



# Sand Filters

## Owner's Manual and Installation Guide

Congratulations! You have purchased one of the most user-friendly pool filters available. Jacuzzi is a leader in providing superior products combined with easy installation and simple service.

The Jacuzzi sand filter, will provide you with many years of pool enjoyment. Ideal for above-ground or vinyl liner-in-ground pools, your Jacuzzi Sand Filter allows you to easily clean the filter. When you choose Jacuzzi, you've chosen the best.

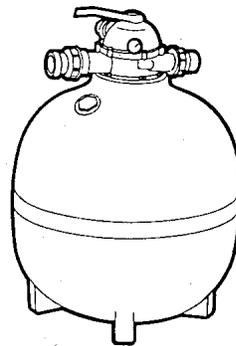
This step-by-step installation and maintenance guide will provide the necessary information for you to easily maintain the equipment.



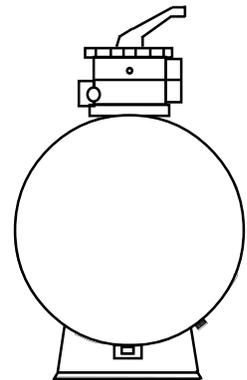
**MFM**  
L225, L250  
MFM15, MFM17



**Laser**  
L160, L190



**SandTrap**  
ST24



**SandStorm**  
TM26, TM31,  
TM36



Before installation be sure to read all instructions and warnings carefully. Refer to product label(s) for additional operation instruction and specifications.

## INSPECTION

Examine the equipment when received. Notify your dealer or carrier of any damage or missing parts. Verify that equipment is of size and model specified.

## INSTALLATION LOCATION

Locate unit on a solid foundation as close to pool/spa as possible. Give consideration to drainage-away from equipment, ventilation, and access for future servicing and winterizing.

## PUMP SELECTION

A full line of pool/spa pumps are available for installation with these filters. For those installations where the equipment will be placed above the water level, a self-priming pump should be selected. Ask your dealer to determine the proper size and distance from pool or spa and friction losses (restrictions) of associated equipment.

## GENERAL PLUMBING

### FOR SOLVENT WELD CONNECTIONS

Rigid or flexible PVC pipe can be used. Pipe ends should be clean and free of any flash caused by the cutting operation. Be sure that the proper adhesive is used on the type of pipe specified.

Recommended Adhesives-These are examples only and are not intended to restrict brands.

#### PVC-PVC Joint

Uni-Weld Pool-Tite 2000  
Suregard Flex 20  
IPS Weld-On 705

#### PVC-ABS Joint

Uni-Weld Pool-Tite 2000  
Suregard Weld-All No. 5  
IPS Weld-OM 794

Note: A primer will assure that adhesive joints are superior. Suregard P-3000 has a purple tracer to qualify in areas where codes specify a primer must be used.

Caution: We recommend that you consider climatic conditions when applying adhesives. Certain atmospheric situations, such as high moisture content, make the adhesive action of certain glues less effective. Check the manufacturer's instructions.

## FOR THREADED CONNECTIONS

Use only Teflon® tape or equivalent on threaded plumbing connections. Other pipe compounds may damage threads. We do not recommend the use of silicone or petroleum based compounds. **DO NOT OVERTIGHTEN: HAND TIGHTEN PLUS 1/2 TURN IS SUFFICIENT.**

## FILTER PLUMBING

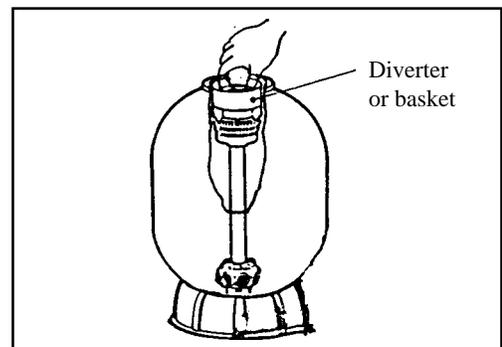
If filter is equipped with union connections, union adapters are needed to complete plumbing connections and may need to be ordered separately.

