

Operating and Maintenance Instructions Manual

VE108H

Pipe Roll Grooving Tool



WARNING



- Failure to follow instructions and warnings may result in serious personal injury, property damage or improper installation.
- Before installing, operating, or servicing this tool, read and understand the instructions in this manual and all warning labels on the tool.
- If you need additional copies of the manual or have any questions about the safe operation of this tool, contact Victaulic Europe, Prijkelstraat 36, Nazareth, Belgium, phone: +32-9-381 15 00, or your Victaulic Sales Office.

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READ THIS FIRST - HAZARD IDENTIFICATION

Definitions for identifying the various hazard levels shown on warning labels or to indicate proper safety procedures in this Manual are provided below.

When you see these safety messages, be alert to the possibility of personal injury or property damage and carefully read and fully understand the instructions that follow.

DANGER
The use of the word "DANGER" always signifies an immediate hazard with a likelihood of serious personal injury or death if instructions, including recommended precautions, are not followed.

WARNING
The use of the word "WARNING" signifies the presence of hazards or unsafe practices which could result in serious personal injury or death if instructions, including recommended precautions, are not followed.

CAUTION
The use of the word "CAUTION" signifies possible hazards or unsafe practices which could result in minor personal injury, product or property damage if instructions, including precautions, are not followed.

NOTICE
The use of the word "NOTICE" signifies special instructions which are important but not related to hazards.

OPERATOR SAFETY INSTRUCTIONS

This tool is designed only for roll grooving pipe. To accomplish this function requires some dexterity and mechanical skills, as well as sound safety habits. Although this tool is manufactured for safe dependable operation, it is impossible to anticipate those combinations of circumstances which could result in an accident. The following instructions are recommended for safe operation of the tool. The operator is cautioned to always practice "Safety First" during each phase of use, including setup and maintenance of this unit. **It is the responsibility of the owner, lessee or user of this tool to ensure that all operators receive, read and understand this manual and are fully trained to operate this tool.**

General

- **Read and understand this Manual before operating or performing maintenance on this tool.** Become familiar with the tool's operations, applications and limitations. Be particularly aware of its specific hazards. Store this manual in a clean area and always at a readily available location. Additional copies at no charge are available upon request by writing or phoning Victaulic Europe.
- **Use only recommended accessories.** Use of improper accessories may be hazardous. See "Accessories".
- **This tool is designed ONLY for roll grooving of pipe sizes, materials and wall thicknesses outlined under "Tool Rating and Roll Selection".**

Tool Setup

- **Ground the drive motor.** Be sure the drive motor is connected to an internally grounded electrical system.

- **Avoid dangerous environments.** Don't use the machine in damp or wet locations. Don't use the tool on sloped or uneven ground or floor. Keep work area well illuminated. Allow sufficient space to operate tool and accessories properly and for others to pass safely.
- **Prevent back injury.** During tool setup, it is recommended to use a lift to move and position the tool, as it cannot be safely handled by one person.

Operating Tool

- **Inspect the equipment.** Prior to starting the tool, check the movable parts for any obstructions. Be sure that guards and tool parts are properly installed and adjusted.
- **Prevent accidental startings.** Place power switch in the "OFF" position prior to connecting electrical power.
- **Operate tool from control station side only.** The tool must be operated with the safety foot switch control located for easy operator access. Never reach across moving parts or material being worked on. Foot switch should always be accessible to operator.
- **Keep hands away from grooving rolls and stabilizer wheel during grooving operation.** Grooving rolls can crush or cut fingers and hands.
- **Never reach inside pipe end or across the tool or pipe during operation.**
- **Do not over-reach.** Keep your proper footing and balance at all times. Be sure you can reach foot switch safely at all times. Do not reach across tool or pipe. Keep hands and loose tools away from moving parts.
- **Always wear safety glasses and foot protection.**
- **Keep work area clean.** Cluttered areas, benches and slippery floors invite accidents.
- **Wear ear protection if exposed to long periods of very noisy operations.**
- **Keep visitors away.** All visitors should be kept a safe distance from the work area.

- **Keep alert.** Do not operate tool if ill or drowsy from medication or fatigue. Avoid horseplay around tool and keep bystanders a safe distance from tool and pipe being grooved.
- **Wear proper apparel.** Never wear loose clothing (unbuttoned jackets or loose sleeve cuffs) loose gloves or jewelry that can get caught in moving parts.
- **Do not force tool.** It will do the job better and safer at the rate for which it was designed.
- **Secure work, machine and accessories.** Make sure machine is stable. See "Tool Setup" for securing machine to floor or platform.
- **Support work.** Support long pipe with a pipe stand secured to the floor or ground.
- **Do not misuse tool.** Perform only the functions for which the tool is designed. Do not overload the tool.
- **Do not remove any labels from tool.** Replace any damaged or worn labels.

Tool Maintenance

- **Disconnect electrical power prior to servicing.** Repair should be attempted only by authorized personnel. Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- **Maintain tool in top condition.** Keep tool clean for best and safest performance. Follow lubricating instructions.
- **Use only genuine Victaulic replacement parts to ensure proper and safe function of the tool.**

NOTICE

Drawings and/or pictures in this manual may be exaggerated for clarity.

