



VR12 VALVE REFACER MACHINE INSTALLATION MANUAL



PARTS ORDERING

For optional equipment catalogs, please visit <https://www.rottermfg.com/documentation.php>

For fastest service ordering parts or equipment, contact us via e-mail with the information below. For customers within the U.S., send emails to parts@rottermfg.com, for customers outside of the U.S., use intlparts@rottermfg.com

Have the following information on hand to expedite the ordering process:

1. Your name, business name, and contact number
2. Customer number, or your billing address if you do not have a customer number
3. Shipping address if different from the billing address
4. Machine model and serial number
5. Part number and description of the item(s) to order
6. Preferred method of shipment

For customers outside of the U.S. requiring faster service, contact your local distributor.

In some cases, you may be requested to send a photo of the part you are ordering if it is a replacement part or does not appear in our database.

If you are unsure which part you need to order, contact our service department, and ask to speak to one of our service consultants. They will assist you in determining which part(s) you require.

THERE IS A MINIMUM ORDER OF \$25.00

MANUAL SECTIONS

INTRODUCTION

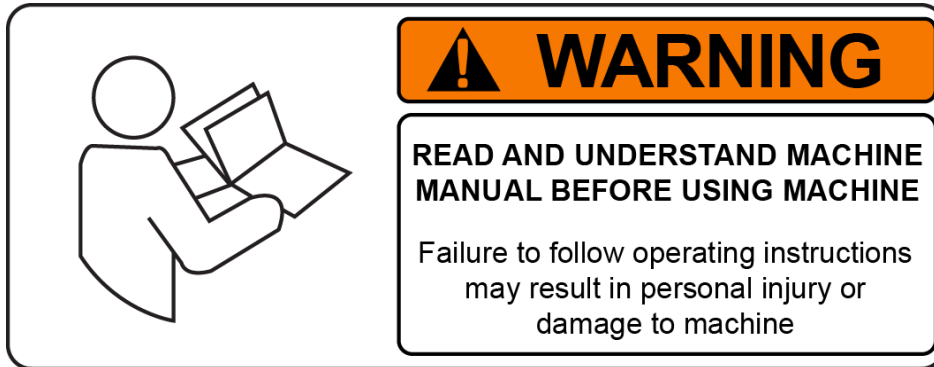
INSTALLATION

INTRODUCTION

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Introduction



READ THE SAFETY CHAPTER BEFORE INSTALLING MACHINE. THOROUGHLY UNDERSTAND ALL SAFETY ISSUES BEFORE OPERATING MACHINE.

ATTENTION OWNER/BUSINESS MANAGER

To validate the warranty on your new Rottler machine, please be sure to sign and complete the “Installation Report” located in the Installation Chapter of this manual.

We suggest that the new user of the VR12 read the CONTROL DEFINITIONS to get an idea how the machine operates.

The Operating Instructions chapter should be read in order to familiarize the user with the actual button pushing sequences required to carry out a job. These chapters in the manual should be considered an introduction. As the operators of the VR12 series machines gain experience with using the different functions of the machine, complicated setups and programs will make more sense.

The rest of the manual contains information and part number reference on fixtures, cutting tools, and machine maintenance. The operator should read and become familiar with these areas as well.

Description

Rottler's Centerless Grinding System is able to grind a set of valves to exact same length without adjusting settings.

The Centerless System rotates the valve stem on it's own centerline. Precision drive rollers rotate the valve stem and a pneumatic low friction steady rest support the valve stem similar to a precision balancing machine, resulting in extremely accurate valve stem to valve seat run out less than .0002" (.005mm) TIR. The Rottler Centerless System allows a wide range of valve stem diameters to be ground without changing any collets or chucks.

Stroking Handwheel - The new design stroking handwheel moves the valve back and forth over the grinding wheel. When operator's hand is removed from the stroking handwheel, the stroking system remains in position until the operator moves the handwheel again.

