

LCI Lab-Scale Short Path Evaporator

Most Robust Lab Evaporator

Perfect for Lab and R&D!

Short path evaporation/distillation is a thermal separation technique that provides minimal pressure drop, permitting deep vacuum operation down to 0.001 mbar. Short path evaporation is also called molecular distillation while a short path evaporator is sometimes known as an SPE or SPDU (short path distillation unit).

Short path evaporation is excellent for gently processing heat sensitive, high boiling products. Short path evaporation perfectly complements LCI's thin film evaporation technology program, allowing us even greater capability to provide the right solution for your separation problems.

Maximum Versatility!

The LCI Short Path Evaporator can be used to evaluate a broad variety of applications. It can provide qualitative results that will help determine if thin-film evaporation technology is suitable for your needs.

Purchase one today!

LCI's Short Path Evaporator provides an inexpensive means to evaluate thin film evaporation on lab-scale quantities of material for your development or existing products within your own facility.

Customize Your Solution!

In addition to the evaporator, an LCI Short Path Evaporator System can include any of these additional component options:

- Feed tank and metering pump
- Vapor condenser
- Vacuum system
- Wheeled cart
- Piping, valves, etc.

Call or email LCI to discuss your application and the benefits of the LCI Short Path Evaporator today!



LCI Lab-Scale Short Path Evaporator



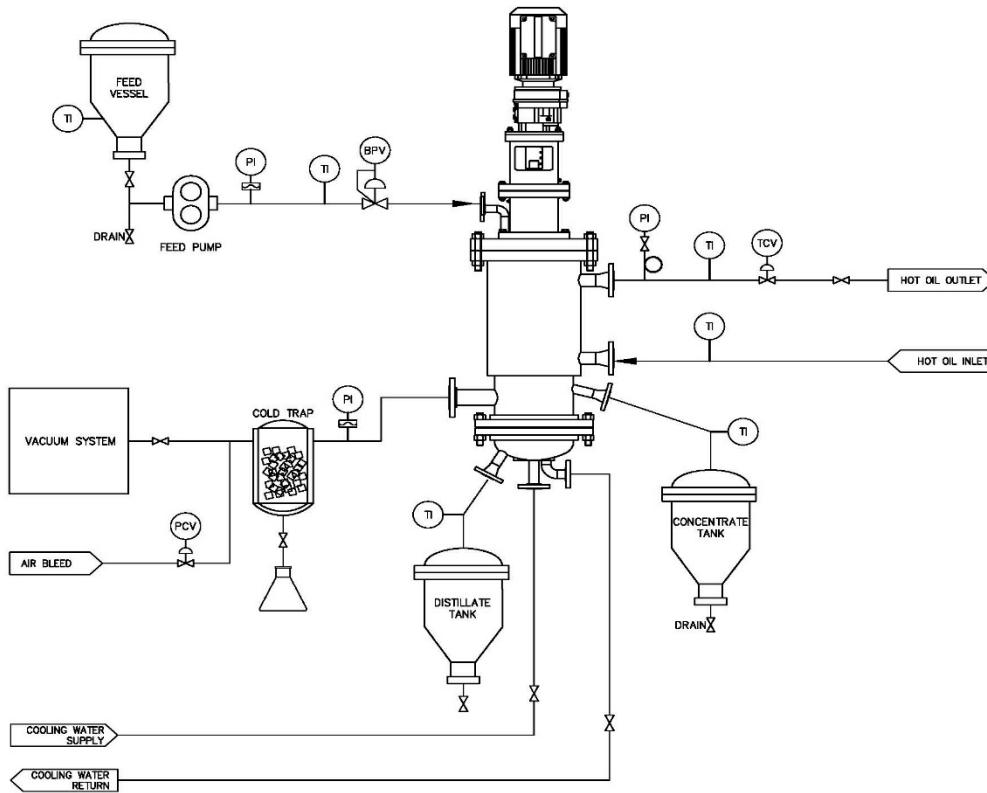
LCI Lab-Scale Short Path Evaporator with ancillary components



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LCI Lab-Scale Short Path Evaporator



Typical LCI Short Path Evaporator Flow Sheet

How it Works...

In a short path evaporator, the rotor cage assembly surrounds an internal condenser and revolves at moderate speeds. Feed enters through a nozzle at the top of the unit and is spread into a thin film on the inside surface of the shell via the rotor blades.

The rotor blades gently agitate the process liquid as it travels down the heated surface in a very short time while vapors are generated on the heating surface. These vapors flow through the rotor cage before condensing on the internally-located condenser.

The cage-type construction and location of the internal condenser create a short vapor flow path or "short path", extending the operating pressure capability from 1 mbar to 0.001 mbar compared to a standard thin-film evaporator.

The concentrate (bottoms) flows out of the evaporator bottom outlet by gravity into an collection flask.

Capacity can be varied by adjusting the feed rate, heating temperature, rotor speed, and/or vacuum to achieve the desired composition result.

What can you use this for?

- Purification of Essential Oils and Cannabinoids
- Dehydration/devolatilization of organics
- Distillation/purification of organics
- Used oil recovery
- Tocopherol distillation
- Omega-3 purification Solvent reclaiming
- Deodorization
- Reaction of heat sensitive, viscous, and fouling materials.

FAST FACTS

Heated Surface Area	0.59 ft ²
Material of Construction	316 SS process wetted parts
Process Area P/T Rating	FV to 15 PSIG @ 400°F
Jacket P/T Rating	150 psig @ 365°F (steam) 100 psig @ 650°F (liquid)
Feed Rate	2-30 lb/hr (typical)
Viscosity	~8,000 cP max (typical)



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