VE108H

INTRODUCTION

The Victaulic® Series VE108H is a fully motorized, semi-automatic hydraulic feed tool for roll grooving pipe to prepare it to receive Victaulic grooved pipe couplings. The VE108H is designed to roll groove pipe of various materials and wall thicknesses (see "Tool Rating and Roll Selection" charts).

Both this tool and the manual contain trademarks, copyrights and/or patented features which are the exclusive property of Victaulic Company of America.

CAUTION
<ul style="list-style-type: none">• This tool should only be used for roll grooving pipe designated in the "Tool Rating and Roll Selection" charts.• Use of the tool for other purposes or exceeding the pipe thickness maximums will overload the tool, shorten tool life and may cause tool damage.

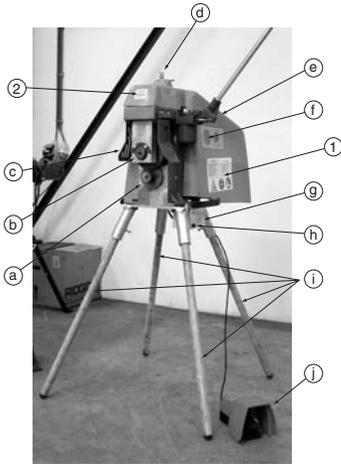
Power Requirements

Power must be supplied through a safety foot switch to ensure safe operation. Be sure the tool is properly grounded in accordance with local regulations.

CAUTION
<ul style="list-style-type: none">• Power supplied to the tool must be 230 V ±5%.• Failure to do so may result in shortened tool life and property damage.

DANGER	
	<ul style="list-style-type: none">• To reduce the risk of electric shock, check the electrical source for proper grounding.• Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.• Failure to do so may result in serious personal injury.

TOOL NOMENCLATURE



Item	Description
a	lower roll
b	upper roll
c	roll guards
d	depth adjuster
e	hydraulic pump
f	gauge
g	start button
h	fuse
i	legs
j	foot switch

The numbers in the illustration indicate the location of the following warning labels:

- Label 1

this illustration is not yet available

- Label 2

this illustration is not yet available

- Label 3

this illustration is not yet available

VE108H

RECEIVING TOOL

Victaulic®VE108H tools are packed individually in sturdy containers, designed for use in reshipping the tool.

NOTE: Be sure to save original shipping materials for return shipment of rental tools.

Upon receipt of tool, make sure all necessary parts are included. If any parts are missing, notify your Victaulic distributor or Victaulic representative.

Container Contents



- Tool head with mounting table and gear motor, (4) legs and foot switch with cord and pump.
- Rolls for 42,4 - 48,3 mm and 60,3 - 168,3 mm steel pipe. The 60,3 - 168,3 mm rolls are mounted on the head assembly
- Two (2) tool operating manuals
- One 4 mm and one 6 mm Allen wrench
- Roll removal tool
- Pi-tape
- Gauge to measure groove width and gasket seat

The standard series VE108H tools are supplied with grooving rolls for 42,4 - 168,3 mm carbon steel pipe. Rolls are marked with the size for your convenience.

For grooving to other specifications and other materials, see "Tool Rating and Roll Selection" charts. Grooving rolls for other specifications and other materials must be purchased separately.

TOOL SETUP

WARNING

- Do not connect power until instructed otherwise.
- Accidental start up of tool may result in serious personal injury.

WARNING

- The hydraulic system is set to operate at a maximum pressure of 165 bar.
- Adjusting the setup for higher pressures will result in tool damage.

1 Remove all components from the containers and check to be certain all necessary items are included. See "Receiving Tool."

2 Locate the tool on a level concrete floor or base. A suitable location provides:

- the required power as described under "Power Requirements"
- the required space for adequate handling of pipe to be grooved
- a level and even surface for tool, pipe stand and footing
- an ambient temperature between -7°C and 40°C

3 Insert the hand pump handle into the lever arm of the pump. Lock the handle in position with the set screw or nut and bolt provided.



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PRE-OPERATION ADJUSTMENTS

Every Victaulic® tool is checked, adjusted and tested at the factory prior to shipment. Before grooving, however, the following adjustments must be made in sequence to make sure of proper tool operation.

WARNING

- Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- Accidental start up of tool may result in serious personal injury.

Grooving Rolls

Make sure the proper roll set is on the tool for the pipe size and material to be grooved. Rolls are marked with the pipe size. See "Tool Rating and Roll Selection" charts. If proper rolls are not on tool, refer to "Roll Changing".

CAUTION

- Make sure roll cup point set screws are tight.
- Loose cup point set screws could seriously damage both the tool and rolls.

Pipe Preparation

For proper tool operation, and production of proper pipe grooves, carefully observe the following pipe preparation tips.

- Pipe ends should be cut squarely in accordance with Column 1 note in the appropriate chart under "Roll Groove Specifications".
- Internal or external weld bead or seams must be ground flush with the pipe surface extending 51 mm back from the pipe end.
- The end of the pipe, both inside and out, must be cleaned of loose rust, coarse scale, dirt and other foreign material.

CAUTION

- For maximum grooving roll life, remove foreign material and loose rust.
- Foreign material such as coarse scale or dirt might interfere with or damage the grooving rolls or distort the groove. Rust is an abrasive material and will tend to wear out the surface of the grooving rolls.

