

# Clean and clear water for the home.

Reliable water filter products for problem water.

RESIDENTIAL  
WATER FILTERS



**Hydrotech**®   
Your clear choice in water treatment.

## All Hydrotech's residential water filters include the following features:

- Durable filament wound mineral tanks consisting of a rotationally molded polyethylene liner and a high strength epoxy/fiberglass outer shell. Tanks are corrosion resistant and are tested and certified by WQA.

Our products are backed by a solid guarantee including:

- Control valves are covered by a five year parts warranty.
- Mineral tanks are covered by a ten year warranty.

## Iron and Sulfur Filters

Iron, manganese and sulfur are oxidized and removed from your water, protecting your plumbing and eliminating ugly staining and unpleasant tastes and odors.

### How the System Works

The system consists of three major components: a backwashable filter containing oxygen charged manganese greensand, a chemical feeder which delivers an accurately measured volume of potassium permanganate solution for each regeneration and either a calendar clock or meter initiated control valve which governs the operation of the system.

As water passes through the filter bed, it comes in contact with the oxygen charged media. This causes iron, manganese and sulfur to oxidize. The undesirable compounds are then trapped in the filter bed. Eventually the oxygen in the filter becomes depleted and regeneration is necessary.

Regeneration takes place during the night while you sleep. First, backwashing cleans the filter bed, then concentrated potassium permanganate solution is passed through it, recharging the bed with oxygen. Two rapid rinses remove any remaining potassium and a volume of water is returned to the feeder to dissolve enough potassium permanganate for the next regeneration. All functions are performed automatically.

### Automatic calendar clock

The standard model features a twelve day (5600 or 2510) calendar clock control valve which regenerates automatically at pre-set intervals according to your family's estimated water use.

### Money saving demand regeneration

The money saving control valve includes a metering system which meters your water use and regenerates only when needed. That can mean chemical and water savings of up to 50%.



### Features

- Five year warranty on 5600 and 2510 Noryl control valve with five cycle operation
- Adjustable cycles on the 2510 control increases operating efficiency by improving backwash effectiveness and by saving water
- Heavy duty mineral tanks with ten year warranty
- Strong, durable Noryl valve body with environmental enclosure on the 2510.
- Optional bypass valve for ease of installation and service
- Optional insulated tank jacket to reduce condensation
- NOTE: Potassium Permanganate sold separately



## Activated Carbon Filters

Unpleasant tastes and odors caused by chlorine or organic substances, such as decayed vegetation and run-off, are adsorbed by top quality activated carbon. The filter will automatically backwash to a predetermined schedule using a calendar clock controlled valve. This frees the bed of accumulated impurities and readies it for operation again.

### Features

- Five year warranty on 5600 and 2510 Noryl® control valves with two cycle operation
- Adjustable cycles on the 2510 control increase operating efficiency by improving backwash effectiveness and by saving water
- Heavy duty mineral tank with a ten year warranty
- Strong, durable Noryl valve body with environmental enclosure on 2510 control
- Optional bypass valve for ease of installation and service
- Optional insulated tank jacket to reduce condensation

## Neutralizing Filters

Neutralizing filters use a special media which raises the pH of acidic water and neutralizes its corrosive characteristics. In addition to protecting pipes, plumbing fixtures and appliances, this filter also facilitates the removal of iron and manganese by raising the pH. This enables an iron filter to be used. Periodic backwashing cleans the bed.

### Features:

- Electrical: 110V/60Hz standard (all valves)
- Superior fiberglass mineral tank
- Gravel underbedding
- Clock initiated
- Neutralizing Media

## Turbidity (Multi-Media) Filters

Our turbidity filters use multiple medias to trap suspended particulate matter, such as clay and silt, which gives water a cloudy appearance. The result is clean, clear water. The multi-media filter bed facilitates more thorough backwashing and prevents channeling. Periodic backwashing with our calendar clock control valves cleans the bed.

### Features:

- Electrical: 110V/60Hz standard (all valves)
- Superior fiberglass mineral tank
- Gravel underbedding
- Clock initiated
- Multi-Media Layered Media Bed

# 2510 Valve Chemical Free Iron Filters (A and AM Beds)



Once installed, the chemical free iron filter requires little or no attention. It automatically removes soluble iron, sometimes called ferrous iron or "clear water", precipitated iron, sometimes called ferric iron or "red water" and bacterial iron. It is safe and very economical because it requires none of the expensive or messy chemicals conventional iron filters use.



Hydrocharger

The chem-free iron filter features two major components, an air injector and a backwashable filter containing special media. In some applications a contact tank or an additional pressure tank may be required for the chem-free to function.

The air injector adds a controlled amount of air to the water supply just before it enters the pressure tank. The air starts the iron removal process as the water sits in the tank.

