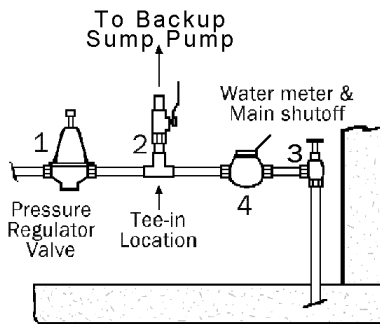


For Basepump Models RB750, HB1000, CB1500 (& -AVB) Installation Instructions

**Important: Read this page before attempting installation of this product!
Read all instructions before installation.**

**** Hang instructions near unit & inform homeowner for future reference. ****

Water Supply Checklist



Pre-Installation 4 Point Checklist

BEFORE installing, use this checklist to verify each item below. Record each item in the space provided. Improper installation will result in reduced pumping capacity or pump **may not operate** at all. Each pump model has slightly different requirements so take note of your model number and the information associated with it. This will save you a lot of time during installation and if a problem arises, this will help pinpoint the source.

1. Household Water Pressure:

Minimum Pressure: 40 lbs. PSI Maximum Pressure: 100 lbs. PSI

Compensate for normal pressure loss from test point to pump Location. Avoid excessive piping from "tee-in" location, whenever possible. Tee in before PRV when possible unless incoming municipal **water pressure exceeds 95 lbs. PSI**, then it is necessary to "tee-in" **AFTER** the Pressure Regulator Valve (PRV) to protect the pump valve from damage.

1
Minimum Pressure
40 lbs PSI
Actual: ___ PSI

2. Household Water Flow:

You must be able to fill a five gallon bucket with water from a hose spigot at the following rates:

RB750: 40 seconds or less (7 GPM)

HB1000: 30 seconds or less (10 GPM)

CB1500: 20 seconds or less (15 GPM)

If it takes longer, you may have a restriction that must be bypassed or removed to maximize pumping capacity; or you may need to go down a Model size.

2
Minimum Water Flow
7-15 GPM
5 Gal in _____
Seconds

3. Type of Piping:

Must be installed using copper pipe or equivalent in the minimum sizes indicated below. (PVC, CPVC, PEX, etc., if approved in your area.) Do not connect to or install using galvanized iron pipe because of the smaller Inside Diameter and potential for rust and deterioration flaking off.
Pump Model: RB750: 1/2" – 3/4" Pipe HB1000: 3/4" Pipe CB1500: 3/4" -1" Pipe

3
Pipe Size
Min: 1/2" 3/4" 1"
Actual: _____

4. Pipeline Restrictions:

Pump should be teed-in before any devices that restrict water flow. Examples of such devices are: stop & waste valves, globe-type valves, Pressure Regulator Valves (PRV), water conditioners, filters, etc. Water meter must be minimum 3/4" standard for all models. A double check valve or an SVB (Spill-resistant Vacuum Breaker) back-flow device installed in the water supply line before the pump is often required and should pose no problem. Reduced Pressure Zone (RPZ) devices may reduce pumping rates.

4
No Piping Restrictions.
Any? Y N

Model No. _____ **Serial No:** _____ **Installation Date:** _____

General Specifications for All Models

PLEASE READ all instructions **BEFORE** installing this pump. The average pumping capacity of this pump may vary depending on your municipal water supply, pressure, piping, head pressure, and any restrictions that may exist in your piping. **DO NOT** connect this pump **BEFORE** the Water Meter. This is stealing water and is a crime. **DO NOT OVER TIGHTEN FITTINGS WHEN CONNECTING TO THIS PUMP**, but don't be afraid to tighten sufficiently to prevent leaks!! **DO NOT APPLY HEAT DIRECTLY TO THIS PUMP!! MAKE COPPER CONNECTIONS SEPARATELY AND THEN THREAD THEM TO the pump after they cool!** Damage to the pump unit can occur if this is ignored and will void the warranty!!

These instructions are for installations in a broad range of applications. You may have a unique situation that requires greater expertise than we are able to give you here, or you may require the services of a licensed professional plumber. You should always check local building and plumbing codes before installing any such device. **Refer to sketch of Water Supply Information included with these instructions before and during installation. Use thread sealing paste and/or tape on all threaded fittings and PVC cement and cleaner on all PVC fittings.**

Additional parts or supplies needed

Pipe Sizes: For RB 750: 1/2" or 3/4" For HB 1000: 3/4" For CB 1500: 3/4" or 1"

- ⇒ Water supply pipe and fittings, (copper or equivalent, not iron) usually a "T", a couple 90° elbows, and enough pipe to connect your existing water supply to the inlet fitting of the pump.
- ⇒ Full Flow "Ball" or "Gate" Valve; Union fitting; Female adapter to connect to threaded male fitting on pump.
- ⇒ Clear PVC primer/cleaner and cement (small cans) and pipe thread sealant or tape.
- ⇒ 10 Foot Length PVC pipe: (more, if needed to fit your application- see pages 4-6).
Sizes needed: 1" for RB 750; 1-1/4" for HB 1000; 1-1/2" for CB 1500

Tools Needed

- ⇒ Electric or cordless drill with hole saw attachment for drilling through house wall in Outdoor Discharge Installations (not needed for Indoor Discharge): 1 1/2" for RB 750; 1 3/4" for HB 1000; 2" for CB 1500 and screwdriver bits.
- ⇒ Phillips and Slotted Screwdrivers; Utility Knife; Tape Measure.
- ⇒ Plumbing tools for water supply pipe as needed: torch, tubing cutter, solder, flux, pipe cleaning cloth, etc.

