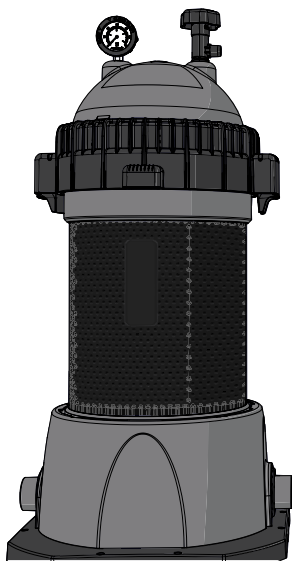




PIPELINE FILTERS®

CARTRIDGE FILTER MANUAL

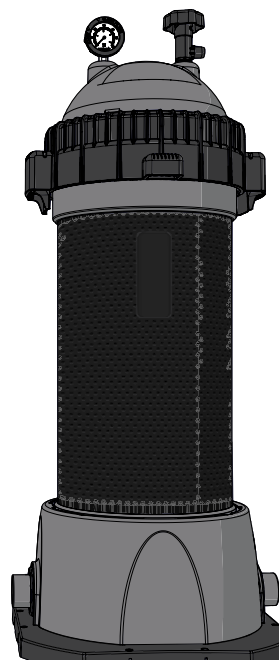
INSTALLATION AND USER'S GUIDE



MODEL # PLF27000



Certified to
NSF/ANSI/CAN 50



MODEL #PLF35000



Certified to
NSF/ANSI/CAN 50

My filter is the ☐ PLF27000 or ☐ PLF35000 and it was installed on _____ (date)

Installed by _____ (company/contact)

My clean filter pressure is _____ psi and it needs to be cleaned before the pressure increases 10 psi.

Clean the filter before the pressure reaches _____ psi (clean filter pressure + 10 psi)

FOR YOUR SAFETY

Read, understand and follow all warning notices and instructions before installing, using, or servicing this filter. Failure to follow warning notices and instructions may result in property damage, serious injury, or death.

SAVE THESE INSTRUCTIONS

TABLE OF CONTENTS

INSTALLATION SAFETY INSTRUCTIONS	4	INSTALLING PRESSURE GAUGE	10
GENERAL SAFETY INSTRUCTIONS	4	USING THE PRESSURE GAUGE	10
FILTER SPECIFICATIONS	5	Initial pressure gauge set-up	
GENERAL INFORMATION	6	How to read the pressure gauge	
Filter location		Maintaining the pressure gauge	
Filter position		How to check the pressure gauge	
Filter drain		CLEANING THE FILTER	11
Filter piping		What you need to clean the filter	
Pipe size		Preparing to open the filter	
Hydrostatic pressure tests		How to open the filter	
INSTALLATION INSTRUCTIONS	7	System restart instructions	
Filter set		RUNNING PARALLEL FILTERS	13
Connecting piping		REPLACEMENT PARTS	14
Connecting piping to the Filter Unions			
INSTALLING LID ASSEMBLY	8		
FILTER OPERATIONS	9		
Normal operation			
Maximum working pressure			
Maintain the pressure gauge			
When to clean the filter			



INSTALLATION SAFETY INSTRUCTIONS

⚠ WARNING High pressure water supply can cause severe injury, property damage, or death. DO NOT CONNECT FILTER TO AN UNREGULATED MUNICIPAL WATER SYSTEM OR OTHER SOURCE OF PRESSURIZED WATER CAPABLE OF PRESSURES GREATER THAN 50 PSI. Only pressure test for the minimum time required by the local code and do not leave the pressurized system unattended. This procedure should only be performed by qualified personnel.

⚠ WARNING Pressurized air inside the filter can cause severe injury, property damage, or death. DO NOT USE COMPRESSED AIR TO PRESSURE TEST THIS FILTER. Before applying pressure, verify the filter is properly installed, fully assembled, and completely full of water.



⚠ WARNING High pressure start-up. DO NOT INSTALL THIS FILTER NEAR PUMP SWITCHES. Standing too close to the filter when the pump turns on can cause severe injury or death. Install pump controls so that the user has enough space to stand clear of the filter and pump during startup, shutdown or servicing.

⚠ WARNING RISK OF ELECTRICAL SHOCK OR ELECTROCUTION. Water spraying from an improperly positioned filter or Air Relief Valve can create an electrical hazard that can cause severe personal injury as well as damage property. Direct the Air Relief Valve opening away from electrical equipment, switches, controls and junction boxes, or attach an air relief hose to direct air and water to a safe discharge location.

ATTENTION INSTALLER: This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

GENERAL SAFETY INSTRUCTIONS

⚠ WARNING Always disconnect power to the pool pump at the circuit breaker before servicing the filter. Pumps are often controlled by timers, remote control systems, and secondary switches that could be switched on while you are working on the filter. Failure to disconnect power to the pump can result in serious injury or death to the person servicing the filter, pool users, or others, and it can result in flooding that can cause property damage.

The maximum operating pressure for this filter is 50 psi. Never subject the filter to operating pressure exceeding 50 psi. Operating pressures above 50 psi can cause equipment to break, which can result in death, serious personal injury, or property damage.

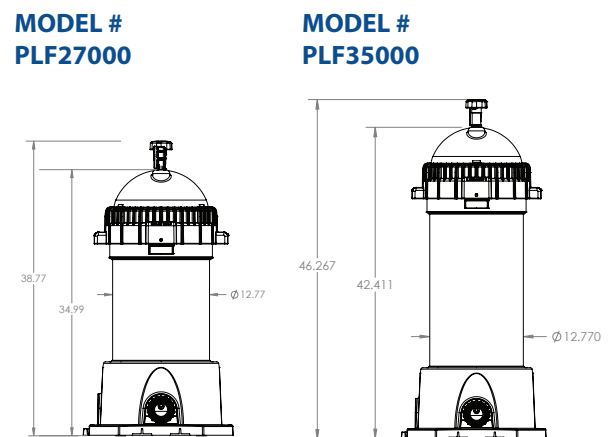
ATTENTION USER: This manual contains important information about the installation, operation, servicing and safe use of this product. Keep this manual for future use. Replace worn or damaged filter parts immediately.

