MOD : DH53AL/T2V

Production code : TS44AD

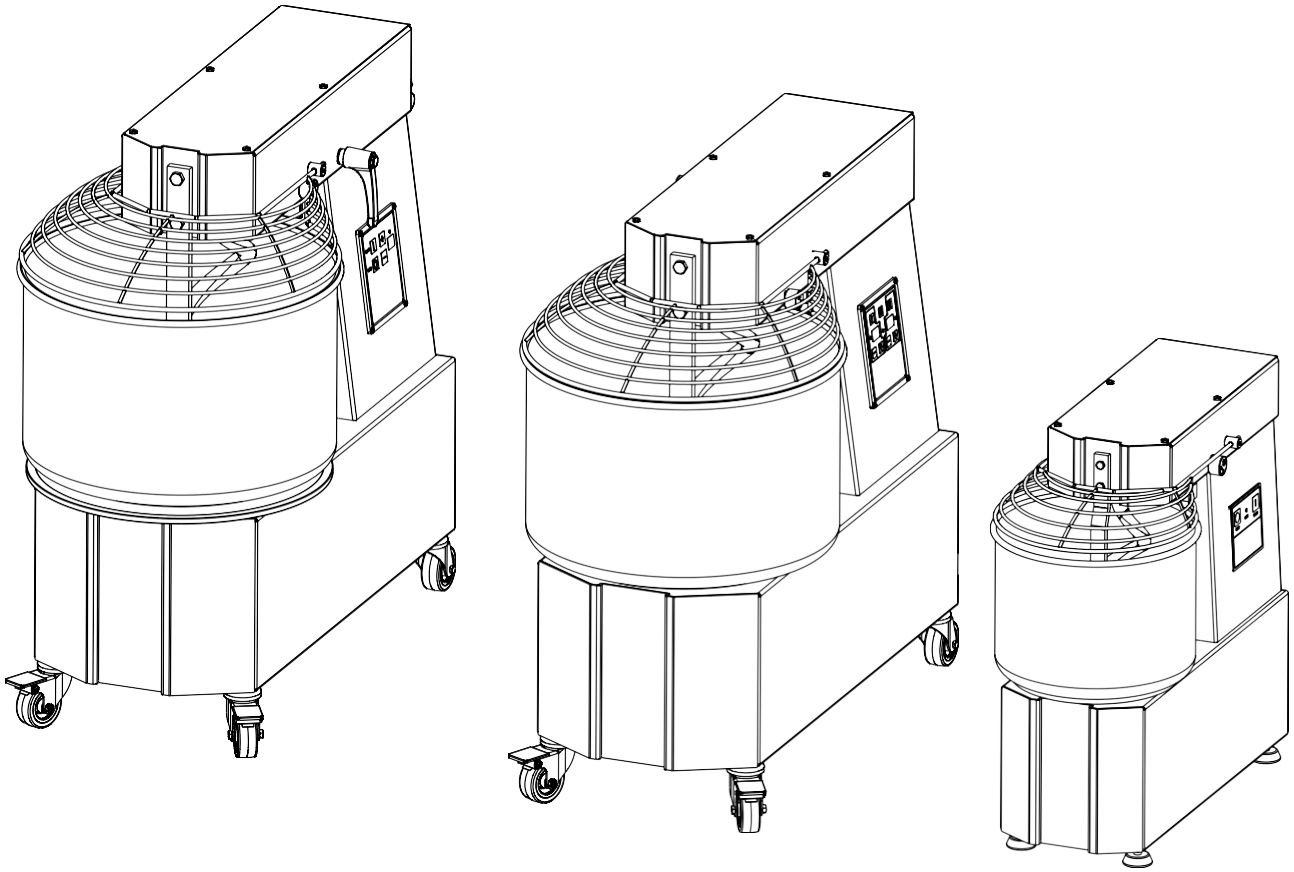
08/2025

User Manual

Atomix Line DH

Series

SPIRAL MIXER



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0.0 Foreword

This manual is intended for all those who are responsible for the installation, use and maintenance of mixers so that they can make the most of the product's features. It is important that this manual is kept and follows the machine in all its possible transfers, including change of ownership, in order to be able to be consulted if necessary and therefore have the information necessary to operate in safe conditions.

The manufacturer does not assume the obligation to notify any subsequent changes to the product. Furthermore, the owner of this document reserves the right by law with the prohibition of tampering, reproduction and transmission to third parties without his authorization.

The following symbols have been used to highlight certain parts of the text:

⚠ **WARNING: indicates** dangerous situations for which special attention must be paid.

ℹ **INFORMATION:** refers to technical indications of particular importance.

1.0 GENERAL INFORMATION

1.1 Guarantee

The duration of the warranty is two years and starts from the date of the invoice or tax receipt issued at the time of purchase. Within this period, parts that are defective in workmanship for well-ascertained and unequivocal causes will be replaced or repaired free of charge and only ex our factory, except for electrical components and those subject to wear. Shipping costs and labor costs are excluded from the warranty. The warranty is void in cases where it is ascertained that the damage has been caused by: transport, incorrect or insufficient maintenance, inexperience of operators, tampering, repairs carried out by unauthorized personnel, failure to comply with the requirements of the manual. Any recourse against the manufacturer for direct or indirect damage resulting from the time in which the machine remains inactive due to: breakdown, waiting for repairs, or in any case referable to the physical absence of the equipment, is excluded.

