

303 JUG

Horse Stall Waterers

Operation Manual



303 Corner Mount



303 Flat Back

Bakko Industries, Inc.
Glenwood, MN 56334

ACKERMAN 
SINCE 1969

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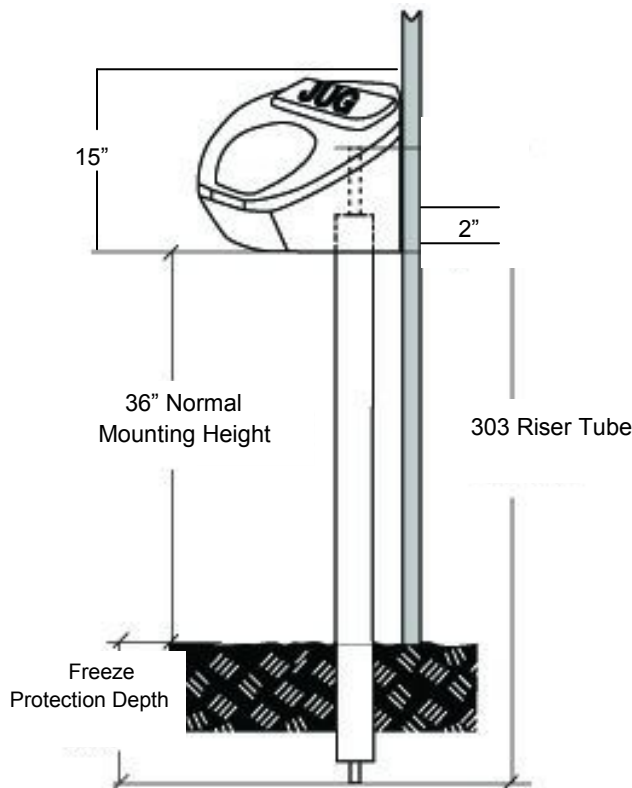
PRODUCT WARNINGS-ELECTRICAL

1. To prevent electrical shock, disconnect the main power before servicing electrical components.
2. Be sure all electrical equipment is connected according to local and federal electrical guidelines.
3. Never stand in water when handling electrical equipment.

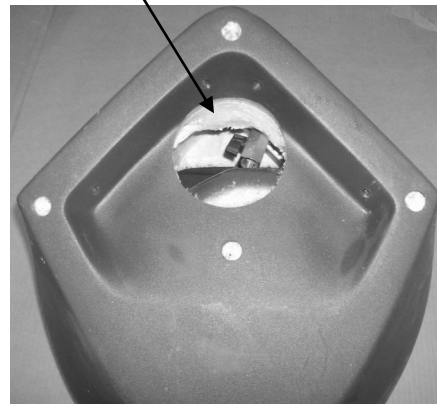


Installation of 303 Riser Tubes

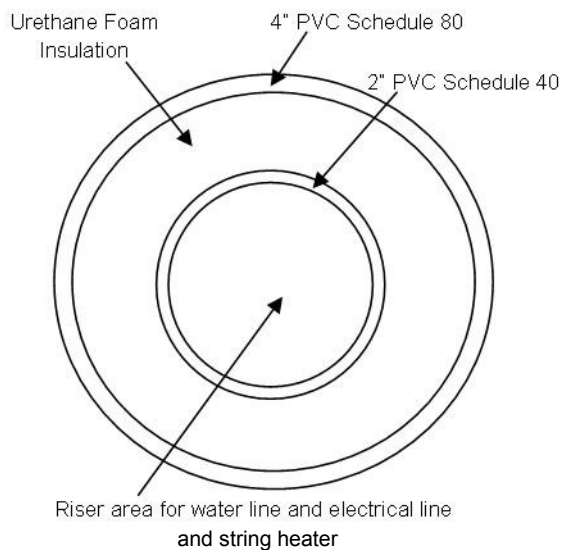
The Water Supply Line servicing the 303 JUG Waterer must be buried at a sufficient depth below the frost line to prevent it from freezing. The size waterline of choice going from the buried horizontal underground waterline up through the Riser Tube into the 303 JUG is 1/2" inch in diameter. This is a commonly used size, and will allow enough room for the waterline to get from the riser tube up into the Service Tunnel of the JUG. Initially extend the incoming water line about 6 inches above the top of the 303 riser tube (for good measure). Then, when ready for final placement of the 303 on the riser tube, cut the line down to about 2 inches above the top of the riser tube. For With Heat JUG Waterers, run the Electrical Line underground along with the Water Line, leaving the proper distance between the two lines, as recommended by your electrician and plumber. Contact your electrician for the proper sizing of electric line to be used to accommodate the 30 Watt 120 Volt Heater in a With Heat JUG, as well as the string heater that is placed down the 303 riser tube.



