RG5200i Pipe Roll Grooving Tool



0GS <u>AGS</u>



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 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 are not followed.

 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 are not followed.

NOTICE

• The use of the word "NOTICE" identifies special instructions that are important but not related to hazards.



OPERATOR SAFETY INSTRUCTIONS

These instructions must be read and understood by each operator PRIOR to working with the RG5200i. These instructions describe safe operation of the tool, including setup 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 manufactured for safe, dependable operation, it is impossible 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 setup and maintenance. It is the responsibility of the lessee or user of these tools to ensure that all operators read this manual and fully understand the operation of these tools.

Read this manual before operating or servicing these tools. Become familiar with the tool's operations, applications, and limitations. Be particularly aware of its specific hazards. Store this manual in a clean area where it is always readily available. Additional copies of this manual are available upon request through Victaulic.

DANGER

- 1. Avoid using the tool in 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 tool to protect the operator from electric shock. Tool components are grounded to the frame of the tool. Verify that the frame is grounded properly.
- 3. Always turn off the main power supply to the tool before making any tool adjustments or before performing maintenance on the tool. Only authorized personnel should attempt to perform maintenance on the tool.

WARNING

- 1. Prevent back injury. DO NOT attempt to lift tool components without the use of mechanical lifting equipment.
- 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.
- 4. Do not stare directly into the profile laser (Class 2 Laser Product) or pipe revolution sensor (Class 1 Laser Product). Staring directly into the profile laser or pipe revolution sensor can result in eye damage.
- 5. Keep hands and tools away from grooving rolls and stabilizer roller during the grooving operation. Grooving rolls can crush or cut fingers and hands.
- 6. Do not reach inside the pipe ends during tool operation. Pipe edges can be sharp and can snag gloves, hands, and shirt sleeves. Fingers and hands can be crushed between the pipe and lower roll.
- 7. Do not over-reach. Maintain proper footing and balance at all times. Verify that the red "EMERGENCY STOP" button on the control station is easily accessible at all times.



- 1. The RG5200i tool is designed ONLY for roll grooving pipe sizes, materials, and wall thicknesses listed in Section XI.
- 2. Inspect the equipment. Before using the tool, check all moveable parts for any obstructions. Verify that the guards and tool components are installed and adjusted properly. Verify that roll sets are in good condition and that a properly-matched roll set is installed on the tool.
- **3. Stay alert.** Do not operate the tool if you are drowsy from medication or fatigue. Avoid horseplay around the equipment.
- 4. Keep visitors away from the immediate work area. All visitors should be kept away from the proximity scanner zone at all times.
- 5. Keep work areas clean. Keep the work area around the tool clear of any obstructions that could limit the movement of the operator. Clean up any oil or other spills.
- 6. Secure the work, tool, and accessories. Verify that the tool is stable. Refer to Section II of this manual.
- 7. **Support the work.** Support pipe lengths in accordance with the requirements listed in Section II of this manual.
- 8. Do not force the tool. Do not force the tool or accessories to perform any functions beyond their capabilities. Do not overload the tool.
- Maintain tools with care. Keep tools clean at all times to ensure proper and safe performance. Follow the instructions for 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.
- **11. Do not remove any labels from the tool.** Replace any damaged or worn labels.

Tool Safety Features



The RG5200i Roll Grooving Tool is equipped with multiple safety features, including a red "EMERGENCY STOP" button on the control station. **NOTE:** To activate the emergency stop, press in the red button. Activation of the emergency stop halts the machine process and prevents machine startup. If additional roll grooving will not be performed, the tool will shut off the hydraulic system after 15 minutes of inactivity.



The RG5200i Roll Grooving Tool's support base contains a proximity scanner that emits an invisible 9-foot/2.7-meter light curtain that automatically detects and shuts down the tool if anything crosses within its programmed range (front, left, and right sides of the tool). Refer to page 11 for additional information.



INTRODUCTION

NOTICE

- Photos/graphics 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 Company.

The RG5200i is designed for roll grooving carbon steel pipe in sizes 4 - 12-inch/114.3 - 323.9 mm to Original Groove System (OGS) specifications and 14 - 16-inch/355.6 - 406.4-mm to Advanced Groove System (AGS) specifications in fully-automated mode. In addition, the RG5200i is capable of roll grooving carbon steel pipe in sizes 18 - 24-inch/457 - 610-mm to AGS specifications in semi-automated mode. Grooving roll sets are marked with the size and part number, and they are color coded to identify the pipe material. Always verify that a properly-matched roll set is installed on the tool. For roll grooving rolls for other specifications, sizes, and materials must be purchased separately.

ACAUTION

- The RG5200i must be used ONLY for roll grooving pipe designated in Section XI of this manual.
- Always verify that a properly-matched roll set is installed on the tool.

Failure to follow these instructions may cause grooves that are not within Victaulic specifications, resulting in joint failure, personal injury, and property damage.

RECEIVING THE TOOL

The RG5200i Roll Grooving Tool is mounted on a pallet and enclosed in a wooden crate, which is designed for use in shipping the tool back to Victaulic upon completion of the lease.

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

RG5200i Container Contents

Qty.	Description
1	RG5200i Pipe Roll Grooving Tool with Stabilizer Assembly and Support Base/Handrails
1	Control Station
1	VAP131R Hydraulic, Adjustable Pipe Stand with Tracks
1	TM-RG5200i Operating and Maintenance Instructions Manual
1	Roll Set for 8 – 12-inch/219.1 – 323.9-mm Steel Pipe Mounted on the Tool (Unless Specified Otherwise on the Order) - Original Groove System Specifications
1	Roll Set for 4 – 6-inch/114.3 – 168.3-mm Steel Pipe - Original Groove System Specifications
1	Roll Set for 14 – 24-inch/355.6 – 610-mm Steel Pipe - AGS Specifications
1	Guard Setting Pad (OGS)
1	Guard Setting Pad (AGS)
1	Electrical Cable (10-foot/3-meter Length)
75	Reflective Target



SECTION I

• Tool Nomenclature

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.



DO NOT stare directly into the profile laser or pipe revolution sensor. Staring directly into the profile laser or pipe revolution sensor can result in eye damage.

Located on Electrical Enclosure





SECTION II

- Tool Dimensions and Weights
- Lifting Requirements
- Tool Setup
- Workspace Requirements
- Placement of Tracks for the VAP131R Hydraulic, Adjustable Pipe Stand
- VAP131R Hydraulic, Adjustable Pipe Stand
- Placement
- Control Station Placement
- Proximity Scanner Typical Range

TOOL DIMENSIONS AND WEIGHTS



LIFTING REQUIREMENTS

.

A WARNING

An overhead crane must be used to lift/transport



The RG5200i Roll Grooving Tool with suport base, as shown, weighs approximately 1300 pounds/590 kilograms.

The control station weighs approximately 54 pounds/24 kilograms.







TOOL SETUP

🛕 WARNING

- DO NOT turn on the main power supply to the tool until instructed otherwise.
- The tool MUST be leveled and anchored securely to a concrete floor.
- Failure to follow these instructions could result in serious personal injury and/or property damage, including damage to the tool.

