

# Hot/Cold Blackbody Calibration Source



## BLACK POINT™ BB701



Standard

- ✓ Calibrates from -18 to 149°C (0 to 300°F)
- ✓ Portable, Rugged Design
- ✓ Calibrates Infrared Pyrometers Quickly and Accurately
- ✓ Built-In Digital PID Autotune Temperature Controller with Temperature Readout
- ✓ NIST-Traceable Calibration Certificate Included with 3 Data Points
- ✓ RS232 Standard
- ✓ Special Nitrogen Purge Collar Limits Target Plate Condensation and Frosting at Low Temperatures
- ✓ Built-In RTD Reference Probe Output

The BB701 blackbody calibrator is a high performance, rugged, portable calibrator for infrared pyrometers. Hot/cold model has a range of -18 to 149°C (0 to 300°F). It's ability to provide a stable, repeatable cold calibration point allows the user to calibrate or test most infrared pyrometers quickly and accurately without having to prepare an ice bath. Both models come with an RS232 computer interface which allows computer control of the setpoints for automatic test applications.

**Caution:** To avoid fire hazard or damage to your calibrator, always allow your calibrator to cool down to ambient temperature before returning to storage.



### Specifications

#### Target Plate Temperature Range:

-18 to 149°C (0 to 300°F)

**Accuracy:** ±0.8°C +1 digit (±1.4°F) (worst case)

**Display Accuracy:** ±0.3°C (±0.6°F) [over entire scale]

**RTD Accuracy:** ±0.375°C (±0.75°F) [worst case]

**Stability:** ± 0.6°C (± 1.2°F) or less

#### Ambient Environmental Conditions:

**Temperature:** 4.4 to 29.4°C (40 to 85°F) [target plate reaches 0°F];

4.4 to 43°C (40 to 110°F) [target plate reaches 11.8°F]

**Humidity:** 0 to 90% RH, non-condensing

**Target Plate Size:** 63.5 mm (2.5")

**Cavity Emissivity:** 0.95

**Internal Control Sensor:** Platinum

RTD, 100 Ω, 0.00385

**Calibration Reference Sensor:**

Platinum RTD, 100 Ω, 0.00385

**Warm-up Time:** 5 min, from ambient to 149°C (300°F)

**Cool-Down Time:** 5 min, from ambient to -18°C (0°F)

#### Power Requirements by Model:

**BB701:** 115 Vac~, 50/60 Hz, 175 W

**BB701-230VAC:** 230 Vac~, 50/60 Hz, 175 W

#### Dimensions:

19.5 H x 35.5 W x 36.5 mm L (7.75 x 14.128 x 15.5")

**Weight:** 12.7 kg (28 lb)

**Installation Category:** II

We make running changes when technical advances allow. Check at time of ordering for additional features.

### To Order

Model No.	Description
BB701	Hot/cold blackbody cal source, 115V, range: -18 to 149°C (0 to 300°F)
BB701-230VAC	Hot/cold blackbody cal source, 230V, range: -18 to 149°C (0 to 300°F)

Comes complete with operator's manual and NIST calibration certificate.

**Ordering Example:** BB701, hot/cold blackbody calibration source.