Maintenance

Maintenance to your grinder is minimal but important to prolonging the life and performance of the machine.

1. Apply Inland Motor Shaft Lubricant (#50022) to the shaft whenever changing or removing grinding heads. Remove the head if you won't be using the grinder for more than a week.
2. Tighten grinding head set screws **ONLY** to the flat side of the motor shaft to prevent scaring the shaft which makes removing the head nearly impossible. Never force a bit onto the shaft and never pry off a bit. If the bit is stuck, contact Inland Customer service for instructions at 1-800-521-8428, ext. 306
3. It is very important not to overfill the water reservoir. Fill only until the water is level with the fill line. Over filling can create an electrical shock and damage the motor.
4. After every hour of use you need to remove accumulated glass residue from the sponge in the BitSert. Remove the sponge and hold it under running water and squeeze it several times to rinse it clean. Replace in the BitSert.
5. Remove and clean the reservoir after every 4 hours of use (or more often if grinding heavily). Ground glass accumulates in the reservoir and can slow down the bit and hardened residue is difficult to remove. To remove the reservoir first remove any grinding bits. Lift off the work surface and then lift the reservoir tray off the grinder body. Scrape the glass sludge into the trash and rinse clean. Reassemble the machine (refer to Assembly section).
6. The work surface is reversible. When one side becomes worn, simply flip it over. Replacement grids are available.
7. Motor bearings are permanently sealed and lubricated.

Popular Accessories

TwinSpin™ RetroFitKit™ #50005: The RetroFitKit™ converts your Wizard IV™ into a versatile TwinSpin™ Disc Grinder so you can grind straight pieces, angles (even compound angles) while still being able to grind using standard bits.

3-Step!™ Beveler Kit #50006: Convert your Wizard IV™ into a mini-beveling machine to modify stock bevels and clusters to your own design needs or to polish out small scratches using an exclusive 3 step process.

MagnaShield™ #50018: This 8" x 1o" acrylic shield has an optical quality convex magnifying surface built in to reduce eye strain and make detail work easier.

GrinderStation™ #50014: This washable, folding vinyl backdrop helps contain overspray, keeping your work area clean and dry.

MagnaLight™ #76020: A combination magnifying glass and work light that makes all your work easier to see.

DiamondCoolant™ # 50011: Use this water soluble coolant to grind faster and make bits last longer by reducing grinding friction.

Popular Grinding Heads

WB-8 1/4" Diamond Bits: Available in fine, standard, and speed grits. For drilling holes and grinding intricate details and tight curves.

WB-9 1" Diamond Bits: Available in extra fine, fine, standard, speed and super speed grits, as well as longest lasting SuperBond bits.

Drilling Heads: Available in 1/8" (#40318), 1/4" (#40314), and 3/8" (#40338) diameters. Requires Drill Head Adapter (#40317). They sit on top of standard grinding bits. Useful for drilling holes for hanging hardware, making eyes or other intricate details.

Other Quality Inland Products

SwapTop™ Came Saw: Stock no. 10660

The SwapTop™ Came Saw is the all purpose, full-size, full feature table saw for all your stained glass and hobby projects. It's able to professionally handle large scale projects but precise enough for fine detail work. Imagine cutting metal cames (like zinc and brass), plastics, and even tile, ceramics, glass, and more.

- **Sturdy and Accurate:** The aluminum surface is sturdier, longer lasting and won't corrode when used wet.
- **Large Work Surface:** The 10" x 12" work surface provides plenty of work space for larger projects while taking up only a small part of your work bench.
- **Quick and Easy:** No hassle product assembly takes only minutes. Operation is easy and straight forward. Changing blades takes only minutes.
- **Use Wet or Dry:** The SwapTop™ Came Saw comes with the 6 1/2" General Purpose Blade for dry sawing non-ferrous soft metals and plastics. Saw most woods with the optional WoodCut™ 6 1/2" blade or use the optional 6 1/2" Diamond Coated Blade to (wet) cut tile, stone, glass, and many other hard materials.

Service

Questions about your grinder can be answered by calling Inland Customer Service at 1-800-521-8428 Monday through Friday, 9:00 am to 5:00 PM EST, by visiting the Inland Craft web site at www.inlandcraft.com, or by e-mailing Customer Service at helpdesk@inlandcraft.com.

