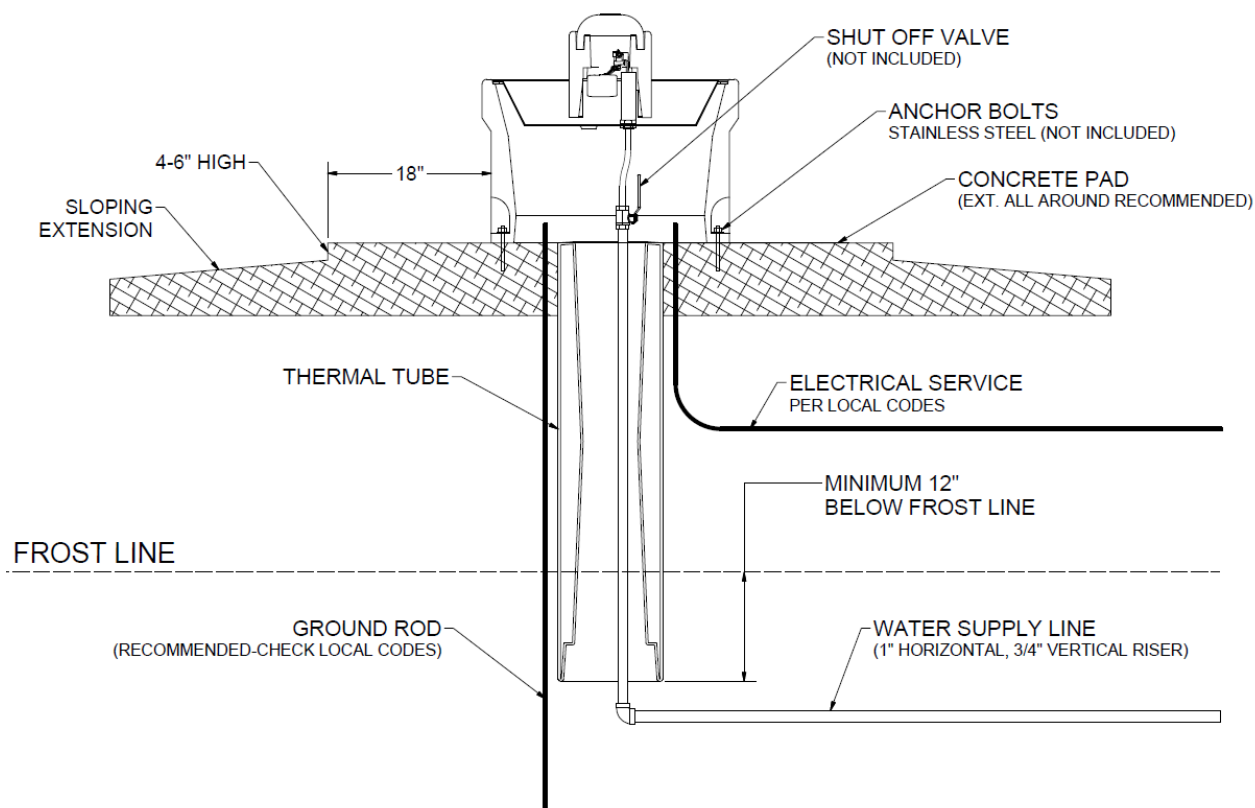


OmniFount 1, 2 and 2 SP

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 one foot 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
18359	Omni 1 120V	173W	1.4A@120V
16619	Omni 2 120V	298W	2.5A@120V
18680	Omni 2sp 120V	298W	2.5A@120V

Item No.	Description	Watts	Amps
18362	Omni 1 240V	248W	1A@240V
16844	Omni 2 240V	448W	1.9A@240V
18681	Omni 2sp 240V	448W	1.9A@240V

D. Riser Tube - Install a riser tube and extend it at least one foot below frost line or down to horizontal underground water line. For optimum water line protection, use the 12" 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.*

