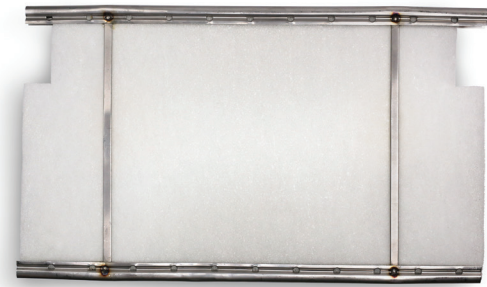


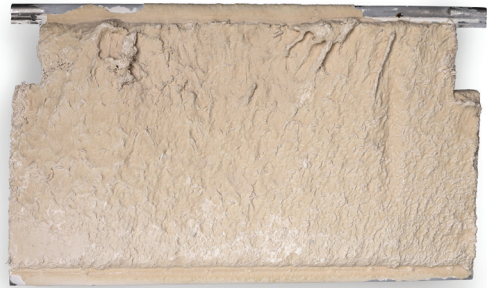
How Armstrong Reduces Humidifier Maintenance Using Ionic Bed Technology

Ionic Beds Stop Solids
Ionic beds consist of a fibrous medium that attracts solids from the water as its temperature rises, minimizing the buildup of solids on the heat exchanger and inner tank walls. Once the ionic beds have absorbed their capacity of solids, an indicator on the humidifier's control panel signals it's time to replace the ionic beds. Changing the beds takes only about 15 minutes. Use of the ionic beds:

- | Reduces cleaning of the tank exchanger or heating elements
- | Keeps the drain screen cleaner longer – allowing effective tank blowdown
- | Helps maintain humidifier output without building excessive heat exchanger surface temperatures
- | Requires less frequent blowdown, conserving water and energy
- | Eliminates the need for wasteful surface skimmers that must be checked weekly for possible plugging
- | Reduces downtime
- | Has years of field-proven success in thousands of humidifier applications



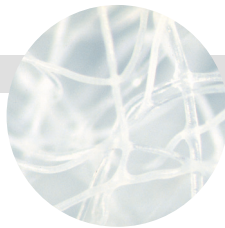
New ionic bed filter



Ionic bed filter after 1,000 hours of use

Better Here than in your Humidifiers

These photos show how the ionic bed fibers (magnified 52.5x) collect solids throughout their service life. A new ionic bed weighs between 1/3 and 1/2 pound, depending on the humidifier type. When it reaches its capacity, an ionic bed may weigh more than 2-1/2 pounds.



New ionic bed



After 400 hours



After 800 hours



More Than Just Humidification Products

For detailed information on customizing humidification schedules and calculating non-wetting distances and humidification loads, refer to Armstrong's Humid-A-ware™ humidification sizing and selection software. Visit our website to download the Humid-A-ware™ Software. To learn more, visit: <https://c1.armstronginternational.com/>
For over 120 years in the steam business, Armstrong has been devoted to building stronger bonds through the sharing of information and ideas. That's why **Knowledge Not Shared Is Energy Wasted®** is our motto, promise and pledge to you. And it's why we founded Armstrong University®. Use this site for quick research on steam, answers to steam system questions and comprehensive online steam system education. Learn more at armstronginternational.com



INTELLIGENT THERMAL UTILITIES SOLUTIONS FROM A GLOBAL LEADER IN ENERGY MANAGEMENT AND ENJOYABLE EXPERIENCES

Armstrong International
The Americas | Asia | Europe, Middle East, Africa
armstronginternational.com



HUMIDIFICATION
STEAM | GAS | ELECTRIC | ATOMIZATION | EVAPORATIVE



Global Experience in Humidification

Armstrong International provides leading-edge design, manufacturing and application of humidification and conditioned steam equipment for satisfied companies of all sizes, all over the world.

Whatever your industry, Armstrong has the energy-efficient, cost-effective solutions you need to achieve

trouble-free control of your humidity. Our products are engineered to consistently deliver the clean, reliable, precisely controlled humidification necessary for reducing static discharge and achieving a pleasant, comfortable environment.

Adiabatic Humidification



Cool Fog® System

The Cool Fog® System offers an energy efficient, environmentally sound, and economical way of controlling the injection of compressed air and water into an air handling system to provide humidification and evaporative cooling. The use of compressed air produces the highest energy water particle which results in the highest evaporation efficiency. With optional “variable differential” control, turndown of over 100:1 can be achieved yielding unrivalled controllability.



