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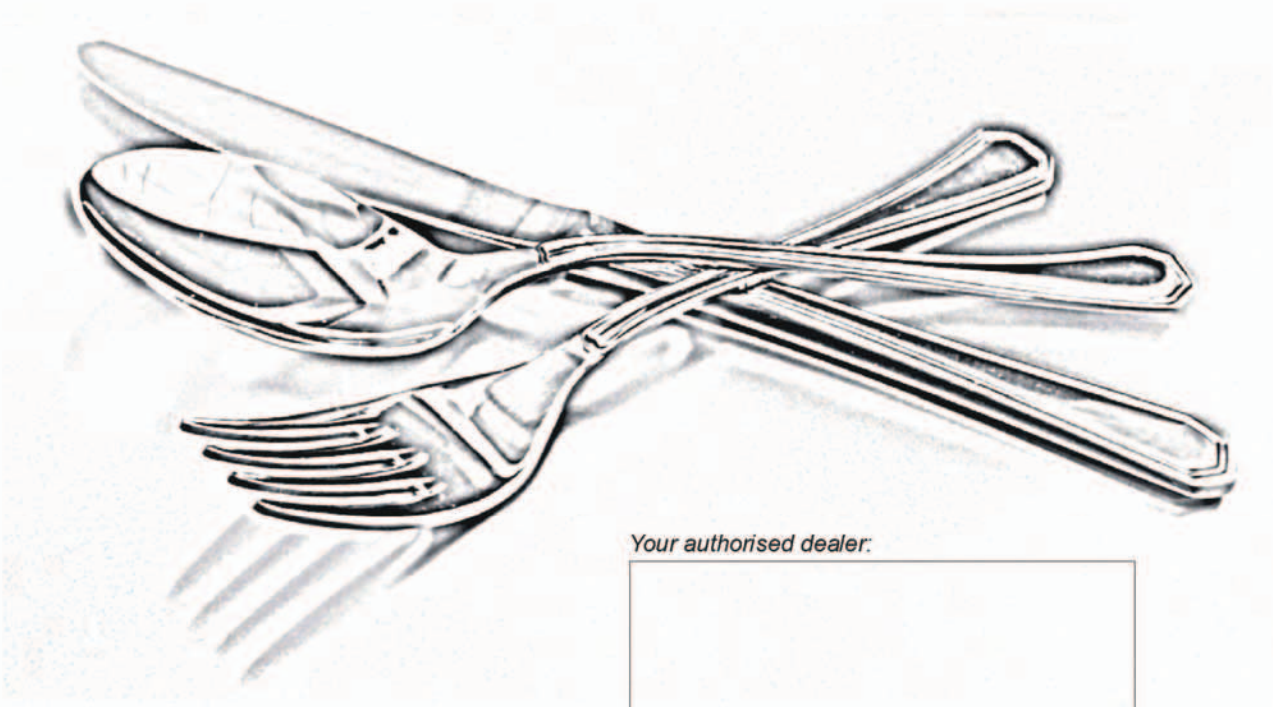
POLISTAR CUTLERY POLISHER MK 8000 M3

Operating Manual



Your authorised dealer:

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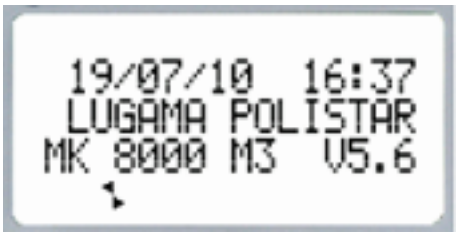
1. Important recommendations

Never allow unauthorised or unqualified personnel to start, adjust, operate or repair the machine. Never remove or change the integrated safety devices. Always refer to this manual for all necessary operations.

⚠ **ATTENTION:** Never place things on top of the machine!
Neither the inner parts nor the surface of the machine should ever be exposed to a water flush - water contact might damage electronic parts (look also at chapter *"12.1. Cleaning")*
Never clean the outside parts of the machine with jet water (hoses) or high pressure jet cleaners.
Never use corrosive or acid cleaning products, brine, wire wool or steel brushes since these could damage the machine.

