VE450FSD Roll Grooving Tool



OGS *₄cs* EndSeal[™]

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.

A 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.

• 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.

• 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 VE450FSD Roll Grooving Tool is designed for the sole purpose of roll grooving pipe. The lessee or owner of this tool is responsible for ensuring that each operator reads this manual and fully understands the operation of this grooving tool PRIOR to working with the tool. These instructions describe safe operation of the tool, including setup and maintenance. Each operator shall become familiar with the tool's operations, applications, and limitations. Particular attention shall be given to reading and understanding the dangers, warnings, and cautions described throughout this manual.

Operators shall follow all appropriate Occupational Safety and Health Administration (OSHA) guidelines and training, and/or other nationally-recognized standards, as well as jobsite-specific requirements. Use of this tool requires dexterity, mechanical skills, and sound safety habits. Although this tool is designed and manufactured for safe, dependable operation, it is difficult to anticipate all combinations of circumstances that could result in an accident. The operator is cautioned to always practice "safety first" during each phase of use, including setup and maintenance.

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



A 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 drive motor to protect the operator from electric shock. Verify that the drive motor is connected to an internally-grounded electrical source.
- **3. Disconnect the power cord from the electrical source before servicing the tool.** Only authorized personnel shall perform maintenance on the tool. Always disconnect the power cord from the electrical source before servicing or adjusting the tool. Follow all lockout/tagout procedures.

WARNING

- 1. Follow all applicable local and national safety regulations.
- 2. Prevent back injury. Always follow OSHA guidelines, and/or other nationally-recognized standards, for safe lifting techniques when handling tool components.
- **3.** Wear proper apparel. Do not wear loose clothing, jewelry, or anything that can become entangled in moving parts.
- 4. Wear protective items when working with tools. Always wear safety glasses, hardhat, foot protection, and hearing protection (sound levels up to 97 decibels can be produced during the grooving process).
- 5. Keep hands and tools away from grooving rolls during the grooving operation. Grooving rolls can crush or cut fingers and hands. Use pipe that is a sufficient length.
- 6. Do not reach inside pipe ends during tool operation. Pipe edges can be sharp and can snag gloves, hands, and shirt sleeves.
- 7. Operate the tool opposite the direction of pipe rotation. The tool shall be operated with a safety foot switch that is located for ease of operator access. Never reach across moving parts. DO NOT use the tool if it does not contain a safety foot switch (contact Victaulic).
- 8. Do not over-reach. Maintain proper balance at all times. Verify that the safety foot switch is easily accessible to the operator.
- **9.** Do not make any modifications to the tool. DO NOT remove any safety guarding or any components that would affect tool safety or performance.

- 1. The VE450FSD tool is designed ONLY for roll grooving pipe sizes, materials, and wall thicknesses specified in this manual.
- 2. Inspect the equipment. Before using the tool, check moveable parts for obstructions. Verify that tool components are installed and adjusted in accordance with the "Tool Setup" section. Verify that properly matched roll sets are installed and lubricated.
- **3. Stay alert.** DO NOT operate the tool if impaired by drugs (medicinal or recreational), medication, alcohol, or fatigue.
- Keep visitors, trainees, and observers away from the work area. All visitors shall be kept a safe distance from equipment at all times, and shall be offered the opportunity to review this manual.
- 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 on the floor to prevent slips or falls.
- 6. Secure the work, machine, and accessories. Verify that the tool is stable. Refer to the "Tool Setup" section.



CAUTION

- 7. Support the work. Support long pipe lengths with a pipe stand, in accordance with the "Grooving 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 at all times to ensure proper and safe performance. Follow the instructions for matching 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 Victaulic VE450FSD Roll Grooving Tool is a motorized hydraulic-feed tool for roll grooving pipe to receive Victaulic grooved pipe products. The standard VE450FSD tool is supplied with Original Groove System (OGS) roll sets for 4 - 12-inch/DN100 – DN300 carbon steel pipe and Advanced Groove System (AGS) RW roll sets for 14 - 24-inch/DN350 – DN600 carbon steel pipe. VE450FSD rolls are marked with the size and part number, and they are color coded to identify the pipe material. For roll grooving to other specifications and materials, refer to the "VE450FSD Ratings" tables on page 33. Grooving rolls for other specifications, sizes, and materials shall be purchased separately.

A WARNING

- This tool shall be used ONLY for grooving pipe with specifications that fall within the designated parameters.
- Always 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 death or serious personal injury and property damage.



RECEIVING THE TOOL

VE450FSD tools are palletized individually and enclosed in a sturdy sleeve, which is designed for use in shipping the tool back to Victaulic upon completion of the rental contract (when applicable). Any additional roll sets that are ordered are contained in the larger storage box mounted at the back of the tool frame.

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

LARGE CONTAINER CONTENTS

Qty.	Description
1	VE450FSD Pipe Roll Grooving Tool
1	8 - 12-inch/DN200 - DN300 OGS Roll Set Mounted on the Tool (Unless Ordered Otherwise)
1	Pipe Stabilizer Assembly (Mounted on Tool)
1	Hand Pump Assembly (Mounted on Tool)

CONTENTS OF STORAGE BOXES MOUNTED ON TOOL FRAME

Qty.	Description
2	VE450FSD Operating and Maintenance Instructions Manual
1	Bag Containing Pipe Stabilizer Positioning Hardware and Hand Pump Positioning Hardware
1	Pipe Diameter Tape
1	Guard Setting Pad for OGS Roll Set
1	Guard Setting Pad for AGS Roll Set
1	Safety Foot Switch
1	4 - 6-inch/DN100 - DN150 OGS Roll Set for Carbon Steel Pipe
1	14 - 24-inch/DN350 - DN600 AGS Roll Set for Carbon Steel Pipe

The tool is shown below with the hand pump and stabilizer assembly collapsed for shipping purposes. Follow the "Tool Setup" instructions to install the hand pump and stabilizer assembly in their proper operating positions.