FILTER SPECIFICATIONS

Table 1: Filter Specifications

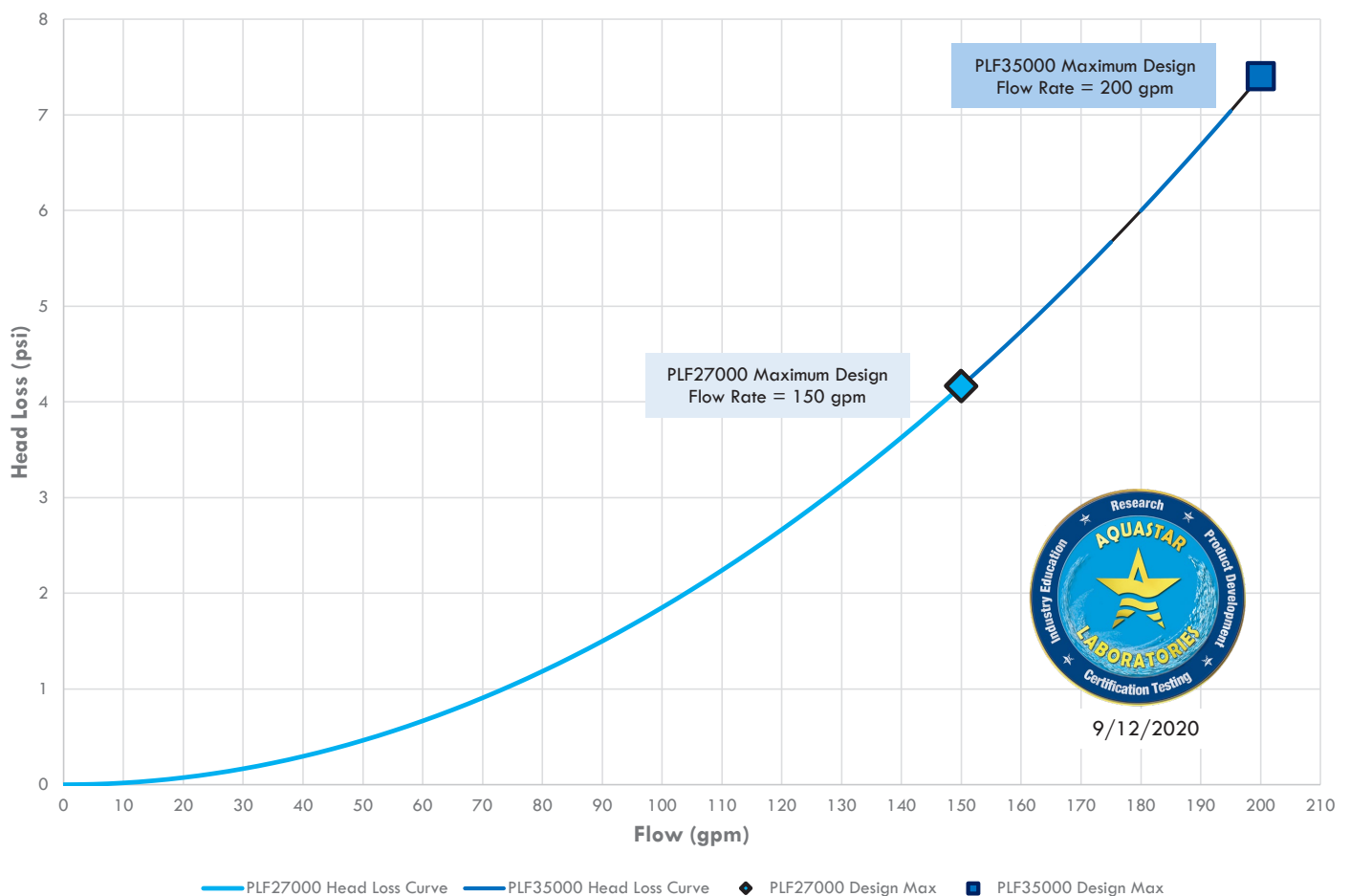
Model Number	PLF27000	PLF35000
Filter area (sq. ft.)	200	250
Maximum Flow Rate (gpm)	150	200
Residential: Design Filtration Flow Rate* (gpm)	150	200
Public: Design Filtration Flow Rate (gpm)	75	99
Public: Pool 6-Hour Turnover Capacity (gallons)	27,000	35,640
Public: Pool 8-Hour Turnover Capacity (gallons)	36,000	47,520
Residential: 12-Hour Turnover Capacity (gallons)	108,000	144,000
Maximum working pressure (psi)	50	50
Replacement Cartridge Filter (Model #)	PF27000	PF35000
Minimum Vertical Clearance (in.)	61	76

Product Dimensions



*Local residential swimming pool building, and energy efficiency codes may specify lower filtration flow rates.

AquaStar Cartridge Filters - PLF27000 & PLF35000
Head Loss Curve



GENERAL INFORMATION

Keep pump controls at least 5 feet away

Install pump controls (e.g., on/off switches, timers, control systems, etc.) at least five (5) feet from the filter. This must be done to allow enough room to stand clear of the filter when the pump is started.

Table 2

Filter Model	Size	Vertical Clearance	Horizontal Clearance
PLF27000	200 sq. ft.	61 in.	6 in.
PLF35000	250 sq. ft.	76 in.	6 in.

Filter location

Select a filter location that provides enough light and clearance around and above the filter so it can be inspected and serviced. The filter must be mounted on a reasonably level surface that provides adequate drainage. Ensure there is enough vertical clearance above the filter to allow the filter element to be lifted out of the housing for cleaning and replacement. See Table 2 and Figure 1.

Filter position

Position the filter so the INLET is facing the pump. If the pump is to the right side of the filter, the drain port will be in the back. If the pump is to the left of the filter, the drain port will be in the front.

Filter drain

The filter drain must be accessible to allow properly cleaning. The supplied 1 ½ threaded drain plug includes an O-Ring for easy opening and closing. For filter servicing convenience, a drainpipe with ball valve can be attached to the filter drain port, allowing drained water to be directed to an appropriate drainage location, see Figure 2.

Filter piping

Make all piping connections in compliance with local codes. The filter uses PVC unions (included) to quickly connect the filter to the recirculation system piping. The unions are 2-inch female slip socket inside and 2 ½-inch male spigot outside.

Pipe size

To operate any filter at the maximum design flow rate requires piping large enough to carry volumes of water without causing excessive back-pressure, which limits the flow through the recirculation system. The minimum pipe size needed to achieve the design flow rate typically is 2 ½-inch for short distances between the filter and pool, consider 3-inch for greater distances.

