



# Spa Bath Installation Guide

## COMPONENTS OF SPA BATH INSTALLATION

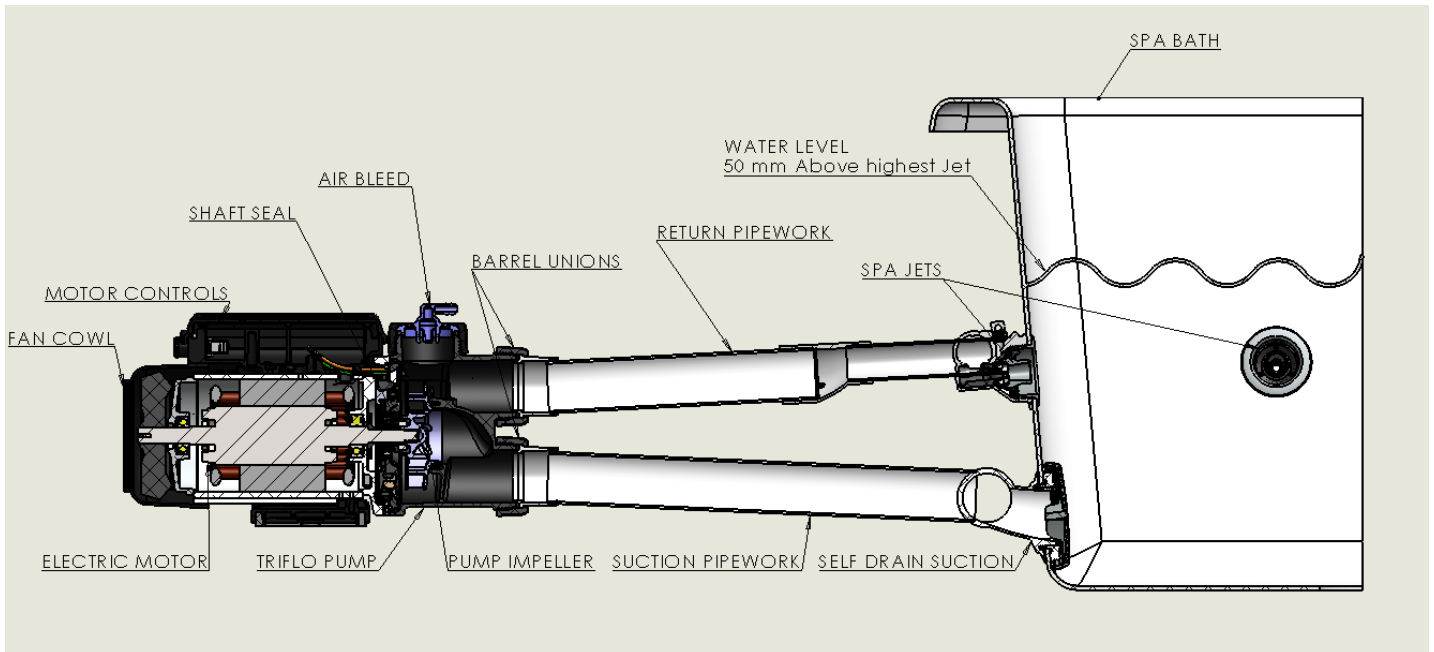


Figure 1 - Components of Spa Bath System

Your Spa Bath is fitted with Self Draining Spa Jets. These provide the Hydro Massage effect which gives soothing massage to your body. When the bath is emptied the jets will automatically drain water from the jets and surrounding pipe manifold. There may be 5-20 Spa Jets fitted of varying sizes and power.

Your Spa Bath will have a Self-Drain Suction Outlet fitted low in the bath. This connects to Suction Pipework which allows the water to pass from the Suction to the inlet of the pump.

### **The Self Drain Spa Bath System – when the pump is turned OFF and the Spa Bath is emptied.**

The Spa Bath Pump is a special design pump which will automatically drain the water out of the pump and empty into the Suction pipework. Depending on the height of the pump (see installation diagrams below) the water from the return pipework may drain back through the pump and return to the spa bath through the suction pipework.

It is important that the Installation of your Spa Bath, Suction Pipework, return pipework and the pump be designed to facilitate this self-draining feature.

The Suction pipework must be installed at a slight angle to permit the water to drain from the pump.

If the pump is located some considerable distance from the spa bath, the suction pipework angle will elevate the height of the pump. When the Spa Bath is filled with water to a height 50 mm above the Spa jets, the water will flood through the drain suction, pass into the suction pipework and then into the pump casing. It is critical that the pump impeller is filled with water to above its centreline. **If the pump is mounted too high, the water level will be too low and the pump will not prime.**

Spa Pump INTERNAL INSTALLATION require fitting of a drain tray. Edgetec strongly recommend the fitting of the Pro-Tec Drain tray for ALL internal pump installations.

