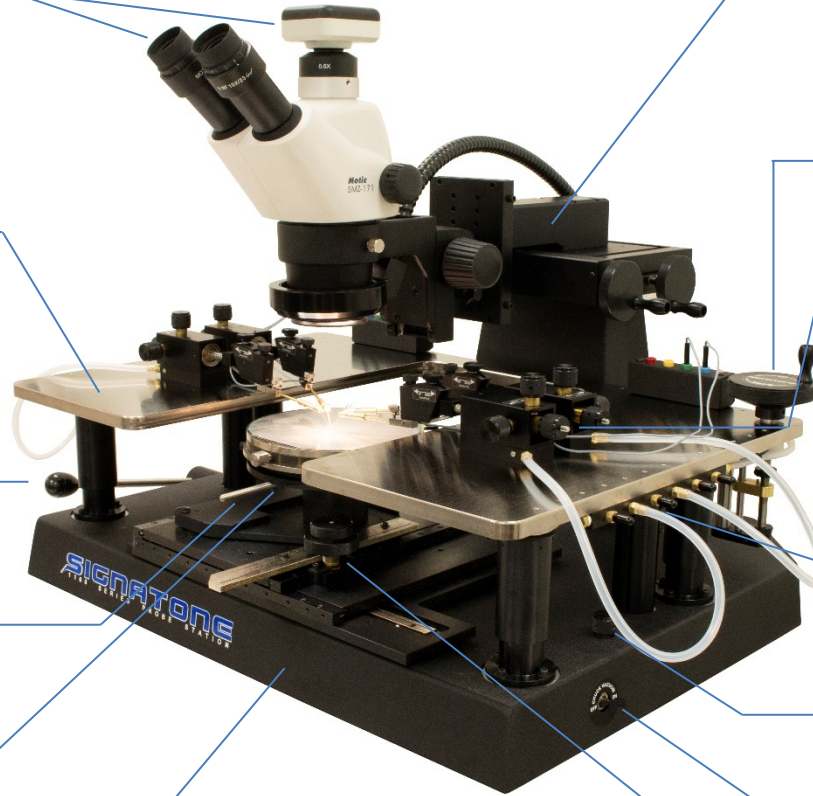


Signatone S-1160 100mm - 200mm Manual Probe System

Performance – Quality – Value - for reliable and accurate DC/CV, and High-Power Test Measurements



Microscope and Imaging Options

- Various optics available
- A-zoom 10:1, or Seiwa 12:1 zoom Scopes
- FS70, PSM-100 High Power Microscopes
- Motic and Leica low Power Microscopes
- SMP HDMI digital or CCD camera.

Platen

- Ridged, stable steel design (12.7mm thick).
- Supports Vacuum or Magnetic
- Supports rectangular probe cards.
- Course and fine lift adjustment for DUT set-up.

Linear Platen "Quick-Lift" Lever

- Ergonomically-Correct 0 to 9.5mm (0.375") "Z" range of platen lift for probe to pad separation

Chuck Theta Rotation

- Standard 360° rotation for quick- easy alignment
- Optional Fine rotation ($\pm 6^\circ$) and theta-lock

Modular Chucks

- A variety of ambient or thermal chucks available.
- Standard configuration includes ambient chuck with pin hole vacuum selector zones (5mm-200mm test samples) and Coaxial, Triaxial connections available.

Small Footprint

- Designed for use with bench top and vibration tables
- Includes vibration absorber feet
- Low profile design for maximum test integration
- Economically designed for field upgrade
- Ideal for RF, mmW, load pull, CV/IV, high power, MEMS..

--Available Options--

- Hot Chuck & Controller
- Recirculation Chiller/closed-loop
- Vibration Isolation Table
- Vacuum pump/Air compressor
- EMI Shielded DarkBox's

Microscope Mount and Movement

- Stable microscope bridge
- 50mm x 50mm manual X-Y
- 25mm-100mm "Z" varies on microscope selection

Platen Fine "Z" Adjust

- Provides 34mm (1.35") fine platen "Z" adjustment for DUT with varying thickness.

Micro Positioners and Probes

- Supports RF-mmW, DC , HP Micropositioners.
- A variety of MicroPositioner selections.
- RF Heads (18 -40 GHz, 40-110GHz).
- DC, Coax, Triax, (nA, pA, fA, fF).
- High voltage (3kV TRX, 5kV-12kV COAX),
- High Current probes (up to 100A).

MicroPositioner Vacuum Connection

- 10 Vacuum connections (5 on each side) for holding Micropositioners

Vacuum Port Control

- MicroPositioner Vacuum Intensity Adjustment

Chuck Vacuum

- On /Off Toggle switch

Chuck X-Y Motion Control

- Coaxial Knob Gear Drive Stage
- Travel Range 203 x 203 mm X- Y
- 5 μ (micron) resolution
- Fine Travel: 12mm x 12mm (0.5" x 0.5") (optional)
- Fine Travel Resolution: <1 μ m (0.001mm) @ 250 μ m/rev

Signatone S - 1160 | 150mm - 200mm Manual Probe System designed for reliable and accurate analytical testing of DC, CV-IV, and High-Power applications.

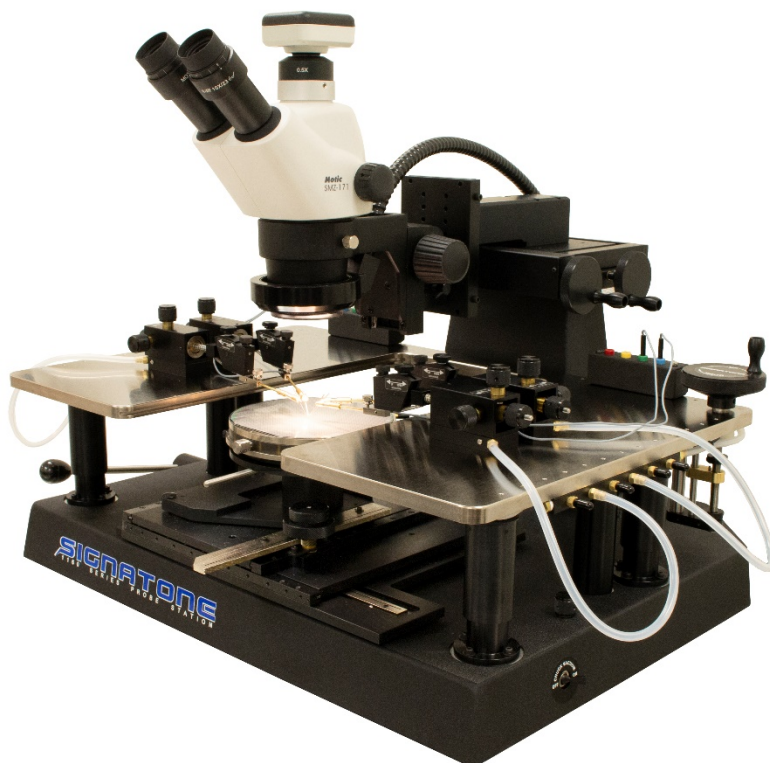
❖ FEATURES / BENEFITS

Multi – Use

- Designed for a wide variety of DC/HP test.
- Robust design and multiple setup and configuration options allow for a maximum of measurement dynamics

Ergonomics and Optional Configurations

- Ease of use , single-handed X-Y Stage knobs for quick movement plus fine knob control
- Quick platen lift with adjustable platen separation
- Chuck fine rotation and lock
- Steel platen accepts DC/HP/CAP Positioners (magnetic or vacuum mount)
- Available in multiple configurations including a variety of chuck options, DC/RF/1 to10KV, Micro positioners, microscopes, camera's, PCB holders, and more.
- Optional Instrumentation racks, Vibration Isolation tables, Thermal chucks dark-box, ...



