

# *Grizzly* *Industrial, Inc.*®

## MODEL T25688

## 24" SLIP ROLL

## OWNER'S MANUAL

*(For models manufactured since 09/13)*



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**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE  
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**

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V1.09.13



## **WARNING!**

**This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.**

**Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.**

**The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.**

**The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.**



## **WARNING!**

**Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:**

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

**Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.**

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# INTRODUCTION

## Machine Description

A slip roll is a machine used to flatten and create constant-radius curves in sheet metal workpieces. The three roller system adjusts to allow the operator to complete a number of procedures.

The T25688 can quickly adjust to create cone, spiral or continuous cylindrical shapes with sheet metal up to 22 gauge. Workpieces can be bent to job specification, straightened, or even slightly flattened. In addition to sheet metal, this slip roll has 1/8", 3/16", and 1/4" grooves for precise wire/rod bending.

The T25688 features a quick-release upper roller designed specifically for the easy release of cylindrical workpieces from the machine.

## Contact Info

We stand behind our machines. If you have any questions or need help, use the information below to contact us. Before contacting, please get the serial number and manufacture date of your machine. This will help us help you faster.

Grizzly Technical Support  
1203 Lycoming Mall Circle  
Muncy, PA 17756  
Phone: (570) 546-9663  
Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager  
P.O. Box 2069  
Bellingham, WA 98227-2069  
Email: manuals@grizzly.com


## Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs contained inside. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive will be slightly different than what is shown in the manual.**

If you find this to be the case, and the difference between the manual and machine leaves you confused about a procedure, check our website for an updated version. We post current manuals and manual updates for free on our website at [www.grizzly.com](http://www.grizzly.com).

Alternatively, you can call our Technical Support for help. Before calling, please write down the **Manufacture Date** and **Serial Number** stamped into the machine ID label (see below). This information helps us determine if updated documentation is available for your machine.

		<b>MODEL GXXXX</b>	
		<b>MACHINE NAME</b>	
<b>SPECIFICATIONS</b>		<b>▲ WARNING!</b>	
Motor:		To reduce risk of serious injury when using this machine:	
Specification:		Read manual before operation.	
Specification:		Wear safety glasses and respirator.	
Specification:		Ensure machine is properly adjusted/setup and	
Specification:		power is connected to grounded circuit before starting.	
Weight:		4. Make sure the motor has stopped and disconnect	
		power before adjustments, maintenance, or service.	
		5. DO NOT expose to rain or dampness.	
		6. DO NOT modify this machine in any way.	
		7.	
		8.	
		9.	
		10. Maintain machine carefully to prevent accidents.	

Manufactured for Grizzly in Taiwan

Manufacture Date

Serial Number



# Identification

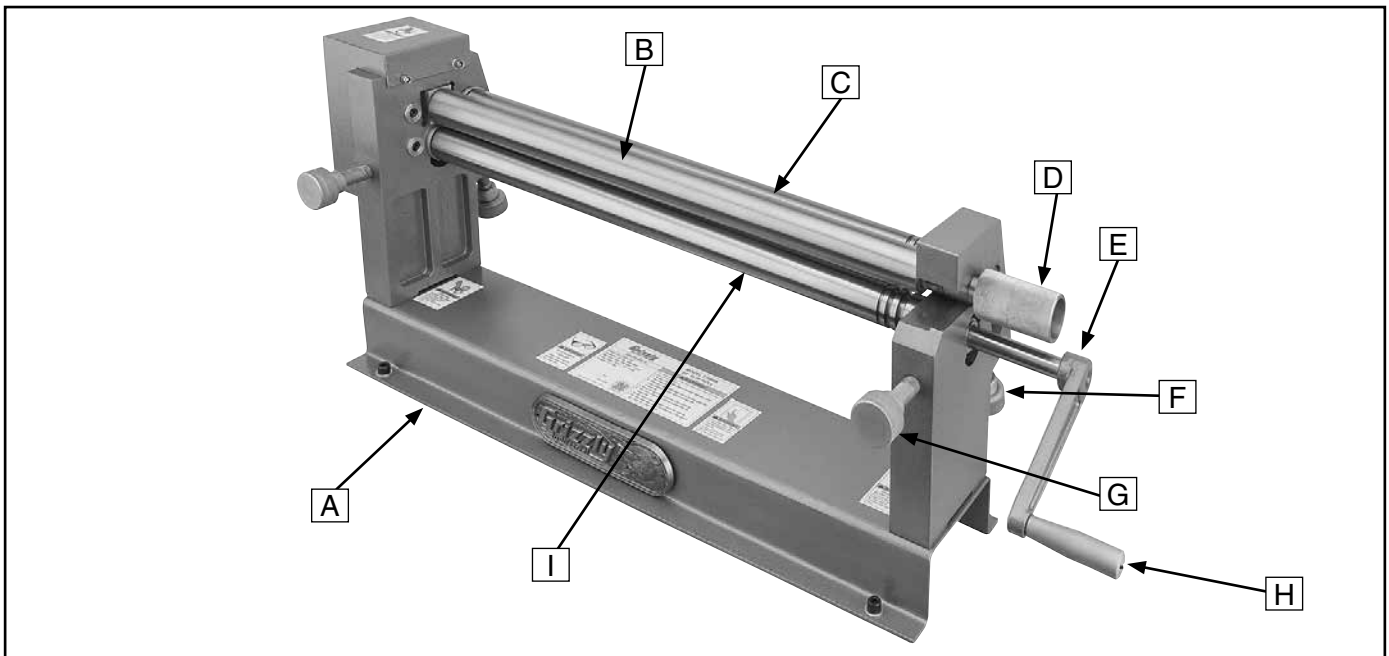


Figure 1. Machine identification.

## Identification List

- A. Machine Base
- B. Top Roller
- C. Rear Roller
- D. Removable Bushing
- E. Crank
- F. Radius Adjustment Knob
- G. Thickness Adjustment Knob
- H. Crank Handle
- I. Bottom Roller

## Sample Illustration

Throughout this manual, diagrams are used to illustrate how the components of the machine are used during the various steps of operation.

Familiarize yourself with the following illustration, its relationship to the machine, and the symbols used in it before proceeding through this manual.

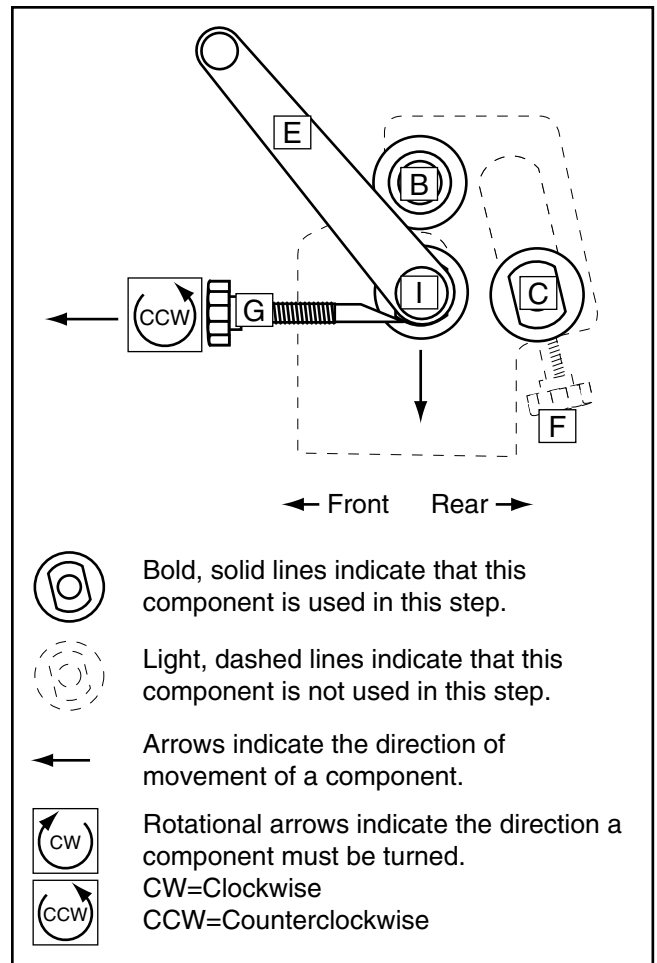


Figure 2. Sample illustration.





# MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

## MODEL T25688 24" SLIP ROLL - 22 GAUGE

### Product Dimensions:

Weight..... 111 lbs.  
 Width (side-to-side) x Depth (front-to-back) x Height..... 38 x 9-1/2 x 16-1/4 in.  
 Footprint (Length x Width)..... 26 x 9-1/2 in.

### Shipping Dimensions:

Type..... Wood Crate  
 Content..... Machine  
 Weight..... 115 lbs.  
 Length x Width x Height..... 37 x 11 x 17 in.

### Main Specifications:

#### Capacities

Maximum Width..... 24 in.  
 Maximum Thickness Mild Steel..... 22 Gauge  
 Slip Roll Minimum Cylinder Diameter..... 1-5/8 in.  
 Wire Sizes..... 3/32, 1/8, 5/32 in.

#### Construction

Frame..... Steel  
 Head and Tail Supports..... Steel  
 Rollers..... Steel

### Other Specifications:

Country Of Origin ..... China  
 Warranty ..... 1 Year  
 Approximate Assembly & Setup Time ..... 45 Minutes  
 Serial Number Location ..... ID Label on Base

### Features:

- Quick release top roller
- Easily adjustable rollers
- Hardened steel gearing



# SECTION 1: SAFETY

## For Your Own Safety, Read Instruction Manual Before Operating This Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures. Always use common sense and good judgment.



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

**NOTICE**

This symbol is used to alert the user to useful information about proper operation of the machine.

## Safety Instructions for Machinery



**OWNER'S MANUAL.** Read and understand this owner's manual **BEFORE** using machine.

**TRAINED OPERATORS ONLY.** Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

**DANGEROUS ENVIRONMENTS.** Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

**MENTAL ALERTNESS REQUIRED.** Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

**ELECTRICAL EQUIPMENT INJURY RISKS.** You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

**DISCONNECT POWER FIRST.** Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

**EYE PROTECTION.** Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are **NOT** approved safety glasses.



# WARNING

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.

**HAZARDOUS DUST.** Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

**HEARING PROTECTION.** Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

**REMOVE ADJUSTING TOOLS.** Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

**USE CORRECT TOOL FOR THE JOB.** Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

**AWKWARD POSITIONS.** Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

**CHILDREN & BYSTANDERS.** Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

**GUARDS & COVERS.** Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly.

**FORCING MACHINERY.** Do not force machine. It will do the job safer and better at the rate for which it was designed.

**NEVER STAND ON MACHINE.** Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

**STABLE MACHINE.** Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

**USE RECOMMENDED ACCESSORIES.** Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

**UNATTENDED OPERATION.** To reduce the risk of accidental injury, turn machine **OFF** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

**MAINTAIN WITH CARE.** Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

**CHECK DAMAGED PARTS.** Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

**MAINTAIN POWER CORDS.** When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

**EXPERIENCING DIFFICULTIES.** If at any time you experience difficulties performing the intended operation, stop using the machine! Contact our Technical Support at (570) 546-9663.





# WARNING

## Additional Safety for Slip Rolls

**OVERLOADING.** Overloading this machine can cause injury from flying parts or property damage. Do not exceed the machine capacities.

**SECURING SLIP ROLL.** Before using, secure the slip roll to a sturdy vise that is securely fastened to a workbench that can support the weight and dynamic forces involved in forming sheet metal. Otherwise, the slip roll may unexpectedly move or fall, causing serious injury or property damage.

**METAL EDGES.** Sharp edges on sheet metal can result in severe cuts. Always wear leather gloves before handling sheet metal, and chamfer and debur edges.

**TOOLS IN POOR CONDITION.** Using the slip roll with loose or damaged hardware could result in sudden, uncontrolled movements during use. Inspect the slip roll for any cracked linkage, controls, or loose fasteners. Correct any problems before use.

**GLOVES AND GLASSES.** Always wear leather gloves and approved safety glasses when using the slip roll.

**HEATING METAL.** Heating the workpiece with a torch while it is in the slip roll will weaken the metal of the rollers and the frame. Do not use a torch or other similar heating tool near the slip roll.

**BACK INJURIES.** The cranking motion required to operate this slip roll is potentially harmful if proper technique is not used. To avoid back injuries, keep your back vertical and never over-exert yourself or operate the slip roll in awkward positions.

**CRUSHING & PINCHING INJURIES.** Slip rolls can quickly crush or pinch fingers or hands. Never place fingers or hands between or near the rollers during operation.

# WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

# CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.



# SECTION 2: SETUP

## Unpacking

Your machine was carefully packaged for safe transportation. Remove the packaging materials from around your machine and inspect it. If you discover any damage, *please call us immediately at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, inventory the contents.



## Needed for Setup

The following are needed to complete the setup process, but are not included with the machine.

Description	Qty
• Assistant.....	1
• Safety Glasses (for each person).....	1 Pair
• Standard Screwdriver #2.....	1
• Shop Rags.....	As Needed
• Cleaner/Degreaser (Page 9)	
• Mounting Hardware (Page 10)	

## Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Box 1 (Figure 3):	Qty
A. 24" Slip Roll.....	1
B. Crank Handle.....	1

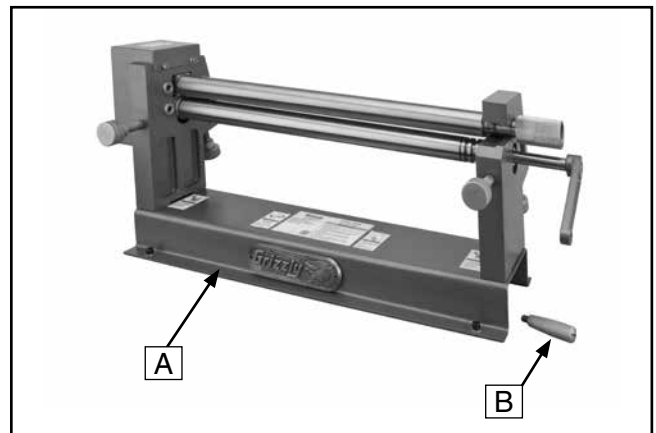


Figure 3. Machine inventory.

## NOTICE

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.



# Cleanup

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.

There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

## Before cleaning, gather the following:

- Disposable Rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

## Basic steps for removing rust preventative:

1. Put on safety glasses.
2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.
3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.
4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

## **NOTICE**

**Avoid chlorine-based solvents, such as acetone or brake parts cleaner, that may damage painted surfaces.**

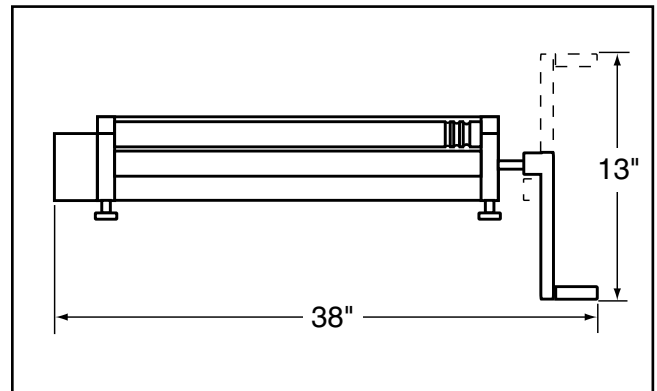
# Site Considerations

## Workbench Load

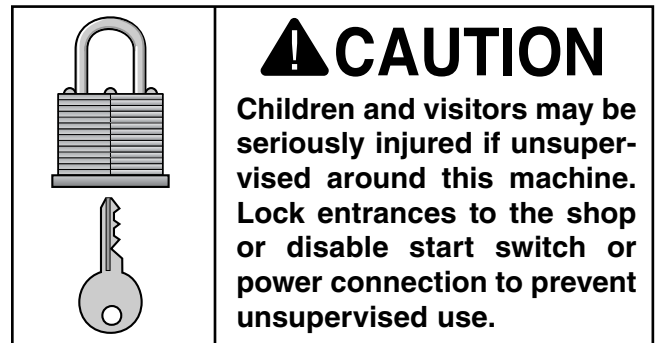
Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support the weight of the machine and workpiece materials.

