



by **MIRACO**

**INSTALLATION INSTRUCTIONS
AND SPECIFICATIONS FOR**

MiraFount Models:

#3345 - #3330 - #3465 - #3390 - #3354-S - #3370-S - #3410 - #3410-4

E-Fount Models:

#3330-E - #3340-E - #3390-E - #3465-E - #3345-E - #3354-SE - #3410-E - #3410-4E

READ CAREFULLY

MIRACO

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Specifications

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Part I - General

Description:

1. The E-Fount is the finest operating, lowest cost, energy-efficient livestock waterer on the market today. The sealed atmosphere helps prevent the formation of scum and algae. It also prevents tongue injuries from contact with frigid steel.
2. All edges are curved and sloped to prevent injury to people and animals.

Weights & Dimensions:

E-Fount								
Product #	Capacity	Gallons	Length	Width	Drinking/Overall Height	Specifications	Weight	Heat
3330-E	25 head dairy 50 head beef	15 (57 liters)	28 inches (71 cm)	26 inches (66 cm)	14 inches/21 inches (35.5 cm/53 cm)	One 8.75 inches (22 cm) opening / 9 inches (23 cm) ball closure	57 lbs (26 kg)	75 watts
3340-E	100 head sheep	15 (57 liters)	28 inches (71 cm)	26 inches (66 cm)	14 inches/20 inches (35.5 cm/51 cm)	Four 6 inches (15 cm) openings / 7 inches (18 cm) ball closures	57 lbs (26 kg)	75 watts
3390-E	60 head dairy 150 head beef	44 (166 liters)	43 inches (109 cm)	29 inches (73.5 cm)	20 inches/27.5 inches (51 cm/70 cm)	Two 10 inches (25.5 cm) openings / 10.75 inches (27 cm) ball closures (removable end panels)	129 lbs (58.5 kg)	75 watts
3465-E	40 head dairy 100 head beef	20 (76 liters)	36 inches (91.5 cm)	24 inches (61 cm)	18 inches/25.5 inches (45.5 cm/65 cm)	Two 9.5 inches (23 cm) openings / 10 inches (25.5 cm) ball closures	79 lbs (36 kg)	75 watts
3345-E	30 head dairy 75 head beef	30 (112 liters)	29 inches (73.5 cm)	31 inches (79 cm)	18 inches/26.5 inches (45.4 cm/67 cm)	One 10 inches (25.5 cm) opening (removable top)	95 lbs (43 kg)	75 watts
3354-SE	90 head dairy 200 head beef	70 (265 liters)	57.5 inches (146 cm)	32.5 inches (82.5 cm)	19 inches/27 inches (48 cm/68.5 cm)	Four 9.5 inches (23 cm) openings / 10.75 inches (27 cm) ball closures (convertible)	152 lbs (69 kg)	150 watts
3410-E	50 sows 100 market hogs	6 (27 liters)	34 inches (86 cm)	19 inches (48 cm)	8 inches/16.5 inches (40.5 cm/42 cm)	Two lift up lids/ 10 inches (25.5 cm) openings	57 lbs (26 kg)	75 watts
3410-4E	100 sows 200 market hogs	15 (57 liters)	34 inches (86 cm)	36.5 inches (93 cm)	8 inches/16.5 inches (40.5 cm/42 cm)	Four lift up lids/ 10 inches (25.5 cm) openings	98 lbs (44.5 kg)	75 watts
MiraFount								
Product #	Capacity	Gallons	Length	Width	Drinking/Overall Height	Specifications	Weight	Heat
3345	30 head dairy 75 head beef	30 (112 liters)	29 inches (73.5 cm)	31 inches (79 cm)	18 inches/26.5 inches (45.4 cm/67 cm)	One 10 inches (25.5 cm) opening / 10.75 inches (27 cm) ball closures	95 lbs (43 kg)	N/A
3330	25 head dairy 50 head beef	15 (57 liters)	28 inches (71 cm)	26 inches (66 cm)	14 inches/21 inches (35.5 cm/53 cm)	One 8.75 inches (22 cm) opening / 9 inches (23 cm) ball closure	59 lbs (27 kg)	N/A
3465	40 head dairy 100 head beef	20 (76 liters)	36 inches (91.5 cm)	24 inches (61 cm)	18 inches/25.5 inches (45.5 cm/65 cm)	Two 9.25 inches (23 cm) openings / 10 inches (25.5 cm) ball closures	79 lbs (36 kg)	N/A
3390	60 head dairy 150 head beef	44 (166 liters)	43 inches (109 cm)	29 inches (73.5 cm)	20 inches/27.5 inches (51 cm/70 cm)	Two 10 inches (25.5 cm) openings / 10.75 inches (27 cm) ball closures (convertible)	126 lbs (57 kg)	N/A
3354-S	90 head dairy 200 head beef	70 (265 liters)	57.5 inches (146 cm)	32.5 inches (82.5 cm)	19 inches/27 inches (48 cm/68.5 cm)	Four 9.5 inches (23 cm) openings / 10.75 inches (27 cm) ball closures (convertible)	152 lbs (69 kg)	N/A
3370-5	120 head dairy 200 cow/calf units 250 head beef	100 (378 liters)	57.5 inches (146 cm)	45.5 inches (115.5 cm)	20 inches/28 inches (51 cm/71 cm)	Six 9.5 inches (23 cm) openings / 10.75 inches (27 cm) ball closures	216 lbs (98 kg)	N/A
3410	50 head sows 100 head market hogs	6 (27 liters)	34 inches (86 cm)	19 inches (48 cm)	16 inches/16.5 inches (40.5 cm/42 cm)	Two lift up lids/ 10 inches (25.5 cm) openings	52 lbs (23.5 kg)	N/A
3410-4	100 head sows 200 head market hogs	15 (57 liters)	34 inches (86 cm)	36.5 inches (93 cm)	16 inches/16.5 inches (40.5 cm/42 cm)	Four lift up lids/ 10 inches (25.5 cm) openings	95 lbs (43 kg)	N/A

