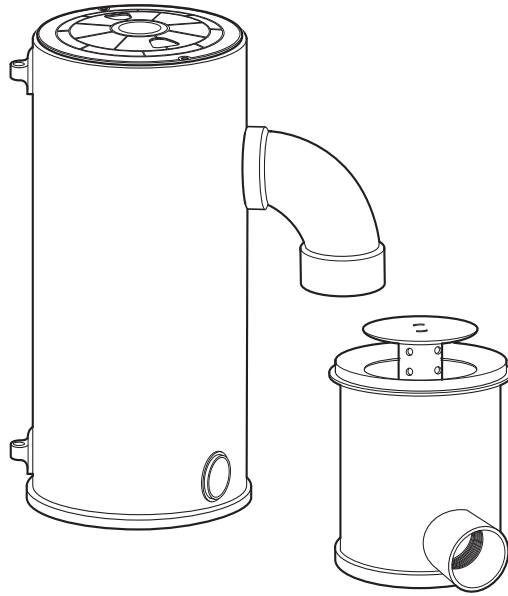


INSTALLATION AND MAINTENANCE GUIDE



 **Polaris Leaf Trapper**

IMPORTANT INFORMATION

SERIAL NUMBER

Important Information

For customer service or support:

- For on-line support: www.polarispool.com
- To contact Polaris:

