

WIT Product Lineup

World-wide Innovative Technology

WIT

주식회사 위트

jwchoi@wwit.co.kr

031-293-9205

1

WIT Product Lineup

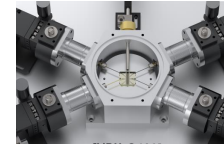


High
Temperature

VPX-P150



VPX-G400



Room
Temperature

APX-4B



APX-6C



APX-8C



Low
Temperature

VPX-77K



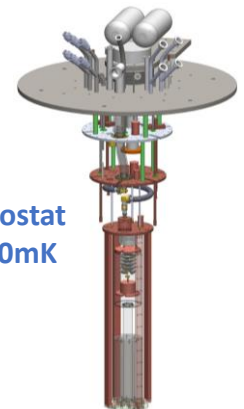
Cryostat
4.2K

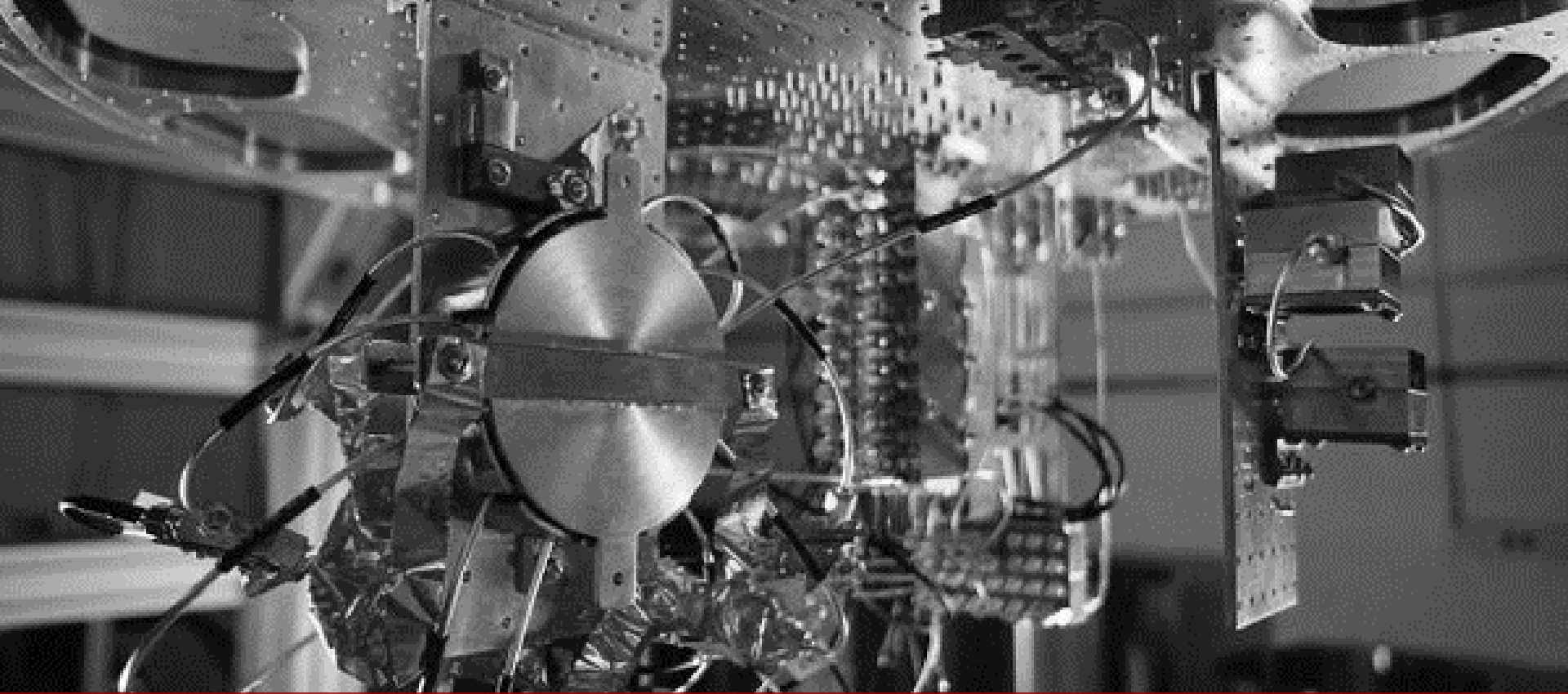


Cryostat
1.5 K



Cryostat
300mK





WIT APX Lineup

World-wide Innovative Technology

WIT

1

WIT APX Lineup



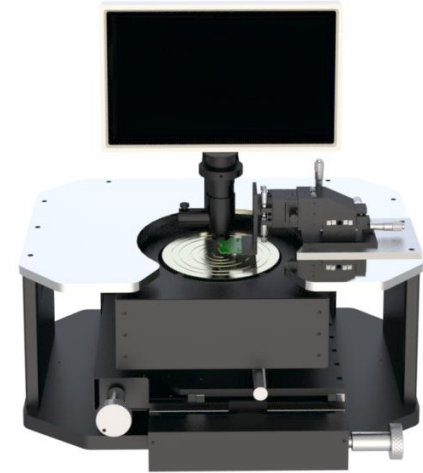
APX-4A



APX-4B



Hall Probe Station



APX-6B



APX-6C



APX-8C



APX-4A



Specifications

Main Frame	4 Inch Main chuck	Nickel plated vacuum chuck
	Device Transport	Travel Range X, Y: 25 mm x 25 mm
	Scope Transport (option)	Travel Range X, Y: 30 mm x 30 mm
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		Monitor Capture & Recoding Card
		13" LCD Monitor
Micro-positioner	XYZ movement	6 mm x 6 mm x 6 mm
	Resolution	5 um
	Base Option	Vacuum, Magnet
	Tip Holder	TRX, BNC, SMA
Probe Tip	Bending Type	Size : 0.5 x 30 mm
		Material: Tungsten
Footprint	Footprint	480(W) x 350(D) x 400(H) mm
Option	Dark Box	900(W) x 750(D) x 800(H) mm
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2KVA (Automatic Voltage Regulator)

3

Ambient Probe Station (APX-4B)



APX-4B



Specifications

Main Frame	4 Inch Main chuck	Nickel plated vacuum chuck
	Device Transport	Travel Range X, Y: 25 mm x 25 mm
	Scope Transport (option)	Travel Range X, Y: 30 mm x 30 mm
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		Monitor Capture & Recoding Card
		13" LCD Monitor
Micro-positioner	XYZ movement	6 mm x 6 mm x 6 mm
	Resolution	5 um
	Base Option	Vacuum, Magnet
	Tip Holder	TRX, BNC, SMA
Probe Tip	Bending Type	Size : 0.5 x 30 mm
		Material: Tungsten
Footprint	Footprint	480(W) x 350(D) x 520(H) mm
Option	Dark Box	900(W) x 750(D) x 800(H) mm
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2KVA (Automatic Voltage Regulator)

4

Ambient Probe Station (APX-6B)



APX-6B



Specifications

Main Frame	6 Inch Main chuck	Nickel plated vacuum chuck
	Device Transport	Travel Range X, Y: 50 mm x 50 mm
	Scope Transport	Travel Range X, Y: 30 mm x 30 mm
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		Monitor Capture & Recoding Card
		13" LCD Monitor
Micro-positioner	XYZ movement	13 mm x 13 mm x 13 mm
	Resolution	3 um
	Base Option	Vacuum, Magnet
	Tip Holder	TRX, BNC, SMA
Probe Tip	Bending Type	Size : 0.5 x 30 mm
		Material: Tungsten
Footprint	Footprint	530(W) x 400(D) x 520(H) mm
Option	Dark Box	900(W) x 750(D) x 800(H) mm
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2KVA (Automatic Voltage Regulator)

APX-6C



Specifications

Main Frame	6 Inch Main chuck	Nickel plated vacuum chuck
	Device Transport	Travel Range X, Y: 150 mm x 150 mm Travel Range Z : 10 mm , Theta : 10°
	Platen Transport	One Shift Up : 5 mm (Platen up/down : 20 mm)
	Scope Transport	Travel Range X, Y: 30 mm x 30 mm
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		Monitor Capture & Recoding Card
Micro-positioner	XYZ movement	13 mm x 13 mm x 13 mm
	Resolution	3 um
	Base Option	Vacuum, Magnet
	Tip Holder	TRX, BNC, SMA
Probe Tip	Bending Type	Size : 0.5 x 30 mm
		Material: Tungsten
Footprint	Footprint	600(W) x 470(D) x 550(H) mm
Option	Dark Box	900(W) x 750(D) x 800(H) mm
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2KVA (Automatic Voltage Regulator)

6

Ambient Probe Station (APX-8C)



APX-8C



Specifications

Main Frame	8 Inch Main chuck	Nickel plated vacuum chuck
	Device Transport	Travel Range X, Y: 200 mm x 200 mm Travel Range Z : 10 mm , Theta : 10°
	Platen Transport	One Shift Up : 5 mm (Platen up/down : 20 mm)
	Scope Transport	Travel Range X, Y: 30 mm x 30 mm
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		Monitor Capture & Recoding Card
Micro-positioner	XYZ movement	13 mm x 13 mm x 13 mm
	Resolution	3 um
	Base Option	Vacuum, Magnet
	Tip Holder	TRX, BNC, SMA
Probe Tip	Bending Type	Size : 0.5 x 30 mm
		Material: Tungsten
Footprint	Footprint	730(W) x 530(D) x 600(H) mm
Option	Dark Box	900(W) x 750(D) x 800(H) mm
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2KVA (Automatic Voltage Regulator)

DTS-P200



Specifications

Main Frame	6 Inch Main chuck	Nickel plated vacuum chuck
	Device Transport	Travel Range X, Y: 50 mm x 50 mm Theta : 10°
	Scope Transport	Travel Range X, Y: 30 mm x 30 mm
Metallurgical microscope	Metallurgical microscope	Trinocular head with eyepiece 10X
		LED illumination reflection
		Revolver for 4 long WD objective
	Long WD objective	Upto 100X (WD: 12.5mm, N.A: 0.55)
	CCD Camera	3.1 M Pixels, (Resolution: 2048x1536)
Temperature Controller	Temperature Range	25 °C ~ 150 °C
	Typical Cooling Power	42 W
	DC Power Input	5 ~ 24 V / 4 A
	Bipolar Output	0 ~ ±21 V / ±4 A
	Power Control Mode	Performance-optimized PID control
Micro-positioner	XYZ movement	13 mm x 13 mm x 13 mm
	Resolution	3 um
	Theta/Tilt	15°/10°
	Base Option	Vacuum, Magnet
Footprint	Footprint	550(W) x 450(D) x 620(H) mm

7

DTS-P200 : Control Software



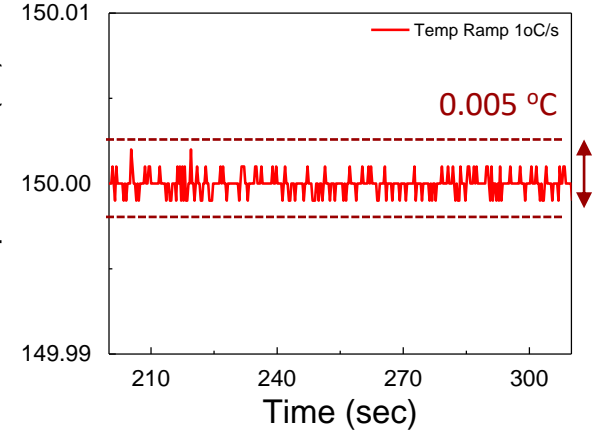
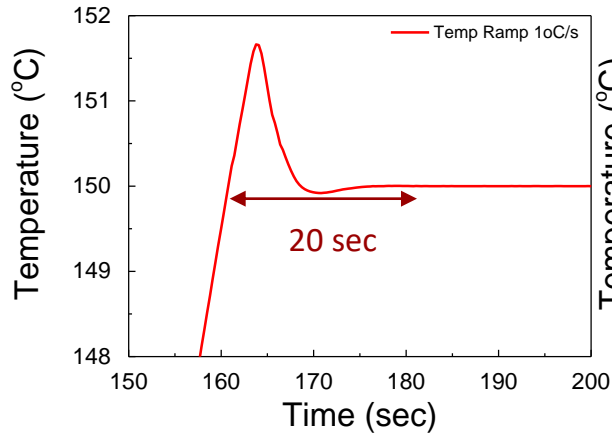
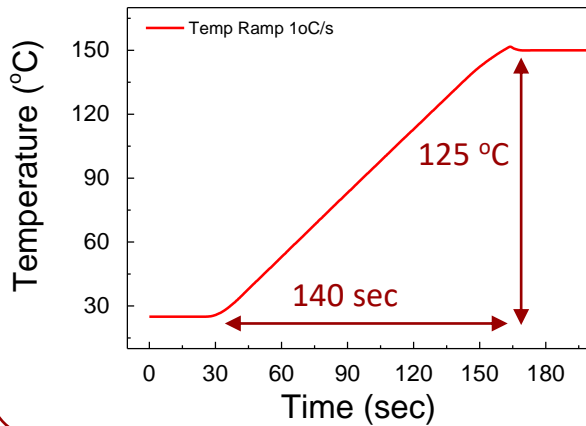
Description			
A	PC-Controller 통신 포트 설정	I	온도 제어 실행/중지
B	Stage Target Temperature 지정	J	소프트웨어 정지
C	Sink Temperature 측정값	K	Stage Temperature 측정값
D	Peltier Module에 인가된 전류값	L	Time vs Temperature Curve
E	Peltier Module에 인가된 전압값		
F	인가전류값 시각화		
G	측정 데이터 저장 폴더		
H	측정 대상 이름		

7

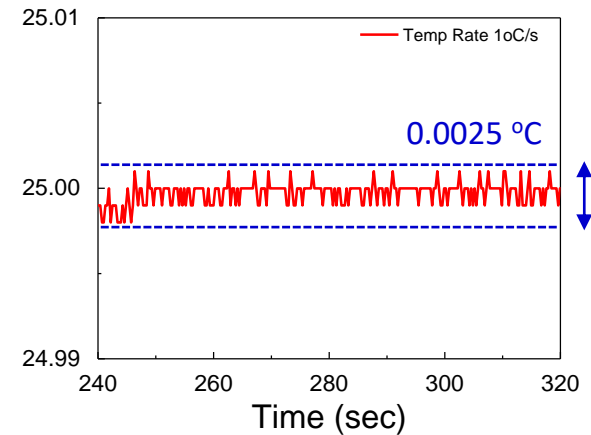
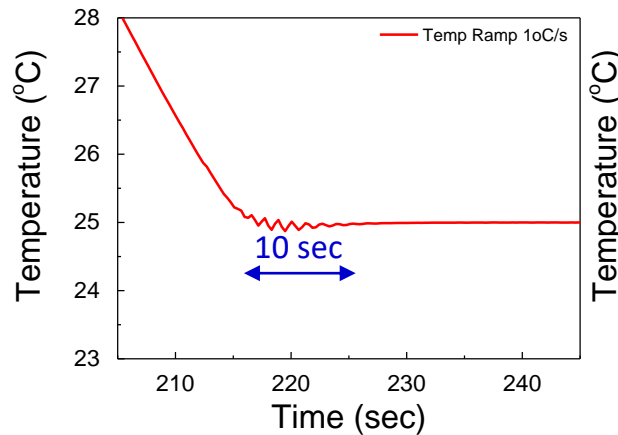
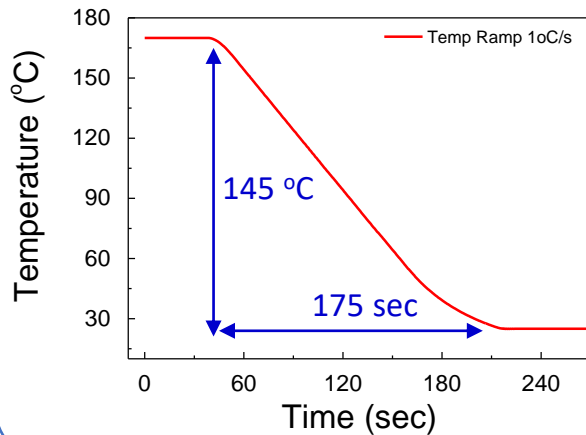
DTS-P200: Temperature Stability



Heating with 1 °C/s Heating rate



Cooling with 1 °C/s Cooling rate



8

Hall Probe Station (APX-HE)



