

RG3600 Roll Grooving Tool

**STRENGTHIN™¹⁰⁰**

WARNING



Failure to follow instructions and warnings could result in death or serious personal injury, property damage, and product damage.

- Before operating or servicing any pipe preparation tools, read all instructions in the operating and maintenance manual and all warning labels on the tool.

- Wear safety glasses, hardhat, foot protection, and hearing protection while working around pipe preparation tools.
- Save the operating and maintenance manual in a place accessible to all operators of the tool.

If you need additional copies of any literature, or if you have questions concerning the safe and proper operation of any pipe preparation tools, contact Victaulic, P.O. Box 31, Easton, PA 18044-0031, Phone: 1-800-PICK VIC, E-Mail: pickvic@victaulic.com

Original Instructions

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HAZARD IDENTIFICATION

Definitions for identifying the various hazard levels are provided below.




This safety alert symbol indicates important safety messages. When you see this symbol, be alert to the possibility of personal injury.


Carefully read and fully understand the message that follows.

**DANGER**

- The use of the word “DANGER” identifies an immediate hazard with a likelihood of death or serious personal injury if instructions, including recommended precautions, are not followed.

**WARNING**

- The use of the word “WARNING” identifies the presence of hazards or unsafe practices that could result in death or serious personal injury if instructions, including recommended precautions, are not followed.

**CAUTION**

- The use of the word “CAUTION” identifies possible hazards or unsafe practices that could result in personal injury and product or property damage if instructions, including recommended precautions, are not followed.

NOTICE

- The use of the word “NOTICE” identifies special instructions that are important but not related to hazards.

OPERATOR SAFETY INSTRUCTIONS

The RG3600 Roll Grooving Tool is designed for the sole purpose of roll grooving pipe. These instructions must be read and understood by each operator PRIOR to working with the grooving tool. These instructions describe safe operation of the tool, including set up and maintenance. Each operator must become familiar with the tool's operations, applications, and limitations. Particular care should be given to reading and understanding the dangers, warnings, and cautions described throughout these operating instructions.

Use of these tools requires dexterity and mechanical skills, as well as sound safety habits. Although these tools are designed and manufactured for safe, dependable operation, it is difficult to anticipate all combinations of circumstances that could result in an accident. The following instructions are recommended for safe operation of these tools. The operator is cautioned to always practice “safety first” during each phase of use, including set up and maintenance. It is the responsibility of the lessee or user of these tools to verify that all operators read this manual and fully understand the operation of these tools.

Store this manual in a clean, dry area where it is always readily available. Additional copies of this manual are available upon request through Victaulic, or can be downloaded at victaulic.com.

**DANGER**

1. **Avoid using the tool in potentially dangerous environments.** Do not expose the tool to rain, and do not use the tool in damp or wet locations. Do not use the tool on sloped or uneven surfaces. Keep the work area well lit. Allow sufficient space to operate the tool properly.
2. **Ground the power drive to protect the operator from electric shock.** Verify that the power drive is connected to an internally grounded electrical source.

3. **Disconnect the power cord from the electrical source before servicing the tool.** Only authorized personnel should perform maintenance on the tool. Always disconnect the power cord from the electrical source before servicing or adjusting the tool.

WARNING

1. **Prevent back injury.** Always use proper lifting techniques when handling tool components.
2. **Wear proper apparel.** Do not wear loose clothing, jewelry, or anything that can become entangled in moving parts.
3. **Wear protective items when working with tools.** Always wear safety glasses, hardhat, foot protection, and hearing protection (sound levels up to 93.5 decibels can be produced during the grooving process).
4. **Keep hands and tools away from grooving rolls during the grooving operation.** Grooving rolls can crush or cut fingers and hands.
5. **Do not reach inside pipe ends during tool operation.** Pipe edges can be sharp and can snag gloves, hands, and shirt sleeves.
6. **Operate the tool only with a safety foot switch.** The power drive must be operated with a safety foot switch that is located for easy operator access. Never reach across moving parts. If the tool does not contain a safety foot switch, contact Victaulic.
7. **Do not over-reach.** Maintain proper footing and balance at all times. Verify that the safety foot switch is easily accessible to the operator.
8. **Do not make any modifications to the tool.** Do not remove any safety guarding or any components that would affect tool performance.

CAUTION

1. **The RG3600 tool is designed ONLY for roll grooving pipe sizes, materials, and wall thicknesses listed on page 23.**
2. **Inspect the equipment.** Before using the tool, check moveable parts for obstructions. Ensure that tool components are installed and adjusted in accordance with the “Tool Setup” section. Ensure that properly matched roll sets are installed and lubricated.
3. **Stay alert.** Do not operate the tool if you are drowsy from medication or fatigue.
4. **Keep visitors, trainees, and observers away from the immediate work area.** All visitors should be kept a safe distance from the equipment at all times.
5. **Keep work areas clean.** Keep the work area around the tool clear of any obstructions that could limit movement of the operator. Clean up any spills.
6. **Secure the work, machine, and accessories.** Verify that the tool is stable. Refer to the “Tool Setup” section.
7. **Support the work.** Support long pipe lengths with a pipe stand, in accordance with the “Long Pipe Lengths” section.
8. **Do not force the tool.** Do not force the tool or accessories to perform any functions beyond the capabilities described in these instructions. Do not overload the tool.
9. **Maintain tool with care.** Keep the tool clean to ensure proper and safe performance. Follow the instructions for matching roll sets and lubricating tool components.
10. **Use only Victaulic replacement parts and accessories.** Use of any other parts may result in a voided warranty, improper operation, and hazardous situations. Refer to the “Parts Ordering Information” and “Accessories” sections.
11. **Do not remove any labels from the tool.** Replace any damaged or worn labels.