### The Spa jet Function

When the pump motor is operated, the pump impeller draws water from the suction pipework and pumps the water under pressure back through the return pipework. The pressurized water is distributed around the Spa through a pipework manifold (not Shown) where it passes through the spa jet creating a powerful hydro massage inside the spa.

The Spa jet is connected to an air control which draws air from the bathroom and creates the pulsing effect of the Spa Jet.

### Important components of the system

1. Barrel Unions – these disconnect the pump from the pipework to allow the pump to be removed for service.
2. AIR BLEED – may be activated to improve the priming of the system – required when the pump is mounted higher than normal – refer installation manual.
3. Shaft Seal – The motor rotates the shaft at 2880 rpm and transfers power to the impeller. The shaft seal is fitted around the motor shaft and prevents water from the pump impeller from leaking out of the pump casing or passing into the electric motor. The shaft seal has a polished ceramic surface bearing on a carbon brush face. This interface must be lubricated and cooled in order to prevent overheating. The seal is design so a small amount of water from the pump is allowed to squeeze between the ceramic and carbon surface to sool the shaft seal. All shaft seals will wear over time and require replacement.

The Pump and motor will require service at some future time. For all internal installations a service Hatch of adequate size must be installed to permit service. This hatch must be positioned and sized to allow the serviceman to reach the barrel unions to remove the pump for service.

