

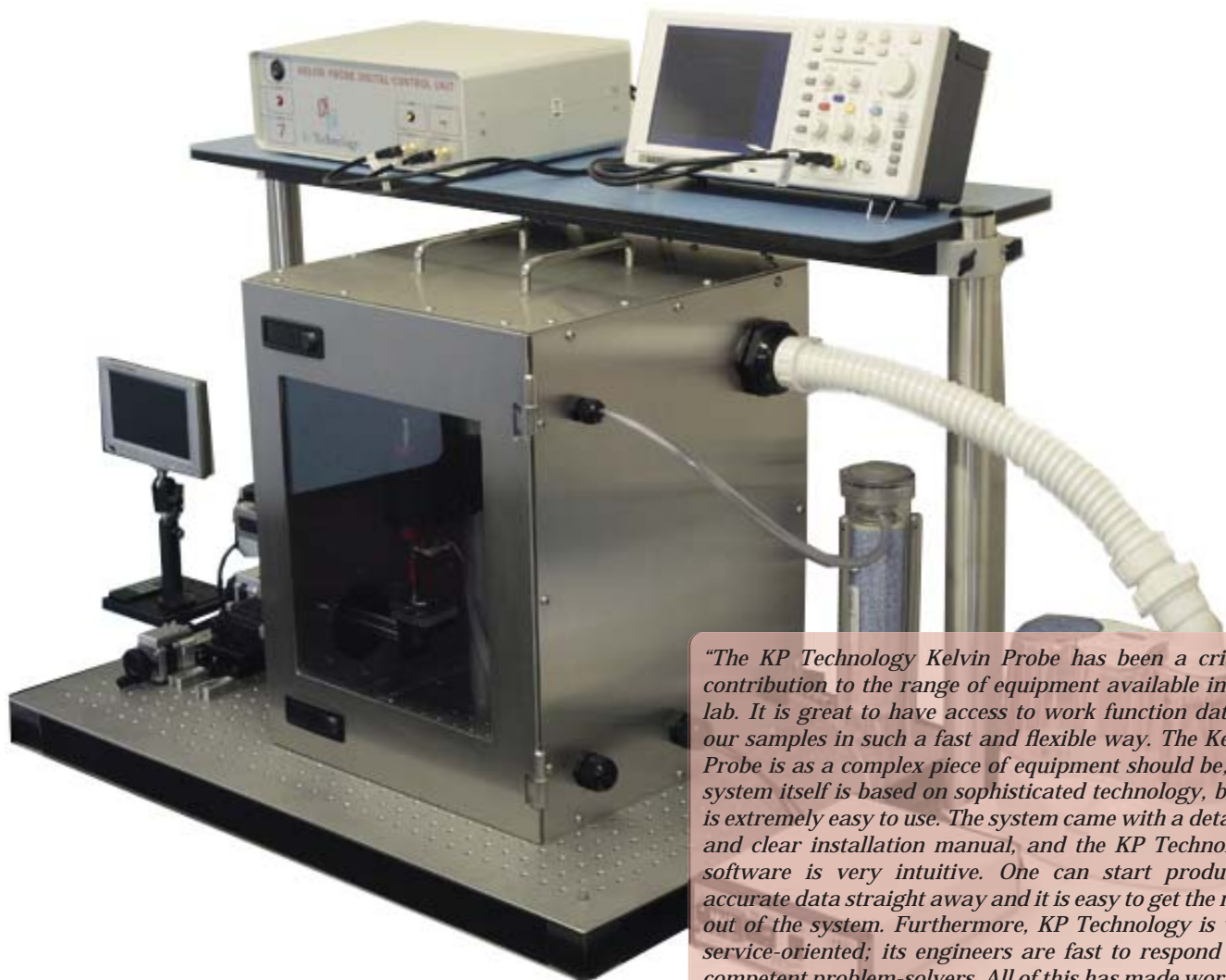
Corrosion/Environmental Housing Kelvin Probe System

RHC020

The **Kelvin Probe** is a non-contact, non-destructive vibrating capacitor device used to measure the work function (wf) of conducting materials or surface potential of semiconductor or insulating surfaces. The wf of a surface is typically defined by the topmost 1-3 layers of atoms or molecules, so the **Kelvin Probe** is one of the most sensitive surface analysis techniques available. **KP Technology** Systems offer very high wf resolution of 1-3 meV, currently the highest achieved by any commercial device.

