

Food slicer



MODEL

612p

Instructions manual

 **Ma-Ga**[®]

Warning:

**Knife of the slicer is made of stainless steel,
THERE IS REQUIRED a special concern
for CLEANLINESS AND HYGIENE.**

**EVERY DAY after work
it is necessary to wash the cutter,
in particular the inner surface of the knife.
AFTER WASHING DRY.**

**It is recommended to leave blade cover
not screwed to the slicer for the night.**

**Not following this advice
means that the knife
can occur corrosion.**

**Grinding of sharpener and a knife
are not subject to free exchange
within the warranty period.**

**Warranty and post warranty
repairs paid, also realizes
by the manufacturer.**



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Food Slicer 612p and 612pT

Operator's Manual



*We wish the User of our machine to have a nice work
and to obtain the best results during food cutting.
We recommend exact acquaintance with the Operator's Manual
and complying with user's instructions included in it.*

November 2010

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1. Introduction

1.1 Condition of delivery

The food slicer model 612p is delivered by the manufacturer as complete product. After unpacking, the following parts of packaging should be removed:

- lower fixing plate
- product table fixing cord
- foil from the tray
- gasket from the blade.

1.2 Packaging

The slicer is delivered in a cardboard and fixed to a transporting pallet, covered with protective foil, or (for sea transport) placed in wooden box.

Boxes are adapted for loading and unloading them by means of a fork-lift truck. During transportation a cardboard or wooden box, a case or a pallet should be protected against overturn and against possibility of mechanical damage.

External dimensions and weight are presented in Table 1.

	Cardboard box	Wooden box
Length (mm)	680	720
Width (mm)	540	600
Height (mm)	560	650
Gross weight (kg)	44	60

Table 1

1.3 Periodical protection

For period of transportation and storage all metal surfaces of the slicer are covered with a thin layer of preservative. Used preservatives allow storing the machine in closed rooms for a period of 6 months.

1.4 Storage

The slicer should be stored in dry room, which ensure protection against atmospheric influences (temperature, humidity).

Conditions of storage are indicated on a label placed on a cardboard or wooden box.

1.5 Qualifications

Any activities connecting with loading, unloading and shifting of the slicer must be done only by authorised, qualified and experienced persons.

2. Technical data

2.1 Designation

The food slicer of 612p model is a precise machine designed for cutting slices of various thickness of sausages, cheeses, bread as well as raw, roasted or boiled meat in a quick and efficient way. Thanks to modern technical solutions, the user of the machine has a possibility of handy operation and of keeping maximum cleanness during cutting process.

Proper operation, everyday careful cleaning and maintenance as well as proper sharpening of the blade ensure high grade of hygiene, good efficiency and long-lasting work of the slicer. Parts submitted to everyday or periodical cleaning, are easy for disassembly without any tools.

The model 612p food slicer has been designed to be used in trade and catering, where cutting process is not continuous. Using of the machine for industrial continuous cutting and packaging of food will cause forfeiture of the rights resulting from the warranty agreement.

The Operator's Manual informs the user on a manner of servicing during the slicer operating.

2.2 Basic values

Model	612p
Dimensions	
- length	635 mm
- width	500 mm
- height	495 mm
Weight	39 kg
Slice thickness	0-28 mm
Slice thickness control	ca. 1 mm
Blade diameter	ca. 300 mm
Blade rotation	300 rpm
Product table dimensions	300 × 250 mm
Maximum table pitch	ca. 300 mm
Motor	250 W
Start-up capacitor	80 µF
Start-up relay	PR-5
Supply voltage	115 V, 60 Hz

2.3 Design

1. Gauge plate
2. Circular blade
3. Blade sharpener
4. Blade cover
5. Hopper tray
6. Handle
7. Bracket
8. Clamping bolt
9. Slice thickness control
10. ON/OFF switches

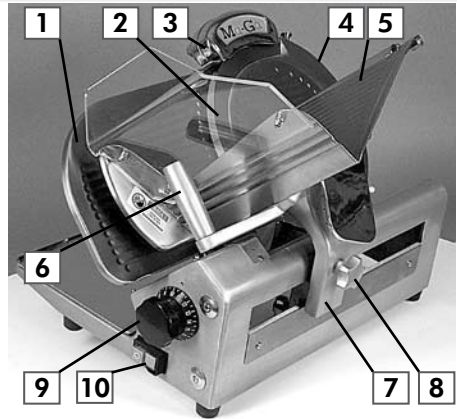


Fig. 1 General view

The slicer is made from stainless steel, except the product table guides and the shaft of the blade bearing. Individual parts of the slicer are smooth and easy to clean. The blade of the slicer is driven by the electric motor through the worm gear. Switching an electric drive on is possible after setting a required slice thickness and after switching into position ON (Fig. 1, pos.10). After switching a drive on, the white indicator light lights-up (Fig. 2, pos. 8).

