

DOUGH DIVIDER INSTALLATION AND USER MANUAL



INSTALLATION AND USER MANUAL

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INSTALLATION AND USER MANUAL

Booklet Version - 2021/10 - **EN**



PREAMBLE

Manual

- The mounting instructions are part of the device and contains information for safe mounting of the device.
- Read all the mounting instruction before installation.
- The mounting instruction must always be available for the access of the installer at the mounting site.
- The mounting instruction must be kept to insure the lifetime of the machine.
- is not responsible for any problems arising from the use of the oven for any other purpose rather than its own.
- The mounting instructions must be handed over to the next operators of the device.

Figures












- All figures in this manual are exemplary.
- They may vary depending on the current device.

All the right to make technical changes for development purposes are reserved!

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Transfer of product-specific information to third parties is reserved.

Warning Signs

	On this direction	Move with the direction indicated by the arrows facing upwards.
	Fragile	Handle the package carefully.
	Keep Dry	Packaged in such a way that it does not come into contact with open air.
	CE mark	The machine meets the basic safety requirements.
	Balance	Indicates the point where the machine should be lifted.
	Suspension Point	Indicates where the ropes or chains must be attached.
	Caution	A hazardous situation may result in serious injury or death.
	Fire	Fire danger!
	High voltage	Caution, danger of death!
	High temperature	Caution, danger of death!
	Working Spare Parts	Do not perform maintenance and repair operations on moving parts.

Guarantee terms

Not covered by the warranty:

- Glass damage, bulbs and gaskets,
- Misuse of the device,
- In case of modifications or technical changes made to the device by people or personnel not authorized by the manufacturer,
- Not using the original parts of the manufacturer,
- Damages caused by mechanical impacts caused by the customer's shipment of the oven.
- Damages arising from inadequate of all the mains network systems feeding the oven.
- Malfunctions that may occur due to user negligence of the oven.
- In case of attempts to repair the oven by the customer or persons not authorized by during the warranty period
- Due to malfunctions that may occur in electric motors.
- Due to malfunctions that may occur in all electrical materials.
- In case of non-compliance with the rules specified in the instructions for use.
- In cases where the settings on the oven are mixed and corrupted.

GENERAL INFORMATION

Manufacturer Company

Product Label Information

The image shows a product label information form with the following fields and labels:

- 1**: Manufacturer Company Information (indicated by a pink circle with the number 1)
- TIP TYPE**: Machine type (indicated by a pink circle with the number 2)
- XXXXXXXXXXXXXXXX**: Machine weight (indicated by a pink circle with the number 3)
- AĞIRLIK WEIGHT (Kg)**: Machine model (indicated by a pink circle with the number 4)
- XXXX XXX**: Date of manufacture (indicated by a pink circle with the number 5)
- İMALAT TARİHİ CONSTR. YEAR**: Serial number (indicated by a pink circle with the number 6)
- XX X XXX**: CE marking (indicated by a pink circle with the number 7)
- SERİ NUMARASI SERIAL NUMBER**: Working voltage (indicated by a pink circle with the number 8)
- V XXX**: Working frequency (indicated by a pink circle with the number 9)
- HZ XX/XX**: Working power (indicated by a pink circle with the number 10)
- KW XX**

1. Manufacturer Company Information
2. Machine type
3. Machine weight
4. Machine model
5. Date of manufacture
6. Serial number
7. CE marking
8. Working voltage
9. Working frequency
10. Working power

