US Water Systems
Limeblaster Salt-Free Water Conditioner

Owners Manual
320-USP-LB-10, 320-USP-LB-20

US Water Systems Corporate Office
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Indianapolis, IN 46234
1-800-608-8792
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Unpacking / Inspection

Be sure to check the entire system for any shipping damage or parts loss. Also note damage to the shipping cartons. Contact US Water Systems at 1-800-608-8792 to report any shipping damage within 24 hours of delivery. Claims made after 24 hours may not be honored.
Small parts, needed to install the system, are in a parts bags. To avoid loss of the small parts, keep them in the parts bag until you are ready to use them.

Safety Guide

- Check and comply with your provincial / state and local codes. You must follow these guidelines.
- Use care when handling the filter system. Do not turn upside down, drop, drag or set on sharp protrusions.

**WARNING:** This system does not remove biological contaminants. US Water Systems recommends that bacteria levels be checked periodically to ensure there is no bacteria present. Coliform and E.coli most importantly.
Special Instructions
Make sure each screw has a washer. DO NOT use power tools to tighten screws. Be sure to use Teflon tape on the inlets/outlet fittings. The sump O-ring will be shipped in the bottom of the sump. Be sure to lubricate the O-ring and threads on the sump with silicone grease (food grade).
The US Water Limeblaster prevents scale formation on plumbing and appliances while delivering softer, healthier skin. The US Water Limeblaster totally prevents limescale on and in appliances, pipes, fixtures - actually everything water touches. The new Limeblaster technology effectively "Seals" the plumbing and appliance surfaces so that calcium and magnesium (often called limescale) cannot stick. Additionally, the Limeblaster water treatment method is environmentally friendly, uses no electricity and is 100% safe for drinking water.

**Limeblaster Benefits**

- Completely safe for drinking water
- Easy to fit and low maintenance
- No electricity needed - No waste water
- Long life cartridges typically last 6 to 9 months
- Extends the life of appliances: dishwasher, washing machine, water heater, faucets, etc.
- Cleaner bathrooms, showers and kitchens
- Saves up to 40% on energy by reducing cost of energy bills
- Low purchasing and maintenance costs, pays for itself within one year
- One-Year Money Back Guarantee on the US Water Limeblaster

**How It Works**

The US Water Limeblaster system uses a unique and patented dosing system which adds a small amount siliphos (a food grade material) to the water, effectively "sealing" Calcium and Magnesium from sticking to any surface or pipes. Silicopolyphosphate is a "food grade" product and is safe for human consumption according to the WHO and FAO recommendations. It meets all FDA requirements for being "food grade." Cities have used it for years on a smaller scale - it is completely safe.* If you also want to remove 35,000 other contaminants that can be in your water, like chemicals, rocket fuel, pharmaceuticals, TCE, THM's and many others, then we suggest using the US Water BodyGuard Filter and/or Reverse Osmosis for drinking, cooking and the like.

**The Truth About Lime Scale**

Limescale is formed when cold water is heated in a water heater, boiler or tea kettle. In the process of heating water, such as in a water heater, calcium carbonate precipitates and forms limescale.
US Water Limeblaster Filter Installation Instructions

Maintenance
The Limeblaster Scale Prevention Cartridge is a slow-dissolving, slow-release siliphos that is rated to last at least 100,000 gallons. This can vary, based upon your water hardness and usage. In some cases, it can last 6 months and in others it might last one year.

*Phosphates are natural minerals needed by the human body. There are absolutely no health considerations in case phosphate-treated potable water is consumed continuously. The phosphorus intake by the human body is per average 3,400 - 4,300 mg P2O5 per day. Based on the fact that per day two litres of water treated with max. 5 ppm phosphate (as P2O5) are consumed, the average daily P2O5 intake by potable water is 10 mg, less than 0.3 % of the total P2O5 intake. It should also be noted that the average phosphate intake per person and day should not drop below 1,500 - 2,000 mg P2O5 per day to avoid deterioration of the human body.

Water Quality Parameters
- Application: Municipal water, but can be used on surface or well water with proper pretreatment
- Flow Rate: Designed to flow up to 12 or 25 GPM, but flow rate can be exceeded for short periods of time.
- Maximum Hardness: 80 GPG
- Maximum Iron: < 1 ppm
- Maximum Sulfur: Zero
- Maximum Manganese: < 0.03
- Maximum Oil: Zero
- Maximum Copper: 1.3 mg/l
- pH: 6 to 9
- Feed Water Pressure: 20 to 100 psi
- Feed Water Temperature: 38° to 100° F

Where to Install
The Limeblaster Scale Prevention System should be installed as the final filter in a water treatment system. To increase the longevity of the Limeblaster cartridge, irrigation and outside spigots should be plumbed in prior to the Limeblaster system. If the US Water Quantum Disinfection system or the US Water Disruptor are being used, they should be installed prior to the US Water Limeblaster. For installation questions please call 1-800-698-8792.

WARNING! The US Water filtration system should not be installed in direct sunlight. The heat and UV light may cause the material to disfigure. Make sure the system is sheltered from the sun.