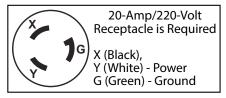




POWER REQUIREMENTS

ONLY QUALIFIED ELECTRICIANS SHALL CONNECT INCOMING POWER. To reduce the risk of electric shock, check the electrical source for proper grounding. Always disconnect the power cord from the electrical source before servicing or adjusting the tool. Follow all lockout/tagout procedures. DO NOT alter plugs in any way. Failure to follow these instructions could result in death or serious personal injury.

The VE450FSD is designed to operate on a **220-VOLT, SINGLE-PHASE 50 OR 60 HERTZ POWER SUPPLY**. The circuit protection required is 20 amps. All VE450FSD components are grounded to the frame of the tool. Verify that the frame is grounded properly in accordance with Article 250 of the National Electrical Code. If an extension cord is required, refer to the "Extension Cord Requirements" section on this page for cord size requirements.



The VE450FSD is provided with a 20-Amp/250-Volt twist-lock plug. If a pre-wired outlet is not available, contact a qualified electrician. **DO NOT** alter the plug in any way. A 20-Amp circuit breaker is located inside the electrical box at the back of the tool.

EXTENSION CORD REQUIREMENTS

When pre-wired outlets are not available and an extension cord shall 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). Cord sizes (gauges) thinner than required will cause significant voltage drop at the drive motors while the tool is operating. Voltage drops may cause damage to the drive motors and can result in improper tool operation. **NOTE:** It is acceptable to use a heavier cord size (gauge) than what is required.

The required cord sizes (gauges) for cord lengths, up to and including 100 feet/30m, are listed in the table below. Use of extension cords longer than 100 feet/30m shall be avoided.

Motor Rating	Cord Lengths							
Volts/Amps	25 feet/8 m 50 feet/15 m 100 feet/30 m							
220 15	12 gauge	12 gauge	10 gauge					

PORTABLE POWER REQUIREMENTS

When commercial power is not available, a portable power source (generator) may be utilized. The portable power source shall have a minimum regulated output capacity rating of 3.5 kW. The minimum, regulated 3.5 kW rating is required to ensure proper tool operation. Use of a non-regulated or lower capacity power source may cause premature motor failure and erratic tool operation.



TOOL NOMENCLATURE

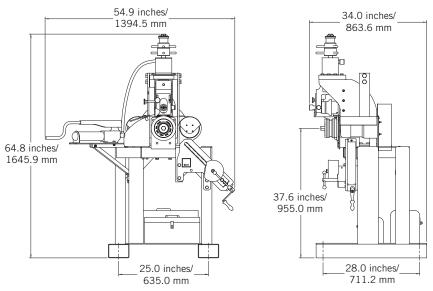
NOTICE

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- The tool, along with this operating and maintenance instructions manual, contains trademarks, copyrights, and/or patented features that are the exclusive property of Victaulic.





TOOL DIMENSIONS AND SPECIFICATIONS



FRONT VIEW

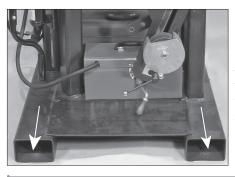
Tool weight is 825 lbs/374 kg Tool sound power is 97 dB(A)

TOOL SETUP

A WARNING

- DO NOT plug the power cord into the electrical source until instructed otherwise.
- The tool SHALL be leveled and anchored securely to a sturdy floor or base.

Failure to follow these instructions could result in serious personal injury, tool damage, and improper tool operation.

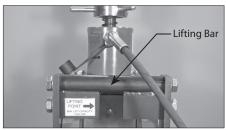


1. Remove all components from the packaging, and verify that all necessary items are included. Refer to the "Receiving the Tool" section.

SIDE VIEW

The base of the VE450FSD frame, shown to the left, serves as lifting points for a forklift or pallet jack.





In addition, the VE450FSD is provided with a lifting bar, which serves as a balanced location to lift the tool into position. The minimum lift capacity requirement is 1000 pounds/453 kg.

2. Select a location for the tool by taking into consideration the following factors (refer to "Tool Dimensions And Specifications" for overall dimensions):

- a. The required power supply (refer to the "Power Requirements" section)
- **b.** Adequate space to handle pipe lengths
- c. A firm and level surface for the tool and pipe stand
- **d.** Adequate clearance around the tool for adjustment and maintenance.

3. After an appropriate location is chosen, level the tool front to back. If the tool is not level, the grooving operation will be affected. After the tool is leveled, anchor it securely to a sturdy floor or base.



4. Remove the lower bolt and lock washer from the pipe stabilizer assembly. Keep this bolt and lock washer for re-installation. If necessary, loosen but do not remove the upper bolt.



5. Raise the pipe stabilizer assembly into the operating position. Re-locate the bolt and lock washer to the new lower hole in the pipe stabilizer assembly. Tighten the bolt until the lock washer becomes flattened. **NOTE:** The tool frame is designed so that nuts are not required on the ends of the bolts.



6. Remove the two bolts and two lock washers from the bag located in the larger storage box. Install the bolts with lock washers into the holes in the pipe stabilizer and tool frame. Tighten the bolts until the lock washers become flattened.





7. Raise the hand pump to the operating position. Insert the leg of the hand pump assembly into the bracket on the tool.

8. Remove the bolt with the lock washer and flat washer from the bag located in the larger storage box. Install the bolt/lock washer/flat washer into the hole in the tool frame bracket and leg of the hand pump assembly. Tighten the bolt until the lock washer becomes flattened.



9. Tighten the nut located on the back side of the hand pump assembly.



10. Remove the cap from the power cylinder. Connect the hydraulic hose from the hand pump to the power cylinder using the quick connections provided.



11. Remove the safety foot switch from the storage box. Place the safety foot switch in a location that provides ease of access for the operator. DO NOT ATTEMPT TO OPERATE THE TOOL WITHOUT A SAFETY FOOT SWITCH.

12. Plug the power cord for the tool into an internallygrounded electrical outlet. The outlet shall meet the power requirements for the tool. Refer to the "Power Requirements" section.



