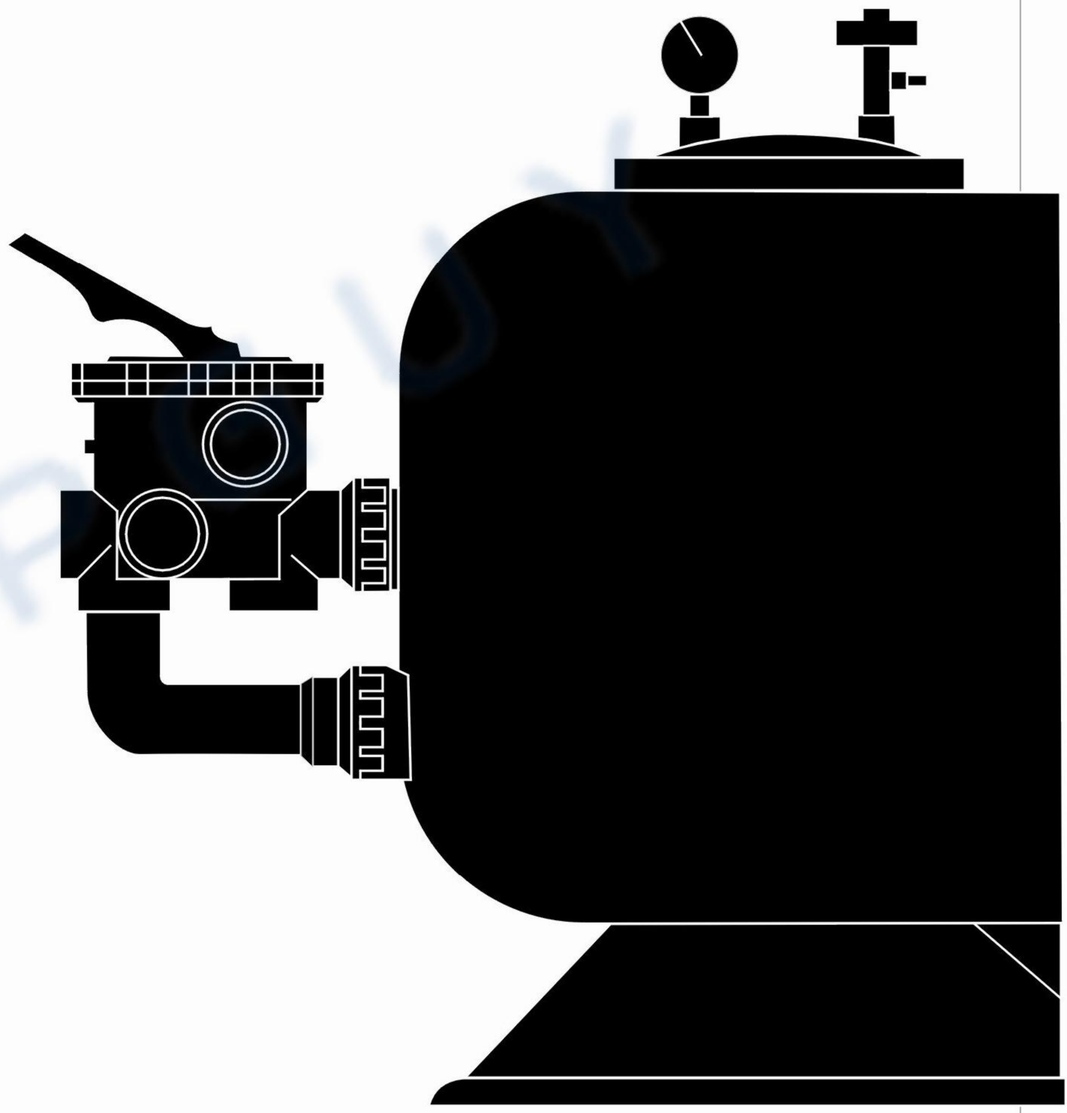
SAND FILTER



INSTALLATION AND MAINTENANCE MANUAL

"Important: This manual contains important information regarding safety measures to adopt when installing and starting up the filter. It is therefore imperative that both the installer and end-user read the following instructions before installing or using the filter".

"In order to ensure best performance of the filter, please read the following instrutions".