Always state the model and serial number of the machine when requesting technical assistance or ordering spare parts. The serial number and machine data are stamped on the data plate affixed inside of the cap of the machine.
Sometimes the information about the software version of the machine is important. This is shown on the display, as soon as you are closing the cap.



1. row: today's date and time
2. row: name of model
3. row: name of model and software version

Please note, that there may only installed original spare parts at the machine, in other respects all warranty claims will terminate

Beside the original spare parts there are also useful appliances available for the *POLISTAR MK 8000 M3.* LUGAMA offers polishing granulate, cleaning alcohol as well as cutlery transport trolleys (in stainless steel, with 4 castors and PVC vessel included) in the right working heights for loading the cutlery and collecting the cutlery after polishing. Please ask your authorised dealer.

An integrated germicide lamp sterilises constantly the surface of both the cutlery and the drying granulate.

⚠ **ATTENTION: The radiation of this UVC lamp is harmful to eyes and skin!**
Installations with these lamps have to be screened off completely. Therefore and for user's safety the machine is constructed in this way that the lamp is switched off as soon as the lid of the machine will be lifted.

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⚠ **ATTENTION:** The machine grown up to a temperature of 80 °C. Please let the machine cool some minutes before you start the cleaning. Do not grip into the machine or granulate when the machine is running.

2. Purpose of the machine

All restaurants need to give a finishing touch by hand to their cutlery in steel or silver – to dry the cutlery, remove the water (lime) stains and to make the metal shine brilliant.
The cutlery dryer *POLISTAR MK 8000 M3* fulfils this work in a split of the time you need to do it manually.

3. Technical help

To get answers and solutions for any technical enquiries or problems, please call your authorised dealer.

4. Description and working process

The clean, **wet** cutlery is loaded into the bulk through the central opening on the top of the machine.
The cutlery goes a helical way in the vibration bulk, which is filled with a pure vegetal product. This granulate which is always at a constant warm temperature (caused by heated air) enables to dry the cutlery and to provide also a light polishing. The humidity absorbed by the granulate evaporates as well.
After a short period of time the cutlery comes out through the front opening of the machine falling directly into the prepared basket - perfectly dry and shiny – no matter if it is silver or steel.

5. Electronic control

The electronic control of this machine enables to read out the operation status at the display. There also are shown the warning notices.

6. Technical data

Power:	900 W
Voltage:	230V / 50 Hz
Storage temperaturer:	10 °C - +40 °C
Ambient temperature:	room-temperature
Operating temperature:	80 °C
Environm. humidity:	20 - 90 %
Weight:	ca. 100 kg
Dimensions:	635 x 740 x 750/795 mm (LxDxH)
Productivity per hour	6000 – 8000 pieces approx.

7. Keypad

(1) green	**General switch** (including indicator light)
(2) blue	**Start button** (including indicator light))
(3)	**Display** for readout of operation-status and error-codes

8. Preparing the machine for the first use

8.1. Placing requirements

We recommend to place the machine close by the dishwasher. The distances to the wall on the back must be at least 50 mm and minimum 20 mm at the sides because of the occurring vibrations during operation. Don't put the machine on mobile surfaces.
Make sure that the machine is adjusted horizontally (by means of the height adjustable feet with a level) before installing the machine itself.

8.2. Connecting the machine to circuit

The machine has to be plugged into a 230V/50 Hz (single-phase) socket.

8.3. Filling the machine with granulate

The filling capacity is about 6 kg. Therefore we offer buckets of approx. 6 kg granulate each.

1. Lift the cap.
2. Remove the perforated grid (by loosing the screws). The therefore necessary Allen key is on top of the terminal box inside the machine.
3. Spray the bulk with a 70 % methyl cleaning alcohol and wipe it with dry, clean absorbent paper.
4. After resetting the grid and fixing the screws back on it pour about 6 kg granulate into the bulk.
5. Close the cap.
6. After refilling the machine with fresh granulate let the machine run for 1 hour without cutlery, remove the dust from the bulk and below the protecting mat at the top opening (with cleaning alcohol). Retry this procedure before loading the machine with cutlery.