Product Specifications

- ⇒ Materials: Heavy-duty Schedule 80 Polypropylene, Stainless steel hardware, PVC Schedule 40 fittings
- ⇒ Dimensions:

RB 750:	Length: 14 1/2"	Width: 4"	Height: 10"	Weight: 1.5 lb.
HB 1000:	Length: 15 1/2"	Width: 4"	Height: 10"	Weight: 2 lb.
CB 1500:	Length: 15 1/2"	Width: 6"	Height: 10"	Weight: 3 lb.
- ⇒ Water inlet fitting:

RB 750:	1/2" or 3/4" Male threaded	Suction and Discharge Opening: 1" socket
HB 1000:	3/4" Male threaded	Suction and Discharge Opening: 1-1/4" socket
CB 1500:	1" or 3/4" Male threaded	Suction and Discharge Opening: 1-1/2" socket
- ⇒ Water service requirements: Minimum pressure: 40 lb. PSI Maximum pressure: 100 lb. PSI
- ⇒ Minimum City Water Flow Rate:

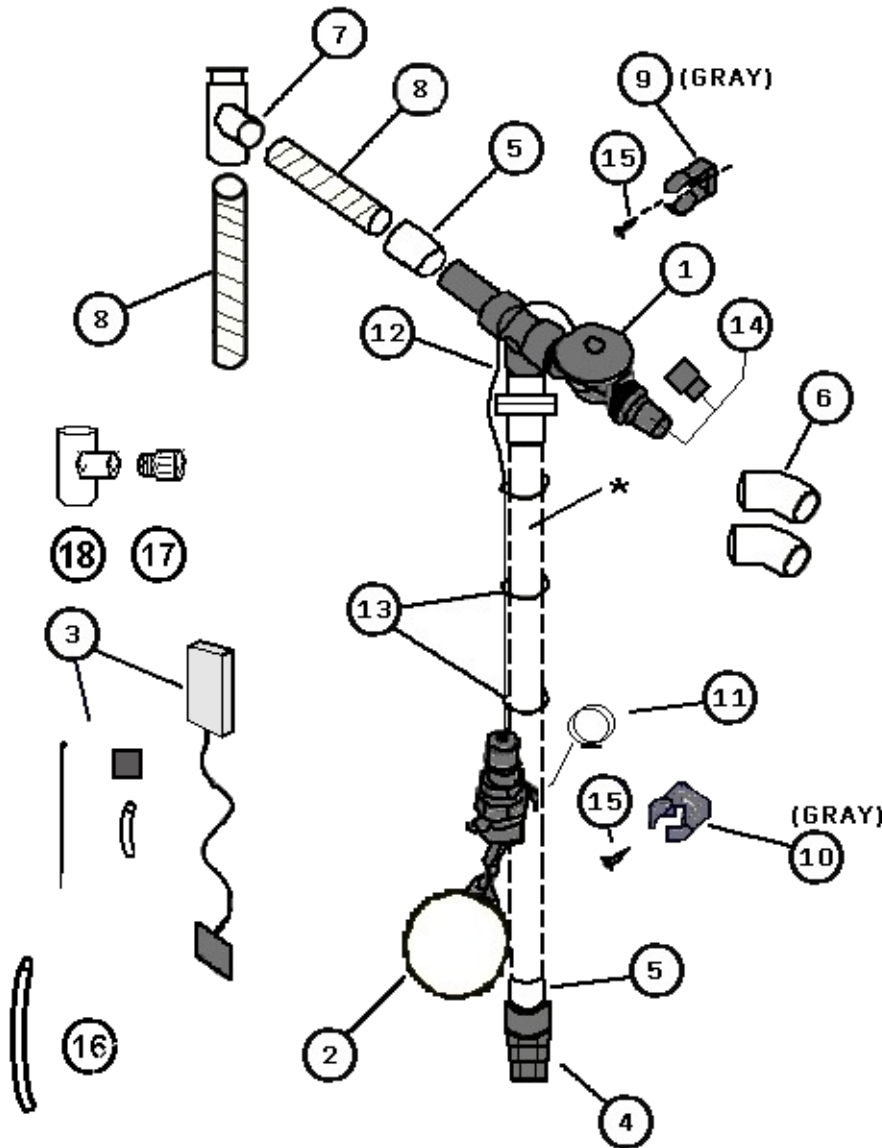
RB 750: 7 GPM	HB 1000: 10 GPM	CB 1500: 15 GPM
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Back-flow Prevention

Check with your local plumbing or water department for their requirements regarding back-flow prevention if you have any questions. Installation of an approved back-flow prevention device will cause little or no problem for this pump, but a reduction of pumping capacity may occur (usually less than 10%). However, some of these devices, such as RPZ backflow devices, are far more restrictive than others and may affect published pumping rates.

Parts List for All Models

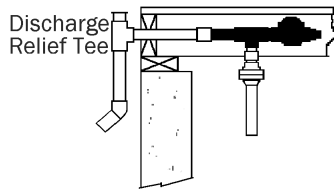
**EXPLODED
VIEW & PARTS LIST**



- ① EJECTOR & CHECK VALVE
 - ② FLOAT VALVE
 - ③ WATER ALARM, VELCRO TAB, CABLE TIE, 2" CLEAR TUBE
 - ④ SUCTION SCREEN
 - ⑤ (5) ADAPTERS
 - ⑥ (2) 45 DEGREE ELBOWS
 - ⑦ DISCHARGE RELIEF TEE
 - ⑧ FLEXIBLE HOSE
 - ⑨ EJECTOR HANGER
 - ⑩ SUCTION PIPE HANGER
 - ⑪ FLOAT CLAMP
 - ⑫ TRANSFER TUBE
 - ⑬ (5) CABLE TIES
 - ⑭ (1) INLET ADAPTER
RB750 HAS 2 SIZES
 - ⑮ (2) MOUNTING SCREWS
 - ⑯ 6" CLEAR TUBE
- Indoor Discharge Parts
(Not included with AVB)
- ⑰ (1) Male Adapter
 - ⑱ (1) Tee
- *PVC PIPE NOT INCLUDED

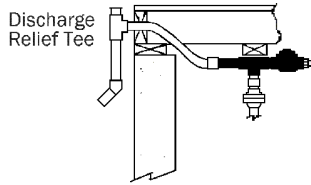
Suction/Discharge Options **Outdoor Discharge**

Standard Discharge



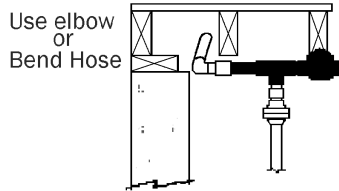
Ejector mounted on side of ceiling joist;
Discharge straight to exterior.

