INSTALLATION & OPERATING INSTRUCTIONS

PACIFIC WATER TECHNOLOGY

CARBON FILTER MODELS:

WTWFN36

CLACK WS2H EI

50mm inlet/outlet

AUTOMATIC FILTER VALVE MANUAL FILTERS AND FILTERS WITH IN/OUT HEAD

GAC MEDIA

Activated carbon is commonly used to adsorb natural organic compounds, taste and odour compounds, and synthetic organic chemicals in drinking water and waste water treatment.

PACIFIC WATER TECHNOLOGY

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1300 CLEANWATER

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INSTALLATION RECORD

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Please complete the following as a record of purchase for warranty and service purposes.

FILTER MODEL : **WTWFN36**

SERIAL NO. : .....

PURCHASED FROM :.....

DATE PURCHASED : .....

DATE INSTALLED : .....

INSTALLED BY :.....

HOW DOES YOUR FILTER WORK?

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Congratulations on the purchase of your new GAC Filter.
Please take the time to read the following. It will familiarise you with the design principals and workings of your new filter

Introduction

Activated carbon can be made from a wide range of source materials such as coal, coconut shells and wood. The material is often charred to achieve carbon, followed by chemical activation or activation by high temperature steam. This produces an activated carbon with an extensive network of pores and an extremely high surface area (typical range is 300 to 2000 m2/g). The pores provide sites for the adsorption of chemical contaminants in gases or liquids.

Activation

Material such as wood, coconut shells or coal that is activated by steam is first carbonised to create charcoal. The carbonisation is performed at a temperature at approximately 550 degC in an oxygen free atmosphere. This process drives off all of the volatile organic compounds and leaves behind the carbon and the minerals (ash).
The steam activation of the charcoal is then carried out an even higher temperature (up to 1000 degC) in a steam atmosphere.

Acticarb BAC GA1000N - Key Information

Potable Water Filtration via BAC - pre-washed for removal of pH, ash & floaters.
Coal - Steam Activated
6 x 12 Mesh, 8 x 30 Mesh, 12 x 40 Mesh

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CAUTION !

The filter is not designed to remove microbiologically unsafe contaminants from the water supply.
If the water is for potable use it should be disinfected prior to use.

IMPORTANT. FAILURE TO COMPLY COULD VOID WARRANTY !

a. All plumbing must conform to Australian Standards guidelines and Local Council regulations.
b. For filters subjected to permanent hydrostatic pressure an integral non-testable backflow prevention device in accordance with AS3500.1 and complying with AS 2845.1 Clauses 3.6.3, 3.6.4, 7.3.1 and 7.3.3 should be fitted in the inlet line.
c. For filters subject to hydrostatic pressure in excess of 690 kPa a suitable pressure control device should be fitted in the influent line.
d. Where the hot water system is a mains pressure storage type, a cold water relief valve of suitable rating should be fitted (if not already installed), between the non-return valve and the cold water inlet of the hot water system.
e. For installations subject to excessive or prolonged water hammer, a water hammer arrestor should be fitted.

GENERAL SPECIFICATIONS

Minimum Operating Pressure	280 kPa
Maximum Operating Pressure	690 kPa
Minimum & Maximum Operating Temperature	5°C to 49°C

MODEL	DESCRIPTION	In/Out mm	Service. Flow lpm
WTWFN36	50mm Clack valve or IN/OUT Head, GAC media, underbed gravel and loading funnel	50/50	110.0

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LOCATE THE FILTER:

√ CHECKLIST

1. It is advisable to locate the filter in a protected environment. If the unit is to be installed outside, or in the open, a protective shelter or shed is recommended.
2. The distance between the filter and a drain should be as short as possible.
3. Location should be easily accessible and have adequate height clearance to facilitate servicing.
4. Hot water can severely damage the filter. If installing near a hot water service ensure a minimum of 2 metres of piping between the outlet of the filter and inlet of the heater to help avoid heat transfer. Ensure a non-return valve on the inlet of the hot water system is present and functional.
5. Do not install filter where it or its connections (including drain and overflow lines) will ever be subjected to ambient temperatures under 1°C or over 49°C.
6. Do not install filter near chemicals or chemical fumes.
7. The filter will require a standard 3 pin 240 volt 10 amp grounded power outlet.
8.