APX-HE



Specifications

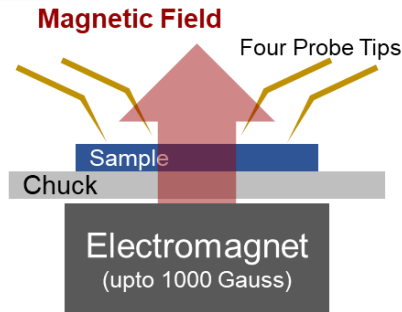
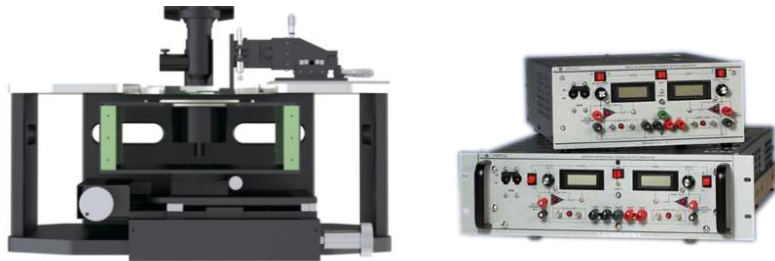
Main Frame	6 Inch Main chuck	Nickel plated vacuum chuck
	Device Transport	Travel Range X, Y: 200 mm x 200 mm Theta : 10°
	Scope Transport	Travel Range X, Y: 30 mm x 30 mm
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		Monitor Capture & Recoding Card
		13" LCD Monitor
Micro-positioner	XYZ movement	13 mm x 13 mm x 13 mm
	Resolution	3 um
	Theta/Tilt	15°/10°
	Base Option	Vacuum, Magnet
	Tip Holder	TRX, BNC, SMA
Probe Tip	Bending Type	Size : 0.5 x 30 mm
		Material: Tungsten
Footprint	Footprint	550(W) x 450(D) x 620(H) mm
Option	Dark Box	900(W) x 750(D) x 800(H) mm
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2KVA (Automatic Voltage Regulator)

8

Hall Probe Station (APX-HE)



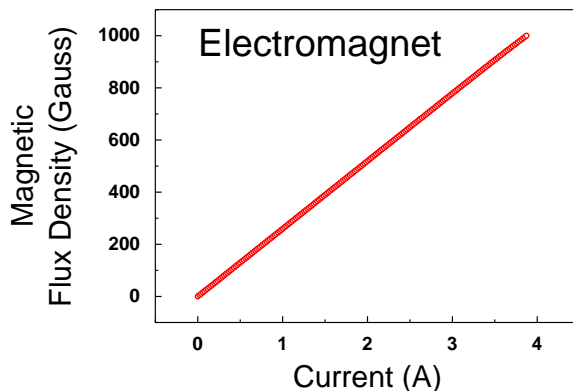
Power Supply



Electromagnet & Power Supply - Specifications

Electromagnet	Magnetic Flux Density	0 ~ 1500 Gauss	
DC Output Range	Voltage	0 ~ ±20V	
	Current	0 ~ ±5A	
Closed Loop Gain	Voltage Channel (V/V)	2.0	
	Current Channel (A/V)	0.5	
Output Impedance	Series R	80 uohm	
	Series L	20 uH	
	Shunt R	40kohm	
	Shunt C	0.05 uF	
Ripple and Noise	Voltage Mode	Typical	< 1mV
		Maximum	3mV
	Current Mode	Typical	< 0.01%
		Maximum	0.03%

Current vs Magnet Flux Density



9

Microscope & Video Systems



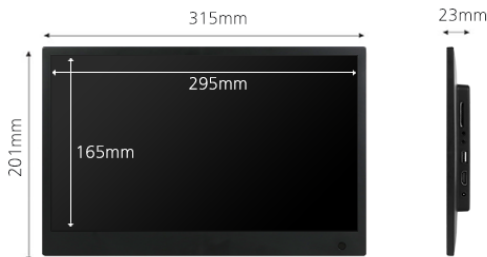
Microscope



HDMI Camera



Digital Monitor



Specifications

Optic Microscope	Zoom Objective	0.7 ~ 4.5X		
	C-mount Adapter	0.5X, 1X, 2X		
	Objective Lens	1X	2X	
	Working Distance (mm)	90	40	
	Light Source	LED Ring light		
CCD Camera	Imaging Sensor	Sony CMOS Sensor IMX185		
	Sensor Size	1/1.9 inch		
	Image Resolution	Dynamic: 1920 x 1080, Static: 3264 x 1836		
Digital Monitor	Screen Size	13 inch		
	Resolution	1920 x1080 (16:9)		
	Dimension	315(W) x 201(H) x 23 (D)		
	Weight	500 g		
Total Magnification	Digital Magnification	50X		
	Zoom Objective	0.7 ~ 4.5X		
	C-mount	0.5X	1X	2X
	Total Magnification	8 ~ 60X	17.5 ~ 112X	35 ~ 225X

10

Micro-Positioner



Specifications		RF-01	PS-01	PM-01
Resolution		3 um	3 um	5 um
Travel	X axis	13 mm	13 mm	6 mm
	Y axis	13 mm	13 mm	6 mm
	X axis	13 mm	13 mm	6 mm
	Theta/Tilt	15°/10°	-	-
Bottom Base		Magnetic	Magnetic/Vacuum	Magnetic/Vacuum
Probe Tip Holder Type		RF/Slide Glass Holder	Swivel Head	Swivel Head
Cable		TRX/BNC/RF	TRX/BNC	TRX/BNC
Dimension (W x D x H)		60 x 240 x 100	60 x 220 x 70	55 mm x 210 mm x 50 mm

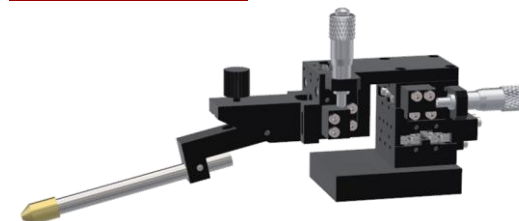
RF-01



PS-01

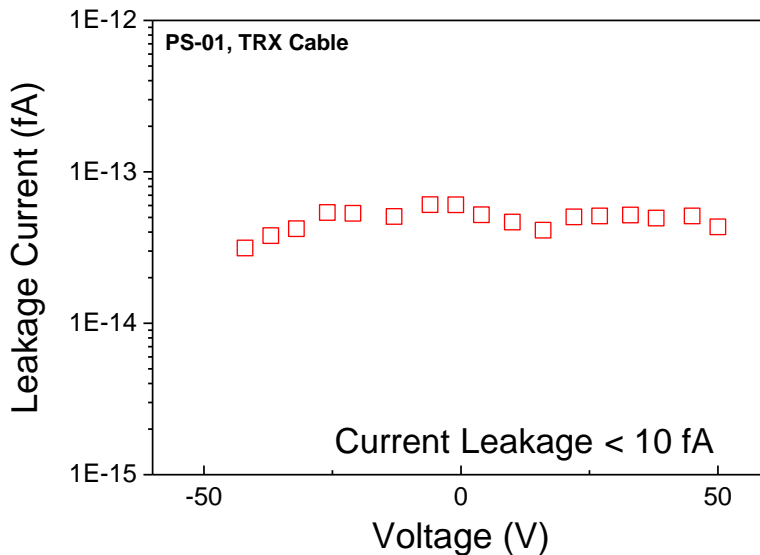


PM-01

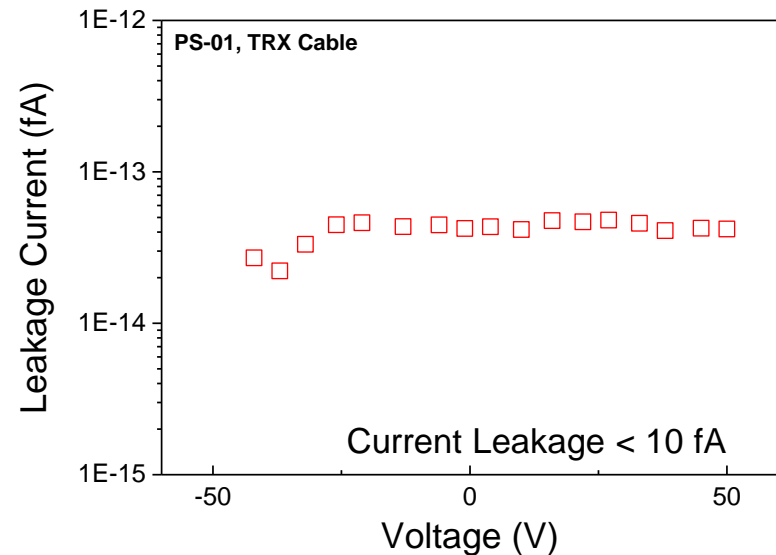


Test Condition

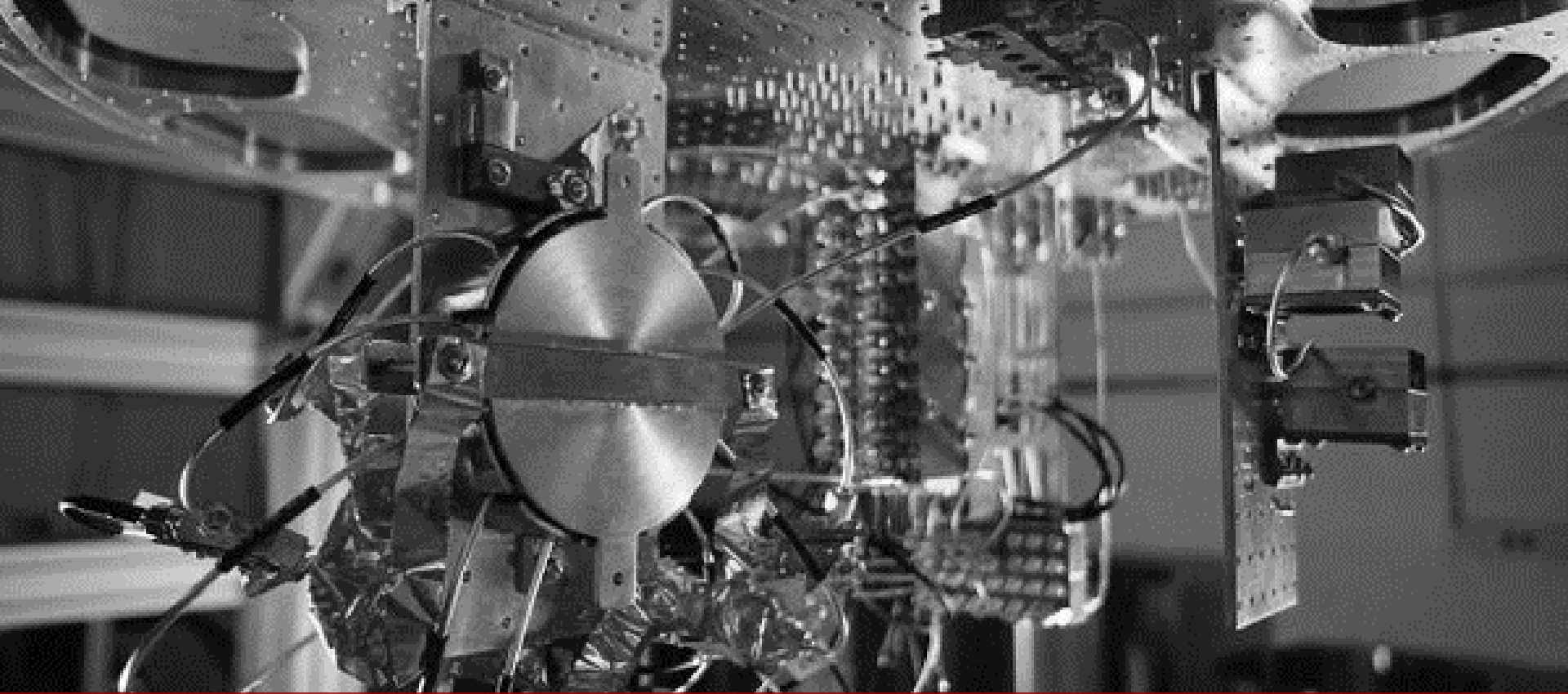
- Parameter Analyzer: Keithley 4200
- Voltage Range: - 40V to 40V
- Configuration: PS-01 and TRX Cable



Leakage current (A) vs. Voltage (V)
[-40V to 40V]



Leakage current (A) vs. Voltage (V)
[-40V to 40V]



WIT VPX Lineup

World-wide Innovative Technology

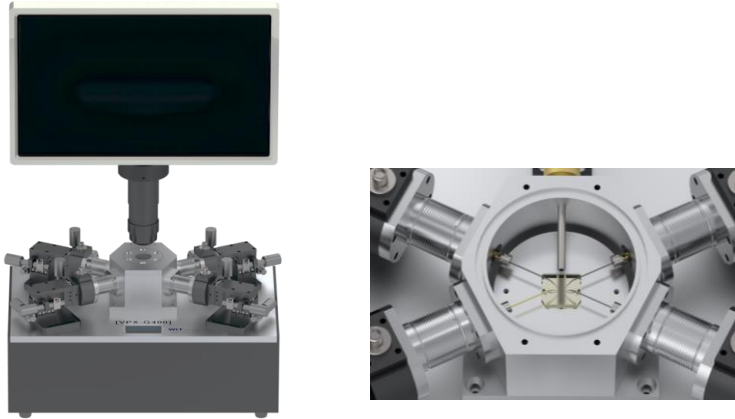
WIT

1

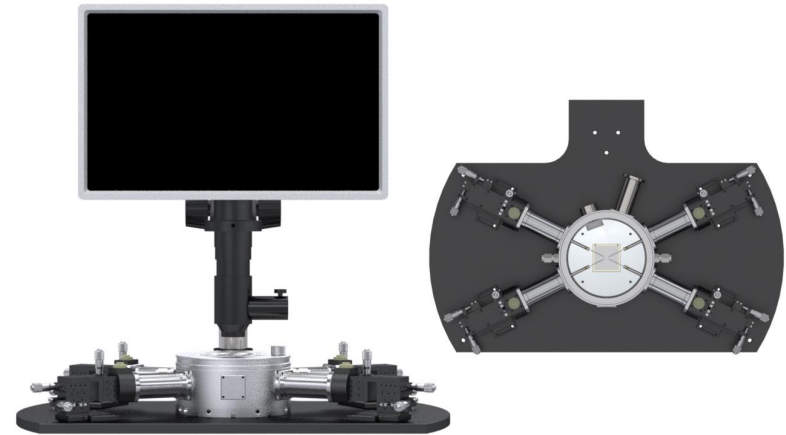
WIT VPX Lineup



VPX-G400



VPX-P150



VPX-77K



VPX-77KT



1

Thermal Annealing System (A-400)



A-400

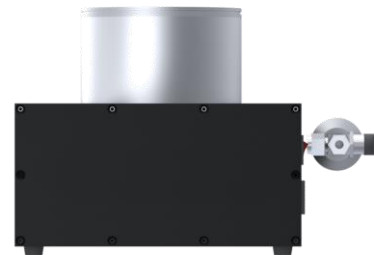


Specifications

Sample Chuck	Chuck Size	30 mm
Temperature Stage	Temperature Range	RT ~ 400 °C
	Cooling	12 °C/min
	Heating	10 °C/min
	Heater Power	50 W, 2 A
	Temp. Stability	± 0.1 °C
Temperature Controller	DC Input	12~24 V / 10 A
	Bipolar Output	0~21 V / ±10 A
	Temperature Probe	Pt100, Pt1000, NTC, VIN, K-type
	Software	High Speed Temperature Modulation
Vacuum pump	Turbo Pump	upto 10 ⁻⁶ Torr
	Rotary Pump	upto 10 ⁻³ Torr
Vacuum Gauge	Mid-Range Gauge	upto 10 ⁻⁴ Torr
Footprint	Footprint	330(W) x 267(D) x 180(H) mm
	MFC	Ar, O ₂ , N ₂ , Air
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2 KVA (Automatic Voltage Regulator)

1

Thermal Annealing System (A-400)



