

Operating The 975 Combo Roll Groover In Place

⚠ WARNING



Only drive manually when used for in place applications. Do not use powered devices (such as drills or impact tools) to drive the roll groover when used in place. Use of powered devices can damage the groover and increase the risk of injury.

Do not wear loose clothing when operating the roll groover. Keep sleeves and jackets buttoned. Do not reach across the machine or pipe. Loose clothing can become entangled in rotating parts and cause crushing injuries.

Keep hands away from grooving rolls. Do not groove pipes shorter than specified. Do not wear loose fitting gloves. Fingers can be crushed between groove rolls or between groove roll and pipe.

Keep hands away from ends of pipe. Do not reach inside pipe. Burrs and sharp edges can catch and cut. Fingers can be crushed between groove rolls or between groove roll and pipe.

Always wear eye protection to protect your eyes against dirt and foreign objects. Wear steel toe footwear to protect feet from tipping tools and falling pipe. When working in place, wear a hard hat.

Follow operating instructions to reduce the risk of injury from crushing, tipping, striking and other causes.

Setting/Measuring The Groove Diameter

NOTICE Due to differing pipe characteristics, a test groove should always be performed before the first groove of the day or when changing pipe size, schedule or material. Groove diameter setting gauges are approximate only and the groove diameter must be measured to confirm proper size.

1. Confirm that the equipment and pipe are properly set up. Improper pipe preparation can effect the accurate set up of the groove depth gauge. The groove roll should be touching the pipe.
2. Adjust the groove depth gauge so that the correct step of the gauge is under the head of the adjusting screw (Figure 15A). The groove depth gauge is designed for use with pipe. See "Setting The Groove Diameter For Copper Tube" for use with copper tube.
3. Turn the adjusting screw clockwise until the head

touches the step of the depth gauge. Turn the groove depth gauge to the grooving position (Figure 15B). If gauge is not in the grooving position it will prevent grooving and may be damaged.



Figure 15A – Place Correct Step of Gauge Under Adjusting Screw Head



Figure 15B – Gauge In Grooving Position

4. Prepare a test groove (follow the steps for "Forming the Roll Groove").
5. Measure the groove diameter. The best method for measuring groove diameter is the use of a diameter tape (See Accessories Section). Snugly wrap the diameter tape around the pipe in the groove. Make sure that the tape sits flat in the bottom of the groove, and read the groove diameter (See Figure 16).



Figure 16 – Measuring The Groove Diameter With A Diameter Tape

6. Compare the measured groove diameter to the required groove diameter as shown in Table I or III or as specified by the groove fitting manufacturer. If the measured groove is outside of the required groove diameter, the adjusting screw must be repositioned to give the correct groove diameter.
 - To increase groove diameter, turn the adjusting screw clockwise.

- To decrease groove diameter, turn the adjusting screw counter-clockwise.
 - Each 1/4 turn of the adjusting screw changes the groove diameter approximately 0.02".
7. Repeat steps 4-6 until the groove diameter is within specifications. If the first groove is too large, the Groove can be adjusted and the groove made smaller. If the groove is too small, another groove will need to be made. Proper groove diameter is important to insure connection performance. Out of specification grooves could cause joint failure.

Forming The Roll Groove

1. Confirm that the equipment and pipe are properly set up.
2. Assume a proper operating position. Make sure that your footing is good and you are well balanced.
3. Make sure that the feedscrew has been tightened 1/4 turn.
4. Remove the ratchet from the feedscrew and securely install in the extension. (In close quarters applications, the extension does not need to be used.)
5. Turn the ratchet clockwise as viewed from the back of the roll groover (this will match the arrows cast into the back of the roll groover, *see Figure 17*). Watch the groover rotate and be sure that the cover plate of the roll groover stays in contact with the end of the pipe. If the roll groover starts to move away from the pipe end, stop rotating the ratchet to prevent the roll groover from spiraling off the pipe end and falling. The roll groover support arms can be pushed on to help bring the cover plate back in contact with the pipe end. If needed, re-mount the roll groover to the pipe. (*see "Mounting Roll Groover to Pipe" section*). If the pipe end is deformed, it will need to be cut off and a new groove prepared.

