AMETEK®
SENSORS, TEST & CALIBRATION

Temperature Calibrator Overview

Advantages

- High Accuracy and Stability
- Fast Calibration
- Easy to Carry
- Intuitive Operation
- Two Year Warranty
- Free Calibration Software
- Innovative Patented Technology
- Dynamic Load Compensation
- Accredited Certificates (Optional)
- Plug & Plug Reference Sensors
- Application Specific Inserts
- High Profile Design

Cold Temperature Calibrators

	Specifications							Functions						
	Internal Acc. (°F)	External Acc. (°F)	Stability	Resolution	Type	Insert Dia. (in)	Immersion Depth (in)	Ext. Ref. Sensor	SUT Input	Dynamic Load Comp	Set Follows	Auto Step	Switch Test	Calibrator
-148 to 311°F	0.54	0.11	0.054	0.001	Dry	1.17	6.3	√	√	√	√	√	√	RTC-159
-130 to 257°F	0.54	0.13	0.054	0.01	Dry	1.17	6.3	√	√		√	√	√	PTC-125
-49 to 356°F	0.18	0.07	0.009	0.001	Dry	1.17	6.3	√	√	√	√	√	√	RTC-187
-49 to 311°F	0.20	0.07	0.009	0.001	Dry	1.17	6.3	√	√	√	√	√	√	RTCt-157
-49 to 311°F	0.18	0.07	0.009	0.001	Dry	1.17	6.3	√	√	√	√	√	√	RTC-157
-26 to 311°F	0.18	0.07	0.009	0.001	Dry	1.17	6.3	√	√	√	√	√	√	RTCt-156
-22 to 311°F	0.18	0.07	0.009	0.001	Dry	1.02	6.3	√	√	√	√	√	√	RTC-156
-22 to 329°F	0.32	0.081	0.018	0.001	D/W	2.5	7.1	√	√	√	√	√	√	RTCt-168
-22 to 329°F	0.32	0.081	0.018	0.001	D/W	2.5	7.1	√	√	√	√	√	√	RTC-168
-13 to 311°F	0.32	0.11	0.018	0.01	Dry	1.02	6.3	√	√		√	√	√	PTC-155
-13 to 311°F	0.54	0.36	0.070	0.01	Dry	1.01	4.53	√			√	√	√	CTC-155
-8 to 311°F	0.32	0.07	0.018	0.001	D/W	2.5	7.1	√	√	√	√	√	√	RTC-158
14 to 257°F	0.90	-	0.090	0.1	Dry	0.5	4.3					√		ETC-125

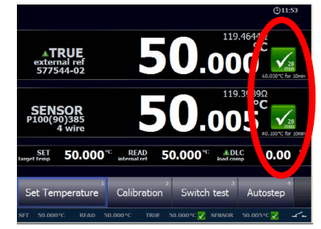
Hot Temperature Calibrators

	Specifications							Functions						
	Internal Acc. (°F)	External Acc. (°F)	Stability	Resolution	Type	Insert Dia. (in)	Immersion Depth (in)	Ext. Ref. Sensor	SUT Input	Dynamic Load Comp	Set Follows	Auto Step	Switch Test	Calibrator
82 to 482°F	0.50	0.13	0.036	0.001	D/W	2.5	7.1	√	√	√	√	√	√	RTC-250
82 to 662°F	0.81	0.45	0.090	0.01	Dry	1.01	4.53	√			√	√	√	CTC-350
91 to 662°F	0.36	0.15	0.036	0.01	Dry	1.02	5.5		√		√	√	√	PTC-350
82 to 752°F	0.90	-	0.270	0.1	Dry	Fixed	4.1					√		ETC-400
82 to 752°F	0.90	-	0.540	0.1	Dry	1.4	-					√		ETC-400R
91 to 797°F	0.36	0.23	0.036	0.01	Dry	1.02	5.91	√	√		√	√	√	PTC-425
82 to 1202°F	1.62	-	0.180	0.1	Dry	1.01	4.53					√	√	MTC-650
82 to 1202°F	1.17	0.81	0.090	0.01	Dry	1.01	7.48	√			√	√	√	CTC-652
82 to 1220°F	1.53	0.81	0.140	0.01	Dry	1.01	4.53	√			√	√	√	CTC-660
91 to 1220°F	0.54	0.27	0.072	0.01	Dry	0.98	5.91	√	√		√	√	√	PTC-660
91 to 1292°F	0.52	0.20	0.036	0.001	Dry	1.17	7.9	√	√	√	√	√	√	RTC-700
212 to 2201°F	3.60	3.60	0.180	0.01	Dry	0.98	5.39	√			√	√	√	CTC-1205



Dynamic Load Compensation

DLC function makes the homogeneity independent of the different loads of the insert. The DLC sensor improves the homogeneity even more by controlling the homogeneity not only in the well, but also inside the insert, where the sensors-under-test are placed during calibration.



RTCt Touchscreen Calibrator

The new RTCt model brings user-friendly advancements like a larger, customizable touchscreen display, dual sensor input capabilities, and expanded remote connectivity options.