INTRODUCTION

NOTICE

- Drawings and/or pictures in this manual may be exaggerated for clarity.
- The tool, along with this operating and maintenance instructions manual, contains trademarks, copyrights, and/or patented features that are the exclusive property of Victaulic.

The RG3600 Roll Grooving Tool is a semi-automated, hydraulic-feed tool for roll grooving pipe to receive Victaulic grooved pipe products. The standard tool is supplied with matched rolls for grooving DN50–DN150 and DN200–DN300 stainless steel pipe. Roll sets are marked with the size and part number, and are color coded blue to identify that they are specifically for the RG3600 system.

CAUTION

- This tool must be used **ONLY** for grooving pipe with specifications that fall within the designated parameters.
- Verify that the upper and lower grooving rolls are a matched set.

Failure to follow these instructions could damage the tool and cause product failure, resulting in property damage or personal injury.

RECEIVING THE TOOL


The RG3600 Roll Grooving Tool is palletized individually and enclosed in a cardboard sleeve, which is designed for repeated shipping. Save the original container for return shipment of rental tools and accessories.


Upon receipt of the tool, confirm that all necessary components are included. If any components are missing, contact Victaulic.

CONTAINER CONTENTS

Qty.	Description
1	Tool Head Assembly
1	Hydraulic Hand Pump Assembly
1	Hydraulic Hand Pump Handle
1	Drive Motor
1	Roll Set for DN50–DN150 Stainless Steel Pipe (standard - mounted on the tool at the factory)
1	Roll Set for DN200–DN300 Stainless Steel Pipe (standard - attached to side of tool at the factory)
1	Safety Foot Switch
2	Operating and Maintenance Manual
1	GDC- STRENGTH-IN ™100 Go/No-Go Groove Diameter Cable

POWER REQUIREMENTS



 **DANGER**

- To reduce the risk of electric shock, check the electrical source for proper grounding.
- Before performing any maintenance on the tool, disconnect the power cord from the electrical source.

Failure to follow these instructions could result in death or serious personal injury.

The RG3600 Roll Grooving Tool is equipped with a 230 VAC 50/60-Hz motor. Maximum current draw is 8 amps. In addition, tools are equipped with a grounded plug.

Power must be supplied to the motor/drive through a safety foot switch to verify safe operation. Verify that the motor/drive is grounded properly in accordance with local codes.

If an extension cord is required, refer to the “Extension Cord Requirements” section.

EXTENSION CORD REQUIREMENTS

When pre-wired outlets are not available and an extension cord must be used, it is important to use the proper cord size (i.e. Conductor Size American Wire Gauge). Cord size selection is based upon tool rating (amps) and cord length (feet). Use of a cord size (gauge) thinner than required will cause significant voltage drop at the power drive or tool motor while the tool is operating. Voltage drops may cause damage to the power drive or tool motor and can result in improper tool operation. **NOTE:** It is acceptable to use a cord size that is thicker than required.

Listed in the chart below are recommended cord size (gauge) for cord lengths up to and including 31 meters. Use of extension cords beyond 31 meters in length should be avoided.

Drive Motor Rating volts/amps	Cord Lengths meters		
	8	15	31
230 8	1.5 mm ²	1.5 mm ²	2.5 mm ²

TOOL NOMENCLATURE

NOTICE

- Drawings and/or pictures in this manual may be exaggerated for clarity.
- The tool, along with this operating and maintenance instructions manual, contains trademarks, copyrights, and/or patented features that are the exclusive property of Victaulic.



IMPORTANT INFORMATION LABELS PROVIDED ON THE TOOL

WARNING

Failure to follow instructions and warnings could result in serious personal injury, property damage, and/or product damage.

- Before operating or servicing any pipe preparation tools, read all instructions in the Operating and Maintenance Instructions Manual and all labels on the tool.
- Wear safety glasses, hardhat, foot protection, and hearing protection when working around tools.

If you need additional copies of any literature, or if you have questions concerning the safe and proper operation of any pipe preparation tools, contact Victaulic, P.O. Box 31, Easton, PA 18044-0031, Phone 1-800-PICK VIC, E-Mail: pickvic@victaulic.com.

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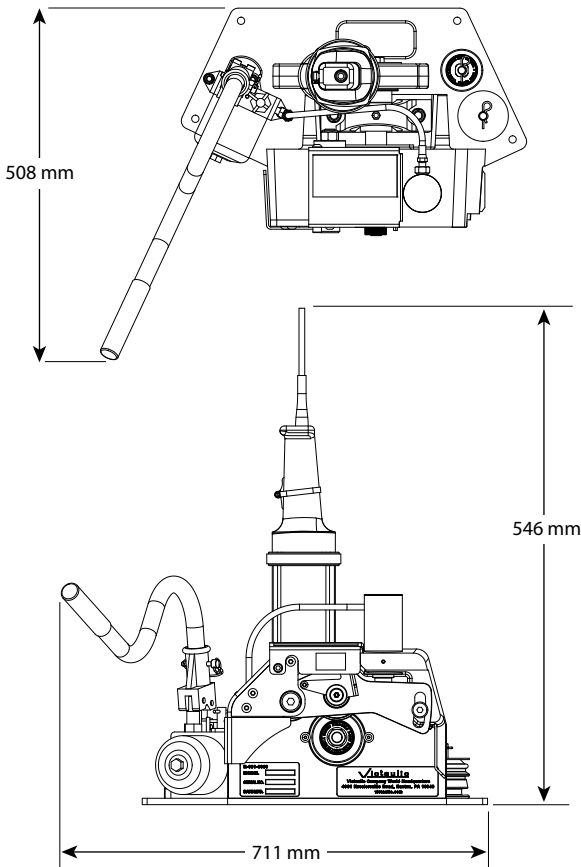
PIPE ROTATION



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TOOL DIMENSIONS AND SPECIFICATIONS



Tool weight is 29 kilograms/64 pounds. Tool weight includes the tool head assembly and hand pump assembly.

