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HORIZONTAL BEVELER GRINDER MODEL NO.'S 5045, 5046, 5047, 5060, & 5061

INTRODUCTION

The information in this instruction is brief and basic. If at all possible, the beginner should work under the supervision of a skilled artisan or take a class under a trained instructor using a detailed glass-working text.

Beveling is the process where by the edges of a piece of glass are angled from some point on the surface to the rim.

With this unit, the user has the ability to grind, bevel, and polish pieces of glass.

The Horizontal Beveler Grinder unit is designed for coldworking glass. With the appropriate accessories this unit will grind, shape, and polish small work pieces. Flat diamond discs are the cleanest, fastest way to make glass bevels.



VARIABLE-SPEED UNIT DESCRIPTION

This ruggedly built horizontal beveler/grinder is made with a heavy-duty welded steel chassis and waste catch pan for easy wash out and clean up. The unit has a 1" shaft mounted in heavy duty ball bearings, set 11" apart, designed to withstand the rigors of daily use and lend stability and rigidity to the blanchet and precision ground plate. The shaft has a 5/8"-11RH female thread to accept a variety of finishing tools such as diamond cones and domes. The variable speed unit allows speed ranges from 200rpm to 1100rpm and features reversible plate spin. Use this unit with removable, magnetic-backed, diamond discs for clean and easy grinding. This model features a water sleeve that allows water to come up through the shaft center and disperse from the middle of the plate and an overhead loc-line® water supply. The 1hp, 3phase, wash-down motor and speed controller are perfect for use in wet environments. This unit cannot be run on a CFI circuit.



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SINGLE-SPEED UNIT DESCRIPTION

This ruggedly built horizontal beveler/grinder is made with a heavy-duty welded steel chassis and waste catch pan for easy wash out and clean up. The unit has a 1" shaft mounted in heavy duty ball bearings, set 11" apart, designed to withstand the rigors of daily use and lend stability and rigidity to the blancher and precision ground plate. The shaft has a 5/8"-11RH female thread to accept a variety of finishing tools such as diamond cones and domes. The single speed unit is available in 545rpm and 1080rpm. Use this unit with removable, magnetic-backed, diamond discs for clean and easy grinding. This model features an overhead loc-line® water supply. The single speed unit is built with a 1/2hp motor and a water resistant cord.

DISC CARE

Magnetic backed diamond discs are an essential part to an operating horizontal beveler/grinder. The diamond discs are the cleanest and fastest way to grind, bevel, smooth, shape, and polish glass. Magnetic discs vary from coarse nickel-bond 60g aggressive grind to fine resin bond 1,200g finish and polish. To ensure optimal use of diamond discs, always dry off the discs after use and store on a flat dry surface to diminish warp. A warped disc will cause vibration during use.

PLATE CARE

When finished using magnetic discs, always remove the disc from the plate so as to reduce the likelihood of rust. Take a coarse sponge, such as a Scotch-Brite™, and run over the plate to remove any accumulated rust. Dry the plate and spray with WD-40 to help resist rusting in the future. Should the plate have to be removed, mark both the plate and the shaft/flange to ensure the plate holes remain lined up with the original flange holes. The plate and holes have been factory set to minimize run-out. Marking the holes will maintain smooth operation upon replacement of plate.

MAINTENANCE

The Horizontal Beveler Grinder requires very little maintenance beyond standard cleaning during and after use. Avoid allowing the glass residue to build up in the catch pan by using the loc-line® water hose to wash out the pan. If the glass waste builds up, turn the machine off and use a plastic putty knife to scrape away the debris. Do not allow the water in the catch pan to rise over the bearing. Check the waste removal hose to ensure proper drainage of water and debris.

Every six months it is necessary to grease the bearings with a small pump from a grease gun. For variable speed units, there are four grease fittings, one under the plate, one on the lower bearing, and two on the water sleeve. For single speed units there are two grease fittings, one under the plate, and one on the lower bearing. Remove the front panel for access to the bearings and water sleeve.



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OPERATION

Prior to using your machine, make sure that you have a clean, usable workspace with access to water and an electrical power source. Setting up a water station is simple. Fill a five gallon bucket three-quarters full of water. Connect a ¼” plastic tube to the water manifold on the side of the unit and connect the other side of the tube to a water pump. Place the water pump inside the bucket. Make sure the drain tube is sitting inside a separate bucket so that water draining from the pan is being removed. Periodically replenish water with fresh, clean water, this avoids cross-contamination. Plug both the water pump and the unit into a power source. If an immediate water source is available, hook the water supply directly to the water source for a constant supply of fresh water. NEVER remove the glass waste into a drain as the glass waste will solidify and create a blockage in the drainage system.

Place the magnetic backed disc on steel plate using the brass centering pin as a guide. Always make sure to have water running on unit when grinding. Glass residue is dangerous to breathe in. Water will keep the residue from becoming airborne. Grind glass as desired using magnetic backed diamond discs to move from a coarse grind to a fine grind. Use a felt disc in combination with cerium oxide to achieve a clear finished polish. Make sure to follow the instructions under “Disc Care” to ensure maximum disc life. For units featuring a through shaft water feed system, plug the shaft with the solid brass plug during the polishing stage to discontinue water running through the shaft. This allows the user to control the amount of water being applied to the felt disc while keeping the water sleeve cool.

To grind, hold the work piece against the turning plate in whatever position is most comfortable. Experiment with pressure on the plate to find the amount that optimizes results. It is advantageous to move the work piece back and forth across the surface of the plate. Moving the work area from center to rim produces a more even wear of the diamond disc promoting a longer disc life.

When finished grinding and polishing follow the instructions under “Maintenance” to clean the glass residue out of the machine. Additionally take time to follow the instructions under “Plate Care” to minimize rusting of the steel plate and to keep unit running smoothly and efficiently.