Disclaimer

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Rottler Manufacturing and its employees or representatives are not responsible for any information regarding final specifications of any workpiece that is created as a final product when using Rottler equipment. It is the responsibility of the end user of Rottler equipment to determine the final dimensions and finishes of the workpiece that they are working on. Any information regarding final dimensions and finishes that appears in any Rottler literature or that is expressed by anyone representing Rottler is to be regarded as general information to help with the demonstration of or for operator training of Rottler equipment.

Limited Warranty

Rottler Manufacturing Company Model VR12 parts and equipment is warranted as to materials and workmanship. This limited warranty remains in effect for one year from the date of installation or two years from the date of the original shipment from Rottler or whichever date occurs first. This only applies if the machine is owned and operated by the original purchaser and is operated and maintained as per the instructions in the manual. A machine is warranted only if the Installation Report has been properly executed by a certified installation person and received by Rottler at the time of actual installation.

The products are warranted upon delivery to conform to their published specifications and to be free from defects in material and workmanship under normal use for a period of one year from shipment. Should a product not be as warranted, Rottler sole obligation shall be, at its option, to repair, correct or replace the product or to refund the amounts paid for the Product upon its return to a location designated by Rottler. No warranty shall extend to rapid wear Products (including tooling) or to Products which have been subject to misuse (including any use contrary to Rottler instructions), neglect, accident (including during shipment), improper handling or installation, or subject to any modification, repair or service not certified by Rottler. Rottler shall not be liable for any consequential, direct or indirect damages or for any other injury or loss. Buyer waives any right, beyond the foregoing warranty, to make a claim against Rottler. No warranty is provided for any Products not paid in full.

Merchandise cannot be returned to Rottler without prior approval. Customer must contact the Parts Department to get approval and to be issued a Return Goods Authorization number (**RGR#**). Merchandise authorized for return must be returned prepaid. If merchandise is returned with shipping charges collect, the actual amount of these charges may be deducted from any credit which may be due the customer. The **RGR #** assigned by the Parts Department should be written on the shipping label and must appear on a copy of the invoice(s) covering the original shipment. This invoice copy must be included in the box with the parts. Shipment must contain **ONLY** those items on the **RGR** as approved for return. Merchandise must be received within 10 days of the date of **RGR** or the **RGR** will be canceled. All returned merchandise may be subject to a 20% restocking fee on under \$1,000.00 amount or 10% on any items over \$1,000.00. Parts or tooling over 30 days old are considered as customer property and can only be returned with prior approval from Rottler Corporation Management.

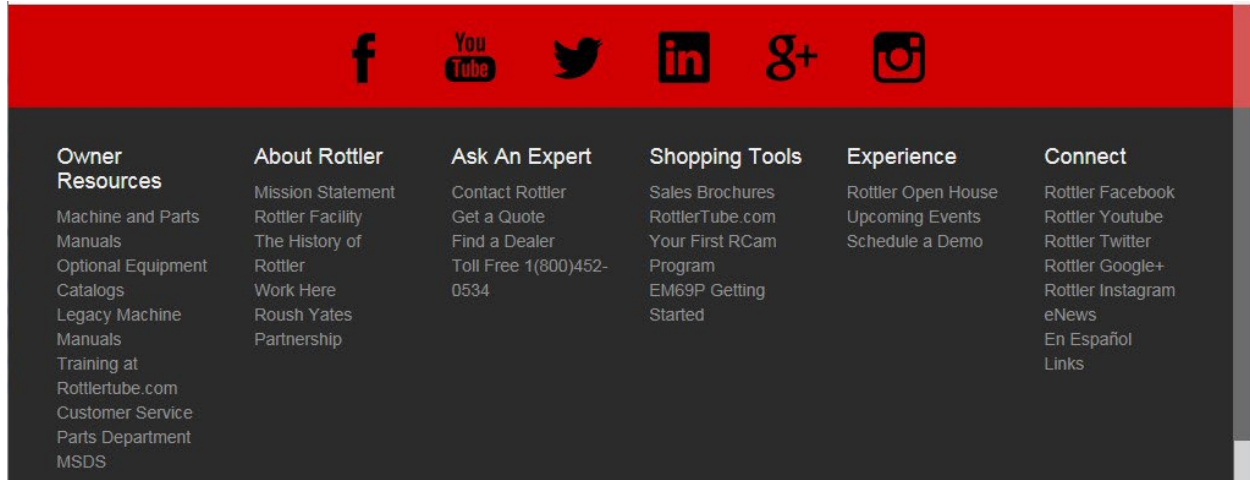
The issuance of a **RGR DOES NOT** guarantee credit - it is only authorization for the return of the goods. Credit for return merchandise is at the sole discretion of Rottler. Credit will be issued only after inspection of returned goods.