Tool sound pressure is 85.5 dB(A), while tool sound power is 93.5 dB(A). All measurements taken with a Rems Amigo® 2 power drive.

NOTE: Noise measurements are dependent on the power drive, and will vary based on configuration. Always check the power drive manufacturer's documentation for details.

® Rems Amigo is a trademark of REMS GmbH & Co KG

SETUP OF THE TOOL HEAD ASSEMBLY

**WARNING**



- **Always use proper lifting techniques when handling the tool head assembly.**

Failure to follow this instruction could result in personal injury.

1. Remove all components from the packaging, and confirm that all necessary components are included. Refer to the “Receiving the Tool” section.



2. The tool must be located on a level table or sturdy base. After an appropriate location is chosen, the tool must be leveled front to back and anchored securely by the base plate using bolts or clamps.

NOTE: A non-level tool can severely affect grooving operation. When checking tool level, place the level on top of the hydraulic cylinder, as shown above.

3. Select a location for the tool and pipe stand by taking into consideration the following factors:
 - a. The required power supply (refer to the “Power Requirements” section)
 - b. Ambient temperature requirements of -21° C to 26° C
 - c. A level base for the tool and pipe stand
 - d. Adequate space to handle pipe lengths
 - e. Adequate clearance around the tool for adjustment and maintenance.



4. Insert the hand pump handle into the lever arm of the hydraulic hand pump. Position the hand pump handle with the handle grip facing outward. Lock the handle in this position with the retaining pin provided.

SETUP OF THE POWER DRIVE

DANGER

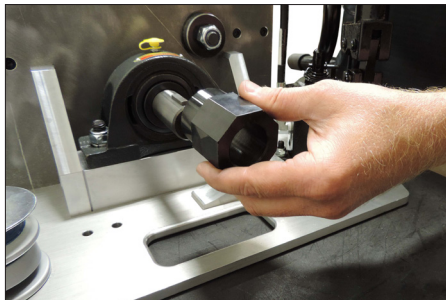


- **DO NOT** connect power until instructed otherwise.

Failure to follow this instruction could result in serious personal injury.



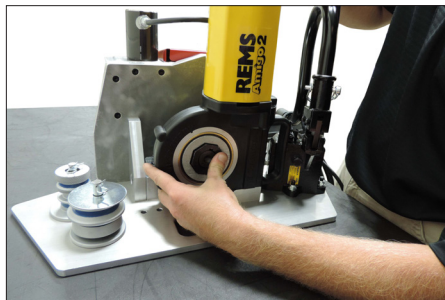
1. Remove the retainer plate and bolt from the universal drive adapter at the rear of the tool.



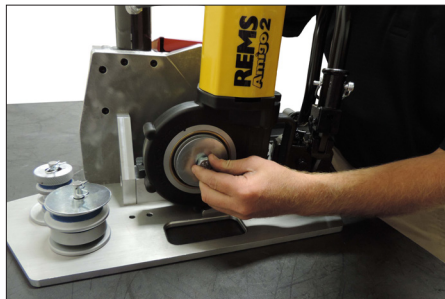
2. Remove the drive bushing from the universal drive adapter.



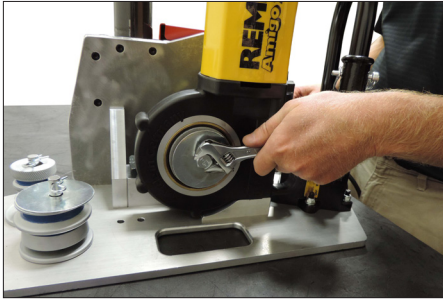
3. Insert the drive bushing into the drive motor.



4. Insert the drive motor over the universal drive adapter until the motor sits flush with the rear main shaft bearing.



5. Replace the retainer plate and bolt over the drive motor.



6. Secure the bolt with a 19-mm wrench. Do not overtighten the bolt.

WARNING

- **DO NOT** operate the power drive without a safety foot switch. If the tool does not contain a safety foot switch, contact Victaulic.

Operating the tool without a safety foot switch could result in serious personal injury.

DANGER



- To reduce the risk of electric shock, check the electrical source for proper grounding.
- Before performing any maintenance on the tool, disconnect the power cord from the electrical source.

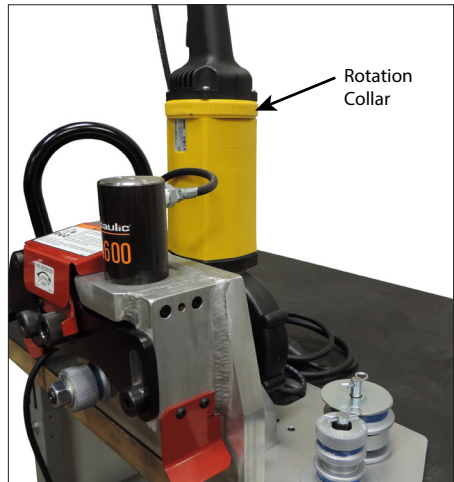
Failure to follow these instructions could result in death or serious personal injury.

