

MAGNA-FLO SAND FILTER

SIDE MOUNTED MULTIPOINT VALVE

Assembly & Operating Instructions

F.G Series: 550mm - 21"
650mm - 25"
710mm - 28"



A. Assembly

1. Prepare a firm base for the sand filter, capable of withstanding a pressure of 100g per sq/cm. A 50mm thick slab of reinforced concrete would be best. The slab should be large enough for the filter base to be located with a 100mm clearance from all edges.
2. a. Loosen the lid clamp and remove the clamp from the tank top.



- b. Remove the tank lid.



- c. Dis-assemble the plastic unions from the tank connectors.



3. a. Attach the tank union to the MP Valve top adaptor.



- b. Thread the top adaptor into the MP Valve opposite 'Filter'. Make sure the rubber Oring is on the top adaptor so that when it is firmly threaded into the MP Valve, it will seal the connection making it watertight.



- c. Attach the second tank union onto the bottom (non-thread) adaptor.



- d. Glue the adaptor onto the 90o plastic elbow, making sure it is firmly pushed in to its fullest depth.



- e. Glue the other end of the 90o elbow into the base of the MP Valve, once again making sure it is pushed in to its fullest depth.



4. a. Assemble the MP Valve onto the tank by threading the unions onto the top and bottom tank connectors. Make sure the rubber Orings are in place in order to make the connections watertight.



- b. Attach the 3 barrel unions onto the MP Valve, again making sure the rubber Orings are on them to ensure a watertight connection.



- c. Thread the sight glass into the MP Valve, making sure the rubber Oring is in place.



5. a. Fill at least half the filter tank with water. This is done so that the weight of the sand media, pouring into the tank, will not damage the underdrain at the bottom of the tank.
- b. Pour the required amount of filter sand into the tank. (See media requirement data on page 5).
- c. Once completed, brush off any sand particles which may have lodged in the rubber Oring groove at the top of the tank.

6. a. Place the lid Oring into the tank top groove, making sure it is in the correct position.



- b. Place the tank lid into position and re-assemble the lid clamp using the nuts and bolts provided.



- c. Tighten the clamp nuts and bolts to seal the tank lid.



7. a. Attach the air release valve into the tank lid. **DO NOT OVERTIGHTEN AS THIS CAN DAMAGE THE TANK LID.**



- b. Attach the pressure gauge, with rubber Oring, onto the tank lid, making sure it is tight enough to seal the connection. **DO NOT OVERTIGHTEN AS THIS CAN DAMAGE THE TANK LID.**



B. Operating Instructions

Valve Operation

The water flowing through the filter tank is controlled by the MP Valve. It is supplied assembled and ready for use. There are six locating positions on the valve. See page 6 for a description of these functions. Place next to the filter tank for easy reference.

IMPORTANT: The valve handle must **NOT** be moved while the pump is running.

Initial Start Up

Make sure the correct amount of filter sand is in the filter tank, and that all plumbing and barrel union connections are tight and secure. Make sure the pool is filled to a position halfway up the mouth of the skimmer box.

Set the MP Valve on **BACKWASH**. Run the pump until the water being pumped to waste is clean and clear. Check the clear plastic sight glass, attached to the waste port of the MP valve, for clarity. Turn pump off. Set MP Valve to **RINSE**. Turn pump on. Run pump for 10-30 seconds. Turn pump off. Set MP Valve to **FILTER**. Turn pump on. Normal filtration commences.

Normal Operation

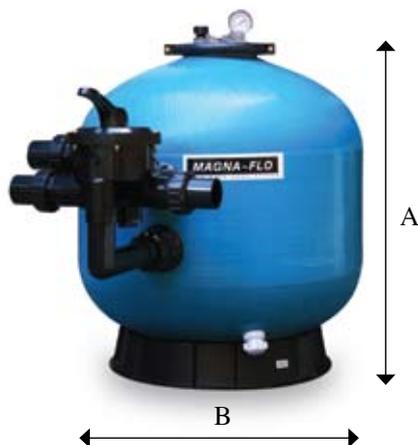
As the filter removes dirt from the pool water, the pressure in the filter tank will rise, indicated by an increased reading on the pressure gauge, located in the tank lid. When the pressure gauge reading has increased to 50KPA over the **START UP** pressure, it is time to backwash the filter. Normal start up pressure is between 50 & 70 KPA.

Backwash

Turn the pump off. Set the MP Valve to **BACKWASH**. Turn on the pump and run until the water going to waste is clean and clear. (Check the clear plastic sight glass, attached to the waste port of the MP valve, for clarity). Turn the pump off. Set the MP Valve handle to **RINSE**. Turn on the pump. Run for 10-30 seconds. Turn off pump. Return the MP Valve handle to **FILTER** and re-commence normal filtration.

