



Hybrid Molecular Distillation Unit

/ LAB1ST Scientific Instruments



LAB1ST / Laboratory and Processing Equipment

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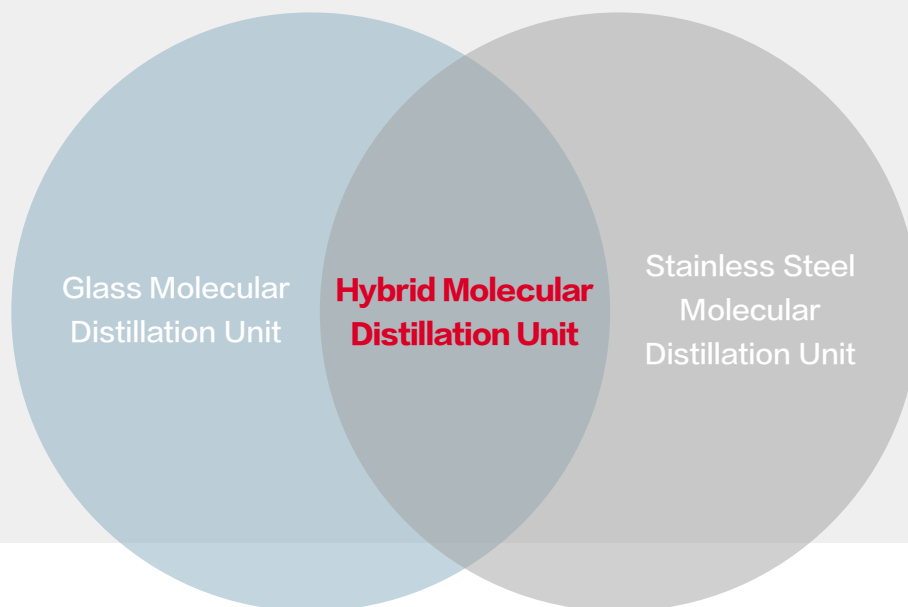
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Hybrid Molecular Distillation Unit

Molecular distillation is a type of short-path vacuum distillation, characterized by an extremely low vacuum pressure. It is a special liquid-liquid separation technology, which is different from the traditional distillation by boiling point difference separation principle, but by different substances molecular movement of the average free path difference to achieve separation.

Hybrid wiped film still is a NEW STYLE molecular distillation equipment that made by glass and stainless steel. It combines the advantages of glass wiped film still and stainless steel molecular distillation such as process visibility, durable in use, high evaporator rate and so forth.



GENERAL TYPES

Type A



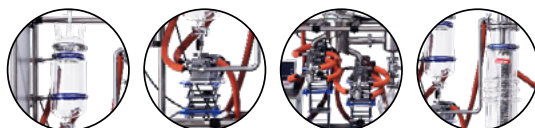
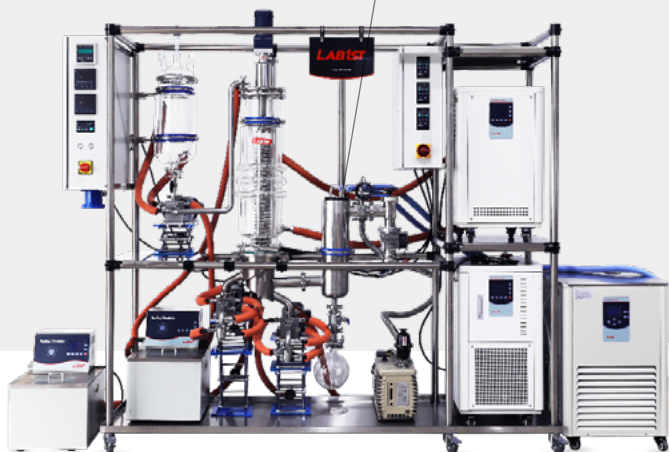
- 1 Feeding Vessel - 3 Liter
- 2 Continuous Feeding : Peristaltic Pump with Silicone Tube
- 3 Continuous Discharging : Glass Flasks with PTFE Valve
- 4 Electrical Heating (Silicone Heating Tape)
- 5 Equipped with a Dewar Style Cold Trap



