



INSTALLATION INSTRUCTIONS

Read and study entire booklet carefully before beginning installation. Use only Nelson accessories and replacement parts. Save this booklet. Call if you have questions.

SERIES 700 WATERERS



NELSON MANUFACTURING COMPANY
CUSTOMER SERVICE DEPARTMENT
3049 12TH STREET S.W.
CEDAR RAPIDS, IOWA 52404



To Place An Order For
Waterers Or Parts Call:

Phone: 888-844-6606

www.nelsonmfg.com

Monday-Friday 7:30-5:00 CST



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OPERATING PRINCIPLE

The drinking bowl is balanced on one end of the beam with a lead weight on the other end. As an animal drinks, the system becomes out of balance, causing the pivot beam to tilt and open the water valve. Water refills the bowl, returning the pivot beam to its original position and automatically closing the valve.

ELECTRIC HEATER

Waterers are available with optional electric heaters. The heater is thermostatically controlled, turning on and off according to the temperature. The heater is located under the cross beam and heats the air inside the waterer. Heating element can get red hot when it is operating; this is normal. See page 16 for heater location.

MODEL NUMBER LOCATION

Waterer model number is located on the nameplate. Model number is also present on shipping box, packing list and invoice.



LOCATION OF WATERER

1. Locate waterer in place sheltered from prevailing winds for reduced energy consumption and maximum freeze protection.
2. Locate waterer away from feeders to reduce the amount of feed dropped in waterer.
3. Avoid locating waterers in areas with a high water table. This may hinder protecting the waterline from freezing in cold climates.
4. Avoid locating waterers in areas where bedrock prevents digging a hole deep enough to obtain ground heat for waterline freeze protection.

HEIGHT OF WATERER

Mount waterer high enough that animals have to reach a little to drink. This arrangement minimizes the possibility of animal waste falling into the waterer.

MOUNTING WALL AND BASE

WARNING! DO NOT mount or set waterers with heaters on top of wooden or combustible bases. This may result in serious injury or death for personnel or animals or damage to structures.

Concrete Pipe - Models 730-10

and 760-10 have 10 inch high housings and are designed for installation on a poured concrete pad or in straight side or bell end concrete pipe (see installation diagrams). Concrete pipe usually can be obtained at your local concrete products manufacturer. Use 12" I.D. for Model 730-10 and 15" I.D. for Model 760-10.

Concrete pipe comes in four, six and eight foot lengths. Two sections of concrete pipe may be necessary to obtain depth for freeze protection. Concrete pipe is heavy, weighing approximately 100-130 lbs per foot. It's a good idea to verify that concrete pipe is available in your area prior to purchasing your waterers. Consult your local phone book for a source (look under "Concrete Products").

Concrete Pad - Models 730-10, 760-10, 730-24 and 760-24 are designed to mount on poured concrete bases. The waterer should be mounted on a level concrete base, free of sharp corners or edges. Surface of concrete mounting base must be flat or waterer housing will become distorted when bolted down and top cover may not latch. Concrete base needs to be a size and weight to prevent being moved or knocked over by animal. Waterer must be level when mounted on base or it will not operate properly.

Wall-mount Models 730-10C, 760-10C, 730-10W & 760-10W are designed to mount to a wall. Wall may be wood, metal or concrete. Wall must be strong and rigid so that animal cannot knock or dislodge waterer off wall (see "Specifications" table for weights of each model).

MOUNTING WATERER TO POURED CONCRETE BASE

Poured concrete base may be in form of a pad or may be elevated, in which case a circular or square form is required. Bolt circle dimensions are shown in drawing (see diagram "Bolt Circle Layout").

1. Mark concrete while still wet and insert 3/8" bent threaded rod or carriage bolts. Alternatively, mark concrete after it has cured and drill holes to accommodate 3/8" anchor bolts. Use stainless steel bolts. **DO NOT** use brass hold down bolts with aluminum housing waterers. Galvanic action will cause corrosion of housing.
2. Remove cross beam and drinking bowl cage from housing by removing screws at each end of cross beam (see diagram Fastening Screws).
3. Place hold down lugs over the bolts and secure with nuts. Mounting surface must be flat or waterer housing will become distorted when bolted down. Shim if necessary.
4. Caulk with all-weather sealant at outside base of waterer where housing and concrete base contact (see installation diagrams). This will eliminate air gaps. Air gaps can lead to water line freeze-up and increased energy consumption by heater.

Note: If top cover binds, the housing likely became distorted when it was bolted down to the concrete pad. This indicates that the pad is not level. To straighten housing, loosen one lug nut at a time until the top cover casting latches and unlatches easily. Shim under lug(s) that was causing the distortion in order to level housing. Remember to caulk around outside bottom of housing so there are no air gaps between housing and concrete pad (see installation diagram).

MOUNTING WATERER TO CONCRETE PIPE

1. Insert male end of pipe into ground so it is rigid and secure and cannot fall over or be knocked over by an animal
2. Locate waterer in female end of pipe. Waterer must be level. Shim to level if necessary.
3. Anchor waterer to concrete pipe so that waterer cannot dislodge from pipe by animal (see diagram "Concrete Pipe Installation").

4. After waterer is anchored to concrete pipe, fill groove between housing and pipe with a sand-cement grout. This will further anchor waterer to pipe and eliminate air gaps. Air gaps can lead to water line freeze-up and increased energy consumption by heater.

MOUNTING WATERER TO WALL

WARNING! WALL STRENGTH

Wall must be strong enough to support waterer and abuse of animal(s) using waterer. Wall must not break resulting in waterer coming off wall. Failure to comply may give animal(s) access to power supply and may result in serious injury or death to personnel or animals, or damage to structure.

The wall must be straight and strong so that waterer can not be dislodged by animal (see "Specifications" table for model weights).

1. Remove cross beam and drinking bowl cage by removing cross beam screws (see diagram "Fastening Screws").
2. Before marking holes on wall, attach bottom plate to housing using provided fasteners (see installation diagrams). Bottom plate and housing must be aligned.
3. When bringing utilities through bottom plate, remove utility hole plate. **DO NOT** remove utility hole plate unless bringing utilities into the bottom plate through 6" SCH 40 PVC (6.625" OD).
4. Mark holes on wall using housing as template. If bringing utilities from underneath, place housing (with bottom plate attached and utility hole plate removed) over 6" SCH 40 PVC pipe to properly locate bolt holes on wall. PVC pipe should extend no more than 1/2" through bottom plate into waterer. Marking bolt holes on wall requires two people, one to hold waterer and one to mark holes.
5. Use four 1/2" stainless steel bolts to bolt waterer to wall.
6. Reinstall cross beam and drinking bowl cage.
7. Seal underneath bottom plate around PVC Pipe with all-weather sealant to eliminate air gaps (see installation diagrams).

WATERLINE FREEZE PROTECTION

A combination of geothermal heat and Nelson's Waterline Insulation Accessory 1004 protect the waterline from freezing (see installation diagrams). Digging a deep hole below the waterer allows ground heat to rise and circulate around the water line. The ground heat in addition to Nelson's Water Line Insulation and the heater in the waterer serve to protect the waterline and the water in the drinking bowl from freezing. To determine your area's maximum frost depth ask a local concrete contractor, well driller or your area's Agricultural Extension Service.

Nelson Waterline Insulation Acc. # 1004 covers most of the vertical portion of the water line from the 90 degree elbow below ground up to the waterer. Leave 2" air gap between insulation and heater assembly in bottom of waterer (see installation diagrams). Fire retardant urethane foam conforms to UL 94 HF-1. Remove outer plastic skin before installation.

6" SCH 40 PVC Pipe (6.625 OD)

Installation of all wall mount models requires using 6" SCH 40 PVC Pipe. The PVC Pipe functions as a hole liner below ground and as a protective cover above ground. The PVC Pipe should extend no more than 1/2" through the bottom plate of the wall mount waterer models. Seal underneath waterer around PVC Pipe and bottom plate with all-weather sealant. Obtain 6" SCH 40 PVC Pipe (6.625" OD) locally.

WARNING! AIR GAPS

Seal air gaps as instructed in installation diagrams to prevent cold air from entering into waterer housing which may result in freeze-up, excessive energy consumption, and shortened heater and thermostat life.

Sealant. Apply an all-weather silicone sealant to seal small air gaps outside of housing where housing and concrete base meet on free-standing models. On wall-mount models seal 1) where housing and wall meet and 2) underneath where 6" SCH 40 PVC Pipe and bottom plate meet. (See installation diagrams).

Drain Pipe. Installation for free-standing models requires lining the hole below the concrete pad with drain pipe. Line the hole with PVC pipe or ADS corrugated, non-perforated pipe. Both are available locally. **DO NOT** extend drain pipe above concrete pad. (See installation diagrams).

Models 730-10W and 760-10W

In freezing climates, **DO NOT** bring waterline in through the back of waterer models 730-10W & 760-10W. Waterline freeze protection is almost impossible to accomplish because ground heat cannot be utilized. There are two exceptions:

1. The installation is a back-to-back installation, where two waterers with heaters are mounted back-to-back in adjacent stalls (Back-To-Back Installation diagram).
2. The waterer is mounted on a wall adjacent to a non-freeze room that will protect the waterline from freezing, such as a heated tack room.

See Back-To-Back Installation diagram on page 19.

WATER PRESSURE AND CONNECTION

Water Pressure. The control valve will operate on water pressures from 20 to 80 psi. Optimal pressure range is 40-60 psi. Consult a qualified plumber if your water pressure falls outside of this range.

Vertical Waterline.

1. The vertical portion of the waterline must be metal or rigid plastic to provide maximum freeze protection and to locate shut-off valve in proper location (see page 7). Diameter of vertical waterline should be 3/4" to 1". The larger the diameter the greater the freeze protection.
2. Flush waterline to remove foreign material before making final connection to the brass shut-off valve. If waterline is not thoroughly flushed, the inline filter will clog and the control valve may not seal, resulting in dripping and overflow.

Water Connection – Brass Shut-off Valve

Connect vertical waterline to the 1/4" male pipe thread on brass shut-off valve. An adapter will likely be necessary. **IMPORTANT:** Location of brass shut-off valve and water supply hose must be in accordance with diagram on page 7.

ELECTRICAL INSTALLATION & MAINTENANCE

WARNING! ELECTRICAL INSTALLATION

Use a licensed electrician to install and maintain the Waterer, so that you can be assured that you have complied with all national and local electrical codes and that you have not created a risk of electrocution or fire. Improper installation or maintenance may result in serious injury or death for personnel or animals or damage to structures.

A LICENSED ELECTRICIAN WILL DETERMINE:

A) Type and size of service wire, **B)** grounding procedure, and **C)** proper fusing of heater.

Ground Wire: The heating element is grounded to the waterer by a green ground screw at the factory. The ground wire from the power service should be secured to the waterer with the second green ground screw provided in the handy box. When using wire-nuts, follow instruction on wire-nut box. Tape wire nuts to wire to prevent loosening.

Fusing: Waterers must be individually fused.

DO NOT over fuse. Consult a licensed electrician. Heating rating @ 120 volts AC.

WATERER	HEATER#	WATTS	AMPS
MODEL 730	755	250	2.1
MODEL 760	785	325	2.7

Dedicated Circuits. Waterers must be on dedicated circuits. TURN POWER OFF after the Winter heating season when heaters are no longer needed (temperatures are consistently above freezing) or when performing maintenance on waterers.

ASSEMBLY

Filter In Waterer. A nylon water filter is packed separately with the control valve adjustment screw in a clear plastic bag stapled to the bowl cage. Insert nylon filter in water line after water lines have been flushed of debris. The filter prevents particles in water from fouling the control valve. It should be cleaned after first week of service, then as needed or annually thereafter. Check filter for debris if rate of water flow into drinking bowl slows.



