

## Specification for Universal Testing Machine (UTM)

SUBJECT	DESCRIPTION	VALUES
<b>LOAD FRAME</b>	Frame type:	Single Column
	Load Capacity:	1kN
	Height	≥900mm
	Maximum Cross head speed:	≥1000mm/min
	Minimum Cross head speed:	≤0.001mm/min
	Cross head travel:	1000mm without any accessories
	Drive System:	Electromechanical
	Accuracy in test speed:	0.05% of the set speed
	Accuracy in position, repetition measurement:	±2μ
<b>LOAD CELL</b>	Load Cell capacity	1kN
	Accuracy in load measurement:	±0.5% of applied load from 2% of applied load from 2% to 100% capacity
<b>GRIPPING</b>	Grips:	Screw type
	Specimen Thickness:	200 microns to 2 mm
	Speciment length:	2cm to 10cm
	Specimen width:	1 cm to 2 cm
<b>ELECTRONICS</b>	Data Acquisition Rate:	24-bit resolution card with data acquisition rate of minimum 500 Hz simultaneously on load, extension, and strain channels.
	Data Sampling Rate:	400kHz or better
<b>Software</b>	Configuration Possibility:	Configure a specific transducer (such as load cell or extensometer) and link it with a specific method such that the method will require that the specific transducer is used.
	Test Method Saving and Recalling:	Save the test method along with the start position, limit positions etc. so that this is recalled when the file is opened.

	Education Module:	Testing software should have an “Education Module” to teach the students various testing configurations virtually.
<b>Additional Requirements</b>	Warranty:	2-year warranty
	References:	Vendors must have sufficient experience in supplying equipment on reputed organisations for research purpose. They must provide references of end users whom we can contact for their experience with the supplied machine. Experience of the end users will also be used as a criterion for the selection of bids that meet technical requirements
	Training:	Vendors must provide training to our technical staff for using the equipment
	Others:	All the expenses for installation, training and post sales technical support will be borne by the vendor
<b>Optional</b>	Manual Cutting press with Dumbbell shape die, Load Cell (200N)	Provide prices of these items as optional