

Crusader Arsenic Reduction Filter

The Crusader Arsenic Reduction Filter is designed to reduce Arsenic from microbiologically safe water at flow rates up to 20 gpm.

Arsenic is generally colorless, tasteless, and odorless in water. Many groundwater supplies are contaminated with arsenic. In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic, or a combination of both. More information about arsenic and its toxicity can be found on the Agency for Toxic Substances and Disease Registry at <http://www.atsdr.cdc.gov/toxprofiles/phs2.html> and U.S. Environmental Protection Agency website at <http://www.epa.gov/safewater/arsenic.html>.

Media Tank

All filter models feature a non-corrosive fiberglass tank with a one-piece thermoplastic inner liner. The tank has a maximum working pressure of 90 psi and a working temperature up to 120°F. The tank is approved by NSF, UL, and the FDA. It also meets WQA Standard S-100.

Filtration Media - LayneRT (Hydrous Metal Oxide Sorbent)

Media used for arsenic removal is affected by a number of water parameters.

To provide a service life estimate, we require a full water analysis that must include arsenite (As(III)), arsenate (As(V)), pH, silica, phosphate, iron, and manganese.

Total Arsenic - Total arsenic concentration above 0.30 mg/L will reduce media life.

Arsenite As(III) - The arsenic removal media removes both As(III) and As(V) but has approximately four times the capacity for As(V) over As(III). If arsenite is present it is recommended to oxidize the water ahead of the arsenic removal media.

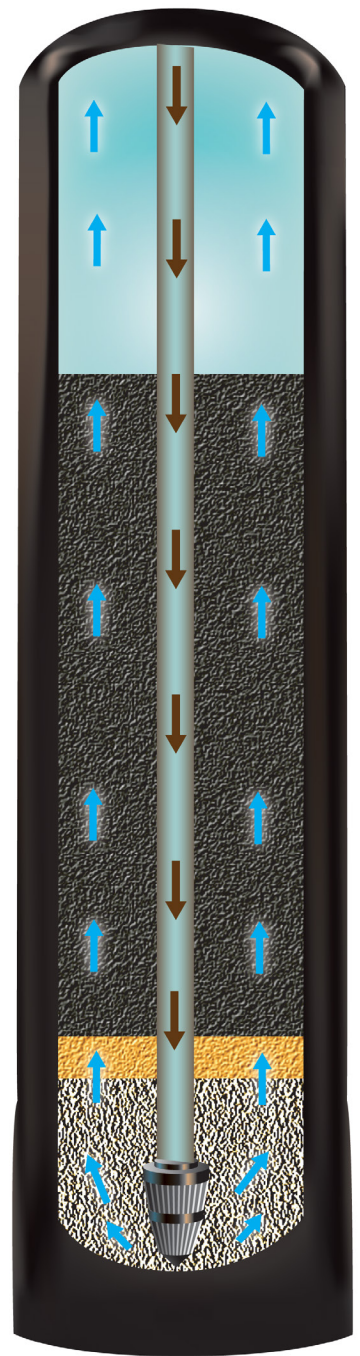
pH - Adsorption media operate most effectively between 5.5-8.5. The media will reduce arsenic outside of this range but the capacity may be compromised. At elevated pH, silica becomes a more aggressive interfering species. Note: Do not use organic acids (such as citric or acetic) to adjust the pH ahead of the media.

Silica - Levels above 20 mg/L begin to interfere with media arsenic adsorption when combined with a pH above 7.5.

Phosphate - Levels above 0.15 mg/L will reduce media life for arsenic adsorption.

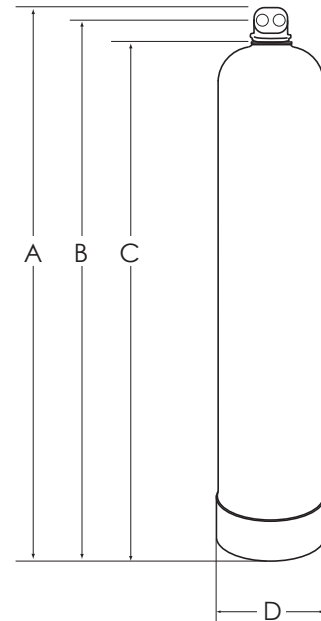
Iron and Manganese - Soluble iron and manganese may precipitate onto the media bed. If iron and manganese are above the secondary MCLs (0.30 mg/L and .050 mg/L respectively).

Hardness - Does not affect performance of the media.



Crusader Arsenic Reduction Filter

- NSF/ANSI Standard 61 Certified
- Proven Iron Chemistry
- No Fines
- No Backwash
- Centrally Regenerable Media
- Optimal Flow Dynamics
- Rapid Adsorption Kinetics
- Low Pressure Drop
- Spent Media Passes Toxicity Characteristic Leaching Procedure (TCLP)



This filtration system should only be installed after a comprehensive water test and engineering evaluation.

	CS-AS-1	CS-AS-2	CS-AS-3
Peak Flow Rate (gpm) @ 75 psi inlet, 25 psi drop	10	15	20
Service Flor Rate (gpm) @ 55 psi inlet, 15 psi drop	4	8	12
Operating pH Range	5.5 - 8.5	5.5 - 8.5	5.5 - 8.5
Maximum Influent Particle Size (micron)	20	20	20
Absolute Filtration Size (micron)	N/A	N/A	N/A
Maximum Influent Iron Level (ppm)	0.3	0.3	0.3
Maximum Influent Manganese Level (ppm)	0.05	0.05	0.05
Water Pressure Range (psi)	45 - 75	45 - 75	45 - 75
Maximum Inlet Pipe Size	1"	1"	1"
Dimension A - Overall System Height	57"	57"	68"
Dimension B - System Piping Height	56.09"	56.09"	67.09"
Dimension C - Pressure Vessel Height	54"	54"	65"
Dimension D - Pressure Vessel Diameter	10"	13"	14"
Shipping Weight (lbs)	70	88	105