An overhead crane must be used to lift/transport the tool to its intended location. An eye bolt is provided in the top-middle section of the tool. Verify that the minimum capacity rating of the overhead crane is 2000 pounds/910 kilograms. Refer to the "Tool Dimensions and Weights" and "Lifting Requirements" sections on the previous page for additional information.

- 1. Remove all components from the packaging, and verify that all items are included. Refer to the "Receiving the Tool" section.
- **2.** Select a location for the tool, control station, and pipe stand by taking into consideration the following factors:
 - A permanent indoor location with a level concrete floor. The location must remain at a temperature from +20°F to +104°F/-6°C to +40°C.
 - The required power supply (refer to the "Power Requirements" section)
 - Adequate space to accommodate pipe lengths and clearance for adjustment and maintenance (refer to graphic below)
- **3.** Level the tool from front-to-back and side-to-side. Anchor the tool to the concrete floor. **NOTE:** A non-level tool can severely affect grooving operation.

Workspace Requirements





PLACEMENT OF TRACKS FOR THE VAP131R HYDRAULIC, ADJUSTABLE PIPE STAND

ACAUTION

- The VAP131R Hydraulic, Adjustable Pipe Stand and tracks must be used to support pipe and are critical to proper tool operation.
- Verify that the VAP131R is positioned properly to minimize pipe-end flare.
- DO NOT install couplings on pipe that exceeds the maximum allowable flare.
- This tool must be used ONLY for roll grooving pipe designated in Section XI of this manual.
- Failure to follow these instructions could cause product failure, resulting in personal injury and property damage.





VAP131R HYDRAULIC, ADJUSTABLE PIPE STAND PLACEMENT

1. Place the centerline of the VAP131R approximately 6 inches/152 mm back from the middle of the pipe length. Refer to the drawing shown below. **NOTE:** If the tool is set up properly in a level position, but the back end of the pipe is higher than the end being grooved, the pipe may not track. In addition, excessive flare may occur on the pipe end. Refer to the "Tool Setup" section.



2. Position the VAP131R so that the pipe centerline is square to the lower roll. Refer to the drawing shown below. **NOTE:** When pipe flare is excessive, right-to-left tracking must be kept to a minimum.





CONTROL STATION PLACEMENT

The control station must be located on a level concrete floor or base and contains adjustable feet to accommodate for variations in the floor's surface.



The RG5200i Roll Grooving Tool's support base contains a proximity scanner that emits an invisible light curtain, which automatically detects and shuts down the tool if anything crosses within its programmed range. The typical range is shown in the graphic below and can be adjusted by a Victaulic representative, as required, during setup and commissioning. The control station must be placed outside this range in order for the tool to operate.







SECTION III

• Power Requirements and Hookup

POWER REQUIREMENTS AND HOOKUP



The RG5200i is designed and wired to operate on a 220-volt, 3-phase, 50/60-Hz power supply.

Each RG5200i Roll Grooving Tool is provided with a label inside the main electrical enclosure, which identifies proper wiring for the tool. Reference must be made to this label to ensure proper tool setup.

The RG5200i Roll Grooving Tool is supplied with a 34-inch nominal conduit opening for wiring incoming power. The conduit opening is located at the back of the tool near the main electrical enclosure.

Incoming electrical connections must be made inside the main electrical enclosure (10-gauge wire minimum). The incoming, threephase power must be connected at the top of the main breaker at the upper-right side within the main electrical enclosure.

- 1. Make the ground connection inside the main electrical enclosure
- 2. Make 3-phase electrical connections to the circuit breaker of the tool



SECTION IV

- Preparing Pipe for Grooving
- Minimum Pipe Length Requirements

PREPARING PIPE FOR GROOVING

 For maximum grooving roll life, remove foreign material and loose rust from the interior and exterior surfaces of the pipe ends. Rust is an abrasive material that will wear the surface of grooving rolls.

Foreign material may interfere with or damage grooving rolls, resulting in distorted grooves and grooves that are out of Victaulic specifications.

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

Victaulic recommends square-cut pipe for use with grooved-end pipe products. Square-cut pipe MUST be used with Victaulic FlushSeal® and EndSeal® gaskets. The maximum allowable tolerance from square-cut pipe ends ("S" dimension shown) is γ_{16} inch/1.6 mm for 4 – 24-inch/114.3 – 610-mm sizes.



For 12-inch/323.9-mm and smaller pipe sizes, beveled-end pipe may be used with Victaulic standard and Vic-Flange gaskets, provided that the wall thickness is standard wall (ANSI B36.10) or less and that the bevel meets ANSI B16.25 (37½°) or ASTM A-53 (30°). **NOTE:** Roll grooving beveled-end pipe may result in unacceptable pipe flare. Beveled steel pipe in 14 - 24-inch/355.6 - 610-mm sizes is acceptable with Victaulic Advanced Grooving System (AGS) standard or FlushSeal gaskets, including AGS Vic-Flanges.

- For 12-inch/323.9-mm and smaller pipe sizes, raised internal and external weld beads and seams must be ground flush with the pipe surface 2 inches/50 mm back from the pipe ends.
- For 14 24-inch/355.6 610-mm pipe sizes, raised internal and external weld beads and seams must be ground flush with the pipe surface 4 inches/100 mm back from the pipe ends.
- The inside diameter of the pipe end must be cleaned to remove coarse scale, dirt, and other foreign material that might interfere with or damage grooving rolls. The front edge of the pipe end shall be uniform with no concave/convex surface features that will cause improper grooving roll tracking and result in difficulties during coupling assembly.

MINIMUM PIPE LENGTH REQUIREMENTS

RG5200i Roll Grooving Tools are capable of grooving short pipe lengths. Refer to the following table, which identifies the minimum pipe length requirement per pipe size. **NOTE:** Grooved pipe nipples, shorter than those listed in the following table, are available from Victaulic.

Pipe lengths, from 20 feet/6 meters up to double-random lengths (approximately 40 feet/12 meters), will require additional lengths for the VAP131R track system. Refer to Section II, along with the TM-VAP131 Operating and Maintenance Instructions Manual provided with the VAP131R, for complete setup instructions.

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

EXAMPLE: A 20-foot, 4-inch/6.2-m length of 10-inch diameter steel pipe is required to finish a section, and only 20-foot/6.1-m lengths are available. Instead of using a 20-foot/6.1-m length of carbon steel pipe and a 4-inch/102-mm length of carbon steel pipe, follow these steps:

- For 10-inch/273.0-mm diameter carbon steel pipe, the minimum length that should be roll grooved is 10 inches/255 mm.
- Roll groove a 19-foot, 6-inch/5.9-m length of pipe and a 10-inch/255-mm length of pipe.