## SAND FILTER PREPARATION

**DO NOT PLACE SAND IN FILTER TANK BEFORE IT IS POSITIONED AS ITS WEIGHT WILL MAKE MOVING TANK MORE DIFFICULT AND MAY CAUSE DAMAGE.**

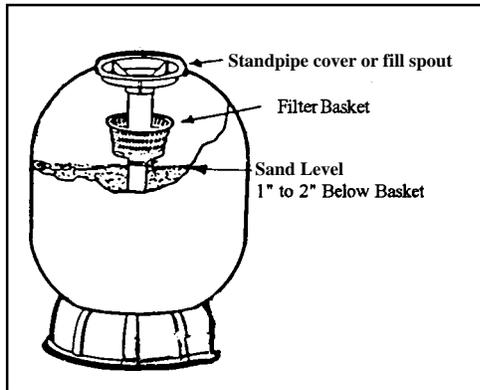
Remove bag of miscellaneous parts and proceed as follows:

1. Remove diverter/basket. Inspect the standpipe system to assure that it is properly assembled. (Press firmly on the standpipe to make sure that it is securely seated at the bottom of the tank.)



2. Place standpipe cover on standpipe to prevent entrance of any sand. Standpipe cover is either a plastic cap or waxed corrugated assembly found in misc. parts bag or separately in carton. Some filters may already have standpipe cover installed on standpipe and diverter removed and located in misc. parts bag.
3. Fill tank approximately 1/2 full of water.

4. Add sand (not provided) following recommendation for size and amount on product label. Be sure that standpipe remains centered while pouring sand. Be sure sand is level.



5. Remove cover from standpipe.
6. Place diverter/basket back on standpipe for all tanks.
7. Carefully remove all sand particles from valve mounting location, being especially careful of valve bolt inserts and O-ring seat.
8. Position O-ring carefully in groove on tank top or on bottom of dial valve.
9. For all tanks except the SandStorm, install dial valve on tank, using provided hex bolts. Tighten bolts uniformly, being careful not to OVERTIGHTEN. Port position on valve should be relative to pump location. Note: Six position dial valves are equipped with sight glass which must be hand tighten only.
10. For SandStorm tanks, install dial valve using provided v-band clamp. Insure that the tank flange and dial-valve flange are enclosed within the clamp before tightening. Port position on valve should be relative to pump location.
11. Install pressure gauge.
12. For Laser filters or filters that include a backwash adapter - the reduced orifice 1-1/2" thread x barb backwash adapter in the hardware kit is designed to provide proper water flow during the backwash cycle. To insure desired backwash characteristics install the adapter in the waste port of the dial valve.

## DIAL VALVE FUNCTIONS

**FILTER** - For normal filtering. This position also can be used for regular vacuuming.

**BACKWASH** - Clean your filter with this position. Note instructions on Cleaning Filter.

**DRAIN** - This position allows you to pump water from the pool. The flow from the pump is permitted to bypass the filter and go directly to waste. Use this position to vacuum heavy concentration of debris.

**WHIRLPOOL** - By bypassing the filter, this position creates more pressure to obtain optimum performance from any hydro-therapy fittings. No filtration occurs while the valve is in this position.

**WINTERIZE** - This is a neutral position which is used only when pump is stopped. It allows air to leave-or enter the tank to help priming and draining.

**RINSE** - (6 and 7 position dial valve only, not available on 4 position dial valve). For settling filter bed after backwashing and for carrying any remaining loose dirt to waste. The rinse prevents any return of residual dirt to the pool that occurs momentarily when changing directly from **BACKWASH** to **FILTER**.

**TEST** - (6 and 7 position dial valve only, not available on 4 position dial valve) This position prevents any backflow of water from pool during pump maintenance if filter is below water level.

