



# **SPIRALO**

Pétrin à spirale  
Spiral mixer  
Spiraalkneder  
Spiralkneter  
Amasadora  
Impastatrice

Congratulations with the purchase of this spiral mixer.

This machine has been tested thoroughly in our warehouse in Belgium before delivery. This way, Sinmag Europe is able to guarantee delivery of a machine ready for installation.

For correct use and long service life of your spiral mixer, we recommend that you read this manual attentively before starting to use the machine.

Sinmag Europe thank you for your trust and wish you much job satisfaction with this spiral mixer.



Sinmag Europe Team.

**NOTICE**

The use of this or any industrial equipment may involve hazards such as hot surface, sharp objects, or danger from exposure to the electrical power. This manual is provided to assist you in the safe and efficient use of our equipment.

All equipment, whether considered hazardous or not, should be used in accordance with principles of good manufacturing practice.

The operator of this equipment must be of a legal age. Before operation, please read and follow the instructions carefully for maximum safety, and to obtain the best use of our equipment.

## 1. INTRODUCTION

### 1.1 BRIEF INTRODUCTION

This handbook aims at introducing you on how to install, operate and maintain the spiral mixer **SPIRALO**.

Thanks for choosing **SINMAC EUROPE** as your supplier. Any question, please contact our local office or dealer that will provide you with instant and ideal service.

### 1.2. SPECIFICATION

Machine model: **SPIRALO**

|  | <b>25</b>         | <b>50T</b>      | <b>60T</b>         | <b>80T</b>        | <b>120T</b>     | <b>200T</b>     |
|--|-------------------|-----------------|--------------------|-------------------|-----------------|-----------------|
| <b>FLOUR CAPACITY</b><br>50% water     | 2 - 15 kg         | 4 - 30 kg       | 4 - 40 kg          | 4 - 50 kg         | 6 - 75 kg       | 10 - 120 kg     |
| <b>DOUGH CAPACITY</b>                  | 3 - 25 kg         | 6 - 50 kg       | 6 - 60 kg          | 6 - 80 kg         | 9 - 120 kg      | 15 - 200 kg     |
| <b>LIQUID CAPACITY</b>                 | 1 - 8 L           | 2 - 15 L        | 2 - 20 L           | 2 - 25 L          | 3 - 40 L        | 5 - 60 L        |
| <b>MOTOR POWER</b><br>Spiral<br>Bowl   | 2,2 kW            | 3 kW<br>0,75 kW | 4,12 kW<br>0,75 kW | 4,5 kW<br>0,75 kW | 6 kW<br>0,55 kW | 12 kW<br>1,5 kW |
| <b>BREAKER VALUE AT 380V</b>           | 16 A              | 16 A            | 16 A               | 20 A              | 32 A            | 50 A            |
| <b>R.P.M. at 50 Hz</b><br>1st/2nd gear | 140/280           | 135/270         | 135/270            | 125/250           | 110/220         | 98/196          |
| <b>NET WEIGHT MACHINE</b>              | 140 kg            | 320 kg          | 350 kg             | 390 kg            | 610 kg          | 1300 kg         |
| <b>VOLTAGE</b>                         | 220/380V 3Ph 50Hz |                 |                    |                   |                 |                 |

## 2. SAFETY INFORMATION

### 2.1 SAFETY SYMBOLS

For your safety, please pay attention to the following symbol as marked on the machine:



This label warns that only qualified service personnel can access this position and the operator must disconnect the power before carrying out any cleaning or servicing.

### 2.2 WORKING SAFETY INFORMATION

The machine must only be used by personnel suitably trained for the purpose and who have been trained in the contents of this publication.

#### TO ENSURE SAFE WORK, COMPLY WITH THE FOLLOWING INSTRUCTIONS:

1. Install the machine in compliance with workplace safe work requirements.
2. Don't place the machine near a source of heat and this machine must not be used in a place where the surrounding environment may have a potential risk of explosion.
3. Use the machine with great care and never be distracted.
4. Do not wear loose fitting clothing or clothing with wide or open sleeves.
5. Do not remove, cover or modify the identification plates placed on the machine body.
6. Do not use the machine as a working surface or area and do not place any objects on it that are not required for normal working operations.
7. Do not use the machine with temporary electrical connections or non-insulated cables.
8. Periodically check the state of the power cable and the cable clamp on the machine body, have it replaced as soon as is necessary by qualified personnel.
9. Stop the machine immediately as soon as there is any defective or abnormal operation, a breakage, any incorrect movements, or unusual noises.
10. Before cleaning or carrying out maintenance, disconnect the machine from the electricity mains.
11. Use protective working gloves for cleaning and maintenance.
12. For all extraordinary maintenance, consult the manufacturer or qualified and authorised personnel.
13. Do not use water jets or spray to clean the machine.
14. When sharp accessories are manipulated, use cut-resistant gloves.