13. Depress the safety foot switch to check rotation of the lower roll and to verify that the tool is stable. Rotation of the lower roll shall be **CLOCKWISE**. If rotation of the lower roll is counterclockwise, contact Victaulic. If the tool wobbles, verify that it is level and anchored securely to the floor or platform.



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 shall be made to ensure proper tool operation. In addition, the tool shall be inspected for any damage that may have occurred during shipping and handling.

A WARNING

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

Accidental startup of the tool could result in serious personal injury.

PIPE PREPARATION

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

1. Victaulic recommends square-cut pipe. Beveled-end pipe may be used, provided that the wall thickness is standard wall (ANSI B36.10) or less and that the bevel meets ANSI B16.25 (37 ½°) or ASTM A-53 (30°). NOTE: Roll grooving beveled-end pipe may result in unacceptable flare, leaks, or joint failure. Square-cut pipe SHALL be used with Victaulic products containing FlushSeal[™] and EndSeal[™] gaskets.

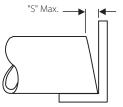
For OGS, the maximum allowable tolerance from square-cut pipe ends ("S" dimension shown) is:

% inch/1.6 mm for 4-inch/DN100 and larger sizes

For AGS, the maximum allowable tolerance from square-cut pipe ends ("S" dimension shown) is:

1/16 inch/1.6 mm for 14 − 20-inch/DN350 − DN500 − sizes 3/32 inch/2.4 mm for 22 − 24-inch/DN550 − DN600 sizes

This is measured from the true square line.



2. Prior to grooving, raised internal and external weld beads and seams shall be ground flush to the pipe surface a minimum of 6 inches/152 mm back from the pipe ends. This area shall be generally free from indentations, projections, weld seam anomalies, and roll marks to ensure a leak-tight seal.

3. The inside diameter of the pipe end shall be cleaned to remove coarse scale, dirt, and other foreign material that might interfere with or damage grooving rolls.

4. 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.

5. If pipe cut-off is required, Victaulic recommends the use of a mechanically-guided pipe cutting tool for proper pipe end preparation. Free-hand pipe end cutting is not recommended.

• 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.



PIPE LENGTHS SUITABLE FOR GROOVING





• Grooving rolls can crush or cut fingers and hands. Never groove pipe that is shorter than the recommended lengths listed in this manual.

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

The VE450FSD tool is capable of grooving short pipe lengths without the use of a pipe stand. Refer to the "Maximum Length that can be Grooved Without Use of Pipe Stand" column in the table below, along with the "Grooving Short Pipe Lengths" section. Pipe that exceeds the lengths listed in the "Maximum Length that can be Grooved Without Use of Pipe Stand" column (and up to 20 feet/6 meters in length) requires the use of a pipe stand. Refer to the "Grooving Long Pipe Lengths" section. Pipe lengths from 20 feet/6 meters up to double-random lengths (approximately 40 feet/12 meters) shall be supported with two pipe stands.

NOTICE

• Grooved pipe nipples, shorter than those listed in the following table, are available from Victaulic.

Nominal Pipe Size inches/DN	Actual Pipe Outside Diameter inches/mm	Minimum Length that can be Grooved Safely with Victaulic Tool inches/mm	Maximum Length that can be Grooved Without Use of Pipe Stand inches/mm			
4	4.500	8	36			
DN100	114.3	205	915			
5	5.563	8	32			
	141.3	205	815			
6	6.625	10	28			
DN150	168.3	255	715			
8	8.625	10	24			
DN200	219.1	255	610			
10	10.750	10	20			
DN250	273	255	510			
12	12.750	12	18			
DN300	323.9	305	460			
14 – 16	14.000 – 16.000	12	16			
DN350 – DN400	355.6 – 406.4	305	410			
18 and Larger DN450 and Larger	18.000 and Larger 457.2 and Larger	NOTE: Always use a pipe stand when roll grooving pipe in these sizes. DO NOT roll groove pipe lengths shorter than 18 inches/457 mm in these sizes.				

If pipe is required that is shorter than the minimum length listed in this 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/DN250 diameter carbon steel pipe is required to finish a section and only 20-foot/6.1-m lengths are available. Instead of roll grooving 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:

1. Refer to the table above, and note that for 10-inch/DN250 diameter carbon steel pipe, the minimum length that can be roll grooved is 10 inches/255 mm.

2. Roll groove a 19-foot, 6-inch/5.9-m length of pipe and a 10-inch/255-mm length of pipe.



GROOVING ROLLS

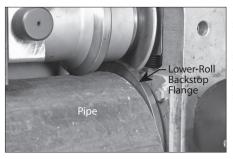
Verify that the proper roll set is installed on the tool for the pipe size and material to be grooved. Roll sets are marked with the pipe size and part number, and they are color coded for the pipe material. Refer to page 34 for additional information. If the proper rolls are not installed on the tool, refer to the "Roll Changing" section.

• Verify that the roll-retaining bolts and set screws are tight.

Loose retaining bolts and set screws could cause damage to the tool and rolls.

ADJUSTING THE ROLL GUARDS

VE450FSD guards shall be adjusted every time the rolls are changed or when the pipe size or wall thickness is different from the previous pipe that was grooved.





1. Disconnect the power cord from the electrical source.

2. 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 shall rest directly on top of the roll and shall not be skewed to one side or the other. **NOTE:** If necessary, retract the pipe stabilizer to provide clearance for inserting the pipe over the lower roll. To retract the pipe stabilizer, loosen the locking handle and use the handwheel to retract the roller.

3. Close the hand pump valve by turning it clockwise.

4. Pump the handle of the hand pump until the upper roll moves down and comes into firm contact with the pipe.

5. Remove the appropriate guard setting pad from the larger storage box. **NOTE:** Two guard setting pads are included in the storage box. One is specifically for pipe being grooved with original-type roll sets (thin guard pad), and the other is specifically for pipe being grooved with AGS roll sets (thick guard pad with label that states "FOR AGS ONLY").



6. 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.





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

8. Remove the guard setting pad from the pipe. Store the guard setting pad in the larger storage box.

ADJUSTING THE PIPE STABILIZER

A WARNING

- DO NOT reach over pipe while making adjustments.
- DO NOT make adjustments while the tool/pipe is in operation/motion.