Victaulic recommends that pipe shall be square ended. When using beveled pipe, standard wall or less, the bevel should not exceed 37,5°. Square ended pipe must be used with FlushSeal® and EndSeal® gaskets. For heavier pipe walls, square ended pipe is also required.

Groovable Pipe Lengths

The VE108H is capable of grooving short pipe lengths without the use of a pipe stand (see Table 1), or long pipe lengths up to 6 m with the use of appropriate pipe stands.

Short Pipe Lengths

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

WARNING



- Grooving rolls can crush or cut fingers and hands.
- Loading and unloading pipe will place your hands close to the rollers.
- Never groove pipe shorter than what is recommended (See "Groovable Pipe Lengths").

Table 1 - Pipe lengths groovable without a pipe stand

O.D. [mm]	Length - [mm]	
	Min.	Max.
33,7	203	914
42,4	203	914
48,3	203	914
60,3	203	914
73,0	203	914
88,9	203	914
101,6	203	914
114,3	203	914
127,0	203	813
141,3	203	813
152,4	254	762
168,3	254	711
203,2	254	610
219,1	254	610

If a pipe shorter than the minimum shown in Table 1 is needed, if possible, shorten the next to last piece of pipe enough so that the last piece of pipe is as long or longer than the minimum length specified in Table 1. See example below.

NOTICE
Pipe nipples shorter than those shown in the table above are available from Victaulic.

Long Pipe Lengths

With pipe in excess of the maximum length shown in Table 1, a roller type pipe stand must be used.

NOTICE
The figures below show the adjustable pipe stand (PS 108). PS 108 is suitable for 33,7 - 219,1 mm pipe. Also available are Victaulic model VAPS 112, suitable for sizes 26,9 - 323,9, and VAPS 224, suitable for sizes 60,3 - 610,0 mm. See "Accessories".

1 Position pipe and pipe stand in accordance with the figures below.

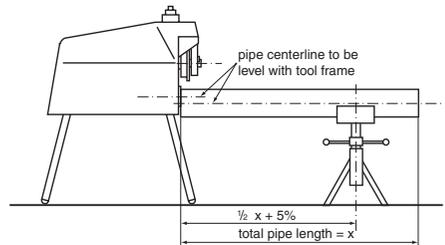


Figure 1 - Support of pipe

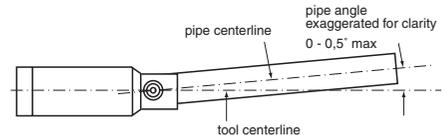


Figure 2 - Tracking angle

WARNING
<ul style="list-style-type: none"> • Pipe stand location will affect pipe tracking. • Incorrect pipe stand position may cause the pipe to be pushed out of rolls and fall. • Failure to position pipe and pipe stand in accordance with the figures shown may result in serious personal injury or property damage.

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CAUTION

Pipe position will affect pipe flare.

- When pipe end flare is excessive, right-to-left tracking must be kept to a minimum. It may be necessary to use less than 0,5°.

Make sure tool is level (see "Tool Setup").

- If pipe is grooved with back end of pipe (end of pipe which is not in tool) higher than the end being grooved, pipe may not track and excessive pipe end flare may result.
- Assembly of couplings on pipe exceeding Maximum Allowable Flare (see "Roll Groove Specifications" charts) may prevent closure of couplings pad-to-pad, allowing possible pipe separation, and result in property damage.
- Also, joint leakage may result due to excessive gasket distortion/damage.

Groove Diameter Stop Adjustment

The groove diameter stop must be adjusted for each pipe size or change in wall thickness. Groove diameter, identified as the "C" dimension for each pipe size, is listed under "Standard Roll Groove Specifications".

For your convenience, a "C" dimension chart for steel pipe is also on the tool.

NOTICE

To perform the following adjustments, use several short scrap sections of pipe (but not shorter than what is recommended in the "Groovable Pipe Lengths" table) of the proper material, diameter and thickness to be grooved.

To achieve proper diameter:

- 1 Determine the size and thickness of pipe to be grooved. See "Pipe Dimensions" to determine proper schedule.
- 2 Turn the groove diameter stop counter-clockwise about 10 revolutions.



- 3 Using a piece of scrap pipe or short piece of pipe (refer to the "Groovable Pipe Lengths" table) of the diameter and wall thickness to be grooved, place the pipe over the lower roll with the pipe end against the lower roll backstop flange.



- 4 Pump the handle several times to bring the upper roll into light but firm contact with the pipe.



5 Turn the groove diameter stop clockwise as far as possible. This is the zero-point.

6 Turn the groove diameter stop counterclockwise as far as required for the pipe diameter to be grooved. One revolution counterclockwise equals approximately 1 mm increase in groove depth.



NOTICE

This method provides an approximate groove diameter adjustment, not "exact" groove diameter settings.

WARNING



- Grooving rolls can crush or cut fingers and hands.
- Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- Keep hands away from grooving rolls and stabilizer wheel.
- Never reach inside pipe end or across the tool or pipe during operation.
- Never groove pipe shorter than what is recommended (See "Groovable Pipe Lengths").
- Never wear loose clothing, loose gloves, or jewelry while operating tool.