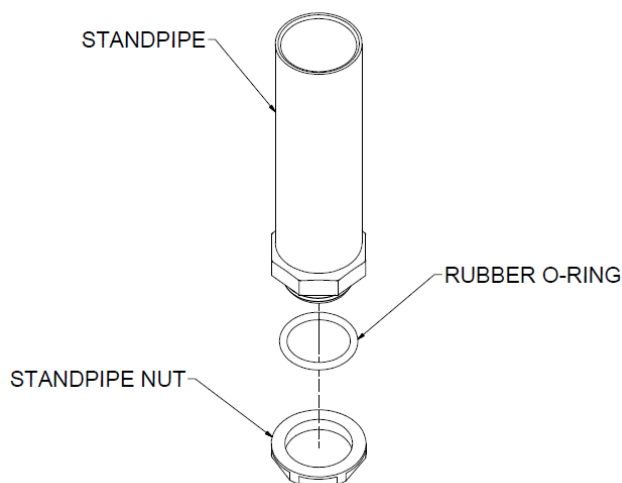
E. Mounting Platform - A concrete platform must be provided for all fountains. Use a minimum of 4" thick, (6" recommended thickness), large enough to accommodate fountain, and additional 4" step (on top of the platform) extending 18" out from each side of the unit. This will protect the unit from manure 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. 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.

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

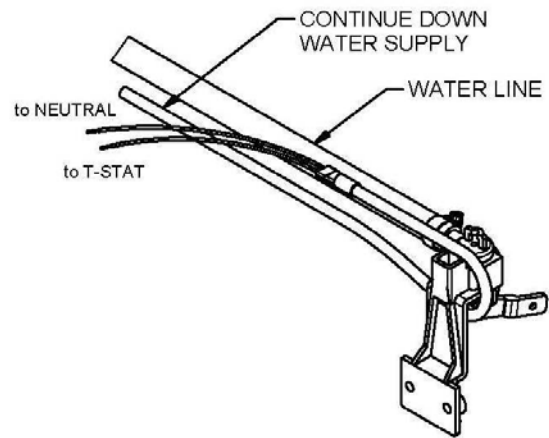
H. Anchoring Fountain – OmniFount 1 is provided with 3 hold-down pockets to anchor the unit securely to the concrete. The OmniFount 2 and OmniFount 2SP are provided with four hold-down pockets. The use of 3/8" x 5" stainless steel expansion anchor bolts (not included) is recommended. Anchor bolts are 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.

I. Assemble Standpipe– Install standpipe into hole in trough. Rubber O-ring is to be on inside of trough. Tighten nut hand tight to allow for adjustment after valve assembly is installed.



J. 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.



K. Electrical Connection - The electrical installation should be made and maintained by a qualified electrician conforming to national and local codes. A means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules. For wiring connections, see wiring diagram. Make connections according to the wiring diagram below.

WARNING: ANY ELECTRICAL SERVICE MUST BE INSTALLED AND MAINTAINED BY A QUALIFIED ELECTRICIAN.

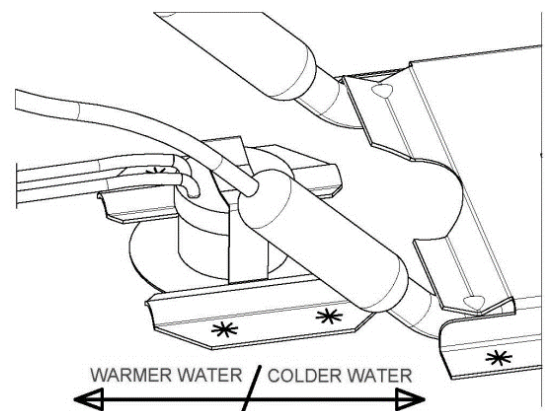
WARNING: DISCONNECT POWER IF THE WATER SUPPLY IS TO BE SHUT OFF FOR AN EXTENDED AMOUNT OF TIME. FAILURE TO TURN OFF POWER CAN RESULT IN DAMAGE TO THE WATERING FOUNTAIN.

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.

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

L. Disc Thermostat – The disc thermostat is mounted in a bracket under the trough, which allows it to be moved relative to the heater. To ease movement of thermostat, turn 1/4 turn. To lock in position after adjustment, turn 1/4 turn back. **As the thermostat is moved toward the heater, the water temperature in the trough is lowered.** The best location is determined by checking the trough temperature several times during the heating season.

M. Final Water Connection – Connect the top of the supplied hose to the valve, cut hose to proper length and slip onto the barb fitting of the valve assembly. Clamps and fittings are furnished to secure the connection.



N. 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.*

O. Drain Plug – Insert the drain plug firmly into the drain hole in the center of the trough.

P. Water Seal Drain – Install the small drain plug into the drain hole in the water seal groove around the valve chamber seal. This plug may be removed during the non-freezing periods to allow the water seal groove to drain.

Q. Float Adjustment – Open water-supply shut-off valve, check for and fix any leaks. Adjust float for a water depth of 2 inches below top of trough by adjusting the wing-nut. With the valve functioning properly and the water level set at the proper level, you may install the valve cover. The water seal groove between the frame and valve cover must be filled with liquid to create a protective seal from cold winter air getting to the valve.

