

Annexure – 1

Technical Specifications for Motorized XYZ Translation Stages

Qty Required: 1 No

Sl. No.	Parameter	CMTI Requirement
<b>Stages</b>		
1	Axes	Motorized XYZ
2	Control Type	Closed Loop
3	Drive Type	Ball Screw/ Lead Screw
4	Stroke	100 mm on XYZ, all three axes
5	Load carrying capacity	> 3 kg on horizontal and vertical axes
6	Positioning Accuracy	$\leq 0.005$ mm
7	Resolution	$\leq 0.0005$ mm
	Repeatability	$\leq 0.005$ mm
8	Max Speed	$\geq 5$ mm/sec
9	Carriage	The stages should be equipped with a carriage having mounting holes, to accommodate various samples.
10	Mounting adapters	All necessary mounting adapters to assemble the stages in XYZ configuration, should be included
<b>Control System</b>		
11	Control Type	Closed Loop through encoder feedback.
12	Number of Controllable Axes	3
13	Motor Type	Stepper
14	Motion Modes	<ul style="list-style-type: none"><li>- Move left/ right/ up/ down.</li><li>- Incremental movement.</li><li>- Move to a position.</li><li>- Move to home position.</li><li>- Speed control.</li></ul>
15	I/O	External Trigger IN and Trigger OUT provision for I/O.
16	Communication Interface	PC based operation of controller to be supported through USB interface. If the controller comes with RS-232 interface, appropriate USB to serial converter to be included.
17	Supported OS	Windows 10
18	Power supply	Power supply as required to operate the stage to be included.
19	Cables	All cables necessary for operation of the stage like power cables, data cables, interconnecting cables etc to be included.
20	Control software	Operating software and associated APIs, executable on Windows platform to be provided.
21	Test Reports	The stage should be tested for its positioning accuracy and the reports of the same to be included in the supply.

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