Under Joist Discharge



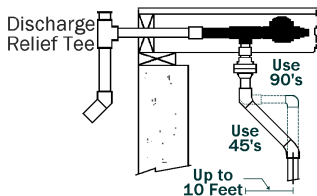
Ejector mounted under ceiling joist with
Discharge hose sloping upward and out.

Perpendicular Discharge

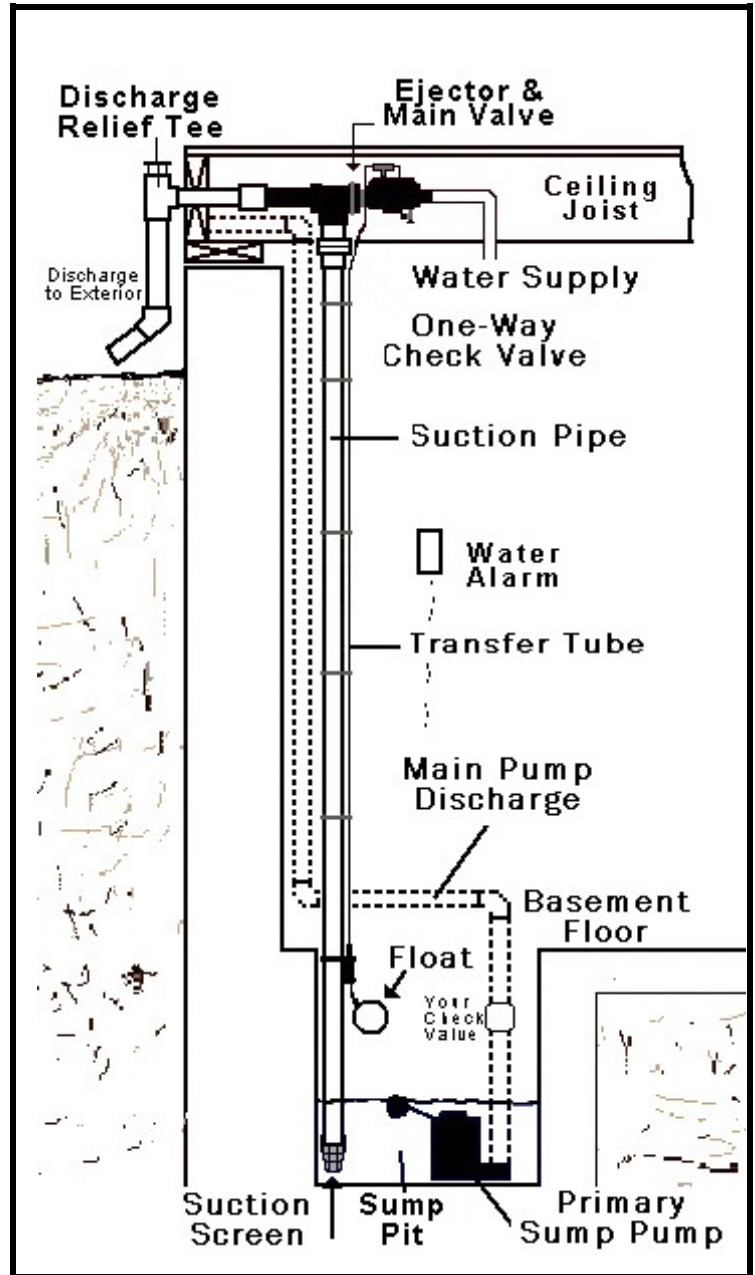


Ejector perpendicular to joist with discharge
hose at right angle through hole in joist.

Offset Suction Pipe



Suction pipe offset with 45 or 90 degree
elbows to clear obstacles or ease installation

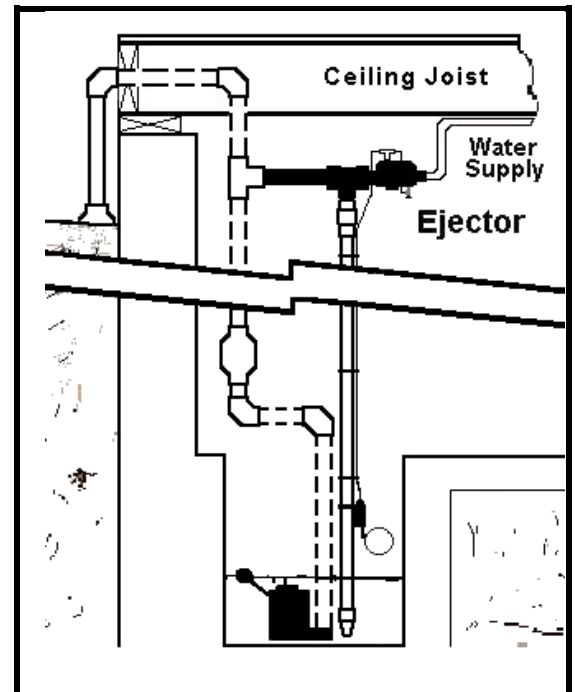
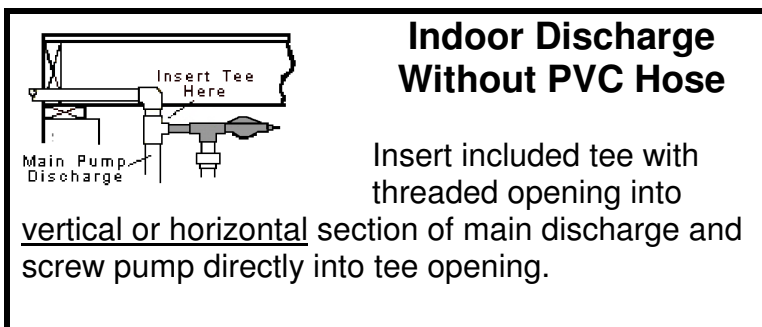
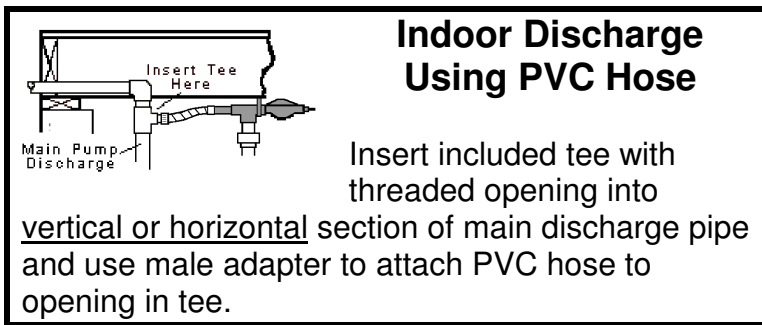


