WARNING: Any electrical service must be installed and maintained by a qualified electrician. Must conform to all national and local codes. Use a properly sized wire for the distance and current draw for your specific unit. Circuit protection may be required and should be sized according to the unit ratings.

WARNING: National/Local electrical codes may require livestock waterers with electric heat, installed in feedlots in open feeding area to be earthed by a separate stranded copper earthing conductor or at least no.6 AWG terminating at a point where the branch circuit receives its supply. Check with local authorities.

WARNING: This installation must be made and maintained in strict conformity with National/ Local plumbing codes and National/Local electrical codes (CSA in Canada). The applicable provisions of these codes take precedent. Failure to make and maintain all installations properly may result in loss of livestock, personal Injury, or death.

CAUTION: This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge **if** they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children being supervised not to play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

CAUTION: Disconnect power if the water supply is to be shut off for an extended amount of time. Failure to turn off power can result in damage to the watering fountain.

CAUTION: For cord connected units, connection must be made only to a properly earthed circuit protected by a Residual Current Device (RCD).

CAUTION: Assure that there is water in the trough before turning on power to the heating system and immersion heater as applicable. Running this unit or immersion heater without water in the trough could cause damage to some components.

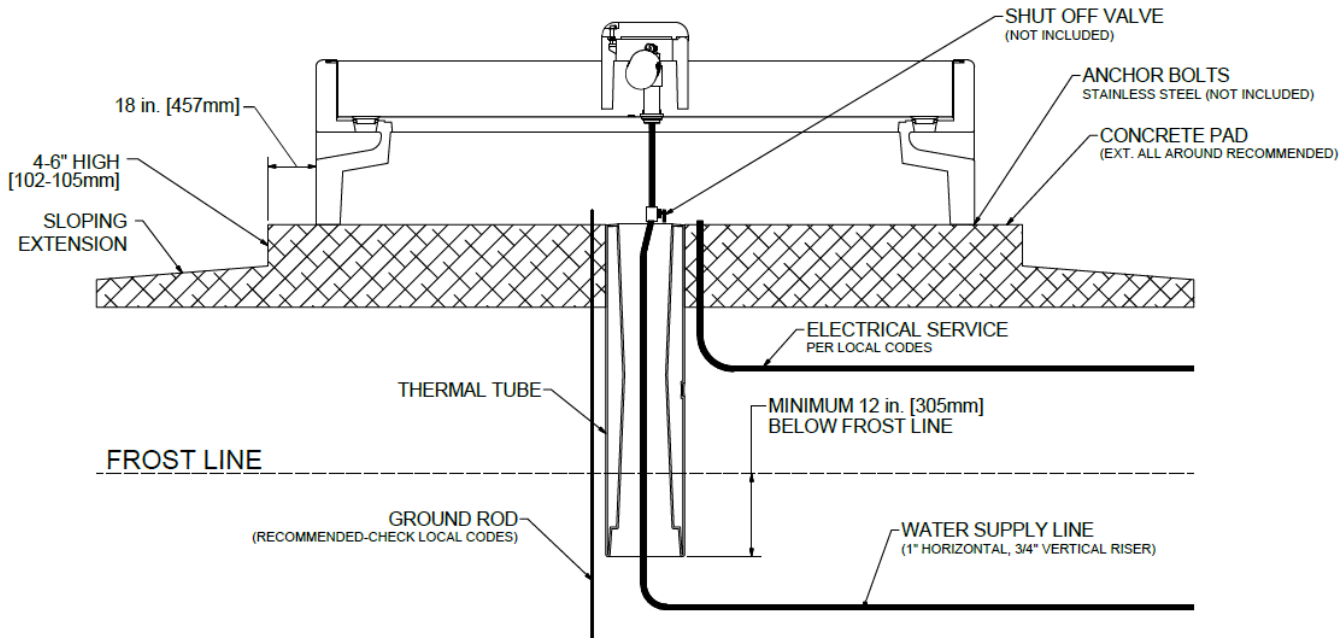
CAUTION: When using the immersion heater for supplemental heat, assure that heater will be completely below the water surface.

CAUTION: Maximum water supply pressure should not exceed hose rating of 200 psi (13.8 Bar). Use of a pressure reducer may be required for extreme pressures.

CAUTION: Access panel can only be removed by service personnel or similarly qualified person.

NOTE: *A means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.*

OmniMaster Fountains
Installation Instructions



A. Location - Putting the fountain in a location that offers protection from the wind will enhance the performance of the fountain. Livestock will tend to gather in this protected area, enticing them to drink more. Access panel should be opposite of prevailing winter wind to give additional protection to the supply line.

B. Water Supply Line - Horizontal underground water line should be sized to account for pressure drop, relating to distance, and placed 1 ft [305 mm] below frost line. A one-inch vertical supply pipe is recommended. A shut-off valve should be installed under fountain to allow for easier servicing. For optimum serviceability, a stop and waste valve can be installed below frost level to drain water when unit is not in use. Vertical supply line must be centered in riser tube to provide an air space between the line and frozen ground outside of tube. Flush water supply line thoroughly before connection to fountain. Water supplies with foreign material such as sand, rust, etc. may require a filter to keep fountain valve working properly.

