

DIAMOND TECH INTERNATIONAL  
Innovations For Creativity

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# **POWER MAX II**™

GLASS GRINDER

*OPERATIONS MANUAL*

## Before You Begin

*Read and follow all instructions carefully.*

- After unpacking all components, assemble grinder on a firm level surface to prevent grinder from tilting and rocking.
- Be sure the power switch is in the OFF position before plugging in the grinder.
- Always disconnect grinder from electrical outlet before setting up or servicing.
- Wear proper apparel. Never wear loose fitting clothes, neckties, jewelry and gloves that may get caught in moving parts.
- Always wear safety goggles. Everyday eyeglasses have only impact resistant lenses they are not safety glasses.
- Never turn on grinder while glass or working materials are touching the bits or disks.
- Keep out of reach of children.
- Never leave grinder running unattended. Turn power OFF when not in use.
- Do not operate while under the influence of medication or alcohol.
- To ensure top performance keep grinder properly maintained and lubricated.

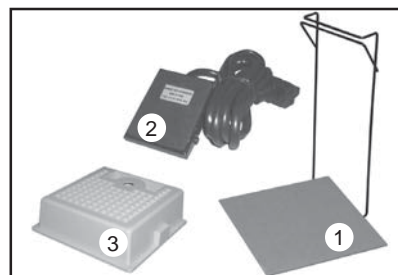
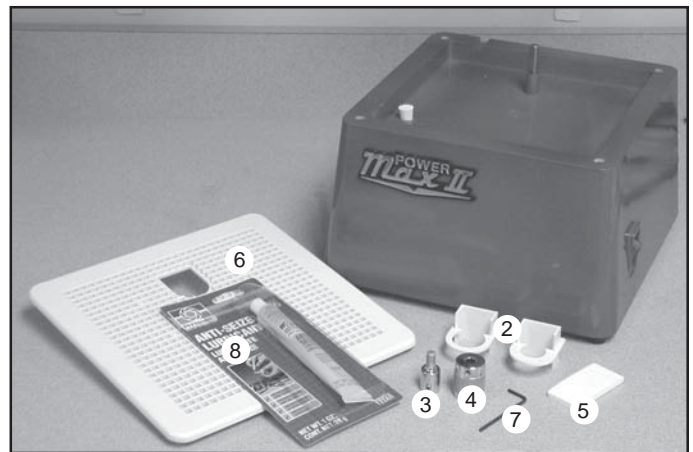
## Contents

Your Power Max II Grinder™ has been shipped partially assembled. Carefully remove grinder and parts from the packaging.

- 1- Grinder Body
- 2- Two Grind Surface Adaptors
- 3- 1/4" Silver Bullet™ Bit
- 4- 1" Silver Bullet™ Bit
- 5- Advanced Super Sponge™
- 6- Easy Glide Work Surface
- 7- Hex Wrench
- 8- Anti-Seize Lubricant

**Deluxe Model Also Includes:**

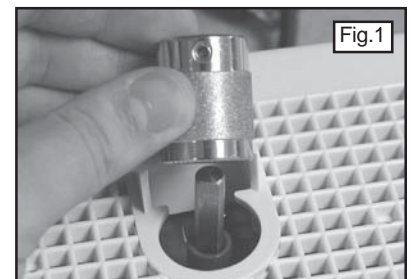
- 1 - Universal Face Shield
- 2 - Easy-On-Footswitch
- 3 - Step-Up Work Surface



## Assembly Instructions

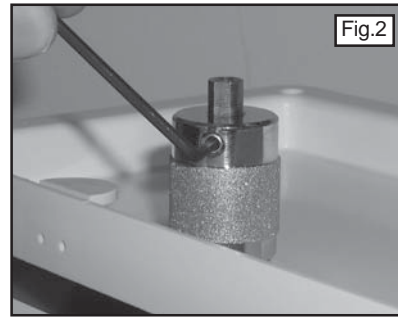
### A. Bit Installation

- 1) Before installing the grinder bit, lubricate the top of the motor shaft and inside the bit by applying a thin coating of anti-seize lubricant.
- 2) Slide the bit onto the motor shaft, positioning the set screw over the flat side of the motor shaft (Fig. 1). Position the bit on the shaft so at least 1/8" of the diamond surface is exposed above



the Easy Glide™ work surface.

