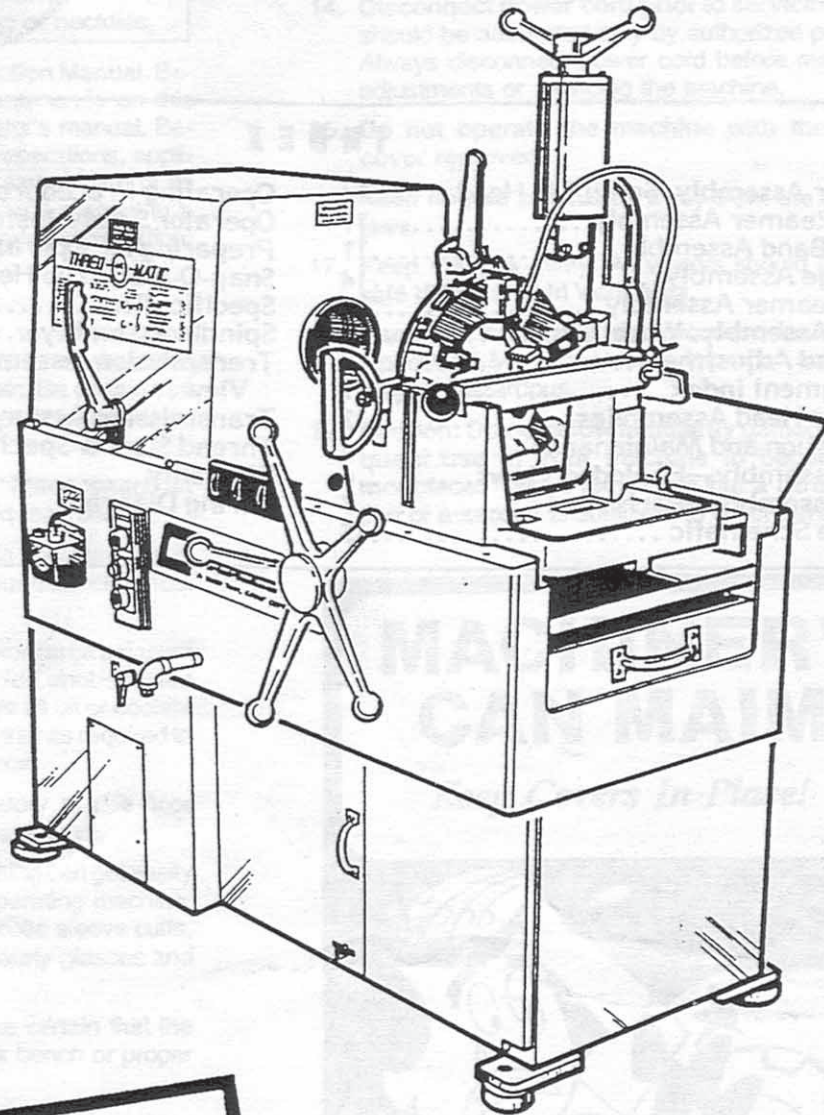


OPERATOR SAFETY INSTRUCTIONS

# Operator's Manual and Parts Catalog

THRED-O-MATIC®

## 66-A



**WARNING**  
Before operating this unit, read and understand the Operator's Manual. Become familiar with the potential hazards of this unit.

