

TRIMLINE CARTRIDGE FILTERS

Installation and Operating Manual



WARNING

This equipment must be installed and serviced by a qualified technician. Improper installation can create electrical hazards which could result in property damage, serious injury or death. Improper installation will void the warranty.



Notice to Installer

This manual contains important information about the installation, operation and safe use of this product. Once the product has been installed **this manual must be given to the owner/ operator of this equipment.**

DESCRIPTION

The Trimline Cartridge Filter (TCF) series has been designed for residential, commercial and light industrial applications. TCF series provide compact and economical filtration.

Trimline Cartridge Filter

- Pleated Polyester Cartridges
- Media Cartridges

HOUSING SPECIFICATIONS	
Max. Pressure	TCF 600kPa (87psi).
Max. Temperature	40°C (104°F)
Material	Polypropylene
Seals	Buna-n
Flow rates	Max. flow rates Vs Pressure drop is determined by cartridge selection. Please contact Waterco.

WATER FILTRATION

TCF - sediment cartridge

Liquid enters the housing through the bottom inlet port and flows through the pleated cartridge from the exterior to the interior. Particulates are retained on the outer surface of the pleated cartridge and clean liquid exits the housing at the base.

TCF - media cartridge

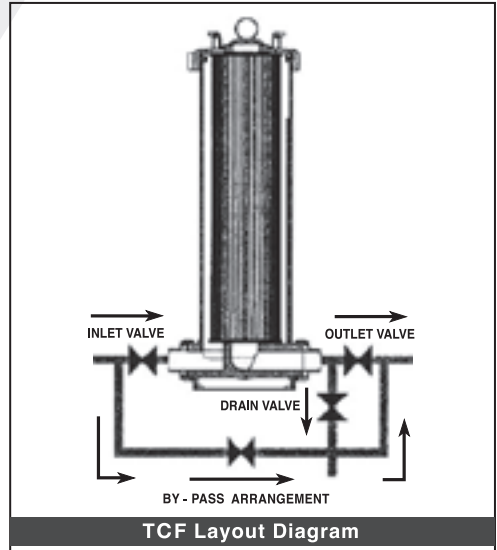
Liquid enters the housing through the bottom inlet port and through the top of the media cartridge. The liquid then makes its way through the entire bed of the media till it reaches bottom outlet.

NOTE: A sediment filter removes dirt, debris and suspended solids, it does not sanitise the water.

POSITIONING

- The filter unit should sit on level concrete surface or a precast concrete slab of suitable strength.
- The filter unit should be located near a drain, to minimise piping for waste.
- Position the filter away from direct sunlight.
- Be sure to comply with the local plumbing codes. The filter may be plumbed into a drinking water system and would, therefore be subject to whichever local regulations may apply.
- Be sure that all provisions for wastewater disposal meet local, state or national codes. Do not discharge water where it will cause flooding or damage.

- Take special care with the waste line. If there is not an adequate air gap between the waste pipe outlet and the drain into which it discharges, a siphon may develop that will draw some of the drain waste back into the water filter. This may result in undesirable “cross connection” between a safe and an unsafe water supply.
- If the incoming water pressure is higher than the maximum pressure rating, a pressure regulating valve (PRV) needs to be incorporated upstream to the filter inlet. The PRV should be at least 20mm (3/4” dia.).



Piping

- To minimise pressure loss through the filter, all incoming connecting pipe work should be 40mm (1 1/2” dia.) PVC Class E.
- For best efficiency, use the fewest possible fittings. This prevents a restriction in the water flow.
- A by-pass piping arrangement should be incorporated, which allows the entire filter unit to be easily isolated for servicing and maintenance, while ensuring continuous water supply.
- Filter connections are provided with an O-rings seal. To avoid damage to the O-rings, use only a silicone base lubricant on the O-rings.
- Keep piping tight and free of leaks.

FILTER ELEMENT CHANGES

- 1) Turn off and lock out the pump, (if installed). If a By-Pass Valve is fitted, the pump is not required to be turned off.