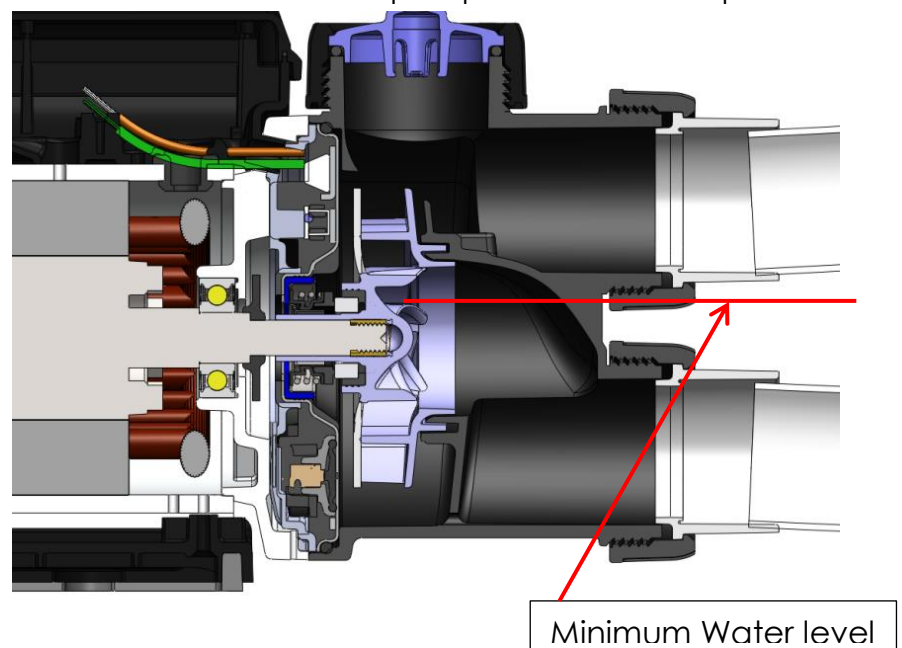


Figure 2 - Minimum height of water level for pump to prime

## EXTERNAL PUMP INSTALLATION

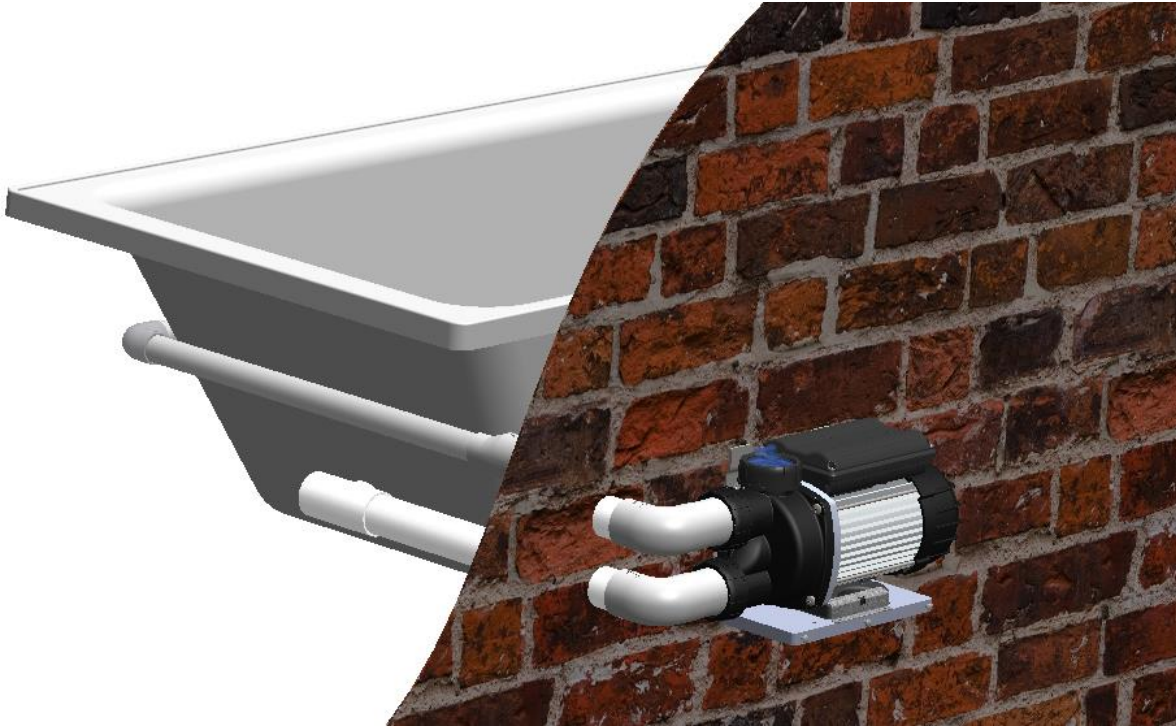


Figure 3 - Spa Bath installed with Pump mounted on external Wall

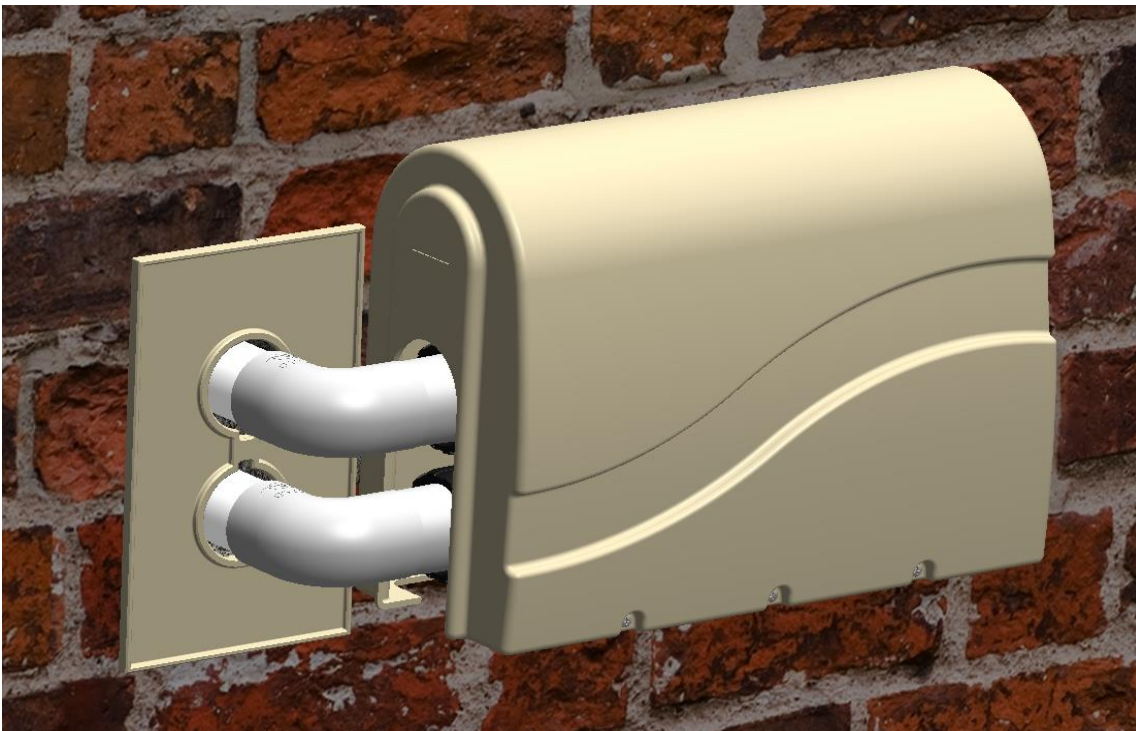


Figure 4 - External Installation with Pro-Tec Pump Cover and Cover Plate

