



Iron & Manganese

Removal Filters

Purion

Product Guide

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Iron Removal Filters - Clack Valves

Removal of iron, manganese & hydrogen sulphide



Residential & Light Commercial

AUTOMATIC RESIDENTIAL & LIGHT COMMERCIAL FILTERS FOR POTABLE & PROCESS WATERS FEATURING DMI65 MEDIA USING CHLORINE OXIDATION & CLACK CONTROL VALVES

THE PROCESS

Soluble iron and manganese are oxidised by chlorine and precipitated out of solution. Hydrogen Sulphide is oxidised to a sulphur precipitate. The filter media is oxidised by dosing a liquid chlorine solution prior to the filter by means of a peristaltic dosing pump. The dosing pump is activated either by a flow switch that starts the pump when flow is detected or it can be wired directly to the water supply pump pressure switch or control box. The precipitates are trapped in the filter bed and removed by backwashing the filter.

FRP Filter Tanks



Fibre Reinforced Plastic (FRP) Filter Vessels are used to hold the filtration media.

Dosing Pump



A dosing pump draws a measured amount of liquid into its chamber and injects the chemical into a tank or pipe that contains the fluid that is being dosed.

NHWP Valve



NHWP valves prevent untreated water going to service during backwash. Supplied with models with NHWP suffix.

Pressure Switch Assembly



Assembly for pressure differential backwashing.

Clack WS1.5 Valve



AUTOMATIC CONTROL

Features a water meter with microprocessor. A volume of water is calculated based on the filter size and the iron, manganese & hydrogen sulphide loading, and entered into the microprocessor. The water meter and microprocessor monitor the water flow and initiate a backwash when the pre-set volume of water has been attained.

MODELS	DESCRIPTION	¹ Max. flow lpm	Backwash flow lpm	In/Out/Drain (mm)	² Install area w x d x h (cm)
WTWFDMI12-NHWP	12" x 52" tank, DMI65 media, filter valve, control & cover, bypass valve, Stenner peristaltic dosing pump & flowswitch	30.0	36.0	25/25/20	57 x 55 x 155
WTWFDMI14-NHWP	14" x 65" tank, DMI65 media, filter valve, control & cover, bypass valve, Stenner peristaltic dosing pump & flowswitch	49.0	49.0	25/25/20	63 x 56 x 180

¹ Guide only. Lower flow rates may be required for high iron water. ² If possible allow additional 500mm minimum height clearance to facilitate servicing. Minimum recommended backwash pressure 280 kpa. Max. inlet pressure 600 kpa with no water hammer. For open discharge e.g. tank filling, use NHWP model to provide back-pressure when filter is backwashing.

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Iron Removal Filters - Clack Valves

Removal of iron, manganese & hydrogen sulphide



C&I Series - 1.5" Clack Valves

COMMERCIAL & INDUSTRIAL FILTERS FOR POTABLE & PROCESS WATERS. FEATURING DMI65 MEDIA USING CHLORINE OXIDATION

THE PROCESS

Soluble iron and manganese are oxidised by chlorine and precipitated out of solution. Hydrogen Sulphide is oxidised to a sulphur precipitate. The filter media is oxidised by dosing a liquid chlorine solution prior to the filter by means of a peristaltic dosing pump. The dosing pump is activated either by a flow switch that starts the pump when flow is detected or it can be wired directly to the water supply pump pressure switch or control box. The precipitates are trapped in the filter bed and removed by backwashing the filter.

VALVE, CONTROL & CONFIGURATION OPTIONS:

Single or multiple filter configurations • Top-mount programmable 4-cycle automatic filter valves • Timer, water meter, pressure differential or external signal backwash initiation • Single, alternating or twin metered controls - sequential or parallel controls for multiple filters • Free-standing FRP fibreglass wrapped polyethylene filter tanks • No Hard Water Bypass (NHWB) valve option to prevent unfiltered water to service during backwash cycles • Motorised alternating valve (MAV) option for clean water backwashing.

FRP Filter Tanks



Fibre Reinforced Plastic (FRP) Filter Vessels are used to hold the filtration media.

Clack WS1.5 Valve



Automatic Control featuring water meter with microprocessor.

Dosing Pump



A dosing pump draws a measured amount of liquid into its chamber and injects the chemical into a tank or pipe that contains the fluid that is being dosed.

Pressure Switch Assembly



Assembly for pressure differential backwashing.



OPTIONAL

Motorised Alternating Valve (MAV) option for clean water backwash or twin alternating filter configuration.



Hard Water Bypass Valve (NHWB) to prevent unfiltered water to service during backwash.

FILTER MODEL	¹ Filter Tank (DxH) inches	In/Out mm	² Service Flow lpm	Backwash Flow lpm	² Install area w x d x h (cm)
WTWFDMI16-NHWB	16 x 65	40	26.5	67.0	46 x 51 x 270
WTWFDMI21-NHWB	21 x 62	40	42.0	102.0	58 x 64 x 262
WTWFDMI24-NHWB	24 x 72	40	60.0	138.0	66 x 72 x 287

¹Tank dimensions only. ² Flow rates are a guide only. Filtration efficiency is dependent on raw water quality and flow rate. ² Height includes 1.0 metre clearance above filter to facilitate installation and servicing. Minimum recommended backwash pressure 420 kpa. Maximum inlet pressure 600 kpa with no water hammer. For open discharge (e.g. tank filling), use NHWBP option to provide back-pressure when filter is backwashing.