Cold Water Filter. If your water contains large amounts of debris, and/or if you have a large number of waterers, install one large cold water filter at a convenient non-freeze location. Consult a licensed plumber.

Water Hammer Arresters. Water hammer occurs when the flow of water is instantaneously stopped by a closing valve. This sudden stop results in a pressure spike behind the valve which acts like a tiny explosion inside the pipe. This pressure spike will reverberate throughout the plumbing

system, rattling and shaking pipes, until it is absorbed. Normally, a sufficient pocket of air will absorb such a pressure spike, but if no pocket of air is present, expensive fixtures and appliances, such as waterers, within the plumbing line will be damaged as they are left to absorb the pressure spike. Water hammer arresters absorb the pressure spike and will preserve fixtures and waterers. Consult a licensed plumber on the need for water hammer arresters in waterlines.

Adjustment Screw For Control Valve. The control valve adjustment screw is located in the same clear plastic bag as the nylon water filter. The plastic bag is stapled to the bowl cage.

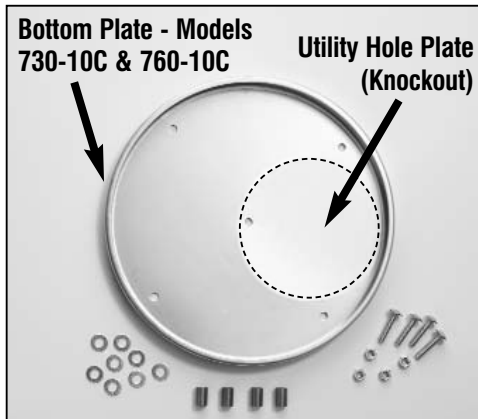
Counter Weight. For shipping purposes, counter weight has been packed separately, unassembled. Install counter weight after waterer has been mounted to base or wall (see diagram "Weight Assembly"). Remove four shipping pads on weight.

Tighten Screws. Tighten screws prior to utilization and then annually thereafter or as needed. (see diagram "Tightening Screws").

Bottom Plate – Wall-Mount Models 730-10W & 760-10W, 730-10C & 760-10C are shipped with a bottom plate unassembled. The bottom plate must be fastened to the housing. Fasten bottom plate before mounting waterer to wall. Four sets of fasteners are included. **DO NOT** remove utility hole plate unless inserting 6" SCH 40 PVC pipe no more than 1/2" through bottom plate into bottom of waterer. No air gap should exist between 6" SCH 40 PVC pipe and bottom plate (see installation diagrams).

Removing Utility Knockout Plate - Wall-Mount Models 730-10C and 760-10C

Utility knockout hole in bottom plate is sized for 6" SCH 40 PVC pipe (6.625" OD). **DO NOT** remove knockout unless inserting 6" SCH 40 PVC pipe no more than 1/2" through bottom plate into bottom of waterer. No air gap should exist between 6" SCH 40 PVC pipe



and bottom plate (see installation diagrams).

To remove utility knockout hole you will need straight bit screw driver or small chisel, a hammer, a file and two blocks at least 7/8" thick:

1. Lay plate open side down on two blocks, placing one block just outside the circle and the other block on the opposite side of the circle.
2. Place screw driver bit just inside circle, beginning half way between tabs and working toward tabs, and strike with the hammer just hard enough to break the tabs loose. Continue around circle.
3. When you have gone all the way around, you can move the circle back and forth until the two tabs break and the knockout slug comes out.
4. File the inside of the hole to remove burrs.
5. Fasten bottom plate to housing (see installation diagrams). You will want to place the plate on the riser pipe (6" SCH 40 PVC pipe) before marking bolt holes on wall. Marking bolt holes on wall requires two people, one to hold waterer and one to mark holes.

LATCHING & UNLATCHING TOP COVER

Round Models. To latch cover to housing place top cover on housing so that all three cover clips are inside of housing. Rotate clockwise until cover clip catches on the latch. Pull up on cover to verify cover is secured to the housing. To unlatch cover from housing press down on brass latch button on housing while rotating cover counter clockwise. Lift cover off.

(Continued on next page)



- To Unlatch:**
1. Press brass button down and
 2. rotate cover.
 3. Lift up on cover.

Wallmount models. To latch top cover, angle cover so that the two rear clips on cover catch the hold down fixtures on the back of the waterer housing. Bring front of cover straight down so that cover clip in front catches latch on front of housing and secures to the housing. Pull up on cover to verify it is secured to the housing. To unlatch cover from housing press down on brass latch button on front of housing and lift front of cover up and then pull forward.

To Unlatch:

1. Press brass button down and
2. Lift up on cover.
3. Pull cover forward.



WARNING! TOP COVER, DRINKING BOWL, & BOTTOM PLATE

Drinking bowl should be in waterer and top cover latched to waterer housing at all times unless personnel are at waterer performing maintenance such as cleaning, inspecting, or replacing parts. Bottom cover should be permanently fastened to housing. Failure to comply may give animals access to power supply and may result in serious injury or death to personnel or animals or damage to structure.

ADJUSTMENTS

WARNING! Always turn off power when using a tool to service or maintain waterer to eliminate risk of electrocution.

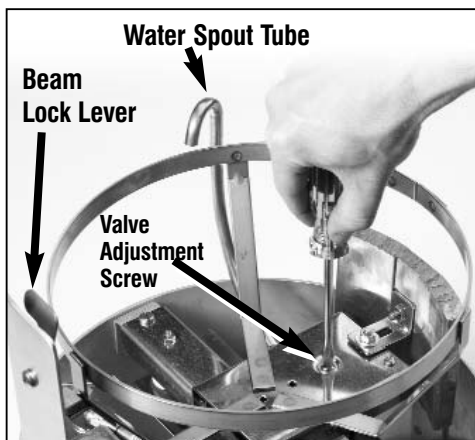
Control Valve Adjustment Screw

1. Remove top cast aluminum cover.
2. Lock the beam lock lever. Beam lock lever prevents the beam from pivoting and opening the valve.
3. Remove drinking bowl.
4. Open the brass shut-off valve.
5. Using coin or screwdriver, turn control valve adjustment screw (3/8" stainless steel screw in brass bushing) until a

very small stream flows from the water spout tube and breaks-up into drops about 3" below tube outlet. Then turn control valve adjustment screw 1/4 turn counter-clockwise which will cause water to stop flowing.

6. Replace drinking bowl, release beam lock lever, and observe water entering bowl.

Note: If, after initial adjustment, water does not completely shut-off and drips, lock the beam lock lever and turn the control valve adjustment screw another 1/4 turn counter-clockwise. Continue this process at 1/4 turn intervals until water shuts-off completely after refilling.



Rate of Flow - Brass Shut-Off Valve

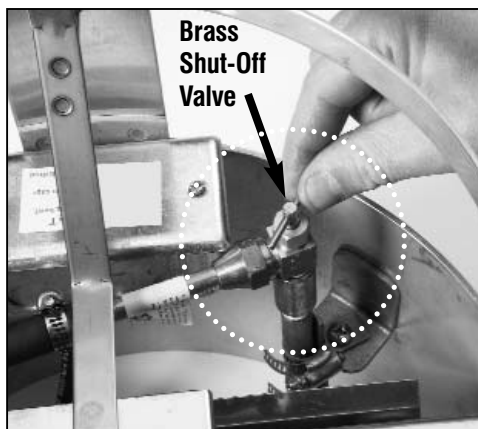
The brass shut-off valve has two functions.

1. to regulate rate of water flow into drinking bowl and
2. to shut-off water supply when desired.

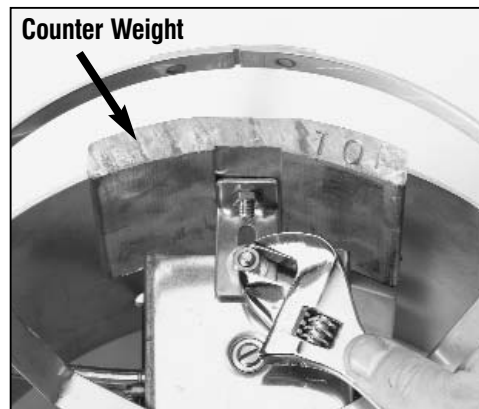
The brass shutoff valve should be opened 1 to 3 turns (or more, depending on water pressure) for normal operation. Waterer should not swirl out of bowl when refilling.

Note: If water seeps from top of brass shut-off valve, tighten packing nut located below valve handle on valve stem. Tighten no more than necessary to stop leakage.

Adjust Water Level In Drinking Bowl.



The level of water in the drinking bowl can be controlled by changing the position of the counter weight. Normal water level is about 2-1/2 inches from bottom of the bowl. Level of water in bowl may be raised or lowered (total variation about 1") by moving weight toward or away from cross beam. Moving weight away from cross beam raises water level as it then requires more water in bowl to balance beam. To change position to weight, loosen nut and slide to desired position. Tighten nut making certain weight is square with beam. Weight should not touch insulation or anything which would prevent free movement of beam.



WARRANTY

Nelson Manufacturing Company will repair or, at its option, replace without charge, any parts found defective upon examination at the factory if returned within the guarantee period, transportation charges prepaid. Replacement shipment will be made transportation charges prepaid. Nelson Waterers are guaranteed against defects in workmanship and/or materials for one year. Nelson heaters and thermostats are guaranteed against defects in workmanship and/or materials for three years.

CONTACT NELSON FOR INFORMATION AND GUIDANCE

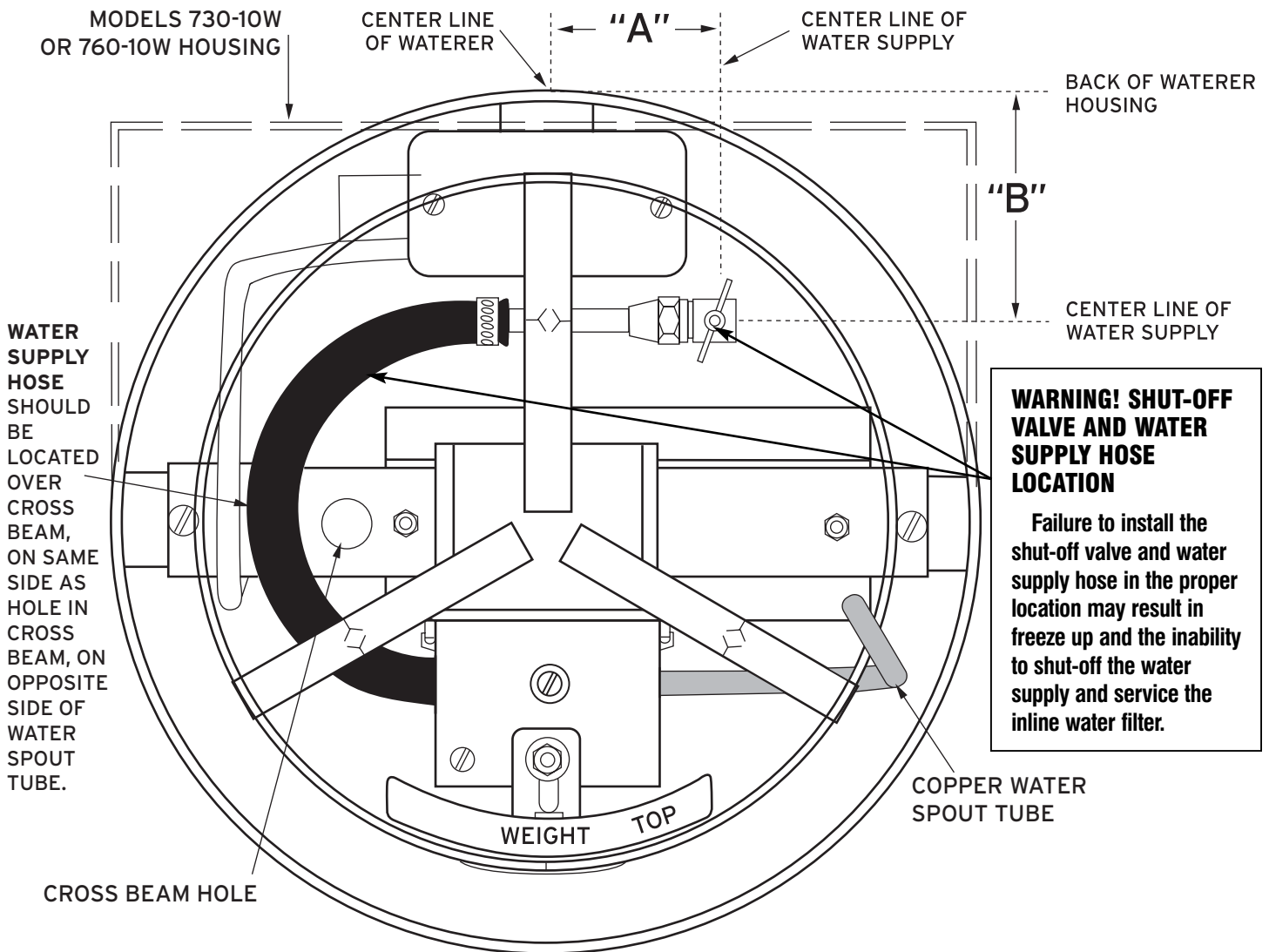
If you need help concerning installation or maintenance, phone Nelson's Customer Service Department. Contact Nelson to order waterers, parts, parts lists, maintenance guides, installation instructions, sales brochures, and other helpful information.