US and Canada

Customer Service

2620 Commerce Way

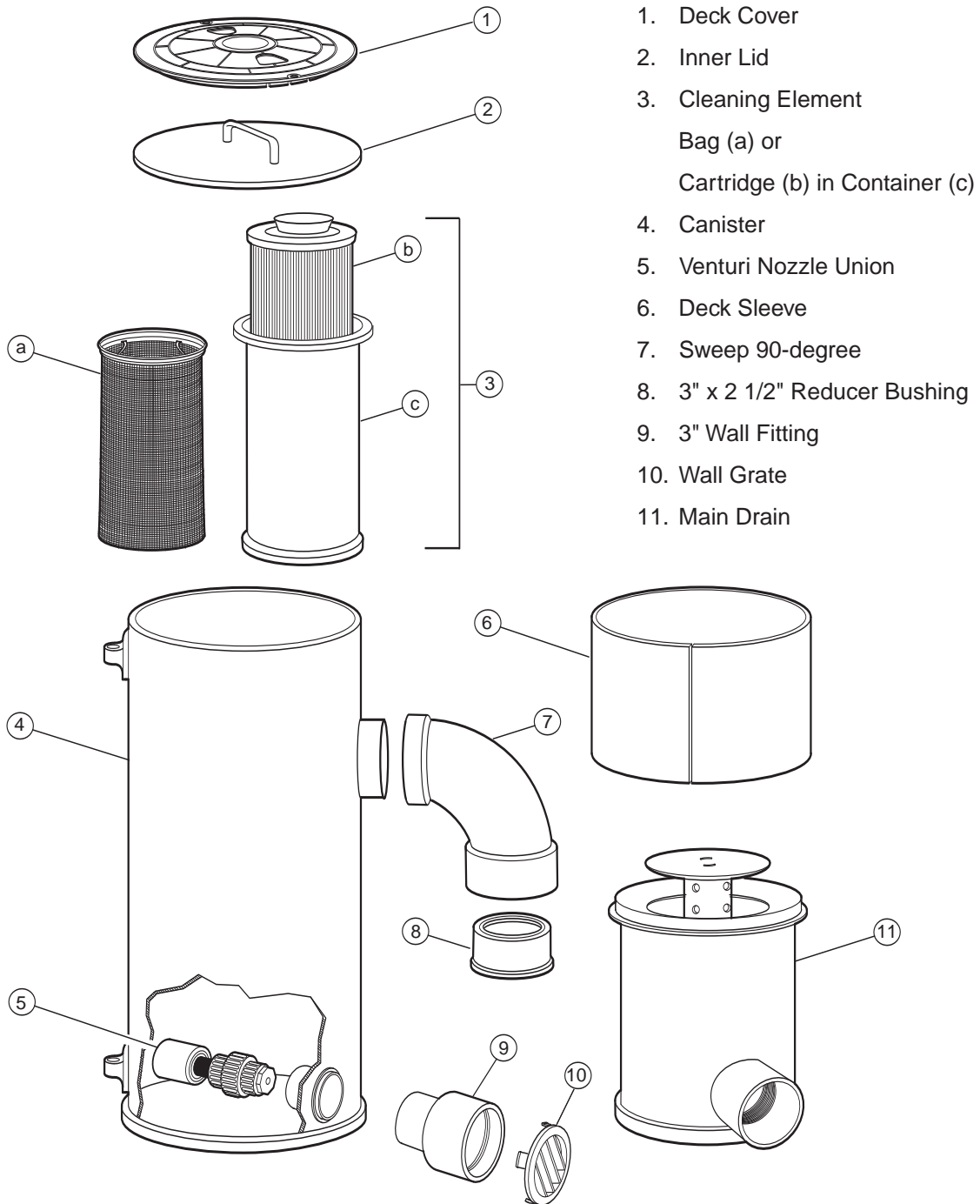
Vista, CA 92081-8438

1-800-822-7933

Introduction

The Polaris LeafTrapper™ main drain system uses the force of clean, filtered water to clear dirt and debris from swimming pools and spas. Using suction created by a high-pressure venturi nozzle inside the canister, the LeafTrapper pulls leaves and debris from the pool bottom through a plumbing line connected to the main drain. Clean water is returned to the pool through a specialized fitting that directs flow to improve pool skimmer efficiency.

