NIRMA UNIVERSITY
Institute of Technology
Civil Engineering Department

Annexure- II/1

Specifications of Equipment for Tender Bid cum Quotation

Name of Equipment/ Assembly	Automatic Bursting Strength Tester
Related Standards to be accorded	IS 1966 - 1, ISO 13938-1, ASTM D3786
Features/Capabilities /Specifications	Metrological confirmation of the bursting tester shall be carried out in accordance with ISO 10012. The testing apparatus shall comply with the following requirements: • The apparatus shall be capable of producing various constant rates of increase in volume per unit time between 100 cm^3/min and 500 cm^3/min to within ±10 % of the indicated value. • Hydraulic pressure capacity of 50 kg/cm^2 • Bursting pressure shall be indicated with an accuracy of ± 2 % of full-scale range above the first 20 % of range. • Height at burst up to 70 mm shall be indicated with an accuracy of ± 1 mm. Zero position of the measuring gauge shall be adjustable to accommodate the thickness of the test specimen. • Means for indicating the volume at burst (if available) to within ± 2 % of the indicated value. • A test area of 100 cm^2 (112.84 mm diameter) shall be used. • The mechanical clamping device shall provide for clamping of the test specimen securely without distortion or damage and prevent slippage during the test. The clamping ring shall allow undisturbed vaulting of highly expansive fabrics (e.g. fabric test specimens whose height at burst is greater than half of the test specimen diameter). All test specimen clamping ring inner diameters shall be accurate to ±0.2 mm. To avoid the test specimen damage, a small curvature at the inner edge of the clamping ring facing the test specimen is recommended. • A safety cover shall enclose the clamping device during the test when the expansion of the test specimen takes place. It shall allow clear observation of the expansion of the test specimen during the test. • The diaphragm shall meet the following requirements: o thickness up to 2 mm; o highly expansive; o if the diaphragm is to be used several times, it shall be elastic within the range of height at burst observed during the test; o resistant against pressurizing fluids used. • Fabric cutting die for cutting of • Digital display for output of results.
Make	Clear mention **Make** in the bid
Electrical Supply Requirement	• Electricity supply requirements (voltage and phase) shall be clearly mentioned • Mention in case of Requirement of UPS (Uninterrupted Power Supply) with capacity
Size and Weight	• Mention the area required for positioning of equipment. • Mention the total weight of the equipment. • Mention specific requirement of foundation/pedestal for resting the equipment, if any. • Mention need of vibration isolation, if needed
Water and Air Supply Requirements	• Mention the requirement to supply compressed air, if any. • Mention the requirement and arrangement of water supply, if any.

Compatibility of parts	• In case of accessories from make differing to the make of equipment, compatibility shall be checked and certified by the bidder.
Calibration Certificates, Technical Manual and SOP	• The calibration certificates shall be provided with equipment and accessories. • Validity of calibration certificate for all devices shall not be less than one year. • Technical manual and Standard Operating Procedure documents shall be provided.