



# HOMEOWNER INSTRUCTION MANUAL

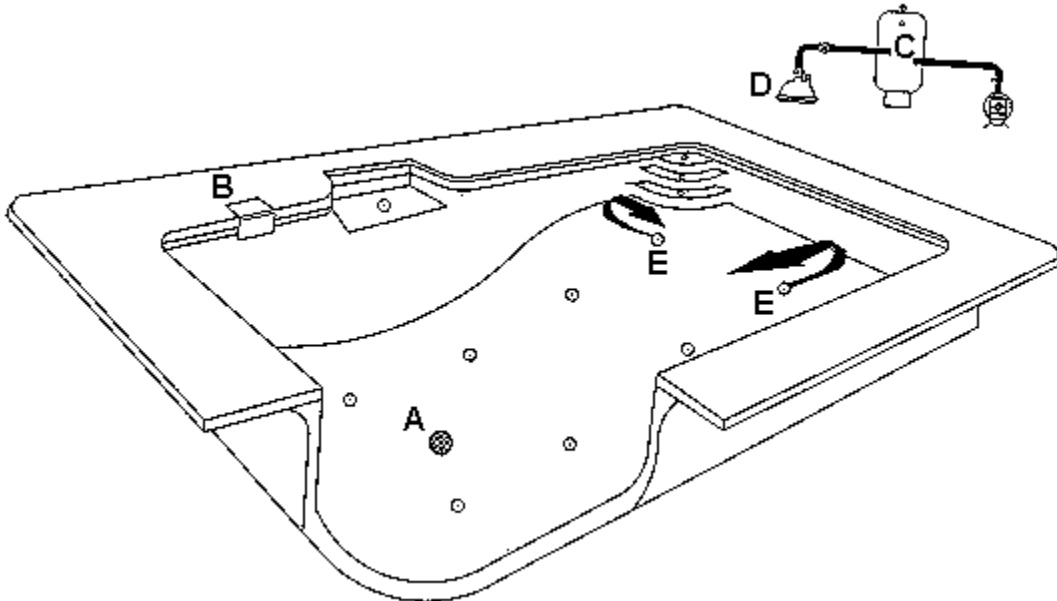
These specifications in this manual only apply to the US.  
Contact CSI for the International specifications.  
The 99% cleaning guarantee is only valid in the US.

## 1. INTRODUCTION

Congratulations on your purchase of a new swimming pool equipped with a CSI Cleaning and Circulation System. Your system provides the most advanced technology available in the swimming pool industry today. The System is engineered to reduce the daily cost of operating a pool through controlled energy and chemical use. In addition, it delivers maximum cleaning efficiency. The **cleaning feature** offers you the pleasure of a pool with time to enjoy it.

Your In-Floor System operates on the proven principal of suspending dirt in the water and removing it through your normal filtration system. Water is drawn from the pool via the main drain (A) and skimmer (B), removing dirt by going through the filter (C). The System consists of a water-powered actuator valve (D) which distributes the filtered water to a bank of indexing cleaning heads located throughout your pool.

One bank or group of heads (E), comes up at a time, rotates to a new position and disperses a high-pressure stream of filtered water for a programmed period of time. The valve then automatically cycles to another bank of heads and continues to cycle as long as the pump is on and the system is activated. Between cycles, the heads which are not in use will return flush with the pool floor. When the entire System is turned off, all the heads return flush with the pool floor.



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## 2. OPERATION

The cleaning heads are designed to operate at a predetermined gallonage and desired operating pressure. Therefore, it is very important that all water is directed through the cleaning heads. Items such as aerators, fountains, therapies, elevated spillways or auxiliary lines must be closed during System operation to achieve maximum efficiency. We suggest you run the In-Floor System at all times while the pump is on.

Debris is suspended by the action of the water jets from the cleaning heads mounted in the floor. It is then removed by the normal filtration system, keeping your pool continuously clean. Under normal operation, the recommended suction setting for the skimmer is 40% and for the main drain, 60% (except with Leaf Trapper, which allows 100% skimmers).