* A stainless steel cooling coil (equipped with a -80°C chiller) can be added into the Dewar cold trap as well

Type B

- 1 Larger Feeding Vessel - 5 Liter
- 2 Continuous Feeding : Gear Pumps with Jacketed Head
- 3 Continuous Discharging : Gear Pumps with Jacketed Head
- 4 Jacketed Heating (Fully Jacketed Pipeline)
- 5 Equipped with Both a Dewar Style Cold Trap and a Cooling Coil Cold Trap with a -80°C Chiller



FEATURES

Well-designed Evaporator Body

- Glass and stainless steel combined design combines transparency and durability
- Stainless steel coil has more efficient heat transfer performance
- Short residence time, uniform heating
- High borosilicate glass to observe distillation process



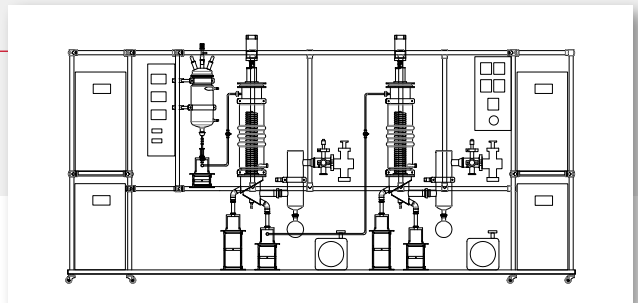
More Details

- All-in-one control panel design
- Grease free high vacuum joints capable of as low as 0.1 Pa
- 45 degree chute on the strip controls residence time
- Precisely designed wiper structure for high stability in long-term operation



More Options

- UL standards
- Cascade design available

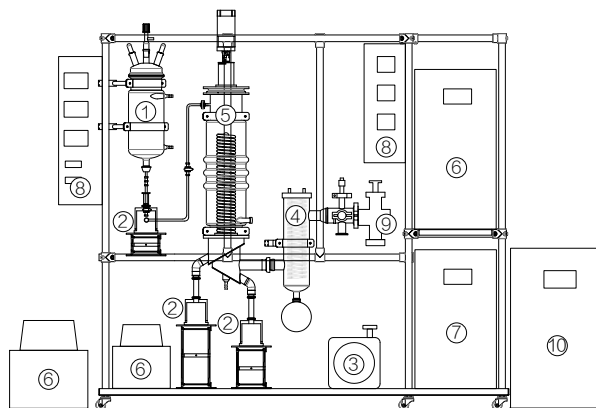


TECHNICAL DATA

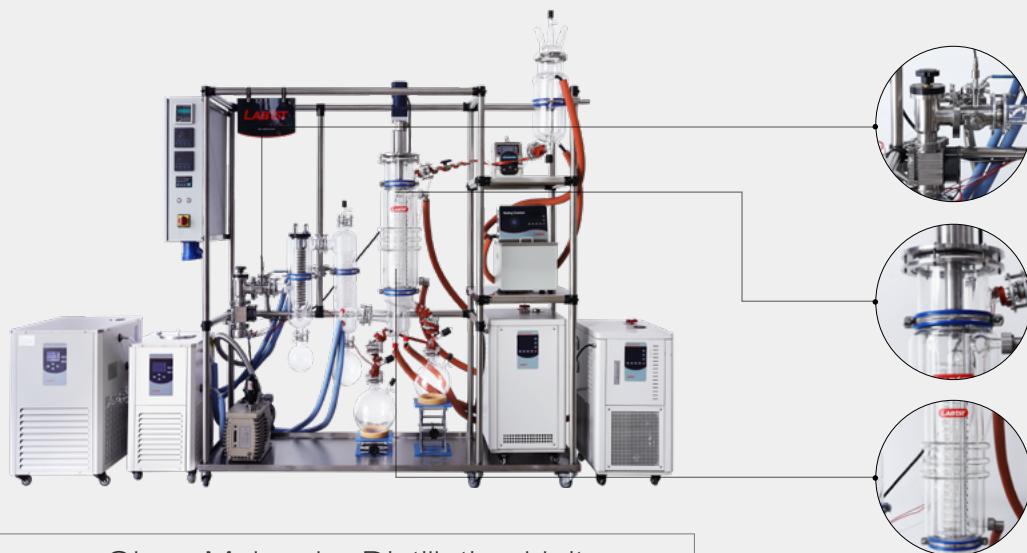
Model	HMD-150	HMD-200
Feed Rate (kg/h)	1.25 – 12.5	1.75 – 17.5
CBD Throughput (kg/hr)	2.5~5	3.5~7
Material	Boro Glass 3.3 (evaporator) / SS316L (other wet parts) / PTFE (wiper) / SS304 (frame)	
Effective Evaporation Area (m ² /sqft)	0.25/2.7	0.35/3.8
Evaporator Internal Diameter (mm/inch)	150/6.0	200/7.9
Feeding Funnel Volume (L)	3	5
Internal Condenser Area (m ²)	0.4	0.5
Distillate Receiving Vessel Volume (L)	5	5
Residue Receiving Vessel Volume (L)	3	5
Motor Power (W)	120	120
Maximum Speed (rpm)	400	400
Stirrer Seal	Oil-less Magnetic, High Vacuum	
Wiper Type	Scraper	Scraper
Vacuum Gauge	Pirani Style	Pirani Style
Operation Temperature	Up to 250°C	Up to 250°C
Vacuum Level	Better than 10 Pa	Better than 10 Pa
Voltage	220V-Single Phase / Customizable	
Dimension (WxHxD)	2270 x 1940 x 628	2420 x 2040 x 628