7 Prepare a trial groove. To do so, follow the "Grooving Operation" procedures.

8 After a trial groove is prepared and pipe removed from the tool, carefully check the groove diameter ("C" dimension), as charted under "Roll Groove Specifications". The "C" dimension is best checked with a pipe tape. It also may be checked with a vernier caliper or narrow-land micrometer at two locations, 90° apart, around the groove. Average reading must equal the required groove diameter specification.



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CAUTION

- The "C" dimension (groove diameter) must always conform to specifications under "Roll Groove Specifications" to ensure proper joint performance.
- Failure to follow instructions and warnings may result in serious personal injury, property damage or improper installation.

9 If groove diameter ("C" dimension) is not within tolerance, the diameter stop must be adjusted to obtain the proper dimension. To adjust for a **smaller groove diameter**, turn the depth adjuster **counterclockwise**. To adjust for a **bigger groove diameter**, turn adjuster **clockwise**.

10 Prepare another trial groove and check the groove diameter again. Repeat the two previous steps until the groove diameter is within specification.

11 Lock the groove diameter stop as shown.



GROOVING OPERATION

CAUTION

- Victaulic® Series VE108H tools are designed **ONLY** for roll grooving pipe of the sizes, materials and wall thicknesses outlined under "Tool Rating and Roll Selection".
- Grooving pipe other than that recommended will result in improper pipe end configuration or improper groove dimensions for applying Victaulic products.

Before grooving, make sure you have followed all instructions in:

- "Tool Setup"
- "Grooving Rolls"
- "Pipe Preparation"
- "Groovable Pipe Lengths"
- "Groove Diameter Stop Adjustment"

WARNING



- Before operating tool, review precautions under "Operator Safety Instructions".
- Failure to follow instructions and warnings may result in serious personal injury, property damage or improper installation.

DANGER

- To reduce the risk of electric shock, check the electrical source for proper grounding.
- Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- Failure to do so may result in serious personal injury.

1 Plug the machine into an internally grounded electrical source. Make sure motor is grounded.

2 Set the main power switch to "ON".



3 Actuate safety foot switch by pressing foot on pedal to be certain tool is operational, power supply is available, and that lower roll is turning counterclockwise when viewed from the front. Remove foot from foot switch.

4 Open hand pump valve by turning counterclockwise. This will allow upper roll and arm to move to full up position.



Hand pump valve closes automatically upon release.

WARNING

- Grooving rolls can crush or cut fingers and hands.
- Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- Never reach inside pipe end or across the tool or pipe during operation.
- Never groove pipe shorter than what is recommended (See "Groovable Pipe Lengths").
- Never wear loose clothing, loose gloves, or jewelry while operating tool.

5 Insert a piece of pipe of the correct size and schedule/thickness to be grooved over the lower roll with the pipe end against the lower roll backstop flange.

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6 Pump the handle several times to bring the upper roll into light but firm contact with the pipe.



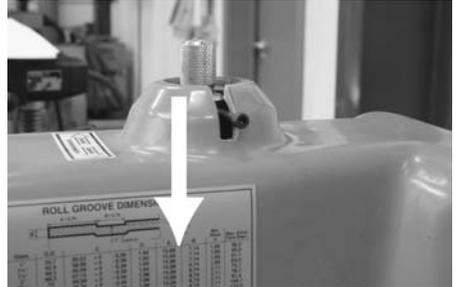
7 If grooving a short pipe (see "Groovable Pipe Lengths"), remove hands from pipe.

8 Depress and hold down safety foot switch. The pipe will begin to rotate counterclockwise. As the pipe rotates, begin grooving by slowly pumping the pump handle.

NOTICE

Do not pump too fast, but at a rate sufficient to groove the pipe and maintain audible moderate-to-heavy load on the gear motor.

9 Let the grooving continue until the depth adjuster lock comes into full, firm contact with the underlying surface. Continue pipe rotation for several revolutions to ensure groove completion.



10 Withdraw foot from safety foot switch.

WARNING



- Grooving rolls can crush or cut fingers and hands.
- Do not place hand(s) inside end of pipe to pull pipe out of tool or place hand(s) in area of grooving rolls or stabilizer roller.

11 If grooving a short pipe, manually support pipe.

12 Open hand pump valve to release pipe. Remove pipe from tool.



NOTICE

Groove diameter should be correct for the diameter and wall thickness of pipe for which it was set under "Groove Diameter Stop Adjustment". Groove diameter should be checked and adjusted as necessary to ensure grooves are within specification.

ROLL CHANGING

WARNING

- Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- Accidental start up of tool may result in serious personal injury.



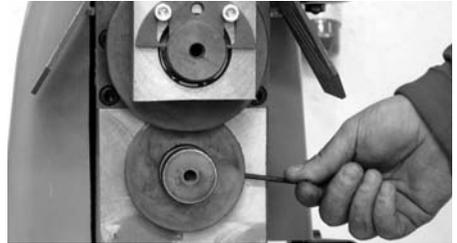
NOTICE

Victaulic® Series VE108H roll grooving tools are designed for fast, easy grooving. Rolls accommodate several pipe sizes (refer to "Tool Rating and Roll Selection") eliminating the need for frequent roll changes. When a different size range is encountered or special grooving styles are required, the grooving rolls must be changed and Pre-Operation Adjustments performed again. Also, different pipe materials may require that the rolls be changed. Refer to "Tool Rating and Roll Selection" for proper roll selection.