Switching the machine off is made by switching into position OFF.

1. Motor (under cover)
2. Grinding wheel pusher
3. Honing wheel puller
4. Deflector plate
5. Foot
6. Blade sharpener knob
7. Stem assy
8. Indicator light
9. Tray
10. Hopper weight plate

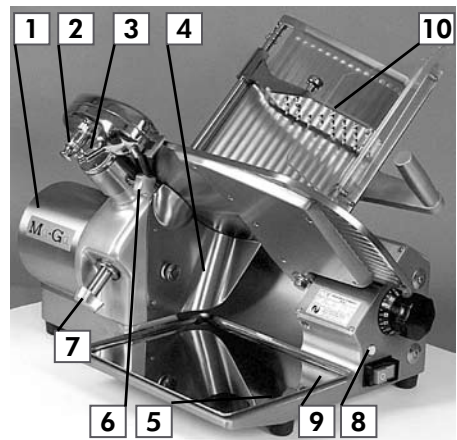
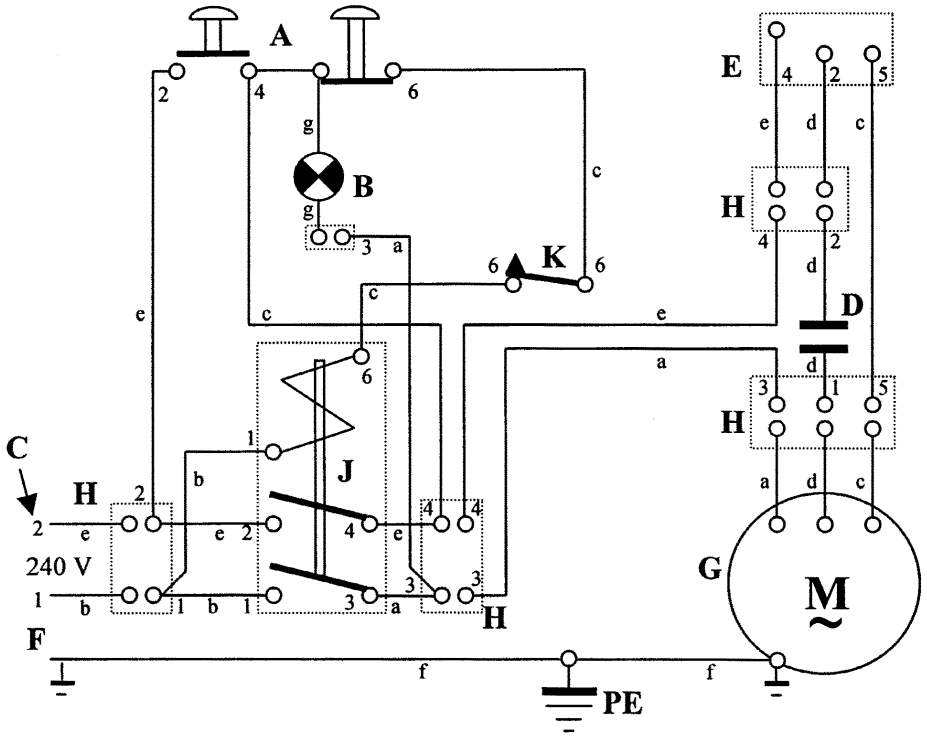


Fig. 2. Rear view

The slicer will automatically stop if the fastening bolt is loosened (Fig. 2, pos. 7),

2.4 Electric diagram 612p (Fig. 3)



Symbols on Fig. 3:

- A - ON/OFF switches
- B - Indicator light
- C - Wire identifiers
- D - Start-up capacitor
- E - Start-up relay
- F - Supply cord
- G - Motor 250 W
- H - Terminal strip
- J - Start-up contactor
- K - Micro switch
- PE - Clamp for external protective wire

Wires:

- a - black;
- b - blue;
- c - red;
- d - yellow;
- e - brown;
- f - green-yellow;
- g - white