Material necessary for installation:

1. Concrete
2. PVC glue
3. 1 Insulated Heat Tube #834
4. Thread sealer or Teflon tape
5. Electrical connections

Note: Southern USA regions do not require as large a heat well.

Part II -- Materials, Products

Materials

1. High-impact polyethylene

Insulation

1. The base, cover and lid closures are filled with a 3" thickness of urethane foam.

Valve

1. Miraco valve

Electrical

1. Cartridge heater – 75 watts
2. Cartridge thermostat



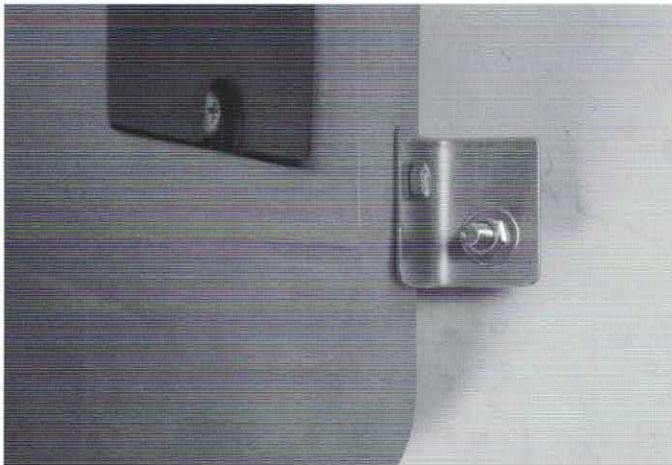
Step 1

Install your heat well at least 1 foot below frost or down to your water line to ensure frost-free operation. Install the water line so it comes up close to the center of the heat well. For existing installation where a small hole is all you have, use a low-wattage heat tape on the line provided to prevent freezing.



Step 2

Pull the paper backing off the rubber gasket furnished in your parts carton. Stick this gasket on the bottom of your tank. Keep the gasket as close to the edge as possible. This is necessary to keep air out and keep your heat well dry. Model 3330 and 3330-E, valve must be directed to corner of tank.