1

A-400 : Control Software



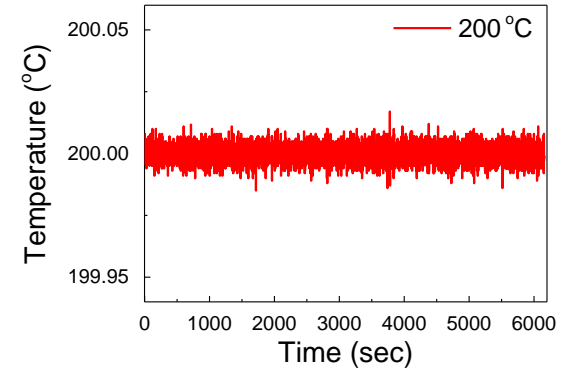
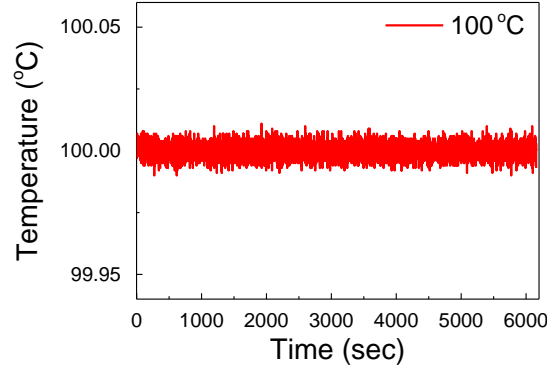
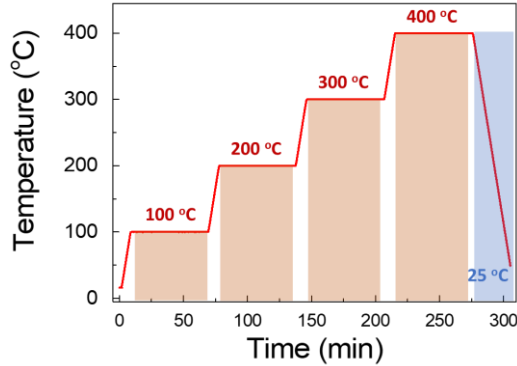
Description			
A	PC-Controller 통신 포트 설정	I	온도 제어 실행/중지
B	Stage Target Temperature 지정	J	소프트웨어 정지
C	Sink Temperature 측정값	K	Stage Temperature 측정값
D	Peltier Module에 인가된 전류값	L	Time vs Temperature Curve
E	Peltier Module에 인가된 전압값		
F	인가전류값 시각화		
G	측정 데이터 저장 폴더		
H	측정 대상 이름		

1

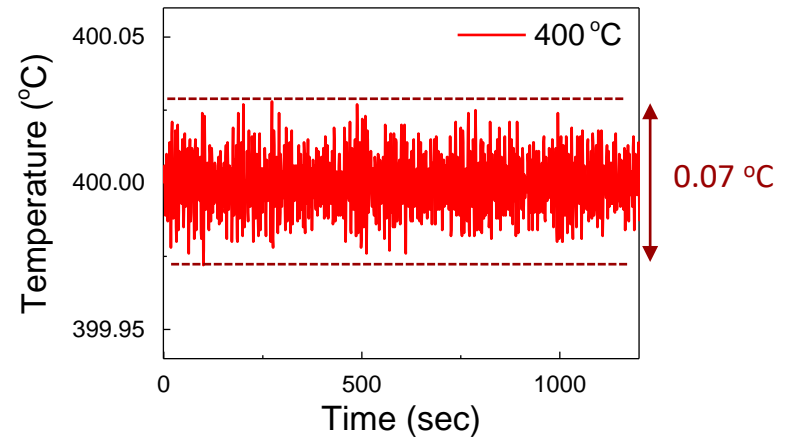
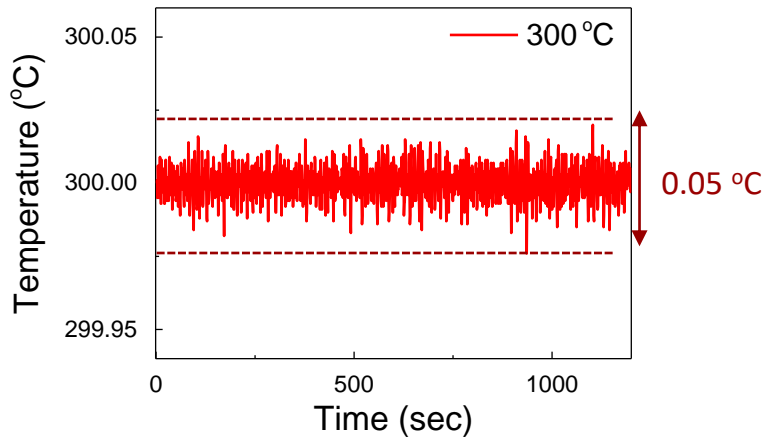
A-400: Temperature Stability



Temperature Stability



Temperature Stability



2

Vacuum Probe Station (VPX-M300)



VPX-M300

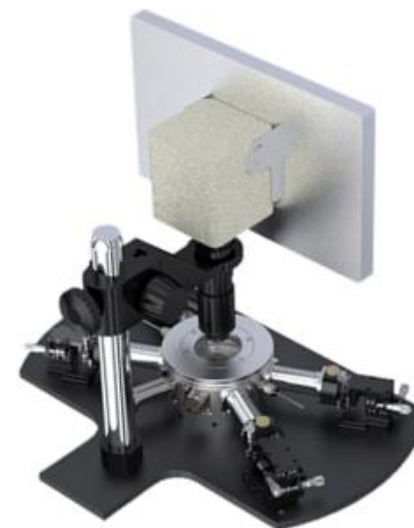
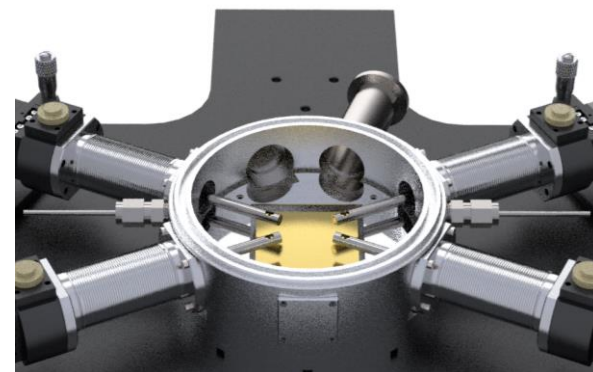
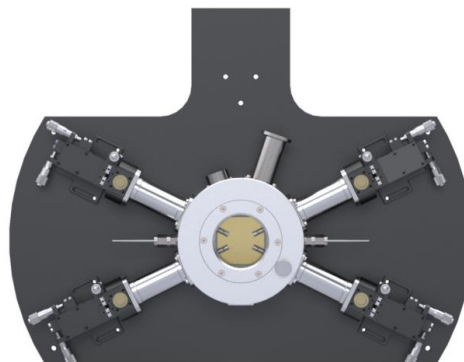
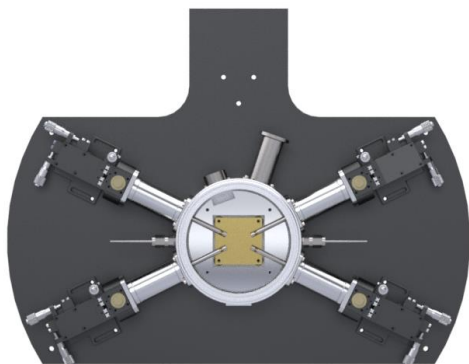


Specifications

Sample Chuck	Chuck Size	30 mm x 30 mm
Temperature	Temperature Range	RT ~ 300 °C
	Cooling	12 °C/min
	Heating	10 °C/min
	Heater Power	50 W, 2 A
	Temp. Stability	± 2 °C
Micro-positioner	Maximum Probes	4 PCS
	XYZ movement	7 mm x 7 mm x 7 mm
	Tip Holder	SMA type
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		13" LCD Monitor
Probe Tip	Bending Type	Material: Tungsten, Size : 0.5 x 30 mm
Footprint	Footprint	450(W) x 320(D) x 450(H) mm
	MFC	Ar, O ₂ , N ₂ , Air
Option	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2 KVA (Automatic Voltage Regulator)

2

Vacuum Probe Station (VPX-M300)



3

Gas Sensor Measurement System (VPX-G400)



VPX-G400

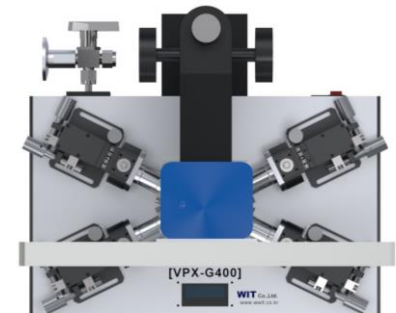
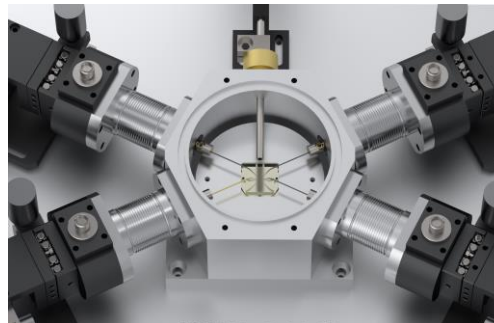


Specifications

Sample Chuck	Chuck Size	12 mm x 12 mm
Temperature	Temperature Range	RT ~ 400 °C
	DC Input	12~24 V / 10 A
	Bipolar Output	0~21 V / ±10 A
	Temperature Probe	Pt100, Pt1000, NTC, VIN, K-type
	Temp. Stability	± 1 °C
Micro-positioner	Maximum Probes	4 PCS
	XYZ movement	7 mm x 7 mm x 7 mm
	Tip Holder	SMA type
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		13" LCD Monitor
Probe Tip	Bending Type	Material: Tungsten, Size : 0.5 x 30 mm
Footprint	Footprint	320(W) x 280(D) x 510(H) mm
Option	MFC	Ar, O ₂ , N ₂ , Air
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2 KVA (Automatic Voltage Regulator)

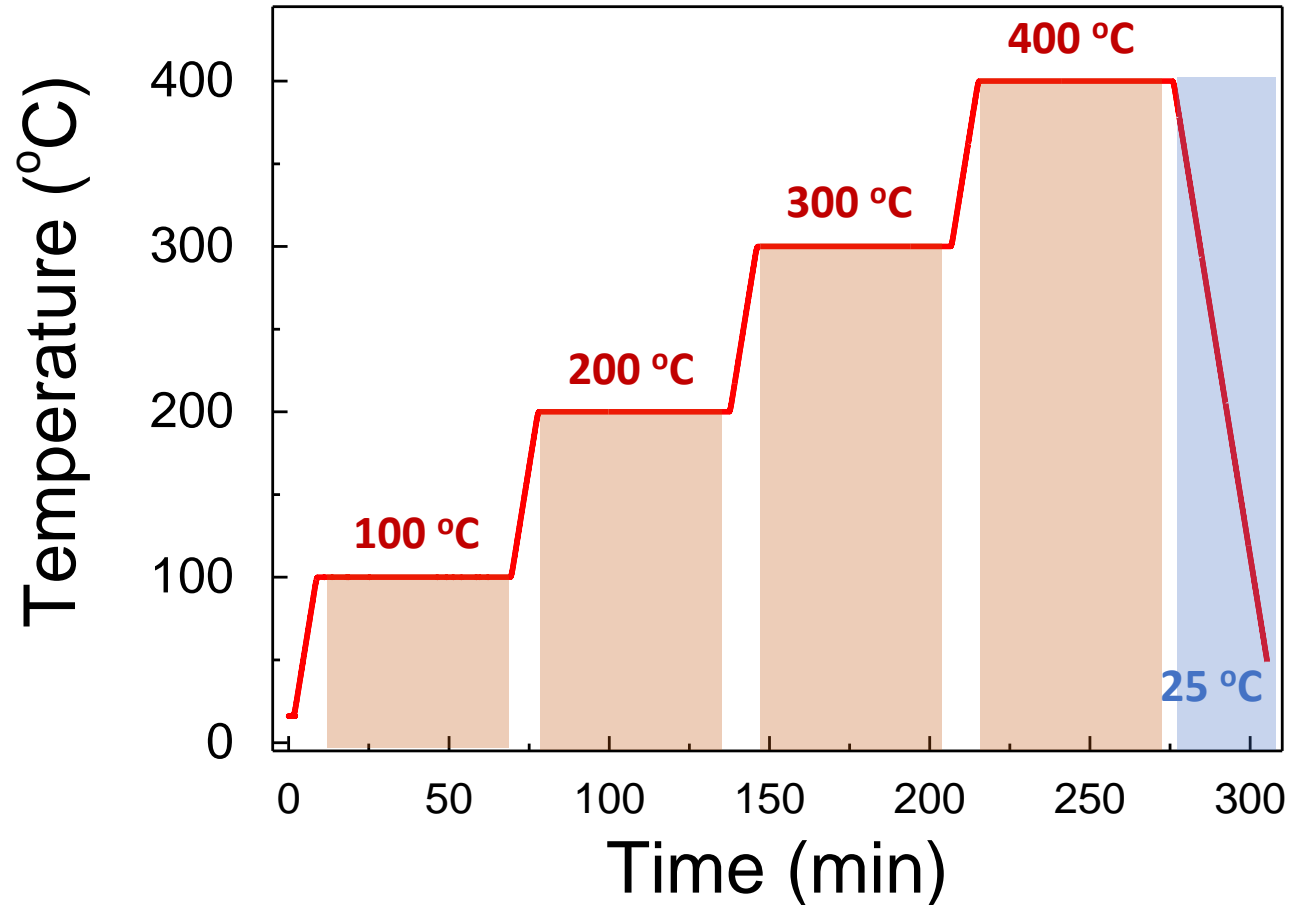
3

Gas Sensor Measurement System (VPX-G400)



3

VPX-G400: Thermal Performance



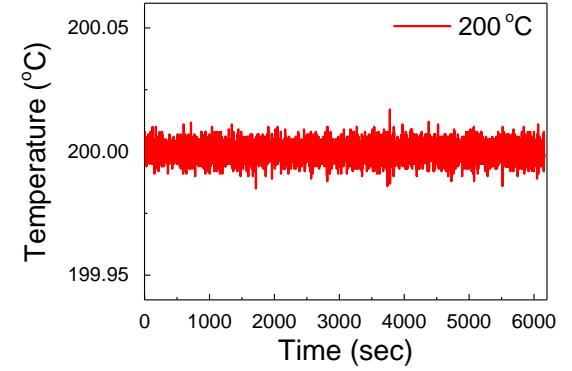
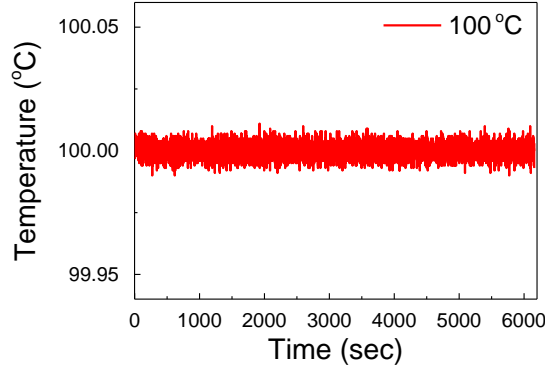
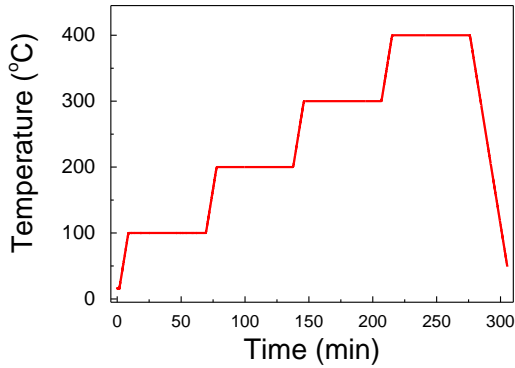
- Increase the temperature from room temperature 25 °C to 100 °C.
- Temperature increments of 100 °C up to 400 °C
- After holding at 400 °C for 1 hour, cool down to 25 °C

3

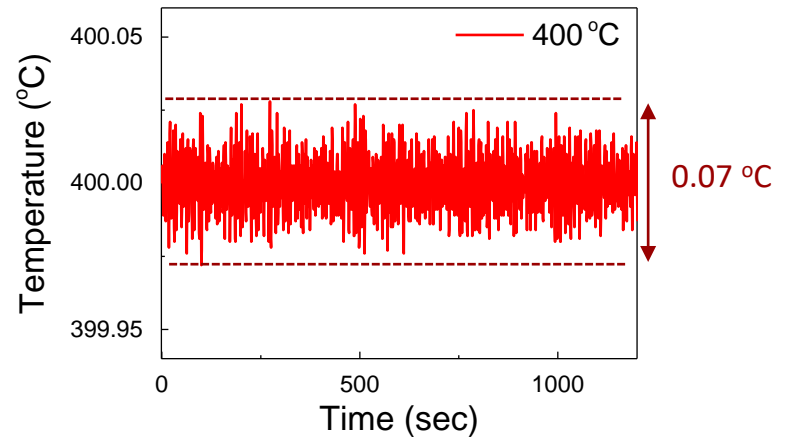
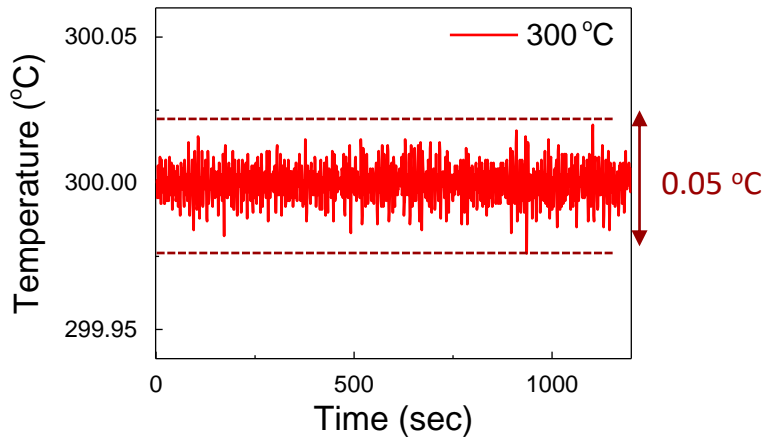
VPX-G400: Temperature Stability