The actual **run time** required to keep your pool clean varies according to your environmental conditions (i.e. wind, rain, dust or landscaping, etc.). Pools in well-protected areas may require a minimum run time, whereas in more open areas, experimentation may be necessary to determine the actual time for cleaning. In all cases, the run time should only be what is required to keep the pool clean and clear. To determine the proper time, start by running the pool a minimum of 24 hours per day. Reduce the run time by one hour every two days until the pool ceases to be as clean as preferred. **Six hours per day is our recommended minimum run time.**

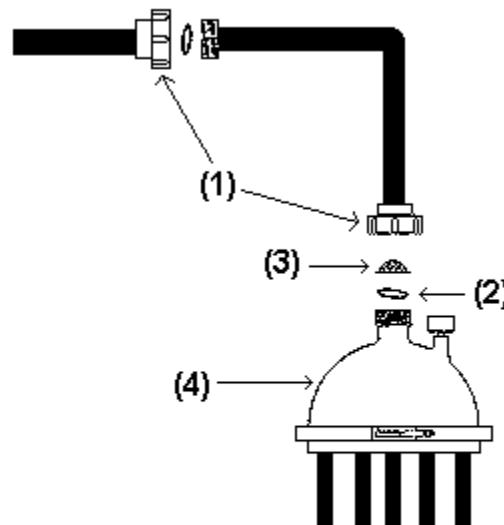
In situations where heavy surface debris is present, we recommend run times be set in 3-hour increments. For example, a 9-hour run time would be set 3 hours on, 5 off, 3 on, 5 off, 3 on, 5 off -- a total of 24 hours. When the pool is run 9 hours on, then 15 off, the dirt and surface debris accumulates rather than being cleaned every few hours. When leaves are allowed to become saturated, they sink, causing delays in removing them from the pool.

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### 3. MAINTENANCE

Your system is a fully automatic circulation and cleaning system; however, it does not eliminate the need for normal pool maintenance. Strainer Baskets and the filter must be kept clean in order to allow maximum water flow to the In-Floor System. In addition to the regular skimmer and pump baskets, there is a valve cup strainer that must be cleaned periodically.

#### HOW TO CLEAN THE CUP STRAINER

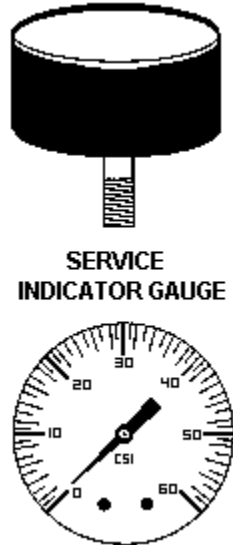


1. Unscrew union nuts (1) from valve (4).
2. Remove and clean strainer (3).
3. Replace strainer, align o-ring (2) and tighten union nut (1). Hand tighten only!

Occasional brushing is necessary to prevent mineral buildup on the finish. Frequency depends upon the water quality, which varies significantly in different areas. It is important to remember to brush the pool's interior surface even though you may not see visible dirt, especially in new pools.

The pool will normally show a pressure at the filter of 25 to 30 psi with a clean filter. When the normal operating pressure increases by 4 psi or more, you should backwash or clean your filter. Normal operation pressure is the note pressure immediately after cleaning all filters and strainers with all valves shut and all water being directed to the System. The System utilizes your filtered and treated

water. Therefore, the pool water must be kept in proper chemical balance. The CSI automatic water valve is equipped with a service indicator gauge.



The operating pressure will vary depending on the various factors of pump size, number of floor cleaning heads on a line and miscellaneous auxiliary pool equipment. The rule of thumb is:

2 floor heads operating at the same time = 15 psi min.

3 floor heads operating at the same time = 16 psi min.

4 floor heads operating at the same time = 17 psi min.

5 floor heads operating at the same time = 19 psi min.

Service is required when the indicator falls below these minimum operating pressures. Follow these four steps:

1. Check to see auxiliary valves are closed. (All water goes to the CSI valve only.)
2. Backwash filter; recharge if a DE filter.
3. Clean all screens: skimmer, pump, valve cup strainer.
4. If the problem is not solved, call your builder or CSI Customer Service at 1-800-762-0647 (in AZ, 948-1199).

The CSI In-Floor Cleaning and Circulation System cannot cause stains in plaster. Stains are caused by a chemical imbalance. To prevent staining, four things must be done:

1. Follow your pool builder's instructions for brushing your new pool. Brushing is important.
2. Keep the ph in balance.
3. Keep the chloring level correct.
4. Test your pool water by taking some samples to a pool service store in your neighborhood. Many times, this is a free service.