❖ SPECIFICATIONS

Chuck XY Stage (Standard)

Travel range	203mm X 203mm (8 x 8 in)
Fine-travel range	12mm x 12mm (0.5" x 0.5") (optional)*
Fine-travel resolution	<1µm (0.001mm) @ 250µm/rev
Planarity	< 10 µm
Theta travel (Standard)	360°
Theta travel (Fine)	± 6.0° (optional)*
Theta resolution	1.5 x 10 ⁻⁵ gradient
Motion Control	Coaxial Knob Gear Drive Stage

Chuck to Platen

Chuck to Platen Separation (Quick Lift)	9.375mm (3/8")
Chuck to Platen Separation (Fine Adjust)	38.1mm (1.5")

*All data are relevant with optional configuration

Manual Microscope Stage (Linear)

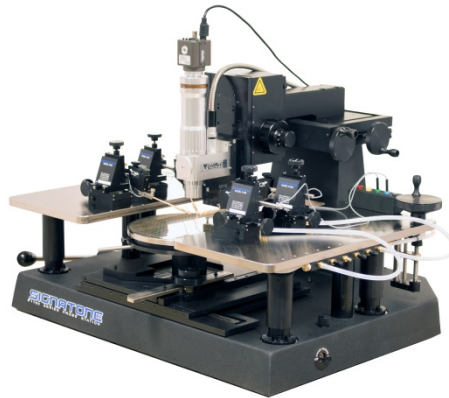
Movement range	50 X 50mm (2" x 2")
Resolution	1° = 2.54μ (0.0001")
Scope "Z" range	25mm-100mm * (dependent on microscope selection)
Motion Control	Independently controlled X and Y knobs

*All data relevant with optional configuration



S-1160A###

➤ "A" option: 50mm X-Y Microscope mount (for use with high-powered optics)



S-1160B###

➤ "B" option: 50mm X-Y Microscope mount (for use with low-powered optics)



S-1160S###

➤ "S" option: "boom" style Microscope mount (for use with low-powered optics)

❖ **Sample Microscope –SELECTION GUIDE**

- **High Powered Microscope**
(allows up to 2000x magnification)
1-4 Objectives - rotatable turret – 1X-2X zoom
50mm manual "Z" focus adjust- Camera Port



Motic
PSM-1000



Seiwa
S-12Z

- **Mono-Zoom Video Scope**
(100X-600X magnification- Offered by Seiwa)
Single Objective - Camera Port (no eye pieces)
Fiber-optic illumination -25mm "Z" focus adjust

- **Stereo -Zoom Low Power Microscope**
(7.5X -50X magnification – Offered by Motic)
Long working distance (113mm) - Camera Port
Fiber-optic or LED illumination
50mm "Z" focus adjust



Motic
SMZ-171

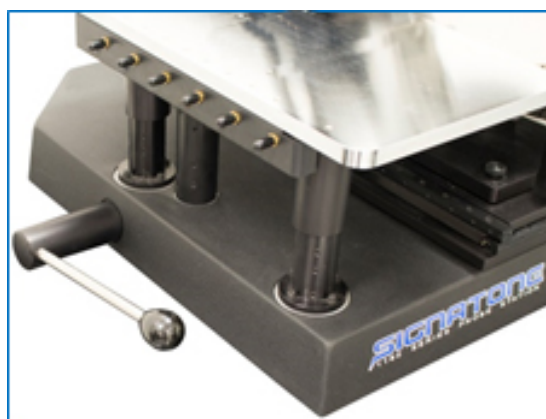
❖ **PROBE PLATEN**

Specifications

Design	Four Post Support
Dimension	L = 406.5mm x W = 610mm x H = 12.7mm 16" x 24" x 0.5"
Chuck to Platen Top	Min. 14.7mm (Variable Separation with Fine Platen Adjust)
Max. No of Micro Positioners	10 x DC/HP/RF (Multiple Probe / Test Configurations)
Quick Platen Lift Control (CVL)	Continuous Variable Lift (0 to 9.375mm)
Contact Repeatability	< 1 μm (0.04 mils) by Manual Control
DC/High Power Micro Positioner Mounting	Magnetic or Vacuum
CAP946 Micro Positioner Mounting	Magnetic or Bolt Down

Signatone Multi Benefit Ergonomically Correct Platen Adjust and Features:

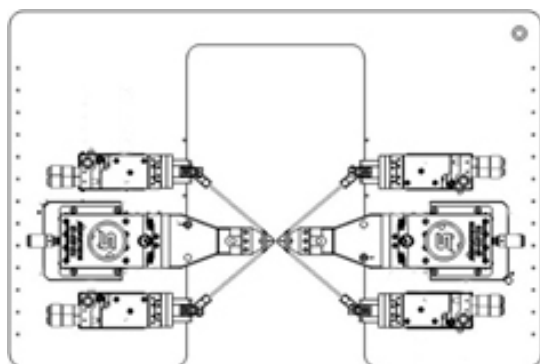
- "Quick Lift" with Continuous Variable Lift (CVL) for easy probe to pad separation and alignment
- "Fine Adjust" for Probe card and variable Chucks and DUT thickness setup



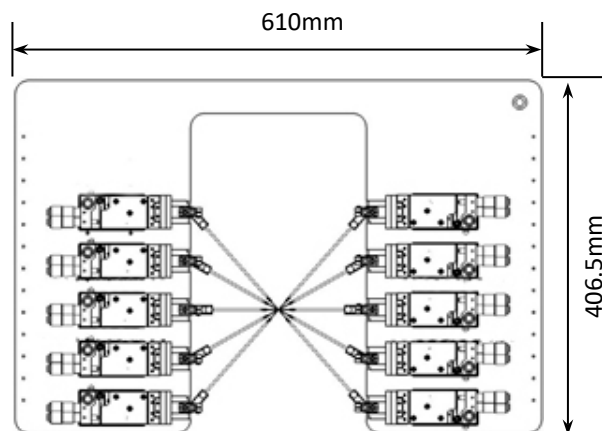
Platen "Quick Lift"



Platen "Fine Adjust"



Sample Configured with 2 RF + 4 DC Probes



Sample Configured with 10 DC Probes

❖ **MICRO POSITIONER**

Choose the Micro Positioner that's best for your application (more positioner styles available)

The S-1160 Series probe stations include a Steel Platen for use with Vacuum or Magnetic based micro Positioners (Bolt-down optional)