C. Electric Supply – It is generally most cost effective to run your electrical supply line at the same time you are trenching for your water supply.

Item No.	Description	Watts	Amps
18920	OmniMaster 4 120V	548W	4.57A@120V
18860	OmniMaster 8 120V	1048W	8.7A@120V
18940	OmniMaster 12 120V	1298W	10.8A@120V

Item No.	Description	Watts	Amps
18921	OmniMaster 4 240V	609W	2.65A@240V
18861	OmniMaster 8 240V	895W	3.88A@240V
18941	OmniMaster 12 240V	895W	3.88A@240V

D. Riser Tube - Install a riser tube and extend it at least 1 ft. [305 mm] below frost line or down to horizontal underground water line. For optimum water line protection, use the 12 in. [305 mm] diameter insulated *Ritchie Thermal Tube*, part numbers and sizes are shown to the right. Tube opening must be kept clear.

Ritchie Thermal Tube	
Part #	Description
18158	1' Top Section
16612	4' Top Section
16416	2' Extension

NOTE: *The supply line touching the riser tube is the most common cause of the supply line freezing. Do not surround the supply line with insulation, wood, or other foreign material. Any foreign material in the tube may cause frost to migrate to the supply line causing it to freeze.*

E. Mounting Platform - A concrete platform must be provided for all fountains. Use a minimum of 4 in. [102 mm] thick and large enough to accommodate fountain. An additional 4-6 in. [102-105 mm] step extending 18 in. [457 mm] out from each side of the unit. This will protect the unit from manure handling equipment, as well as discouraging animals from defecating in the fountain. Extending the platform provides animals a place to stand while drinking, consider the size of your animals when determining the dimensions of your platform. The concrete step and platform should slope away from the fountain for drainage. A rough broom finish to concrete surface provides better footing for livestock.

F. Head/Neck Rail – Ritchie recommends the use and installation of a head/neck rail with the Watermaster family of products. This prevents animal injury and protects your waterer from potential animal damage to the waterer. Improper installation may void your warranty.

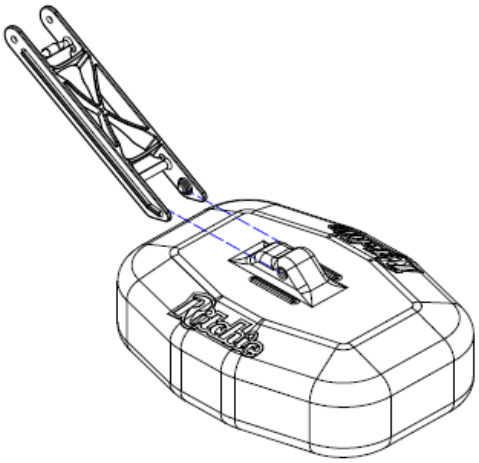
G. Hose Connection - Connect hose fitting to shut-off valve at top of concrete. Slip on barb fitting with furnished clamps. Hose should not touch insulation or outside surface of fountain. Place the hose under the fountain as you move the unit in place over the riser tube.

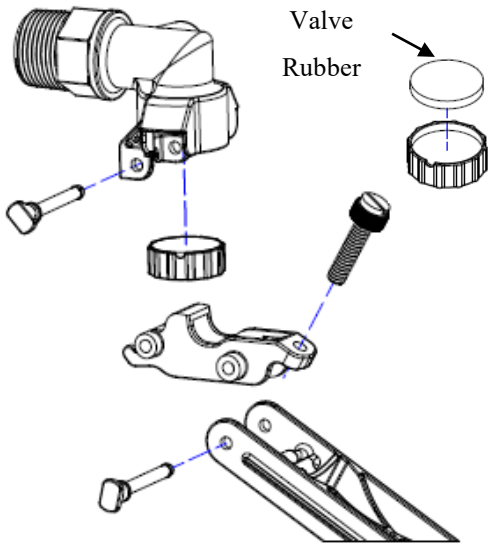
H. Preparing the bottom - Apply the provided foam weather stripping to the bottom of the unit, along the outside edge of the fountain.

I. Anchoring Fountain – Ritchie Fountains have mounting pockets molded into the base. The use of 3/8" x 5" stainless steel expansion anchor bolts (not included) is recommended. Anchor bolts are available from Ritchie in a two pack, part #16555. Large diameter fender washers are included and should be used with anchor bolt to prevent damage to the plastic casing. Remove the side access panel to prepare for the remainder of the installation process.