1.2 Machine Features

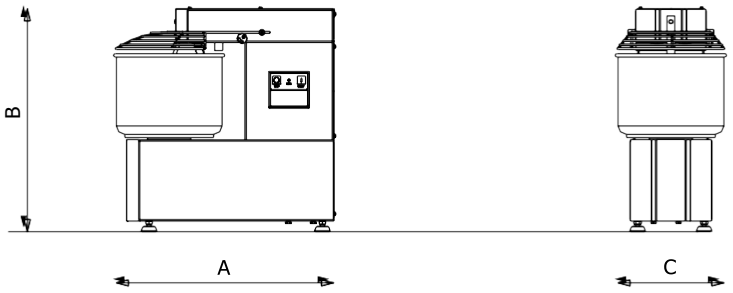
The mixers in the versions with fixed head and bowl or with lifting head and removable bowl, have been designed and manufactured for food use only for the processing of dough based on cereal flour, with prevalent use in pizzerias, bakeries and pastry shops.

Each mixer (Fig.1) consists of:

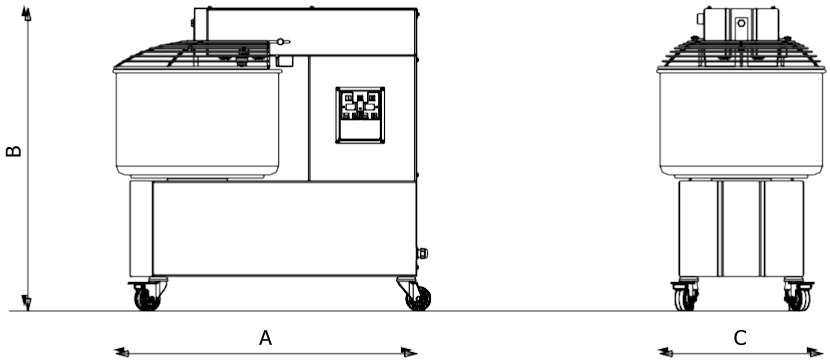
- A steel structure protected with epoxy powder-based oven painting, containing the transmission and control components
- Bowl, spiral, central column (pasta breaker) and the stainless steel protective grille.
- A set of interchangeable tools to be used depending on the type of machining to be carried out.
- The chain transmission with oil-bath gear motor.
- Moving parts mounted on watertight ball bearings.
- Rubber feet for TS5-8 models, and swivel wheels, free at the rear and with brake at the front, for TS12-18-25-38-44 models.
- Motor drive
  - single-phase 1-speed
  - three-phase 1-speed
  - 2-speed three-phase motor
- Electrical circuit, powered by a cable with mains voltage, to which the start, stop and safety devices are connected at low voltage (24 V). These include the interlocking of the moving parts that can be activated by the activation of the movable tank guard.

Fig. 1

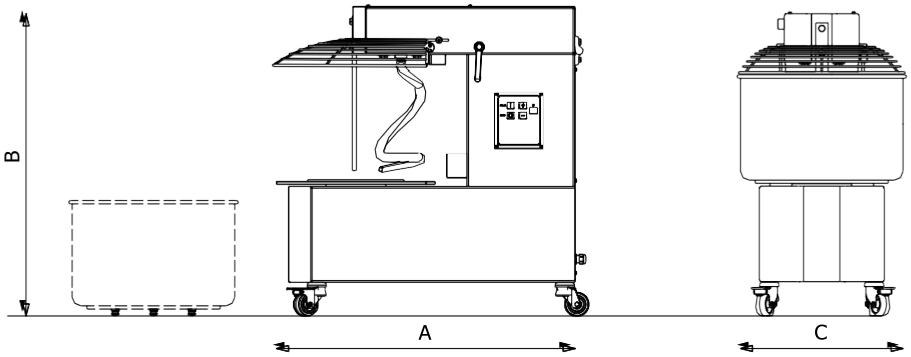
TS5; TS8



TS12; TS18; TS25; TS38; TS44



TSA12; TSA18; TSA25;
TSA38; TSA44



1.3 Specifications

HEAD AND FIXED TANK

Model	Kneading capacity kg	Flour capacity kg	Tank volume Lt	Tank size mm	Motor power kw	Volt	Dimensions mm At C B	Weight Kg
TS5M	5	3	7	237X160	0.37	230/50/1	540X260X520	38
TS5T	5	3	7	237X160	0.37	400/50/3	540X260X520	38
TS5D	5	3	7	237X160	0.3/0.45	400/50/3	540X260X520	38
TS8M	8	5	10	260X200 mm	0.37	230/50/1	550X270X553	40
TS8T	8	5	10	260X200 mm	0.37	400/50/3	550X270X553	40
TS8D	8	5	10	260X200 mm	0.3/0.45	400/50/3	550X270X553	40
TS12M	12	8	15	317X210	0.9	230/50/1	690X335X630	68
TS12T	12	8	15	317X210	0.75	400/50/3	690X335X630	68
TS12D	12	8	15	317X210	0.6/0.8	400/50/3	690X335X630	68
TS18M	18	12	20	360X210	0.9	230/50/1	715X380X630	70
TS18T	18	12	20	360X210	0.75	400/50/3	715X380X630	70
TS18D	18	12	20	360X210	0.6/0.8	400/50/3	715X380X630	70
TS25M	25	17	33	400X260	1.1	230/50/1	785X420X700	85
TS25T	25	17	33	400X260	1.1	400/50/3	785X420X700	85
TS25D	25	17	33	400X260	1/1.4	400/50/3	785X420X700	85
TS38M	38	25	40	452X260	1.5	230/50/1	830X470X770	97
TS38T	38	25	40	452X260	1.5	400/50/3	830X470X770	97
TS38D	38	25	40	452X260	1.5/2.2	400/50/3	830X470X770	97
TS44M	44	30	50	500X270	1.5	230/50/3	870X520X770	102
TS44T	44	30	50	500X270	1.5	400/50/3	870X520X770	102
TS44D	44	30	50	500X270	1.5/2.2	400/50/3	870X520X770	102

