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GGM GASTRO

Automatic Spiral Mixer With Fixed Bowl

Installation and user Manual





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Spiral mixer

Kneading machine

Dough mixer

Spiral kneader

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INTERNATIONAL

INSTALLATION AND USER MANUAL

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Introduction

Manual

- Installation instructions are part of the device and contain information for the safe device use.
- Installation instructions must be fully read before installation.
- Installation instructions must always be ready to be accessed by the installer at the installation site.
- Installation instructions must be maintained along the device service life.
- Our company shall not be held responsible for the problems arising from unintended use of the oven.
- Installation instructions must be delivered device's subsequent operators.

Figures








- All figures given in this manual are exemplary.
- It may show differences according to the current device.

The company reserves its rights for technical modifications for development!

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Warning Signs Used

	Fragile	Handle the package with care.
	Keep it dry	Packed so as not to contact with open air.
	CE Mark	The machine meets the basic safety requirements.
	Warning	A hazardous situation, it may result in severe injury and death.
	Fire	Fire hazard!
	High Voltage	Attention, Death Risk
	Operating Mechanical Parts	Do not perform maintenance or repair work on moving parts.

Warranty

Those not covered by the warranty;

- Glass damages, ampoules and seals.
- Unintended use of the device,
- Modifications or technical modifications to the device by person and persons not authorized by the manufacturer,
- Avoiding use of the manufacturer company's original parts,
- Damages with mechanical impacts during the oven transportation by the customer.
- Losses due to the insufficiency of all network systems supplying the mixer.
- Faults that may occur due to user's neglect of the mixer.

- **Non - authorized personnel are not allowed to interfere with the repair and modification of the device under any circumstances;**

- Due to the failures in electric motors.
- Due to the failures those may occur with the entire electricity materials.
- In cases of failing to adhere with the rules specified in instructions of use.
- Due to the deformations those may occur as a result of cleaning the bowl spiral and knife by metal scrappers.
- In cases of tempering and damaging settings on the mixer.

Manufacturer Company Information

Opening Times

Monday till Friday

08:30 - 17:30
info@gmgastro.com

Service & Warranty

Tel: +49 (0) 2553 722 03 00
technik@gmgastro.com

Address

GGM Gastro International GmbH
 Weinerpark 16
 D- 48607 Ochtrup

ggmgastro

Weinerpark 16
 48607 Ochtrup (DE)

E-Mail: info@gmgastro.com

TYP Weight (kg)

Modell Construction year

Item no.

CE..... V HZ kW

LABEL INFORMATION

- | | |
|-------------------------------------|------------------------|
| 1. Manufacturer company information | 6. Serial number |
| 2. Machine type | 7. CE mark |
| 3. Machine weight | 8. Operating voltage |
| 4. Machine model | 9. Operating frequency |
| 5. Production date | 10. Operating power |

Production Area Design

1. In the entire area, there should be some room to allow for inspection and cleaning when manufacturing equipment is installed.
2. When placing the machines, all connections must be closed so that there are no openings.
3. The floor on which the machines are placed should be accessible from the point of view of the cleaning operation or should be completely closed.
4. In cases where equipment passes through sections such as ceiling, floor, wall, sufficient floor should be provided between equipment and wall for cleaning or machine should be mounted on the wall not to permit any gap.
5. Auxiliary equipment must be removable and can be reassembled to facilitate cleaning.
6. Production base should be covered with hard, smooth, easy to clean and non-absorbent material.
7. For insulation, non-absorbent materials should be used. These surfaces should be accessible.
8. Stacking should be made on pallets to let minimum 100 mm distance with the floor when storing the products.
9. Vessels used to collect waste products and waste water should be made of easy to clean materials and should have sufficient volume.
10. Doors and windows opening out of the plant should be isolated to prevent any outsourced contamination.
11. Sufficient ventilation should be ensured in the washing rooms.
12. Water and water vapor that come into direct contact with the products should be of drinkable quality.
13. Pipes, valves and fittings used for liquid materials: Either "on-site cleaning" programs should be implemented for these sections or systems allowing easy disassembly and assembly should be used.
14. All fixed pipes should be isolated to prevent condensation.
15. Drainage systems for wastewater must be installed in areas where cleaning is required.
16. Floor slope should be such as to prevent water accumulation on the surface.
17. Illumination lamps should be protected as to prevent falling and breaking.
18. Power cables should be stabilized (their contact with the ground should be prevented)
19. Machine's electrical components should be closed to prevent dust formation. Water should be prevented from entering electrical panels.
20. Machine parts such as fan, motor should be accessibly mounted.
21. Motor and other auxiliary equipment should be placed not to touch the floor.