## INTERNAL PUMP INSTALLATIONS with DRAIN TRAY



Figure 5 - Typical Indoor Installation with pump at one end

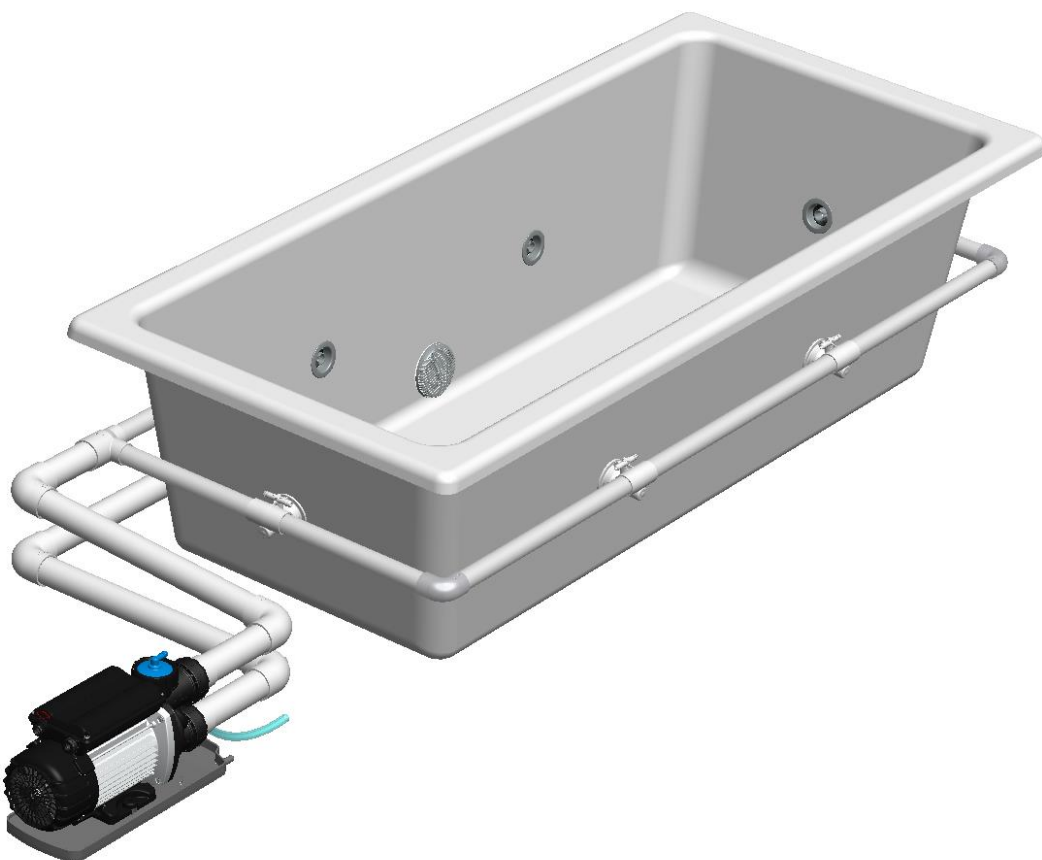


Figure 6 - Typical Indoor Installation - with Pump in Vanity or Closet

# Correct Spa Bath Pump Installation

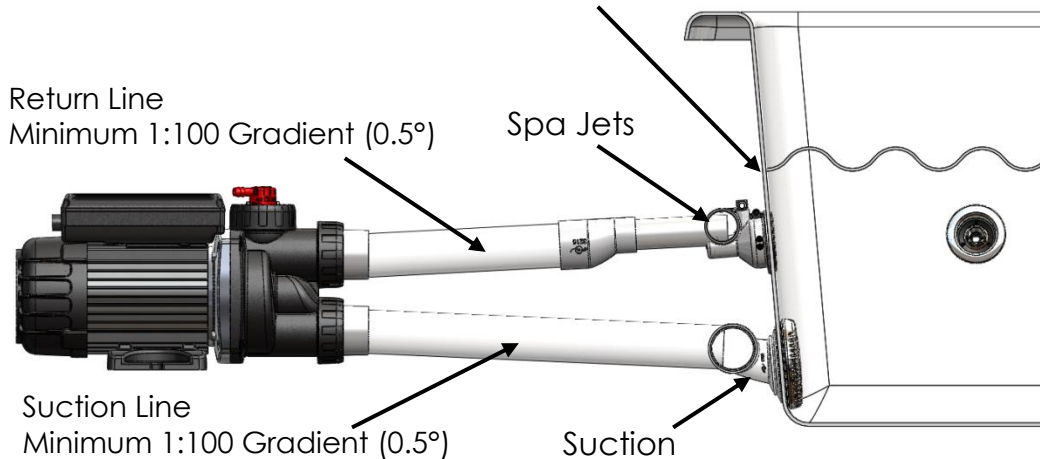
Use 40mm or 25mm UPVC Pressure Pipe for plumbing installation, 40mm pipe is preferred for both the suction and return lines.