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

- DO NOT adjust the pipe stabilizer 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.

Failure to prepare pipe in accordance with all instructions may cause joint failure, resulting in personal injury and/or property damage.

The pipe stabilizer for the VE450FSD is designed to prevent sway of short and long pipe lengths. When the pipe 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 pipe stabilizer.



1. Loosen the locking handle of the pipe stabilizer.





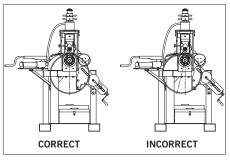


2. Using the handwheel, advance the roller on the pipe stabilizer inward until it is approximately $\frac{1}{16}$ inch/1.5 mm from the pipe. Refer to Figure 1 for proper positioning

3. Tighten the locking handle of the pipe stabilizer.

4. Plug the power cord for the tool into an internally-grounded electrical outlet. Refer to the "Power Requirements" section.

FIGURE 1



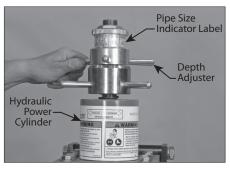
5. Depress the safety foot switch and observe the roller on the pipe stabilizer. The roller on the pipe stabilizer shall remain in slight contact with the pipe, and the pipe shall rotate smoothly without swaying from side to side. If the pipe is not rotating smoothly or is swaying from side to side, remove your foot from the safety foot switch. When the pipe stops rotating, adjust the roller on the pipe stabilizer further inward. Depress the safety foot switch, verify that the pipe rotates smoothly and does not sway from side to side, and make further adjustments, as necessary. DO NOT adjust the pipe to the left and off center and result in excessive pipe-end flare.



ADJUSTING THE GROOVE DIAMETER STOP

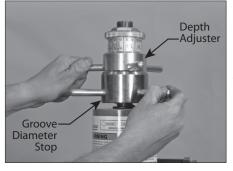
NOTICE

• To perform the following adjustments, Victaulic recommends the use of several short, scrap sections of pipe that are the proper material, diameter, and thickness to be grooved. Verify that the scrap sections meet the length requirements listed in the "Pipe Lengths Suitable for Grooving" section.



The groove diameter stop shall be adjusted for each pipe size or change in wall thickness.

1. Locate the proper pipe diameter and thickness on the pipe-size indicator label of the depth adjuster. The depth adjuster can be rotated for ease of viewing. Align the top edge of the depth adjuster with the lower line position of the proper pipe size and schedule markings.



2. Hold the depth adjuster to prevent it from turning. Turn the groove diameter stop counterclockwise to lock the depth adjuster in this position.

NOTICE

- The markings provide an approximate groove diameter adjustment and are not exact groove diameter settings. Variations in pipe OD and wall thickness make it impossible to calibrate the groove diameter stop exactly.
- Occasionally during the grooving operation, the groove diameter stop may move up and down slightly, making contact and then breaking contact with the hydraulic cylinder. This is normal for pipe that has a noticeable weld seam, hard spot, or large wall thickness variation.

3. Prepare a trial groove by referring to the "Grooving Short Pipe Lengths" or "Grooving Long Pipe Lengths" section.

4. After a trial groove is prepared and the pipe is removed from the tool, check the groove diameter ("C" dimension) carefully with a pipe tape. In addition, a vernier caliper or narrow-land micrometer can be used to check the "C" dimension at two locations (90° apart) within the groove. The average reading shall be within the required groove diameter specification.



CAUTION

• The "C" dimension (groove diameter) shall conform to Victaulic specifications to ensure proper joint performance.

Failure to follow this instruction could cause joint failure, resulting in personal injury and/or property damage.

5. If the groove diameter ("C" dimension) is not within Victaulic specifications, the diameter stop shall be adjusted.

5a. Loosen the depth adjuster from the groove diameter stop, and rotate each independently. Rotating the depth adjuster and groove diameter stop when locked together will cause premature thread wear.

5b. To adjust for a smaller groove diameter, turn the depth adjuster counterclockwise (when viewed from above the tool).

5c. To adjust for a larger groove diameter, turn the depth adjuster clockwise (when viewed from above the tool).

5d. Hold the depth adjuster to prevent it from turning. Turn the groove diameter stop counterclockwise to lock the depth adjuster in position.

NOTE: A quarter turn either way will change the groove diameter by 0.042 inch/1.1 mm or 0.167 inch/ 4.2 mm per full turn.

6. Prepare another trial groove, and check the groove diameter ("C" dimension), as described in step 4 on the previous page. Repeat these steps, as necessary, until the groove diameter is within specification.



GROOVING SHORT PIPE LENGTHS

WARNING Grooving rolls can crush or cut fingers and hands. Always unplug the power cord from the electrical source before making any tool adjustments. Loading/unloading pipe will place your hands close to the rollers. Keep hands away from the grooving rolls and the roller on the pipe stabilizer during operation. Never reach inside the pipe ends or across the tool or pipe during operation.

- Always groove pipe in a CLOCKWISE direction.
- 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.

1. Before grooving, verify that all instructions in the previous sections of this manual have been followed.

2. Verify that the tool is plugged into an internally-grounded electrical outlet. Refer to the "Power Requirements" section.



Pipe

3. Open the hand pump valve by turning it counterclockwise. This will allow the upper roll to move to its highest position.

4. 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 shall rest directly on top of the roll and shall not be skewed to one side or the other. **Continue to support the pipe until instructed otherwise.**

5. Close the hand pump valve by turning it clockwise.



6. The operator shall be positioned, as shown to the left. Pump the handle of the hand pump until the upper roll moves down and comes into firm contact with the pipe. Remove hands from the pipe.





7. Depress and hold down the safety foot switch. This will produce clockwise rotation of the lower roll when viewed from the front of the tool. Check the tracking of the pipe as it rotates to verify that it remains in contact with the lower-roll backstop flange. If the pipe does not remain in contact with the lower-roll backstop flange, stop the tool by releasing the safety foot switch. When the pipe stops rotating, verify that the pipe is positioned properly on the lower roll.

