

ProStrainer™ is unique and it offers useful and significant benefits unlike any other pump strainers available today. Please read this manual in its entirety before you proceed with installation to take full advantage of these additional benefits and features.

PROBLEM

WHAT'S IN YOUR WATER?

- LEAVES
- GRASS
- BARK
- BAND AIDS
- JEWELRY
- HAIR PINS
- BODY LINT
- BATHING SUIT LINT
- STYROFOAM BEADS
- OIL
- PLASTIC BAGS
- GARBAGE BAGS
- NEWS PAPER
- FOODS
- STICKS
- STONES
- GOGGLES
- INSECTS
- RODENTS
- VEGETATION
- DUST
- DIRT

ProStrainer™ Patented

SOLUTIONS

FEATURES - ProStrainer™ is 3 products in 1

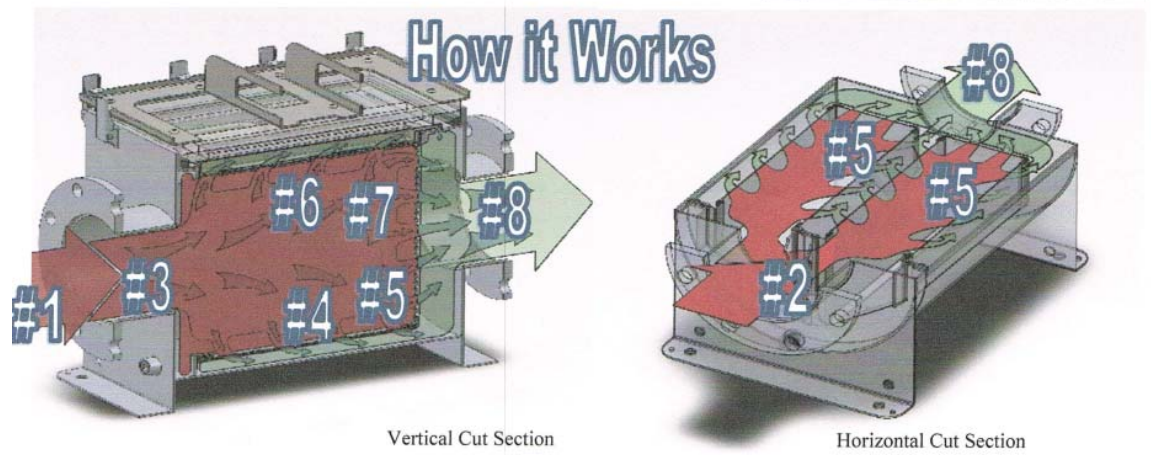
- 1 PUMP STRAINER WITH 2 BASKETS FOR FAR MORE HOLDING CAPACITY
- 2 FLOW STRAIGHTENER WHICH INCREASES PUMP LIFE
- 3 AUTOMATIC AIR EVACUATOR WHICH INCREASES PUMP LIFE
- 4 BAG GRABBER SAVES PUMP FROM CATASTROPHIC FAILURE
- 5 TRANQUIL HORIZONTAL LAMINAR FLOW INTO PUMP VOLUTE
- 6 INCREASES NET POSITIVE SUCTION HEAD FOR MORE EFFICIENT PUMPING

BENEFITS:

- HOLD MUCH MORE, REQUIRING LESS MAINTENANCE
- LOWEST MOUNTING PROFILE FOR BETTER PUMP PERFORMANCE
- VISUAL INSPECTION OF LOADING
- PROTECTS PUMP FROM LARGE OBJECTS
- ALL STAINLESS STEEL CONSTRUCTION
- QUICK SERVICE HARDWARE
- PRESSURE ADJUSTABLE LATCHES
- INTEGRAL MOUNTING FEET