MEDIA LOADING & FILTER ASSEMBLY:

1. Position the filter tank in the selected location.
2. Place the distributor tube and basket assembly in the media tank. Ensure riser is sitting in recess in bottom of tank. The top of the distributor tube should be level with the top of the filter tank.
3. Cover or plug the top of the distributor tube with a rag or bag to stop the media entering the tube.
4. The amount of Calcite media and underbed gravel required is as per below.
   Check you have the correct quantities. While holding the distributor tube central to the neck of the tank, and exerting slight downward pressure to stop the tube from moving, pour in the underbed gravel. #5 followed by #6.

UNDERBED COARSE #5 (kgs)	UNDERBED FINE #6 (kgs)	GAC (L)
160.0	80.0	700.0 *

Comment: * for non- back washable filters where minimal void space is required.

5. Holding the distributor tube central to the neck of the tank and exerting slight downward pressure, shake the tank back and forth slightly to level out the gravel in the tank.
6. Pour in the carbon media.

7. Remove the rag or bag from the tube and clean the media from the tank threads and the top of the distributor tube.
8. Fill the tank with water to within approximately 150 mm from the top.

9. Smear silicon grease to the outside of the top of the distributor tube to approx. 50mm down from the top of the tube.
10. Place the automatic control valve/ or in/out head over the distributor tube and, exerting slight downward pressure, screw the Valve or head into the tank thread until the valve bottoms against the top lip of the tank.
CAUTION! - Hand tighten only.
11. Re-position the filter tank so that the control valve is facing in the correct direction(if applicable)

WATER LINE CONNECTION:

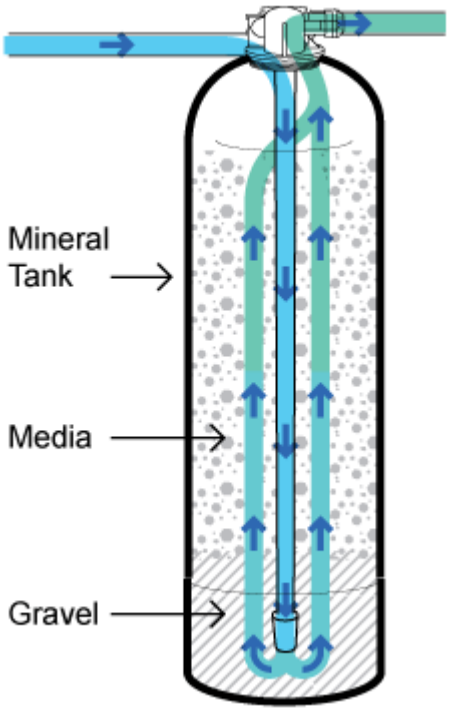
√ CHECKLIST

NO HARD WATER BYPASS VALVE (NHWBP)

OPTION:

_ a. If the 'NO HARD WATER BYPASS VALVE' option is supplied, connect it to the outlet of the bypass Valve.

_ b. Check the power is turned off, remove the filter valve cover and plug the NHWBP drive connection cable into the control board.



12. Fit the inlet

13. Connect the incoming and outgoing water lines to the inlet & outlet adaptors. Looking front-on at the control valve the inlet is at the back of the valve on the right hand side and the outlet at the back of the valve on the left hand side. Flow direction arrows are moulded on the valve barrels to show the correct flow direction.

For manual valves the option is to either have up-flow or downflow during filtration . For conventional downflow just follow the flow directions marked on the in/out head.