9. Placing the machine into operation

Do not operate the machine without having become familiar with the contents of this manual and make sure that all in *chapter 8.("Preparing the machine for the first use")* mentioned operations have been carried out.

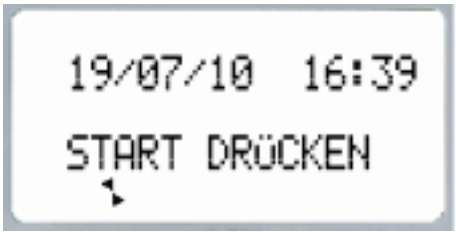
☞ **IMPORTANT:** The cutlery must be loaded ***clean and wet*** to obtain a perfect polishing. Already dried water stains can't be removed in the dryer. Therefore put the cutlery ***immediately*** after drawn out of the dishwasher directly into a vessel filled with absolutely ***clean, fat-free water***.
TIP: ***Put a tiny dash of vinegar into the water vessel!***

☞ **IMPORTANT***:* To protect the mat at the top opening and the bulk coating we suggest to load knives with the handle first.

Do not operate the machine with open cover.
EXCEPTION: see chapter 12.2. „Granulate exchange".

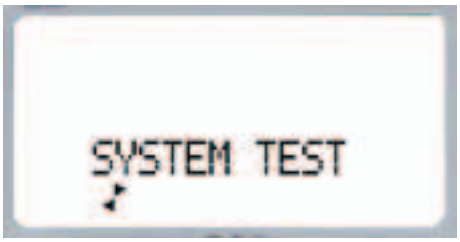
9.1. Turn on the machine

1. Insert the machine into the power socket.
2. Push the gereral switch [(1) green] ON/OFF, and the green switch will go on.
   Now the machine is on the electrical power supply connected.
   On the display you can see the following message.



1. row: today's date and time
2. row: „Start drücken“ (means push the START button)

3. Push the Start button [(2) blue] START, and the blue switch will go on. The motor will begin to vibrate and the display shows you the following messages:



The system test controls the UVC lamp and the temperature sensor. If they make troubles, the display shows you following messages:

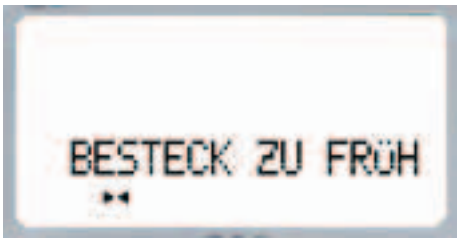
„UVC KONTROLLIEREN“ (explanation chapter 9.2.1)
“FÜHLER DEFEKT“ (explanation chapter 9.2.2)

„AUFHEIZEN“ means heating process
When the system test is okay, the heating process begins. The granulate heats up to 80 °C. Please wait.

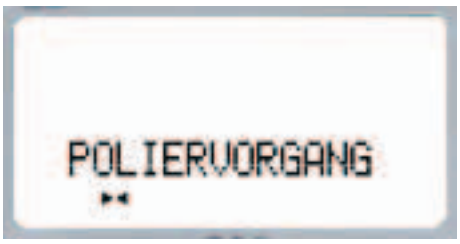
☞ **IMPORTANT:** The operating temperature will be reached in about 15 to 20 minutes depending from the ambient temperature. Variations in temperature of +/- 4 °C are normal (caused by active/inactive heating.

4. Put a collecting basket (for the cutlery) below the front opening where the cutlery will come out (not to deep to avoid noise and damage of the cutlery).

After the machine reached the 80 °C the display shows you the message: „BETRIEBSBEREIT“ and four short acoustic tones sound, it means that the machine is ready to polishing. In the second row stands for a few seconds TEMP – it shows you the acutal temperature. After these seconds, it changes to the time. In this time the time of heating is also included. If you don't polish after 30 minutes, they machine switch off automatically.