## Placement Location

Consider anticipated workpiece sizes and additional space needed for auxiliary stands, work tables, or other machinery when establishing a location for this machine in the shop. Below is the minimum amount of space the machine needs to function.



**Figure 4.** Minimum working clearances.



# Bench Mounting

The base of this machine has mounting holes that allow it to be fastened to a workbench or other mounting surface to prevent it from moving during operation and causing accidental injury or damage.

The strongest mounting option is a "Through Mount" (see example below) where holes are drilled all the way through the workbench—and hex bolts, washers, and hex nuts are used to secure the machine in place.

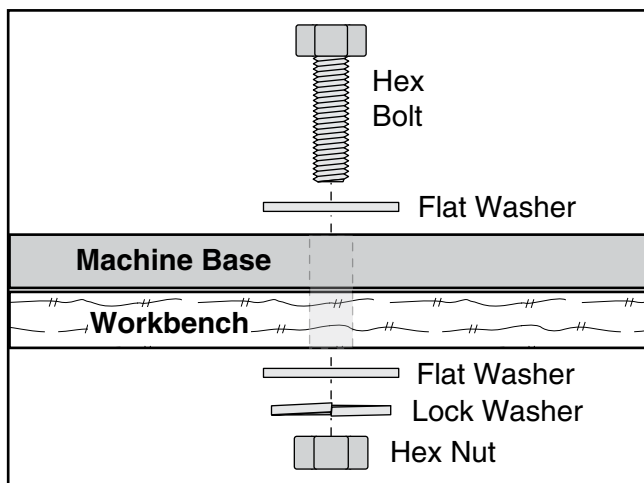


Figure 5. Example of a "Through Mount" setup.

Another option is a "Direct Mount" (see example below) where the machine is secured directly to the workbench with lag screws and washers.

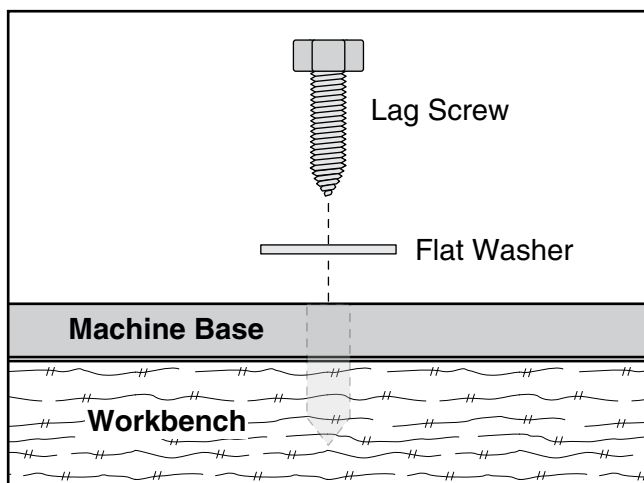


Figure 6. Example of a "Direct Mount" setup.

# Assembly

The Model T25688 comes from the factory almost fully assembled. All that is required for assembly is attaching the crank handle to the handle. Thread the crank handle into the small end of the crank and tighten, as shown in **Figure 7**.

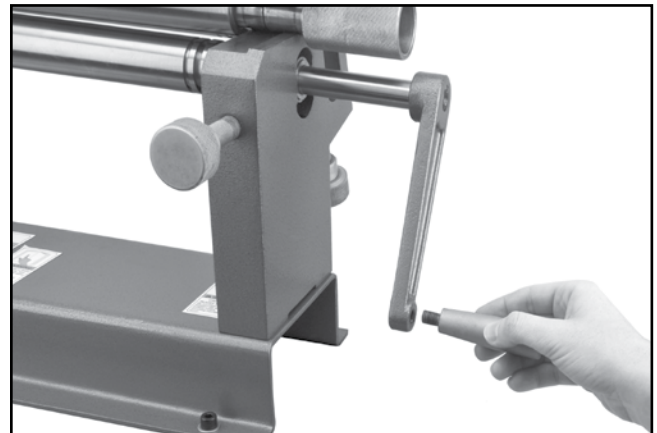
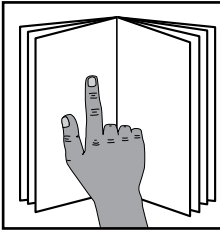


Figure 7. Assembly.



# SECTION 3: OPERATIONS



## ⚠️ WARNING

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.



## ⚠️ WARNING

Damage to your eyes and hands could result from using this machine without proper protective gear. Always wear safety glasses and leather gloves, when operating this machine.



## ⚠️ WARNING

This machine and its components are heavy. Get lifting help to reduce the risk of injury.

## NOTICE

If you are not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

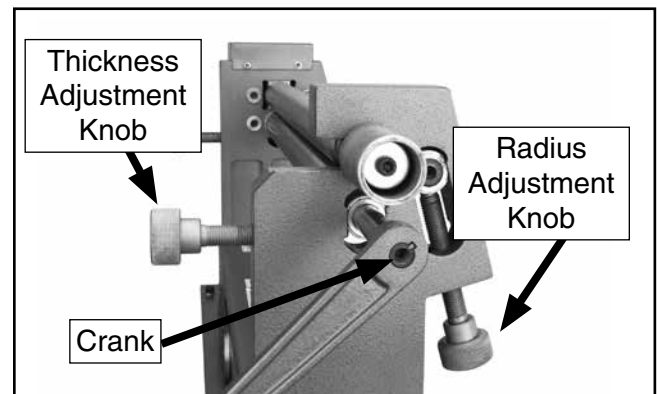
## Basic Controls

Use **Figures 8–9** and the descriptions below to become familiar with the basic controls of the slip roll.

**Thickness Adjustment Knob:** Raises and lowers the bottom roller to adjust for thicknesses of different workpieces.

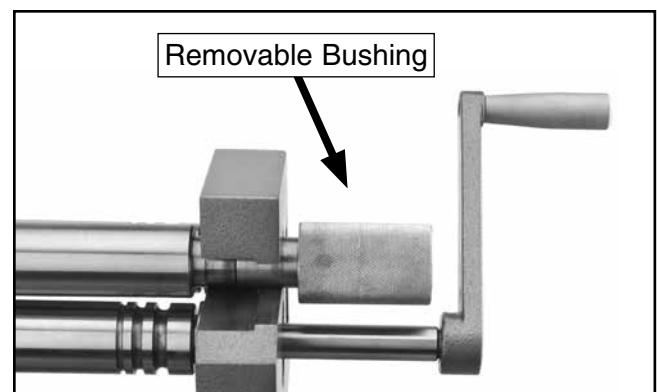
**Radius Adjustment Knob:** Raises and lowers the rear roller to create smaller and larger radius bends.

**Crank:** Turns the rollers, feeding the workpiece through the machine.



**Figure 8.** Adjustment knobs.

**Removable Bushing:** Slides out allowing the release of the top roller to facilitate the unloading of cylindrical workpieces.



**Figure 9.** Removable bushing.

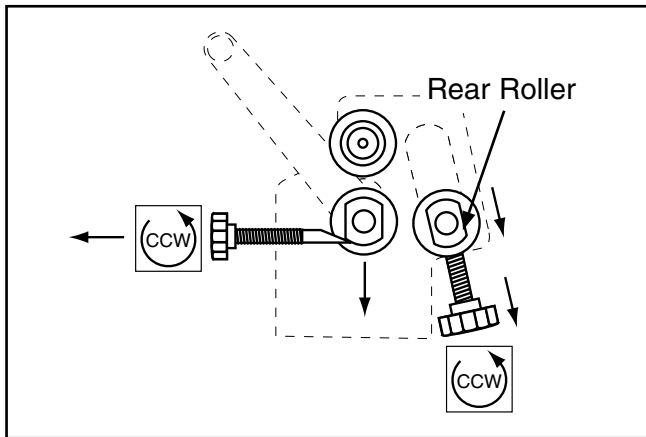


# Preparation

Before every use, follow these procedures to set up the slip roll for safe, accurate, and efficient use.

## To prepare the slip roll for use:

1. Turn the thickness adjustment knob to lower the bottom roller to approximately  $\frac{1}{4}$ " below the top roller. Use calipers or a spacer to set the distance between the rollers evenly at each end (see **Figure 10**).