See Page 6 for installation of models with the -AVB Device, which **MUST NOT** be installed using the Indoor Discharge method. It must be installed using the Outdoor Discharge method and set up to self-drain to the exterior. Failure to follow these instructions will result in water spilling into your home or failure of the AVB device to operate properly, or both.

Indoor Discharge

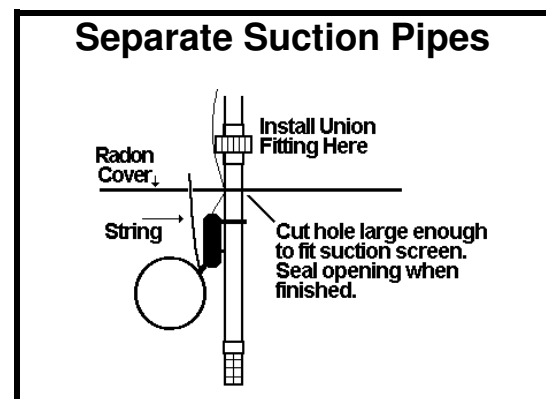
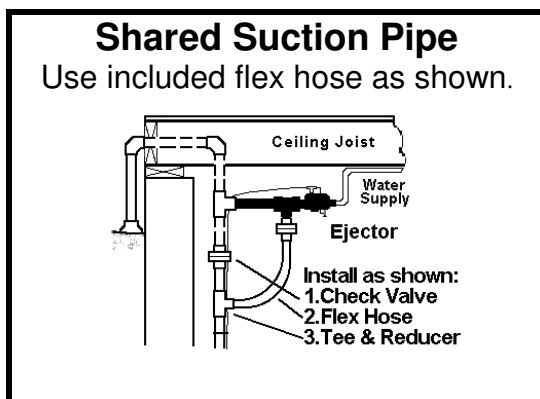
In some cases, it may be necessary to connect this pump to the main sump pump discharge or to a storm drain that is inside the home. If connected in this manner and your main pump fails because the discharge pipe is clogged, both pumps will fail. The following conditions are critical:

- ◆ The Discharge Relief Tee is usually NOT used in this configuration, as it is replaced by the tee shown.
- ◆ The main pump must have a working check valve at all times, above the main pump and below backup pump entry tee. Failure could send fresh water down the main pump discharge and flood your basement. If worn, change it now.
- ◆ Horizontal runs of more than 6 feet must slope down and away from this pump to harness gravity instead of fighting it.
- ◆ Any storm drain connection **MUST** have an air gap to prevent a back-siphon into the sump pit or basement.
- ◆ The drain pipe that receives the discharge water must be in good working order, with no breaks, leaks, or obstructions. A broken or leaky underground drain pipe could recycle discharge water back into the sump.
- ◆ **Use pipe thread sealing tape or paste on all threaded parts & PVC cement on all socket joints.**
- ◆ **DO NOT USE INDOOR DISCHARGE METHOD IF YOU HAVE THE AVB DEVICE INCLUDED.**



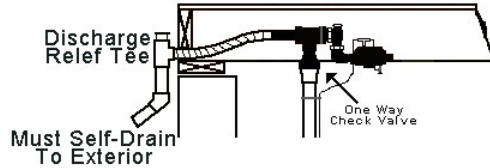
Radon Cover Installation: Two Methods

In both cases, the transfer tube, which is very small, will follow the suction pipe through the hole in the cover to the float and is sealed in afterward. You may drill a small 1/8" hole in the cover above the float and feed a **string to the float** for testing the pump in the future. The tee that receives the pump is included in the kit. You will need to add any extra parts as shown.



Atmospheric Vacuum Breaker –AVB Installation

All Models with AVB



Install pump as high as possible and slope discharge down and away to self-drain to exterior OR water will spill indoors.

General installation is the same for both the outdoor discharge and the AVB EXCEPT that the **discharge for the -AVB MUST slope downward to the exterior to self-drain**, as shown here. See enclosed Data Sheet #Base/AVB-0508 for product specifications.

This system design meets the criteria as specified by the University of Southern California as outlined below.