When you put the cutlery during the heating into the machine, the display shows you the following message: „BESTECK ZU FRÜH“ and some short acoustic tones sound. So a good polishing result is not possible to warrant.



As soon as the machine is ready to polishing, you can put the cutlery into the machine. Therefore, put the small blue cap away. „POLIERVORGANG” means: polishing process.

☞ **IMPORTANT:** Put a handful of the cutlery into the machine and after you don’t see it any more in the granulate you can put the next handful of cutlery into it. Not too fast, because the cutlery will block.

The message „POLIERVORGANG“ stands on the display only for a few seconds after these seconds it changes to „BETRIEBSBEREIT“.

When you open the cap of the machine, the UVC lamp switch off, because the radiation of this UVC lamp is harmful to eyes and skin. On the display you can see for a few seconds the message „NACHTROCKUNG UNTERBROCHEN“ (it means FINAL DRYING interrupted), and as long as the cap is open the message „DECKEL OFFEN“ (it means cap is open) stands on the display.

Please close the cap and push the Start button [(2) blue] START. After you close the cap you can see on the display the message with the information of date, time, model type and software version. After this message the system test starts. Is this system test okay the heating process begins.

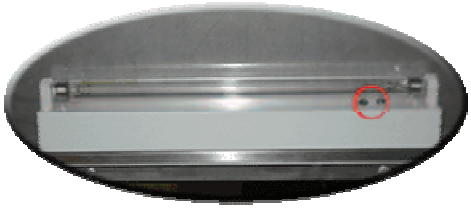
9.2. Problem report

9.2.1. UVC KONTROLLIEREN (it means UVC lamp control)

This problem report stands on the display when the UVC lamp is contaminates or defect. Some short acoustic tones sound.

UVC lamp defect:
Check the UVC lamp by opening the blue cap and looking carfully if there is a light. If you don’t see a light, change the UVC lamp as follows:

1. Push the Start button [(2) blue] START.
2. Push the general switch [(2) green] ON/OFF.
3. Switch off the machine from the power socket.
4. Open the cap of the machine and putt he UVC lamp out of the holding. Put in the holding the new one.
5. After that, switch on the machine on the power socket and push the general switch [(2) green] ON/OFF and the Start button [(2) blue] START.



UVC lamp contaminate:
Fine powder get produced by the granulate. And this powder can contaminate the UVC lamp and the holding. Please clean both components carefully.

1. Push the Start button [(2) blue] START.
2. Push the general switch [(2) green] ON/OFF.
3. Switch off the machine from the power socket.
4. Open the cap of the machine and put the UVC lamp out of the holding. Clean them with cleaning alcohol and kitchen paper.
5. Take care of the tiny sensor on the holding! Put in the cleaned UVC lamp.
   Lampe wieder in der Halterung.
6. After that, switch on the machine on the power socket and push the general switch [(2) green] ON/OFF and the Start button [(2) blue] START.

9.2.2. FÜHLER DEFEKT (it means temperature sensor defect)

This problem report stands on the display when the temperature sensor is defect. Some short acoustic tones sound.

1. Push the Start button [(2) blue] START.
2. Push the general switch [(2) green] ON/OFF.
3. Switch off the machine from the power socket and wait 5 minutes, before you switch on the machine again.
4. Is the problem report not away please contact your service technician.

9.2.3. HEIZUNG DEFEKT (it means heating defect)

This problem report stands on the display when the heating is defect. Some short acoustic tones sound.

1. Push the Start button [(2) blue] START.
2. Push the general switch [(2) green] ON/OFF.
3. Switch off the machine from the power socket and wait 5 minutes, before you switch on the machine again.
4. Is the problem report not away please contact your service technician.

10. End of operation

10.1. The automatic final drying process

☞ **IMPORTANT:** It is essential to run the final drying process after operation to dry the granulate entirely.