CHECK PRIOR INSTALLATION

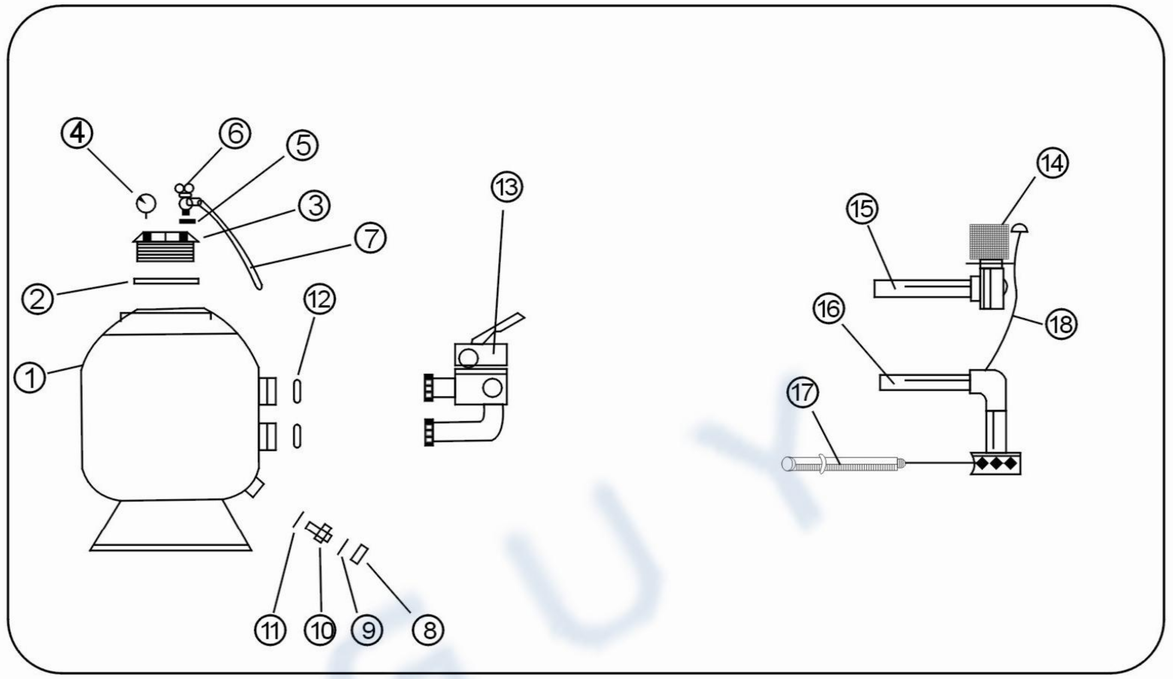
Using the following list ensure that the model and the components are correct.

Filters with top valve			
Model	1Filter box		1 side delector valve box 1 1/2″
S400	1 Filter	1 Filter body	1 Selector valve assembly 1 1/2″
S450		1 Drain plug	
S500		1 Device of complete fitre pipes	8 Cover screw
S550		1 Base	1 Pressure gauge
S600		1 Instruction munual	1 Gasket
S650			3 O-rings
S700			1 Instruction brochure
S750			
S800			3 Connector(o-rings) (1 1/2″ or ¢ 40)

Filters with top valve			
Model	1Filter box		1 side delector valve box 2″
S700	1 Filter	1 Filter body	1 Selector valve assembly 2″
S750		1 Drain plug	
S800		1 Device of complete fitre pipes	10 Cover screw
S900		1 Base	1 Pressure gauge
S1050		1 Instruction munual	1 Gasket
S1200		1 Filter body	3 O-rings
S1400			1 Instruction brochure
			3 Connector(o-rings) (2″ or ¢50)

Filters with side mounted valve				
Model	1 Filterbox			1 side delector valve box 1 1/2″
SS550	1 Filter	1 Lid		1 Selector valve assembly 1 1/2″
SS600		1 O-ring(1 gasket and 8 cover screw)		
SS700		1 Pressure gauge		1 Straight connector and 1 fixing nut
SS750		1 High flow air relief valve		
SS800		1 Plug high flow air relief valve		1 Elbow joint and fixing nut
		1 O-ring		
		1 Instruction manual		2 O-rings and 1 gasket
		Filter body	1 Drain plug	1 Instructon brochure
			1 Device of complete fitre pipes	
			1 Filter body	3 Connector (1 1/2″ or ¢ 40)
			1 Base	

Filters with side mounted valve				
Model	1 Filterbox			1 side delector valve box 2″
SS700	1 Filter	1 Lid		1 Selector valve assembly2″
Ss750		1 O-ring(1 gasket and 8 cover screw)		
SS800		1 Pressure gauge		1 Straight connector and 1 fixing nut
SS900		1 High flow air relief valve		
SS1050		1 Plug high flow air relief valve		1 Elbow joint and fixing nut
SS1200		1 O-ring		
SS1400		1 Instruction manual		2 O-rings and 1 gasket
		Filter body	1 Drain plug	1 Instructon brochure
			1 Device of complete fitre pipes	
			1 Filter body	3 Connector (2″ or ¢ 50)
			1 Base	