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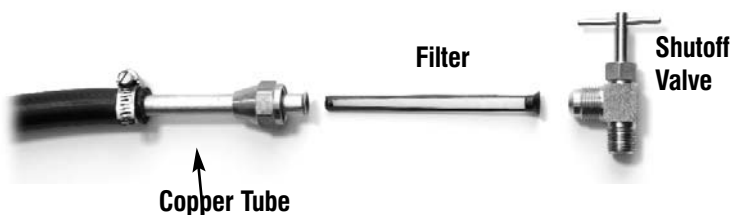
Location of Water Supply Hose, Shut-Off Valve & Filter

TOP VIEW COVER AND BOWL REMOVED



WATER FILTER LOCATION

- Flush waterlines before inserting filter and using waterers. If waterline is not completely flushed of debris, filter may clog and control valve may not function properly resulting in dripping and overflow.
- Install a large cold water filter in a non-freeze location if your water contains a lot of debris and/or if you have a large number of waterers.
- **DO NOT** bend/crimp copper tube leading to brass shut-off valve.

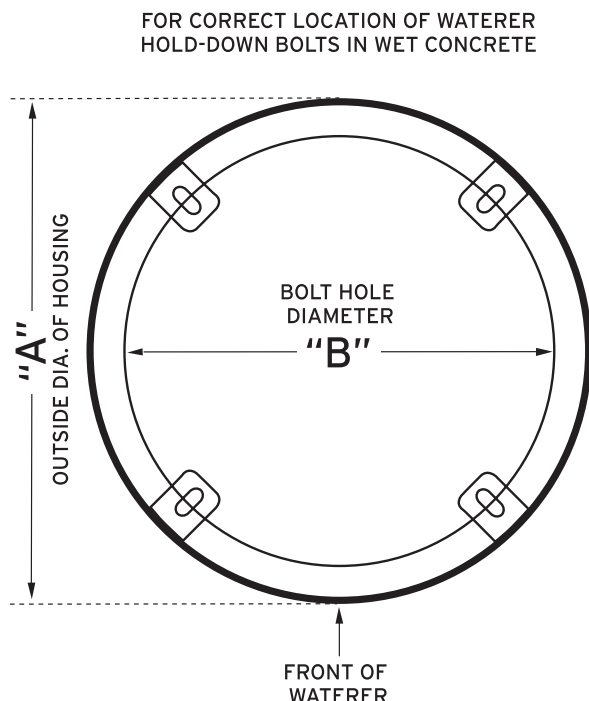


BRASS SHUT-OFF LOCATION

MODEL	"A"	"B"
730 - 10	3"	3-1/2"
730 - 10W	4-1/2"	3-1/2"
730 - 10C	3"	3-1/2"
730 - 24	3"	3-1/2"
760 - 10	3"	4-1/2"
760 - 10W	4-1/2"	4-1/2"
760 - 10C	3"	4-1/2"
760-24	3"	4-1/2"

TOP OF 1/4" FPT FITTING FOR CONNECTING BRASS SHUT-OFF VALVE ON WATER SUPPLY LINE MUST BE SEVEN INCHES (7") BELOW TOP OF HOUSING ON ALL MODELS.

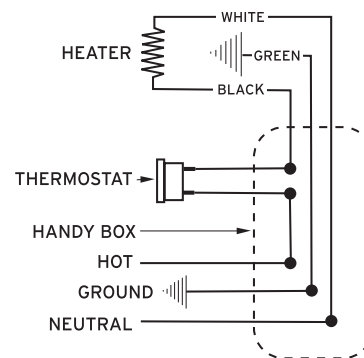
Bolt Circle Layout



MODE	"A"	"B"
730 - 10	13-1/4"	11"
730 - 24	13-1/4"	11"
760 - 10	16"	13-5/8"
760 - 24	16"	13-5/8"

EFFECTIVE MAY, 2006 LUGS ARE WELDED TO THE INSIDE OF HOUSING FOR ALL FREE STANDING MODELS.

Heater Wiring Diagram



WARNING! ELECTRICAL INSTALLATION & MAINTENANCE

Use a licensed electrician to install and maintain the Waterer, so you can be assured that you have complied with all national and local electrical codes and that you have not created a risk of electrocution or fire. Improper installation or maintenance may result in serious injury or death for personnel or animals or damage to structures.

A LICENSED ELECTRICIAN WILL DETERMINE:

A) Type and size of service wire, B) grounding procedure, and C) proper fusing of heater.

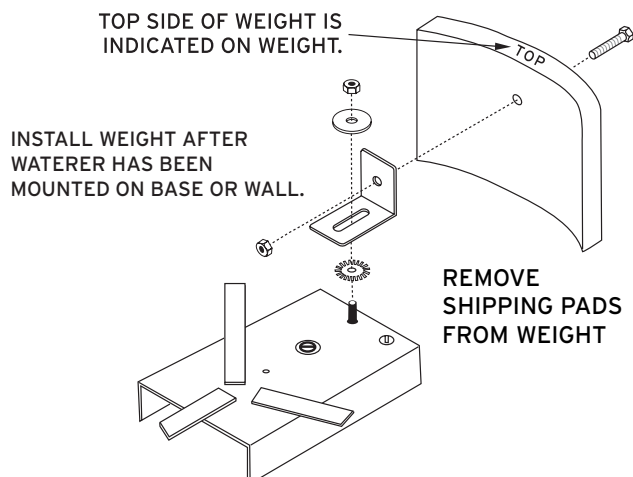
GROUND WIRE: The heating element is grounded to the waterer by a green ground screw at the factory. The ground wire from the power service should be secured to the waterer with the second green ground screw provided in the handy box. When using wire-nuts, follow instruction on wire-nut box. Tape wire nuts to wire to prevent loosening.

FUSING: Waterers must be individually fused. Do not over fuse. Consult a licensed electrician. Heating rating @ 120 volts AC.

WATERER	WATTS	AMPS	HEATER #
Model 730	250	2.1	755
Model 760	325	2.7	785

DEDICATED CIRCUITS - Waterers must be on dedicated circuits. TURN POWER OFF after the Winter heating season when heaters are no longer needed (temperatures are consistently above freezing) or when performing maintenance on waterers.

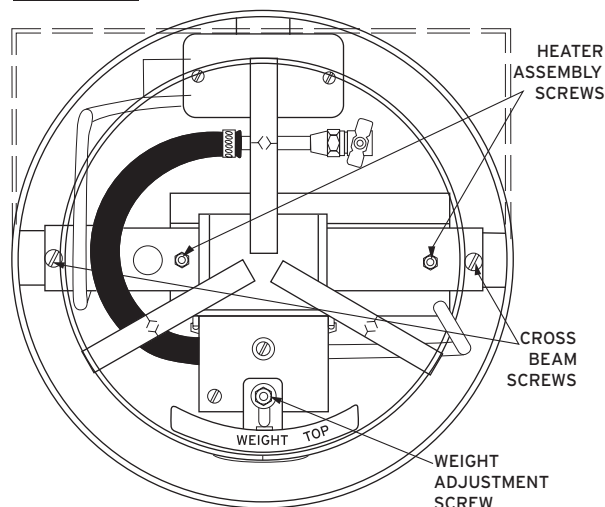
Weight Installation



Tighten Screws

TOP VIEW: COVER & BOWL REMOVED

IMPORTANT: TIGHTEN SCREWS IN TOP COVER (NOT SHOWN)

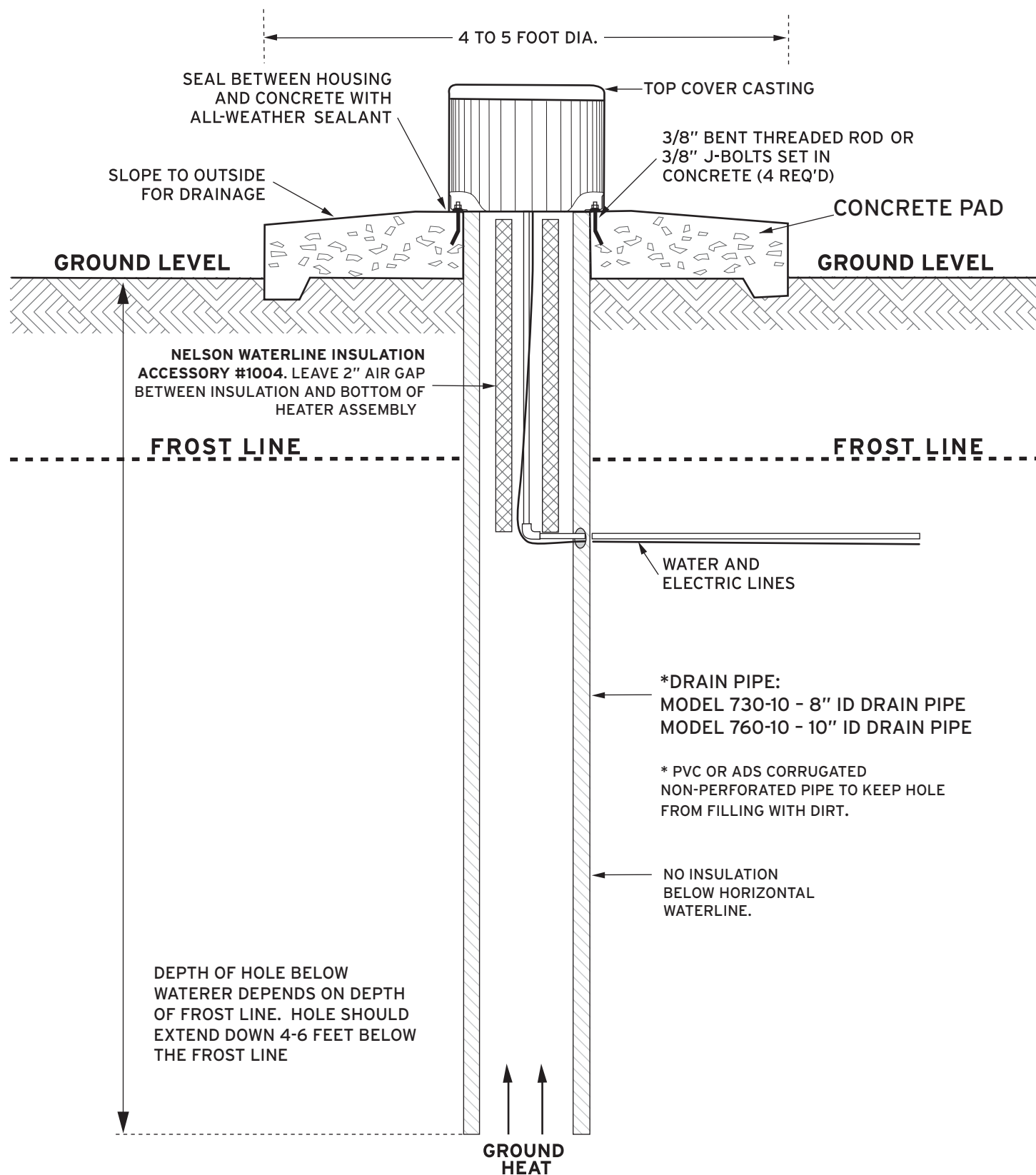


WARNING! USE CARE NOT to spill water on heating element. Water on heating element reduces heater life and may lead to freeze-up. Keep area below drinking bowl as dry and clean as possible.