Step 3

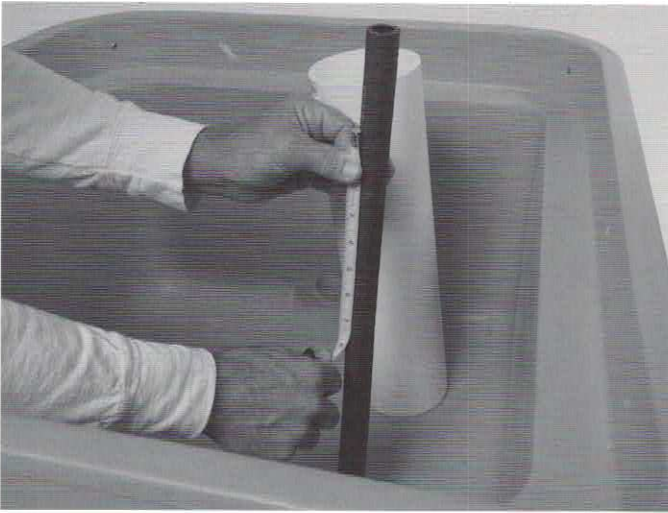
After pulling your #14-3 or #14-2 romex with ground up through the hole provided, center your tank and drill 3/8-inch holes in the cement and drive the 3/8-inch stainless-steel concrete anchors provided.



Step 4

After you have completed Steps 1-3, your fill line will be standing above the 4-inch riser pipe. Make sure the 4-inch pipe is pushed completely down into the bottom fitting. With a pen or pencil, make a mark on the fill line 2.5" below the top of the 4" outer pipe.

**Keep Your Investment Above Ground Working Perfectly
By Protecting Your Underground Investment.**



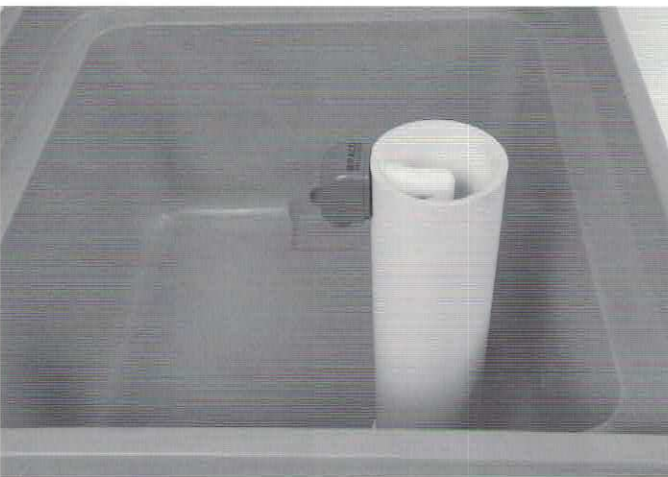
Step 5

The riser pipe is not glued into the bottom fitting. Pull the riser pipe out of the bottom fitting. Cut off the fill line where you made your mark.



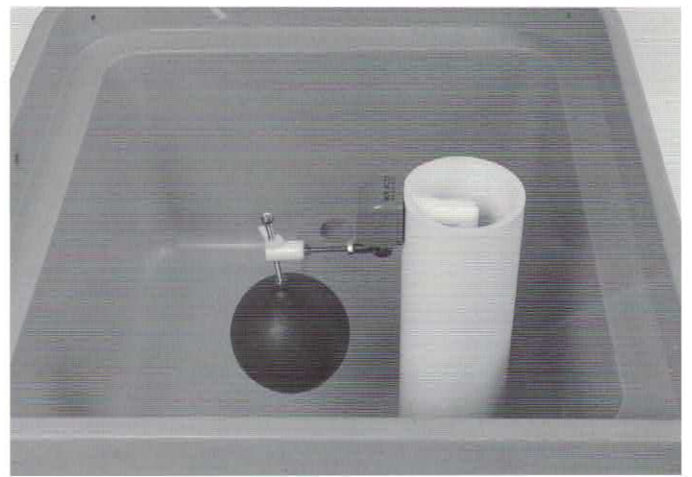
Step 6

The pipe insulation should be up into the tank about 2 inches. If you are using a low-wattage heat tape to protect the water line, do not use the pipe insulation. Using PVC cement, apply it to the bottom of your 4-inch riser pipe. Make sure all connections are clean before applying glue.