NOTICE

Make sure the lower roll is positioned so that the cap point set screw is accessible.

- 2 With the 4 mm Allen wrench, loosen the cup point set screw in the lower roll backstop flange.



Roll Removal

WARNING

- Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- Accidental start up of tool may result in serious personal injury.

- 3 Screw the roll removal tool into the center of the lower roll (clockwise).



Lower Roll (all sizes)

- 1 Open hand pump valve by turning counter-clockwise. This will allow upper roll to move to full up position.

- 4 Pull the lower roll out and store in a clean place.

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Upper Roll (all sizes)

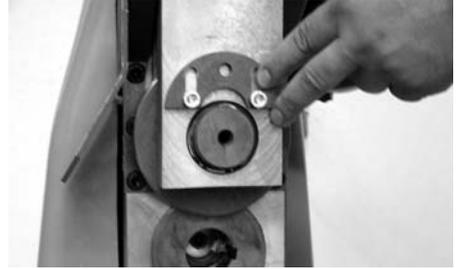
1 With the 4 mm Allen wrench, loosen the socket head cap screw of the roll guard on the right hand side and turn it away from the upper roll.



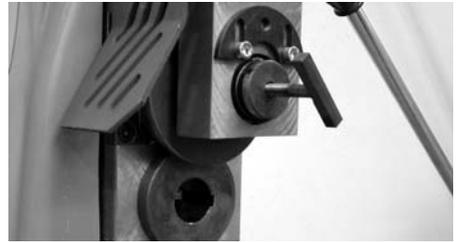
2 With the 4 mm Allen wrench, loosen the cup point set screw in the upper roll.



3 With the 6 mm Allen wrench, loosen the 2 adjustment screws and slide the distance plate up, away from the upper shaft.



4 Screw the roll removal tool into the upper shaft (clockwise).



5 With one hand, support the upper roll from the bottom; with the other hand, withdraw the upper shaft as shown. When the upper shaft is withdrawn, the upper roll will drop into your hand.



6 Store roll in a clean place.

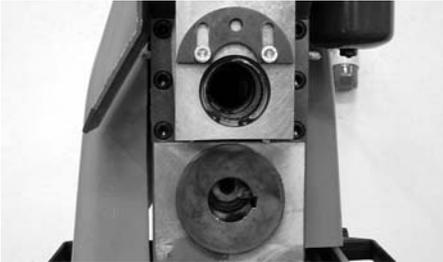
Roll Installation

NOTICE

See "Tool Rating and Roll Selection" charts for information on available grooving rolls.

Upper Roll (all sizes)

- 1 Slide the distance plate up.



- 2 Inspect the upper shaft bearings. Replace if damaged or worn.

- 3 Insert the desired upper roll into the slide with markings facing forward. Fully insert the shaft into the slide and through the upper roll and slide bearings as shown.



NOTICE

Do not force shaft. Shaft should fit freely through upper roll and bearings.

- 4 Slide the distance plate down into the groove of the upper shaft and tighten the 2 adjustment screws to lock in position.



- 5 With the 4 mm Allen wrench, tighten the cup point set screw in the upper roll.



- 6 Turn the right-hand roll guard towards the upper roll. With the 4 mm Allen wrench, tighten the socket head cap screw to lock in position.

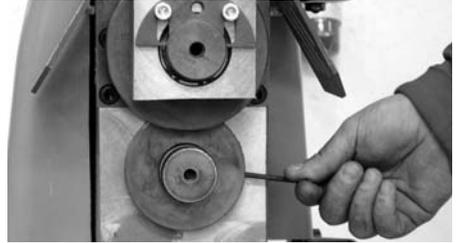
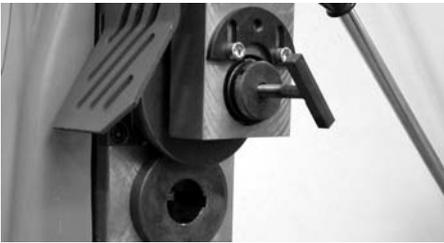
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7 Remove the roll removal tool from the upper shaft.



3 With the 4 mm Allen wrench, tighten the cup point set screw in the lower roll.



Lower Roll (all sizes)

1 Lightly lubricate the desired lower roll.



2 Carefully insert lower roll into main shaft.

Roll installation is complete.

Before grooving, make sure all "Pre-Operation Adjustments" are reviewed and followed.

MAINTENANCE

General

This manual provides information to permit the operator of Victaulic® roll grooving tools to keep his equipment in top operating condition and to guide him in making repairs when it becomes necessary.

Replacement parts, applicable only to these tools, should be ordered from Victaulic to ensure proper operation of the tool. All parts are supplied ex Nazareth, Belgium – unless otherwise stated – at the price in effect at the time of ordering.

NOTICE

Remember that preventative maintenance during operation will pay for itself in repair and operating savings.

DANGER

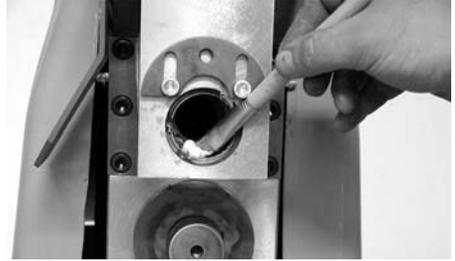


- Always disconnect power before servicing or making any tool adjustments unless instructed otherwise.
- Failure to do so may result in serious personal injury.