EVAPACK® Series

Simple, natural and efficient process. The EVAPACK® Series efficiently converts all water types to water vapor using an adiabatic process. Dry air passes through a corrugated bank of wetted cells media made from non-organic wet fibers. EVAPACK® series uses the sensible air heat to evaporate the water to consume less energy and minimize pressure drop. The air is cooled and humidified.

Electric Humidification



HUMIDICLEAN™ Series HC-6000 Humidifier with Ionic Bed Technology™

The HumidiClean™ electric humidifier includes disposable inserts made of a fibrous medium. Called ionic beds, these devices attract solids from the boiling water, preventing the solids from plating out on the heating elements or on the tank walls. Tank cleaning is minimized, and effective service life is extended.



Series EHU-800 Electric Steam Humidifier

No other electric humidifier does a better job of stabilizing and simplifying humidity control. Only Armstrong offers full modulation and a patented self-regulating maximum output feature. When you install an Armstrong Series EHU-800 you get accurate, automatically adjusted humidity control that's virtually hands-free.



ERS-LC

The ERS-LC is a low capacity, compact, resistive humidifier. It can produce from 7-75 lb/hr steam capacities. It is available in most common voltages and is compatible with potable, softened, and RO/DI grade water. Only hanging 10 inches off the wall, the ERS-LC works great in occupied spaces. It can be matched with a fan pack on top for area dispersion or used with a dispersion tube in the duct.

Gas Humidification



Gas-Fired HumidiClean™ with Ionic Bed Technology™

Armstrong's gas fired HumidiClean's innovative Ionic Bed Technology reduces operating costs, labor and downtime associated with humidifier cleaning. The GFH Series uses natural gas or propane for economical operation. The HumidiClean™ is designed for use with tap, softened or RO/DI quality water, Capacities up to 700 lb/hr, Modbus and BACnet communication, and integrated touchscreen with enhanced operational data and diagnostics to support faster more accurate service. The GFH Series is CSA-certified and CGA-approved.

Steam Humidification



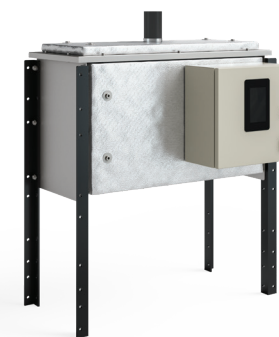
Series 9000 Humidifier

The Series 9000 direct steam injection humidifier provides precisely controlled, trouble-free steam humidification. These units distribute steam and give you precise control to accurately maintain the required level of relative humidity. Available in a range of selections to meet various capacity requirements, Series 9000 units offer uniform vapor distribution and rapid, complete absorption. They maintain quiet operation and require minimal maintenance.



Series 1000 All Stainless Steel Humidifier

A steam separator type humidifier for use in sensitive environments where pure, demineralized, deionized or distilled water is used to generate clean steam. Designed for applications where all steam and condensate piping is stainless steel, the Armstrong Series 1000 delivers precisely controlled, trouble-free steam humidification. Stainless steel construction prevents problems caused by corrosion and subsequent carry-over of corrosion by-products.



Clean Steam Humidifier with Ionic Bed Technology™

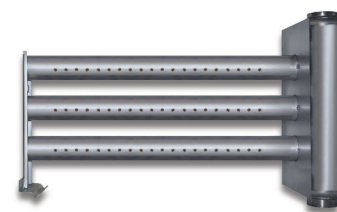
Steam-to-steam devices in the CS Series use boiler steam to produce chemical free steam from untreated water. Easy to install and simple to clean, Armstrong steam-to-steam humidifiers have all the benefits of steam humidification without the concern of boiler treatment carry-over. This device has all the benefits of the innovative Ionic Bed Technology™ at the heart of all HumidiClean™ humidifiers and the advanced logic with integrated touchscreen, with Modbus and BACnet communications.

Specialized Dispersion Methods



EHF Fan Package

The EHF Fan Package is used when the atmospheric steam can not be delivered in to the duct / AHU. This unit is mounted in the space that is to be humidified and fed by one of Armstrong's many atmospheric steam generators.



HumidiPack®, HumidiPackPlus® & HumidiPack CF®

The HumidiPack® Family is a prefabricated steam humidifier system that comes ready for insertion into the duct or air handler when a short non-wetting distance is required. These panels accept steam, separate entrained moisture from it and admit it into the airstream via tublets in the dispersion tube. The HumidiPack® has the ability to accept pressurized steam or atmospheric steam from the many generators that we manufacture. The HumidiPack CF® combines the all welded SS construction and a unique tube within a tube design to give you a dry, uniform discharge of steam for nearly any application with a steam source from pressurized central supply.