J. Valve Assembly – The valve assembly can be put together before proceeding.

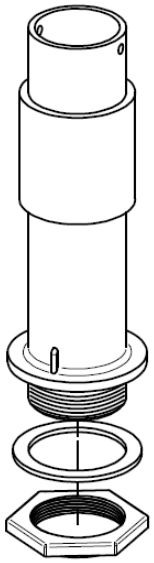
1. Insert valve rubber into the valve rubber retainer.
2. Attach float arm to float as shown in diagram. The raised emboss on top of float should be orientated as shown.
3. Screw thumb screw into cam arm. To adjust water level, tighten thumb screw to lower, loosen thumb screw to raise.
4. Insert the valve rubber retainer into the valve body with the valve rubber up. Align the cam arm to the valve body and insert first pin.
5. Align the float arm and attached float to the cam arm and insert second pin.



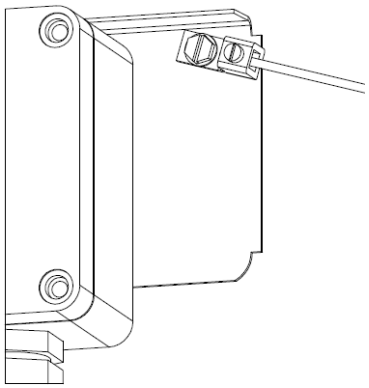


K. Standpipe installation –

1. Install standpipe into hole in trough. Rubber washer is to be on inside of trough. Tighten nut hand tight to allow for adjustment after valve assembly is installed.
2. Feed supply hose up through standpipe and attach to valve bracket. The hose may be shortened if necessary. Tighten the hose clamp securely to prevent leaks.
3. The lower front peg on valve bracket should be inserted into hole on standpipe first. Compress valve clip to snap in opposite hole on standpipe.
4. Rotate standpipe in trough until center of float aligns with center of trough. DO NOT allow float to be too close to frame when installed as this may hamper valve performance.
5. Tighten standpipe nut hand tight plus one-quarter turn. DO NOT use joint compound for this fitting.



L. Electrical Connections – Power supply wires should be run into the junction box provided with the units. Use of the strain relief provided will provide sealing and strain relief for incoming wires. This prevents moisture from entering the wire connections. If the incoming wire/cable size is not sized for the provided cord grip, a different adapter may be required.



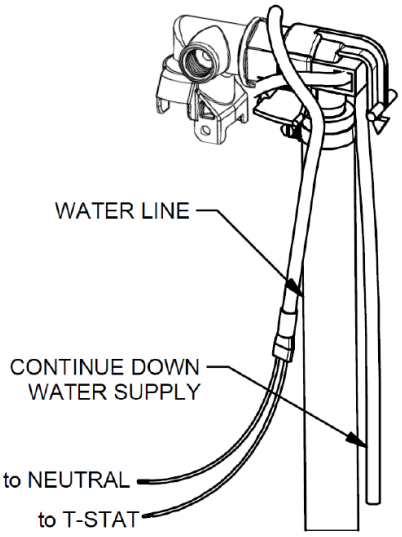
FOR CE INSTALLATIONS ONLY – Power supply wires must be run in a conduit that is attached to the supplied junction box. Additional fittings will be required.

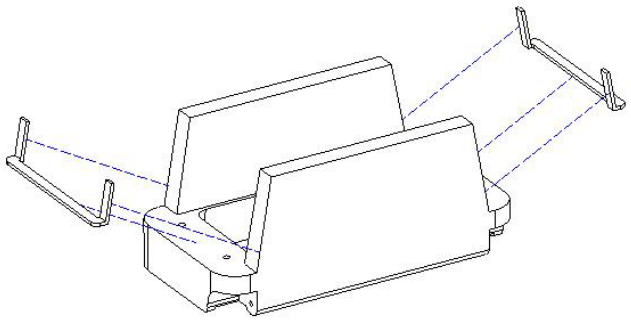
M. Ground Connection – Attach local ground rod with bare copper wire to the ground lug provided near the junction box. Localized grounding will minimize the risk of stray voltage and may be required by your local electrical code.

1. Loosen screw on lug
2. Place bare ground wire from ground rod under screw.
3. Firmly tighten screw to secure wire.

N. Cable Heater – Uncoil cable heater and loop around the valve. Attach the remaining part of the cable heater to the water supply, as far down the riser tube as possible with the cable twist ties provided. This heater is water tight, but should not be immersed in water. Heater may cross over itself but should not be tightened at those locations.

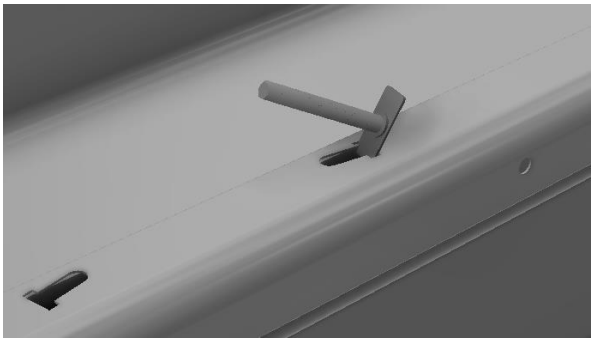
CAUTION: Installation must not cause any strain on heater wiring connections. Avoid heater damage caused by hot spots due to its leads lying too close to each other. Also, do not wrap additional insulation around heater.

