

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.

**TERMS AND CONDITIONS OF THE
SALES ORDER
FOR SVI INTERNATIONAL, INC.**

1. **GENERAL.** The terms and conditions of sales order outlined herein shall apply to the sale by SVI INTERNATIONAL, INC. (hereinafter referred to as "Company") of the items described on the facing page (hereinafter referred to as "Merchandise") to Purchaser.
2. **DELIVERY.** Delivery shall be deemed to be complete when the Merchandise has been shipped F.O.B. Company's plants in DeKalb, Illinois, Montclair, California; and Baltimore, Maryland ("Company's plants"). Shipments are subject to delays from causes or contingencies beyond the reasonable control of the Company. When otherwise not specified, shipments will be made in standard containers via carrier which, in the judgment of the Company, will result in the most practical method. Title and right of possession will pass to the Purchaser upon receipt by the carrier at the shipping point. If a customer of the Company should specify a specific carrier's method of shipment (i.e. UPS Next Day Air) and that carrier does not perform to the customer's expectations, freight credit to a customer's account will not be issued unless the Company can first obtain a credit.
3. **RISK OF LOSS.** Identification of the Merchandise under Uniform Commercial Code (hereinafter referred to as "UCC") Section 2-501 shall take place at the moment of shipment F.O.B. Company's plants. Risk of loss shall pass to the Purchaser when the Merchandise is shipped from the Company's plants.
4. **TITLE.** Title to the merchandise shall transfer to the Purchaser when the Merchandise is shipped from the Company's plants.
5. **WARRANTIES.** The Company guarantees its products to be free from defects in workmanship and raw materials for a period of one year from date of purchase. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL WARRANTIES EXPRESS OR IMPLIED. COMPANY DOES NOT WARRANT THE MERCHANDISE IS MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE. Company's liability for breach of the terms of this Agreement, including any warranty, is limited to either refund of the invoice price of the Merchandise or at Company's option, replacement of the Merchandise free of charge, including transportation charges but not including the cost of labor. Purchaser has not relied on any statement or upon the conduct of Company with respect to the prospective use of the merchandise. Company shall not be liable for and Purchaser waives any and all claims for any loss or damage, directly or indirectly, arising from the use of the Merchandise and for punitive, incidental or consequential damages, including, but not limited to, damages to property, for loss of use, loss of time, loss of profit or loss of income. The Company does not authorize the sale of our products under any other warranty, expressed or implied.
6. **SETOFF.** All claims for money due or to become due from the Company shall be subject to deduction by the Company for any setoff or counterclaim arising out of this or any other claims of the Company or its affiliated companies, whether such setoff or counterclaim arose before or after any assignment by Purchaser.
7. **INDEMNIFICATION.** Purchaser agrees to indemnify the Company and hold it harmless from and against all claims, liability, loss, damage or expense, including reasonable counsel fees, arising from or by reason of any modifications or alterations made by Purchaser. If a customer of the Company modifies or alters any part, in any manner whatsoever, or uses any part in departure from recommended performance specifications, said customer agrees to indemnify and hold the Company harmless from and against all liability and expenses based on damage to property or injury to or death of any person arising out of or attributable to such modified or altered part. Further, the Company will not accept any such modified or altered part for credit to a customer's account.
8. **FREIGHT POLICY.** Freight charges on individual orders less than \$3000 in net value, are prepaid and added to invoice or collect FOB shipping point. Freight charges on one shipment only (standard ground service and to the continental US only) on most \$3000 net value orders may be paid by SVI International, Inc. - FOB shipping point. Please speak to your Salesperson for exceptions to this Freight policy for your specific order. Note: Customers with COD terms are responsible for all carrier COD fees regardless of order, including refusal fees.
9. **RETURN POLICY.** To return a part for credit or inspection, Purchaser must first contact our Main Office in Illinois, to obtain a Return Merchandise Form. Once Purchaser has obtained this form, the parts can be returned freight prepaid only. The Return form must be included with the shipment. Parts returned to the Company without the approved form will be returned freight collect to the shipper or refused. Returns must be initiated within 60 days of the invoice date. The Return Forms are valid for 60 days, from the date of issue. All Returns are subject to 25% restocking charges. Return parts brought into our remote warehouses, will not be accepted by our personnel, without a Return Merchandise Form from the Main Office. Parts which have been used in any way or manner, including any installation or incorporation into a lift, hoist, or other equipment, shall NOT be eligible for return whether or not a Return form has been assigned.
10. **RESTOCK CHARGE.** Returns are subject to up to twenty-five (25%) restocking charge. Refusals are subject to the same restocking charge plus the cost of outbound and return freight charges and/or fees incurred by the Company due to shipment refusal.
11. **PRICES AND PAYMENTS.** All prices are subject to change without notice. All prices are F.O.B. shipping point. The Company standard terms are net 30 days, C.O.D. company check, C.O.D. cash, VISA, MasterCard, Discover or American Express. However, if in the judgment of the Company, the financial condition of the Purchaser at any time does not justify shipment according to standard terms of payment, the Company may require full or partial payment in advance.
12. **INTERPRETATION.** This sales order is intended by the parties as a complete and exclusive statement of the terms of their agreement. It supersedes all prior agreements, written or oral. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any terms used in this sales order. Acceptance or acquiescence in a course of performance rendered under this purchase order shall not be relevant to determine the meaning of this sales order even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity for objection. Whenever a term defined by the UCC is used in this sales order the definition contained in the UCC shall control.
13. **MODIFICATION.** This sales order can be modified or rescinded only by a writing signed by both parties.
14. **WAIVER.** No claim or right arising out of a breach of this sales order can be discharged in whole or in part by a waiver or renunciation of the claim or right unless such waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party.
15. **ASSIGNMENT.** No right or interest in this sales order shall be assigned by either party without the written consent of the other and no delegation of any obligation owed, or of the performance of any obligation by either the Company or Purchaser shall be made without the written consent of the other party. Any attempted assignment or delegation not made in conformity with this paragraph shall be wholly void and totally ineffective for all purposes.
16. **TIME TO PERFORM AND BRING ACTION.** Time is of the essence of this sales order. Any action for breach of this sales order shall be commenced within two (2) years after the cause of action has accrued. Any party who loses any litigation shall reimburse the other party for costs including reasonable attorney's fees. The exclusive jurisdiction for any legal action shall be the Circuit Court of DeKalb County, Illinois.
17. **APPLICABLE LAW.** This sales order shall be governed by the UCC of Illinois as effective and in force on the date of this sales order.

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)