- 2) Close the Inlet and Outlet Valve (not supplied with the unit). Open By-Pass Valve, if fitted.
- 3) Open the Air Relief Valve on the lid to release all air pressure from inside the tank and system.
- 4) Open the Drain Valve to empty the water in the filter.
- 5) Once the filter is drained close the Drain Valve.
- 6) Remove the lid manually by turning counter clockwise.
- 7) Remove filter cartridge, insert new filter cartridge.
- 8) When assembling the lid, check the O-ring for cracks or tears. Replace if necessary.
- 9) Thread the lid and tighten the pipe joints at various ports. Hand tighten only.
- 10) Start the pump (if installed) and slowly open the Inlet Valve, fill the housing until water flows from the Air Relief Valve (on lid). If by-pass is fitted, close the By-Pass Valve and slowly open the Inlet Valve, fill the housing until water flows from the Air Relief Valve.
- 11) Close Air Relief Valve.
- 12) Open the Outlet Valve.

WATERCO ORIFICE PLATE

Rinsing Instructions

- 1) Turn off and lock out the pump (if installed) and close the Inlet Valve.
- 2) Close the Outlet Valve, Drain Valve and By-Pass Valve (if fitted). Open the Air Relief Valve mounted on top of the lid.
- 3) Open the Inlet Valve and turn on pump (if installed) to allow water to flow through the unit and to waste. Close the Air Relief Valve as soon as air is totally expelled and water flows from the Air Relief Valve.
- 4) Check if the media is adequately rinsed by looking at the waste water flowing past the air gap and to the drain.
- 5) Once the waste water appears clear, close the Drain Valve and open the Outlet Valve.

CONDITIONS FOR CARTRIDGE REPLACEMENT

As filtration proceeds, the void areas in the medium become filled with debris filtered from the water. The pressure will start to rise and the flow of water will start diminishing. The filter will eventually become so clogged with debris that it will be necessary to either clean or dispose of the filter medium.

Cartridge replacement is determined by the following conditions : -

- The pressure drop increases.
- The flow rate decreases until it is insufficient to meet the demand.
- The removal efficiency decreases to the point where the effluent quality deteriorates and is no longer acceptable.

CONDITIONS FOR CARBON AND SOFTENING RESIN REPLACEMENT

Water Usage

To estimate the life of a filter media or resin requires information on feed water quality and the volume of water. For a residential application, water usage can be determined by the water meter or for a residential application, or by the following calculation : -

A safe assumption can be made that each person will use approximately 125 litres of water per day. An automatic washing machine and/ or dishwasher each count as an additional user.

For Example :

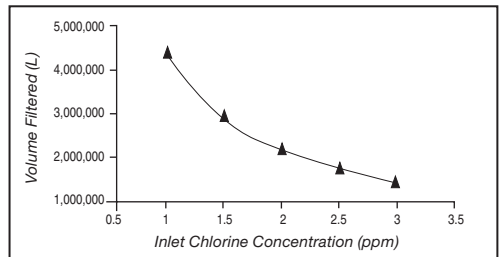
A family of five with a dishwasher and washing machine will use approximately 7 x 125 litres of water per day - total 875 litres. 875 litres per day x 7 day = 6,125 litres per week.

For feed water quality determination either contact the local water authority or a feed water analysis is required.

Carbon

As activated carbon adsorbs taste/ odour and chlorine and some organic material. The carbon will eventually be exhausted and require replacement.

Chlorine Concentration Vs Cartridge Capacity



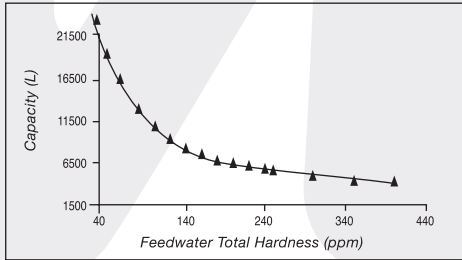
Cartridge capacity may vary dependant on water analysis.

NOTE: Commandomatic recommends maximum flow rate of 30ℓ/ min.

