



Fully Automatic

Auto MIX

Contents

Section 1- Introduction	
(1-1) How to use the manual	4
(1-2) Terminology and signs	5
Section 2- General information	
(2-1) Company's liabilities	7
(2-2) Guarantee	7
Section 3- Device introduction	
(3-1) Main parts	10
(3-2) Device buttons description	11
Section 4- Technical features	
(4-1) Technical features	13
(4-2) Technical details	14
Section 5- Transportation and installation	
(5-1) Unboxing	16
(5-2) Device transportation	16
(5-3) Environmental conditions	17
(5-4) Installation	18
Section 6- Product applications	
(6-1) Device initiation	20
(6-2) Functional programs setting	21
Section 7- Safety	
(7-1) General safety	24
(7-2) safety measures of device	24
Section 8- Maintenance	
(8-1) Clean-up	26
(8-2) Periodical maintenance	26
(8-3) maintenance technical instructions	27

Dear Customer

We thank you for your selectivity and trust in purchasing domestically produced products, and we are pleased that after continuous efforts, we have been able to manufacture Vacuum Mixer device and put it at your disposal.

This product has been designed by our technical and engineering team of experienced and committed people in the fields of mechanical, electronics and computer engineering, and by utilizing updated technology and building upon 25 years of experience in manufacturing dental equipment, this product has reached production of export index quality.

In designing the product, three principles of accuracy, reliability and safety performance and also user friendly have been considered, so in order to correctly and completely utilize product features, we ask you to read the instruction manual carefully and if you have any questions or you need more information, contact the after-sales unit.

The instruction manual is a comprehensive reference for the efficient and safe use of the product. Following the instructions of this manual has a great role in reducing consumable costs, avoiding risks and ultimately increasing product life. The instruction manual should always be kept near the product and the user should periodically read it.

Please impart us with your constructive guidance, so that we can benefit from your comments, recommendations, and gain knowledge about your needs.

**We hope that you will find using Vacuum Mixer to be an enjoyable and successful experience,
Polaris Engineering and Manufacturing**



Auto Mix

Introduction

(1-1) How to use the manual

This manual presents the instructions about use, installation, and maintenance of Vacuum Mixer made by Polaris Co. It should be noted that:

- The product should be used according to the instructions of this manual. Thus, all parts of it should be read carefully before starting and installing the tool. Special attention should be paid to the highlighted parts. (refer to section 2-1).
- Observing the instructions of the manual assures the health and safe operation of the tool.
- Manual is an integral part of the product. Thus, it should always come with the product and should be used optimally as a reference for use during the operation of the product. It should be available even during the sale of the product, or even when it is not used.
- In case of losing or damaging the manual, get a replacement one from the after-sales service department of Polaris Co.

The following are explained in detail in this manual:

- Installation and start up of the product
- Operation details of the product and its parts
- Maintenance condition
- Primary safety and preventive details

(1-2) Terminology and signs

Knowledge of signs meanings is of great importance. A list of signs has been introduced in the following for initial recognition and reference to them if necessary.



Danger!

Indicates compulsory warnings.



Warning!

Indicates functional recommendations.



Forbidden!

Indicates forbidden activities.



Caution!

Refers to user instructions of the tool.



Auto Mix

General Information

(2-1) Company liabilities

Polaris Co. is not liable for any problem involving the following: Failure to follow the instructions of this manual (incorrect use of the product), repair by an unauthorized person and part replacement without coordination with the after-sales service department, failure due to power fluctuations.

(2-2) Guarantee

Guarantee of this product includes repairs, supply, and replacement. If used appropriately, the guarantee of Polaris Co, covers all main parts of the device for 18 month.

Following cases ant parts are not covered by guarantee:



- power fluctuations
- incorrect transportation of device
- inappropriate and frequent use of device despite having obvious flaws
- not observing the maintenance instructions
- power cable
- any repair or replacement by unauthorized persons.
- main and display keys



Commutation fees of company representatives to install or repair during guarantee period will be received from buyer at site.



The device can't be used before installation and insurance of correct operation of protective parts.



It is highly recommended that user has a general knowledge of this manual before using this device. The cases which appear to be operation flaws in the device should be registered by user and they should be sent to the after-sale service department.

General Information

- Authorized representatives of Polaris Co.
These persons are endorsed by the company to work on the device under any operational circumstances. They are also authorized to do any electrical and mechanical adjustment/repair, maintenance program and authorized parts replacement.