Nominal Pipe Size inches	Actual Pipe Outside Diameter inches/mm	Minimum Pipe Length inches/mm
4	4.500 114.3	8 205
41/2	5.000 127.0	8 205
5	5.563 141.3	8 205
6	6.625 168.3	10 255
8	8.625 219.1	10 255
10	10.750 273.0	10 255
12	12.750 323.9	12 305

Nominal Pipe Size inches	Actual Pipe Outside Diameter inches/mm	Minimum Pipe Length inches/mm
14	14.000 355.6	12 305
16	16.000 406.4	12 305
18	18.000 457	18 460
20	20.000 508	18 460
22	22.000 559	18 460
24	24.000 610	18 460



SECTION V

- Checking and Adjusting the Tool Prior to Operation
- Adjusting the Roll Guards
- Pipe Stabilizer Adjustment

CHECKING AND ADJUSTING THE TOOL PRIOR TO OPERATION

Every Victaulic RG5200i Roll Grooving Tool is checked, adjusted, and tested at the factory prior to shipment. However, before attempting to operate the tool, the following checks and adjustments must be made to ensure proper tool operation:

Verify that the proper roll set is installed and aligned properly on the tool for the pipe size that will be grooved. Roll sets are marked with the pipe size, part number, and they are color coded for the pipe material. Refer to Section XI and the "Roll Changing" section.

- Verify that the roll guards are adjusted.
- Verify that the pipe stabilizer is adjusted.

NOTICE

- Upper and lower rolls are matched components and must not be intermixed with other roll sets.
- If roll sets are ordered as replacements for the ones that were shipped with the tool, the value etched on the back of the roll set must be entered in the "Calibrate Roll" section of the control station's maintenance screen. Contact Victaulic for details.

Scale	<u>Units</u>			
1.00000	2995.858	4 to 6 Rollset PI Tape Value	6.375	SET
1.00000	4244.132	8 to 12 Rollset PI Tape Value	4.500	SET
1.00000	4073.932	14 to 24 Rollset PI Tape Value	4.688	SET

Adjusting the Roll Guards

ACAUTION

• The "Adjusting the Roll Guards" section must be completed with every roll change.

Failure to adjust the roll guards properly could result in personal injury.

- **1.** Loosen the stabilizer locking handle and the stabilizer-roller-guard wing nut.
- 2. Using the stabilizer handwheel, retract the stabilizer roller to clear the pipe when it is inserted onto the lower roll.

3. Insert a length of pipe that is the correct size and schedule 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. Refer to Section II for complete setup instructions.



4. With the correct pipe size and schedule inserted onto the lower roll, press the "MAINTENANCE" button on the control station's home screen.



5. Press the "MOVE RAM TO PIPE" button. **NOTE:** The "MOVE RAM TO PIPE" button allows the user to move the ram from the park position to the pipe at a reduced force in order to set the roll guards or adjust the pipe stabilizer. If the red "EMERGENCY STOP" button was activated, two touches of the "MOVE RAM TO PIPE" button will be necessary to activate the hydraulic motor and execute movement of the ram.

Maintenance	Start M	laintenance	Upper Roller
Machine ID		<u> </u>	Upper Roller Position
(0) Contrast Sensor	Park Ram	Move am to Pipe	0.0000
 (1) Start Switches 			0.0000
(2) EStop Monitor	Move Ram to Target	Move Ram to Zero	Calculate Diameter
OD Offset (Inches)	- Enable	Units=1	✓ Show Dims
C Offset (Inches)	Print A Test Label		A: 0 B: 0
(10)HYDRAULIC MOTOR OFF	Ram Pressure Ram Park P in PSI in inch 0.0 0.0	resition Ram Current Position in inches 00 0.000	D: 0 F: 0 A2: 0
(8)MAIN MOTOR OFF	Calibrate Roll	Initial OD Check is ON	Home Screen



WARNING

• Always turn off the main power supply to the tool before making any tool adjustments.

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

6. Prior to making tool guard adjustments, press the red "EMERGENCY STOP" button located on the control station.



7. Loosen the knob on the front of the roll guards to raise the plate to its highest position. Tighten the knob.



ACAUTION

- The roll guards must be spaced properly by using the appropriate guard setting pad.
- DO NOT attempt to use damaged roll sets. Contact Victaulic for replacement parts.
- Verify that the lower-roll retaining bolt is tight and that the upper shaft is locked in position.

Failure to follow these instructions could result in damage to the tool and roll set.

Two guard setting pads are included with the tool. For 12-inch/ 323.9-mm and smaller pipe sizes, use the ¼-inch/6.4-mm thick guard setting pad. For 14-inch/355.6-mm and larger pipe being grooved with AGS roll sets, use the ¾-inch/9.5-mm thick guard setting pad containing a **"FOR AGS ONLY"** label. **8.** Hold the correct guard setting pad firmly against the pipe and push it under the roll guards. Loosen the knob on the front of the roll guards to drop the plate onto the guard setting pad. Tighten the knob.



9. Loosen the knob on the left side of the roll guards to drop the side sliding guard onto the guard setting pad. Tighten the knob.



10. Remove the guard setting pad from the pipe. Store the guard setting pad in a safe location. The roll guard adjustment procedure is now complete.





Pipe Stabilizer Adjustment

WARNING

• Always turn off the main power supply to the tool before making any tool adjustments.

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

The pipe stabilizer for the RG5200i is designed to prevent pipe sway of short and long pipe lengths. When the stabilizer is adjusted for a selected pipe size and wall thickness, it does not require further adjustment unless pipe of a different size and wall thickness will be grooved. Pipe of the same size and wall thickness can be moved in and out of the tool without retracting the stabilizer.

ACAUTION

 DO NOT adjust the stabilizer roller to push the pipe to the left and off center from the rolls. Increased pipe-end flare and shortened roll life will result if the pipe is pushed to the left and off center.

Assembly of couplings on pipe that exceeds the maximum allowable flare dimension may prevent proper pad-to-pad assembly of coupling housings and gasket distortion/damage, resulting in joint failure, personal injury, and property damage.

1. Press the red "EMERGENCY STOP" button located on the control station. Using the stabilizer handwheel, adjust the stabilizer roller toward the pipe. Position the roller guard so that the roller opening faces the pipe directly. Verify that the guard does not rub the pipe.





NOTE: DO NOT adjust the stabilizer roller too far inward, since it will skew the pipe to the left and off center, resulting in excessive pipe-end flare. Refer to the drawing shown below for proper positioning.



2. Tighten the stabilizer locking handle and the stabilizer-rollerguard wing nut. The pipe stabilizer adjustment procedure is now complete.





SECTION VI

- Fully-Automated Grooving Operation
- Explanation of Readings Within Victaulic Specifications
- Explanation of Readings Not
 Within Victaulic
 Specifications
 - Specifications
- Grooving a Partially-Grooved Pipe End
- Semi-Automated Grooving
 Operation

FULLY-AUTOMATED GROOVING OPERATION FOR 4 - 12-INCH/114.3 - 323.9-MM PIPE (OGS SPECIFICATIONS) AND 14 - 16-INCH/ 355.6 - 406.4-MM PIPE (AGS SPECIFICATIONS)

1. Verify that all previous sections in this manual have been followed. Insert a length of pipe that is the correct size and schedule onto the lower roll. Verify that the pipe end contacts the lower-roll backstop flange. The pipe must rest directly on top of the roll. Refer to Section II for complete tool setup instructions.