Service Tunnel of 303 JUG



Run the waterline and the electrical line up through the 303 Riser Tube into the Service Tunnel of the 303



Installation of the 303 JUG Horse Stall Waterer when using 303 Riser Tubes

Insert the 1/2 inch X 1/2 inch Hose Barb/Elbow into the incoming 1/2 inch waterline and secure with a hose clamp. (If you are not using a standard 1/2 inch waterline to supply the 303 Jug, you will need to provide your own Barb/Elbow fitting components.) Using thread sealant, attach the enclosed Brass Nipple to the incoming Barb/Elbow. Attach the 1/2 inch end of the enclosed 303 flex hose to the incoming Brass Nipple and tighten securely. Gently ease the Flex Hose up into the Service Tunnel of the 303 as you slide the fountain on the riser tube. Attach the small fitting on the other end of the 303 Flex Hose to the threaded Brass Elbow coming out of the end of the 303 Shut Off Valve, and tighten securely. When the water line has been properly flushed and checked for leaks, and the electricity (if with heat) has been properly hooked up, and the 303 has been mounted to the wall, pump sealant between the outside of the riser tube and the 4 inch hole on the bottom of the 303 to create a good weather seal.

Installation of the 303 JUG Horse Stall Waterer when not using 303 Riser Tubes.

When a 303 is not mounted on top of a 303 Riser Tube it will be necessary to “Field Drill” the hole in the JUG that will accommodate the incoming waterline. The proper size hole (the size of your incoming water line) can be drilled in the back area of the JUG. This is the area that is not part of the water reservoir. The water line can enter the JUG through the top or the bottom. The size of the incoming water line will then need to be adapted to the 1/2 inch 303 shut off valve that is mounted inside the Service Tunnel of the 303.

Mounting the 303 JUG to the wall

If mounting on top of a 303 Riser Tube, slide the JUG on top of the tube. The Riser Tube will extend up into the JUG approximately 1 1/2 inches.



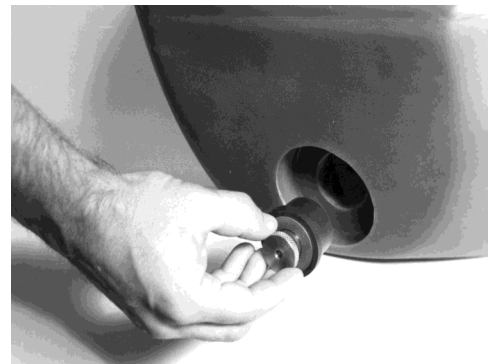
Corner Mount 303: Mount the JUG to the wall using the 303 Wall Mounting Kit.

Mounting Holes Used
Top——Use all 4 Holes
Bottom——Use 2 Front Holes

Flat Back 303: “Field Drill” 6 holes in the back wall of the Flat Back 303. The holes should be drilled in such places so that when lag bolts with washers are placed through them that they will attach to the strongest points of the wall available. Use whatever length of Lag Bolts fit your specific mounting situation.

Flushing The Water Line

Remove the Front Half Float Valve by turning it counter clockwise 1/4 turn and pulling it out of the Float Valve Base, as shown on the following page. Turn on the incoming water supply and let it run freely for a few minutes. The water reservoir will need to be drained away at this time by removing the External Drain Plug. Turn the water off and reinstall the Front Half Float Valve and the External Drain Plug. Turn the water back on.



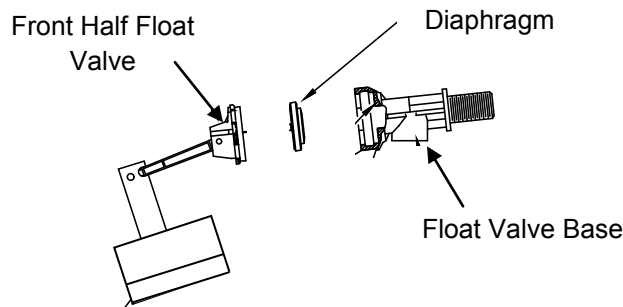
Final Installation Steps

After connecting the power to the Heater and Thermostat, (see wiring diagram on following pages).
Install the 303 JUG Lid.