## IMPORTANT REQUIREMENT FOR PUMP SERVICE:

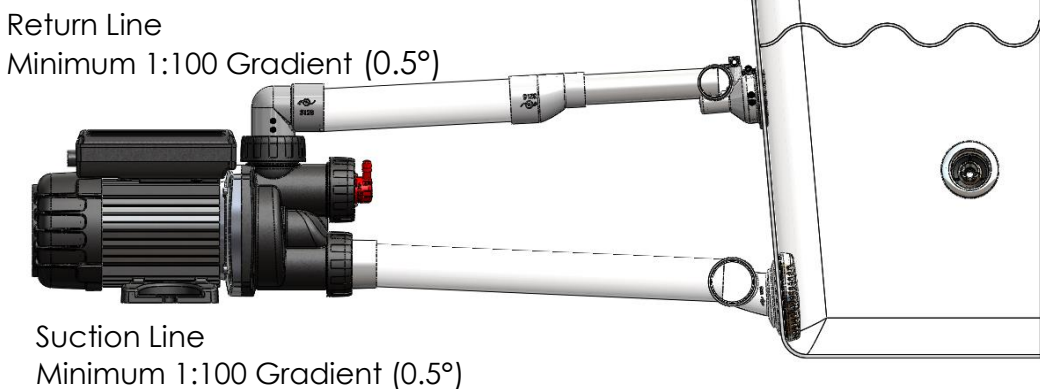
- Pump installation must provide access for pump removal.
- To allow for pump removal a serviceman must be able to reach the barrel unions.

For under the hob installation- an access panel must be provided on the installation

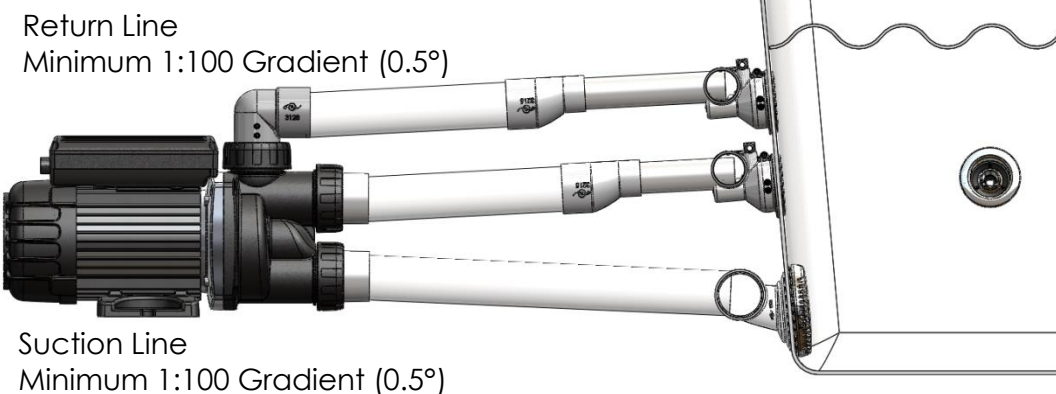
### Standard Installation Water Level Minimum 50 mm Above Spa Jets



