

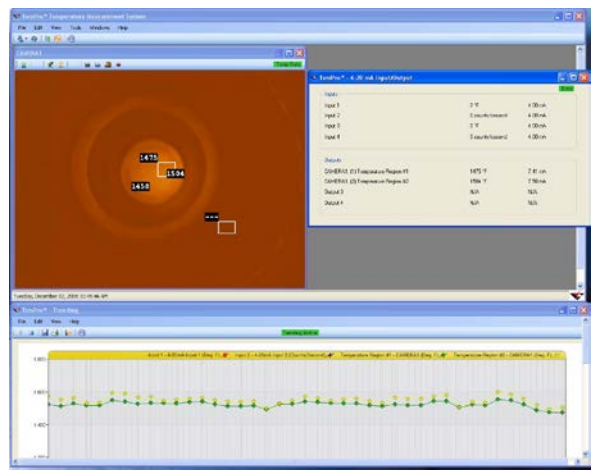
# Diamond Power® TemPro® II Temperature Measurement System

Babcock & Wilcox (B&W) offers a comprehensive temperature measurement system for recovery boiler bed or superheater tube monitoring. Designed to meet specific boiler operator needs, the Diamond Power® TemPro® II system provides accurate real-time temperature readings for boiler efficiency readings and emissions control. Temperature readings are logged for trend analyses and to compare various operational features and conditions within the boiler.

The TemPro II system is robust, measuring temperatures ranging from 1292 to 2800F (700 to 1538C) and a wider field of view than any other system available. Up to 15 regions can be monitored by the system, and a built-in LCD screen on the camera housing offers the option for local or remote viewing. Temperature information is retrieved through the PC.

## Features

- Measures boiler temperatures ranging from 1292 to 2800F (700 to 1538C)
- Monitors up to 15 regions
- +/- 3% degree of accuracy
- 105° diagonal field-of-view
- Remote or local monitoring with LCD screen on camera housing
- NEMA 12 housing to withstand harsh boiler environments
- Easily integrates into existing DCS
- CSV output to log readings and perform trend analyses
- Capture screen shots with one mouse click or automatically at user-defined intervals
- Real-time graphical trending
- Bed formation tracking
- Sequential switching of cameras
- Optional 4 to 20 mA I/O



State-of-the-art technology for monitoring recovery bed or utility profiles and firing conditions

## Benefits

**Monitor firing conditions** in up to 15 regions of your boiler with accurate real-time temperature readings and local or remote viewing.

**Export data** in the form of CSV output to Excel or bitmap screen capture shots. Additionally, the system can easily integrate into your boiler's DCS control system. Use the data to test boiler efficiency and monitor emissions control.

**Reliable and accurate** boiler imaging and temperature measurement technology, withstanding the harshest boiler environments while offering the industry's largest field of view.

## Availability

The TemPro II system is available as an add-on to current SmeltCam® AT III or UtiliCam® AT III infrared camera systems or as a complete installation on nearly all types of recovery and utility boilers. Contact your local Babcock & Wilcox representative, or call us at (800) 700-2791.

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The TemPro® II temperature measurement system includes SmeltCam® AT III and UtiliCam® AT III cameras, mounted and connected through control assemblies, feeding live video and data to the TemPro II software, which runs on a PC.



### TemPro II Temperature Measurement System Specifications

Air Requirements	Camera Assembly	60 psi (414 kPa) @ 10 scfm (0.005 Nm <sup>3</sup> /s) Instrument or filtered plant air
	Optical Probe	15 to 20 psi (103.4 to 137.8 kPa) @ 40 to 45 scfm (0.018 to 0.021 Nm <sup>3</sup> /s) Based on instrument or filtered plant air at 90 to 100F (32.2 to 37.7C) ambient
Air Connections	Filtered Air System	0.5 in. (1.27 cm) NPT pipe
Camera Assembly	Lengths Available	24 in. (61 cm), 36 in. (91.4 cm), 48 in. (121.9 cm) or 60 in. (152.4 cm)
	Optical Probe Outer Diameter	1.5 in. (3.8 cm) material 316L SST
	Weight (Including Lenstube)	24 in. (61 cm) unit: 44 lb (19 kg) 36 in. (91.44 cm) unit: 46.5 lb (21 kg) 48 in. (121.9 cm) unit: 49 lb (22 kg) 60 in. (152.4 cm) unit: 51.5 lb (23 kg)
Retract Control Unit	Material	NEMA 4X fiberglass. Weight: 12 lb (5.4 kg) (Optional NEMA-4 painted steel)
Operating Temperatures	Camera Assembly Ambient Temp.	+150F (+66C)
	Maximum Internal Furnace Temp.	+3000F (+1648C)
Electric Retract Assembly	Activated by low-pressure switch on air supply	
	Weight	Approx. 20 lb (9.0 kg)
Power Requirements	Camera Housing	95 to 240 Vac, 47 to 63 Hz, 1.0A max.
	Electric Retract	102-130Vac, 50/60 Hz.
Data Requirements	Cat5E or 6 Ethernet 328 ft (100 m) max standard. Optional dual LC fiber optic multimode, 50/125 micron, 1640 ft (500 m) maximum	

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For more information or to contact us, visit our website at [www.babcock.com](http://www.babcock.com).