Hydrostatic Pressure Tests

DOES NOT EXCEED 50 PSI, THE MAXIMUM WORKING PRESSURE OF THE FILTER. When performing hydrostatic pressure tests to check for leaks of the complete recirculation system use the lowest test pressure allowed by local code and never exceed 50 psi under any circumstances.

Figure 1

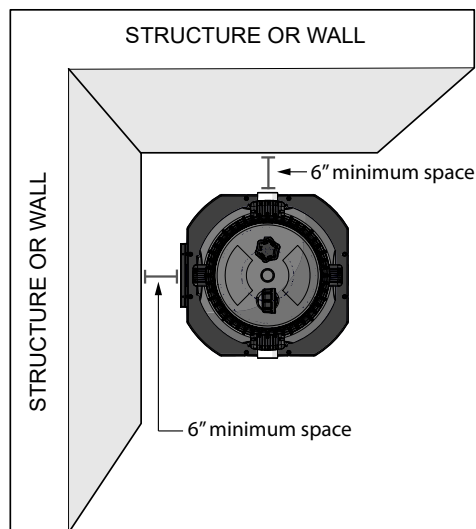
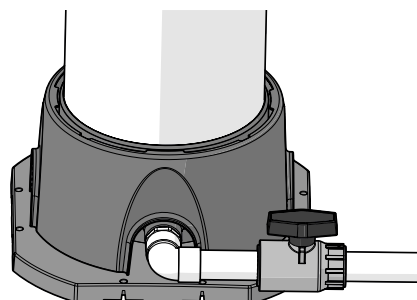


Figure 2



INSTALLATION INSTRUCTIONS

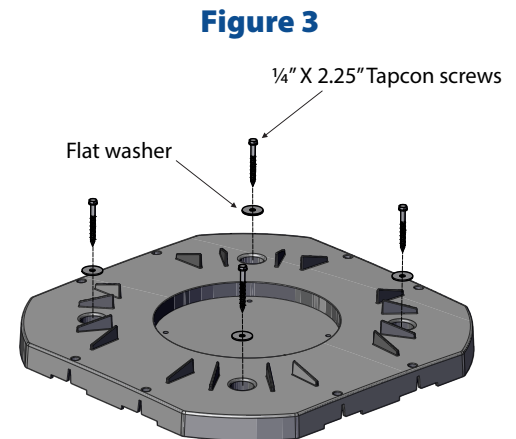
Installation of filter and piping should only be done by qualified personnel.

Filter set

- Before installing the filter read and understand these instructions and any applicable codes.
- Refer to and apply Filter Specifications and General Information above.
- Assure the intended filter location provides adequate clearance, drainage, and protection from freezing and severe weather. Some local codes and conditions require the filter to be secured to the ground, such as hurricane or earthquake zones.
- The filter is heavy, remove the box from around the filter or get someone else to help lift it carefully out of the box.

Connecting piping

- To access pipe connects, the Base Cover needs to be temporarily lifted out of the way.
- Remove the Filter Lid Assembly by following the Locking Ring Removal Instructions below and then carefully set it out of the way.
- Lift the Base Cover up to the bottom of the Housing Locking Ring threads and thread it into the bottom threads by turning it counter-clockwise. Guide the top inside edges into the threads a ¼ turn or more. Alternatively, the Base Cover can be fully removed and set aside until the piping installation is complete.
- If the filter is to be attached to the ground, use four (4) ¼-inch bolts appropriate for the application. See Figure 3.
- If a drain pipe and valve are to be connected to the filter drain port, install it before connecting recirculation piping.



Connecting piping to the Filter Unions

- Filter plumbing connections are provided with 2-inch x 2 ½-inch unions equipped with double-sealing gasket. When lubricating, use only a silicone-based lubricant on the O-rings provided. Do not use petroleum jelly, pipe joint compound, glue, or solvents. Install the Union Gaskets on the Nut side of the filter Inlet and Outlet unions.
- Connect the recirculating system piping to the Unions:
 - For 2-inch recirculation system piping, connect 2-inch PVC piping or fittings to the inside socket of each threaded union.
 - For 2 ½-inch recirculation system piping, connect a 2 ½-inch slip socket fitting to the outside spigot of each threaded union.
 - For 3-inch or larger recirculation system piping, connect a 2 ½-inch x 3-inch or larger reducer bushing to the outside spigot of each threaded union and then connect the 3-inch or larger fitting.
- After connecting all piping reinstall the Base Cover by threading it through the Housing's locking threads. Position it so all three ports align with the openings. Then reinstall the Lid Assembly by following the instructions below.

INSTALLATION INSTRUCTIONS CONTINUED

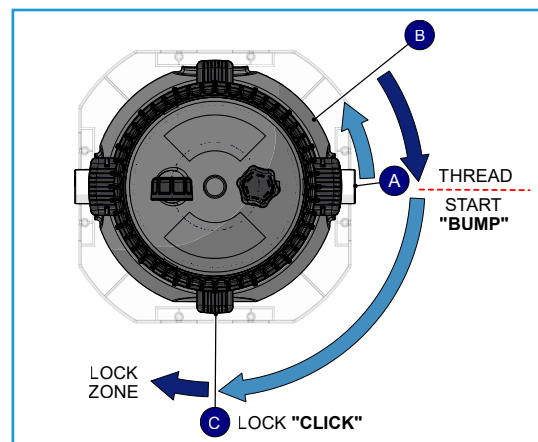
⚠ CAUTION TURN THE LOCKING RING ONE FULL TURN TO FULLY CLOSE THE FILTER. Failure to fully close the filter can cause water to flood out of the filter if the pump is turned on. Always install the Lid Assembly by following the instruction below. NEVER TURN ON THE PUMP WITHOUT FOLLOWING AND COMPLETING THESE LID ASSEMBLY INSTRUCTIONS.

