

How HydroBlend Works

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HydroBlend is the trade name used for an NSF approved scale preventing / corrosion inhibiting compound.

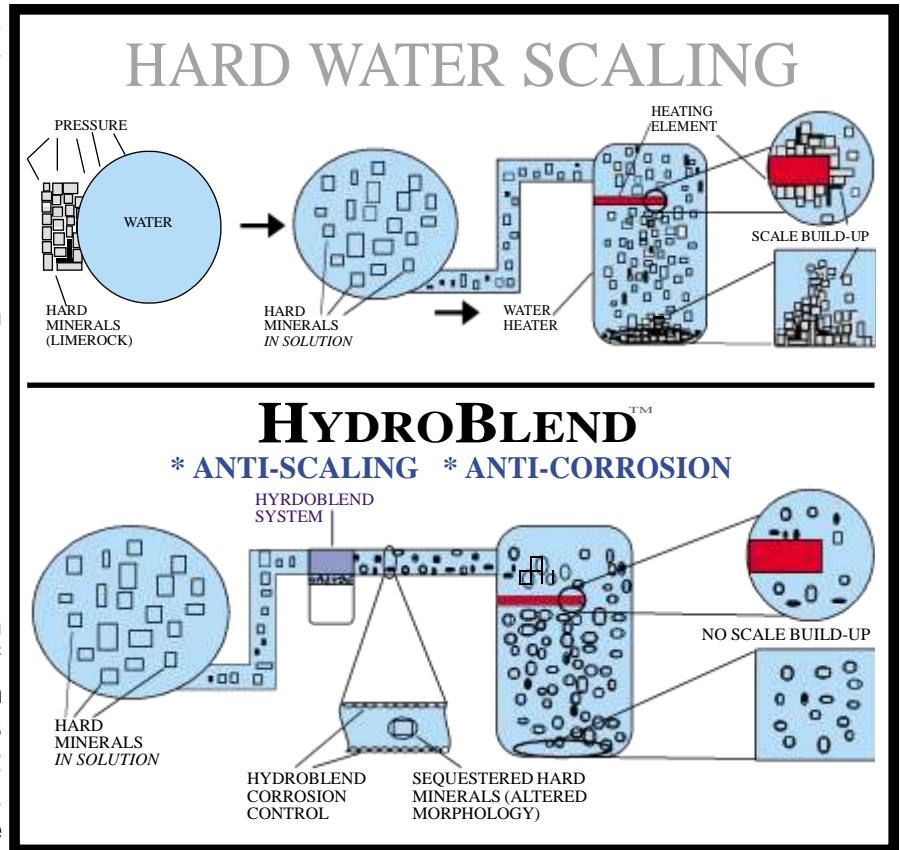
HydroBlend is listed by NSF under PHOS-HW, PHOS-CW, and PHOS-FE.

HydroBlend differs from standard polyphosphates (glassy or Siliphos) treatments in that it has shown to work in both high temperature (90°F-200°F) and high hardness (10+grains) applications.

HydroBlend works similar as standard polyphosphates but does so in high temp & high hardness applications.

- 1) HydroBlend sequesters scale-causing minerals keeping them in solution for longer periods of time. These minerals will remain in solution long enough to pass through the equipment without the ability to precipitate out as a hard tenacious scale deposit. The length of time HydroBlend can hold these minerals in solution depends on water temperature, hardness level, alkalinity level, TDS, and pressure. The higher hardness, temperature, alkalinity, and TDS, the shorter the period of time that HydroBlend will be able to keep these minerals in solution.
- 2) When HydroBlend is present in the water, it alters the morphology (shape) of the scale molecule. If the scale-causing minerals precipitate out of solution, they do not have the ability to build up on themselves to form hard scale deposits. This precipitate is more in the form of a fine powder and will either pass through the equipment and down the drain or collect at the bottom of the boiling chamber until the equipment is drained or blown down.
- 3) HydroBlend helps remove scale deposits by “softening” the existing scale, dissolving back into solution scale-causing molecules. This slow de-liming process may eventually remove all the scale deposits although this claim is not made. In some cases the existing scale deposits are not completely removed, but only partially removed depending on the water source.
- 4) HydroBlend combines with dissolved minerals and forms a micro-thin layer of corrosion protection on wetted parts. This layer of protection does not build up on itself.

A common question posed is if you have twice the hardness, does this mean that you must have twice the amount of HydroBlend to effectively treat the water? The answer is no. HydroBlend works on a “threshold effect”. This basically means that if a small amount of this product is present in the water supply, it interferes with the formation of the symmetrical crystalline molecules needed to form scale deposits. HydroBlend is a “threshold treatment” able to handle high hardness levels with relatively low amounts of product (1-4 ppm).