7. Plug the Rems Amigo 2 power drive cord into the provided safety foot switch. Refer to the power drive manufacturer's operating manual for additional information.

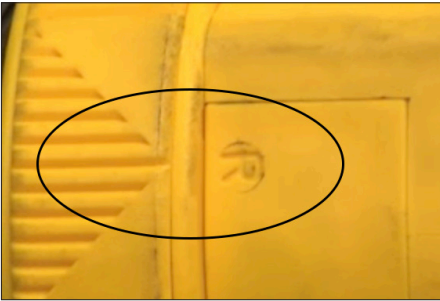
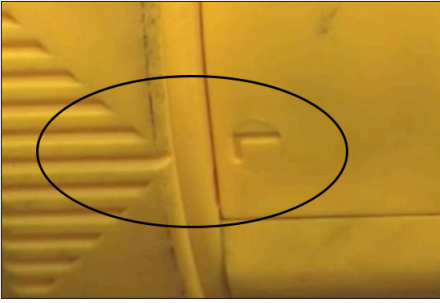
Verify that the switch is located on the same side of the tool as the hand pump handle, with adequate clearance for ease of use and to avoid a tripping hazard.



8. Depress the safety foot switch. Verify that the lower roll rotates away from the operator when viewed from the front of the tool. (See Figure 2 on page 14 for more information.) If the lower roll rotates toward the operator, reverse the rotation collar as outlined in steps 9a and 9b that follow. Remove foot from the safety foot switch.





- 9a. Locate the rotation collar at the base of the Rems drive body.



- 9b. The drive body features **L** (left) and **R** (right) markings. To reverse the direction of rotation, twist the collar to align the arrow with the opposite marking.
10. Verify that the tool is stable. If the tool wobbles, verify that the clamp or bolts are adjusted correctly and that the tool is level. If the wobble persists, the tool must be relocated to a more level surface.


PRE-OPERATION CHECKS AND ADJUSTMENTS

Every Victaulic roll grooving tool is checked, adjusted, and tested at the factory prior to shipment. However, before operating the tool, the following checks and adjustments should be made to verify proper tool operation. In addition, the tool should be inspected for any damage that may have occurred during shipping and handling.

 DANGER	
	<ul style="list-style-type: none">• Before making any tool adjustments, disconnect the power cord from the electrical source. <p>Accidental startup of the tool could result in serious personal injury.</p>

GROOVING ROLLS

Verify that the proper roll set is installed on the tool for the pipe size to be grooved. Roll sets are marked with the pipe size and part number, and are color-coded blue. Refer to page 23. If the proper roll set is not installed on the tool, refer to the “Roll Changing” section.

 CAUTION	
<ul style="list-style-type: none">• Verify that the roll retaining bolts and nuts are tight.• Verify that the upper and lower grooving rolls are a matched set. <p>Failure to follow these instructions could damage the tool and cause product failure, resulting in property damage or personal injury.</p>	

PIPE PREPARATION

For proper tool operation and production of grooves that are within Victaulic specifications, the following guidelines must be followed.

- 1. Use only square-cut pipe with **STRENGTH-IN™100** products.
- NOTE:** Roll grooving beveled-end pipe will result in unacceptable flare.
- 2. Raised internal and external weld beads and seams must be ground flush with the pipe surface, 50 mm back from the pipe ends.
- 3. All coarse scale, dirt, and other foreign material must be removed from the interior and exterior surfaces of the pipe ends.

⚠ CAUTION

- For maximum grooving roll life, remove foreign material from the interior and exterior surfaces of the pipe ends.

Foreign material may interfere with or damage grooving rolls, resulting in leaks and property damage.

PIPE LENGTH REQUIREMENTS

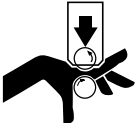
RG3600 Roll Grooving Tools are capable of grooving short pipe lengths without the use of a pipe stand. Refer to the “Short Pipe Lengths” section.

Pipe lengths longer than those listed in Table 1 on the following page (and up to 6 meters) must be supported with a pipe stand.

Pipe lengths from 6 meters up to double-random lengths (approximately 12 meters) must be supported with two pipe stands.

SHORT PIPE LENGTHS

⚠ WARNING



- Grooving rolls can crush or cut fingers and hands.

Never groove pipe that is shorter than the recommended lengths listed in this manual.

Table 1 shows the minimum and maximum pipe lengths that can be grooved without the use of a pipe stand. Refer to the “Grooving Operation” section for instructions on how to groove short pipe lengths. For pipe longer than what is shown in Table 1, refer to the “Long Pipe Lengths” section.

NOTICE

- Grooved pipe nipples, shorter than those listed in Table 1, are available from Victaulic.

If pipe is required that is shorter than the minimum length listed in Table 1, shorten the next-to-last piece so that the last piece is as long (or longer) than the minimum length specified.

EXAMPLE: A 6.2-m length of DN250 diameter stainless steel pipe is required to finish a section, and only 6.1-m lengths are available. Instead of roll grooving a 6.1-m length of stainless steel pipe and a 102-mm length of stainless steel pipe, follow these steps:

1. Refer to Table 1, noting that for DN250 diameter stainless steel pipe, the minimum length that should be roll grooved is 255 mm.
2. Roll groove a 5.9-m length of pipe and a 255-mm length of pipe. Refer to the “Long Pipe Lengths” section.