8. After proper pipe positioning is verified, depress and hold down the safety foot switch. As the pipe rotates, begin the grooving process by pumping the handle of the hand pump slowly. DO NOT pump the handle of the hand pump too fast. The rate shall be sufficient to maintain an audible, moderate-to-heavy load on the motors.

9. Continue the grooving process until the depth stop comes into full contact with the top of the hydraulic power cylinder. Continue to rotate the pipe for one to three revolutions to ensure groove completion.

10. Remove foot from the safety foot switch.

11. When rotation stops, support the pipe.

12. To release the pipe, open the hand pump valve by turning it counterclockwise. Remove the pipe from the lower roll.

NOTICE

- Occasionally during the grooving operation, the groove diameter stop may move up and down slightly, making contact and then breaking contact with the hydraulic cylinder. This is normal for pipe that has a noticeable weld seam, hard spot, or large wall thickness variations.
- The groove diameter shall be within specification for the diameter and wall thickness of the pipe. The groove diameter shall be checked and adjusted, as necessary, to ensure grooves remain within specification.



GROOVING LONG PIPE LENGTHS

- For long pipe lengths, verify that the pipe stand is positioned properly to minimize pipe-end flare.
- DO NOT install couplings on pipe that exceeds the maximum allowable flare.
- Always refer to the applicable "Roll Groove Specifications" table for details.

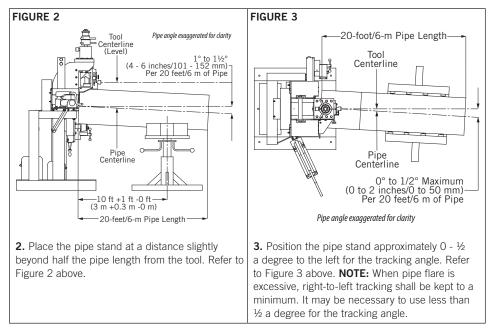
Installation of couplings on pipe that exceeds the maximum allowable flare may prevent padto-pad closure of the housings and/or may cause damage to the coupling gasket, resulting in property damage.

NOTICE

- Figures 2 and 3 show the VAPS224 Victaulic Adjustable Pipe Stand, which is designed for 2 24-inch/DN50 DN600 pipe sizes. In addition, Victaulic offers the VAPS112, which is designed for ³/₄ 12-inch/DN20 DN300 pipe sizes.
- For additional information, refer to the instructions included with the pipe stand.

When roll grooving pipe that exceeds the maximum length listed in the "Pipe Lengths Suitable for Grooving" section, a roller-type pipe stand shall be used. The roller-type pipe stand shall 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.





WARNING



- Grooving rolls can crush or cut fingers and hands.
 - Always unplug the power cord from the electrical source before making any tool adjustments.
 - Loading/unloading pipe will place your hands close to the rollers. Keep hands away from the grooving rolls and the roller on the pipe stabilizer during operation.
- Never reach inside the pipe ends or across the tool or pipe during operation.
- Always groove pipe in a CLOCKWISE direction.
- 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. Before grooving, verify that all instructions in the previous sections of this manual have been followed.

5. Verify that the tool is plugged into an internally-grounded electrical outlet. Refer to the "Power Requirements" section.





6. Open the hand pump valve by turning it counterclockwise. This will allow the upper roll to move to its highest position.

7. 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 shall rest directly on top of the roll and shall not be skewed to one side or the other.

8. Adjust the height of the pipe stand to position the pipe approximately $1 - 1\frac{1}{2}$ degrees ($\frac{1}{4}$ inch per foot/20 mm per meter) below level (the pipe end being grooved shall be higher than the opposite end). Refer to Figure 2. **NOTE:** The pipe shall be inserted onto the lower roll before the height of the pipe stand is adjusted. 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. In addition, excessive flare may occur on the pipe end. Refer to Figures 2 and 3 for pipe positioning requirements.



9. Close the hand pump valve by turning it clockwise.

10. Pump the handle of the hand pump until the upper roll moves down and comes into firm contact with the pipe.



TM-VE450FSD / Operating and Maintenance Instructions Manual



11. Depress and hold down the safety foot switch. This will produce clockwise rotation of the lower roll when viewed from the front of the tool. Check the tracking of the pipe as it rotates to verify that it remains in contact with the lower-roll backstop flange. If the pipe does not remain in contact with the lower-roll backstop flange, stop the tool by releasing the safety foot switch. When the pipe stops rotating, verify that the pipe is level and positioned properly on the lower roll (refer to step 7 on the previous page).

12. After proper pipe positioning is verified, depress and hold down the safety foot switch. As the pipe rotates, begin the grooving process by pumping the handle of the hand pump slowly. DO NOT pump the handle of the hand pump too fast. The rate shall be sufficient to maintain an audible, moderate-to-heavy load on the motors.

13. Continue the grooving process until the depth stop comes into full contact with the top of the hydraulic power cylinder. Continue to rotate the pipe for one to three revolutions to ensure groove completion.

14. Remove foot from the safety foot switch.



15. To release the pipe, open the hand pump valve by turning it counterclockwise. Remove the pipe from the lower roll.

NOTICE

- Occasionally during the grooving operation, the groove diameter stop may move up and down slightly, making contact and then breaking contact with the hydraulic cylinder. This is normal for pipe that has a noticeable weld seam, hard spot, or large wall thickness variations.
- The groove diameter shall be within specification for the diameter and wall thickness of the pipe. The groove diameter shall be checked and adjusted, as necessary, to ensure grooves remain within specification.



ROLL CHANGING

A WARNING

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

Accidental startup of the tool could result in serious personal injury.

The VE450FSD is designed for ease of roll changes. When a different size range, pipe material, or grooving style is required, the grooving rolls shall be changed and all instructions in the previous sections of this manual shall be followed. Refer to page 34 for proper roll selection. **NOTE:** Due to the interlocking design of the rolls, the upper roll must be removed before the lower roll. The new lower roll must then be installed before attempting to install the new upper roll.

