

FFE-45

FALLING FILM EVAPORATOR

Alcohol Evaporation System

The FFE-45 is Delta Separations premier solution to alcohol evaporation and recovery. With this innovative technology a single operator can maintain the evaporation rates that are required for large scale alcohol extraction and processing.



FFE-45 Advantages

1 Single Operator



10x 20 Liter Rotary Evaporators



85-95% Separation Efficiency



- Small Comparable Footprint
- Short Residence Time
- 316L Sanitary Stainless Steel
- Tempered and reinforced sight glass
- Continuous Operation
- System can be modified for specific applications or higher throughputs
- 12 Month Parts/Labor Warranty
- Technical Support
- Made in USA
- Clean in Place (CIP)

Product Overview

The Falling Film Evaporator is the solution to evaporating and condensing alcohol used in extracting heat-sensitive compounds. The saturated alcohol is siphoned into the top of the evaporator. The solution falls down multiple small diameter holes, forming a film on the walls of the heated evaporator surface, allowing for efficient evaporation with minimal residency time. This yields a non-thermally degraded concentrate at the bottom of the evaporator which contains 5-10% residual alcohol. The alcohol vapor then travels through the system and is condensed before cascading out of the system into a collection tank.

Production Capacity



50°C - 90°C

Operational evaporator temperature



35-45

Gallons per hour



6x

50 liter rotary evaporators

Standard Features

Operational Footprint

- Evaporator & Pump Cart
15' L x 7' D x 9' H

Dimensions

Evaporator

- 41" L x 32" W x 99" H
(104 cm L x 81 cm W x 249 cm H)

Pump Cart

- 52" L x 32" W x 74" H
(132 cm L x 81 cm W x 188 cm H)

Weight

- Main Frame: Approx. 400 lbs
- Pump Cart: Approx. 600 lbs

Electrical

Condenser Pump Cart

- 230V, 3.5 kW / 14.5 amps, singlephase

Included Ancillary Equipment

Recirculating Electric Heater

- Heating power: 36 kW / 84 amps @ 240V or 47 amps @ 460V / three-phase (Requires professional installation)
- Transfer Fluid Flow: 25 GPM (25 PSI)
- Max temp: 250° F (120° C)
- Transfer Fluid Line Connections: 1 FNPT
- Dimensions: 33" L x 17" W x 52" H
- Approx. 255 lbs

Recirculating Water Chiller

- 8.8 kW / 40 amps @ 240 V / 26 amps @ 460 V / three-phase (Requires professional installation)
- Cooling Power: 5.4 ton
- Coolant Flow: 17.4 GPM
- Operational Temperature: 50° F - 60° F
- Volume: 30 gallons
- Coolant Line Connections: 1" FNPT
- Dimensions: 52" L x 26" W x 55" H
- Weight: 715 lbs
- Professional Install sheets from Manufacturer

Pump Chiller

- 5.2kW / 25 amps @ 230V, single-phase
- Cooling Power: 1.5 ton
- Coolant Flow: 3.5 GPM
- Operating Temperature: -10°F - 35° F
- Dimensions: 30.5" L x 19" W x 26" H
- Weight: 340 lbs