LIFTING HEAD AND BOWL

Model	Kneading capacity kg	Flour capacity kg	Tank volume Lt	Tank size mm	Motor power kw	Volt	Dimensions mm At C B	Weight Kg
TS12AM	12	8	15	317X210	0.9	230/50/1	690X335X630	79
TS12AT	12	8	15	317X210	0.75	400/50/3	690X335X630	79
TS12AD	12	8	15	317X210	0.6/0.8	400/50/3	690X335X630	79
TS18AM	18	12	20	360X210	0.9	230/50/1	715X380X630	82
TS18AT	18	12	20	360X210	0.75	400/50/3	715X380X630	82
TS18AD	18	12	20	360X210	0.6/0.8	400/50/3	715X380X630	82
TS25AM	25	17	33	400X260	1.1	230/50/1	785X420X700	98
TS25AT	25	17	33	400X260	1.1	400/50/3	785X420X700	98
TS25AD	25	17	33	400X260	1/1.4	400/50/3	785X420X700	98
TS38AM	38	25	40	452X260	1.5	230/50/1	830X470X770	112
TS38AT	38	25	40	452X260	1.5	400/50/3	830X470X770	112
TS38AD	38	25	40	452X260	1.5/2.2	400/50/3	830X470X770	112
TS44AM	44	30	50	500X270	1.5	230/50/3	870X520X770	116
TS44AT	44	30	50	500X270	1.5	400/50/3	870X520X770	116
TS44AD	44	30	50	500X270	1.5/2.2	400/50/3	870X520X770	116

M= Single-phase motor, D= Double speed, T= Three-phase motor.

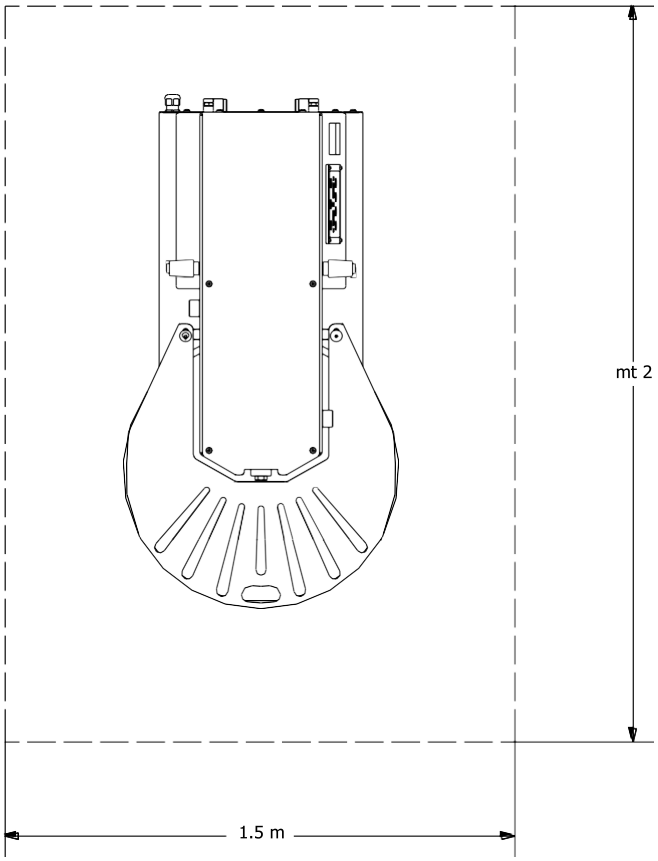
1.4 Wiring diagrams

For wiring diagrams, refer to paragraph 8.8-8.13

1.5 Operator Occupied Zone

Under normal operating conditions and for optimal exploitation of the machine's potential, the operator needs the area shown in Fig. 2.

Fig. 2



1.6 General safety instructions

The machine, while complying with the safety requirements of the reference electrical, mechanical and hygienic standards, may constitute a danger:

- If used for purposes and conditions other than those intended by the manufacturer.
- By tampering with protections and safety devices.
- For non-compliance with the requirements for installation, commissioning, use, and maintenance.

INFORMATION

All installation and maintenance operations must be carried out by qualified personnel authorized by the manufacturer, who declines all liability deriving from incorrect installation or tampering.

1.7 Safety Warnings

INFORMATION

Read these instructions carefully before using the machine. ⚠

ATTENTION

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

A) Keep your workplace tidy. Clutter poses a risk of accidents.
B) Assess environmental conditions. Do not use the machine in a humid, wet or sufficiently lit environment, in the vicinity of flammable liquids or gases.
C) Keep children and unemployed persons away. Do not allow them near the machine or the workplace .
D) Use the machine within the range of the rating plate and for permitted use only. Without overloading it will work better and safer.
E) Dress appropriately. Do not wear hanging clothing or accessories that can become entangled in moving parts. Use non-slip shoes. For hygienic reasons, as well as for safety, for long hair, use the appropriate net and gloves for your hands.
F) Protect the power cord. Do not pull on the cord to pull the plug out of the outlet. Do not expose the cable to high temperatures, in contact with sharp edges, water or solvents.

G) Avoid insecure positions. Look for the most suitable position that always ensures balance.
H) Always use extreme caution. Observe your work. Do not use the machine when you are distracted.
I) Disconnect the plug from the socket at the end of each use and before cleaning, maintenance or moving the machine.
L) Extension cables must not be used in open air.
M) Check the machine for damage. Before using the machine, carefully check the efficiency of the safety devices. Check that: the moving parts are not blocked, that there are no damaged components, that all the parts have been correctly assembled and that all conditions that could affect the regular operation of the machine is optimal.