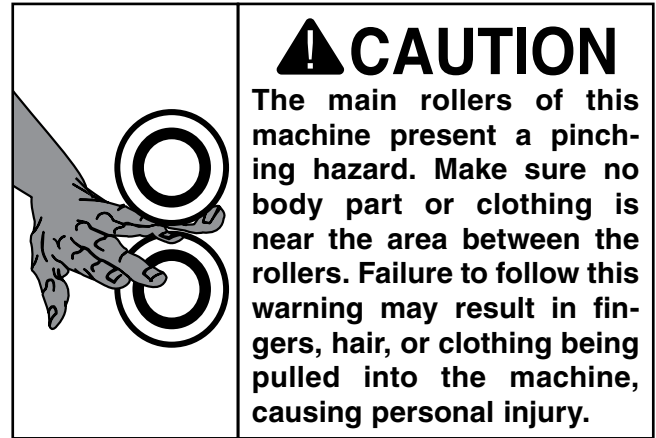


**Figure 10.** Slip roll preparation.

2. Lower the rear roller until it is approximately even with the bottom roller (see **Figure 10**). Use calipers or a spacer to set the rear roller even with the bottom roller at each end.

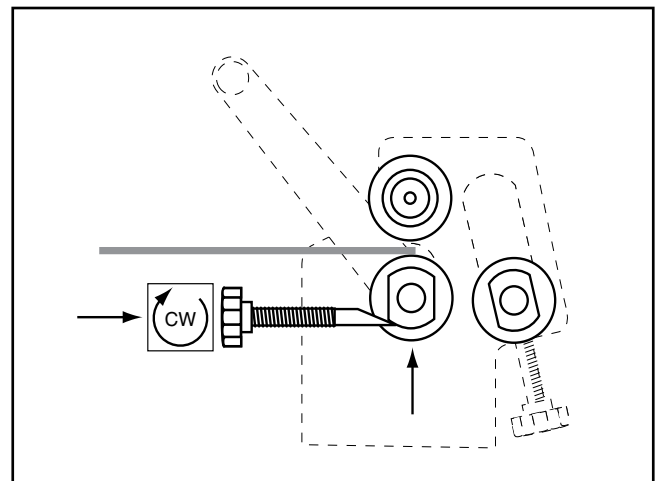
# Flat Rolling

This slip roll can be used to flat roll sheet metal up to 22 gauge. This can be done to straighten and slightly flatten workpieces.



## To flat roll a workpiece:

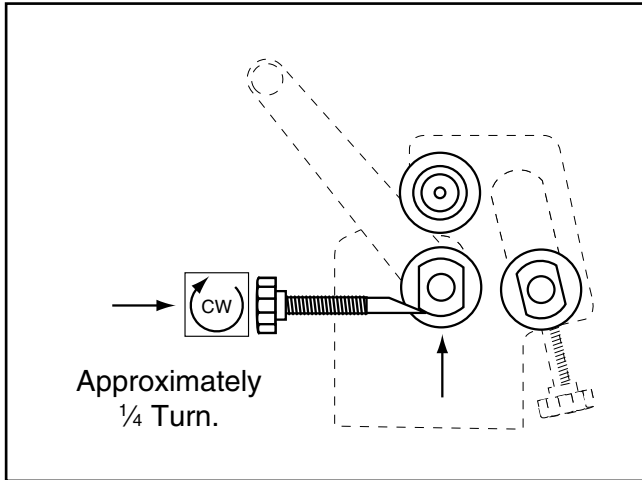
1. Place the workpiece between the top and bottom rollers, as shown in **Figure 11**. Turn the thickness adjustment knobs to lift the bottom roller until the workpiece is held snug between the top and bottom rollers. Be sure to turn the thickness adjustment knobs equal amounts.



**Figure 11.** Raising bottom roller for flat rolling.

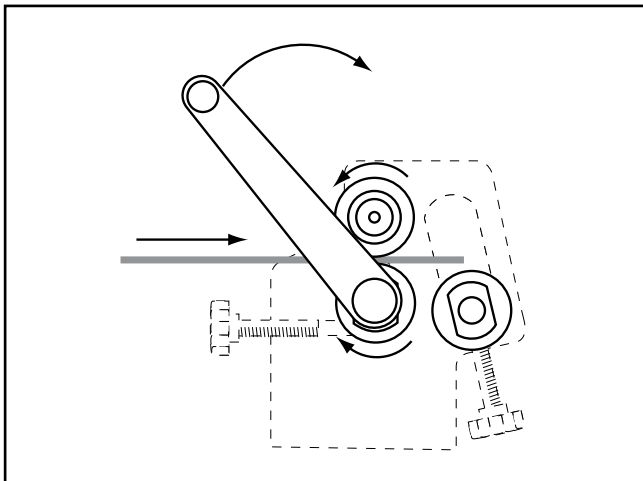


- Remove the workpiece from between the rollers, then raise the bottom roller slightly by rotating each thickness adjustment knob approximately  $\frac{1}{4}$  turn. Also, make sure the rear roller is lowered completely and will not interfere with the workpiece as it exits the machine (see **Figure 12**).



**Figure 12.** Raising bottom roller  $\frac{1}{4}$  turn.

- With the help of an assistant, feed the workpiece into the rollers while turning the crank (see **Figure 13**).



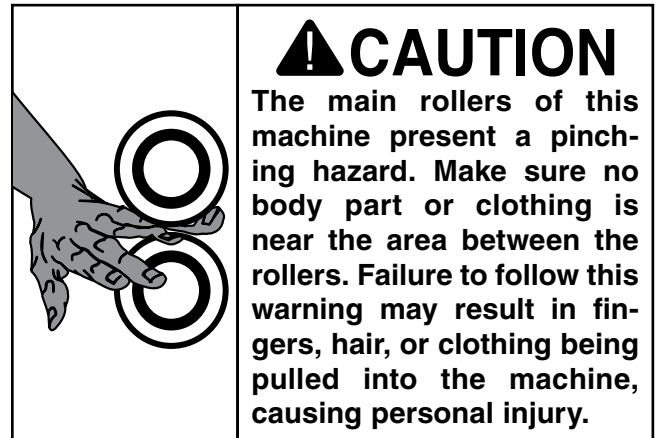
**Figure 13.** Flat rolling the workpiece.

- Continue processing the workpiece by repeating **Steps 2** and **3** until the desired results are produced.

## Creating Bends

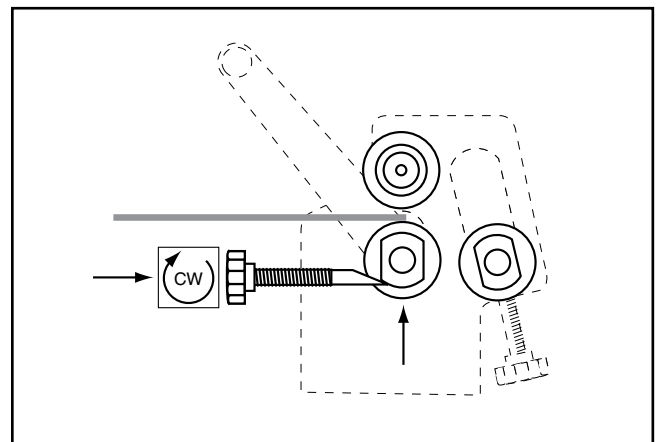
This slip roll can easily create constant-radius bends in sheet metal up to 22 gauge.

**Note:** The method for creating a specific radius is a trial-and-error process. Due to the many variations among metal workpieces, no single positioning will create the same curve on all materials. We recommend using scrap pieces the same dimensions and material as the final workpiece until the desired curve is achieved.