Temperature Stability



Temperature Stability



4

Vacuum Probe Station (VPX-M600)



VPX-M600

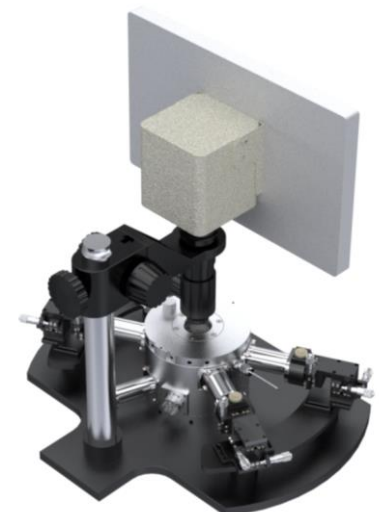
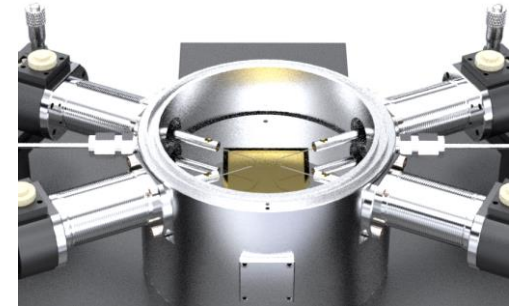
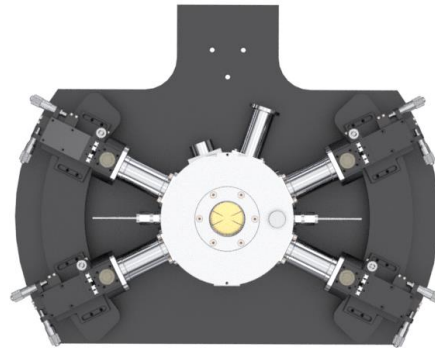
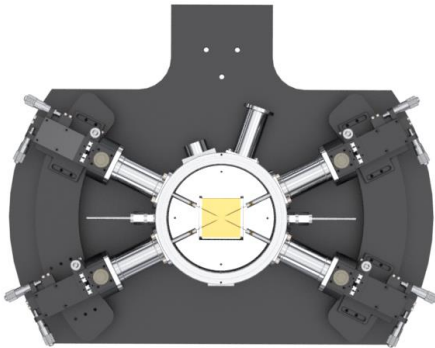


Specifications

Sample Chuck	Chuck Size	30 mm x 30 mm
Temperature	Temperature Range	RT ~ 600 °C
	Cooling	12 °C/min
	Heating	10 °C/min
	Heater Power	50 W, 2 A
	Temp. Stability	± 2 °C
Micro-positioner	Maximum Probes	4 PCS
	XYZ movement	7 mm x 7 mm x 7 mm
	Tip Holder	SMA type
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		13" LCD Monitor
Probe Tip	Bending Type	Material: Tungsten, Size : 0.5 x 30 mm
Footprint	Footprint	450(W) x 320(D) x 450(H) mm
	MFC	Ar, O ₂ , N ₂ , Air
Option	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2 KVA (Automatic Voltage Regulator)

4

Vacuum Probe Station (VPX-M600)

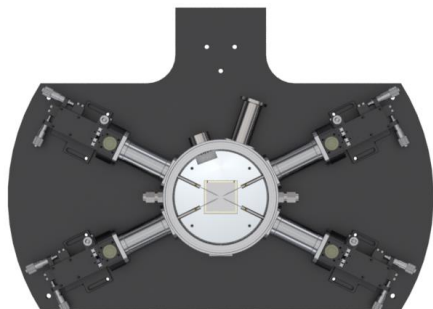
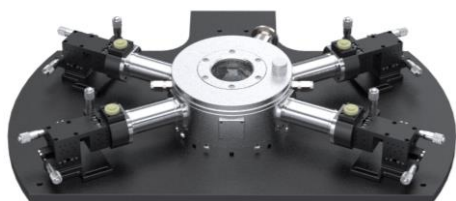


5

Vacuum Probe Station (VPX-P150)



VPX-P150

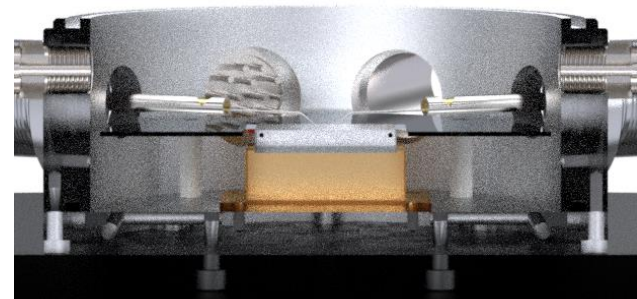
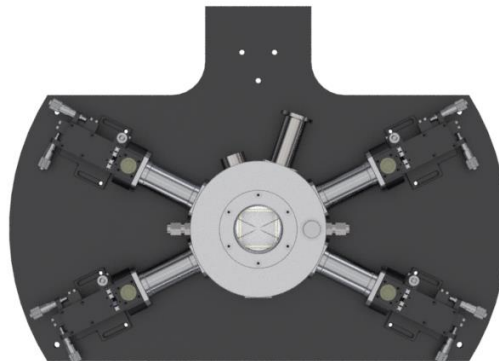
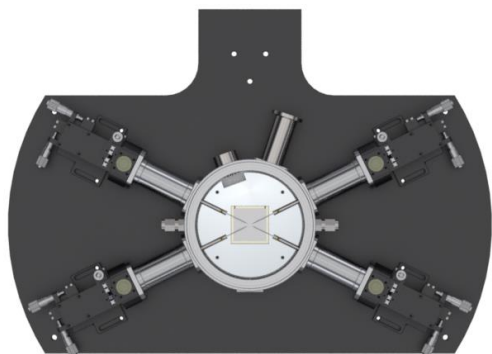


Specifications

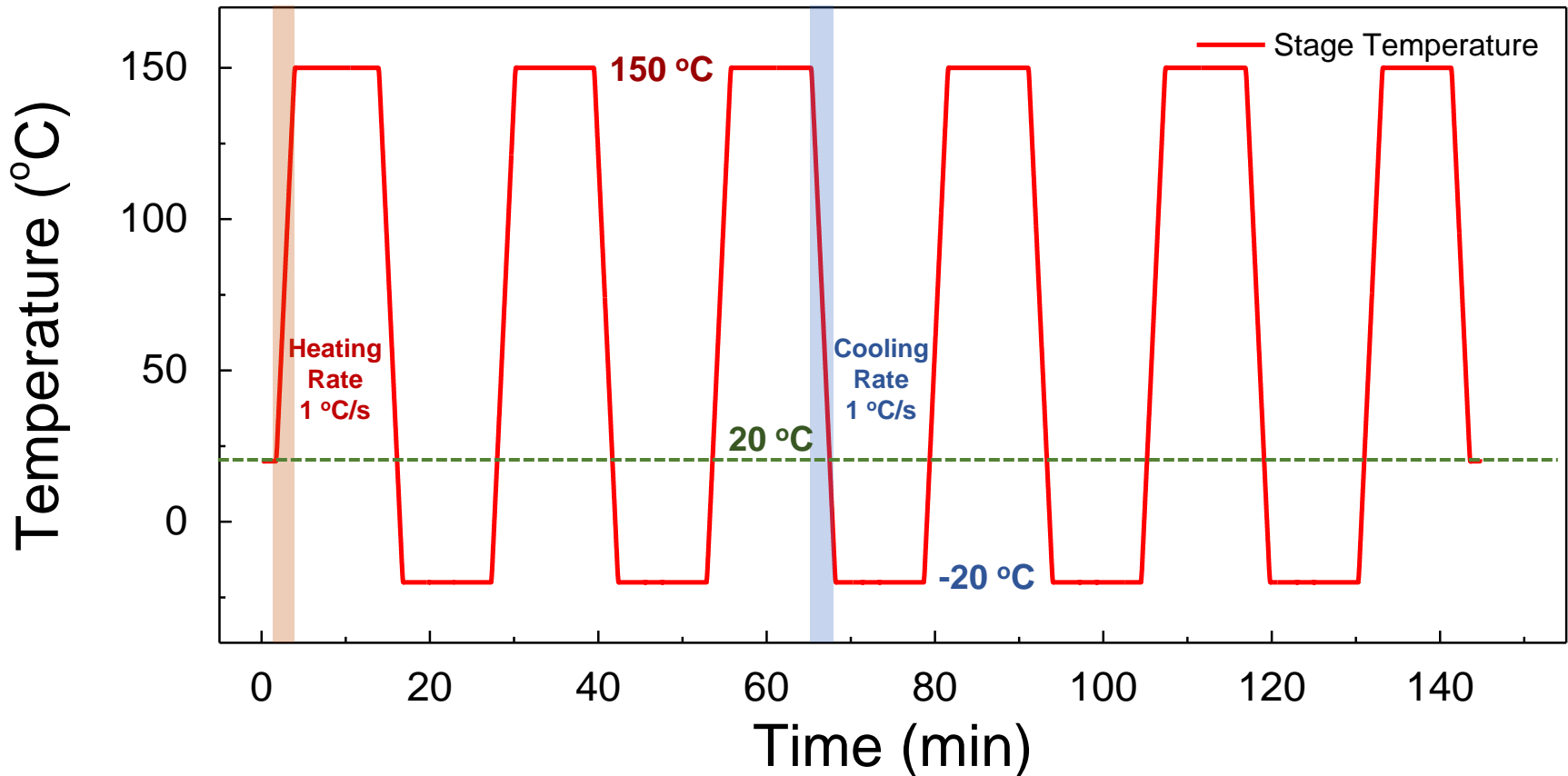
Sample Chuck	Chuck Size	30 mm x 30 mm
Peltier Cooler based Thermal Stage	Temperature Range	-20 °C ~ 150 °C
	Heating / Cooling Rate	1 °C/sec
	Temperature Stability	± 0.01 °C
	Temperature Control	PC Programmable Control via USB interface
Micro-positioner	Maximum Probes	4 PCS
	XYZ movement	7 mm x 7 mm x 7 mm
	Tip Holder	SMA type
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		13" LCD Monitor
Probe Tip	Bending Type	Material: Tungsten, Size : 0.5 x 30 mm
Footprint	Footprint	450(W) x 320(D) x 450(H) mm
	MFC	Ar, O ₂ , N ₂ , Air
Option	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2 KVA (Automatic Voltage Regulator)

5

Vacuum Probe Station (VPX-P150)



VTC-P150 Heating and Cooling



■ VTC-P150 Temperature Test Environment : Pressure 10^{-5} Torr

■ Heat the stage to 150 °C with rate of 1 °C/s, and maintain temp for 10 min

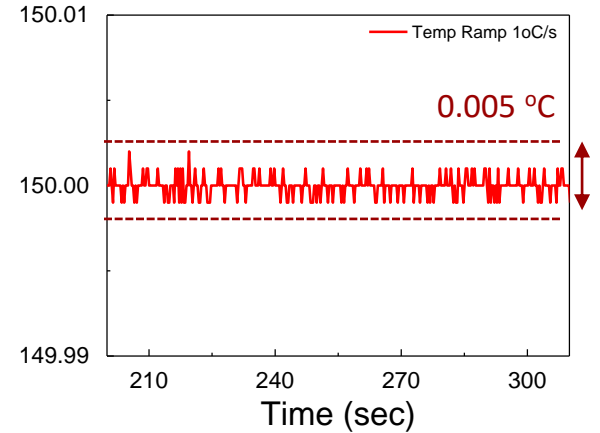
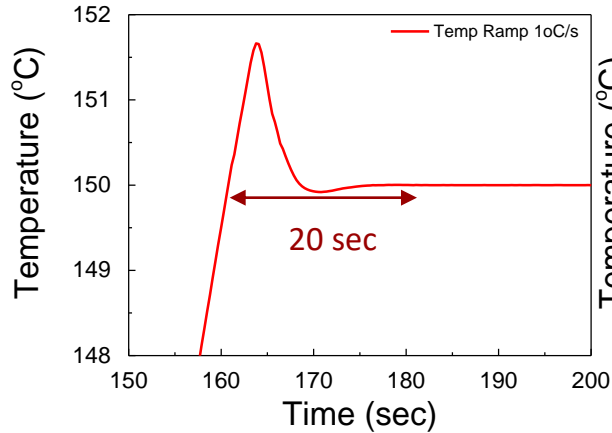
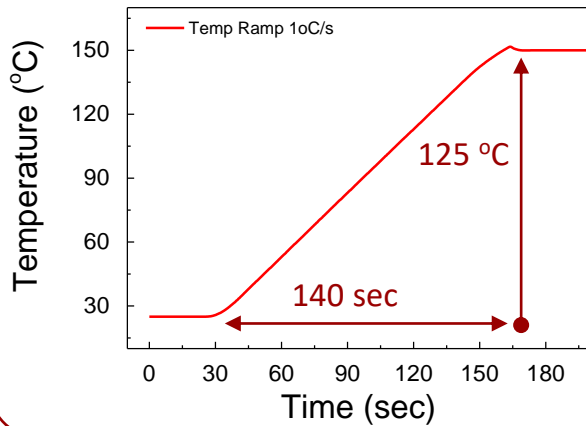
■ Cool the stage to -20 °C with rate of 1 °C/s, and maintain temp for 10 min

5

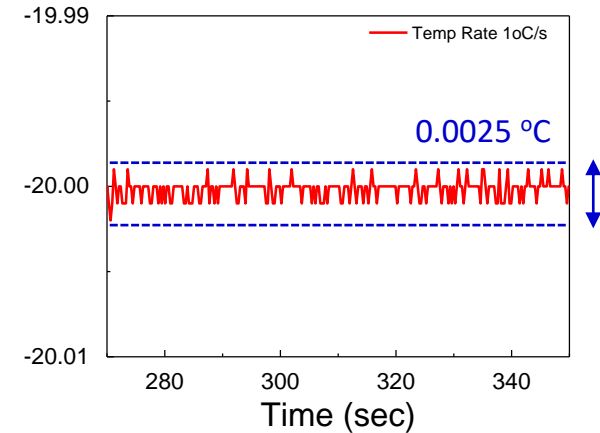
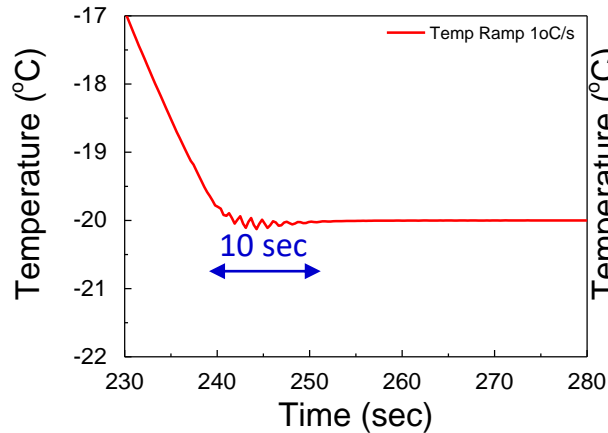
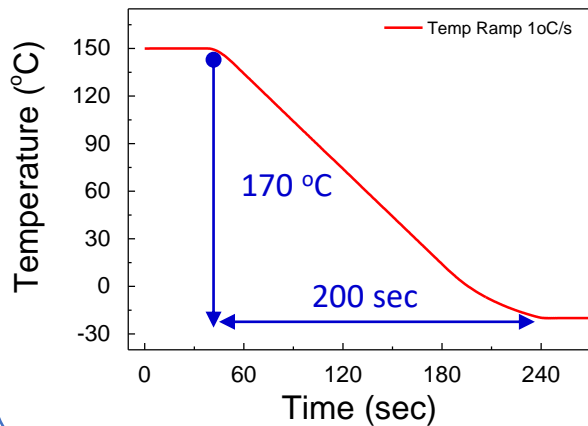
VPX-P150: Temperature Stability



