

# OWNERS MANUAL

## WISSOTA UNIVERSAL DRESSER

### SAVE THESE INSTRUCTION!

**WARNING:** For your own safety, read and understand all operating rules, warnings, and cautions for this dressing unit AND for the skate sharpening machine(s) this dresser will be used on BEFORE operating machine or this dresser.

**WARNING:** Grinding wheels can rupture/explode if abused. Also, in normal wheel dressing operations, the materials being removed may fly off the wheel with considerable force. The potential of serious injury exists for both the operator and for others in the work area (possibly 30 feet or more). To protect against this hazard, before operating machine, or this dressing unit, operator and others in the area must wear safety goggles or a full-face shield worn over safety glasses with side shields, along with protective clothing.

**WARNING:** Dressing operations create dusts. Excessive dust inhalation will adversely affect your respiratory health. Dressing with round diamond coated FULL WIDTH spinning forms produce more fine dust than regular single point diamond dressers. Re-evaluate the effectiveness of your dust control system when using round spinning diamond forms that dress the full width of the wheel at one time. Always wear a tight fitting H.E.P.A. dust mask.

**WARNING:** This Wissota Universal Dresser is designed solely to dress skate sharpener grinding wheels on skate sharpening machines. Never attempt to perform any other type of use with this dresser. Doing so may present a risk of serious personal injury.

**WARNING:** Always contact the manufacturer of the specific diamond coated form tools you are using to be fully aware of ALL risks related to their specific products.

### SAFETY RULES

1. Never make any adjustments with the machine running.
2. Keep face out of line and as far away from work opening as possible.
3. Keep work area clean: cluttered areas and benches invite accidents.
4. Keep work area well lighted.
5. Keep children away, and all visitors should be kept a safe distance from work area.
6. Wear proper apparel. No loose clothing, neckties, rings, bracelets or other jewelry to get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
7. Don't overreach. Keep proper footing and balance at all times.
8. Keep hands in sight and clear of all moving parts.
9. Stay alert. Watch what you are doing. Use common sense. Do not operate tool when you are tired.

**DOUBLE ENDED SPINDLE (P/N#13)** (5/16-18 RIGHT HAND  
THREAD ONE END, 5/16-18 LEFT HAND ON THE OTHER END)

**IMPORTANT:** To provide self tightening of the Spindle Caps (#11 LorR), use the right hand threaded spindle end on machines which throw sparks to operators right (WISSOTA). Use left hand threaded spindle end for machines which throw sparks to operators left (Blademaster, FlemmingGray, E-Z Sharp, Blackstone). The double ended spindle comes with left and right hand threaded Spindle Caps (#11 LorR). Install the “**larger size**” round diamond dressing form tool on the correct spindle end so that it bottoms out against the shoulder of the spindle. If there is a “top” to the dressing tool, be sure it is facing up. Install the spindle cap snugly. The spindle cap locates against the inside race of the bearing and will NOT effect how the dresser spins.

**INITIAL SPINDLE HEIGHT SET UP** (SEE ALSO “FINAL SPINDLE SET UP”)

**WARNING:** The skate sharpening machine must be off while performing this set up.

1. Determine if your skate sharpening machine throws sparks to operator’s right or left. The double ended spindle (#13) has left handed thread on one end and right hand thread on the other. If the skate sharpening machine throws sparks to the right, install the spindle with the right hand thread facing UP and vice versa. This allows for “self tightening” of the spindle hold down cap (#11 LorR).

2. With the proper spindle end facing UP, screw the spindle into Lever (#4). Next screw the spindle lock nut onto the spindle from underneath the lever (#4). Leave lock nut loose for now. See Fig .1 to verify correct assembly.

3. See “**Installing Dressing tools**” and install the dressing tool of your choice.

4. Wipe the table top of your skate sharpener to remove any abrasive sand, dust, or magnetic particles which could be attracted to the magnetic base of the Universal Dresser, or interfere with the magnetic base sitting flush on the table. The Universal Dresser’s magnetic base will only work on cast iron or steel tables. Verify that the lever on magnetic base is pointing to “-“ (off). Place the Universal dresser on your skate table so that your dressing tool is close to but NOT TOUCHING the grinding wheel. Now screw the entire spindle up or down until your dressing tool is centered on the grinding wheel. **CAUTION: The round Dressing Tool you are using must be wider than the grinding wheel, extending past the grinding wheel both above and below.**

While keeping the spindle in this position, tighten the lock nut (#12) securely.

**DRESSING THE GRINDING WHEEL WITH THE UNIVERSAL**

## **DRESSER**

**WARNING:** ALWAYS WEAR EYE PROTECTION  
ALWAYS WEAR A TIGHT FITTING H.E.P.A. DUST MASK  
DO NOT MAKE ANY ADJUSTMENTS WITH MACHINE ON.

IMPORTANT- FOR BEST RESULTS,

**NEW GRINDING WHEELS-** Always dress the grinding wheel with your factory installed dressing system to remove any concentricity problems (hop,wobble) BEFORE using the Universal dresser. DO NOT use the Universal Dresser to “true up” new wheels.

**NEW OR CURRENTLY IN USE GRINDING WHEELS-** If going from a radius shape to a “flat bottom” shape, always dress the grinding wheel with your factory installed dressing system to the largest radius possible BEFORE switching to the round diamond “flat bottom” dressing forms. Once in the “flat bottom” shape you can ignore the factory dresser, using the Universal Dresser exclusively until you decide to go back to a “radius” shape. If you go back to the radius shape follow the above before switching back to the flat bottom shape. Starting with a wheel that has been trued up and dressed to a large flat radius shape makes it easier for the round diamond coated (expensive) flat bottom forms to dress the first time.