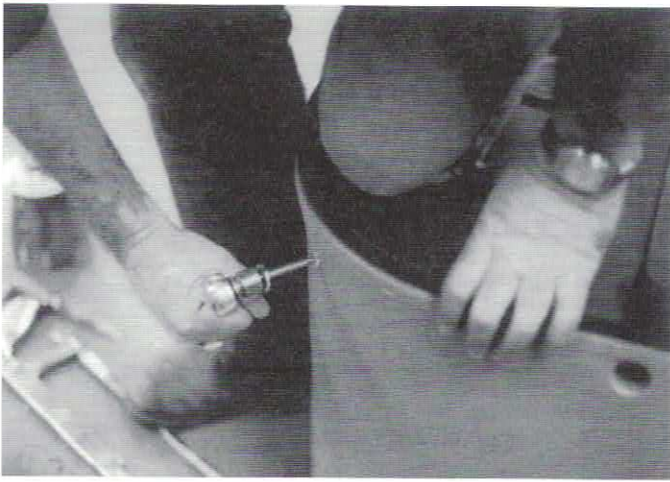
Step 7

Apply sealant to valve threads. Screw the valve into the T fitting so the valve is tight. In most cases, hand tight is sufficient. If wrenches are required, do not overtighten. Valve should be straight up and down when tightened. Valve should be back against the 4-inch riser.



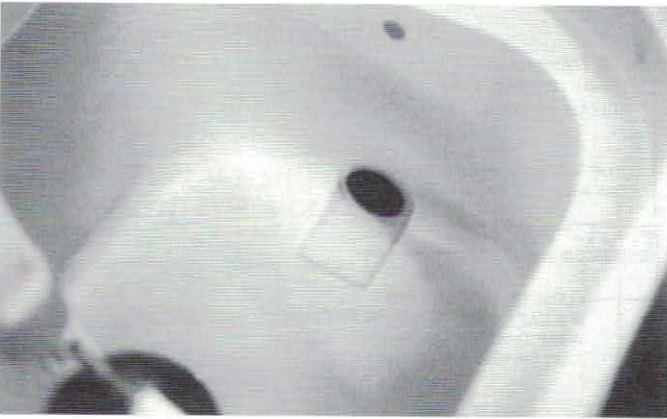
Step 8

Install the bob float and arm with the brass thumb screw. When the water level is at the proper setting, the horizontal arm should be parallel with the water and the vertical arm should be screwed up until the bob float is within 3/8 inch of the nylon fitting.



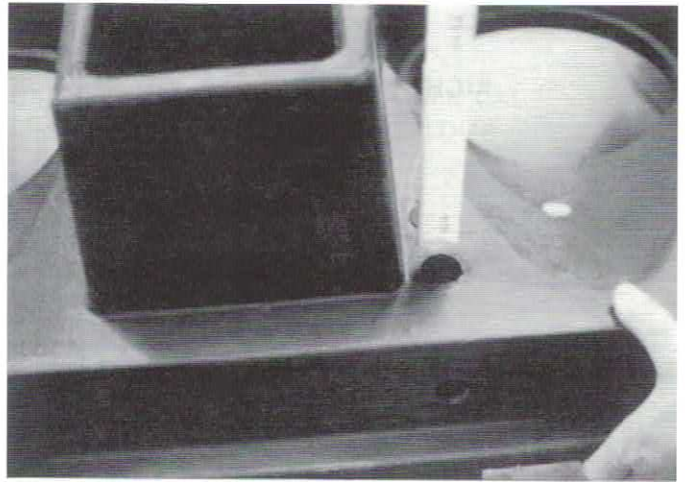
Step 9

Apply pressure down on the top and screw in the base bolts to secure the top to the base. If the holes don't line up, don't be concerned. The bolt will make its own hole.



Step 11

Always place the drain plugs in from the inside to prevent them from coming out.



