Cindbest CH Series

200mm - 300mmManual Probe Station System

FEATURES / BENEFITS

Usefulness

- Applications: Suitable for a variety of wafer measurement applications, wafer level reliabilit (WLR), failure analysis (FA), integrated circuit engineering, micro-electromechanical systems (MEMS) and high power (HP)
- Test IV curve, CV curve, LIV curve, RF test, high voltage and high current test

Ergonomics and optional features

- Adjustable needle seat platform quickly lifts and lowers for easy separation of sample and probe
- Chuck rotation lock
- Header platform accepts DC/RF positioners (magnetic or vacuum mounted)
- Available in a variety of configurations, including various chuck options, DC/RF/high voltage 1~10KV, micro positioners, microscopes, cameras, PCB holders, etc.

Platform configuration parameters

	Model	CH-8	CH-12
Platform	Chuck Size	8 inches	12 inches
	Sample stage pull-out	Travel: 110mm	Stroke: 150mm
	Sample stage rotation	Can rotate 360°, can be fine-tuned by 15 °, with an accuracy of 0.1°, and has an angle locking device	
	Sample fixation method	Vacuum adsorption, Central adsorption hole, Multi-circle adsorption ring	
	Sample stage Z axis lifting	Can be raised or lowered 8mm	
	X-Y travel range	8 inches*8 inches	12 inches*12 inches
	X-Y air floating travel	360° air-floating movement for quick sample positioning	

	XY movement accuracy	1um
	Needle Seat Platform	Can quickly raise and lower by 5mm and fine-tune by 25mm
	Back electrode test	The sample stage is electrically independent and suspended, and the 4mm jack can be connected to the back electrode (optional)
Microscope travel module	Microscope fixing method	Gantry with X-Y fine adjustment, moving range 2“ x 2”
	Mobile itinerary	2 inches * 2 inches

Microscopes - Selection Guide

High Power Microscope - Metallography

----Used for spot testing of small size pad devices and loading laser

Zoom	1X~2X
Eyepiece	10Xor 20XOptional
Z-axis handwheel focusing range	50.8mm
CMount	0.5X
Objective	5/10/20/50/100XOptional
Manual nose wheel	4 holes
Maximum magnification	2000X or 4000X
Light source	150WHigh power white light source

Motic
PSM-1000

Low Power Microscope - Stereo

----Used forLarge size padDevicesSpot Test

Zoom	0.8X~5X
Eyepiece	20X
Z-axis handwheel focusing range	50.8mm
CMount	0.4X
Auxiliary objective lens can be loaded	2X
Minimum resolution	2um
Maximum magnification	100X or 200X
Light source	ledRing light

Cindbest
CB-M200

Microscope - Monocular Metallography

----The standard lens can be used for spot measurement of large-size pads, and it can be used for spot measurement of small-size pads after adding a metallographic objective lens

Continuous zoom ratio	0.75 - 5X
Standard objective lens	1X
CMount	1X
Working distance	82mm
Additional objective lens	5/10/20/50XOptional
MinimumResolution	2um
Maximum magnification	Zoom * Camera * Objective Lens * Display = Magnification
Light source	Coaxial light source

Cindbest 0745

Probe Holders - Selection Guide

Fixing methods: magnetic switch adsorption / vacuum adsorption optional

- CB-40-T movement accuracy 2um
  Travel range XYZ: 12mm
  Economical price, small size, ideal for pad/large contact probing

CB-40-T

- CB-100 movement accuracy 0.7um
  XYZ linear motion, suitable for probing as small as 1 micron
  Travel range XYZ: 12mm
  DC, RF, fiber optic switchable fixed

CB-100

- CB-200 movement accuracy 0.5um,
  XYZ linear motion, suitable for probing as small as 1 micron
  Travel range XYZ: 20mm
  DC, RF, fiber optic switchable fixed

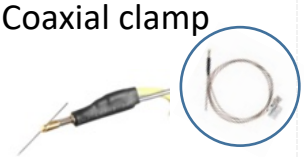
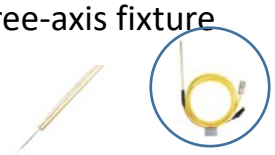
CB-200

