

the bit top in a circular motion, making sure to keep the glass and diamond wet at all times; you may need to stop and reload the sponge several times. Reduce the pressure as you begin to see the bit come through the back of the glass to help avoid chipping. Practice on a piece of scrap glass before you drill on your final project.

Maintenance

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

1. Apply Inland Motor Shaft Lubricant (no. 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 by removing it. Squeeze several times while holding under running water to rinse it clean.
5. Remove and clean the reservoir every 4 hours of use, more often if grinding heavily. Remove the reservoir by first removing any grinding bits. Lift off the grid surface and then lift the reservoir tray off the grinder body. Scrape the glass sludge into the trash and rinse clean. Reassemble, referring to the 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

SecondStory™ Work Surface #50001: This elevated work surface sits on your existing work surface with self-contained coolant reservoir makes using smaller bits and drilling heads easier.

FlexShaft™, no. 50019: FlexShaft™ turns your grinder's 5/16" motor shaft into a hand-held engraving, drilling, and shaping tool.

FaceShield™ #50017: A clear 8.5" x 10" acrylic shield for added protection against grinder chips and spray.

Popular Grinding Heads

Jewelry Bits: Grind 1mm (no. 40190) or 1.4mm (no. 40194) grooves around the outside of cabochons, fused pieces, etc. for wire wrapping.

Drilling Heads: Sit on top of standard grinding bits and are useful for drilling holes and creating intricate details. Available in 1/8" (no. 40318), 1/4" (no. 40314), and 3/8" (no. 40338) diameters and require the Drill Head Adapter (no. 40317).

Another Quality Inland Product

DB-100™ Diamond Band Saw, no. 91010

The DB-100 Diamond Band Saw is engineered to run wet or dry and cuts glass, stone, and a whole lot more! Make impossible cuts possible, save glass, and cut that perfect piece on the first try!



- Includes two diamond blades for sawing glass, stone, ceramic, marble, porcelain, shells, tile and more. Optional wood and metal cutting blades are available.
- It has a permanent magnet, high torque motor with built in speed control for optimum cutting control, accuracy, and speed.
- Patented BladeSert™ blade guides make the most intricate cuts simple and the upper blade guide adjusts to materials up 3" thick.
- Rigid and quiet. Structural plastic housing has extra thick walls for strength and durability while deadening sound and making it lightweight and easy to handle.
- **2 Year Full Confidence Warranty.**

Replacement Parts

Part Name	Impulse™	Aero™
Grid Work Surface	no. 50081	no. 50081
1" Standard BitSert™	no. 40041	----
3/4" Standard BitSert™	no. 40036	no. 40036
3/4" WB-1 Bits	Assorted Grits available for use on both	
1/4" WB-8 Bits	Assorted Grits available for use on both	
1" WB-9 Bits	Asst'd Grits	----

Service

So that we can offer you the highest level of service possible, please take a moment to register your product by going to www.inlandcraft.com or mailing in the registration card.

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

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Impulse™ and Aero™ Diamond Glass Grinder

User Guide

Thank you for buying this Inland product. This booklet contains instructions for set up and use of both the Impulse™ and Aero™ machines. Please take time to read all the instructions to understand the correct components, set up, and use of the model you purchased.

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 and make sure that you have all the parts listed for your particular machine before beginning assembly. The following are standard parts and accessories for both the Impulse™ and Aero™.

Part Number and Name	Impulse™	Aero™
	Quantity/Color	Quantity/Color
(A) Grinder Body	(1) Black/White	(1) Maroon/White
(B) Coolant Reservoir Tray	(1) Black	(1) Maroon
(E) Open Grid Work Surface	(1) White	(1) White
(F) BitSert™	(1) White	(1) White
(G) Coolant Feed Sponge	(2) Yellow	(2) Yellow
(I) Allen Wrench	(2) Black	(2) Black
(J) Splash Guard	(1) White	(1) White

The following item(s) are standard with the Impulse™:

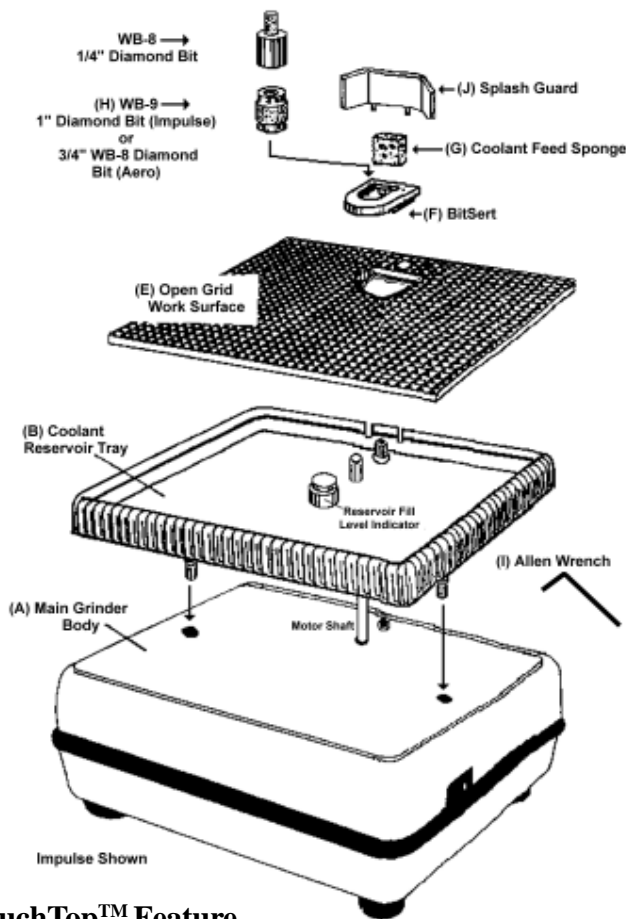
1" WB-9 Grinding Head	(1) Brass	(not for use on Aero™)
1/4" WB-8 Grinding/Drilling Bit	(1) Brass	(optional accessory)

The following item(s) are standard with the Aero™:

3/4" WB-1 Grinding Head	(optional accessory)	(1) Brass
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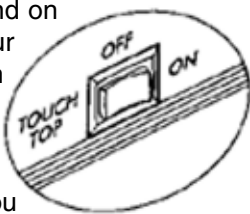
Assembly

Refer to the exploded view diagram below. Place the Coolant Reservoir Tray (B) on top of the white Grinder Body (A), inserting the locator pegs on the reservoir bottom into the corresponding holes in the grinder body. NOTE: The other hole in the top will be covered by the coolant reservoir. Next place the Work Surface (E) on the coolant reservoir and insert the white BitSert™ (F) into the work surface. Insert the Splash Guard (J) behind the motor shaft by inserting it into the holes in the BitSert™.



The TouchTop™ Feature

Your grinder has a three-way switch located on the right side of the body. You can select off, continuous running, or TouchTop™. When set for TouchTop™, the machine turns off and on automatically when you put the glass and your hands onto the work surface to grind. It then turns off automatically when you remove them. Using the TouchTop feature is convenient and greatly extends motor life. You can adjust the sensitivity of the work surface to the feel you



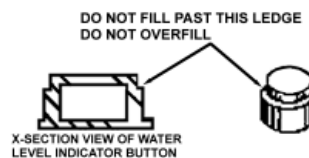
like best. On the bottom of the **reservoir** tray (Part B in the diagram) is a sensitivity set screw. Turning the screw tighter, or clockwise decreases sensitivity. Loosening the screw increases the sensitivity. To adjust the sensitivity, use a one pound weight to compensate for the load of coolant that will be in the reservoir when you are grinding. Do not adjust the washer nut for the TouchTop switch found on the grinder base. Take the time to adjust the TouchTop™ feature to your preference now.

Installing the Grinding Bit

Apply a thin coating of Inland Motor Shaft Lubricant™ (no. 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 3/4" 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!**

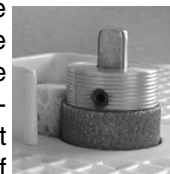
Filling the Coolant Reservoir

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 (no. 50011) to increase bit life and grinding speed if desired. Replace the grid surface.



Sponge Placement

Coolant is fed up to the grinding bit through the yellow Coolant Feed Sponge (G) held in place by the BitSert™ (F). The bottom of the sponge contacts 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 in the reservoir and the top of the bit 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 head or your glass when grinding, either the sponge is not prop-



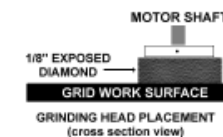
erly positioned or the water/coolant level in the reservoir is low. Periodically rinse out the sponge to remove accumulated grinding residue. When the sponge becomes worn, replace it.

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.

Diamond Grinding Heads

Diamond grinding heads, or bits, have actual diamond crystals. As the diamond surface wears, you will feel it grind 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 a 5/8" vertical section of usable diamond on 1" and 3/4" diameter grinding bits. Since most stained glass is 1/8" thick, by adjusting the bit up and down on the shaft, you have up to 5 usable sections of diamond before you need to consider replacing the entire bit.



How To Drill A Hole

The Impulse comes with a 1/4" grinding/drilling head. Aero owners will need to purchase this bit. The 1/4" WB-8 bit is useful for both drilling holes and intricate grinding. The 1/4" WB-8 is placed onto the motor shaft so it sits on top of the 1" WB-9 (or 3/4" WB-1) head. Loosen the set screw and place the bit onto the shaft, securing it to the flat side of the motor shaft like any other bit.

You supply coolant to the head and glass while drilling by using another sponge soaked in coolant. Begin drilling the hole by holding the front surface of the glass against the upper edge of the bit at about a 45° angle while you hold the coolant soaked sponge against the bit and glass. (You may want to use two hands). Slowly move the glass down on the bit to a horizontal position. Continue to work the glass down and around

