

GS Plus Series With Chlorine Injection System

Media:
Greensand Plus -
Iron, Manganese &
Sulfur Odor Removal



Requirement:

This filter system is designed to follow a chemical injection system feeding chlorine or hydrogen peroxide.

"The GS Plus series uses one of the filtration industries most dependable and powerful oxidizers in the removal of iron and manganese from well water."

Problem Areas Being Treated:

- Iron (Red Stains)
- Manganese (Gray/Black Stains)
- Hydrogen Sulfide (Sulfur Odor)

The GS Plus series uses one of the filtration industries most dependable and powerful oxidizers in the removal of iron and manganese from well water. Greensand Plus is coated with manganese dioxide that acts as a catalyst in the oxidation-reduction reaction of iron, manganese and hydrogen sulfide. Greensand Plus is an oxygen rich mineral that oxidizes the iron and manganese into an insoluble particulate upon contact with influent water and then traps the particulate among its granular medium. The result is clean, non-staining water.

During filtration, the manganese coating can become covered with iron oxide removed from the ground water. To keep the bed in clean, working order, chlorine[†] is used as a regenerant. Continuous exhaustion of Greensand Plus without proper regeneration with chlorine will result in a non-working filter.

Specifications*				
Tank Size	Bed Size	Inlet/Outlet	Service Flow Range†	Minimum Required BW
10 X 54"	1.5 Cu. Ft.	1"	2.7 - 5 gpm	7 gpm
12 X 48"	2 Cu. Ft.	1"	4 - 7 gpm	10 gpm
13 X 54"	2.5 Cu. Ft.	1"	4.6 - 8 gpm	12 gpm
14 X 65"	3.0	1"	6 - 9 gpm	15 gpm

The GS Plus series filter works in a wider pH range (6.2 - 8.5) than a lot of other media filters. Raw waters with a pH lower than 6.2 should be pH-corrected to 6.5-6.8 before filtration.

The GS Plus series is an automatic backwashing system. Based on either time (Timer Valve) or amount of water used (Metered Valve) the filter backwashes on its own without any intervention, worry or maintenance by the homeowner. The time in which backwashing occurs is adjustable but usually is factory set at 2 am in the morning to avoid times of heavy water usage.

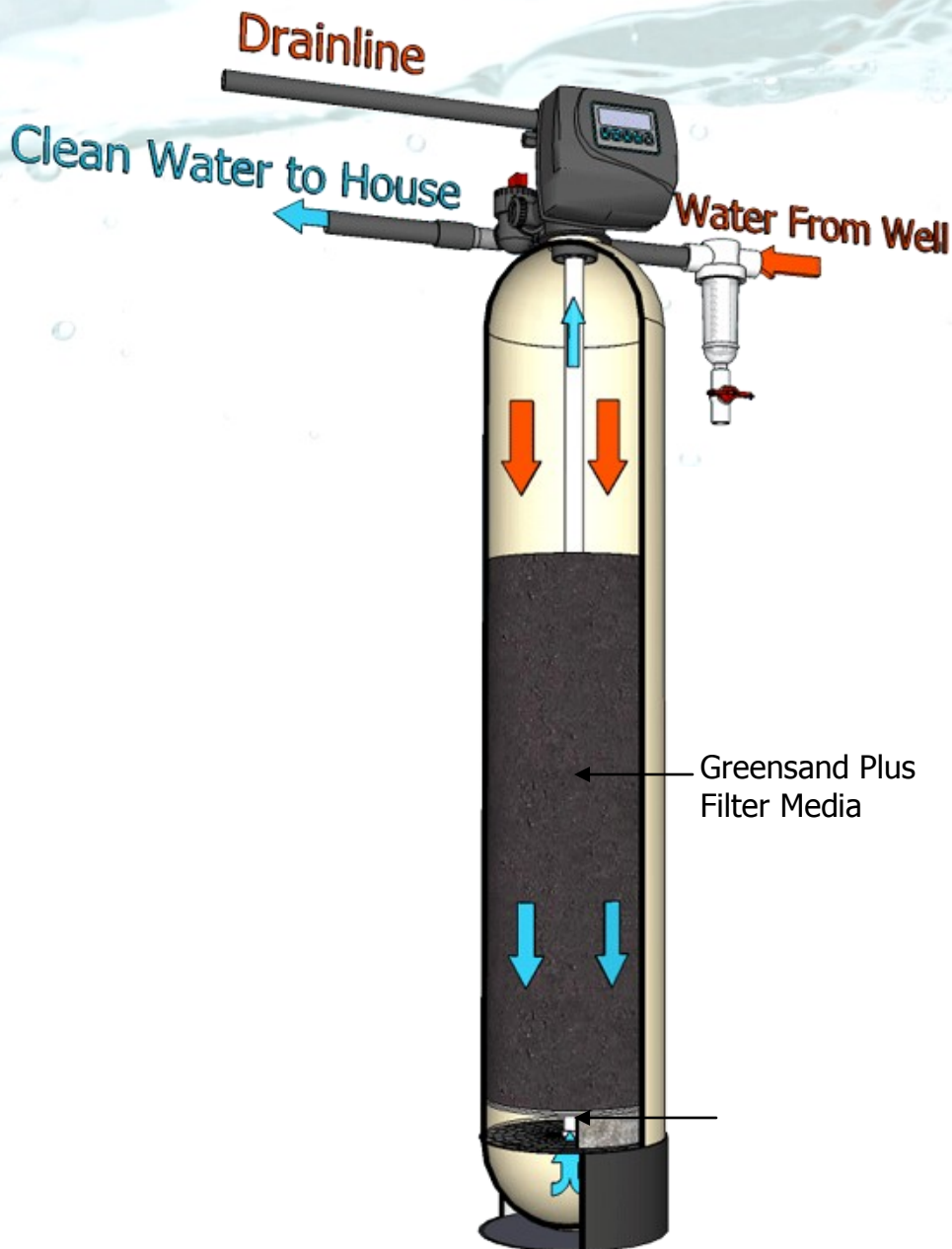
The Greensand Plus system paired with a chlorine (or hydrogen peroxide) feed pump system treats for higher levels of iron, manganese, iron bacteria and hydrogen sulfide. *See the attached information on the chemical feed system and Hydrogen Sulfide.*

The system includes:
High-impact Structural fiberglass tank, Fleck or Clack backwashing valve with bypass, distributor tube, garnet under-bed, and filtration media.

*These numbers indicate a continuous (service) flow rate -the amount of water the media can handle for extended periods. Filters also have a "peak" flow rate which are higher than the ones published above. These are flow rates the media can handle for short periods of time.



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This filter system will include a chemical injection system to assist with the treatment of iron, manganese, iron bacteria or hydrogen sulfide.



Our filters are assembled with American made Enpress Vortech tanks. These tanks use a distributor *plate* which requires 30% less water and allows for a more thorough backwash than a traditional distributor basket.



Above: This cutaway diagram shows the interior of the Greensand Plus filter. About 18" of free space is left between the top of the media bed and the top of the filter tank to allow the filter media to expand and roll during the backwash cycle.

The Stenner pump (Pictured above right) will inject a chlorine solution into the water line between the pump and the pressure tank. The filter will remove the oxidized iron and manganese precipitate. This setup treats for higher levels of iron, manganese, iron bacteria and hydrogen sulfide.

**Filter
Tech**