The water's pH is automatically raised to neutral or higher as it passes through the filter bed and a catalytic effect occurs between the iron and filter media. The iron changes into a colloidal state and is trapped throughout the filter bed. This produces an iron removal capacity four times greater than a conventional iron removal filter.

The chem-free filter media remains unchanged at the end of the oxidation process and consequently requires no chemical regeneration.

Periodic backwashing of the filter bed flushes the precipitated iron to the drain and readies the filter for use again. The duration and frequency of backwashing varies from 10 to 12 minutes every 4 to 12 days, depending on iron concentration and water usage.

## Neutralizes acidic water

The chemical free iron removal filter's patented process raises the pH of the water, improving the efficiency of iron removal. This has the added benefit of neutralizing acidic water.

## Features

- Minimal operating costs - requires no chemicals for regeneration
- Attention-free operation removes iron concentrations of up to 35 ppm
- Conserves water - requires only occasional backwashing using 10% of the water a conventional filter uses in regeneration
- Five year warranty on 2510 Noryl® control valve
- Heavy duty mineral tanks with 10 year warranty.
- Neutralizes acidic water
- Optional bypass valve
- Optional insulated tank jacket to reduce condensation.

### **"A" versus "AM" chemical free media beds**

*A Type Media Bed* - order for most applications where the raw water pH is above 7.0 and Manganese is negligible  
*AM Type Media Bed* - order these units where the raw water is below 7.0 and/or Manganese is up to 1.0 mg/L.

# 2510 Valve Chemical Free Iron Filters (Birm® Media)



Once installed, the chemical free iron filter requires little or no attention. It automatically removes soluble iron, sometimes called ferrous iron or "clear water", precipitated iron, sometimes called ferric iron or "red water" and bacterial iron. It is safe and very economical because it requires none of the expensive or messy chemicals conventional iron filters use.



Mazzei® Injector Assembly

The chem-free iron filter features two major components, an air injector and a backwashable filter containing Birm® media. In some applications a contact tank or an additional pressure tank may be required for the chem-free to function.

The air injector adds a controlled amount of air to the water supply just before it enters the pressure tank. The air starts the iron removal process as the water sits in the tank.

The iron changes into a colloidal state and as such it is trapped throughout the filter bed.

The chem-free filter media remains unchanged at the end of the oxidation process and consequently requires no chemical regeneration.

Periodic backwashing of the filter bed flushes the precipitated iron to the drain and readies the filter for use again. The duration and frequency of backwashing varies from 10 to 12 minutes every 4 to 12 days, depending on iron concentration and water usage.

## Features

- Minimal operating costs - requires no chemicals for regeneration
- Attention-free operation removes iron concentrations of up to 35 ppm
- Conserves water - requires only occasional backwashing using 10% of the water a conventional filter uses in regeneration
- Five year warranty on 2510 Noryl® control valve
- Heavy duty mineral tanks with 10 year warranty.
- Optional bypass valve
- Optional insulated tank jacket to reduce condensation.

## Iron & Sulfur Filters - Specifications & Performance

Model		Manganese Greensand Volume (cu.ft.)	Potassium Permanganate per Regen. (oz)	Iron Removal Capacity (ppm)	Service Flow Rate <sup>(1)</sup> (usgpm)	Backwash Flow Rate (usgpm)	Mineral Tank Size <sup>(3)</sup> (inches)	Installation Space WxDxH (inches)	Shipping Weight (lbs)
Calendar Clock	Metered								
5600CC-948IF-100	5600MI-948IF-100	1.00	4	6,000	4	4	9 x 48	21 x 11 x 58	135
5600CC-1047IF-100	5600MI-1047IF-100	1.00	4	6,000	5	5	10 x 47	22 x 12 x 57	145
2510CC-948IF-100	2510MI-948IF-100	1.00	4	6,000	4	4	9 x 48	21 x 11 x 58	135
2510CC-1047IF-100	2510MI-1047IF-100	1.00	4	6,000	5	5	10 x 47	22 x 12 x 57	145
2510CC-1054IF-150	2510MI-1054IF-150	1.50	6	9,000	8	7	10 x 54	22 x 12 x 64	180
2510CC-1252IF-200	2510MI-1252IF-200	2.00	8	12,000	10	10	12 x 52	34 x 14 x 62	207

## Taste and Odor Filter (Carbon) - Specifications & Performance

5600 Models Calendar Clock	2510 Models Calendar Clock	Filter Media Volume (cu.ft.)	Service Flow Rate <sup>(1)</sup> (usgpm)	Peak Flow Rate <sup>(2)</sup> (usgpm)	Backwash Flow Rate (usgpm)	Mineral Tank Size <sup>(3)</sup> (inches)	Installation Space W x D x H (inches)	Shipping Weight (lbs)
5600CC-948AC-100	2510CC-948AC-100	1.00	4	6	4	9 x 48	11 x 11 x 58	60
5600CC-1047AC-100	2510CC-1047AC-100	1.00	5	7	5	10 x 47	12 x 12 x 57	65
5600CC-1054AC-150	2510CC-1054AC-150	1.50	5	7	5	10 x 54	12 x 12 x 64	93
5600CC-1252AC-200	2510CC-1252AC-200	2.00	7	9	7	12 x 52	14 x 14 x 62	105