2. Mark the pipe end with a reflective target. The center of the reflective target must be aligned with the arrow on the roll guard system, as shown below.



3. The operator and control station must be located outside the proximity scanner range, as indicated on page 11.

4. Twist and pull up on the red "EMERGENCY STOP" button located on the control station.



5. With the correct pipe size and schedule inserted onto the lower roll, press the "SETUP" button on the control station's home screen.



NOTICE

• The control station allows the operator to assign a four-digit identification code to provide greater traceability in the material test report (MTR).

Select Schedule and Size					
		Pipe Size	Schedule		
Job Setup	4 Inch	14 OD			
Operator	4.5 Inch	16 OD			
7 8	9	18 OD	Schedule 10		
		20 OD	Schedule 20		
4 5		22 OD	Schedule 40		
1 2	3 🖊	24 OD			
0 -	\$		OGS C Dim		

• To ensure proper machine operation and end formation, it is critical to select the size and schedule each time there is a change in material or when the machine is powered on initially. Press the "SETUP" button on the control station's home screen to verify that the correct parameters are selected.



6. From the "SELECT SCHEDULE AND SIZE" screen, select the nominal pipe size and pipe wall schedule.

	Select Schedule and	Size	
		Pipe Size	Schedule
Job			
Setup	4 Inch	14 OD	
		(1.0.0	
Operator	4.5 Inch	16 OD	
0	E Inch	18.00	
2995.858	5 Inch	18 00	Schedule 10
	6 Inch	20 OD	
			Schedule 20
Groove	8 Inch	22 OD	
			Schedule 40
	10 Inch	24 OD	
Home			
nome	12 Inch		OGS
	·		C Dim

7. Select the "GROOVE" button.



	NOTICE	
If the machin was activated pressed, the pressed to c	e was just powered on, if the pr l, or if the red "EMERGENCY ST red bar on the control station so ear the fault condition.	roximity scanner 'OP" button was creen must be
Current Pipe	Carbon Steel-Schedule 10-6 Inch	
Current Sample	ESTOP Present - Press To Reset Tool	
1		A
		0.595 to 0.655
		В
		0.314 to 0.374
		С
Current Position		6.433 to 6.455
0.000	OD F C	F
Current Pressure		max = 6.730
5.9		OD
Park Position		6.594 to 6.688
0.500		

8. Press the yellow "HOME GROOVE HEAD" bar on the control station screen to turn on the tool's hydraulic system and initialize the tool.





9. Press both green actuation palm switches simultaneously (within half a second of each other). If both palm switches are not activated within this time frame, both hands must be removed from the palm switches, and the action must be re-initiated.







10. Both green actuation palm switches must be activated again to start the grooving process. After the palm switches are activated successfully, the machine will begin calculating the pipe diameter.



NOTICE

• The main shaft will begin to rotate clockwise at a reduced speed. The control system will read the outside diameter of the pipe and will compare it to the operator's selection of nominal pipe size and corresponding tolerance. In addition, the control system will check for the pipe end to be seated fully against the lower-roll backstop flange. Observe the pipe stabilizer while the pipe is rotating. The pipe stabilizer roller should remain in contact with the pipe, and the pipe should rotate smoothly without swaying from side to side.



• When all conditions are met, the control system begins the grooving process by increasing the lower roll's rotational speed. The calculated pipe outside diameter will appear at the bottom of the screen. At this point, when grooving 18 inch/457 mm and larger pipe to AGS specifications, refer to the "Semi-Automated Grooving Operation" section.



• During the grooving process, the tool will vary its insertion depth and speed based off the physical pipe characteristics. The operator will notice both variations of pressure and head displacement. When the grooving process is complete, a "Validating" message will flash on the control station screen, and the lower roll's rotational speed will be reduced. In some cases, the tool will exit the validation stage and will continue grooving to further refine the groove dimensions. In this case, the tool will re-enter the "Validating" stage when complete. An image of the pipe end will appear with the results of the grooving process. Refer to the "Explanation of Readings" sections on the following page.





EXPLANATION OF READINGS WITHIN VICTAULIC SPECIFICATIONS

When the grooving process is complete, a "Groove Completed - Return to Park Position" banner will appear at the bottom of the control station's screen.



The control station screen will show an image of the pipe end with a go or no-go indicator for each dimension. The screen shown below indicates that all dimensions fall within Victaulic specifications and that no additional action is required.

At this point, the pipe can be removed from the tool, and another pipe end of the same size and schedule can be grooved by following the "Fully-Automated Grooving Operation" section.



EXPLANATION OF READINGS NOT WITHIN VICTAULIC SPECIFICATIONS

In a case where a dimension has failed to be read, or if the dimension is physically out of tolerance, a message will appear on the control station screen that identifies the out-of-tolerance dimension with instructions on how to remedy the issue. The operator must acknowledge the error by pressing the "OK" button.

<u>"C" DIMENSION FAIL</u>
RISK: JOINT PERFORMANCE ACTIONS:
1)Check Pipe C using PI Tape - C not equal to PI Tape steps 2,3,4 - C <> Spec via PI Tape step 5 2)Check For Excessive Vibration - Set Steady Rest 3)Check Pipe Sticker for Wear or Movement 4)Recalibrate Roll Set 5)Dispose of End
ОК

After acknowledgment, the control station screen will show an image of the pipe end with a yellow dash as a good reading and a red "X" as a failed reading. The "Current Sample" number in the top, left corner of the screen will index to a new value.



For additional information, refer to the "Troubleshooting" section.



GROOVING A PARTIALLY-GROOVED PIPE END

1. If a partially-grooved pipe end is inserted onto the lower roll, the pipe will fail the initial outside diameter check. To override the initial outside diameter check, press the "MAINTENANCE" button on the control station's home screen.



2. Press the green "INITIAL OD CHECK IS ON" button on the control station's maintenance screen. This button will change from green to gray and will say "OFF." Follow all steps in the "Fully-Automated Grooving Operation" section to complete the groove.





Verify that the "INITIAL OD CHECK IS ON" button is reactivated in the "Maintenance" screen before grooving a new pipe end.





SEMI-AUTOMATED GROOVING OPERATION FOR 18 - 24-INCH/457 - 610-MM PIPE (AGS SPECIFICATIONS)

In semi-automated mode for grooving 18 - 24-inch/457 - 610-mm pipe to AGS specifications, the RG5200i uses a virtual depth stop that is preprogrammed but user adjustable for pipe wall and OD variations. In this mode, the tool retains automatic dimension recording and validation for all critical groove dimensions, except for the "C" Groove Diameter. When grooving a particular size in the 18 - 24-inch/457 - 610-mm range, the operator must check the "C" Groove Diameter dimension each time by using the PT-100A Go/No-Go Grooved Pipe Diameter Tape and then validate (pass or fail) the value through prompts on the control station's screen.

1. Follow all steps in the "Fully-Automated Grooving Operation" section. **NOTE:** The tool will groove the pipe to a pre-programmed depth and may require further adjustment.