LeafTrapper Components

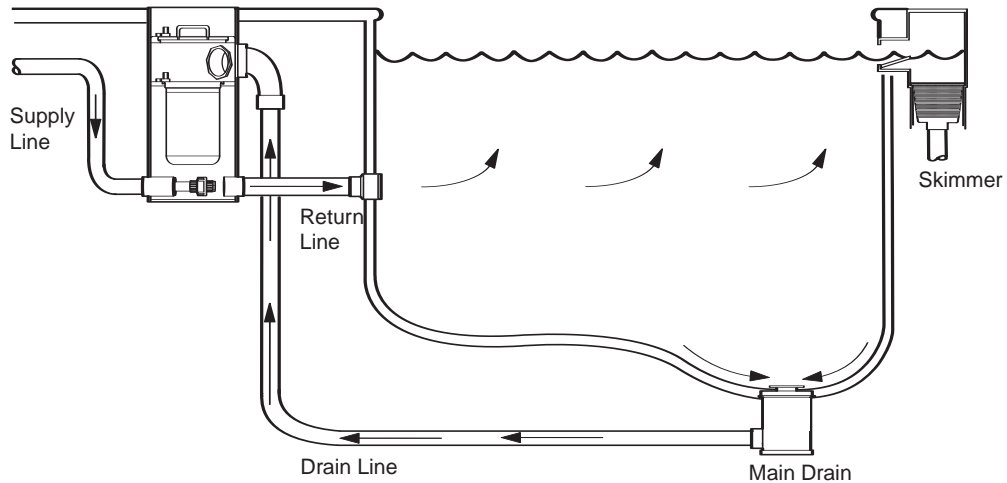


Installation

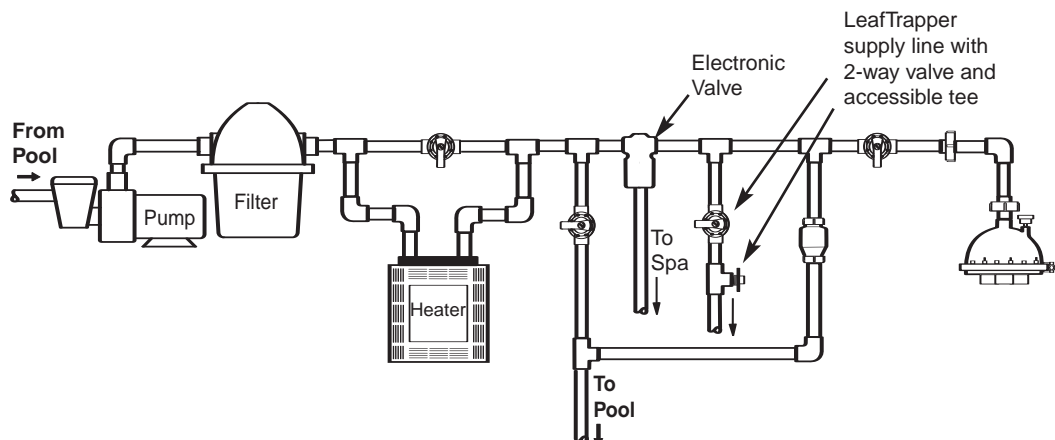
1 Designing the LeafTrapper Pool

Since the LeafTrapper uses a venturi system to direct water, optimize system performance by designing the pool with these flow dynamics in mind.

- Water moving through the return line is directed to the pool surface to increase surface action and skimmer performance. Position the canister so it directs debris to a skimmer.
- Locate the main drain at the deepest point in the pool. Slope the pool floor to funnel debris into the main drain.



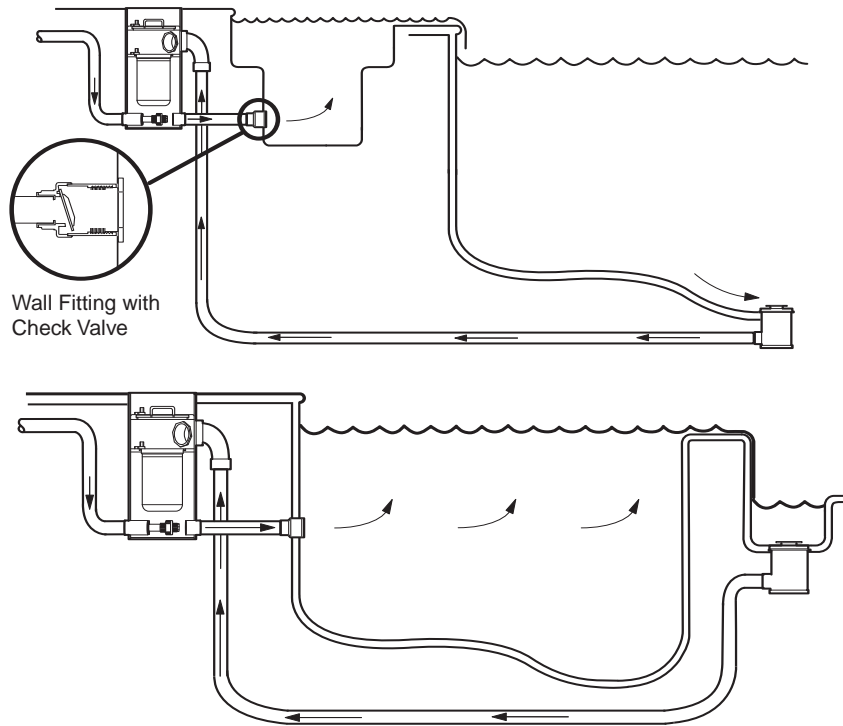
- If an automatic valve system is used to control flow between a pool and spa, install the feed line to the LeafTrapper after the spa feed. This will stop flow to the LeafTrapper when the spa is operating.
- Install a two-way valve and tee with a threaded cap on the LeafTrapper supply line to control flow and provide access for maintenance.
- If a single pump is used to power the LeafTrapper and an in-floor cleaning system, calculate one head worth of flow for the LeafTrapper.
- If a separate pump will power the LeafTrapper, use a 1/2 hp high head pump. To power multiple units, increase pump size by 1/2 hp for each LeafTrapper installed.



Elevated LeafTrapper System

A specialized LeafTrapper system is also available for elevated spas, waterfalls and negative edge pools. When designing such systems, note:

- The canister on this system is 4" longer than a standard unit to accommodate discharge below the spa bench.
- The specialized return-line wall fitting for this system has an internal check valve that must be installed **right side up**.