- **Designed for your safety.** The Filter and Lid Assembly have two sets of lid-locking threads to create a two-stage O-ring compression/decompression system. The bottom set of threads work just like other filters, holding the lid in place. This patent pending filter also has a second set of threads that securely hold the Lid even when the O-ring seal is opened, allowing water to exit down the side of the Housing.
- **Design for ease of use.** The two-stage system also compresses and decompresses the O-ring using the screw action of the Locking Ring unlike other filters that require users to break the O-ring seal by pulling directly on the filter top after removing a locking ring or clamp.
- **Infinitely adjustable lid.** The two-piece assembly allows the top dome to face any direction, an important safety feature that allows the water exiting the Air Relief Valve to be aimed away from controls and other equipment.
- **Install the Manual Air Relief valve.** Prior to attaching the Lid Assembly to the filter Housing, install the Air Relief valve in the larger port located on top of the domed Lid. The valve includes an O-ring. Do not add Teflon tape to the valve threads. Simply thread the valve into the filter by hand until the O-ring is fully seated.

Step 1: With the Lid Assembly removed, inspect, clean, and then lubricate the filter housing O-ring and groove using the silicone-based grease provided. NEVER use petroleum jelly, pipe joint compound, glue, or solvents on any O-ring or gasket. Only use silicone-based lubricants.

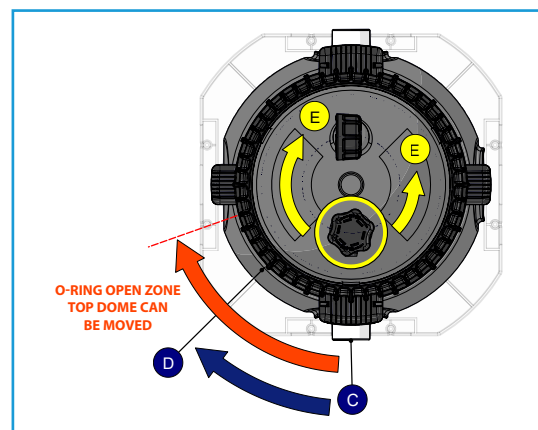
Step 2: Lift the Lid Assembly by the large handles and while standing directly in front of the filter, set it on top of the filter housing with the handles at 3 and 9 o'clock (A). Rotate the Locking Ring counter-clockwise until you feel it drop onto the first thread (B) (approximately 2 and 8 o'clock), then turn it clockwise $\frac{1}{4}$ turn until you feel the Locking Ring "bump" the first thread. This will happen as the handles pass the 3 and 9 o'clock positions. Continue rotating until you feel the handle safety lock "click" as the large handle passes 6 o'clock (C).

STEP 2



STEP 3

Step 3: Continue to rotate the Locking Ring another $\frac{1}{8}$ turn (D). This step moves the Locking Ring inside the water release safety zone without engaging the O-ring, allowing the top dome to be rotated to any position (E).



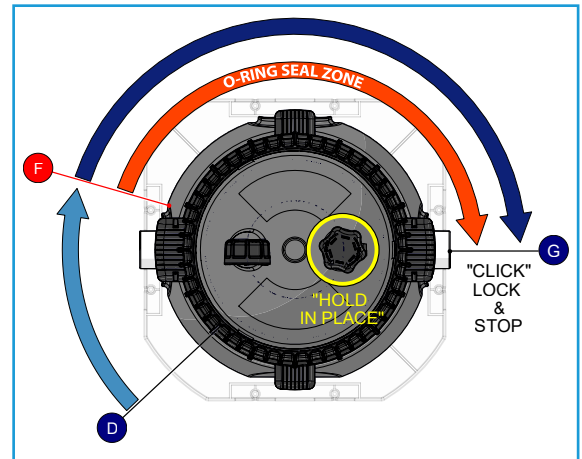
INSTALLATION INSTRUCTIONS CONTINUED

Step 4: While holding the Locking Ring in place with one hand, use the other to rotate the filter dome by holding and aiming the Air Relief Valve where you intend the water to spray. **DO NOT AIM AIR RELIEF VALVE AT ELECTRIC EQUIPMENT OR PUMP CONTROLS.** If the Dome rotates with Locking Ring when being held with one hand, or you need two hands to rotate the Locking Ring, alternate using both hands to rotate the Locking Ring and then the Dome until it is where you want it (E).

Step 5: Hold the Air Relief Valve (as needed) while continuing to rotate the Locking Ring clockwise from (D) another ¼ turn, until you feel the O-ring engaging the Filter housing (F).

Step 6: Using both hands, continue rotating the Locking Ring clockwise another 1/3 turn, sealing the O-ring and fully locking the filter together (G). It is fully locked when you feel the large handles “click” and the Locking Ring hits a hard stop. The Locking Ring handles **MUST** be back where you started, at 3 and 9 o’clock. **THE LOCKING RING MUST COMPLETE ONE FULL TURN TO FULLY CLOSE AND LOCK THE FILTER.**

STEPS 4 & 5



FILTER OPERATIONS

Normal operation

This filter operates under pressure. When the lock ring is installed properly and operated without air in the water system, this filter will operate safely. See Figure 4 for system operation overview.

Maximum working pressure is 50 psi

The maximum working pressure of this filter is 50 psi. Never subject this filter to pressure in excess of this amount - even when conducting hydrostatic pressure tests. Pressures above 50 psi can cause the lid to be blown off, which can result in severe injury, death or property damage.

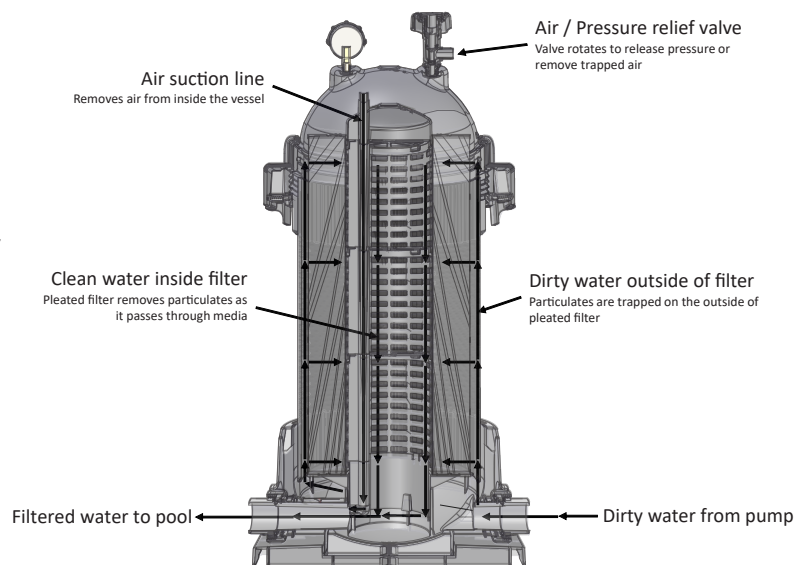
Maintain the pressure gauge

The pressure gauge is the primary indicator of how the filter is operating. Maintain your pressure gauge in good working order.

