
solarDOME

OWNER'S MANUAL



IMPORTANT SAFETY RULES

Read all instructions BEFORE assembling and using this product. KEEP THIS MANUAL.



Horizon Ventures PO Box 513, Deerfield, IL 60015
www.horizonreels.net info@horizonreels.com



WARNING

- Carefully read and adhere to all CAUTION and NOTE notices located throughout this manual. Failure to comply with these instructions can cause personal injury or damage to the unit.
- Do NOT allow children to operate this Product.
- Always turn the filter system off when installing or working on the solarDOME.
- Install this product away from the pool to prevent children from using the solarDOME as a way to access the pool.
- NEVER service this unit with the pool pump running.
- Do not use any petroleum based lubricant. Petroleum based products will destroy plastic parts. Use silicone lubricants only.
- The solarDOME is to be installed between the Filter and the pool water return fitting, AFTER the water is filtered The solarDOME must come after the Filter to prevent dirt & debris from clogging the hose of the solarDOME.
- Before loosening any threaded connections on filter, pump or pool, be sure the return fitting & skimmer are closed or blocked at the pool to prevent water flowing out of the pool.

GENERAL INFORMATION

The solarDOME you just purchased for your aboveground pool is simple to install and effortless to operate once connected. The installation instructions included in this manual are based on a few assumptions:

- 1) you have an existing above ground pool that is completely set up and filled with water,
- 2) your above ground pool is equipped with a pump-operated water filtering system, and
- 3) you have the necessary hoses needed to feed water in and out of your pool and filter system.

These assumptions are necessary as the solarDOME(s), once installed, will be completely dependent upon your pool's filter pump to push water in and through the heater's solar coils.

How It Works

When properly installed, the solarDOME will be connected to your filter and your pool by two hose connections: One hose will feed cold, filtered pool water from your filter system into one port of the solarDOME. The other hose will return sun-warmed water from the other port of the solarDOME to your pool via the pool return fitting in your pool. As cold water is fed into the solarDOME, it travels through the solar coils where it is heated by the sun before it is delivered back into your swimming pool.

Know Your Pool

Before you begin installation it is a good idea to know certain specifications of your pool:

How big is your pool?

See chart for quantity of solarDOMES for your pool? What size hose does it use? (i.e. 1¼" dia or 1½" dia) (1½" dia hose included)

POOL SIZE		NO. OF solarDOME(s) REQUIRED
18' ROUND	12' x 24' OVAL/ RECTANGLE	1
24' ROUND	16' x 32' OVAL/ RECTANGLE	2
30' ROUND	18' x 33' OVAL/ RECTANGLE	3

How big is your Filter Pump?

The solarDOME is designed to be used with pump & filter systems rated for use on Above Ground Pools. SolarDOMES can be used on Filter Pumps from ¼ (.25) H.P. to 2 H.P. only. **Do not use solarDOME with pumps over 2 H.P. or with pumps rated for Inground pools.**

solarDOME Location

Your solarDOME needs to be located on a hard level surface. You will need to position the heater lower than the pool's water level and at a safe distance away from the pool. **Your solarDOME must be positioned for maximum exposure to the sun.**

STEP 1: PARTS LIST/REFERENCE

CONNECTION KIT		
NO.	DESCRIPTION	QUANTITY OF COMPONENTS
1	MAIN BODY	1
2	1 1/2" FILTER HOSE (117")	2
3	ELBOW CONNECTOR	2
4	O-RING	2
5	HOSE CLAMP	2
6	1 1/4"-1 1/2" ELBOW SLEEVE	2
7	FLOW REDUCER (must be installed in water inlet position)	1

DIVERTER VALVE KIT		
NO.	DESCRIPTION	QUANTITY OF COMPONENTS
1	DIVERTER VALVE	1
2	"T" CONNECTOR	1
3	HOSE ADAPTER	3
4	HOSE CLAMP	6
5	TEFLON TAPE	1