## FILTER START UP

1. Set dial valve to DRAIN position.
2. Perform pump start up.
3. After good flow has been established, continue pumping for one minute or until wastewater is clear.
4. Stop the pump. Set dial valve to BACKWASH and restart pump.
5. Observe the waste water. When flow becomes clear (approximately 2 to 3 minutes). STOP pump. *(cont'd next page)*

6. If your dial valve does not have a RINSE cycle, proceed to STEP 7. If your dial valve does have a RINSE cycle, set it to that position, restart pump and allow it to run 20 seconds. STOP pump.

7. Set dial valve to FILTER and restart pump.

## **WATER CHEMISTRY**

Proper and consistent use of chemicals is necessary to maintain clean, sanitary water, prevent a spread of germ infection and control the growth of algae which can spoil the appearance and enjoyment of your pool or spa.

Chlorine is the most commonly used chemical to provide clean, sanitary water. Either dry or liquid chlorine can be used which should be added daily as it is dissipated by dirt and germs as well as by the sun and wind.

It is also important that the correct level of acidity or alkalinity of the pool water be maintained. This is the pH of your pool with pH 7.0 being neutral. Readings above pH 7.0 are alkaline and readings below are acid. A desirable range is 7.2 to 7.4. Consult your local pool/spa dealer for complete information on proper application and use of chemicals.

## **FILTER MAINTENANCE**

Filter tank and contents should not require attention other than backwashing provided water is kept in continuous chemical balance without heavy dosages of corrosive chemicals.

## **CLEANING FILTER (Backwashing)**

When the new filter is first placed in service, note reading on pressure gauge. As dirt builds up in filter, the pressure reading will increase. When it reads 10 PSI above the original reading, it is time to backwash as described below.

1. STOP pump.
2. Set dial valve to BACKWASH and start pump.

3. Observe the waste water. STOP pump when flow becomes milky clear (approximately one to three minutes).

4. If your dial valve does not have a RINSE cycle proceed to step 5. If your dial valve does have a RINSE cycle, set it to that position, restart pump and allow to run 20 seconds. STOP pump.

5. Set dial to FILTER and start pump to resume filtering operation.

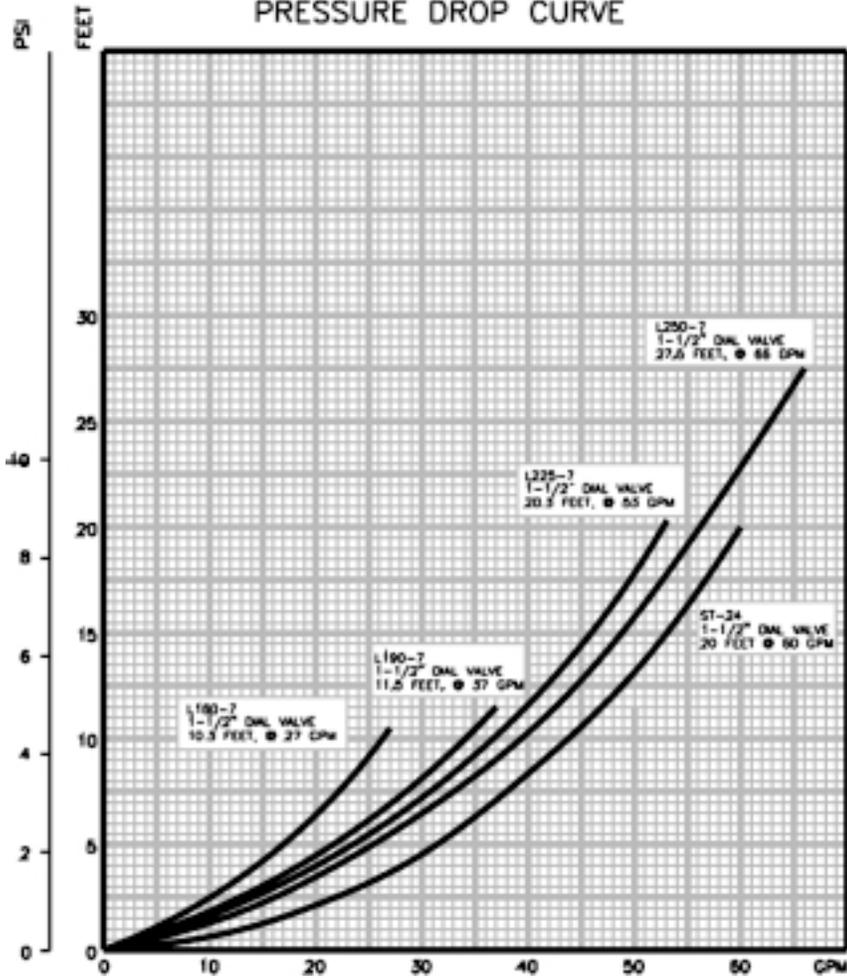
Do not use pool vacuum cleaner when filter is backwashing.

