



HSFD-B-7200GPH
VAPOR COMPRESSION DISTILLER

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BENEFITS

- Aqua-Chem patented Spray-Film® vapor compression distillation units produce consistent, reliable, high-purity water regardless of feedwater quality fluctuations.
- Distillation is the only process that removes all known viruses or bacteria 100 percent of the time.
- The Aqua-Chem patented Spray-Film® evaporator design provides improved wetting of the tube bundle and reduced scaling. This means less downtime for cleaning and reduced blowdown for less water waste.
- The Spray-Film design includes built-in on-line cleaning, minimizing maintenance costs and maximizing operating life.
- The system provides improved safety and ease of maintenance to extend operating life. All major components are accessible from floor level, with the compressor and pumps located at the edge of the skid for easy serviceability.
- Higher-capacity distillers (1,600 to 7,200 U.S. gph) use low-speed compressors (<6,000 rpm). Durable journal bearings are used on the smaller high speed compressor designs (from 300 to 1200 gph) thus minimizing maintenance costs.
- Aqua-Chem's proven technology ensures superior bacteria, virus, dissolved minerals and THM removal with minimal pretreatment.



Aqua-Chem systems produce distilled and high-purity drinking water for some of the most trusted brands in the world.



From pretreatment to vapor compression and reverse osmosis, Aqua-Chem leads the way in water, with experience, insight and state-of-the-art solutions.

DESIGN FEATURES

- **COMPRESSORS** – We offer low-speed, direct-drive compressors on all units 1,600 gph and above. The compressors used on our smaller units (300 - 1200 gph) use high-speed journal bearings for maximum life.
- **EVAPORATOR** – The evaporator features a horizontal design using the Spray-Film® process. It has a straight tube or U-tube configuration with a tube life of 25-30 years – and no large gaskets requiring routine maintenance.
- **HEAT SOURCE** – The vapor compression process uses its own compressed steam as its primary heat source, resulting in vastly improved efficiency.
- **CONSTRUCTION MATERIALS** – Standard materials are corrosion-resistant 304 and 316 stainless steel.
- **AUTOMATION** – Stills are designed to operate automatically, with stopping and starting based on level signals from distillate tanks. A programmable logic controller (PLC) and human machine interface (HMI) are standard on distillers.
- **DEAERATOR** – A 316L SST deaerator removes carbon dioxide, oxygen and other noncondensable gases from the feedwater or distillate.

ADVANTAGES OF AQUA-CHEM'S HORIZONTAL SPRAY FILM® VS. TYPICAL VERTICAL FILM

- Most forgiving VC technology on the market today, able to handle widely varying feedwater conditions with minimal pretreatment.
- High tube wetting rates result in more efficient evaporation, reducing feedwater consumption and plant steam consumption, thus increasing energy efficiency.
- Evaporation on the outside of the tubes eliminates the possibility of contamination of distillate or scaling on ID of tubes.
- Tubes and tube sheets do not remain in blowdown water, increasing evaporator efficiency and tube life.
- All major components are accessible at floor level, reducing the need for elevated work surfaces, thus resulting in improved maintenance capabilities and safer access to major components.
- No large gaskets to replace requiring major disassembly and heavy rigging.



AQUA-CHEM'S HORIZONTAL SPRAY FILM® TECHNOLOGY AT WORK

THE AQUA-CHEM SERVICE COMMITMENT:

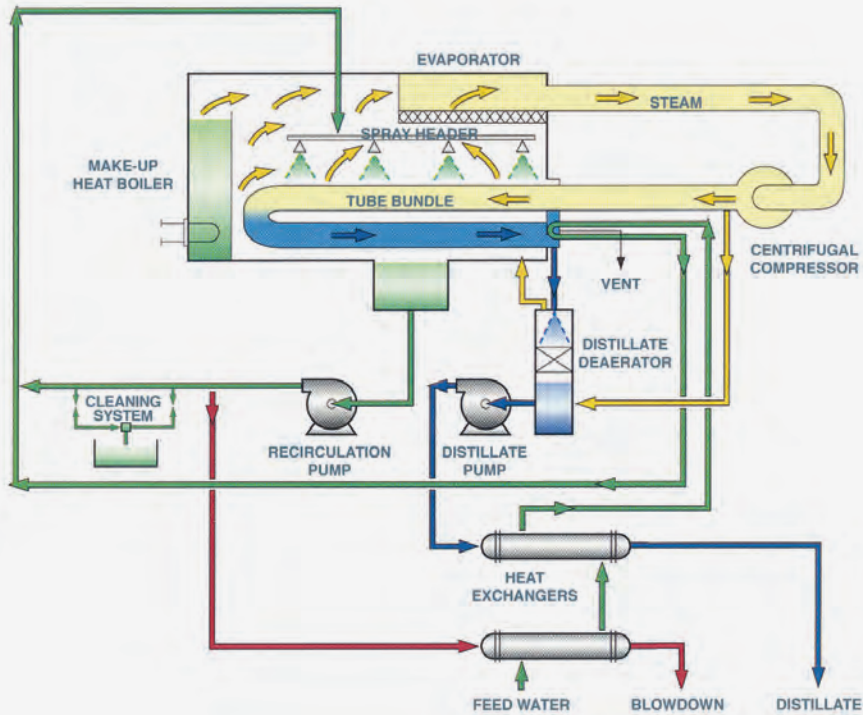
We are committed to service and parts for our equipment, even decades after installation. We currently support units that were installed in the 1970s and 1980s – some even back to the 1940s. We keep key components in stock, and our factory-trained service technicians are available to support our customers around the world.



HSFD-B-7200GPH
BOTTLED WATER DISTILLER



HOW AQUA-CHEM SPRAY FILM® WORKS



Incoming feedwater is preheated by the outgoing blowdown and distillate. Feedwater is sprayed over the evaporator tube bundle. A portion of the spray is evaporated as steam, and the remainder is collected in the sump to be recirculated.

Steam generated inside the evaporator is drawn through demisters by the centrifugal compressor and is superheated to 250° F/ 121° C in the compression process. The steam condenses inside the evaporator tube bundle and is collected as pure distillate. The distillate is pumped through the heat exchanger and into storage.

EQUIPMENT CHARACTERISTICS

CAPACITY	(TONNES/HR)	LENGTH	WIDTH	HEIGHT
HSFD-B-1200GPH	5.0	226/5.7	88/2.25	99/2.53
HSFD-B-3000GPH	10.0	216/5.4	140/3.5	125/3.2
HSFD-B-4500GPH	17.0	261/6.6	153/3.8	139/3.5
HSFD-B-6000GPH	23.0	298/7.5	131/3.3	155/3.9
HSFD-B-7200GPH	27.0	346/8.7	131/3.3	155/3.9

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