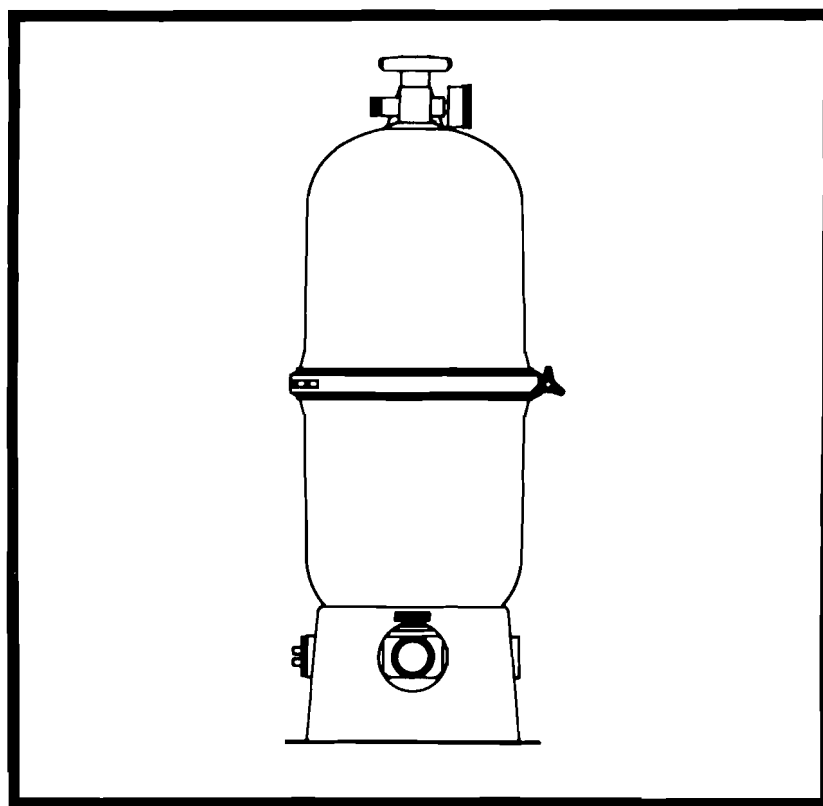


Starbright™

DE FILTER INSTALLATION, OPERATION & SERVICE MANUAL



FILTER IS DESIGNED AND INTENDED FOR USE TO FILTER WATER
IN SWIMMING POOLS AND SPAS

★ **PATENT PENDING**

STARBRIGHT SYSTEMS
P.O. BOX 1205 • SANFORD, NORTH CAROLINA 27330

INSTALLATION INSTRUCTIONS

WARNING

FILTERS SHOULD NEVER BE TESTED OR SUBJECTED TO AIR OR GAS UNDER PRESSURE. ALL GASES ARE COMPRESSIBLE AND UNDER PRESSURE CREATE A DANGER. SEVERE BODILY INJURY OR PROPERTY DAMAGE COULD OCCUR IF THE FILTER IS SUBJECTED TO AIR OR GAS PRESSURE.

1. Remove all components from the carton and inspect for damage that may have occurred in shipment.
2. Place the filter in its permanent location on a level slab. DO NOT use sand to level the filter as it may wash away, leaving the filter out of level. This condition will cause poor filter performance.
3. Be certain the piping is as follows: A) From the pool to the *inlet* of the pump; B) From the *outlet* of the pump to the *inlet* of the filter; C) From the *outlet* of the filter to the pool.

INTRODUCTION

The Star filter is very simple to operate and yet is very positive in its operation. The flow entering the filter is at the bottom through a series of holes 360 degrees around giving a very even flow pattern with the filter and assuring even flow pattern within the filter and assuring even flow to all parts of the grid both top and bottom. Perhaps the real key to the filter is its mechanical means of dislodging the cake. *Patents have been applied for* this type of "swish and bump" system. The entire grid assembly is moved using a small handle on top of the filter. This handle can easily be moved even when the pump is on the filter mode. However, the cake will not fall because of the differential pressure between the outer surface and the inner surface of the grid or septum. When the pump is shut down, and all pressures are balanced, moving the handle and the grid assembly bumping against the stops (approximately 90 degrees apart) dislodges the cake in a very dramatic and explosive manner. The type of "swish and bump" action can easily be understood by comparing it to a conventional agitator type of washing machine. The swishing action of the water within the washing machine necessarily cleans the clothes in a positive fashion. The same swishing action takes place in the Star filter. The only difference being that it's a manual lever causing the "swishing" motion. Having vertical grids

spaced far apart and no horizontal surfaces in the bottom portion of the grid assembly assures complete cake removal during the "swish and bump" action.