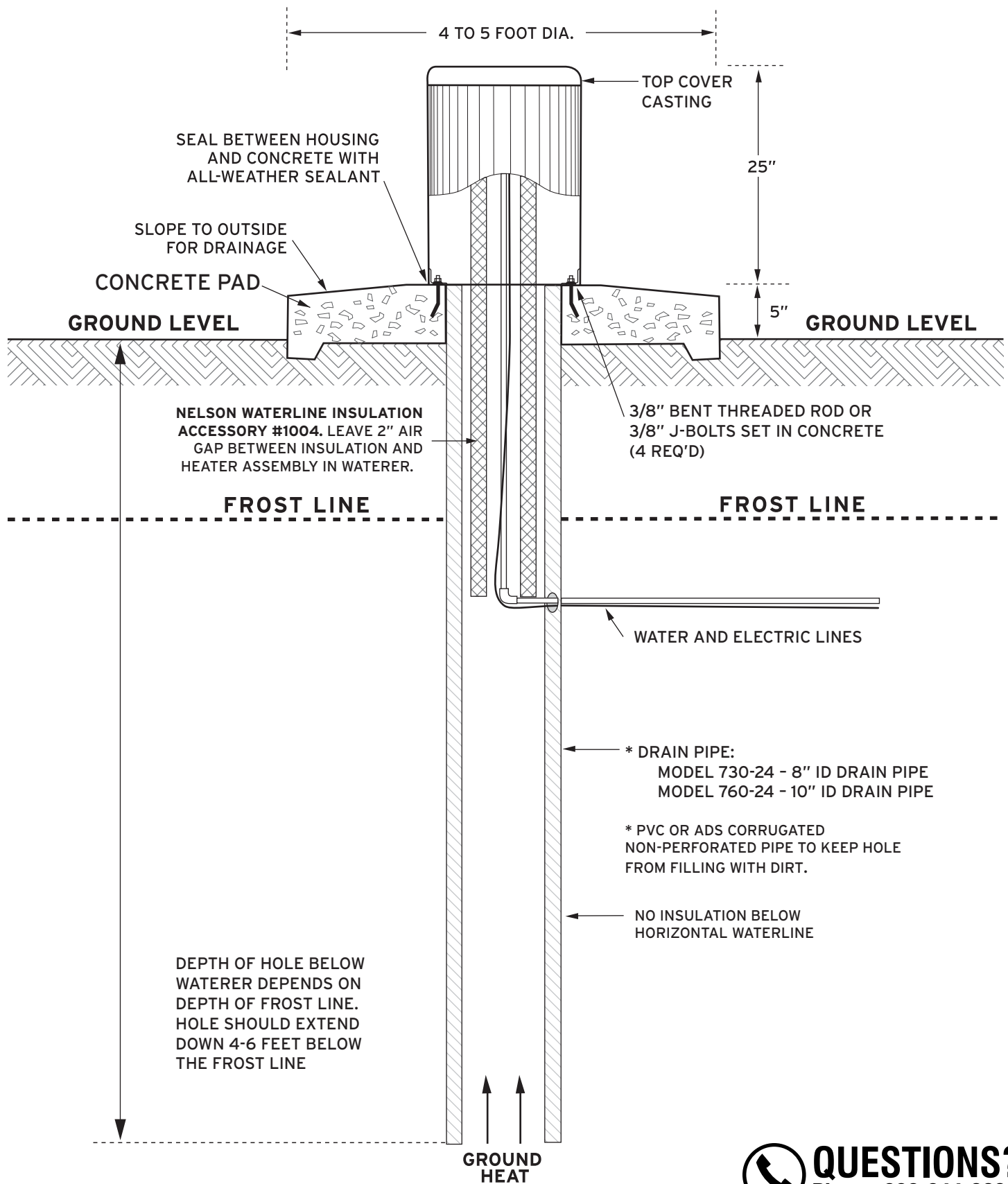
QUESTIONS?
Phone: 888-844-6606

Models 730-10 & 760-10 With Heater Mounted on Concrete Pad

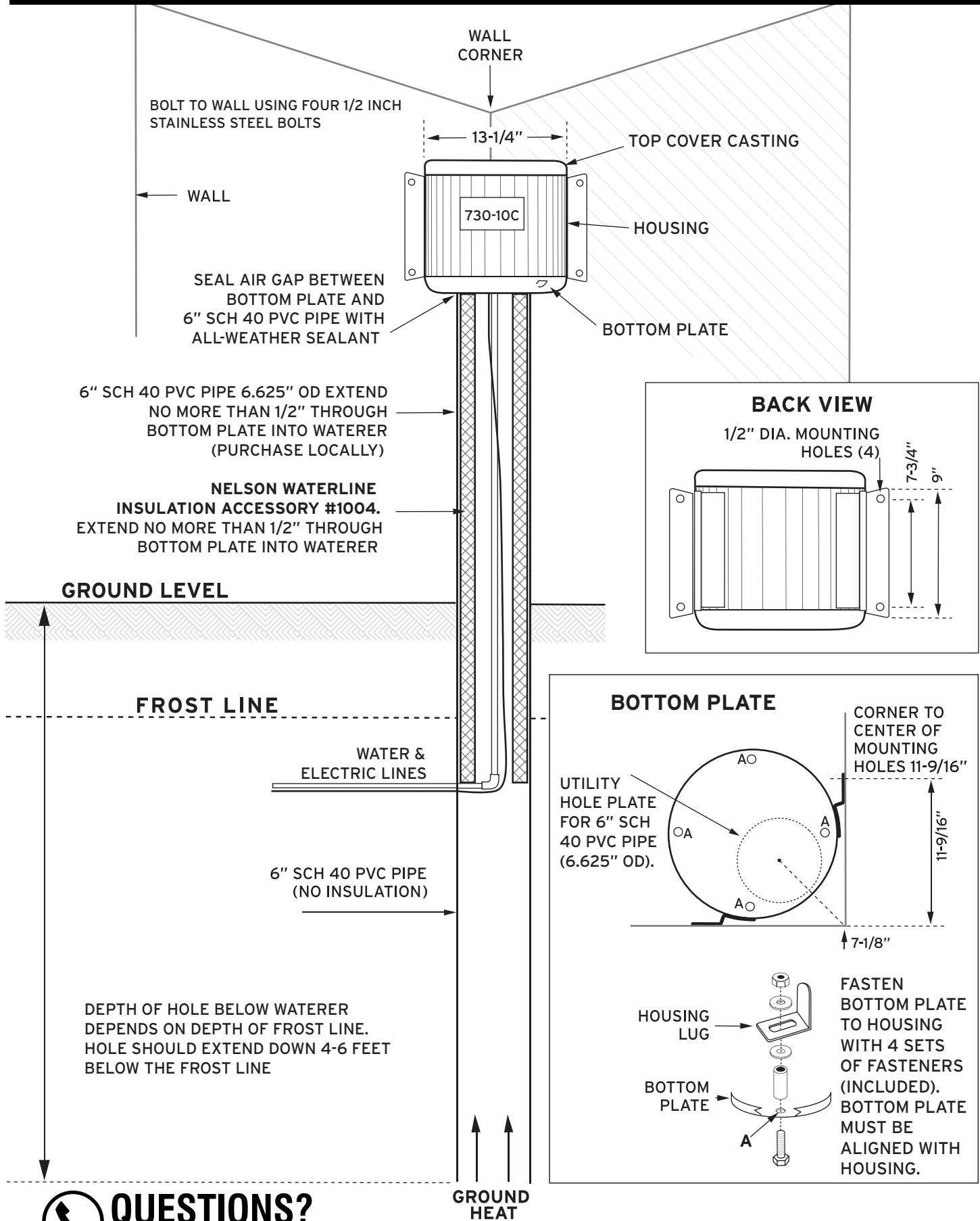


QUESTIONS?
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Model 730-24 & 760-24 With Heater Mounted On Concrete Pad