The SKP5050 with RHC020 is the ideal **Kelvin Probe** system for researches looking to investigate samples in a controlled atmosphere with the option of increasing sample temperatures up to 90°C.

This system includes everything the researcher needs to produce reliable, repeatable results, due to the unique features provided by the 'Baikie System'.



"The KP Technology Kelvin Probe has been a critical contribution to the range of equipment available in our lab. It is great to have access to work function data of our samples in such a fast and flexible way. The Kelvin Probe is as a complex piece of equipment should be; the system itself is based on sophisticated technology, but it is extremely easy to use. The system came with a detailed and clear installation manual, and the KP Technology software is very intuitive. One can start producing accurate data straight away and it is easy to get the most out of the system. Furthermore, KP Technology is very service-oriented; its engineers are fast to respond and competent problem-solvers. All of this has made working with the Kelvin Probe and KP Technology a most pleasant and satisfying experience."

Dr. S. H. Mennema
TNO Science & Industry

THE BAIKIE SYSTEM

All KP Technology Systems are based upon unique features developed by Professor Iain Baikie. These features are unsurpassed by any other company.

- Highest work function/surface potential resolution of 1 - 3 meV (standard)
- Voice Coil driver provides very high rejection of driver talkover noise compared with piezoelectric systems
- Off null signal detection system for improved resolution - Our Signal-to-Noise (S/N) features remain unsurpassed in the field
- Height regulation feature to control the tip to sample spacing during measurements and scans which allows for stable, reliable and repeatable data
- Full digital control of all Kelvin Probe parameters
- Quick change probe tip allowing user selectable spatial resolution

SOFTWARE FEATURES

User digital control of probe amplitude, probe frequency, mean spacing, and tip potential. Automatic measurement of Kelvin Probe signal and work function averaging. Export of data to Excel compatible spreadsheets. The software also allows user control of motorised translators allowing custom (X, Y) scans, permitting high-resolution work function topographies up to 50mm per side. Software features tip tracking control during scanning and real-time 3D reporting of sample work function and sample height topographies.

WHAT IS INCLUDED?

- Kelvin Probe Head Unit with Integral Tip Amplifier & Tip
- Optical Kelvin Probe Mount with 25.4 mm Manual Translator
- Sample Holder with Gold/Aluminium Calibration Sample
- 3-Axis Motorised Translation Stage
- Digital Control Unit
- Dell PC with Monitor
- Data Acquisition System (Preinstalled in PC)
- Scanning Kelvin Probe Software (on CD and Preinstalled on PC)
- NI-DAQ Software (on CD and Preinstalled on PC)
- Faraday Screen
- Spare Tip Amplifier
- Power Supply Unit
- Associated System Cables and Manuals
- Optical Camera Arrangement with 7" Monitor and Optical Mounts
- Digital Oscilloscope
- Relative Humidity Chamber with quick access door
- RH Control Unit with Humidifier and Dehumidifier Unit
- Stainless Steel 600 x 900 mm Optical Base
- 24 Month Warranty

ADDITIONAL INFORMATION

- Scanning system - 50mm x 50mm
- Height Control - 50mm (Manual and Automatic)
- Position Resolution - 0.3175 μm
- Tracking System - Automatic hold of tip to sample spacing to 0.3175 μm
- Relative Humidity Chamber - 400 x 400 x 500 mm (80 litres)
- Automatic Control of relative Humidity to 1% (range 10 - 100%)
- Automatic Sample temperature Control from room temperature to 90°C
- Visualisation - 3D maps of surface potential
- Other Options - RHC010

