

Annexure-I

Sl. No.	Name of the Machine	Qty.	Specification
1	Izod / Charpy Impact Tester along with accessories (As per IS/179,180 & ASTM 256)	01	<ul style="list-style-type: none"> • Impact Energy: 0 - 25 Joules Resolution: 0.01 J • Release angle of pendulum: 150° Impact Speed: 3.46 m/s • Micro controller: With setting of sample dimension, error of machine and selection of Standard of test process (IS, ISO or ASTM) and hammer selection with Direct display of impact energy in joules and Impact Strength in J/mt& J/mt² and corresponding angle in degrees on digital indicator with selection of hammer. 4 Line LCD display with 10 test memory with Average result of selected test • Indication to select low or High value of Hammer during test • Indication to conduct test by microcontroller • Faulty sensor indication on LCD display • Easy, Safe and maintenance free release mechanism for Hammers • Easy interchangeability of hammers during test • Hammers: Suitable hammers each for Izod&Charpy tests should be supplied • Necessary incremental plates should be supplied as attachment to the original hammers to comply the standard requirements • Screw type powder coated bench vice for both Izod&Charpy test samples in line with National/ International standards. • Power:230 V AC, 1 Phase, 60 Hz
2	Notch Cutter (for Izod / Charpy Impact Tester)	01	<ul style="list-style-type: none"> • Motorized Operation. • Depth Micrometer: Range: 0-25 mm , L.C: 0.01mm • Cutting Angle: 45 deg. Min. 4 sample at a time • Cutting Speed: 150 mm/Min Feed Speed: 90 mm/Min. • Cutting Tool: Tungsten Carbide tool to avoid frequently damage of the cutting edge. • Power: 230 V AC, 1 Phase, 60 Hz
3	Digital Hardness Tester For Rubber & Plastics (Without Stand) Shore A (As per ASTM D2240)	01	<ul style="list-style-type: none"> • Range: 0 – 100 HA • Resolution: 0.5 HA • Type: Digital • Display: LED
4	Digital Hardness Tester For Rubber & Plastics (Without Stand) Shore D (As per ASTM D2240)	01	<ul style="list-style-type: none"> • Range: 0 – 100 HA • Resolution: 0.5 HA • Type: Digital • Display: LED

5	Dart Impact Tester (for film) (As per ASTM D 1709 & IS 2508)	01	<ul style="list-style-type: none"> • Specimen Clamping: Pneumatically Operated to hold Film/ Sheet samples • Release Mechanism: Electromagnetic Supporting of 2 Kg Weight with a Centering device to Ensure reproducible drop. • Drop Mechanism: Dart drop mechanism to dart drop at different Drop height • Counter: Six digit electronic counters for counting number of trials. • Dart Shaft: OD 6.5 mm and 127.5 mm Atleastt long. • Dart, Weight and Increamental weights: Suitablefor all ASTM &IS. • Acrylic Safety cover to be additionally fitted on Clamping device to protect and avoid Damages of dart while drop • Vvacum pump & gauge: The range and Least count should meet the standard test method requirements of IS & ASTM. • Power: 230 V AC,50 Hz
6	Opacity Tester (As per IS 4984 & IS 12235)	01	<ul style="list-style-type: none"> • Indigenous design to read direct percentage reading of light Passing through specimen. • Precious least count of 0.01%. • Solid state electronic design for long life of the apparatus. • Simple to operate and allegiant appearance. • Dust free specimen chamber. • Power: 230 V AC,50 Hz
7	VSP / HDT test Apparatus (As per IS 4984, IS 12818 & IS 12235)	01	<ul style="list-style-type: none"> • Minimum Two station • Material of Construction: The Inner bath S. S. should be made from a single piece S.S. material without any welding or joint make leak proof. Outer body may be made from M.S. material. • Temperature Controller: PID with range up to 400°C, resolution of 0.1°C & Accuracy of 0.1°C. • Circulation: Induction Motor. • Rate of Heating: 50°C/ hour or 120°C / hour (selectable) • Paint: Powder Coated. • Accessories: The machine should be supplied with the necessary loads and incremental weights as required to conduct HDT & VSP test as per standards. • Needles: Interchangeable with a pair of spares should be supplied • Power :230 V AC, 50 Hz
8	Melting Point Apparatus (Hot stage)	01	<ul style="list-style-type: none"> • Temperature Range: Up to300 °C • Readability: 1 °C • Resolution: 1°C • Accuracy: ±0.5 % • Auto Relay Cut Off for Melting Point and Boiling Point • Power :230 V AC, 50 Hz