Replacement Parts

Reversible Work Surface: Inland no. #50081

Replacement Sponge: Inland no. #90102

1" Standard BitSert™: Inland no. #40035

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Document No. 3000/QF/601 Rev No. 2 Stock No. 66861131

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Wizard IV™

Diamond Glass Grinder

User Guide

Thank you for buying this Inland product. Please take time to read all the instructions to understand the correct components, set up, and uses of your Wizard IV™.

Safety

- It is extremely important to wear proper eye protection when using any glass grinder. We highly recommend that you wear safety goggles rather than safety glass. You can also use the Inland FaceShield™ or MagnaShield™ in conjunction with proper eye wear for added protection: A shield alone is not adequate eye protection.
- **DO NOT** wear loose clothing or any accessories (long necklaces, bracelets, shirts with long fringes, and similar) that might get caught by the grinder head while using any Inland grinder.
- Use only in a properly grounded and tested outlet. Under **NO** circumstances should you override the grounding system or modify the plug.
- Set up your machine on a sturdy, level work surface that is water tolerant and a comfortable height to work on.
- Do not sit your grinder in a pan, on a towel or carpeting.

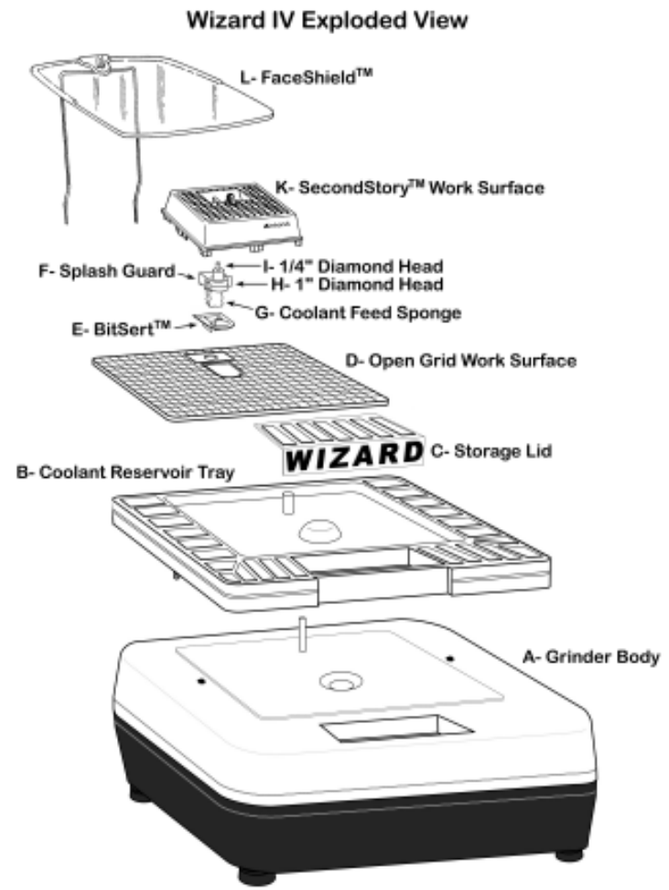
Parts

Check to make sure that you have all the parts listed before beginning assembly. Refer to the diagram on the following page.

No.	Quantity	Color	Description
A	1	White/Black	Grinder Body
B	1	White	Coolant Reservoir Tray
C	1	White	Storage Lid
D	1	White	Open Grid Work Surface
E	1	White	BitSert™ for 1" Diamond Head
F	1	White	Splash Guard
G	2	Yellow	Coolant Feed Sponge
H	1	Brass	1" WB-9 Diamond Head
I	1	Brass	1/4" WB-8 Diamond Head
J	2	Black	Allen Wrench
K	1	White	SecondStory™ Work Surface
L	1	Clear/Chrome	FaceShield™ w/ Wire Bracket

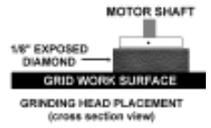
Assembly

Refer to the exploded view diagram below. The Reservoir Tray (B) and Grid Surface (D) are already installed on your machine. Put the BitSert™ (E) into the opening on the grid work surface then insert the Splash Guard (F) into the holes in the BitSert™. Install the FaceShield™ (L) by inserting the wire bracket into the bracket holders found on the back of the machine. Set the face shield onto the loop of the wire bracket.