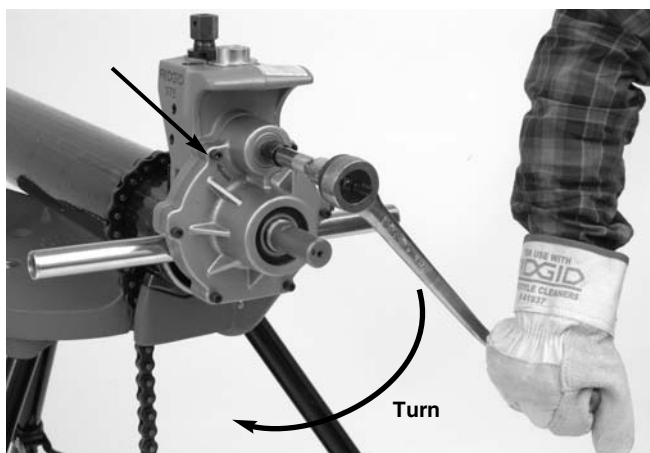


Figure 17 – Turning the Ratchet in the Direction of the Arrows

6. Continue rotating the ratchet until the roll groover completes at least a full rotation around the pipe. Remove the ratchet from the extension and attach to the feedscrew. Tighten the feedscrew another 1/4 turn. Remove the ratchet from the feedscrew and securely attach to the extension. Do not tighten the feedscrew more than 1/4 turn per pipe rotation. Aggressive tightening of the feedscrew can cause excessive groove flare and can cause the roll groover to walk off the pipe. Continue rotating the ratchet to drive the roll groover around the pipe while monitoring the position of the cover plate to the end of the pipe.
7. Continue tightening the feedscrew 1/4 turn per groove revolution around pipe until the head of the adjusting screw stops against the top of the roll groover. Do not continue tightening the feedscrew after the adjusting screw reaches the top of the roll groover, this can damage the adjusting screw. Rotate the roll groover at least two more full rotations around the pipe after the adjusting screw reaches the top of the roll groover to insure uniform groove depth.
8. Move the ratchet to the feedscrew. Securely grasp the roll groover. Turn the feedscrew counter-clockwise and retract the groove roll so that the roll groover can be removed from the pipe. Do not drop the roll groover.
9. Inspect the groove.
 - Make sure that the groove is fully formed.
 - Check the groove diameter and make sure it is within specification.
 - Check any other items required by the fitting manufacturer.

If any problems are found, the groove cannot be used.

Maintenance Instructions

⚠ WARNING

Make sure the power drive switch is in the OFF position and the unplugged before performing any maintenance or making any adjustments.

Lubrication

Lubricate the 975 Combo Roll Groover with a good general purpose grease once a month.

- Grease fittings are located on the side of the operator's side of the base, the front of the slide block, and the end of the groove roll shaft (*See Figure 2*). Add grease until a small amount is pushed out.
- Apply a light coat of grease to the feedscrew.

- The gear box of the 975 Combo Roll Groover is greased for life and does not require the addition of any grease unless the gear box is opened.

See Inspection Section for other information on maintenance.

Cleaning

Clean the driveshaft knurls with a wire brush on a daily basis or more often if needed.

Changing Roll Sets

NOTICE When changing roll set parts, always make sure drive and groove roll markings match. Mismatched parts can make improper grooves and cause leaks.

Remove the roll groover from the power drive or threading machine and place on a stable work bench.

Required Tools:

- 3/8" Hex Wrench
- 3/32" Hex Wrench
- .070" External Retaining Ring Pliers

Removing and Installing Drive Roll

1. Remove 6 screws that hold rear cover to the housing.
2. Remove the rear cover (See Figure 18).

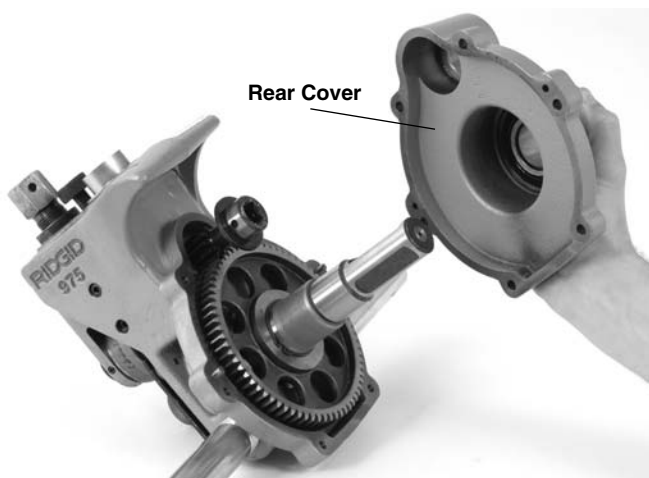


Figure 18 – Removing Rear Cover

3. Remove pinion.
4. Remove the driveshaft assembly out of the back of the 975 Roll Groover.
5. Remove retaining ring from driveshaft and slide gear off. (See Figure 19.)

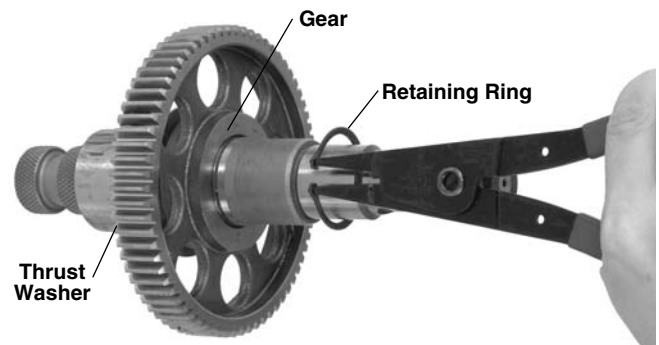


Figure 19 – Removing Retaining Ring

6. Remove key and then thrust washer.
7. Slide thrust washer onto new driveshaft.
8. Insert key and install gear.
9. Install retaining ring into driveshaft groove.
10. Place driveshaft assembly into main housing.
11. Grease from the gearbox may have been lost during the driveshaft change. Make sure the bearings and gear teeth are coated sufficiently with a good general purpose grease.
12. Insert pinion and reinstall rear cover. Tighten screws to 12-16 ft*lbs of torque.

