**Electron Column:**

1 X AEI 1403-RE Tungsten-Rhenium Thermionic Filament (Package of 10, 1403-WRE):

<https://www.tedpella.com/apertures-and-filaments_html/tungsten-filaments.aspx>

INR 20,921

1 X Mains-Rated Wire (Max 1.1 Kv):

<https://www.amazon.in/TWC-Lite-Single-Black-Electrical/dp/B0B7GG46KJ>

INR 750

1 X 10kV-Rated Copper core Silicone Wire:

https://www.aliexpress.com/item/1005001839936748.html

INR 1750

1 X 230VAC 50W 10kVDC 5mA Power Supply (CX-50):

https://ar.aliexpress.com/item/1005003518403820.html

INR 1200

1 X 230VAC 24W to 24V 1A Power Supply (outside vacuum, PCB):

<https://www.amazon.in/Easy-Power-Supply-Module/dp/B08V1C1JWL>

INR 190

1 X Beam Limiting Aperture, Platinum-Iridium 2 mm OD, 50 μm ID (Part No. 65019):

<https://www.tedpella.com/apertures-and-filaments_html/aperture1.aspx>

INR 10100

3 X Linear (XYZ) Stage with NEMA-11 Stepper Motors and Drivers (50 mm x 50 mm, 4-pitch):

<https://ar.aliexpress.com/item/1005008513205849.html>

INR 8451

1 X Beta-Radiation Dosimeter for Safety (0 – 500 Msv):

<https://www.amazon.in/Geiger-Counter-Nuclear-Radiation-Detector/dp/B0BHH9X1WG/>

INR 4858

**Cost of Electron Column:** INR 51,390

**Vacuum System:**

1 X Diffusion Pump Heater, Nichrome Wire (330 mm):

<https://www.amazon.in/Filfora-Nichrome-Resistance-Heating-330x4-0mm/dp/B0CVTR7J1D>

INR 449

1 X Diffusion Pump 130 mm Nitrile O-Ring:

<https://www.amazon.in/Oring-130-3-5mm-Pack-12pc/dp/B08PTCKJ3Y>

INR 599

1 X 240 CFM Server Fan

<https://www.amazon.in/Delta-Electronics-AFB1212GHE-CF00-120x120x-connector/dp/B004X2M2GG>

INR 9390

1 X Diffusion Pump Silicone Oil, Ultragrade 19 (1 Liter):

<https://www.fishersci.com/shop/products/ultra-grade-19-oil-1l/NC9844626>

INR 4600

1 X Acrylic Pipe for Diffusion to Rotary Vane (1/4inch):

<https://www.amazon.in/Dwiza-Enterprise-Grade-Meter-Purifier/dp/B08HSKSPK9>

INR 999

1 X Rotary Vane Pump (50 Liters/min):

https://www.amazon.in/HAVC-RX-1S-Single-Stage-Vacuum/dp/B079J3Y781

INR 5000

1m X 2mm diameter Viton Cord for Vacuum Door:

https://www.amazon.in/VITON-RUBBER-PRICE-METER-DIAMETER/dp/B0B367N6C7

INR 210

1 X USB Feedthrough- USB Female to MicroUSB Male- Microusb connects directly to Teensy 4.1 (Metal):

https://www.amazon.in/LIRAMARK-Micro-USB-Connector-Aluminium-Smartphone/dp/B0CRR75WFJ

INR 139

1 X USB Male to Male (Outside the vacuum):

<https://www.amazon.in/Ambrane-Unbreakable-Charging-Braided-Cable/dp/B098NS6PVG>

INR 169

1 X Loctite Stycast-2850 Vacuum Epoxy

<https://in.rsdelivers.com/product/loctite/loctite-stycast-2850-ft-quartkit/loctite-loctite-stycast-2850-ft-quartkit-black-1/2349630>

INR 25156

1 X Vibration Isolation (Ribbed Pads):

<https://www.amazon.in/Vibration-Premium-Lasting-Quality-Thickness/dp/B0CCDQTVDW?th=1>

INR 1199

**Cost of Vacuum System:** INR 58,860

**Embedded Systems:**

1 X Teensy 4.1 MCU (no electrolytic capacitors):

<https://www.amazon.in/4-1-iMXRT1062-Development-soldered-Pre-soldered/dp/B0DP6M197Q>

INR 3900

1 X AD7626BCPZ ADC for ET Detector (16-bit single channel, 10 MSPS): https://www.mouser.in/ProductDetail/Analog-Devices/AD7626BCPZ-RL7?qs=%2FtpEQrCGXCwjx1S0Wpoj8A%3D%3D

INR 6518

1 X AD5754BREZ for DAC for Raster Scanning (16-bit 4-channel):

<https://www.mouser.in/ProductDetail/Analog-Devices/AD5754BREZ?qs=NmRFExCfTkE9WVZYrblgWQ%3D%3D>

INR 2664

1 X 230VAC Relay for Voltage Control:

https://www.amazon.in/CLUB-BOLLYWOOD-Channel-Optocoupler-Insulation/dp/B0C2PT1KRB

INR 604

**Cost of Embedded Systems:** INR 13,686

**Everhart-Thornley Detector:**

1 X Copper Mesh (Faraday Cage):

<https://www.amazon.in/Copper-Mesh-Prefect-Blocking-Eco-Friendly/dp/B08PSLHWZT/>

INR 2318

1 X Polystyrene EJ200-Replicate (420 nm Plastic Scintillator):

<https://www.alibaba.com/product-detail/Polystyrene-Plastic-scintillator-material-equivalent-EJ_1601298622046.html?spm=a2700.7724857.0.0.6c196c9eovIgdM>

INR 3085

1 X 99.7% Vegetable Glycerin (Optical Coupling Gel):

<https://www.amazon.in/Chemtex-Glycerine-Vegetable-Emulsifier-Sweetener/dp/B09KRYXW67>

INR 649

1 X PMMA Acrylic Block (Lightguide):

<https://www.amazon.in/UraXx-Versatile-Rectangular-Limitless-Possibilities/dp/B0CGNCHX6W>

INR 199

1 X Aluminium Foil (Optical Cladding):

<https://www.amazon.in/Ezee-Aluminium-Foil-72-Micron/dp/B00Y0Q073A>

INR 399

1 X MICROFC-30020-SMT-TR1 (3 mm x 3 mm SiPM): <https://www.mouser.in/ProductDetail/onsemi/MICROFC-30020-SMT-TR1?qs=byeeYqUIh0PslEkIwO7UpQ%3D%3D>

INR 3376

1 X Cremat CR-113-R2 (Charge-Sensitive Amplifier, 50 microseconds decay):

https://www.amazon.ae/CR-113-R2-1-Charge-Sensitive-preamplifier-Module/dp/B07BCQSBD8

INR 9921

1 X Cremat CR-200-500ns (Pulse-Shaper, 500ns Pulse Time):

<https://www.amazon.ae/Cremat-Inc-CR-200-500ns-R2-1-Shaping-Amplifier/dp/B07BD28Y7R>?

INR 9921

**Cost of Everhart-Thornley Detector:** INR 29,868

**Custom Machining:**

1 X 20 mm x 400 mm x 400 mm, 5 x 10 mm x 400 mm x 400 mm blocks of AL 6061 (Frame, 30,240 g):

INR 15,000

Cost of Custom Machining Parts:

Diffusion Pump?

Sliding Door?

Budget:

INR 20,000

**Total Cost:** INR 187,904/ USD 2200