N) Have the machine repaired by qualified personnel. Repairs must only be carried out by qualified persons using original replacement parts.
Failure to comply with these instructions may constitute an element of danger for the user.

2.0 INSTALLATION AND COMMISSIONING

2.1 Requirements to be paid by the user

The environmental conditions of the place where the machine is installed must have the following characteristics:

· Be free of moisture.
· Adequately distant water and heat sources.
· Adequate ventilation and lighting and complying with the hygiene and safety standards required by current laws.

The floor must be flat and compact to facilitate thorough cleaning. Obstacles of any kind that could affect the normal ventilation of the machine must not be placed in the immediate vicinity of the machine .

INFORMATION

The electrical network must be equipped with a residual current circuit breaker with characteristics suitable for those of the machine, in which the opening distance between the contacts is at least 3 mm. In particular, an efficient earthing system is indispensable.

ATTENTION

Check that the supply voltage and frequency of the system are compatible with the values shown both in the technical specifications (1.3) and on the plate affixed to the back of the machine.

2.2 Installation methods

The machine is supplied in a special closed box and fixed with straps to the wooden pallet. Inside the packaging, in addition to the machine, there are the operating instructions and the declaration of conformity according to the Machinery Directive. The machine must be unloaded from the means of transport by lifting it with appropriate equipment.

To transport the machine to the installation site, use a wheeled trolley with an appropriate load-bearing capacity. After cutting the strap, remove the packaging and the plastic protection, then with the help of belts of adequate capacity inserted under the base of the machine (Fig.3) and a suitable lifting device (manual or motor), lift the machine, remove the pallet underneath, position it in the expected location, taking care to leave a free space around the machine of about 50 cm in order to facilitate the operations of use, cleaning and maintenance of the machine itself. If the machine becomes unstable due to uneven floors, shim the feet or wheels with pieces of hard rubber sheet. To level the machine correctly, use the feet A (Fig. 4).

Note: All packaging details must be disposed of in accordance with applicable laws.

2.3 Electrical connection

The Y-type connection of the machine to the mains is made by means of a power cable, which is equipped with a plug only in the single-phase version. For machines with three-phase power supply, it is essential to mount a standardised and polarised plug at the end of the cable (the distinction between phase and neutral must be unequivocal), and to check that the direction of rotation of the tank is that indicated by the arrow on the tank.

2.4 Machine positioning

The mains socket must be easily accessible and must not require any movement. The distance between the machine and the socket must be such that the power cord does not become strained. In addition, this cable must not be under the support feet of the machine.

Fig. 3

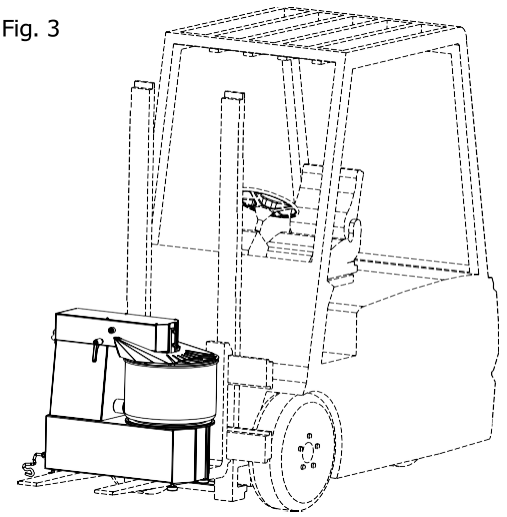
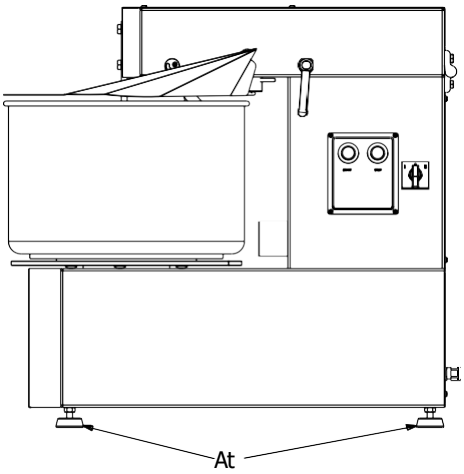


Fig. 4



3.0 CONTROL AND SAFETY DEVICES

The machines are equipped with the following control and safety devices:

3.1 CONTROL DEVICES

Model TS5-8 machines with single-phase or three-phase power supply (Fig. 5-5b):

Fig. 5

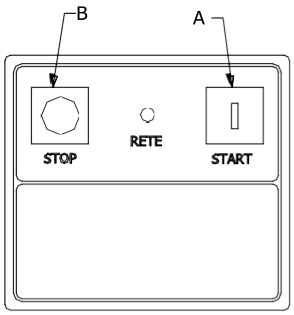
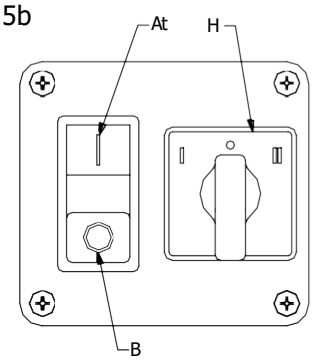


Fig. 5b



Position	Description
A	Green Start button
B	Red Stop button
H	Speed selector switch

Machines model TS12-44 with single-phase, three-phase and three-phase two-speed automatic power supply (Fig.6-7):