R. Install Side Access Panel – Once all water line connections have been checked for leaks and electrical hook-up is complete, the side access door may be installed.

S. Children should be supervised to ensure that they do not play with the appliance – This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions concerning use of the appliance by a person responsible for their safety.

T. Cleaning Your Fountain – To clean your watering fountain you will need a good stiff bristled brush. Remove the cover then brush the water seal groove to remove any build-up then brush the tank. Remove the plug that is located in the valve chamber area under the float 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 plug and let the tank refill. Now is a good time to readjust the float if needed. Reinstall cover and you are done.

Ritchie Valves

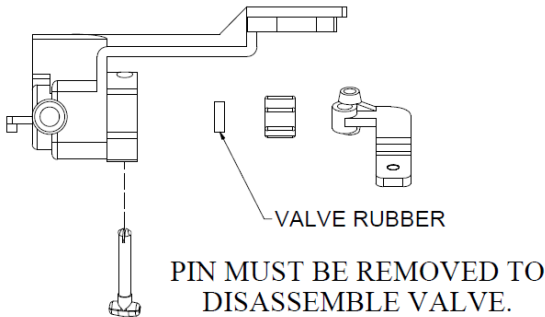
Ritchie valves come in various sizes and pressure ratings as shown below - green for high supply line pressure, red for moderate supply pressure, and white for low-pressure applications. Differences in the size of trough also impacts valve choice. Your individual situations may require a change from the standard valve supplied with your fountain, see your Ritchie Dealer if this is needed.

NOTE: *The red ½" valve is standard on the OmniFount 1, 2 & 2 SP*

1/2"	Part #	GPM	Pressure Range
White	12574	4.8	Low, 5-40 psi. (34-275 kPa)
Red	12575	3.4	Moderate, 40-60 psi. (275-414 kPa)
Green	13597	1.45	High, 60-80 psi. (414-552 kPa)

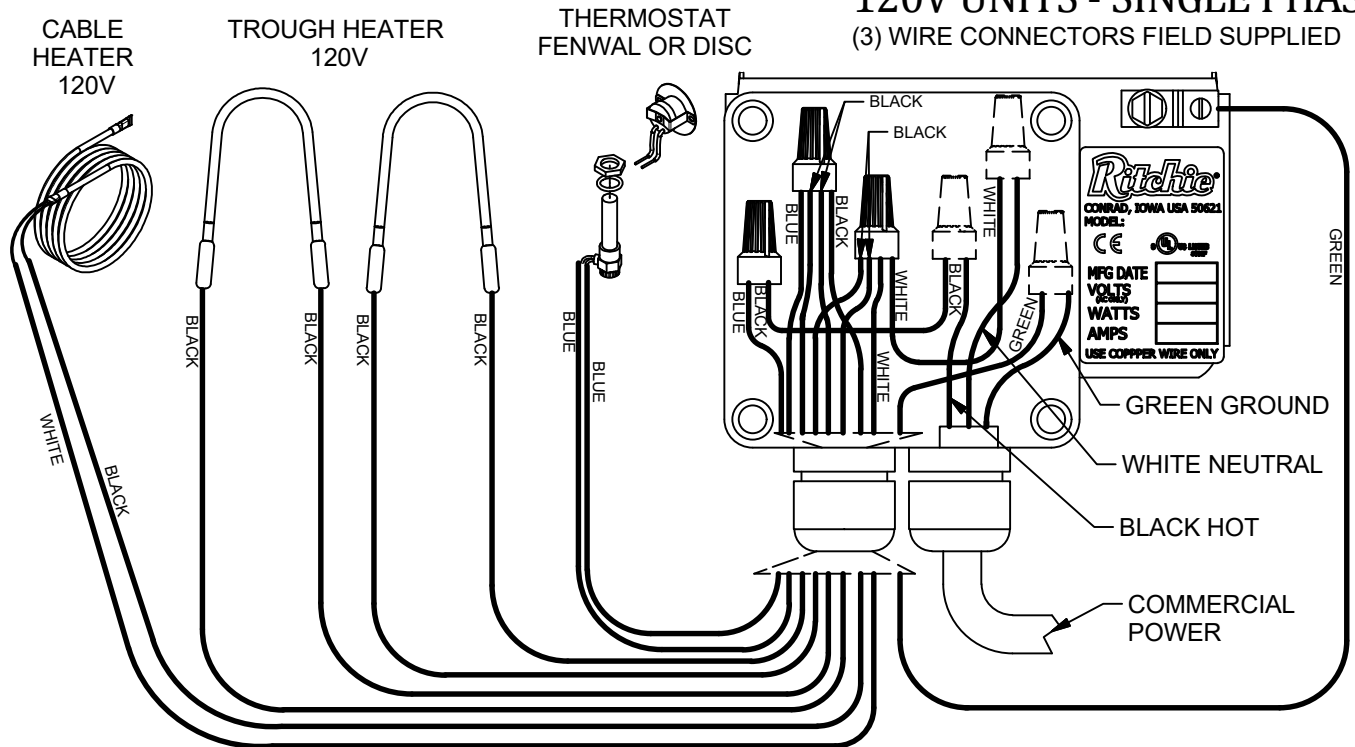
NOTE: *Maximum inlet water pressure for each valve is shown above. If water pressure is extremely high, and if the valve does not shut off, a pressure-reducing valve (Ritchie #18649) may be needed.*

