

**AMERITool, INC.**  
**UNIVERSAL HD MACHINE INSTRUCTIONS**

**BEFORE PLUGGING IN THE UNIVERSAL HD MACHINE, PLEASE READ ALL INSTRUCTIONS THOROUGHLY. THE MACHINE IS AN ELECTRIC POWER TOOL AND CAN CAUSE PERSONAL INJURY OR SUFFER DAMAGE IF IT IS IMPROPERLY USED.**

**CAUTION**

1. **NEVER** operate the Universal HD machine without goggles or other protective eye equipment. Be sure that anyone who is observing or is nearby has adequate eye protection as well.
2. Take care that no water or oil is allowed to run down the shaft and into the motor, as this will cause the motor to instantly burn out. The machine is designed in such a way that this does not occur with normal use.
3. Do not allow the water level to build up in the machine basin. Be sure that the drainage hole is open so that the used water flows properly into the run-off cup. Should the hole be plugged and the water level be allowed to rise unchecked, water could possibly leak down the motor shaft, causing motor burnout.
4. Always unplug the Universal HD while maintaining, cleaning or when not in use.
5. Do not use the discs dry. Working with dry discs can damage the discs as well as create dust that is harmful to breathe.
6. Read the copy of "Safety Rules For Power Tools" enclosed with your machine.

**OPERATING INSTRUCTIONS**

1. Carefully unpack machine and set it on a table. Check to see that no damage has occurred in shipment. Check all packing materials to be sure that no small parts are inadvertently discarded.
2. Notice setscrew on the arbor. Be sure screw is positioned against the flat side of the motor shaft. If the screw is positioned against a rounded side of the shaft, it will make a squeaking noise and create friction, causing the motor shaft to feel hot. Once the arbor is properly positioned, check the setscrew for tightness on the arbor, using the allen wrench. Do not over tighten the screw. The arbor may be adjusted up and down as necessary to keep the spinning disc below the water shield. The black water shield has two large screws at the front on either side; these are used to raise or lower the water shield, as needed.
3. Install water system, consisting of a black plastic cup with water tube on top of the water shield. Turn drain 1/4 turn. Position drain cup. Return drain to original position. Fill top cup with CLEAN water. (Never re-use water). Set the Metal Diamond Disc on the arbor and secure with flat washer and 1/4X20 threaded black knurled knob. **Put on your safety goggles**, turn on power switch.
4. Adjust the valve on the water tube until water drips slowly and steadily onto the spinning disc. Now you are ready to shape your rough material.

**DIAMOND SANDING DISC: USE AND CARE**

**STEP 1: METAL DIAMOND DISC (ROUGH SHAPING)**

1. Metal Diamond Disc is used for stock removal and shaping of materials covering a wide hardness range. A slight vibration is normal. Never use discs dry; use only clean water as lubricant. Do not use wipers or sponges as they can become contaminated with cutting debris and larger diamond particles. Contamination from coarse material will cause hard to remove scratches in the material you are working on.
2. Grind edge of material to fit mounting or template. Also remove bulk of material to create desired shape of gemstone. Remove as many flat spots as possible if you are making a domed cabochon.
3. If a sharp edge is present on your material, gently introduce sharp edge to diamond disc. This prevents unnecessary wear and/or damage to your diamond disc; it will also prevent possible chipping of your material.
4. When finished with disc, rinse and spin dry completely. Store in a clean, dry plastic bag.

NOTE: Among the accessories included with your kit, you will find three colored Diamond Sanding Discs, a White Polish Pad, and four black backing plates. To prepare these items for use, they must first be assembled. To do this, remove protective backing from Diamond Sanding Disc. Apply the exposed pressure sensitive adhesive to the clean, smooth surface of a hard backing plate, making sure Disc evenly contacts backing plate surface. Clip a center hole with a sharp knife, following the 1/2" center hole in backing plate.

#### STEP 2: 325 MESH BROWN DIAMOND SANDING DISC

1. This disc is used following the Metal Disc to further refine the desired shape. It also removes scratches and flat spots left from the metal rough grinding operations. It is important to remove all scratches from previous operations, as they are difficult or impossible to remove later on.
2. When finished with the 325 Mesh Diamond Sanding Disc, rinse thoroughly with clean water, spin dry and store in a clean, dry plastic bag. Rinse black water shield before proceeding to the next step.

#### STEP 3: 600 MESH RED DIAMOND SANDING DISC

1. This step is used after the 325 Mesh (brown) Sanding Disc. The 600 Mesh Red Diamond Sanding Disc is used to further refine the work piece before proceeding to the Blue 1200 Mesh Diamond Sanding Disc. It is not as aggressive as the brown disc, and it is excellent for removing the scratches and flat spots remaining after using the brown disc. As with the other Sanding Disc, use with water drip.
2. As with the 325 Mesh Sanding Disc, rinse and spin dry completely after use; store in a clean, dry plastic bag.

#### STEP 4: 1200 BLUE DIAMOND SANDING DISC

1. This disc is used after the shaping of the work piece is completed. It removes scratches left by the 600 Mesh Sanding Disc and imparts a sheen to the material. This disc is also called a "Pre-Polish Pad."
2. When finished with this disc, clean, dry and store as with the other Sanding Discs.

#### STEP 5: WHITE POLISH PAD WITH SYRINGE OF 14,000 DIAMOND COMPOUND

1. The White Polish Pad should be charged with the 14,000 Mesh Diamond Compound and is used for the final polish. This pad is used with a very slight drip of water.
2. Take the syringe of 14,000 Mesh Diamond Compound, remove cap and squeeze a small amount onto several areas of the White Polish Pad. Turn machine on so that it spins slowly; use fingers to distribute Diamond compound over work area of Polish Pad. Turn machine up to working speed; apply work piece. Too much compound will cause the stone to slide and it will not polish.
3. When finished, store White Polish Pad in clean, dry plastic bag. It does not require charging each time it is used.

### **MAINTENANCE**

The Universal HD is designed to give years of reliable, vibration free service with only a minimum of maintenance.

#### 1. CLEANING

After use, the Universal HD is easily disassembled for cleaning. Remove and rinse the black water shield. Wipe machine basin with damp towel. **Pour about a cup of clean, warm water into the drain to remove debris from the drain.** Rinse and dry drain cup. Do not pour waste water down a sink. Allow the machine to dry completely. Store in a safe place out of the reach of children.

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### **WARRANTY**

Your Universal HD warranty covers failure in the material and workmanship for 1 (one) year from the date of original purchase. Any failed part of the Universal HD will be repaired or replaced without charge.

This warranty does not cover damage caused by misuse, abuse, accidents or alterations to the Universal HD.