*****Be careful not to cross thread the bolts as they are turned into the brass inserts.*****

Turn the water on and fill the reservoir to the desired level. You can adjust this by turning the External Adjustment Shaft. Ideally the water level out in the drinking bowl will be 1/2 inch above the highest part (back side) of the drinking hole.

Special Float Valve Instructions



The Fluidmaster Float Valve used on the 303 is among the most reliable , trouble free valves available today. Because of the precision qualities built into the valve, it is to your benefit to see that at the time of installation your water supply is clean. Please follow these guidelines to ensure proper installation.

1. Flush sufficient water through the water line before attaching the Float Valve.
2. Attach the Float Valve to the Water Line.
3. Turn on the water supply.
4. Let the reservoir fill a few times.
5. Turn off the water supply.
6. Remove the Front Half Float Valve. This is done by giving the tabs at the base of the gray arm a 1/4 turn counter clockwise and removing it from the base of the valve.
7. Remove the rubber Diaphragm from the stainless pin and wash all components. Reinstall the Diaphragm on the stainless pin.
8. Reinstall the Front Half Float Valve by placing it back into the Float Valve Base, and turning it 1/4 turn clockwise.
9. Turn on the water supply.
10. We recommend that you do this procedure a few times. If you still realize dripping water you need to do it again.
11. At this time check all water fittings , and connections for leaks.

By following these instructions you should realize the trouble free performance of the 303 JUG that customers have come to expect over the years.



Trouble Shooting Tip

If at sometime you find the bowls over flowing:

Clean and, or replace the diaphragm, as this will almost always be the cause of a JUG over flowing. It is recommended that the diaphragm be replaced every year.

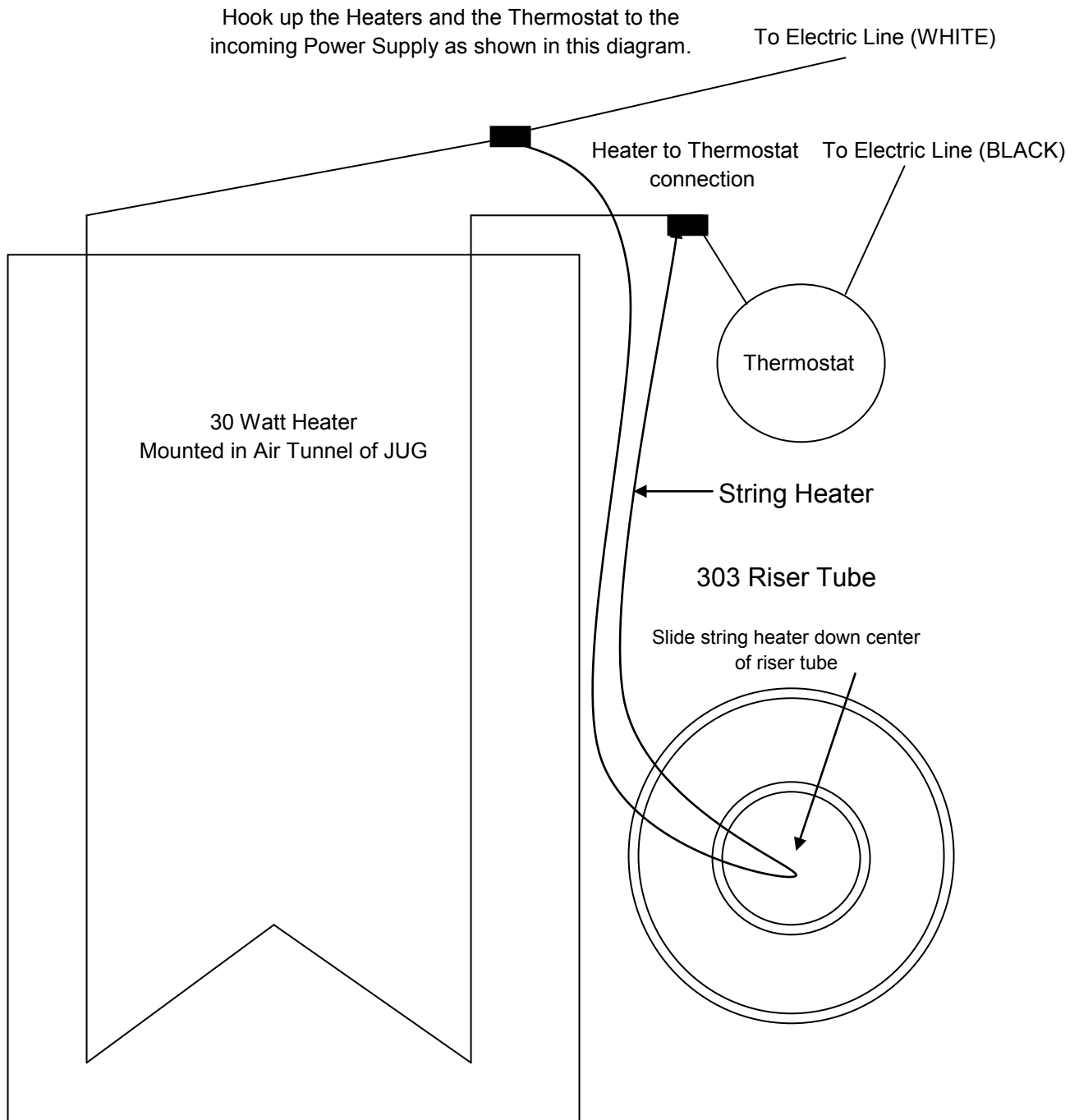
Check all connections and fittings for leaks.