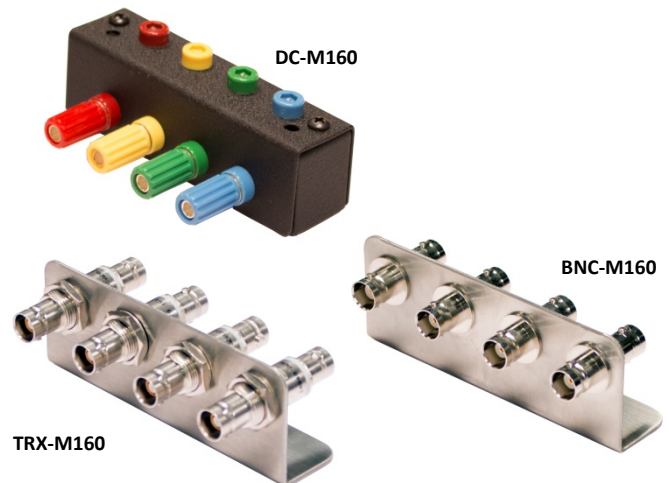
- The **SP-100** Series with 100 TPI linear X-Y-Z motion with in-line micrometer knobs for high precision probing sub-micron features at high magnification – great for use with multi probe applications
- The **S-926** Series with 100 TPI rectilinear X-Y-Z motion, good for probing down to 1 micron, at a very competitive price
- The **S-725** Series with 80 TPI is economically priced, Low profile, great for pad / large contact probing



Probe Connector Panels:

The S-1160 Series probe stations include mounting for various probe connector panels. Probes (Micro-positioner Probe holder) supply one of the following 3 basic connections styles

- Single line wire with Mini-phone tip
- Micro-coax wire with Coaxial – BNC
- Triaxial wire with Triax Connector



❖ **DC PROBE –SELECTION GUIDE**

	Coax Probe (C)	Triax Probe (T)	Kelvin Probe (K)
Max voltage	500 V	500 V	500 V
Temperature range	-60 °C to 300 °C	-60 °C to 300 °C	-60 °C to 300 °C
Leakage current	< 50fA	< 20fA	< 20fA
Connectivity	BNC	Standard Triax	SSMC
Connectivity type	Single Coaxial	Single low noise Triaxial	Force/Sense Coax
Characteristics impedance	50 Ohms	50 Ohms	50 Ohms
Residual capacitance	< 80fF	< 80fF	< 80fF
Probe holder material	Brass	Brass	Brass
Probe tips material	Tungsten	Tungsten	Tungsten
Probe tips sizes	0.5 µm – 25 µm	0.5 µm – 25 µm	0.5 µm – 25 µm
Minimum pad size	25 µm x 25 µm	25 µm x 25 µm	25 µm x 25 µm



Coax Probe



Triax Probe



Coax Kelvin Probe

❖ **High Voltage/High Current PROBE –SELECTION**

Model	High Voltage Probes			High Current Probe
	HVP-CX-3	HVP-TX-3	HVP-CX-10	HCP 100
Max Voltage	3 kV	3 kV	10 kV	500 V
Max Current	1 A DC/30 A Pulsed	120 mA DC	20 mA DC	10 A DC/100 A Pulsed
Temperature Range	-60 °C to 300 °C	-60 °C to 300 °C	-60 °C to 300 °C	-60 °C to 300 °C
Leakage Current	< 200 pA @ 3 kV, < 5 pA @ 10 V	< 1 pA @ 3 kV, < 100 fA @ 10 V	< 100 pA @ 10 kV	N/A
Connector Type	SHV	HV Triax	UHV Coax	HV Banana
Replaceable Tip	Yes	Yes	Yes	Yes
Probe Material	W	W	W	BeCu or W



HVP-CX-3



HVP-TX-3



HVP-CX-10



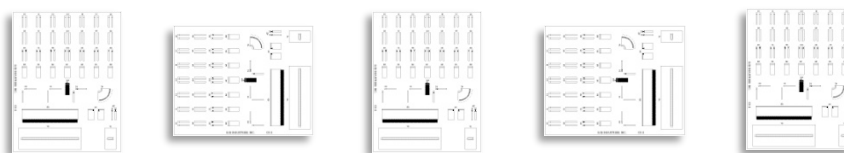
HCP-100

❖ RF PROBE –SELECTION GUIDE



Cable Interface

	SP-40A	SP-50A	SP-67A	SP-110H	SP-145
Frequency	DC-40GHz	DC-50GHz	DC-67GHz	DC-110GHz	DC-145GHz
Connector	2.92mm	2.4mm	1.85mm	1.0mm	0.8mm
Tip Configuration	GS/SG/GSG	GS/SG/GSG	GS/SG/GSG	GS/SG/GSG	GSG
Pitch Range	50μ - 2540μ	50μ - 1250μ	50μ - 1250μ	50μ - 1250μ	50μ - 200μ
Insertion Loss	<.8db	<1.0db	<1.1db	<1.5db	<1.75db
Return Loss	> 18db	>18db	>14db	>15db	>15db



Calibration Substrates

GSG	SP-CS-5	SP-CS-9	SP-CS-10	SP-CS-18
Pad Size	50μ X 50μ 100μ X 100μ 150μ X 150μ	100μ X 100μ	150μ X 150μ	300μ X 300μ
Pitch Range	75μ - 250μ	250μ - 600μ	600μ - 1250μ	1250μ - 2540μ

GS/SG	SP-CS-8	SP-CS-14	SP-CS-11	SP-CS-17
Pad Size	50μ X 50μ 100μ X 100μ 150μ X 150μ	100μ X 100μ	150μ X 150μ	300μ X 300μ
Pitch Range	50μ - 200μ	200μ - 400μ	400μ - 1250μ	750μ - 2540μ

GSG > 110GHz	SP-CS-15
Pad Size	25μ X 25μ
Pitch Range	40μ - 150μ (SOLT) 30μ - 150μ (LRM)



RF Cables

	RFC-40	RFC-50	RFC-67	RFC-110
Frequency Range	DC - 40GHz	DC - 50GHz	DC - 67GHz	DC - 110GHz
Length	4 Ft.	4 Ft.	3 Ft.	*
Connectors	2.92 M – 2.92 F	2.4 M – 2.4 F	1.85 M - 1.85 F	1.0 M - 1.0 F

* Contact Factory

❖ **NON-THERMAL CHUCKS**

Standard Wafer Chuck

Connectivity	Coax BNC (m)
Diameter	203mm
Material	Nickel Plated Brass (gold optional)
Chuck surface	Zone selector knob with Pin Hole vacuum patterns
Vacuum hole pattern sections(diameter)	5mm, 22mm, 50mm, 91mm, 135mm, 168mm
Vacuum actuation	Selector Knob allows individual activation of vacuum zones
Supported DUT sizes	10mm, 25mm, 75mm, 100mm, 150mm, 200mm
Surface planarity	±6.5μ
Rigidity	<3μ / 10N at edge of the chuck

Electrical Specification (Coax)

Operation voltage	Designed for operation at -200V to + 200VDC
Maximum voltage between chuck top and GND	500 V DC
Isolation	> 150 GΩ

Wafer Chuck (Triaxial)

Connectivity	Triax (m)
Diameter	203mm
Material	Gold Plated Brass
Chuck surface	Independent Vacuum zones with Pin Hole vacuum patterns
Vacuum hole pattern sections(diameter)	0mm, 65mm, 112mm, 162mm
Vacuum actuation	Multi-Zone Adjustable Control
Supported DUT sizes	3mm, 75mm, 125mm, 200mm
Surface planarity	± 5μm
Rigidity	<3μm / 10N near at edge of the chuck

Electrical Specification (Triax)