NO	CODE	DESCRIPTION	NO	CODE	DESCRIPTION
1	SS0001	Filter body	10	SS0010	Sand drain plug
2	SS0002	O-ring(Gasket)	11	SS0011	O-ring
3	SS0003	Lid	12	SS0012	O-ring
4	SS0004	Pressure gauge	13	SS0013	Selector valve
5	SS0005	Air relief valve	14	SS0014	Basket
6	SS0006	O-ring	15	SS0015	Filter diffuser
7	SS0007	Air relief tube	16	SS0016	Filter collector
8	SS0008	Water drain	17	SS0017	Collector arm
9	SS0009	Gasket	18	SS0018	Service air tube

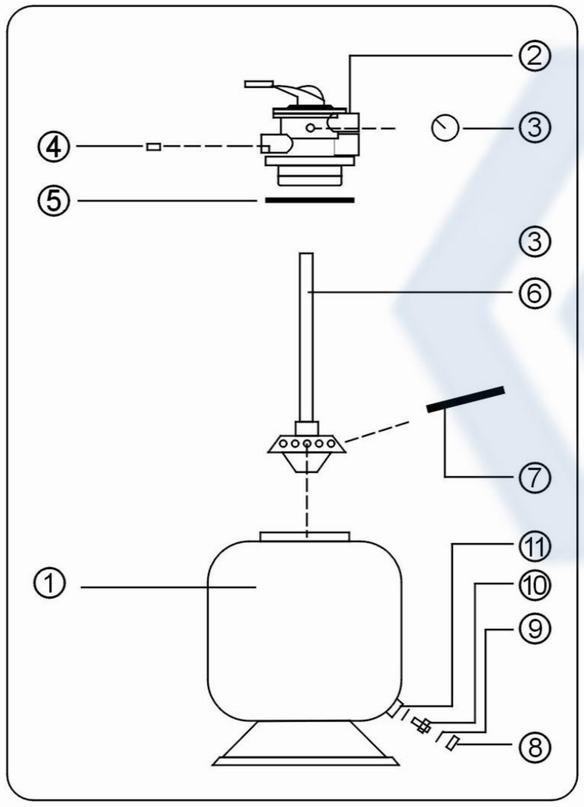
ATTENTION: Flat joint included in the Tee fitting.Do NOT use Teflon to seal the Tee tiffing.

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Low water flow.	Strainer basket blocked.	Clean strainer basket.
No water flow.	Pump motor is working in reverse.(3 phase only)	Change direction of motor
Pressure gauge oscillating wildly	Suction lines semi-blocked	Check strainer basket

SAFETY WARNING

- Do not operate the filter without water.
- Whenever handling the filter or valves ensure electricity is isolated.
- Do not allow children or adults to sit on the filter.
- Do not connect the filter directly to the mains water supply as the pressure could prove excessive and exceed the working pressure of the filter.
- Do not clean the lid with any type of solvent as it could lose its properties of shine and transparency.
- Do not use excessive force on the unions as this could cause damage to the plastic components.



N°	CODE	DESCRIPTION
1	S0001	Filter body
2	S0002	Selector valve
3	S0003	Pressure gauge
4	S0004	Union head
5	S0005	Gasket
6	S0006	Filter collector
7	S0007	Collector arm
8	S0008	Water drain plug
9	S0009	Gasket
10	S0010	Sand drain plug
11	S0011	O-ring

GENERAL CHARACTERISTICS

The filter is an important part of the plant installation of a swimming pool as it physically cleans the water.
Execellent water quality can be obtained by circulating the water through the filter so that suspended solids are retained in the media bed, and treating the water chemically once it has passed through the filter.
filtration and water treatment depend on other equipment also such as pumps. chemicals, pool flow fittings ensuring the correct return and discharge of pool water, as well as other factors which ensure good circulation and maintenance of water quality.
Normally, cach country has standards regulating private and public swimming pools which must be taken into account when installers are designing or installing a system.
STANDARD: The Cantabric filters have followed the ISO 9000 process to ensure good quality control and have also surpassed NSF standard 50 trials.

INSTALLATION

Once the delivery has been checked for components and condition please take into account the followeng:

- Use plastic fittings for all connections
- The water-tight integrity of the unions is achieved via the gaskets so it is not necessary to excessively tighten the union nuts. Do not use ptfe tape.
- Install the filter as close to the swimming pool basin as possible, and below water level if possible.
- The filtration plant room or housing should have a drain facility in case of failure or breakage of any the plant. This will avoid damage to electrical components if the water can be drained off quickly.
- Space should be allowed around the filter for ease of ease of maintenance during its working life.
- In residential pools it is normal for the suction from the pool to come from two points e.g.50% from the skimmer and 50% from the main drain.