Heating with 1 °C/s Heating rate



Cooling with 1 °C/s Cooling rate



6

Vacuum Probe Station (VPX-77K)



VPX-77K

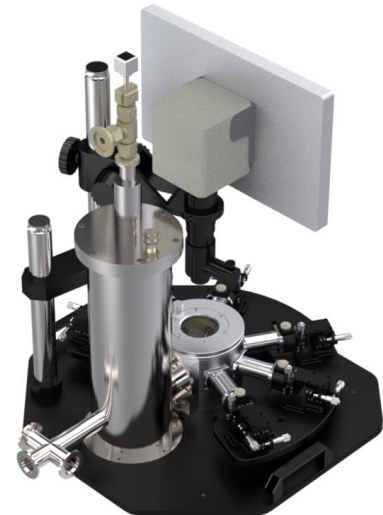
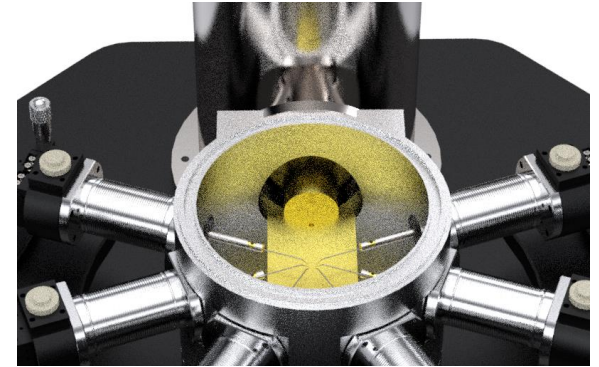
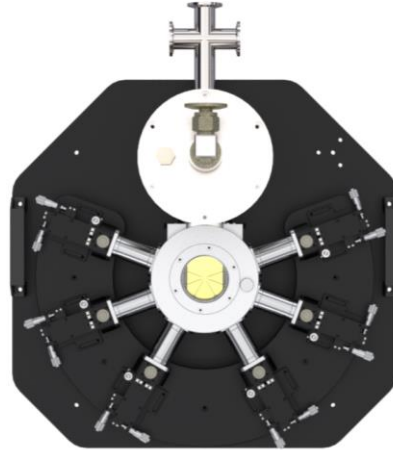
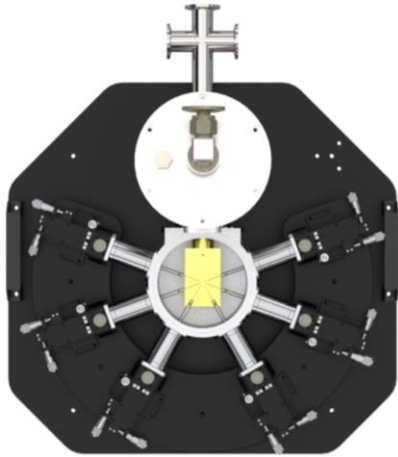


Specifications

Sample Chuck	Chuck Size	35 mm x 35 mm
	Temperature Range	65 K ~ 450 K
Temperature	LN2 Capacity	0.8 Liter
	Cooling Time	< 30 min to 77 K
	Holding Time	> 8 hours at 77 K
	Temp. Stability	± 0.1 K
	Micro-positioner	Maximum Probes
XYZ movement		7 mm x 7 mm x 7 mm
Tip Holder		SMA type
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X
		Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		13" LCD Monitor
Probe Tip	Bending Type	Material: Tungsten, Size : 0.5 x 30 mm
Footprint	Footprint	450(W) x 550(D) x 600(H) mm
Option	MFC	Ar, O ₂ , N ₂ , Air
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2 KVA (Automatic Voltage Regulator)

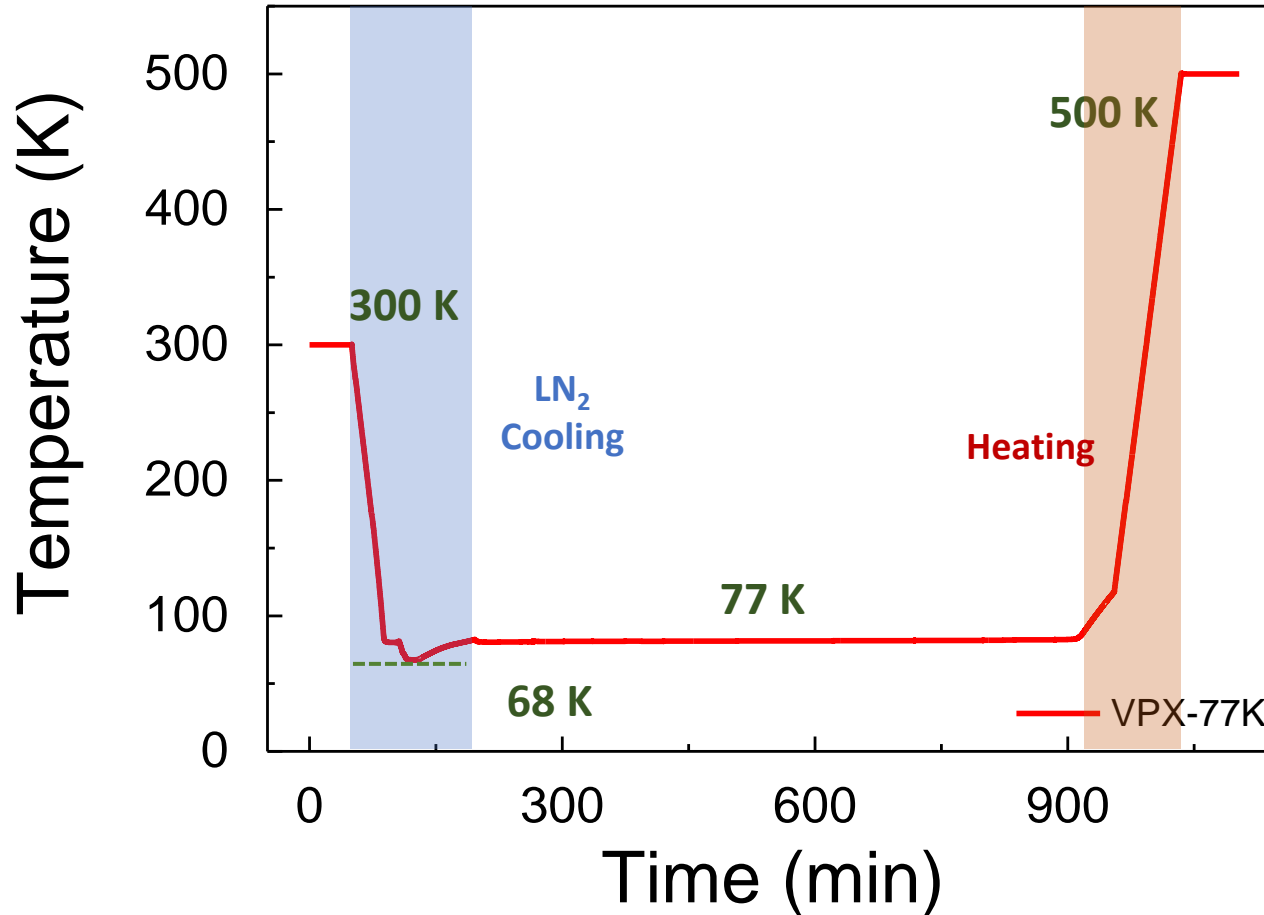
6

Vacuum Probe Station (VPX-77K)



6

VPX-77K: Thermal Performance

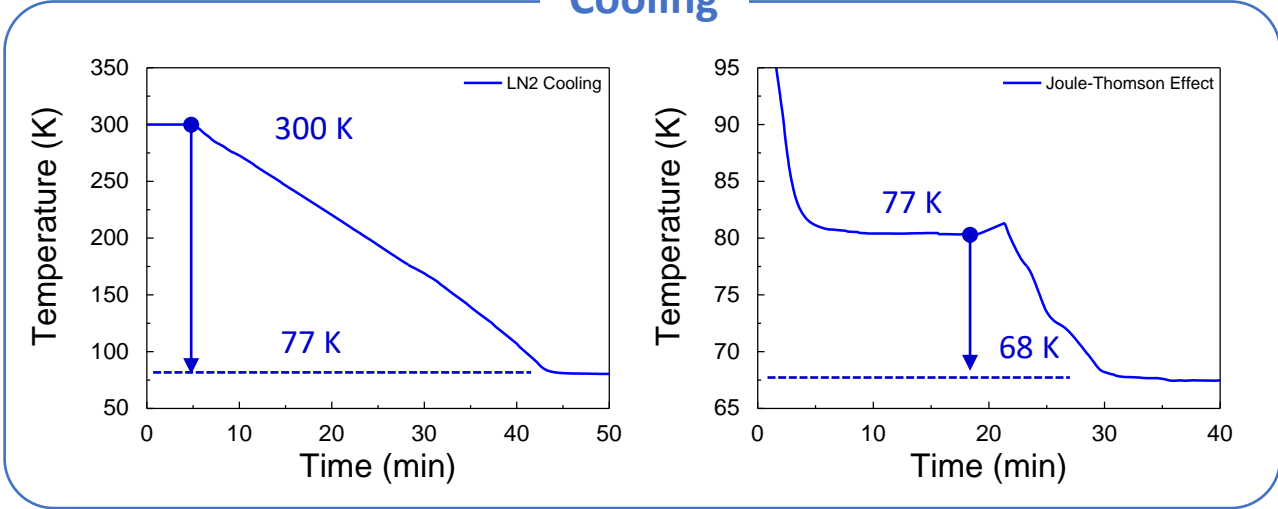


- Cooling rate of 5 K/s from 300K to 77K.
- Heat from 77K to 500K and hold the temperature.
- After holding at 77K, cooling to 68K using the Joule-Thomson Effect.

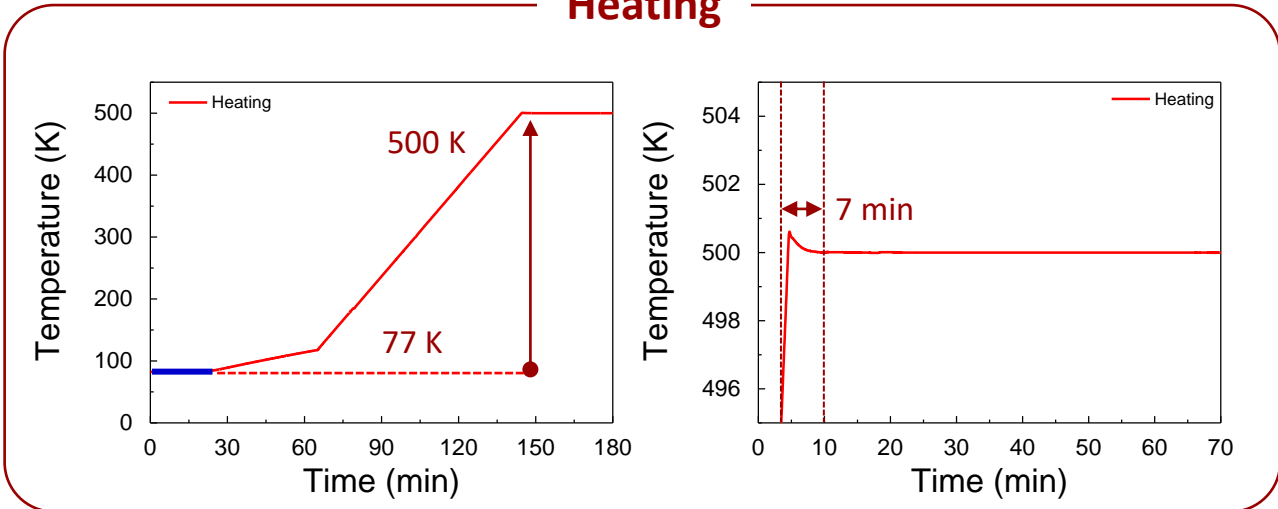
6

VPX-77K: Cooling and Heating

Cooling



Heating



7

Vacuum Probe Station (VPX-77KT)



VPX-77KT

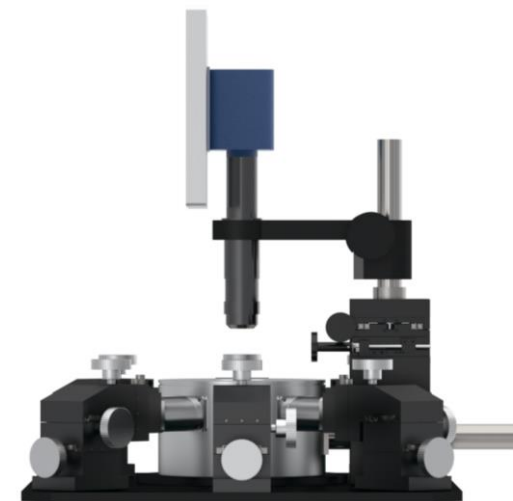
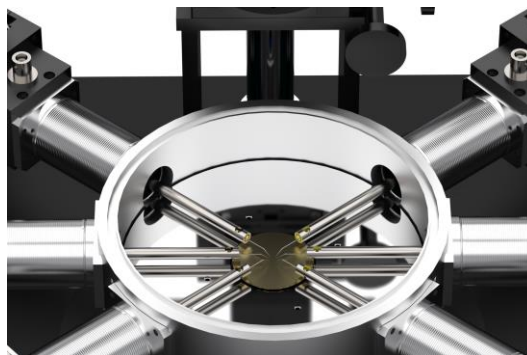
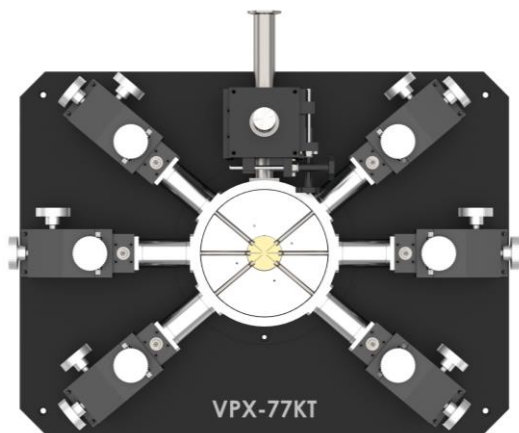


Specifications

Sample Chuck	Chuck Size	30 mm
	Temperature Range	65 K ~ 425 K
Temperature	LN2 Capacity	30 Liter
	Cooling Time	< 30 min to 77 K
	Holding Time	> 7 Days at 77 K
	Temp. Stability	± 0.1 K
	Maximum Probes	6 PCS
Micro-positioner	XYZ movement	10 mm x 10 mm x 10 mm
	Tip Holder	BNC Type
Digital Microscope	Metallurgical Microscope	Zoom Lens: 0.75X to 4.5X Magnification: up to 225X
	CCD Camera	6M Pixel, Full HD type
		13" LCD Monitor
Probe Tip	Bending Type	Material: Tungsten, Size : 0.5 x 30 mm
Footprint	Footprint	600(W) x 450(D) x 500(H) mm
Option	MFC	Ar, O ₂ , N ₂ , Air
	Anti-Vibration Table	750(W) x 750(D) x 800(H) mm
	AVR	2 KVA (Automatic Voltage Regulator)

7

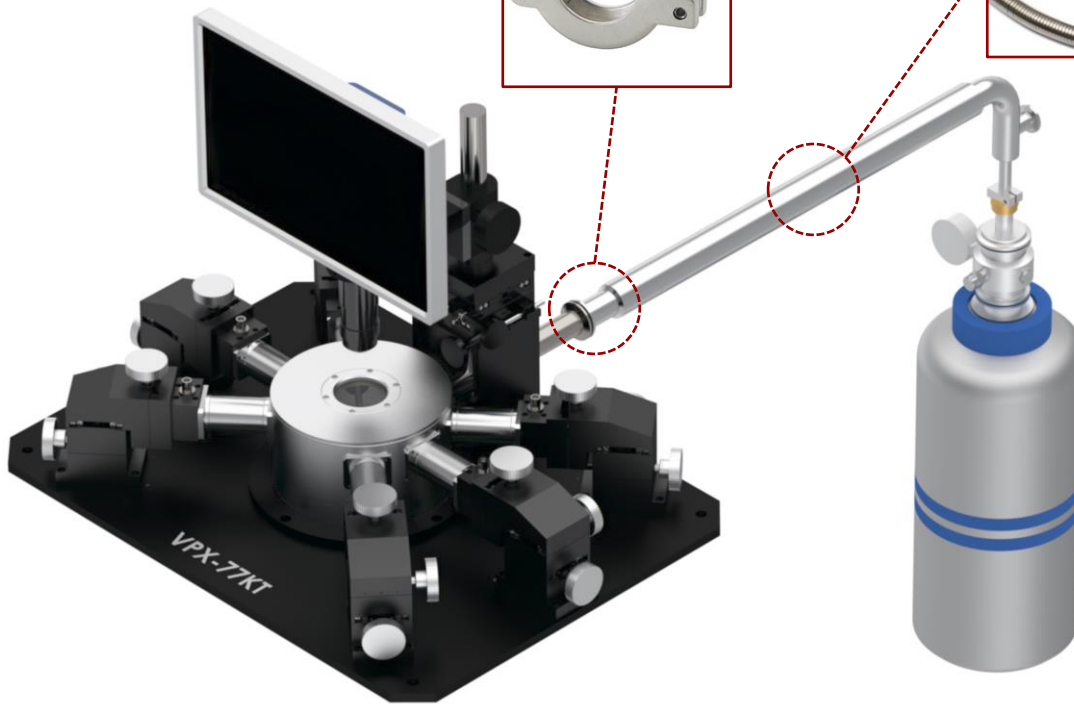
Vacuum Probe Station (VPX-77KT)



