

## **Tender for Procurement of Planetary Micro Mill**

IIT-Madras is looking for a planetary micro mill with accessories. The following technical specifications should be met, to qualify the technical bid. A detailed compliance statement should be provided and it should be supported by the manufacturer's (OEM) product brochure or website. Information provided in the supplier/redistributor/vendor/reseller's brochure or website cannot be considered as supporting document. Technical bids without proper compliance statement will not be considered. The bidder should be an Original Equipment Manufacturer or their authorized vendors/dealers/partners. If vendors/dealers/partners are participating in the bidding, an authorization certificate should be provided.

The system should meet the following technical requirements

1. The mill should be a bench top model
2. The mill should be capable of both wet and dry grinding
3. The mill should have capacity to hold two bowls with at least 80 ml volume
4. The mill should be able hold maximum sample quantity of 60 ml and minimum sample quantity of 1 ml
5. The mill should have milling capability for the particle size of upto 5mm in the feed
6. The final particle fineness should be less than 0.1  $\mu\text{m}$
7. The bowls and balls should be made of zirconium oxide
8. The grinding bowls should be supplied with steel casing.
9. Recommended number of grinding balls of 15mm, 10mm and 5mm should be quoted.
10. Rotational speed of main disk should be 100 - 1100 rpm
11. Maximum speed of grinding bowls should be 2200 rpm
12. High energy milling up to 95 g.
13. The mill should have facility of continually monitoring and recording the data of gas pressure and temperature during the grinding process
14. The mill should have easier logging facility.
15. Compensation of unbalance of all grinding bowls using a compensation mechanism which is easy to operate.
16. Possibility to add additional lock-system and/or special lid for grinding in inert atmosphere
17. Grinding chamber cooled by built-in to permit longer grinding times
18. Programmable interval and break times and rotation direction (clock wise & anti clock wise)
19. Absolutely reproducible grinding parameters with use synchronous belts for transmission.
20. Effective diameter of main disk should be 140 mm
21. Transmission ratio should be 1: -2 or better
22. Vendor should attach list of at least 10 satisfactory installations of quoted instrument in India.
23. Warranty: Should provide at least 1 year warranty.
24. Installation and training should be done onsite.