## **WINTERIZING**

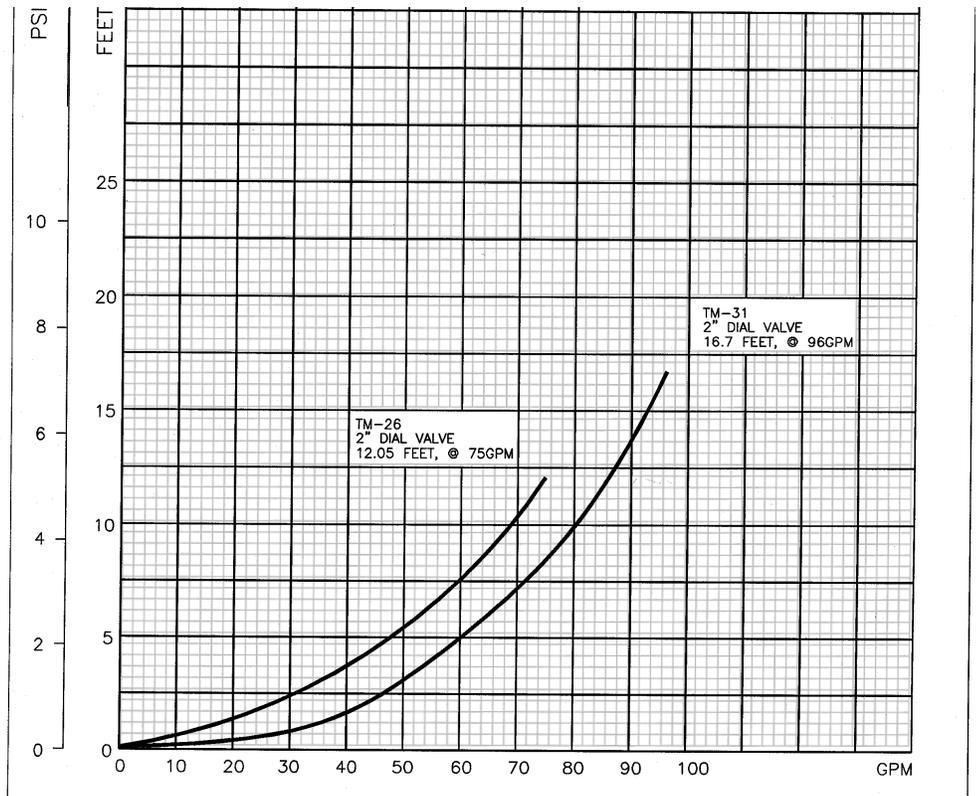
Consult your dealer for advice on winterizing your equipment if freezing temperatures occur in your locality. Their knowledge of your equipment makes them the best qualified source of information. Follow their recommendations, and if these include draining the filter system, proceed as follows:

1. BACKWASH for 3 to 5 minutes and the set dial valve to WINTERIZE position.
2. Drain system by removing drain plugs and/or removing pipe caps from the filter, pumps, and disinfecting equipment. Store plugs in a dry place for safekeeping.