NW25 Vacuum Hose Clamp



Flexible Vacuum Jacketed Hose

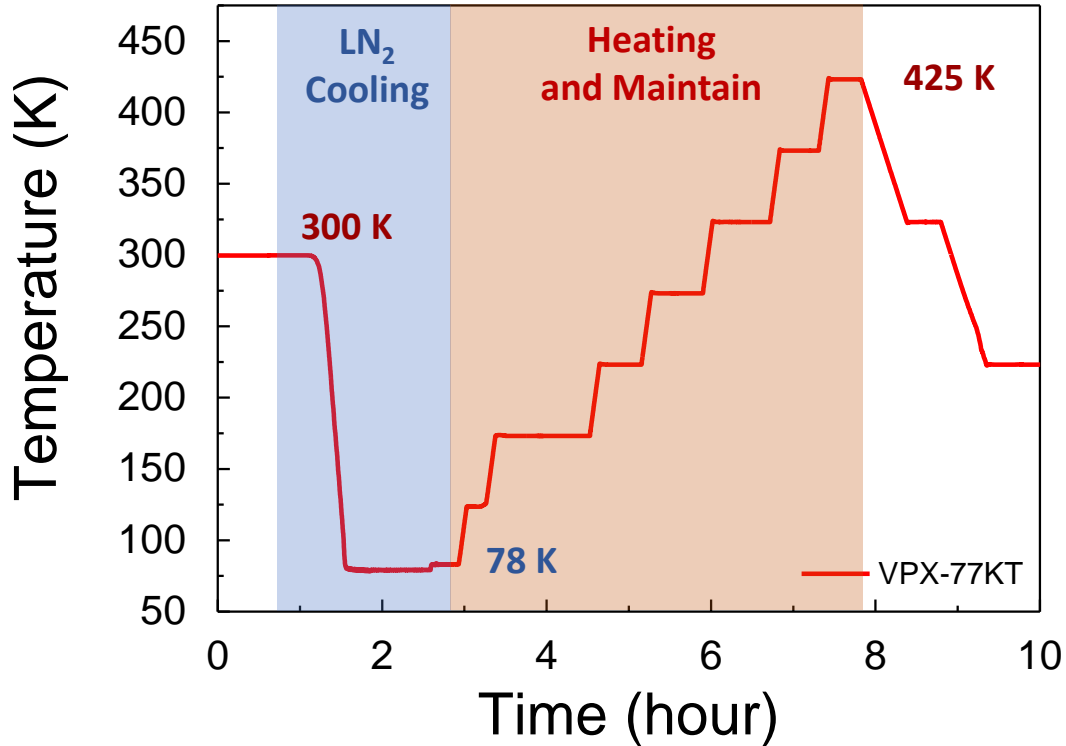


Liquid Nitrogen Dewar

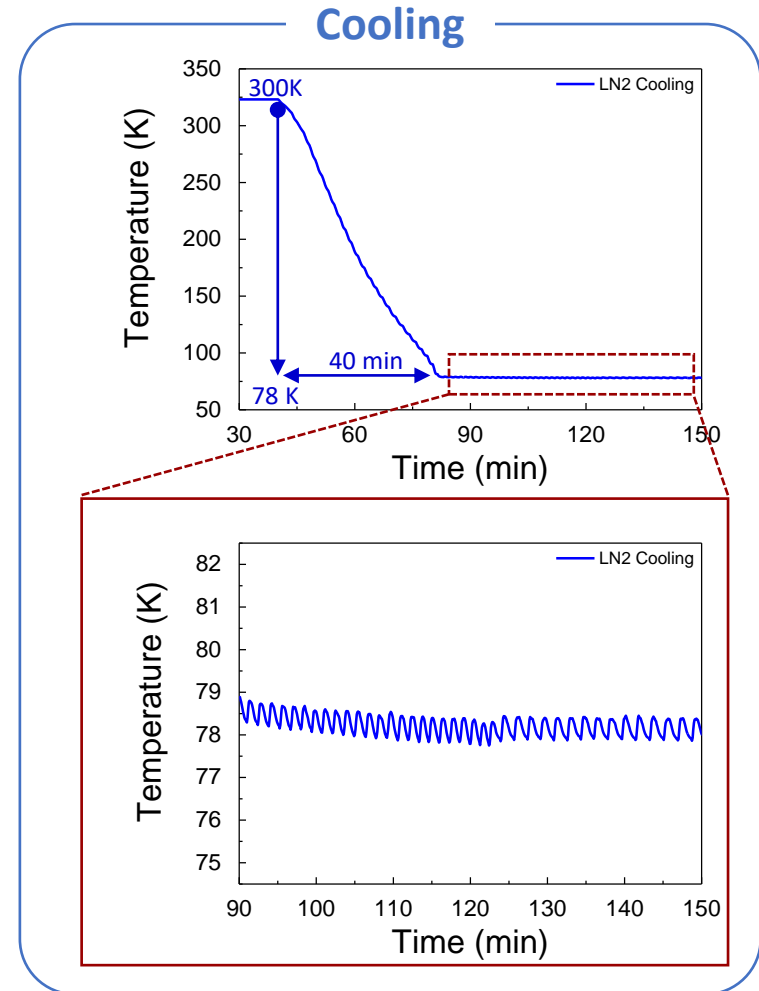
Volume	31.5 Liter
Evaporation	0.11 L/day
Static Holding Time	298 Days
Neck Diameter	50 mm
Vessel Diameter	455 mm
Vessel Height	670 mm
Empty Weight	13.8 kg

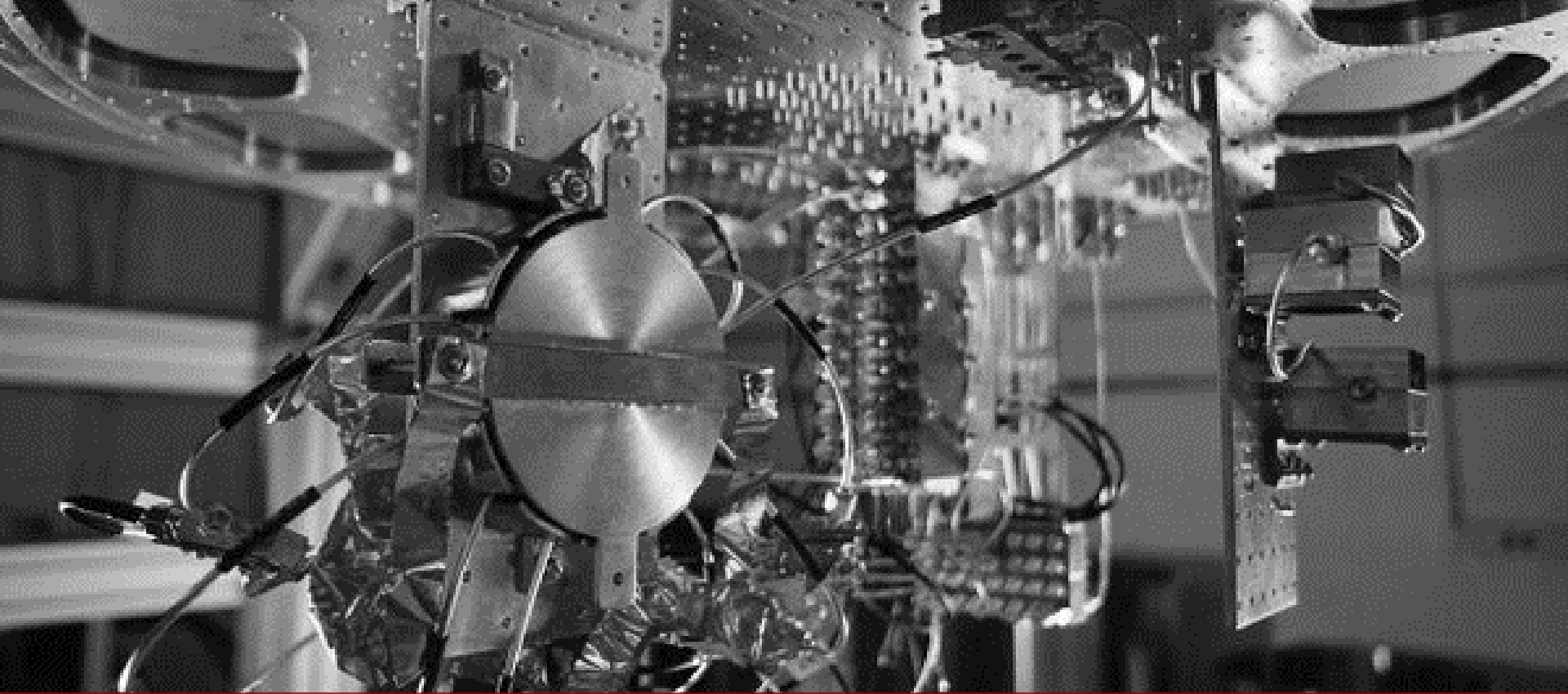
- LN2 Dewar와 Vacuum jacketed hose을 이용한 냉각 시스템
- 챔버 내 스테이지 냉각에 필요한 액체 질소 소비량의 최소화
- 극저온의 질소 기체 이동 시 발생하는 진동의 최소화

VPX-77KT Thermal Performance



- 상온 300 K 에서 78 K까지 6 K/s 속도로 냉각.
- 78 K에서 425 K 까지 가열 후 일정 시간 온도 유지 반복 실행.
- 78 K 유지 시, 1 K 이내의 온도 안정성





WIT CCR Lineup

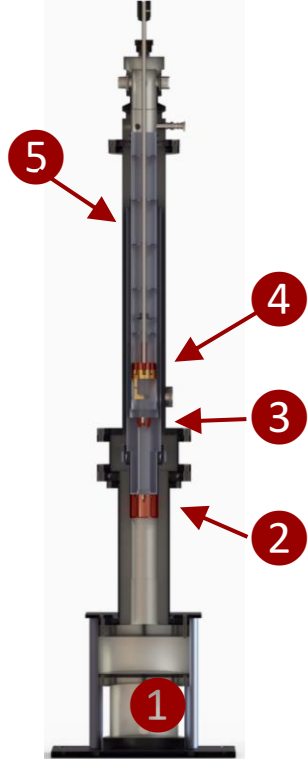
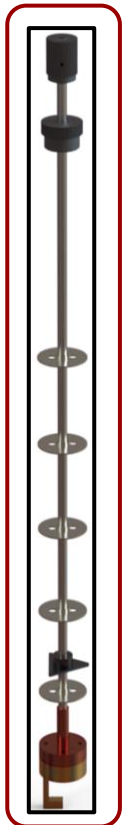
World-wide Innovative Technology

WIT

1

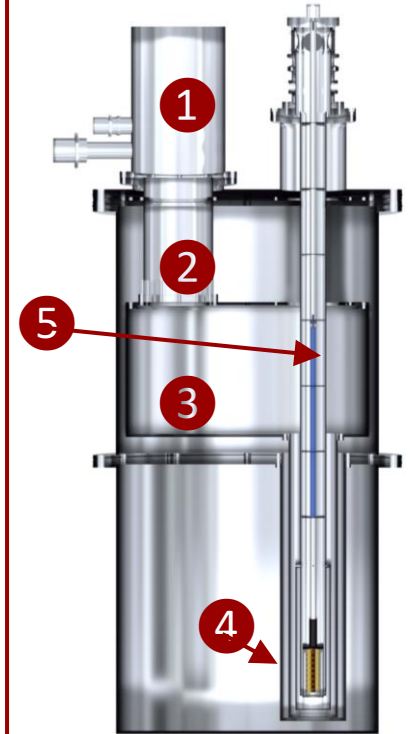
CCR System

4.2 K CCR System

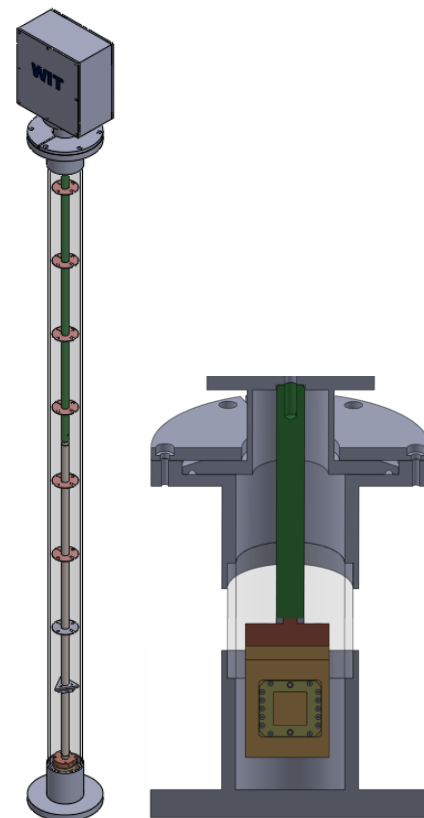
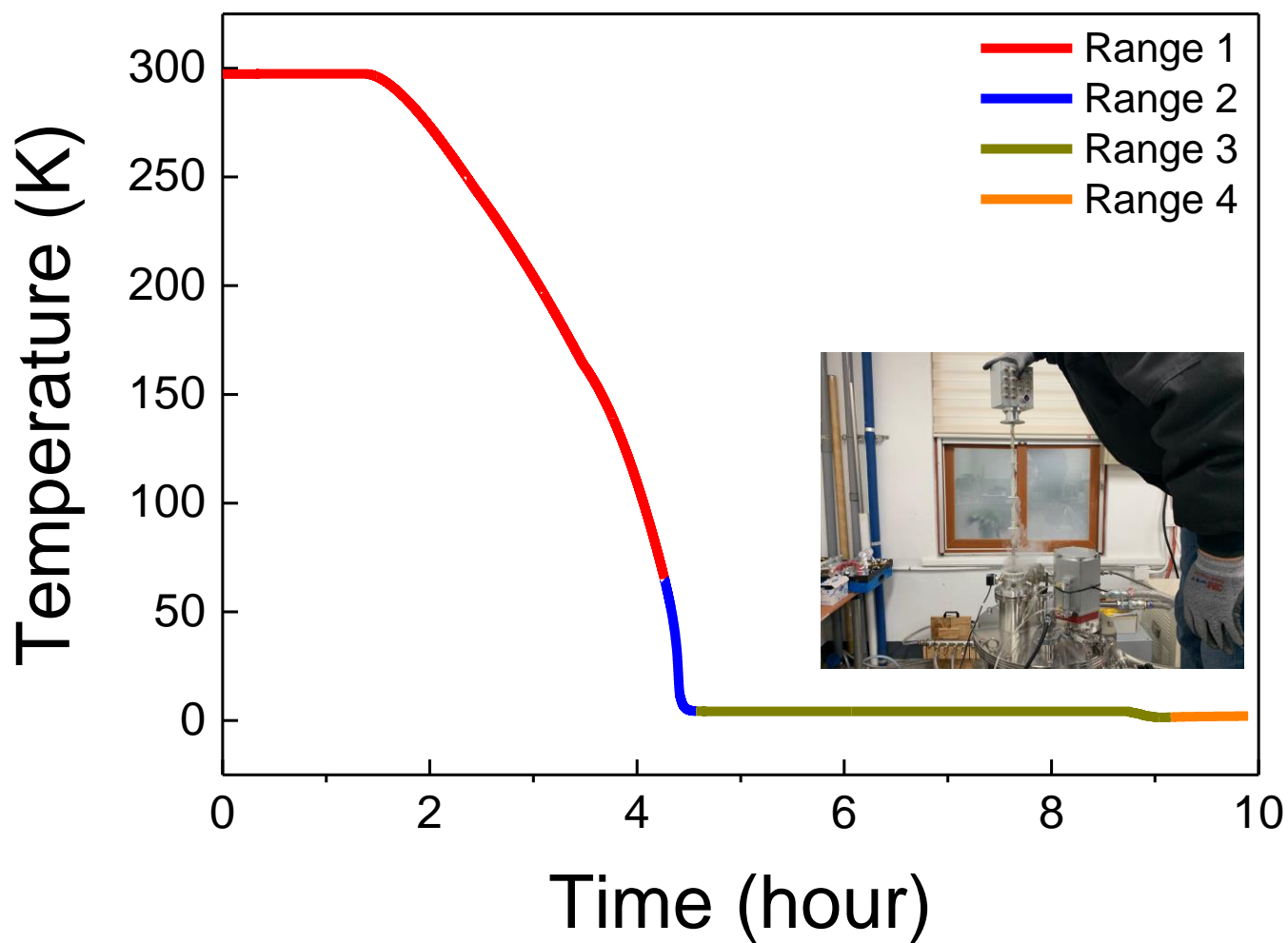


