

## **Technical Specifications**

### **Multichannel Electrochemical Workstation with software**

#### ***Essential***

- Modular design system, should be upgradable with different modules
- Independent channels - Five
- All Channels with EIS Facility
- Current range: 20 nA – 400 mA or higher (minimum six Ranges)
- Output Voltage range:  $\pm 10$  V or better
- Compliance voltage:  $\pm 20$  V or better
- Voltage Resolution: 5 $\mu$ V or better
- Current Resolution : 800 pA or better
- Potentiostat Bandwidth: 1 MHz or higher
- Frequency range: 10  $\mu$ Hz – 1 MHz or more
- Corrosion and Electrochemical software with facility for Tafel plot, LPR,  $E_{\text{corr}}$ ,  $I_{\text{corr}}$  value calculation, Rate of corrosion calculation, simulation etc.
- Impedance Spectroscopy software with frequency sweeping option in current and voltage mode
- Voltammetry software with facility for CV, LSV, SWV etc.
- Pulse Measurement software
- Solar and Photovoltaic software
- Equivalent circuit fitting and simulation software
- Critical Pitting Temperature software
- Temperature probe/sensor - Pt 1000 for pitting corrosion experiments with 2 m electrode cable and 2 X 2 mm plugs
- Electrochemical Cell having nitrogen purging option with PTFE purge tubes, and consisting of Pt mesh counter electrode, Ag/AgCl reference electrode and Glassy Carbon working electrode
- Complete Corrosion Flat cell kit with double jacketed cell including saturated calomel reference Electrode and Platinum Mesh Counter electrode (Sample expose area 1 cm<sup>2</sup> and 10 cm<sup>2</sup>)
- At least three reference samples with known redox profile to calibrate the instrument
- To control data acquisition and saving of data; a suitable system (Dell/HP/Lenovo) having compatible all in one with latest configurations having at least i7 Processor (min 3.6 GHz, 4 Cores), at least 8 GB RAM and 1 TB HDD, 23.8" Color Monitor, External DVD Writer, LaserJet multifunctional Colour Printer, Wireless Optical Mouse, Wireless Keyboard etc. with latest genuine licensed window
- System should operate at standard 230 V, 50 Hz
- UPS, 2 KVA offline with at least 30 minutes back-up time
- Free installation, commissioning and operational training of instrument at our lab
- *Two years onsite warranty on complete system with free life time up-gradation of softwares*

#### ***Optional (Mandatory to quote)***

- One Pt mesh counter electrode (54 mm wire / 80 mesh) – Flat cell design
- One Calomel Reference electrode (length: 92 mm – OD: 6 mm)
- One Paint cell consisting of Glass for Coating cell, Nylon base with three feet, Rubber cup with two holes, Metallic clamp and O-ring etc.
- One Graphite rod counter electrode (L 145 mm, OD 6 mm)
- One Reference Electrode (Ag/AgCl – length: 80 mm – OD: 6 mm),
- One Bridge tube for 6 mm reference Electrode
- 20x Mask for 1 cm<sup>2</sup> and 10 cm<sup>2</sup> each
- Electrode Polishing Kit
- *Three years extended warranty on complete system*