Structure Display

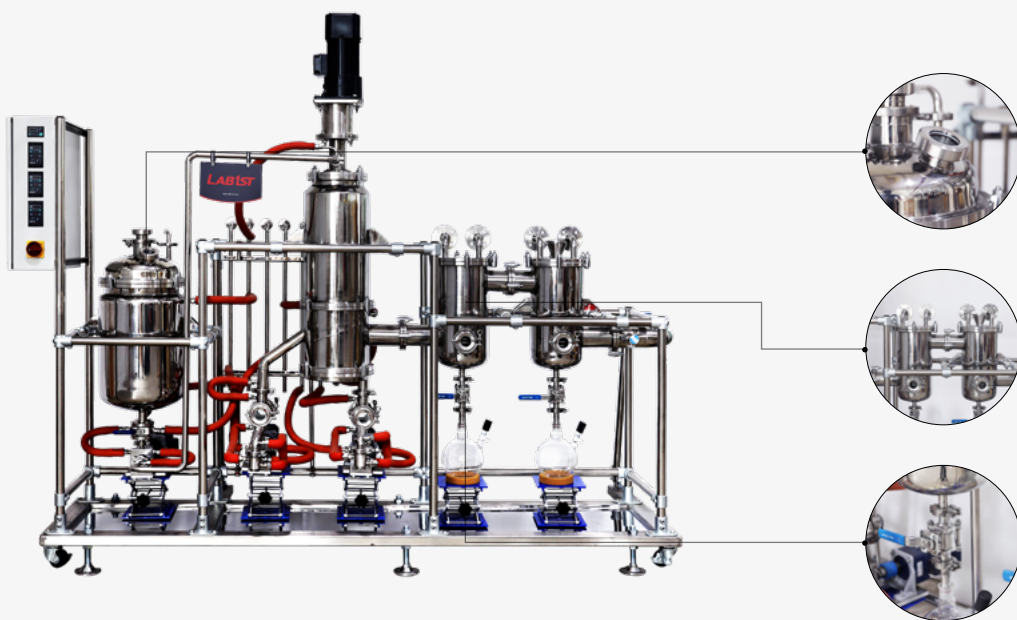
- ① Feeding Flask
- ② Gear Pumps
- ③ Vacuum Pump
- ④ Cold Trap
- ⑤ Main Evaporator
- ⑥ Heating Circulator
- ⑦ Heating Cooling Circulator
- ⑧ Integrated Electric Cabinet
- ⑨ Air-cooled Diffusion Pump
- ⑩ Cooling Circulator



RELATED PRODUCTS



Glass Molecular Distillation Unit



Stainless Steel Molecular Distillation Unit

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