europascal
Calibration Experts

PTC 155 / 350 / 425 / 660
Professional Temperature Calibrator

- **Wide Temperature Range:**
  - **PTC-155: -25 to 155°C**
  - **PTC-350: 33 to 350°C**
  - **PTC-425: 33 to 425°C NEW,**
    ideal for sterilization tunnels, or for process validation and monitoring solutions used in the pharmaceutical, medical and food industry.
  - **PTC-660: 33 to 660°C**

Model A – The calibrator without inputs
Model B – The calibrator with inputs for a reference sensor and test device
Model C – The calibrator with an input for a reference sensor

- **Active Dual-Zone Heating Technology**
- **MVI: Mains Power Variance Immunity**
- **External Reference Sensor Control possible**
- **Easy to carry**

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Multi-Information Display

Stability Status
Shows information about the user selected stability criteria, the actual stability status, and estimations for when stability can be expected.

Reference Temperature
Indicates if the internal or external reference sensor is used, the temperature of that sensor, and whether “Set Follows True” is active.

Sensor Under Test
Shows current status. Displays the type of sensor under test connected as well as its temperature.

Menu Bar
Shows the current function possibilities.

Informative color display and easy operation
The PTC’s full color VGA display is very easy to read. The main temperature indications, like SET, RED, TRUE and SUT (Sensor Under Test), are always displayed at all stages of the programming or calibration procedure.

The navigation is very logical to use and the display indicates all important information needed for the current function.

Keyboard
With the keyboard you can navigate between functions and fill in desired settings such as set temperature, auto test temperature, and switch test temperature.

Useful Features

- Easy Set Function
- Work Order Calibration Mode (Procedure Download) via JofraCal
- Auto Switch Test
- Auto-Stepping

Special Features

- Calibration Software included
- Multi-hole Insert Kits
- Plug and Play Reference Sensors
- Easy to Carry
- Calibrate up to 24 Sensors simultaneously
- All-in-one Carrying Case

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Specifications PTC-155

Temperature Range:
Temp. @ ambient 23°C / 73°F -25 to 155°C / -13 to 311°F

Accuracy:
*CTC-155 with internal ref. sensor ±0.18°C / ±0.32°F
°CTC-155 with external STS-150 ref. sensor ±0.06 °C / ±0.11°F
*Specification when using the internal reference. (Load 4 mm OD reference probe in the center of the insert).
°12-month period. Relative to reference standard. Specifications use of the external STS-150 sensor.

Stability: ±0.01 °C / ±0.018°F
Measured after the stability indicator has been on for 10 minutes.
Measuring time is 30 minutes.

Radial Homogeneity (difference between holes) 0.01°C / ±0.0184F°

Settings
Resolution 1 or 0.1 or 0.01
Units °C or °F or K

Heating Time:	-25 to 23°C / -13 to 73°F	4 minutes
Heating Time:	23 to 155°C / 73 to 311°C	12 minutes
Cooling Time:	155 to 23°C / 311 to 73°F	10 minutes
Cooling Time:	23 to -25°C / 73 to -13°F	15 minutes

Time to Stability (typical) 10 minutes

Mains Power:
Voltage: 115 V (90-127) / 230 V (180-254)
Max. Power Consumption 400 W
Frequency, US deliveries: 60 Hz ±3
Frequency, non-US deliveries: 50 Hz ±3, 60 Hz ±3

Instrument Dimensions (L x W x H): 362 x 171 x 363 mm / 14.3x6.7x14.3 in
Instrument Weight: 10.3 kg / 22.7 lb
Immersion Depth: 160 mm / 6.3 in
Well Diameter: 26 mm / 1.02 in
Insert Dimension (diameter x length): 25.8 x 150 mm / 1.02 x 5.91 in

Electrical:
Switch Test Input (dry contact) B-Model only
Test Voltage: max. 5 VDC
Test Current: max. 2.5 mA
Digital Interface
USB 2.0

Environmental:
Operating Temperature: 0 to 40°C / 32 to 104°F
Storage Temperature: -20 to 50°C / -4 to 122°F
Humidity: 5 to 90% Rh, non-condensing
Protection Class: IP-10

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External Reference Sensor (Pt100)

STS-102-A	-45 to 155°C / -49 to 311°F

Accuracy

Hysteresis (@ 0°C/32°F)	0.01°C / 0.018°F
Long Term Stability (@ 0°C/32°F)	0.014°C / 0.025°F
Repeatability	0.004°C / 0.007°F

Note: Stability when exposed to max. Temperature for 100 hours

Response Time

STS-120-A t_{05} (50%)	5 sec.
STS-120-A t_{09} (90%)	16 sec.