- 2. Using the PT-100A Go/No-Go Grooved Pipe Diameter Tape, measure the "C" Groove Diameter.
- If the groove falls within the "C" Groove Diameter Range Band on the PT-100A Go/No-Go Grooved Pipe Diameter Tape, proceed to the "Groove Diameter Within Specification" section or "Groove Diameter Within Specification – Adjustment May be Needed" section.



• If the groove is too shallow, proceed to the "Groove Diameter Too Shallow" section.



• If the groove is too deep, discard the pipe end and proceed to the "Groove Diameter Too Deep" section.





Groove Diameter Within Specification





Groove Diameter Within Specification – Adjustment May be Needed



• When the "GROOVE IN SPEC ADJUST" button (a) and then the "SUBMIT" button (b) are selected, a screen will appear on the control station where a finer adjustment can be made to the "C" Groove Diameter.



I On the following screen, move the slider to match what is shown on the pipe diameter tape. NOTE: Moving the slider to the left would indicate that the tool should groove to a shallower depth (the +/- buttons move the slider in 0.010-inch/0.3-mm increments). Press the "SUBMIT" button after the correct value is selected.



2. Re-insert the pipe end onto the lower roll and initiate the grooving process by pressing the "YES" button on the following screen.



3. After the tool has completed the re-grooving process, measure the "C" Groove Diameter again with the PT-100A Go/No-Go Grooved Pipe Diameter Tape. If the new "C" Groove Diameter measurement is within specification, press the "GROOVE IN SPEC DO NOT ADJUST" button and the "SUBMIT" button on the "Groove Review" screen to acknowledge that the new dimension is acceptable. The grooving process for the same pipe diameter can then resume as normal.







Groove Diameter Too Shallow

 If the "C" Groove Diameter is not within specification (too shallow), press the "GROOVE NOT IN SPEC" button (a) and then the "SUBMIT" button (b).



2. On the following screen, move the slider to match what is shown on the pipe diameter tape. NOTE: Moving the slider to the right would indicate that the groove was too shallow (the +/- buttons move the slider in 0.010-inch/0.3-mm increments). Press the "SUBMIT" button after the correct value is selected.



3. Re-insert the pipe end onto the lower roll and initiate the grooving process by pressing the "YES" button on the following screen.



 After pressing the "YES" button, the following screen will appear on the control station. The "RE-GROOVING ACTIVE PRESS TO CANCEL" button will be highlighted yellow. The grooving process can then resume as normal in order to form the groove deeper to the specified adjustment.

 Current Pipe Carbon Steel-Standard Wall-20 OD
 A 1437-1531
 B
 0.430-0500

• If the initial groove was more than 0.080 inch/2 mm too

shallow, more than one adjustment cycle, described in this

F

_

X

Regrooving Active Press to Cancel

Instructions continue on the following page

Current Position

0.000

Current Pressure

0.7

Park Position

0.000

OD

System Message

Waiting for START

section, will be required.



С

19.455 - 19.500

max = 20.230

19.969 - 20.094

Review

Groove

F

OD

Home

Screen

4. After the tool has completed the re-grooving process, measure the "C" Groove Diameter again with the PT-100A Go/No-Go Grooved Pipe Diameter Tape. If the new "C" Groove Diameter measurement is within specification, press the "GROOVE IN SPEC DO NOT ADJUST" button and the "SUBMIT" button on the "Groove Review" screen to acknowledge that the new dimension is acceptable. The grooving process for the same pipe diameter can then resume as normal.





Groove Diameter Too Deep (Reject Pipe End Immediately)

1. If the "C" Groove Diameter is not within specification (too deep), press the "GROOVE NOT IN SPEC" button (a) and then the "SUBMIT" button (b). **NOTE:** The section of pipe with the out-of-specification (deep) groove shall be cut off and discarded.



2. On the following screen, move the slider to match what is shown on the pipe diameter tape. **NOTE:** Moving the slider to the left would indicate that the groove was too deep. Press the "SUBMIT" button after the correct value is selected.



NOTICE After pressing the "SUBMIT" button, the following screen will • appear on the control station. At this point, a new pipe of the same diameter must be inserted onto the lower roll, and the semi-automated grooving operation must be reinitiated. Carbon Steel-Standard Wall-20 OD Current Pipe Current Sample 1 A AB 1.437 - 1.531 В 0.430 - 0.500 C rrent Position 19.455 - 19.500 OD Ē 0.000 F X _ _ Current Pressure max = 20.230 0.7 OD Park Position 19.969 - 20.094 0.000 System Messages Press To Enable Regrooving Review Groove Home Waiting for START Screen



SECTION VII

• Extracting Data Via the USB Connection

EXTRACTING DATA VIA THE USB CONNECTION

The RG5200i Roll Grooving Tool's data extraction feature provides the user with a means to view and organize grooving data. A USB port is provided on the back of the control station for connecting to a flash drive or external hard drive.

1. Press the "SAMPLE REVIEW" button on the control station's home screen, then insert a storage device into the USB port located on the back of the control station.

\checkmark	icta	aulic	8
Setup	Groove	Maintenance	Sample Review

2. Press the "SAVE TO USB ON PEDESTAL" button on the control station's home screen. This converts the groove data that is stored in the RG5200i Roll Grooving Tool into a text file and saves it to the storage device.

#	Count	Time	Nominal	OD	Α	В	С	F
12	12	04/11/2014 10:55	10.750	PASS	PASS	PASS	PASS	PASS
11	11	04/11/2014 10:55	10.750	PASS	PASS	PASS	PASS	PASS
10	10	04/11/2014 10:55	12.750	PASS	PASS	PASS	PASS	PASS
9	9	04/11/2014 10:55	12.750	PASS	PASS	PASS	PASS	PASS
8	8	04/11/2014 10:55	6.625	PASS	PASS	PASS	PASS	PASS
7	7	04/11/2014 10:55	6.625	PASS	PASS	PASS	PASS	PASS
6	6	04/11/2014 10:55	8.625	PASS	PASS	PASS	PASS	PASS
5	5	04/11/2014 10:55	8.625	PASS	PASS	PASS	PASS	PASS
4	4	04/11/2014 10:55	20.000	OD OFF	PASS	PASS	FAIL	PASS
3	3	04/11/2014 10:55	20.000	PASS		PASS	FAIL	PASS
			Sa	mples:	12	Buffered:	0	
P D	AGE OWN	PAGE UP GO LOCA		CLEAR DATA	SAVE TO USB ON PEDESTAL	SEND DATA TO EMAIL	Ho Sci	ome reen

- 3
- **3.** Remove the storage device from the back of the control station and insert it into the USB drive of a personal computer. Open the storage device's folder. The screen shown below is how the data will be stored on the device. Open the newest file when sorted by the "Date Modified" column in order to view the most current grooving data.