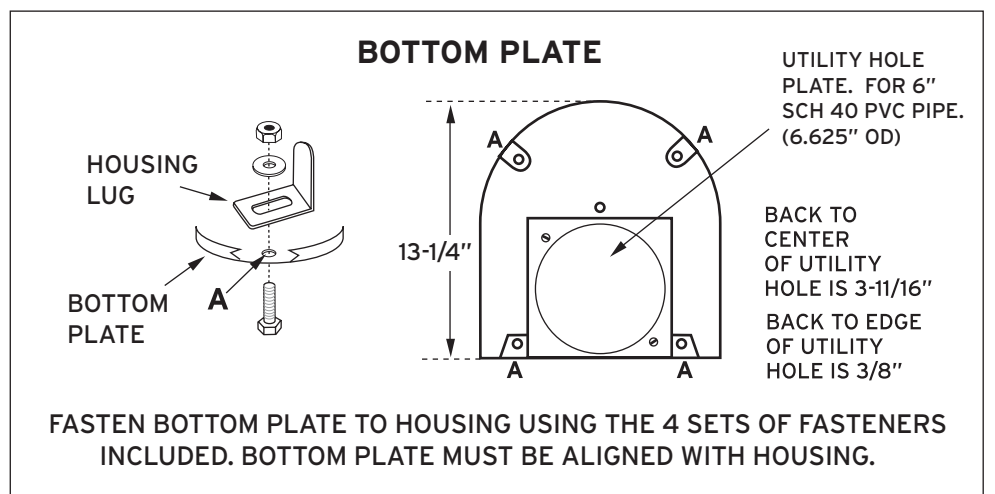
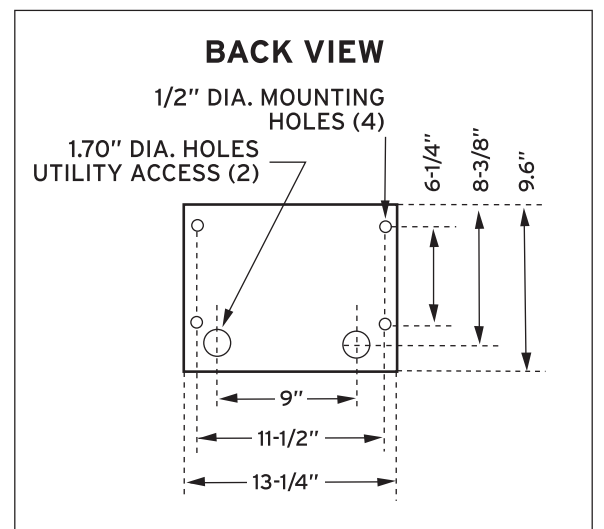
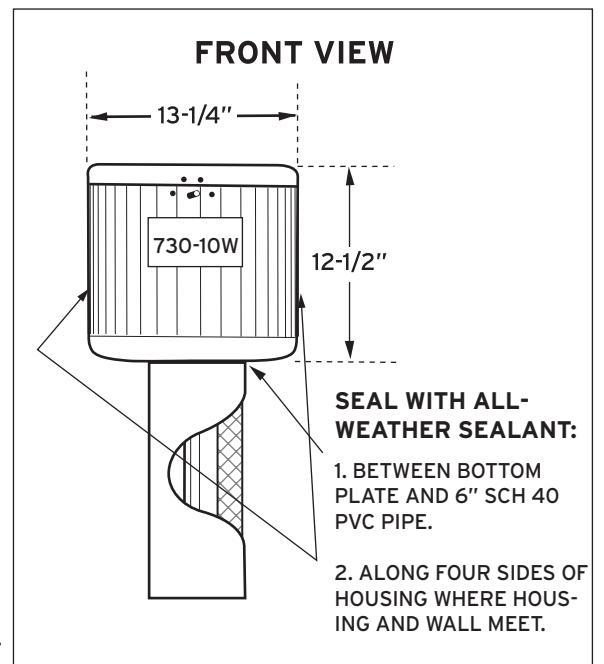
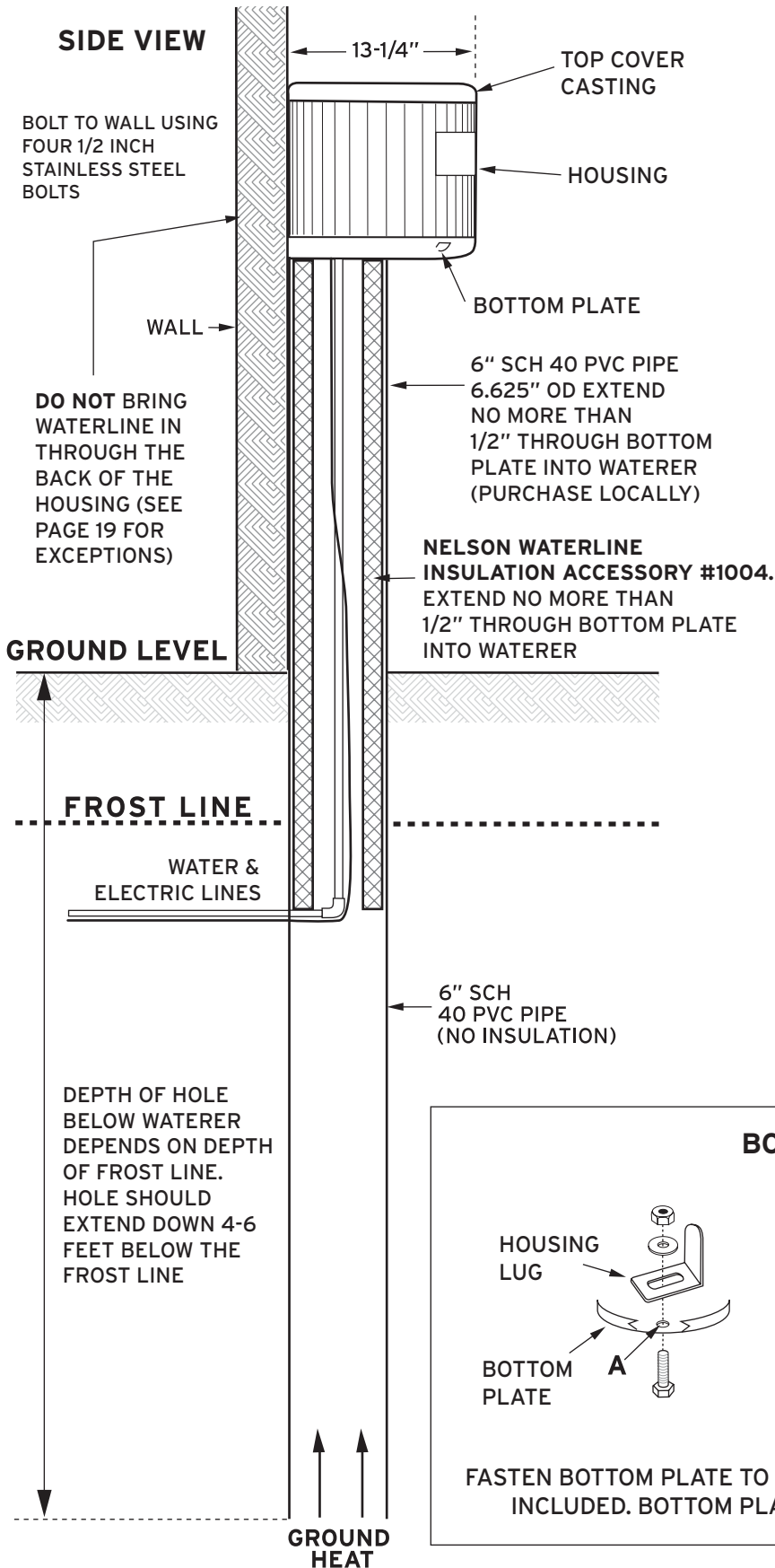


Model 730-10C Corner Wall-Mount With Heater



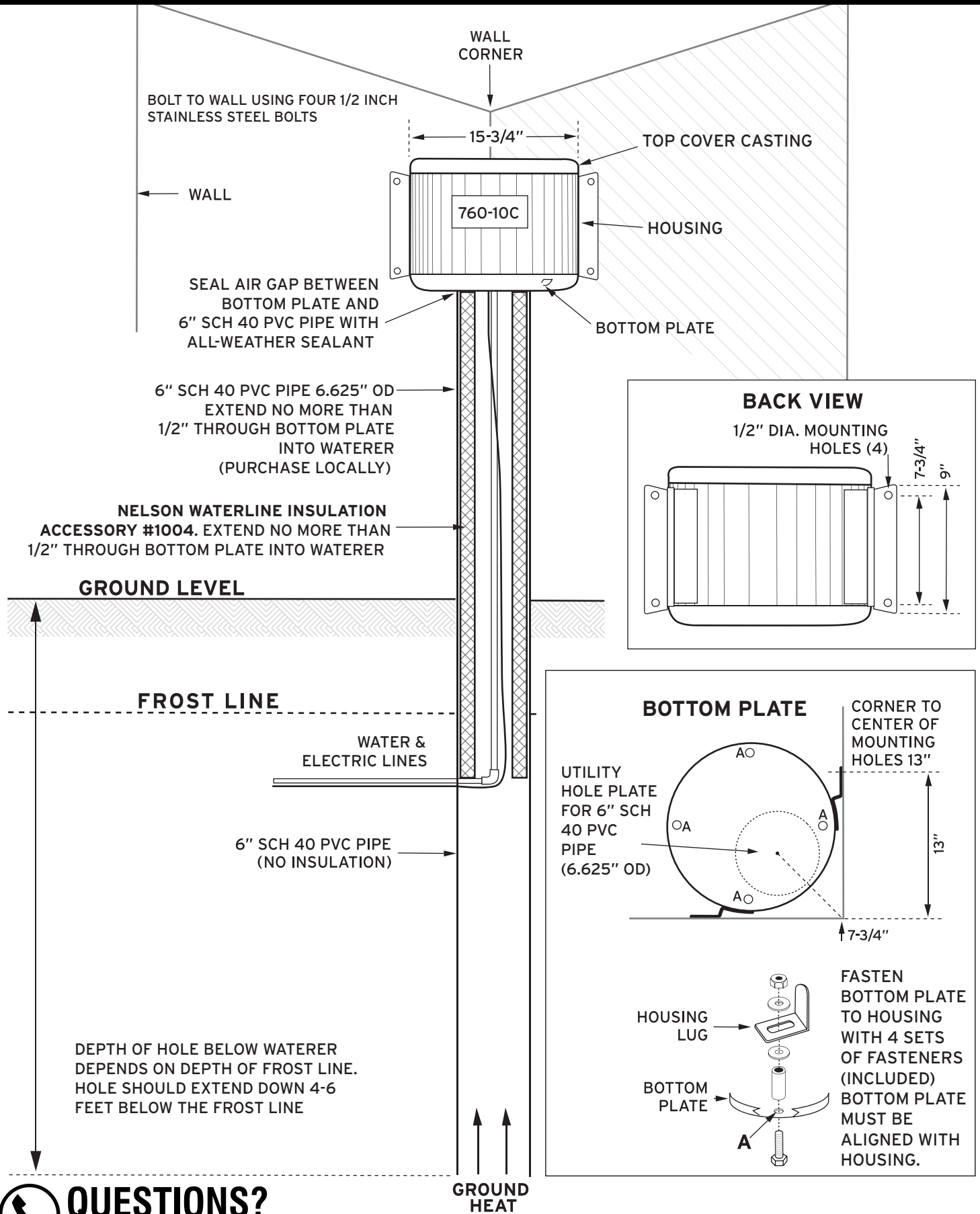
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Model 730-10W Wall-Mount With Heater



QUESTIONS?
Phone: 888-844-6606

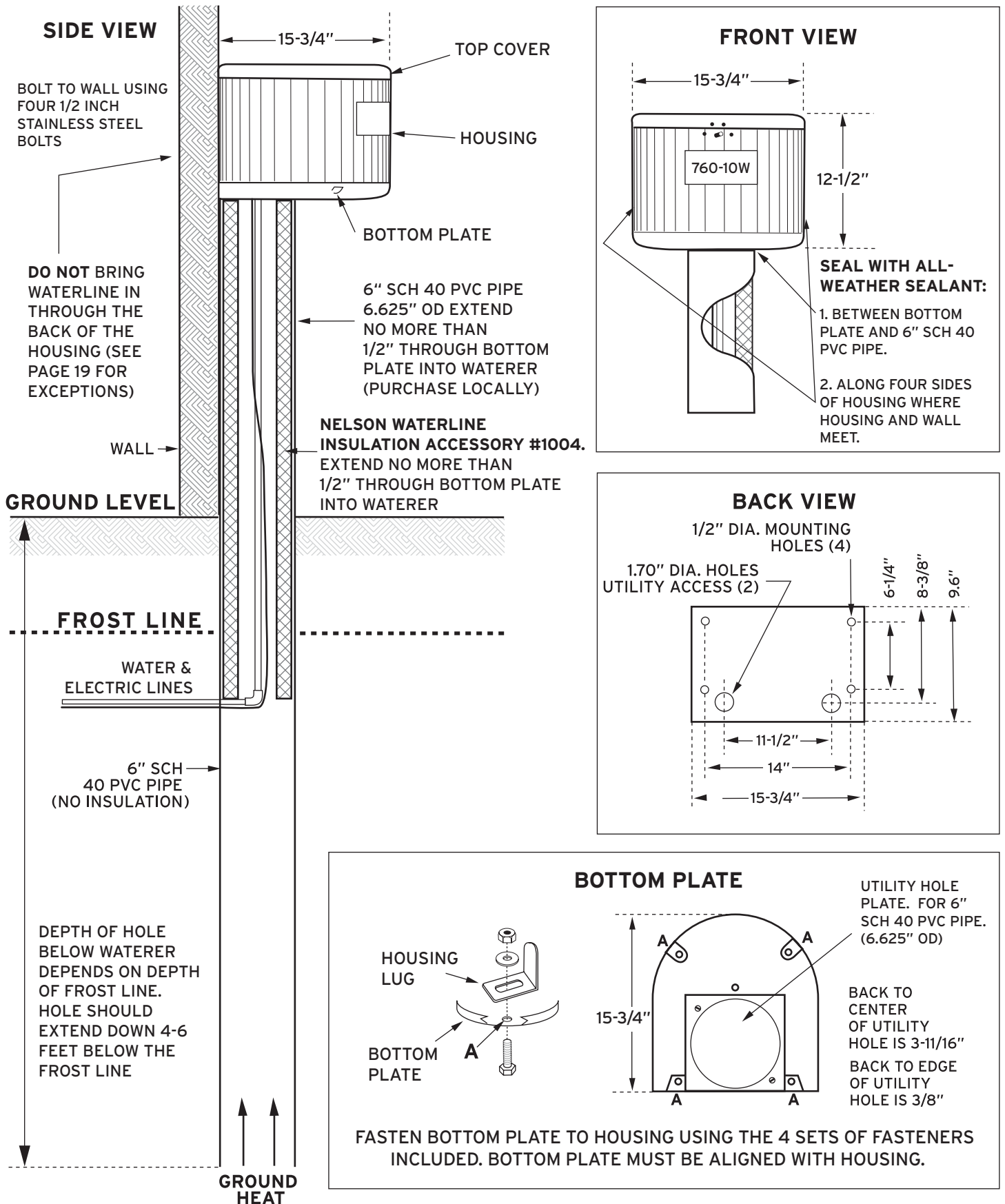
Model 760-10C Corner Wall-Mount With Heater



QUESTIONS?