### Top Outlet Installation-Please note the Air Bleed cannot be activated in this installation.



### TriFlo Installation



## Incorrect Spa Bath Pump Installation

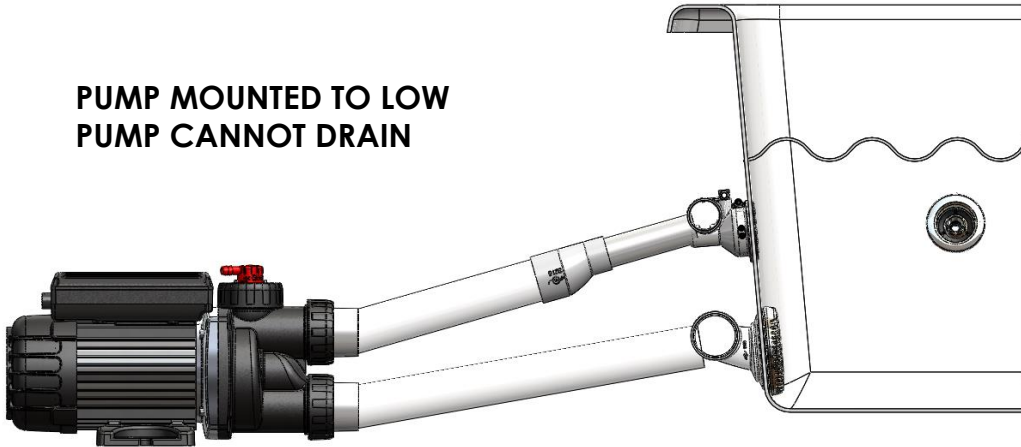
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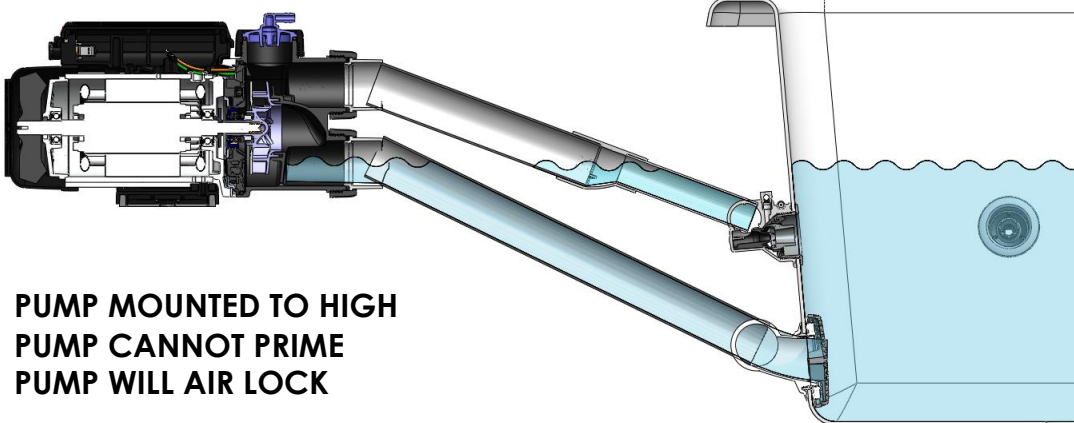
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**PUMP MOUNTED TO LOW  
PUMP CANNOT DRAIN**

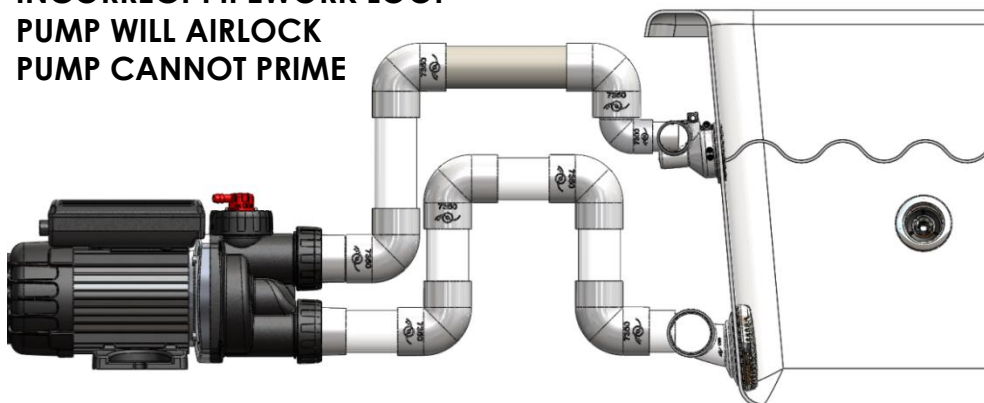


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**INCORRECT PIPEWORK LOOP-  
PUMP WILL AIRLOCK  
PUMP CANNOT PRIME**

