

# SMALL TYPE LOW TEMPERATURE COMPARATIVE CALIBRATION EQUIPMENT



## MODEL KT-H503, KT-H504, KT-H504S



KT-H503



KT-H504  
KT-H504S

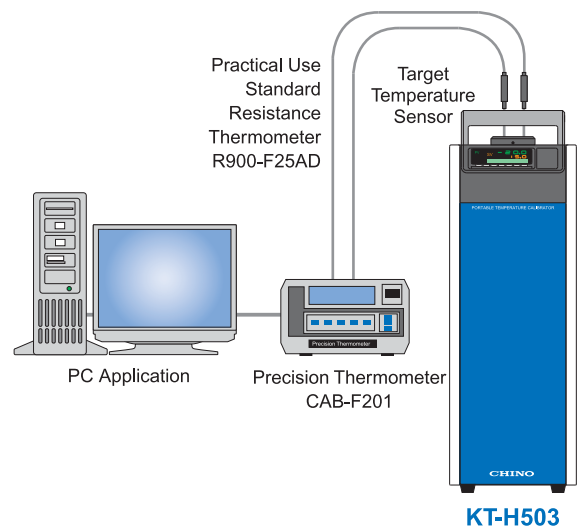
- Realize low temperature calibration from  $-100^{\circ}\text{C}$  to  $155^{\circ}\text{C}$
- Compact & light weight body
- For on-site calibration of resistance thermometers and thermocouples!



### FEATURES

- **Calibration from  $-100$  to  $155^{\circ}\text{C}$**   
KT-H503 calibrates from  $-100$  to  $50^{\circ}\text{C}$  by using Stirling cooler, KT-H504 calibration from  $-30$  to  $155^{\circ}\text{C}$  by using Peltier device and KT-H504S calibrates from  $-20$  to  $154^{\circ}\text{C}$  for short length sensor.
- **Reduce the heating/cooling time**  
KT-H503 ( $-100$  to  $50^{\circ}\text{C}$  type) :  $23^{\circ}\text{C}$  to  $-100^{\circ}\text{C}$  at about 40min.  
KT-H504 ( $-30$  to  $155^{\circ}\text{C}$  type) :  $-30^{\circ}\text{C}$  to  $155^{\circ}\text{C}$  at about 20min.  
KT-H504S ( $-20$  to  $155^{\circ}\text{C}$  type) :  $-20^{\circ}\text{C}$  to  $155^{\circ}\text{C}$  at about 20min.
- **Excellent temperature stability and temperature distribution**  
KT-H503 ( $-100$  to  $50^{\circ}\text{C}$  type) :  $\pm 0.03^{\circ}\text{C}$  per 30min.  
KT-H504 ( $-30$  to  $155^{\circ}\text{C}$  type) :  $\pm 0.01^{\circ}\text{C}$  per 30min.  
Within  $0.1^{\circ}\text{C}$  (40mm from the bottom), within  $0.01^{\circ}\text{C}$ .  
KT-H504S ( $-20$  to  $155^{\circ}\text{C}$  type) :  $\pm 0.02^{\circ}\text{C}$  per 30min.  
Within  $0.2^{\circ}\text{C}$  (40mm from the bottom).
- **Simple temperature setting**  
Select 8 preset temperature points by simple selecting button.
- **Calibration test report (option)**  
CHINO calibration test report available.

### EXAMPLE OF USE



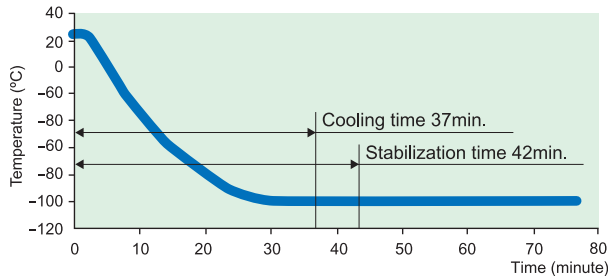
## SPECIFICATIONS

Model	KT-H503	KT-H504	KT-H504S
Calibration Temperature Range	-100 to 50°C	-30 to 155°C* (Ambient temperature:23°C)	-20 to 155°C* (Ambient temperature:23°C)
Heating/Cooling Time	About 40min. (23 to -100°C) About 40min. (-100 to 50°C)	About 30min. (23 to -30°C) About 20min. (-30 to 155°C) About 15min. (155 to 23°C)	About 20min. (23 to -20°C) About 20min. (-20 to 155°C) About 20min. (155 to 23°C)
Stabilization Time	15min. (Stability time after reached to setting temperature.)	15min. (Stability time after reached to setting temperature.)	15min. (Stability time after reached to setting temperature.)
Stability	±0.03°C	±0.02°C	±0.02°C
Temperature Distribution	40mm from the bottom between wells	Within 0.1°C	Within 0.2°C
Temperature Control Method	Heating and cooling decoupling control, Z control		
Block	Replaceable: select from 8 block types, custom type available		
Temperature Sensor Length	Over 205mm	Over 195mm	Over 100mm
Display Resolution	0.1°C/0.01°C		
Communication Interface	RS232C		
Power Supply	100 to 240V AC 50/60Hz	100 to 120/200 to 240V AC Select 50/60Hz	
Maximum Power Consumption	150VA (at 100V AC) 270VA (at 240V AC)	350VA (at 100V AC) 450VA (at 240V AC)	
Weight	About 12kg	About 7.0kg	