PROCEDURES

This filter operates under pressure. When closed properly and operated without air in the water system, this filter will operate in a safe manner.

WARNING

AIR ENTERING FILTER AND THE UNIT NOT CLOSED CORRECTLY CAN CAUSE THE TANK TOP TO BLOW OFF AND COULD CAUSE SEVERE BODILY INJURY AND/OR PROPERTY DAMAGE.

GENERAL — Check all piping valves so that the water can flow from the pool to the pump through the filter and back to the pool. Open the air bleeder valve on top of the filter. (Turn counter-clockwise to open.) Check the hand knob on the V-clamp to be certain it is fully tightened. See Re-assembly of filter items 4, 5 & 6 for the procedure for tightening up the hand knobs. Start pump; do not operate for more than 1 minute without the diatomaceous earth (D.E.) precoat. When a solid stream of water leaves the pet cock close it. A steady flow of water is now returning to the pool.

PRECOAT — Add 4 pounds of diatomaceous (D.E.) into the skimmer. (This is approximately 7 quarts.) After 2 or 3 minutes note the pressure gauge reading. Also note the flow by holding your hand over the pool return fitting in the pool.

FILTERING — As dirt is collected in the filter the pressure gauge will gradually rise and the flow to the pool will be lowered. When the flow has been reduced by about 1/3 note the pressure gauge reading. In the future the higher gauge reading can be used as a guide to tell when regeneration is needed. The increase in pressure will be in the general area of 10 pounds, but will vary depending on the pump being used with the filter.

REGENERATION - SWISH AND BUMP — When the flow has been reduced and the pressure gauge has increased as mentioned above, regeneration is necessary. Stop the pump and move the handle back and forth 4 times. This will "swish and bump" the filter allowing the D.E. to inter-mix with the water within the filter chamber. Restart the pump and the flow will be back to normal and the pressure gauge will be at the low reading.

CAUTION:

When performing the manual cleaning operation you may wish to disassemble the filter which is easily done by loosening the handle knob on the V-band assembly. However, be certain the pump is shut off and the pressure gauge reads 0 before attempting to disassemble the filter.

CLEANING — After a number of weeks it will be noted that the flow is reduced in about 1 day, which means that the ratio of dirt to D.E. is such that full cleaning is needed. To clean the filter, shut off the pump. Open the air relief valve and the drain valve. Quickly "swish and bump" using the handle provided 6 to 8 times. Wait approximately 3 minutes or until the filter is completely empty. Turn the pump on and completely fill the filter again with water. "Swish and bump" another 6 to 8 times and again allow the filter to drain. Close the drain valve and follow the instructions above to begin a new filter cycle by adding 4 lbs. D.E.

CLEANING OF GRID ASSEMBLY

Due to pool water chemistry, a build up of minerals and oil may form deposits on the fabric of the grids. This will eventually result in shortened filter cycles. To clean the fabric proceed as follows.

Never attempt to open clamp while there is pressure in the filter. Before opening, turn pump off and open air relief valve.

Remove the entire grid assembly from the filter and hose off using a nozzle directing the water stream at about a 45° angle. If the fabric is coated with body oils, suntan lotions, calcium or rust, washing will not remove these materials. It is recommended that one of the following cleaners be used:

FILTER-CLEANSE — Great Lakes Biochemical

FILTER-FREE — Hydrotech Chemical Corporation

KLEEN-IT — Bio Lab, Inc.

Mix a solution following the manufacturer's instructions on the label. Place the entire grid assembly in a plastic container and add the solution so the entire grid assembly is submerged. Allow to stand overnight (12 hours).

The following day wash with a hose and remove all of the solution from the grids so it does not return to the pool.

This will remove oils, scale and rust in one cleaning operation. This procedure should be done at the end of the swimming season and before the filter is stored for the winter.

WARNING

IMPROPER TANK ASSEMBLY COULD CAUSE THE TANK TOP TO BLOW OFF AND COULD CAUSE SEVERE BODILY INJURY AND/OR PROPERTY DAMAGE.

RE-ASSEMBLY OF FILTER

1. Be certain the grid assembly is inserted into the bottom fitting. Clean the two tank half flanges and the tank o-ring.