UPPER ROLL REMOVAL (LEGACY AND NEWER TOOL VERSIONS)



1. Open the hand pump valve by turning it counterclockwise. This will allow the upper roll to move to its highest position.



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 the larger storage box.

5. Proceed to the applicable "Lower Roll Removal" section on page 24 or 26.



LOWER ROLL REMOVAL (LEGACY TOOL VERSIONS WITH ROUND MAIN SHAFT AND WOODRUFF KEY)



1. Using an adjustable wrench, loosen and remove the lower-roll retaining bolt.



2. Remove the lower-roll washer.

NOTICE

• The main shaft contains a Woodruff Key that is critical for installation of the lower roll. Be careful not to lose the Woodruff key. Inspect the Woodruff key for damage and replace it, as necessary.



3. Remove the lower roll by pulling it off the main shaft. If the lower roll cannot be removed by hand, use a conventional gear puller. Be careful not to lose the Woodruff key located in the main shaft. Store the lower roll in the larger storage box.

4. Proceed to the "Lower Roll Installation" section on the following page.



LOWER ROLL INSTALLATION (LEGACY TOOL VERSIONS WITH ROUND MAIN SHAFT AND WOODRUFF KEY)

1. Prior to lower roll installation, clean the main shaft and the lower roll bore to remove any dirt and scale. If damage is present, replace any affected components.

2. To aid in removing the lower roll at a later time, a dry graphite spray or anti-seize lubricant can be applied to the main shaft bore before the lower roll is installed.



3. Align the keyway in the lower roll with the Woodruff key inserted in the main shaft. Verify that the markings on the lower roll face outward.



4. Install the lower-roll washer.



5. Install the lower-roll retaining bolt. Tighten the lower-roll retaining bolt completely to secure the lower roll onto the main shaft.

6. Proceed to the "Upper Roll Installation" section on page 28.



LOWER ROLL REMOVAL (NEWER TOOL VERSIONS WITH SQUARE DRIVE MAIN SHAFT)



1. Using an adjustable 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. If the lower roll cannot be removed by hand, gently tap around the circular face of the lower roll to loosen it. Store the lower roll in the larger storage box.

4. Proceed to the "Lower Roll Installation" section on the following page.



LOWER ROLL INSTALLATION (NEWER TOOL VERSIONS WITH SQUARE DRIVE MAIN SHAFT)

1. Prior to lower roll installation, clean the main shaft and the lower roll bore to remove any dirt and scale. If damage is present, replace any affected components.

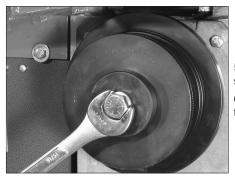
2. To aid in removing the lower roll at a later time, a dry graphite spray or anti-seize lubricant can be applied to the main shaft bore before the lower roll is installed.



3. 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.



4. Install the lower-roll washer and lower-roll retaining bolt.



5. Tighten the lower-roll retaining bolt completely to secure the lower roll onto the main shaft.

6. Proceed to the "Upper Roll Installation" section on the following page.

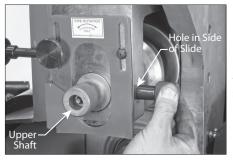


UPPER ROLL INSTALLATION (LEGACY AND NEWER TOOL VERSIONS)

1. Prior to installation of the upper roll, clean the upper shaft and the upper roll to remove any dirt and scale. Inspect the bearing in the upper roll for proper lubrication and condition. If damage is present, replace any affected components.



2. Install the proper upper roll behind the slide, as shown to the left. Verify that the markings on the upper roll are facing forward. While supporting the upper roll, insert the upper shaft into the slide and upper roll.



3. Align the hole in the upper shaft with the hole in the side of the slide. Push the upper shaft pin into the slide/upper shaft until it stops.



4. Lubricate the upper roll bearings every time rolls are changed and after every 8 hours of operation. A grease fitting is provided on the front of the upper shaft, as shown to the left. Refer to the "Maintenance" section for additional information.

5. Before performing the grooving operation, verify that all instructions in the previous sections of this manual are followed.



MAINTENANCE

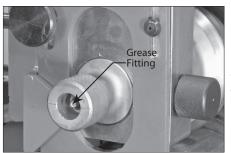
WARNING

- Before performing any maintenance on the tool, disconnect the power cord from the electrical source.
- · Failure to follow this instruction could result in serious personal injury.

This section provides information about keeping tools in proper operating condition. Replacement parts shall be ordered from Victaulic to ensure proper and safe tool operation.

LUBRICATING TOOL COMPONENTS

After every 8 hours of operation, lubricate tool components. Refer to the "Recommended Lubricants" table on page 31 for the proper grease.



1. Lubricate the upper roll bearings every time rolls are changed and after every 8 hours of operation. A grease fitting is provided on the front of the upper shaft, as shown to the left.



2. Grease the slide gibs. The slide gib grease fitting is located on the back of the slide.



3. Grease the main shaft bearings through the fitting located on the side of the tool.





4. Grease the stabilizer wheel. A grease fitting is accessible from the rear side of the wheel guard. The stabilizer wheel may need to be rotated to gain access to the grease fitting.

CHECKING AND FILLING HAND PUMP HYDRAULIC FLUID

The hydraulic fluid level in the hand pump shall be checked before tool operation. In addition, the hydraulic fluid level shall be checked semi-annually or if pumping feels spongy.



1. Open the hand pump valve fully by turning it counterclockwise.

2. Remove the hydraulic fill plug. The oil level shall be at the bottom of the hole.

BLEEDING AIR FROM THE HYDRAULIC SYSTEM

1. To bleed air from the system, remove the hand pump assembly from the side of the tool, and hold the assembly above the hydraulic power cylinder. Close the hand pump valve by turning it clockwise. Open the hydraulic fill plug one full turn.

- 2. Pump the handle of the hand pump several times to build pressure.
- **3.** Open the hand pump valve by turning it counterclockwise. This will allow air to escape.
- 4. Repeat steps 1 3 several times to bleed all air from the system.
- 5. Check the hydraulic fluid level, and add hydraulic jack oil, as required.
- 6. Continue to hold the hand pump assembly above the hydraulic power cylinder. Close the fill plug.
- 7. Re-install the hand pump assembly onto the side of the tool.