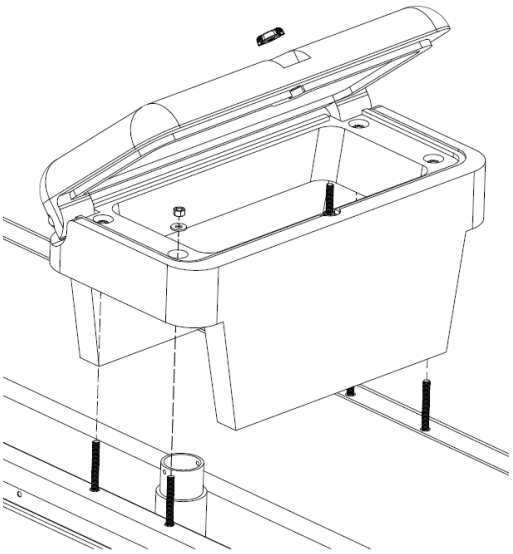


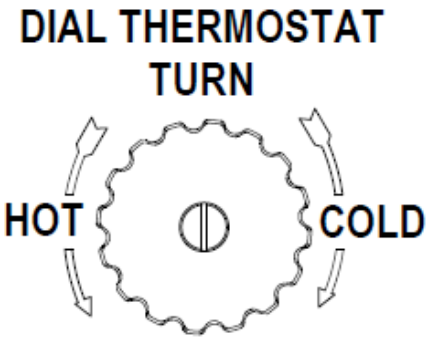


O. Valve Frame and Cover – Before installing the valve chamber frame, the weather seal must be installed on the frame (right). The seal is installed by removing the paper backing from the adhesive side and then starting at the midpoint of the frame leg; attach the seal to the frame. Work your way around the frame with the seal as close to the inside edge as possible and then up the other leg to the halfway point. At this time cut any extra foam seal as needed then repeat for other side.

P. Attach Frame - The frame can then be attached to the casing and trough using the T-bolts and nuts provided in parts bag. The T-Bolts slide into the four T-shaped holes (shown below) located near the center of each trough railing. Twisting the base of the T-bolt, once inserted, helps the bolt sit upright while installing the frame. A washer should be used on the head of the screw as well as under the nut. Tighten securely.







Q. Fenwal Thermostat – The adjustable range is from 0 deg F (-18 deg C) to 100 deg F (38 deg C). Thermostat is not preset at factory. Fill the trough to proper water level. Check the water temperature with a thermometer. The next morning, check the water temperature again. If the water is warmer than desired, turn the thermostat down. If there is ice forming on the surface of the water, turn the thermostat up. Only slight adjustments should be made to the thermostat at any time. A 1/16 turn on the thermostat will change the water temp. 7 deg F (4 deg C). 44 deg F (7 deg C) in the trough represents the most economical operation. Counterclockwise raises the thermostat setting.

R. Seal the Base - After the unit is completely installed, apply a bead of caulking around the base of the fountain to ensure no wind enters through the base of the unit.

NOTE: *Sealing the bottom of the unit from cold air is an important aspect of the unit's thermal performance.*

S. Drain Plug – Insert the pre-assembled drain plugs firmly into the drain holes from inside the trough at each end. Wetting the plug can aid in installation.

T. Float Adjustment – Turn on water supply, check for and correct any leaks. Adjust valve thumb screw to adjust water level. To lower the water level, manually adjust float with hand and then set thumb screw. The proper depth should be 1-2 in. [25-51 mm] below the top of the trough.

U. Install Side Access Panel and Close Lid– Once all water line connections have been checked for leaks and electrical hook-up is complete, the side access door may be installed. After valve is checked to make sure it is functioning properly and the water level is set to the proper height, you may close and lock down the lid. Note: Serial number or date code is found on underneath side of top red valve cover.

V. Cleaning Your Fountain – To clean your watering fountain you will need a good stiff bristled brush. Open the hinged cover and brush the inside of the valve chamber to remove any build-up then brush the rest of fountain. Remove drain plugs to drain out the water and debris. You can shut off the water with the shut-off valve located under the unit or by holding the float in the up position. After the water and debris has drained reinstall the plugs and let the tank refill. Now is a good time to readjust the float if needed. Reinstall cover and you are done.

W. Maintenance – Regular maintenance is required for optimal performance. The valve rubber in your valve can be removed and either flipped for a new seal surface or replaced to prevent dripping. Higher pressure will require more frequent replacements. Remove any mineral build up on the valve components to allow for free movement of the valve. Heaters, cable heaters and thermostats should be checked for functionality prior to cold weather. Remove any debris accumulation in the riser tube. Sealant around the base should be checked for cracking and replaced as needed to prevent air permeation.