IN THE PRODUCTION OF BAKERY

Manufacturing Design

1. In the entire area, when placing manufacturing equipment, gaps should be left in order to allow for inspection and cleaning.
2. When placing the machines, all connection locations must be closed in order not to leave gaps.
3. The floor where the machines are placed must be accessible in terms of cleaning operation or should be completely closed.
4. In cases where the equipment passes through sections such as ceilings, floor, walls, sufficient gaps must be provided between the machine and the wall for cleaning, or the machine must be mounted on the wall so that there won't be any gap.
5. Auxiliary equipment must be detachable and reassembled to facilitate cleaning.
6. The manufacturing base should be covered with hard, smooth, easy-to-clean and non-absorbent material.
7. For insulation, non-absorbent material should be used. These surfaces must be accessible.
8. When storing products, stacking should be carried out on pallets with a distance of at least 100 mm with the floor.
9. The containers used to collect waste products and wastewater must be made of easily cleaned material and must be of sufficient volume.
10. Doors and windows opened outside the manufacturing must be insd in such a way as to prevent any external contamination
11. Adequate ventilation should be provided in the washing rooms.
12. Water and water vapor that comes into direct contact with products should be drinkable water.
13. Pipes, valves and joints used for liquid materials: Either 'on-site cleaning' programs should be applied for these parts, or systems that can be easily disassembled and assembled.
14. All fixed pipes must be isolated to prevent condensation.
15. In the cleaning areas, the necessary drainage systems for waste water must be installed.
16. The ground slope should be in such a way as to prevent the accumulation of water on the surface.
17. Lamps must be protected to prevent them from dropping and breaking.
18. Electrical cables must be fixed (contact with the ground must be prevented).
19. The electrical components of the machines must be switched off to prevent dusting. Water should be prevented from entering the electrical panels.
20. Machine parts such as fans and engines must be amounted in an accessible way.

INFORMATION ABOUT THE MACHINE

Purpose of Use: Volumetric Dough Divider machine ensures the preparation of bread dough by cutting the dough prepared in dough kneading machines in the desired weight.

In this machine, the cutting drum and suction piston are present, in order for the dough to be pulled into the cylinder by the movement of the piston and cut without compressing the dough with the rotational movement of the cylinder. Processing the most delicate dough type, it works as if it were cut by hand, without wearing it out. Metal surfaces that come into contact with the dough are automatically lubricated. Thus, precision and long-lasting operation are ensured. The dough hopper is made of stainless steel and has a dough capacity of 60 kg. With this machine there is no need to clean the cutting system. Weight adjustment is manufactured with manual and automatic weight adjustment.

The flour chamber on the front of the machine ensures that the dough does not stick to the cylinders. There are two aybolts (steel rings) in order to make the transportation on the machine.

The machine has an oil pump for the comfortable operation of the drum. Sunflower oil suitable for food is used in the machine. All materials that come into contact with the dough are selected suitable for food.

On the belt there is a dough folding chain that allows the dough to roll. There are oil pan and gears inside the casing at the front of the machine. The machine stops automatically due to the switch (limit switch) on it when this enclosure is opened.

Technical Information Table

MODEL				TPM110	
Gram	gr	70-200	80-350	100-600	250-1.000
Cutting capacity	adet	1.100 - 2.200			
Hopper capacity	Kg	70			
Connection strength	Kw	1,5 (380V / 50-60 Hz / 3 Phase)			
Weight	kg	385			
Exterior Dimensions	cm	(W) Width:65 (L) Length: 150 (H) Height: 115			

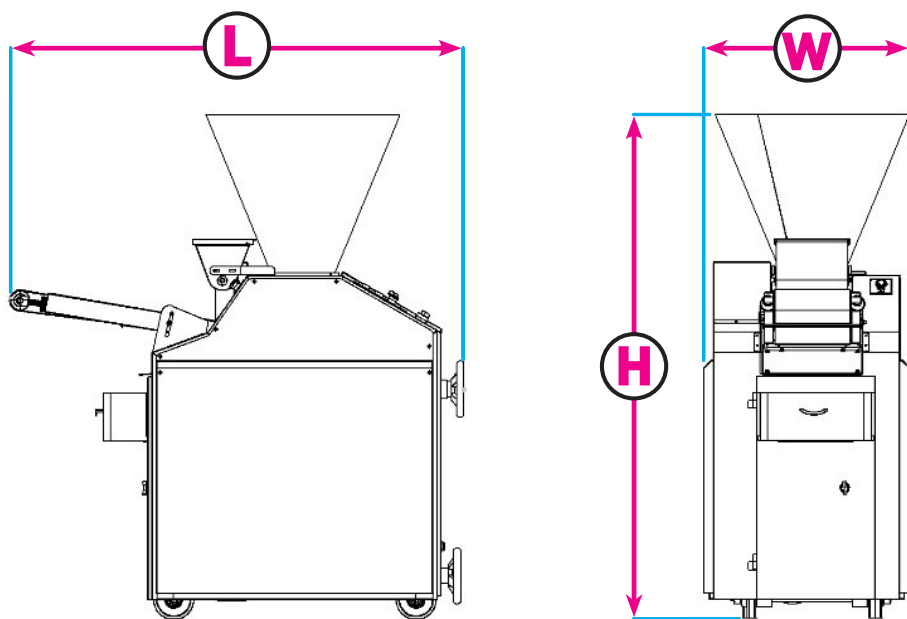
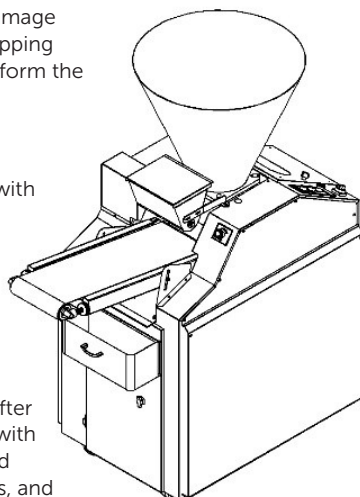