**To create a bend in a workpiece:**

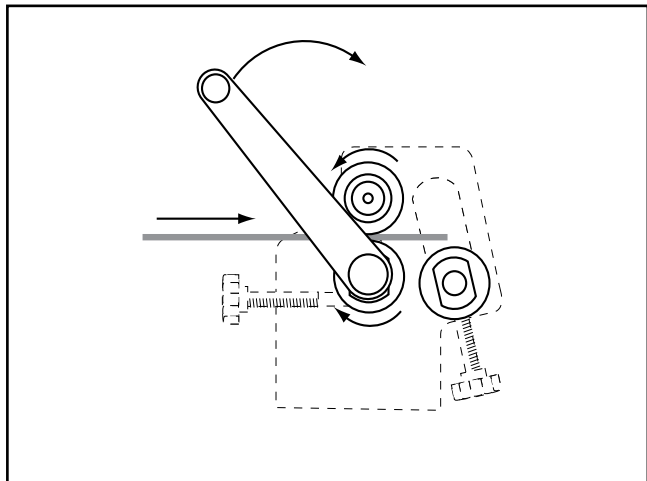
- Place the workpiece between the top and bottom rollers, as shown in **Figure 14**. Turn the thickness adjustment knobs to raise the bottom roller until the workpiece is held snug between the top and bottom rollers. Be sure to turn the thickness adjustment knobs equal amounts.



**Figure 14.** Raising bottom roller.

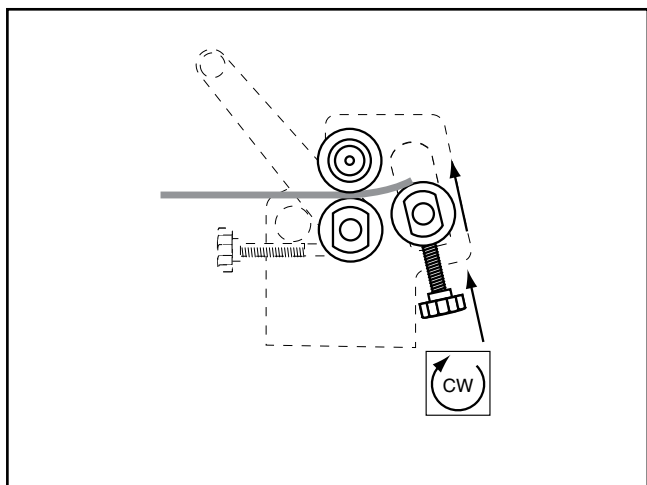


- Turn the crank clockwise to feed the workpiece until its edge is directly above the rear roller, as shown in **Figure 15**.



**Figure 15.** Feeding the workpiece.

- Turn the radius adjustment knobs to lift the rear roller until the desired radius bend is reached (see **Figure 16**). Make sure to turn the knobs equal amounts so the rear roller is always parallel with the other rollers. Failure to do so will create a larger radius on one end than the other, resulting in a cone or spiral shape.

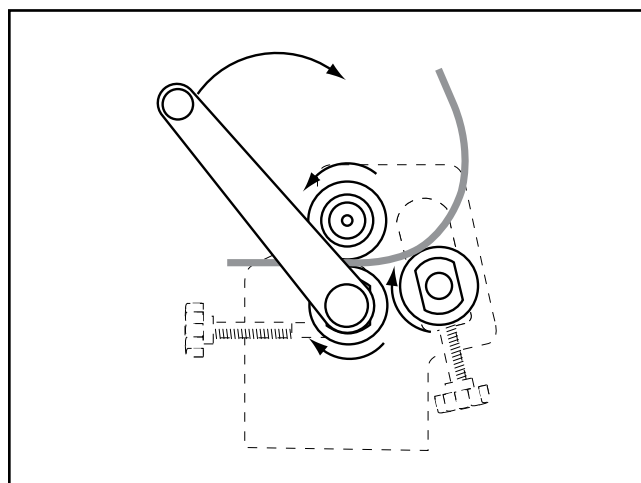


**Figure 16.** Setting the radius.

	<p><b>! WARNING</b></p> <p>This machine poses a cutting hazard if workpieces are not properly handled when exiting the rollers. If necessary, get assistance to support the workpiece. Make sure all helpers are wearing safety glasses and leather gloves when assisting in the use of this machine.</p>

<p><b>! CAUTION</b></p> <p>Depending on the size and shape of the workpiece, you may need assistance to support the workpiece as it exits the machine. Failure to adequately support the workpiece may result in the workpiece falling, causing injuries.</p>
---

- Turn the crank to process the material through the slip roll. Continue turning until the workpiece is completely through the top and bottom rollers (see **Figure 17**).



**Figure 17.** Processing the workpiece.





# Creating Cylinders

This slip roll can be used to easily and accurately create cylinders

If you know the diameter of the cylinder you want to create, use the formula below to calculate the length of material needed.

$$C = \pi D$$

C=Circumference  
(Length of Material Needed)

$\pi$ =Pi (Approximately 3.142)

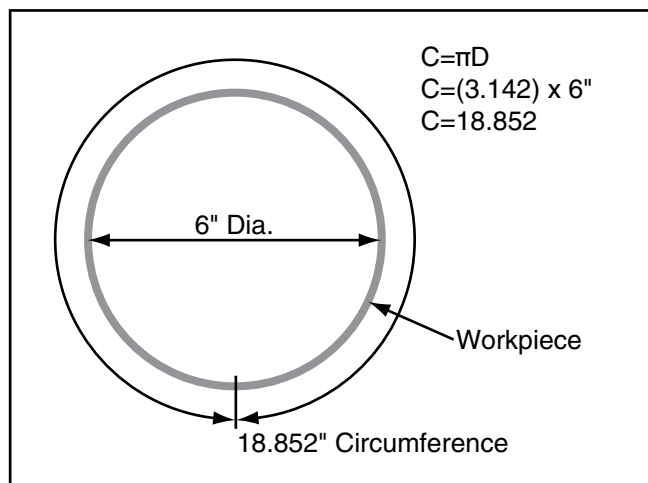
D=Diameter

**Example:** Suppose you want to create a 6" diameter cylinder. You would use the above formula as follows:

$$C = \pi D$$
$$C = (3.142) \times 6"$$
$$C = 18.852"$$

The result of 18.852" indicates that you need to start with a piece of sheet metal that is approximately 18.852" in length in order to create a 6" diameter cylinder.

You can use the slip roll to create a bend with the correct radius so that the two ends meet, forming a 6" diameter cylinder (see **Figure 18**).



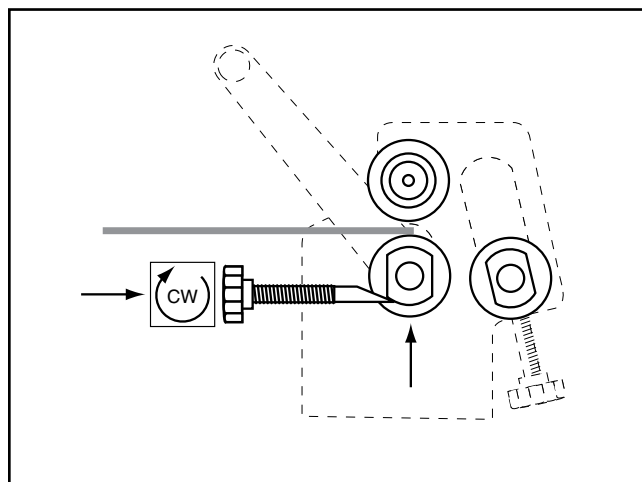
**Figure 18.** Calculating circumference example.

Once you have the necessary length workpiece, follow the steps below to create the cylinder.

**Note:** The method for creating a specific radius is a trial-and-error process. Due to the many variations among metal workpieces, no single positioning will create the same curve on all materials. We recommend using scrap pieces the same dimensions and material as the final workpiece until the desired curve is achieved.

**To create a cylinder:**

1. Place the workpiece between the top and bottom rollers, as shown in **Figure 19**. Turn the thickness adjustment knobs to lift the bottom roller until the workpiece is held snug between the top and bottom rollers. Be sure to turn the thickness adjustment knobs equal amounts.