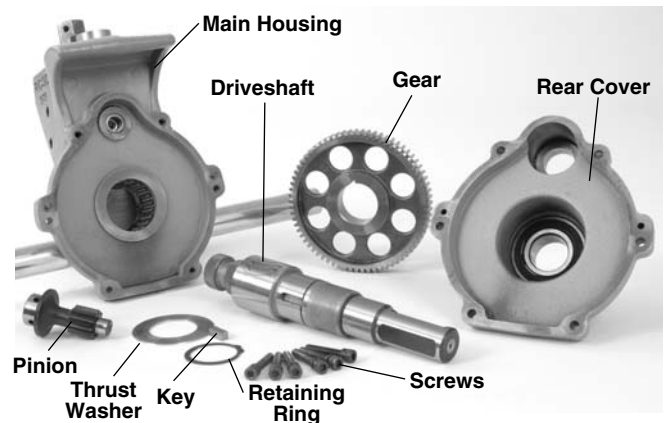


Figure 20 – 975 Combo Roll Groover Parts Diagram

Removing and Installing Groove Roll

1. Remove the setscrew that holds the groove roll shaft in place.
2. Pull the groove roll shaft out of the slide block and remove the groove roll and thrust washer.
3. Insert the thrust washer and new groove roll into the slide block. Ensure that the internal retaining ring in the groove roll is closest to the main housing, and that the groove roll is between the thrust washer and main housing.

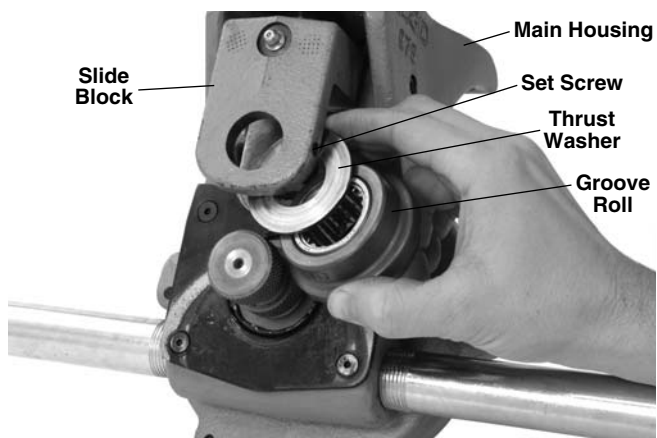


Figure 21

4. Replace the groove roll shaft and the set screw.
5. Visually inspect the alignment between the groove roll and the drive roll. If they are not aligned, check orientation of groove roll and thrust washer.
6. Grease as directed in Lubrication Section of manual.

Accessories

⚠ WARNING

The following RIDGID products have been designed to function with the 975 Combo Roll Groover. Other accessories suitable for use with other tools may be hazardous when used on the 975 Combo Roll Groover. To reduce the risk of serious injury, only use accessories specifically designed and recommended for use with the 975 Combo Roll Groover, such as those listed in the chart.

Cat. Number	Description
41855	300 Power Drive, 115V 25-60Hz 38RPM
75075	300 Power Drive, 115V 23-60Hz 57RPM
42360	1206 Stand for 300 Power Drive
66947	300 Compact, 115V 50/60Hz 38RPM
73447	300 Compact, 115V 50/60Hz 52RPM
67662	Adapter Bracket for 300 Compact
67657	250 Folding Wheel Stand for 300 Compact
72037	460 Portable TRISTAND Chain Vise
56662	VJ-99 VHead High Pipe Stand
76822	Inch Diameter Tape
76827	Metric Diameter Tape
30708	Extension, 1/2" Drive, Locking
30703	Ratchet, 1/2" Drive With 90° bend
32833	Groove and Drive Rolls for 2" - 8" Copper Tube Type K, L, M and DWV

Machine Storage

⚠ WARNING Store the tool in a locked area that is out of reach of children and people unfamiliar with roll groover equipment. This tool can cause serious injury in the hands of untrained users.

Service and Repair

⚠ WARNING

Improper service or repair can make machine unsafe to operate.

The "Maintenance Instructions" will take care of most of the service needs of this machine. Any problems not addressed by this section should only be handled by an authorized RIDGID service technician.

Tool should be taken to a RIDGID Independent Authorized Service Center or returned to the factory.

When servicing this machine, only identical replacement parts should be used. Use of other parts may create a risk of serious injury.

If you have any questions regarding the service or repair of this machine, call or write to:

Ridge Tool Company
 Technical Service Department
 400 Clark Street
 Elyria, Ohio 44035-6001
 Tel: (800) 519-3456
 E-mail: rctechservices@emerson.com

For name and address of your nearest Independent Authorized Service Center, contact the Ridge Tool Company at (800) 519-3456 or www.RIDGID.com