

# Magnetron Sputtering Unit with RF/DC Power Supplies

MODEL: 12 MSPT RF/DC



**HINDHIVAC** Magnetron Sputtering Unit Model 12 MSPT with single magnetron source of 4" size [target] is specially designed for Thin Film application by sputtering method.

Vacuum Chamber measures 12 inch. dia. x 10 inch. height glass chamber with both ends open and achieve vacuum sealing with top plate and bottom plate. (Stainless Steel chamber available as an option.) A target holder, for the material to be sputtered, made of copper with provision for cooling by water circulation is provided. Substrate holder (anode) is a copper plate of 5" dia is provided at the bottom plate.

A dedicated DC power supply of 2 KW is provided for Magnetron Sputtering.

A high speed vacuum pumping system fully integrated with necessary piping and valves, all operated manually is rated for high gas through put handling and to produce clean and high vacuum in the chamber. All the electrical controls and instruments are housed in the main unit at convenient place for smooth operation of the system.

### Optional Accessories:

RF power supply 500 Watts, 13.56 MHz with manual matching network, substrate heater cum holder, Mass Flow Controller.

## TECHNICAL SPECIFICATIONS

		Model
Parameters		12 MSPT RF/DC
1.	Chamber (Glass) Size	300mm dia x 250mm height (Stainless Steel Chamber optional)
2.	Base plate size	330mm dia, 11 nos of ports on the periphery
3.	Top plate lifting	Manual lifting with spring & ball cage assembly
4.	CHAMBER GADGETORIES:	
	a. Magnetron source (water cooled)	100mm dia
	b. Substrate holder (anode)	125mm dia
	c. Gas feeding	Fine control needle valve to admit O <sub>2</sub> /N <sub>2</sub> /Ar. (Mass flow controller - optional)
	d. DC power supply	2KW, Voltage: 150-950 V, Current: 0 to 2Amps (RF Power Supply 500 watts 13.56MHz with manual matching network-optional)
5.	VACUUM PUMPING SYSTEM	
	a. Oil diffusion pump type & speed	OD-114D (diffstack type), 280 Lit/Sec.
	b. Rotary Vacuum Pump type & speed	ED-15, 250 lt/sec
	c. High Vacuum Valve	100mm butterfly valve type
	d. Roughing, Backing Valve	25mm size (CV-25)
	e. Vacuum Gauge	Pirani, Penning Gauge with sensor to read vacuum in the range of 0.5 mbar to 1 x 10 <sup>-3</sup> mbar and 10 <sup>-3</sup> to 10 <sup>-6</sup> mbar
	f. Ultimate Vacuum (when LNT filled with Liquid Nitrogen)	1 x 10 <sup>-6</sup> mbar in clean, cold, empty chamber
6.	Utilities Required	
	a. Power	230V AC, 50Hz, Single Phase, peak power consumption ~ 10KVA
	b. Water	4-5 Lit/min at 24 PSI pressure at inlet temp. of 20°C
	c. Liquid Nitrogen	5 liters of liquid nitrogen per charge
	d. Target	Target material suitable to 4" dia magnetron source (Target material to be supplied by customer)

HIND HIGH VACUUM CO. PVT. LTD.

Site No.17, Phase 1, Peenya Industrial Area, Bangalore - 560 058, India. Ph: 080-8394518, 8394615, 8394617, 8394640. Fax: 080-8394874. E.Mail : info@hindhivac.com

SALES OFFICE

Baroda: Ph: 33178, 359039. Fax: 0265-331505. Calcutta: Ph: 4661462, 4649182. Fax: 033-4662830. Chennai: Ph: 4891061. Fax: 044-4891061. Hyderabad: Ph: 3235504, 3234609. Fax: 040-3235504. Mumbai: Ph: 5550003, 5587219. Fax: 022-5563724. New Delhi: Ph: 6282410, 6282411. Fax: 011-6282412. Pune: Ph: 5466095, 5442426. Fax: 020-5466095.