

ExTeM-CAPEX-010-XYZ-stages

Technical specification for the motorized X-Y-Z stages

X-Y-Z stages with motorized controller

The linear stage is required for setting up the fluid jet polishing setup with the following technical details

Absolute positioning accuracy: Linear stages (XYZ): ± 0.0025 mm or better

Repeatability: Linear stage (XYZ): ± 0.005 mm or better

Straight line accuracy: Linear stage (XYZ): $\pm 5 \mu\text{m} / 25$ mm or better

Construction: Aluminium alloy on any rust free Finish: Black anodized

Travel: Linear stages (XYZ): 300 mm

Resolution: Linear stages: $\pm 5 \mu\text{m}$ (full Step)

Linear guide: Recirculation ball screw and rail

Drive: Linear stage (XY Stage):

Rolled ball screw, pitch 4 mm

Linear stage (Z Stage): Rolled ball screw with magnetic brake

Actuator: Servomotor

Maximum speed: Linear stages (XY Stage): 16mm / sec (4 rps):

Linear stages (Z Stage): 16 mm / sec (4 rps)

Limit switch: Linear stages: Optical Limit switch in both ends

Theta stage: Optical home sensing limit switch

Mounting Holes: Linear stages: M6 tapped holes

Pay-Load: 25 Kg

Other conditions

The vendor may specify additional spares required for smooth operation of the unit over a period of five years

PRE-INSTALLATION REQUIREMENTS

The infrastructure/utilities such as power and any other special ambient conditions required from this laboratory should be intimated.

DOCUMENTATION:

Two sets of instruction and service manuals in English including various sub systems, spares, accessories, electronic drawings, schematics drawings should be supplied along with the unit. The necessary software in CD has to be supplied.

It is mandatory to submit the filled Technical Compliance Sheet attached herewith along with the technical quotation.

- a. all sub modules / accessories should be warranted for at least for 12 months from the date of installation/commissioning against all the design, material or manufacturing defects.
- b. Supplier should attend the maintenance issue within 7 days of complaint.
- c. Installation should be done by factory trained engineers at our institute, free of charge.
- d. Operation, service and maintenance training should be provided to at least five persons for a minimum of two days.
- e. One set of maintenance and operating manuals in English (with a hard copy)
- f. The offer should be made @5% GST against a concessional GST certificate.
- g. Equipment to be delivered in test ready, factory calibrated condition.
- h. Supplier must have supplied any kind of this system to at least 1 IIT or 2 NITs or 2 government R&D laboratories in India.
- i. The supplier must provide the detailed address of the customers from IITs, NITs and government R&D laboratories in India to whom they have supplied any kind of similar unit.
- j. The supplier should be equipped with well-trained engineers to offer post warranty maintenance and service support.
- k. The nearest service center is to be mentioned.
- l. Compliance statement needs to be provided clearly specifying COMPLY/NON-COMPLY with remarks/reasons of all of the points mentioned above (from 1.0 to 12.12).

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