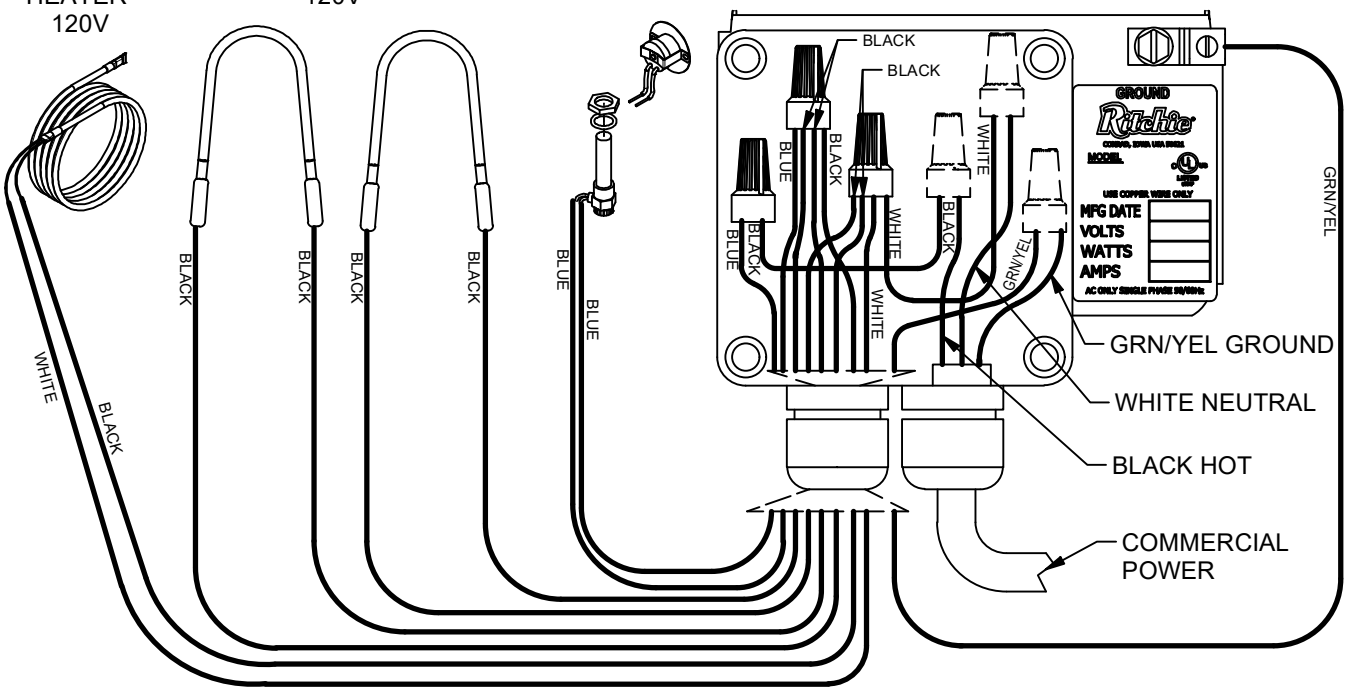
Ritchie Valves

The Ritchie OmniMaster family comes standard with our 3/4" yellow high-pressure valve that is rated up to 110 psi [758 Kpa]. If water pressure is very high and valve does not shut off consistently, a pressure-reducing valve (Ritchie # 18649) may be needed.