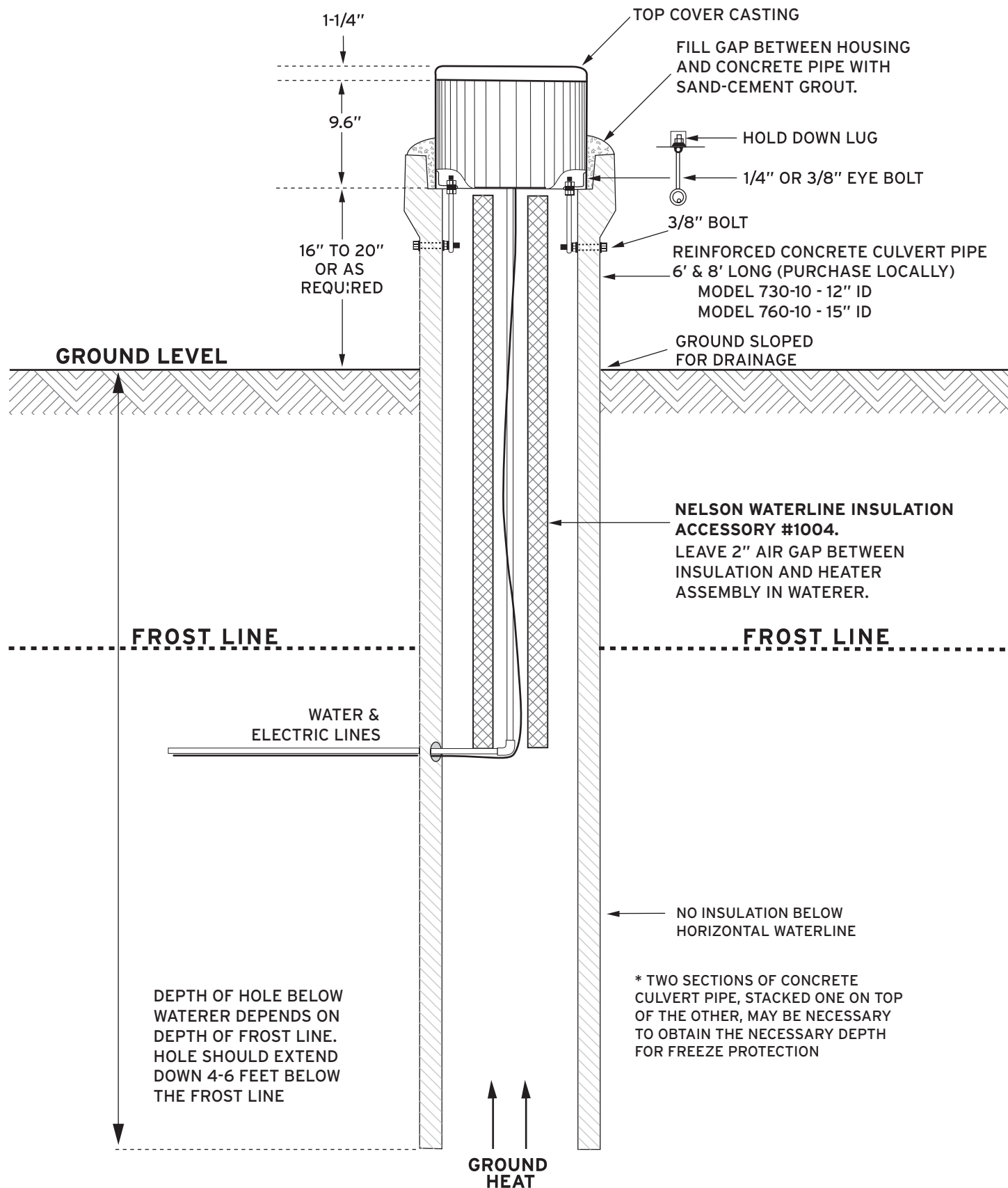
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Model 760-10W Wall-Mount With Heater



 **QUESTIONS?**
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Models 730-10 & 760-10 In Concrete Pipe With Heater



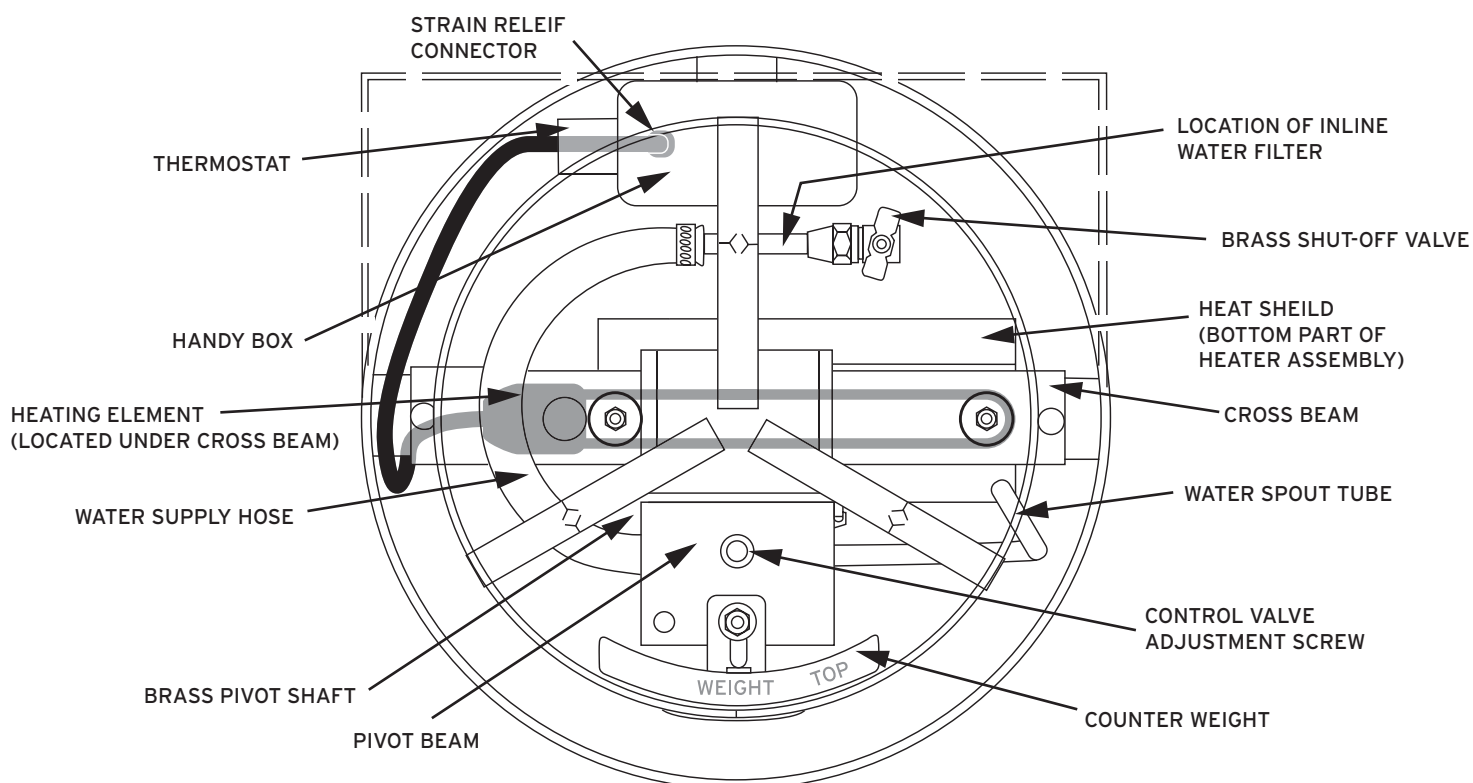
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Specifications

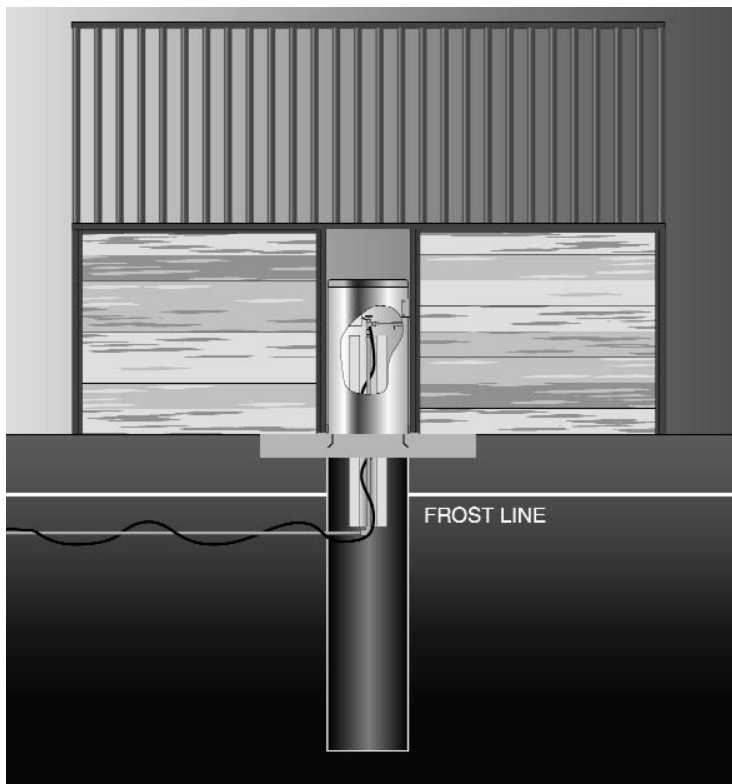
Model Number	Style	Housing Material	Approx. W x H	Weight	Optional Heater	Amps
730-10A	Free-Standing	Aluminum	13" x 11"	24 lb	250 Watt	2.1
730-10S	Free-Standing	Stainless Steel	13" x 11"	32 lb	250 Watt	2.1
730-24A	Free-Standing	Aluminum	13" x 25"	32 lb	250 Watt	2.1
730-24S	Free-Standing	Stainless Steel	13" x 25"	51 lb	250 Watt	2.1
730-10WA	Wall-mount	Aluminum	13" x 11"	28 lb	250 Watt	2.1
730-10WS	Wall-mount	Stainless Steel	13" x 11"	38 lb	250 Watt	2.1
730-10CA	Wall-mount	Aluminum	13" x 11"	27 lb	250 Watt	2.1
730-10CS	Wall-mount	Stainless Steel	13" x 11"	36 lb	250 Watt	2.1
760-10A	Free-Standing	Aluminum	16" x 11"	30 lb	325 Watt	2.7
760-10S	Free-Standing	Stainless Steel	16" x 11"	38 lb	325 Watt	2.7
760-24A	Free-Standing	Aluminum	16" x 25"	39 lb	325 Watt	2.7
760-24S	Free-Standing	Stainless Steel	16" x 25"	62 lb	325 Watt	2.7
760-10WA	Wall-mount	Aluminum	16" x 11"	36 lb	325 Watt	2.7
760-10WS	Wall-mount	Stainless Steel	16" x 11"	47 lb	325 Watt	2.7
760-10CA	Wall-mount	Aluminum	16" x 11"	32 lb	325 Watt	2.7
760-10CS	Wall-mount	Stainless Steel	16" x 11"	43 lb	325 Watt	2.7