Note: Liquid in motion, 0,4 m/sec.

Dimensions

Diameter	4 mm / 0.157 in
Length	30 mm / 1.18 in
Max. height over calibrator top	20 mm / 0.79

External Reference Sensor (Pt100)

STS-150-A	-25 to 155°C / -13 to 311°F

Accuracy

Hysteresis (@ 0°C/32°F)	0.01°C / 0.018°F
Long Term Stability (@ 0°C/32°F)	0.014°C / 0.025°F
Repeatability	0.004°C / 0.0072°F

Note: Stability when exposed to max. Temperature for 100 hours

Response Time

STS-150-A t_{05} (50%)	7 sec.
STS-150-A t_{09} (90%)	18 sec.

Note: Liquid in motion, 0,4 m/sec.

Dimensions

Diameter	4 mm / 0.157 in
Length	180 mm / 7.08 in
Cable length	1 mm / 3.28 ft

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Specifications CTC-350

Temperature Range:	33 to 350°C / 91 to 662°F	
Accuracy:		
*PTC-350 with internal ref. sensor	±0.2°C / ±0.36°F	
°PTC-350 with STS-150	±0.08 °C / ±0.15°F	

*Specification when using the internal reference. (Load 4 mm OD reference probe in the center of the insert).
°12-month period. Relative to reference standard. Specifications use of the external STS-150 sensor.

Stability:	±0.02 °C / ±0.036°F	

Measured after the stability indicator has been on for 10 minutes.
Measuring time is 30 minutes.

Radial Homogeneity (difference between holes)	0.02°C / ±0.036F°	
Settings		
Resolution	1 or 0.1 od 0.01	
Units	°C or °F or K	
Heating Time:	33 to 350°C / 91 to 662°C	7 minutes
Cooling Time:	350 to 100°C / 662 to 212°F	12 minutes
Cooling Time:	100 to 50°C / 212 to 122°F	12 minutes
Time to Stability (typical)	10 minutes	
Mains Power:		
Voltage:	115 V (90-127) / 230 V (180-254)	
Max. Power Consumption	1150 W	
Frequency, US deliveries:	60 Hz ±3	
Frequency, non-US deliveries:	50 Hz ±3, 60 Hz ±3	
Instrument Dimensions (L x W x H):	362 x 171 x 363 mm / 14.3x6.7x14.3 in	
Instrument Weight:	8.2 kg / 18.1 lb	
Immersion Depth:	140 mm / 5.5 in	
Well Diameter:	26 mm / 1.02 in	
Insert Dimension (diameter x length):	25.8 x 150 mm / 1.02 x 5.91 in	
Electrical:		
Switch Test Input (dry contact) B Model only		
Test Voltage:	max. 5 VDC	
Test Current:	max. 2.5 mA	
Digital Interface		
USB 2.0		
Environmental:		
Operating Temperature:	0 to 40°C / 32 to 104°F	
Storage Temperature:	-20 to 50°C / -4 to 122°F	
Humidity:	0 to 90% Rh, non-condensing	
Protection Class:	IP-10	

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External Reference Sensor (Pt100)

STS-150-A	0 to 350°C / 32 to 662°F

Accuracy

Hysteresis (@ 0°C/32°F)	0.01°C / 0.018°F
Long Term Stability (@ 0°C/32°F)	0.014°C / 0.025°F
Repeatability	0.004°C / 0.007°F

Note: Stability when exposed to max. Temperature for 100 hours

Sensing Element Pt 100

Response Time

STS-150-A t_{05} (50%)	7 sec.
STS-150-A t_{09} (90%)	18 sec.

Note: Liquid in motion, 0,4 m/sec.

Dimensions

Diameter	4 mm / 0.157 in
Length	165 mm / 6.50 in
Max. height over calibrator top	20 mm / 0.79 in

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Specifications CTC-425

Temperature Range:	33 to 425°C / 91 to 797°F	
Accuracy:		
*PTC-425 with internal ref. sensor @ 33 to 350°C	±0.20°C / ±0.36°F	
*PTC-425 with internal ref. sensor @ 350 to 425°C	±0.25°C / ±0.45°F	
°PTC-425 with external STS150 ref. sensor	±0.13 °C / ±0.23°F	

*Specification when using the internal reference. (Load 4 mm OD reference probe in the center of the insert).
°12-month period. Relative to reference standard. Specifications use of the external STS-150 sensor.