### SAND FILTER FAMILY PRESSURE DROP CURVE



### SANDSTORM FILTER PRESSURE DROP CURVE



# Trouble Shooting



**Disconnect power to motor main circuit breaker to avoid electrical shock.**

## **TROUBLESHOOTING SAND FILTERS:**

### **SAND BACK TO POOL.**

- \* Sand too small; recommend .40mm to .50 mm size, 20# silica. Inspect.
- \* Flow rate too high. Adjust discharge valve to reduce flow.
- \* Sand bed calcified. Change sand.
- \* Cracked or loose laterals. Inspect or replace.
- \* Cracked manifold. Inspect or replace.
- \* Cracked or unseated standpipe in manifold. Inspect or replace.
- \* Too much sand; above basket on standpipe. Inspect.

### **ALGAE OR DEBRIS BACK TO POOL.**

- \* Upper standpipe disengaged from bottom of valve. Lengthen upper standpipe.
- \* Upper standpipe disengaged from top of basket. Inspect.
- \* Heavy dirt load.
- \* Heavy bather load.
- \* Algae. Shock and flock to remove from pool.
- \* Dial valve isn't locked in position. Inspect.

### **EXCESSIVE PRESSURE IN FILTER.**

- \* Dirty filter. Backwash; recheck pressure.
- \* Backwash adapter in the "return" outlet on the dial valve. Inspect.
- \* Calcified sand bed. Inspect and change if necessary.
- \* Using Soft Swim; Baquacil. Use Baquacil's cleaners.

### **FILTER LEAKS WATER.**

- \* Split in tank due to freeze damage. Replace.
- \* Drain plug missing or not tight. Inspect.
- \* O-ring between tank and valve damaged, twisted or not lubed. Inspect.

### **DIAL VALVE LEAKS.**

- \* Valve set in intermediate position. Inspect.
- \* Diverter O-ring damaged. Replace.
- \* O-ring between body and housing damaged. Inspect or replace.
- \* O-ring between valve and tank damaged, twisted, not lubed. Inspect.

- \* Pressure gauge installed without sealant or teflon tape. Inspect.

### **FILTER WILL NOT KEEP WATER CLEAN.**

- \* Dirty filter. Backwash or change sand; recheck pressure.
- \* Algae growth in pool. Shock and flock; then vacuum on waste.
- \* Water started out dirty. Continue to filter and clean as necessary.
- \* Improper sand media. Recommend .40mm to .50mm, 20# silica. Inspect.
- \* Heavy swimmer load.
- \* Not enough sand in filter. Inspect or fill to proper level.
- \* Calcified sand bed. Inspect and change sand if necessary.
- \* Dial valve in intermediate position. Inspect.
- \* Flow rate too low.
- \* Backwash adapter in the "pump" inlet on the dial valve. Inspect.

### **SAND COMING OUT OF BACKWASH IN BACKWASH MODE.**

- \* Valve missing backwash adapter. Check valve.
- \* Too much sand. Just changed and overfilled?
- \* Pump is over sized. GPM of pump vs. GPM capacity of filter. Check.
- \* May need smaller backwash adapter . . . extreme case. PSI is important.

**NOTE:** If these recommendations do not solve your particular problem(s), please contact your local dealer for service.

### **SERVICE & REPAIR PARTS**

*Refer all service to your local dealer as his knowledge of your equipment makes him the best qualified source of information. Order all repair parts through your dealer. Give the following information when ordering repair parts:*

1. Unit nameplate data.
2. Description of part.

## JACUZZI LIMITED WARRANTY

Jacuzzi Bros. Division (JBD) warrants its products to be free of defects in material and workmanship for a period of 1 year from date of purchase or 3 years from date of manufacture, whichever comes first; Jacuzzi Bros. also provides additional warranty coverage on specific products as specified herein.

**Magnum Force pumps-** 12 years limited: the case, RingLoks, impeller, diffuser, seal plate, and pump lid have 5 years full and 7 years pro-rated thereafter; the o-rings, basket, seal and other hardware have one full year from the date of installation. The motor carries a 3 year original manufacturer's warranty.

