AMETEK®
TEST & CALIBRATION INSTRUMENTS

▶ 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 & Play Reference Sensors
- Application Specific Inserts
- High Profile Design

Table 1

Temperature Range	Internal Accuracy (°C)	External Accuracy (°C)	Stability (°C)	Resolution (°C)	Type	Insert Diameter (mm)	Immersion Depth (mm)	External Ref. Sensor	Sensor Under Test Input*	Dynamic Load Compensation	Clamp Calibration	Set Follows True	Autostep	Switch Test	Patented Technology	Model
-100°C to 155°C	0.30	0.06	0.030	0.001	Dry	29.7	190	✓	✓	✓		✓	✓	✓	X,Y	RTC-159
-90°C to 125°C	0.30	0.07	0.030	0.01	Dry	29.7	190	✓	✓			✓	✓	✓	X	PTC-125
-45°C to 180°C	0.10	0.04	0.005	0.001	Dry	29.7	160	✓	✓	✓		✓	✓	✓	Y	RTC-187
-45°C to 155°C	0.10	0.04	0.005	0.001	Dry	29.7	160	✓	✓	✓		✓	✓	✓	Y	RTC-157
-30°C to 155°C	0.10	0.04	0.005	0.001	Dry	29.7	160	✓	✓	✓	✓	✓	✓	✓	Y	RTC-156
-25°C to 155°C	0.18	0.06	0.010	0.01	Dry	25.8	160	✓	✓			✓	✓	✓		PTC-155
-23°C to 155°C	0.18	–	0.010	0.1	Dry	19.9	160					✓	✓			ITC-155
-22°C to 155°C	0.18	0.04	0.010	0.001	Dry/Wet	63.5	180	✓	✓			✓	✓	✓	Y	RTC-158
-25°C to 155°C	0.30	0.20	0.040	0.1	Dry	25.8	120	✓				✓	✓	✓		CTC-155
-10°C to 125°C	0.50	–	0.050	0.1	Dry	12.5	110						✓			ETC-125

Table 2

Temperature Range	Internal Accuracy (°C)	External Accuracy (°C)	Stability (°C)	Resolution (°C)	Type	Insert Diameter (mm)	Immersion Depth (mm)	External Ref. Sensor	Sensor Under Test Input*	Dynamic Load Compensation	Set Follows True	Autostep	Switch Test	Mains Variance Immunity	Patented Technology	Model
28°C to 250°C	0.28	0.07	0.020	0.001	Dry/Wet	63.5	180	✓	✓	✓	✓	✓	✓	✓	Y	RTC-250
33°C to 320°C	0.25	–	0.020	0.1	Dry	29.7	150				✓	✓	✓			ITC-320
28°C to 350°C	0.45	0.25	0.050	0.01	Dry	25.7	110	✓			✓	✓	✓			CTC-350A
33°C to 320°C	0.50	–	0.100	0.1	Dry	25.7	190				✓	✓	✓			CTC-320B
33°C to 350°C	0.20	0.08	0.020	0.01	Dry	25.8	140	✓	✓		✓	✓	✓	✓	Z	PTC-350
33°C to 425°C	‡0.20/0.25	0.13	0.020	0.01	Dry	25.8	150	✓	✓		✓	✓	✓	✓	Z	PTC-425
28°C to 400°C	0.50	–	0.150	0.1	Dry	Fixed	105				✓					ETC-400
28°C INFRARED 400°C	0.50	–	0.300	0.1	Dry	36.0	–				✓					ETC-400R
33°C to 650°C	0.45	–	0.040	0.1	Dry	29.7	150				✓	✓	✓			ITC-650
28°C to 660°C	0.85	0.45	0.080	0.01	Dry	25.7	110	✓			✓	✓	✓			CTC-660A
33°C to 650°C	0.60	–	0.050	0.1	Dry	25.7	190				✓	✓	✓			CTC-650B
33°C to 660°C	0.30	0.15	0.040	0.01	Dry	24.8	150	✓	✓	✓	✓	✓	✓	✓	Z	PTC-660
33°C to 700°C	0.29	0.11	0.020	0.001	Dry	29.8	200	✓	✓		✓	✓	✓	✓	Y,Z	RTC-700
300°C to 1250°C	2.00	–	0.100	0.1	Dry	25.0	135				✓	✓	✓			CTC-1200

Temperature Range — Specifications — Functions — Model

* RTD, TC, mA active, mA passive and switch   ‡ At 33 to 350° C / At 350 to 425° C

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.

Free calibration software
JOFRACAL is our highly versatile calibration software that is supplied with the calibrator. The software ensures easy calibration of various temperature sensors, such as RTD´s, thermocouples, transmitters and thermo switches. It integrates with all our calibration instruments.