Irganize 👻 🧻 O	pen 👻 Print Burn New folder			
🔶 Favorites	Name	Date modified	Туре	Size
🔁 _Global_Data_P	groove_data_0021_21_07_2015_17_04	7/21/2015 10:54 PM	Text Document	2 KB
E Desktop	groove_data_0021_21_07_2015_17_05	7/21/2015 10:56 PM	Text Document	2 KB
🗼 Downloads	groove_data_0021_23_07_2015_18_49	7/24/2015 12:39 AM	Text Document	2 KB
Secent Places	groove_data_0021_23_07_2015_18_50	7/24/2015 12:39 AM	Text Document	2 KB
	groove_data_0021_23_07_2015_20_42	7/24/2015 2:32 AM	Text Document	3 KB
词 Libraries	groove_data_0021_23_07_2015_20_45	7/24/2015 2:34 AM	Text Document	3 KB
Computer Computer CD Drive (E:) U: CD Drive (E:) U:				
Network				

4. After double-clicking the groove data file, a text file will open.

5. To organize the data, perform a "Save As" function on the opened text file. Rename the file and use the spreadsheet extension .csv to automatically convert the data, which is separated by commas, into individual columns.

File name:	groove_data_0021_23_07_2015_20_45.csv +	
Save as type:	Text Documents (".txt) •	
Hide Folders	Encoding: ANSI Save Cancel	

6. After the file is saved, open the new .csv file in a spreadsheet editing software. The data will be organized into respective columns with headings, as shown below.

	5.	· 6 ·								Book1 -	Excel								? 🗉	- 0	8 X
	HO	ME P	4SERT	PAGELAN	OUT FORMUL	AS DAT	A REVIEW	V VIEV	A00-3	NS PDF	XChange 4										
From	from Web	From Fro Text So Get Extern	m Other surces * al Data	Distin Connection	g Reheah D 6 All - Conner	onnections roperties fit Links tions	⊉↓ <mark>조</mark> 호 素↓ Sort	Filter	To Clear To Reapply To Advanced er	Text to Column	Flash F Fill D	lemove Dat aplicates Validat D	ta Conse ion * ata Teols	idate What	? It-If Relat rais *	B ionships	Group Ungrou	p Subtota Outline	+∃ Show I -∃ Hide D	Jetail etail G	^
82		• •	XV	fx	Record																v
	A]	8		с	D	E	F	G	н	1	1	к	L.	м	N	0	Р	Q	R	s	P
2	- 6	Record	Groove	Number	Date	Nominal	00	۵.	8	c	F	Groove Time	Operator	Schedule	Materia	Colors	lob				
8				1	4/11/2014 10:55	4.5	4.526	0.723	0.351	4.328	4.541	298	0			0	29 Job #1				
4				2	4/11/2014 10:55	6.625	6.633	0.639	0.351	6.445	6.643	121	0			0	31 Job #1				
5				3	4/11/2014 10:55	8.625	8.651	0.746	0.453	8.424	8.664	125	0	1		0	31 Job #1				
6		4		4	4/11/2014 10:55	8.625	8.635	0.747	0.454	8.426	8.647	107	0	3		0	31 Job #1				
1		5	6	5	4/11/2014 10:55	4.5	4.506	0.622	0.356	4.321	4.519	107	0	2		0	31 Job #1				
8			6	6	4/11/2014 10:55	4.5	4,478	0.613	0.352	4.314	4,493	78	0	3		0	31 Job #1				
9				7	7/6/2015 16:37	12.75	12.732	0.839	0.456	12.512	12.758	113	0	1		0	29 Job #1				
0		1	1	8	7/6/2015 16:45	12.75	12.73	0.845	0.466	12.522	12.762	178	0	2		0	29 Job #1				
1		5		9	7/6/2015 19:22	10.75	10.746	0.832	0.463	10.541	10.775	181	0	3		0	29 Job #1				
2		10		10	7/20/2015 20:27	16	16	0	0	15.49	16	235	0			0	25 Job #1				
3		11	1	11	7/20/2015 21:44	16	15.982	0	0	15.481	15.982	238	0	0		0	25 Job #1				
4		13	t	12	7/21/2015 16:00	14	13.984	0	0	13.488	13.984	225	0	0	() ()	0	25 Job #1				
5		13	1	13	7/21/2015 16:08	14	13.985	0	0	13.491	13.985	238	0			0	25 Job #1				
6		14		14	7/21/2015 16:21	14	14.006	0	0	13.478	14.006	227	0	0	() ()	0	25 Job #1				
7																					
8																					
9																					
10																					
1																					
2																					
13																					_
4		Chart	1	<u>۵</u>																	
	-					_	_	_	_	_	_	1		_	_	_				_	12
ADY																		U		-+	100%



SECTION VIII

- Roll Changing
- Lower Roll Removal
- Upper Roll Removal
- Upper Roll Installation
- Lower Roll Installation

ROLL CHANGING

ACAUTION

- The RG5200i must be used ONLY for roll grooving pipe designated in the Section XI of this manual.
- Always verify that a properly-matched roll set is installed on the tool.

Failure to follow these instructions may cause grooves that are not within Victaulic specifications, resulting in joint failure, personal injury, and property damage.

RG5200i roll grooving tools are designed with rolls to accommodate several pipe sizes and materials, which eliminates the need for frequent roll changes.

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

- Upper and lower rolls are matched components and must not be intermixed with other roll sets.
- If roll sets are ordered as replacements for the ones that were shipped with the tool, the value etched on the back of the roll set must be entered in the "Calibrate Roll" section of the control station's maintenance screen. Contact Victaulic for details.

Victa	aulic					
<u>Scale</u> 1.00000 1.00000	<u>Units</u> 2995.858 4244.132	4 to 6 8 to 12	Rollset PI Tape Va 2 Rollset PI Tape \	alue /alue	6.375	SET
1.00000	4073.932	14 to 24 Rollset PI Tape Value			4.688	SET
Maintenance			Rollset Set Rollset Average			Home Screen
Failure to follow these instructions may cause grooves that are not within Victaulic specifications, resulting in joint failure, personal						







2. Press the "MOVE RAM TO ZERO" button on the control station's maintenance screen.

Maintenance	Start M	Upper Roller			
Machine ID			Upper Roller Position		
(0) Contrast Sensor	Park Ram	Move Ram to Pipe	0.0000		
 (1) Start Switches 			0.0000		
(2) EStop Monitor	Move Ram to Target	Move Ram to Zero	Calculate Diameter		
OD Offset (Inches)	- Enable	Units=1	Show Dims		
	Printing Labels				
C Offset (Inches)	Print A				
0.0000	Test Laber		В: 0		
(10)HYDRAULIC	Ram Pressure Ram Park F	Position Ram Current Position	D: 0		
MOTOR OFF	in PSI in inct	in inches	F: 0		
			A2: 0		
(8)MAIN MOTOR OFF	Calibrate Roll	Initial OD Check is ON	Home Screen		

3. Press the red "EMERGENCY STOP" button located on the control station.



WARNING

• Always turn off the main power supply to the tool before making any tool adjustments.

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



Lower Roll Removal

1. Using a ¹⁵/₁₆-inch wrench, loosen the lower-roll retaining bolt.



2. Remove the lower-roll retaining bolt and the lower-roll washer.



3. Remove the lower roll by pulling it off the main shaft. Store the lower roll in a safe location to prevent damage. If the lower roll cannot be removed by hand, use a conventional gear puller.