Figure 1

General Rules for Unpacking the Machine

- Before unpacking the machine; inspect for any damage from the transport. Check if all the parts in the shipping document are present. In case of missing parts, inform the manufacturer within 24 hours.
- When the installation of the machine is complete, dispose of the packaging material in accordance with applicable legal regulations.
- Store the materials used to lift the machine in a suitable place for future usage.

The packaging structure of the product is carried out in accordance with the norms of the world and Europe. After the machine control process is finished, it is packaged with bubble wrap, compressed with stretch nylon and placed in the box which is designed according to the standards, and made ready for the shipment process.

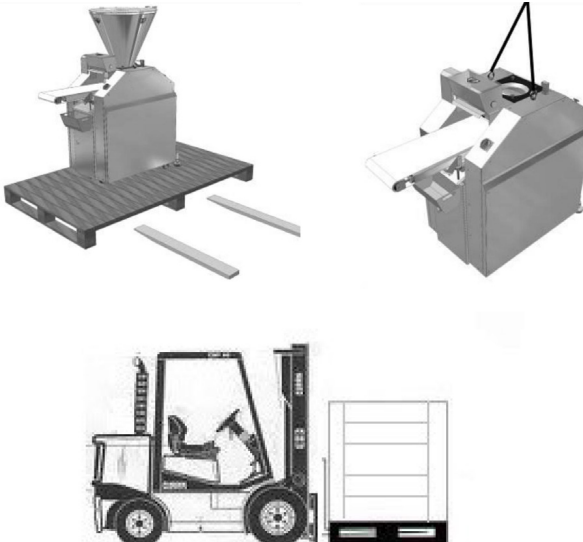


1. TRANSPORTATION OF THE PRODUCT

General Rules for Transport Operations And Lifting the Machine

- Before starting the operation, determine and inspect the entire transport area, the parking area of the vehicle performing the transport and the area where the machine will be installed. Make sure there are no hazardous situations.
- Make sure that the lifting capacity of the vehicle that will carry out the lifting and transporting of the machine is sufficient. Weights are stamped on the packaging and/or are included in this manual.
- Check that the lifting ropes and chain types are approved and that the capacity indicated by the manufacturer is clearly written on the ropes. Before using the lifting ropes, check for damage and wear.
- Do not tie knots to the lifting ropes, do not bend them and follow the rules set out by the manufacturer. The same rules are applied to chains and strappings.
- Pay particular attention to the removal of the machine centrally.
- When the machine is installed and moving, do not climb on top of it and do neither go under it.
- Care should be taken not to place unauthorized personnel in the loading area.
- In order not to cause any accidents and injuries; all operators must stand at a safe distance while the machine is being lifted.
- When removing the machine, care should be taken not to shake the system.
- After this point, chains or belts can be used according to preference when shipped.

Lifting tool used to remove the machine; must have sufficient lifting capacity and fork length.



