



Laser Pin Drill
Pin Hole Drilling Unit

Pindex

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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 pin-hole drilling unit (Pindex Q1) 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 technique of 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 Pindex to be an enjoyable and successful experience,
Polaris Engineering and Manufacturing**



Pindex

Introduction

(1-1) How to use the manual

This manual presents the instructions about use, installation, and maintenance of Pindex device 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 .

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.



General Information

(2-1) Company liabilities

Polaris 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 and 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
- installation by unauthorized persons
- any repair or replacement by unauthorized persons.
- power cable and key
- drill



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



Generally parts of the hand piece and pedal are not guaranteed except when a problem in the mentioned parts occurs during delivery to the users.



Before completing the installation and ensuring the accuracy of the protective components, the device is not ready to use.

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.



Device Introduction

(3-1) Main parts description

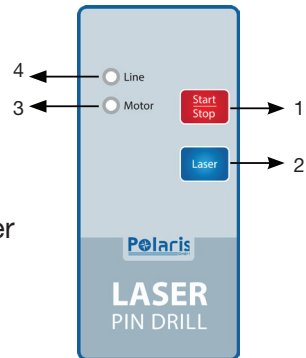
Main Components of Device

The main parts of the Pindex Device are as follows:

- 1-Adjustment Handle of Sheet
- 2-Movable Sheet
- 3-Device's Panel
- 4-Laser Light
- 5-Fused Jack
- 6-Main Key of Device
- 7-Carcass Sheet



- 1-Motor On /Off Key
- 2-Laser Light's On /Off Key
- 3-Motor On/Off LED
- 4-LED for connecting device to power





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 information

Technical specifications of Laser Pin Drill Device are presented in table 1:

Technical Information on Product

Power Supply	220 Volts – 60/50 Hertz
Power	150 watts
Length of Device	450 mm
Width of Device	250 mm
Depth of Device	260 mm
Approximate Weight	18 Kilograms

Lateral Equipment:

Lateral equipment List of the Product

Part	Number
Drill	2
Wrench	2
Manual	1
Fuse Tow	1
Power Cable	1



Pindex

**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. Disconnect the device electricity connection.
2. Disconnect all connections.
3. Know the weight of the device because lack of knowledge about factors such as these may lead to many problems (this information are given in technical specifications part).
4. The device should remain in a horizontal position during movement and be held from the beneath and be moved carefully.
5. Put the device in the designated box and if the box is not available, follow safety instructions for protection, because the company is not exposed to transportation risk and has no obligations towards it. Please referrer to part 2-4.



Avoid displacing the device when the device is on.



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 Laser Pin Drill Device is designed so that it should be placed on a sturdy and stable table parallel to the ground. All the parts of the table shall be checked in terms of stability.
- 2 Upon inspecting the device's input power and urban power, plug the device's switch to the outlet (working voltage of the devices is 220 volts based on the electricity).



Urban single-phase power source must be complied with the specifications of the device power supply of device.

(5-4) device installation

The device is installed very easily and simply but its transportation shall be paid more attention until any mistakes which may result in arising any problem during the device's function or damaging it, are prevented.

1. Bring the device out the package carefully; therefore, bring out all the styrofoam (plastofoms) around it, remove the laser pin drill and place it on standard and flat laboratory table so that around space of the laser pin drill would be empty for minimum 25 cm. Pay attention that the table surface and its legs are not metal.



In case the table surface and its legs are metal and are connected with the ground, there will be risk of electric shock. Therefore, put the Laser Pin Drill Device on wooden or fiberglass table

2. Keep Laser Pin Drill Device away from direct sunlight.
3. The operator shall connect the device to the nearest power supply through a suitable connection with the device.



Don't use adaptor for electrical connection.

5. Remove the retentive sheet of the model and insert the suitable grinder in its place using wrench supplied with the device. For this purpose, lose the retentive nut of grinder then insert the grinder in its place and tighten the nut in its place using its special wrench.

6. Insert the retentive sheet of the model in its place.





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Device Application

(6-1) Device initiation

1. At first, connect the electrical cable to the jack beside the device then plug to the entrance outlet of the urban power.
2. Move the device's table toward bottom using your two hands and measure the depth of the drilling which is started from the sheet. The concerned size is adjustable easily through adjustment handle of the sheet which is placed opposite the device.



Perform such adjustments when the device is off and the main key is disconnected, because the rotating parts of the device can injure your hand seriously.

3. Put the main On/Off key in the device, which is placed on the right hand of the body, in ON position. In this mode, the device is fed and LED Lamp on it will be turned on.
4. Press laser key which is placed on the device until its sign is indicated.
5. Press the start key. At this time, the motor will be turned on. The LED lamp will start blinking.
6. Place the model on work table; displace the model until the concerned location for drilling is placed under the laser light.
7. Hold firmly the part using two hands and press down. The work table will be moved to down and the nut will drill the part.
8. Remove the pressure made on the work table and let the work table return to the starting place. Perform a similar function for drilling further works.



The bur is the only susceptible part for damaging and injuring, therefore, paying attention to the nut is obligatory. Therefore, never move the sheet toward down side whenever the motor is turned on or off.

(6-1) Device initiation



Avoid putting your hands on the parts which the bur is drilling.