- 1 GM Cooler
- 2 1st Stage : 45 K
- 3 2nd Stage : 4.2 K
- 4 Sample Holder
- 5 Top Loading Inserter

1 K POT System

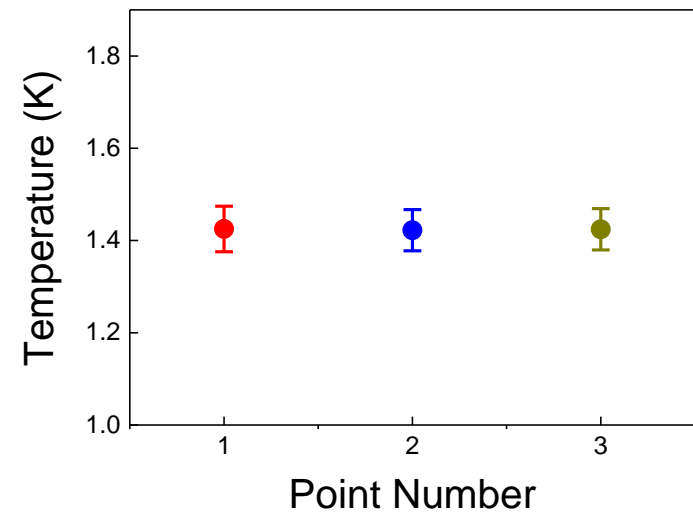
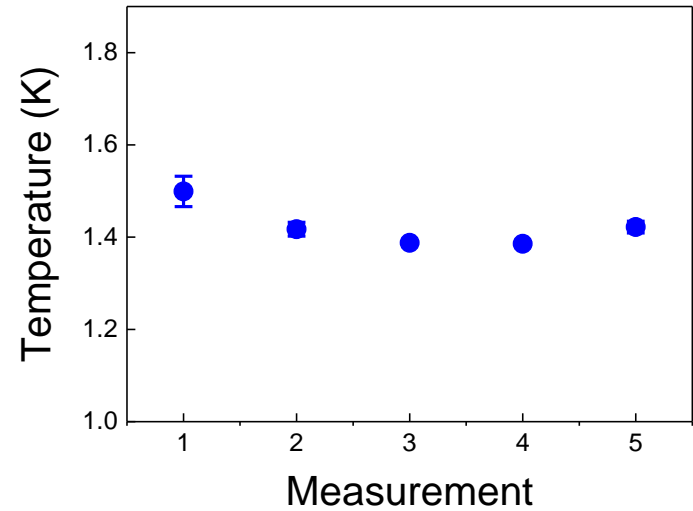
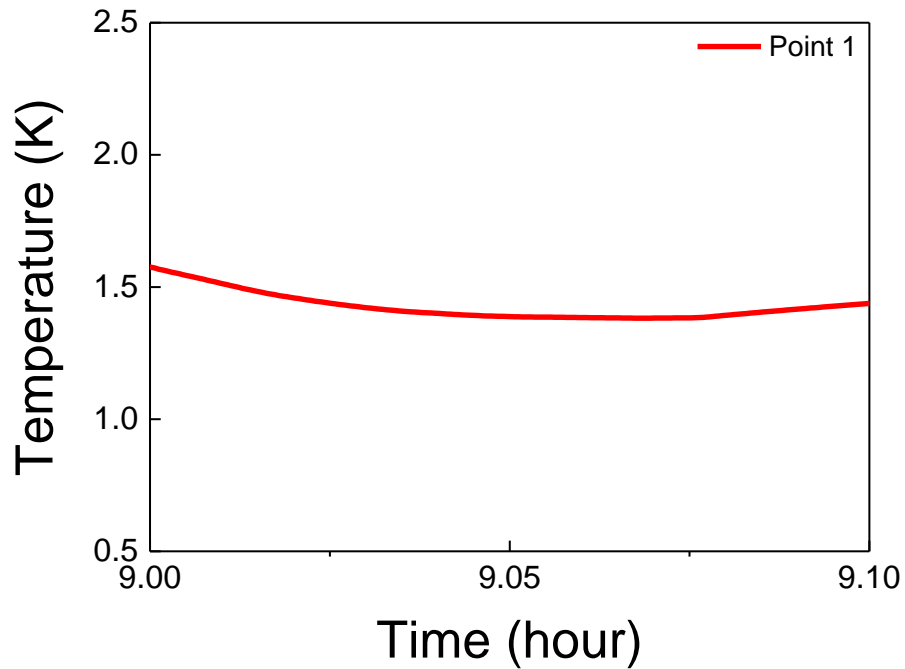


- 1 Pulse Tube Cooler
- 2 1st Stage : 65 K
- 3 2nd Stage : 4.2 K
- 4 Sample Holder
- 5 Top Loading Inserter

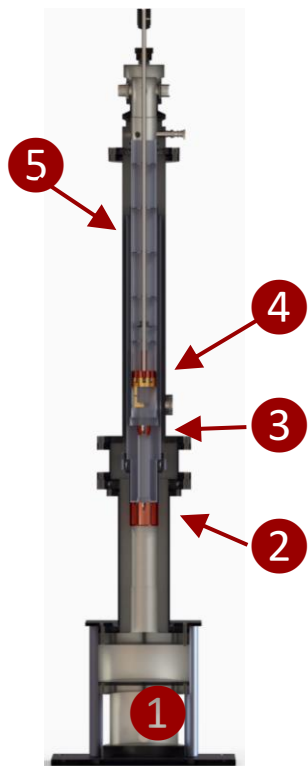
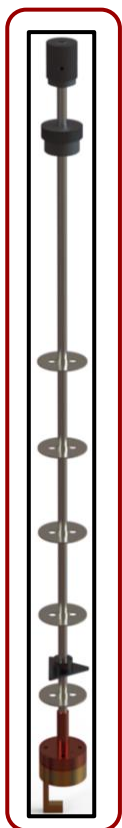


2

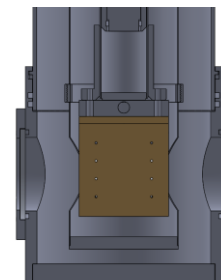
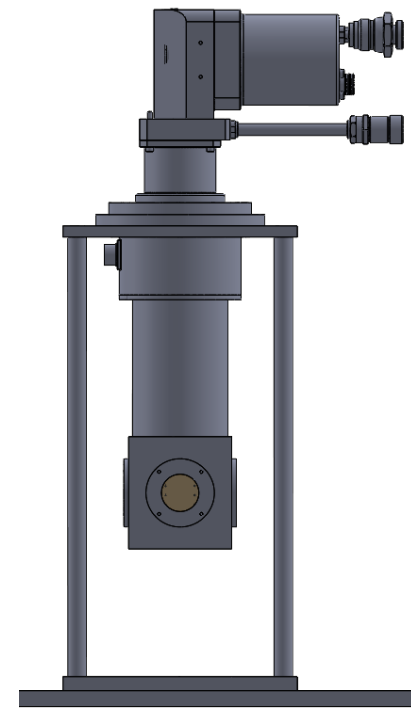
1K POT System: 1.5K uniformity

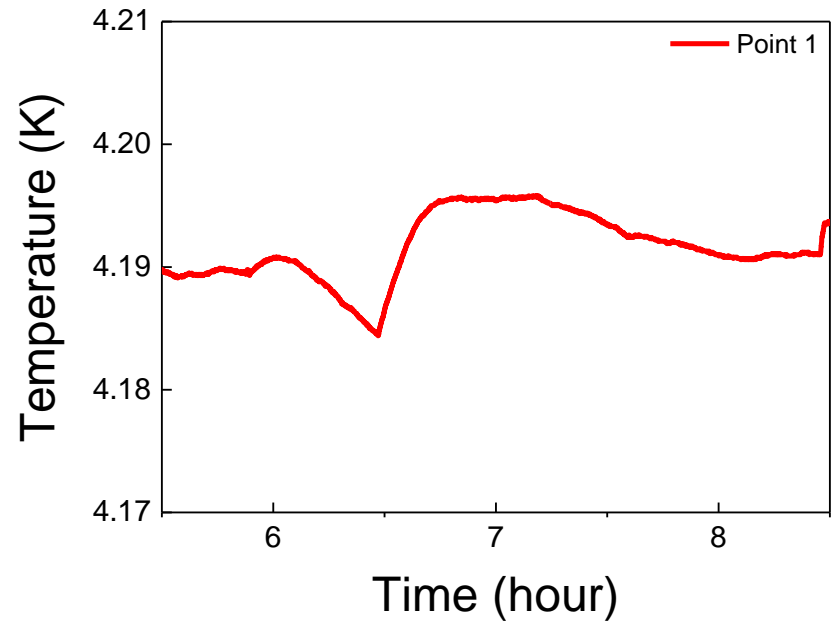
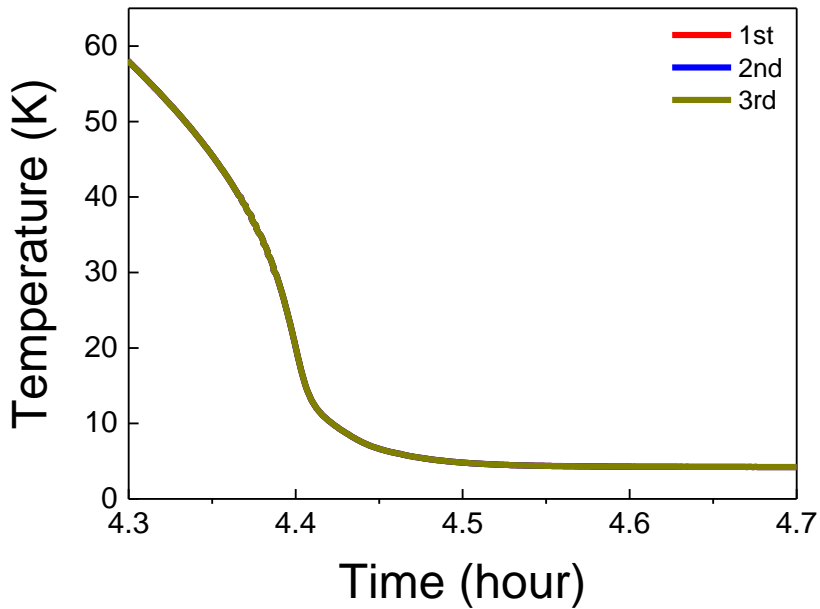


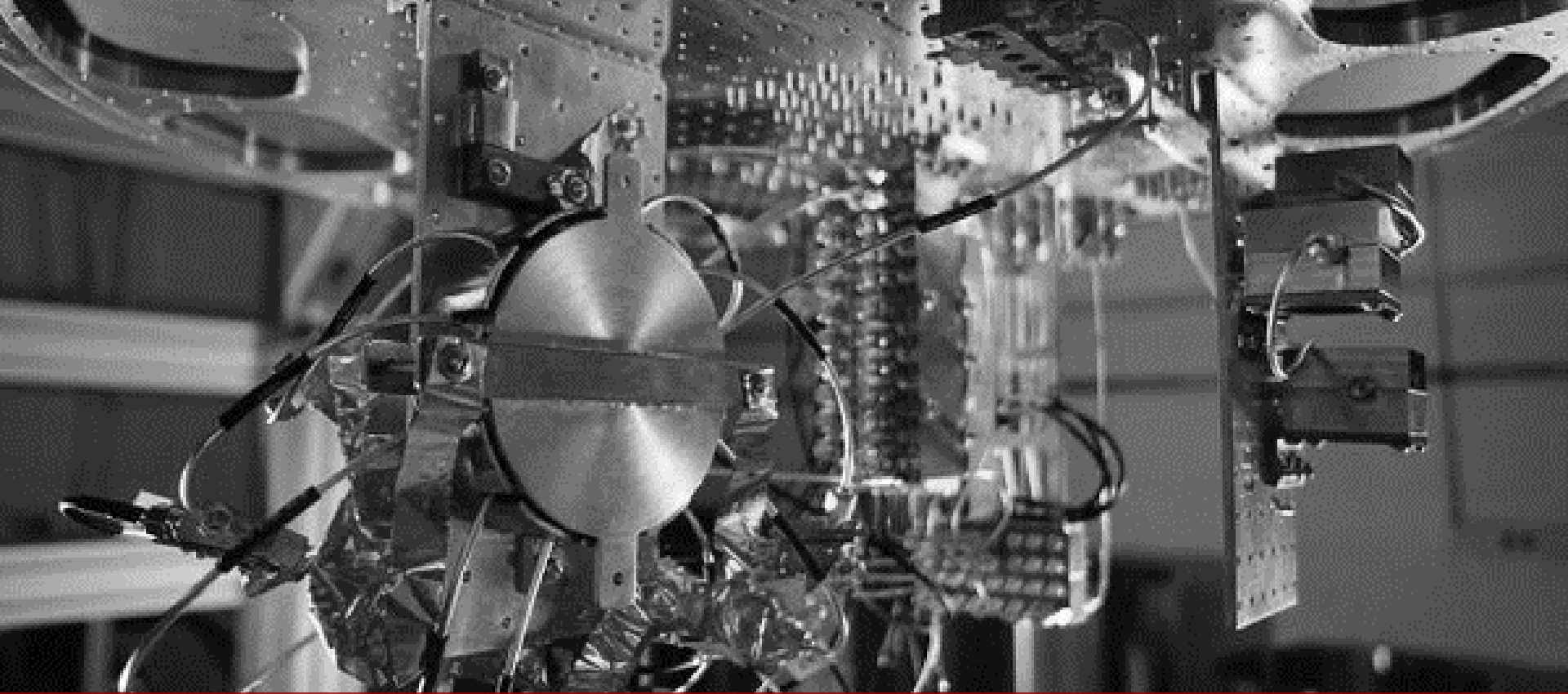
Top Loading Cryostat



- ① GM Cooler
- ② 1st Stage : 45 K
- ③ 2nd Stage : 4.2 K
- ④ Sample Holder
- ⑤ Top Loading Inserter







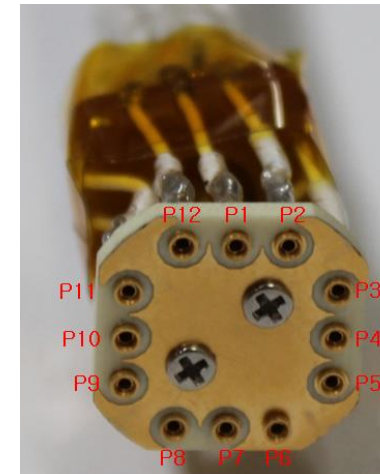
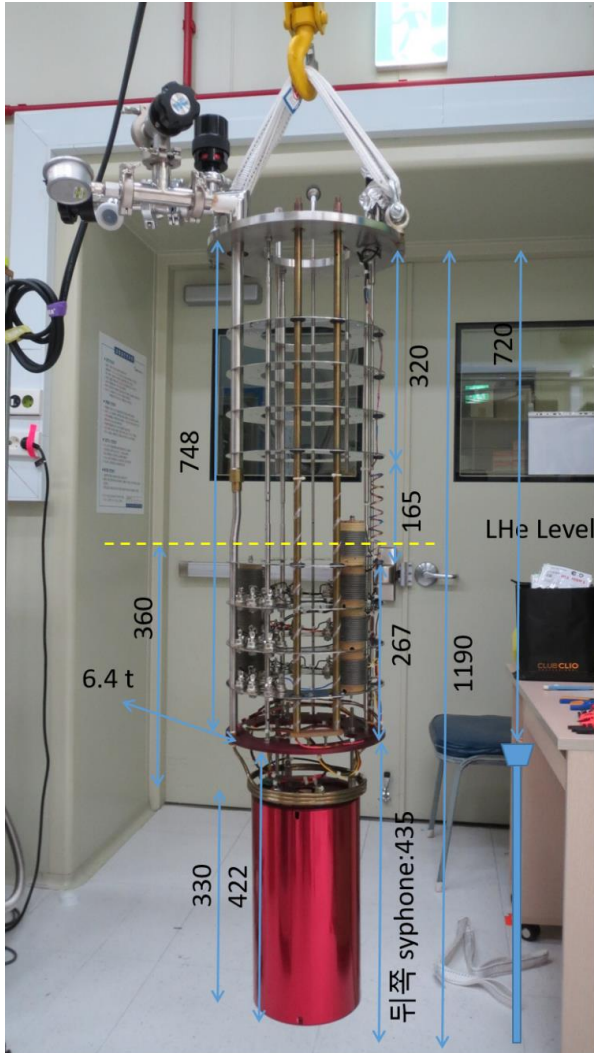
Low Temperature Parts