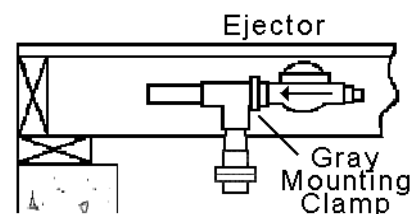
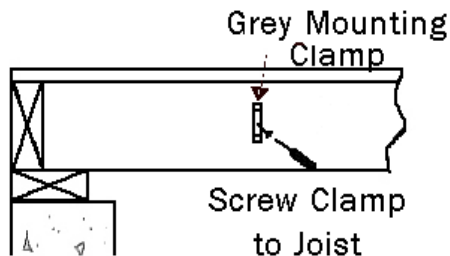
Meets ASSE Listed 1001, CSA Certified, IAPMO Listed. AVB is always placed downstream from all shut-off valves. Its air inlet valve closes when the water flows in the normal direction but, as water ceases to flow the air inlet valve opens, thus interrupting the possible back siphon effect. If piping or a hose is attached to this assembly and run to a point of higher elevation, the backpressure will keep the air inlet valve closed because of the pressure created by the elevation of water. Hence, it would not provide the intended protection. Therefore, this type of assembly must always be installed **at least six (6) inches** above all downstream piping and outlets. Additionally, this assembly may not have shut-off or obstructions downstream. A shut-off valve would keep the assembly under pressure and allow the air inlet valve (or float check) to seal against the air inlet port inside the AVB unit, thus causing the assembly to act as an elbow, not a backflow preventer. The AVB may not be under continuous pressure for this same reason. An AVB must not be in use for more than twelve (12) hours out of any twenty-four (24) hour period. It may be used to protect against either a pollutant or contaminant, but may only be used to protect against a back siphon condition.

Do not connect the discharge of AVB Models to the main pump discharge; this may force water back toward backup pump and spill indoors from the AVB unit.

Instructions for All Models

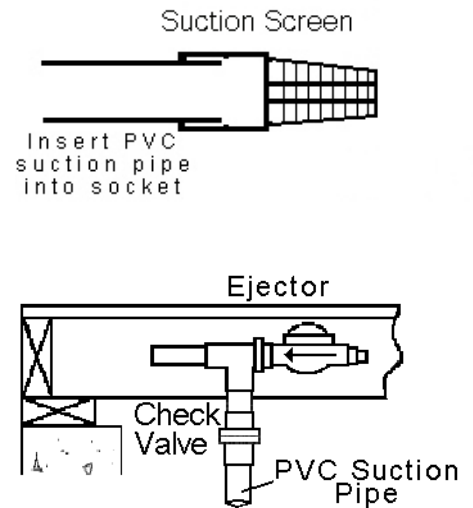
Step 1. Mount Ejector on Joist

A black polypropylene threaded male reducer nipple is provided for connecting your municipal water supply piping to the pump ejector valve. Apply thread sealing tape to each end of this fitting and thread the correct sized end into the threaded opening of the ejector valve. Mount the ejector as directly as possible above the sump pit against the side or on the bottom of one of the ceiling joists (See Suction/Discharge Options). Check the building exterior to make sure the discharge will clear any obstacles if using Outdoor Discharge Method. The suction pipe can be fitted in various ways to accommodate this location. If the discharge is longer than 6 feet in length, pumping will be reduced somewhat. Locate cold water supply, which must be piped directly into the unit. Do not connect with hose or other "short-cut" connection tubing other than locally approved systems. Consider all this when locating the unit so the water connections will work out later in the installation. Attach the mounting clamp to the ceiling joist using 1" wood screw and snap the pump unit into the clamp as shown.



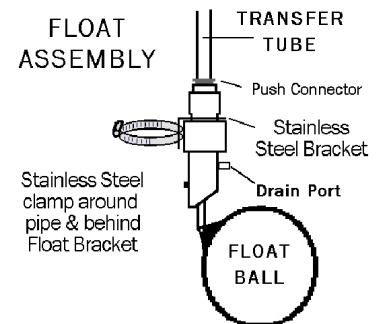
Step 2. Install Suction Pipe

Apply thread sealing tape or paste to threaded end of check valve that is attached to the ejector and connect female adapter to check valve; tighten securely. Locate the suction pipe in the pit to clear the primary pump and any other obstructions. Measure PVC pipe and cut length to reach from the bottom of the Pump Ejector down to approximately 6" from the base of the sump pit. Take into account any turns and fittings you need. After the float is attached to the suction pipe in Step 3, you may then secure the suction pipe to the side of the pit using the included gray clamp. Allowing the pipe to hang freely in the pit is fine if the suction pipe and float assembly do not interfere with the main pump and will not cause the float to come into contact with anything that would prevent its normal operation. You may use two 45° or 90° elbows to shift the pipe over if the pump is not mounted directly above the pit (See Suction/Discharge Options on Page 4). Using PVC primer and cement, insert the pipe into the PVC female fitting on the Suction Screen. Temporarily insert the upper end of the suction pipe into the socket opening of the check valve and make sure that the lower end of the Suction Screen is 2 - 4 inches above the bottom of the sump. **After** cutting and adjusting to the proper length, **use primer and cement to insert the upper end** into the check valve, as shown.



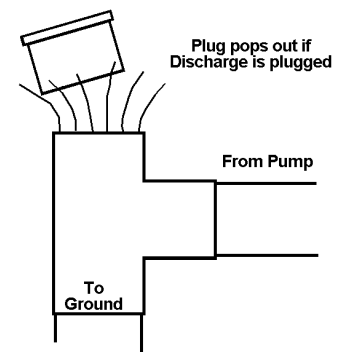
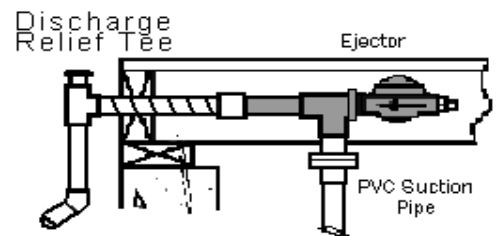
Step 3. Install The Float

Open the Stainless Steel Pipe Clamp and place it around suction pipe near the top of the sump pit. Tighten screw until the clamp is nearly closed around pipe. Hold float assembly with Stainless Steel Bracket against pipe above clamp and slip the bracket behind the clamp, as shown. Slide the float assembly on the suction pipe so the float ball hangs just above the "high water mark" (highest water level in the pit just as the main sump pump turns on) and tighten clamp securely against the pipe so the float will not slide up and down. Make sure the float assembly clears your sump cover, or you may need to cut the cover to fit around it. If anything interferes with the free movement of the float, you may **turn it** to clear, or **adjust the angle** of the float ball.



