



JAGDAMBA ENTERPRISE



ROTARY EVAPORATOR SYSTEM

SALIENT FEATURES OF JE ROTARY EVAPORATORS

- A user-friendly metal frame guard hood with transparent acrylic protecting the user from steam, oil spillage and accidental flask breakage
- The whole system is covered with metal housing with glass doors keeping in mind the industrial safety standards
- The receiver are guarded with metal. Glass doors are provided for ease of handling for the user in order to clean the receiver after reaction
- The thermostatic bath is lifted by hydraulic system
- Self-aligning flask support system for user friendly operation
- Emergency stop button provision during process
- It is controlled by PLC (Programmable Logic Control) system
- All the parameters can be read, set and stored:
 - Actual & set bath temperatures
 - Vapour temperature
 - Rotation speed
 - Actual and set vacuum values

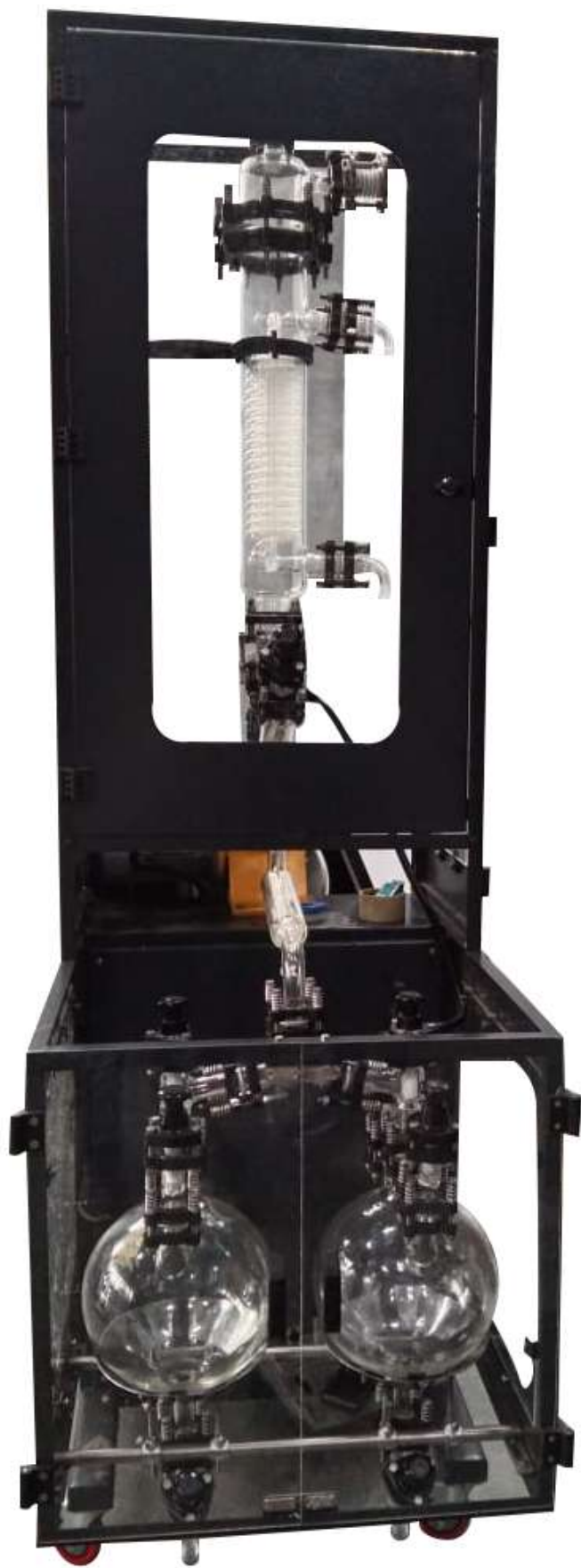
Principal

A Rotary evaporator can form a thin film by rotating under constant heating and specific pressures (vacuum or atmospheric). It evaporates effectively and the vapours are condensed separately and collected

Applications

- Concentration
- Solvent extraction
- Crystallisation
- Petrochemistry
- Particularly handling temperature sensitive materials

Rotary evaporator is the most effective and important apparatus for Research and development, Educational purpose and Pilot testing in Biological, biochemical, pharmaceutical, chemical, food and fragrance industry.