Tools proven to be defective within the warranty period will be repaired or replaced at the factory's option. We accept no responsibility for defects caused by external damage, wear, abuse, or misuse, nor do we accept any obligation to provide compensation for direct or indirect costs in connection with cases covered by the warranty.

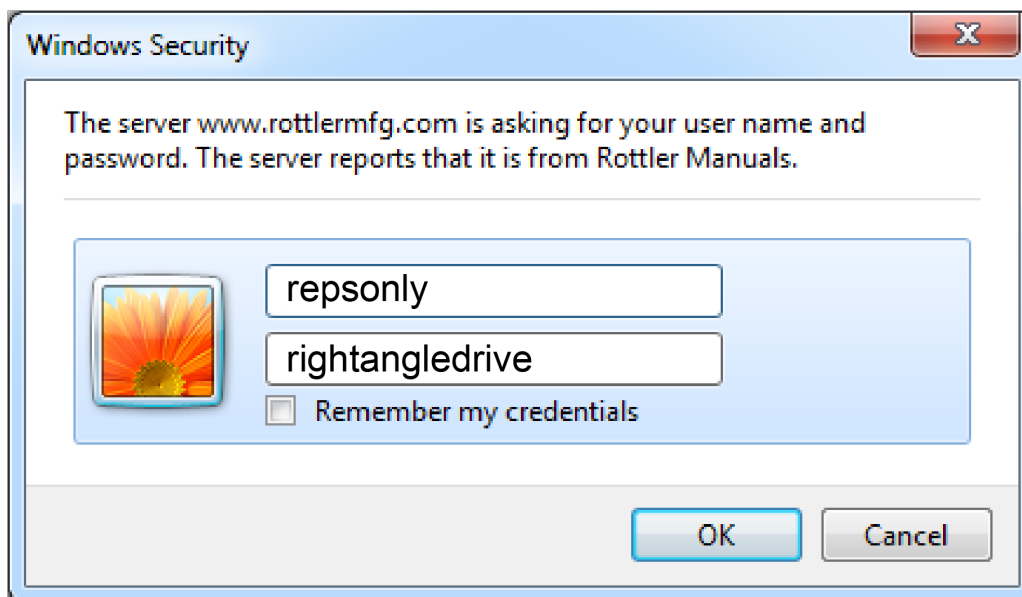
Online Documentation Access

Online documentation for machines and optional equipment can be accessed at the Rottler website. To access documentation open your browser and navigate to <https://www.rottlermfg.com>.

Scroll to the bottom of the page and under the Owner Resources title click the type of documentation you want to access.



If a log in window pops up asking for user name and password fill in the blanks as shown.



INSTALLATION

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ATTENTION OWNER/BUSINESS MANAGER

To validate the warranty on your new Rottler machine, please be sure to sign the installation report after the installation technician has installed the machine and verified the machine is operating correctly and given the operators operation and maintenance training.

Thank you for your cooperation and the opportunity to be of service to you.

ROTTLER MANUFACTURING**INSTALLATION REPORT**

VR12

REV 010924

OFFICE USE ONLY

Route to:

Orders Notified _____ Eng Mgr _____ Svc Mgr _____ Assem Mgr _____ Andy _____ Svc Filing _____

Warranty Exp Date _____

**ROTTLER MANUFACTURING MUST HAVE THIS REPORT RETURNED
TO PROPERLY QUALIFY WARRANTY ON EQUIPMENT**

Customer: _____ Address: _____

City: _____ State: _____ Zip: _____ Phone: _____

Country: _____

Machine Model: _____ Serial Number: _____ Representative: _____

MACHINE INSTALLATION: Electrical information MUST be complete to validate this report.