3) Secure the bit to the shaft by turning the set screw clockwise with the hex wrench (Fig. 2).



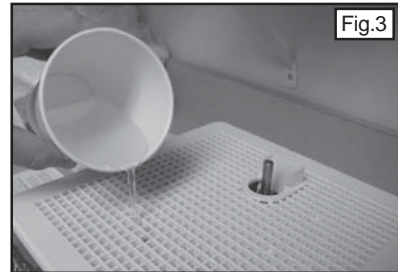
**IMPORTANT:** Always secure the bit to the flat side of the motor shaft. Tightening the bit to the rounded side can scar the shaft and prevent bit removal!

## B. Sponge Installation

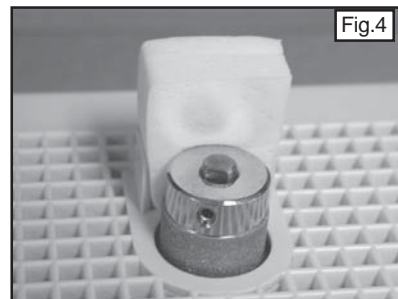
*The technologically advanced Super Sponge™ can absorb over 10 times its weight in water. Its superior wicking ability insures a sufficient water supply to protect the bit and keep the glass cool.*

1) Wet the Super Sponge™ by immersing it in water until soft and pliable.

2) Fill the water reservoir (Fig.3) about 3/4 of the way to the top. You may add special grinding lubricant if desired.



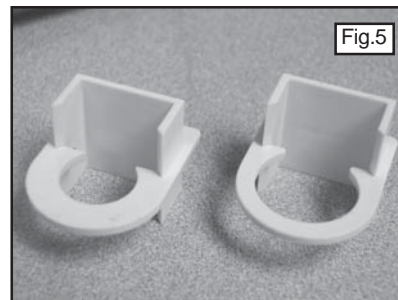
3) Insert the sponge between the sponge holder on the work surface and grinder bit so that the bottom of the sponge is in contact with the coolant/water in the reservoir and the top of the sponge is in contact with the diamond surface of the bit (sponge may be trimmed to ensure proper fit).



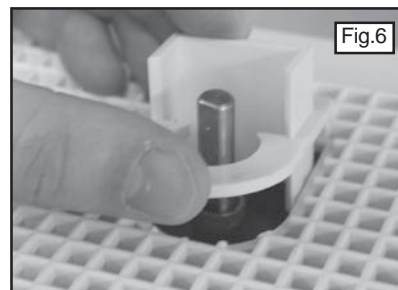
4) The wet sponge should remain in contact with the bit while grinding (Fig.4). Periodically rinse out the sponge to remove grinding residue. When the sponge becomes worn, replace it.

5) Should your sponge become dry during periods of nonuse, simply immerse in water & reinstall.

6) The Power Max II comes with two work surface adaptors designed to allow the use of a 1" and 3/4" bit (Fig.5). After the surface grid has been installed, place the grid surface adaptor into the grid (Fig.6). Be sure to use the adaptor that matches the bit you are using.

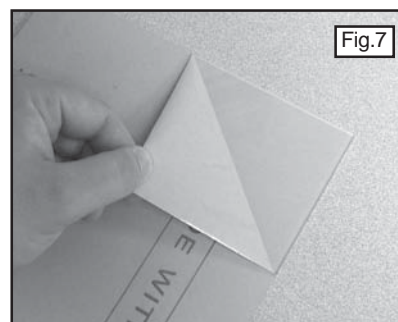


7) Soak the sponge in water, then position it into the grid surface adaptor located behind the water reservoir.



## Deluxe Models Only

1) Use the Universal Face Shield™ by simply removing the paper covering from the shield (Fig.7), put it on the frame, then slide the base of the frame underneath the grinder body (Fig.8). 2) Deluxe models also come with an Easy-On™ Footswitch. This switch allows you to easily turn the grinder on or off with a simple tap of the toe. To use, plug grinder directly into the footswitch, then plug footswitch into any outlet. Turn grinder to the ON position.



3) The Step-Up Work™ Surface has pins on its bottom that fit into the grid cover for easy installation (Fig.9).

3) The 1/4" grinder bit is useful for both drilling holes and intricate grinding. To setup the 1/4" bit, simply install work surface, then place the 1/4" bit directly into the top of the shaft making sure the hex screw lines up with the flat side

of the shaft and tighten.