2. START-UP THE MACHINE GENERAL RULES

GENERAL RULES

- Installation is carried out by the staff of the manufacturer or by the personnel authorized by the manufacturer.
- The manufacturer is not responsible for the failures in the installation made by unauthorised personnel. Despite the labor guarantee, the manufacturer is not responsible for the failures during the installation by unauthorised personnel.
- The manufacturer cannot be held responsible for the place where the machine was installed as also for its technical and legal compliance.
- All operations must be carried out in accordance with the directives of a single authorized personnel.
- Operators and persons at your disposal must wear protective clothing suitable for the operation.

The manufacturer is not responsible for accidents, damage and machine malfunctions that occur due to non-compliance with the rules in this section.

2.1 Rules Regarding Stocking the Machine:

- The machine must be stored in a closed place away from the dust, moisture and heat source.
- The media values allowed for storage are as follows: Temperature: -5 °C to 45 °C
- Maximum humidity: 60%

EQUIPMENT AND TOOLS REQUIRED FOR LIFTING AND MOVING THE MACHINE

If the machine is in a crate or pallet

- Forklift must have sufficient carrying capacity. Or,
- Cranes and equipment (ropes, belts or chains) must have sufficient carrying capacity.

Mounting instruction

- The area where the machine will be installed must be safe. The established area must be sufficiently ventilated and illuminated.
- Room temperature should not be less than +5 °C but no more than +40 °C. The humidity should be between 40% and 75%.
- The minimum distance (shape) from the wall required for working, cleaning and maintenance must be observed. This will ensure a safe situation against friction between the wall and the machine.

Electrical connection

- Electrical connection should be 380 V AC-220 V AC 50 Hz. Check the compatibility of the panel voltage with the main voltage.

WORKING PRINCIPLE

The machine is based on the principle of volumetric cutting of the dough filled into the dough chamber (funnel) in the weight set by vacuum system and filling the drum chamber (Figure-2). This method allows the dough to be cut without being crushed or compressed. Thus, the cells of the dough do not die, allowing the dough to take a better shape, as well as being healthier. The swell cells of the compressed dough will disappear, so it will not reach the required swell point.

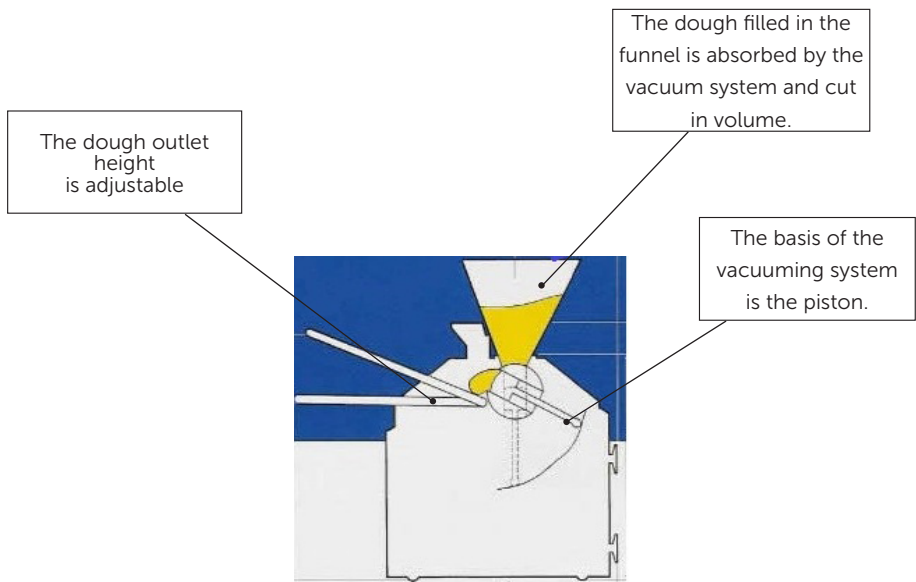


Figure-2

OPERATING THE MACHINE

A sufficient amount of oil (up to 80% of the oil tank must be filled) should be placed in accordance with the food regulations in the machine whose installation and electrical installation connection is made. IT SHOULD NOT BE OPERATED WITHOUT OIL. If the machine is running after a long waiting period after manufacture, the movement of pulling the first piston will be a little loud, this is normal.

