

RELS 2000

SET UP AND OPERATING INSTRUCTIONS

FOR TECHNICAL INFORMATION
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SET UP INSTRUCTIONS

1. Remove rust preventative from all parts of the machine. Take special care to remove it all from the inside taper of the spindle where the arbor seats.
2. Remove the arbor from the pack kit box. Place the arbor in the larger opening in the end of the spindle. Remove the tape that is holding the draw bar into the spindle. Turn the draw bar clockwise as it draws the arbor into seat in the spindle. Do this until it is hand tight and then tighten snugly with the enclosed wrench. DO NOT OVER TIGHTEN. If you need to remove the arbor, loosen the draw bar and unscrew it two turns, and then tap the end of the draw bar with the wrench and the arbor will unseat. Finish unscrewing the draw bar and remove the arbor.
3. Unbolt the sign from the lower bracket on the bench and raise it to the upper bracket and re-bolt it in place.
4. Place the hooks from the pack box into the holes on the sign and lower bench. Place the adapters in the hooks. You may choose whichever is more convenient.
5. This lathe comes equipped with the most modern adapters available in the market today. Our ADAPTER PLUS SYSTEM will allow you to machine most hubless drums and rotors as well as composite rotors.
6. Unpack the chip tray. Slice the tray over the studs on the side of the bench, aligning slots in the chip tray with the grooves in the studs and push down.
7. Plug in machine.

FOR BEST RESULTS USE ONLY **RELS TOOL BITS.** **MAINTENANCE SCHEDULE**

Daily:

- Check the oil level. Adjust as necessary
- All adapters should be kept clean and free of nicks or burs. WD-40 works well as a cleaning medium as it both cleans and prevents rust.
- Keep the arbor free of any foreign material on every setup.
- Keep the surfaces in the slot where the tool bit holder mounts free of chips and burs. Also keep the bottom of the tool bit holder free of burs.
- All exposed machine surfaces of the lathe should be brushed clean and wiped with WD-40. **DO NOT BLOW THE MACHINE WITH COMPRESSED AIR.**

Monthly:

- Check all screws and fasteners

Annually:

- Change the lubricant in the housing. 80/90 gear oil / oil should be $\frac{3}{4}$ way up the sight gauge. Remove the drain plug on the front of the lathe. Remove the vent plug on the top of the lathe and fill with multi-weight gear lube.
- Check the v-belts for wear and replace if necessary.

Drive belt tension:

- A) Insure proper alignment is in place.
- B) Loosen the $\frac{3}{4}$ " nut located next to the lever with the red knob. This disconnects the lever that raises and lowers the motor. Raise the lever with the red knob until the lever is pointing towards the upper pulley. Re-tighten the $\frac{3}{4}$ " nut. This will re-connect the lever to the motor. Lower the lever to the locking position. The belt will re-adjust automatically.
- C) **NOTE:** If the belt is not properly tensioned after performing the above procedure, check that the motor is not resting on the bench or other obstruction.

OPERATING INSTRUCTIONS

Machining Rotors

WEAR EYE PROTECTION AT ALL TIMES

1. Make sure arbor and adapters are clean. All mounting surfaces should be free of grease, dirt and rust.
2. Mount hubless rotors using the RELS HUBLESS ADAPTER and/or the RELS ADAPTER PLUS SYSTEM included with this lathe. This system will work with most hubless and composite rotors. (See enclosed step by step operating instructions).
3. Mount rotors with hubs with the collets (included with the lathe) that fit into the bearing races.
4. This machine is designed to operate at either 150 or 200 RPM's. In most applications we suggest you run the machine at 200 RPM's for best rest results. The spindle speed is changed by moving the belt on the main motor pulleys.
5. With the rotor mounted properly on the lathe, place a vibration dampener on the rotor. Next, position the rotor as close to the machine as possible by moving the spindle. Place the rotor between the two cutting tips of the twin cutter and lock the spindle in place by turning the black knob on the top of the spindle
6. Make sure the feed switch is in the neutral position and turn the machine on with the main power switch on the control panel.
7. Make sure the carbide tips have a good cutting surface and are tightened down properly.
8. Turn the dials to position the cutting tips against the rotor and turn the rotor feed hand crank to move the cutting tips to the inner most part of the cutting surface of the rotor. Turn the dial to remove the desired amount of material from the rotor. Recommended cut: .007-.010 for fastest cut and .002-.005 for finish cut, or one cut if desired. Once you have moved the carbide tips to the desired depth, tighten the red knobs that hold the tool holder tips in place.
9. Fully tighten the wheel on the inside of the crossfeed handle. Set the speed control to wide open for the rough cut. Set the speed control between 12 o'clock and 3 o'clock for the finish cut, or if you prefer a one cut operation. This will result in the best possible finish in the least possible time. Turn the switch to the rotor position and the machine will begin to feed. The machine will continue to feed until it comes to the end of the shaft and will then stop.
10. Turn the machine off and remove rotor.

OPERATING INSTRUCTIONS

Machining Drums

WEAR EYE PROTECTION AT ALL TIMES

1. Remove the twin cutter from the lathe and put the tool bar in place.
2. Mount the drum on the lathe using the RELS ADAPTER PLUS SYSTEM for the hubless drums, or use the collets for a drum with a hub. Use the necessary spacers and lock it in place with the arbor nut. (DO NOT OVER TIGHTEN). Make sure that all critical surfaces are fully cleaned.
3. Wrap the drum with the drum vibration dampener.
4. Place the feed switch in the neutral position and turn the machine on with the main power switch on the control panel.
5. Position the tool bar into the drum so that the cutting tip is at the deepest part of the drum.
6. Dial in the desired amount of surface to be removed.
7. Tighten the wheel in the inside of the crossfeed handle.
8. Turn the speed control to the desired speed. Consult machining rotors for suggested speed.
9. Turn the selector switch to the drum feed position and the machine will feed to the end of the drum.
10. Turn the machine off and remove the drum.

RELS 2000 – Limited Warranty

The manufacturer warrants this equipment to the original user against defective material or workmanship for the period of one (1) year from the date of purchase on parts, and one (1) year from the date of purchase on repair labor. The manufacturer's responsibility under this warranty is limited to the repair or replacement of defective part or parts.

The Manufacturer reserves the right to determine whether the part or parts failed because of defective material, workmanship, or other causes. Failure caused by accident, alteration, misuse, or improper packaging of returned units is not covered by this warranty.

All warranty repairs must be done by a RELS Authorized Service Center or by the factory. Any repair to the equipment other than by these authorized facilities voids this warranty. Any repair to the equipment that is not pre-approved by RELS voids this warranty. The rights under this warranty are limited to the original owner with a warranty form filed with RELS and may not be transferred to subsequent owners.

RELS MANUFACTURING

2000 BRAKE LATHE

SPECIFICATIONS

Spindle speed: 150 & 200rpm

Crossfeed speed: Infinitely variable, 0 to .010 per revolution

Spindle feed: Infinitely variable, 0 to .020" per revolution

Spindle travel: 6-7/8"

Rotor width: 2-1/2"

Drum diameter: 6 to 28"

Rotor diameter: 17"

Drum/rotor weight: 150 lbs. With standard arbor
250 lbs. With 1-7/8" arbor

Spindle diameter: 2-7/8"

Motor: 1hp, 115v, 60hz 1ph, (other voltage available)