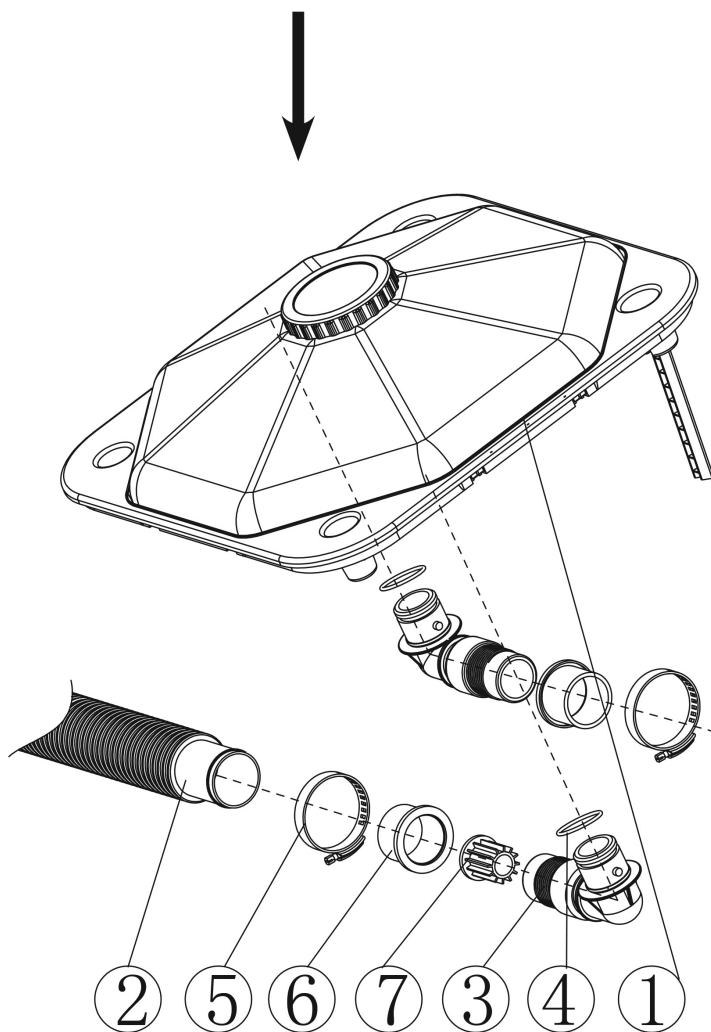


Fig. 2a

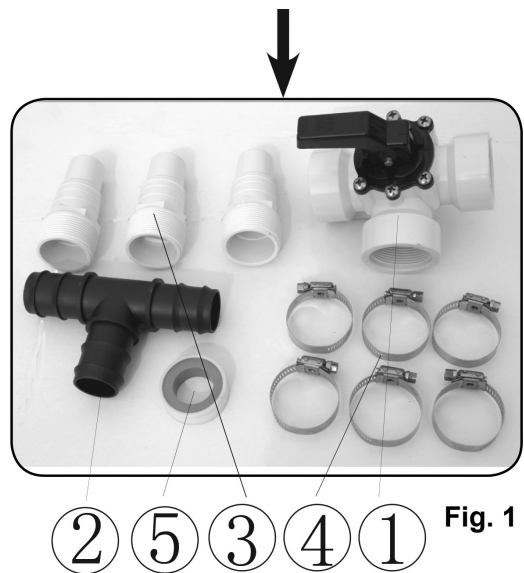


Fig. 1

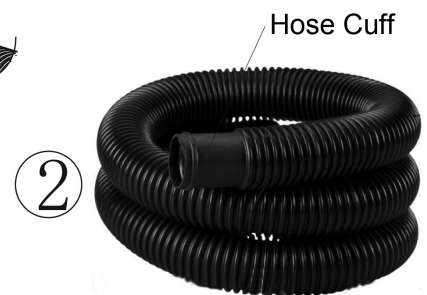


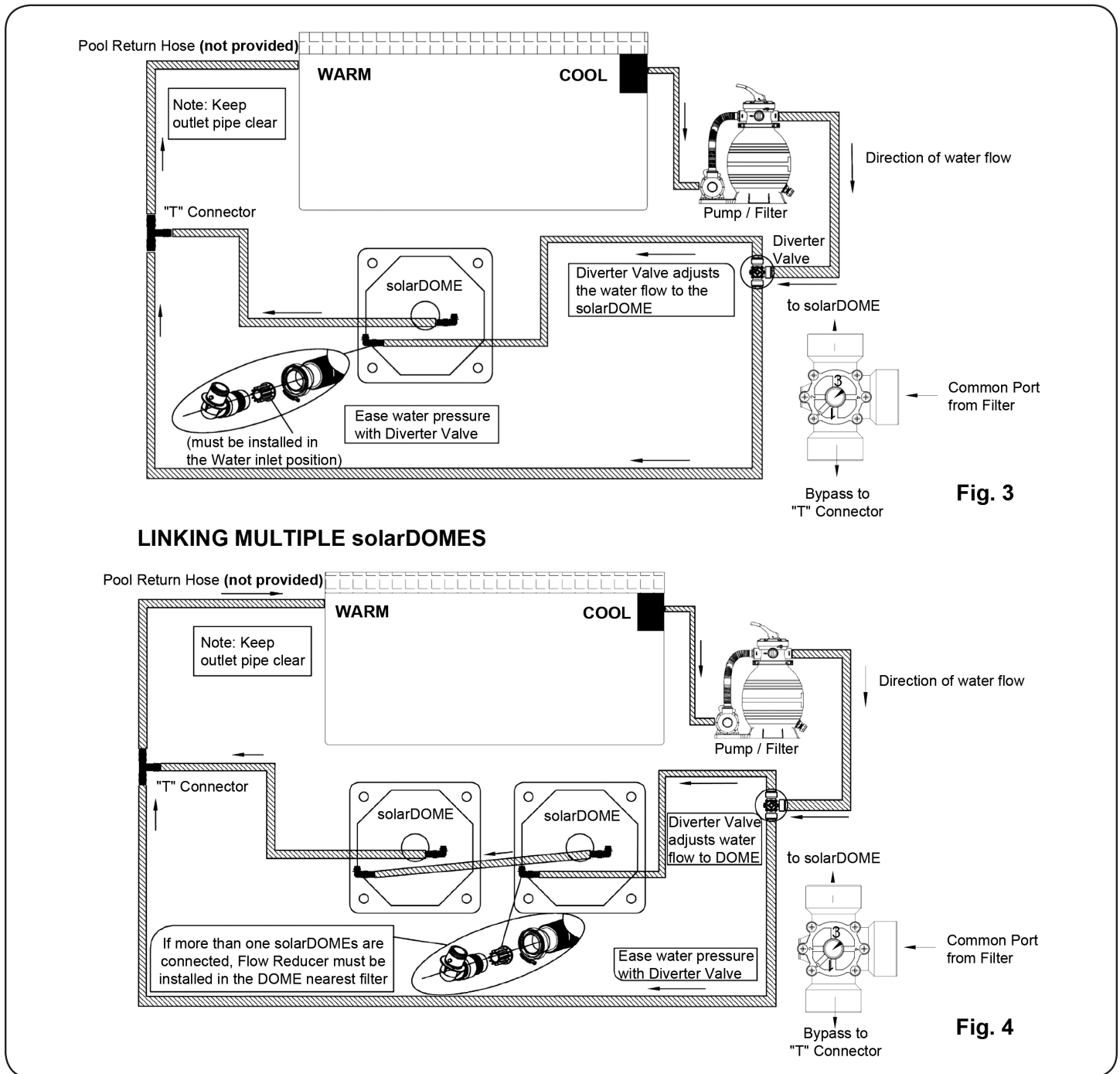
Fig. 2b

Black hose has a "cuff" every 39" and 1 hose will be cut into 3 sections at these spots. 2nd hose will be used as pool return hose."

STEP 2: INSTALLATION INSTRUCTIONS - OVERVIEW

solarDOME – Filter – Pool Layout

The system layouts below will help you install the solarDOME(S) to your aboveground pool.



NOTE: The connections in Fig. 3 & 4 show the water flowing into the solarDOME through the side connector and out through the center connector located on the underside of the solarDOME. This diagram is for reference only as the flow may be reversed if you choose.

The FLOW REDUCER must put into the elbow closest to the filter. The solarDOME must be intalled with Diverter Valve Kit. Operating the filter system withouth a Diverter Valve Kit in place might cause damage to filter, pump and solarDOME.



WARNING: In order to use other outlet water features such as fountains, the solarDOME's Diverter Valve must be in the Bypass mode (Positon 3) !

solarDOME - Pool Connections

NOTE: Turn off the pool pump before connecting the solarDOME. Block water flow at the Pool Return & Skimmer.



WARNING: The Flow Reducer must be installed on the filter side of the solarDOME.