Auto Mix

Device Introduction

(3-1) Main parts description

Main parts of the Vacuum Mixer include:

1. ON/OFF button
2. Fuse
3. O-ring
4. Bowl position detection pin
5. Drain valve-manual
6. Electrical valve
7. sensore
8. 9 volt transformer
9. board
10. cerebral



Fig-1 A view of different parts of Vacuum Mixer

(3-2) Device buttons description



Fig-2 A view of device buttons

Upward button

This button is used for changing programs and letters used in the program name and increasing the mixing time.

Downward button

This button is used for changing programs and letters used in the program name, and decreasing the mixing time.

Set button

This button is used for changing programs, confirming the changed time, confirming the program name letters, and finally saving the new changed program.



Auto Mix

Technical Features

(4-1) Technical features and operation rules of device

Polaris Co. products are manufactured based on the latest technologies and are of the highest qualities. The most recent design and manufacturing methodologies are employed to increase the lifetime and quality of products.

(4-2) Technical details

Technical specifications of the Vacuum Mixer are given in Table 1:

Power supply	210-240V 50/60 Hz
Power	85W
Rotation speed	400 rpm
The small bowl capacity	200 mm
The large bowl capacity	400 mm
Device height	470 mm
Device width	280 mm
Device depth	280 mm
Net weight	17 kg

Table 1 The device technical specifications

Vacuum pump specifications

Power supply	210-240V 50/60 Hz
Maximum power	20W
Maximum vacuum pressure	870 millibar

Table 2 vacuum pump specifications

Accessories

Part	Number
Small bowl	1
Large bowl	1
Power cable	1
Fuse 15 A	1

Table 3 A list of accessories



Auto Mix

**Transportation and
installation**

In order to avoid accidents, it is really important to follow the following instructions during the installation and fixing of equipment. All steps are explained in detail:

(5-1) Unboxing

Having received the device, make sure that the main box is sealed and intact. Otherwise, inform the after-sales service department of Polaris Co, or its authorized representatives.

(5-2) How to move the device

The device should be moved as follows:

- 1 Unplug it from the power source
- 2 The device should remain in a vertical position during movement. For more safety and prevention of any injury due to neglecting the technical details, refer to section 4-1.



Failure to follow the aforementioned instructions results in device being damaged, and Polaris Co, won't be held liable.

(5-3) environmental circumstances

It is important to choose an appropriate environment during installation and operation for personal safety, correct operation and long lifetime. This environment not only should be big enough but also should be on enough, have proper ventilation and should be kept away from dust and direct sunlight. It should be noted that the device must be placed in a way, so that the connections may be managed easily.

Workplace temperature: 0-40°C

Maximum humidity: 75%



The device should not be used in a place where there is danger of explosion or firing

The light of the place should be high enough so that all parts of the device can be seen clearly.



The device should never be exposed directly to sunlight or humidity of rain, etc.

The following should be done before the use of the device:

- 1 Vacuum Mixer has been designed to be put on a stable and firm worktable in parallel with the ground. The stability of all parts of the worktable should be checked.
- 2 Plug the device into the outlet after input power and main electricity are checked (device working voltage is based on AC 210-240 electricity).



The grid single-phase electricity should match the power supply specifications of device.

(5-4) device installation

- 1 Get the device out of its box carefully. To do so, take out all the protective material (Plastofoms) around it, take out the Vacuum mixer, and put it on a flat and standard laboratory table such that the space within 25 cm radius of the device is empty. Make sure that the surface and legs of the table are not made of metal.



There is a danger of electrocution, if the surface or legs of table are made of metal and they are in contact with the ground. Thus, put your vacuum mixer on a wooden table or fiberglass.

- 2 Vacuum mixer should not be exposed to sunlight directly.
- 3 An appropriate cord should be used to connect the device to its nearby power supply.
- 4 An electrical protector must be put on the way of the socket by the user, so overload or indirect currents don't have contact with the protective parts of the device.



It is recommended for the electronic system to have a ground connection part.



Auto Mix

Device application

(6-1) Device initiation

Before using the device, put it on a firm, flat and stable surface and follow these steps:

- 1 Plug the device into the mains electricity
- 2 Never fill the device bowl. It is allowed to fill the bowl under max line of the bowl lid (the blade arch), as shown in Fig 3.

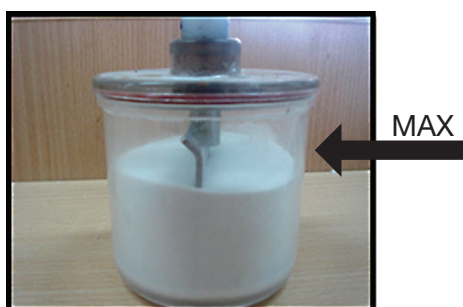


Fig-3 the maximum volume



The volume of substances inside the bowl should never exceed the suggested level.