3. Protection against hazards

3.1 Sources of hazards

Typical sources of hazards and technical protective means using in order to eliminate them are presented in following table:

Type of hazard	Sources of hazards	Part no.	Technical safety means used in order to eliminate hazards
Mechanical	Blade	225	Immovable covers, mentioned below:
		020	Immovable blade shield, preventing against injuries during cleaning with removed cap and (or) with sharpener lifted-up
		020	Gauge plate
		240	Prevention against accidental switching a cutting blade drive on
		400	Blade cover working as a cover with locking device, which makes it impossible to switch a drive on with removed or improperly placed cap.
	Drive	400	Product table, connected with a locking device, that makes it impossible to switch the blade drive on with this table removed.
		270	Immovable covers, mentioned below:
		405	Motor cover, preventing against touching motor elements
		405	Finger guard hindering manipulation with free hand during food cutting and preventing against possible chipping.
		018	Regulator cover
Electrical	Preventing against contact with conductive parts through direct touch	011	Basic protection, including:
		017	ON/OFF switches cover
		019	Lower cover of electric installation recess
Biological	Preventing against contact with conductive parts through direct touch		Cover of electric installation clamps
			Electric protection - connections diagram.
	Parts in the food and splash areas		Points of protective wire connection marked with "PE" symbol:
			a) central connector PE - under the cover no. 019
			b) motor near the gear body
			Materials with certificate of Polish Hygiene Institute (mentioned below)
		281	Blade- stainless steel
		025	Gauge plate - stainless steel
		240	Blade cover - stainless steel
		420	Table plate - stainless steel
	225	Blade shield - stainless steel	
	001	Tray - stainless steel	
	035	Slice guide - stainless steel	
	440	Last slice device chromium	
	101	Main housing - anodised alu-casting	
		Screws and bolts made from stainless steel	
		Counterbore holes for motor bolts, filled with Sealant SCS 1009 Aluminium cement	

Table 2

3.2 Risk connected with remnants

This risk occurs during trials of pressing by hand any little food pieces and remnants during cutting.

In this connection close to the cutting zone, the caution sign is placed and the slicer is equipped with the last slice device, which should be certainly used during cutting of small food pieces and remnants. Also, additional equipment may be delivered, which includes:

- limiting strips, that make possible safe and efficient cutting products of small cross section or soft ones, e.g. tomatoes etc.
- another special weight assembly, placed on the last slice device, making possible safe cutting of raw meat.

3.3 Noise level

Noise level on the operator's stand in conditions of normal work, measured on the height 1,6 m and in a distance of 1 m from the slicer does not exceed 70 dBA.

3.4 Rules of safe work

Safe using of the food slicer depends on fulfilling of the following conditions:

- a) training of the operator, who should know potential hazards occurring during work with the slicer
- b) prohibition of the slicer using if:
 - ▶ the machine is used incompatibly with its designation or parameters of cutting, specified in the instruction, are exceeding
 - ▶ the machine is visibly out of order
 - ▶ any of electrical covers or mobile parts is removed
- c) exact determination of activities being not within the slicer operator's duties and reserved for appointed authorised persons, especially in case of defects removing and repairs, including electric installation
- d) obligation of making maintenance activities only with electric supply switched-off (except blade sharpening process).

Above-mentioned requirements should be specified in a workplace instruction.

- 3.4.1 In order to ensure safe conditions of work and handy operation, there should be separated minimum 4m² in the room for a work-stand and secured good lighting. During work the operator should wear a protective clothing, required by local sanitary regulations.

It is forbidden to:

- 1) Use the slicer in manner incompatible with designation. The manufacturer does not bear responsibility for events resulting from improper using of the slicer
- 2) Operate the slicer by persons not competent or below 18-years-old
- 3) Use the machine being technically out of order
- 4) Press cutting food directly with hand or without last slice device which thanks to its weight ensures good quality of cutting
- 5) **Make any manipulations with hands in a cutting zone. Handy operations during cutting should be limited to the table shifting by means of the table hand (Fig. 1, pos. 6).**
- 6) Make any repairs by unauthorised persons
- 7) Connect the food slicer to the electric mains without securing a protective wire continuity. At the operator's side a grounding pin of plug-in socket must be fast connected to a protective wire.
- 8) Cut products other than food, products with bones or frozen food.
- 9) Leave working machine without supervision.