Product Description

Spiral mixer is a machine which homogeneously mixes flour and water added in the bowl and kneads them as desired within the time set.

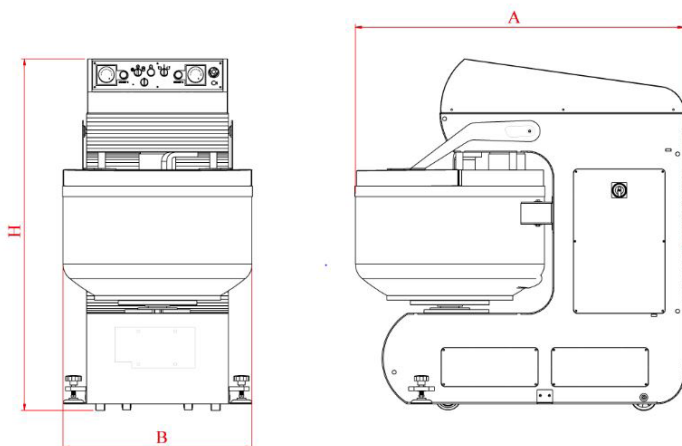
Operating Principle of The Product

Spiral mixers are the machines of dough preparation group. The flour transferred from sifter is added into the mixer bowl. Water that measured according to the speciality of the flour is added into the bowl. The flour is kneaded in desired speciality by setting the kneading duration on machine control panel.

Product Technical Details

	STKMMK40	STKMMK 100	STKMMK 200	STKMMK 250
Flour capacity (kg)	25	62,5	125	150
Dough capacity (kg)	40	100	200	250
Weight of machine (kg)	350	550	830	1150
Dimensions of bowl (ø x h)	50x30	70x41	90x47	100x47
Spiral engine power (kW)	1,5 / 3	3,5 / 5,5	5,5 / 8	7,5 / 11
Bowl engine power (kW)	0,55	0,55	1,5	1,5
Bowl volume	70	157	298	368
Ellectrical connection	380V/50-60 hz/ 3 phase	380V/50-60 hz/ 3 phase	380V/50-60 hz/ 3 phase	380V/50-60 hz/ 3 phase

Product Dimensions



(Figure 1)

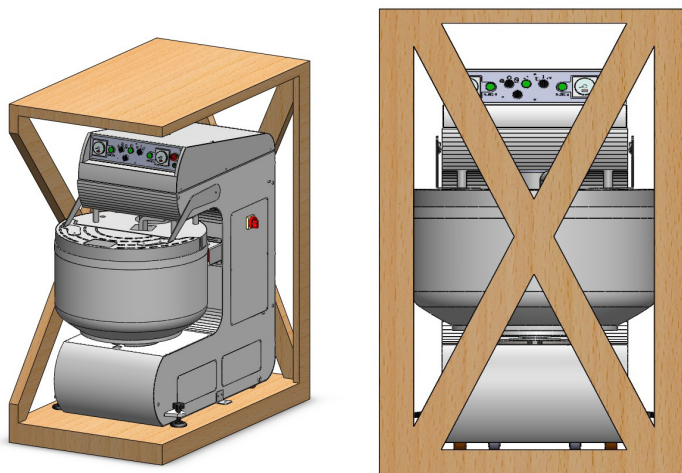
MODEL	A	B	H
STKMMK40	1010 mm	530 mm	1115 mm
STKMMK 100	1255 mm	725 mm	1335 mm
STKMMK 200	1530 mm	930 mm	1425 mm
STKMMK 250	1650 mm	1030 mm	1535 mm

PRODUCT COMMISSIONING

- Installation is carried out by the manufacturer’s personnel or by the personnel authorized by the manufacturer.
- Manufacturer is not responsible for any failure caused during installation made by unauthorized personnel. Manufacturer is not responsible for any malfunctions caused by unauthorized personnel during the installation, despite the labor guarantee.
- Manufacturer cannot be held responsible for the place and technical and legal suitability of the machine.
- All operations must be carried out in accordance with the directives of a sole authorized person.
- Operators and people under their command must wear protective clothing in compliance with the operation.
-