If the machine is in the pulling position of the piston, the engine belt has difficulty in pulling the piston, the belt tension is low, the belt tension must be adjusted. Normal belt tension should be about 2 cm stretched when pressed manually against the belt. If the belt tension is above normal, it will heat up after a certain period of time after working. In order for the machine to work efficiently, attention should be paid to this situation in its first operation and the necessary adjustment should be made.

The machine should be operated without dough and the complete realization of the lubrication function should be followed. The time it takes for the machine to self-lubricate is about 1-2 minutes when oil comes from the oil tank to the back of the drum.

In addition, the dough conveyor belt should be removed from the transparent protective nylon packaging and checked if it works evenly on the band table while working, and if the tape shifts in any direction, it should be brought back into balance from the tape stretching apparatus.

The flour section should be filled with a sufficient amount of flour and the necessary flour sprinkle should be adjusted from the flour adjustment mechanism.

After all these processes, the machine is ready for the task, the cutting function can be performed by placing the dough in the hopper (dough chamber). The bunker must be lightly lubricated so that the dough flows easily.

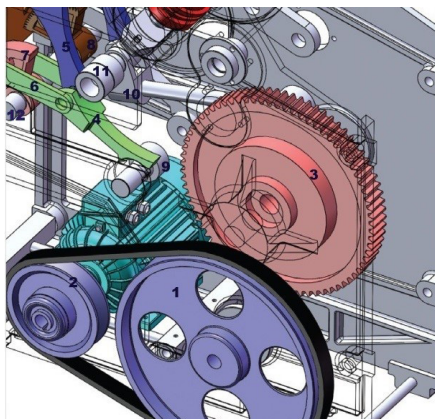
When the machine reaches the normal working level (in case the above procedures have been performed), the machine is ready to cut the dough and the dough bowl is filled by stopping and the machine is made ready to cut the dough. The fact that the dough is fully loaded in the hopper allows the machine to operate more accurately. Therefore, the dough should be continuously reinforced and the vacuuming system should be ensured to work without errors. When the dough reaches the lower levels of the hopper, it can cause results away from the desired weight values.

Weight setting

The cut doughs should be measured in weight with the help of a scale and the adjustment required for the desired weight should be made from the weight adjustment flywheel (Figure-6). The important thing to note here is that the weight adjustment should be done while the machine is running, otherwise it may cause damage to the machine.

Speed setting of the machine

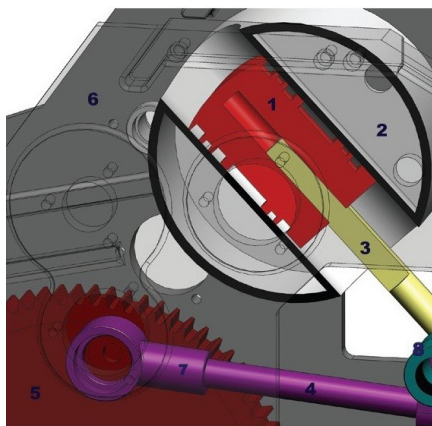
The dough cutting speed of the machine can be adjusted manually from the pulley in standard machines. Thanks to the double channel engine pulley, it cuts approximately 28 pieces/minute dough in the small belt channel and 32pcs/minute in the large belt channel. You can put your machine into production by choosing the cutting speed that best suits you. In addition to shortening the machine's wear time in proportion to the increase in the cutting speed of the machine, the ideal and recommended dough cutting speed and the condition of being in the small belt channel are determined as 28 pcs/minute.