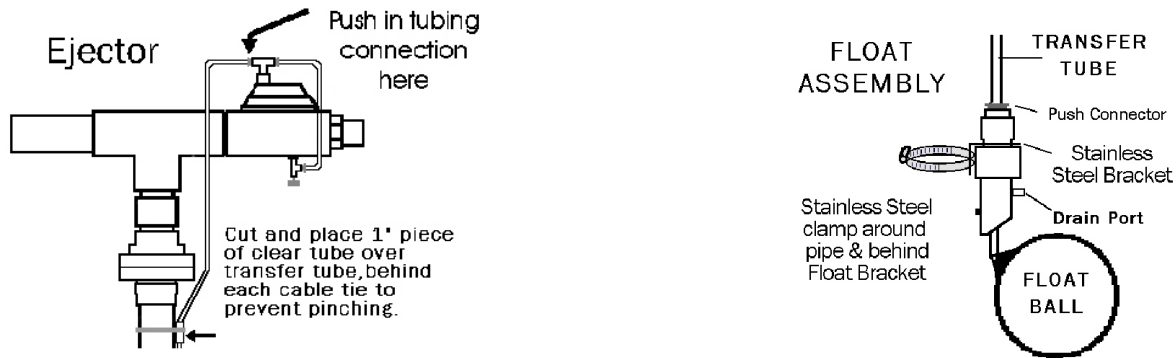
Step 4. Install Discharge Hose

Drill a hole through the building exterior wall for the discharge hose, typically in line with the Ejector unit. The discharge hose is flexible for ease of installation. Rigid PVC may be used, if desired. If necessary, a PVC 90° or 45° elbow may be used for a tight turn. Avoid vertical rises of more than 2 feet on the discharge tube or pumping rates may be affected. Attach female adapter onto the discharge end of the ejector. Push one end of the discharge hose through hole to the exterior. Clean the other end and cement it into the adapter on the discharge end. Cut off the excess hose outside building and clean off the end of the hose. Cement the **Discharge Relief Tee** on the discharge hose outside the building, as shown. **NOTE: Discharge Relief Tee MUST be installed to create the necessary back-pressure for the pump to operate.** If the discharge should become clogged or frozen, the **Relief Plug** can pop open and allow pump to continue operating. This plug must be manually pressed back in after the problem is corrected. The **Relief Plug** comes already installed in the Tee, but you may need to adjust it by hand for it to work properly with your water pressure. You'll have to judge this yourself, but 5-10 lb. of pressure works well. Normal operation won't develop enough pressure to pop it out, but a clogged line should. Cement a short length of PVC pipe into the bottom of the Relief Tee to direct the water down. **This is part of the pumping process and is very important.** Use a 90° or 45° fitting to divert the flow away from the foundation, onto the ground, a splash block, or into a larger drain pipe. Remember, this is a **BACKUP SUMP PUMP** and will only run in an emergency! **Discharge hose or pipe to the outdoors** should be no more than 6 feet and Discharge Relief Tee installed and directed down and away from the foundation of the building. In cases requiring longer discharge piping, it is best if pump is mounted high and the discharge piping runs downhill from the pump to the exterior.



Step 5. Connect Transfer Tube

Push one end of the thin flexible tubing into the push connector of the small "Tee" on top of the pump Ejector. Run the tubing along the suction pipe down to the float, leave about 12" extra for adjustments, and cut off any excess with razor knife or scissors. Make sure the tube ends are fully open and are cut clean and square; push the lower end into the push connector at the top of the float assembly. Fittings are self-sealing when fully inserted. To remove the tubing from either fitting, hold in the retainer ring and pull out the tubing. It can be reinserted several times. Use cable ties to strap the transfer tube along the suction pipe to keep it looking neat. **Do not over-tighten cable ties or pinch, kink, or bend tubing.**



Tip: Using the 6" long clear tube in the kit, cut 1" pieces and slide onto the transfer tube before pushing in the last connector. Slide one behind each cable tie to prevent pinching of transfer tube (see sketch above, left).

Step 6. Connect Water Supply

Shut off main water supply and make connection into your water supply line according to local plumbing codes. In most cases, insert a "T" fitting into a main cold water line. Install a full flow, ball or gate valve right out of the "T" and you can turn on the main water supply while you complete the job. Use the included black threaded adapter to connect the water pipe to the pump. Remove this adapter from the pump and apply thread sealing tape to the larger threaded end. Thread this end tightly into the pump. Apply thread sealing tape to the smaller, exposed end and connect to a female adapter, union fitting, or back-flow device on your water pipe. **Do Not Apply Heat to pump valve.** Complete piping and soldering before connecting to the pump. Install a "union" fitting somewhere in that line in case you ever have to disassemble to make corrections.

NOTE: It is advisable to flush the water line before connecting to the pump by turning it on into a bucket for a short time. This can help remove any loose solder or debris that may be inside the pipe before it can clog the ejector.