Waterer Components - Top Cover & Bowl Removed

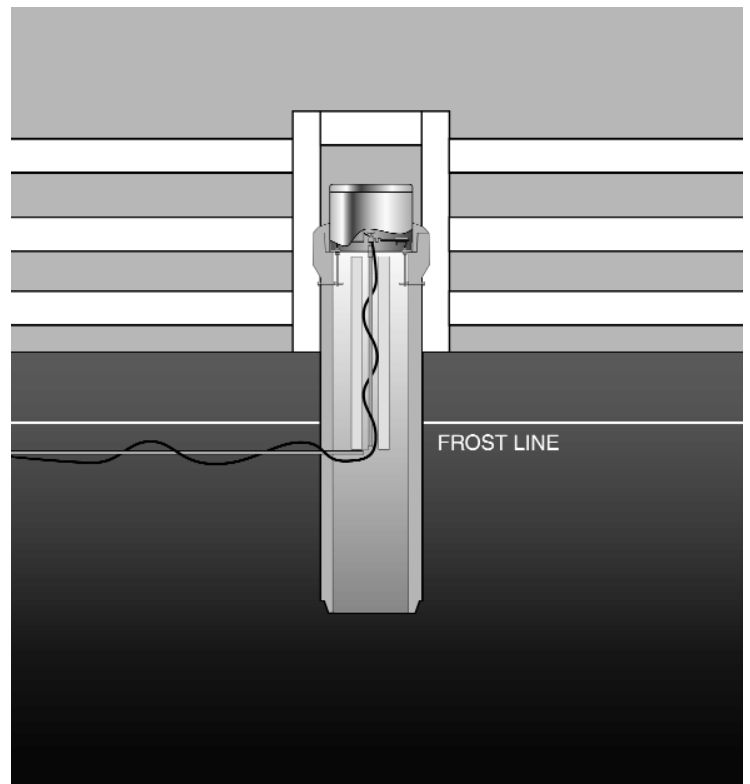


OTHER INSTALLATION IDEAS

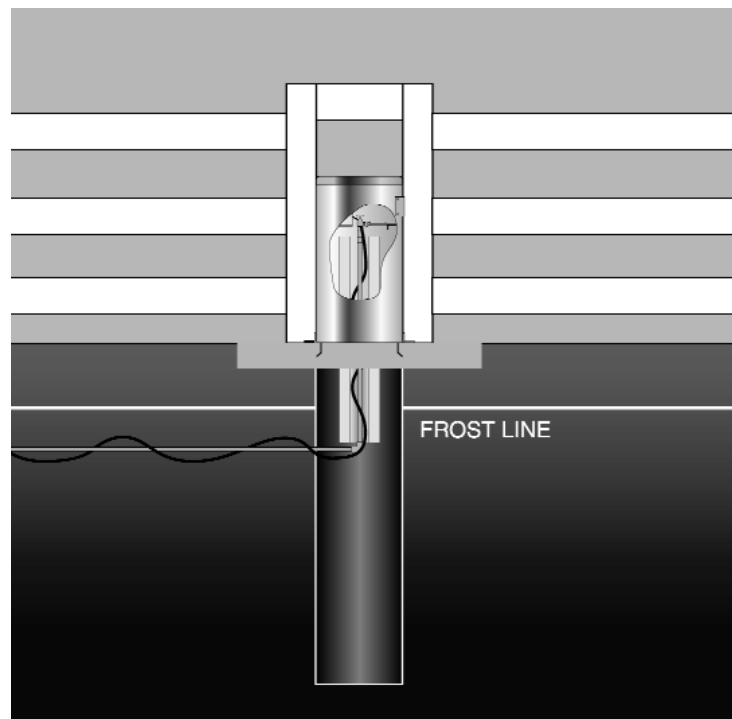
WATERER BETWEEN STALLS



WATER IN CONCRETE PIPE IN FENCE LINE



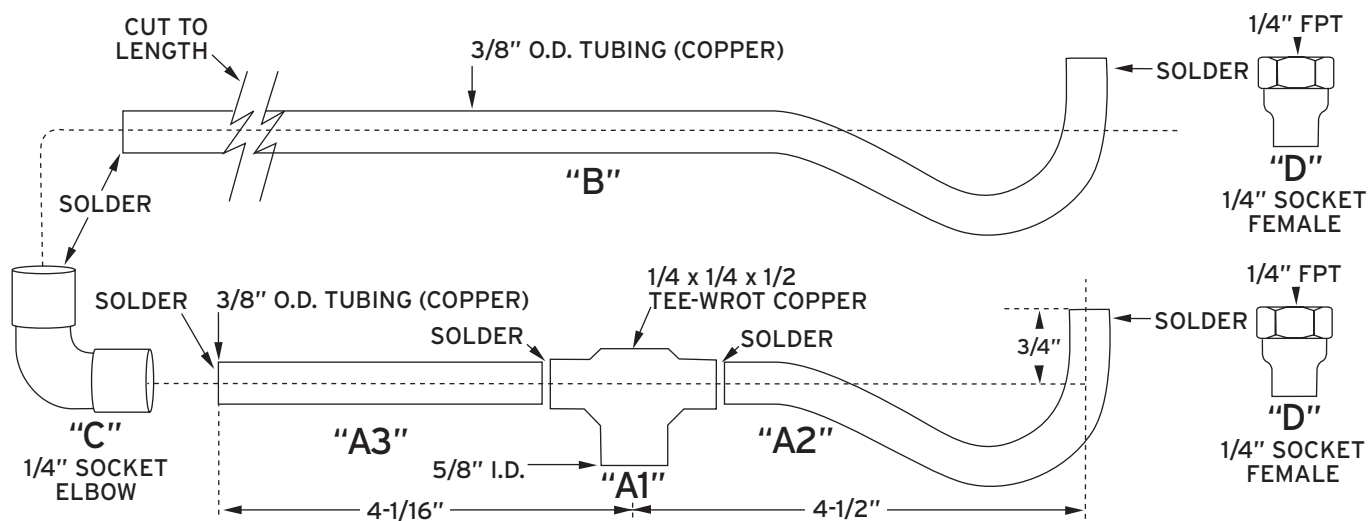
WATERER BETWEEN FENCE LINE



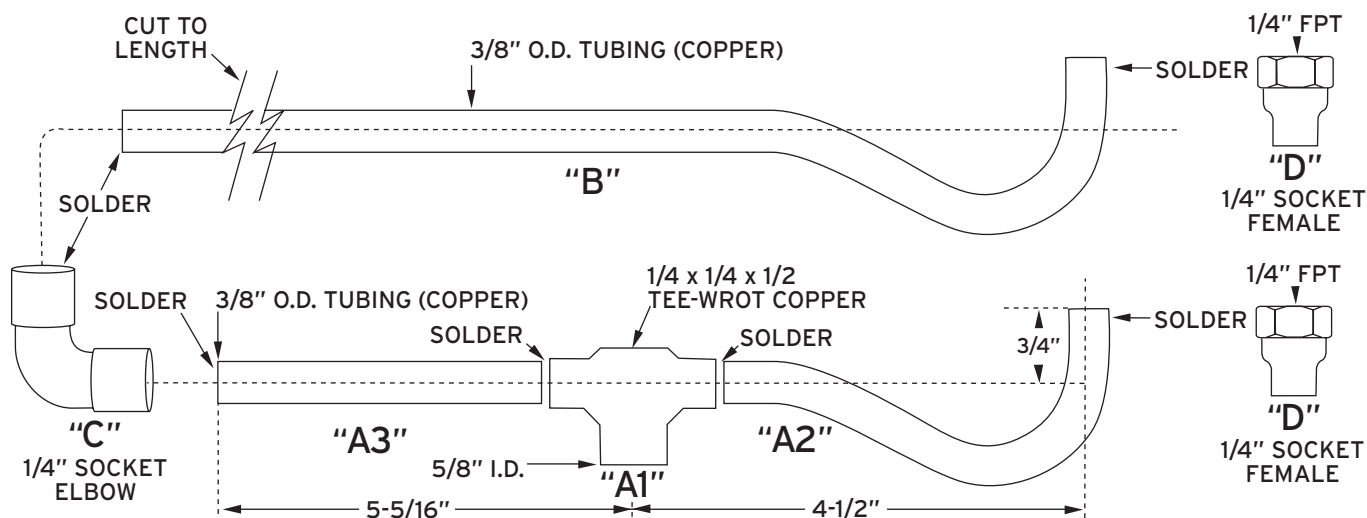
BACK-TO-BACK PLUMBING KIT INSTRUCTIONS

1. Installation must be made by a qualified plumber in accordance with all national and local building codes.
2. Solder female sockets (D) to hooks (A2 & B). Threaded end of female socket will fasten to 1/4 inch male pipe thread of brass shut-off valve provided with each waterer.
3. Solder short "hook" (A2) and straight length (A3) to tee (A1), taking care to orient the 5/8" opening in tee (A1) properly. Hole in tee should be down for water supply coming from below into 1st waterer. Hole in "hook" should be up to connect to the brass shut-off valve. For water supply brought in through back of 1st waterer, hole in tee (A1) should be perpendicular to hole in short hook (A2).
4. Taking care to have riser pipe (water supply line) at proper height, place tee (A1) on riser. Do not solder. Consult waterer installation diagram "Location Of Water Supply Inlet". Failure to locate water supply inlet properly may result in the shut-off valve being inaccessible to user and waterers not functioning properly.
5. Insert long hook (B) (hook first) through hole in back of 1st waterer through wall into the back of the 2nd waterer.
6. Locate the proper location for brass shut-off valve connection in 2nd waterer to determine length of long hook (B) needed.
7. Mark length of long hook (B) needed and remove all plumbing kit parts from waterers.
8. Cut long hook (B) for proper sizing according to mark.
9. Complete assembly by soldering in elbow (C) to long hook (B) and straight length end (A3), again taking care to orient the long hook properly so brass shut-off valve in 2nd waterer is positioned according to installation instructions. Insert assembly into waterers and solder tee (A1) to water supply line.