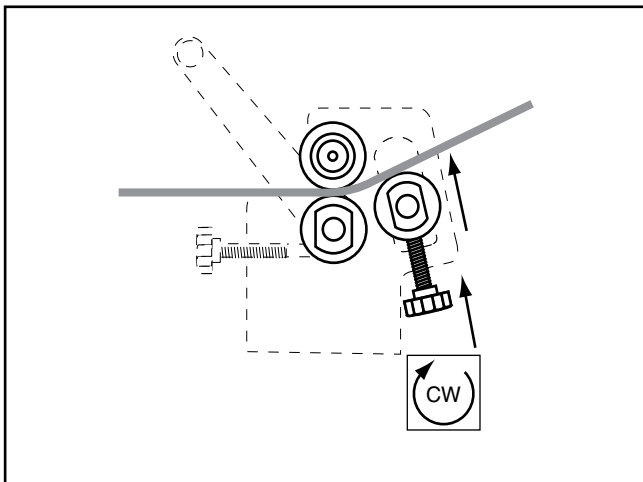


**Figure 19.** Raising bottom roller.



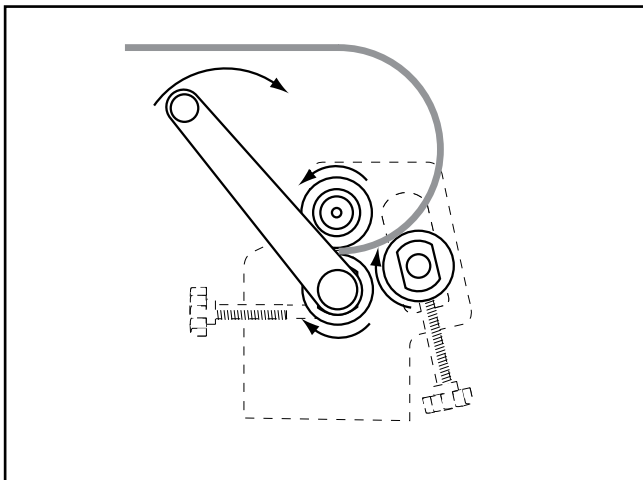
2. Turn the crank clockwise to feed the workpiece until it is approximately half way through the rollers.
3. Turn the radius adjustment knobs to lift the rear roller until the desired radius bend is reached (see **Figure 20**). Make sure to turn the knobs equal amounts so the rear roller is always parallel with the other rollers. Failure to do so will create a larger radius on one end than the other, resulting in a cone shape.

**Note:** Always err on the side of making the radius too large rather than too small. It is easy to decrease the radius but very difficult to increase the radius later.



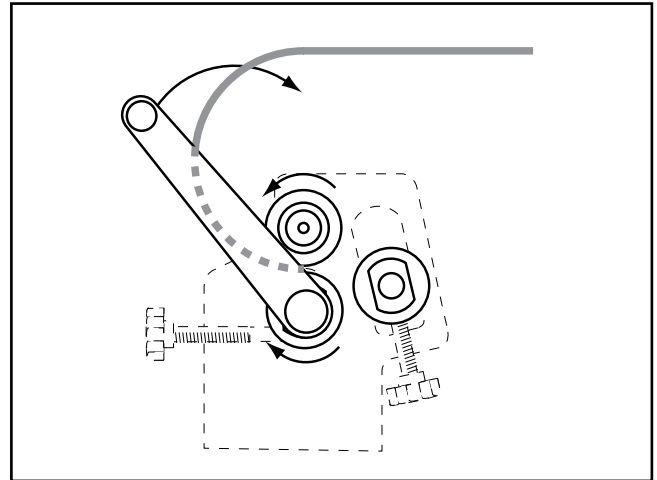
**Figure 20.** Setting the radius.

4. Turn the crank to process the material through the slip roll. Continue turning until the workpiece is completely through the top and bottom rollers (see **Figure 21**).

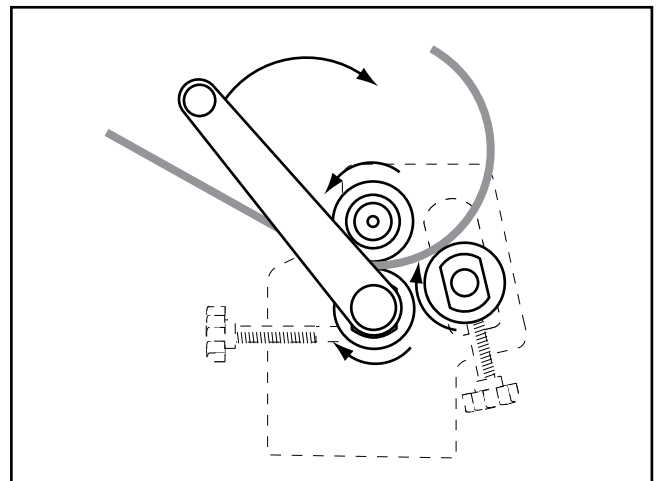


**Figure 21.** Processing the workpiece.

5. Rotate the workpiece 180°, insert the curved end into the slip roll, then process the workpiece through the machine, as shown in **Figures 22–23**.



**Figure 22.** Re-inserting the workpiece.



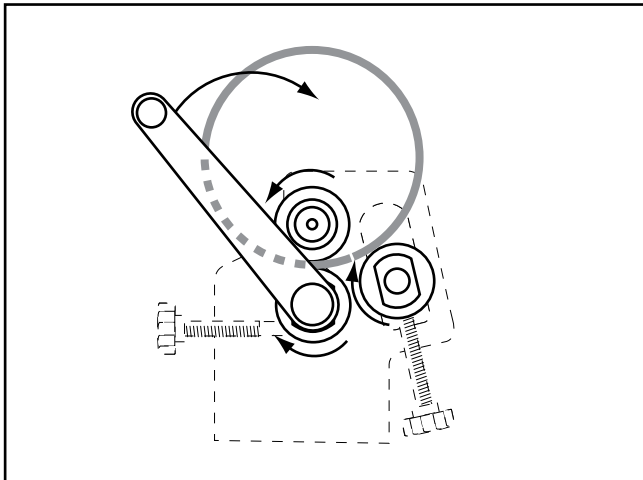
**Figure 23.** Creating the cylinder.



6. Continue to process the workpiece until the cylinder is formed, as shown in **Figure 24**.

—If the ends of the cylinder do not meet, lift the rear roller equally at both ends, then process the entire cylinder through the slip roll again. Repeat as necessary.

—If the ends of the cylinder overlap, remove the cylinder as described in **Removing Workpiece on Page 18**. Then, either attempt to increase the radius by manually bending it, or scrap the workpiece. Lower the rear roller equally at both ends then process a new workpiece through the slip roll. Repeat this step as necessary.



**Figure 24.** Finishing the cylinder.

7. Remove the workpiece as described in **Removing Workpiece on Page 18**.

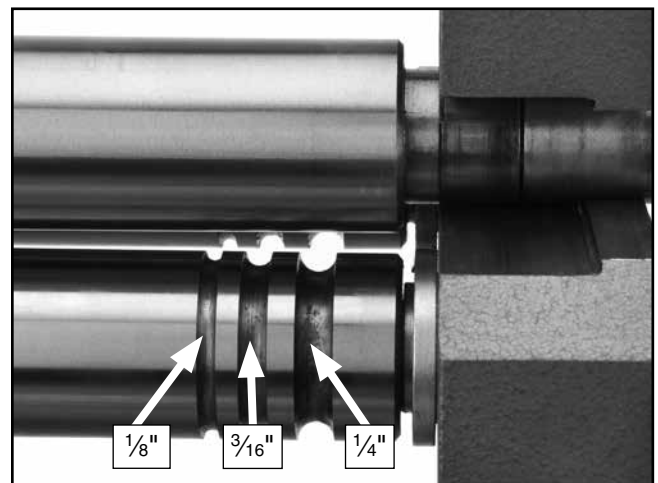
## Bending Wire

This slip roll can be used to shape wires, rods, and small-diameter tubing. The wire grooves can also be used when rolling sheet metal that has a wire bead at one end.

### To use the wire grooves:

1. Place the workpiece into the smallest possible groove on the wheel. The three sizes are  $\frac{1}{8}$ ",  $\frac{3}{16}$ ", and  $\frac{1}{4}$ " (see **Figure 25**).

**Example:** Suppose you want to bend a piece of  $\frac{1}{8}$ " rod. Though it would fit in any of the three grooves, you would use the  $\frac{1}{8}$ " groove since it is the smallest possible groove that the rod will fit into.