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## 4. TROUBLESHOOTING

### DIRTY SPOTS APPEAR

1. Clean pool filter.
2. Make sure all auxiliary valve are closed (therapies, aerator, surface returns, waterfall, spa overflow, etc.)
3. If the pool is equipped with a heater, make sure valve (heater bypass) is adjusted properly (3/4 open).
4. Clean pump basket, skimmer baskets and valve cup strainer.

### **CLEANING HEAD ADVANCES BUT DOES NOT CLEAN**

Debris is probably lodged in the nozzle.

1. Remove the head from the collar. [Click here](#) for pools built prior to 1991; For pools built during or after 1991, [click here](#).
2. Allow pump to run two full cycles on problem bank.
3. Remove any particles in the nozzle and reinsert the cleaning head.

### **CLEANING HEAD WILL NOT POP UP**

1. While in the down position, remove the head and inspect the collar in the pool floor to be sure that all plaster has been removed from the inside of the collar.
2. If the problem persists, call your builder or CSI at 800 762 0647 (in Arizona, 602 948 1199).

### **CLEANING HEAD DOES NOT GO DOWN**

1. With the System running on the problem bank and the head in the upright position, lightly depress head, using telescoping pool pool.
2. If necessary, remove cleaning head from collar and inspect for any binding particles. (The head must be in the down position before removal.)

### **WATER VALVE DOES NOT CYCLE WITH PUMP ON**

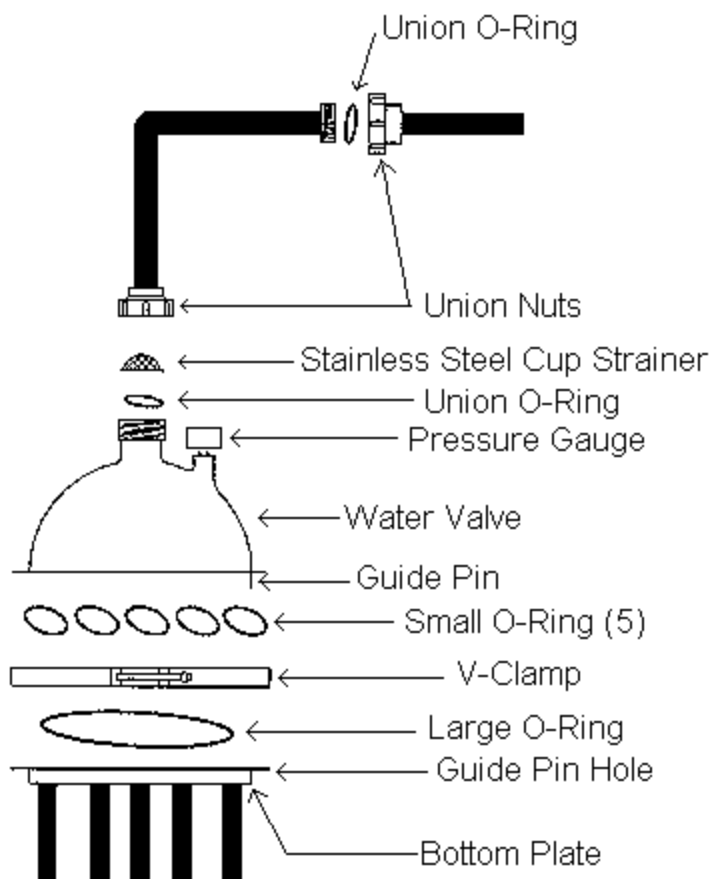
1. Make sure all water is being routed to the System.
2. Check water flow into valve by cleaning all baskets, including valve cup strainer.
3. Clean pool filter.
4. Turn pump on and off several times.
5. Remove water valve strainer and flush valve using water hose with pressure nozzle. Remove valve, turn upside down, and spray pressured water up into the valve. If these methods do not solve the problem, the unit may need to be replaced. All valves are sealed at the factory and should not be opened for repair in the field unless by a certified technician or unless you are instructed to do so by a CSI representative.

### **HOW TO REMOVE THE CSI WATER VALVE**

1. Unscrew the two union nuts located adjacent to the water valve. Remove this section and set it aside.
2. You will need a 7/16" deep socket wrench with a ratchet or a 7/16" wrench. Place the socket on the V-clamp bolt, loosen and remove the V-clamp.
3. Pull the water valve straight up.

4. Remove 5 small o-rings, 1 large o-ring, 1 union o-ring and 1 cup strainer from the water valve. If the system is over one year old, we recommend you replace the o-rings. A kit is available from you builder or CSI.