Fig. 6

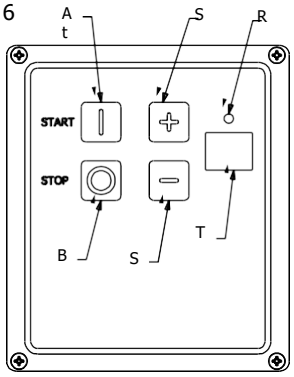
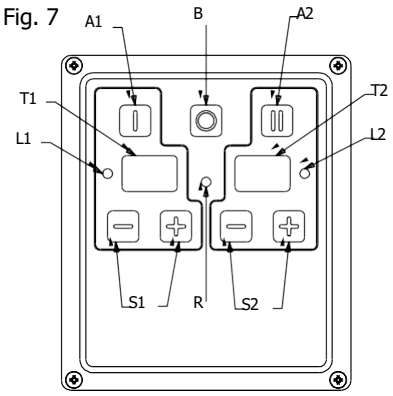


Fig. 7



Position	Description
A/A1	First Speed Start Button
A2	Second Speed Start Button
B	Red Stop button
L1	First speed operation indicator LED
L2	Second speed operation indicator LED
R	Network presence LED / status indicator
S/S1	Time Increment (+) Button / Time Decrement Button (-) first speed
S2	Time increment button (+) / Time decrease button (-) second speed
T/T1	Selected machining time display at first speed
T2	Selected machining time display in second speed

3.2 SAFETY DEVICES (FIG.8)

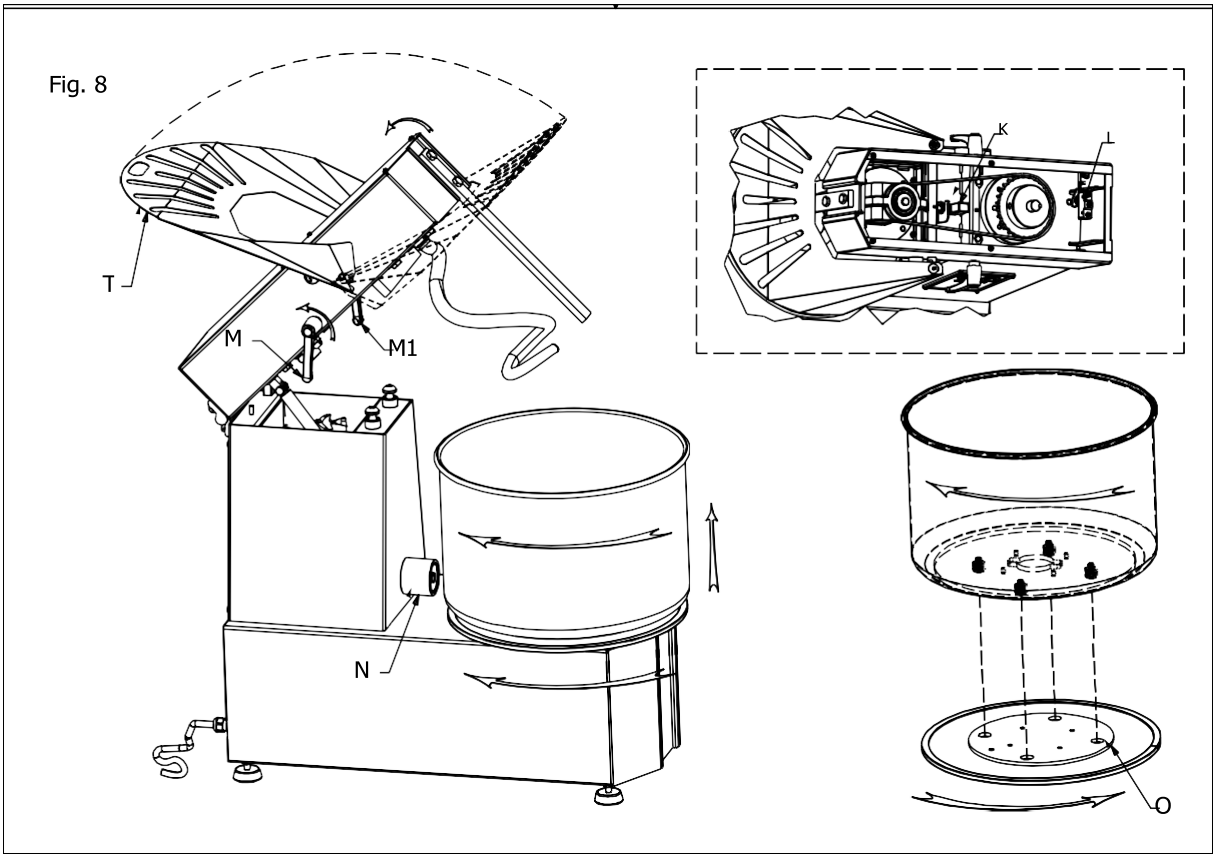
I - Mobile tank protection guard, on all TS/TSA models L - Safety device tested open, only on TSA models
K - Raised tank guard safety device, on all TS/TSA models
M,M1 - Head locking handles in the down position, on TSA models only
N - Tank presence security device, only on TSA models
O - Tub locking disc, on TSA models only

Note: The abbreviation TSA indicates the machine models with lifting head and removable tank, while the abbreviation TS refers to models with fixed head.

⚠ ATTENTION

Individually verified safety devices are effective when:

- **Raising guard I (FIG. 8) stops the machine.**
- **Lifting the head (unlocked by the M,M1 handles) and/or pulling out the tub does not start the machine.**
- **By pulling up moderately both the tub and the head, they remain locked.**



Before starting the machine (start-up-use) lower the head P and guard I completely (FIG. 9). In the openable versions, check that the bowl is correctly inserted and locked by the disc O and that the head in the horizontal position is locked by the handles M and M1, which must be completely tightened. After inserting the plug into the electrical socket, the machine is ready for functional verification.

3.3 Functional verification

3.3.1 Model TS5 and TS8 (Fig. 5-5b)

Single and Three Phase Machine:

START: Press the green button A to start the machine. STOP: Press the red button B to stop the machine.