HydroBlend Systems

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HydroBlend is delivered into the water supply by way of a flow-thru media delivery head. This flow thru head has two small feed holes allowing water to enter the housing. Water comes in contact with the HydroBlend product and dissolves it forming a super-saturated solution that is slowly drawn into the water stream by way of a center feed hole. As the saturated solution is drawn from the housing into the water stream, more freshwater enters the housing, further dissolving more HydroBlend.

Unlike many polyphosphate feed systems, HydroBlend is not a true “erosion” system since erosion is more related to water passing through the media in order for it to dissolve.

HydroBlend is fed using the following methods:

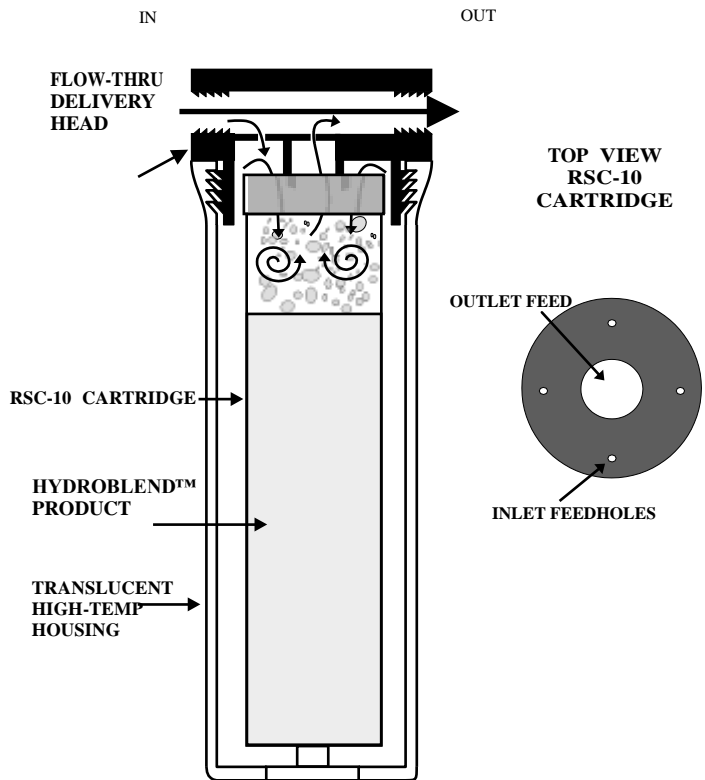
- 1) The flow-thru media deliver head. All HydroBlend units utilize this head (including the HBW), with the exception of the ScaleStick.

HydroBlend cartridges have been designed to maintain a constant surface area allowing for consistent feed rates over the life of the product. In the flow-thru feed head, two small feed holes of different sizes are drilled into the pass-thru tube allowing water to enter the housing as well as allowing saturated product to exit the housing into the water stream. It is typical for a new cartridge to feed more HydroBlend product in the beginning than in the end. This occurs since the super saturated solution is closer to the feedhole when the cartridge is new. The rate at which the cartridge feeds slows over its life.

This is beneficial since the initial feed of the product ensures adequate amounts of HydroBlend for the “cleaning stage” which helps remove existing scale deposits. The slower rate of feed during the later stages of the cartridge can be considered the “maintenance stage”. What is important is that the product will last and provide effective treatment for the desired period of time. The bottom line is that despite certain feed characteristics, the HydroBlend product is very effective in preventing scale deposits and providing corrosion control over the life of the cartridge.