Step 10

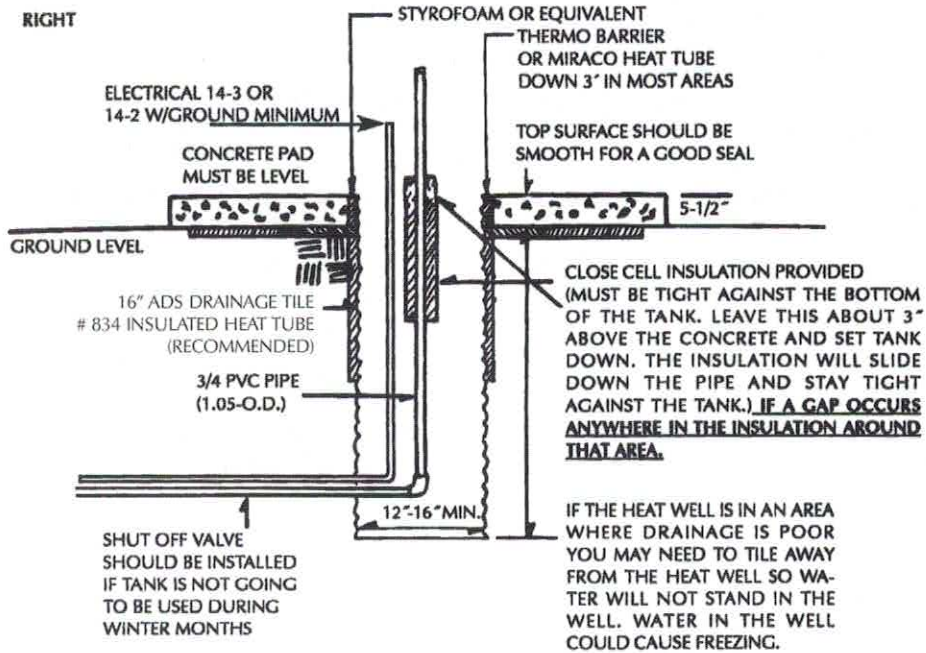
If you are dairy only, remove the two rubber plugs in the top portion of the tank. Then place the $\frac{3}{4}$ -inch pipe in the bottom hole. The 45-degree angle goes in the hole. Align so water can pass through.



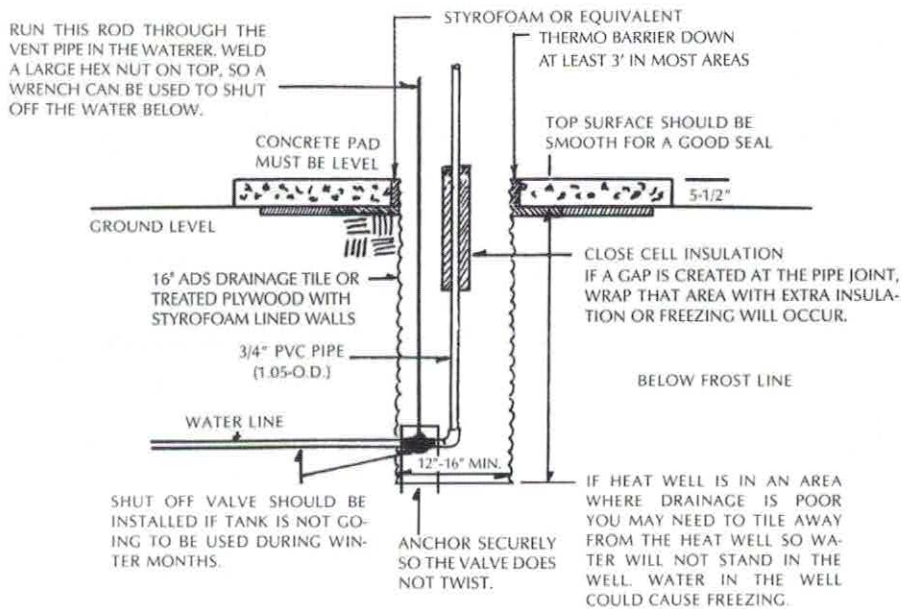
Step 12

All water level adjustments can be done by turning the vertical arm up or down through the top access.

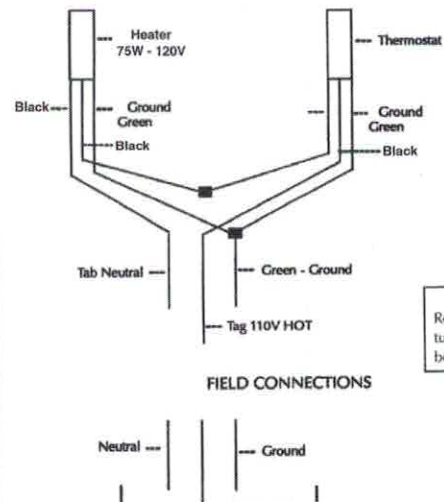
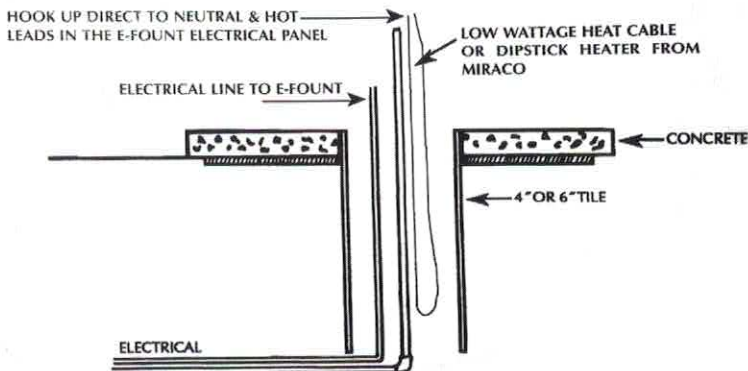
NEW INSTALLATION METHOD



