

DIAMOND TECH
Innovations For Creativity



POWER MAX II™

GLASS GRINDER

OPERATIONS MANUAL

Before You Begin

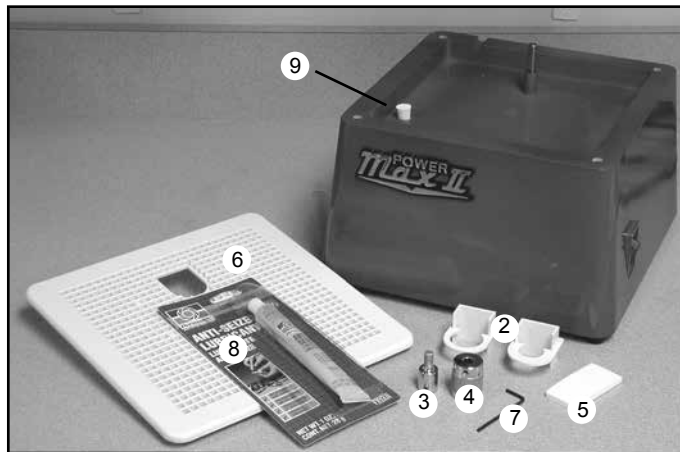
Read and follow all instructions carefully.

- 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. *Use only in a properly grounded and tested outlet. Under no circumstances should you override the grounding system or modify plug.
- 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 Work Surface Adaptors
- 3) 1/4" Chrome Hardened Bit
- 4) 1" Chrome Hardened Bit
- 5) Advanced Super Sponge™
- 6) Easy Glide™ Work Surface
- 7) Hex Wrench
- 8) Anti-Seize Lubricant
- 9) Rubber Stopper



Deluxe Model Also Includes:

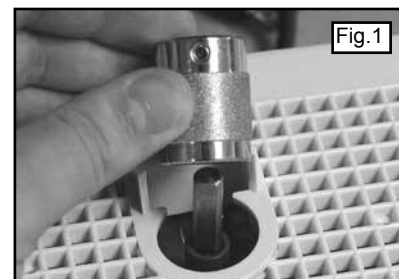
- 1) Universal Face Shield
- 2) Easy-On™ Foot Switch
- 3) 3/4" Chrome Hardened Bit



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.



- 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!

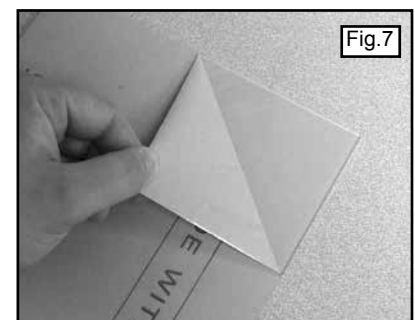
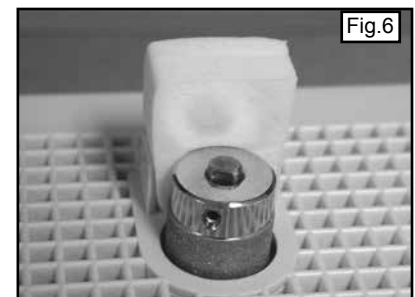
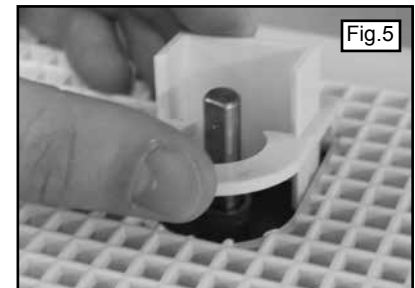
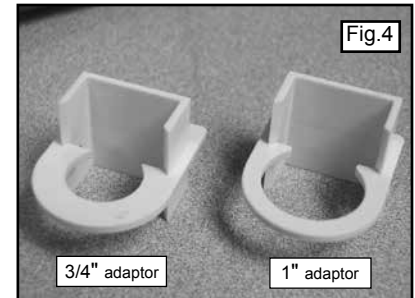
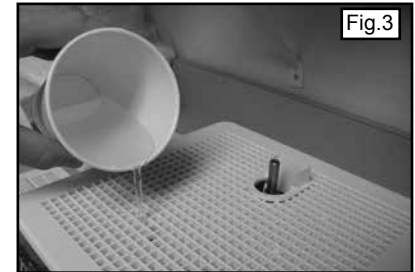
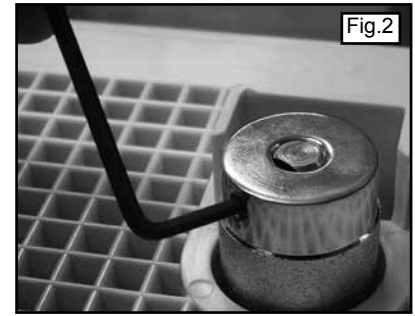
B. Sponge Installation

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.

- Wet the Super Sponge™ by immersing it in water until soft and pliable.
- Fill the water reservoir (Fig.3) about 3/4 of the way to the top. You may add special grinding lubricant if desired.
- The Power Max II comes with two work surface adaptors designed to allow the use of a 1" and 3/4" bit (Fig.4). After the surface grid has been installed, place the grid surface adaptor into the grid (Fig.5). Be sure to use the adaptor that matches the bit you are using.
- 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 side of the sponge is in contact with the diamond surface of the bit (sponge may be trimmed to ensure proper fit).
- The wet sponge should remain in contact with the bit while grinding (Fig.6). Periodically rinse out the sponge to remove grinding residue. When the sponge becomes worn, replace it.
- Should the sponge become dry during periods of non use, simply immerse in water and reinstall.