World-wide Innovative Technology

WIT

1

AC QHR probe based on CMI-probe



2

ICE Oxford He-3 insert wirings



1350

4 K Plate

124

1 K Plate

127

300 mK Plate

Sample chamber

Wires A



Wires B



Wires D



Wires A

(1700mm, Copper, 10 wires, insulated Teflon tube ID0.3xOD0.8, SUSS shield)

Wires B

(300mm, NbTi, 14 wires, insulated teflon tube ID0.3xOD0.8, SUSS shield)

Wires C

(300mm, NbTi, 14 wires, insulated teflon tube ID0.3xOD0.8, SUSS shielded)

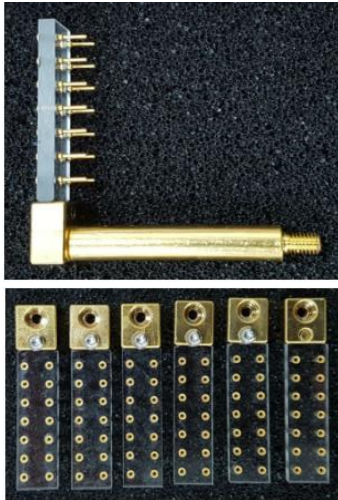
Wires D

(700mm, Copper, 14 wires, insulated teflon tube ID0.3xOD0.8, SUSS shielded)

2

ICE Oxford He-3 insert wirings

Thermal Anchors



Thermal Anchors	Specifications
Sapphire Base	Size (mm): L30 x W7.6
	Thickness (mm): 2.5
	Pin hole : 14
Pin Hole	2850F stycast
	CAT.9 epoxy
OFHC-1	Size : L8.5 x W6.8 x T5
	Materials : Coated gold
OFHC-2	Size : L35 x ø5.0
	Materials : Coated gold

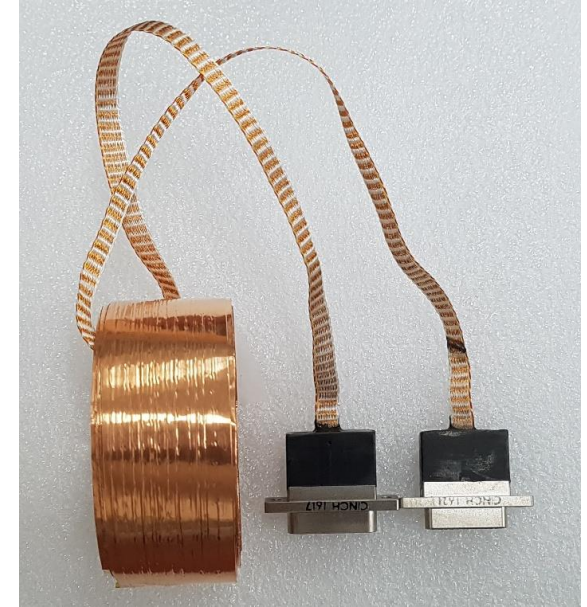
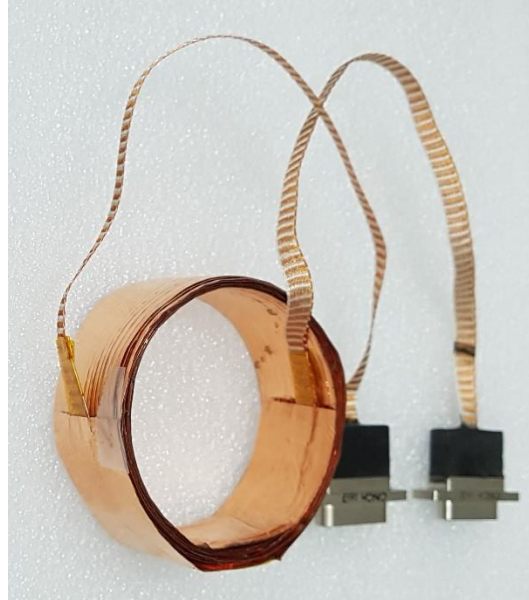
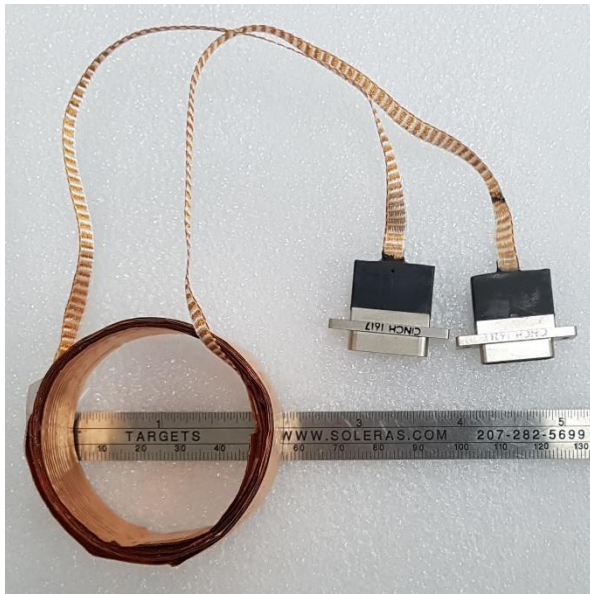
Cryogenic wires



Cryogenic wires	Specifications
4K wires	Materials : Copper wire
	Teflon tube
1K wires	Materials : NbTi wire
	Teflon tube (SUSS shield)
300 mK wires	Materials : NbTi wire
	Teflon tube (SUSS shield)

3

LP filter



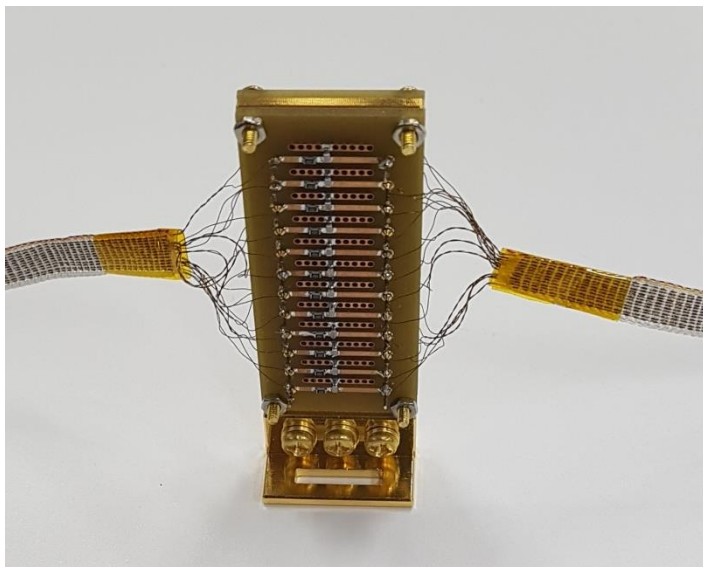
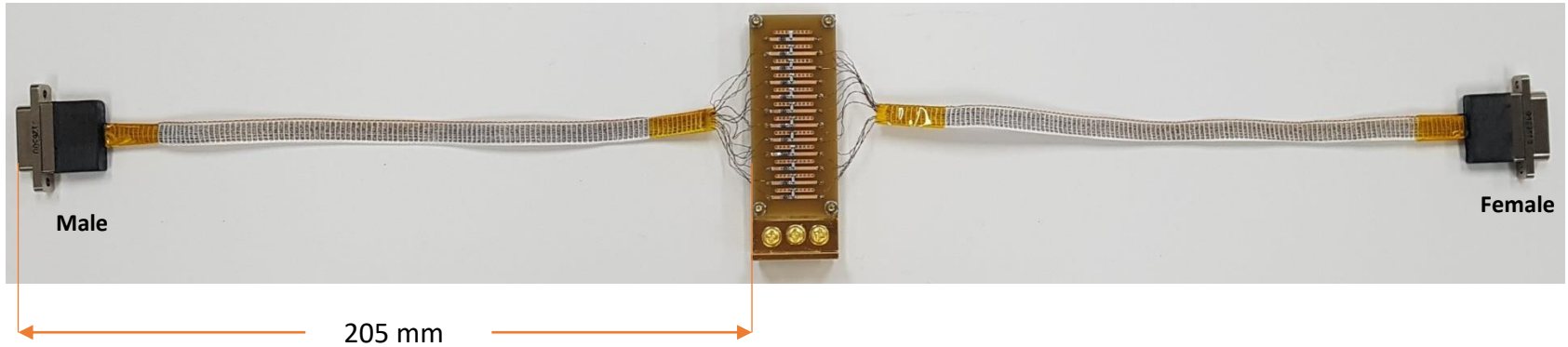
1. Size : W24.0 x L150 (Mn wires), Resistance (at room) : 92 ohms / wire

2. Materials

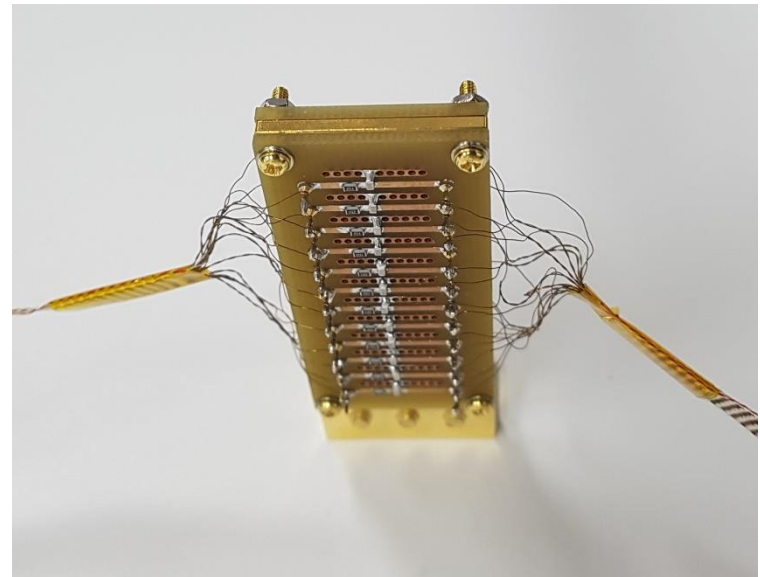
- Copper tape : 3M(P/N:1194)
- Mn wire : 38AWG, 1.5M, twist, 12pairs(24-wires)
- Micro-D 25pin connector (male, female)
- Loom wires : Copper 38AWG, twist, 12pairs, 200mm

3

RC filter



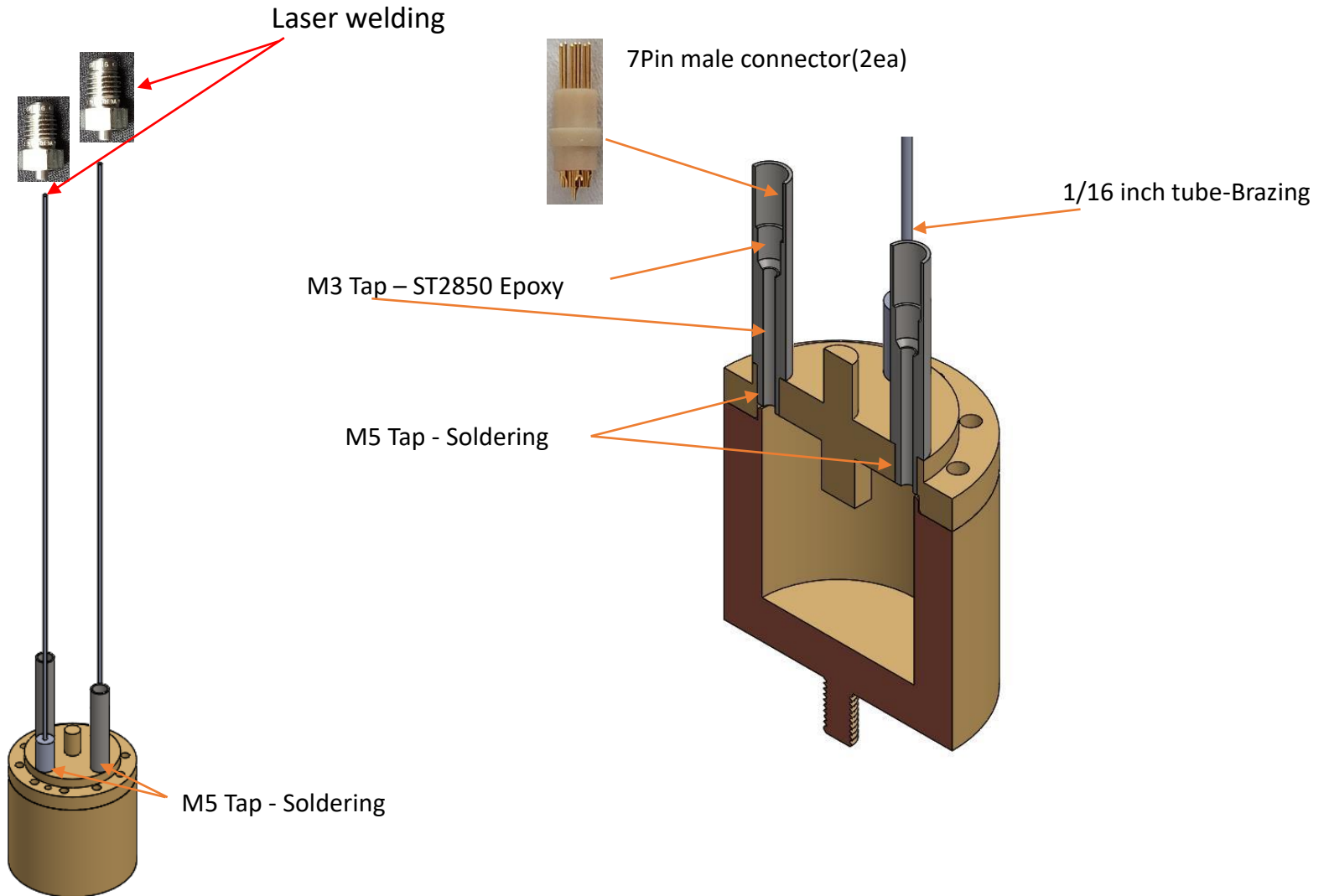
앞면



뒷면

4

QHR sample holder

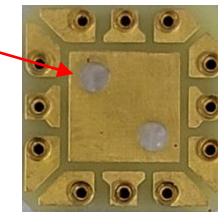
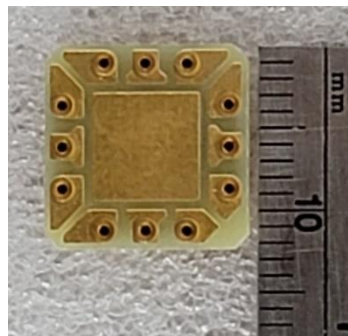
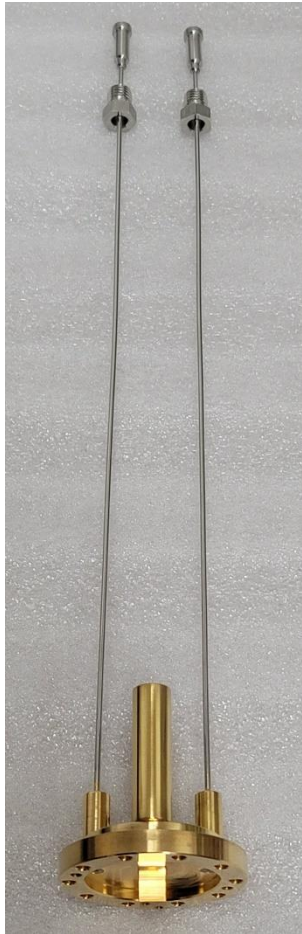


4

QHR sample holder



M5 Tap – Soldering
(Eutec Rod-157)



Hole – $\varnothing 1.8 \times 2$