If the Float Valve is working properly but you are having trouble getting enough water in the Drinking Bowl check to see that the Plumbing (hoses, etc.) inside the Service Tunnel are not “pulling” the Float Valve down so that it can’t be raised high enough by turning the External Float Adjustment. In this case “twist, turn or pull” the plumbing so it is in a position of pushing up on the Float Valve instead of pulling it down.

JUG Fluidmaster Valve Flow Rates

Static Pressure (PSI)	3	7	15	43	73
Flow Rate (gal/minute)	.5	1.5	2.5	5	6

Heater Thermostat Wiring Diagram



When placing a 303 JUG on a 303 Riser Tube, it is recommended that a string heater be placed down the riser tube and tied into the electric line. The length of the heater is determined by the depth of the riser tube. Select the longest heater possible without letting it lay in the dirt at the bottom of the hole.



String Heaters for 303 Riser Tubes

Part #	Length	Watt
24402	2 feet	24
24403	3 feet	30
24404	4 feet	36
24405	5 feet	42
24406	6 feet	48
24408	8 feet	64

CAUTION:

Remember you are working with electricity. Always disconnect the power before working with electrical wires, and have wire connections covered with wire nuts at all times.

Feed Trap Maintenance

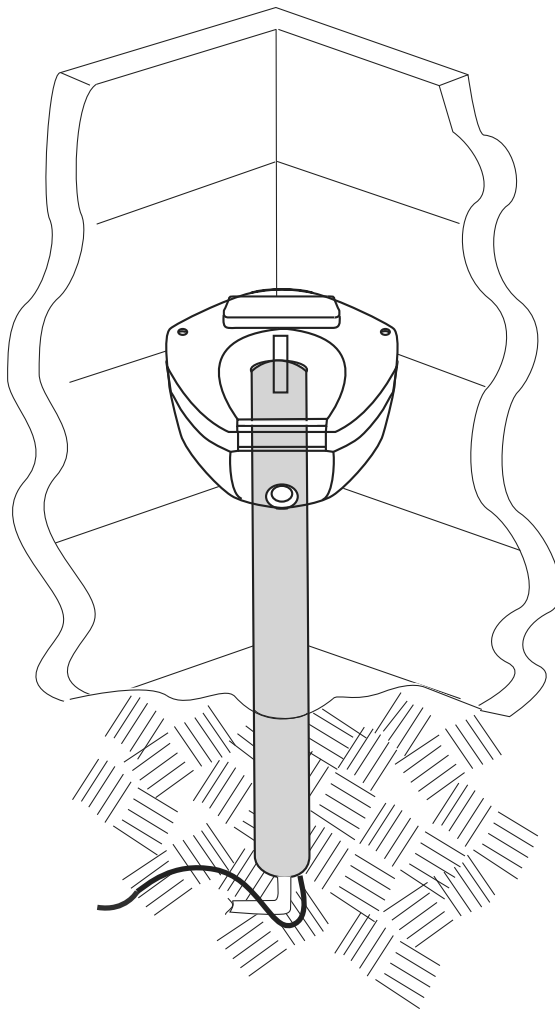
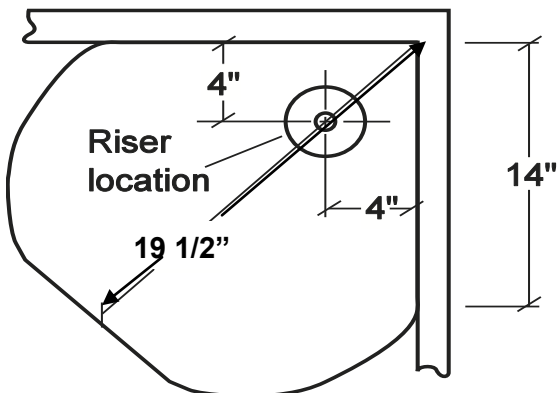
Because of its "Draw Tube" design, the JUG Livestock Waterer will provide the cleanest water available to your animals. The JUG Feed Trap (where the Draw Tubes attach to the bottom of the lid) will catch most of the feed that falls off the animals face. Because of the suction action created in the feed trap while drinking, most animals will "self clean" the JUG. However, over a period of time, feed will accumulate in the feed trap. A proven and quick method of removing that feed from the feed trap is with a wet/dry vac. A vacuum as small as 2 gallons will work well. One or two sucks with the vacuum will do an excellent job of cleaning the feed trap.