DELUXE MODELS ONLY

- 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).
- Deluxe models also come with an Easy-On™ Foot Switch. To use, plug grinder directly into the foot switch, then plug foot switch into any outlet. Turn grinder switch to the ON position. To start grinder, depress foot switch and hold until you want the grinder to stop Release pedal to stop grinder.
- The 3/4" bit is useful in grinding smaller inside curves.



Grinder Use and Maintenance

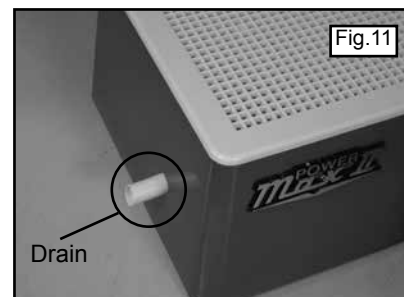
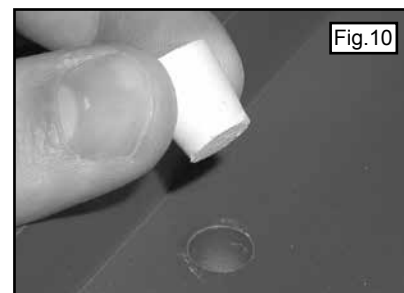
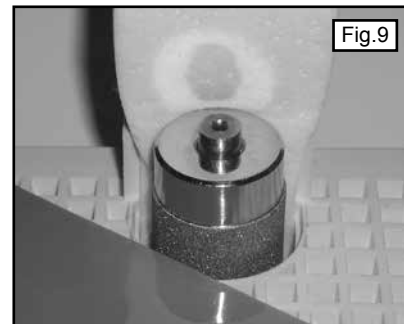
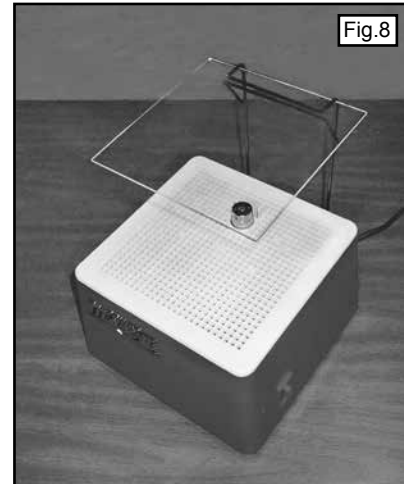
A. Bit Use

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.9).
- 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 to 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.
- 6) The 1/4" grinder bit is useful for both drilling holes and intricate grinding. To set up the 1/4" bit, simply place the 1/4" bit directly into the top of the shaft making sure the hex screw lines up with the flat side. The step-up work surface accessory will fit on top of the base grid surface and provide a sponge holder and platform to use your 1/4" cap bit more efficiently.

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 motor and grinder bit life.
- 3) Clean water reservoir and Super Sponge™ after each use. Remove work surface and flush out grinding residue around the sides of the base. When cleaning or using large volumes of water during grinding, remove the rubber stopper (Fig. 10) from the grinder box and allow water to flush through the drain (Fig. 11).
- 4) To extend the life of the grinder, clean and lubricate the motor shaft with anti-seize, inside openings of all bits and all set screws after 25 hours of use.
- 5) 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.
- 6) DO NOT GRIND METAL. Doing so will destroy the bit and make it unsuitable for grinding glass.



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 scouring pad, 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 anti-seize lubricant. Never tighten the bit to the round side of the motor shaft.

Solution 3: If the bit is still stuck, try applying a penetrating lubricant (available at an auto parts store) to the bit to dissolve the glass slurry which is seizing the bit. If further assistance is necessary, call Diamond Tech toll free at **(800) 937-9593** for tech support or to obtain a Return Authorization Number and instructions on returning the machine for repair.

Parts and Accessories

ITEM	ITEM NUMBER
STEP-UP WORK SURFACE	72
UNIVERSAL FACE SHIELD	75
EASY-ON™ FOOT SWITCH	42
SUPER SPONGE REPLACEMENTS	66SUPER
1/4" FAST BIT	23
1/4" STANDARD BIT	60
3/4" FAST BIT	36
3/4" STANDARD BIT	35
1" FAST BIT	29
1" STANDARD BIT	41
ANGLED BIT	30
REDUCING BIT	31
MAX SPLASH GUARD	P203
GRINDER MOTOR 110V/220V	P216/P216A
GRINDER CAPACITOR 110V/220V	P221/P221A
1" WORK SURFACE ADAPTOR	P404
3/4" WORK SURFACE ADAPTOR	P405
EASY-GLIDE™ WORK SURFACE	P402
RUBBER DRAIN STOPPER	P228

Diamond Tech

Power Max II Series 6 Year Warranty

All *Diamond Tech* 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 at 800-937-9593 or email info@dtcrafts.com for a Return Authorization Number. Equipment will not be accepted at Diamond Tech 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. Diamond Tech 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 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* 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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