Trouble Shooting

Problem	Solution
Water in Trough Too Warm	Adjust thermostat to lower temperature (move closer to heater)
	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 (move away from heater)
	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
1/2" Valve: 	
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

WIRING DIAGRAM FOR HEATED UNITS

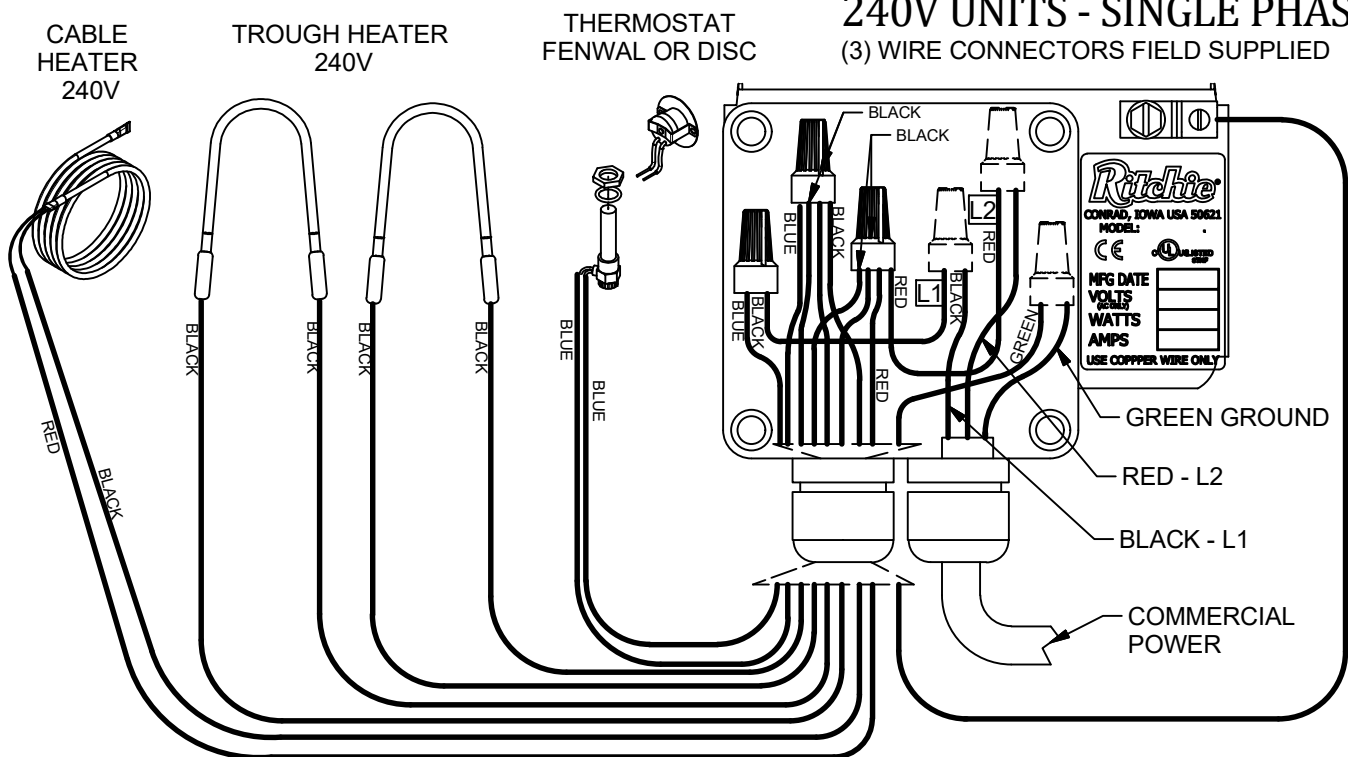