Sand Filter Media Requirements

	FG550	FG650	FG710
Grade of filter media (sand) 1mm	60kg	120kg	180kg
Tank dimensions - Height	A - 660mm	A - 780mm	A - 900mm
Tank dimensions - Diameter	B - 550mm	B - 650mm	B - 710mm



IT IS VERY IMPORTANT TO SIZE THE SAND FILTER TO THE CORRECT PUMP PRESSURE AND FLOW RATE. ASSEMBLING A HIGHER THAN RECOMMENDED PUMP ON THE MAGNA-FLO SAND FILTER WILL REDUCE THE LIFE OF THE FILTER TANK, DUE TO EXCESSIVELY HIGH PRESSURES AND FLOW RATES, WHICH WILL RESULT IN CANCELLATION OF THE WARRANTY.

FGS 550 - Flow rate - 250 Litres per minute - 0.75 HP pump
FGS 650 - Flow rate - 300 Litres per minute - 1 HP pump
FGS 710 - Flow rate - 360 Litres per minute - 1.5 HP pump

C. Maintenance

Magna-Flo pumps and filters require minimum routine maintenance, however, below are some handy hints.

1. **LEVEL OF POOL WATER** - The pool water should be maintained at least half way up the mouth of the skimmer box. This will allow efficient surface skimming and also ensure that the pump receives sufficient water supply.
2. **SKIMMER BOX** - Make sure the skimmer box weir door is floating freely, with no obstructions. Empty all debris from the skimmer basket, as this restricts the flow of water to the pump.
3. **PUMP** - Inspection and cleaning of the pump's hair and lint pot basket must be carried out on a regular basis, to ensure the pump is working to its maximum efficiency. When replacing the lid onto the pump's hair and lint pot, check for dirt particles around the rubber Oring seal. If the lid does not seal tightly, air leaks will occur, which will affect the pumps performance.
4. **FILTER** - As the dirt load in the filter increases, the pressure increases. When the pressure gauge reaches a reading of approximately 50KPA above the normal operating pressure, backwash the filter. (Use method described in the operating instructions) Normal operating pressure is between 50 and 70KPA.

D. General Considerations

1. Locate the pump and filter as close as possible to the pool. If the pump is located 750mm above the water level, place a non-return valve in the suction line in front of the pump.
2. If the pump and filter are located below pool water level, valves should be placed in both the suction and return pipes, to prevent the pool water flowing back during routine maintenance.
3. **MAKE SURE THE PUMP AND FILTER ARE PROTECTED FROM THE WEATHER.**
4. Place the pump and filter in a well drained area. Damp, non ventilated locations should be avoided. Pump motors need free circulation of air to aid in cooling.
5. Electrical connections should be made in accordance with all local codes and ordinances. **DO NOT USE LONG EXTENSION LEADS.**
6. Provide enough space around the filter and pump for routine maintenance.

FILTER Pool Filtering & Vacuuming.

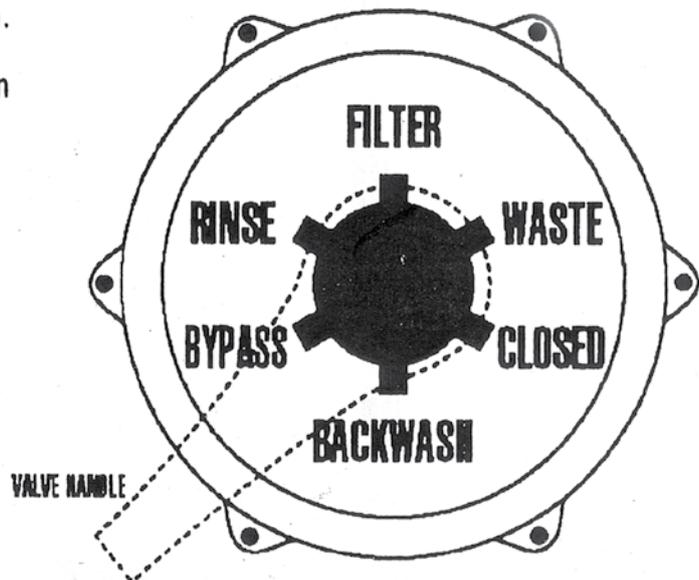
BACKWASH Reverse water flow to clean filter sand.

RINSE Normal filtration, water going to waste. To clean pipes - "Backwash" "Rinse" back to "Filter"

BYPASS Water recirculation, bypassing filter.

WASTE Water goes through the valve & out to waste.

CLOSED Valve shut.



NEVER MOVE THE VALVE HANDLE POSITION, WHEN THE PUMP IS RUNNING