

**Office of the Dean Research and Development
Indian Institute of Engineering Science & Technology (IEST), Shibpur
Howrah-711 103**

Project Code: DRC/DST/CEGESS/HS/022/16-17

**Centre of Excellence for Green Energy & Sensor Systems
Indian Institute of Engineering Science & Technology (IEST), Shibpur
Howrah-711 103**

Notice Inviting Quotations

Sealed quotations are invited for the supply of

Item 1. Sputtering Target,

Item 2. Ultrasonicator,

Item 3. Printer,

Item 4. BRONKHORST MFC (Calibration purpose).

as per the following technical specification. The technical specification can be downloaded from the website. The document can be also obtained from the Centre of Excellence for Green Energy & Sensor Systems (contact: Prof. H. Saha) between 10.00 a.m. and 5.30 p.m. on all working days. The invitation is valid for 7 working days from the date of publication of this notice.

Dean (R & D)

(A. Code DRC-T043/17-18)

SECTION I: TERMS & CONDITIONS

- 1.** The last date of receipt of quotation is valid **for 7 working days** from the date of publication of this notice. Quotations received later will not be entertained under any circumstances.
- 2.** Potential supplier are to submit the quotations in Sealed Cover to the Centre of Excellence for Green Energy & Sensor Systems in the following address:

**Prof. H. Saha
CEGESS
IEST, Shibpur
Howrah-711103, India**

- 3.** Item name must be mentioned on cover.
- 4.** The price quoted should be inclusive of all Taxes in INR, duties and levies. Inclusion of Tax/Levy at a latter stage will not be accepted. Freight, Insurance charges should be clearly indicated. If GST is chargeable then price quoted should be inclusive of GST in INR.
- 5.** Vendor should have proven track record of supply in IEST, IIT, NIT, IISc.
- 6.** Commercial Papers duly signed & must be attached.

SECTION II: TECHNICAL SPECIFICATIONS :-

Item 1.

Sputtering Target :

1. **Materials :** Nickel Oxide n (NiO) – 99.95% Purity
Size : 4” Dia X 6mm th
Cu Backing Plate size : 4” Dia X 3mm th
Qty – 1.
2. **Materials :** Molybdenum Oxide (MoO₃) – 99.95% Purity
Size : 4” Dia X 6mm th
Cu Backing plate size : 4” Dia X 3mm th
Qty – 1

Item 2.

Small Ultrasonicator :

Electric Supply : 170 - 245V, A.C, 50 Hz 1 phase.

Ultrasonic Power : As per Model Watts average,

Ultrasonic Frequency : 40 K Hz OR 33 +/- 3 KHz

Ultrasonic Generator : Micro Controller base Digital Timer .

With latest MOSFET base technology.

With Auto Degassing facility.

Automatic frequency tuning for maximum output Modular generator for easier modification/servicing.

Timer : Two Digit LED display 0 – 20 / 90 minutes Timer with settable & On / Off keys.

Auto Degassing : Preset 10 min., to remove dissolved gases from solution to increase Ultrasonic efficiency.

Heater : S.S sheathed cartridge type immersion heater approx. power capacity 500 watts Heater can easily be replaced.

PSE : Pulse Sweep Energy for uniform distribution of Ultrasonic Energy.

Temperature Control : By Thermostat Blind type Maximum allowable Temp is 60°C OR Digital Temp. Controller with two Digit LED Display , Up / Down Keys for setting Settable temp. : Ambient temperature to 60°C Maximum allowable Temp is 65°C

Transducers : PZT Sandwich type, bonded on the base of S.S Tank, Crystal used of PZT4, of matrock Morgon Make. High temp. & good quality wires for connection & epoxy for bonding of transducers are used.

Tank Clear Size : As per Model

Tank MOQ : S.S 304grade, 1.6mm thick & buffed form inside

Tank Inner Capacity : 8” x 8” x 7” (LXWXH)

Drain Valve : 1/2" Ball Valve is provided for cleaning the tank

Tank Housing MOQ : S.S 304 grade.

Accessory : Basket (custom designed) , Lid , Manual is Provided (As per model)

Item 3.

Printer :

General

- Standard Functions
Print, Scan, Copy, Fax
- Processor
600 MHz
- Operational Panel
2-line LCD
- Memory (Standard)
128 MB
- Interface (Standard)
Hi-Speed USB 2.0 / Ethernet 10/100 Base
Monthly Duty Cycle 15000 pages
- Client OS Support
Windows 8.1 / 8 / 7 / Vista / XP

Print

Speed (Mono)

Up to 28 ppm in A4 (29 ppm in Letter)

- *First Print Out Time (Mono)*
Less than 8.5 seconds (From Ready Mode)
- *Resolution*
4,800 x 600 dpi effective
- *Print Languages*
PCL6 / PCL5e / SPL
- *Duplex Print*
Built-in

Copy

Speed (Mono)

Up to 28 cpm in A4 (29 cpm in Letter)

First Copy Out Time (Mono)
Less than 15 secs (ADF) / Less than 14 sec

Reduce / Enlarge Range
25 - 400% (ADF, Platen)

Multi Copy

99 pages

Copy Features

ID Copy / 2-up / 4-up / Collation Copy / Auto-fit

Scan

Compatibility

TWAIN Standard / WIA Standard

- *Method*
Colour CIS
- *Resolution (Optical)*
Up to 1,200 x 1,200 dpi
- *Resolution (Enhanced)*
Up to 4,800 x 4,800 dpi

FAX

Compatibility

ITU-T G3 / ECM

- *Modem Speed*
33.6 kbps
- *Memory*
8MB (600 pages)
- *Auto Dial*
Yes
- *Fax Feature*
On Hook Dial / Auto Redial / Last Number Redial
/ Auto Reduction / Multi-send / Delayed Send
/ Fax Forwarding / Broadcasting up to 209 locations

Paper Handling

Input Capacity (Cassette)

250-sheet

Input Capacity (Multipurpose Tray)

1-sheet

Media Type (Cassette)

Plain / Thin / Thick / Cardstock / Recycled / Archive / Bond

Media Type (Multipurpose Tray)

Plain / Thin / Thick / Thicker / Cardstock / Transparency /

Pre-Printed / Recycled / Archive / Bond / Label / Envelope

/ Thick Envelope / Cotton / Colored

Media Size (Cassette)

A4 / A5 / A6 / Letter / Legal / Executive / Folio / Officio /

ISO B5 / JIS B5

Media Size (Multipurpose Tray)

A4 / A5 / A6 / Letter / Legal / Executive / Folio / Officio /

ISO B5 / JIS B5 / Envelope (Monarch, No-10, DL, C5, C6) /

Custom (76 x 127 mm - 216 x 356 mm)

Media Weights (Cassette)

60 - 163 g/m²

• *Media Weights (Multipurpose Tray)*

60 - 220 g/m²

• *ADF Type*

ADF

• *ADF Document Capacity*

40 sheets

• *Output Capacity*

120-sheet Face Down, 1-sheet Face Up

Extra Cartridge : 2 Nos.

Item 4.

BRONKHORST MFC (Calibration purpose) :

1. EL-FLOW Base –N₂O gas flow
2. EL-FLOW Base –H₂ gas flow

3. LOW- Δ P-FLOW –SiH₄ gas flow
4. EL-FLOW Base –NH₃ gas flow
5. EL-FLOW Base- CHF₄ gas flow

Note : transport charges Warranty period expected 6-8 months.