The ***S-1080 Thermal Controller*** is designed to drive ***Signatone's*** family of thermal chucks. The ***S-1080*** controller features 0.1°C resolution over the full temperature range. ***S-1080*** programming allows tuning the chuck for peak performance. With a plethora of Signatone thermal chuck options, the versatility of the ***S-1080*** ensures each chuck to achieve peak performance in various applications.

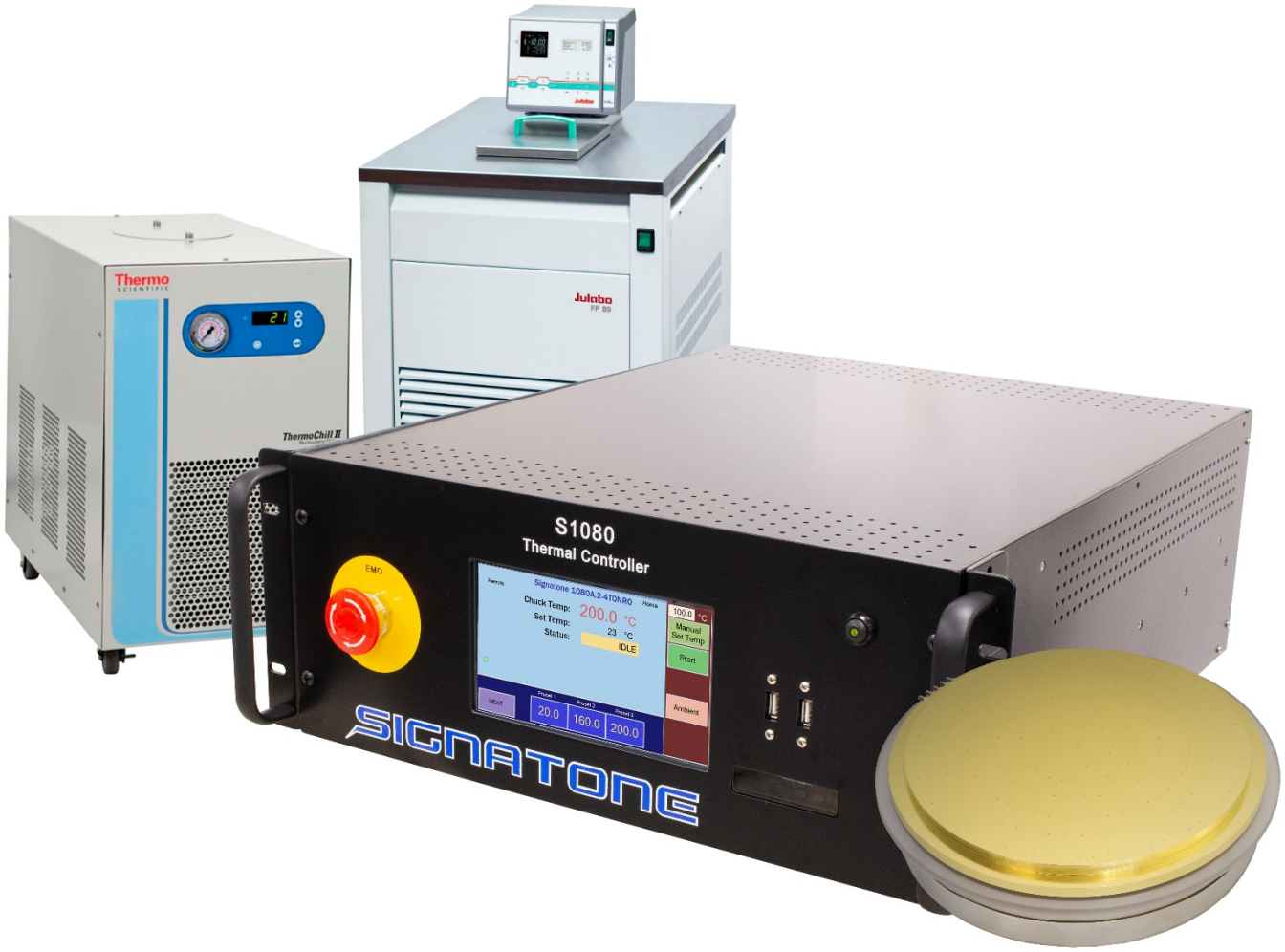
❖ The Integrated Signatone Thermal System Probing Solution is the Obvious Choice