When to clean the filter

Clean your filter when pressure reads 10 psi or higher than the original starting pressure. Your filter pressure reading will increase as it removes debris from your pool. However, this buildup of pressure will vary due to different bathing loads, temperature, weather conditions, etc.

Figure 4



MY ORIGINAL STARTING PRESSURE IS _____ psi (pounds per square inch). I SHOULD CLEAN THE FILTER CARTRIDGES AT _____ psi.

INSTALLING PRESSURE GAUGE

The pressure gauge is supplied with an adjustable boot with two arrows separated by 10 psi. This is to mark the clean filter pressure allowing users to see the pressure rising above the START pressure and to know when the filter should be cleaned.

- Apply two or three wraps of Teflon tape to the pressure gauge 1/4-inch threads.
- Carefully thread the gauge into the 1/4-inch NPT hole in the filter Lid. Turn the gauge by hand until snug and then use a 9/16-inch or 14mm box-end wrench to finish tightening the gauge so it is facing a readable direction.
- DO NOT OVER TIGHTEN.
- When the filter is started for the first time, the Boot will need to be adjusted so the START Arrow points at the operating gauge needle when the filter is new and clean, and with the pump and recirculation system configured and operating at the design filtration flow rate.



FILTER OPERATING INSTRUCTIONS

⚠ WARNING THE PUMP MUST BE OFF BEFORE STARTING THIS PROCEDURE.

⚠ WARNING DO NOT OPERATE FILTER ABOVE 50 PSI UNDER ANY CIRCUMSTANCES.

Filter operating instructions

1. Remove the Lid Assembly and be sure the Filter is properly seated on the Filter Core Assembly and that it is installed with the internal Automatic Air Release screen located on the Outlet side of the filter Housing. When the filter Core Assembly is properly aligned, it will not be able to rotate within the Housing. Try to rotate it. If it turns, keep turning until it drops into place.
2. Install the Lid Assembly by following the instructions above. Make sure the Locking Ring is fully closed and lock. Check by attempting to turn the Locking Ring by turning the SMALL handles counter-clockwise. The Locking Ring should NOT turn.
3. **OPEN THE MANUAL AIR RELIEF VALVE ON TOP OF THE FILTER.**
4. Open all isolation valves.
5. Stand away from the filter and then turning on the pump, be sure to follow the pump manufacturer's priming and start-up instructions. If the pump is working, air will begin existing the Manual Air Relief Valve on the top of the filter.
6. When a steady stream of water comes out of the Manual Air Relief Valve, close the valve.
7. Observe the operating filter for leaks, keeping in mind that water from the Manual Air Relief Valve may drip down the side of filter after passing between the filter Housing and the Locking Ring.

USING THE FILTER PRESSURE GAUGE

Initial pressure gauge set-up

With a new or clean filter cartridge installed, configure the recirculation system valves and pump so the system is operating at the design filtration flow rate. After confirming the system is operating properly, use both hands to rotate the Pressure Gauge Boot so the START Arrow is pointing at the operating pressure gauge needle. A bouncing pressure gauge is normal, aim the Boot's Start Arrow towards the middle of the bouncing needle's operating range.

USING THE FILTER PRESSURE GAUGE CONTINUED

IMPORTANT: While the Pressure Gauge Boot is very helpful, it can be moved without your knowledge so it is important to also record the new filter start-up filter pressure on the front of this manual for future reference.

When to clean the filter

For best results, clean your filter BEFORE pressure reads 10 psi higher than the original starting pressure. Your filter pressure reading will increase as it removes debris from your pool. This buildup of pressure will vary due to different bathing loads, temperature, weather conditions, etc. Check your filter pressure frequently, typically whenever you check your water chemistry and after you clean skimmer baskets.

How to read the pressure gauge

When reading a bouncing pressure gauge, estimate the middle of the bouncing needle and then use that as the filter's current operating pressure.

Maintain the pressure gauge

The pressure gauge is the primary indicator of how the filter is operating. Maintain your pressure gauge in good working order.

How to check pressure gauge for normal operation

Check the operation of your pressure gauge in the following manner:

- The pressure gauge should go to zero (0) when the pump is OFF and the filter Manual Air Relief Valve is OPEN.
- The pressure gauge should indicate pressure when the system is operating properly, EXCEPT when a variable speed pump is operating at a very low speed.

Note: Please refer to the Head Loss Curve chart and notice that a new, clean filter cartridge can handle approximately 70 gpm with only 1 psi of back-pressure (caused by the filter alone). A pressure gauge reading of zero (0) is not necessarily an indication there is a problem with the gauge or how the system is operating. This is especially true for pool systems designed to the latest energy efficiency standards that use larger pipe and correctly sized return eyeball fittings. These systems are capable of moving large volumes of water with very little back-pressure on the filter or pump allowing these systems to filter water at very low pump speeds resulting in significantly lower energy costs.

- The pressure gauge should be readable and not damaged.
- Replace the pressure gauge if it isn't working properly or is damaged.

CLEANING THE FILTER

What you need to clean the filter

- A location that complies with local waste water disposal requirements, if any
- Garden hose attached to water supply
- Fix-stream 2-inch nozzle (or equivalent stream)
- Silicone grease lubricant (provided)
- Replacement O-Ring (PN: O- RING453), if needed
- Replacement filter cartridge (PN: PF27000 or PF35000), if needed
- This manual



CLEANING THE FILTER CONTINUED

Preparing to open the filter



WARNING

Hazardous pressure. Before opening the filter, READ, UNDERSTAND AND FOLLOW THESE INSTRUCTIONS. Failure to follow instructions can result in property damage, serious injury, or death.



WARNING

THE PUMP MUST BE OFF BEFORE STARTING THIS PROCEDURE.

1. Confirm the pump is OFF and ensure any automatic controls are disabled to prevent accidental pump start up.
2. CLOSE isolation valves.
3. OPEN the Manual Air Release Valve located on the top of the filter.
4. WAIT until all pressure is released.
5. OPEN the filter Drain Plug, (or filter drain valve, if installed).
6. WAIT for water to stop draining, (this is only to prevent excess water from spilling when the filter is opened).