Customer is responsible for providing electricity to machine in a manner that meets the local electrical code requirements.

_____ Check machine with precision level and for equal support on feet.

_____ For 110V machines plug power cord supplied with machine into suitable 110V AC 20A outlet.

_____ For 220V version this machine requires 208 to 240V AC 1-phase, 50/60HZ power supply (measured between L1 and L2). Current requirement is 10 amps. When using two legs of a three-phase supply, the voltage from each leg to ground must be between 100-120V AC. Measure the voltages of the power supply twice during installation (1) _____ VAC (2) _____ VAC.

_____ For 220V version measure each leg of the incoming supply to ground. When using a one leg and neutral of a 380 VAC three phase supply L1 should measure 240 VAC and Neutral should measure almost 0 VAC.

L1 to ground _____ VAC L2 to ground _____ VAC.

Make sure all electrical equipment has the proper overload protection. The VR12 should have a stable power supply to prevent damage and uncontrolled movement of the machine.



Neutral and machine ground are not the same thing. You should measure an open circuit between Neutral and ground.



IF VOLTAGE IS OUTSIDE THE CORRECT RANGE AT ANY TIME THE MACHINE WILL NOT OPERATE PROPERLY AND MAY BE DAMAGED.

_____ **BEFORE** turning power on to the machine. Check all wires for security by using the correct screw driver and turning CW until movement stops. Stranded wire can “spread” slightly from vibration during transport.

- _____ Air of the proper pressure and capacity connected to the machine below 70 to 90 PSI Air supply must be free from oil and water. Oil or water will damage electrical and air components. Air pressure should never drop below 70 PSI at any time. Failure to provide adequate air supply may cause improper clamping.
- _____ Remove back cover from the Control Panel and recheck/Inspect all wire connections with a screwdriver for security, Stranded wire used in these machines can spread and loosen a connection when shipping.
- _____ Remove the shipping bolts and brackets.
- _____ Clean any rust inhibitor from the machine surfaces.
- _____ Confirm that coolant pump is wired and plumbed. See Installation section of manual for detailed instructions if needed.
- _____ Have the operator read through the operation manual before training begins. This will help him be familiar with the button pushing sequences. Have the operator read through the manual again after training and some of the sequences will make more sense.

MACHINE START-UP



When starting the machine for the first time, it may move out of control. Make sure all hands are clear of machine parts. Be ready to press the Emergency Stop button if needed.

- _____ Turn main power on from the main incoming breaker box.

MACHINE MOVEMENTS

- _____ Before mounting the grinding wheel, be sure that the machine is not powered and the emergency stop is pushed in.
- _____ Always check that it is not damaged does not show any shock or damage mark.
- _____ Start the spindle and verify grinding wheel operation.

INSTRUCTING THE OPERATOR

Note: Rotter employees and representatives per company policy are not permitted to provide end user of Rottler equipment with any OEM specifications for the workpiece that is created by end user using Rottler equipment.

- _____ Using the operating manual as a guide explain the function of all buttons.
- _____ Cycle all machine movements and supervise the handling of same by operator.
- _____ Fully explain the operation of the machine on seat angle face and stem ends.
- _____ Point out safety features to customer and operator. Do not push any buttons without thinking of safety first.
- _____ Check cooling pump and cooling tank for proper operation.
- _____ Explain the importance of using only Rottler grinding oil. ***Use of non approved grinding oil will void the warranty.***
- _____ The following is a checklist to go through every time the machine is started to begin machining a seat. Work piece secure Grinding wheel RPM set Valve Rotation RPM set _____ Proceed to have operator to machine a valve under you control.
- _____ Parts ordering, refer the to the operating manual for part numbers and description.
- _____ Review Emergency stop procedure and with operator per operating manual.
- _____ Explain the importance of ball chuck maintenance per instructions in manual.

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Note: Rotter employees and representatives per company policy are not permitted to provide end user of Rottler equipment with any OEM specifications for the workpiece that is created by end user using Rottler equipment.

