

## INTRODUCTION OF ROTARY EVAPORATOR



Rotary Evaporator is essentially a thin film evaporator also called rotary vacuum evaporator.

### **Working Of Rotary Evaporator:**

The rotating flask continuously covers a large surface area with a thin film which is ideal for rapid heat transfer. Fortuitously, the thin film also ensures uniform heat distribution without local heating. The facility to work the unit under full vacuum further facilitates evaporation at as low temperature as possible. That is to say, both boiling point and residence time are significantly reduced. These features combined, renders rotary film evaporator to be ideally suited for evaporation of heat sensitive material. It is equally successful for evaporation of suspension in crystallization processes, drying of powder / granules etc.

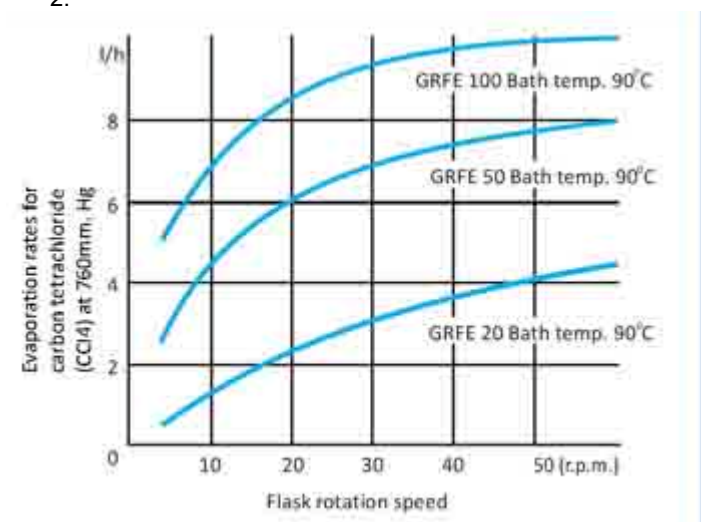
Rota Evaporator/ vacuum evaporator finds wide use from small scale laboratory set-ups to industrial operation. Goel Rotary Film Evaporator (GRFE) is preferred by both research and production facilities and has been used by laboratory and chemical, pharmaceutical and biotechnological industries.

### **SALIENT FEATURES OF ROTARY EVAPORATOR :**

1. Universal corrosion resistance.
2. Auto controlled, digital display of rotational speed and bath temperature.
3. Digital display of process time.
4. Automatic bath lifting.

5. Automatic bath lowering in case of power failure.
6. RS-232 Interface (Optional)
7. Withstands full vacuum.
8. Ideally suited for heat sensitive material.
9. Maintenance free working - Operational reliability.
10. Available in large sizes upto 400 Litre.

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#### CONSTRUCTION OF ROTARY EVAPORATOR:

Goel Rotary Film Evaporators are completely self contained units consisting mainly of :

1. An electrically heated SS heating bath with facility for raising and lowering the height.
2. Rotating flask of corrosion resistant borosilicate glass which is connected to drive by a coupling.
3. The drive is a hollow glass shaft which also acts a vapor off-take pipe. The drive shaft s sealed on condenser/receiver with teflon seal. Power is transmitted to the shaft by a motor driven gear with provision for varying speed.
4. Condenser/receiver arrangements are of standard design depending on the model/size.

#### PERFORMANCE DATA OF ROTARY EVAPORATOR :

The performance of rota-evaporator depends on various parameters such as temperature differential between bath and contents of flask, RPM, flask capacity and working pressure. An indicative comparison of boil-up of CCl4 rates for 20L, 50L and 100L is given in above figure.

#### TECHNICAL INFORMATIONS RELATED TO VARIOUS MODELS OF ROTARY EVAPORATOR ARE FURNISHED BELOW:

Model	Rotating Flask Capacity (ltrs.)	Rotating Speed (rpm)	Electric Motor Rating	Condens e Cooling Area	Receiver Flask Capacity (ltrs.)	Power Supply (Volt/Hz)	Bath Rating
GRFE2	2	0-80	40 Watt	0.15	1	230 V, 50 Hz	2
GRFE3	3	0-80	40	0.15	1	230 V, 50	2

			Watt			Hz	
GRFE5	5	0-80	40 Watt	0.15	2	230 V, 50 Hz	2
GRFE1 0	10	0-80	0.25 HP	0.20	5	230 V, 50 Hz	4
GRFE2 0	20	0-80	0.25 HP	0.30	10	230 V, 50 Hz	4
GRFE5 0	50	0-80	0.25 HP	0.50	20	230 V, 50 Hz	6

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