Lubrication

After every eight hours of operation lubricate the tool.

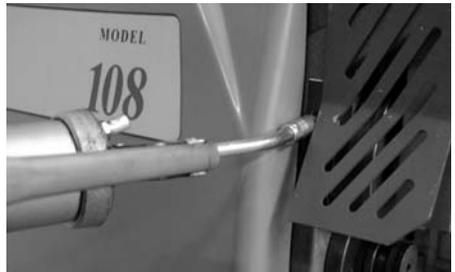
- 1 Grease upper block bearings as shown. Use a No. 2EP Lithium base grease.



- 2 Grease main shaft bearings at fittings provided as shown. Use a No. 2EP Lithium base grease.



- 3 Grease the sliding surfaces at grease fittings with a No. 2EP Lithium base grease.



Hydraulic Systems

The level of the hydraulic fluid in the pump must be checked every six months or if pumping feels spongy.

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Filling and Checking

1 Loosen and remove the bolt retaining the hydraulic tank. Remove the hydraulic tank from the pump.



2 Check the hydraulic fluid level and add oil as required.



NOTICE

The hydraulic tank must be filled to 20 mm from the top.

CAUTION

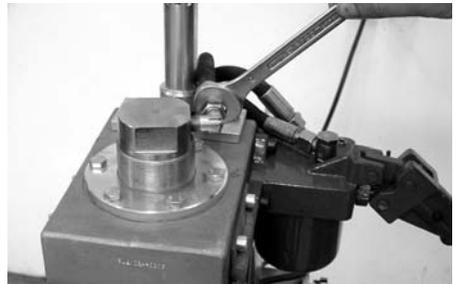
DO NOT mix different types of hydraulic oil. This will change the composition and may damage the gaskets of the hydraulic system.

Air Bleeding

1 Loosen the four top cover screws and remove the top cover.



2 Loosen the nut that connects the hose to the hydraulic cylinder. Remove the hose.



3 Carefully pump the handle until oil flows out of the hose.



4 Reconnect the hose to the hydraulic cylinder and tighten nut.



Recommended Lubricants

Bearing and Slide Grease

General Purpose E.P. Lithium Base Grease.

Manufacturer	Product
Amoco Oil	Amolith Grease #2EP
Arco Petroleum Prod. Co.	Litholine HEP 2
Ashland Oil, Inc./Valvoline Oil Co.	Multi-Lube Lith. EP Grease
Exxon Co., USA	Lidok EP 2
Gulf Oil Corp.	Gulfocrown Grease EP#2
Kendall Refining Co.	L-426
Lubriplate	No. 630-2
Mobil Oil Corp.	Mobilux EP2
Pennzoil Prod. 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 Hydraulic Oil ISO Grade 22.

PARTS ORDERING INFORMATION

When ordering parts, the following information is necessary for Victaulic Europe to process the order promptly and send the correct part(s):

- Tool Model Number: VE108H
- Tool Serial Number. The serial number can be found on the front of the tool.
- (Quantity), Item Number, Part Number and Description. Example: (1) #NK01060900, Woodruff Key.
- Where to send the part(s): company name, address
- To whose attention to send the part(s): person's name
- Purchase Order Number
- Billing Address

You can order parts directly from Victaulic Europe.

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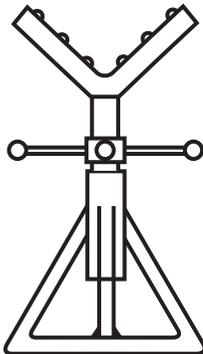
ACCESSORIES

Victaulic Adjustable Pipe Stand VAPS112



Victaulic Model VAPS 112 (art. code: R000112PS0), a portable, adjustable, roller type, four-leg pipe stand for use with Victaulic roll grooving tools, is available from Victaulic Europe. Ball transfer rollers, adjustable for pipe from 26,9 - 323,9 mm, will accommodate linear and rotational movement. Turnstile design permits easy swivel for grooving both pipe ends. Contact Victaulic Europe for details.

Adjustable Pipe Stand PS108



Victaulic Model PS108 (art. code: R000112PS0), a portable, adjustable, roller type, four-leg pipe stand for use with Victaulic roll grooving tools, is available from Victaulic Europe. Ball transfer rollers for pipe from 26,9 - 219,1 mm, will accommodate linear and rotational movement. Turnstile design permits easy swivel for grooving both pipe ends. Contact Victaulic Europe for details.