General remarks on machine performance, adjustments as received and any further organization or parts required to complete the installation.

Instructions given to: _____

Sales/Service Technician: _____ Date _____

Shop Foreman/Superintendent or Owner: _____ Date _____

Once completed e-mail this form to:

service@rottlermfg.com

Installation Procedure

Unpacking and Lifting

Use care when removing the crate materials from the machine. Be careful not to use force on any part of the machine.

Remove the shipping screws (4) from the skid; the shipping brackets will be painted red and lifting bracket on yellow for easy identification. These screws are located at the four bottom corners of the Main Base.

The machine can be lifted by ropes once duly secured by.



THIS MACHINE IS TOP-HEAVY. Use care when lifting and moving

Machine

Location

For a suitable working level, suggest to rise the machine up to some 650 mm.

Avoid an excessive smoothness of the floor to prevent any sliding of the operator.

1. Place the machine in its pre-determined location and carefully remove crating.
2. Remove all the shipping brackets painted red, clean the rust preventative with a clean cloth, and approved solvent.





Air Supply



It is very important the air source for the VR12 machine be moisture free.

Water and oil in the line will result in early cylinder and valve failure. The factory recommends installing a water trap at the machine.

Attach 100 lbs. air source to machine and set regulator to 60 PSI.

Power Supply

This machine has the following power requirements:

- 110 to 120 or 208 to 240 VAC

- Single Phase Power
- 50 or 60 Hz
- 20 Amps for 115 VAC or 140 Amps for 220 VAC

See illustration below for correct connection of incoming power. Measured power at the machine's main breaker must be within the required range listed above. If incoming power is not within range, a transformer must be used. Failure to do so will cause the machine to function abnormally and cause permanent damage to the electronic control system.

Some electrical services contain a "Hot Leg, High Leg, or Wild Leg", where single phase is derived from a three phase connection and one leg measures 208VAC to Ground instead of 120VAC. It is not permitted to use the "Hot Leg" for providing power to this machine. Voltage measured between the phases must be between 208VAC and 240VAC, while each phase to ground must be ~120VAC.

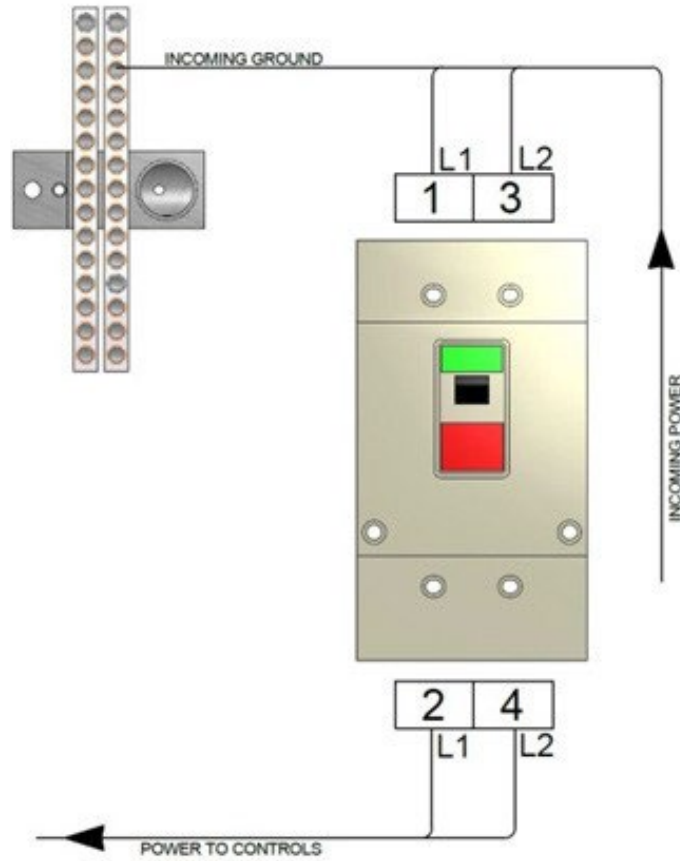
IMPORTANT

Electrically connect in accordance with national and local electrical codes.