## 3. INSTALLATION

### 3.1 GENERAL INSTALLATION REQUIREMENTS

#### NOTE:

It is most important that this machine is installed correctly and that the operation is correct before use. Installation shall comply with local electrical, fire, health and safety requirements.

This machine is designed to provide years of satisfactory service. Correct installation is essential to achieve the best performance, efficiency and trouble-free operation.

### 3.2 INSTALLATION

This appliance shall be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of health harmful substances in the room.

Installations must be carried out by qualified service persons only. Failure to install equipment to relevant codes and manufacturer's specifications in this section will void the warranty.

Components having adjustments protected (e.g. paint sealed) by the manufacturer are only to be adjusted by an authorised service agent. They are not to be adjusted by the installation person.

It is the responsibility of the owner to supply and arrange for the connection of all services to the machine.

### 3.3 UNPACKING

On receipt of the machine, carry out the following: Remove all packaging and transit protection including all protective plastic coverings from outer panels.

Check equipment and parts for damage. Report any damage immediately to the carrier and dealer. Never attempt to operate the machine with damaged parts.

Report any deficiencies to the dealer that supplied the machine.

### 3.4 LOCATION

1. Select a location for the machine with a minimum of 0.6m space around the machine for operating, cleaning and servicing.
2. Position the machine in its proper working position. The machine must be installed on a flat, solid and dry floor.
3. It is recommended that the machine is level from front to back and from side to side. This will ensure the greatest stability.

### 3.5 ELECTRICAL CONNECTION

1. An electrical supply should be available within the reach of the included power cord. Do not use extensions to connect the machine's power cord to the electrical supply.
2. Before making the electrical connections, read the specifications on the rating plate to ensure that they comply with those of the electrical supply. Electrical connection should be made by a qualified service technician who will observe all applicable safety codes and the national electrical codes.
3. Check the correct connection (rotation) of the machine. If necessary, you will have to exchange the position of 2 phase wires.

When connecting this machine to the mains supply, ensure that the following is carried out:

1. An isolating switch is fitted within 2m of the machine.
2. A grommet/gland is fitted around the power supply cord entry hole into the machine.
3. All wiring connections must be checked and tight.

Once the electrical connection has been made, the machine is ready for use.

ELECTRICAL SUPPLY REQUIREMENTS 380VAC, 50Hz, 3PH+E

## 4. INSTALLATION



The machine is ready for installation.

The machine has to be installed on a horizontal and smooth surface.

Adjust the four screws to make sure the machine seats firmly on its four corners.

Mount the protection caps.

## 5. ELECTRICAL SUPPLY



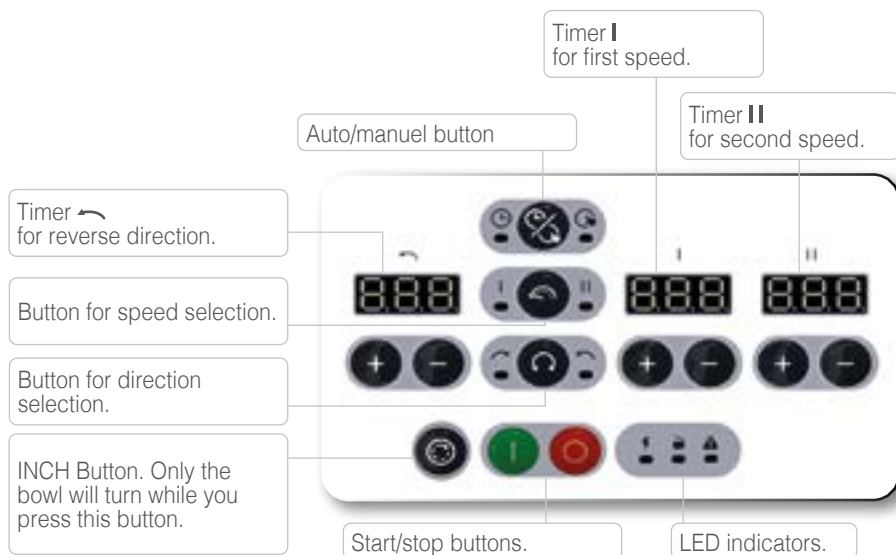
Please connect the machine to the correct electrical supply, as indicated on the identification plate.