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NACHTROCKNUNG means final drying process. After two minutes without polishing the final drying process over 30 minutes begins. In the second raw of the display you can see the rest of the time of the final drying process. In this example: 28 minutes und 32 seconds. After 30 minutes the maschine switch off. You only need to push the general switch [(1) green] ON/OFF.

If you put cutlery into the machine during the final drying process, the circle begins again, see chapter 9. Placing the machine into operation.

10.2. Interruption of the final drying process

NACHTROCKNUNG UNTERBROCHEN means interruption of the final drying process. If you switch off the machine during the final drying process or during the polishing or when you open the cap this message get shown on the display. Some short acoustic tones sound.

11. Emergency

1. Read out the error from the display and compare it with the operating manual.
2. Switch off the machine.
3. Eliminate the problem (*see also chapter 14. „Technical problems / troubleshooting“*).
4. Start working again as indicated in *chapter 9. (“Putting the machine into operation”).*
5. If the problems come again, call your service technician.

12. Regular maintenance

12.1. Cleaning

It is essential to ensure that the machine gets a frequent cleaning (i.e. at least once a day).

Lift the cap and remove the granulate (or dust) dropped out of the bulk with a Hoover. Clean the bulk (above the granulate) and all visible parts with a 70 % methyl cleaning alcohol (by putting alcohol on absorbent paper).

☞ **IMPORTANT:** To ensure a perfect inside cleaning it is essential to use a 70 % methyl alcohol. Buy 1 l bottles cleaning alcohol from your authorised dealer.
Clean the outside parts of the machine with a humid cloth and dry them with absorbent paper. Intense dirt has to be removed by the use of usual stainless steel detergents.

⚠ **ATTENTION:** Never place things on top of the machine!
Neither the inner parts nor the surface of the machine should ever be exposed to a water flush - water contact might damage electronic parts.
Never clean the outside parts of the machine with jet water (hoses) or high pressure jet cleaners.
Never use corrosive or acid cleaning products, brine, wire wool or steel brushes since these could damage the machine.

⚠ **ATTENTION:** The machine grown up to a temperature of 80 °C. Please let the machine cool some minutes before you start the cleaning. Do not grip into the machine or granulate when the machine is running.

12.2. Granulate exchange

If the drying granulate is too powdery or too dirty, it has to be changed.
If the granulate has to be changed, the display shows following message:

After 150 hours of operation the message „GRANULAT WECHSELN“ get shown on the display. It means that you have to change the granulate. The machine is running but you don’t see other messages or information – only this message is standing on the display as long as you make the granulate exchange.

1. Prepare a tiny shovel or a glas, a blank bucket and a hoover.
2. Open the cap.
3. Push for 8 seconds the Start button [(2) blue] START. The motor begins to vibrate, and the UVC lamp switch off.
4. For 2 minutes the motor vibrate and you have time to put the granulate out of the machine. If you need more time, please push the button again for 8 seconds.
5. Delete the rest of the granulate with the hoover.
6. Remove the perforated grid (by loosing the screws). The therefore necessary allen screwdriver is on top of the terminal box inside the machine.
7. Spray the entire bulk with a 70 % methyl cleaning alcohol and wipe it with dry, clean absorbent paper.
8. After resetting the grid and fixing the screws back on it pour about 6 kg granulate into the bulk. After refilling the machine with fresh granulate let the machine run for 1 hour without cutlery, remove the dust from the bulk and below the protecting mat at the top opening (with cleaning alcohol.) Retry this procedure before filling the machine with cutlery.

13. Service

This machine, correctly installed and well treated in the phase of set-up and use, has got a long working life without troubles and necessity of maintenance. For a troubles function of the machine it is necessary that an authorised service technician caries out a service every 3000 operating hours.

13.1. Repairs

Please use only original spare parts, so we can give you the warranty.

13.2. Recurring maintenance

A service on the machine is possible at least after 3000 hours of operation.
You can see following message on the display:

SERVICE ERFORDERLICH means that the machine reached the 3000 hours of operation.
The machine is running but you don't see other messages or information – only this message is standing on the display as long as your service technician makes a service.