Chuck isolation	Measured @ 10V DC
Force to guard	> 2 TΩ
Guard to shield	> 7 TΩ
Force to shield	> 15 TΩ

❖ **SIGNATONE THERMAL CHUCKS**

Typical Specifications of *Signatone* Thermal Technology

	200mm Standard Hot	200mm Hot/ Triax	200mm Hot/ 3kV Triax
Temperature Range	+25°C to +300°C	+25°C to +200°C	+25°C to +200°C
Connectivity	Coax (m)	Triax (m)	SHV Triax (m)
Temperature control method	Liquid Cooled / Resistance heater	Liquid Cooled / Resistance heater	Liquid Cooled / Resistance heater
Coolant	Water	Water	Water
Smallest temperature selection step	0.1°C	0.1°C	0.1°C
Chuck temperature display resolution	0.01°C	0.01°C	0.01°C
External touchscreen display operation	Yes	Yes	Yes
Temperature stability	±0.1°C	±0.1°C	±0.1°C
Temperature accuracy	±0.5°C	±0.5°C	±0.5°C
Control method	Low noise DC/PID	Low noise DC/PID	Low noise DC/PID
Interfaces	RS232C	RS232C	RS232C
Optional Interfaces	GP-IB	GP-IB	GP-IB
Chuck surface plating	Nickel	Gold	Gold
Temperature sensor	RTD	RTD	RTD
Temperature uniformity	±0.5°C at ≤ 200°C ±1. °C at > 200°C	±0.5°C at ≤ 100°C ±2.5°C at 200°C	±0.5°C at ≤ 100°C ±3.5°C at 200°C
Surface flatness	< ±1 µm	< ±8µm	< ±15µm
Electrical isolation - Coax BNC (m) / SHV Triax	150nA	> 5TΩ	> 5TΩ
Heating Rates	25°C to 300°C < 12 min	25°C to 200°C < 9 min	25°C to 200°C < 28 min
Cooling Rates	300°C to 25°C < 9 min	200°C to 25°C < 8 min	200°C to 25°C < 8 min
Leakage @ 10 V Kelvin Triax	N/A	<25fA	<400fA
Residual Capacitance		<200fF	<1pF
Maximum voltage between chuck top and GND	500V	500V	3kV
3 Safety Circuits	Yes	Yes	Yes
Vacuum Pattern	Rings	Pin hole	Pin hole
Vacuum Zone (DUT Size)	50, 100, 150, 200mm	2, 50, 100, 150, 200mm	2, 50, 100, 150, 200mm

System Controller / Dimensions / Weight / Power Consumption

System Model	W x D x H (mm)	Weight (kg)	Weight (Lbs.)	Power cons. (VA)
S-1080	432 x 483 x 267	20.4	45	2000
TC-II	355 x 711 x 610	50.8	112	1500

❖ **ERS HIGH POWER THERMAL CHUCKS**

Specifications of ERS/ SIGNATONE Technology HV 200mm Chucks

Temperature Range	25°C to 200°C	25°C to 300°C
Connectivity	Kelvin Triax (M),3kV or 10 kV Coaxial	Kelvin Triax (M),3kV or 10 kV Coaxial
Temperature control method	Cooling air / Resistance heater	Cooling air / Resistance heater
Coolant	Air (user supplied)	Air (user supplied)
Smallest temperature selection step	0.1°C	0.1°C
Chuck temperature display resolution	0.01°C	0.01°C
External touchscreen display (optional)	Yes	Yes
Temperature stability	±0.08°C	±0.08°C
Temperature accuracy	±0.1°C	±0.1°C
Control method	Low noise DC/PID	Low noise DC/PID
Interfaces	RS232C	RS232C
Chuck surface plating	Gold plated with pinhole surface	Gold plated with pinhole surface
Temperature sensor	Pt100 1/3DIN 4-line wired	Pt100 1/3DIN 4-line wired
Temperature uniformity	< ±0.5°C at ≤ 200°C	< ±0.5°C at ≤ 300°C
Surface flatness and base parallelism	< ±10 µm	< ±10 µm
Heating and Cooling Rates*	25°C to 200°C <30min 200°C to 25°C <30min	25°C to 300°C <35min 300°C to 25°C <35min
Leakage @ 3000V Kelvin Triax (M)		
25°C	5pA	5pA
200 °C	10pA	10pA
300°C	--	15pA
Leakage @ 10kV Coax UHV/SHV (M)		
25°C	6nA	6nA
200 °C	6nA	6nA
300°C	--	6nA
Maximum voltage between chuck top and GND	10 kV DC	10 kV DC

*All data are relevant for chucks in ECO mode

System Controller / Chiller Dimensions and Power / Air Consumption

System type	W x D x H (mm)	Weight (kg)	Power cons. (VA)	max. Air flow (l/min)
25 to 200 °C	300 x 360 x 135	12	1300	220
25 to 300 °C	300 x 360 x 135	12	1300	220

❖ **SYSTEM OPTIONS – ACCESSORIES**

Probe Station Dark Box (PSDB-1160)

Probe Station light tight, electrically shielded enclosure
Excellent for use in conjunction with the following:

- Low-Leakage measurements
- High-Power measurements
- Thermal measurements
- Light-Sensitive measurements

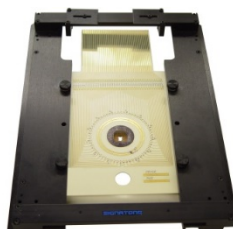
Door and Panel interlock options are typically used for High Voltage and High Temperature safety



PSDB-1160

Probe Card Adapter (S-4710)

For use with 4.5" wide probe cards



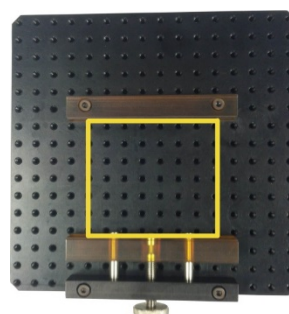
4710

CM-BMVC

Board Mount Vice Chuck

The S-1160 Series probe stations supports the 200mm x 200mm adjustable Vice chuck

- For clamping various size and shaped devices, packaged parts, PCB's, single chips, MEMS, BioMEMS or virtually anything you want to hold view and probe
(VICE Clamps are non-conductive/ ULTEM)



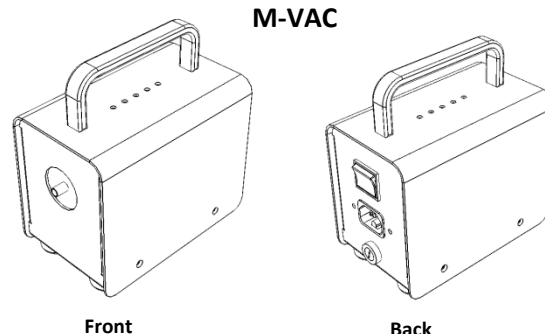
CM-BMVC

M-VAC

AC Linear Piston – (Small) Quiet Vacuum Pump

Supports vacuum hold-down of DUT and mounting of 1-10 Micro-positioners
(11 in. Hg @ 115VAC /428 mbar @ 230V AC)

- Includes Power Cord, On/Off Switch, 10' flexible vacuum tubing, 5Amp Fuse, Vibration dampening feet, Easy grip handle