Clamp Sensor Calibration
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 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.
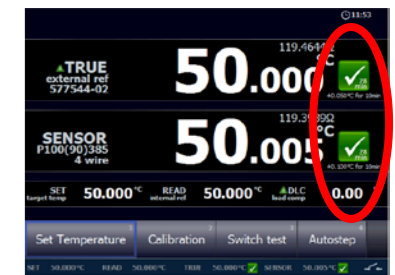
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Table 1

Temperature Range	Internal Accuracy (°F)	External Accuracy (°F)	Stability (°F)	Resolution (°F)	Type	Insert Diameter (in)	Immersion Depth (in)	External Ref. Sensor	Sensor Under Test Input*	Dynamic Load Compensation	Clamp Calibration	Set Follows True	Autostep	Switch Test	Patented Technology	Model
-148°F to 311°F	0.54	0.11	0.054	0.001	Dry	1.17	7.48	✓	✓	✓		✓	✓	✓	X,Y	RTC-159
-130°F to 257°F	0.54	0.13	0.054	0.01	Dry	1.17	7.48	✓	✓			✓	✓	✓	X	PTC-125
-49°F to 356°F	0.18	0.07	0.009	0.001	Dry	1.17	6.30	✓	✓	✓		✓	✓	✓	Y	RTC-187
-49°F to 311°F	0.18	0.07	0.009	0.001	Dry	1.17	6.30	✓	✓	✓		✓	✓	✓	Y	RTC-157
-22°F to 311°F	0.18	0.07	0.009	0.001	Dry	1.17	6.30	✓	✓	✓	✓	✓	✓	✓	Y	RTC-156
-13°F to 311°F	0.32	0.11	0.018	0.01	Dry	1.02	6.30	✓	✓			✓	✓	✓		PTC-155
-9°F to 311°F	0.32	–	0.018	0.1	Dry	0.78	6.30					✓	✓	✓		ITC-155
-8°F to 311°F	0.32	0.07	0.018	0.001	Dry/Wet	2.50	7.09	✓	✓			✓	✓	✓	Y	RTC-158
-13°F to 311°F	0.54	0.36	0.070	0.01	Dry	1.02	4.53	✓				✓	✓	✓		CTC-155
14°F to 257°F	0.90	–	0.090	0.1	Dry	0.50	4.33						✓			ETC-125

Headers: **Temperature Range** | **Specifications** | **Functions** | **Model**

Table 2

Temperature Range	Internal Accuracy (°F)	External Accuracy (°F)	Stability (°F)	Resolution (°F)	Type	Insert Diameter (in)	Immersion Depth (in)	External Ref. Sensor	Sensor Under Test Input*	Dynamic Load Compensation	Set Follows True	Autostep	Switch Test	Mains Variance Immunity	Patented Technology	Model
82°F to 482°F	0.50	0.13	0.036	0.001	Dry/Wet	2.50	7.09	✓	✓	✓	✓	✓	✓	✓	Y	RTC-250
91°F to 608°F	0.45	–	0.036	0.1	Dry	1.17	5.91				✓	✓	✓			ITC-320
82°F to 662°F	0.81	0.45	0.090	0.01	Dry	1.01	4.33	✓			✓	✓	✓			CTC-350A
91°F to 608°F	0.90	–	0.180	0.1	Dry	1.01	7.48				✓	✓	✓			CTC-320B
91°F to 662°F	0.36	0.15	0.036	0.01	Dry	1.02	5.51	✓	✓		✓	✓	✓	✓	Z	PTC-350
91°C to 797°C	‡0.36/0.45	0.23	0.036	0.01	Dry	1.02	5.91	✓	✓		✓	✓	✓	✓	Z	PTC-425
82°F to 752°F	0.90	–	0.270	0.1	Dry	Fixed	4.13					✓				ETC-400
82°F INFRARED 752°F	0.90	–	0.540	0.1	Dry	1.42	–					✓				ETC-400R
91°F to 1202°F	0.81	–	0.070	0.1	Dry	1.17	5.91				✓	✓	✓			ITC-650
82°F to 1220°F	1.53	0.81	0.140	0.01	Dry	1.01	4.33	✓			✓	✓	✓			CTC-660A
91°F to 1202°F	1.08	–	0.090	0.1	Dry	1.01	7.48				✓	✓	✓			CTC-650B
91°F to 1220°F	0.54	0.27	0.072	0.01	Dry	0.98	5.91	✓	✓	✓	✓	✓	✓	✓	Z	PTC-660
91°F to 1292°F	0.52	0.20	0.036	0.001	Dry	1.17	7.87	✓	✓		✓	✓	✓	✓	Y,Z	RTC-700
572°F to 2200°F	3.60	–	0.180	0.1	Dry	0.98	5.32				✓	✓	✓			CTC-1200

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