After the machine has been connected to the electrical supply, first of all check the direction of rotation of the kneading spiral and the bowl. Seen from above, both kneading spiral and bowl should rotate clockwise. The arrow on the bowl indicates the rotating direction of the bowl.

If the rotating direction is wrong, please exchange any two of the electrical phase cables to reverse the rotating direction.

## 6. CONTROL PANEL



## 7. OPERATION OF THE SPIRAL MIXER

### 7.1 TIMERS

The timers are located at the upper side of the panel. Timer ↶ is for reverse direction, timer I for first speed, timer II for second speed. The 3 timers display the time in minutes.

The timers are set by means of the **+** and **-** keys. If you press the **+** once, the set time will increase by 10 seconds. The maximum time that can be set is 20 minutes. After 20 minutes, the timer will start from 0 minutes again. Press the **-** key for reducing the set time by 10 seconds.



During MANUAL operation, the timers will not work.. When the **⏻** key is pressed, the timers will return to the set time.

When the spiral mixer is switched **I** the timers will indicate the set time. When the timer starts to work, the time indicated on the timer will be reduced 10 seconds at a time until it reaches 0..

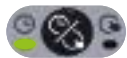


When the safety cover is raised during AUTOMATIC operation the timer will stop at the current position. When the spiral mixer restarts after such a stop, the timer will continue from the current position to finish the remaining time.

## 7.2 INDICATION LEDS

These LEDS show the operation mode in which the spiral mixer is functioning:

### AUTO/MANUAL" operation




When the AUTO LED lights up, the spiral mixer is functioning in AUTOMATIC mode..




When the MANU LED lights up, the spiral mixer is functioning in MANUAL mode.

### Bowl direction



When the  LED lights up, the bowl will rotate in FORWARD direction (clockwise).



When the  LED lights up, the bowl will rotate in REVERSE direction (counterclockwise).

### Speed



When the  LED lights up, the spiral mixer is operating in first speed.



When the  LED lights up, the spiral mixer is operating in second speed.

### Fonction



The ON-LED lights up when the machine is functioning.













The "STOP"-LED lights up only when the safety cover is raised during operation of the machine.






O.L. (Over-Load): This LED lights up when the overload relay is on. After the fault (voltage drop, mixer overload or one of the cable connections has come loose) has been removed, this LED will turn off.


## 7.3 AUTOMATIC OPERATION




- A. Press the AUTO/MANU -button until the AUTO-LED lights up.
- B. Press the  and  buttons below timer  to set desired time for reverse direction..
- C. Press the  and  buttons below timer  to set the desired time for first speed.
- D. Press the  and  buttons below timer  to set the desired time for second speed.
- E. Press the  button to start the machine.






After completing the above procedure, the machine will start operating. It will work in reverse direction until timer  reaches 0. Then the machine will start operating in first speed until timer  reaches 0. Finally the machine will start operating in second speed until timer  reaches 0. The machine will now stop automatically.





During the AUTOMATIC operation the machine will stop when you lift the safety cover. The timer will stop at its current position. The timer will restart from that position after you have closed the safety cover and pressed the  button.

Upon pressing the  button, the timers will return to the initial set time and restart.

## 7.4 MANUAL OPERATION

- A.  Press the AUTO/MANU-button until the MANU-LED lights up.
- B.  Press speed button to select the desired speed.
- C.  Press direction button to select the desired rotation direction
- D. Press the  button to start the machine.
- E. Press the  button to stop the operation.

 The timers will not function during manual operation. The bowl direction cannot be reversed in second speed.

 The mixer will always start in first speed, even if you select speed **II** to start. When the mixer is running in first speed, you can then press **II** to switch to second speed.

## 7.5 MANUAL SWITCH

When the digital panel is damaged, the mixer can be operated with the manual switch that is located at the left side of the top cover. You can select first or second speed manually without timer.



## 9.6. OPTION: PROGRAMMABLE PANEL



Hold down the program button **P** for 5 seconds until the two dots start flashing. Use the **+** or **-** button to select the program number you want to set (e.g., 2).



Set the timers for reverse direction, first and second gear.



Press the program button **P** to save the program. The two dots will turn off.

**Usage**

Using the **+** or **-** button, you can select the program with the desired timers for reverse direction, first gear, and second gear. Simply press the start button **I** to begin the kneading process.



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