**Cygnets pumps-** 10 years limited; the case, RingLoks, impeller, diffuser, seal plate, and pump lid have 5 years full and 5 years pro-rated thereafter; the o-rings, basket, seal and other hardware have one full year from the date of installation. The motor carries a 3 year original manufacturer's warranty.

**LR pumps-** 4 years limited: the case, RingLoks, impeller, diffuser, seal plate, and pump lid have 2 years full and 2 years pro-rated thereafter; the o-rings, basket, seal and other hardware have one full year from the date of installation. The motor carries a 1 year original manufacturer's warranty.

**SherLok filters-** 12 years limited: the tank body and RingLok have 5 full years and 7 years pro-rated thereafter; all internal components have one full year from date of installation.

**TriCLOPS filters-** 12 years limited: the tank body and RingLok have 5 full years and 7 years pro-rated thereafter; all internal components have one full year from date of installation.

**Avalanche filters-** 12 years limited: the tank body and RingLok have 5 full years and 7 years pro-rated thereafter; all internal components have one full year from date of installation.

**EarthWorks filters-** 12 years limited: the tank body and RingLok have 5 full years and 7 years pro-rated thereafter; the valve and all other components have one full year from date of installation.

**Laser filters-** 12 years limited: the tank body and RingLok have 5 full years and 7 years pro-rated thereafter; the valve and other internal components have one full year from date of installation.

**SandStorm filters-** 12 years limited: the tank body and RingLok have 5 full years and 7 years pro-rated thereafter; the valve and other internal components have one full year from date of installation.

JBD's warranty obligation with regard to equipment not of its own manufacture is limited to the warranty actually extended to JBD by its suppliers. Performance of equipment is further warranted to be in accordance with stated ratings when properly installed under normal conditions of operation.

This warranty extends only to the original retail purchaser and only during the time in which the original retail purchaser occupies the site where the product was originally installed. **The product warranty card must be on file with Jacuzzi Bros. to qualify for the additional warranty coverage listed above. Otherwise, Jacuzzi Bros. is limited to paragraph one above.**

Warranty claims shall be made by contacting the installing JBD dealer (point of purchase) as soon as possible after the discovery of any alleged defect. If the claim is determined to be valid, JBD will take corrective action as promptly as reasonably possible.

JBD at its discretion may replace or repair any product that fails under this warranty after inspection by an authorized company representative or after JBD has received the product at our factory. Replacement or repair cannot be made until after the product is inspected. All charges or expenses for freight to and from the factory, removal and reinstallation of the product, or installation of a replacement product are the responsibility of the purchaser.

**THIS WARRANTY IS EFFECTIVE JANUARY 1, 1998. ANY IMPLIED WARRANTIES WHICH THE PURCHASER MAY HAVE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIOD. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. IN NO EVENT SHALL JBD BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.**

This warranty applies to products used in swimming pool, spa, & aquaculture applications only and does not apply to any product which has been subjected to negligence, alteration, accident, abuse, misuse, improper installation, vandalism, civil disturbances, or acts of God (including but not limited to freeze damage, lightning strikes, and other damage caused by catastrophic events). The only warranties authorized by JBD are those set forth herein. JBD does not authorize other persons to extend any warranties with respect to its products, nor will JBD assume liability for any unauthorized warranties made in connection with the sale of its products.

Products carrying a pro-rated warranty will be replaced using the following percentages against the list price in effect at the time of replacement:

**12 year limited warranty** - Magnum Force pumps, SherLok, TriCLOPS, Avalanche, EarthWorks, Laser, SandStorm filters.  
year 6 = 50% year 7 = 40% year 8 = 30% year 9 = 20% year 10 = 15% year 11 = 10% year 12 = 5%

**10 year limited warranty** - Cygnets pumps  
year 6 = 50% year 7 = 40% year 8 = 30% year 9 = 20% year 10 = 10%

**4 year limited warranty** - LR pumps  
year 3 = 40% year 4 = 25%

**THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.**

**JACUZZI.**

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