

Annexure-1

TECHNICAL SPECIFICATIONS FOR SPIN COATER SYSTEM

Description: The spin coater system is to be used for coating silicon wafers, glass slide, and samples of irregular shapes/sizes. It should consist of vacuum chuck(s) capable of holding samples of different dimensions and should be made of an inert, non-interacting material, capable of withstanding various organic/inorganic solvents. The detailed technical specifications are given below

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Sl. No	Items	Specifications
1	Sample dimensions	<ul style="list-style-type: none">• Should be capable of coating wafers up to 6" (150 mm) diameter• For square samples, maximum dimensions should be 4" x 4" (100 mm)• Should be capable of handling samples smaller than the maximum dimensions and of irregular sizes and shapes.• The minimum samples size (for square and circular samples) that can be handled should be specified clearly.
2	Operating parameters	<ul style="list-style-type: none">• Maximum RPM capable should be at least 12000 rpm. This needs to be specified clearly. The step size for setting rotation should be incrementable by 1 rpm (± 1 rpm).• The system should have high acceleration and accuracy and should have a maximum acceleration of 30000 rpm/s. Acceleration/deceleration should be programmable at each step.• Both clockwise and counterclockwise rotation should be possible.• Minimum and maximum programmable time should be mentioned.• The minimum and maximum number of steps in a single recipe should be mentioned.• The number of recipes that can be stored in the coater should be specified.• Recipe storage should be structured, and password protected for easy and safe management

3	Chuck and Adapter	<ul style="list-style-type: none"> • Suitable vacuum chuck and adapter to hold samples of size min 10 mm and max 150 mm diameter and 100 x 100 mm square. The build material of the chuck should be natural polypropylene (NPP).
4	Spin coater materials	<ul style="list-style-type: none"> • The materials used in the inner wall of the process chamber and housing should be specified. It should preferably be made of high quality chemically resistant material such as NPP. It should be capable of chemical stability in the presence of a variety of organic/inorganic solvents and chemicals. • The material used for the lid should also be specified. Preferably it should be transparent so that the process can be observed.
5	Display	<ul style="list-style-type: none"> • Should be detachable, full-size color touchscreen, glove-friendly, and chemical resistant
6	Spin coater dimensions	<ul style="list-style-type: none"> • Overall dimensions and weight of the spin coater should be specified.
7	Vacuum pump	<ul style="list-style-type: none"> • The specifications for the vacuum pump to be used with the spin coater should be given. • Preferably a locally made generic vacuum pump should be compatible with the spin coater.
8	Power	<ul style="list-style-type: none"> • All voltages should be compatible with Indian conditions (220-240 V AC with 50 Hz) single-phase supply.
9	Warranty	<ul style="list-style-type: none"> • At least 12 months warranty, including parts and labour should be included.
10	Existing spin coaters	<ul style="list-style-type: none"> • A list of spin coaters, installed in India in the last two years, should be included. Contact information for the last five most recent installations of the model quoted should be provided as reference.
11	Accessories	<ul style="list-style-type: none"> • Include a list of optional accessories compatible with the spin coater and their costs. These should include • Adapter to hold smaller samples • Liners to cover the inner chamber walls of spin coater • Centering tool to properly position the wafer • Drain hose made of NPP • Manual and/or automatic dispense kit
12	Manuals and user training	<ul style="list-style-type: none"> • Operation manuals should be provided, and support should be provided for both installation and user training. Address of local (Chennai or nearby) support office should be included.