2. Be sure o-ring is in proper position.

3. After installing the o-ring, replace the top cover and guide it carefully so the handle shaft assembly engages the grid assembly. **DO NOT FORCE THE COVER TO CLOSE.**

4. Locate the filter clamp over both flanges, tank top and tank bottom.

5. While tightening hand knob you must tap clamp all around the diameter with a mallet or similar tool to insure uniform loading.

6. Be certain the hand knob is firmly tightened as much as possible using full hand power to tighten.

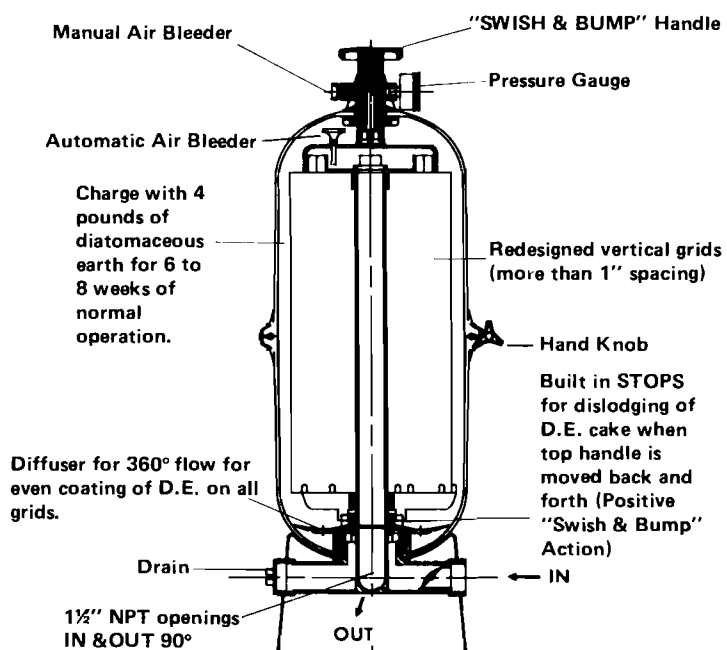
7. The bleeder valve on filter tank must be open before starting pump.

8. Start pump.

9. Close air bleeder valve when a steady stream of water flows from the valve -- this indicates that all air is bled from tank.

WINTERIZING THE FILTER

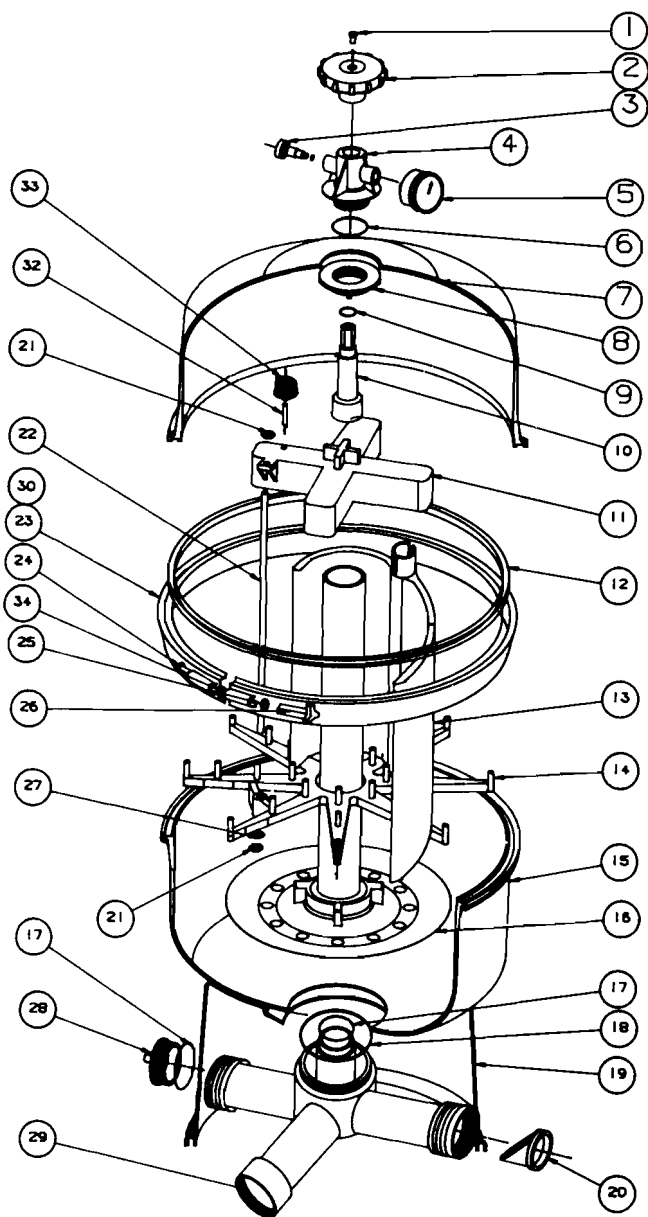
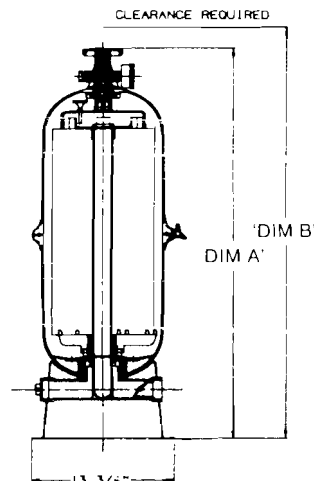
In areas where sub-freezing temperatures can be expected, the filter should be removed from its operating location and stored indoors. Prior to removal, cycle the filter as described under CLEANING. If filter is left outdoors, be certain it is clean and completely drained of all water.