TABLE 1 - PIPE LENGTHS SUITABLE FOR GROOVING WITHOUT THE USE OF A PIPE STAND

Nominal Pipe Size	Length (millimeters)	
	Minimum	Maximum
DN50 – DN80	203	914
DN100	205	915
DN125	205	815
DN150	255	715
DN200	255	610
DN250	255	510
DN300	305	460

LONG PIPE LENGTHS

! CAUTION

- For long pipe lengths, verify that the pipe stand is positioned properly.
- This tool must be used **ONLY** for roll grooving pipe designated on page 23 of this manual.

Failure to follow these instructions could cause product failure, resulting in property damage.

When roll grooving pipe that exceeds the maximum length shown in Table 1, a roller-type pipe stand must be used. The roller-type pipe stand must be capable of handling the weight of the pipe, while allowing the pipe to rotate freely.

1. Verify that the tool is level. Refer to the “Tool Setup” section for leveling requirements.

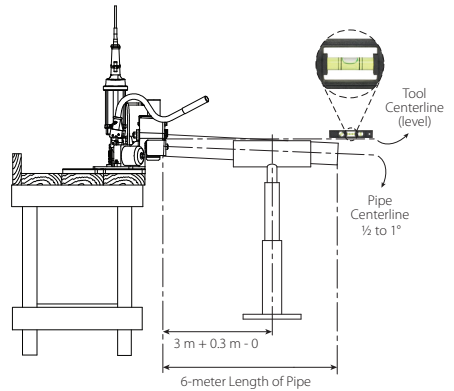


FIGURE 1: SUPPORT OF PIPE

2. Place the pipe stand at a distance slightly beyond half the pipe length from the tool. Refer to the drawing above.

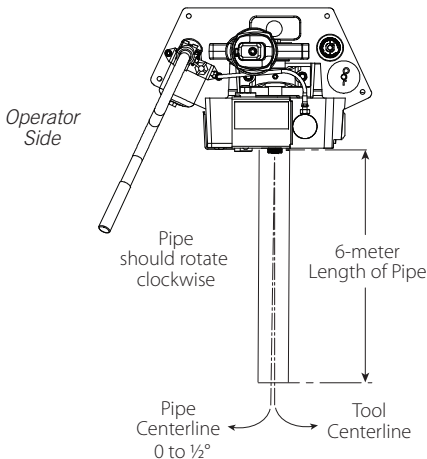


FIGURE 2: TRACKING ANGLE

3. Position the pipe stand approximately 0–½ a degree to the left for the tracking angle. Refer to the drawing above.

NOTE: Right-to-left tracking must be kept to a minimum. It may be necessary to use less than half a degree for the tracking angle.

4. If the tool is properly set up in a level position, but the back end of the pipe is higher than the end being grooved, the pipe may not track. Refer to the “Tool Setup” section and the drawings above for tool setup and pipe positioning requirements.
5. Before grooving, verify that all instructions in the previous sections of this manual have been followed.

GROOVING OPERATION

DANGER



- To reduce the risk of electric shock, check the electrical source for proper grounding.

- Before operating the tool, review the “Operator Safety Instructions” section of this manual.

Failure to follow these instructions could result in death or serious personal injury.

CAUTION

- This tool must be used **ONLY** for roll grooving pipe designated on page 23 of this manual.

Failure to follow this instruction could overload the tool, resulting in reduced tool life, tool damage, or personal injury.

1. Before grooving, verify that all instructions in the previous sections of this manual have been followed.
2. Plug the Rems Amigo 2 power drive cord into the provided safety foot switch. Refer to the power drive manufacturer’s operating manual for additional information.

WARNING

- The power drive must be operated with a safety foot switch. If the power drive is not supplied with a safety foot switch, contact Victaulic.

Operating the tool without a safety foot switch could result in serious personal injury.



3. Depress the safety foot switch pedal. Verify that the lower roll rotates away from the operator when viewed from the front of the tool. If the lower roll rotates toward the operator, see the “Setup of the Power Drive” section for instructions to reverse rotation. Remove foot from the safety foot switch.

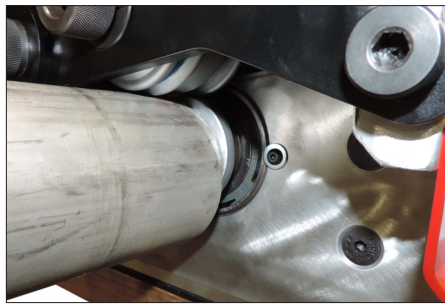
WARNING



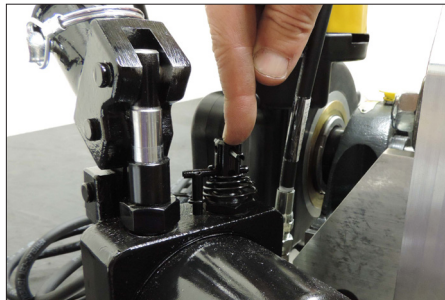
Grooving rolls can crush or cut fingers and hands.

- Before making any tool adjustments, always disconnect the power cord from the electrical source.

- Loading and unloading pipe will place your hands close to the rollers. Keep hands away from the grooving rolls during operation.
- Always verify that the roll guards are closed before grooving.
- Never reach inside the pipe end or across the tool during operation.
- Always groove pipe with rotation away from the operator.
- Never groove pipe that is shorter than the recommended lengths listed in this manual.
- Never wear loose clothing, loose gloves, or anything that can become entangled in moving parts.