SPARE PARTS CATALOG

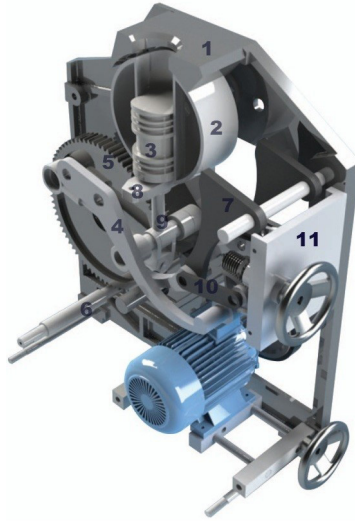
PARTS NUMBER	PARTS NAME	PARTS CODE
<u>1</u>	Big pulley	K -127
<u>2</u>	Engine pulley	K -125
<u>3</u>	Big gear	K -126
<u>4</u>	Small rail	K -136
<u>5</u>	Big rail	K -137
<u>6</u>	Rail eight	K -132

PARTS NUMBER	PARTS NAME	PARTS CODE
<u>7</u>	Cast rowlock	K -138
<u>8</u>	Gear casting rowlock	K -139
<u>9</u>	Rubber chock	K -105
<u>10</u>	Connecting rod U	K -122
<u>11</u>	Rail roller set	K -103/4
<u>12</u>	40 shaft	K -140



PARTS NUMBER	PARTS NAME	PARTS CODE
<u>1</u>	Piston	K -106
<u>2</u>	Drum	K -109
<u>3</u>	Piston rod	K -128
<u>4</u>	Connecting rod	K -133
<u>5</u>	Big gear	K -126
<u>6</u>	Main drawbar	K -134






PARTS NUMBER	PARTS NAME	PARTS CODE
<u>7</u>	Connecting rod bearing	K -135
<u>8</u>	Connecting rod U	K -122



PARTS NUMBER	PARTS NAME	PARTS CODE
<u>1</u>	Under Bun- ker saddle	K -108
<u>2</u>	Drum	K -109
<u>3</u>	Piston	K -106
<u>4</u>	Sickle arm	K -129
<u>5</u>	Big gear	K -126
<u>6</u>	Plastic gear shaft	K -130

PARTS NUMBER	PARTS NAME	PARTS CODE
<u>7</u>	Rail kit	K -131
<u>8</u>	Piston rod bearing	K -119
<u>9</u>	Piston rod	K -128
<u>10</u>	Rail eight	K -132
<u>11</u>	Worm gear bearing	K -110

SPARE PARTS CATALOG

PARTS PICTURES	PARTS NAME	PARTS CODE
	Plastic gear	K-101
	Eccentric pulley	K -102
	Small rail roller	K -103
	Big rail roller	K -104
	Rubber chock	K -105

PARTS PICTURES	PARTS NAME	PARTS CODE
	Piston (60-70-80-90-110-130-150,mm)	K -106 (K -106/60), (K -106/70), (K -106/80), (K -106/90), (K -106/110), (K -106/130), (K -106/150)
	Half-moon keys	K -107
	Under Bunker (saddle) (60-60x2-70-80-90-110-130-150)	K -108 (K -108/60), (K -108/60x2), (K -108/70), (K -108/80), (K -108/90), (K -108/110), (K -108/130), (K -108/150)
	Drum (60-60x2-70-80-90-110-130-150-mm)	K -109 (K-109/60), (K-109/60x2), (K-109/70),(K-109/80), (K-109/90), (K-109/110), (K-109/130), (K-109/150)
	Worm gear bearing	K -110

PARTS PICTURES	PARTS NAME	PARTS CODE
	Nutring (60-70-80-90-110-130-150)	K -111 (K -111/60), (K -111/70), (K -111/80), (K -111/80), (K -111/90), (K -111/110), (K -111/130), (K -111/150)
	Engine belt 17x1525 LA	K -112
	Small belt 9,5x1525 LA	K -113
	Conveyor belt 1600mmx220mm	K -114
	Pneumatic elbow ¼ diş, 10 'hose inlet	K -115
	Oil filter	K -116

PARTS PICTURES	PARTS NAME	PARTS CODE
	Oil pump	K -117
	Worm gear	K -118
	Piston rod bearing	K -119
	Dough folding chain	K -120
	Flouring drive mechanism	K -121
	Connecting rod U	K -122

PARTS PICTURES	PARTS NAME	PARTS CODE
	Conveyor belt pulley	K -123
	Small pulley	K -124
	Engine pulley	K -125
	Big gear	K -126
	Big pulley	K -127
	Piston rod	K -128

PARTS PICTURES	PARTS NAME	PARTS CODE
	Wheel	K-141
	Oil tank cover strainer	K -142
	Drum dust cover	K -143
	Piston & shaft steel pin	K -147
	Rear grease trap kit (Pipe and scraper)	K -145
	Bunker Six O-ring	K – 146

MAINTENANCE OF THE MACHINE

In order for the machine to operate more efficiently and with higher capacity, and also to prevent accidents that may occur, the following maintenance must be applied.