Metal frame guard hood with transparent glass

Castor wheels

TECHNICAL DATA OF 5 LITRE ROTARY EVAPORATOR

MODEL	5 LIT ROTARY EVAPORATOR
BODY	SS 304 BODY
POWER SOURCE	ELE. Panel in FLP enclosure
Voltage Supply	220V , 3Ph 50Hz
Power Consumption	3 KW
ROTATION OF FLASK	
Rotation & Controlling	Soft start & controlling with VFD
Rotation Drive	AC Synchronies Motor 0.25HP,LHP FLP Motor
Rotation speed	10 to 90
Controlling	By VFD
Accuracy	2 RPM
Distillation rate	up to 1-2 litre / hour for water
BATH HEATING	
Temperature Range	0-180°C
Bath Heater power	2 kw
Bath Heating Control	Electronic with PT-100, control accuracy +/-2 °C
Bath Construction	Stainless steel 304 with Cover for heat protection
Bath Lift	Motorised & controlled Linear Movement by Limit switches
GLASS ASSEMBLY	
Rotating Flask	5 L-1 no
receiving Flask	2 L - 1 no
Condensate Area/m ²	Vertical, 0.35 m ^a surface area
Maximum Vacuum	133Pa
Safety Measures	MCB & Short Circuit Breaker , Heater Protection
Other Accessories	pipe supports, condensor holder, receiver flask holder, and rotating flask holder on bath
Safety Measures	MCB & Short Circuit Breaker , Heater Protection
DISPLAY	
RPM	Digital
BATH Temp	Digital with PID Controller
Vapour Temp	Digital
Time Totalizer	Digital
SENSORS	
Vapour temperature	PT - 100, 3 wire with FLP Head
Bath Temperature	PT - 100, 3 wire with FLP Head
CASTOR WHEELS	All four wheels with Lock [Double Wheels]

TECHNICAL DATA OF 10 LITRE ROTARY EVAPORATOR

MODEL	10 LIT ROTARY EVAPORATOR
BODY	SS 304 BODY
POWER SOURCE	ELE. Panel in FLP enclosure
Voltage Supply	220V , 3Ph 50Hz
Power Consumption	3 KW
ROTATION OF FLASK	
Rotation & Controlling	Soft start & controlling with VFD
Rotation Drive	AC Synchronies Motor 0.25HP,LHP FLP Motor
Rotation speed	0 to 160 RPM
Controlling	By VFD
Accuracy	2 RPM
Distillation rate	up to 3.5 - 4 litre / hour for water
BATH HEATING	
Tempeprature Range	0-180°C
Bath Heater power	4 kw
Bath Heating Control	Electronic with PT-100, control accuracy +/-2 °C
Bath Contruction	Stainless steel 304 with Cover for heat protection
Bath Lift	Motorised & controlled Linear Movement by Limit switches
GLASS ASSEMBLY	
Rotating Flask	Interchangeable 5L, 6L and 10L flask
receiving Flask	5 L - 2 no
Condensate Area/m2	Vertical, 0.5 m ^a surface area
Maximum Vacuum	133Pa
Safety Measures	MCB & Short Circuit Breaker , Heater Protection
Other Accessories	pipe supports, condensor holder, receiver flask holder, and rotating flask holder on bath
Safety Measures	MCB & Short Circuit Breaker , Heater Protection
DISPLAY	
RPM	Digital
BATH Temp	Digital with PID Controller
Vapour Temp	Digital
Time Totalizer	Digital
SENSORS	
Vapour temperature	PT - 100, 3 wire with FLP Head
Bath Temperature	PT - 100, 3 wire with FLP Head
CASTOR WHEELS	All four wheels with Lock [Double Wheels]

TECHNICAL DATA OF 20 LITRE ROTARY EVAPORATOR

MODEL	20 LIT ROTARY EVAPORATOR	
BODY	SS 304 BODY	
POWER SOURCE	ELE. Panel in FLP enclosure	
Voltage Supply	220V , 3Ph 50Hz	
Power Consumption	5 KW	
ROTATION OF FLASK		
Rotation & Controlling	Soft start & controlling with VFD	
Rotation Drive	AC Synchronies Motor 0.25HP,LHP FLP Motor	
Rotation speed	10 to 135	
Controlling	By VFD	
Accuracy	2 RPM	
Distillation rate	up to 3.5 - 4 litre / hour for water	
BATH HEATING		
Temperature Range	0-180 ° C	
Bath Heater power	4 kw	
Bath Heating Control	Electronic with PT-100, control accuracy +/-2 °C	
Bath Construction	Stainless steel 304 with Cover for heat protection	
Bath Dimensions	Outer Ø 425mm x 330mm deep	
Bath Lift	Motorised & controlled Linear Movement by Limit switches	
GLASS ASSEMBLY		
Rotating Flask	20L-1 no	
receiving Flask	10 L - 1 no	
Condensate Area/m ²	Vertical, 1 m ^a surface are	
Maximum Vacuum	133Pa	
Safety Measures	MCB & Short Circuit Breaker , Heater Protection	
Other Accessories	pipe supports, condensor holder, receiver flask holder, and rotating flask holder on bath	
Safety Measures	MCB & Short Circuit Breaker , Heater Protection	
DISPLAY		
RPM	Digital	
BATH Temp	Digital with PID Controller	
Vapour Temp	Digital	
Time Totalizer	Digital	
SENSORS		
Vapour temperature	PT - 100, 3 wire with FLP Head	PT - 100, 3 wire
Bath Temperature	PT - 100, 3 wire with FLP Head	PT - 100, 3 wire
CASTOR WHEELS	All four wheels with Lock [Double Wheels]	