Softening Resin

As the softening resin exchanges safe ions for calcium and magnesium. The resin will eventually be exhausted and require replacement.

Feedwater Total Hardness Vs Cartridge Capacity



Cartridge capacity may vary dependant on water analysis

NOTE: Commandomatic recommends maximum flow rate rate of 10ℓ/ min.

NOTE: It is advisable in areas where water quality is poor, to install a sediment filter before the media filter.

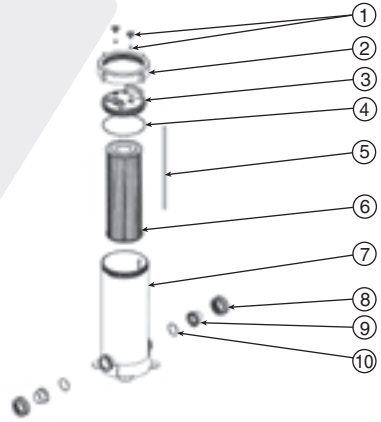
WATERCO ORIFICE PLATE

As the Waterco media cartridges are designed for a maximum flow rate, Waterco highly advises the installation of Waterco Orifice Plates for carbon and ion exchange applications to ensure optimum performance. For more information please consult Waterco.

Other Products

Commandomatic Automated Domestic Water Softeners and Filters Commandomatic Industrial Automated Filtration Plants Waterco Multi Media Fibreglass Vessels Waterco Hydrostorm, Supatuf and Aqualstream Centrifugal Pumps.

TCF SPARE PART LISTS



ITEM	QTY	NAME	PART/ DRG NO.	DESC
1	2	Air Relief Valve With O-ring	620221	-
2	1	TCF Lock Ring	62024BLK	-
3	1	Lid	620281-0501	-
4	1	O-ring	62026	-
5	1	Air Bleed	W02547	C25
	1		W02548	CC50
	1		W02549	C50 , CC75
	1		W02550	C75 , CC100
6	1	Cartridge Element	62040	C25
	1		62042	C50
	1		62044	C75
	1		62048	CC50
	1		62049	CC75
	1		62050	CC100
7	1	Body	W02541PEW	C25
	1		W02542PEW	CC50
	1		W02543PEW	C50 , CC75
	1		W02544PEW	C75 , CC100
	1		W02541S	C25
	1		W02542S	CC50
	1		W02543S	C50 , CC75
	1		W02544S	C75 , CC100
8	2	O-ring	W02280	-
9	2	Tail End	W2648BLK	50 X 40
10	2	Lock Nut	W02647BLK	-

OFFICES - AUSTRALIA

NSW - SYDNEY
(HEAD OFFICE)
Tel: +61 2 9898 8600

QLD - BRISBANE
Tel: +61 7 3299 9900

VIC/TAS - MELBOURNE
Tel: +61 3 9764 1211

WA - PERTH
Tel: +61 8 9273 1900

SA/NT - ADELAIDE
Tel: +61 8 8244 6000

ACT DISTRIBUTION
Tel: +61 2 6280 6476

OFFICES - OVERSEAS

WATERCO (EUROPE) LIMITED
Sittingbourne, Kent, UK
Tel: +44 (0) 1795 521 733

WATERCO FRANCE
Saint Priest, France
Tel: +33 4 72 79 33 30

WATERCO (USA) INC
Augusta, Georgia, USA
Tel: +1 706 793 7291

WATERCO CANADA
Longueuil, Quebec, Canada
Tel: +1 450 748 1421

WATERCO (NZ) LIMITED
Auckland, New Zealand
Tel: +64 9 525 7570

WATERCO © LIMITED
Guangzhou, China
Tel: +86 20 3222 2180

WATERCO (FAR EAST) SDN BHD
Selangor, Malaysia
Tel: +60 3 6145 6000

PT WATERCO INDONESIA
Jakarta, Indonesia
Tel: +62 21 4585 1481

WATERCO SINGAPORE INTL PTE LTD
Nehsons Building, Singapore
Tel: +65 6344 2378

WATERCO

Waterco Limited ABN 62 002 070 733