### COMPLETE WATER VALVE



### HOW TO REPLACE THE CSI WATER VALVE

1. Place all 5 small o-rings on the bottom of the replacement valve. (Wetting them helps them stick. Do not use any lubricants!)
2. Place the large o-ring in the groove provided for it in the bottom plate.
3. Locate and align the guide pin on the bottom of the water valve with the hole on the bottom plate. Be sure the o-rings are in place.
4. Place the V-clamp around the valve and begin tightening. Periodically tap the V-clamp until the band is about 3/4" apart from each end.
5. Place the cup strainer in the valve, screen up. Replace connecting section with two unions. Hand tighten securely. Turn the System on. Check for leaves.

### DIRT SPOT TRAPPED BETWEEN CLEANING HEADS

In most cases, this would occur along the walls of the pool.

1. Make sure the heads on each side of dirt are pointed in the same direction. Heads can be advanced using the head removal tool. Snap tool into place and ratchet head up and down until

- nozzle points in the same direction.
2. Increase the pool run time.

### FOR ADDITIONAL INFORMATION

1. Phone 1 800 762 0647 (in Arizona, 602 948 1199). CSI has a service department which can advise you should you have any questions. Just ask for Extension 114. Hours are 8:00 a.m. to 5:00 p.m. (Mountain Time). Monday through Friday.

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## 5. WARRANTY STATEMENT

In the unlikely event of a malfunction, CSI will repair or replace, at its option, the water valve for a period of 12 months from date of installation. This CSI warranty covers materials and workmanship, including wear. Return the warranty card located in the front of your manual.

**CAUTION:** The automatic water valve is designed as a modular water valve for ease and simplified replacement. New or rebuilt replacement water valves are available. **Rebuilding kits are also available.**

CSI has initiated a five (5) year prorated warranty program on the System's cleaning heads. Under this warranty program, CSI will exchange any cleaning head that does not operate properly and that is returned to the factory freight prepaid, based on the original equipment. These prices will only change in relation to cost of manufacturing.

FROM DATE OF MANUFACTURE	CLEANING HEAD REPLACEMENT COST*
0 - 18 months	-0-
18 - 24 months	\$5
2 - 3 years	\$10
3 - 4 years	\$15
4 - 5 years	\$20
*All monetary amounts are in US dollars	

### CSI OFFERS AN OPTIONAL LIMITED LIFETIME WARRANTY...

...that extends warranty coverage on the water valve and cleaning heads for a lifetime to the original purchaser. (A sample Lifetime Limited Warranty is available.)

Ask your builder for your Lifetime Warranty or phone us at 1 800 762 0647 (in Arizona, 602 948 1199). Parts may be returned for warranty to your builder or to CSI freight prepaid.

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## 6. LEAF TRAPPER

Your in-floor system may include a Leaf Trapper Main Drain System. This system delivers additional cleaning and filtration, creating an even cleaner and healthier pool.

### OPERATION

Your Leaf Trapper main drain works on a simple principle called "venturi-powered suction". Venturi-powered suction delivers as much as 100% more debris-removing power to the main drain as it allows pool skimmers to work more effectively.

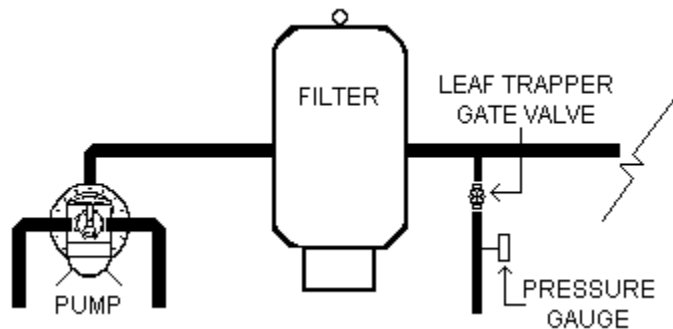
With venturi-powered suction, the Leaf Trapper main drain is NOT connected to the suction side of the pool pump. Rather, it is connected to the **pressure** side of the pool pump. A low volume of high-pressure water is directed through the bottom of the Leaf Trapper canister (through the venturi nozzle), then out to the pool. This high-pressure water creates suction inside the Leaf Trapper canister. This suction is connected to the main drain where leaves and debris can be removed from the pool.