WIRING DIAGRAM FOR HEATED UNITS

120V UNITS - SINGLE PHASE

(3) WIRE CONNECTORS FIELD SUPPLIED

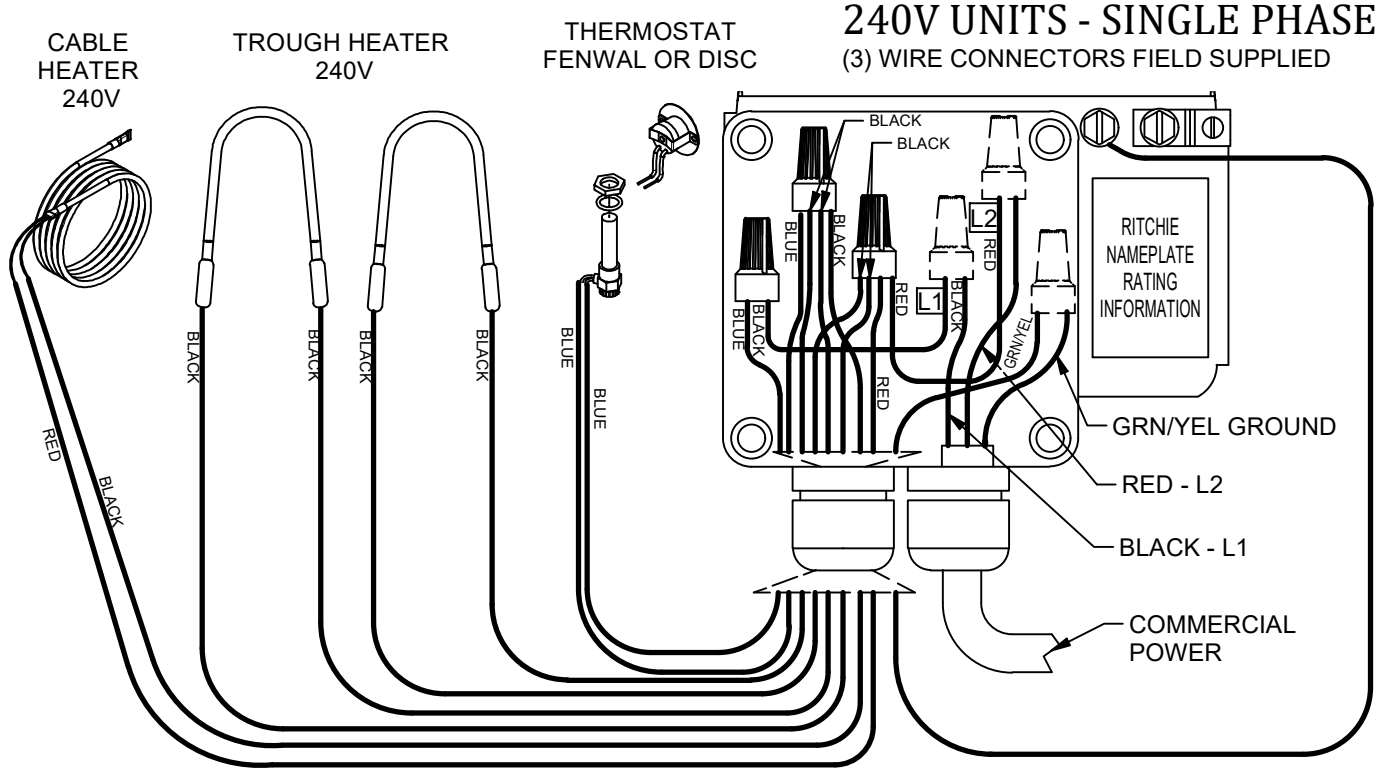


WARNING - CHECK NAMEPLATE FOR CORRECT VOLTAGE. ONLY CONNECT 120VAC TO 120V UNITS. WIRING DIAGRAM SHOWN WITH 2 HEATERS - QUANTITY MAY VARY

NOTE: Power cord may be supplied on select units to simplify installation. Use of a moisture resistant, exterior grade outlet is recommended in these units. Do not use extension cords.

240V UNITS - SINGLE PHASE

(3) WIRE CONNECTORS FIELD SUPPLIED



WARNING - CHECK NAMEPLATE FOR CORRECT VOLTAGE. ONLY CONNECT 230-240VAC TO 240V UNITS. WIRING DIAGRAM SHOWN WITH 2 HEATERS - QUANTITY MAY VARY

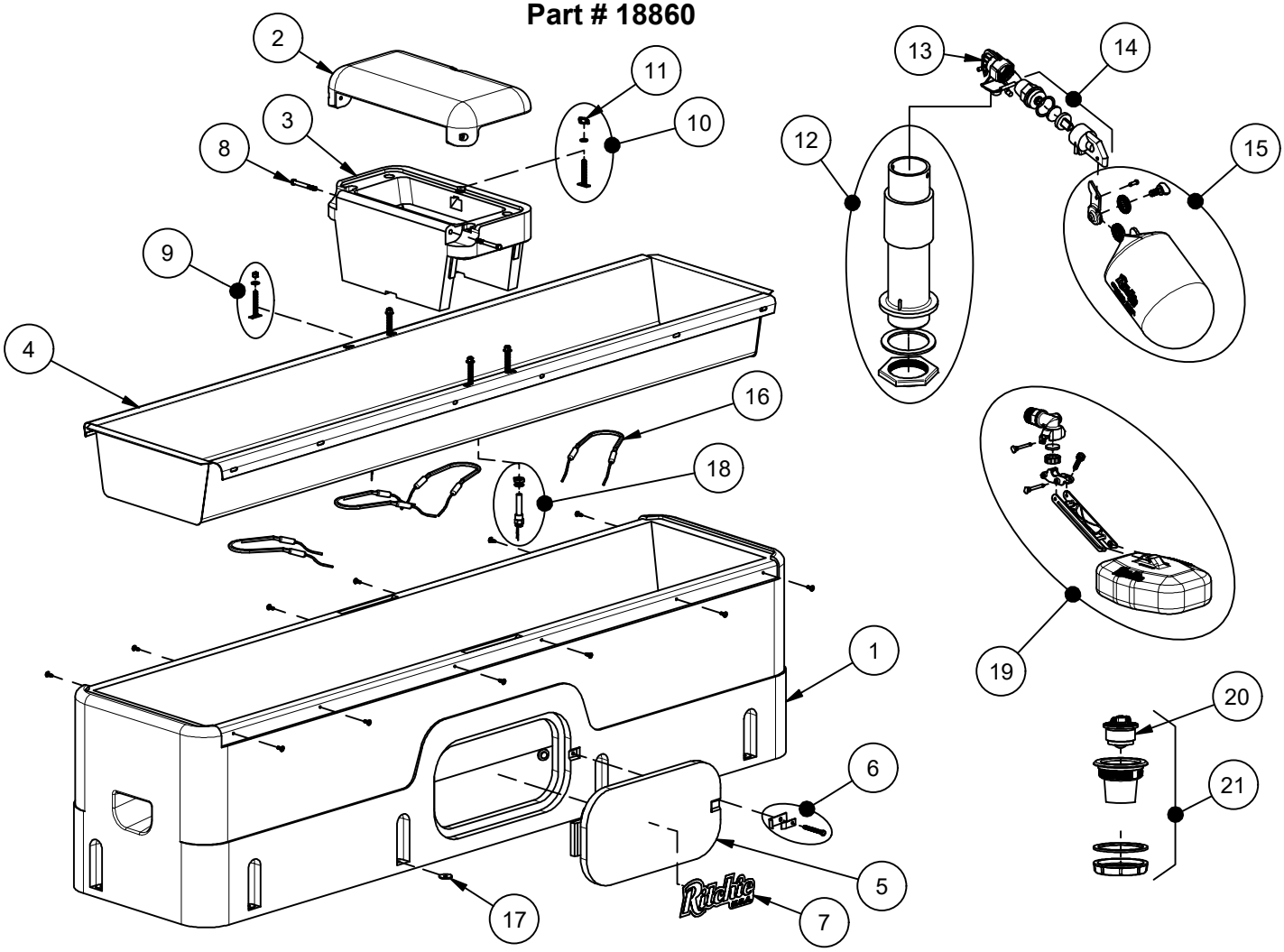
2/3/2025
Wiring-2025.dwg
TDU - Sheet: 1 of 1