For more than 50 years Signatone has developed and manufactured thermal chuck systems to meet the ever-evolving demands and test criteria for you- our customers. Understanding the devices to be tested, mounted, and probed is key to designing a highly accurate, integrated thermal system.

With our engineering and production team working together, utilizing 3D drawings and our extensive in-house machine shop, Signatone has a great advantage in building, integrating, and testing our thermal probing solutions - all under one roof. This saves everyone time and money, alleviates miscommunication and results in faster deliveries and better system integration.

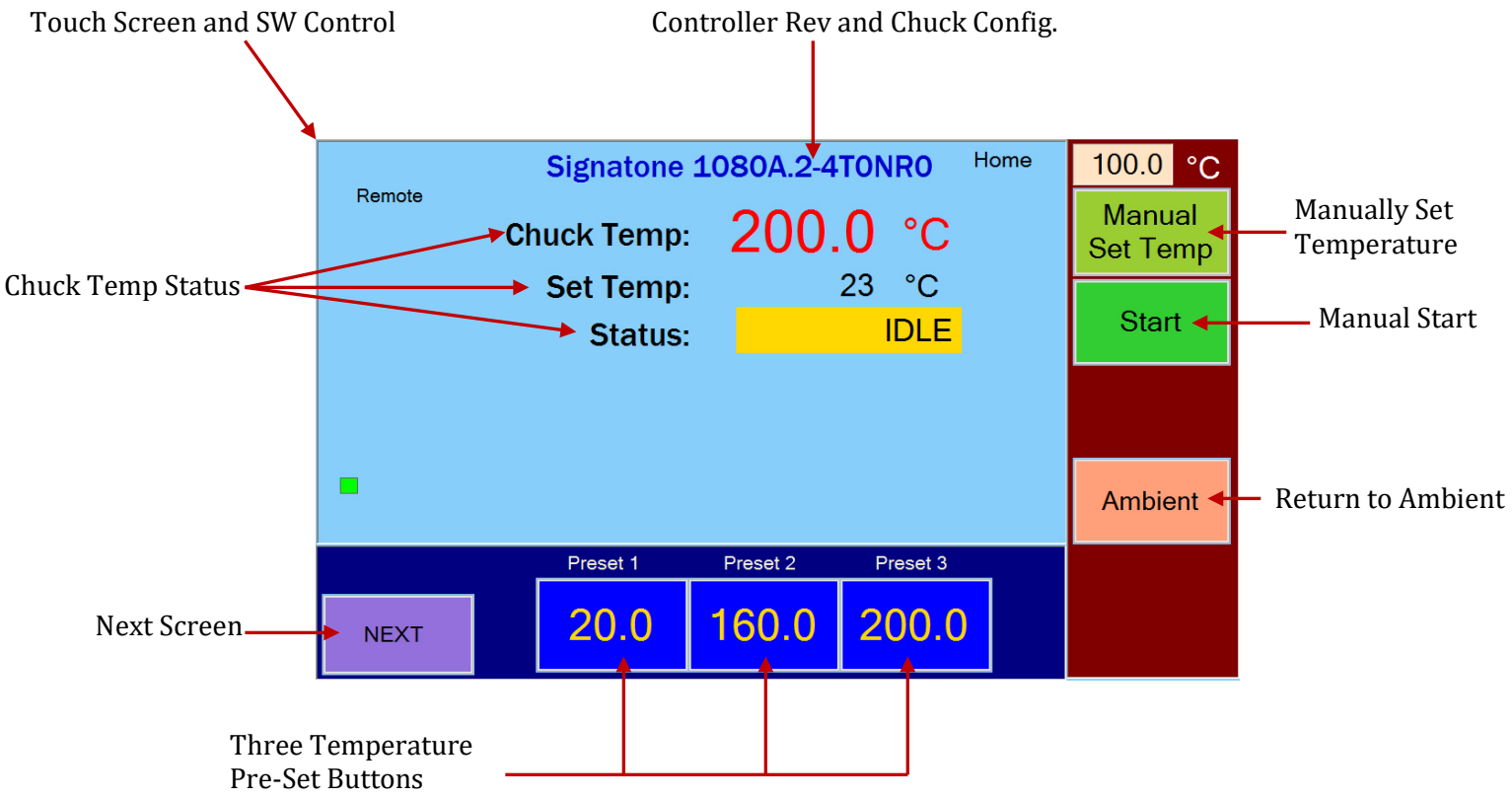
❖ FEATURES / BENEFITS