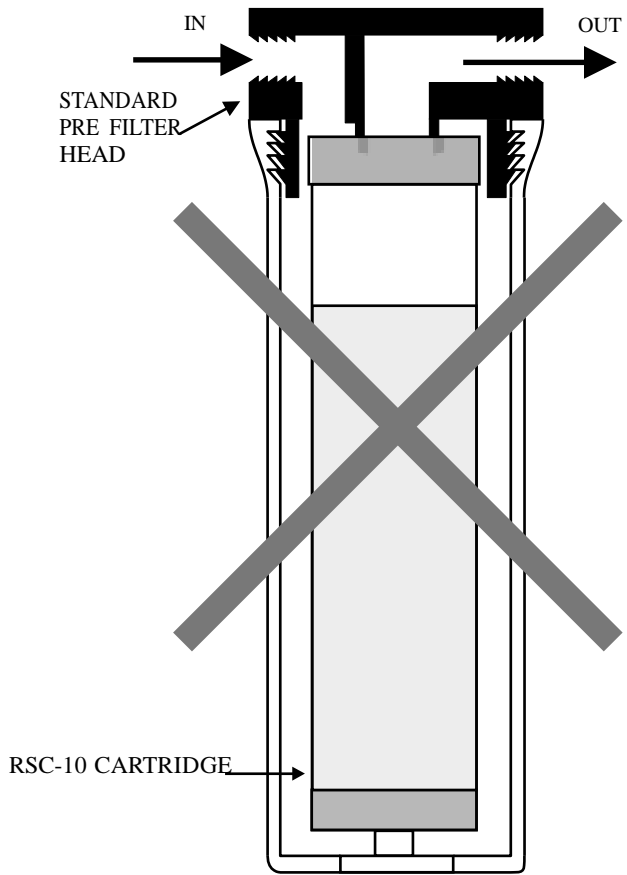
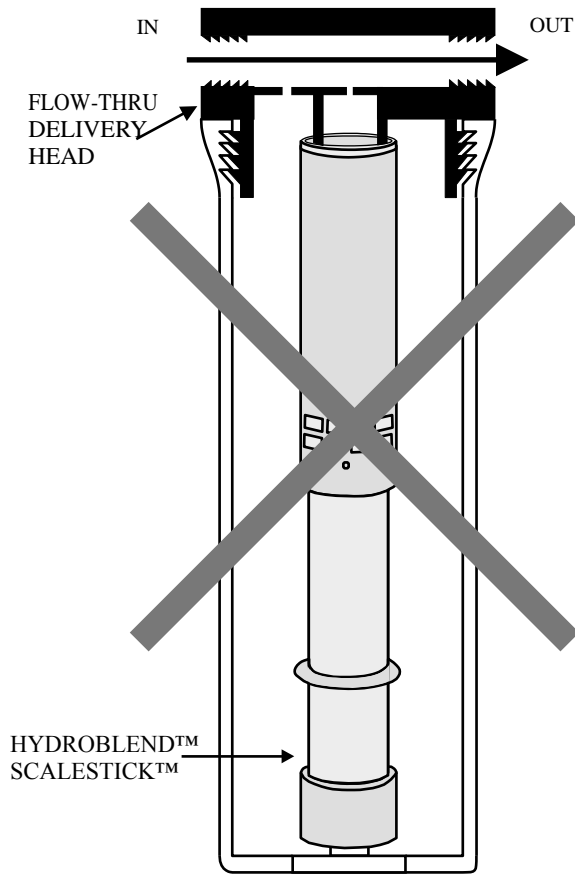
The only maintenance required when using the flow-thru media delivery head is to periodically ensure that the feedholes are not clogged. In extreme water conditions (high hardness & alkalinity) the feedholes may become clogged or restricted. In order to clean the feed holes, the sump must be removed, and the inlet and outlet feed holes can be cleaned using a paper clip.

MODEL - HBW



NOTE: If a HydroBlend RSC-10 cartridge is placed in a standard pre-filter head, the product will be dissolved in a matter of days if not hours, as opposed to months. Always ensure that a flow-thru head is used. If a ScaleStick is placed in a flow-thru housing, it will not dissolve and will not feed product into the water supply.

MISTAKE



HydroBlend Features & Benefits

HydroBlend will never harm any equipment no matter how it is applied. In certain steamer / combi installations, the drain may become clogged upon initial installation as scale will begin to fall off and settle to the bottom of the chamber. This may require a couple of cleanings but should not reoccur after initial use.

HydroBlend is not an anti-spotting agent. HydroBlend does act as a surfactant and does help reduce spotting although the claim is not emphasized. Spotting is not only a hardness issue but a TDS issue as well. HydroBlend does not lower TDS. It is best to play down spotting issues and if the product helps or eliminates spotting, the customer will be pleasantly surprised.

HydroBlend will help remove and prevent scale deposits. In some cases, HydroBlend will completely remove and prevent scaling inside water-fed equipment. This is not always the case. Depending on water quality and the type of equipment, HydroBlend may reduce scaling by only 75%. If the customer expects 100% elimination of scale, there may be a let down on the horizon.

HydroBlend will help prevent corrosion on wetted parts inside equipment. Corrosion is always a tricky issue as many factors may contribute to corrosion including pH, dissolved gases, scale deposits, past de-limings, temperature, chlorides, etc. HydroBlend will only help in the areas where the parts are in contact with water. It does not for example keep the top of a boiler from corroding due to dissolved chlorine gases being released from the water. (Carbon Filter)

Most important to any product's success in the water treatment / foodservice industry is the proper maintenance of the product once it is installed. The RSC-5 and RSC-10 should be visually inspected on a regular basis to ensure proper scale control. Levels of the HydroBlend media are easily visible through the translucent housing sump. The HydroBlend cartridges should last for 6 to 12 months depending on water conditions and water usage.