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**ROTHENBERGER**



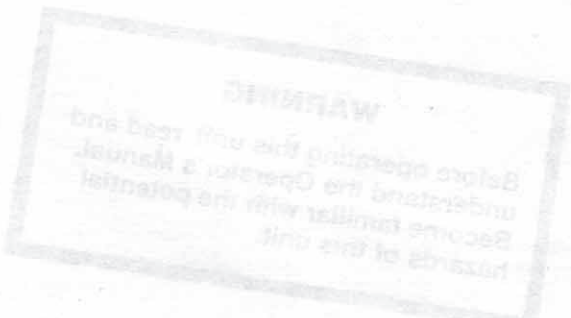
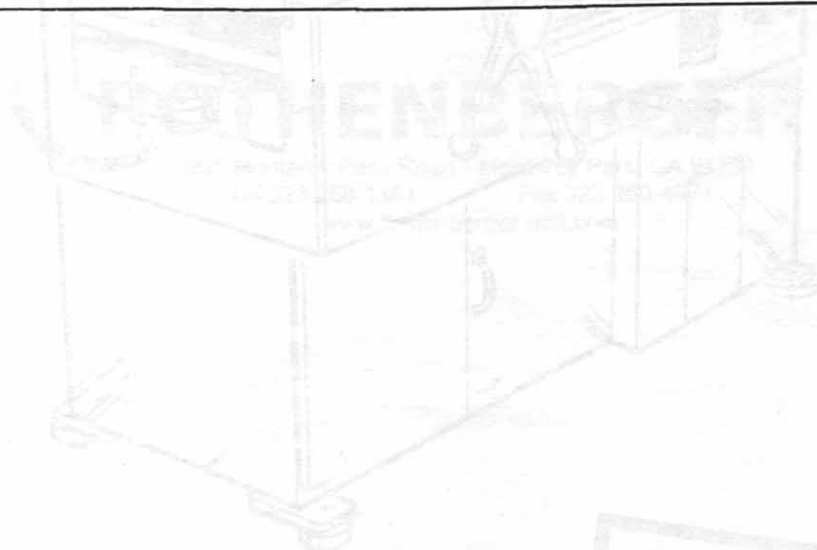
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# OPERATOR SAFETY INSTRUCTIONS

**WARNING:** This metalworking machine is designed for threading, cutting, reaming, beveling and grooving pipe with accessories made or authorized by Rothenberger. Modifying machine in any way and/or using devices not made or authorized by Rothenberger can result in serious injury and void Rothenberger's warranty and liability.

**REMEMBER:**

- \* Operate machine from switch side only.
- \* Do not disconnect or block footswitch.
- \* Do not wear gloves, loose clothing or neckties.

1. **Read and understand the Instruction Manual.** Before operating or performing maintenance on this machine, read carefully the operator's manual. Become familiar with the machine's operations, applications and limitations. Be particularly aware of its specific hazards. Store the operator's manual in a clean area and always at a readily available location.
2. **Inspect the equipment.** Prior to starting the machine, check the movable parts for obstructions, such as rags, packing remnants, etc. Be certain that guards and machine parts are properly installed and secured.
3. **Prevent accidental startings.** Place switch in "OFF" position prior to plugging in machine.
4. **Ground the machine.** Be certain the machine is connected to an internally grounded electrical system.
5. **Keep work area clean.** Keep the work area adjacent to the machine clear of clutter for unobstructed movement of the operator. Remove all oil or coolant spills. Remove shavings from chip tray as required to maintain proper operating clearance.
6. **Use pipe supports.** It is mandatory to use floor mounted pipe stands for long, heavy work.
7. **Wear proper clothing.** Loose clothing can get easily tangled in moving parts. When operating machine, do not wear unbuttoned jackets, loose sleeve cuffs, gloves, neckties, long hair, etc. Safety glasses and shoes should be worn.
8. **Secure machine and work.** Make certain that the machine is bolted to a heavy work bench or proper stand.
9. **Always maintain machine.** Keep machine clean and cutting tools sharp for safe, dependable operation. Follow lubricating instructions. Report any unsafe condition for immediate correction.
10. **Keep alert.** Do not operate machine if ill or drowsy from medication or fatigue. Avoid horseplay around equipment and keep bystanders a safe distance from equipment.
11. **Operate on switch side only.** Machine should be operated on switch side only. Never reach across

moving parts or material being worked on. Switch should always be accessible to operator.