Optional Rolls

See "Tool Rating and Roll Selection" for rolls for different materials and groove specifications.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Pipe will not stay in grooving rolls.	Incorrect pipe positioning.	See Pipe Support section.
	Improper manual grooving technique.	See "Grooving Operation" - Grooving Short Pipe Lengths section.
	Power Drive running clockwise	See "Tool Setup".
Pipe stops rotating during grooving.	Rust or dirt has built up on lower roll.	Remove accumulation from lower roll with stiff wire brush.
	Rust or dirt is excessively heavy inside the pipe end.	Remove heavy rust and dirt from inside pipe end. See "Pipe Preparation".
	Worn grooving rolls.	Inspect lower roll for worn knurls, replace if worn.
	Woodruff keys under lower roll are damaged or missing.	Remove lower roll, replace key and reinstall lower roll. See "Roll Changing".
	Motor has stalled due to excess hand pumping.	Open release valve to free pipe. After release valve closes, continue grooving, pumping at a moderate rate.
	Circuit breaker has tripped or fuse has blown on electrical circuit supplying motor.	Reset breaker or replace fuse.
Pipe flare is excessive.	Pipe support adjusted too high.	Check pipe levelness. See Pipe Support section.
	Tool is tilted forward.	Check tool levelness. See Tool Setup section.
	Incorrect pipe support positioning, pipe is "overtracking".	Move pipe support to the right. See Pipe Support section.
While grooving, loud squeaks echo through the pipe.	Pipe not square cut.	Cut pipe end squarely.
	Incorrect pipe support positioning, pipe is "overtracking".	Move pipe support to the right. See Pipe Support section.
	Pipe is rubbing excessively hard on lower roll flange.	Remove pipe from tool and apply a film of grease to the face of the lower roll flange as needed.
During grooving, loud thumps or bangs occur about once every revolution of the pipe.	Pipe has a pronounced weld seam.	Grind welds flush with pipe surface inside and out 51 mm back from pipe end.
Tool won't groove pipe.	Hand pump valve is not closed tightly.	Tighten valve.
	Hand pump is low on oil.	See "Maintenance".
	Air in hydraulic system.	See "Maintenance".
	Pipe beyond tool's wall thickness capability.	See "Tool Rating and Roll Selection".
Tool comes up to operating pressure excessively slow.	Air in hydraulic system.	Bleed air from hydraulic system.
Upper roll won't rotate	Dirt trapped between roll and slide or retaining plate.	Remove upper roll and clean off dirt. Reinstall upper roll.
Lower roll does not stay in place, backs out of tool head.	Lower roll has loosened in its backstop flange.	Tighten and lock screw.
	Lower roll screw is damaged.	Replace screw and reinstall rolls.

TOOL RATING AND ROLL SELECTION

Standard Rolls

O.D. [mm]	1		2		3		4		Standard Roll Nos.
	Nominal Wall Thickness Dimensions - [mm]								
	Steel Pipe		Stainless Steel Pipe		Aluminum Pipe		PVC Plastic Pipe		
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
33,7	1,7	3,4	1,7	3,4	1,7	3,4	3,4	3,4	WM00ROLB024A WM00ROLO011A
42,4	1,7	3,6	1,7	3,6	1,7	3,6	3,6	3,6	WM00ROLB026A
48,3	1,7	3,7	1,7	3,7	1,7	3,7	3,7	3,7	WM00ROLO012A
60,3	2,1	3,9	1,7	3,9	1,7	3,9	3,9	5,5	60,3 - 168,3 mm: WM00ROLB027A WM00ROLO13A
73,0	2,1	5,2	2,1	4,8	2,1	7,1	5,2	7,0	
76,1	2,1	5,6	2,1	4,8	2,1	7,1	-	-	
88,9	2,1	5,6	2,1	4,8	2,1	7,1	5,5	7,6	
108,0	2,1	5,6	2,1	4,8	2,1	7,1	5,7	8,1	
114,3	2,1	6,0	2,1	4,8	2,8	7,1	6,0	8,6	
127,0	2,4	6,0	2,4	4,8	2,4	7,1	-	-	
141,3	2,8	3,4	2,8	3,4	2,8	7,1	6,6	9,5	
159,0	2,8	3,4	2,8	3,4	2,8	7,1	-	-	
168,3	2,8	3,4	2,8	3,4	2,8	7,1	7,1	11,0	
219,1	2,8	3,4	2,8	3,4	2,8	8,2	8,2	12,7	WM00ROLB028A WM00ROLO014A

Notes for Standard Rolls:

COLUMN 1: **Steel Pipe** – Maximum ratings on steel are limited to pipe of 150 BHN (Brinell Hardness Number) and less.

COLUMN 2: **Stainless Steel Pipe** – Types 304/304L and 316/316L

COLUMN 3: **Aluminum Pipe** – Alloys 6061-T4 and 6063-T4

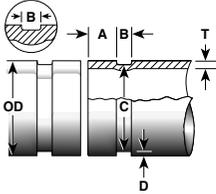
COLUMN 4: **PVC Plastic Pipe** – PVC Type I Grade I - PVC1120; PVC Type I Grade II - PVC1220; PVC Type II Grade I - PVC2116

The following pipe sizes may also be grooved: 133,0 mm, 139,7 mm, 165,1 mm. Contact Victaulic Europe for details.

Standard rolls are also available in stainless steel for grooving of stainless steel pipe.