**Figure 25.** Wire grooves.

2. Process the material through the machine as described in **Creating Bends on Page 13**.

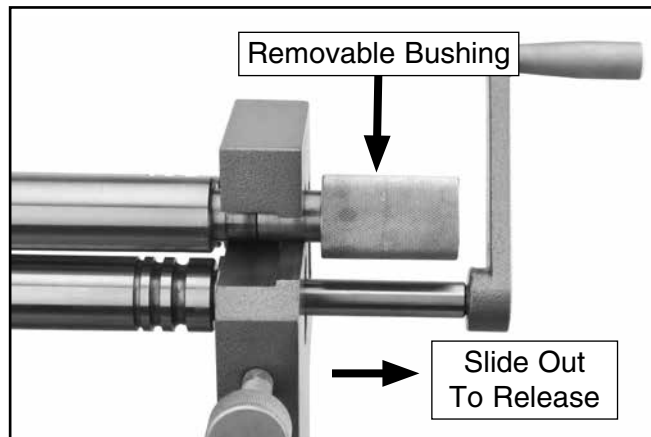
—If you want to make a loop of wire, follow the instructions in **Creating Cylinders on Page 15**.



# Removing Workpiece

To remove cylindrical workpieces:

1. Slide the removable bushing outward. This will release the top roller from the stand (see **Figure 26**).



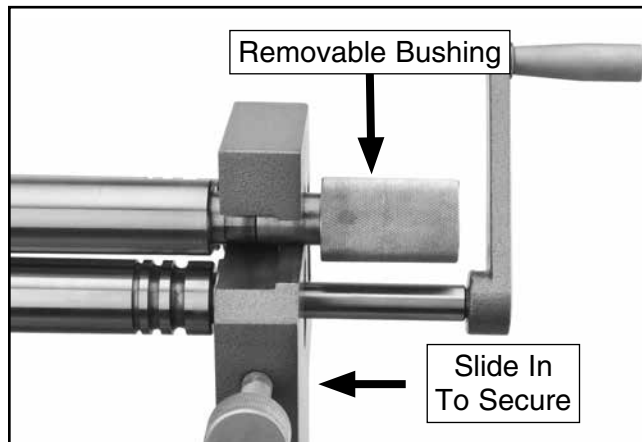
**Figure 26.** Removable bushing release.

2. Slide the top roller out from the base (see **Figure 27**). Remove the workpiece from the top roller, then slide the top roller back into the base.



**Figure 27.** Releasing top roller.

3. Move the top roller back into position and slide the removable bushing in to secure the top roller (see **Figure 28**).



**Figure 28.** Securing top roller.



# SECTION 4: ACCESSORIES

## **! WARNING**

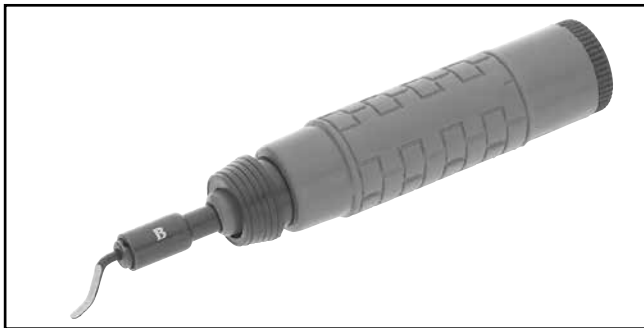
Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

## **NOTICE**

Refer to our website or latest catalog for additional recommended accessories.

### **G5618—Deburring Tool with two Blades**

The quickest tool for smoothing freshly sheared metal edges. Comes with two blades, one for steel and aluminum and one for brass and cast iron.



**Figure 29.** Deburring Tool.

### **T23094—Pneumatic Sheet Metal Shear**

This heavy-duty Pneumatic Sheet Metal Shear provides long life and reliable cutting with an ergonomic grip for comfort and stability. Shears most types of plastics and all types of aluminum, tin, and steel.



**Figure 30.** Pneumatic Sheet Metal Shear.

### **H5503—Electric Sheet Metal Shear**

This Electric Sheet Metal Shear features a ½ HP, 110V, 2500 RPM, 3.8 amp motor with a 360 degree adjustable swivel head and variable speed range from 0 to 2500 SPM. Cuts up to 14 gauge in mild steel and 18 gauge in stainless, at up to 150 inches per minute.



**Figure 31.** Electric sheet metal shear.

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# SECTION 5 : MAINTENANCE

## Schedule

For optimum performance from the machine, follow this maintenance schedule and refer to any specific instructions given in this section.

### Daily Check:

- Loose mounting bolts.
- Any other unsafe condition.

### Weekly Maintenance:

- Clean machine.
- Lubricate gears.
- Lubricate roller bushings.

## Cleaning

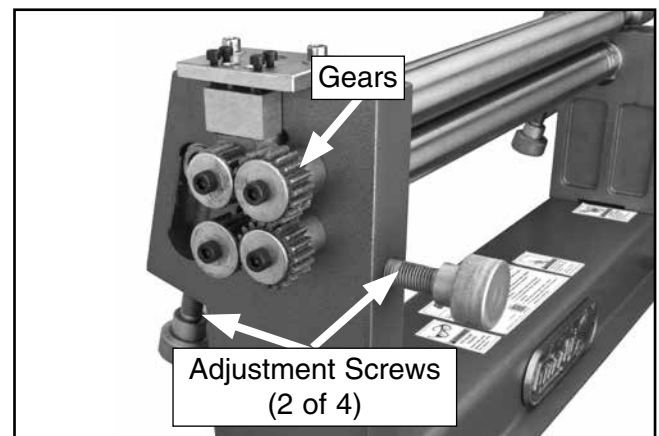
Cleaning the Model T25688 is relatively easy. Periodically wipe down the rollers to remove dust and debris—this ensures rust-promoting material does not remain on the bare metal surfaces.

Treat all unpainted metal surfaces with quality metal protectants like SLIPIT®, or Boeshield® T-9 (see previous page for offerings from Grizzly).

## Lubrication

### Roller Gears

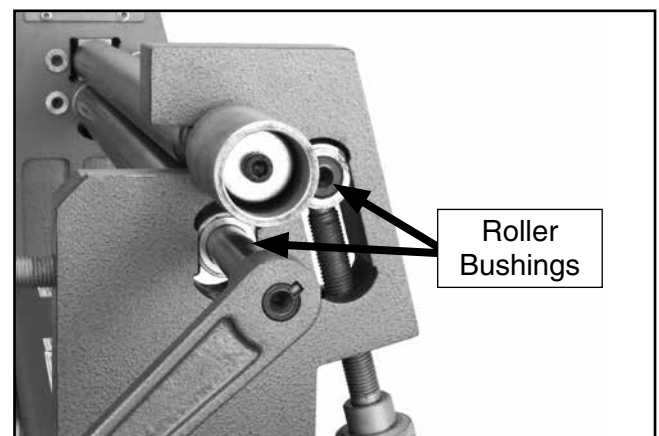
Lift the gear guard cover and apply a dab of white lithium grease to the upper roller gears (see **Figure 32**). Rotate the hand crank several times in both directions to distribute the grease to both gears, then wipe away any excess and close the cover.



**Figure 32.** Gears and adjustment screws.

### Roller Bushings

Use an oil can to apply a few drops of light machine oil to the brass bushings at either end of the three rollers (see **Figure 33**). Rotate the hand crank several times in both directions to distribute the oil, then wipe away any excess.



**Figure 33.** Roller bushing.



# SECTION 6: SERVICE

Review the troubleshooting and procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, call our Technical Support at (570) 546-9663.