## STARTING THE SYSTEM

To start the Leaf Trapper Main Drain System, simply turn on the pool pump. Check to make sure that the Leaf Trapper gate valve is open and that the pressure gauge reads approximately 20 psi.

## PRESSURE GAUGE READINGS

Leaf Trapper was designed to operate at approximately 20 psi at the Leaf Trapper pressure gauge. Adjust the gate valve accordingly to obtain this pressure at all times.



## ADJUSTING THE MAIN DRAIN

The main drain on the pool floor can be easily adjusted from the deck using a tool available through your pool builder or CSI.

1. Simply attach the tool to the end of your pool service pole.
2. Insert both tabs into the slots on the top of the drain.
3. Turn counter clockwise to raise drain for larger leaves OR turn clockwise to lower drain for smaller debris. Normal height would be flush with the pool floor.

## MAINTENANCE

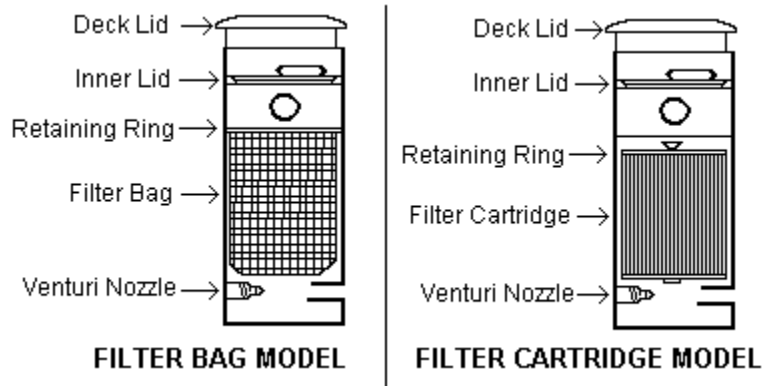
Maintaining the Leaf Trapper Main Drain is easy! Simply follow the instructions below. Should you have any questions, please do not hesitate to call CSI at 1 800 762 0647.

## CLEANING THE LEAF TRAPPER FILTER

1. Turn off the pool pump.
2. Remove the deck lid and inner lid.
3. With your hand, remove the retaining ring and attached filter by lifting up.
4. FOR FILTER BAGS: Turn the bag inside out and flush water backwards through the bag with a garden hose. If filter builds up with suntan lotion, soak and clean with dish soap.
5. FOR CARTRIDGE FILTERS: Remove cartridge filter from container and rinse out container.

Next, go to the pool skimmer and remove skimmer basket. With pool pump running, hold the cartridge by the handle and dunk it into the skimmer several times, using an up and down motion. Or, to lengthen the time between cleaning the pool's filter, you may clean the cartridge by using a garden hose with a spray nozzle. If filter builds up with suntan lotion, soak and clean with dish soap. Place cartridge filter back inside the container.

6. When clean, return the filter bag/cartridge container back inside the Leaf Trapper canister.
7. Before replacing the inner lid (clear lid), turn on the pool pump. This will allow water inside the Leaf Trapper canister to drain below the point where the inner lid sits.
8. Once the water level goes below this point, replace the inner lid and the deck lid.



## WINTERIZATION

As with most pool equipment, if the swimming pool is located in a climate where freezing weather is possible, winterization of the Leaf Trapper along with other pool equipment, is necessary in order to protect your pool and equipment. Special winterizing instructions are available through CSI if your pool is in one of these areas. To acquire such instructions, feel free to call us on our toll-free number, 1 800 762 0647 (In Arizona, 602 948 1199).

## STAGNANT WATER ABOVE THE INNER LID

If the water level is higher than the inner lid (clear lid) in the Leaf Trapper canister, stagnant water will settle above the inner lid. This will make viewing the Leaf Trapper filter difficult. This stagnant water can easily be brought below the inner lid.

1. While the Leaf Trapper is off, remove the inner lid from the Leaf Trapper canister.
2. Turn on the Leaf Trapper System. Water will automatically be drawn below the inner lid ring and into the filter.
3. When the water has dropped below the inner lid ring, place the inner lid back into position.

**CAUTION: During freezing weather, stagnant water must be brought below the inner lid in this manner to avoid freeze damage!**

## LEAF TRAPPER WARRANTY COVERAGE

Leaf Trapper comes with a lifetime structural warranty on all parts, with the exception of the filter (bag or cartridge, covered for one year. This factory warranty is extended to the original pool owner, limited to replacement and excludes labor, incidental or consequential costs to replace.