ROLL GROOVE SPECIFICATIONS

Steel Pipe and All Materials Grooved with Standard and RX Rolls



1			2	3	4		5	6	7
O.D. - [mm]			Dimensions - [mm]						
Basic	Tolerance		Gasket Seat A $\pm 0,76$	Groove Width B $\pm 0,76$	Groove Dia. C		Grv. Depth D (ref.)	Min. Wall Thk. T	Max. Flare Dia.
	+	-			Basic	Tolerance			
33,7	0,33	0,33	15,88	7,14	30,23	-0,38	1,60	1,65	36,3
42,4	0,41	0,41	15,88	7,14	38,99	-0,38	1,60	1,65	45,0
48,3	0,48	0,48	15,88	7,14	45,09	-0,38	1,60	1,65	51,1
60,3	0,61	0,61	15,88	8,74	57,15	-0,38	1,60	1,65	63,0
73,0	0,74	0,74	15,88	8,74	69,09	-0,46	1,98	2,11	75,7
76,1	0,76	0,76	15,88	8,74	72,26	-0,46	1,98	2,11	78,7
88,9	0,89	0,89	15,88	8,74	84,94	-0,46	1,98	2,11	91,4
101,6	1,02	0,79	15,88	8,74	97,38	-0,51	2,11	2,11	104,1
108,0	1,04	0,79	15,88	8,74	103,73	-0,51	2,11	2,11	110,5
114,3	1,14	0,79	15,88	8,74	110,08	-0,51	2,11	2,11	116,8
127,0	1,27	0,79	15,88	8,74	122,78	-0,51	2,11	2,41	129,5
133,0	1,34	0,79	15,88	8,74	129,13	-0,51	2,11	2,77	135,9
139,7	1,42	0,79	15,88	8,74	135,48	-0,51	2,11	2,77	142,2
141,3	1,42	0,79	15,88	8,74	137,03	-0,56	2,13	2,77	143,8
152,4	1,42	0,79	15,88	8,74	148,06	-0,56	2,16	2,77	154,9
159,0	1,60	0,79	15,88	8,74	153,21	-0,56	2,16	2,77	161,3
165,1	1,60	0,79	15,88	8,74	160,78	-0,56	2,16	2,77	167,6
168,3	1,60	0,79	15,88	8,74	163,96	-0,56	2,16	2,77	170,9
203,2	1,60	0,79	19,05	11,91	198,53	-0,64	2,34	2,77	207,5
219,1	1,60	0,79	19,05	11,91	214,40	-0,64	2,34	2,77	223,5

Standard roll groove specifications notes:

COLUMN 1: **Outside diameter** – The outside diameter of roll grooved pipe shall not vary more than the tolerance listed. For IPS pipe the maximum allowable tolerance from square cut ends is 0,762 mm for 26,9 - 101,6 mm; 1,143 mm for 114,3 - 168,3 mm; and 1,524 mm for sizes 203,2 mm and above measured from true square line.

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COLUMN 2: **Gasket seat** – The pipe surface shall be free from indentations, roll marks, and projections from the end of the pipe to the groove, to provide a leak-tight seal for the gasket. All loose paint, scale, dirt, chips, grease and rust must be removed. It continues to be Victaulic's first recommendation that pipe be square cut. When using beveled pipe contact Victaulic for details. Square cut pipe must be used with FlushSeal® and EndSeal® gaskets. Gasket seat "A" is measured from the end of the pipe.

IMPORTANT: Roll grooving of beveled end pipe may result in unacceptable pipe end flare. See column 7.

COLUMN 3: **Groove width** – Bottom of groove to be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly. Corners at bottom of groove must have a radius of the following dimensions. For IPS steel pipe, 0,06R on 26,9 - 48,3 mm, 0,08R on 60,3 - 168,3 mm, 0,05R on 219,1 mm and up.

COLUMN 4: **Groove outside diameter** – The groove must be of uniform depth for the entire pipe circumference. Groove must be maintained within the "C" diameter tolerance listed.

COLUMN 5: **Groove depth** – For reference only. Groove must conform to the groove diameter "C" listed.

COLUMN 6: **Minimum allowable wall thickness** – This is the minimum wall thickness which may be roll grooved – except PVC.

COLUMN 7: **Maximum allowable pipe end flare diameter** – Measured at the most extreme pipe end diameter square cut or beveled.

PIPE DIMENSIONS

Seamless and Welded Steel Pipe†

O.D. [mm]	Nominal Wall Thickness - [mm]							
	Sched. 5S	Sched. 10S	Sched. 10	Sched. 20	Sched. 30	Sched. 40	Sched. STD	Sched. 80
26,9	1,7	2,1	-	-	-	2,9	2,9	3,9
33,7	1,7	2,8	-	-	-	3,4	3,4	4,5
42,4	1,7	2,8	-	-	-	3,6	3,6	4,9
48,3	1,7	2,8	-	-	-	3,7	3,7	5,1
60,3	1,7	2,8	-	-	-	3,9	3,9	5,5
73,0	2,1	3,0	-	-	-	5,2	5,2	7,0
88,9	2,1	3,0	-	-	-	5,5	5,5	7,6
101,6	2,1	3,0	-	-	-	5,7	5,7	8,1
114,3	2,1	3,0	-	-	-	6,0	6,0	8,6
141,3	2,8	3,4	-	-	-	6,6	6,6	9,5
168,3	2,8	3,4	-	-	-	7,1	7,1	11,0
219,1	2,8	3,8	-	6,4	7,0	8,2	8,2	12,7
273,0	3,4	4,2	-	6,4	7,8	9,3	9,3	15,1
323,9	4,0	4,6	-	6,4	8,4	10,3	9,5	17,4

† For reference only. The VE108H cannot groove all schedules of steel pipe in table.



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