

# Vacuum Coater

MODEL: 24F10-D (For Laboratory & Industrial Use)



**HINDHIVAC** Vacuum Coater Model 24F10-D is specially designed and built to produce quality, thin homogenous and pure film coatings to obtain desired effects in optics, electronics, material science, decorative & functional coatings and other such applications.

The basic units of the Vacuum Coater Model 24F10-D consisting of power supply control rack and a mechanical section housing the vacuum pumping system and the beljar configurations. The 24F10-D is designed with a vertically mounted water cooled beljar (vacuum chamber) which houses a variety of chamber accessories and permits free access to the chamber base plate.

The chamber base plate has standard electrical and mechanical feed-throughs suitable for thermal evaporation, electron beam evaporators, glow discharge assemblies, sensors, rotary motion feed-throughs, shutters etc. The stainless steel beljar is moved up & down by means of a hydraulic lifting system. This system can accommodate variety of accessories and electron beam gun 8 KW.

## Salient Features

- Compact & Elegant
- Easy to service
- Fast Vacuum Cycle due to high pumping speed
- Low ultimate pressure
- Simple handling and dependable operation by front panel control system
- Cabinet mounted with hydraulic lifting facility for beljar

## Optional Accessories:

Planetary Drive, Radiant Heaters, Digital Thickness Monitor, Liquid Nitrogen Trap, Electron Beam Gun 8KW 270° bent beam 4 source/ Single Source with power supply, Liquid nitrogen cooling, Quartz tube heater, Flash evaporation, Multi filament turret

## TECHNICAL SPECIFICATIONS

		Model
Parameters		24F10-D
1.	Vacuum chamber	Vertical Beljar type Vacuum Chamber
2.	Chamber Size	610 mm Dia x 600 mm Height.
3.	Base Plate Size	700mm dia, 21 nos. of blank holes on the periphery
4.	Material	Stainless steel SS-304
5.	Chamber Lifting	Hydraulic system with power pack
6.	CHAMBER GADGETORIES:	
	a. LT Evaporation	3 sets, 400A 10V
	b. Ion Bombardment	1 set, 3 KV, 500 MA
	c. Work holder size (flat)	533mm dia
	d. Rotary Cage Drive	DC motor with rotary shaft seal.
	e. Radiant Heater	Stainless Steel tubular heater dome shape, to heat the substrate at 300°C
	f. Gas feeding	Fine control needle valve
	g. Source shuter	1 no. manual operation
7.	VACUUM PUMPING SYSTEM	
	a. Diffusion pump type & speed	OD-250D, 1700 Lit/Sec.
	b. Rotary Vacuum Pump type & speed	CD-120, 2000 Lit/Min.
	c. High Vacuum Valve	350mm Butterfly Valve (Electro pneumatic) QSV-10P
	d. Roughing, Backing Valve	150mm size Right angle type electro pneumatic
	e. Vacuum Gauge	Analog, Pirani, Penning Gauge with sensor to measure Vacuum in the range of 0.5 Mbar to $1 \times 10^{-3}$ Mbar and $10^{-3}$ to $10^{-6}$ Mbar)
8.	Ultimate Vacuum (when LNT filled with Liquid Nitrogen)	$5 \times 10^{-6}$ M.bar in clean, empty chamber
9.	Utilities Required	
	a. Power	415V AC, 50Hz, Three Phase, peak power consumption _ 20KVA
	b. Water at 25° C	10-15 Lit/min at a pressure of 2-3 Kg/cm <sup>2</sup> at temp 15-20°C
	c. Pneumatic supply	Compressed air at 4-5 Kg/cm <sup>2</sup>

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