12. **Operate in proper environment.** Machine should not be operated in damp locations. Wear hearing protection in noisy shop environments. Insure proper illumination in work area.
13. **Do not misuse machine.** Perform only the functions for which the machine is designed. Do not force machine.
14. **Disconnect power cord prior to servicing.** Repair should be attempted only by authorized personnel. Always disconnect power cord before making any adjustments or servicing the machine.
15. **Do not operate the machine with the spindle cover removed.**
16. **Keep fingers and hands away from the chucking jaws.**
17. **Keep visitors away.** All visitors should be kept a safe distance from work area.
18. **Use only recommended accessories.** Refer to Operator's Manual. Use of improper accessories may be hazardous.
19. **Caution: Do not allow familiarity gained from frequent use of your machine to become commonplace.** Always remember that a careless fraction of a second is sufficient to inflict severe injury.

## MACHINERY CAN MAIM

*Keep Covers In Place!*



**CMS**

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## SPECIFICATIONS

**Motor:** 220-440 V., 3 Phase, 60 Cycle 5 H.P., 1170 RPM, AVO-213 Frame or 220 V., 1 Phase, 60 Cycle 3 H.P., 1800 RPM, RVO-254 Frame.

### THREADING RANGE:

**Pipe or conduit:** 2½"-6"

With adapter and small die head: 1"-6"

**Bolt:** 2½"-4"

With adapter and small die head: 1"-4"

**Switch:** 3 Station Pushbutton with Magnetic Starter and Overload Switch.

**Weight:** 1610 lbs. with 2 die heads less optional equipment.

**Clearance required to service and operate:**

Front and back: 3'

Left Side: 22' (Full length of pipe)

Right Side: 8.5'

**Foundation:** No special requirement.

**Fusing required:** Single Phase, 21 amp., Three Phase, 10 Amp.

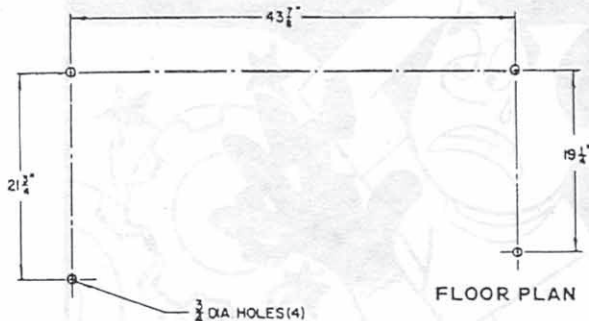
### DIMENSIONS

|                                       |      |
|---------------------------------------|------|
| Length .....                          | 48¾" |
| Width .....                           | 29¾" |
| Height .....                          | 45¾" |
| Floor to center line of spindle ..... | 36¾" |

## PREPARING FOR OPERATION

### MOUNTING

While it is not essential to bolt the THRED-O-MATIC "66-A" to the floor, bolt holes are provided in the base for a solid and permanent installation. The mounting pads on the motor end of the "66-A" are made thicker to provide for proper oil drainage out of the pipe. Care should be taken in mounting machine to maintain the height differential.



### POWER

Use proper electric current as shown on the name plate. Always connect the ground wire to the outlet box.

To prevent power loss, extension cord of sufficient capacity must be used:

| POWER               | CORD LENGTH | WIRE SIZE |
|---------------------|-------------|-----------|
| 220 V. Single Phase | Below 50'   | 10-3      |
|                     | 50'-100'    | 8-3       |
| 220 V. Three Phase  | Below 50'   | 14-4      |
|                     | 50'-100'    | 10-4      |
| 440 V. Three Phase  | Below 50'   | 14-4      |
|                     | 50'-100'    | 10-4      |

### OVERLOAD SWITCH

On the THRED-O-MATIC "66-A" an automatic cut-off is actuated to protect the motor in event of under-or overloading of power. To reset, open door of machine and push reset button.

### OIL PUMP

Pour five gallons of THRED-O-MATIC oil into the THRED-O-MATIC "66-A" sump. If THRED-O-MATIC oil is not available, use an equivalent dark, sulphur base thread cutting oil. Be sure level is above oil strainer.

Collins threading oil is a special oil designed to stand up under the high speed operation of this machine. Other oils will have a tendency to break down, thereby causing excessive die wear.

The cutting oil control value is located on the front panel just below the push button switch. Turn counter-clockwise to decrease and clockwise to increase oil flow.

