

# HSFD-B-1320

## VAPOR COMPRESSION DISTILLERS

Aqua-Chem supplies and innovative vapor compression distillation system. Vapor compression improves the performance of the distillation process by lowering the evaporation operating temperature; which, in turn, reduces maintenance and chemical cleaning cycles.

### DESIGN FEATURES

#### EVAPORATOR

The evaporator features a horizontal design using the Spray Film® process, which utilizes a straight tube configuration. The horizontal configuration eliminates the large shell gaskets in use on vertical distillers that are prone to leaks and require frequent replacement.

#### MATERIALS OF CONSTRUCTION

Standard materials used are 316L stainless steel and product contact surfaces are 15-25 RA finish.

#### SANITARY COMPONENTS

Aqua-Chem's Vapor Compression Distillers are manufactured using sanitary valves, instruments, pumps and piping.

#### AUTOMATION

Aqua-Chem's Vapor Compression Distiller operation is fully automatic requiring minimal operator input. Addition of variable capacity control allows the unit to vary output flow rate based on demand, reducing the number of start/stops of the unit.

#### DEAERATOR

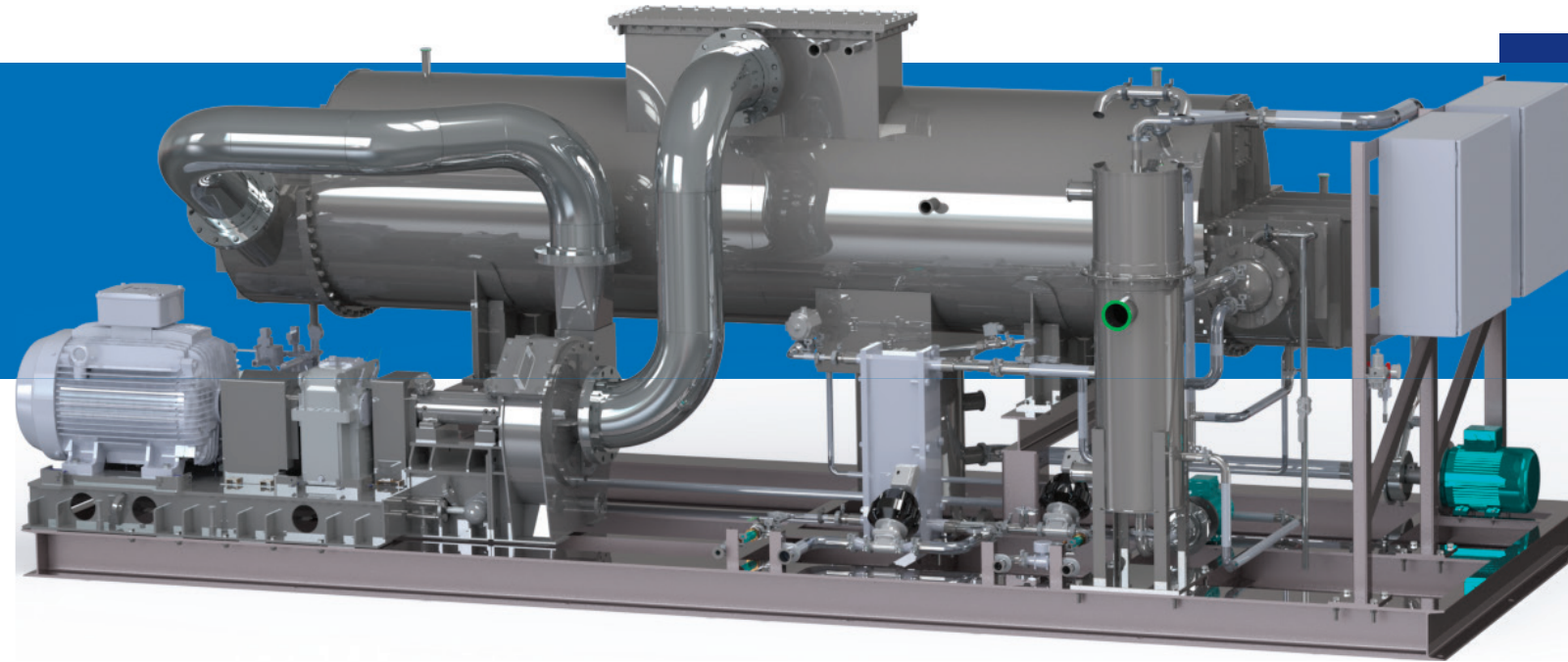
A 316L stainless steel deaerator removes carbon dioxide, oxygen and other noncondensable gases from the feedwater and distillate.

#### INSULATION

The evaporator and deaerator are insulated with low-chloride fiberglass and covered with polished stainless steel lagging.

#### COMPACT SIZE

Overall dimensions (226" x 88.5" x 99.75"/5740mm x 2250mm x 2530mm) allow unit to be shipped in standard shipping containers. In addition, the horizontal design allows the unit to fit through standard industrial building hallways and doorways.



### 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.
- 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.
- No large gaskets to replace requiring major disassembly and heavy rigging.

### BENEFITS

- Aqua-Chem's design offers reduced energy consumption and less stringent feedwater requirements as compared to other distillation processes like multiple-effect systems.
- Aqua-Chem's patented horizontal Spray Film® evaporator design provides improved wetting of the evaporator tubes and reduced scaling. This means less downtime for cleaning and higher operating efficiency.
- All major components are accessible from floor-level, with the compressor and pumps located at the edge of the skid for easy serviceability.
- Aqua-Chem's proven technology ensures superior T.O.C (Total Organic Carbon) and THM (Trihalomethane) removal with minimal pretreatment.
- Aqua-Chem utilizes low speed compressor technology, which results in cooler bearing temperatures.



### EQUIPMENT CHARACTERISTICS

MODEL	HSFD-B-1320
Capacity (Gallons per Hour/Tonnes per Hour)	1320/5m <sup>3</sup>
Dimensions L x W x H (inches/millimeters)	241 x 88 x 89 (6144 x 2235 x 2248)