RainHarvest Systems

6075 Parkway North Drive
Cumming, GA 30040

Pump Connection Kit Instructions

RHS Part number: PCAG11B

This kit is designed to connect an external above ground pump equipped with a 1" female pipe thread connection to a standard above-ground water tank using a suction hose connection installed at the base of the tank.

Typical pump: RainMaster MHP75 and MHP75A

Typical tanks: Graf Top Tank, Herkules Tank and most other above ground tanks

Kit contents:

(A)   Qty-1   1" Heavy-duty bulkhead fitting

(B)   Qty-2   1" Male pipe thread to 1" Hose barb fitting

(C)   Qty-1   1" reinforced suction hose, 5' long

(D)   Qty-2   Stainless steel hose clamps

Tools required:

        2-1/4" hole saw with mandrel to cut hole in the tank for the 1" bulkhead fitting
        Channel lock pliers for the fittings
        Flat blade screwdriver to tighten the hose clamps

Instructions:

Step 1: Installing the bulkhead fitting:

        Determine the installation location of the 1" bulkhead fitting. It should be installed low enough so that the majority of water can be withdrawn but allowing enough distance from the bottom to avoid settled contaminants and debris. Centering the fitting about 4"- 6" from the bottom is a good rule of thumb as this also allows for a hose bibb and hose to be connected if a gravity flow system is desired in the future.

        Drill the hole for the bulkhead fitting using a 2-1/4" hole saw. Remove any plastic debris.

Slide the rubber gasket onto the main body of the bulkhead fitting and then insert the fitting through the tank wall from the inside. Tip: If you cannot reach the hole from the tank accessway, drop a length of string, rope or wire into the tank and fish it through the hole - then slide the fitting down the string and pull it through the hole (then remove the guide string).

Thread the nut onto the bulkhead body and tighten slightly more than hand-tightening. It can be tightened later if necessary.

Install the suction hose and fittings:

Apply Teflon tape or pipe sealant to one of the 1" MNPT hose barb fittings (B) and thread it into the bulkhead fitting. Slip the suction hose onto the barbed fitting and secure with a hose clamp. Apply Teflon tape or pipe sealant to the second 1" MNPT hose barb fitting (B) and thread it into the pump inlet. Your pump should now be connected to the tank with no leaks.

Check for leaks:

Most pumps will allow water to flow through the pump unless a hose bibb, nozzle or valve has been installed on the pressure side of the pump. Make sure you have something installed there before energizing the pump.

Fill the tank so that the water level is above the bulkhead fittings and check for leaks. Tighten any leaking fittings or clamps until all leaks have stopped. DO NOT FILL THE TANK ABOVE THIS LEVEL UNTIL THE SYSTEM HAS BEEN THOROUGHLLY CHECKED FOR LEAKS. If no leaks have been found, continue filling until the water level is above all plumbing connections, continually checking for leaks and fixing as necessary.

Additional notes:

Drinking rainwater: Untreated rainwater is not safe to drink. Never use rainwater for potable or drinking water applications unless the system has been designed, tested and labeled as safe for drinking.

Freezing: If freezing temperatures are possible, the system should be winterized by draining the tank and the moving the pump indoors for storage.

Siphoning and backflow prevention: It may be necessary to install an anti-siphon or vacuum-break adapter on the hose bibb to prevent siphoning of the tank if the hose is left below the tank. Additionally, a backflow preventer or check valve may be necessary to prevent external water sources from entering the tank if the hose is connected to another water supply whether that supply is pressurized or not.

Installation of a floating filter: This system is designed for smaller systems that may not require the use of a floating filter (sometimes referred to as a floating extractor). If a floating filter is desired, one may be purchased and installed per the instructions. The existing bulkhead can be sealed with a threaded plug available at RainHarvest Systems or your local hardware store.