3.5 Compliance with standards

Model 612p food slicer is manufactured in accordance with the ETL requirements 9700731 for health, safety and NSF hygiene requirements.

4. Preparation to start-up

4.1 Unpacking

During acceptance of the delivered machine, the package should be checked for any damages and the contents must be compared with an order and specification. The supplier should be informed about any observed discrepancies.

The range of delivery includes, besides the food slice, also a tank with an oil for metal parts conservation, a brush for cleaning of difficult access parts and a tray for sliced food. The package also contains the Operator's Manual, guarantee certificate and declaration concerning compliance with norms and standards.

4.2 Positioning

After the machine has been unpacked, it must be placed on stable base, adequate for its weight. Elements of package mentioned in paragraph 1.1 of the Manual should be removed as well.

When machine has been positioned on the table, it must be cleaned-up. The feet of the slicer are used for proper levelling of the machine (Fig. 2, pos. 5).

4.3 Connection to electric mains

The food slicer model 612p is delivered complete, with triple conductor of cross section of 1 mm², terminated with a plug. Installation of a plug-in socket with a protective contact, permanently connected to protective installation and secured with 6A fuse should be made by the user. Supply voltage should be in range 90-100% of rated voltage and frequency should oscillate within $\pm 2\%$ of rated value.

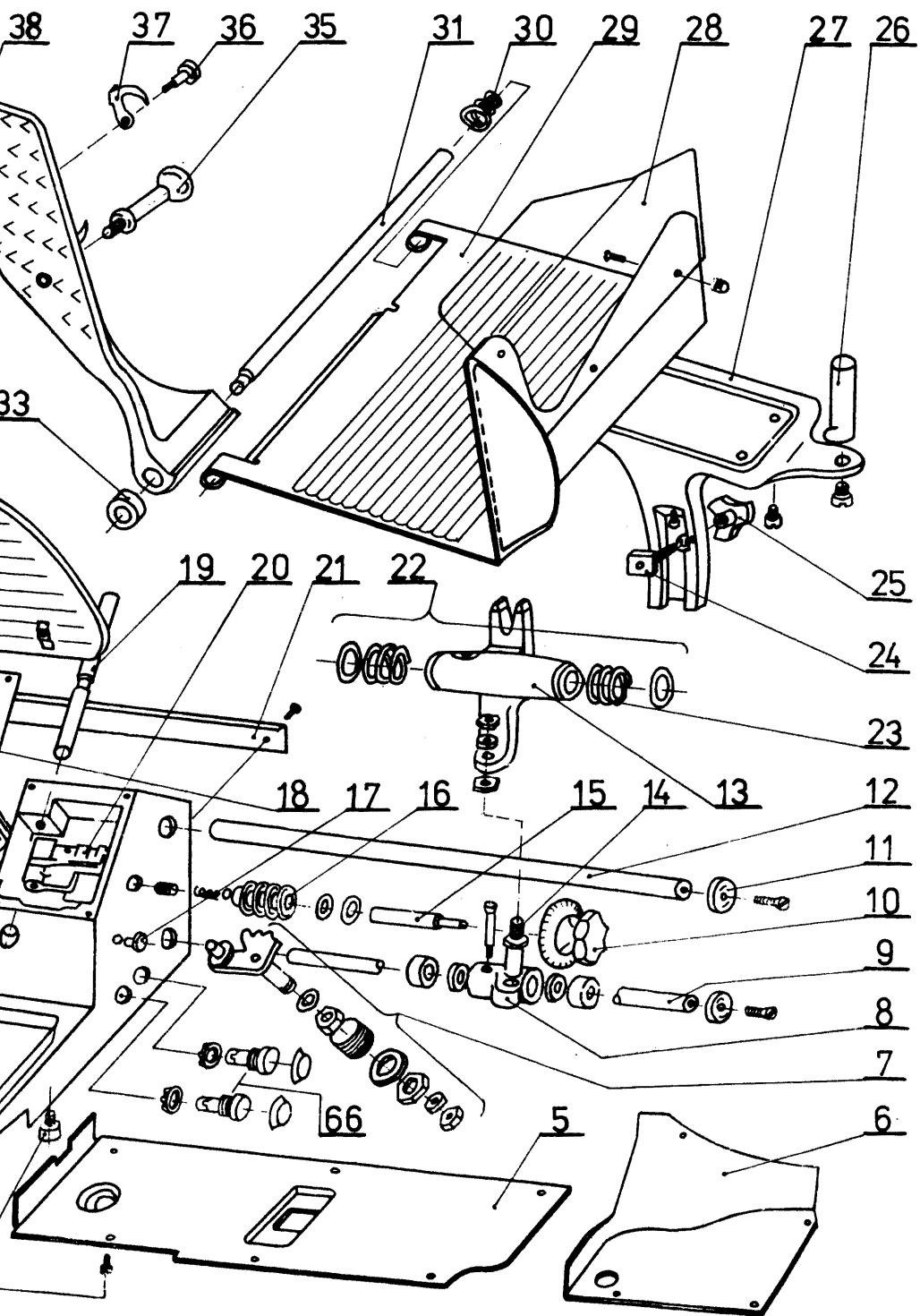
5. Using of the food slicer

5.1. Setting of slices thickness

The slice thickness control is situated on the side panel of the machine and it has a knob scale, orientating in set thickness with accuracy ca. 1 mm. The figure 4 shows the related gauge plate shifting knob, that allows to obtain required slice thickness.



Fig 4. The slicer side view



5.2. The product table shifting