WARNING: Iron removal and sediment control should be installed prior to the US Water Limeblaster. The Limeblaster should be treated as a polishing filter and never as a point of entry filter exclusively.
US Water Filter Installation Instructions

1. Install the Limeblaster system in the desired location in the water treatment system. Typically this will be the last component in the line of treatment. The cap is marked “IN” and “OUT” on the top of the housing.
2. Mount the housing to the bracket using the supplied screws, orienting the housing to match the applications’ desired flow direction.
3. Install threaded nipples or other threaded fittings in the housing. Be sure to use Teflon tape on the fittings. Tighten them with channel locks. If flex pipes with rubber gaskets are used there is no need to Teflon tape the outer fittings. If a normal plumbing fitting is used then be sure to Teflon tape the outer fitting. When looking directly at the end of the fitting the tape should be wrapped clockwise.

4. Mount the filter to the wall using the necessary fasteners for the wall type. Mark the hole locations on the wall using a marker or pencil while holding the filter housing level. If this is to be mounted to a studded wall, a mounting board can be used. A shelf board or plywood can be mounted to the studs, then the filter housing can be screwed to the plywood or shelf board. (Shelf board pictured below).
5. Shut off the water and release the water pressure at the lowest sink or spigot. Cut the pipe and connect it to the filter. Connect the inlet plumbing to the inlet on the filter housing. Tighten with channel locks.

6. Connect the outlet plumbing to the outlet on the filter housing. Tighten with channel locks.

**NOTE:** *The connections above are made using the installation kits used with the US Water Systems Modular Filtration System.* These flex pipes have a rubber gasket and do not require Teflon tape. If pipe fittings are used be sure to use Teflon tape on the threads prior to installing the fitting on the filter housing. If copper pipe and fittings are being used make sure all solder joints within 12-15” of the filter housing are completed and the pipe is cool, prior to connecting it to the housing fittings.
US Water Filter Installation Instructions

1. Remove the sump from the filter housing and install the filter. A very small amount of silicone grease or water can be used to lubricate the O-rings on the filter. The filter housing cap has a coupling that will accept the o-ringed nipple on top of the filter. Install the filter so the nipple on the top is fully seated in the filter housing cap.

2. Lubricate the O-ring on the filter housing sump and install it. Tighten the filter sump hand tight. That should be adequate. Do not use abrasive tools to tighten the housing or damage may occur.
US Water Filter Startup Instructions

1. Open a faucet or spigot down stream of the filter. Slowly open the water shutoff valve and let the filter fill. Air will be pushed out of the filter through the open spigot or faucet downstream. Once there is no air coming out of the faucet or spigot, turn the water supply on fully and shut the faucet or spigot.

2. Check for leaks. If there are no leaks the filter is installed and ready for service.
US Water Filter Cartridge Replacement Instructions

1. Shut off the water supply.
2. Open a faucet of spigot closest to the filter housing and allow all the water to empty from the plumbing system.

**WARNING!** If the pressure is not released, the filter sump will be very difficult to get loose. It is imperative that the water pressure is released prior to attempting to remove the filter sump.

3. Remove the sump by spinning it counterclockwise until the sump is completely removed.
6. Remove the old filter and discard.

7. Lubricate the O-rings and install the new filter in the filter housing cap.

8. Lubricate the o-ring for the sump and lubricate the sump threads with food grade silicone grease.
US Water Filter Cartridge Replacement Instructions

9. Install the filter sump in the filter cap by turning it clockwise until it is hand tight.

NOTE: The housing should spin tight fairly easily. If not, add more lubrication to the sump threads. This will aid with removing the sump when the filter needs to be replaced again.

10. Turn on the water supply and open a spigot downstream of the filter to release the air.
11. Once the air has been released, fully open the supply valve and close the faucet or spigot.
12. Check the housing for leaks and repair as necessary.
Warranty

For the lifetime of the original purchaser, at the original residential place of installation of this US Water Water Conditioning System, US WATER SYSTEMS, INC. warrants the following:

GENERAL PROVISIONS
This warranty does not apply to any commercial or industrial installations or to any part of the water conditioner which has been subjected to misuse, neglect, alteration or accident; or to any damage caused by fire, flood, freezing, Acts of God, or any other casualty, or if the original serial numbers have been removed.

These warranties are in lieu of all other warranties expressed, or implied, and we do not authorize any person to assume for us any other obligation on the sale of this water conditioner. No responsibility is assumed for delays or failure to meet these warranties caused by strike, government regulations or other circumstances beyond the control of US WATER SYSTEMS, INC.

To obtain warranty service, call or write: US WATER SYSTEMS, INC. 1209 Country Club Road Indianapolis, IN 46234 (800) 608-USWA.

ANY IMPLIED WARRANTIES OF FITNESS OR MERCHANTABILITY ARE LIMITED TO THE TERMS OF THIS EXPRESSED WARRANTY AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE HEREIN. US WATER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

THIS WARRANTY MAY BE TRANSFERRED TO A SUBSEQUENT OWNER WITH WRITTEN APPROVAL OF US WATER AND PAYMENT OF STANDARD TRANSFER FEE.