ACCESSORY # 1073 FOR MODEL 730-10W



ACCESSORY # 1076 FOR MODEL 760-10W

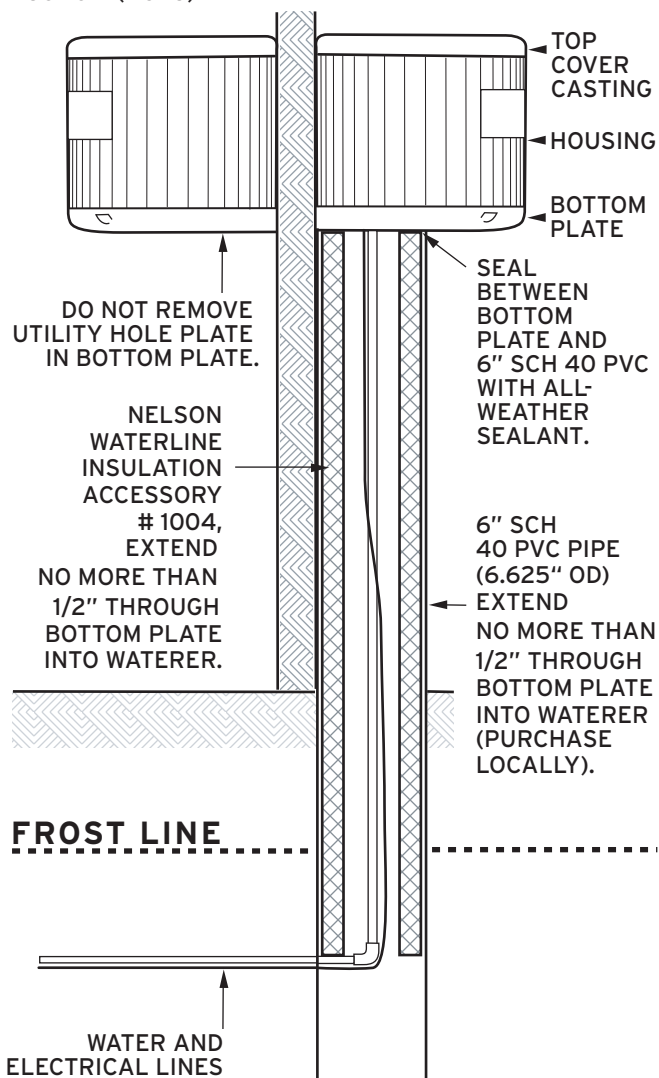


Back-To-Back Installation Models 730-10W & 760-10W

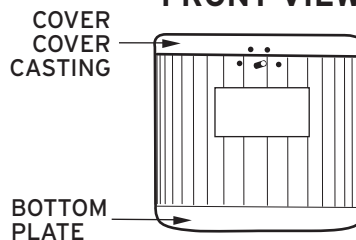
ALSO CONSULT DIAGRAMS:

730-10W (PG 12) &
760-10W (PG 16)

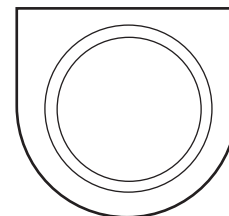
SIDE VIEW



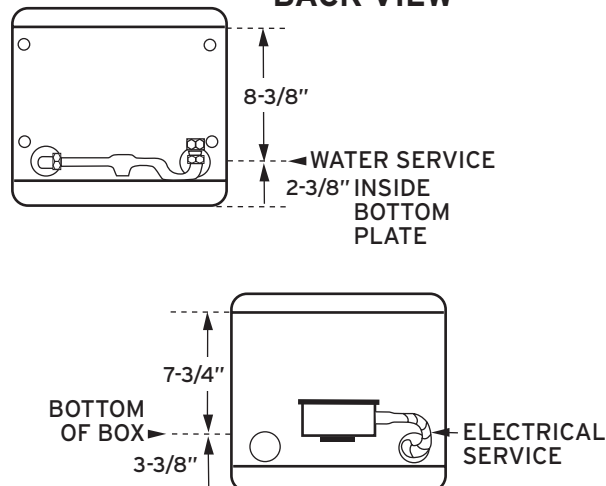
FRONT VIEW



TOP VIEW



BACK VIEW



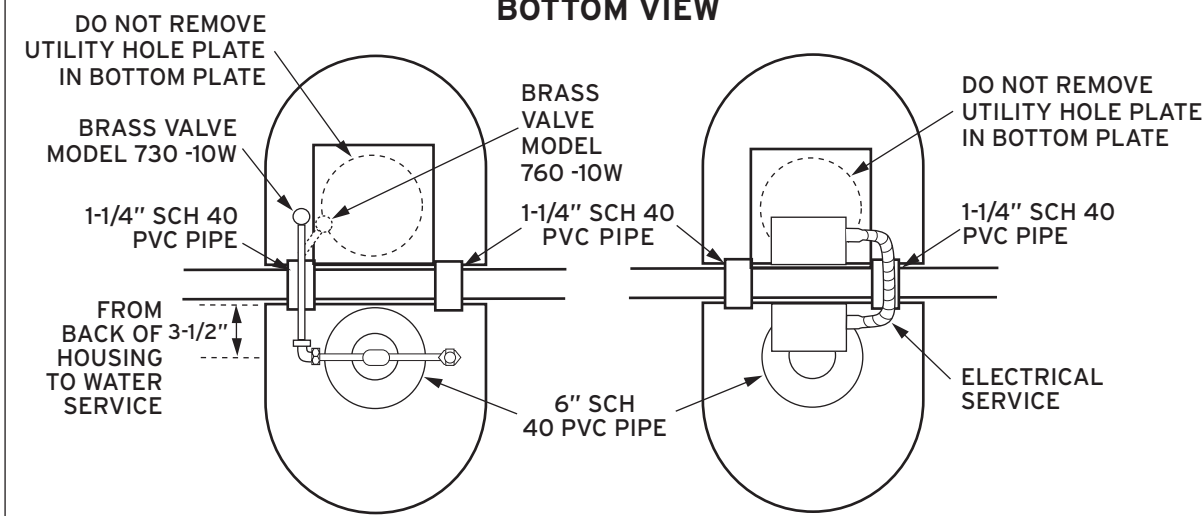
DO NOT BRING WATERLINE IN THROUGH THE BACK.

In freezing climates, DO NOT bring waterline in through the back of waterer models 730-10W & 760-10W. Waterline freeze protection is almost impossible to accomplish because ground heat cannot be utilized.

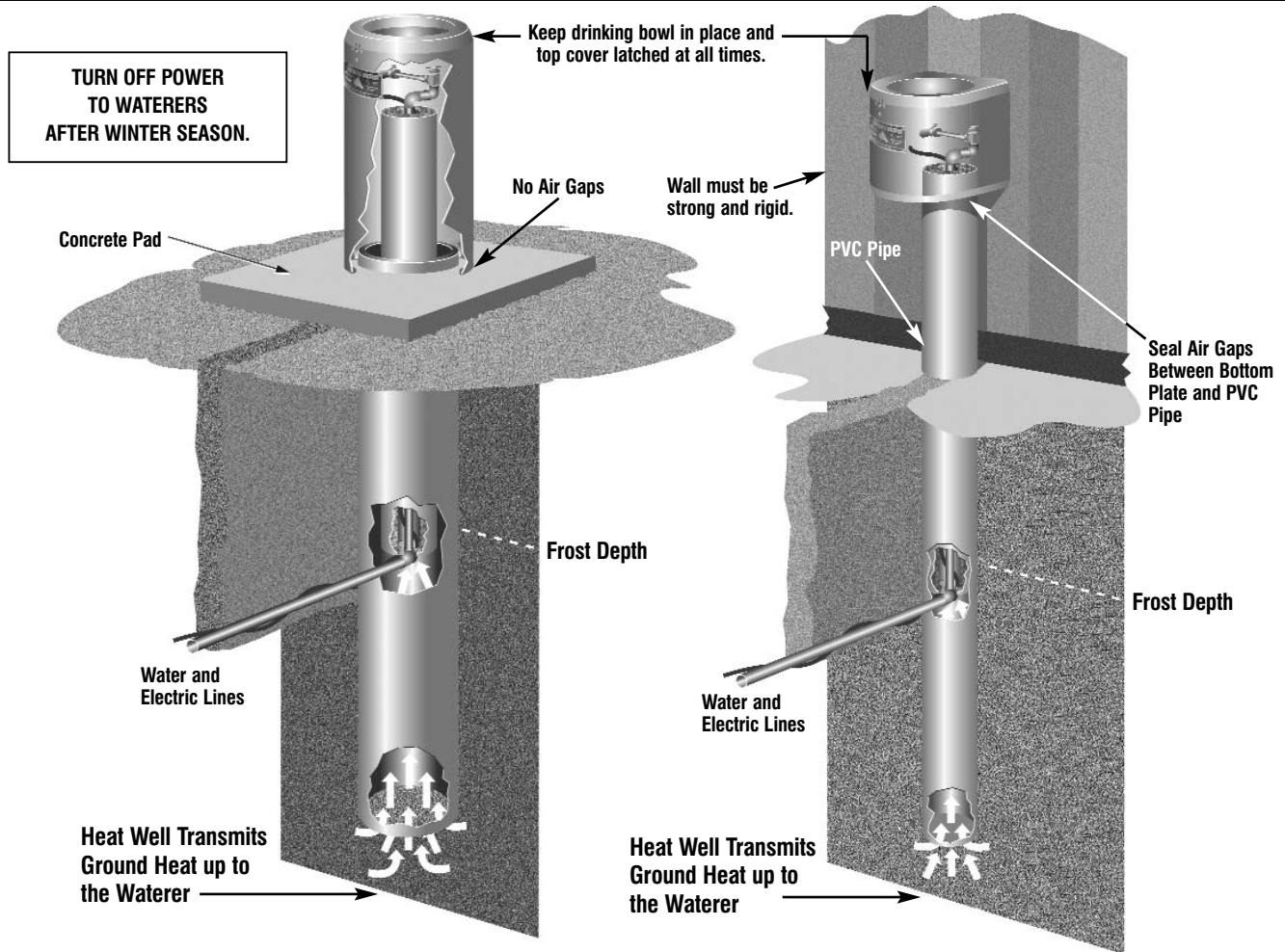
THERE ARE TWO EXCEPTIONS:

1. The installation is a back-to-back installation, where two waterers with heaters are mounted back-to-back in adjacent stalls (Back-To-Back Installation diagram).
2. The waterer is mounted on a wall adjacent to a non-freeze room that will protect the waterline from freezing, such as a heated tack room.

BOTTOM VIEW



Warnings and Safety



WARNING! Mounting Base

DO NOT mount free-standing models with heaters on wooden bases or combustible surfaces. Mount free-standing models on concrete bases. (See Warning details on page 3)

WARNING! Wall Strength

Wall must be strong and rigid to support wall-mount waterer and abuse of animals. (See Warning details on page 4)

WARNING! Electrical Installation & Maintenance

Use a licensed electrician to install and maintain the Waterer, so that you can be assured that you have complied with all national and local electrical codes and that you have not created a risk of electrocution or fire. Improper installation or maintenance may result in serious injury or death for personnel or animals or damage to structures. (See Warning details on page 4)

WARNING! Keep Top Cover Latched & Drinking Bowl In Place

Drinking Bowl should be in waterer and top cover latched to waterer at all times unless personnel are at waterer performing maintenance such as cleaning, inspecting or replacing parts. (See Warning details on page 6)

WARNING! Turn Off Electricity After Winter Season

Always turn off electricity to waterers when heaters are no longer necessary (temperatures are consistently above freezing) to eliminate any risk of an accident resulting in electrocution or fire. Waterers should be on dedicated circuits.

WARNING! Seal Air Gaps

Seal small air gaps with all-weather sealant between concrete base and housing on free-standing models and between 6" SCH 40 PVC and bottom plate on wall-mount models. (See Warning details on page 4)

WARNING! Turn Off Electricity When Servicing Waterer

Always turn off power to waterers when using a tool to service or maintain waterer to eliminate risk of electrocution. Waterers should be on dedicated circuits.

WARNING! USE CARE NOT to spill water on heating element

Water on heating element reduces heater life and may lead to freeze-up. Keep area below drinking bowl as dry and clean as possible. (See Warning details on page 7)

WARNING! Inspect Waterers Daily

Inspect and clean waterers daily. Cleaning (emptying) the drinking bowl will allow you to verify waterers are automatically refilling and heaters are working. If a waterer is not refilling as a result of a power outage and resulting freeze-up or a component failure, animals will not have water. This could lead to dehydration, illness or death.

WARNING! DO NOT expose animals to electrical wires

All electrical wires and insulation should be covered with protective PVC pipe or metal conduit pipe. This will help prevent animals from chewing through electrical wires and creating a risk of fire or electrocution. Consult a licensed electrician to assure you are complying with all local and national codes.



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