Upper Roll Removal

1. Adjust the front roll guard, if necessary, to uncover the upper shaft completely.



2. Pull the upper shaft locking pin out of the slide until it stops.



3. While supporting the upper roll, remove the upper shaft from the upper roll/slide by pulling it straight out.



4. Remove the upper roll. Store the upper roll in a safe location to prevent damage.



Upper Roll Installation

The back of the upper roll contains a gear that must be checked for damage before the roll is installed in the tool. If any damage to the gear is present, the roll must be replaced.



- **1.** Inspect the condition of the bearing in the upper roll. If any damage to the bearing is present, the roll must be replaced.
- 2. Prior to each use/installation, clean the upper shaft and upper roll to remove any dirt and scale. Apply a light coating of lubricant only to the upper roll bearing. Refer to the "Recommended Lubricants" section. NOTE: To prevent interference with the laser, verify that no grease is present on the outside surface of the upper roll.

- Use caution during installation of the upper roll to prevent damage to the gear. The upper roll will not install properly if any gear teeth are damaged.
- To prevent interference with the laser, verify that no grease is present on the outside surface of the upper roll.

Failure to follow these instructions could result in measurement errors and pipe that is grooved to dimensions that do not conform to Victaulic specifications. **3.** Install the proper upper roll behind the slide. Verify that the markings on the upper roll are facing outward (toward the front of the tool) and that the gear on the back of the upper roll engages properly with the gear behind the slide, as shown below.



4. While supporting the upper roll, insert the upper shaft into the slide and upper roll. Align the hole in the upper shaft with the

locking pin on the side of the slide.

5. Push the upper shaft locking pin into the slide/upper shaft until it stops. **NOTE:** Hole orientation lines are marked on the front of the upper shaft.

Lower Roll Installation

1. Prior to installation, clean the main shaft and the lower roll to remove any dirt and scale. **NOTE:** To aid in removing the lower roll at a later time, a light coating of dry graphite spray or anti-seize lubricant can be applied to the main shaft before the lower roll is installed.

2. Align the square end of the main shaft with the square hole in the lower roll. Push the lower roll completely onto the main shaft. Verify that the markings on the lower roll are facing out.

3. Install the lower-roll washer and lower-roll retaining bolt. Using a ¹⁵/₁₆-inch wrench, tighten the lower-roll retaining bolt completely to secure the lower roll onto the main shaft.

ACAUTION

• Verify that the upper roll is positioned toward the back of the upper shaft. The gear on the back of the upper roll must engage properly with the gear behind the slide.

Failure to follow this instruction could result in measurement errors and pipe that is grooved to dimensions that do not conform to Victaulic specifications.

4. Turn on the main power supply to the tool, then twist and pull up on the red "EMERGENCY STOP" button located on the control station.

5. Press the "PARK RAM" button on the control station's maintenance screen. Verify that the upper roll/slide advances and that the upper and lower rolls align/engage. Two touches of the "PARK RAM" button will be necessary to activate the hydraulic motor and execute movement of the ram.

6. Grease the upper shaft bearings, as shown, by applying grease through the lubrication fitting on the front of the upper shaft. Refer to the "Recommended Lubricants" section for the proper grease. Roll set installation is now complete. Before grooving, verify that all instructions in the previous sections of this manual have been followed.

7. Groove a sample pipe end, then check the pipe end with the PT-100A Go/No-Go Grooved Pipe Diameter Tape once per shift and after every grooving roll change.

NOTICE

- The RG5200i Roll Grooving Tool will create an in-specification groove that is anywhere within the black tolerance bands shown below.
- Groove and check a minimum of three pipe ends to obtain a trend before attempting to make any changes to the tool's grooving parameters.

SECTION IX

- Maintenance
- Recommended Lubricants

MAINTENANCE

WARNING

• Always turn off the main power supply to the tool before performing any maintenance.

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

1. Before lubricating any tool components, turn the power switch on the side of the tool to the "OFF" position.

- 2. After every 8 hours of operation, lubricate the tool. Always lubricate the upper roll bearings when rolls are changed.
- **3.** Grease the upper shaft bearings every time roll changes are made and after every 8 hours of operation. A grease fitting is provided on the front of the upper shaft. Refer to the "Recommended Lubricants" section for the proper grease.

4. Grease the slide gibs. The slide gib grease fitting is located on the back of the slide and is accessible when the tool hood is open.

5. Grease the main shaft bearings through the fittings located on the side of the tool.

 Remove the stabilizer-roller-guard wing nut and stabilizer roller guard.

7. Grease the stabilizer roller, and replace the stabilizer roller guard and stabilizer-roller-guard wing nut.

8. Check the hydraulic oil level on a monthly basis. The level should be 1 – 2 inches/25 – 50 mm below the top of the tank. DO NOT over-fill the tank, since the oil may overflow due to thermal expansion. Refer to the "Recommended Lubricants" section for the proper hydraulic oil. NOTE: Hydraulic oil and the hydraulic oil filter should be replaced annually or every 2000 hours of operation, whichever comes first. Contact Victaulic when the tool is ready for hydraulic oil and filter replacement.

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

Gear Oil

Refer to the tag located on the gear reducer

Hydraulic Oil

(High-Pressure, Anti-Wear/Anti-Foam Hydraulic Oil ISO Grade 32)

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

MAINTENANCE NOTES

Operator	Date	Maintenance Performed	Comments

SECTION X

• Troubleshooting

TROUBLESHOOTING

The following messages may appear on the control station screen during tool operation, which alert the operator to errors that are occurring. The error message displayed on the control station screen must be read and acknowledged before tool operation can proceed. **NOTE:** Screens for system-related errors will appear with a gray background, and screens for dimension-related errors will appear with a yellow background.

RAM FAILED TO TOUCH PIPE

If a "Ram Failed to Touch Pipe" screen is displayed on the control station, check the linear encoder at the back of the tool head for a red or green light. Contact Victaulic and report the condition.

NO REFLECTIVE TARGET

During pipe rotation, if a reflective target is not present on the pipe, or if the laser does not detect the reflective target, the screen shown below will be displayed on the control station. The operator must reposition the reflective target and acknowledge the error by pressing the "OK" button.

PIPE NOT INSERTED FULLY

If the pipe end is too out-of-square or if the pipe has pulled away from the lower-roll backstop flange, a warning message will appear on the control station screen with instructions on how to remedy the issue. The operator must acknowledge the error by pressing the "OK" button.

PIPE NOT INSERTED FULLY
RISK: "A" DIMENSION OUT OF SPEC
ACTIONS:
1)Check Pipe Alignment -Check Machine and Pipe is Level -Move Pipe Stand to Left 2)Check pipe end for Squareness -0.0625" max difference 3)Adjust Roll Set Screws 4)Excessive Vibration - Set Steady Rest 5)Check Laser Path

OD MEASUREMENT FAIL

If tool failed to read the pipe outside diameter, if the outside diameter is physically out of tolerance, or if the wrong pipe size is selected, a message will appear on the control station screen with instructions on how to remedy the issue. The operator must acknowledge the error by pressing the "OK" button.