ASSEMBLY

Correct assembly of the filter is as tollows:

1. Ensrue the floor below the filter is clean and level.
2. Place the filter in its final position.
3. In the case of a side-mounted model,install the selector valve on the filter ensuring that the gaskets between the valve and the filter are positioned correctly.
4. Proceed to make the three connections relevant to the selector valve: to the pump, to waste, and return to the pool. Each of these connections can be identified on the valve itself.
5. Install the pressure gauge tee, the pressure gauge and the air purge plug (see breakdown). No ptfe tape is necessary as the water -tight seal is made with the o ring. The pressure gauge only has to be hand- tight. Do not use any tools to tighten the pressure gauge.

NOTE: To make the various connections from the selector valve to the pump etc. use PVC fittings, gaskets and ptfe tape if necessary. Also use PVC pipe for the installation. Do not use metal pipe or fittings which could seriously damage the plastic components of the installation

6. Once the installation is finished and before loading the sand, the system should be tested to ensure all is working correctly and that there are no leaks.
7. SAND LOADING: 0.5mm-0.7mm sand is recommeneded for ideal performance of the filter, The quality to be used for each size is included on the model characerjstics of the filter . For correct loading the instructions are as follows:
   - Remove the lid and o ring of the filter without damaging the o ring
   - Ensure the collector arms have not been displaced in transit
   - Carefully half fill with water.
   - Carefully pour in the sand to ensure no damage to the collector arms and protect the diffuser
   - Replace the diffuser, take off protection and replace the lid once the residual sand has been wiped from the lid area.

OPERATING THE FILTER

The selector valve handle can be turned to one of six positions ($1_{1/2''}$ Selector valve with eight positi-ons)indicating the necessary operations for the correct running of the filter.

IMPORTANT: Always stop the pump before changing the selector valve position.

FILTRATION

The pressure gauge will indicate the build up of dirt in the filter. At the start of the filtration process the pressure gauge will indicate approximately 0.8kg/cm^2 of pressure. As the filter becomes dirtier. the pressure increases.When said pressure reaches 1.3kg/cm^2 a backwash operation needs to be carried out.

BACKWASH

The media bed forms thousands of channels in which the suspended particles passing through are caught. When these channels become saturated with dirt the filter must be cleaned through backwash and the dirt sent to waste. As stated elsewhere, the pressure gauge gives an indication of the pressure accumulated in the filter as a direct result of the retention of particles in the media.
When the pressure gauge indicates 1.3kg/cm^2 a backwash must be carried out in the following manner:

- Stop the pump
- Place the selector valve handle in the position of backwash
- Start the pump for a period of two minutes,(Check the sight glass on the selector valve to ensure water is clear).

This operation reverses the flow in the filter to fluidise the sand bed, releasing the dirty matter to waste.

RINSE

After backwashing a rise operation is recommended before the filtration mode is re-started to ensure that no turbid water is returned to the pool. To do this, stop the pump. place the handle to rinse option, start thepump for 1minute (check the sight glass on the filter as the exact time will depend on how dirty the water is). This operation flows in the same direction as the normal filtration option exept that the water goes to waste and not back to the pool.

RECIRCULATION

In this option the water from the pump will return straight to the pool without going through the filter.

WASTE

If the pool does not have a drain the pool may be emptied via the pump with the position of WASTE selected. The main drain, skimmer and vac. Piont valves must be closed in order to realise this operation.

CLOSED

As the name suggests this closes off the entry of water to the filter and is most normally used when access to the pump prefilter basket is required.

WINTERIZE (Only 11/2″ selector valve)

Some room is reserved in case that the temperature gets too low,this device is usedto prevent injure the body of pump.

SERVICE (Only 11/2″ selector valve)

This device should not work when the pump is in working condition.The screw on the handle should be replaced when repairing.

RUNNING THE FILTER

The filter should be backwashed once the sand has been loaded in the following way.

1. Place the selector vale in the backwash position.
2. Open the valves controlling the suction lines of the pool
3. Open the air relief valve (only sanf filter with air relief valve), run the pump for 4 minutes, close air relief valveonly after a continuos stream of water is flowing from the vale (only sanf filter with air) relief valve).

4 Stop the pump and place the selector valve in the filtration,

5. Open the air relief valve (only sanf filter with air relief valve), run the pump to start the system filtering, close air relief valveonly after a continuos stream of water is flowing from the vale only sanf filter with air relief valve).

The filtering cycle of the pool water has now begun.

MAINTENANCE

- Do not use solvents to clean the filter as this will affect the shine of the filter and cause. damage to the shell.
- Ensure that any o rings, gaskets are in good condition and replace when necessary.
- Carry out backwashing and rinshing operations as per the instructions.
- For optimuim results change the sand on an annual basis.
  WINTERISING:So as not to damage the filter during the winter months,the following steps must be followde:
  - Carry out backwash and rinse operations following the instructions in manual
  - Empty the filter of water.
  - Remove the filter lid to ensure ventilation of the unlt during this period of inactivity.
  - When the filter is to become operational once more, follow the instructions in RUNNING THE FILTER.