The product table, tilted of 45°, of dimensions 250×300 mm, with grooved surface, allows to cut food feeding under its own weight. The table is shifted manually on distance up to 300 mm.

Extreme position of the table are protected by springs. The design of the food slicer assures smooth and easy movement of this table. During cutting process the operator should move the table by means of a carriage handle (Fig. 1, pos. 6), **avoiding rapid movements**. Cut food presses on the pressure plate with its own weight.



Fig. 5 The table shifting

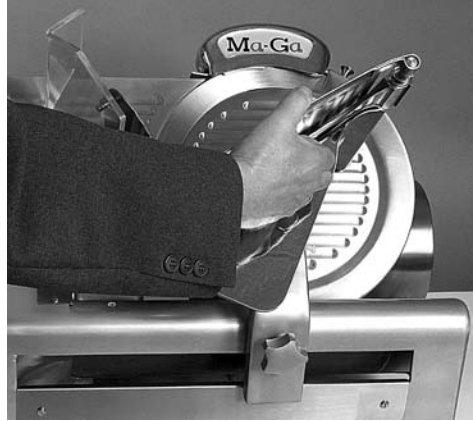


Fig. 6 Using of the last slice device

When cutting small pieces of food, one should use a last slice device placed under the table. This device (Fig.6), after unhooking, should be positioned on the product table of the slicer. It presses, with its own weight, any small pieces of cut food. After all remnants of food have been sliced, the last slice device should be again hooked up on a pin placed on the table support, under a plate of the product table.

Limiting strips are an additional equipment. They allow to safe and efficient cut products of small section in relation to their length as well as lemons and tomatoes. These strips (up to three pieces) are fixed by screwing them to the blade of the product table. After mounting of the limiting strip there is no possibility to use the last slice device.

In special execution, another special weight assembly enabling cutting of raw meat may be mounted on the standard food last slice device. This special weight has two positions. In lower position, with needles declined, sink those needles in a soft piece of cut food and continue cutting, handing the carriage handle (Fig. 5).

5.3 Blade sharpening

It is necessary to periodically sharpen the food-cutting blade during operation of the slicer. A sharpener constantly mounted to the slicer above the blade edge has been designed for this purpose.

Before starting of sharpening, the blade should be dry and cleaned of fat. Fat on the blade causes quick wear of sharpening abrasive disks.

The sharpening process (Fig. 7) should be proceeded as follows:

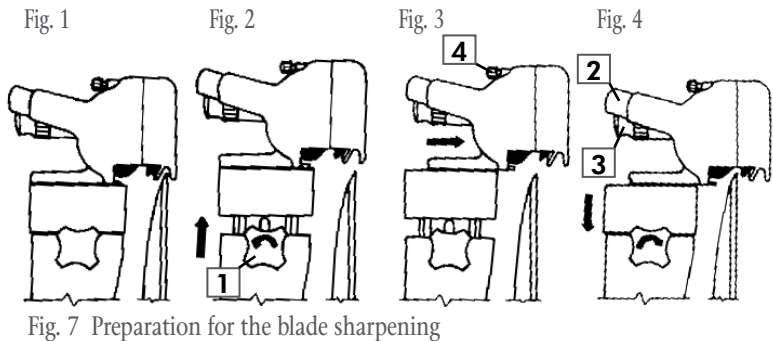


Fig. 7 Preparation for the blade sharpening

- Fig. 1 The sharpener unit in normal position, abrasive disks away from the blade, the blade cutting edge is protected.
- Fig. 2 Loosen the knob situated on the side of the sharpener, on the housing (Fig. 7, pos. 1). The sharpener will rebound upwardly.
- Fig. 3 When the sharpener reaches its upper position, move it forward towards the blade home.
- Fig. 4 The abrasive disks are above the blade. Now the whole sharpener should be pressed down, home (Fig. 8) and locked in this position, by screwing with a knob situated at side (Fig. 7, pos. 1). In this position the sharpener is ready for the blade sharpening.

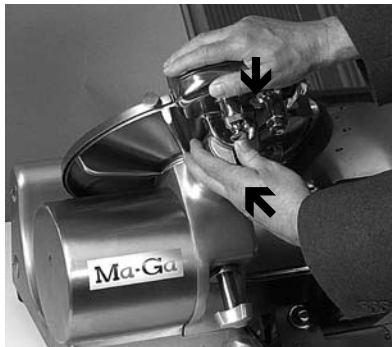


Fig. 8 Preparation for sharpening



Fig. 9 The blade sharpening

In order to make sharpening, slicer must be complete and prepared like for regular food cutting. Following steps should be performed:

1. Switch the slicer on.
2. Press the sharpener puller button (Fig. 7, pos. 2, - this one with a cavity) for period of 5-10 seconds and then pull the puller handle (Fig. 7, pos. 3 - this one with a knurl) for the same period. It should be enough for regular blade sharpening. If the blade cutting edge has nicked, sharpening process should be longer. For the finishing of sharpening process the pusher should be pressed and the puller pulled simultaneously for 2-3 seconds (Fig. 9).

1. Switch the motor off and check the cutting edge of the blade visually. The sharpness of the blade may be checked by means of the piece of paper, which should be pulled across the edge (with the blade locked). The sharp blade cuts a paper piece easily.
2. When the blade is sharpened, any dirt produced during abrasive discs strewing has to be removed. To do this (with the sharpener lifted up) one should remove the blade cover and clean the blade and then replace the cover.

Note:

The blade should be sharpened when the quality of slicing worsens. Sharpening process should be performed carefully, without applying excessive force during operating the pusher or the puller of the sharpener.

During mounting (or putting back) of the blade cover, it should be carried by two holds, as shown on fig. 10, introducing a fixing insert to a hole in the middle of the blade. Then, holding the blade cover by hand, fasten the fastening bolt (Fig. 2, pos. 7) home.



Fig 10. Removing or replacing of the blade cover

After finishing the sharpening operation the sharpener should be positioned in normal position (Fig. 7, pos. 1). To do this, perform following steps:

1. Loosen a knob positioned at the side of the sharpener (Fig. 7, pos. 1), it will rebound up and shift back.
2. Push the sharpener down with left hand and fasten the knob at the side of the sharpener (Fig. 7, pos. 1). Now the sharpener serves as a segment of the blade shield and the slicer is ready for further operation.

Note:

The sharpening process results in gradual decrease of the blade diameter. The diameter of a new blade is 298+1 mm. If, as a result of operation, this diameter becomes less than 288 mm, further sharpening is impossible and the blade must be replaced with a new one. In order to facilitate a multiple sharpening of smaller and smaller blade, a special adjusting bolt is situated on the housing under the sharpener; this bolt enables lowering of the sharpener during sharpening of the blade (arrow on g. 13).

6. Maintenance

6.1 Cleaning of the slicer

Exact compliance with cleaning concerned instructions will result in fulfilling of obligatory health regulations. The slicer should be cleaned every day after finishing work. Because of the motor and parts of electric equipment that have not hermetic housings, the machine must not be immerse in water or washed with a stream of water under pressure.

To clean the slicer, perform following steps:

- a) set the slice thickness control in zero position
- b) unplug the power cord from the plug-in socket of electric mains
- c) remove the food last slice device, unscrewing the connecting screw



Fig. 11 Removing of the table Fig. 12 Removing of the slice guide

- d) loosen the table fixing knob (only one turn)
- e) hold, with both hands, the table support (Fig. 11) and move it up
- f) unscrew the bolt of the blade cover (Fig. 2, pos. 7) and remove this cover when it drops automatically
- g) remove the tray and unscrew the slice guide (Fig. 12)
- h) clean the machine from food remnants, paying special attention for the blade and the blade cover
- i) wipe dry all parts of the slicer
- j) put all dismantled parts back into their original positions.