DC Fixed

RF Fixed

Fiber Fixing

Probe Fixtures - Selection Guide

	Coaxial clamp 	Three-axis fixture 	Kelvin clamp 
Maximum voltage	700 V	1500 V	250V
Maximum voltage	1A	10A	1A
Temperature range	-60 °C to 300 °C	-60 °C to 300 °C	-60 °C to 300 °C
Leakage Current	< 10pA	<100fA	< 20fA
Connectors	BNC(M)	Standard Triax(M)	SSMC
Probe fixing method	Spring fixation or tubular fixation	Spring fixation or tubular fixation	Screw locking
Probe tip material	Tungsten	Tungsten	Tungsten
Probe tip size	0.5 μm – 25 μm	0.5 μm – 25 μm	0.5 μm – 25 μm
Cables	1.5m long coaxial cable	1.8m long three-axis	1m long three-axis line

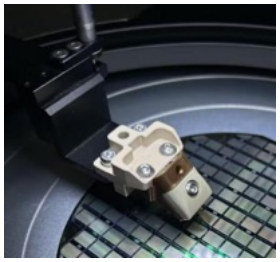
❖ High Voltage / High Current Probes - Selection Guide

High voltage

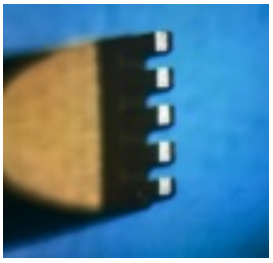
Model	HV-3KV 	HV-5KV 	HV-10KV 
Maximum voltage	3KV	5KV	10KV
Maximum current	2 A Pulsed	5 A Pulsed	3 A Pulsed
Temperature range	-60℃ to 200℃	-60℃ to 200℃	-60℃ to 200℃
Leakage Current	< 300fA @ 3000V	< 100PA @ 5000V	< 100nA @10000V
Connector Type	HV Triaxial/BNC Coaxial/Banana	SHV	UHV
Replaceable probe	Yes	Yes	Yes
Probe material	W	W	W

High current

High Current Probe Fixture



High Current Replacement Probe - Multi-Finger Type

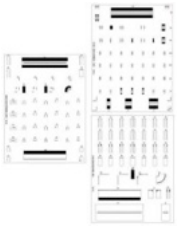


Model	HC-200	HCT-200
Maximum voltage	/	500V
Maximum current	/	20A DC/200A Pulsed
Leakage Current	/	N/A
Connector Type	/	HV Banana
Replaceable tips	/	Yes
Probe material	/	BeCu or W
Number of needle tips	/	8

❖ RF Probes - Selection Guide

	40A	50A	67A	110H
Frequency	DC-40GHz	DC-50GHz	DC-67GHz	DC-110GHz
Connectors	2.92mm	2.4mm	1.85mm	1.0mm
Pin structure	GS/SG/GSG	GS/SG/GSG	GS/SG/GSG	GS/SG/GSG
Spacing range	25µ - 2540µ	25µ - 1250µ	25µ - 1250µ	525µ - 1250µ
Insertion loss	<.8db	<1.0db	<1.1db	<1.5db
Return loss	> 18db	>18db	>14db	>15db

Calibration Substrate Selection Guide



Calibration Substrate	Pad Size (microns)	Calibration Types Supported	Footprint	Pitch Range Recommended (microns)	Pitch Range Acceptable (microns)
CS-5	50 x 50	SOLT, LRL, LRM	GSG	75 - 250	75 -250
CS-9	100 x 100	SOLT, LRL, LRM	GSG	250 - 600	150 - 600
CS-10	150 x 150	SOLT, LRM	GSG	600 - 1250	225 - 1250
CS-18	300 x 300	SOLT, LRM	GSG	1250 - 2540	500 - 2540
CS-8	50 x 50 100 x 100 150 x 150	SOLT, LRM	GS, SG	50 - 200	50 -300
CS-14	100 x 100	SOLT, LRM	GS, SG	200 - 400	150 - 600
CS-11	150 x 150	SOLT, LRM	GS, SG	400 - 1250	175 - 1250
CS-17	300 x 300	SOLT, LRM	GS, SG	750 - 2540	450 - 2540