Note: In machines with a three-phase power supply, if the direction of rotation of the tank is the opposite of that indicated in the arrow, it is essential to carry out the following procedure both for start-up and every time the power supply is changed:

- Stop the machine.
- Pull the plug out of the power outlet.
- Reverse the position of two phases on the plug (e.g. L1 with L2 and vice versa).
- Insert the plug back into the power socket.
- Restart the machine and check that the direction of rotation of the tank is correct.

Keep the machine running at no-load for about 1 minute and check that the functionality is regular.

3.3.2 Model TS12-44, TS12A-44A

Single-phase and three-phase machine (Fig.6):

The TS12M-44M, TS12AM-44AM single-phase models and TS12T-44T, TS12AT-44AT three-phase models allow the management of the processing time with the timer. It is possible to exclude the timer function.

Timer override operation:

START: Press button A to start both the tub and the spiral. STOP: press button B, to stop both the bowl and the spiral.

During operation, the indicator light indicated in fig,6 by the letter R is green, while if the safety gate (letter I fig.8-9) is lifted, the indicator light turns red, indicating that the machine safety system has been activated.
To resume working, lower the movable guard, letter I fig.8-9, and press start again (button A).

Timer-based operation:

The timer function manages the duration of the process.
The duration of the processing is set using the ± buttons indicated by the letter S in fig.6. The selected time is expressed in minutes and shown on the display, indicated in fig.6 by the letter T.
After setting the time, press the start button indicated in fig.6 by the letter A and the R position LED begins to flash.
During processing, the time indicated by the display decreases. The machine stops automatically when the set time is reset. An instant after resetting, the timer returns to the duration set in the work just carried out.

Automatic three-phase double-speed machine (Fig.7):

The TS12D-44D, TS12AD-44AD models allow automatic management of the 1st and 2nd speed machining time using the timer functions related to the 1st and 2nd speeds. It is possible to exclude the timer functions relating to the 1st and 2nd speeds .

Processing with the exception of the timer:

START: press button A1 to start both the bath and the spiral in 1st speed, the passage in 2 speed is achieved by pressing button A2.
STOP: press button B, to stop both the bowl and the spiral.
If the safety gate (letter I fig.8-9) is lifted, the machine stops, to resume working you must press the start button A1 or A2 again depending on the desired speed.

Machining in automatic mode:

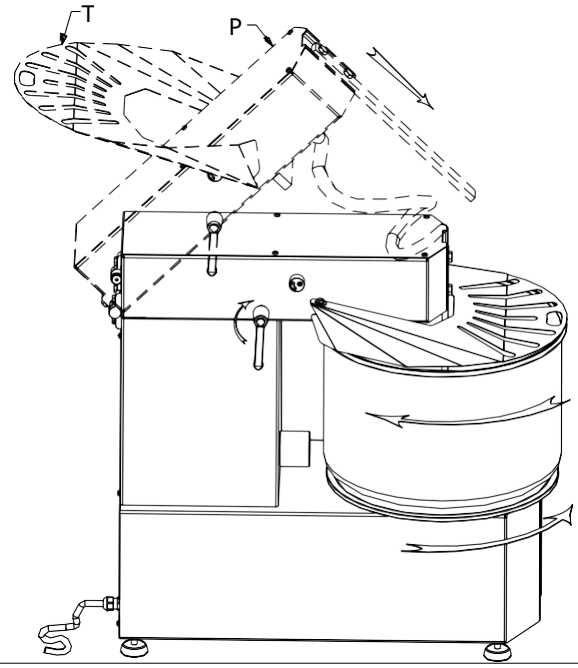
This operating mode is achieved by setting the working times in 1st and 2nd speed using the selection buttons S1 for the first speed timer and S2 for the 2nd speed timer. Once the times have been set, the processing is started by pressing A1.
The 2nd speed machining starts automatically when the time set in 1 is completed and the cycle stops when the time set in the 2nd speed is also completed.
During operation, the indicator light position R is flashing green, if the guard is lifted, the colour will turn red and stop flashing.
The L1 indicator light is on and L2 is off in 1st speed and vice versa for 2nd speed.

Note: In machines with three-phase power supply, if the direction of rotation of the tank is the opposite of that indicated by the arrow, it is essential to carry out the following procedure both for start-up and every time the power supply is changed:

- Stop the machine.
- Pull the plug out of the power outlet.
- Reverse the position of two phases on the plug (e.g. L1 with L2 and vice versa).
- Insert the plug back into the power socket.
- Restart the machine and check that the direction of rotation of the tank is correct.

Keep the machine running at no-load for about 1 minute and check that the functionality is regular.

Fig. 9



4.0 USE

Before starting each work cycle, make sure that the machine is perfectly clean, in particular, the contact surfaces of the tank, the spiral and the central column, which must be treated with detergents compatible with food products. If necessary, proceed with cleaning according to the procedures 5.1.

4.1 Use of the machine with fixed head and bowl

After lifting the guard I, pour the ingredients of the desired type and quantity into the tank, lower the guard and start the machine as described in paragraph 3.3.
The action carried out by the spiral, whose movement is synchronized with the rotation of the tank, allows to obtain the amalgam of flour, water, salt, yeast and any other food products until the desired consistency of the dough is obtained.
If necessary, to slightly change the characteristics and/or consistency of the initial mixture, pour the ingredients into the tank through the protective grid I.
Once the processing cycle is completed, the machine is disconnected from the power socket, the mobile guard is raised to the maximum opening, the dough is removed from the tank and the machine is cleaned according to the 5.1 procedure.

