

Specifications for Ultrasonicator

A. Detailed specifications of the equipment

- Power minimum 100 W (or higher)
- Suitable resonator, Output frequency minimum 30 kHz (or higher), auto-tuning microprocessor
- Basic equipment comprising of generator, ultrasonic converter, horn, tips/ probes, power cables and suitable capacity pump.
- Adjustable pulse duration (on & off time) ranging from 1 sec to at least minimum 1 hr (or higher)
- Programmable timer
- Temperature controller to prevent overheating of the specimen
- Sound proof chamber
- Different sizes of probes / microtips to sonicate minimum volume of 50 µl & maximum up to 250-500 ml.
- Suitable flow cell made of stainless steel, with cooling arrangement for pressurized circulation of fluids.
- Detachable stainless steel rotator with thermocouple.
- All required cables and connectors
- Minimum spares required for trouble free operation

B. Power requirements

- Power 220-240 V AC, 50-60 Hz

C. Qualification criteria & other aspects

- The vendor should have supplied minimum two ultrasonicators in India and details should be furnished.
- Should have agents in India to provide after sales service, support and maintenance.
- The machine should be guaranteed for a period of 2 years from the date of commissioning. During warranty period, if there is any repair to be carried out at the supplier's works, transportation cost of equipment/component besides repair / replacement charges, if any, should be borne by the supplier.
- Photograph and catalogue related to each and every item should be enclosed.
- Dimensions of equipment, weight and space requirements to be given.
- Installation & Commissioning should be carried out at BHEL R&D. Pre-installation requirements should be furnished.
- Commissioning charges, if any, to be indicated.
- Compliance statement of specification to be submitted along with the offer. Failure to give compliance statement, the offer is liable to be rejected. All tender specifications to be compared with machine offered line by line and documentary evidence must be enclosed by the supplier along with quotation.
- Two hard copies of all the operational manuals related to the ultrasonicator instrument should be provided.
- The supplier should ensure that the spares are made available for the next 10 years.
- Only reputed manufacturers with ISO 9001 certificate need to quote.

D. Technical & commercial bid submission

D.1. Technical offer with all catalogues should be provided

D.2. Compliance statement meeting the specification line by line should be provided (Failure to give compliance statement, the offer is liable to be rejected)

D.3. Commercial bid (Price) with terms and conditions to be submitted in a separate Sealed Cover.

Note: **All covers should be clearly marked indicating the contents and should be SEALED.**

For any Technical Clarification, please contact :

Shri K Venugopal, AGM(CNT) at E-mail ID : venugopal@bhelrnd.co.in