RF Cables

	40GHz	50GHz	67GHz	110GHz
Frequency Range	DC - 40GHz	DC - 50GHz	DC - 67GHz	DC - 110GHz
Length	120cm	120cm	120cm	15cm
Connectors	2.92M – 2.92M	2.4M – 2.4M	1.85 M - 1.85 M	1.0M - 1.0M

* Contact Factory

Chuck options

	Normal temperature chuck	Normal high temperature chuck	Normally high temperature back electrode chuck
Diameter	8 inches / 12 inches	8 inches / 12 inches	8 inches / 12 inches
Material	Stainless steel	Nickel-plated aluminum	Copper gold plated
Adsorption method	Annular adsorption hole vacuum adsorption	Annular adsorption hole vacuum adsorption	Annular adsorption hole vacuum adsorption

Adsorption ring	4 laps	4 laps	4 laps
Adsorption pore size	1mm*	1mm*	1mm*
Temperature range	/	RT-200℃ (can be upgraded to 300, 400, 500℃)	RT-200℃ (upgradable to 300℃)
Temperature resolution	/	0.1℃	0.1℃
Temperature control accuracy	/	0.1℃	0.1℃
Temperature stability	/	±1℃	±1℃
Applicability	Tested at room temperature	Tested in high temperature environment	Under high temperature environment and back electrode pressure test is required

*1mm is the standard aperture. If necessary, it can be changed to a smaller aperture adsorption hole

Chuck options

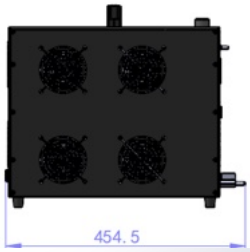
	Room temperature coaxial chuck	Room temperature three-axis chuck	Room to high temperature coaxial chuck	Room to high temperature three-axis chuck
Diameter	8 inches / 12 inches	8 inches / 12 inches	8 inches / 12 inches	8 inches / 12 inches
Material	Aluminum alloy nickel or gold plated, stainless steel*	Aluminum alloy nickel or gold plated, stainless steel	Aluminum alloy nickel or gold plated, stainless steel	Aluminum alloy nickel or gold plated, stainless steel
Adsorption method	Annular/Porous*	Annular/Porous*	Annular/Porous*	Annular/Porous*
Adsorption ring	8 inches: 15, 40, 70, 105, 140, 165, 190 mm 12 inches: 15, 40, 70, 105, 140, 165, 190, 230, 260, 290 mm			
Adsorption pore size	0.5mm*	0.5mm*	0.5mm*	0.5mm*
Temperature range	/	/	RT-200℃ (Upgradable to 300℃)	RT-200℃ (Upgradable to 300℃)
Temperature resolution	/	/	0.1℃	0.1℃
Temperature control accuracy	/	/	0.1℃	0.1℃
Temperature stability	/	/	±1℃	±1℃
Leakage accuracy	≤50PA@±5V/25℃	≤100fA @±5V/25℃	≤50PA@±5V/25℃	≤100fA @±5V/25℃
Heating and cooling rate	/	/	25℃-200℃≤ 20min@8 inches 200℃-300℃≤ 25min@8 inches	25℃-200℃≤30min@8 inches 200℃-300℃≤35min@8 inches
applicability	Tested at room temperature	Tested at room temperature	High temperature and high	High temperature and high temperature

			temperature back electrode test	back electrode test

*0.5mm is the standard aperture of the porous adsorption chuck, which can be customized if necessary
*Porous adsorption is suitable for thin sheets ≤200um thick
*About chuck material: Gold plating is recommended for high-power device testing, gold plating or nickel plating is recommended for back electrode testing, and stainless steel is generally used

