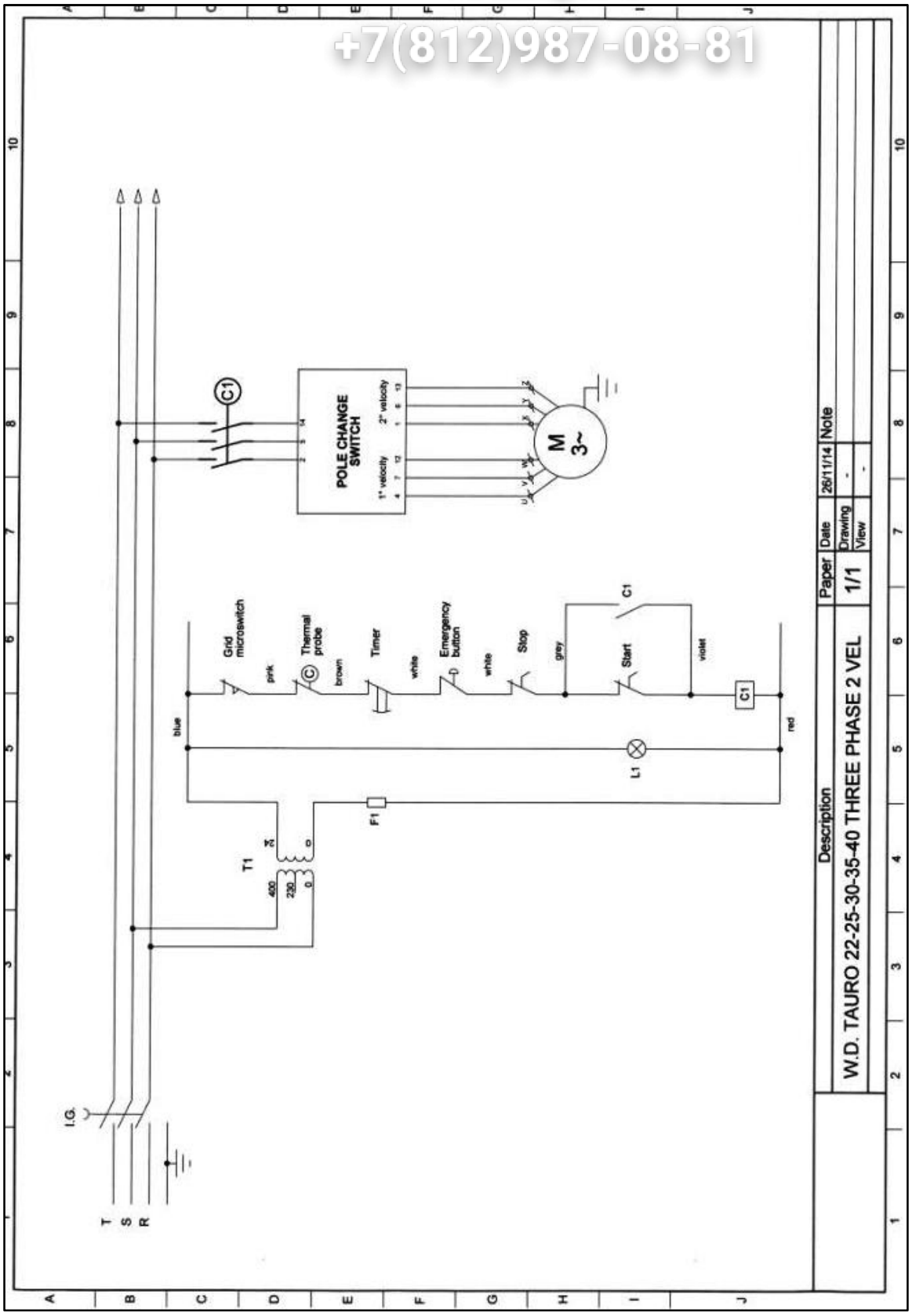

2-Speed three-phase wiring diagram

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19. Demolition and disposal

Machine decommissioning is the direct responsibility of the purchaser, who must keep to the local standards and regulations. Mechanical and electrical parts disassembly must be entrusted to skilled personnel.

19.1. Obligations of informing users

Information form for "professional" type products users

INFORMATION FOR USERS

Pursuant to art.26 ofLeg.Decree 14/03/2014, no. 49 "Implementation of Directives 2012/19/UE, on waste of electrical and electronic equipment (WEEE), as well as waste disposal"

The crossed out wheelie bin symbol on the equipment or on its container indicates that the product must be disposed of separately from other waste at the end of its useful life.

The manufacturer plans and manages separate collection of this equipment at the end of its life. Users who wish to dispose of this equipment must, therefore, contact the manufacturer and follow its system for separate collection of the equipment at the ends of its life.

Proper separate collection to then send the equipment no longer in use to recycling, treatment and environmentally compatible disposal contributes to preventing possible negative effects on the environment and on health and favours reusing and/or recycling the materials that make up the equipment.

Illegal product disposal by the owner results in the application of the administrative sanctions required by the standard in force.