Trouble Shooting

Problem	Solution
Water in Trough Too Warm	Adjust thermostat to lower temperature
	Check to see if thermostat has failed by contacts burning closed
Ice in Trough	Check fuses or circuit breakers
	Check all heating elements to make sure they are working and hot
	Adjust thermostat to higher temperature
	Check for voltage from thermostat output
	Check voltage to fountain with and without electrical load
	Check that heaters are wired properly
Valve Freezing	Check that cable heater is installed properly and fastened to water supply line and is working when heaters are hot
	Check for missing or damaged insulation
	Check for air gaps for wind penetrations
Supply line Freezing	Check that the cable heater is uncoiled and fastened around valve, to supply line and is working when heaters are hot
	Check that supply piping is centered in riser tube
	Check that riser tube is free of water and mud that may freeze
	Check that flexible hose does not touch side of casing or frame
	Check casing for air leaks
	Check for air gaps between casing and concrete floor
Valve won't stop dripping	Check float adjustment. Check for waterlogged float, or float rubbing on side of valve compartment
	Check for excessive system water pressure
	Disassemble valve and check for sand or scale in valve rubber. Also check valve orifice outlet for wear and damage. A screen or filter may be required with sandy or scaly water
	Turn valve rubber over and re-assemble
Low water flow	Check that valve inlet is not plugged or supply hose is not kinked
	Check system pressure from supply hose by installing a tee and a pressure gauge directly in front of the valve to check pressure drop when valve is open. A severe pressure drop indicates a restriction or undersized supply system.
	Check that shutoff valves are fully open

OmniMaster 8

Part # 18860



Item	Part #	Description	Qty	·	·	Item	Part #	Description	Qty
1	18851	OM 8 Casing	1			18	16534	Fenwal Thermostat SS pkg	1 pkg
2	18871	OM 8 Cover	1				18320	O-Ring Fenwal (6/pkg)	1 pkg
3	18868	OM 8 Frame	1				18074	Nut Brass Fenwal (6/pkg)	1 pkg
4	18872	OM 8 Trough Complete	1			19	18832	HP 3/4" Valve Assembly	1 pkg
5	16562	Access Panel 10" x 20"	1			20	18849	Ritchie 2" Plug Package	1 pkg
6	18147	Access Panel Hardware Pkg	1			21	18904	OM Drain Assembly w/Plug	1 pkg
7	18653	Ritchie Decal 12" (1/pkg)	1 pkg			NS	18470	Drain Plug Ritchie 3" (Pre-2023)	2
8	18452	Bolt 3/8" x 3" SS (2/pkg)	1 pkg			NS	14866	Seal Foam 10' Roll	2
9	18854	OM 8 Frame Screws (4/pkg)	1 pkg			NS	15931	Hose Clamp SS (5/pkg)	1 pkg
10	18448	T-Bolt w/Wingnut 3/8" (2/pkg)	1 pkg			NS	18614	Adapter 3/4" x 5/8" HB	1 pkg
11	18451	Wing Nut 3/8" Nylon (4/pkg)	1 pkg			NS	18863	OM 8 Accessory pkg	1 pkg
12	18181	CM Standpipe Pkg	1 pkg			NS	13830	Cable Htr 120V 48W (1/pkg)	1 pkg
13	11514	Valve Bracket 3/4"	1 pkg						
14	15377	Green Male Valve 3/4" pkg	1 pkg				18861	OmniMaster 8 240V	
15	18314	Float with Hardware pkg	1 pkg			NS	11403	Heater 240V 300W (1/pkg)	3 pkgs
16	11419	Heater 120V 250W (1/pkg)	4 pkgs			NS	16424	Cable Htr 240V 48W (1/pkg)	1 pkg
17	18318	Bolt Down Washer (4/pkg)	2 pkgs						

RITCHIE INDUSTRIES, INC.