PROPER INSTALLATION OF DRAIN BACK SHUTOFF VALVE



EXISTING INSTALLATIONS WATER LINE PROTECTION



E-Fount Wiring Diagram

CAUTION
Read instructions carefully and turn electricity off at main fuse box before beginning installation.

Management Tips

1. A 5/16-inch bolt is to be used to hold the balls back for training livestock. The 5/16-inch bolt is inserted into a threaded insert in the baffled portion of the lid. This holds the balls back for training.
2. Water level is very important. If the water is too high, the ball will stick shut in the winter time and the tank will appear frozen. A kick or small amount of hot water on the balls will fix the problem. Then lower the water level so this won't happen again. However, never lower water below the baffle.
3. In case of power failure, merely keep the livestock away from the waterer so they can't drink it down. If this has already happened, a small amount of hot water is all you need. NEVER USE AN OPEN FLAME TO THAW ICE!
4. Management is necessary in any operation and this includes checking your waterer daily. Water is very important and any malfunction should be attended to immediately. This is good practice for any make of waterer.
5. E-Founts must be installed level, otherwise one ball will be higher than the others.
6. E-Founts should be cleaned periodically, especially the ones being used for hogs. Mud can hamper the proper operation of the E-Fount.
7. If your valve is seeping, check the valve for foreign materials first. This is the biggest cause of seeping valves. If you have extremely rusty water or dirty water, your valve should be cleaned periodically.
8. If you have any questions, give us a call at 641-236-5822.

Miraco Livestock waterers express warranty and waiver of implied warranties and consequential damages

Express warranty

Ahrens Agricultural Industries, Inc., dba Miraco, expressly warrants that the Miraco waterers (excluding valve and valve parts) will be free of defects in materials and workmanship for a period of five (5) years for delivery. The Miraco valve and valve parts are warranted to be free of defects in materials and workmanship for a period of one (1) year from delivery. Such warranty does not apply to any Miraco unit that has been subjected to misuse, or material failure to install, operate or maintain in accordance with Miraco's written instructions, or other events, acts or omission, including but not limited to acts of nature, which affect the Miraco unit materially and adversely and are not attributable to Miraco.

This warranty is limited to the repair or replacement of the defective part, and the option of Miraco. Such repair or replacement part is warranted only for the unexpired portion of the original warranty period. Buyers with warranty claims should contact their local dealer immediately.

Heaters in all electrically heated units are warranted for a period of one (1) year.

Waivers of implied warranties and consequential damages.

Except for the above express warranty, this product is sold as is. Implied warranties of merchantability and fitness for a particular purpose, as well as special, indirect or consequential damages, are all waived by the buyer.

Electrical connection – Electrical service must be made and maintained by a qualified electrician. Each fountain must be wired through a fuse box with properly sized wire. (Refer to access plate for electrical requirement.) Hot wire must be run through the thermostat, and the neutral wire run to the white wire or neutral marked wire in junction box. A copper ground rod, buried in a minimum of 10 feet in soil, must be provided at each fountain. Connect ground wire from rod to ground connection in junction box.