Front

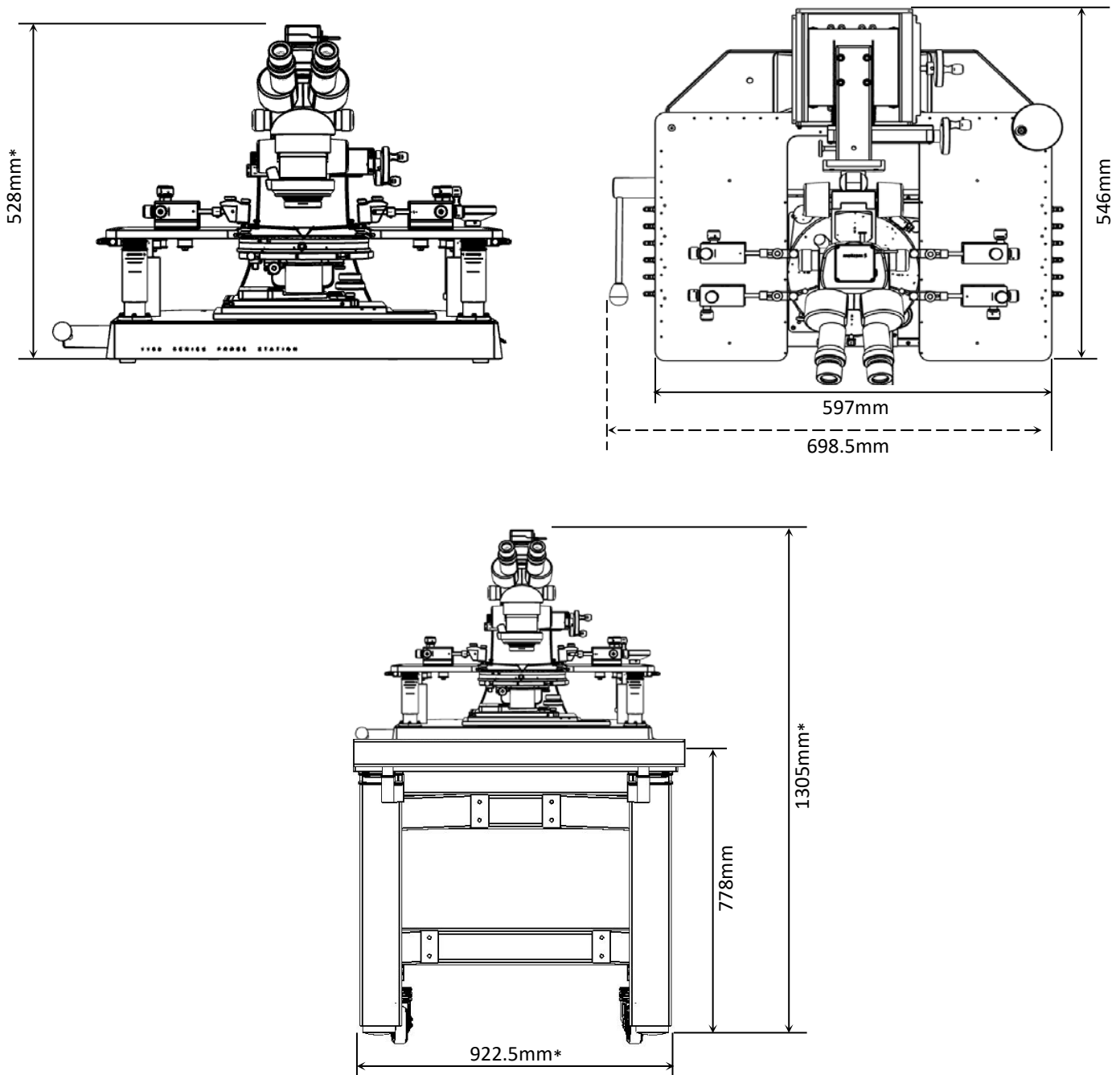
Back

❖ SYSTEM DIMENSIONS – TABLE OPTIONAL

WL-1160 / including microscope*

Dimensions (L x D x H)	546 x 597 x 528mm	(21.5" x 23.5" x 20.78")
Weight	56.7kg	(125 lbs.)

* Can vary dependent on monitor, probes, shelf, and microscope selection



❖ WARRANTY

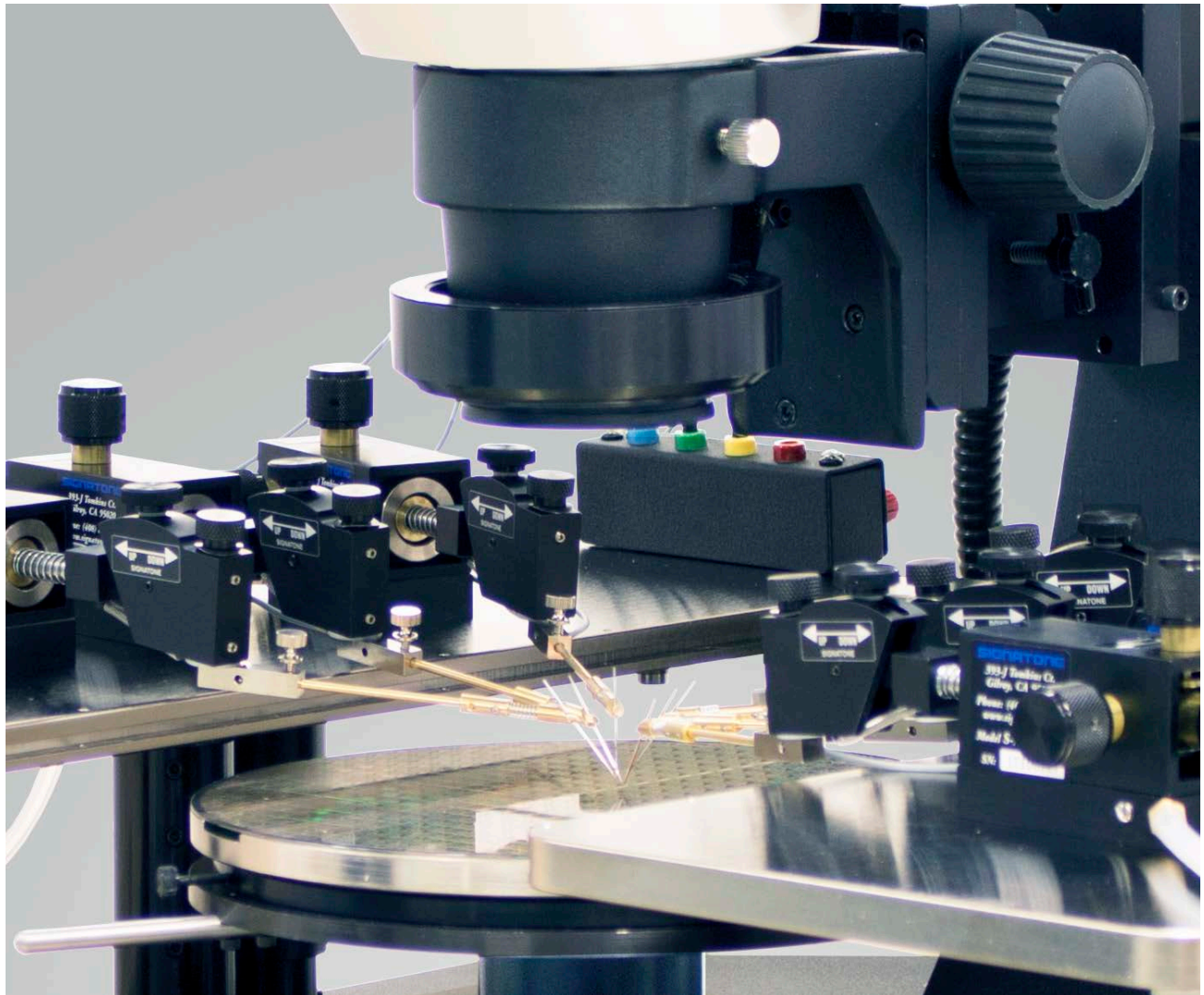
- Standard Warranty 12 months *
- For Extended Warranty and Service Contracts : Contact Signatone Corp. for more information