Sanitary Sensor Calibration — RTC-168 and RTC-156



Most of the temperature sensors used for measurement within the food industry have to be approved for sanitary applications. Therefore, the temperature sensors have been designed in such a way that only a minimal number of germs or contaminants can conceal themselves on the sensors. Unfortunately, a side effect of these designs is that the sensors cannot be calibrated in a standard calibrator. The RTC-156 and especially the RTC-168 overcomes that problem by using a special designed clamp insert together with our short and flexible STS-102 reference sensor.

MVI - Mains Variance Immunity

The cycling of supply power can cause the temperature regulator to perform inconsistently, leading to both inaccurate readings and unstable temperatures. Our MVI system eliminates errors from unstable mains power.

Patented Technology

X) The cooling/heating technology used in our ultra coolers makes it possible to cover a very broad temperature range from -100 to 155°C.

Y) The DLC technology increases the temperature homogeneity and documents it in the display.

Z) The cooling speed of our heater calibrators for the RTC and PTC Series, is improved by using a special insulation.

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Cold Temperature Calibrators

	Specifications							Functions						
	Internal Acc. (°C)	External Acc. (°C)	Stability	Resolution	Type	Insert Dia. (mm)	Immersion Depth (mm)	Ext. Ref. Sensor	SUT Input	Dynamic Load Comp	Set Follows	Auto Step	Switch Test	Calibrator
-100 to 155°C	0.30	0.06	0.030	0.001	Dry	29.7	190	√	√	√	√	√	√	RTC-159
-90 to 125°C	0.30	0.07	0.030	0.01	Dry	29.7	190	√	√		√	√	√	PTC-125
-45 to 180°C	0.10	0.04	0.005	0.001	Dry	29.7	160	√	√	√	√	√	√	RTC-187
-45 to 155°C	0.10	0.04	0.005	0.001	Dry	29.7	160	√	√	√	√	√	√	RTCt-157
-45 to 155°C	0.10	0.04	0.005	0.001	Dry	29.7	160	√	√	√	√	√	√	RTC-157
-32 to 155°C	0.10	0.04	0.005	0.001	Dry	29.7	160	√	√	√	√	√	√	RTCt-156
-30 to 155°C	0.10	0.04	0.005	0.001	Dry	29.7	160	√	√	√	√	√	√	RTC-156
-30 to 165°C	0.14	0.045	0.010	0.001	D/W	63.5	180	√	√	√	√	√	√	RTCt-168
-30 to 165°C	0.14	0.045	0.010	0.001	D/W	63.5	180	√	√	√	√	√	√	RTC-168
-25 to 155°C	0.18	0.06	0.010	0.01	Dry	25.8	160	√	√		√	√	√	PTC-155
-25 to 155°C	0.30	0.20	0.040	0.1	Dry	25.8	120	√			√	√	√	CTC-155
-22 to 155°C	0.18	0.04	0.010	0.001	D/W	63.5	180	√	√	√	√	√	√	RTC-158
-10 to 125°C	0.50	-	0.050	0.1	Dry	12.5	110					√		ETC-125

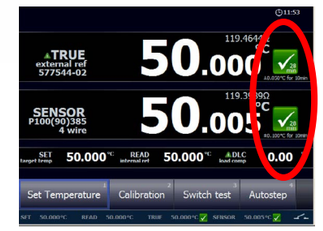
Hot Temperature Calibrators

	Specifications							Functions						
	Internal Acc. (°C)	External Acc. (°C)	Stability	Resolution	Type	Insert Dia. (mm)	Immersion Depth (mm)	Ext. Ref. Sensor	SUT Input	Dynamic Load Comp	Set Follows	Auto Step	Switch Test	Calibrator
28 to 250°C	0.28	0.07	0.020	0.001	D/W	63.5	180	√	√	√	√	√	√	RTC-250
28 to 350°C	0.45	0.25	0.050	0.01	Dry	25.7	110	√			√	√	√	CTC-350
33 to 250°C	0.20	0.08	0.020	0.01	Dry	25.8	140	√	√		√	√	√	PTC-350
28 to 400°C	0.50	-	0.150	0.1	Dry	Fixed	105					√		ETC-400
28 to 400°C	0.50	-	0.150	0.1	Dry	36.0	-					√		ETC-400R
33 to 425°C	0.20	0.13	0.020	0.01	Dry	25.8	150	√	√		√	√	√	PTC-425
28 to 650°C	0.90	-	0.100	0.1	Dry	25.7	115					√	√	MTC-650
28 to 650°C	0.65	0.45	0.050	0.01	Dry	25.7	190	√			√	√	√	CTC-652
28 to 660°C	0.85	0.45	0.080	0.01	Dry	25.7	110	√			√	√	√	CTC-660
33 to 660°C	0.30	0.15	0.040	0.01	Dry	24.8	150	√	√		√	√	√	PTC-660
33 to 700°C	0.29	0.11	0.020	0.001	Dry	29.8	200	√	√	√	√	√	√	RTC-700
100 to 1205°C	2.00	2.00	0.100	0.01	Dry	27.0	137	√			√	√	√	CTC-1205



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