Daily Maintenance:

- For daily maintenance, the machine must be first unplugged.
- Dough residues on the machine should be cleaned.
- Do not touch the funnel while performing maintenance.
- Oil and oil filter should be checked and/or cleaned.

Annual Maintenance::

- Electrical power must be cut off. The machine must be unplugged.
- The residues that may have been accumulated on the machine are cleaned using a dampened lint-free cloth and, if necessary, a soft brush.
- Screw connections are checked, repaired if there is a loosening or if there is room that requires repair.
- Belts and pulleys are checked. Worn belts are replaced.
- If there are crushed cable and loose cable connections, they are replaced or repaired.

GENERAL WARNINGS

- When the machine is not running, the piston should be left in the position of removing the dough to the band and absolutely no cleaning etc. should be done when the machine is running. When not in use for a long time, it should be disconnected from the electricity.
- The machine should be connected to the grounding line in accordance with the standards where it will be operated and the safety of life and property should be ensured.
- The lubrication system of the machine should be continuously checked through the glass in the rear and the lubrication system should be kept clean on a routine basis.
- Any problems that may occur in the machine dough cutting chamber, such as metal etc. leakage or electrical components, and any problems that may result from lean operation are not covered by the warranty. In addition, the machine should not be repaired, maintained, etc. by unauthorized persons.

POSSIBLE MALFUNCTION AND REASONS :

<u>MALFUNCTION</u>	<u>REASONS</u>	<u>SOLUTION</u>
The Machine is Not Working	There is a phase sequence error	Phase change should be done. Due to the electronic relay system in the machine, in case of phase sequence failure, it will protect the engine and will not start it. In this case, the plug at the end of the machine cable should be removed and phase change should be made.
	The front cover is open	The front cover must be closed. For the safety of you and your machine, when the front cover is opened while the machine is running, the safety sensor on the cover will be activated, the machine will stop immediately and the front cover will not operate without closing.
	Buttons are broken	Switches and buttons should be checked.
	Belt broken/low tension	Spare belt fitted/tension checked.
	The emergency stop button is closed	The emergency stop button should open.
	The digital meter has cut off the electricity by closing the contact.	Normally this is not a problem, but in case the digital counter has a malfunction, the ignition can be switched off, the device should be checked.

<u>MALFUNCTION</u>	<u>REASONS</u>	<u>SOLUTION</u>
Engine doesn't start	Cable connections are loose/disconnected.	Cable connections should be checked
	The engine may have burned out	Replace the engine , check the bearings
	There is a power surge in the mains.	The relay engine will not start until the Electric Surge returns to normal.
The engine stops constantly The sound of the engine increases	There is a power surge in the network	The problem will resolve itself when the electrical surge returns to normal. If it continues, you need to check the electrical fault.
It is not lubricated	The oil is over	Oil should be added At least 7 liters of oil should be placed in the oil tank in accordance with the food regulations.
	The filter is clogged	The filter must be cleaned. The filter should be cleaned at short intervals.
	Hose is clogged	Hoses should be checked and cleaned.
	Oil pump is broken	Pump must be cleaned-replaced.
	Drum channels are clogged	Drum channels and pneumatic elbows should be checked and cleaned.
Does not flour	The flour adjustment mechanism is closed.	Flour sifting adjustment mechanism should be adjusted according to the necessity.
	Flour movement mechanism is broken.	Flour movement mechanism should be checked.
	Belt strap is ruptured.	The belt should be replaced with a new one suitable in size.



GGM Gastro International GmbH
Weinerpark 16
D-48607 Ochtrup

www.ggmgastro.com

info@ggmgastro.com

+49 2553 7220 0