** See Signatone Corporate Terms and Conditions of Sale for further details.*

- **North America:** Sales.NA@signatone.com
- **Europe:** Sales.Europe@signatone.com
- **Asia:** Sales.Asia@signatone.com



Signatone S-725 General Purpose, 3-Axis Micropositioner



❖ FEATURES / APPLICATIONS

Signatone offers an extensive line of Micropositioners to address virtually every probing and measurement application, ranging from the very simple to the highly complex sub-micron high-resolution positioners.

The S-725 General Purpose 3-axis Micropositioner accommodates the majority of Signatone's probe arms and single needle probes allowing for a variety of test configurations. Available with vacuum or magnetic base, pivot, spring, or rigid head, 3-Axis direction control, this positioner is very economically priced and recognized as the best value in the probing market.

Designed for a Variety of Probing Applications

- IV/CV Coaxial-Low Current
- Failure Analysis
- Pad Probing
- High Power Test
- Resistivity Measurements
- MEMS Test
- Your Application

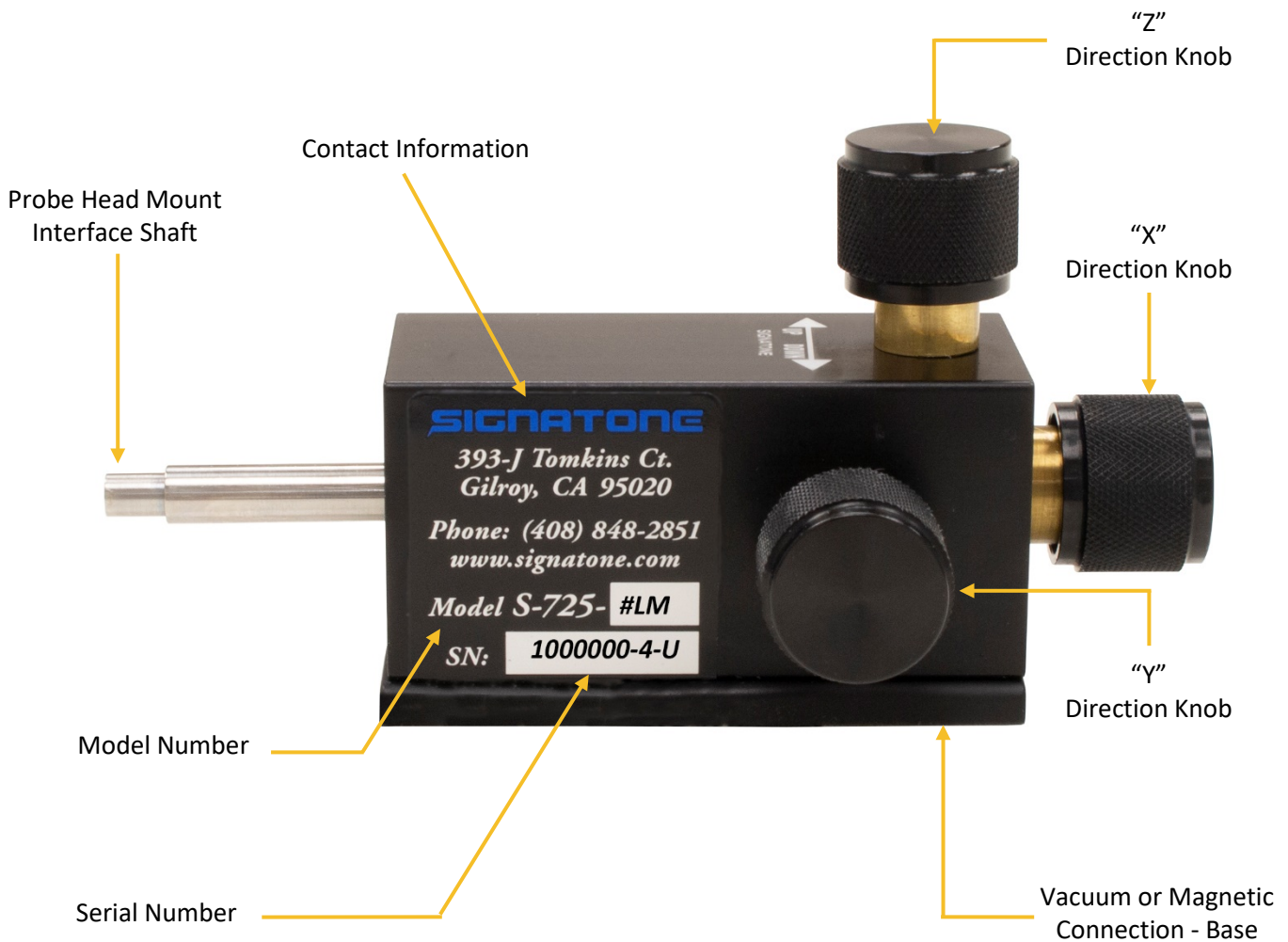
SPECIFICATIONS

Model S-725

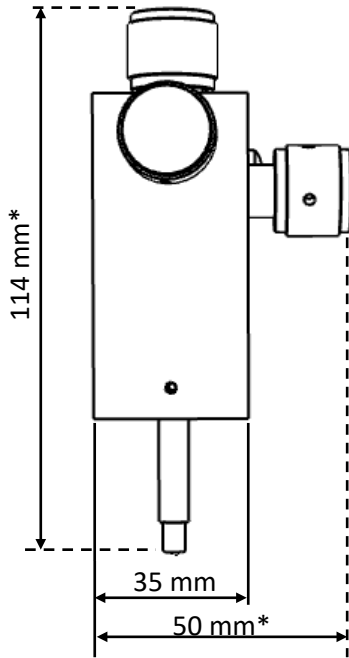
Travel range	X = 19 mm Y-Z = 15 mm
Feature resolution	5 µm
Screw resolution	80 TPI
Mounting	Vacuum, Magnetic
Footprint (W/D)	67mm x 35mm