General Rules on Unpacking the Machine

- Inspect the machine for damages during transportation before unpacking. Check that all parts listed in the shipping documents are present. If there are missing parts, manufacturer must be informed within 24 hours.
- Dispose of the packaging material in accordance with the applicable legal regulations when the machine is fully installed.
- Store the materials used for lifting the machine in a suitable place for future use. (Figure 2)



(Figure 2)

Load Structure

Machine can be shipped in form as stated below:

- Completely assembled;
- Partially assembled;
- Not completely assembled; parts are stacked on the pallet or optionally on top of any wooden structure.

The vehicle to be transported must have the required lifting capacity. (Please see machine's technical information chart.).

Lifting device used to raise the machine; should have sufficient lifting capacity and fork length.

Product Transport

Spiral mixers are able to move in every direction easily thanks to their wheels. The machine is delivered to the customer on a wooden pallet or in a wooden case.

- GGM Gastro is not responsible for the malfunctions that may occur during the transportation.



(Figure 3)

The packaging structure of the product is made according to the world and European norms. It is made ready for the shipping procedure by placing into cases packed with nylon and design in compliance with standards by compressing with nylon with bubble pack.

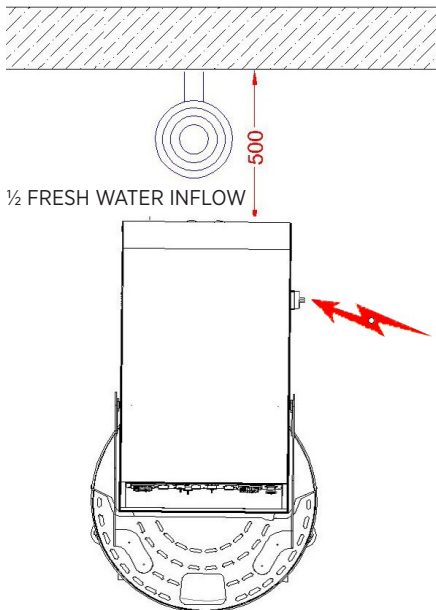


DO NOT TAKE OVER PRODUCT WITH DESTROYED PACKAGE, DAMAGED CASE AND BEING CRUSHED AND SCRATCHED. MOREOVER, INFORM THIS SITUATION IMMEDIATELY TO MANUFACTURER BY TAKING PHOTO AND WITH A BRIEF NOTE.

PRODUCT ASSEMBLY

5. Place the machine on a flat surface.
5. Ensure the necessary electrical voltage.
5. Check the stretch of upper belt pulley group.
5. Check the stretch of lower belt pulley group.
5. Prevent the movement of machine while it is operating by using stabilizing chocks.

Product Stabilizing



DISTANCE BETWEEN THE MACHINE AND WALL SHOULD BE AT LEAST 500 MM. (Figure 4)

KW VALUE OF THE MACHINE IS 5 KW FOR STKMMK 40.

FOR STKMMK 100, IT IS 6 KW.

FOR STKMMK 200, IT IS 10 KW.

FOR STKMMK 250, IT IS 14 KW.