4. Insert a length of pipe that is the correct size and wall thickness over the lower roll. Verify that the pipe end contacts the lower-roll backstop flange. The pipe must rest directly on top of the roll and must not be skewed to one side or the other.



5. Verify that the valve on the hydraulic hand pump is closed. Gently attempt to twist the valve counterclockwise to verify that the stop pin prevents further movement.



6. The operator should be positioned on the safety foot switch/hydraulic hand pump side of the tool. While supporting the pipe, pump the handle of the hydraulic hand pump to bring the upper roll down into firm contact with the pipe.
7. Remove hands from the pipe. For long pipe lengths supported with a pipe stand, verify that the pipe is pitched and positioned properly. Refer to the "Long Pipe Lengths" section.

WARNING

- **All guards must be in place and adjusted properly before grooving begins.**

Failure to follow this instruction could result in serious personal injury.



8. Depress and hold down the safety foot switch pedal.



9. As the pipe rotates, begin the grooving process by pumping the handle of the hydraulic hand pump at a slow, steady rate (one pump per one full pipe rotation). **NOTE:** Pumping the handle past the point of resistance could damage the tool. Verify that the pipe remains against the lower-roll backstop flange. If the pipe does not remain against the lower-roll backstop flange, remove foot from the safety foot switch and re-position the pipe.

NOTICE

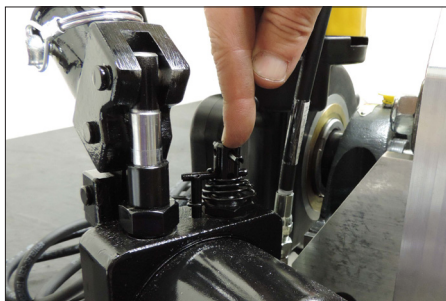
- **Do not pump the handle of the hydraulic hand pump too fast. The rate should be sufficient to groove the pipe and maintain audible, moderate-to-heavy load on the motor/drive.**

10. Continue the grooving process until the hand pump resists movement of the handle.
11. Release the safety foot switch pedal, and withdraw foot from the switch.

⚠ WARNING

- **DO NOT** place hands inside the pipe end or in the area of the grooving rolls while the pipe is still rotating.

Failure to follow this instruction could result in serious personal injury.



12. If a pipe stand is not being used, manually support the pipe during removal to prevent it from falling as it separates from the tool.

Open the valve on the hydraulic hand pump by turning it counterclockwise to release the pipe. Remove the pipe from the tool.

13. Disconnect the tool from the electrical source if no additional roll grooving will be performed.



14. Carefully check the groove diameter ("C" dimension) with the GDC-**STRENGTHIN™100** Go/No-Go Groove Diameter Cable.

ROLL CHANGING

The RG3600 Roll Grooving Tool is designed with rolls to accommodate several pipe sizes, eliminating the need for frequent roll changes.

When a different pipe size is required for grooving, the upper and lower rolls must be changed. For proper roll selection, refer to page 23.

UPPER ROLL REMOVAL

⚠ DANGER



- **Always disconnect the tool from the electrical source before changing rolls.**

Failure to follow this instruction could result in serious personal injury.



1. Lift the upper roll guard.



2. Lift the upper roll shaft latch.



3. With one hand holding the upper roll in place, use the other to pull the upper shaft out from the front of the tool. Place the upper shaft in a safe location.

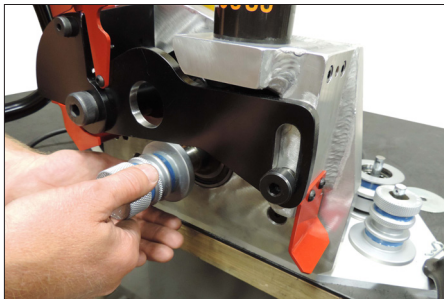


4. Lift the upper roll out of the tool body.

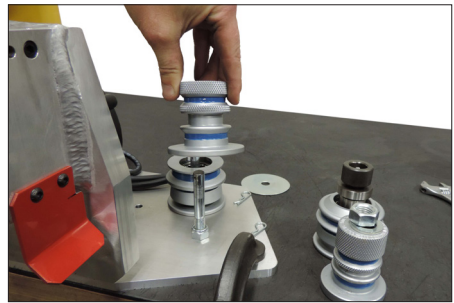
LOWER ROLL REMOVAL



1. Using a 24-mm wrench, loosen and remove the main shaft nut and washer. Place them in a safe location.

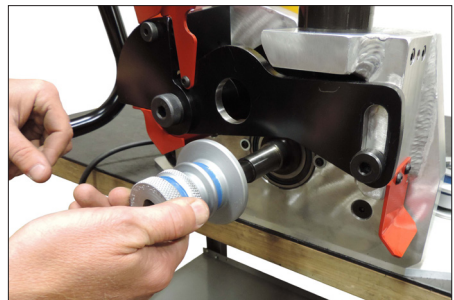


2. Remove the lower roll assembly from the main shaft by pulling it straight out of the tool.



3. Remove the alternate upper roll from the storage pin and replace it with the roll that was just removed from the tool.