MOTOR FILTER REMOVAL AND CLEANING

These instructions apply to both motors:

- 1. Remove the four screws and nuts on the motor guard.
- 2. Remove the filter cap.
- 3. Remove the sponge filter. Clean the filter by using low-pressure, dry air.

MOTOR FILTER REPLACEMENT

These instructions apply to both motors:

- 1. Replace the sponge filter on the motor by aligning the four holes.
- 2. Position the motor guard onto the motor.
- 3. Re-install the motor guard with the four screws and nuts.



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RECOMMENDED LUBRICANTS

Bearing and Slide Grease

(General Purpose EP Lithium-Based Grease)

Manufacturer	Product
BP Amoco	Energrease LC-EP2
Gulf Oil Corp.	Gulfcrown Grease EP#2
Lubriplate	No. 630-2
Mobil Oil Corp.	Mobilux EP2
Pennzoil Products Co.	Pennlith EP 712 Lube
Shell Oil Co.	Alvania EP2
Sun Refining	Sun Prestige 742 EP
Texaco Inc.	Multifak EP2

Hydraulic Oil

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

Manufacturer	Product
BP Amoco	Energol HLP-HM32
Gulf Oil Corp.	Harmony 32 AW
Kendall Refining Co.	Kenoil R&O AW-32
Lubriplate	HO-o
Mobil Oil Corp.	Mobil DTE 24
Pennzoil Products Co.	Pennzbell AW32
Shell Oil Co.	Tellus 32
Sun Refining	Survis 832
Texaco Inc [.]	Rando

PARTS ORDERING

When ordering parts, the following information is required for Victaulic to process the order and send the correct part(s). Reference the RP-VE450FSD Repair Parts List for detailed drawings and parts listings. Parts can be ordered by calling 1-800-PICK-VIC.

- 1. Tool Model Number
- 2. Tool Serial Number
- **3.** Quantity, Item Number, Part Number, and Description
- 4. Where to send the part(s) Company Name and Address
- To whose attention to send the part(s) Person's Name
- 6. Purchase Order Number
- 7. Billing Address

ACCESSORIES

VAPS112 VICTAULIC ADJUSTABLE PIPE STAND



The Victaulic VAPS112 Pipe Stand is a portable, adjustable, roller-type pipe stand that contains four legs for additional stability. The VAPS112 supports pipe sizes ¾ to 12 inches/DN20 to DN300 (1½-foot/0.5-meter to full, single 20-foot/6-meter random lengths) and has a load rating of 1075 pounds/490 kilograms. The turnstile design permits ease of grooving for both pipe ends. Contact Victaulic for details.

VAPS224 VICTAULIC ADJUSTABLE PIPE STAND



The Victaulic VAPS224 Pipe Stand contains features that are similar to the VAPS112, but supports pipe sizes 2 to 24 inches/DN50 to DN600 (1½-foot/0.5-meter to full, single 20-foot/6-meter random lengths) and has a load rating of 1800 pounds/817 kilograms. Contact Victaulic for details.



TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Pipe will not stay in groov- ing rolls.	Incorrect pipe positioning of long pipe length.	Refer to the "Grooving Long Pipe Lengths" section.
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.
	Worn grooving rolls.	Inspect the lower roll for worn knurls. Replace the lower roll if excessive wear is present.
	The key for the lower roll is sheared or missing.	Remove the lower roll to replace the key. Refer to the "Roll Chang- ing" section.
	The circuit breaker has tripped.	Check the tool circuit/overloads and the power supply breaker/ fuses. Reset the breaker.
While grooving, loud squeaks echo through	Incorrect pipe support positioning of a long pipe length. Pipe is "over-tracking."	Move the pipe support to the left. Refer to the "Grooving Long Pipe Lengths" section.
the pipe.	Pipe end 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 grease to the face of the lower-roll backstop flange, as needed.
During grooving, loud thumps or bangs occur approximately once every revolution of the pipe.	Pipe has a pronounced weld seam.	Refer to the "Preparing Pipe for Grooving" section.
Pipe flare is excessive.	Pipe support is adjusted too high for long pipe.	Refer to the "Grooving Long Pipe Lengths" section.
	Tool is tilted forward (out of level) while grooving long pipe.	Refer to the "Tool Setup" section.
	Incorrect pipe support positioning of long pipe. Pipe is "over-tracking."	Move the pipe support to the left. Refer to the "Grooving Long Pipe Lengths" section.
	Pipe stabilizer is adjusted too far inward.	Back off the pipe stabilizer to the furthest point where it still stabilizes the pipe effectively.
Larger diameter pipe sways or vibrates from side to side.	Incorrect pipe stabilizer adjustment.	Move the pipe stabilizer in or out until the pipe rotates smoothly.
The tool will not groove	Air is present in the hydraulic system.	Refer to the "Maintenance" section.
the pipe.	Pipe is beyond the wall thickness capac- ity of the tool, or the pipe material is too hard.	Refer to the "VE450FSD Ratings" tables on the following page.
	Hand pump valve is not closed tightly.	Close the hand pump valve tightly by turning it clockwise.
	The groove diameter stop bottoms out too soon.	Refer to the "Groove Diameter Adjustment" section.
	Hand pump is low on oil.	Refer to the "Maintenance" section.



TROUBLESHOOTING (CONTINUED)

PROBLEM	POSSIBLE CAUSE	SOLUTION
Pipe grooves do not meet Victaulic specifications.	Groove diameter stop is not adjusted correctly.	Refer to the "Groove Diameter Stop Adjustments" section.
	Pipe is beyond the wall thickness capac- ity of the tool, or the pipe material is too hard.	Refer to the "VE450FSD Ratings" tables on this page.
The "A" Gasket Seat or "B" Groove Width dimensions	Upper roll bearing is not lubricated sufficiently.	Refer to the "Maintenance" section.
do not meet Victaulic specifications.	Incorrect upper roll, lower roll, or both installed on the tool.	Install the correct rolls.

