



**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**

**MATERIALS MANAGEMENT DIVISION**

**Powai, Mumbai 400076.**

**Ref No. (PR No.) 1000048887**

**(Rfx No. 6100002484)**

**Technical Specifications: Voltage Source for Material Testing (Qty:) 1**

<b>Sr. No</b>	<b>Item Description</b>	<b>Detailed Technical Specification</b>	<b>Technical Compliance (Yes / No)</b>	<b>Additional Information ( if any )</b>
1	<p><b><u>Voltage Source for Material Testing</u></b></p> <p><b>AC Source :</b></p> <ul style="list-style-type: none"><li>• Input voltage: 230V, 50Hz, Single Phase</li><li>• Output voltage:<ul style="list-style-type: none"><li>• Part A -- 40kV peak to peak</li><li>• Part B -- 28kV peak to peak</li></ul></li><li>• Output Frequency:<ul style="list-style-type: none"><li>• Part A: 100Hz to 20KHz</li><li>• Part B: 20KHz to 50KHz</li></ul></li><li>• Two systems in one container with flip switch controls:<ul style="list-style-type: none"><li>• DC System variable voltage + Display, Voltage Display + Current Display provided</li><li>• AC System frequency display, Voltage display, No current display provided</li></ul></li><li>• AC current control &amp; trip at max 30mA current</li></ul>			

**Accessories**

- Overall dimension of system  
L=1500mm x H=900mmxD=800mm
- Working platform of minimum 300mm x 300mm
- Pressure chamber of diameter 150mm x H=250mm, to withstand a maximum pressure of 145 PSI (SS Vessel)
- Vacuum chamber of diameter 150mm x H=250mm, to maintain a maximum vacuum of 0.76 mm (1 millibar) to 720mm Hg
- Vacuum pump of 150 ltrs with a gauge & all
- Spark Electrode to be provided in the chamber
  - parallel plate 75mm diameter
  - parallel endpoint
  - Two points provided
  - Sphere 30mm diameter
  - Sphere 20mm diameter
- All electrodes shall be stainless steel
- Gap adjustment is done by a threaded system, adjustable between a minimum of 5mm and a maximum of 40mm gap
- Option for using different gases: Air, Nitrogen, Argon, SF6, CO2, N2 + O2 + C4
- Gas pressure meter & controller (will be supplied with all its pipes, etc.) SS Gauge, glycerine filling + Electronic gauge
- Gas pressure can be controlled by a pressure regulator
- Gas column height shall be adjustable, with an adapter that can be physically installed
- A castor wheel shall be provided with a top table type, so the table will be installed with 2 vessels for DC & AC. This vessel can be used for pressure as well as vacuum.
- The machine should be divided into DC as well as AC sections

	<ul style="list-style-type: none"> <li>• For high temperatures, a suitable hot plate system shall be supplied with its control. Thermostat for temperature control, maximum 90° Centigrade</li> <li>• Protection &amp; Safety: DC Current control &amp; trip at max 30mA</li> <li>• Warranty - 1 Year</li> <li>• Delivery – Within 4 Months after PO</li> </ul>			
2	<p><b>D.C. Source :</b></p> <ul style="list-style-type: none"> <li>• Voltage: 230V, 50 Hz, Single Phase Set</li> <li>• Output voltage: 0 to 50kV DC at 30mA (1500W) DC max</li> <li>• Warranty - 1 Year</li> <li>• Delivery - Within 4 Months after PO</li> </ul>			