How to open the filter

7. Confirm completion of steps 1 through 6 above.
8. Remove the filter Lid Assembly:
 - a. Using the large Locking Ring handles, reach under each with your fingers and pull the spring-loaded filter locks into the unlocked position.
 - b. While holding the locks open, forcefully rotate the Locking Ring counter-clockwise 1/8 turn and then release the lock and the large handles. This will begin the process of decompressing the O-ring.
 - c. Move hands to the small handles and continue to rotate another 1/4-turn. This will continue to decompress the O-ring while lifting the Lid.
 - d. Move hands to the large handles again and rotate another 1/4 turn. This will fully decompress the O-ring allowing the Locking Ring to rotate to the second safety stop.
 - e. Reach under the large handles with your fingers and pull the spring-loaded filter locks into the unlocked position again and then finish rotating the last 1/4 turn.
 - f. Carefully lift the Lid and set it aside. DO NOT REMOVE THE FILTER CARTRIDGE.

How to clean the filter

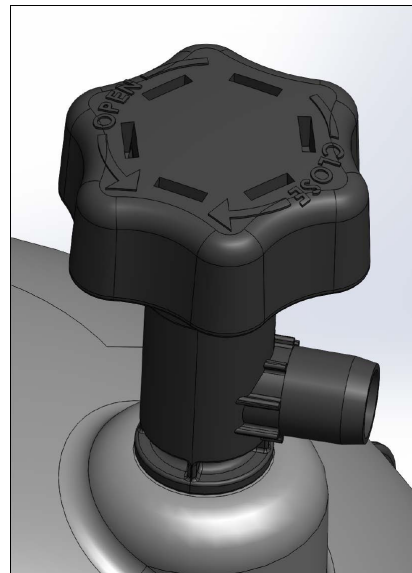
9. BEFORE removing the filter Cartridge from the filter Housing, use a garden hose, without the nozzle, to rinse visible dirt and debris out of the filter. This MUST be done to keep dirty water from entering the Outlet pipe where it can be pumped into other equipment, such as heaters, sanitizers and other equipment intended for filtered water only.
10. AFTER rinsing all visible debris out the Drain port, wait for the water to drain and then carefully lift the Cartridge out of Housing by the handles.
11. Set it down and while holding the filter Core Assembly at the bottom, lift the filter Cartridge up by the top, separating it from the Core. Set it down where you can inspect it for damage, holes, rips, or wear past the point where cleaning will be effective. If damaged, replace the filter Cartridge with the proper size replacement PN: PF27000 or PF35000.
12. Move the dirty filter Cartridge to a suitable location and then clean it using this procedure:
 - a. Attach a fix-stream 2-inch nozzle (or nozzle providing an equivalent stream) to the hose and turn it on slowly while holding the hose and nozzle level with the ground about 3 feet above the ground. Adjust the water pressure until the stream of water sprays between 20 and 30 feet. This will provide good cleaning pressure without being so strong it could damage the filter media.

CLEANING THE FILTER CONTINUED

- b. Standing about 6 feet from the upright filter Cartridge begin rinsing it in a short sweeping motion, about 2-3 inches wide, working your way down the filter media. **BE SURE TO RINSE DEEP BETWEEN EACH PLEAT.**
 - c. Rotate the Cartridge, or work your way around it while keeping 6 feet away, repeating the process above (b.) until it is free of rinsable debris, sand and silt.
 - d. **CLEAN THE AUTOMATIC AIR RELEASE SCREEN** located on the filter Core Assembly. Replace if damaged.
13. Inspect the Cartridge again for damage, holes, and rips or splits in the filter media. If no damage is found, it can be reinstalled and reused.

System Restart Instructions

1. Reinstall the filter Cartridge with the "THIS SIDE UP" showing as it is placed onto the Filter Core Assembly.
2. Lower the Cartridge and Core Assembly into the filter Housing with the Automatic Air Release screen located on the Outlet side of the filter Housing. Try to rotate it. If it turns, keep turning until it drops into place.
3. Install the Lid Assembly by following the instructions above. Make sure the Locking Ring is fully closed and locked. Check by attempting to turn the Locking Ring using the SMALL handles in a counter-clockwise direction. The Locking Ring should NOT turn.
4. Reinstall the Drain plug, after making sure the O-ring is clean, lubricated with silicon-based grease (provided) and in place. (or close the Drain valve if installed).
5. **OPEN THE MANUAL AIR RELIEF VALVE ON TOP OF THE FILTER.**
6. Open all isolation valves.
7. Stand away from the filter and then turn on the pump, being sure to follow the pump manufacturer's priming and start-up instructions. If the pump is working and isolations are in the correct position, air will begin existing the Manual Air Relief Valve on the top of the filter.
8. When a steady stream of water comes out of the Manual Air Relief Valve, close the valve.
9. Observe the operating filter for leaks, keeping in mind that water from the Manual Air Relief Valve may drip down the side of filter after passing between the filter Housing and the Locking Ring.

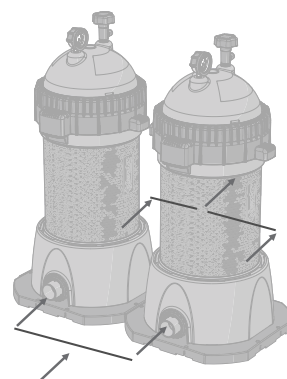
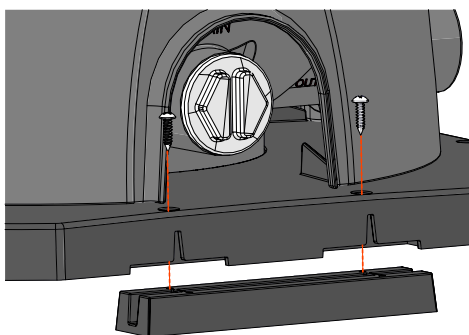


RUNNING PARALLEL FILTERS

How to run filters in parallel

To maximize room on the equipment pad consider using the plate link when running filters in parallel.

The plate link inserts into the bottom of the base plate and is secured using four (4) Pan Head Phill. Screw, #10 X 3/4".