### **WITH MOTOR OFF (steps 1 and 2)-**

1. Wipe off machine table top to remove abrasive sand, dust or magnetic material.
2. Verify that the lever on the magnetic base points to - . The - is magnetism OFF, and the + is magnetism ON. With the lever on the magnetic base in - position, place the Universal Dresser on the machine table so that the dresser tool is very close to the grinding wheel but NOT touching. Turn magnetism lever to +. Verify that Universal dresser is held solidly to table top and dresser tool is NOT touching grinding wheel.
3. Wearing eye protection and a Tight fitting H.E.P.A. dust mask, turn motor on. Turn yellow feed screw (#10) slowly/firmly in and take light dressing cuts to your grinding wheel.

**IMPORTANT!** The dressing tool is only dressing the grinding wheel when it is rotating SLOWER than the grinding wheel (overcoming its “at rest” state). Once the dressing tool and the grinding wheel are both spinning at the same speed, NO cutting action or wheel dressing is taking place. Forcing the dressing tool further into the grinding wheel in this condition will actually break down the aluminum oxide grain of the grinding wheel and put excess wear on your dressing tool. Try small “in and out” advances with the yellow dial, allowing the dressing tool to stop spinning between advances. Try different feed techniques to see what works best on your grinding wheel.

**WARNING:** Turn machine off and verify that the grinding wheel has stopped spinning before removing the Universal Dresser from the table top.

4. Turn magnetism lever to - ,and remove the dressing unit.

## **FINAL SPINDLE ADJUSTMENT**

This adjustment will “synchronize” the WISSOTA Universal Dresser with the factory installed dressing mechanism currently installed on your machine. This will allow your skate holder to grind skates against a grinding wheel dressed by the factory dresser OR the Universal Dresser with no or minimal adjustment to the skate holder.

1. Using your factory dressing system, dress the grinding wheel and grind a skate. Adjust your skate holder so that you have absolutely even edges.
2. See “**Dressing the grinding wheel with the Universal Dresser**”. Now, redress the grinding wheel using the Universal Dresser
3. WITHOUT MAKING ANY CHANGE TO THE SKATE HOLDER regrind the skate against the grinding wheel that has now been dressed using the Universal Dresser.  
**WARNING:** Do not make any adjustments with the motor running.
4. If you have a high top edge, loosen lock nut (#12) and screw spindle (#13) UPWARDS (toward ceiling) a very small amount. For a high bottom edge on skate blade, screw spindle DOWN a small amount. The spindle is slotted on the ends. Use a screw driver to make fine adjustments up or down. BE SURE TO RETIGHTEN LOCK NUT WHEN DONE.
5. Regrind skate and check for even edges. Repeat step#4 above if needed. Once even edges are achieved, synchronization has occurred. Leave the spindle locked in this position.

## **OPERATION TIPS / MAINTENANCE**

If the tolerances of the round spinning diamond coated dressing tools you are using are not precise; they will not “repeat” which will cause you to readjust your skate holder.

If there is a “TOP” and “BOTTOM” to your dressing tool, always place the top UP.

If there is a bearing in your dressing tool, check that it rotates easily. Pinch the inside race between your fingers; rotate the dressing tool feeling for ease of rotation, any “flat spots”, “bumps”, or uneven rotation. **UNEVEN ROTATION WILL CAUSE POOR DRESSING OF THE GRINDING WHEEL.**

Conversely, if your bearing spins effortlessly it will spin up to the same speed of the grinding wheel quickly. **IMPORTANT!** As mentioned under “Dressing the grinding wheel with the Universal Dresser”, The dressing tool is only dressing the grinding wheel when it is rotating SLOWER than the grinding wheel (overcoming its “at rest” state). Once the dressing tool and the grinding wheel are both spinning at the same speed NO cutting action or wheel dressing is taking place. Forcing the dressing tool further into the grinding wheel in this condition will actually break down the aluminum oxide grain of the grinding wheel and put excess wear on your dressing tool. Try small “in and out” advances of the yellow dial, allowing the dressing tool to stop spinning between advances. Experiment with different feed techniques to see what works best for the particular machine, grinding wheel, and condition of the bearing.

You can place the Universal Dresser at different locations relative to the grinding wheel to direct the dust stream to a slightly more favorable direction.

Try locating the Universal Dresser at different locations, and at different angles to the grinding wheel to find a wheel dressing “sweet spot” on your particular machine

The magnetic base of the dressing unit must sit PERFECTLY FLAT on the machine table. If the bottom of the magnetic base becomes damaged/dented etc, it will not rest flat on the machine table, reducing the magnetic pull dramatically. Always clean the tabletop before placing the Universal Dresser. If the dressing unit is sitting on small particles of abrasive sand/dust (even very small particles), it may not locate or perform perfectly. With the magnetism lever turned to - , inspect and clean the bottom of the magnetic base frequently.

Do not put any substance on the dressing unit which is oily, sticky, tacky or wet, as this will attract the ABRASIVE dust. Use car wax on the bottom of the dressing unit if needed.

Be careful where you place or store the Universal Dresser after use. Your skate sharpener will create metal powder/dust as a byproduct of sharpening skate blades. Placing the magnetic base on or near this metal debris will cause the dressing unit to be contaminated. Find a good storage spot for your dressing unit, preferably to the left side of the machine, and make a habit of keeping it there between dressings.

**QUESTIONS? CONTACT THE FACTORY....**

**WISSOTA MFG 3268 COUNTY ROAD 42 WEST BURNSVILLE MN 55337**

**763-545-1448**