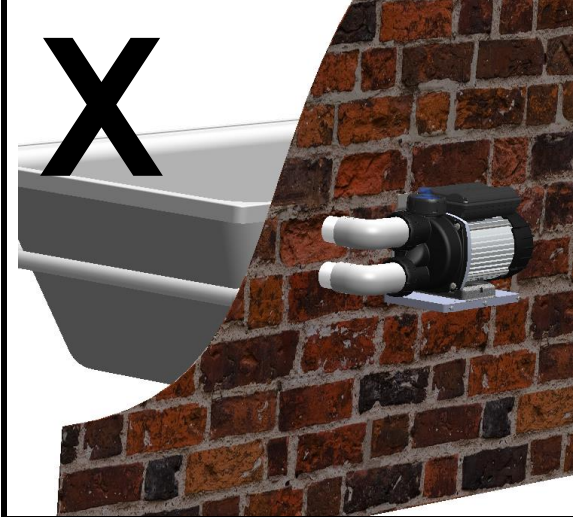


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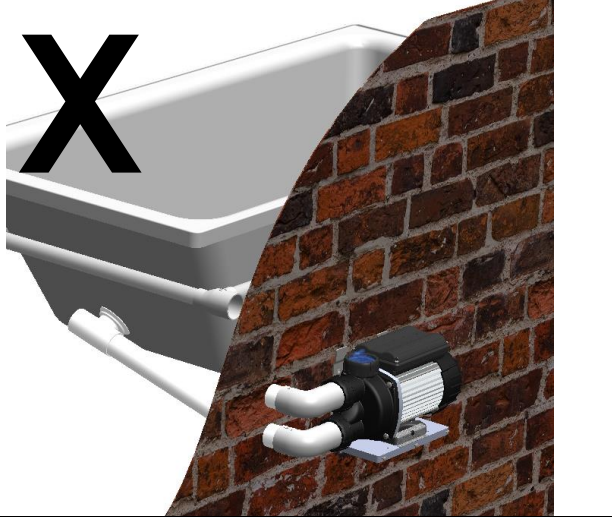
### Correct Mounting on External Wall.



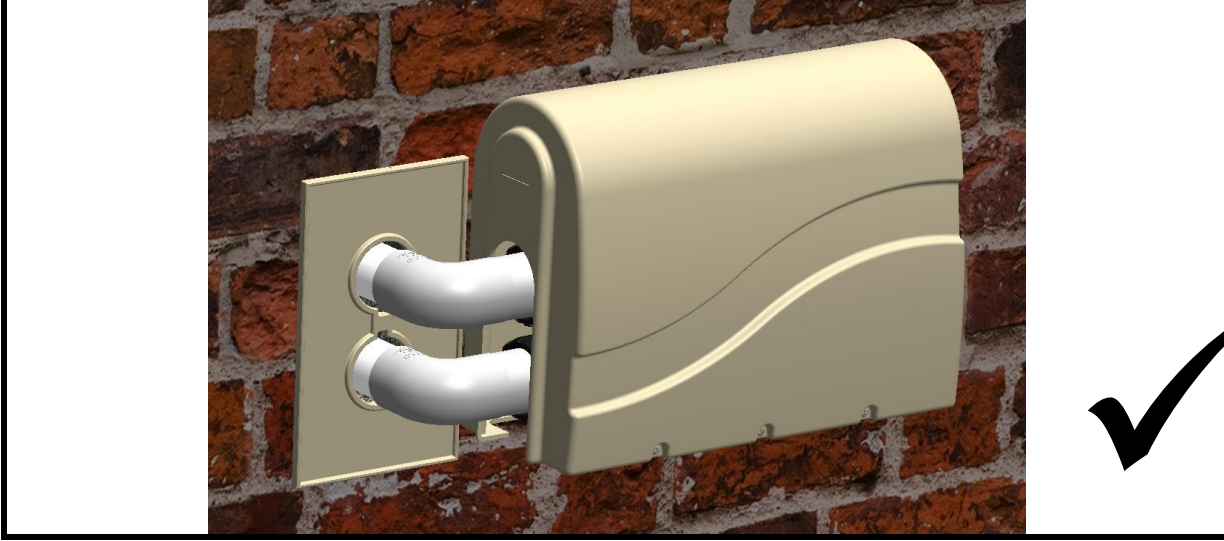
**Incorrect Mounting on External Wall – Pump too High  
PUMP CAN NOT PRIME**