Remember that draining the 2 gallon reservoir of the 303 JUG is as easy as removing the front mounted external drain plug.



303 Feed Trap

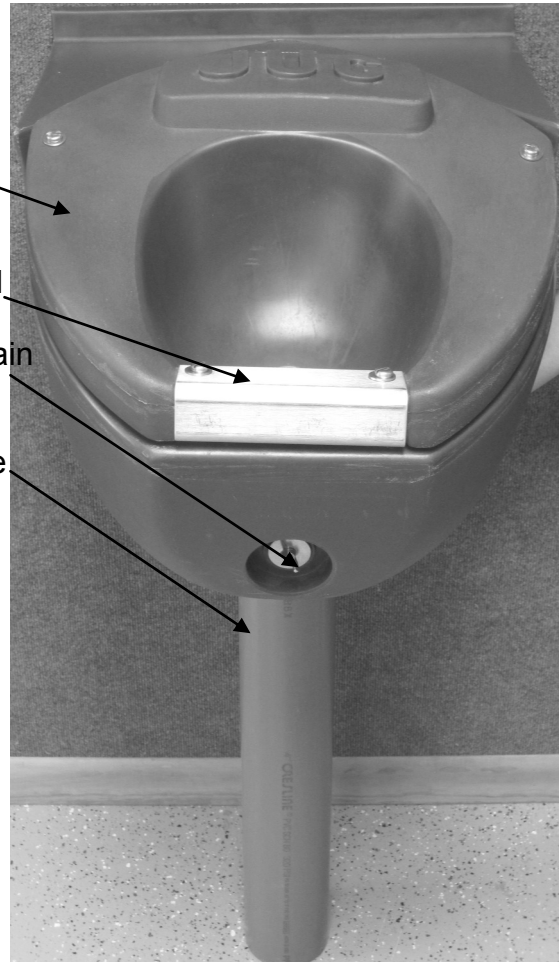
Top View of 303 Corner Mount



Typical 303 Corner Mount Installation



Typical 303 Flat Back Installation



303 Corner Mount Specifications

Sides

Top back corner to front curve = 14 inches
Bottom back corner to front curve = 11 inches

Height

Back = 15 inches
Front = 8 1/4 inches

Width

19 Inches

Depth

From top/back corner to front of bite guard = 22 inches

Attachment Holes

Top Holes = 1st hole is 7 inches from back corner
2nd hole is 12 inches from back corner
Bottom Holes = 1st hole is 3 inches from back corner
2nd hole is 9 inches from back corner

303 Flat Back Specifications

Sides

Top back center to front curve = 16 inches
Bottom back center to front curve = 12 inches

Height

Back = 16 3/4 inches
Front = 8 1/4 inches

Width

22 Inches

Depth

From center/back center to front of bite guard = 23 inches

303 Riser Tube

The 303 Riser Tube extends 1 1/2 inches up into the fountain, and rests against the bottom of the water reservoir. About 1/2 of the tube sits under the water reservoir, with the other 1/2 of the tube positioned under the air space of the 303.