This device is only used to mix homogenous and non-porous substances for shaping them. Generally speaking, dental plasters, silicon, and refractory cement are approved to be used in this device. Other usage methods, such as the use of hazardous products or health-threatening substances contradict the manual instructions.



If you don't intend to use the device in hours, turn it off.

- 1 Put the device on a worktable (refer to section 5-4).
- 2 Plug the device into a socket, and make sure it is connected according to what was said in the section (4-5).

- 3 To mix small levels of substances, use only the small bowl, otherwise, the large bowl will decrease the device efficiency in mixing.
- 4 It'd be better to mix the substances manually for 10 seconds, Before connecting bowls to the device, in order to increase work quality. Then, check if the O-ring is clean (Fig 4) and push the bowl upward in the indicated place to start vacuum operation automatically. You can release the bowl several seconds after the vacuum indicator started showing a number greater than 500. The mixing program begins after the pre-defined minimum level of vacuum has reached.

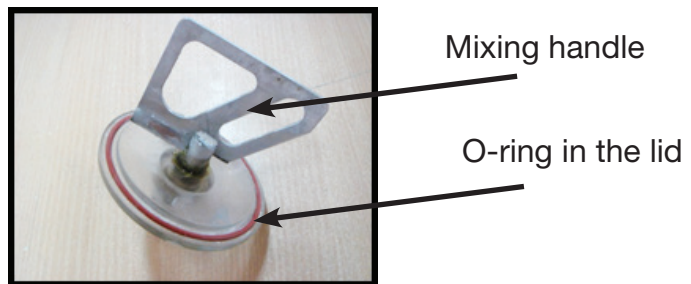


Fig-4 a view of the bowl lid



At the end of the set mixing time, the device begins to alarm in order to indicate the end of mixing process. At this moment, to remove the bowl, first hold the bowl with one hand and push the stop button with the other until the bowl comes off.



Use the manual valve to drain the vacuum and to remove the bowl from the device, when there is no electricity or the stop button doesn't function.

Setting program for device function

Use up and down buttons on the panel to choose a device program. It should be noted that changes are only applied when they are saved before the execution of programs.

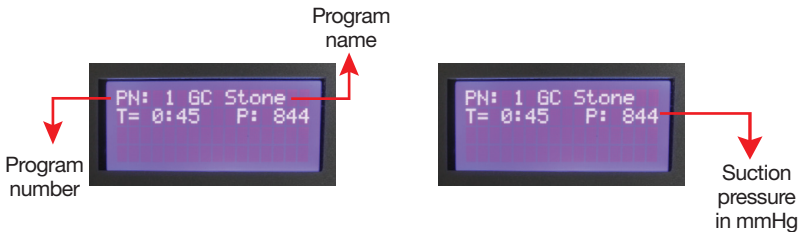


Fig-5 A view of the Vacuum Mixer display

- Press the set button to change mixing time. When time parameter starts flashing, you can increase mixing time by one second for every press of the upward button. If you hold the upward button, mixing time will increase rapidly. The downward button is used to decrease the mixing time.
- The program name can be changed by pressing the set button for the second time. Use up and down buttons to change the first letter. You can change the next letter by pressing the set button. To insert a space, hold the upward button until the indicator starts showing a negative sign.
- To save changes, hold the set button until the display starts showing the “save” word (Fig 6).

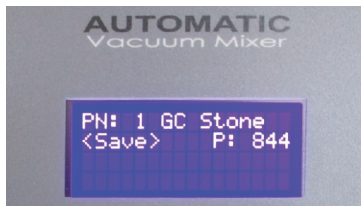


Fig-6 Save is displayed on the Vacuum Mixer display



Auto Mix

Safety

(7-1) general safety

Users are required to read and always follow the listed suggestions and warnings here; following these instructions will assure a long-term, flawless operation for the product.



Make sure that all parts of the device are installed correctly before using the device.



Never use a defected device.



You should never use the device if its accessories are defected, otherwise, the device operation will be affected, and it will no longer be covered by guarantee. Thus, make sure all parts are flawless before operation.

- The place should be clean and well-lit and free of obstacles.
- If you see any flaws in the device operation, stop operating the device immediately, unplug it, and call the after-sales service department of Polaris Co and inform them about that.
- Never disassemble the electrical or pneumatic parts.
- Never replace the power supply or parts which are directly related to the plug.
- Operation of this device for applications other than those mentioned is forbidden.
- Make sure the device is disconnected from the main sockets before cleaning.

Device safety measures

Polaris Co. makes use of high quality raw materials for advanced production processes to promote the safety level. Quality control is performed in three stages of input, middle control, and final control through several control stations, a procedure which minimizes error and defects chances.