LIMITED WARRANTY

Ritchie Industries, Inc., hereinafter referred to as Ritchie Industries, gives a LIMITED WARRANTY for the period of time(s) stated herein, subject to certain limitations, on your new watering system against defects in material or workmanship when properly installed, set up, operated, and maintained in accordance with the instructions and recommendations set forth by Ritchie Industries, including in the Installation Instructions. **The warranty excludes labor and shipping charges.**

The warranty is transferable to the next purchaser of the watering system prior to expiration of the warranty period, but any such transfer will not extend the original warranty term. Proof of purchase must be submitted with any warranty claim, and all warranty claims shall be processed through an Authorized Ritchie Dealer or Distributor.

Ritchie Industries' liability for any defects in material or workmanship with respect to accepted goods shall be limited to repairing the goods or replacing them as Ritchie Industries shall elect. Parts used in warranty repairs will be warranted for the balance of the water system's warranty period, with all parts replaced under warranty becoming the property of Ritchie Industries.

The limited warranty periods begin upon delivery of the watering system to the original purchaser. Upon delivery of the goods, purchaser assumes all liability, including but not limited for all personal injury and property damage, resulting from the handling, possession, or use of the goods.

WARRANTY COVERAGE AND LIMITATIONS

Limitations of Warranties and Remedies

Ritchie Industries' watering systems are designed and manufactured to provide years of reliable use when installed and operated consistent with Ritchie Industries' instructions and recommendations. However, the potential for improper installation, modifications and misuse of the goods exists. Therefore, the limited warranty provided shall be as follows:

This limited warranty shall not apply to any appearance items and shall not apply to any product which has been subject to misuse, abuse, abnormal service or handling, negligence, or accident, nor to any product that is installed and/or used contrary to Ritchie Industries' installation instructions and instructions for use. The limited warranty shall also not apply to any product whose exterior has been damaged or otherwise defaced, that has been repaired, altered, or modified by anyone, other than Ritchie Industries, in a way so as in Ritchie Industries' judgment it adversely affects the product's operation, performance, durability, or intended use, nor to any product where removal of parts, modification(s) or use of parts or accessories not manufactured or approved by Ritchie Industries has caused damage.

Coverage and Warranty Periods

Unit Type	Coverage and Warranty Period
Poly Units	Base, top, and ball closures. Ten-year limited warranty: 100% for first five years, then declining 20% per year for remainder of the 10-year period.
Stainless Steel Units	Stainless trough and stainless valve chamber frame. Ten-year limited warranty, plus ten years of corrosion coverage, at 100% for entire 10-year period.
Component Parts	One-year limited warranty on all component parts, such as floats, valves, and heating elements.

Exclusions of Liability

EXCEPT AS OTHERWISE EXPRESSLY STATED HEREIN, RITCHIE INDUSTRIES MAKES NO OTHER WARRANTY OR REPRESENTATION OF ANY KIND, EXPRESSED OR IMPLIED. **THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED FROM THIS LIMITED WARRANTY**. TO THE EXTENT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. **THIS LIMITED WARRANTY EXCLUDES INCIDENTAL, CONSEQUENTIAL, AND SPECIAL DAMAGES. THIS EXCLUSION OF CONSEQUENTIAL, INCIDENTAL, AND SPECIAL DAMAGES IS INDEPENDENT FROM AND SHALL SURVIVE ANY FINDING THAT THE EXCLUSIVE REMEDY FAILED OF ITS ESSENTIAL PURPOSE.** THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON UNDER THIS WARRANTY. SOME STATES/PROVINCES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS, AND EXCLUSIONS IDENTIFIED ABOVE AND, AS A RESULT, THEY MAY NOT APPLY TO YOU.

No agent, employee or representative of Ritchie Industries, and no Ritchie Industries Dealer/Distributor, is authorized to bind Ritchie Industries to any representation or warranty regarding the goods except as specifically included in this limited warranty.

Part # 24210
February 3, 2025

Installation Instructions for

Ritchie®
Fresh Water For Life™

OmniMaster Series Fountains

Congratulations, you have just purchased the finest watering fountain on the market. This unit is built to give you excellent service when properly installed and maintained. Please follow instructions carefully. Read and understand all instructions before installing.

Ritchie Industries, Inc.
800-747-0222
www.ritchiefount.com
@RitchieWaterers

Alternate formats for this manual are available at: www.Ritchiefount.com