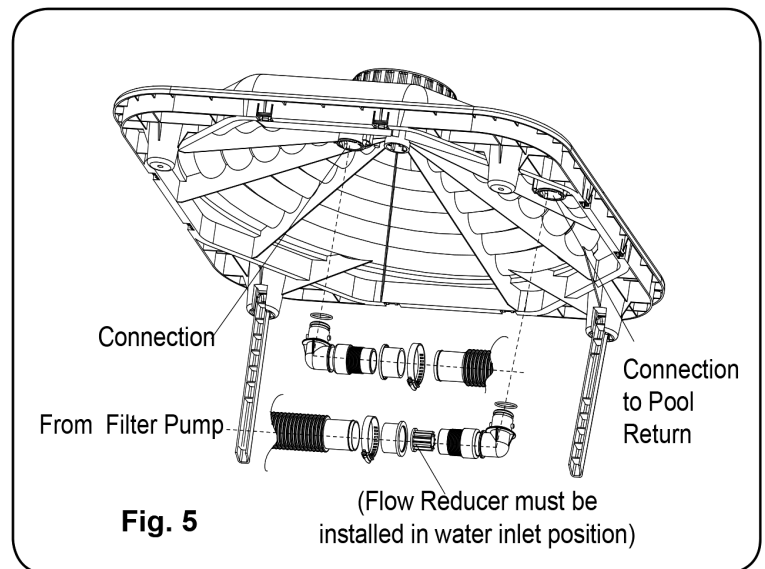
(When more than one solarDOME is connected, the Flow Reducer must be installed in the solarDOME on the side that is the nearest to the Filter. There is no need to install a Flow Reducer on the other solarDOMEs.)
Installing the Flow Reducer properly will put less water pressure on the solarDOME & extend its service life.



Reminder: Do not forget to unblock the Pool Return & Skimmer before turning on the pump.

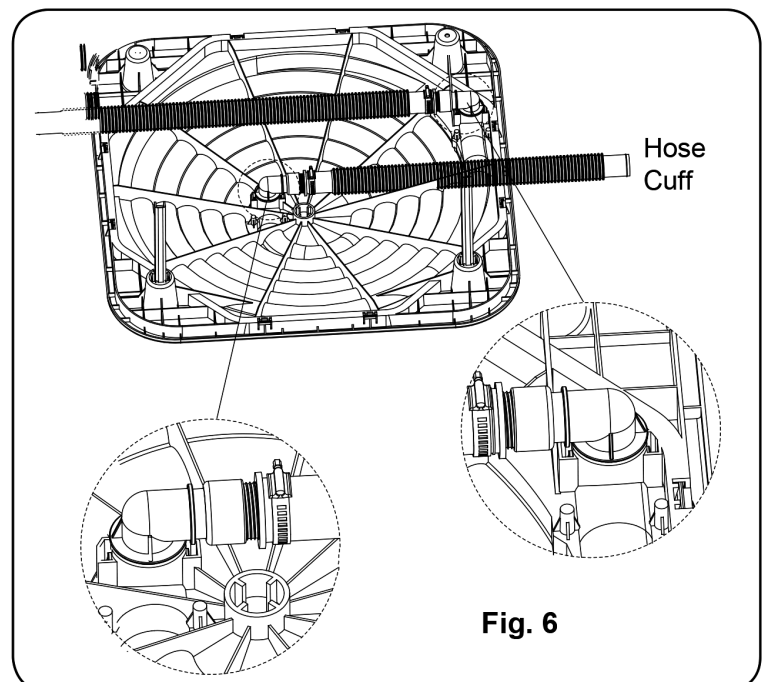
1. Filter to Diverter Valve Connection

- A. Wrap the threads of the 3 Hose Adaptors with Teflon tape (provided). Twist these adaptors into the 3 ports at the Diverter Valve
- B. Position the Diverter Valve exactly as shown in the diagram on Page 4 (see Fig 3). The valve must be installed correctly for the solarDOME to work. Failure to position the Valve correctly will reduce the solarDOME's ability to heat the pool water.
- C. After blocking the return fitting & Skimmer at the pool to prevent water from flowing out of the pool, remove the hose at the pool wall that runs from the Filter System to the return fitting.
- D. Connect this hose to the common port of the Diverter Valve (at Position 4) & secure with a stainless steel clamp.



2. Diverter Valve to solarDOME Connections

- A. Put the orange Flow Reducer into the Elbow Connector to be installed where clean water from the Filter System enters the solarDOME.
- B. If you are using the 1 1/2" diameter black hose (provided), you must place the 1 1/4" - 1 1/2" rubber Elbow Sleeve on the Elbow Connector. (If using 1 1/4" diameter hose the Elbow Sleeve is not required.)
- C. Put the hose on the Elbow Connector & secure it with a stainless steel hose clamp. (If necessary the provided hoses may be cut at the cuff.)
- D. Apply a small amount of silicone lubricant to the O-ring & put the O-ring in the groove on the short side of the Elbow Connector.
- E. Insert the Elbow Connector into a port on the underside of the solarDOME & twist to lock it in place.
- F. Connect a hose from the Elbow to the Diverter Valve (see Fig. 3 & 4).