CAUTION

Do not attempt to connect more 240VAC to this machine.

Do not attempt to connect to Three Phase Power.



Grounding

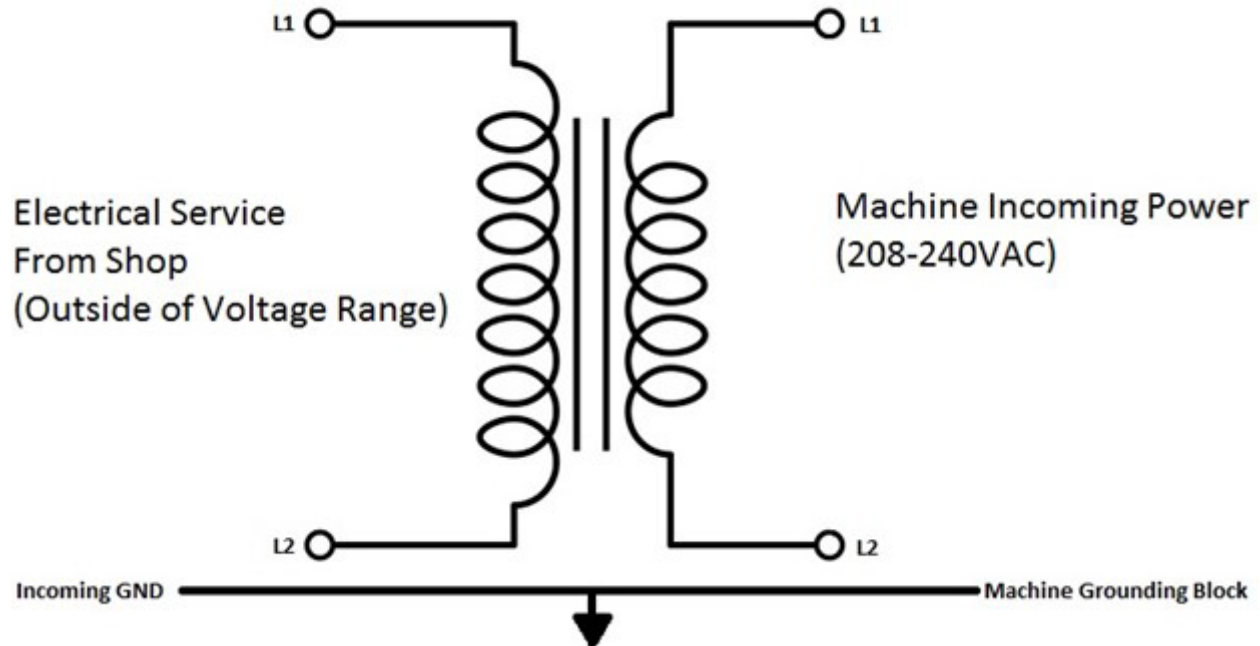
The machine requires a good earth ground. The grounding conductor from the incoming power source must be connected to the grounding block located inside of the electrical cabinet. A ground rod installed in addition to the electrical service grounding conductor is permitted, but must be connected directly to the grounding block inside of the electrical cabinet. Connecting the ground rod to the machine base is not permitted. Consult a Licensed Electrician in your area to assess the installation, and install the appropriate ground rod if necessary. Failure to do so may lead to an installation that is unsafe and does not meet national and local electric codes.

Transformer Connections

This machine has the following minimum transformer size requirement:

- 10 kVA

If a transformer is necessary for machine installation, please refer to the diagram below for connection information. Transformers must be sized to meet the minimum power requirements listed above. Consult a Licensed Electrician in your area for transformer selection and installation.



Adding Grinding Oil

Add grinding oil that was shipped with the machine by pouring oil into drainage area.

IMPORTANT

**USE ONLY ROTTLER APPROVED GRINDING OIL
ROTTLER GRINDING OIL OR CASTROL HONILO 710
ARE THE ONLY APPROVED GRINDING OILS
USE OF NON APPROVED OIL WILL VOID WARRANTY**