TECHNICAL DATA OF 50 LITRE ROTARY EVAPORATOR

MODEL	50L GMP & FLP	50L NON GMP & FLP	50L NON GMP & NON FLP
BODY	SS 304 BODY	MS Powder coated	MS Powder coated
POWER SOURCE	ELE. PANEL IN FLP ENCLOSURE		ELE. PANEL IN NON FLP ENCLOSURE
Voltage Supply	220V , 3Ph 50Hz		
Power Consumption	7 KW		
ROTATION OF FLASK			
Rotation & Controlling	Soft start & controlling with VFD		
Rotation Drive	AC Synchronies Motor 0.5HP,LHP / Hindustan Make FLP motors	AC Synchronies Motor 0.5HP	
Rotation speed	10 to 135		
Controlling	By VFD		
Accuracy	2 RPM		
Distillation rate	up to 4 - 5.8 litre / hour for water		
BATH HEATING			
Temperature Range	0-180 ° C		
Bath Heater power	6 kw with FLP Head	6 kw without FLP head	
Bath Heating Control	Electronic with PT-100, control accuracy +/-2 °C		
Bath Construction	Stainless steel 304 with Cover for heat protection		
Bath Dimensions	Outer Ø 560 mm x 400mm deep		
Bath Lift	Motorised & controlled Linear Movement by Limit switches		
GLASS ASSEMBLY			
Rotating Flask	50L-1 no		
receiving Flask	20 L - 1 no		
Condensate Area/m ²	Vertical, 1.2 m ² surface are		
Maximum Vacuum	133Pa		
Safety Measures	MCB & Short Circuit Breaker , Heater Protection		
Other Accessories	pipe supports, condensor holder, receiver flask holder, and rotating flask holder on bath		
Safety Measures	MCB & Short Circuit Breaker , Heater Protection		
GFT	T Bush		
DISPLAY			
RPM	Digital		
BATH Temp	Digital with PID Controller		
Vapour Temp	Digital		
Time Totalizer	Digital		
SENSORS			
Vapour temperature	PT - 100, 3 wire with FLP Head	PT - 100, 3 wire	
Bath Temperature	PT - 100, 3 wire with FLP Head	PT - 100, 3 wire	
CASTOR WHEELS	All four wheels with Lock [Double Wheels]		

TECHNICAL DATA OF 100 LITRE ROTARY EVAPORATOR

MODEL	100L GMP & FLP	100L NON GMP & FL	100L NON GMP & NON FLP
BODY	SS 304 BODY	MS Powder coated	MS Powder coated
POWER SOURCE	ELE. PANEL IN FLP ENCLOSURE		ELE. PANEL IN NON FLP ENCLOSURE
Voltage Supply	415V, 3 phase, 50 Hz		
Power Consumption	14 KW		
ROTATION OF FLASK			
Rotation & Controlling	Soft start & controlling with VFD		
Rotation Drive	AC Synchronies Motor 1.0 HP,LHP / Hindu	AC Synchronies Motor 0.25HP	
Rotation speed	0 to 90		
Controlling	By VFD		
Accuracy	2 RPM		
BATH HEATING			
	Bath MOC SS 304, JACKETED AND INSULATED		
Tempeprature Range	0-180 ° C		
Bath Heater power	6 kwX 2		
Bath Heating Control	Electronic with PT-100, control accuracy +/-2 °C		
Bath Contruction	Stainless steel 304 with Cover for heat protection		
Bath Dimensions	Outer diameter 750mm x 550mmHt		
Bath Lift	Motorised & controlled Linear Movement by Limit switches		
GLASS ASSEMBLY			
Rotating Flask	100-1 no		
receiving Flask	50 L - 1 no or 2 nos as preferred		
Condensate Area/m2	Vertical, 2.5 m2 surface area		
Maximum Vacuum	133Pa		
Safety Measures	MCB & Short Circuit Breaker , Heater Protection		
Other Accessories	pipe supports, condensor holder, receiver flask holder, and rotating flask holder on bath		
Safety Measures	MCB & Short Circuit Breaker , Heater Protection		
DISPLAY			
RPM	Digital		
BATH Temp	Digital with PID Controller		
Vapour Temp	Digital		
Time Totalizer	Digital		
SENSORS			
Vapour temperature	PT - 100, 3 wire with FLP Head	PT - 100, 3 wire	
Bath Temperature	PT - 100, 3 wire with FLP Head	PT - 100, 3 wire	
Castors wheel	All four wheels with Lock [Double Wheels]		

AUTOMATION AND INSTRUMENTATION

Automation from Single rotary unit to multiple units with common controller, multiple screens & with 21CFR part 11 compliant SCADA solutions.

Automation increases the reproducibility and productivity of complete chemical processes by automated runs.

Jagdamba Enterprise adapts and integrates commercially available up-to-date technology of leading suppliers which fulfil current technical guidelines and directives as per 94/9/EC regarding flame proof or ex proof equipment for installation in chemical plants and laboratories where Ex Zone specifications are required.

Non Ex proof IP65 panel solutions with various MOC options like SS, GRP, MS powder coated is also provided as per requirement.

Automation is often customised as per the complexity requirement of chemical processes.

Jagdamba provides solutions which cover control of single and multiple processes & devices.

Customised PLC for Rotary Evaporators cover basic control functions:

- Stirring speed
- Vacuum / Pressure
- Temperature Control
- Temperature Control Unit
- Data logging with export in ASCII format (*.csv) • Customised reporting

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