## OPERATING PROCEDURE

### DOUBLE AUTOMATIC CHUCK

**NOTE:** Never, under any circumstances, shift gears while motor is running.

1. Press 'reverse' button to open jaws.
2. Put stock in machine.
3. Select proper speed according to instruction plate above shifting lever.
4. Press "forward" button to close jaws and start rotating stock.

For maximum power, machine is engineered for direct drive, without a clutch. Occasionally gears may not mesh when shifting. Simply touch the "reverse" button to move gears slightly, then shift gears.

### THREAD CUTTING

1. Slip the proper size die head onto the carriage pin, and lower the head into the carriage groove. The THRED-O-MATIC "66-A" carriage is designed so that die head adapter can be mounted for use with 2" and smaller die heads.
2. On Mono, Dual, Uniquad and Scroll

heads, close operating handle; on Snap-O-Matic heads, select the correct size and engage the operating handle pin.

3. On die heads with reamers attached, be sure reamer is in die head with number side up.
4. Insert stock through the spindle from either the front or rear of the machine.
5. Select proper speed as shown on the instruction plate.
6. Actuate switch to "on" position to close jaws and rotate stock.
7. Manually feed die head onto the stock, using pressure, until a few threads have been cut, after which head automatically feeds itself.
8. Correct thread length is normally obtained when stock reaches the outside edge of chasers, at which time open die head with right hand. With left hand, move carriage away from stock. The machine is also equipped with a thread length scale.

## REAMING

Die heads with reamers attached:

1. Be sure number side of reamer is up.
2. Reaming is accomplished while threading, in one operation.
3. If reaming only is desired, open die head and move carriage forward. Ream to desired depth.

Dual or Uniquad die heads:

1. Reaming is accomplished as a separate operation.
2. Open die head, move reamer forward. Ream to desired depth. It is best to ream the pipe before threading.

## CUTTING

1. Select proper speed as shown on the instruction plate.
2. Be sure cutting assembly is centered and open.
3. Insert stock. Move carriage until cutter wheel is at the point where cut is desired. Turn cutter handle clockwise for cut-off.

NOTE: Never cut into threads, as this may cause damage to the cutting wheel.

## GROOVING

1. Install grooving head on carriage pin.
2. Turn grooving feed screw handle (11) counter-clockwise as far as it will go to

get cutting tool completely clear of the pipe.

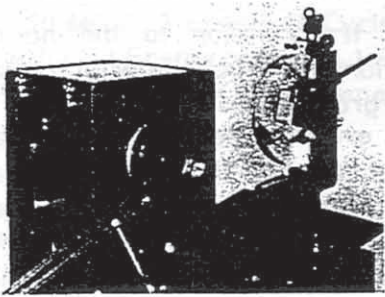
3. Shift transmission to the number 1 position and chuck material in machine to be grooved and cut.
4. Pass grooving head over material and place operating lever pin in the appropriate setting on the selector plate (19) to match the size of the material you are going to groove and cut. This will align pipe and grooving head.
5. Adjust centering bolt (24) for proper seat in carriage and tighten lock nut (23).
6. With machine running in the number 1 position, turn feed screw handle (11) clockwise to engage cutting tool (18) with pipe. Before proceeding to cut material, tighten screw on rear of carriage. This will keep carriage from creeping.
7. When using tool on standard wall pipe, the cutting tool will first part the material. After material has parted, while keeping the machine running, turn feed screw handle (11) one complete revolution until marks line up on indicator (13) and bearing block (21) which will give the proper depth of groove.
8. After the groove is finished, turn the feed screw handle (11) counter-clockwise to open position again.
9. Open operating lever and remove pipe.
10. Check frequently to be certain grooving tool has not become dull and needs sharpening; use groove depth scale or coupling for this purpose. Visually you may determine signs of a dull or improperly sharpened cutting tool if you notice excessive burr on pipe after cutting.

## MAKE-ON SEE FIGURE 1

Insert the pipe either from the front or rear of machine and start the machine. Apply "Joint dope", and place fitting in position using a wrench or other holding device. Let the machine screw the fitting in place.