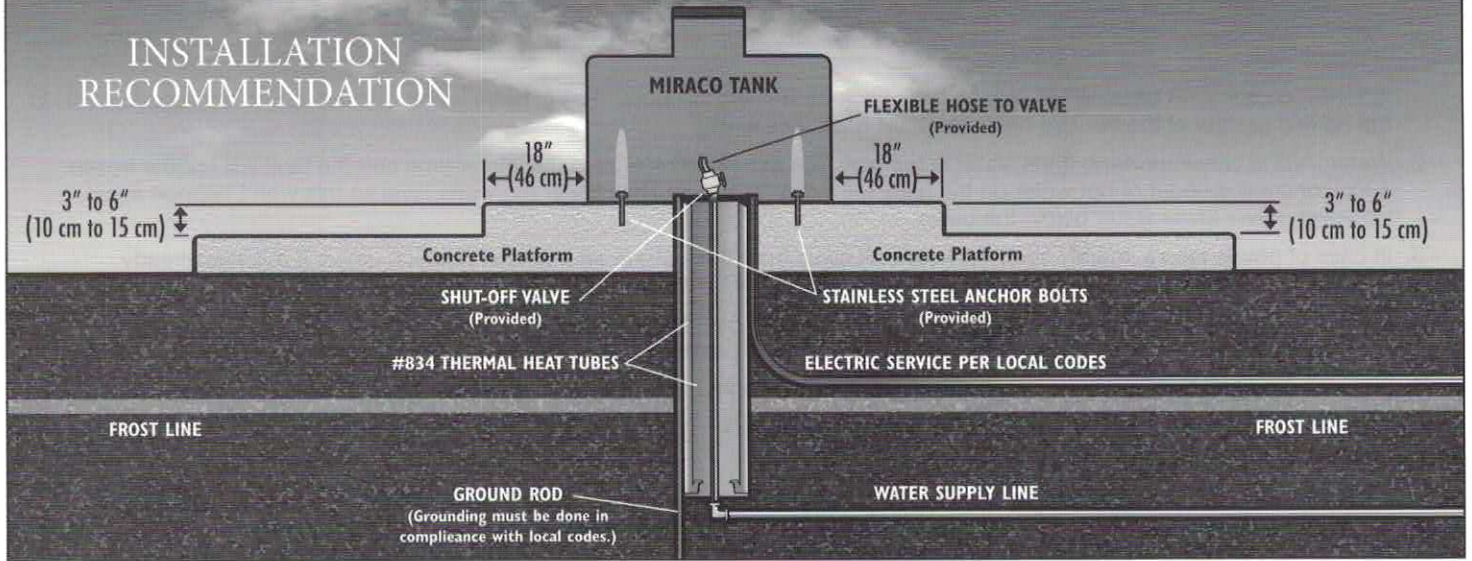
Thermostat – Preset at the factory for 50 degrees.

Warning – Never allow the E-Fount to set empty unless the heater has been turned off. Always disconnect electricity to the E-font before draining. Damage to the tank can occur.

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.

Notice: Canadian Electrical Code – Part 1 requires livestock waterers installed in feedlots in open feeding areas shall be grounded by a separate copper grounding conductor or at least No. 6 AWG terminating at a point where the branch circuit receives its supply.

INSTALLATION RECOMMENDATION



ACCESSORIES

UNDERGROUND SHUT OFF KIT



Part No. #399-5 with Drain Back

834 INSULATED HEAT TUBES



Highly insulated tube shields incoming ground water from cold as it passes through the frost level. Polyethylene construction ensures years of trouble-free use. One 30-inch tube and 3 feet of 12-inch plastic drainage tile provides a sufficient heat well in most locations. For northern locations, two 30-inch heat tubes may be required.

Outside Dimensions
14" X 30" (36 x 76 cm)
2" Insulation (5 cm)
Weight
18 pounds (8 kg)

AUTOMATIC VALVES

Part No.	GPM	Pressure
#336 (Black)	14	Low 5 - 40 psi
#521 (Red)	12.5	High 40 - 80 psi
#519 (Blue)	6	High 80 - 90 psi



250 AND 500 WATT HEATERS CAN BE USED IN ANY MODEL. E-FOUNT USES A 75 WATT HEATER.

HEATERS

1 year warranty

Available in 120 Volt or 240 Volt
250 Watts and 500 Watts

- HighLimit safety fuse
- Teflon coated aluminum
- New thermostat technology



Design allows heater to set 1/2" above the bottom for better heat dispersion.

- Part No.**
- #543 with built-in thermostat
250 Watt Immersion Heater
 - #543-5 500 Watt Immersion Heater (110 Volt or 220 Volt)
- Part No.**
- #919-5 Thermostat Controlled Cable Line Heater (110 Volt or 220 Volt)



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Authorized Dealer