Starbright™

DE FILTER

MODEL	DIM' A	DIM' B
DE-35	29 3/4"	38"
DE-50	37 3/8"	50"



REPLACEMENT PARTS

ITEM	PART NO.	DESCRIPTION	QTY.
34	17-5020	RING-RETAINING CARRIAGE BOLT	1
33	15-4577	STRAINER-AIR RELIEF	1
32	19-1606	TUBING 1/4"	1
31	19-1953	GRID ASSEMBLY-COMPLETE DE35	1
31	19-1486	GRID ASSEMBLY-COMPLETE DE50	1
30	17-4880	BAND ASSEMBLY-COMPLETE	1
29	19-1469	PIPING-BOTTOM WITH CHECK VALVE	1
28	55-2417	PLUG-1 1/2" W/O-RING	1
27	19-1330	WASHER-LOCK 1/4" SS	2
26	17-4882	KNOB-BANK ASSEMBLY	1
25	63-9822	WASHER-FLAT 5/16" SS	1
24	15-2060	BOLT-5/16"-18x4 1/4" CARRIAGE	1
23	17-4879	CLAMP BAND	1
22	19-1948	ROD-1/4" X 15" SS DE35	2
22	19-1430	ROD-1/4" X 21 1/2" SS DE50	2
21	27-2408	NUT-HEX 1/4-20 SERRATED SS	1
20	19-1437	CHECK VALVE ASSEMBLY	1
19	19-1423	FOOT TANK	1
18	19-1424	O-RING 3 1/2" X 3 7/8" X 3/16"	1
17	19-1474	O-RING 1 3/4" X 2" X 1/8"	2
16	19-1942	PIPE-CENTER W/DIFFUSER DE 35	1
16	19-1483	PIPE-CENTER W/DIFFUSER DE 50	1
15	75-0009	BOTTOM-TANK	1
14	19-1467	RETAINER-GRID BOTTOM	1
13	19-1321	GRID - DE 35	4
13	19-1322	GRID - DE 50	4
12	17-4704	O-RING-TANK	1
11	19-1950	MANIFOLD ASSEMBLY DE 35	1
11	19-1481	MANIFOLD ASSEMBLY DE 50	1
10	19-1955	SHAFT-ENGAGEMENT DE 35	1
10	19-1480	SHAFT-ENGAGEMENT DE 50	1
9	19-1479	O-RING 7/8" X 1 1/8" X 1/8"	1
8	19-1478	NUT-1 7/8" - 8" - BUTTRESS	1
7	75-0010	TOP-TANK DE 35	1
7	75-0011	TOP-TANK DE 50	1
6	15-5054	O-RING 1 1/8" X 2 1/8" X 1/8"	1
5	15-5050	GAUGE-BACK MOUNT PRESSURE	1
4	19-1475	ADAPTOR-TANK TOP DE 50	1
3	19-2515	SCREW-AIR BLEEDER W/O-RING	1
2	19-1472	KNOB-ENGAGEMENT SHAFT	1
1	55-2472	SCREW-FLATHEAD #12 X 1"	1

NOTE 1

ITEM 31, GRID ASSEMBLY-COMPLETE
CONSISTS OF ITEMS 11, 13, 14, 21, 22, 27, 32, 33

NOTE 2

ITEM 30, P/N 19-4880 BAND ASSEMBLY-COMPLETE
CONSISTS OF ITEMS 23, 24, 25, 26, 34

NOTE 3

APPLY SILICONE SEALANT TO ACME THREADS
ON ITEM 16, P/N 19-1483