LOWER ROLL INSTALLATION



1. Place the lower roll over the main shaft.



2. Replace and tighten the main shaft nut and washer. **DO NOT** over-tighten the nut.

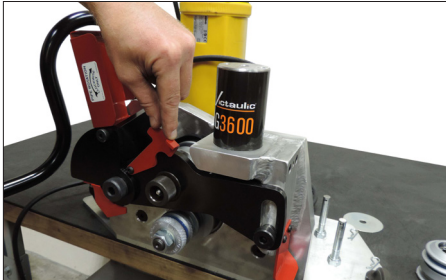
UPPER ROLL INSTALLATION



1. Place upper roll in tool body.



2. Place upper shaft through upper roll.



3. Close upper roll shaft latch.



4. Close upper roll guard.

5. Roll set installation is now complete. Before grooving, verify that all instructions in the previous sections of this manual have been followed.

MAINTENANCE

DANGER



- Always turn off the main power supply to the tool before making any tool adjustments or before performing any maintenance.

Failure to follow this instruction could result in death or serious personal injury.

This section provides information about keeping tools in proper operating condition and guidance for making repairs when it becomes necessary. Preventive maintenance during operation will pay for itself in repair and operating savings.

Replacement parts must be ordered from Victaulic to verify proper and safe operation of the tool.

LUBRICATION

After every eight hours of operation, lubricate the tool. Always lubricate the upper roll bearings when rolls are changed. Refer to the "Recommended Lubricants" section for the proper grease.



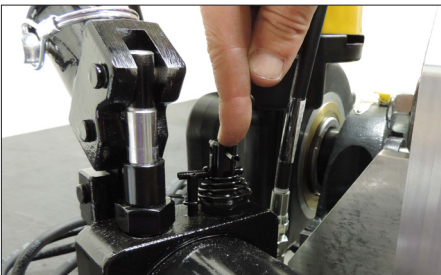
1. Grease the upper roll bearings every time roll changes are made and after every eight hours of operation. A grease fitting is provided, as shown above.



2. Grease main shaft bearings through the grease fitting behind the main vertical plate, as shown above.

CHECKING AND FILLING HYDRAULIC HAND PUMP HYDRAULIC FLUID

The hydraulic fluid level in the hydraulic hand pump must be checked a minimum of every six months (depending on tool usage) or if pumping feels spongy.



1. Open the valve on the hydraulic hand pump by turning it counterclockwise.



- 2a. Remove the hydraulic fill plug at the back end of the hydraulic hand pump.
- 2b. Check the hydraulic fluid level. If necessary, add hydraulic jack oil to the bottom of the threaded port. Keep filling until the fluid begins to seep out.
- 2c. Re-install the hydraulic fill plug.

RECOMMENDED LUBRICANTS

NOTICE

- The products listed below are recommendations only. Victaulic does not endorse, sponsor, or have any affiliation with the following manufacturers.
- Always verify that the grease or oil is suitable for the intended service by referring to the product's Safety Data Sheet (SDS).

Bearing and Slide Grease – NLGI #2 Summer Grade Graphite Moly Base

(General Purpose EP Lithium Base Grease)

Manufacturer	Product
BP	Energrease LS-EP2
Gulf Oil International	Gulf Crown EP 2
LUBRIPLATE	No. 630-2
Exxon Mobile Corporation	Mobilux EP2
Pennzoil Products Company	Pennlith EP 712
Shell	Alvania EP2
Chevron	Multifak EP2

Hydraulic Oil

(High-Pressure, Anti-Wear/Anti-Foam Hydraulic Oil ISO Grade 22)

Manufacturer	Product
BP	Energol HLP-HM 32
Gulf Oil International	Harmony AW 32
LUBRIPLATE	HO-32
Exxon Mobile Corporation	Mobil DTE 20 Series
Pennzoil Products Company	Pennzbell AW 32
Shell	Tellus 32
Chevron	Rando HD 32

NOTE:

Energrease LS-EP and Energol HLP-HM are trademarks of BP p.l.c.

Gulf is a registered trademark of Gulf Oil International
LUBRIPLATE is a registered trademark of LUBRIPLATE Lubricants Company

Mobilux and Mobil DTE are trademarks of the Exxon Mobile Corporation

Pennzoil, Pennlith, and Pennzbell are registered trademarks of SOPUS Products

Shell is a registered trademark of Shell International Petroleum Company Limited (SIPC)

Multifak and Rando are registered trademarks of Chevron Intellectual Property LLC

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Pipe will not stay in grooving rolls.	Incorrect pipe positioning of long pipe length. Lower roll and pipe are not rotating clockwise.	Refer to the “Long Pipe Lengths” section. Refer to the “Setup of the Power Drive” section.
Pipe stops rotating during grooving.	Dirt build-up is present on the lower roll. Worn grooving rolls. The motor/drive has stalled due to excessive pumping of the hydraulic hand pump. The circuit breaker has tripped or a fuse has blown on the electrical circuit that supplies the power drive.	Remove dirt accumulation from the lower roll with a stiff wire brush. Inspect the lower roll for worn knurls. Replace the lower roll if excessive wear is present. Open the valve on the hydraulic hand pump to release the pipe. Close the valve on the hydraulic hand pump and continue grooving. Pump the hydraulic hand pump at a moderate rate. Contact an authorized person to inspect the electrical components and circuit to reset the breaker, or replace the fuse.
While grooving, loud squeaks echo through the pipe.	Incorrect pipe support positioning of long pipe length. Pipe is “over-tracking.” Pipe end is not cut square. Pipe is rubbing excessively on the lower-roll backstop flange.	Move the pipe support to the right. Refer to the “Grooving Long Pipe Lengths” section. Cut the pipe end squarely. Remove the pipe from the tool, and apply a light coating of bandsaw blade wax to the face of the pipe end.
During grooving, loud thumps or bangs occur approximately once every revolution of the pipe.	Pipe has a pronounced weld seam.	Grind the raised welds flush with the interior and exterior pipe surfaces 50 mm back from the pipe end.
Tool will not groove the pipe.	The valve on the hydraulic hand pump is not closed tightly. The hydraulic hand pump is low on hydraulic fluid. Pipe is beyond the wall thickness or pipe yield strength capacity of the tool.	Tighten the valve on the hydraulic hand pump. Refer to the “Checking and Filling Hydraulic Hand Pump Hydraulic Fluid” section. Refer to page 23.
Pipe groove diameters do not meet Victaulic specifications.	Pipe is beyond the wall thickness capacity of the tool, or the pipe material is too hard.	Refer to page 23.
The “A” Gasket Seat or “B” Groove Width dimensions do not meet Victaulic specifications.	Upper roll bearing is not lubricated sufficiently. Incorrect upper roll, lower roll, or both installed on the tool Pipe not inserted fully onto the lower roll, or pipe is not tracking properly.	Refer to the “Maintenance” section. Install the correct rolls. Refer to page 23. Verify that pipe is against the lower-roll backstop flange. Refer to the “Long Pipe Lengths” section for proper pipe stand positioning.