Example of carbon up-flow filter

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36” Carbon Filter with in/out head
These filters can be filled to about 80% from the top
As no void space is required for backwash. The filter
Has a 4” closure which may reduce down to 2.5”

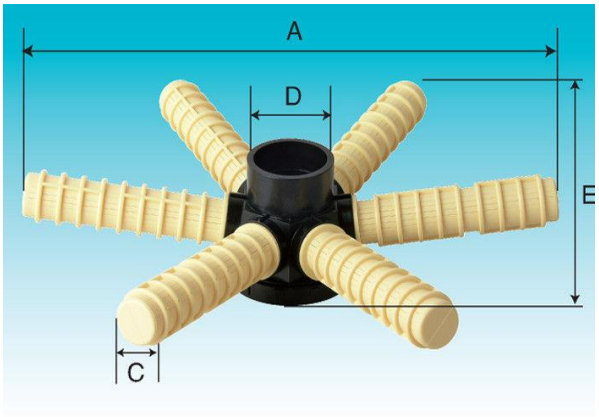


Image above of laterals inside vessel

√ CHECKLIST

DRAIN LINE CONNECTION:

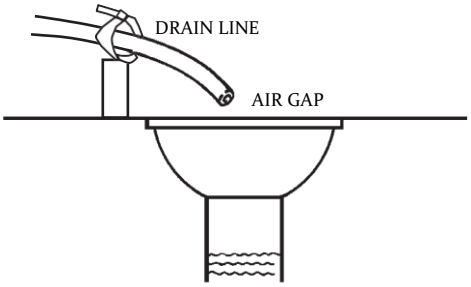
_ 1. If ideally located, the filter will be above, and not more than 6 metres, from the drain. Connect 12mm (1/2") tubing, hose or piping (not supplied) from the valve drain fitting to the drain. The valve drain outlet is located at the back of the valve between the inlet and outlet fittings.

_ 2. If the filter is located where the drain lines must be elevated, you may elevate the lines up to 2 metres providing the run does not exceed 5 metres and the water pressure at the filter is not less than 280kpa. You can elevate an additional 610mm for each additional 70kpa pressure.

_ 3. Where the drain line is elevated but empties into a drain below the level of the control valve, form a 180mm loop at the far end of the line so that the bottom of the loop is level with the valve drain line connection. This will provide an adequate siphon trap.

_ 4. Where a drain empties into an overhead sewer line, a sink-type trap must be used.

CAUTION ! - Never connect the drain line direct into a drain, sewer line or trap. Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being back-siphoned into the filter



_ 5. After installation is completed, turn on the supply water to check for leaks

_ 6. Fully open a cold water faucet downstream of the system

_ 7. Allow water to run until clear

_ 8. Close the cold water faucet

_ 9. Turn off the water supply

The system is now ready for start-up.

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SYSTEM START-UP
Only for automated systems

The final steps before putting the filter into service:

- Set the actual time of day into the control valve

- Backwash the filter

Setting Time of Day

Push NEXT until time of day screen is displayed. Press and hold ▲ or ▼ until the SET indicator is displayed, and the hour flashes. Press ▲ or ▼ until the correct hour is displayed.

Then press NEXT. The minutes will flash. Press ▲ or ▼ until the correct minute is displayed.

Press NEXT to return to the Display Screens. Time of day should only need to be set after power outages lasting more than 8 hours, if the battery has been depleted and a power outage occurs, or when daylight saving time begins or ends. If a power outage lasting more than 8 hours occurs, the time of day will flash on and off which indicates the time of day should be reset. If a power outage lasts less than 8 hours and the time of day flashes on and off, the time of day should be reset and the battery replaced.

Backwash the Filter

_ 1. Press and hold the REGEN button for three seconds until the drive motor starts. Press the REGEN button to advance the unit to the backwash cycle. Wait until the motor stops and the backwash time begins to count down.

_ 2. Open the inlet water supply valve very slowly allowing water to fill the tank in order to expel air. CAUTION: If water flows too rapidly, there will be a loss of media out of the drain.

_ 3. When the water is flowing steadily to the drain without the presence of air, fully open the water supply inlet valve.

_ 4. Press the REGEN button again to advance to the rinse position and allow water to run to drain for 2 - 3 minutes or until the drain runs clear.

_ 5. Press the REGEN button to advance to the service position.

INSTALLATION COMPLETE. THE FILTER IS NOW IN SERVICE.