REPLACEMENT PARTS FOR MODEL # PLF27000

PIPELINE FILTERS®



ITEM NO.	PART NO.	DESCRIPTION
1	PF2011	PRESSURE GAUGE WITH BOOT, PIPELINE FILTER
2	PF1025	RELIEF VALVE ASSEMBLY, PIPELINE FILTER
3	PF2001	LID ASSEMBLY, PIPELINE FILTER
4	PF27000	CARTRIDGE FILTER MEDIA, 27000 GALLON, PIPELINE FILTER
5	PF1014	CAP CENTER CORE, PIPELINE FILTER
6	PF1016	TUBE CENTER CORE, PIPELINE FILTER
7	PF1019	BASE CENTER CORE, PIPELINE FILTER
8	PF1008	COVER, BASE, PIPELINE FILTER
9	O-RING453	ORING, #453, n.275 THK. X 11.975 I.D., EPDM 70A
10	O-RING224	ORING, #224, 0.139THK X 1.734 I.D., EPDM 70A
11	PF1015	DRAIN PLUG, PIPELINE FILTER
12	PF1013	PLATE LINK, PIPELINE FILTER
13	PF1012	BASE PLATE, PIPELINE FILTER
14	PF2012	BASE PLATE SCREWS AND WASHERS, QTY 4, PIPELINE FILTER
15	PF2013	UNION GASKET, PIPELINE FILTER AND UNION, 2" SOCKET X 2.5" SPIGOT, PVC

REPLACEMENT PARTS FOR MODEL # PLF35000

PIPELINE FILTERS®



ITEM NO.	PART NO.	DESCRIPTION
1	PF2011	PRESSURE GAUGE WITH BOOT, PIPELINE FILTER
2	PF1025	RELIEF VALVE ASSEMBLY, PIPELINE FILTER
3	PF2001	LID ASSEMBLY, PIPELINE FILTER
4	PF35000	CARTRIDGE FILTER MEDIA, 35000 GALLON, PIPELINE FILTER
5	PF1014	CAP CENTER CORE, PIPELINE FILTER
6	PF1016	TUBE CENTER CORE, PIPELINE FILTER
7	PF1019	BASE CENTER CORE, PIPELINE FILTER
8	PF1008	COVER, BASE, PIPELINE FILTER
9	O- RING453	ORING, #453, n.275 THK. X 11.975 I.D., EPDM 70A
10	O-RING224	ORING, #224, 0.139THK X 1.734 I.D., EPDM 70A
11	PF1015	DRAIN PLUG, PIPELINE FILTER
12	PF1013	PLATE LINK, PIPELINE FILTER
13	PF1012	BASE PLATE, PIPELINE FILTER
14	PF2012	BASE PLATE SCREWS AND WASHERS, QTY 4, PIPELINE FILTER
15	PF2013	UNION GASKET, PIPELINE FILTER AND UNION, 2" SOCKET X 2.5" SPIGOT, PVC



PIPELINE FILTERS[®]

CARTRIDGE FILTER MANUAL

INSTALLATION AND USER'S GUIDE

AquaStar Pool Products, inc.
4544 McGrath Street, Building 2
Ventura, CA 93003

Have questions, contact us at:

Phone: (877) 768-2717

Fax: (877) 276-7665

Email: Info@aquastarpoolproducts.com

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THE FUTURE OF FILTRATION IS HERE



MODEL # PLF35000
TREATS PUBLIC* POOLS
UP TO 35,000 GALLONS



MODEL # PLF27000
TREATS PUBLIC* POOLS
UP TO 27,000 GALLONS



Certified to
NSF/ANSI/CAN 50



No more half dirty filter elements, choose the cartridge filter with near 100% usable square footage. Made in the USA!

*See chart on back for residential treatment rates

PIPELINE CARTRIDGE FILTERS

Superior performance in three distinct categories

Filtration Performance

Pipeline Filters passed the NSF water clarity (turbidity reduction) test with just 1 turnover, similar to DE filters. Other cartridge filters typically take up to 5 turnovers to pass the same test. Engineered pleat spacing, **64% larger core openings**, and patented uniform tank design allow for more uniform flow from bottom to top, providing best-in-class filtration.



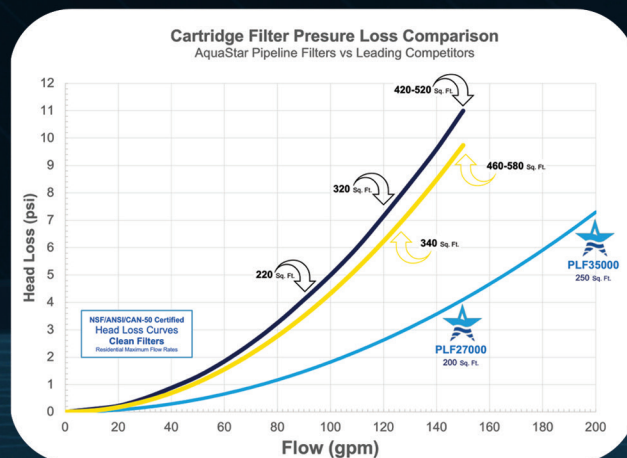
Hydraulic Performance

Pipeline Filters provide top-tier hydraulic performance, as shown in the chart to the right. These filters continue to outperform even after the first cleaning of the filter and cartridge element. Head loss in a Pipeline Filter only increases by 2% after cleaning according to instructions (up to 50% is allowed for NSF certification). Less head loss at the filter provides less stress on the pump, saving energy and money.



Safety and Ease-of-Access

Pipeline Filters patented double-locking system allows for safe, quick, and easy depressurization, making the filter extremely easy to access compared to filters that use a traditional clamp.