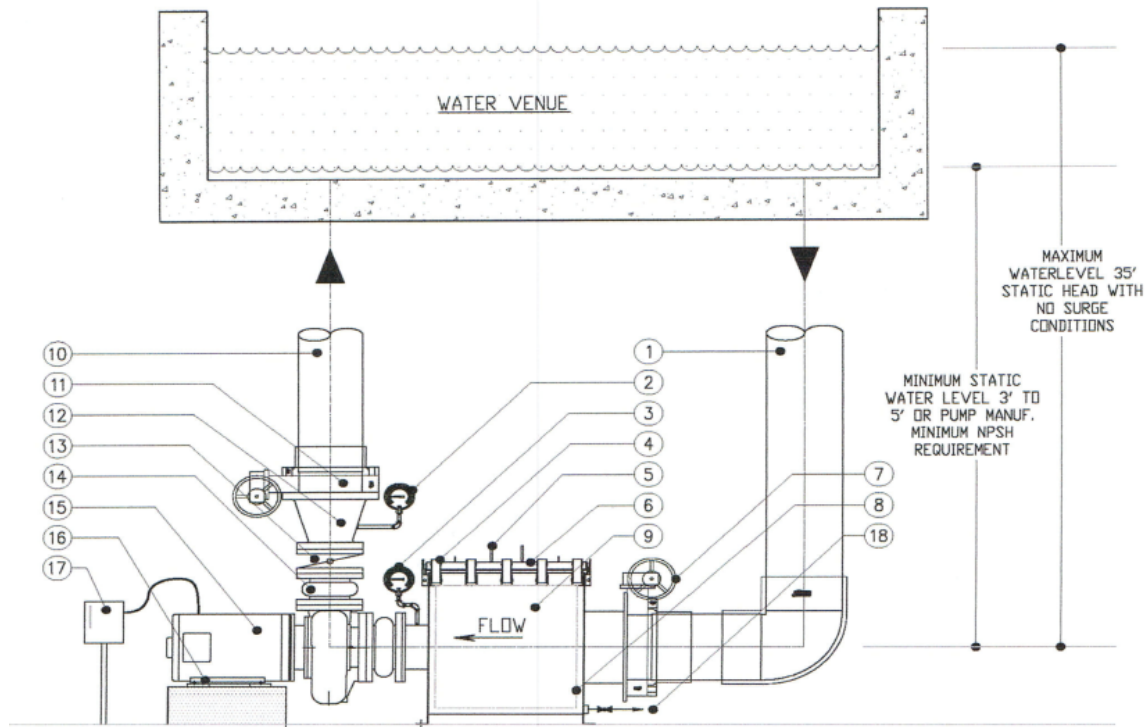
The pump strainer that is a

Green Machine



- #1. Dirty Contaminated water (red) is pulled into the ProStrainer™ by the pump connected to the flange at #8.
- #2. Large debris such as plastic garbage bags or newspaper will get caught on the ProStrainer™ bag grabber center post.
- #3. Water enters the ProStrainer™ body, it slows down allowing debris to separate based on its size and weight.
- #4. Heavier debris settles to the bottom, #5 lighter debris floats to the back panels, and air will rise to the top #6 where it accumulates eventually forming an air bubble #7. When the accumulated air reaches a certain size the pump collapses the bubble and pulls it through the pump volute in one quick accelerated action. This process dramatically reduces pump cavitation.

PROSTRAINER™ SUGGESTED TYPICAL INSTALLATION



1. Water is pulled from the venue by the pump to the ProStrainer™.
2. Discharge pressure gauge
3. Vacuum gauge should be installed between ProStrainer™ effluent and pump suction port for most accurate vacuum reading. Vacuum at startup of new system should read between 1 and 3 inches of Mercury (Hg). Or 1.13 to 3.39 PSI.
4. Draw latches have torque adjustment for proper seal.
5. Glazing Lid has built in handles for lid removal
6. Standard model comes along with clear "See Thru" lid.
7. ProStrainer™ supply isolation valve.
8. Dual patented basket design dramatically improves performance.
9. ProStrainer™ body with annealed welds and special finish.
10. Pump discharged water usually goes to a filter and then back to venue.
11. Venue balancing and flow control valve
12. Concentric increaser fitting
13. Pump and ProStrainer™ isolation valve for service and shut down.
14. Vibration dampener on each side of the pump.
15. Pump Motor should have high energy efficiency ratings due to continuous duty cycle.
16. Pump pad isolation dampeners.
17. Soft start or VFD motor starter on 5 H.P motors and up.
18. ProStrainer™ drain and winterizing plug.
19. Be sure you have the minimum NPSH required by the pump manufacturer.
20. Maximum allowable water level is 13 PSI or 30 feet. Consult factory for higher ratings.

PRE-STARTUP CHECK LIST

- 1.) Pool, water feature, fountain or other fluid body must be filled to proper operating level.
- 2.) All air should be evacuated from all system piping.
- 3.) Pump must have power and previously tested for proper rotation.
- 4.) Only after proper installation is completed should you proceed with leak test operation.
- 5.) Any throttling valves on the discharge side of the pump used to reduce or balance flow, must be in open position to eliminate hydraulic back pressure and then set for system operating desired results after pump has reached full flow.
- 6.) Any isolation valves used on the influent side of the ProStrainer™ must be full open prior to turning on the pump so that the pump does not create a vacuum greater than 7" Hg.
- 7.) Never start pump until all system valves are in full position.
- 8.) Never open or close valves quickly while pump is running or serious damage may occur.
- 9.) System designer is responsible for eliminating hydraulic shock to the ProStrainer™.
- 10.) Designers should use soft start motor starters, expansion tanks, vacuum breakers, check valves, and proper pipe fluid velocity design in conjunction with use of this product.