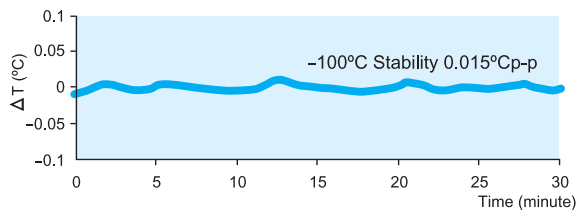
\*If the ambient temperature is higher than 23°C then there is a risk that the min. temperature will also rise up.

## MEASURED DATA (KT-H503)

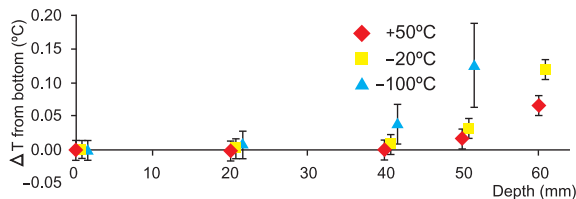
### Cooling time and stabilization time



### Stabilization at -100°C

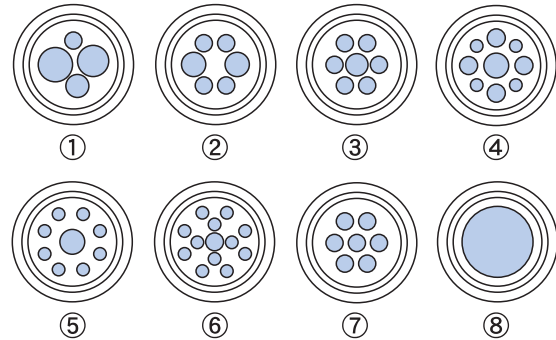


### Temperature Distribution (vertical direction)



## BLOCK TYPES

Block can be changed depending on the temperature sensor to be calibrate.  
Custom type is available.

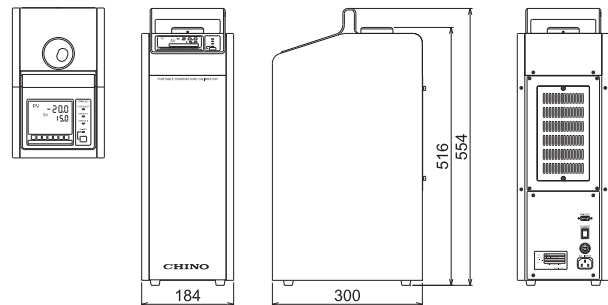


## MEASURING WELL DETAILS FOR BLOCK

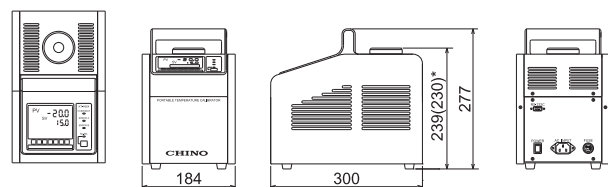
No.	Symbol			Outside diameter of standard sensor	Measuring well and numbers
	KT-H503	KT-H504	KT-H504S		
①	KT-H5TB-01	KT-H5TB-21	KT-H5TB-31	φ7.2mm	φ7.6mmx1, φ6.6mmx1 φ5.0mmx1, φ3.4mmx1
②	KT-H5TB-02	KT-H5TB-22	KT-H5TB-32	φ3.2/φ4.8mm	φ5.0mmx2, φ3.4mmx4
③	KT-H5TB-03	KT-H5TB-23	KT-H5TB-33	φ4.8mm	φ5.0mmx1, φ3.4mmx6
④	KT-H5TB-04	KT-H5TB-24	KT-H5TB-34	φ4.8mm	φ5.0mmx1, φ3.4mmx4, φ2.0mmx4
⑤	KT-H5TB-05	KT-H5TB-25	KT-H5TB-35	φ4.8mm	φ5.0mmx1, φ2.0mmx8
⑥	KT-H5TB-06	KT-H5TB-26	KT-H5TB-36	φ3.2mm	φ3.4mmx1, φ2.0mmx12
⑦	KT-H5TB-07	KT-H5TB-27	KT-H5TB-37	φ3.2mm	φ3.4mmx7
⑧	KT-H5TB-08	KT-H5TB-28	KT-H5TB-38	—	φ17mmx1

## DIMENSIONS

### KT-H503



### KT-H504/504S



\*230 for KT-H504S

Unit: mm

Specifications subject to change without notice. Printed in Japan (I) 2017. 4

## CHINO CORPORATION

32-8 KUMANO-CHO, ITABASHI-KU, TOKYO 173-8632  
 Telephone : +81-3-3956-2171  
 Facsimile : +81-3-3956-0915  
 E-mail : inter@chino.co.jp  
 Website : www.chino.co.jp/