Performance Data

Performance Data		GPM		Residential Turnover (Pool Gallons)		Public Turnover (Pool Gallons)	
Model	Filter Area (sq.ft.)	Max Residential Flow Rate	Max Public Flow	8 Hours	10 Hours	6 Hours	8 Hours
PLF27000	200	150	75	72,000	90,000	27,000	36,000
PLF35000	250	200	99	96,000	120,000	35,640	47,520

Gallons calculated per ISPSC
Claims backed by NSF testing data

(877) 768-2717 - www.aquastarpoolproducts.com
U.S. Patent No. 10,792,596, 11,014,027 and Other Patents Pending

PIPELINE FILTERS® FOR USE UP TO 27,000 GALLONS



Certified to
NSF/ANSI/CAN 50

Compact Filters Engineered for
Safe and Easy Cartridge Access and Maximum Performance

FEATURES

Max commercial 27,000 gallons, 6-hour turn over, calculated per ISPSC

Max residential 108,000 gallons, 12-hour turn over

Compact filters engineered for safe and easy cartridge access

Safe self-aligning removable locking collar/top

Super strength resin for enhanced structural integrity

Self-aligning linking base for parallel filtration systems

Rubber protected stainless steel gauge

Ergonomic pressure relief valve

2" socket x 2½" spigot PVC union connections included

1 per case

8 per pallet

NEW For a maximum for 27,000 gallons

PIPELINE FILTERS®

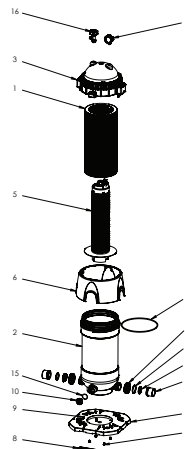
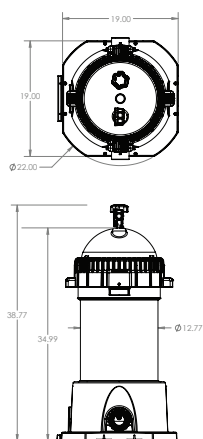
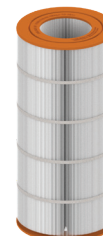
**COMPACT FILTERS ENGINEERED FOR
MAXIMUM SAFETY AND PERFORMANCE**



Model # PLF27000



**AquaStar's
Superior Pure
Pleat Technology
Cartridge**
Model # PF27000



1. Cartridge, 27000 Gallon, PipeLine Filter
2. Housing Assembly, 27000 Gallon, PipeLine Filter
3. Lid Assembly, PipeLine Filter
4. Oring, #453, 275 THK. x 11.975 I.D., EPDM 70A
5. Filter Core Assembly, 27000 Gallon
6. Cover, Base, PipeLine Filter
7. Base Plate, PipeLine Filter
8. Plate Link, PipeLine Filter
9. 10 x 3/4" Pan Head Phillips, 316 SS
10. Drain Plug, PipeLine Filter
11. Snap Ring, PipeLine Filter
12. Union Gasket, PipeLine Filter
13. Union Nut, 2" Union
14. Union, 2" Socket x 2.5" Spigot, PVC
15. Oring, #224, EPDM 70A
16. Relief Valve Assembly, PipeLine Filter
17. Pressure Gauge Assembly, PipeLine Filter

U.S. Patent No. 10,792,596, 11,014,027, and
Other Patents Pending

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info@aquastarpoolproducts.com www.aquastarpoolproducts.com

PIPELINE FILTERS® FOR USE UP TO 35,000 GALLONS



Certified to
NSF/ANSI/CAN 50

Compact Filters Engineered for
Safe and Easy Cartridge Access and Maximum Performance

FEATURES

- Max commercial 35,000 gallons, 6-hour turn over, calculated per ISPSC
- Max residential 144,000 gallons, 12-hour turn over
- Compact filters engineered for safe and easy cartridge access
- Safe self-aligning removable locking collar/top
- Super strength resin for enhanced structural integrity
- Self-aligning linking base for parallel filtration systems
- Rubber protected stainless steel gauge
- Ergonomic pressure relief valve
- 2" socket x 2½" spigot PVC union connections included
- 1 per case
- 8 per pallet

NEW For a maximum for 35,000 gallons

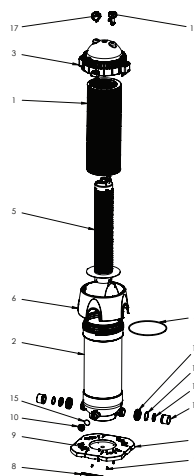
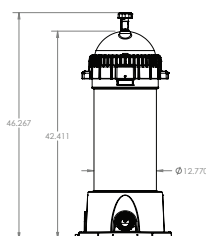
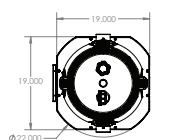
PIPELINE FILTERS® COMPACT FILTERS ENGINEERED FOR MAXIMUM SAFETY AND PERFORMANCE



Model # PLF35000



**AquaStar's
Superior Pure
Pleat Technology
Cartridge**
Model # PF35000



1. Cartridge, 35000 Gallon, PipeLine Filter
2. Housing Assembly, 35000 Gallon, PipeLine Filter
3. Lid Assembly, PipeLine Filter
4. O-ring, #453, 275 THK. x 11.975 I.D., EPDM 70A
5. Filter Core Assembly, 35000 Gallon
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16. Relief Valve Assembly, PipeLine Filter
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U.S. Patent No. 10,792,596, 11,014,027, and
Other Patents Pending

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info@aquastarpoolproducts.com www.aquastarpoolproducts.com

REPLACEMENT PARTS FOR MODEL # PLF27000

PIPELINE FILTERS®



ITEM NO.	PART NO.	DESCRIPTION
1	PF2011	PRESSURE GAUGE WITH BOOT, PIPELINE FILTER
2	PF1025	RELIEF VALVE ASSEMBLY, PIPELINE FILTER
3	PF2001	LID ASSEMBLY, PIPELINE FILTER
4	PF27000	CARTRIDGE FILTER MEDIA, 27000 GALLON, PIPELINE FILTER
5	PF1020	CAP CENTER CORE., PIPELINE FILTER
6	PF1016	TUBE CENTER CORE, PIPELINE FILTER
7	PF1019	BASE CENTER CORE, PIPELINE FILTER
8	PF1008	COVER, BASE, PIPELINE FILTER
9	O-RING453	ORING, #453, n.275 THK. X 11.975 I.D., EPDM 70A
10	O-RING224	ORING, #224, 0.139THK X 1.734 I.D., EPDM 70A
11	PF1029	DRAIN PLUG, PIPELINE FILTER
12	PF1013	PLATE LINK, PIPELINE FILTER
13	PF1012	BASE PLATE, PIPELINE FILTER
14	PF2012	BASE PLATE SCREWS AND WASHERS, QTY 4, PIPELINE FILTER
15	UN20GXX	UNION GASKET, PIPELINE FILTER
16	UN25SP20SOXX	UNION, 2" SOCKET X 2.5" SPIGOT, PVC

REPLACEMENT PARTS FOR MODEL # PLF35000

PIPELINE FILTERS®



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16	UN25SP20SOXX	UNION, 2" SOCKET X 2.5" SPIGOT, PVC