Application

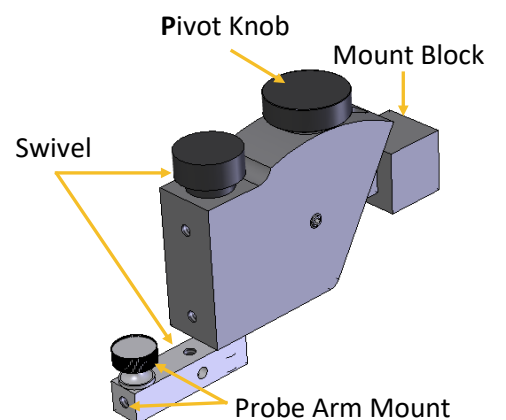
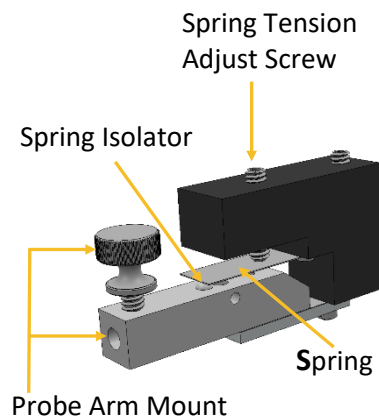
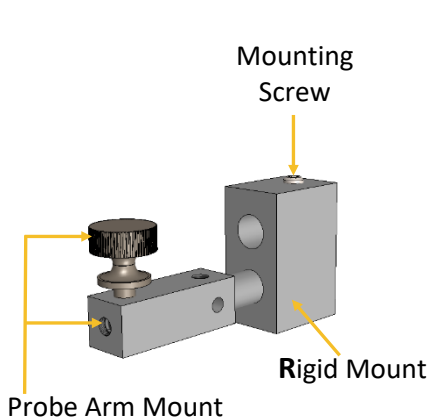
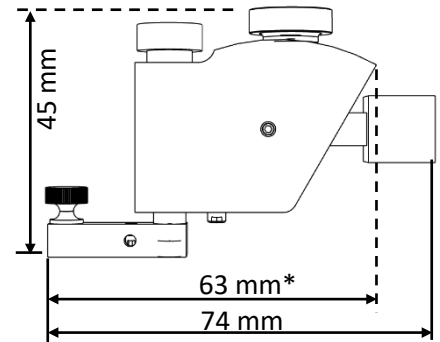
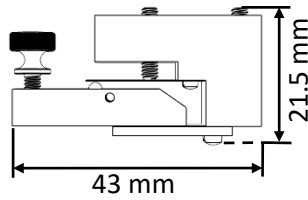
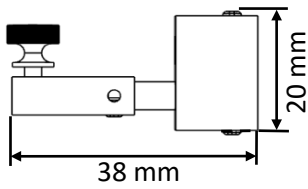
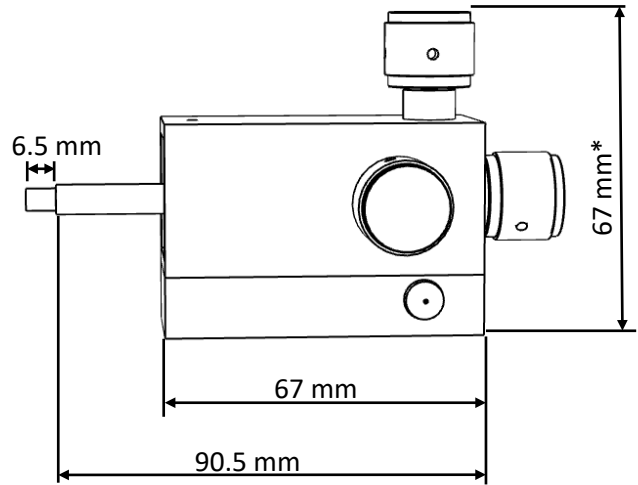
Small footprint/ allows for multiple probes
CV/IV coaxial probing
Failure analysis
Resistivity -Duel Kelvin 4-point probing
Pad probing
High-power probing



❖ **DIMENSIONS – Rigid, Spring and Pivot Head Configurations**



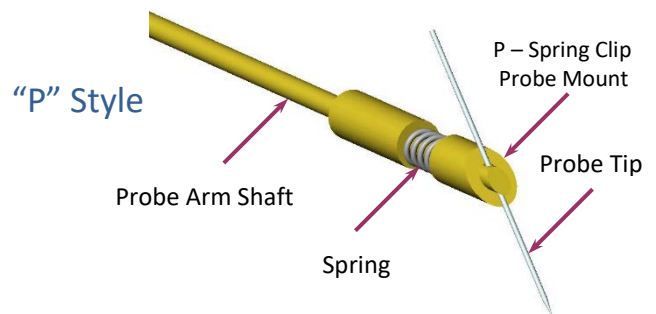
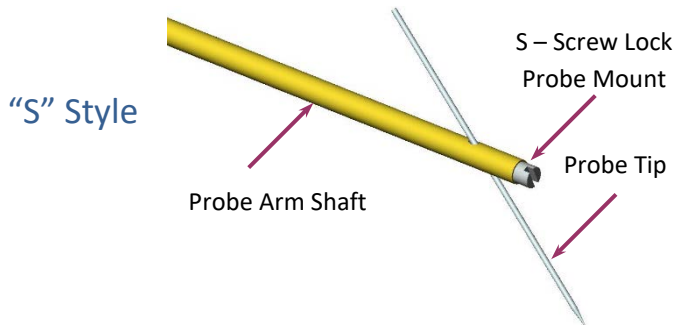
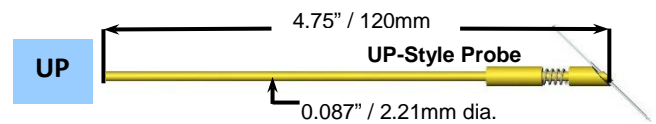
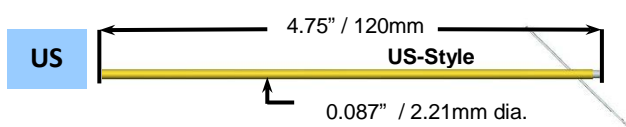
S-725#LV



Signatone Probe Holder Series

Offering a wide variety of probe holders to suit virtually every probing requirement. This Signatone selection guide is for our standard and coax isolated probe holders designed for use with all Signatone Micropositioners

The Signatone “U” Series probe tip holder comes in one universal length of 4.75”. This holder is made to be bent or cut to length by the customer. The “U” style holder is available in the following Signatone “Tip-Mount” Options



The Signatone “S” or screw locking option probe tip mount secures the probe tip with a set screw allows for easy and quick probe replacement.

The Signatone “P” or Spring Clip option probe tip mount allows for a quick and easy probe change without the need for any tools.

General Purpose Probing

PART #	Material	Length	Probe Mount	Connection	Typical Use
US	Brass	120mm	Screw- Lock	Mini-banana jack	$\geq 1\mu\text{A}$
UP	Brass	120mm	Spring- Clip	Mini-banana jack	$\geq 1\mu\text{A}$

❖ **DC PROBE –SELECTION GUIDE**

	Coax Probe (C)	Triax Probe (T)	Kelvin Probe (K)
Max voltage	500 V	500 V	500 V
Temperature range	-60 °C to 300 °C	-60 °C to 300 °C	-60 °C to 300 °C
Leakage current	< 50fA	< 20fA	< 20fA
Connectivity	BNC	Standard Triax	SSMC
Connectivity type	Single Coaxial	Single low noise Triaxial	Force/Sense Coax
Characteristics impedance	50 Ohms	50 Ohms	50 Ohms
Residual capacitance	< 80fF	< 80fF	< 80fF
Probe holder material	Brass	Brass	Brass
Probe tips material	Tungsten	Tungsten	Tungsten
Probe tips sizes	0.5 µm – 25 µm	0.5 µm – 25 µm	0.5 µm – 25 µm
Minimum pad size	25 µm x 25 µm	25 µm x 25 µm	25 µm x 25 µm