120V UNITS - SINGLE PHASE (3) WIRE CONNECTORS FIELD SUPPLIED



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

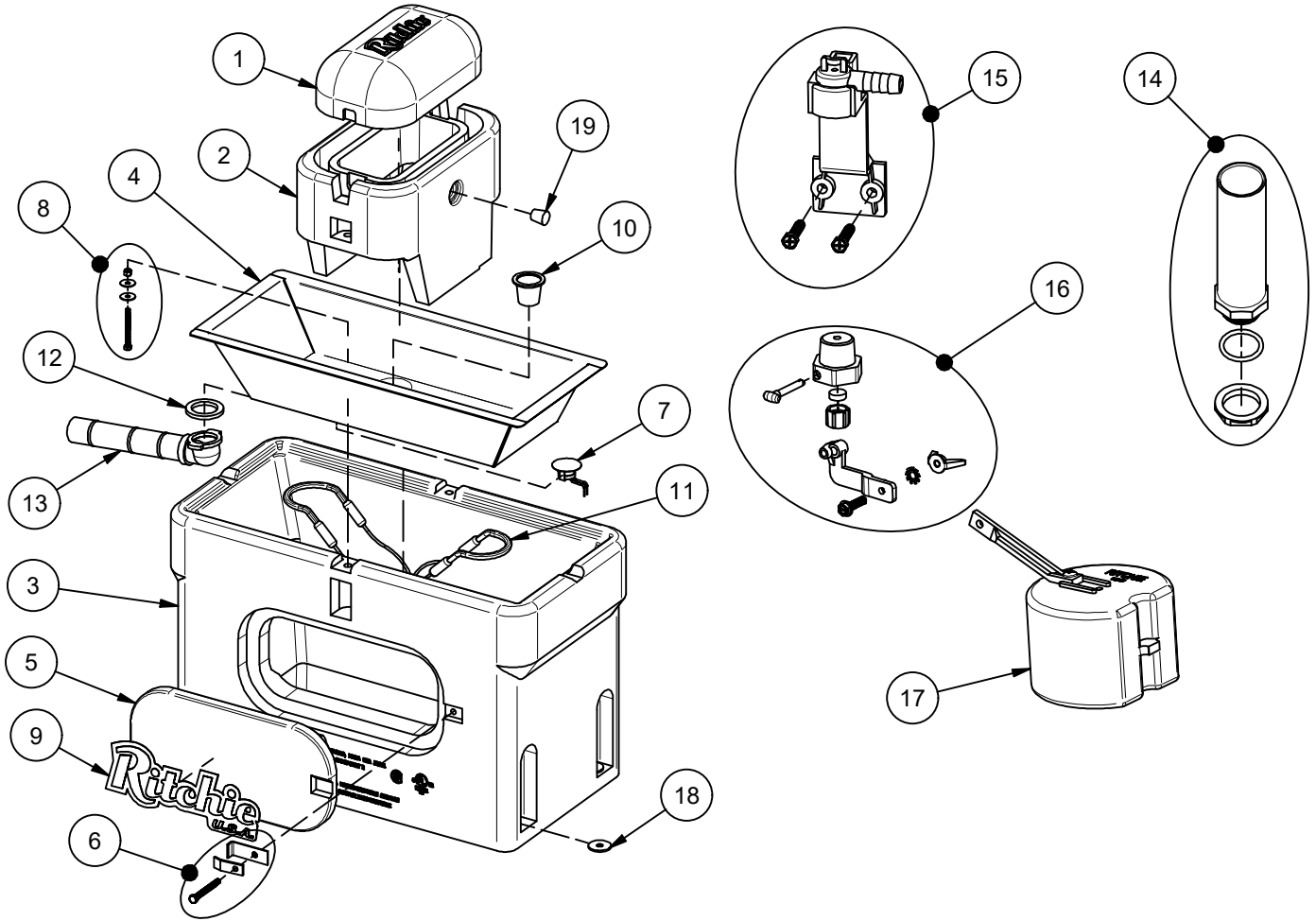


WARNING - CHECK NAMEPLATE FOR CORRECT VOLTAGE. ONLY CONNECT 230-240VAC TO 240V UNITS. WIRING DIAGRAM SHOWN WITH 2 HEATERS - QUANTITY MAY VARY

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Wiring-2021.dwg
TDU - Sheet: 1 of 1