Step 7. Install Water Alarm

<p>Alarm Features:</p> <ol style="list-style-type: none"> 1. Sounding a loud alarm signal exceeding 85 dB at 10 feet at alarm mode. 2. Using advanced electronic design to accurately detect water leakage. 3. Alarm signal is able to last for up to 72 hours. 4. Easy installation and maintenance. 5. Fully automatic operation. 6. 9V DC Battery (included) 7. Relay output (1A/24VDC & 0.5A/125VAC) For security system or remote alarming. 	<p>Alarm Specifications:</p> <p>Dimensions: 1.4" H. x2.4" W. x4.0" L Weight: 4.0 oz. (113g) without battery Battery Type: 9 Volt alkaline Battery Life: 72 hours of continuous use Standby (Up to two years) Sound Intensity: 85dB @ 10 feet Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -20°F to 150°F (-29°C to 66°C) Humidity: 80%RH (non-condensing) Shock Resistance: Shock resistant from a 6-ft. (1.8m) drop onto concrete Water Resistance: Splash and water resistant, but not waterproof. Floats on surface</p>
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Alarm Operating Instructions:

Install the battery: Remove the cover for the battery compartment located on the left side of the alarm. Extend the wires and the connector that are inside. Snap a 9-volt battery onto the connector and place the battery back in the compartment, and then replace the cover.

Mount the Alarm: Open the bottom compartment and extend the 6 foot long sensor wire. Using the wood screws or Velcro tabs, mount the alarm against a wall or other convenient location.

Position the sensor: Use the releasable cable tie with the 2" clear tubing, and wrap it over the sensor wire and around the suction pipe. The tubing will protect the sensor wire from being pinched and will allow you to slide the sensor up or down the pipe without removal.

Replace the battery: Replace the battery if the alarm has operated for an extended period of time, or if the battery expiration date is approaching. Mark the battery expiration date on a piece of tape and attach to the alarm when you install the battery.

Relay Output: The relays are a no volt, dry type contact, normally open, energizes to close. Every time alarm sounds the contacts will close and then open once the water source is cleared.

Operation: The alarm operation is simple. When the sensor is wet the alarm sounds and the relays close. Once water is removed from the sensor, the alarm will silence and the relays open.

Start Up Procedure

Carefully open the shut-off valve you installed in Step 6 and check for leaks. **Pump may turn on at this time.** If there are no leaks, open valve all the way, including your main house valve. Lift the backup pump float for 15 seconds to release air trapped in the Ejector and transfer tube. Air and water will release from the drain port on the float unit just above the float ball. When running the water for the first time, pump may take longer than normal to shut off. Factory setting is approximately 30 seconds after the float ball drops. If it continues running too long or shuts off too quickly, refer to **Troubleshooting**

Instructions for more details. **Note: This pump does not run silently;** it is **very powerful** and some noises will occur during operation, while turning on, or when shutting off, depending on water flow, pressure, piping, etc. Some noises may occur just from the vibration and movement of the pumping unit. Secure all piping and, if needed, place insulating material between the pump, pipe, and the joist to deaden any particularly noisy areas. If water hammer is experienced, you may install a water hammer arrester in the supply line. In some cases, the check valve on the base of the Ejector will thump or flutter as the valve shuts off and air exits the system. This is normal and should be no more than an annoyance.

Operating Instructions

Every 6 months, hold the float up for a few seconds and release it, allowing pump to operate through a full cycle. This flushes the water lines and confirms that the pump is functioning properly. **Confirm that float moves freely up and down in sump.** Confirm that pump runs approximately 30-40 seconds AFTER the float ball drops to its lowest position. This is the factory setting and it may have been adjusted at time of installation to run longer or shorter depending on sump water conditions and inflow rates. Please note that the pump should not turn off immediately when you let the float ball drop. See Adjusting the Timing Knob below on page 11.

Troubleshooting

Unit does not pump at all:

- ⇒ Confirm that float is allowed to **operate freely without obstruction** in the sump pit.
- ⇒ Make sure **water supply valves** to the pump and to the whole house are **open completely**.
- ⇒ Timing Knob may be open too far, keeping the valve closed. **See “Adjusting the Timing Knob” section below.**
- ⇒ **Discharge Relief Tee** must be installed with section of pipe on outlet.

Unit does not pump adequately:

- ⇒ **Low water pressure**; municipal water pressure must be 40 lb. PSI minimum at pump location.
- ⇒ **Wrong inlet piping**; minimum water supply piping must be ½” for RB 750; ¾” for HB 1000; ¾” to 1” for CB 1500.
- ⇒ **Piping kinks or restrictions** (like water conditioners, filters, globe valves, etc.) will reduce pumping capacity.
- ⇒ **Wrong suction or discharge piping** (use only the materials indicated in these instructions).
- ⇒ **Suction screen must be clear** of debris or obstruction and **suction pipe** free of any leaks.

Discharge tubing to the outdoors should be no more than 6 feet and Discharge Relief Tee is installed and directed down and away from the foundation of the building. In cases requiring longer discharge piping, it is best if pump is mounted high and the discharge piping slopes downhill from the pump to the exterior. Avoid having this longer run be full of water as pumping rate will be reduced. If more than 10 feet are needed, it is best to use PVC one size larger than the pump discharge to accommodate the extra water without backing up.

Pump does not shut off:

- ⇒ **Confirm that float moves freely up and down in sump.** Make sure your sump cover, main sump float, and any other obstructions are clear of the pump float. **After the float has dropped to its lowest position, pump is pre-set to run normally for approximately 30 seconds before shutting off.** This gives it the time needed to empty the sump pit and to avoid short, frequent pumping cycles.
- ⇒ **Float Sticks. Main sections of float may be together too tight.** Turn off water supply to pump. You may need to remove the float from its position in the sump by loosening clamp on suction pipe. The large black nut at the center of the black float unit holds the two parts of it together. This should only be hand tight. If it is tighter than that, it needs to be loosened to relieve the pressure from the float arm. You may use channel pliers to hold the nut while turning the lower section counter-clockwise (left) to loosen it. After it loosens, remove the pliers and secure the float back again by hand so that it can be removed again by hand. The final position is a bit of a judgment call, but when finished adjusting, the float arm should move freely and the two sections of the float will be secure and not loose. The water seal is not dependent on the tightness of the nut; there is an “O” ring inside to seal it. Re-install the float into its position on the suction pipe and insert transfer tube. Turn the water supply back on and test the pump by lifting the float and then releasing it.
- ⇒ **Timing Knob may be closed.** See “Adjusting the Timing Knob” section below.
- ⇒ **Timing knob may be clogged.** To check it: turn off water to the pump. Remove the short piece of tubing from side outlet of timing knob and turn on water to the pump. If water comes out of the opening, it is clear. If not, open the knob (counterclockwise or left) till it does. If it stops turning (don’t force it) and no water has come out, it is likely plugged. It can be removed from the ejector using a small wrench counterclockwise on the base nut. Turn off the water, remove it, check it for debris, solder, etc. Verify that turning the knob moves the inner parts up and down freely. Turn on the water briefly to pump; it should pour out of the opening where you removed the timing knob and flush out any debris.