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: <u>https://www.victaulic.com/assets/uploads/literature/24.01.pdf</u>



VE450FSD RATINGS - MAXIMUM PIPE SIZE AND WALL THICKNESS CAPACITY (OGS)

		Pipe Size (inches/mm)								
Model	Pipe Material	4 100	5	6 150	8 200	10 250	12 300	14 350	16 400	18 450
	Steel	Sch. 5 - 40 Sch. 5 - STD 2.1 - 9.3 mm 4.0 - 9.5 mm								
	Stainless	Sch. 40S 6.0 – 9.3 mm						STD 9.5 mm	I	
VE450FSD	Lt. Wall SS	Sch. 5S – 10S 2.1 – 4.6 mm								
	Aluminum		Sch. 5 – 40 STD 2.1 – 9.3 mm 9.5 mm							
	PVC Plastic		. 40 - - 11.0		Sch. 40 8.2 mm					

VE450FSD RATINGS - MAXIMUM PIPE SIZE AND WALL THICKNESS CAPACITY ACS

		Pipe Size (inches/mm)						
Model	Pipe Material	14 350	16 400	18 450	20 500	22 550	24 600	
	Steel	Sch. 5 – STD 4.0 – 9.5 mm						
VE450FSD	Stainless	STD 9.5 mm						
	Lt. Wall SS	Sch. 10S 4.8 – 6.4 mm						



ORIGINAL GROOVE SYSTEM (OGS) ROLL PART NUMBERS STEEL PIPE - COLOR CODED BLACK

Pipe Size inches/mm	Roll Part Numbers
4 - 6 100 - 150	Lower Roll R904460L06 Upper Roll R9QA448U06 Roll Set R9Q1460006
8 – 12 200 – 300	Lower Roll R908460L12 Upper Roll R9QA448U12 Roll Set R9Q1460012
14 - 16 350 - 400	Lower Roll R914460L16 Upper Roll R9QA448U16 Roll Set R9Q1460016
18 - 20 450 - 500	Lower Roll R918460L20 Upper Roll R9QA448U20 Roll Set R9Q1460020
22 - 24 550 - 600	Lower Roll R922460L24 Upper Roll R9QA448U24 Roll Set R9Q1460024

ORIGINAL GROOVE SYSTEM (OGS) ROLL PART NUMBERS ALUMINUM AND PVC PLASTIC PIPE - COLOR CODED YELLOW ZINC

Pipe Size inches/mm	Roll Part Numbers
4 - 6 100 - 150	Lower Roll RP04460L06 Upper Roll RPQA448U06 Roll Set RPQ1460006
8 - 12 200 - 300	Lower Roll RP08460L12 Upper Roll RPQA448U12 Roll Set RPQ1460012

ENDSEAL[™] "ES" ROLL PART NUMBERS STEEL PIPE - COLOR CODED BLACK

Pipe Size inches/mm	Roll Part Numbers
4 - 6 100 - 150	Lower Roll RZQ1448L06 Upper Roll RZQA448U06 Roll Set RZQ1460006
8 – 12 200 – 300	Lower Roll RZQ1448L12 Upper Roll RZQA448U12 Roll Set RZQ1460012

ORIGINAL GROOVE SYSTEM (OGS) ROLL PART NUMBERS SCHEDULE 5S AND 10S STAINLESS STEEL PIPE - COLOR CODED SILVER

Pipe Size inches/mm	Roll Part Numbers
4 - 6 100 - 150	Lower Roll RX04460L06 Upper Roll RXQA448U06 Roll Set RXQ1460006
8 – 12 200 – 300	Lower Roll RX08460L12 Upper Roll RXQA448U12 Roll Set RXQ1460012
14 - 16 350 - 400	Lower Roll RX14460L16 Upper Roll RXQA448U16 Roll Set RXQ1460020
18 - 20 450 - 500	Lower Roll RX18460L20 Upper Roll RXQA448U20 Roll Set RXQ1460020
22 - 24 550 - 600	Lower Roll RX22460L24 Upper Roll RXQA448U24 Roll Set RXQ1460024

ADVANCED GROOVE SYSTEM **AGS** ROLL PART NUMBERS

STEEL PIPE - COLOR CODED BLACK WITH YELLOW BAND STAINLESS STEEL PIPE - COLOR CODED SILVER WITH BLACK BAND

Pipe Size inches/mm	Roll Part Numbers for Steel Pipe	Roll Part Numbers for Stainless Steel Pipe
14 350	Lower Roll RW02460L24 Upper Roll	Lower Roll RW0X460L18
16		Upper Roll
400		RWQX448A24
18		Roll Set
450		RWQX460018
20	RWQ2448ASY	Lower Boll
500	Roll Set RWQ2460024	RW0X460L24
22		Upper Roll
550		RWQX448A24
24		Roll Set
600		RWQX460024

NOTICE

- Older tools require the following lower bolt size for lower roll installation: 3.75" Long x ⁵/₈ - 11 UNC 2A.
- Existing tools may require contacting Victaulic to determine roll set compatibility.



TM-VE450FSD REV_C

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

ENDSEAL[™] "ES" GROOVE SPECIFICATIONS

For the most up-to-date information regarding EndSeal[™] "ES" roll groove specifications, reference the current revision of Victaulic publication 25.02, 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/25.02.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/I-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:	VE450FSD
Serial No. :	Refer to Machinery Nameplate
Product Description:	Portable Pipe Roll Grooving Tools
Conformity Assessment:	2006/42/EC, Annex I
Reference Standards:	EN ISO 12100 :2010 EN IEC 60204-1 :2006 + A1:2009
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,

LAR. Al

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

Place of Issue: Easton, Pennsylvania, USA Date of Issue: April 26, 2023

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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:	VE450FSD
Serial No. :	Refer to Machinery Nameplate
Product Description:	Roll Grooving Tool
Conformity Assessment:	2008 No. 1597, Annex I
Reference Standards:	BS EN ISO 12100 :2010 BS EN IEC 60204-1
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

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VE450FSD Roll Grooving Tool