- The water feature design must be carefully calculated, considering spillway elevation, width, and desired system flow rate. Elevation, defined as the distance from the lower water level to the top of the spillway, is somewhat limited by the venturi system. Refer to the following operational guidelines.

Elevation	Flow Rate (GPM)	Maximum Spillway Length
4"	42	6
6"	41	6
8"	37	5
12"	31	4

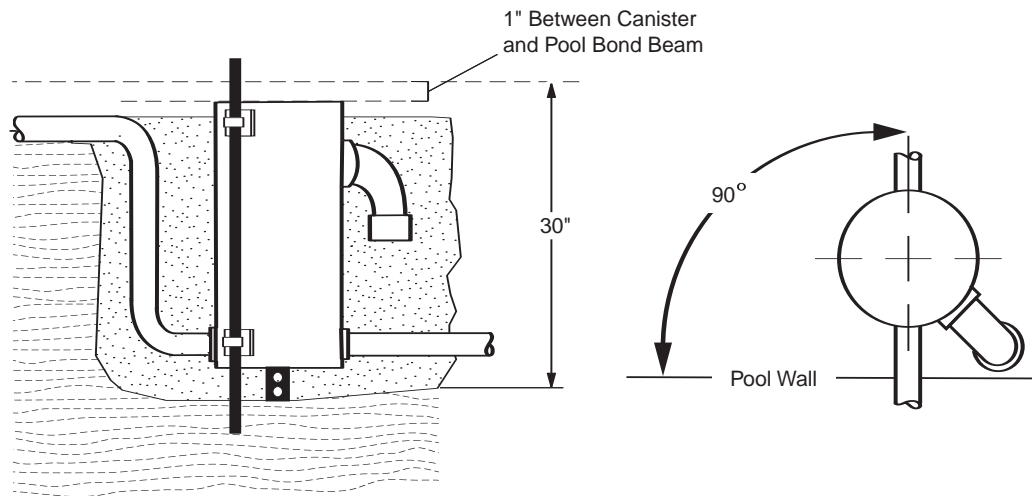
Provided dimensions are at or below the recommended maximums and the spillway is built flat, with a solid cantilevered edge, the system will produce a solid sheet of water flowing over the spillway. If using tile to construct the spillway, reduce the length to compensate for increased flow requirements.

2

Installing the Deck Canister

Excavate the LeafTrapper niche: 30" deep (from top of finished bond beam) by 22" wide and 18" back into the wall.

- Position the canister so the top edge is 1" below the pool bond beam and the return pipe is square with the pool wall once plumbed. Use wood shim or scrap PVC pipe under canister for support.
- Run a 6 foot length of rebar through the canister tabs and secure with tie wire.
- Install the 1-1/2" return pipe so it protrudes through the pool wall.
- Glue the sweep 90-degree and reducer bushing onto the canister.

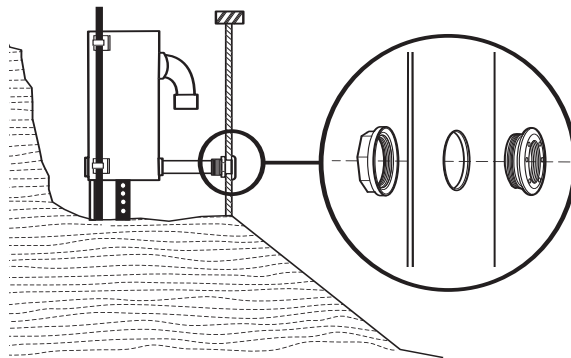


For Vinyl Liner Pools:

1. Drill a 3" diameter hole in the "pre-vinyl" pool wall for the wall fitting, 22" below the liner track. From inside the pool, insert the vinyl wall fitting into the hole. From outside the pool, thread the locking nut into the wall fitting.
2. Glue a 10-1/2" section of 1-1/2" PVC pipe into the canister's return fitting.
3. Position the canister so the return fitting is at the same height as the wall fitting using a shim or PVC pipe for support.

Installation Tip: Place the PVC directly under the canister tabs and run the rebar through the pipe for added support.