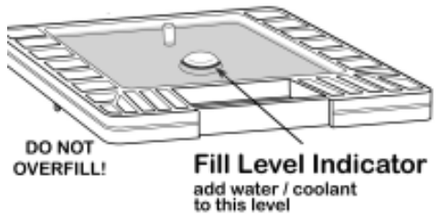


Installing the Grinding Bit

Apply a thin coating of Inland Motor Shaft Lubricant™ (#50022) to the motor shaft. Our Teflon based lubricant helps prevent the bit from seizing on the shaft and seals out ground glass particles. In a pinch, you can use a bit of Vaseline. Loosen the set screw on the 1" Grinding Head (H) by turning it counterclockwise with one of the black Allen Wrenches (I). Slide the bit down onto the motor shaft, positioning the set screw over the flat side of the motor shaft. Bits should slide on easily. **Do not force!** Contact customer service if you have problems. Lower the bit down until just over an 1/8" of silver diamond is exposed above the grid work surface. Secure the bit to the shaft by turning the set screw clockwise with the allen wrench. **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!**

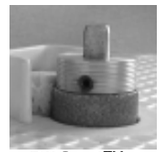


Filling the Coolant Reservoir



A water/coolant mixture prevents airborne glass dust, increases grinding speed, and prolongs the life of the diamond surface. Pour 12 ounces (1½ cups) of water into the reservoir tray. (**DO NOT** use antifreeze) This amount fills the reservoir to the coolant level indicator located in the center of the reservoir tray. **IMPORTANT: Never pour water directly onto the grinding head or motor shaft!** You can then add a capful of Inland Diamond Coolant (#50011) to increase bit life and grinding speed if desired. Replace the grid surface.

Sponge Placement



Coolant is fed to the grinding bit through the Coolant Feed Sponge (F) held in place by the BitSert™ (E). The bottom of the sponge is in contact with the coolant in the reservoir and the upper portion contacts the diamond surface of the grinding bit. Insert the sponge into the rectangular hole in the back of the BitSert™ so that the bottom of the sponge contacts the coolant/water in the reservoir and the top of the sponge is in contact with the diamond surface of the bit. You may need to wet the sponge before grinding by pouring a small amount of water onto it. The sponge must remain in contact with the bit while grinding. If a white paste develops on the grinder head or your glass while grinding, either the sponge is improperly positioned or the water/coolant level in the reservoir is low. Periodically rinse out the sponge to remove grinding residue. When the sponge becomes worn, replace it.

Grinding

Turn on the machine and start grinding a piece of scrap glass to get a feel for the grinding action. Begin by pushing the glass into the grinding bit using light pressure and moving the glass back and forth across the bit. 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. When grinding out deep cuts, use intermittent pressure to allow coolant to rinse ground glass from the head. If you ever have a white paste form on the bit, it is not getting enough coolant. Stop and check the sponge placement and coolant level. Grinding without coolant greatly reduces the life of your grinding heads.

As the diamond surface wears, you will find it grinds less effectively. When this happens, it is time to expose a new portion of the diamond surface. Loosen the set screw using the allen wrench and move the grinding head up on the shaft to expose a new 1/8" section of diamond. Secure the bit back in place making sure to tighten against the flat side of the motor shaft. Reposition the sponge if needed. You have up to 5 (1/8") sections of diamond on a standard grinding bit to use before you need to consider replacing the entire head.

How To Drill A Hole

The Wizard IV™ comes with a 1/4" grinding/drilling head. The 1/4" WB-8 bit is useful for both drilling holes and intricate grinding. It is put onto the motor shaft on top of the 1" WB-9 bit. Loosen the set screw and place the bit onto the shaft and secure it to the flat side of the motor shaft like any other bit.

You need to apply coolant to the bit head while drilling or grinding. At this time you can set up the SecondStory™ Work Surface according to the instructions packaged with it. The SecondStory™ makes it easy to use the 1/4" diamond head and eliminates the need for the hand held sponge in the instructions below. You just lift it out of the way when you want to go back to using the 1" grinding head.

Start drilling the hole by holding the front surface of the glass at about a 45^0 angle to the upper edge of the bit while holding a coolant soaked sponge against both the bit and glass. (You may want to use two hands). Start the machine and slowly bring the glass down to a horizontal position onto the bit. Work the glass down and around the bit top in a circular motion, always making sure to keep the glass and bit surface wet. You may need to stop to reload the sponge several times. Ease up on the pressure as you begin to see the bit come through the back of the glass to help reduce chipping.

Storage Compartment

The storage area is useful for holding items like extra grinder heads and ThumbSavers™. The storage lid (C) is removed by simply lifting upward on the word '**WIZARD**'. To close, simply set it back in place on the reservoir.