Calibrated precision is sustained with high performance, low noise power solutions

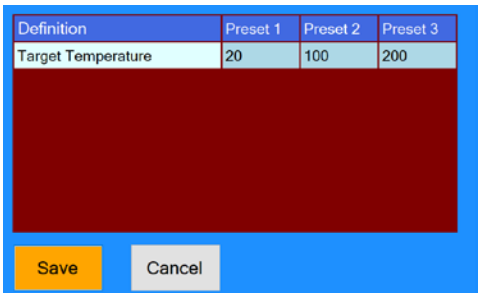


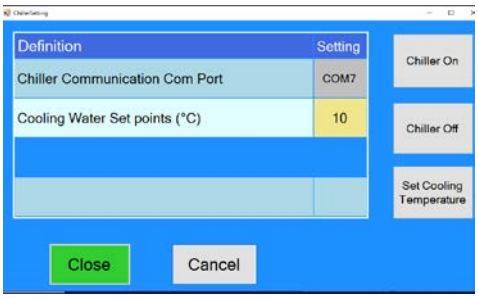
- Touch screen operation
- Set Target Temperature
- Three preset temperature buttons for one touch operation
- Reporting of Temperature and Status
- Ramping speed control
- 0.1°C resolution
- Temperature range: -60°C to +300°C depending on chuck selection
- Controls 100mm, 150mm,200mm,300mm Chucks
- Up to 1500-Watt output
- Triple safety circuit to prevent Thermal run away
- EMO safety switch
- GPIB-RS232 and TCP/TCIP interface
- SW Control of a Variety of Chillers
- 19" Rack mountable

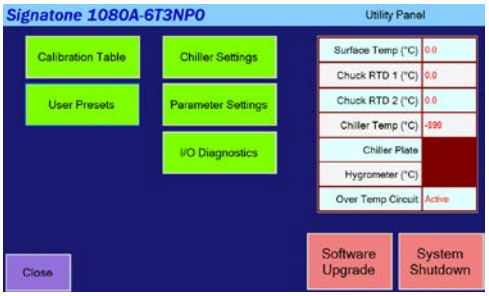
❖ Intuitive Touch-Screen and SW Controls