Call your service technician, he will make following steps of service:

- ✓ Cleaning the inside parts of the machine
- ✓ Controlling of the springs concerning failures.
- ✓ Controlling of the mat at the cutlery loading opening concerning damages.
- ✓ Controlling of the bulk concerning cuts.
- ✓ Controlling of the electronic components.
- ✓ Inspection of the electric cables.

☞ **IMPORTANT:** If you don't change a damaged mat, a warranty on the bulk is not possible to give.

14. Technical problems / troubleshooting

14.1. Errors, which could be eliminated by oneself:

Anzeige/Fehler	*Behebung*	*Achtung*
The mat at the cutlery loading opening is damaged.	1. Order new mat from your authorised dealer 2. Replace the mat.	Intensive wear of the mat causes damages of the bulk coating.
Granulate or powder is sticking on the cutlery after it has come out from the polishing machine.	**a) Operating temperature is to low:** The cutlery put into the machine when the machine was in the heating phase. Please put the cutlery into the machine only after you see on the display: „BETRIEBSBEREIT“ **b) The cutlery were thrown into the machine dirty** Renew possibly dirty water or control the dishwasher **c) The granulate is dirty** Control if the granulate is contaminated by fatty residues and change the granulate if it is dirty.	If these matters does not apply, please call your authorised service technician.
UVC KONTROLLIEREN	The UVC lamp is contaminated or defect. Control it how explained in chapter 9.2.1. „UVC KONTROLLIEREN“. Sollte die Lampe bei geschlossenem Deckel noch immer nicht funktionieren, rufen Sie bitte Ihren Fachhändler. ☞ **IMPORTANT:** We suggest to buy a reserve UVC lamp.	It is essential to replace the UVC lamp by a lamp of the same type, since its radiation is sterilising constantly the surface of both the cutlery and the drying granulate
BESTECK ZU FRÜH	When you put the cutlery during the heating into the machine, the display shows you the following message: „BESTECK ZU FRÜH“ and some short acoustic tones sound. So a good polishing result is not possible to warrant	

14.2. Errors, which have to be eliminated by an authorised service technician:

Anzeige Fehler	***Behebung***	***Achtung***
The machine does not work even if the machine is plugged and the general switch [(1) green] ON/OFF is on.	Call your authorised service technician.	
	The heating is defect call your authorised service technician.	
	The temperature sensor is defect,. call your authorised service technician.	

15. Transport

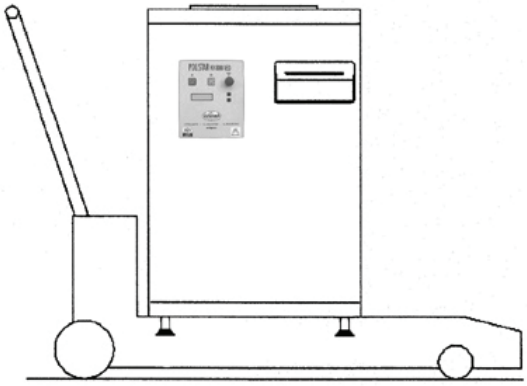

fig. 5

The machine has to be transported in a wooden box with the bottom to the ground set on to a pallet. When it is transported without a wooden box you have to proceed as shown in drawing fig. 5.

⚠ **ATTENTION:** The weight is about 100 kg. The machine may not be tipped over. The bottom has always to be at the ground since otherwise the bulk is sliding off its anchoring.

16. Disposing of the machine

The main parts of the machine are made of steel, aluminium, high grade steel (inox) and synthetic material. Therefore most of the parts can be disposed in an easy way (scraps and synthetics). The bulk is coated with a synthetic rubber (polyurethane) and must therefore be disassembled and disposed separately.

17. Appendix

- ✓ Notes from the authorised technician
- ✓ Declaration of conformity

Datum	Notiz

We reserve the right to make changes in design and product range without notice.