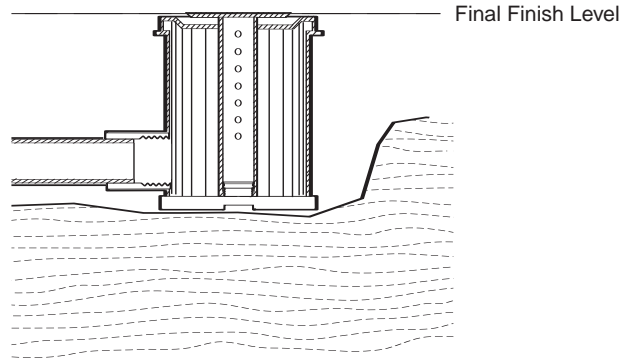
4. Glue return pipe, with canister attached, into the wall fitting.



3

Installing the Main Drain

- Position the main drain flush with the final finish level of the pool floor.
- Use 2-1/2" PVC pipe to connect the main drain to the canister. Heat pipe to simplify installation and improve water flow to the filter element, especially in areas with very leafy conditions. If heating is not possible, use 45 degree elbows instead of 90 elbows. Flexible pipe can also be used.



The main drain can be equipped with an optional hydrostatic check valve, Polaris part #4-1-41).

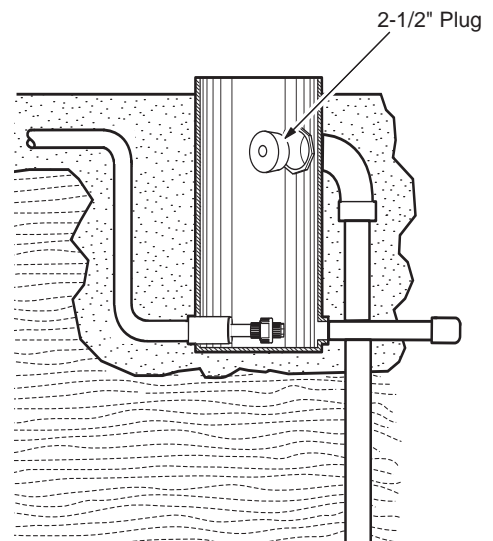
4

Pressure Testing the System

Use the Polaris Air Pressure Test Kit (part #4-17-102) and Polaris Water Pressure Test Kit (part # 4-17-100) to test the system. Test to 35 psi.

- To test supply line, install the venturi nozzle union with the solid washer in place and hand tighten until secure.
- To test drain line, install 2-1/2" test plugs at the drain and the canister.

After pressure is verified, place the deck cover on the canister and tape the protective cardboard disk over it. Affix the masonite protective cover over the main drain.



For Vinyl Liner Pools:

After pressure testing, install a thrust block around the main drain to prohibit shifting. Pour a 12" diameter concrete ring around the drain, 6 to 8" deep. Leave room for the pool bottom material between the concrete and the vinyl.

5

Finishing the Pool

Concrete Shell Guidelines

- Cut a well 6" deep and 6" in diameter in the shell at the return line to accommodate the flush-mounted 3" wall fitting.
- For final finish to seal properly, include a 1" well in the shell around the main drain.

Deck Installation

Use the adjustable deck sleeve to set the height of the deck cover.

1. Slide deck sleeve into the canister and place deck cover on top. Adjust to desired height and mark position inside canister.
2. Raise sleeve up a few inches, apply glue to canister, reposition sleeve and hold until glue sets. Verify that protective disk is on deck cover.
3. Pour the deck around the LeafTrapper as you would a skimmer.

Preparing for Final Surface Finish

Clear the Supply Line

1. Remove the venturi nozzle union from the canister and the test plugs from the drain line and drain. Open tee at pool equipment and flush the lines using a blower or pressurized water.
2. Clear all debris from the canister and drain.
3. Close tee, remove the solid washer from venturi nozzle union and re-install.