OmniFount 2

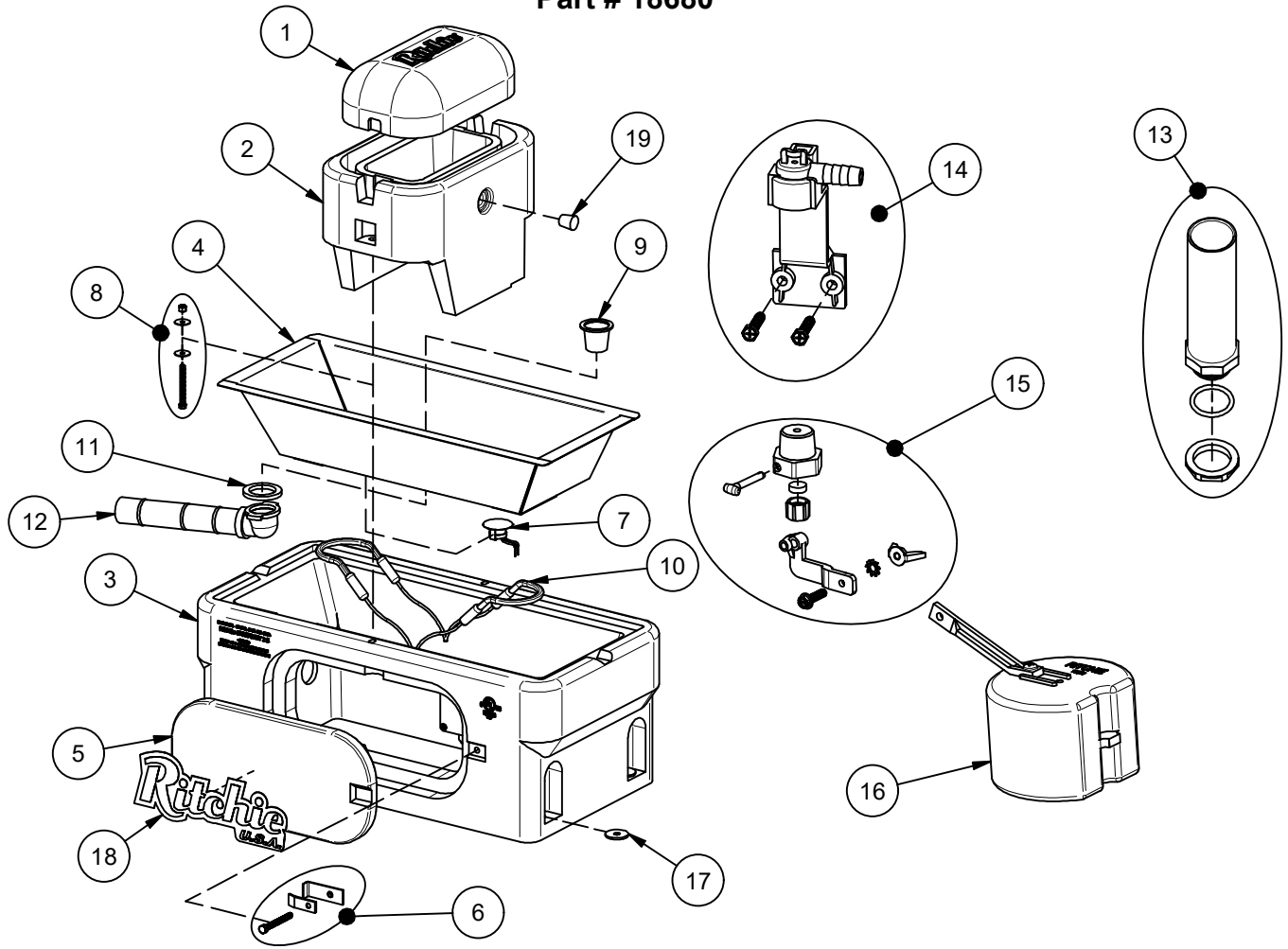
Part # 16619



Item	Part #	Description	Qty	Item	Part #	Description	Qty
1	18424	Omni 2 Cover	1	15	11515	Valve Brkt 1/2" w/ Screws pkg	1 pkg
2	18347	Omni 2 Frame pkg	1 pkg	16	12575	Red Valve 1/2" pkg	1 pkg
	18348	Omni 2 Cover & Frame pkg	1 pkg	17	13613	Float with Short Arm pkg	1 pkg
3	16620	Omni 2 Casing	1	18	18318	Bolt Down Washer (4/pkg)	1 pkg
4	16616	Omni 2 Trough	1 pkg	19	18633	Plug #3 - Water Channel (2/pkg)	1 pkg
5	16621	Access Panel 6"x14"	1	NS	13830	Cable Htr 120V 48W (1/pkg)	1 pkg
6	18147	Access Panel Hardware pkg	1 pkg	NS	16627	Omni Small Accessory pkg	1 pkg
7	11885	Disc Thermostat pkg	1 pkg	NS	16523	Seal Foam 1/4"x3/4"x50' Roll	1
8	18266	Frame Bolt,Nut,Wshr SS(3/pkg)	1 pkg	NS	14866	Seal Foam 10' Roll	1
9	18653	Ritchie Decal 12" (1/pkg)	1 pkg	NS	18709	Screws Valve Mount (4/ pkg)	1 pkg
10	18628	Drain Plug (2/pkg)	1 pkg				
11	14150	Heater 120V 125W (1/pkg)	2 pkgs		16844	OMNI 2 240V	
12	18075	Drain Washer (6/pkg)	1 pkg	NS	16664	Heater 240V 200W (1/pkg)	2 pkgs
13	11471	Drain Pipe with Elbow	1	NS	16424	Cable Htr 240V 48W (1/pkg)	1 pkg
14	16866	Standpipe pkg	1 pkg				