**Incorrect Mounting on External Wall – Pump too Low  
PUMP CAN NOT DRAIN**

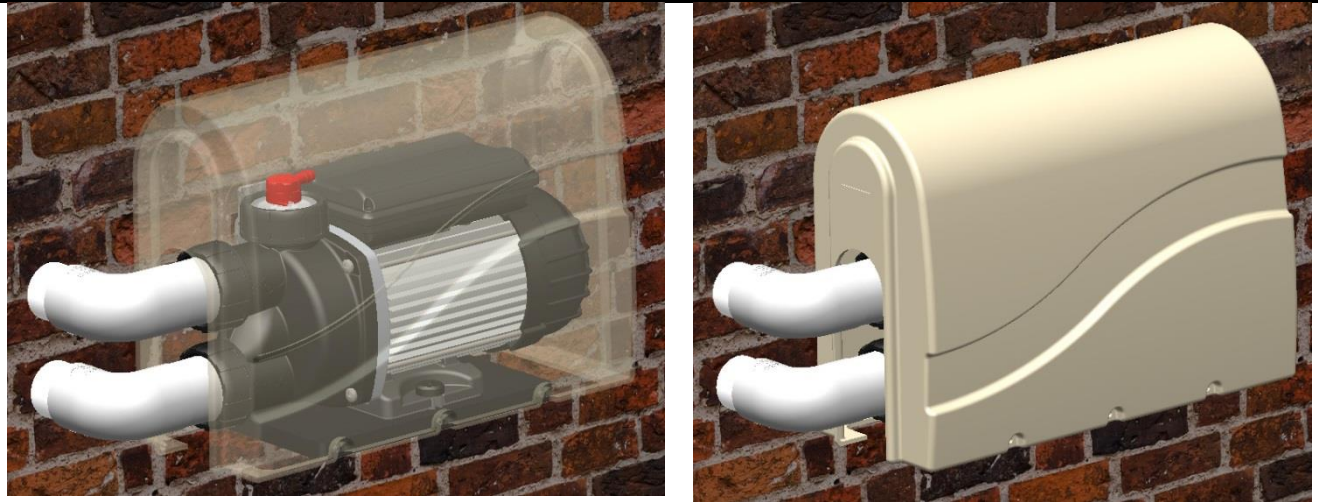


### EXTERNAL WALL INSTALLATION WITH Pro-Tec Pump Cover and Pro-Tec Cover Plate



## Pro-Tec Accessories

Easy To Install. Complete With Wall Brackets & Base. Pro-Tec Pump Cover Reduces Noise Level. Left or Right Hand Mount – Neutral Merino Colour-**Part #6400**



### Pro-Tec Cover Plate

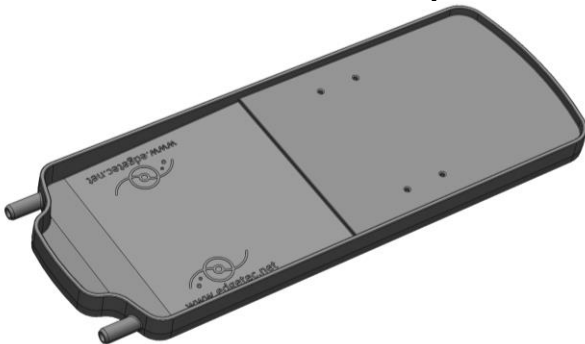
Easy to Install. Can be fitted during installation or fitted after installation. Complements Pro-Tec Pump Cover above and can be painted to match house décor -**Part #6420**



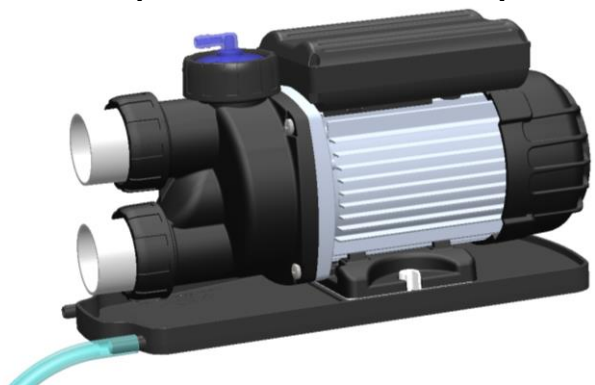
### Pro-Tec Drain Tray – Internal Installation

Easy To Install. Protects indoor installations from water damage should any small drip from the mechanical seal occur due to normal wear -**Part #6450**

#### Pro-Tec Drain Tray



#### Pump Mounted on Drain Tray





## **SERVICE ACCESS**

**Service Access Hatch Minimum Size requirements – 300 X 300 mm**

**Recommended Service Access Hatch size – 500 X 500 mm**

**Maximum distance to reach Barrel Unions – 500 mm**

Your Spa Bath Pump will require service at some future time. The serviceable items include

1. Shaft Seal
2. Motor bearings
3. Motor Capacitor
4. Air Switch or Electronic controls
5. Fan Cowl and Fan

Careful consideration must be given pump location for future service access.

Things to consider.

1. Can the serviceman reach the barrel unions to disconnect the pump?
2. Can the pump be moved away from the pipework to clear the O rings.
3. Is there sufficient access space to refit the O ring and reconnect the barrel unions?
4. Where is the pump located? Pumps mounted on second story level will require two people to access the pump. For OHS reasons, a second person is required to hold the ladder. Servicemen are refusing to attend pumps fitted on external walls without a support person to hold the ladder.
5. Free Standing Baths. A recent trend to free standing spa baths has pumps and pipework installed under the bath without access panels. While these type of baths can be service, this requires two tradesmen to attend, a plumber to disconnect the waste outlet and taps, and an electrical technician to service the pump. Once the bath is disconnected from plumbing - two people are required to remove the bath and turn it over for service. This is outside the standard service conditions for the pump. Service of pump on free standing baths will only be completed when the bath is removed and service access to the pump is possible. It is the responsibility of the owner/builder to remove the free standing bath and provide access to the technician.