NO RESPONSE - PROFILE SCANNER

A "No Response - Profile Scanner" screen that appears at any point during the grooving operation is an indication that the machine has lost communication with the profile scanner and will not continue the grooving process. Contact Victaulic.

NO RESPONSE - Profile Scanner
RETURN TO MAIN

TROUBLESHOOTING (CONTINUED)

Problem	Possible Cause	Solution
Pipe will not stay in grooving rolls.	Incorrect pipe positioning of long pipe length.	Refer to Section II.
	Lower roll and pipe are not rotating clockwise.	Contact Victaulic.
	Hydraulic pressure too low.	Check hydraulic fluid level and contact Victaulic.
Pipe stops rotating during the grooving operation.	Rust or dirt buildup is present on the lower roll.	Remove rust or dirt accumulation from the lower roll with a stiff wire brush.
	Rust or dirt is excessively heavy inside the pipe end.	Remove heavy rust and dirt from inside the pipe end.
	Reflective target has not been placed on the pipe, or the reflective target is not in a detectable position.	Check pipe for reflective target, or move reflective target to a detectable position.
	Worn grooving rolls.	Inspect the lower roll for worn knurls. Replace the lower roll if excessive wear is present.
	The circuit breaker has tripped or a fuse has blown out on the electrical circuit that supplies the tool.	Reset the breaker, or replace the fuse.
While grooving, loud squeaks echo through the pipe.	Incorrect pipe support positioning of a long pipe length. Pipe is "over-tracking."	Refer to Section II.
	Pipe is not cut square.	Cut the pipe end squarely.
	Pipe is rubbing excessively on the lower–roll backstop flange.	Remove the pipe from the tool, and apply a light coating of bandsaw blade wax to the face of the pipe end.
	Tool bearings are not lubricated.	Refer to the "Maintenance" and "Lubrication" sections.
During grooving, loud thumps or bangs occur approximately once every revolution of the pipe.	Pipe has a pronounced weld seam.	For 12-inch/323.9-mm and smaller pipe sizes, raised internal and external weld beads and seams must be ground flush with the pipe surface 2 inches/50 mm back from the pipe ends. For 14 - 16-inch/355.6 - 406.4-mm pipe sizes, raised internal and external weld beads and seams must be ground flush with the pipe surface 4 inches/100 mm back from the pipe ands.
Pine flare is evcessive	Pine support is adjusted too high for long nine	Refer to Section II
	Tool is tilted forward (out of level) while grooving long pipe.	Refer to Section II.
	Incorrect pipe support positioning of long pipe. Pipe is "over-tracking."	Refer to Section II.
	Pipe stabilizer is adjusted too far inward.	Back off the pipe stabilizer to the furthest point where it still stabilizes the pipe effectively.

TROUBLESHOOTING (CONTINUED)

Problem	Possible Cause	Solution		
Pipe is not rotating smoothly or is swaying from side to side.	Incorrect pipe stabilizer adjustment.	Press the red "EMERGENCY STOP" button on the control station. Adjust the pipe stabilizer roller by following the "Pipe Stabilizer Adjustment" section.		
Tool will not groove the pipe.	Air is present in the hydraulic system.	Contact Victaulic.		
	Pipe is beyond the wall thickness or pipe yield strength capacity of the tool.	Refer to Section XI.		
Pipe groove diameters do not meet Victaulic specifications.	Pipe is beyond the wall thickness or pipe yield strength capacity of the tool.	Refer to Section XI.		
	Incorrect upper roll and/or lower roll installed on the tool	Install the correct rolls. Refer to Section XI.		
The "A" Gasket Seat or "B" Groove Width dimensions do not	Upper roll bearing is not lubricated adequately.	Refer to the "Maintenance" section.		
meet Victaulic specifications.	Incorrect upper roll and/or lower roll installed on the tool	Install the correct rolls. Refer to Section XI.		
	Pipe not inserted fully onto the lower roll, or pipe is not tracking properly.	Verify that the pipe is against the lower-roll backstop flange, and refer to Section II.		

NOTE: For any communication issues with the control station or any electrical connection issues, contact Victaulic.

SECTION XI

- RG5200i Ratings
- Roll Part Numbers
- Links to Supporting Documents

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

ADVANCED GROOVE SYSTEM AGS

STEEL PIPE - COLOR CODED BLACK WITH YELLOW BAND

ROLL PART NUMBERS

RG5200I RATINGS - MAXIMUM PIPE SIZE AND WALL THICKNESS CAPACITY (OGS AND 49)

		Pipe Size (inches/mm)											
		4	5	6	8	10	12	14	16	18	20	22	24
Model	Pipe Material	100	125	150	200	250	300	350	400	450	500	550	600
	Steel	Sch. 10 – 40 (OGS)			Standard Wall (498)								
RG5200i		3.0 – 10.3 mm						9.5	mm				
11032001	Stainless	Lt. Wall (OGS)				Lt. Wall (49 2)							
		Automatic						Semi-Au	Itomatic				

ORIGINAL GROOVE SYSTEM (OGS) ROLL PART NUMBERS

STEEL PIPE - COLOR CODED BLACK

Pipe Size inches/mm	Roll Part Numbers	Pipe Size inches/mm	Roll Part Numbers
4	Lower Roll	14	
100	R904460L06	350	
5	Upper Roll	16	
125	R9Q1G52A06	400	Lower Roll
6	Roll Set	18	RW02G52L24
150	R9Q1G52006	450	Upper Roll
8	Lower Roll	20	RWQ2G52A24
200	R908460L12	500	Roll Set
10	Upper Roll	22	RWQ2520024
250	R9Q1G52A12	550	
12	Roll Set	24]
300	R9Q1G52012	600	

NOTE: For roll part numbers for grooving light-wall stainless steel pipe, contact Victaulic.

OGS GROOVE SPECIFICATIONS

For the most up-to-date information regarding OGS roll groove specifications, reference the current revision of Victaulic publication 25.01, 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/25.01.pdf

AGS GROOVE SPECIFICATIONS

For the most up-to-date information regarding AGS roll groove specifications, reference the current revision of Victaulic publication 25.09, 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/25.09.pdf

ADDITIONAL RESOURCES

For additional information on 24-inch/DN600 and smaller Victaulic mechanical piping products for carbon steel, stainless steel, aluminum, and CPVC/PVC pipe, reference the current revision of the I-100 Field Installation Handbook, 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/l-100.pdf

For additional information on Victaulic Advanced Groove System (AGS) products, reference the current revision of the I-W100 Field Installation Handbook, 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/I-W100.pdf

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 Models:	RG5200i
Serial No. :	Refer to Machinery Nameplate
Product Description:	Pipe 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,

La R. Al

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:	RG5200i
Serial No. :	Refer to Machinery Nameplate
Product Description:	Pipe 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,

La R. Al

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

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

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RG5200i Pipe Roll Grooving Tool