OmniFount 2 SP

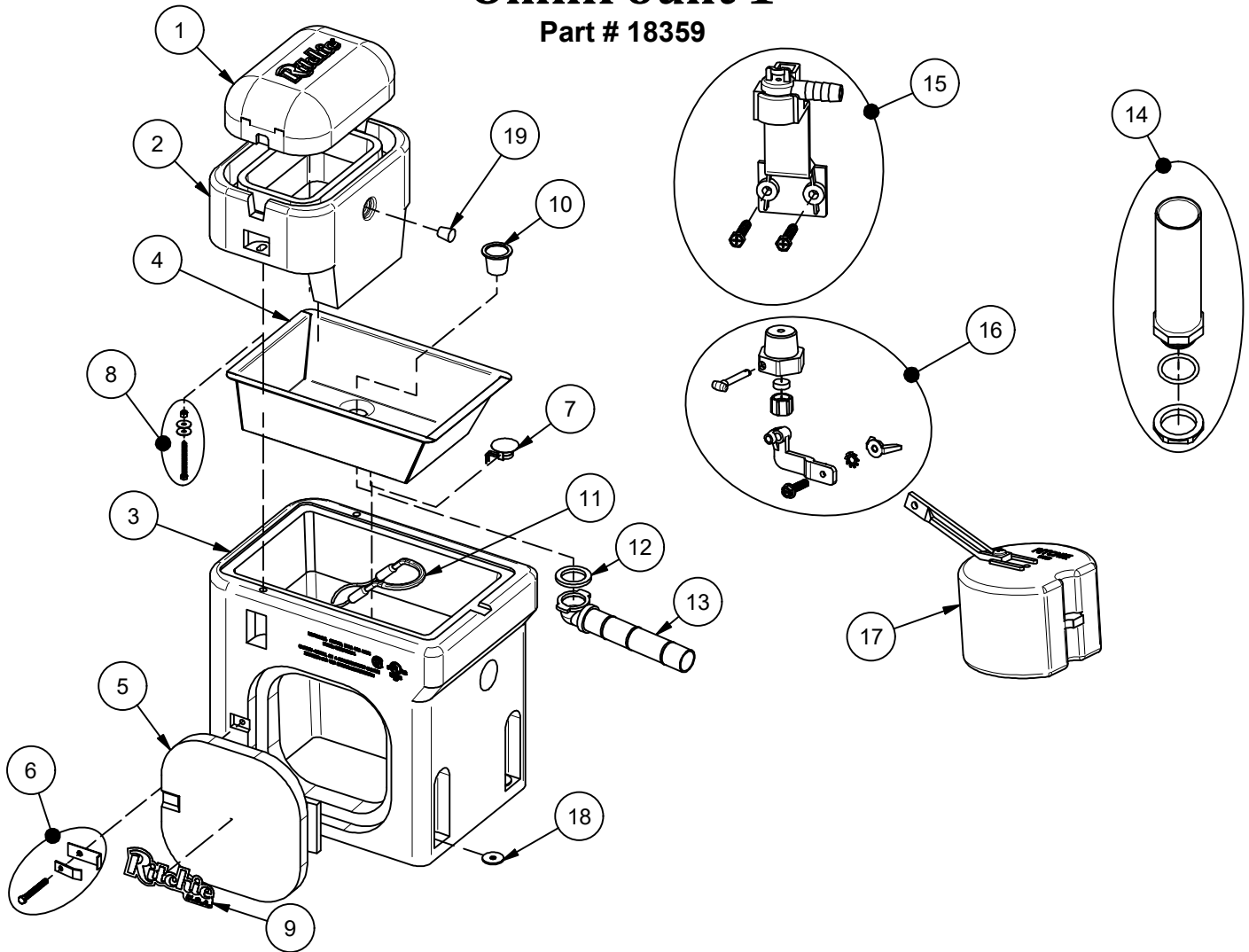
Part # 18680



Item	Part #	Description	Qty	Item	Part #	Description	Qty
1	18424	Omni 2 Cover	1	15	12575	Red Valve 1/2" pkg	1 pkg
2	18347	Omni 2 Frame pkg	1 pkg	16	13613	Float with Short Arm pkg	1 pkg
	18348	Omni 2 Cover & Frame pkg	1 pkg	17	18318	Bolt Down Washer (4/pkg)	1 pkg
3	18684	Omni 2 SP Casing	1	18	18653	Ritchie Decal 12" (1/pkg)	1 pkg
4	16616	Omni 2 Trough	1 pkg	19	18633	Plug #3 - Water Channel (2/pkg)	1 pkg
5	16621	Access Panel 6"x14"	1	NS	13830	Cable Htr 120V 48W (1/pkg)	1 pkg
6	18147	Access Panel Hardware pkg	1 pkg	NS	16627	Omni Small Accessory pkg	1 pkg
7	11885	Disc Thermostat pkg	1 pkg	NS	16523	Seal Foam 1/4"x3/4"x50' Roll	1
8	18266	Frame Bolt, Nut, Wshr SS(3/pkg)	1 pkg	NS	14866	Seal Foam 10' Roll	1
9	18628	Drain Plug (2/pkg)	1 pkg	NS	18709	Screws Valve Bracket (4/ pkg)	1 pkg
10	14150	Heater 120V 125W (1/pkg)	2 pkgs				
11	18075	Drain Washer (6/pkg)	1 pkg		18681	OMNI 2 SP 240V	
12	11471	Drain Pipe with Elbow	1	NS	16664	Heater 240V 200W (1/pkg)	2 pkgs
13	16866	Standpipe pkg	1 pkg	NS	16424	Cable Htr 240V 48W (1/pkg)	1 pkg
14	11515	Valve Bracket 1/2" w/ Scrws pkg	1 pkg				

OmniFount 1

Part # 18359



Item	Part #	Description	Qty	Item	Part #	Description	Qty