Normal startup procedure will vary depending on system design. Always consult designer and design documents.

PROSTRAINER™ START-UP INFORMATION

- 1.) Pool, water feature, fountain or other fluid body must be filled to proper operating level.
- 2.) All valves should be in full open position to eliminate excessive pressure and or vacuum at startup.
- 3.) All air should be evacuated from all system piping.
- 4.) Pump must have power and previously tested for proper rotation.
- 5.) When ProStrainer™ is full and not leaking you may proceed with startup.
- 6.) Start pump and allow the system to stabilize for a few minutes.
- 7.) Slowly, adjust any and all discharge valves to desired flow rate.
- 8.) Continue to inspect ProStrainer™ cover for leaks. If small leaks occur it may be necessary to adjust lid draw latches. Start the adjusting process at the draw latch closet to the most amount of leakage and work toward the area where the leaking is less. Only adjust one handle at a time until cover is sealed tightly.
- 9.) To increase pressure, loosen lock nut on draw latch clamping arm. Turn clamping arm clockwise to increase pressure on lid and counter clockwise to decrease pressure on lid. Retighten lock nut when adjustment is satisfactory.
- 10.) Periodically examine the baskets to see how full they are. When pump vacuum increases by a pre-determined amount (generally 3 inches of Mercury), clean the baskets.
- 11.) Always clean baskets prior to long periods of anticipated unattended maintenance.
- 12.) It may be necessary to make adjustments to the lid draw latches after the break in period has occurred or if the gasket is disturbed during cleaning and not properly positioned when re-seated.
- 13.) After system start up and approval by the engineer or designer that the system is operating properly: record the vacuum pressure between the ProStrainer™ and the pump. Make sure the Filter and ProStrainer™ are clean.

INSTALLER WARNING

Violation of any item in the attached manual could void warranty.

PROSTRAINER™ INSTALLATION PREPARATION

- 1.) The ProStrainer™ unit should be installed without taking off the plastic stretch wrap around the body and lid. Remove any plastic wrap covering the flange faces before connecting to the system piping. Remove plastic wrap around body just before startup. This will protect the draw latch hardware as well as the final appearance of the product.
- 2.) Be sure to support all piping, pumps, valves, etc. as necessary for their proper and independent support. Any and all connecting pipes, pumps and flanges must have their own support system so that there is no additional weight or stress added to the ProStrainer™ after all the connections are made.
- 3.) The integral mounting support foot brackets on the bottom end plate of the ProStrainer™ is designed for floor mounting or to attach a non-corrosive mounting supports if installed at an elevation higher than the floor. These mounting foot brackets are designed to only carry the weight of the ProStrainer™ full of water.
- 4.) Make sure the flow direction is correct. Fluid should enter the influent end of the strainer. This is the end in which internal baskets are open and have no screening material. When you look in this end you will see a center post dividing the two basket openings.
- 5.) Always install ProStrainer™ on the suction side of the pump.
- 6.) Place ProStrainer™ in its installation position and examine the spacing between the ProStrainer™ effluent face piping and the pump.
- 7.) Influent piping-be sure to allow adequate room to install all required system components called out in the plans by the designer.
- 8.) Do not install ProStrainer™ more than 16 feet below water feature or pool operating water level.
- 9.) Do not install any piping or other obstructions directly above the ProStrainer™ since the ability to remove and clean the baskets may be impaired.
 - a. Install the ProStrainer™ level in the horizontal plane and be sure to check for level by using a torpedo level and resting it on the lid in both directions. Check to see drain plug is properly tightened to prevent leaking on the influent end.
- 10.) To install an external drain system – remove drain plug and make drain connection using a union or other fitting arrangement that will allow the drain line to be serviced and cleaned to provide long term functionality.
- 11.) Check the flange face for any defects or damage which sometimes occurs while product is stored at the jobsite.
- 12.) Never use any pressurized source of water or air, such as a garden hose or job site compressor to test the ProStrainer™. It is designed to handle a maximum pressure of 15 PSI.

PROSTRAINER™ CLEANING INFORMATION

When the vacuum gauge reading increases by 3 to 5 inches Hg Mercury, it is generally necessary to clean the ProStrainer™ baskets. Each system is different depending on design and it is up to the engineer or designer to make the final determination of the gauge reading and appropriate cleaning gauge indication for same. The Standard ProStrainer™ is designed to not exceed the following limits.