## Grinder Use and Maintenance

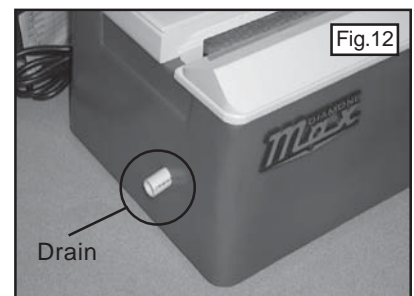
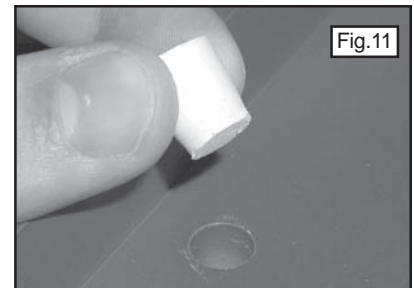
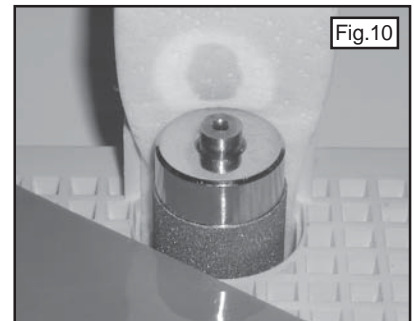
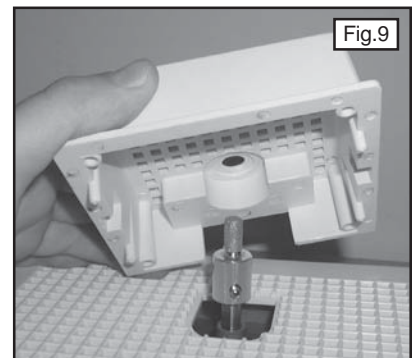
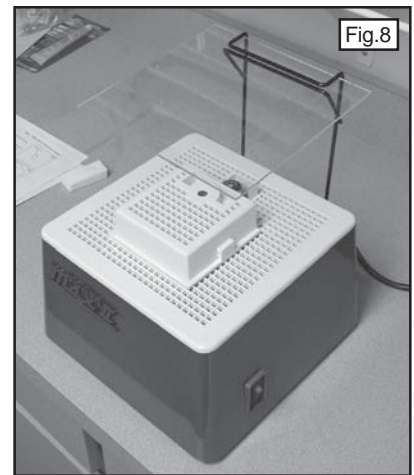
### A. Bit Use

*Remember to wear safety glasses or install a protective face shield when grinding.*

- 1) If you are a first time user, get the feel of the grinder by turning on the grinder and grinding a piece of scrap glass. Begin by pushing the glass into the grinding bit using light pressure and moving the glass back and forth across the bit (Fig.10).
- 2) Slowly increase the pressure until you feel comfortable with the grinding speed and your control. You'll quickly learn the optimum grinding pressure for the types of glass you use.
- 3) Stop periodically and check the sponge placement and water level. Grinding without water greatly reduces the life of your grinding bits.
- 4) Over time, a bit may grind less effectively causing your glass to chip this is a result of wearing away of the bit's diamond surface. When this happens, it is time to expose a new portion of the diamond surface. Loosen the set screw using the hex wrench and move the grinding bit up on the shaft to expose a new 1/8" section of diamond.
- 5) Secure the bit back in place making sure to tighten it against the flat side of the motor shaft. Reposition the sponge if needed.

### B. Care Information

- 1) NEVER GRIND DRY. Always make sure the sponge for the grinder bit is wet while grinding.
- 2) While using the grinder bit, use only light to medium pressure on the bit. Do not push material against bit using excessive force. Unnecessary pressure will shorten grinder and grinder bit life.
- 3) Clean water reservoir and Super Sponge™ after each use. Remove water reservoir and flush out grinding residue around the sides of the base. The drain hole (Fig.11) in the grinder box allows water to flush through the drain (Fig.12) when cleaning or if using large volumes of water when grinding.
- 4) If the grinding bit becomes dry, add water directly to the Super Sponge™.
- 5) To extend the life of the grinder, clean and lubricate the motor shaft, inside openings of all bits and all set screws every 25 hours of use.
- 6) Grinder bits should be removed from the machine if they are not in use for a week or more. This will keep them from "cementing" to the shaft. It will also provide you with the opportunity (and habit) of inspecting the motor shaft and bits for proper care and maintenance.
- 7) DO NOT GRIND METAL. It will make the surface unsuitable for glass in seconds.