Install Return Fitting

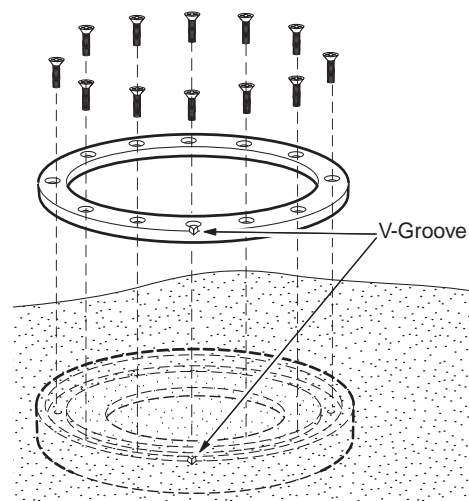
Cut the return pipe 1-1/2" behind the finished wall. Glue the return fitting flush with the finished pool wall. Tape fitting for protection. Do not install the return wall grate until after the final finish is applied.

For Vinyl Liner Pools:

Lines should be cleared and debris removed before installation of the vermiculite or sand bottom.

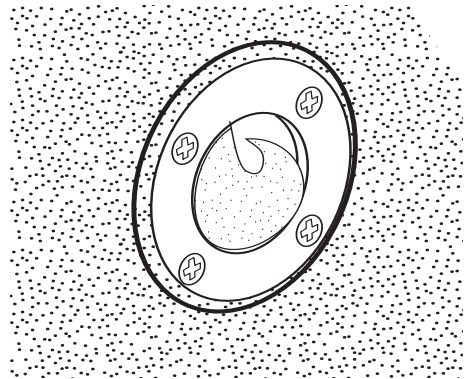
Once the liner is securely in place, install the main drain grate:

1. Locate the main drain under the liner and feel for the V-groove on the outer edge of the drain.
2. Press the locking ring onto the main drain, aligning the ring V-groove with the V-groove on the drain. This will align the screw holes.
3. Hold the locking ring in place and install the 12 self-tapping screws. Tighten securely.
4. Cut away the liner by trimming at the inner edge of the locking ring.
5. Install the drain grate flush with the pool floor.



Install the wall fitting face plate:

1. Locate the wall fitting and the four empty screw holes.
2. Align the face plate with the screw holes and install the screws.
3. Cut the liner from the center of the face plate and install the wall fitting.

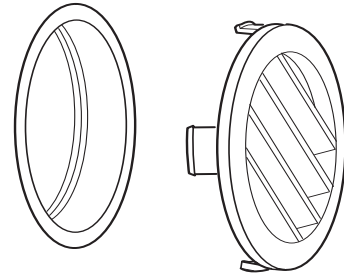


6

Starting the System

Before initiating the system, open a discharge line before the leaf trapper and flush the pool pump and filtration system. Clear debris from all filters and screens.

- Install the return wall gate, positioning to direct flow to skimmer.
- Install the filter element (bag or cartridge with container) and rotate the locking tabs into place.
- If water has accumulated above the level of the inner lid, turn on the pool pump to drain the water into the filter. Reposition and secure the inner lid and install the deck cover.



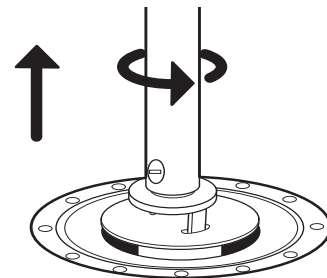
Turn on the pool pump to activate the LeafTrapper.

- Verify that the valve in the equipment is completely open.
- If a pressure gauge is installed, pressure should be approximately 20 PSI. Adjust valve to maintain pressure if necessary.

Normal operating height of the main drain is flush with the pool floor. To adjust, use the Polaris Head Removal Tool (part# 3-17-8) attached to the end of a pool service pole.

Insert the tabs of the tool into the slots on the drain.

- Turn counterclockwise to raise the drain for larger debris like leaves.
- Turn clockwise to lower the drain.