Note:

With the product table removed, there is no possibility to start the slicer up or to shift the slide on which the table is mounted. It is also impossible to turn the slice thickness control.

During cleaning, the sharpener should be moved up. It enables removing of any food remnants from the blade shield. To do this, the knob positioned at the side of the gear cover (Fig. 2, pos. 6) should be loosened. After finishing a cleaning process the sharpener should be pushed to its lower position and tighten with this knob.

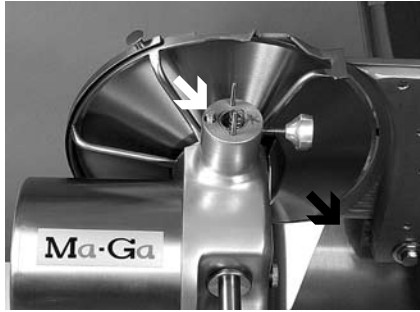


Fig. 13 The blade shield

The blade of the slicer is permanently covered with the shield making it impossible to get hurt during cleaning with the blade cover removed or with the sharpener moved up (Fig. 13). This shield must not be removed in any case. Any food remnants from below of this shield should be removed by means of the brush delivered together with the slicer.

The product table is equipped with the transparent cover preventing against putting a hand within cutting area during food slicing and it should not be removed. Removed product table should be cleaned carefully, to not damage this transparent cover.

Metal parts should be washed by means of a soft sponge, using water with detergents.

6.2 Lubrication of the slicer

The slicer model 612p has to be lubricated periodically, in lubrication points shown on figure 14. Before starting of lubrication, the food slicer should be cleaned, as it is specified in paragraph 6.1.

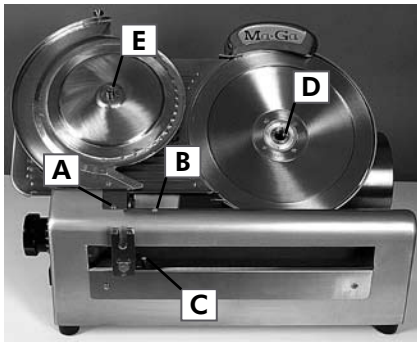


Fig. 14 Lubrication points

Generally, accessible gear oil should be used for lubrication of shifting slides (points B and C) and for the rest slides (point A). It is forbidden to use edible oil for lubricating of the slicer. During 2-5 hours a day regular operation the frequency of lubrication should be as follows:

Point 'A' should be lubricated with a few drops of gear oil once a quarter.

Points 'B' and 'C' should be lubricated with gear oil every day. During lubrication of those lubrication points, the slice thickness control should be positioned in zero position, and the product table must be shifted to extreme position near this control knob (Fig. 14).

Points 'D' and 'E' should be most of all kept clean. Those points should be lubricated once a week with an oil delivered together with the slicer. Once a quarter the whole clamping bolt should be unscrew and lubricated with the same oil.

6.3 Maintenance of the sharpener

To perform the maintenance of the sharpener, it should be first of all dismantled from the slicer. To do that, unscrew the knob at the side of the gear housing (Fig. 7, pos. 1) until it is possible to take it away from the housing socket. Access to the abrasive disks of the sharpener is possible after unscrewing of a bolt joining the housing and the cover (Fig. 7, pos. 4). After removing the cover (Fig. 15) proceed as follows:

- a) the sharpening disk (started by pushing) just pull up. It is held in place only with a spring catch.
- b) remove the polishing disk (started by pulling), after unscrewing the puller (Fig. 7, pos. 3). Take care to not lose of loose parts.