1	18422	Omni 1 Cover	1	15	11515	Valve Bracket 1/2" w/ Scrws pkg	1 pkg
2	18473	Omni 1 Frame pkg	1 pkg	16	12575	Red Valve 1/2" pkg	1 pkg
	18474	Omni 1 Cover & Frame pkg	1 pkg	17	13613	Float with Short Arm pkg	1 pkg
3	18361	Omni 1 Casing	1	18	18318	Bolt Down Washer (4/pkg)	1 pkg
4	18368	Omni 1 Trough	1 pkg	19	18633	Plug #3 - Water Channel (2/pkg)	1 pkg
5	18370	Access Panel 10"x10"	1	NS	13830	Cable Htr 120V 48W (1/pkg)	1 pkg
6	18147	Access Panel Hardware pkg	1 pkg	NS	16627	Omni Small Accessory pkg	1 pkg
7	11885	Disc Thermostat pkg	1 pkg	NS	16523	Seal Foam 1/4"x3/4"x50' Roll	1
8	18266	Frame Bolt,Nut,Wshr SS(3/pkg)	1 pkg	NS	14866	Seal Foam 10' Roll	1
9	18655	Ritchie Decal 7.5" (1/pkg)	1 pkg	NS	18709	Screws Valve Mount (4/ pkg)	1 pkg
10	18628	Drain Plug (2/pkg)	1 pkg				
11	14150	Heater 120V 125W (1/pkg)	1 pkg		18362	OMNI 1 240V	
12	18075	Drain Washer (6/pkg)	1 pkg	NS	16664	Heater 240V 200W (1/pkg)	1 pkg
13	11471	Drain Pipe with Elbow	1	NS	16424	Cable Htr 240V 48W (1/pkg)	1 pkg
14	16866	Standpipe pkg	1 pkg				



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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.

Installation Instructions for



OmniFount 1, 2, 2 Special 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

