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GLASS LATHE UNIT INSTRUCTIONS

INTRODUCTION

Covington Engineering has introduced a new glass lathe designed by glass artist Steve Klein. The glass lathe features a 36" turned, ground, and polished shaft that minimizes vibration and gives user 11" of usable shaft space. The 1hp motor gives ample torque to all three quick-change speeds, 635rpm, 805rpm, and 1100rpm.



STANDARD GLASS LATHE DESCRIPTION

The standard glass lathe allows user to mount up to 10" wheels. The rust resistant, powder coated splash pans, come un-mounted to be attached to the base where it is most convenient for the user. The splash hoods come with valves and spray nozzles for adjustable water application while two felt guards help minimize splash and overspray. This model also comes with two four inch spacers to center wheels under spray nozzles.

GLASS LATHE NUMBER TWO DESCRIPTION

The glass lathe number two is a versatile machine that can accommodate almost any wheel. This machine is light enough for a small studio but heavy-duty enough for high production shops. Lathe stand features fully adjustable shelves that can be removed for large pieces. The stand is 36" high, creating a comfortable shaft height of 46". Each adjustable aluminum-topped Lam-I-Cushion side table is 16" x 36" high, to accommodate users own water catch basin.

INSTALLATION

Prior to using your machine make sure you have a clean usable workspace with access to water and an electrical power source. Read Covington's Safety Demands sheet.

Place standard glass lathe on a sturdy, level table to avoid vibration. Glass lathe number two **must** be anchored to the stand, and the stand **must** be anchored to the floor to keep from tipping over. Glass lathe number two units sold without the stand **must** be anchored to a solid, sturdy tabletop.

When putting wheels on shaft, be sure the arbor holes are the correct size and that the shaft is clean. Wheels should fit snugly. Allow up to 0.002" clearance for heat expansion.

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INSTALLATION CONTINUED

A soft material such as cardboard (less than 1/8" thick) or blotter paper (less than 0.025" thick) should be used between the flanges and the wheels to compensate for uneven surfaces. This will produce a mechanical joint. Flanges must be perpendicular to the shaft. Do not use flat washers in place of recessed flanges. Tighten nuts and secure wheels firmly in place. Do not over tighten as this action may damage wheel. Rotation of shaft will keep retaining nuts tight when wheels are in motion. Rotate wheels and check for side wobble and round.

Important: Install wheels properly to avoid vibration. Should vibration occur, mark wheels and loosen nuts to turn each of the wheels. Spin the opposite direction 1/8" revolution and repeat check until balance is obtained. Caution: An out of round wheel cannot be balanced.

OPERATION

There must be a provision for bringing coolant to the wheels. A moderate flow is satisfactory. This is important because:

1. It keeps wheels flushed clean so dust will not form. It is hazardous to your health to breathe dust.
2. Heat generated by dry grinding can damage the material being cut.
3. It is possible to shorten the life of your grinding wheel if you run it dry.
4. Grinding residue, which slows abrasive action, is washed away to make cutting action faster.
5. Do not allow water absorbed by the wheel to upset its balance. After each use, wheels should be run dry for at least one minute before the machine is stored for the day. This is to clear the wheel of water impregnation of the grit bond. Never allow the wheel to set in water when not in use.

Water manifolds with loc-line® are available for purchase in the catalog and online to provide water to wheel face.

MAINTENANCE & WHEEL CARE

Caring for wheels properly ensures fast abrasive action, polishing quality, and vibration reduction. Always follow the manufacturers instructions.

Abrasive Bond Wheels: Before approaching the front of a wheel or using it, run for one full minute. Never use a chipped or cracked wheel. If chipped, dress out chipped area, if practicable. If cracked, replace wheel.

Silicon Carbide and Aluminum Oxide Wheels: The wheel will wear with use, although not rapidly. If the surface becomes grooved or wavy dress it with a coarse silicon carbide dressing stick. Use continuous water spray while dressing. Smooth surface with 100-grit silicon carbide sandpaper wrapped over a wooden block.

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MAINTENANCE & WHEEL CARE CONTINUED

Diamond Wheels: Sharpen wheel by reversing its direction of rotation periodically (turn it around on the shaft), or run a coarse silicon carbide stick across surface. Use more water and flush wheel clean.

Cork Wheels: Dress with a sharp chisel or sandpaper sanding block. If using chisel or scraper, hold tool point in downward position to wheel rotation to avoid the possibility of the edge digging into the wheel.

Felt Wheel: Dress dry wheels with a clean, coarse, tooth file. Dress damp wheels with a fine tooth file. Brush away felt residue.