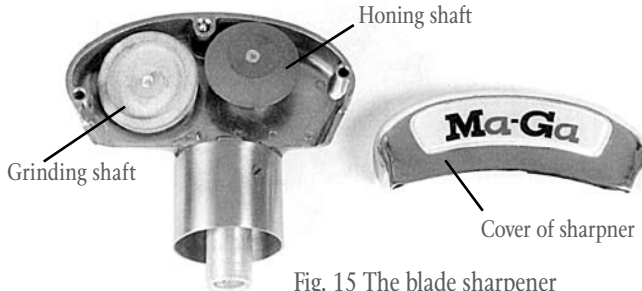


Fig. 15 The blade sharpener

- c) thoroughly wash abrasive disks with alcohol, removing fat and juices. Worn disks replace with new ones.
- d) after washing, dry metal parts
- e) all mobile parts of the sharpener, like spindle of abrasive disks and holes guiding those disks, should be lubricated with an oil delivered together with the sharpener, every quarter
- f) during mounting of the polishing disk, place the guide on the spindle, place the spring and insert the whole to the hole in the housing along guiding protrusion, then fasten the puller
- g) during mounting of the sharpening disk, insert it to a socket
- h) fasten the cover with the housing of the sharpener using bolt and place the whole subassembly on the slicer.

7. Catalogue of spare parts

No.	Part number	Description
1	101	Main Base
2	035	Slice Guide
3	001	Tray
4	040	Rubber Foot
5	019C	Electrical Cover Plate
6	016	Foot Cover Plate
7	130	Stub Sector Assy
8	170	Guide Sleeve Assy

No.	Part number	Description
9	104	Guide Rod
10	150	Knob Assy
11	106	Seating
12	103	Main Guide
13	165	Carriage Sleeve
14	162	Stud
15	114	Spindle
16	116	Single-start Worm
17	060	Indicator light
18	018	Adjustment Cover Plate
19	112	Shaft
20	140	Slide Slice Assy
21	006	Front Cover Plate
22	160	Carriage Sleeve Assy
23	166	Spring Buffer
24	415	Carriage Bracket Holder
25	222	Knob for Bracket
26	413	Carriage Handle
27	412	Carriage
28	405	Finger Guard
29	420	Product Holder Assy
30	402	Conical Spring
31	401	Guide for Last Slice Device
32	092	Tank with oil
33	462	Arm Bush
34	3001	Hook
35	451	Knob for Last Slice Device
36	3003	Screw of hook
37	3004	Washer of hook
38	450	Last Slice Device
39	025	Gauge Plate Assy
40	021	Gauge Plate Support
41	220	Knob Assy
42	210	Motor Housing Assy
43	208	Spring for Grinding Att.
44	215	Microswitch Assy
45	264	Worm for Motor
46	230	Stem Assy
47	260	Motor Assy
49	KER	Start-Up Capacitor
50	PR-5	Start-up Relay
51	270	Motor Cover Assy

No.	Part number	Description
52	306	Protective Cover
53	312	Lock Screw
54	303	Pull Knob
55	301	Push Knob
56	300	Grinding Attachment Assy
57	302	Spring
58	330	Honing Shaft Assy
59	320	Grinding Shaft Assy
60	293	Spiral Gear
61	290	Blade Carriage Assy
62	225	Blade Cover Assy
63	281	Blade
64	240	Flange Assy
65	247	Centre Plate Assy

Note:

Ordinal numbers refer to the part numbers, according to the drawing of the slicer in the Operator's Manual.

When ordering of spare parts for the food slicer model 612p always provide the following data:

- | | |
|---|--------------------------------|
| 1. slicer serial number | 3. name of part or subassembly |
| 2. serial number of part or subassembly | 4. required quantity |

The figure 16 shows a diagram of co-operation of parts of the slicer model 612p. Numbers of references for individual parts are consistent with ordinal numbers in catalogue of spare parts.

8. Trouble shooting

Fault	Cause	Remedy
The motor does not work	No voltage in electric mains	Check the power supply
	Defect of electrical wiring	Check and remove the fault
	The blade cover placed improperly	Fasten the clamping bolt
	The slice thickness control positioned to zero	Turn the knob to required thickness
	The capacitor broken	Replace the capacitor
	PR-5 relay broken	Replace relay
	PNT relay overloaded	Start again after 15 sec.
	Contactor broken	Replace R16/10 contactor
Noise after switching the slicer on	Motor broken	Repair or replace the motor
	Wormwheel of the gear broken	Replace the wormwheel
Improper food cutting	The blade bearing worn	Replace an assembly
	Motor bearings worn	Replace bearings
	Blunt blade	Sharpen the blade
	Difficult table shifting	Oil the table guides
	Grease leakage from the blade bearing	Break work, replace bearing subassembly
	Improper cutting of the food remnants	Check co-operation of the last slice device on the product table, oil the guide of this plate.

Table 3

Note:

Generally accessible car gear oil or oil used for sewing machines should be used for lubrication.



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