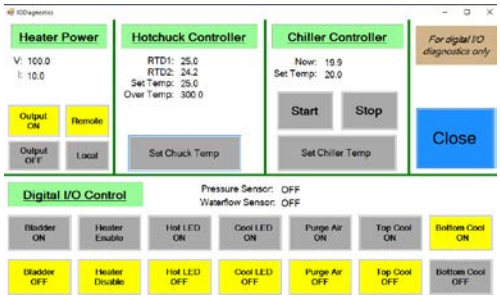


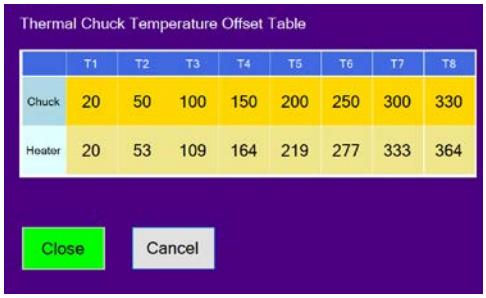
❖ Sample Configuration Setup Screens











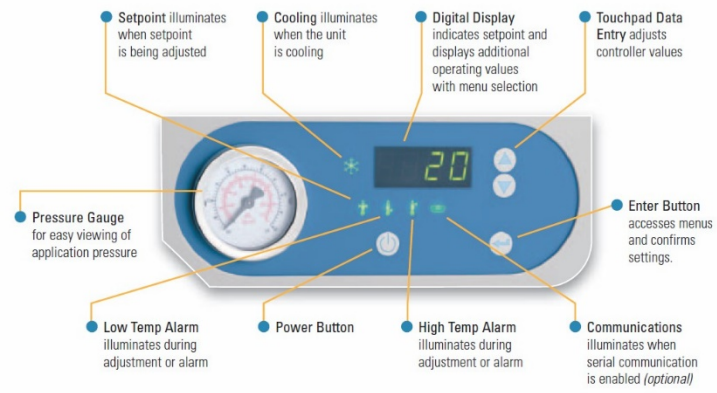
❖ SYSTEM OPTIONS – ACCESSORIES

Model # TC-

Recirculation Chiller (TC-II)

Recirculation Chiller for use with Hot Chucks when House Water & Drain are not Available

- Intuitive Digital Controller
- Pressure Gauge Located on Front Panel
- Accessible Fill Port (Top)
- Control Indicator Lights
- RS-232 Communications (Rear)
- Locking Casters for Mobility and Safety



Ultra-Low Refrigerated Circulator (FP89-HL)

A powerful circulating pump system and cooling capacity guarantees short cool-down times. The ACC "Active Cooling Control" provides active cooling control across the whole temperature range. The system is equipped with castors for easy transportation. Additionally, the system includes an improved insulation to help avoid ice-formation, and has a visual liquid level display.

- Chuck Temperature Cooling Range A to -60°C
- Digital Interface RS232, RS485.
- Includes 2 each Barbed Fittings.
- Reliable and Consistent Pump Capacity.
- Early Warning System for Low Liquid Levels
- Early Warning System for High/Low temperature limits (optical and audible alarm)
- Full Thermal Control with S-1080 Software

Model # FP89-HL

❖ SIGNATONE THERMAL CHUCKS

Typical Specifications of *Signatone* Thermal Technology

Ambient to Hot	**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 ±1.5 °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	< ±10 µm	< ±8 µm	< ±15µ
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 < 9min	200°C to 25°C < 8min	200°C to 25°C < 8min
Leakage @ 10 V Kelvin Triax	N/A	<25fA	<400fA
Residual Capacitance		<200fF	<1pF
Maximum voltage between chuck top and GND	500V	1100V	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 512 x 178	34.5	54	< 2000
TC-II	355 x 711 x 610	50.8	112	< 1500
2XRC-89HL	559 x 610 x 915	135	297	< 3700

Typical Specifications of *Signatone* ***Hot-Cold*** Thermal Technology

	200mm Standard Hot	200mm Hot/Cold Triax	200mm Hot/Cold 3kV Triax
Temperature Range	+25 °C to +300 °C	-55 °C to +200 °C	-55 °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	HFE	HFE
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 ±1.5 °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	< ±10 µm	< ±8 µm	< ±15µ
Electrical isolation - Coax BNC (m)	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 < 9min	25 to -50°C < 24min	25 to -50°C < 50min
Leakage @ 10 V Kelvin Triax (m)	N/A	<25fA	<400fA
Residual Capacitance		<200fF	<1pF
Maximum voltage between chuck top and GND	500V	1100V	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, 200	2, 50, 100, 150, 200