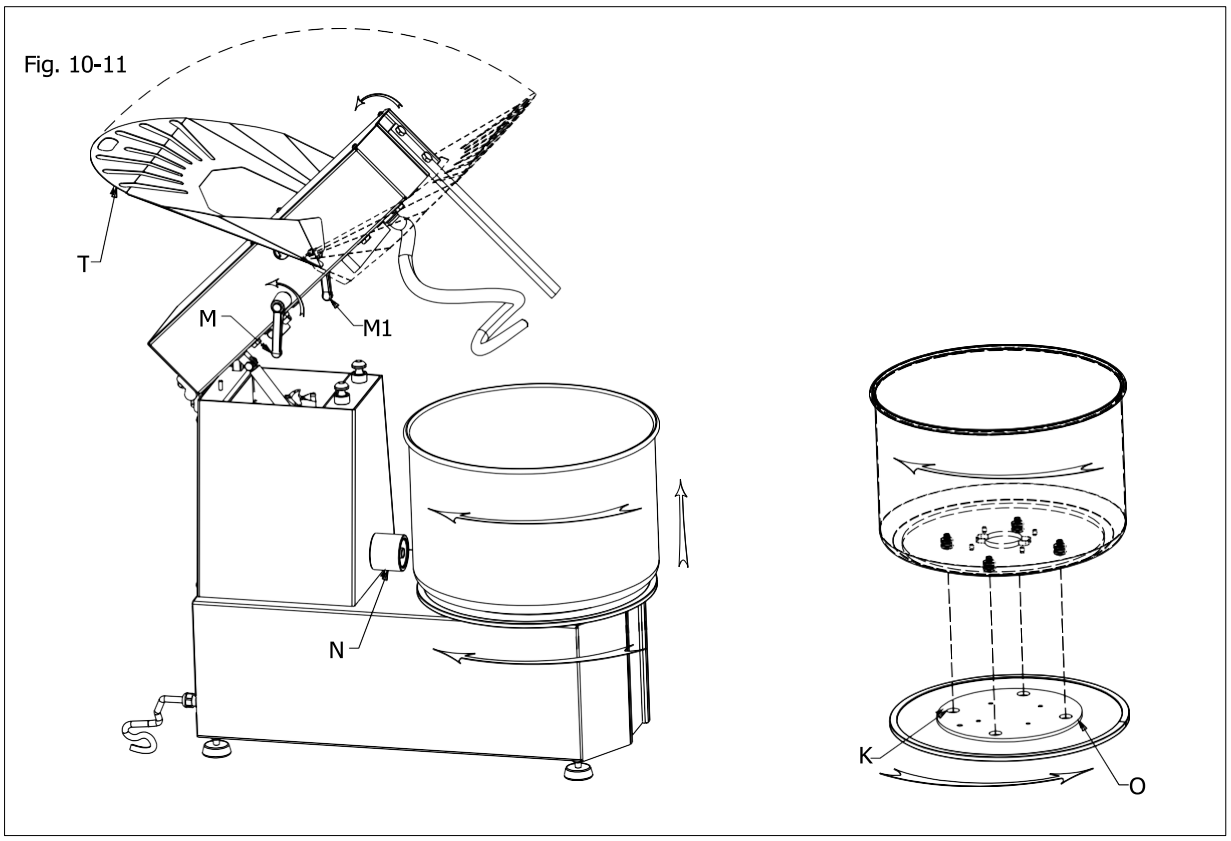
4.2 Use of the machine with lifting head and removable tank

The machine with lifting head and removable tank, although functionally identical to the version with fixed head and tank, differs from the latter for the possibilities offered at the end of each work cycle:

- Facilitation in the removal of the dough.
- Facilitation in the cleaning phase.

4.2.1 Lifting the head and extracting the tank

To raise the head and remove the tank, proceed as follows: stop the machine, unplug the power supply, lift guard I completely (FIG. 1O), unscrew handles M and M1, lift the head with the help of the piston below, turn the disc O clockwise until the tank is unlocked, Lift the tub and then take it out, take out the dough.



4.2.2 Repositioning the tub and head

Once the cleaning operation is complete, reassemble the tank making sure that the 4 pins below (FIG. 11) are correctly inserted inside the holes K of the machine, lock the tank by turning the disc O counterclockwise. Replace the head horizontally by pressing it progressively downwards (FIG. 9), screw the handles M and M1.

⚠ ATTENTION

Before removing the mixture, always carry out the stop procedure according to the methods par. 3.1 or 3.2.

5.0 MAINTENANCE

⚠ ATTENTION

Before carrying out any maintenance or cleaning, remove the plug from the electrical outlet. In the event of a malfunction or breakdown of the machine, contact only the manufacturer's authorised service centres (see SECTION 7).

⚠ ATTENTION.
Maintenance of the machine should only be carried out by qualified operators.

5.1 Cleanliness

Cleaning must be carried out at the end of each use in compliance with hygiene rules and to protect the functionality of the machine. With the help of a wooden or plastic spatula, proceed to a first removal of the paste residues and then carefully clean the bowl, the spiral, the pasta breaker and the mobile protection, with the help of a soft sponge and hot water, dry with food-grade absorbent paper, then first go over the mentioned surfaces and then the whole machine with a soft and clean cloth soaked in specific disinfectant for food machines.

⚠ ATTENTION

It is recommended that you do not use abrasive or corrosive non-food chemicals under any circumstances. It is absolutely necessary to avoid the use of water jets, various tools, rough or abrasive media such as steel wool, sponges, etc., which may damage surfaces and in particular compromise safety from a hygienic point of view. To maintain both the efficiency of performance and the safety of the machinery, it is essential to carry out scheduled periodic maintenance (at least once every 6 months).

