

# Stainless Steel Wiped Film Distillation Unit

/ LiquidExtrac Scientific and Industrial Equipment



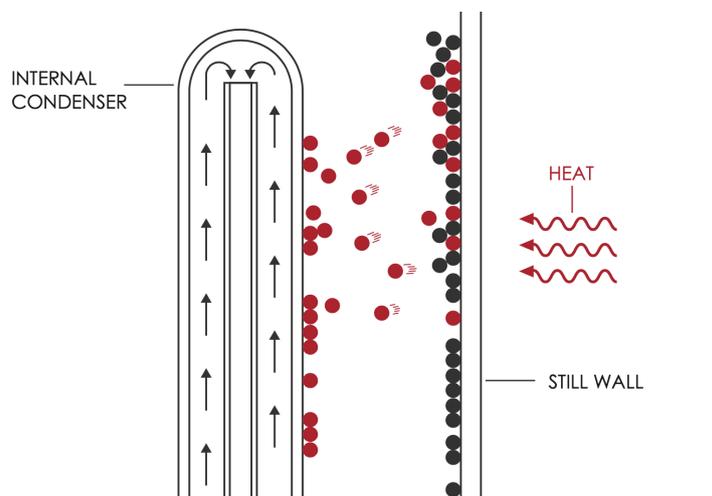
proudly made by  
gold supplier



## How It Works

Molecular (short-path) distillation is the best thermal separation method for heat-sensitive material because it is the gentlest type, causing the least amount of thermal degradation of product. Our wiped film evaporator system are widely used for cannabis/hemp, garlic oil, cod liver oil and chemical and pharmaceutical industries. Shorter residence time, lower separation temperature, capability of continuous and unattended operation makes LiquidExtrac molecular (short-path) distillation system standing out with many improvements incorporated over the years. This molecular short path distillation system is comprised of components carefully selected to provide the concentrate manufacturer with a complete turnkey package optimized for cannabis work.

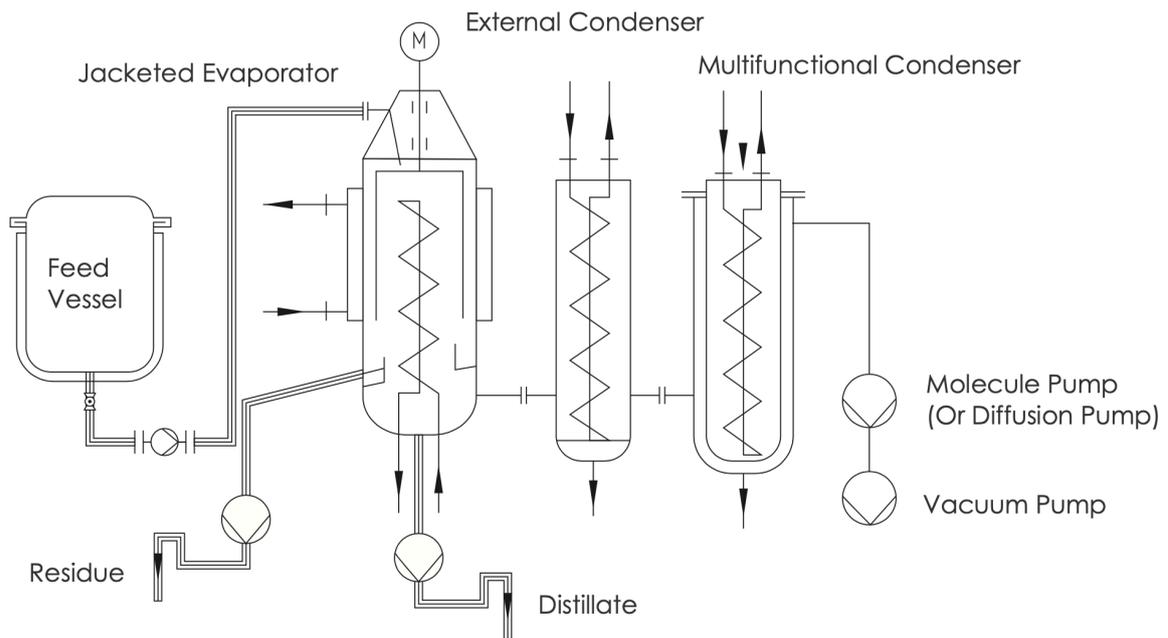
Material is delivered from a feed flask into a cylindrical evaporation section, having heating, on the outside, (either electric resistance or circulating hot fluid jacket type), and a diagonally slotted wiper mechanism forcing liquid around and downward in a thin film on the inside. In the center of the body is a closely positioned internal condenser, providing a short path for vapor molecules traveling from the heated surface to the condenser surface. For cannabinoids, the internal condenser fluid must be kept elevated (~70° C) to prevent high viscosity or freeze up of THC, CBD and related components. During the journey downward, lighter (lower boiling point) fractions of the liquid begin to vaporize, move to the internal condenser and condense, falling down as a liquid into a well that captures and separates the distilled liquid (cannabinoid) which flows into a receiver flask. Heavier residue material (Chlorophyll, salts, sugars, heavy wax fractions) does not evaporate and instead travels the length of the still body and flows into a different receiver flask.



## Why It is Superior

1. Continuous and automated system, easy to use.
2. Short residence time (less than 10 seconds)
3. High Evaporation rates
4. Low processing temperature
5. Low vacuum (down to 0.001mbar)
6. Jacket design for efficient heating & excellent heat preservation
7. Stainless steel material, stable quality

## Turnkey System



## Package Includes



1. Three high precision gear pumps
2. Rotary vane pump and turbomolecular pump
3. Circulating heater (Up to 200C) for feeding vessel and Pipeline
4. Circulating heater (Up to 300C) for jacketed evaporator
5. Circulating heater cooler(-25C to 200C) for internal condenser
6. Circulating chiller (Down to -25C) for external condenser
7. Circulating chiller (Down to -80C) for multifunctional condenser

# Specifications

Model	LESMD-01	LESMD-03	LESMD-05	LESMD-10
Throughput (L/hr)	3-5	10-15	15-25	30-50
Estimate Throughput (CBD/THC) (L/hr)	2	6	10	20
Material Inlet Method	Continuous feeding and discharging with gear pump, adjustable speed			
Material	Wetted material: SS316L, Others: SS304			
Vacuum Level	Better than 10 Pascal			
Dimension (WxDxH mm)	2000x900x2000	2400x900x2500	2600x900x3200	2800x900x4200
Evaporation Body Diameter (mm)	125	250	300	350
Evaporation Area (m <sup>2</sup> )	0.1	0.3	0.5	1
Internal Condenser Area (m <sup>2</sup> )	0.2	0.5	1	1.5
External Condenser Area (m <sup>2</sup> )	0.3	0.6	1	2
Cold Trap Style	Dewar Style with Cooling Coil			
Jacketed Feeding Vessel Volume (L)	15	30	50	50
Distillate Receiving Vessel Volume (L)	10	30	30	50
Residue Receiving Vessel Volume (L)	10	30	30	50
Wiper	Scraper (or Roller if preferred)			
Wiper Structure Material	SS316L			
Blade Material	PTFE			
Vacuum Gauge	Pirani Style			
Moto Coupling / Vacuum Seal	Mechanical Seal			
Heating	All pipelines are jacketed-heated to maintain material flowability			

# Design Drawings