WATER INFLOW GROUND CLEARANCE OF THE MACHINE IS

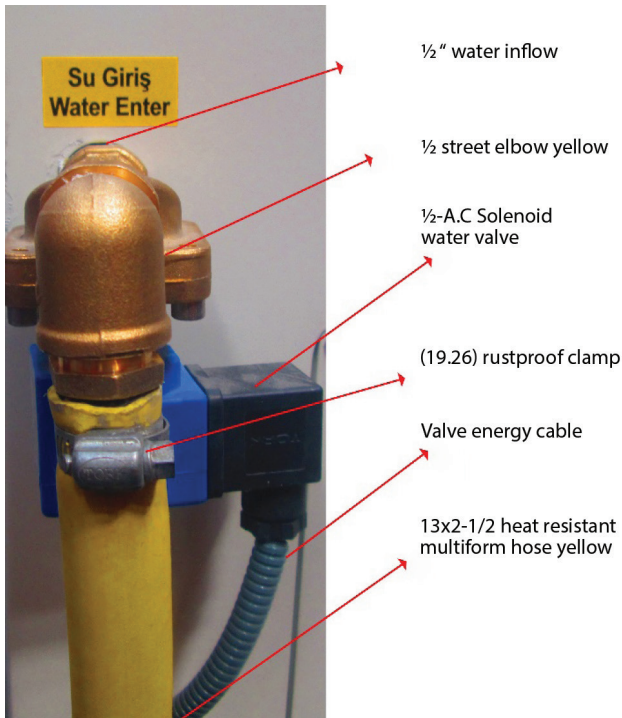
950 MM FOR STKMMK 40

1020 MM FOR STKMMK 100

1050 MM FOR STKMMK 200

1150 MM FOR STKMMK 250

Fresh Water Installation



(Figure 5)

Electrical Installation

Electrical installation produced in accordance with the world and European norms adds value for your machine and gives confidence to you and your employees. The electronic systems used were designed to facilitate your works. With the technological possibilities, an easy and comfortable usage is aimed.

For the electric/electronic problems, maintenance and/or repair should be only performed by the authorized people, the permanent damages that may occur as a result of system interference made by unauthorized people should be prevented.

Rules:

- Customer is responsible for electrical connection. Also, customer have to make the electrical connection according to the laws and regulations in force.
- Not only the protection of power supply and its conductors, and also a strong and effective earthing system is customer's responsibility.
- The cables used for the connection of electric pannel to power network have to be approved (tested), and have to be applicable for the operation of an installed machine.
- Make sure that the power supply is disconnected before you intend to connect electricity.
- Make sure that the cables are in a safe place, and that there is no risk for an accident.
- Terminals should be stabilized properly in a way that they do not affect each other and damage the pieces inside.
- There should be a disconnector that provides electrical energy for the oven or a fused switch close to the customer.
- All of the cables that connect the oven panel with its elements are heat resistant.
- Ventilation of electrical cabin is important. Air temperature may rise until the levels which damage the pieces.

Electrical connection according to the machines;

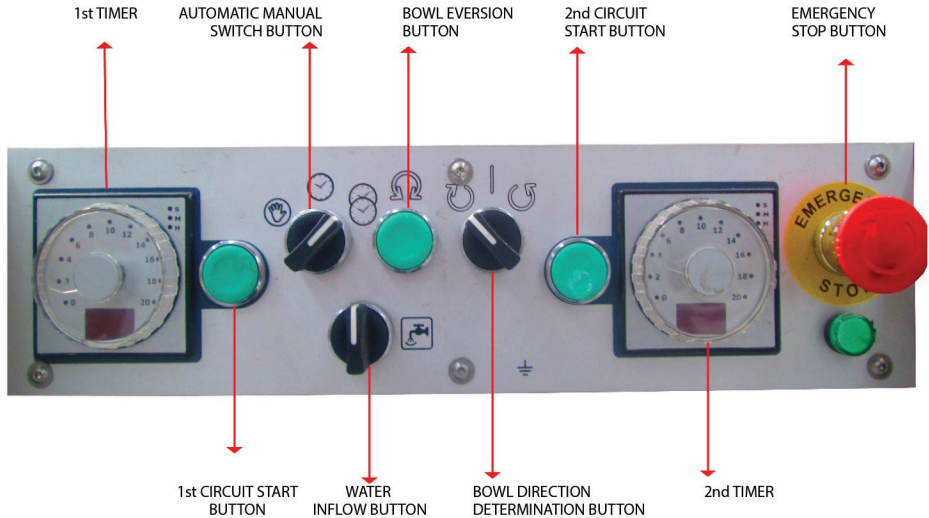
STKMMK40	<p>3 x 16 A FUSE 1 EA. REQUIRED OPERATED WITH 3 PHASE (380 V/ 50 Hz), ITS AVERAGE CURRENCY DRAWN IS 11 A 5 x 2,5 ANTIGRON CABLE REQUIRED CABLE SIZES MAY DIFFER ACCORDING TO DISTANCE. h: 780 mm FROM THE PLACE ENDED BY ½ " FRESH WATER VALVE</p>
STKMMK100	<p>3 x 25 A FUSE 1 EA. REQUIRED OPERATED WITH 3 PHASE (380 V/ 50 Hz), ITS AVERAGE CURRENCY DRAWN IS 13 A 5 x 2,5 ANTIGRON CABLE REQUIRED CABLE SIZES MAY DIFFER ACCORDING TO DISTANCE. h: 970 mm FROM THE PLACE ENDED BY ½ " FRESH WATER VALVE</p>
STKMMK200	<p>3 x 25 A FUSE 1 EA. REQUIRED OPERATED WITH 3 PHASE (380 V/ 50 Hz), ITS AVERAGE CURRENCY DRAWN IS 16 A 5 x 4 ANTIGRON CABLE REQUIRED CABLE SIZES MAY DIFFER ACCORDING TO DISTANCE. h: 1050 mm FROM THE PLACE ENDED BY ½ " FRESH WATER VALVE</p>
STKMMK250	<p>3 x 25 A FUSE 1 EA. REQUIRED OPERATED WITH 3 PHASE (380 V/ 50 Hz), ITS AVERAGE CURRENCY DRAWN IS 23 A 5 x 6 ANTIGRON CABLE (SINGLE VEIN) REQUIRED CABLE SIZES MAY DIFFER ACCORDING TO DISTANCE. h: 1150 mm FROM THE PLACE ENDED BY ½ " FRESH WATER VALVE</p>