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Iron Removal Filters - Clack Valves

Removal of iron, manganese & hydrogen sulphides



C&I Series - 2" Clack Valves

COMMERCIAL & INDUSTRIAL FILTERS FOR POTABLE & PROCESS WATERS. FEATURING DMI65 MEDIA USING CHLORINE OXIDATION

THE PROCESS

Soluble iron and manganese are oxidised by chlorine and precipitated out of solution. Hydrogen Sulphide is oxidised to a sulphur precipitate. The filter media is oxidised by dosing a liquid chlorine solution prior to the filter by means of a peristaltic dosing pump. The dosing pump is activated either by a flow switch that starts the pump when flow is detected or wire it directly to the water supply pump pressure switch or control box. The precipitates are trapped in the filter bed and removed by backwashing.

VALVE, CONTROL & CONFIGURATION OPTIONS:

Single or multiple filter configurations • Top-mount programmable 4-cycle automatic filter valves • Timer, water meter, pressure differential or external signal backwash initiation • Single, alternating or twin metered controls - sequential or parallel controls for multiple filters • Free-standing FRP fibreglass wrapped polyethylene filter tanks • No Hard Water Bypass (NHWB) valve option to prevent unfiltered water to service during backwash cycles • Motorised alternating valve (MAV) option for clean water backwashing.

FRP Filter Tanks



Fibre Reinforced Plastic (FRP) Filter Vessels are used to hold the filtration media.

Clack WS2 Valve



Automatic Control featuring water meter with microprocessor.

Clack WS2H Valve



Automatic Control featuring water meter with microprocessor.

Dosing Pump



A dosing pump draws a measured amount of liquid into its chamber and injects the chemical into a tank or pipe that contains the fluid that is being dosed.

Pressure Switch



Pressure Switch Assembly for pressure differential backwashing.



OPTIONAL

Motorised Alternating Valve (MAV) option for clean water backwash or twin alternating filter configuration.



Hard Water Bypass Valve (NHWB) to prevent unfiltered water to service during backwash.

FILTER MODEL	¹ Filter Tank (DxH) inches	In/Out mm	² Service Flow lpm	Backwash Flow lpm	² Install area w x d x h (cm)
WTWFDMI30-NHWB	30 x 72	50	95.0	216.0	81 x 86 x 295
WTWFDMI36-NHWB	36 x 72	50	135.0	323.0	97 x 102 x 295

¹Tank dimensions only. ² Flow rates are a guide only. Filtration efficiency is dependent on raw water quality and flow rate. ² Height includes 1.0 metre clearance above filter to facilitate installation and servicing. Minimum recommended backwash pressure 420 kpa. Maximum inlet pressure 600 kpa with no water hammer. For open discharge (e.g. tank filling), use NHWBP option to provide back-pressure when filter is backwashing.

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Iron Removal Filters - Clack Valves

Removal of iron, manganese & hydrogen sulphides



C&I Series - 3" Clack Valves

COMMERCIAL & INDUSTRIAL FILTERS FOR POTABLE & PROCESS WATERS. FEATURING DMI65 MEDIA USING CHLORINE OXIDATION

THE PROCESS

Soluble iron and manganese are oxidised by chlorine and precipitated out of solution. Hydrogen Sulphide is oxidised to a sulphur precipitate. The filter media is oxidised by dosing a liquid chlorine solution prior to the filter by means of a peristaltic dosing pump. The dosing pump is activated either by a flow switch that starts the pump when flow is detected or wire it directly to the water supply pump pressure switch or control box. The precipitates are trapped in the filter bed and removed by backwashing.

VALVE, CONTROL & CONFIGURATION OPTIONS:

Single or multiple filter configurations • Top-mount programmable 4-cycle automatic filter valves • Timer, water meter, pressure differential or external signal backwash initiation • Single, alternating or twin metered controls - sequential or parallel controls for multiple filters • Free-standing FRP fibreglass wrapped polyethylene filter tanks • No Hard Water Bypass (NHWB) valve option to prevent unfiltered water to service during backwash cycles • Motorised alternating valve (MAV) option for clean water backwashing.

FRP Filter Tanks



Fibre Reinforced Plastic (FRP) Filter Vessels are used to hold the filtration media.

Clack WS3 Valve



WS3 Valve Options:

Single, Dual, Triple or Quad Filters • Top-mount or Side-mount Valve • Time clock Backwash • Pressure Differential Backwash • Water Meter Backwash • Filtered Water Backwash • No Unfiltered Water Bypass

Dosing Pump



A dosing pump draws a measured amount of liquid into its chamber and injects the chemical into a tank or pipe that contains the fluid that is being dosed.

Pressure Switch



Pressure Switch Assembly for pressure differential backwashing.



Optional No Hard Water Bypass Valve (NHWB) to prevent unfiltered water to service during backwash.



OPTIONAL

Optional Motorised Alternating Valve (MAV) for clean water backwash.

FILTER MODEL	¹ Filter Tank (DxH) inches	Valve Model	In/Out mm	² Service Flow lpm	Backwash Flow lpm	² Install area w x d x h (cm)
WTWFDMI42-NHWB	42 x 72	WS3	80	185.0	435.0	115 x 127 x 350
WTWFDMI48-NHWB	48 x 72	WS3	80	240.0	565.0	130 x 142 x 350

¹Tank dimensions only. ² Flow rates are a guide only. Filtration efficiency is dependent on raw water quality and flow rate. ² Height includes 1.0 metre clearance above filter to facilitate installation and servicing. Minimum recommended backwash pressure 420 kpa. Maximum inlet pressure 600 kpa with no water hammer. For open discharge (e.g. tank filling), use NHWB option to provide back-pressure when filter is backwashing.

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