In the event of tool malfunction outside the scope of the troubleshooting section, contact Victaulic Engineering Services for assistance.

NOTICE

- The “Maximum Pipe Size and Wall Thickness Capacity” table below is accurate as of the date printed on the back cover of this manual. For the most up-to-date information, reference Victaulic publication 24.01, which can be viewed/downloaded by scanning the mobile QR code link to the right, or by clicking on this desktop link:
<https://www.victaulic.com/assets/uploads/literature/24.01.pdf>



RG3600 RATINGS - MAXIMUM PIPE SIZE AND WALL THICKNESS CAPACITY

(*STRENGTHIN*TM100)

Model	Pipe Material	Pipe Size (DN)/Nominal Wall Thickness					
		DN50	DN100	DN150	DN200	DN250	DN300
RG3600	Stainless Steel (<i>STRENGTHIN</i> TM 100)	1.6 – 2.7 mm			2.0 – 3.4 mm		

*STRENGTHIN*TM100 GROOVE SPECIFICATIONS

For the most up-to-date information regarding *STRENGTHIN*TM100 roll groove specifications, reference the current revision of Victaulic publication 25.13, which can be viewed/downloaded by scanning the mobile QR code link to the right, or by clicking on this desktop link:

<https://www.victaulic.com/assets/uploads/literature/25.13.pdf>



*STRENGTHIN*TM100 ROLL PART NUMBERS

STAINLESS STEEL PIPE – COLOR-CODED BLUE

Pipe Size (DN)	Roll Part Numbers
DN50 – DN150	Upper Roll RG01360U06 Lower Roll RG01360L06
DN200 – DN300	Upper Roll RG01360U12 Lower Roll RG01360L12

EC DECLARATION OF CONFORMITY

In Accordance with the Machinery Directive 2006/42/EC

Victaulic Company, headquartered at 4901 Kesslersville Road, Easton, PA 18040, USA, hereby declares that the machinery listed below complies with the essential safety requirements of the Machinery Directive, 2006/42/EC.

Product Model:	RG3600
Serial No. :	Refer to Machinery Nameplate
Product Description:	Portable lightweight roll grooving tool
Conformity Assessment:	2006/42/EC, Annex I
Reference Standards:	EN ISO 12100: 2010 EN IEC 60204-1 : 2018 EN ISO 13857: 2019
Technical Documentation:	The relevant technical documentation prepared in accordance with Annex VII (A) of the Machinery Directive 2006/42/EC, will be made available upon request to the governing authorities.
Authorized Representative:	Victaulic Company c/o Victaulic Europe BVBA Prijkelstraat 36 9810, Nazareth Belgium

Signed for and on behalf of Victaulic Company,



Mr. Len R. Swantek
Director – Global Regulatory Compliance
Machinery Manufacturer Representative

Place of Issue: Easton, Pennsylvania, USA

Date of Issue: September 15, 2020

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UK DECLARATION OF CONFORMITY

In Accordance with The Supply of Machinery (Safety) Regulations 2008 No. 1597

Victaulic Company, headquartered at 4901 Kesslersville Road, Easton, PA 18040, USA, hereby declares that the machinery listed below complies with the essential safety requirements of The Supply of Machinery (Safety) Regulations 2008 No. 1597.

Product Models: RG3600

Serial No. : Refer to Machinery Nameplate

Product Description: Portable lightweight roll grooving tool

Conformity Assessment: 2008 No. 1597, Annex I

Reference Standards: BS EN ISO 12100 : 2010
BS EN ISO 13857 : 2019
BS EN ISO 14120 : 2015

Technical Documentation: The relevant technical documentation prepared in accordance with Annex VII (A) of The Supply of Machinery (Safety) Regulations 2008 No. 1597, will be made available upon request to the governing authorities.

Authorized Representative: Victaulic Company
c/o Victaulic Europe BVBA
Units B1 & B2
Cockerell Close off Gunnels
Wood Road
Stevenage, Hertfordshire
SG1 2NB, United Kingdom

Signed for and on behalf of Victaulic Company,

Mr. Len R. Swantek
Director – Global Regulatory Compliance
Machinery Manufacturer Representative

Place of Issue: Easton, Pennsylvania, USA
Date of Issue: May 14, 2021

RG3600 Roll Grooving Tool