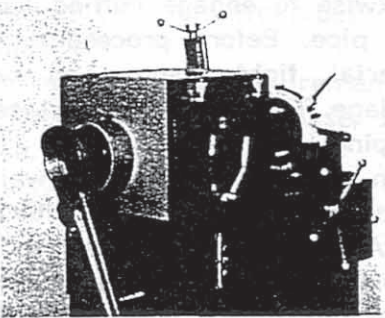
## BREAKDOWN SEE FIGURE 2

Old tight fittings can be broken loose at the rear of the machine. The THRED-O-MATIC



MAKE-ON (Figure 1)

"66-A" has an extension bar on the rear for this purpose.



BREAKDOWN (Figure 2)

## DIE HEAD ADJUSTMENT

REFER TO DRAWINGS

Your machine is equipped with die heads which have been adjusted to standard thread gauges at the factory. If a "deeper" (undersize) or "shallower" (oversize) thread is desired:

1. Mono, Dual and Uniquad heads — Loosen locking lever of locking nut and rotate scroll plate in the direction indicated on link or housing.
2. Snap-O-Matic heads — Loosen two screws and move selector plate in the direction indicated on the selector plate.

To change dies:

1. Mono, Dual and Uniquad heads — Loosen locking lever or locking nut, rotate scroll plate until cam slots line up with entry slots in die head.  
Snap-O-Matic heads — Remove scroll plate stop, rotate scroll plate until cam slots line up with entry slots in die head.
2. Check numbers of dies to be installed. A set consists of five (5) die segments numbered 1 to 5 for pipe size 2½" - 4". Dies for smaller pipe sizes contain four

- (4) die segments numbered 1 to 4.
3. Install dies in die head, matching the numbers on the die with the numbers on the die head. Rotate scroll plate to proper pipe size.

## LUBRICATION AND MAINTENANCE

REFER TO MAIN ASSEMBLY

### PUMP LUBRICATION

#### CUTTING OIL

To assure clean threads and long wear on chasers use Collins sulphur base cutting oil. Change every forty hours of operation. Three of the main causes of poor threads are either a poor grade of cutting oil, cutting oil that has lost its coolant qualities through over-use, or water in the sump.

#### CARRIAGE RAILS (35) AND GEAR (37)

Keep clean and oil frequently with machine oil.

#### OIL PRESSURE RELIEF VALVE (57)

Located next to the strainer in the sump. Should be cleaned periodically to avoid loss of oil pressure through die head. To readjust, turn set screw clockwise as far as it will go and then back one complete turn.

#### SPINDLE GEAR (5)

Remove spindle cover and check ring gear every six months to see if additional "Fil-Mo-Plate" spray lubricant needs to be applied.

#### TRANSMISSION (46)

Remove spindle cover and check transmission oil level every thirty days. Change oil after the first 100 hours of operating, use SAE 40 gear oil. Thereafter, drain and replace with 1½ quarts of oil every six months.

V-belts should be adjusted so that when fingers are placed across the two belts and squeezed, there should be at least ½-inch movement in the belts.

#### MOTOR (62)

Check single phase motors for brush wear every six months. If motor lacks power due to a dirty commutator, use a commutator cleaner

stick or fine emery cloth.

Lubrication is not required as all motors have sealed ball bearings.

## DIES

Keep sharp and free of chips at all times. Sharpening service is provided at the factory for a nominal charge. As all sets of dies are matched, send in complete set for sharpening. When replacing dies in the die head, make sure the number of each die corresponds with the slot number on the die head.

## JAWS

Keep clean with wire brush to avoid slippage. When replacing chuck jaws be sure the "R" markings on the jaws are toward the rear or motor end of the machine.

## BRAKE BAND (18)

If slippage of stock should still occur after wire brushing jaws, then:

1. Stop machine.
2. Put shift lever in third speed.
3. Remove spindle cover.
4. Tighten brake adjustment bolt.
5. Start machine.
6. Push "stop button and spindle should coast  $\frac{1}{4}$ - $\frac{1}{2}$  revolution. If not, repeat steps 4, 5 and 6.
7. Replace spindle cover.



# CMS

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