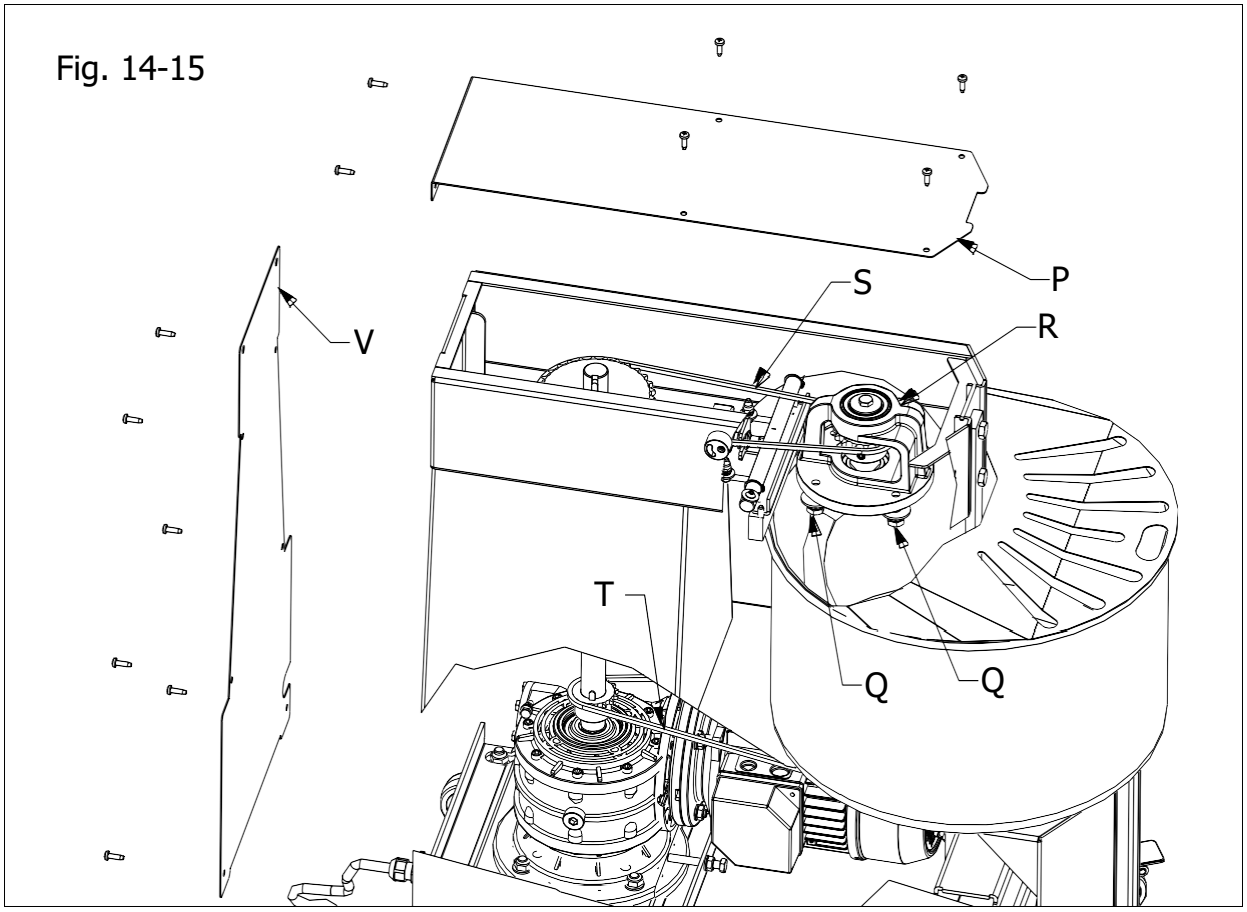
5.2 Upper chain tensioning

⚠ ATTENTION.

Maintenance of the machine should only be carried out by qualified operators.

The chain must be tensioned if periodic checks reveal excessive loosening of the chain or if the rotation of the spiral is inconstant. Unscrew the screws and disassemble the panel P (FIG.14) located above the head of the machine, loosen the screws Q a few turns, pull the spiral support R, until the chain tension is optimised, lock the support R with the screws Q, reassemble and fix the panel P.

Fig. 14-15



5.3 Greasing chains

⚠ **ATTENTION.**
Maintenance of the machine should only be carried out by qualified operators.

After unscrewing the fixing screws, remove the upper P and rear V panels, deposit a reasonable quantity of grease inside the S-T chains (fig. 15) suitable or sufficient to ensure the lubrication of all the chain links. When the operation is complete, reassemble the two panels and retighten the screws.

5.4 Possible anomalies

ANOMALY	CAUSE	SOLUTION
The machine does not start	· Lack of electricity in the network · The emergency stop button is locked · The protective grille and/or head are raised · The main switch knob is in the O position · The speed selector knob is in the O position	· Check the main meter, socket, plug and power cord · Turn the button in the direction indicated by the arrow · Lower both the protective grille and the head correctly · Turn the knob to position 1 · Turn the knob to position 1 or 2
The spiral spins inconsistently	· The chain is loose	· Tension the chain according to the modalities described in section 5.2
The machine stops during use	· Fuse Break	· Replace the fuse with one of the same characteristics

6.0 DEMOLITION OF THE MACHINE

In the event of dismantling and demolition of the machine, the parts that compose it do not present a degree of danger such as to require the adoption of special precautions. To facilitate the recycling of materials, all the parts that make up the electrical system must be separated from the machine.

7.0 AFTER-SALES SERVICE

7.1 Spare parts

For the request for spare parts, refer to chapter 8 relating to exploded views and the related parts lists.

⚠ **ATTENTION**

We recommend that you only use original spare parts. EEC STATES:

Contact your dealer only.

8.0 Attachments

The following attachments refer to the assemblies constituting the structural and mechanical part of the TS series machines and the related wiring diagrams.