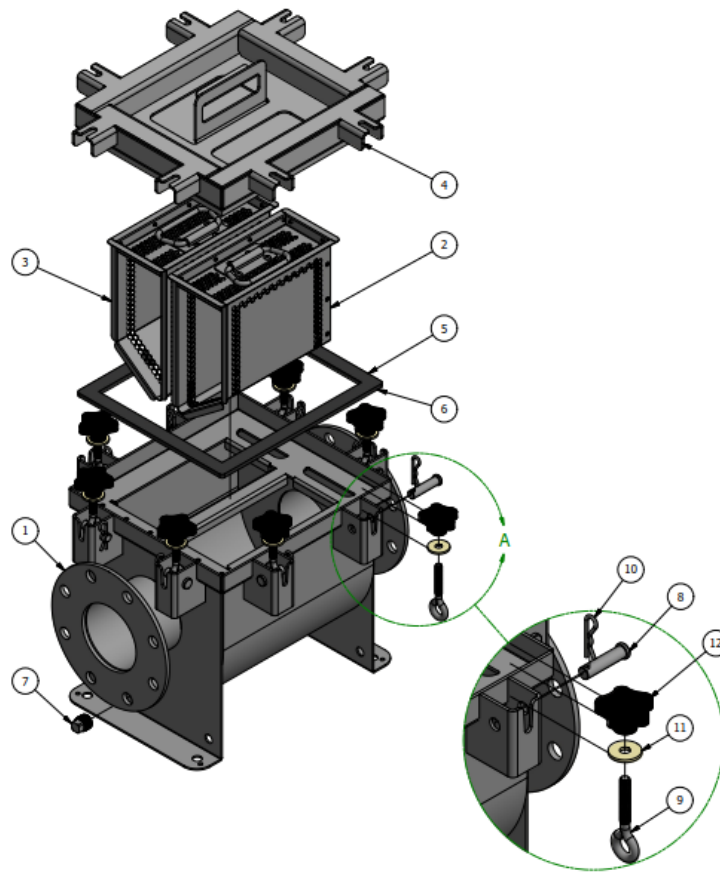
Maximum Vacuum 7Hg Mercury

Maximum Pressure 15 PSI

Cleaning:

1. Turn off the pump
2. Wait 30 seconds and close valves on each side of the strainer to isolate the ProStrainer™.
3. Open the draw latches closest to the corners LAST. This should allow any excessive pressure to bleed off and allowing the lid to stay intact.
4. Remove lid using the hand holds built into the glazing bezel by pulling straight upward.

5. Remove baskets in the same manner and wash out debris with a garden hose.
6. **DONOT BANG THE BASKETS AGAINST SOLID OBJECTS TO DISLodge THE DEBRIS. THIS CAN CUASE THE BASKETS TO CHANGE SHAPE AND CREATE PROBLEMS ON RE-INSTALLATION. THIS PRACTICE WILL IMMEDIATELY VOID WARRANTY.**
7. Be sure to examine the upper interior lip that the lid gaskets set on seal. Be sure that this surface is smooth, clean and free of any foreign matter.
8. Visually inspect the gasket glued to the bottom of the glazing to be sure it is in its proper place.
9. Replace clean baskets and make sure they are seated properly.
10. Re-install the lid and secure it with the draw latches.
11. Open both isolation valves.
12. Turn on the pump.



ITEM NO	QTY	DESCRIPTION
1	1	STRAINER BODY
2	1	BASKET ASSEMBLY RIGHT
3	1	BASKET ASSEMBLY LEFT
4	1	GAZING BEZEL
5	1	GAZING BEZEL STANDARD BASKET
6	1	DOUBLE FACE TAPE
7	1	1" NPT-150# SQUARE HEAD PIPE PLUG
8	10	1/2" DIA. CLEVIS PIN
9	10	3/8-16 UNC, 5/8" DIA. EYE, EYEBOLT
10	10	1/8" DIA. HAIRPIN
11	10	3/8" WASHER
12	10	3/8-16 UNC THREADED KNOB

ITEM NO	QTY	DESCRIPTION
13	1	DAVIT LIFTING SHAFT
14	2	1/2-13 UNC HEX BOLT
15	1	DAVIT LIFTING STUD ASSEMBLY
16	1	3/4" NARROW WASHER
17	2	3/8" REGULAR WASHER
18	2	3/8-16 UNC HEX BOLT
19	1	DAVIT ARM
20	1	CRANK HANDLE BASE
21	1	#10 WIDE-1" OD WASHER
22	1	10-24 UNC BUTTON HEAD SOCKET CAP SCREW
23	1	3/8-16, THREADED STUD CRANK HANDLE
24	1	3/8-16 UNC HEX JAM NUT