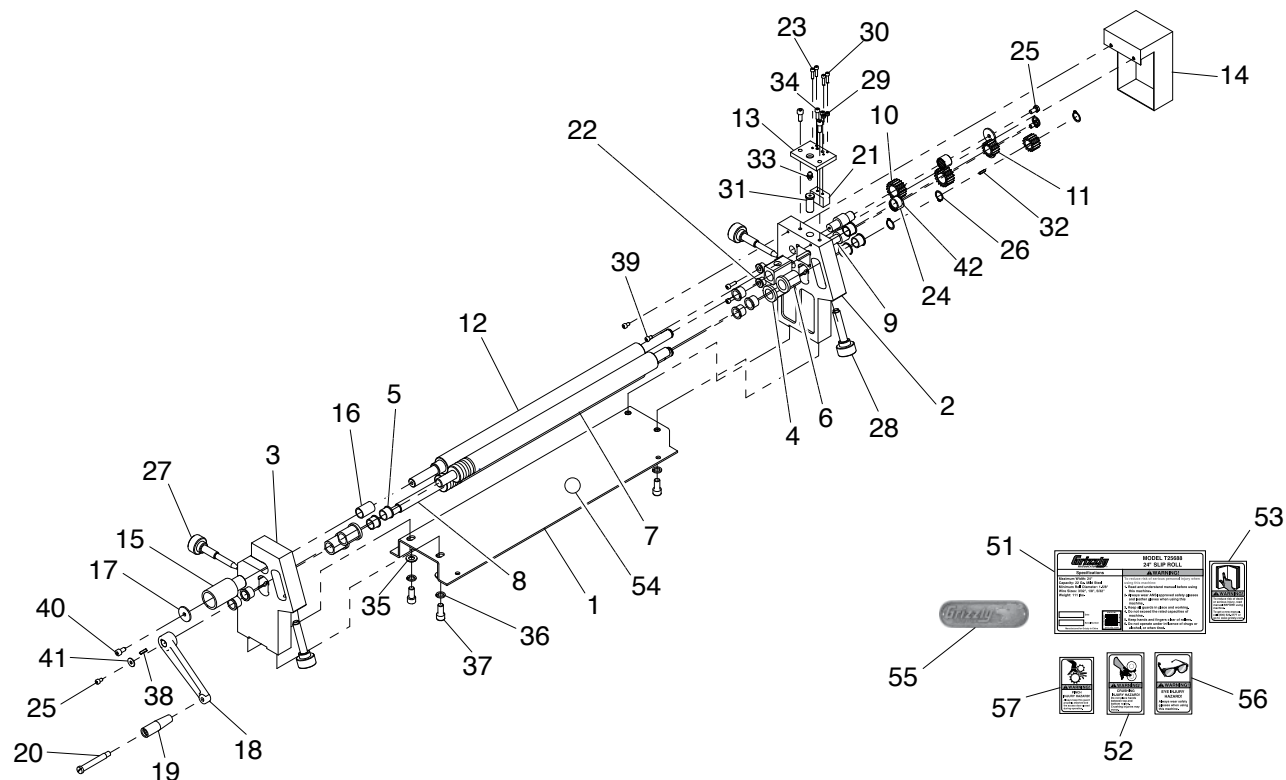
**Note:** Please gather the serial number and manufacture date of your machine before calling.

## Troubleshooting

Symptom	Possible Cause	Possible Solution
Slip roll creates cones when trying to create cylinders.	1. Rollers are not parallel.	1. Adjust rear roller adjustment knobs as necessary to be sure the rear roller and top roller are parallel.
A noticeable crease is formed in the workpiece.	1. Excessive pressure applied in one spot.	1. Reduce the radius and perform the bend in several passes.
Crank does not turn top and bottom rollers.	1. Bottom roller adjustment screws not engaged. 2. Gears are damaged.	1. Engage bottom roller adjustment screws. 2. Check/replace gears.
Slip roll does not bend material.	1. Machine capacities exceeded. 2. Rear roller not engaged.	1. Use materials within the capacity of the slip roll. 2. Check/adjust rear roller.



# SECTION 7: PARTS



REF PART #	DESCRIPTION
1	PT25688001 BASE PLATE
2	PT25688002 SIDE BRACKET (LH)
3	PT25688003 SIDE BRACKET (RH)
4	PT25688004 REAR ROLLER BUSHING
5	PT25688005 LOWER/REAR ROLLER BUSHING (COPPER)
6	PT25688006 ROLLER AXLE SLEEVE
7	PT25688007 REAR ROLLER
8	PT25688008 LOWER ROLLER
9	PT25688009 GEAR SHAFT
10	PT25688010 GEAR 19T
11	PT25688011 GEAR 15T
12	PT25688012 UPPER ROLLER
13	PT25688013 PRESSURE PLATE
14	PT25688014 GEARBOX COVER
15	PT25688015 UPPER ROLLER HANDLE
16	PT25688016 UPPER ROLLER BUSHING (COPPER)
17	PT25688017 CRANK FLAT WASHER 8MM
18	PT25688018 CRANK
19	PT25688019 CRANK HANDLE
20	PT25688020 HANDLE STEP BOLT M10-1.5 X 12
21	PT25688021 CUSHION BLOCK
22	PT25688022 BUSHING
23	PT25688023 CAP SCREW M6-1 X 20
24	PT25688024 NEEDLE BEARING HK2020
25	PT25688025 HEX BOLT M8-1.25 X 16

REF PART #	DESCRIPTION
26	PT25688026 EXT RETAINING RING 20MM
27	PT25688027 KNURLED KNOB BOLT M16-2.0 X 40
28	PT25688028 KNURLED KNOB BOLT M16-2.0 X 70
29	PT25688029 HEX NUT M5-.8
30	PT25688030 CAP SCREW M5-.8 X 20
31	PT25688031 ALIGNMENT PIN
32	PT25688032 KEY 4 X 4 X 18
33	PT25688033 BALL OILER 6MM TAP-IN
34	PT25688034 CAP SCREW M8-1.25 X 20
35	PT25688035 FLAT WASHER 12MM
36	PT25688036 LOCK WASHER 12MM
37	PT25688037 CAP SCREW M12-1.75 X 20
38	PT25688038 KEY 5 X 5 X 20
39	PT25688039 CAP SCREW M6-1 X 10
40	PT25688040 CAP SCREW M8-1.25 X 20
41	PT25688041 FLAT WASHER 8MM
42	PT25688042 GEAR W/COPPER BUSHING 15T
51	PT25688051 MACHINE ID LABEL
52	PT25688052 CRUSHING INJURY LABEL
53	PT25688053 READ MANUAL LABEL
54	PT25688054 GRIZZLY GREEN TOUCH-UP PAINT
55	PT25688055 GRIZZLY NAMEPLATE
56	PT25688056 EYE INJURY LABEL
57	PT25688057 PINCH WARNING LABEL

**Please Note:** We do our best to stock replacement parts whenever possible, but we cannot guarantee that all parts shown here are available for purchase. Call (800) 523-4777 or visit our online parts store at [www.grizzly.com](http://www.grizzly.com) to check for availability.







# WARRANTY CARD

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 Model # \_\_\_\_\_ Order # \_\_\_\_\_ Serial # \_\_\_\_\_

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. **Of course, all information is strictly confidential.**

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 Card Deck                                 Website                       Other:

2. Which of the following magazines do you subscribe to?

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<input type="checkbox"/> Family Handyman	<input type="checkbox"/> Popular Woodworking	<input type="checkbox"/> Woodshop News
<input type="checkbox"/> Hand Loader	<input type="checkbox"/> Precision Shooter	<input type="checkbox"/> Woodsmith
<input type="checkbox"/> Handy	<input type="checkbox"/> Projects in Metal	<input type="checkbox"/> Woodwork
<input type="checkbox"/> Home Shop Machinist	<input type="checkbox"/> RC Modeler	<input type="checkbox"/> Woodworker West
<input type="checkbox"/> Journal of Light Cont.	<input type="checkbox"/> Rifle	<input type="checkbox"/> Woodworker's Journal
<input type="checkbox"/> Live Steam	<input type="checkbox"/> Shop Notes	<input type="checkbox"/> Other:
<input type="checkbox"/> Model Airplane News	<input type="checkbox"/> Shotgun News	
<input type="checkbox"/> Old House Journal	<input type="checkbox"/> Today's Homeowner	
<input type="checkbox"/> Popular Mechanics	<input type="checkbox"/> Wood	

3. What is your annual household income?

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 \$50,000-\$59,000                       \$60,000-\$69,000                       \$70,000+

4. What is your age group?

20-29     30-39     40-49  
 50-59     60-69     70+

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0-2 Years                       2-8 Years                       8-20 Years                       20+ Years

6. How many of your machines or tools are Grizzly?

0-2                       3-5                       6-9                       10+

7. Do you think your machine represents a good value?                       Yes                       No

8. Would you recommend Grizzly Industrial to a friend?                       Yes                       No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?

**Note:** We never use names more than 3 times.                       Yes                       No

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# WARRANTY & RETURNS

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Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

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