Auto Mix

Maintenance

(8-1) Clean-Up

Keep the device body clean using a dry cloth. Wet the cloth with little water or a non-greasy solution, if needed (only do this for body cleaning).

Users should make sure the device is kept clean and free of dust water and other unexpected solutions.

Cleaning should be done at the end of each operation and when the device is on OFF mode and stable.

If the user decides that the internal parts need cleaning, he/she should contact the after-sales service department.

O-rings should be cleaned periodically in their place with a dry cloth. Dust or powder should not be seen on their surfaces. Applying little Vaseline on O-rings will increase the lifetime of the device in addition to facilitate the vacuum production process.



Put the main button on the off position before cleaning external parts of the device. It is forbidden to clean the device while it is plugged.



Never use combustible, corrosive, base or toxic solutions for cleaning the device.



When using compressed air in cleaning, eye guard and face mask should be used. Do not let anyone stand near the device, because one can be harmed by suspended particles.

(8-2) periodic maintenance

Inspection and periodic cleaning of the device depend on the operation level. It is suggested for the user to inform the company experts about the workflow through consultation after installation and learn the appropriate time for an inspection and

periodic cleaning from them. If the user detects any damage or exhaustion during periodic inspections, he/she should contact the after-sales department, so that measures are taken for maintenance and compulsory service.

Periodic service should be determined by the user and is performed by the after-sales services department. It is suggested that the maximum time interval for periodic repairs be 12 months.

If a user detects any defects or problems on the device, he/she should place a warning sign on the device to indicate that it is being maintained and it should not be used (EC warning signs can be purchased at the associated stores).

Cleaning, periodic maintenance and appropriate use of the device are important factors in lifetime and safety of it.



When any defect is seen in the device operation, it is forbidden to use the device before solving that defect.



Safety and protective parts of the device should never be removed from the device unless for repair and maintenance purposes.

The parts which are removed for repair purposes should be replaced as soon as possible.

(8-3) Maintenance technical instructions

- 1 There is a 15A fuse under the upper part of the device body which is related to the main electricity of device. You can replace the defected fuse with a new one if any problem occurs with it. (Fig 7).



Fig-7 Adjustment of the Vacuum Mixer fuse.

Problem	Possible reasons	Corrective actions
Air and abrasive powder do not exit	<ol style="list-style-type: none"> 1. Blockage of the beginning of nozzles 2. The pneumatic pedal hose has been twisted 3. Air position change switch is located in the middle of two locations. 	<ol style="list-style-type: none"> 1. Opening nozzle-Tungsten separation and cleaning the air exit path 2. After bringing out the nozzle from the hose, push the air pedal to determine if there is output 3. Turn reservoir change switch until it is in the right place
Only air exits without abrasive powder	<ol style="list-style-type: none"> 1. Outlet air nozzles have been blocked 2. Outlet nozzle from the reservoir reservoir has been blocked 3. Abrasive material has impurity or humidity 4. Air has humidity 	<ol style="list-style-type: none"> 1. Open the chamber door 2. Block the end of a blue hose inside the chamber using tape of a piece of fabric 3. Close the glass chamber door again. 4. Place your finger on the nozzle outlet point and press the air pedal several times 5. Open the chamber door, open the blocked hose 6. Close the chamber door and initiate the device 7. Replacing the abrasive material 8. Changing the location of the device
Constant device function (device sticking)	<ol style="list-style-type: none"> 1. Connections inside the air pedal are faulty 2. Outlet valve in air pedal has a defect 	<ol style="list-style-type: none"> 1. Check/fix the air pedal connections 2. Replacing the air pedal with a new one
Air leakage from air pedal	<ol style="list-style-type: none"> 1. Air outlet and inlet connections have been connected inversely 	<ol style="list-style-type: none"> 1. Switching the connections
Air pedal doesn't work.	<ol style="list-style-type: none"> 1. No air pressure enters the system from the compressor 2. The pneumatic hose has been twisted 	<ol style="list-style-type: none"> 1. Inspect compressed air lines 2. Inspect compressor air pressure 3. Hose accumulation
The pneumatic pedal hose does not separate from the system	<ol style="list-style-type: none"> 1. The connection has not been freed because of the pressure behind the system 	<ol style="list-style-type: none"> 1. Evacuation of the air inside the system 2. Pressing the blue ring of the fast connection and bringing out the hose from the inside of a fast connection

Calling the aftersales services Unit of Polaris Co.

Tel: +49 (0) 21033373500 Fax: +49 (0) 21033373550

Web: www.polarisgmbh.com

Email: Service@polarisgmbh.com

