



सी.एस.आई.आर. – केन्द्रीय वैज्ञानिक उपकरण संगठन

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)

सैक्टर-30 सी, चण्डीगढ़ (भारत)

CSIR-Central Scientific Instruments Organisation
(Council of Scientific & Industrial Research)

Sector 30-C, Chandigarh (India)

www.csio.res.in



PRE-INDENT CONFERENCE NOTICE

No. CSIO/3(1)2019-Pur

April 03, 2019

The Director, CSIO Chandigarh intends to procure Vacuum Sputtering Coating System etc. Interested Manufacturer/Authorised Dealers/firm may attend the Pre-Indent conference on **29.04.2019 at 10.00 A.M.** for giving technical presentation of their products in the Optical Thin film Lab, Room No. 3, ACSIR complex Library Block of this Organisation. Please confirm your participation through mail at cosp@sio.res.in.


Mohinder Kumar
Controller of Stores & Purchase

RIGHT TO INFORMATION

Tentative Technical Specifications

A. Coating Chamber:

S/n.	Requirement/Parameters	Required Type/Value
A.1	Material	Stainless Steel SS 304L
A.2	Configuration	Box Type
A.3	Chamber Size	600 mm Diameter
A.4	Front Side	Hinged Full Opening Door
A.5	Base Plate	Bottom side of the chamber with adequate feedthroughs for various connections
A.6	Circulation of Hot/Cold Water	Provision for circulation of Hot/Cold water around the chamber
A.7	Viewing ports	1 Nos
A.8	Stainless Steel Liner	Two Sets of Stainless-Steel Liners for chamber walls to prevent deposition and easy cleaning

B. Chamber Gadgets

S/n.	Requirement/Parameters	Required Type/Value
B.1	Vacuum Parameters	The equipment should be able to achieve vacuum better than 3×10^{-6} mbar in less than 60 minutes of pumping time from atmosphere.
B.2	Pumping System	The system should have Turbo Molecular Pump (Pfeiffer/Leybold) backed by a suitable capacity Rotary Pump (Make: Pfeiffer/Leybold)
B.3	Mass Flow Controller	The equipment should comprise of two Mass Flow Controllers with power supply to control the flow of Argon, oxygen and nitrogen into the sputtering chamber. (Make: Brookes/MKS)
B.4	Thickness Monitor	The equipment should comprise of a Quartz crystal film thickness monitor of reputed company with 3 decimal rate display and 4 digit thickness display. (Make: Inficon/Intellemetrics)
B.5	Evaporation Sources	The equipment should have two magnetron sputtering sources and one thermal evaporation source placed in a confocal configuration for co-deposition as well as for multilayer deposition without breaking the vacuum. All the guns should

		be equipped with shutters.
B.6	Power Supply	The quoted magnetron sources should be compatible with any of the DC, pulsed DC and RF power supply. Suitable power supplies must also be included.
B.7	Coating Material and Substrate Type	The equipment should be able to deposit any combination of metals, metal alloys, composites, semiconductors, insulators on semiconductor /glass/metal/plastic substrates in a single run as per the number of evaporation sources and power supplies detailed therein.
B.8	Substrate Heater	The equipment should have provision for substrate heating up to 500 °C (working temperature, also under oxygen ambience) with PID controller. Temperature fluctuation should be within < 5% over 2" diameter.
B.9	Substrate Rotation	The equipment should have provision so that the substrate holder can provide in situ rotation while heating (5-20 rpm).
B.10	Vacuum Gauges	The system must include suitable gauges for measurement of vacuum in roughing, backing line and in chamber.

D. Other Items:

S/n.	Requirement/Parameters	Required Type/Value
C.1	Warranty	2 Years Warranty from the date of Installation
C.2	AMC	The firm must quote the AMC price for next 5 years after the expiry of the warranty period.
C.3	Spare parts	The firm must include spare parts for 2 years and coating targets for the system for initial set-up.
C.4	Software	The system must include required software for automatic deposition and remote operation of the equipment.