REMOTE CONTROL ELEMENTS

Remote control elements are shown in the figure. Information about remote control elements are given below.

Control Panel Usage

In the figure below, the image of STKMMK 40-100-200-250 control panel is shown. (Figure 6)



(Figure 6)

Emergency Stop Button

Emergency stop button is used when having faced with a functional malfunction or emergency situation. The task of the button is to stop all of the working functions and to deenergize the control energy of electrical panel.

Low Speed Button

The task of the button when the position of it is selective switch Auto is to start the process of kneading.

High Speed Button

It is used to switch the process of kneading from low speed to high speed.

Timer-1

It is used to set the duration of kneading in low speed. White indicator shows the duration set, orange indicator shows the remaining duration. Timer is sent by the factory gradually, and it also has second, minute, hour option.

Zaman Saati-2

It is used to set the duration of kneading in high speed. White indicator shows the duration set, orange indicator shows the remaining duration. Timer is sent by the factory gradually, and it also has second, minute, hour option.

Automatic Manual Switch Button

It is used to set the operating options of dough mixing machine as manual or automatic.

7th Bowl Direction Determination Button

It is used to rotate the bowl clockwise or counter-clockwise.

8th Bowl Eversion Button

After finishing the process of dough mixing, it is used to gather the dough left in the bowl.

Do the works given below respectively to provide the first operation.

1. Place the main switch from "0" position to "I" position.
2. Switch to automatic operation position to the machine.
3. Add flour and water in a proper amount for the capacity indicated in the technical specialities section.
4. Determine low and high speed operation duration by using low and high timers.
5. Start the process of kneading by pressing low speed button.
6. The machine will automatically switch to high speed at the end of the operation duration in low speed, and it will finish the process of kneading by stopping at the end of the time set.

Important Note:

- Do not put your hand between the body of machine and rotating bowl while the machine operates.
- While calculating engine power of the machine, water ratio was accepted as 55-60% of the amount of flour.
- While processing with lower amount of water ratio, decrease the amount of dough to be kneaded in a proper amount.

DOUGH KNEADING PROCESS

1. Add flour and water in an amount to be kneaded in the bowl.
2. Do necessary settings on machine control panel.
3. Operate the machine.
4. After completing the duration set, empty the dough in the bowl by opening the door of bowl.

POINTS TO BE CONSIDERED IN THE USE OF PRODUCT

1. If the door of the bowl opens while the machine operates, it stops automatically.
2. If the machine moves as a result of shaking, check the stabilizing chocks.
3. If balance occurs in the bowl, close the gap between pulley and bowl by loosening the screws or bilateral bowl setting pulleys.
4. For the loosening that may occur on the belts, provide stretch by using tie nuts placed in bottom and top.

PERSONAL PROTECTIVE EQUIPMENT



Operator must wear a glove while emptying the bowl.