## Troubleshooting

*Problem:* Grinder bit has become stuck onto the motor shaft

*Solution 1:* Loosen set screws and push the bit as far down the shaft as possible. Most often the shaft *above* where the bit was mounted crusts with glass debris, coolant, hard water residue, etc. Using a small piece of fine steel wool or scrubby, polish the end of the shaft all the way down to where the bit rests.

*Solution 2:* If you can push the bit down as above, but you notice that there is a burr or scar on the round side of the motor shaft caused by the set screw in the wrong position (it appears as a small ring cut into the shaft), you will need to polish it out. This can often be done by using the same steel wool mentioned above, but occasionally it requires stronger abrasives. Be very careful here! You only want to remove the scar, you do not want to make the shaft smaller. It may be necessary to use very fine grit emery cloth or sandpaper here. But again, be very careful, the motor shaft can be easily damaged. Once the scar is polished out, remove the bit. Clean both the bit and shaft and use lubricant. Never tighten the bit to the round side of the motor shaft.

*Solution 3:* If the bit is still stuck, use a plumbers helper or vice grip to remove the bit. If further assistance is necessary, call DTI toll free at (800) 937-9593 for tech support or to obtain a Return Authorization Number and further instructions to send your machine in for repair.

## Additional Parts and Accessories

ITEM	ITEM NUMBER
WORK SURFACE GRID	289
UNIVERSAL FACE SHIELD	DM0750
STEP-UP WORK SURFACE	DM0720
EASY-ON FOOTSWITCH	FS0420
MAX SPLASH GUARD	P203
GRINDER MOTOR 110V/220V	P216/P216A
GRINDER CAPACITOR 110V/220V	P221/P221A
SUPER SPONGE REPLACEMENTS	66SUPER
1/4" FAST BIT	GH0230
1/4" STANDARD BIT	GH0600
3/4" FAST BIT	GH0360
3/4" STANDARD BIT	GH0350
1" FAST BIT	GH0290
1" STANDARD BIT	GH0410
ANGLED BIT	GH0300
REDUCING BIT	GH0310

## Diamond Tech International

### Diamond Max Series 6 Year Warranty

All *Diamond Tech International* grinders and accessories are manufactured to high quality standards and are serviced by highly qualified technicians.

**Power Max II™ Grinders** are warranted to the original purchaser for six full years from the original purchase date. During the six year period, if you feel the **Power Max II™ Grinder** is not performing properly and needs to be serviced, contact Diamond Tech International at 800-937-9593 or email [info@dticrafts.com](mailto:info@dticrafts.com) for a Return Authorization Number. Equipment will not be accepted at DTI without a Return Authorization Number.

If returning your grinder for evaluation or repair, be sure to include your Name, Address, Daytime Phone Number with Area Code and a letter explaining the specific problem you are encountering. You will be contacted if any necessary parts or service are not covered under the warranty.

Date of purchase \_\_\_ / \_\_\_ / \_\_\_

Mark the Return Authorization Number clearly on every package! *Do not send this product back without such prior authorization!* Return postage and insurance are the responsibility of the consumer. DTI will return your grinder postage paid and insured if it is under warranty. Any grinder no longer under warranty will be returned at the owner's expense. Diamond Tech International reserves the right to repair or replace faulty equipment at its discretion. The **Power Max II™ Grinder** is warranted against defective materials or workmanship. If the **Power Max II™ Grinder** suffers damage due to customer modifications and/or is used for any application other than that for which it was designed, this warranty is void. This warranty does not include damage due to: (A) neglect (B) accident (C) unreasonable use (D) improper maintenance (E) any other causes not attributed to defects in material or workmanship. This warranty specifically excludes the Diamond Max™ Grinder bits or disks. Any implied or otherwise explicit guarantees made through merchandiser of this product are not covered in this warranty coverage agreement and are expressly disclaimed.

**IMPORTANT NOTE:** This machine was designed for certain applications only. *Diamond Tech International* strongly recommends that this machine NOT be modified and/or used for any application other than that for which it was designed. If you have any questions relative to its application, please contact us and we will advise as to its proper use.



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