Stability: ±0.02 °C / ±0.036°F
Measured after the stability indicator has been on for 10 minutes.
Measuring time is 30 minutes.

Radial Homogeneity (difference between holes) 0.02°C / ±0.036F°

Settings

Resolution	1 or 0.1 od 0.01
Units	°C or °F or K

Heating Time:	33 to 425°C / 91 to 797°C	10 minutes
Cooling Time:	425 to 100°C / 797 to 212°F	25 minutes
Cooling Time:	100 to 50°C / 212 to 122°F	16 minutes

Time to Stability (typical) 10 minutes

Mains Power:

Voltage:	115 V (90-127) / 230 V (180-254)
Max. Power Consumption	1150 W
Frequency, US deliveries:	60 Hz ±3
Frequency, non-US deliveries:	50 Hz ±3, 60 Hz ±3

Instrument Dimensions (L x W x H):	362 x 171 x 363 mm / 14.3x6.7x14.3 in
Instrument Weight:	9.2 kg / 20.3 lb
Immersion Depth:	150 mm / 5.91 in
Well Diameter:	26 mm / 1.02 in
Insert Dimension (diameter x length):	25.8 x 150 mm / 1.02 x 5.91 in

Electrical:

Switch Test Input (dry contact) B-Model only	
Test Voltage:	max. 5 VDC
Test Current:	max. 2.5 mA
Digital Interface	
USB 2.0	

Environmental:

Operating Temperature:	0 to 40°C / 32 to 104°F
Storage Temperature:	-20 to 50°C / -4 to 122°F
Humidity:	0 to 90% Rh, non-condensing
Protection Class:	IP-10

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External Reference Sensor (Pt100)

STS-150-A	0 to 660°C / 32 to 1220°F

Accuracy

Hysteresis (@ 0°C/32°F)	0.01°C / 0.018°F
Long Term Stability (@ 0°C/32°F)	0.014°C / 0.025°F
Repeatability	0.004°C / 0.007°F

Note: Stability when exposed to max. Temperature for 100 hours

Sensing Element Pt 100

Response Time

STS-150-A t_{05} (50%)	7 sec.
STS-150-A t_{09} (90%)	18 sec.

Note: Liquid in motion, 0,4 m/sec.

Dimensions

Diameter	4 mm / 0.157 in
Length	165 mm / 6.50 in
Max. height over calibrator top	20 mm / 0.79 in

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Specifications CTC-660

Temperature Range:	33 to 660°C / 91 to 1220°F	

Accuracy:

*PTC-660 with int. ref. sensor @ 33 to 420°C	±0.30°C / ±0.54°F
*PTC-660 with int. ref. sensor @ 420 to 660°C	±0.50 °C / ±0.54°F
°PTC-660 with ext. STS-150 ref. sensor	±0.15°C / 0.27°F

*Specification when using the internal reference. (Load 4 mm OD reference probe in the center of the insert).
°12-month period. Relative to reference standard. Specifications use of the external STS-150 sensor.

Stability:	±0.04 °C / ±0.072°F	

Measured after the stability indicator has been on for 10 minutes.
Measuring time is 30 minutes.

Radial Homogeneity (difference between holes)	0.1°C / ±0.18F°	

Settings

Resolution	1 or 0.1 or 0.01
Units	°C or °F or K

Heating Time:	33 to 660°C / 91 to 1220°C	20 minutes

All specifications are given with an ambient temperature 23°C/73.4°F
±3°C/5.9°F. Specified at 115V/230V.

Cooling Time:	660 to 100°C / 1220 to 212°F	36 minutes
Cooling Time:	100 to 50°C / 212 to 122°F	15 minutes

Time to Stability (typical)	10 minutes

Mains Power:

Voltage:	115 V (90-127) / 230 V (180-254)
Max. Power Consumption	1150 VA
Frequency, US deliveries:	60 Hz ±3
Frequency, non-US deliveries:	50 Hz ±3, 60 Hz ±3

Instrument Dimensions (L x W x H):	362 x 171 x 363 mm / 14.3x6.7x14.3 in
Instrument Weight:	8.9 kg / 19.6 lb
Immersion Depth:	150 mm / 5.9 in
Well Diameter:	25 mm / 0.98 in
Insert Dimension (diameter x length):	24.8 x 160 mm / 0.98 x 6.30 in

Electrical:

Switch Test Input (dry contact) B-Model only	
Test Voltage:	max. 5 VDC
Test Current:	max. 2.5 mA
Digital Interface	
USB 2.0	

Environmental:

Operating Temperature:	0 to 40°C / 32 to 104°F
Storage Temperature:	-20 to 50°C / -4 to 122°F
Humidity:	0 to 90% Rh, non-condensing
Protection Class:	IP-10

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External Reference Sensor (Pt100)

STS-150-A	0 to 660°C / 32 to 1220°F

Accuracy

Hysteresis (@ 0°C/32°F)	0.01°C / 0.018°F
Long Term Stability (@ 0°C/32°F)	0.014°C / 0.025°F
Repeatability	0.004°C / 0.007°F

Note: Stability when exposed to max. Temperature for 100 hours

Sensing Element	Pt 100

Response Time

STS-150-A t_{05} (50%)	8 sec.
STS-150-A t_{09} (90%)	26 sec.

Dimensions

Diameter	4 mm / 0.157 in
Length	203 mm / 7.99 in
Max. height over calibrator top	25 mm / 0.94 in

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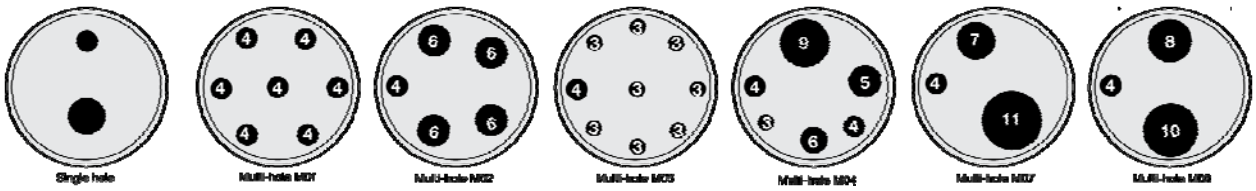
Inserts

Inserts for PTC-155 and PTC-350 are made of aluminium. Inserts for PTC-425 and PTC-660 are made of brass. All specifications on hole sizes refer to the outer diameter of the sensor-under-test. The correct clearance size is applied in all predrilled inserts.

Predrilled Insert metric (mm)

Probe Diameter	PTC-155	PTC-350	PTC-425	PTC-660
3 mm	•	•	•	•
4 mm	•	•	•	•
5 mm	•	•	•	•
6 mm	•	•	•	•
7 mm	•	•	•	•
8 mm	•	•	•	•
9 mm	•	•	•	•
10 mm	•	•	•	•
11 mm	•	•	•	•
12 mm	•	•	•	•
13 mm	•	•	•	•
14 mm	•	•	•	•
15 mm	•	•	•	•
Multi-Hole 1	•	•	•	•
Multi-Hole 2	•	•	•	•
Multi-Hole 3	•	•	•	•
Multi-Hole 4	•	•	•	•
Multi-Hole 5	•	•	•	•
Multi-Hole 6	•	•	•	•
Multi-Hole 7	•	•	•	•
Multi-Hole 8	•	•	•	•



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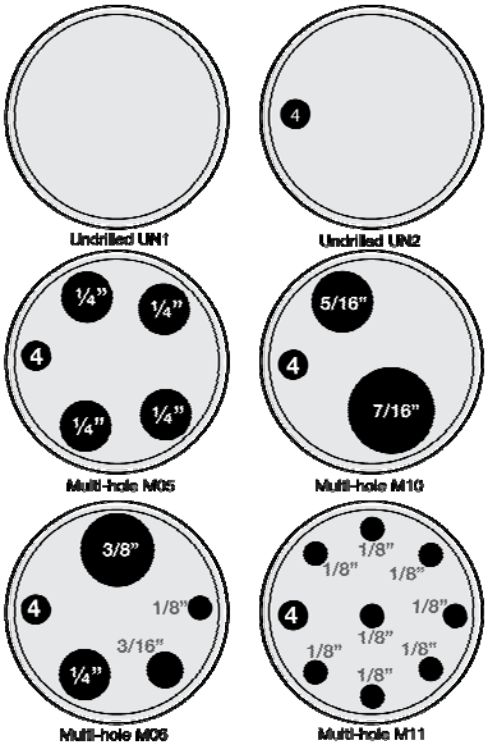
Undrilled Inserts

Inserts	PTC-155	PTC-350	PTC-425	PTC-660
5-pack	•	•	•	•
with ref. hole	•	•	•	•
Isol. Plug	•	**N/A**	**N/A**	**N/A**



Use of other inserts may reduce performance ot the calibrator. To get the best results out of the calibrator, the insert dimensions, tolerance and material is critical. We highly advice using our inserts, as the guarantee trouble free operating.

Do you need customized inserts?
Please contact us for more information.

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