This symbol means that the furnace may have a voltage supply inside the electrical panel. Before opening the electricity panel, it is necessary to cut electricity from main switch or by directly pulling out the socket from the plug (For maintenance personnel).



While the machine is operating, do not interfere. Operator must not wear baggily clothes and tie. He/She must wear a protective bonnet.

- Do not remove or damage warning signs.
- It is mandatory to replace damaged and illegible warning signs. Please contact with the manufacturer for new warning signs.
- Manufacturer is not liable for work accidents or damage to the machine resulting from failure to observe the safety and warning signs or the removal of these plates from the machine.

POINTS SHOULD BE DONE TO MAKE THE PRODUCT LONG LASTING

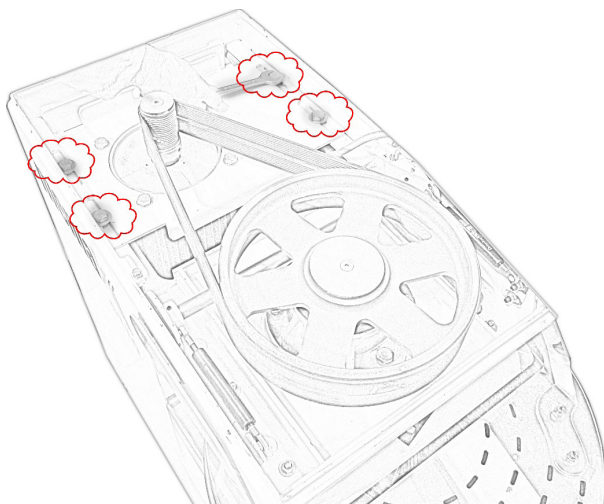
- Clean the inside of the bowl, the spiral and its knife at the end of each work. Do not use metal scrapers during the cleaning process.
- Clean the external parts of the machine.
- Lubricate the bottom and top bearings regularly.
- Replace the bowl setting pulleys if they are eroded.
- Check the belt pulley system regularly, and replace the old ones.

WARNINGS

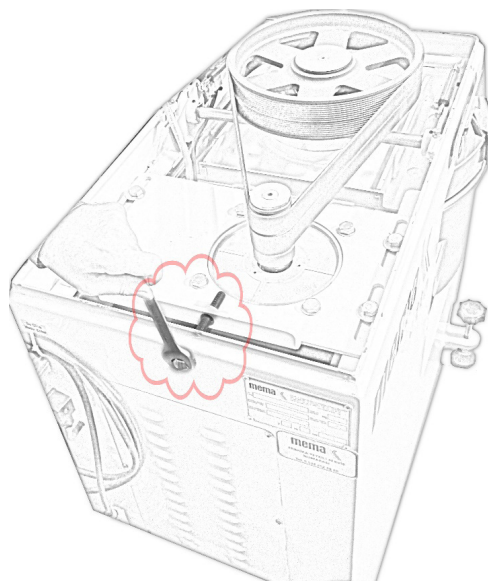
For life, good and environment safety, warning signs are located on necessary places of the machine. These warnings should be followed, and these signs should not be removed. The warning signs of the machine are shown below.