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 512 x 178	24.5	54	< 2000
TC-II	355 x 711 x 610	50.8	112	< 1500
2XRC-89HL	559 x 610 x 915	135	297	< 3700

WARRANTY

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

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

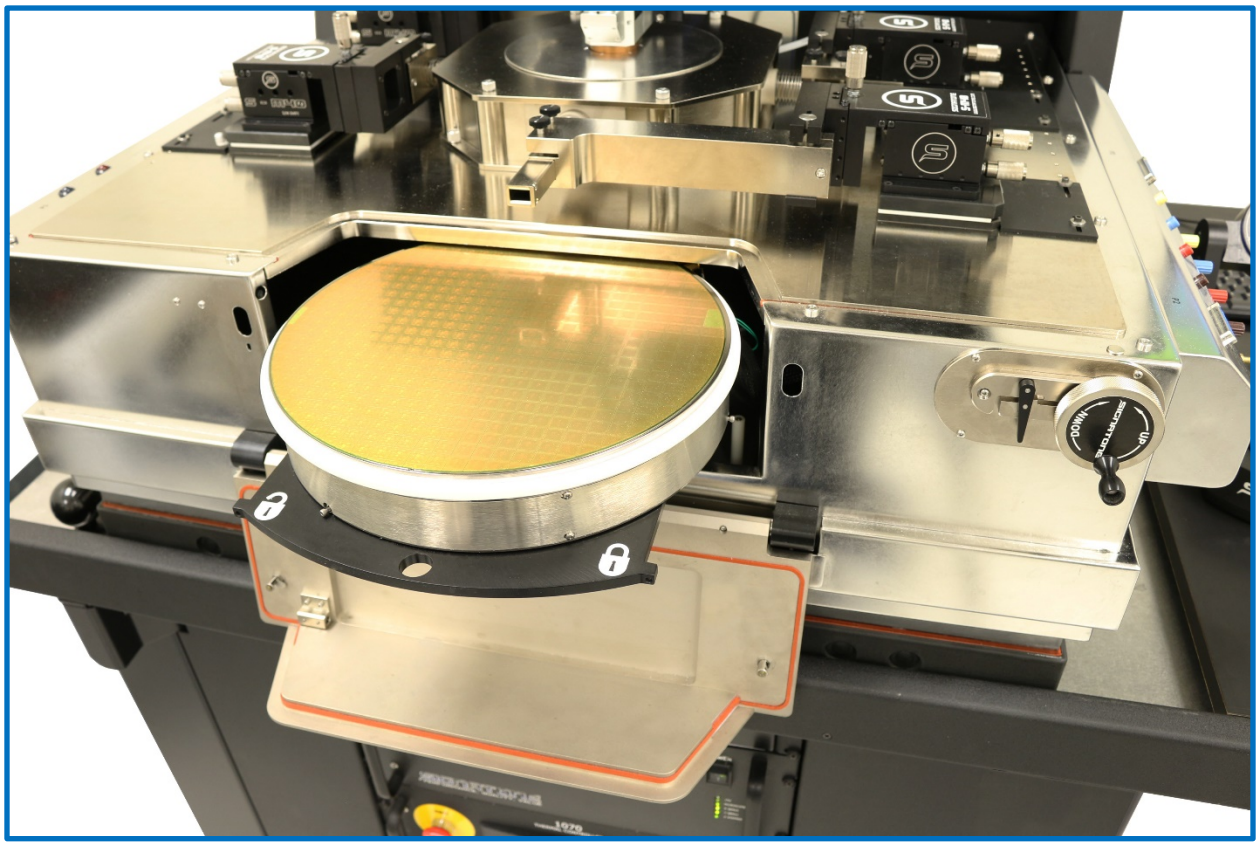


Photo: Signatone WL350, 300mm semiautomatic probe station with local enclosure and 300mm hot/cold chuck system.

microworld®

GRENOBLE - FRANCE
Tel : +33 (0)4 76 56 16 17
Email : contact@microworld.eu
www.microworld.eu