## Multi-Media Filter (Sediment) - Specifications & Performance

5600 Models Calendar Clock	2510 Models Calendar Clock	Filter Media Volume (cu.ft.)	Service Flow Rate <sup>(1)</sup> (usgpm)	Peak Flow Rate <sup>(2)</sup> (usgpm)	Backwash Flow Rate (usgpm)	Mineral Tank Size <sup>(3)</sup> (inches)	Installation Space W x D x H (inches)	Shipping Weight (lbs)
5600CC-948MM-100	2510CC-948MM-100	1.00	4	6	4	9 x 48	11 x 11 x 58	145
5600CC-1047MM-100	2510CC-1047MM-100	1.00	5	7	5	10 x 47	12 x 12 x 57	150
5600CC-1054MM-150	2510CC-1054MM-150	1.50	5	7	5	10 x 54	12 x 12 x 64	213
5600CC-1252MM-200	2510CC-1252MM-200	2.00	7	9	7	12 x 52	14 x 14 x 62	265

## Neutralizing Filter - Specifications & Performance

5600 Models Calendar Clock	2510 Models Calendar Clock	Filter Media Volume (cu.ft.)	Service Flow Rate <sup>(1)</sup> (usgpm)	Peak Flow Rate <sup>(2)</sup> (usgpm)	Backwash Flow Rate (usgpm)	Mineral Tank Size <sup>(3)</sup> (inches)	Installation Space W x D x H (inches)	Shipping Weight (lbs)
5600CC-948NE-100	2510CC-948NE-100	1.00	4	6	4	9 x 48	11 x 11 x 58	115
5600CC-1047NE-100	2510CC-1047NE-100	1.00	5	7	5	10 x 47	12 x 12 x 57	120
5600CC-1054NE-150	2510CC-1054NE-150	1.50	5	7	5	10 x 54	12 x 12 x 64	165
5600CC-1252NE-200	2510CC-1252NE-200	2.00	7	9	7	12 x 52	14 x 14 x 62	215

## Chemical Free Filters - Specifications & Performance (A and AM Beds)

2510 Models		Filter Media Volume (cu.ft.)	Iron Removal Capacity (ppm)	Service Flow Rate <sup>(1)</sup> (usgpm)	Peak Flow Rate (usgpm)	Backwash Flow Rate (usgpm)	Mineral Tank Size <sup>(3)</sup> (inches)	Installation Space WxDxH (inches)	Shipping Weight (lbs)
Calendar Clock "A" Beds	Calendar Clock "B" Beds								
2510CC-847CFA-75	2510CC-847CFAM-75	0.75	22,500	2	4	4	8 x 47	10 x 10 x 57	100
2510CC-1047CFA-100	2510CC-1047CFAM-100	1.00	30,000	3	6	5	10 x 47	12 x 12 x 57	145
2510CC-1252CFA-150	2510CC-1252CFAM-150	1.50	60,000	4	10	7	12 x 52	14 x 14 x 62	250
2510CC-1450CFA-200	2510CC-1450CFAM-200	2.00	90,000	5	15	10	14 x 50	16 x 16 x 60	365

## Chemical Free Filters - Specifications & Performance (Birm)

2510 Models Calendar Clock "B" Beds	Filter Media Volume (cu.ft.)	Iron Removal Capacity (ppm)	Service Flow Rate <sup>(1)</sup> (usgpm)	Peak Flow Rate <sup>(2)</sup> (usgpm)	Backwash Flow Rate (usgpm)	Mineral Tank Size <sup>(3)</sup> (inches)	Installation Space W x D x H (inches)	Shipping Weight (lbs)
2510CC-847CFB-75	0.75	22,500	2	4	3.5	8 x 47	10 x 10 x 57	70
2510CC-1047CFB-100	1.00	30,000	3	6	5	10 x 47	12 x 12 x 57	90
2510CC-1252CFB-150	1.50	45,000	4	8	7	12 x 52	14 x 14 x 62	118

**ADDITIONAL INFORMATION:** Operating Temperature Range = 34° to 110°F (1° to 43°C). Operating Pressure Range = 20 to 120 psi (1.37 to 8.27 bar). The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions shown above, without obligation to change previously manufactured products or to note the change.

**CAUTION:** These products are not intended to be used to treat water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

**NOTES:** <sup>(1)</sup> The Flow Rate given will not exceed a pressure drop of 15psi. <sup>(2)</sup> Peak flow rates are intended for intermittent use only (10 minutes or less). <sup>(3)</sup> Dimensions of cylindrical tanks shown are diameter (or width) x height.

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