SETTING AND MAINTENANCE

Belt System Stretching Setting

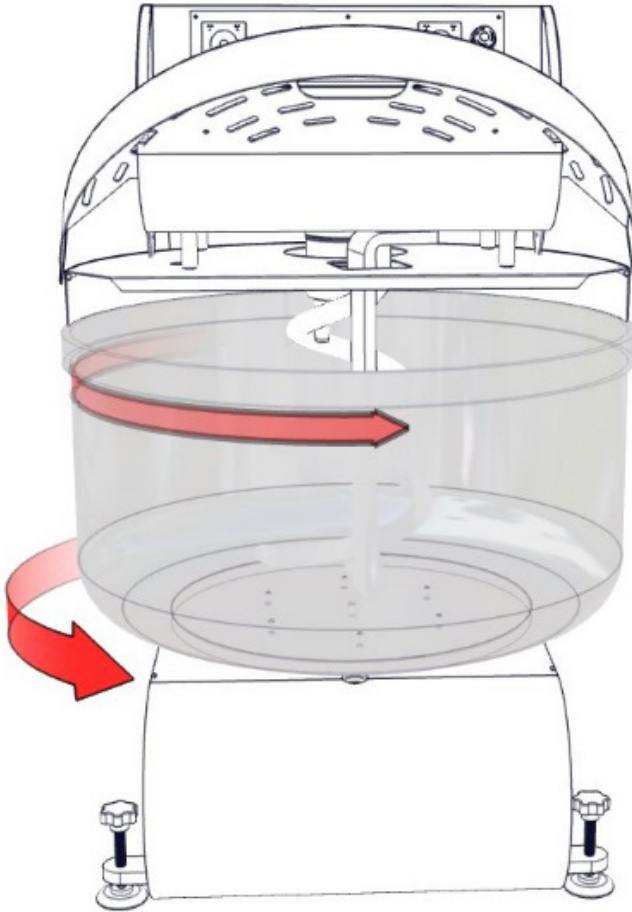


(Figure 7)



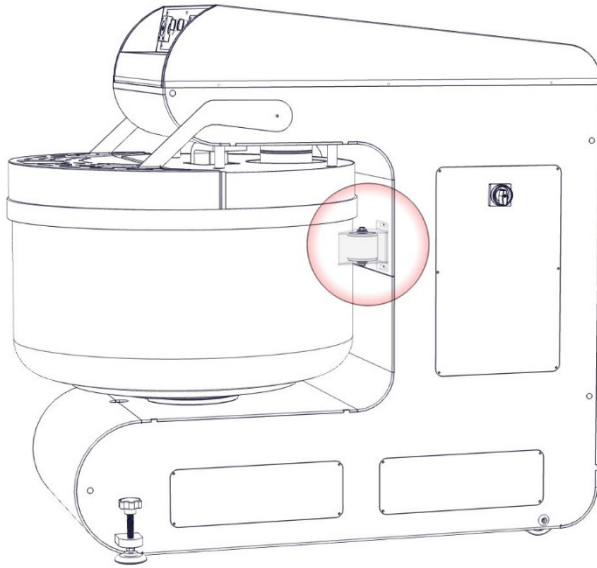
(Figure 8)

For stretching the belts, loosen the screws shown in the circle, afterwards, pull the platform connected to screw in the arrow direction while loosening the screw shown in the circle. Continue the process of pulling until the belts become stretched. When the belts become stretched, tighten the screws shown in figure 10. After tightening the screws, the process of stretching will be done. (Figure 7 and Figure 8)

Bowl Direction of Rotation*(Figure 9)*

Bowl and spiral's direction of rotation is in the direction (clockwise) shown. (Figure 9)

Balance Wheel



(Figure 10)

Bowl balance wheel should be cleaned daily and there should be no flour and dust around it. (Figure 10)

Cleaning, Maintenance and Repair That Can Be done By The User

For an efficient operation of spiral machine, following maintenance instructions is suggested. Daily maintenance of the machine should be made by the user at the end of the work.

Daily Cleaning

After the usage, the bowl, spiral and knife should be cleaned well by using a plastic scraper. Wiping processes should be made with a wet cloth. Pressure water must not be used.

Periodic Maintenance and Repair To Be Made By Authorized Services

Periodic maintenance of the spiral kneading machine should be performed by an authorized services only. Our firm will not be responsible for damages that may occur as a result of the interference of unauthorized people to the machine.

Timing Belt and “V” Belt Control

Check the timing belt and “V” belts in every 4 months.

Remove the timing belt if it is eroded.

If one of the “V” belts is eroded, remove it with all of the “V” belts at the same pulley at the same time. Check the pulley stretches. The pulleys should be deflected for 15 mm at most when pushing by a finger averagely.

FAILURE AND CAUSES

FAILURE	CAUSE	SOLUTION
Gate Switch Failure	If it moves out from its bearing	Switch position is set by disassembling the top gate.
	If the screws of switch are loosen	The screws are tightened.
Spiral Engine Protection Thermic May Be Tripped	One of the phases may not be accessed.	Checked it by calling the service.
If the dough capacity and its toughness is more than the recommended	Engine may be burned.	Engine protection is checked by opening the side panel gate.
Phase line relay failure	Phases may be changes because of the network.	Replace two of the network phases.
	One of the phases may not be accessed.	Measure the network phases flow to the machine.
	Phase line relay may be failed.	Get in contact with the service.

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