Operation and Routine Maintenance

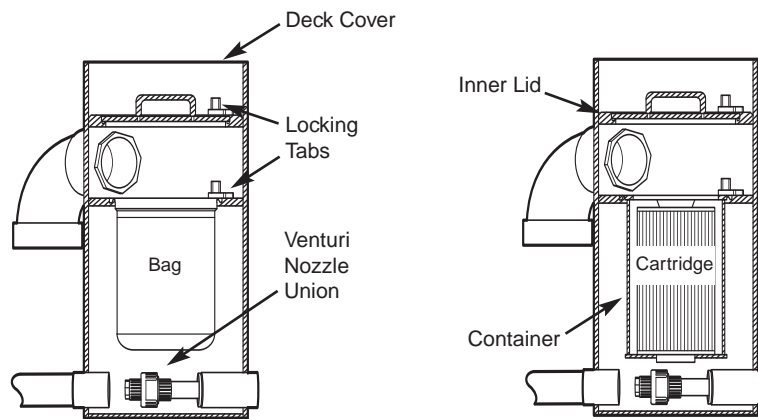
To optimize system performance and maintain a clean pool, routinely clean the pool filter, pump basket and LeafTrapper filter element.

Turn off pool pump to turn off the LeafTrapper system before performing maintenance.

Cleaning the LeafTrapper Filter

1. Remove deck cover. Turn locking tabs to free and remove inner lid.
2. Turn locking tabs to free the filter element (bag or cartridge with container).
3. **For filter bags:** Remove bag, turn inside out and flush with water.

For cartridge filters: Lift out cartridge and cartridge container. Rinse out the container and thoroughly clean the cartridge. To remove calcium deposits, soak the cartridge in a water and muriatic acid solution (diluted 10 to 1) before flushing with water.



4. Reposition and secure filter element.
5. Turn on pool pump to activate LeafTrapper and drain any water inside the canister into the filter. Replace the inner lid and deck cover.

Cleaning the Nozzle

1. Remove deck lid, inner lid and filter element.
2. Turn venturi nozzle union clockwise to remove. Check nozzle for debris and clean as necessary.
3. With nozzle off, turn on pool pump and flush supply line for thirty (30) seconds.
4. Reinstall nozzle union, filter element, inner lid and cover.

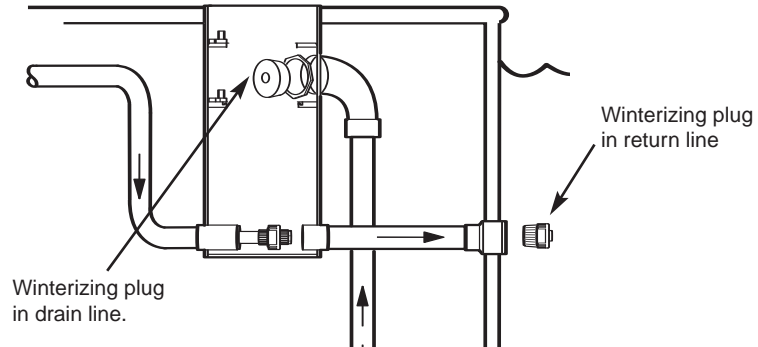
Removing Stagnant Water from Above the Inner Lid

If water accumulates above the inner lid, remove lid and turn on the system to drain water into the filter. Reinstall the lid and cover. **Water must be kept below inner lid in areas prone to freezing.**

Winterizing

To avoid freeze damage in cooler climates, winterize the LeafTrapper system.

1. Remove deck cover, inner lid and filter element (bag or cartridge with container).
2. Remove the return-line wall fitting and replace it with a #9-1/2 rubber winterizing plug (3" threaded cap for raised spas or 1-1/2" threaded plug for vinyl pools).
3. Clear all water from the canister. Using compressed air, blow out the drain line. Install a 2-1/2" winterizing plug in the drain pipe fitting.



4. Close the valve at the pool equipment. Open the plugged tee in the supply line and blow out the line. Reinstall the plug in the tee.
5. Vacuum any remaining water from the canister. Put antifreeze (propylene glycol only) and a weighted object inside the canister to prevent freeze damage from rain water. Reinstall the inner lid, position another weight on top of it and add more antifreeze.
6. Reinstall the deck cover and store the filter element in a dry protected location.



Your pool. Our reputation.

2620 Commerce Way, Vista, CA 92081-8438 • 760-599-9600 • 1-800-822-7933

www.polarispool.com