

FFE-45

FALLING FILM EVAPORATOR

Alcohol Evaporation System

The FFE-45 is Delta Separations innovative falling film evaporation technology is used to evaporate and recover the alcohol from the extract tincture at a large scale. Our evaporation system maintains a high evaporation rate, which significantly increases the throughput of crude oil production, eliminating the need for multiple large rotary evaporator systems.


1 Single Operator

45 Gallons Per Hour

85-95% Separation Efficiency

**Operational
Footprint**

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

**Electrical
Requirements**

 240v Three-Phase
 Full-Load-Amperage: 120.5 amps
 (Including ancillary equipment)

- 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 with the solution falling down multiple small diameter holes. This process forms 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



200

Maximum amp requirement



50°C - 90°C

Operational evaporator temperature



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, 16.3 kW / 7.1 amps, three-phase

Included Ancillary Equipment

Recirculating Electric Heater

- Heating power: 21 kW / 90.5 amps @ 240V 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

- 16.1 kW / 70 amps @ 240 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

- 5.7kW / 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

