

## Large Scale Rotary Vacuum Evaporator N-21 · 51 · 101



### Features

- Full line of large capacity evaporators 20L, 50L and 100L.
- Large volume samples can be condensed, evaporated, dried and recovered at low temperature quickly.
- Sample flask can be easily attached by using flask base.
- Many safety features are incorporated such as leakage protector, over current protector, bath overheat protector, overflow tube, drainage resistive sheet panel.
- Accurate temperature control enables easy bath temperature setting and confirmation. Temperature controller adopts digital temperature setting and display.
- Continuous sample injection is possible. Recovery of eluted solvents from drain pipe during operation is possible.
- Equipped with vacuum gauge.
- Effective recovery and prevention of secondary vaporization are realized by the cone type cooler for condenser and the sub-cooler on top of receiver flask.
- Sample flask can be detached easily by screw frange.
- Vacuum control is possible with optional vacuum controller NVC-2100.

### Specifications

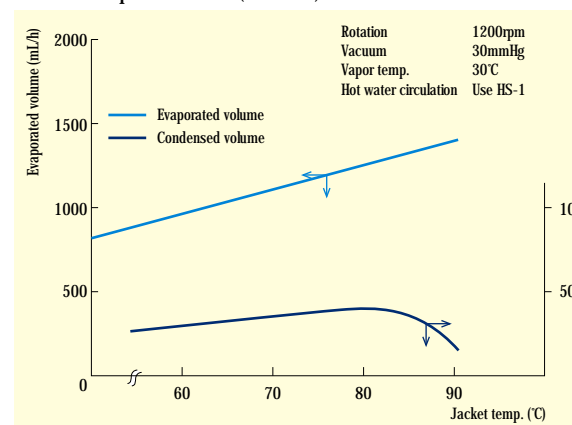
Product Name	Large Scale Rotary Vacuum Evaporator			
Model	N-21NS	N-21	N-51	N-101
Cat.No.	195580	117130	117140	117150
Rotation speed range	20~120rpm	20~120rpm, stepless	10~80rpm, stepless	
Ultimate vacuum	less 133.3Pa (1 Torr)			
Temp. control range	RT+5~80°C			
Temp. control accuracy	±1~2°C (When sample flask is rotating)			
Bath temp. setting & display	Digital setting, digital display			
Safety functions	Overheat protector, Leakage protector, Empty heating protector, Sensor cut etc		Overflow tube, Water supply pipe, Float type overheat protector, Heater cut alarm, Leakage protector, Drainage resistive sheet panel, Overload protector, Non-contact zero cross output	
Bath jack function	Electro-hydraulic auto jack			
Heater	1~6kW, 4 step		Temp. control: 3kW Aux. 2.5kW+3.5kW	
Motor	induction motor 400W			
Circulation pump (shower)	—		7L/min. Motor output 10/15W(50/60Kz)	
Condenser	Vertical 4 spiral cooling area: 1.0m <sup>2</sup>		Vertical 4 spiral, cone type cooling area: 2.0m <sup>2</sup>	
Sample flask	20L	20L	50L	100L
Receiver flask	10L	10L	20L	50L
Vacuum seal	Teflon seal			
Bath diameter (mm) & capacity	Ø450*280H 40L	Ø430*250H 36.2L	Ø560*300H 73.9L	Ø700*350H 134.7L
Weight	200kg	220kg	280kg	330kg
Power source	3Ø 220V 6.8kVA		3Ø 220V 9.8kVA	

## Thin film Vacuum Evaporator MF-10A · 10B · 10C



### \*Data

#### Water evaporation rate (MF-10A)



### Features

- Designed for the concentration or purification of thermally sensitive materials or of viscous materials or of high boiling point materials.
- The double-walled evaporator jacket is made of borosilicate glass and this makes it possible to visually observe the evaporation process.
- Vacuum distillation shortens the time needed for the feed liquid to pass and increases the efficiency of heat transfer.
- With model MF-10B, the amount of sample feeding is controllable by a level sensor, enabling concentration while controlling the liquid level in the evaporation tube.
- Model MF-10C is equipped with a mantle heater and a stainless steel evaporation tube. It is suitable for high temperatures and the temperature can be set up to 180°C.

### Specifications

Product name	Thin film vacuum evaporator		
Model	MF-10A	MF-10B (With liquid sensor)	MF-10C (High temp)
Cat. No.	117440	117450	117450
Rotation speed	140-1200rpm (50/60Hz) steplessly variable		
Rate of evaporation	1140mL/hr (water) circulating hot water 70°C, vacuum 4.0kPa (30Torr)		
Ultimate vacuum	Capacity of vacuum pump 133.3 Pa (1Torr)		
Temp. setting range	*		RT +5-180°C
Rotation speed setting & display	Volume setting and digital display		
Timer function	ON-OFF timer, solenoid valve		
Feed liquid control	-	sensor PT-100Ω	Vacuum seal
Motor	DC brushless motor 60W		
Rotation axis seal	Vacuum seal		
Evaporation tube	Jacket type, evaporation surface 0.04m <sup>2</sup>	Stainless steel (SUS304)	
Condenser	Vertical double spiral tube, condenser surface 0.3m <sup>2</sup>		
Receiving flask	Concentration side 1L volume, Evaporation side 1L volume		
Heating source	Hot water circulator (option)	Mantle heater 800W	
Material	Borosilicate glass, teflon, stainless steel SUS304		
Connection size	Cooling nozzle, hot water nozzle OD 12mm, suction nozzle, sample nozzle OD8mm		
Sample injection	Solenoid valve, timer, needle valve/Automatic control by liquid level sensor/Solenoid valve, timer, needle valve		
Ambient temperature	5~35°C		
Overall dimensions (mm) & weight	625W x 400D x 1416H, 40kg		
Input voltage	100V		



### \*Thin Film Evaporation

- Forms a uniform thin film on the evaporation area by centrifugal action and stirring effect, enabling to concentrate the foaming solvents or high-viscous solvents.
- Needs short time for heating so that the sample can be concentrated without being too much degraded by heat.
- Can increase the rotation speed of propellers in order to raise the concentration ratio.
- Can remove the liquid by opening/closing the cock of receiver flask and concentrates the sample continuously.

