



Ref: NCB/F-192020/2019-2020 (N)

Date: January 20, 2020

Specification of Refrigerated Incubator Shaker

1. The system should be microprocessor controlled Incubator Shaker It should have touch screen LCD controller with easy icons and user-friendly control system.
2. The system should be equipped with large, easy to read display screen.
3. The system should have temperature range from +4°C to 80°C.
4. The system speed should be 30-400 rpm
5. The System should have heated window for better temperature uniformity
6. The system should have the speed accuracy of ± 2 rpm
7. The fluctuation/variation at 37°C should not be more the 0.1°C /0.5°C
8. The system should have orbital shaking motion
9. The system should have the option to mute the audible alarms
10. Air circulation by a fan to maintain temperature uniformity.
11. System should have timer of up to 1 min to 999 Hrs.
12. The system should have three-point temperature calibration
13. The system should have the Corrosion resistance stainless steel interior and epoxy-powder coated exterior.
14. The system should have Temperature and shaking speed deviation alarm.
15. The system should have internal lighting.
16. The system should have Built-in RS-232 port and USB port for external control and data collection.
17. The system should have vertical glide up doors for space saving with hydraulic setup.
18. The system should have the external dimension of (WXDXH) 130X90X70 cm and platform size should be 75 x 48 cm $\pm 5\%$
19. The system should have Smooth start and smooth stop function prevents chemical spills from flasks or test tubes and Easy-access drain system to clean up the spills.
20. The system should have programmable controller to automate parameter changes on a timed basis
21. The system should be quoted with Universal slide out Platform having capacity to holds various size of flask sizes 50ml, 100ml, 200ml 250 ml, 500 ml, 1000 ml clamps each 5 no's and test tube racks with the main offer
22. Electronic and mechanical components should be enclosed, protected from accidental spills.
23. The system should have automatic restart function in case of power failure and after door opening and closing
24. The system should have acceleration/deceleration circuit to prevent sudden start and stop for delicate sample.
25. The incubator shaker should be quoted with stackable kit with the main offer as the kit should be easy to fit.
26. The system Should mandatorily have an option to Stack up to 3 units for Space Saving.
27. The system should have Standard remote alarm contact should allow monitoring of alarm condition



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28. The system should be supplied with lockable Retractable foot caster for easy mobility during installation or relocation and also should have the adjustable height to keep in stable position after the movement of the shaker
29. It should have open lid cut out switch stop agitation when chamber is open.
30. The system should be supplied with all the accessories required to function in the main offer (not an optional accessories Ex. Slide out platform with easy mechanism, Clamps, test-tube racks, stacking kit, etc)
31. System should operate at 230 V/ 50 Hz.
32. The system should be CE/ ISO certified.
33. The system should have the warranty for 3 years.
34. The system should be supplied with all accessories required to function.
35. The product should be as per CE/IEC guideline and certificate from authorized body should be submitted. No self-declaration will be accepted.
36. The system should be installed by the trained Engineer and should be trained on Application, operation and maintenance.
37. The product should be as per CE/IEC guideline and certificate from authorized body should be submitted. No self-declaration will be accepted.
38. Compliance to each of the above points should be separately indicated and evidence presence for each of them (Product brochures should be highlighted wherever required).
39. The service team should be stationed in Bangalore. Contact details of Engineer and office Address should be submitted with this offer.
40. The past performance/service support in NCBS/INSTEM/CCAMP should be satisfactory and the technical evaluation will be done accordingly.