Pump Leaks:

- ⇒ **Valve Cover leaks or “spits” water:** Securely and evenly tighten the 6 screws on top that hold the cover down. If this does not solve the problem, excessive water pressure may be the cause. Check the pressure at the pump unit to confirm and refer back to Page 1. If Ejector valve seems to “spit” or leak at the moment of shut-off, it may be that the incoming water pressure is too high. If this occurs, you will need to move your tee-in point to a location after the PRV.
- ⇒ **Ejector Tee leaks:** Ignore unless it's more than just a few drops of water. This is rare and causes little, if any trouble. If this leaks, it will only drip a bit when the pump is running. However, if it is cracked or broken, please contact us.
- ⇒ **Thin transfer tubing leaks at push fitting:** Turn off water supply valve. Lift float to relieve pressure. Push in retainer ring that holds the tubing in place with one hand and pull out tubing with other hand. Using scissors or sharp utility knife, snip off 1/2” of tubing to create a fresh, clean, square-cut end. Push newly cut end back into fitting until you feel it bottom out and turn the water supply valve back on.

Relief Tee Plug keeps popping out:

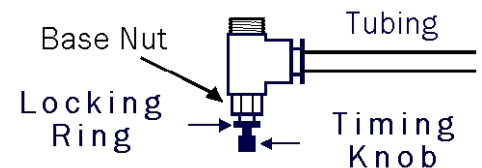
- ⇒ **Make sure discharge** and/or underground conduit are not clogged or frozen.
- ⇒ **Plug may be inserted too loosely.** Push it in a bit further. This should not require more than a few pounds of pressure.

Exterior section of discharge pipe holds water and won't drain or may freeze:

- ⇒ This is rare, but the solution is to drill a 1/16” hole into the top of the discharge relief plug. This will leak a little when the pump runs, but only slightly and will help the vertical pipe drain by introducing air from the top. Do this only outdoors.

Adjusting the Timing Knob:**Factory set for approximately 30 seconds**

- ⇒ **Use sketch to guide you.** Control is located on bottom of Ejector and has the small tubing coming out of it connecting to the small “Tee” on the top of the Ejector.
- ⇒ **Loosen the locking ring** by turning it to the **left (counter-clockwise)**, all the way out without turning the timing knob itself.
- ⇒ If pump is **stopping too early**, **¼ Turn right (clockwise)** produces a **15 Second Longer Run Time**. If you close it completely, pump will not shut off at all.
- ⇒ If pump is **stopping too late**, **¼ Turn left (counter-clockwise)** produces a **15 Second Shorter Run Time**. If you open it too far, pump may run for too short a time to be effective.
- ⇒ When finished, **tighten locking ring finger-tight** by turning it all the way to the **right, (clockwise)** to retain the setting.
- ⇒ **Use the marking on the end of the knob as a guide.** If you lose your place, start over by turning knob all the way in to the right (clockwise) and then back to the left (counter-clockwise) **1 ¼ Turn**. This is the factory setting.
- ⇒ **30 - 45 seconds** run time after the float drops is a good average “rule-of-thumb”. Running it dry will not harm it, but it does use water unnecessarily when this happens.



Place these instructions back into the plastic bag they came in and use the enclosed beaded tie wrap to hang the bag on or next to The Pump for future reference!

30 Day Customer Satisfaction Guarantee

Within 30 days of purchase, if you are not completely satisfied with your new Water Powered Backup Sump Pump, The Company will refund your money, in full, excluding shipping charges. Pump must be returned in its original packaging, unused, and in re-salable condition. Please contact the dealer where you purchased your pump to obtain refund. If purchased directly from The Company, you must call our Customer Satisfaction Department at 1-800-554-1426 to process return or to receive Technical Assistance. Please give your name, address, phone number, date of purchase, and model number.

Five Year Limited Warranty

Base Products Corporation (The Company) warrants this Water Powered Backup Sump Pump against defects in material and workmanship for a period of Five Years from the date of the shipment. Note: The water alarm is NOT part of the pump and is not covered under this warranty. In the event of any defect in the pump unit within the warranty period, The Company will, at its option, replace or recondition the product without charge providing the product is returned, prepaid to our offices in Buffalo, New York. This shall constitute the exclusive remedy for any alleged defect. The Company shall not be responsible for any incidental, indirect, contingent, or consequential damages, including, without limitation, damages or other costs resulting from labor charges, delays, loss of use, revenue or profit, vandalism, negligence, fouling caused by foreign material, damage from peculiar water conditions, chemicals, or other circumstances over which The Company has no control. The Company makes no other warranties, express or implied, except as provided in this limited warranty. This warranty becomes void by any misapplication, misuse, abuse, or improper installation of the product. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Warranty is applicable in the USA and Canada, only.

Return Policy

After reading these instructions, should you determine that this product is not suitable for your application, please call The Company or your dealer for return information. Should the pump be installed and you choose to return it, call The Company for return approval. The Company is not responsible for any cost incurred with removal or pump repairs. Proper packaging of the returned product is the customer's responsibility and goods damaged in transit as a result of improper packaging will not be considered for credit.