Coax Probe



Triax Probe



Coax Kelvin Probe

❖ **High Voltage/High Current PROBE –SELECTION**

Model	High Voltage Probes			High Current Probe
	HVP-CX-3	HVP-TX-3	HVP-CX-10	HCP 100
Max Voltage	3 kV	3 kV	10 kV	500 V
Max Current	1 A DC/30 A Pulsed	120 mA DC	20 mA DC	10 A DC/100 A Pulsed
Temperature Range	-60 °C to 300 °C	-60 °C to 300 °C	-60 °C to 300 °C	-60 °C to 300 °C
Leakage Current	< 200 pA @ 3 kV, < 5 pA @ 10 V	< 1 pA @ 3 kV, < 100 fA @ 10 V	< 100 pA @ 10 kV	N/A
Connector Type	SHV	HV Triax	UHV Coax	HV Banana
Replaceable Tip	Yes	Yes	Yes	Yes
Probe Material	W	W	W	BeCu or W



HVP-CX-3



HVP-TX-3



HVP-CX-10



HCP-100

Signatone Probe Tips

Offering a wide variety of passive probe tips to suit virtually every probing requirement. This selection guide is our standard offering / special sizes and materials available.

Model Number	Material	TIP Diameter	Shank Diameter	Length
SE-10T	Tungsten	1 µm	0.254mm	31.75mm
SE-10TZ	Tungsten	1 µm	0.254mm	31.75mm
SE-20BC	Beryllium Copper	12 µm	0.51mm	31.75mm
SE-20T	Tungsten	3.5 µm	0.51mm	31.75mm
SE-20TB	Tungsten	20 µm	0.51mm	31.75mm
SE-20TBL	Tungsten	20 µm	0.51mm	50.1mm
SE-20TZ	Tungsten	3.5 µm	0.51mm	31.75mm
SE-BC	Beryllium copper	12 µm	0.63mm	19mm
SE-BCB	Beryllium copper	125 µm	0.63mm	19mm
SE-O	Osmium	12 µm	0.63mm	19mm
SE-P	Palladium	12 µm	0.63mm	19mm
SE-S	Steel	12 µm	0.63mm	28.45mm
SE-SM	Tungsten	1 µm	0.51mm	50.1mm
SE-SMS	Tungsten	0.2 µm	0.51mm	50.1mm
SE-T	Tungsten	5 µm	0.63mm	31.75mm
SE-TB	Tungsten	25 µm	0.63mm	31.75mm
SE-TC	Tungsten Carbide	12 µm	0.63mm	31.75mm
SE-TG	Gold Plated Tungsten	12 µm	0.63mm	31.75mm
SE-TL	Tungsten	5 µm	0.63mm	50.1mm
SE-TZ	Tungsten	5 µm	0.63mm	31.75mm
SM-10	Tungsten	0.2 µm	0.51mm	30.5mm
SM-35	Tungsten	0.7 µm	0.51mm	30.5mm

Probes with tungsten shank can be cut and bent to a particular shape by the end user.

Z bend models are also available, for more information, contact sales@signatone.com

Packaging: Tips are sold by the box including quantity of 5 tips.

Discounts available on quantity purchases of 20-100 box, +100 boxes.

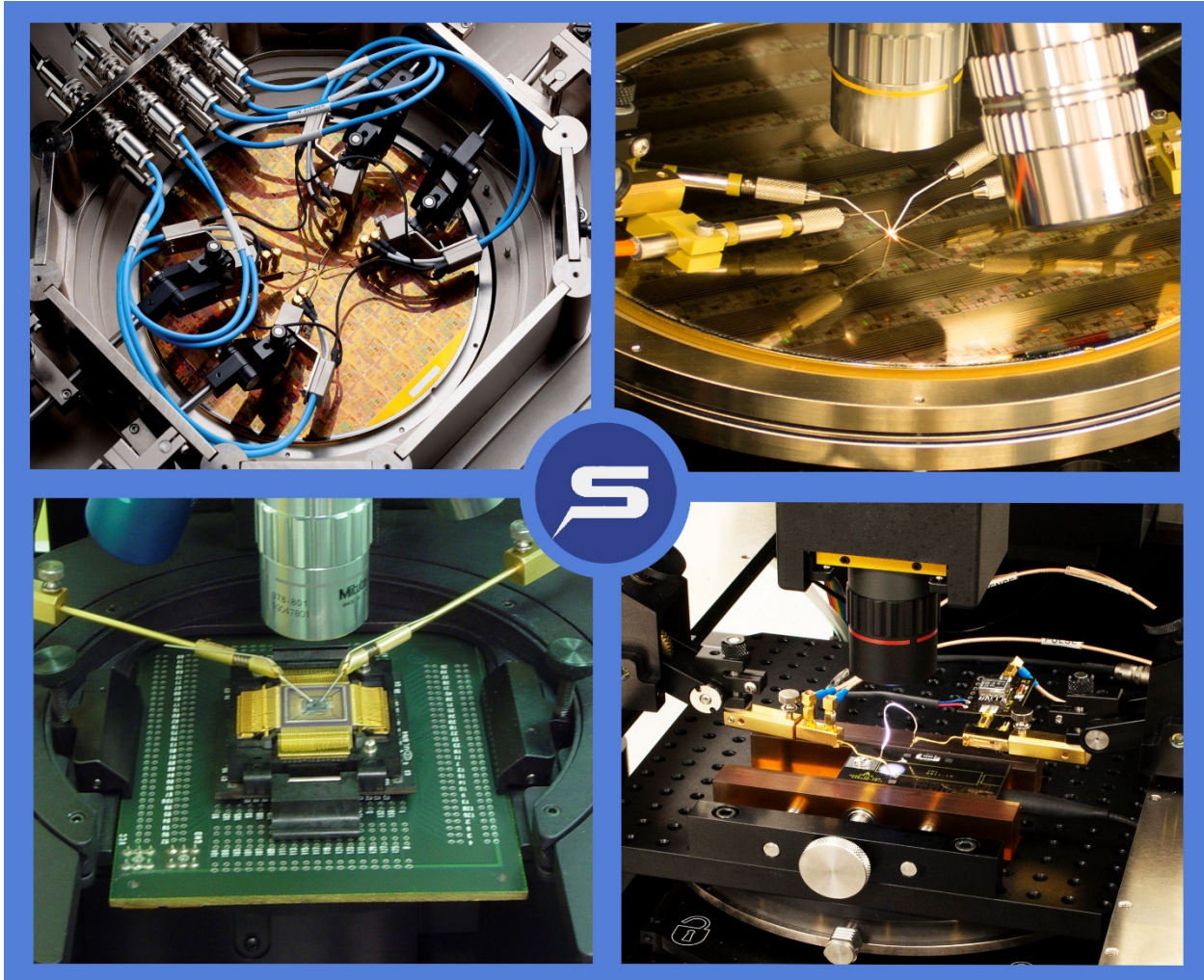
(contact factory for details)



❖ **WARRANTY**

- Standard Warranty 12 months *
For Extended Warranty and Service Contracts contact Signatone Corp. for more information

* See Signatone Corporate Terms and Conditions of Sale for further details.



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