Laser diodes generate very strong light, which shall not be observed directly because it will damage the vision (eye). The correct function of the device can be tested so that the laser light would pass from the central hole which is located on work table.

9. Whenever the work is terminated, turn off the motor via OFF key on it. In this situation, although, the power supply is disconnected due to inertia force of the motor, it will continue its circular motion. turn off laser using the key existing on its handle and turn off the main key and then disconnect the connection cable from power.



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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.



When the device is turned on, the sheet should not be moved to down side without any reason.



Before using the machine, be sure of installation accuracy of all components of the device



Never use a device with malfunctioning.



You are not allowed to use the accessories of the device, In case of facing with any malfunctioning in them. If you use, performance of product is facing with problem and the device will be out of warranty. Therefore, before using, ensure of the safety accessories.

- The workplace shall be cleaned and free from any kind of hindrances as well as be bright completely.
- Before performing any kind of maintenance and technical operations inside the device, plug the connection cable of the device from the outlet. In the same works, the device shall be disconnected completely from the electrical wiring system.
- If any fault or defect is observed in function of the product, immediately stop the device and disconnect the electrical connection of the device and call the after-sales service Agency of Polaris Company and inform the matter to them.
- Avoid opening the electrical parts of the device.

- Never misplace the electricity sector or the sectors which are related to the plug directly.
- Using this device in cases except for the defined applicants is prohibited.
- Never use petrol or flammable solvents as detergent, only use non-flammable, non-corrosive and non-toxic materials.

Device safety measures

In order to promote the safety level, Polaris Company enjoys raw materials with long term quality guarantee in advanced production processes.

The quality control process is made in three stages including input items, intermediate control and final control through several control stations which this procedure has minimized the percentage of error and failure in the product. In addition, the device holds a protective fuse.



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Maintenance

(8-1) cleaning

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).

The operator shall ensure that the device is kept clean and is free from any kind of unforeseen dust, water, and solution.

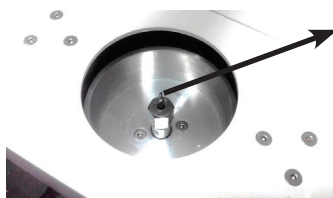
Upon termination of each working session with the device and while the device is turned off, the device should be cleaned.



In order to use device with the maximum output or yield and prevent from putting drill on vertical status, it is recommended to clean working table and around of drill all the time. The plastic surface sheet may be removed and there is a dust collecting tank which can be cleaned with suction and/or vacuum cleaner. It is suggested to be cleaned these sections carefully and repeatedly and repeatedly after every use so that there would be the possibility of loosening the screw easily.



Not cleaning the device after every use leads the bowl and the shaft to be damaged and get out of guarantee.





Dust Collector Chamber



Avoid using wet units. If so it will damage the chamber.

At the discretion of the operator, if the internal section of the device need to be cleaned, please call after sales service agency.

-  Before cleaning the external section of the device, always put the main key on OFF status. Cleaning the device is prevented when the device is turned on or connected to the main power.

-  Never use flammable, corrosive, alkaline or toxic solutions for cleaning the device.

(8-2) periodic maintenance

Periodical inspection and cleaning of the device is subject to the device's function. It is offered that upon installing the device, the operator may inform his work volume to the experts of the company through consulting and take the right time for periodical inspection and cleaning of the device from them. If in the Periodical inspections, some sections of the device are worn out or damaged, such sections shall be identified by the operator and the operator shall call after sales service agency in order to take necessary measure for compulsive or emergency maintenance and service.

The periodical service of the device is at the discretion of the operator which will be performed by the after-sales service agency. The maximum time for periodical maintenances is 12 month.

In case the operator faces with any defect or problem, he shall mark "warning sign" on the device which indicates that the device is under maintenance and using the device is prevented (EC warning sign may be purchased from the related store).

Cleaning, periodical maintenance and suitable usage or application of the device are the effective factors on longevity and safety of the device.

Periodic service should be determined by the user and is performed by the after-sales service 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.



In case of arising any kind of defect or problem, secondary launching the device before removing it is prevented.



Safety and protective parts of the devices shall not be removed from the device unless for the purpose of maintenance.

(8-3) Maintenance technical instructions

Replacing Drill:

The used drill is worn out over time and needs to be replaced. For such reason, remove the sheet and open and replace the drill assembled on drill chuck using the special wrenches.

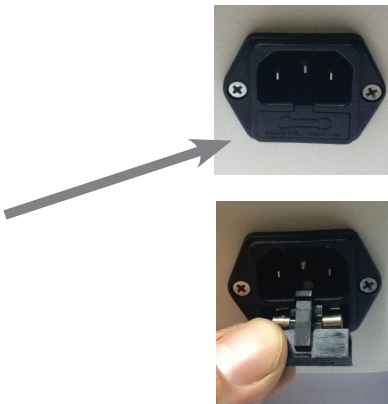
Replacing Fuse:

There is one 2A fuse related to the main power of the device on the right hand of the device's body under the jack. In case of arising any kind of problem, the new fuse can be

replaced the damaged one with respect to the information existing on the device.

For replacing the protective fuse of the device, follow these steps:

- 1-Place the main key of the device on Off Status (0).
- 2-Disconnect the power cable from the back of the device and remove the lower parts of the jack as the following image and then take measure to replace the fuse.



Calling the aftersales services Unit of Polaris Co.

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