3. "T" Connector Installation

- A. The "T" Connector must be positioned exactly as shown in Figures 3 & 4. Failure to position the "T" Connector correctly will reduce the effectiveness of the solarDOME.
- B. Attach the second Elbow Connector to the remaining port on the underside of the solarDOME in the same way as the first Elbow Connector. No Flow Reducer is used here.
- C. Attach a hose from the Elbow to the "T" Connector & secure the hose at both ends with stainless steel hose clamps.
- D. Attach a hose from the Diverter Valve to the "T" Connector & secure both ends with a stainless steel hose clamp.
- E. Attach the 2nd black hose from the "T" Connector to the return fitting on the pool wall and secure the hose at both ends with a stainless steel clamp.
- F. Unblock the Skimmer & Return Fitting at pool wall. Check for leaks & tighten the hose clamps if necessary.

4. How to use the Diverter Valve

(see Fig. 7)

Do not use solarDOME on a Pump larger than 2 H.P. This will overload the solarDOME and cause damage.

- A. Position the Nose on the front of the Diverter Valve Handle to the correct Position Number listed below based on the size of your Above Ground Pool rated pump.
- B. To BYPASS the solarDOME & divert all water directly back to the Pool, place the Nose of the Valve Handle in "Position 3". You may need to do this to vacuum the pool or run a water feature like a fountain. The solarDOME must be covered when using valve position 3 during sunlight hours or you may damage the solarDOME. You may use the white poly-bag the dome was packed in or a tarp you supply to do this.

Pumps 1/4 (.25) H.P. - Use Position 1:

Directs all water to solarDOME. (Only used by small pumps.)

Using any other positions on this size pump will not heat water.

Pumps 1/2 (.5) H.P. - Use Position 5:

Directs 3/4 of water through solarDOME & 1/4 is bypassed.

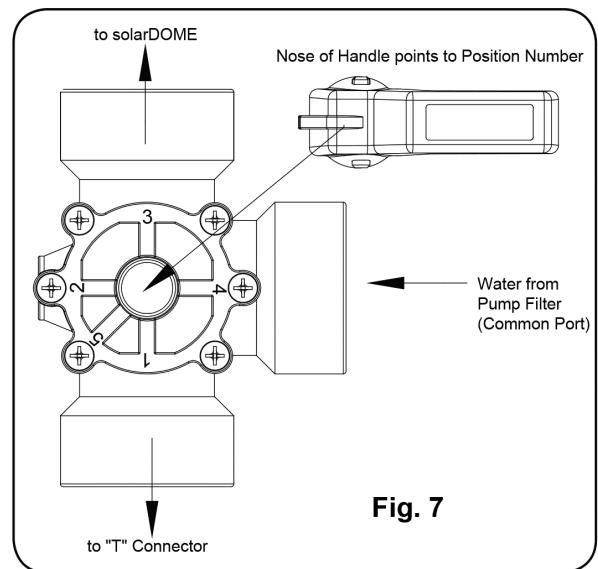
Pumps 3/4 (.75) up to 2 H.P. - Use Position 2: Directs 1/2 water through solarDOME & 1/2 to bypass.

Bypass - Use Position 3:

All water bypasses solarDOME and no heating takes place. Use when no heating is required. You may use other water features when Diverter Valve is in Position 3.

Not Used - Position 4: This position is never used.

Using this position will damage Pump and Filter.



TROUBLESHOOTING

ISSUE	POSSIBILITIES / SOLUTIONS
Does not appear to be heating the pool	Check to make sure water is flowing through the tubes. Check the flow strength at the pool inlet. Has it been sunny? Additional solarDOME(s) may be needed. There could be a clog in the tubing. Try to purge out the clog
Leaking heater	Check the connection seals and replace or repair if defective.
Bubbles continue to flow out of the pool water inlet well after the pump has been turned on	Check the connections for a suction leak. There could be a break in the tubing. There could be a clog in the tubing. Try to purge out the clog. Check to make sure the flow rate is normal.



WARNING

TO PREVENT DAMAGE NOT COVERED UNDER WARRANTY:

1. When the solarDOME is in direct SUNLIGHT during the heat of the day WATER MUST CONTINUALLY FLOW THROUGH THE SOLARDOME OR THE DOME MUST BE COVERED.
2. Keep the white polybag the solarDOME was packed in to cover the dome if the dome does not have water flowing through it during the day.
3. The valve diagram installation instructions on page 6 MUST BE FOLLOWED and the valve position must be set in accordance with the horsepower size of the pump and filter system rated for use for an Above Ground pool.
4. Failure to follow these precautions may result in damage not covered by the warranty.