TEC Refrigeration Water Tank

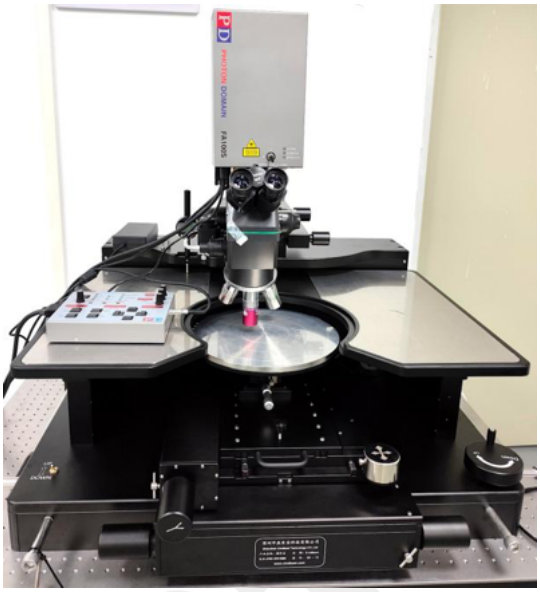
Using TEC electric cooling method, the water temperature can be reduced to 0℃



- Heat dissipation 10W/℃
- Temperature display, can intuitively display water temperature
- Effectively protect machine safety
- Water tank capacity: 0.5L
- Pump flow rate: 1L/min
- Lift: 5M

PD laser machine

Used for metal cutting inside the chip, Mark point marking



- Three-band laser
- Wavelengths include 1064nm, 532nm, 355nm
- Repetition frequency: internal trigger 1Hz; external trigger is possible
- Laser energy: 1mJ
- Light scattered eastward: 5~6mrad
- Laser pulse width:--10 ns
- Cooling method: air cooling
- Built-in CCD camera
- Minimum cutting size: 2um
- Warranty: One year
- Lifespan:>3 million times

System Options - Accessories

Shielding box (CB-6)

The Probe Station light-tight, electrically shielded enclosure is idea

CB-6

- Low leakage measurement
- High Power Measurement Thermal Measurement
- Light sensitivity measurement

Door and panel interlock options are often used for high pressure safety

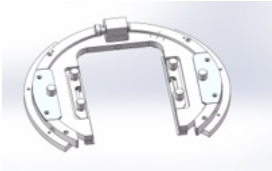
Integrated shielding box

- Lift-up opening method
- Built-in air-floating shock-proof table
- Legs with casters

- Compatible with probe stations within CH-8
- Effectively protect the operator's safety during high voltage and high current testing (infrared light curtain can be installed)
- Effectively shield signal interference and leakage, effectively isolate external vibration, and improve test accuracy
- Contains 4 triaxial female to triaxial female connectors
- There are adapter mounting plates on the left and right sides, each with 8 holes, and a concealed cable outlet at the rear
- Dimensions: 1200*900*1800
- Inner dimensions: 1000x780x950 (excluding the bottom cabinet)

Probe Card Fixture

Used forfixedProbe Card



Silent oil-free vacuum pump

- It can operate 24 hours a day to provide vacuum adsorption for the stage;
- Air flow: 7L/min, silent and oil-free
- Vacuum degree: -250mm/Hg;
- Size: 98mm*58mm*80mm,
- Weight: 0.7kg;
- Power requirement: 220V/50Hz.

VP0125

Optical anti-vibration table

	Damping anti-vibration table	Air floating shockproof table
Model	CBPT Series	CBDT Series
Size	Customizable	Customizable
Natural frequency	6Hz (horizontal) 8Hz (vertical)	1.5Hz (horizontal) 2Hz (vertical)
Countertop Material	Stainless steel SUS430	Stainless steel SUS430
Screw hole	M6	M6

CBPT

Screw hole pitch	25mm×25mm	25mm×25mm
Table surface flatness	≤0.03mm/m2	≤0.03mm/m2
Isolation method	Damping	Air flotation
Air compressor		
Pressure	N/A	0.7mpa
Voltage frequency	N/A	220V-50Hz
Power	N/A	350W
Noise	N/A	<40db
Exhaust volume	N/A	20L/min

CBDT

System Dimensions - Optional

Vibration-Proof Table

Model	CH-8	CH-12
Size (length*width*height)	750W*820D*650H	925W*947D*815H
Weight	About 103 kg	About 170 kg

Warranty

- Standard warranty 12 months*
- For extended warranty and service contracts: please contact Shenzhen Sendongbao Technology Co., Ltd. for more information

*** For more details please refer to Cindbest Terms and Conditions of Sale.**

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