

# Diamond Power® SmeltCam® AT III

## Advanced Technology Infrared Camera for Recovery Boilers

The Diamond Power® SmeltCam® AT III solid-state infrared camera system from Babcock & Wilcox (B&W) delivers powerful images of the smelt bed, superheater area or the liquor guns. Our state-of-the-art camera system provides a wide field-of-view, allowing greater bed coverage with fewer cameras, which can lead to improved monitoring and reduced capital costs.

### Benefits

#### Improved bed monitoring

In addition to the large coverage area, the SmeltCam AT III infrared camera system uses an optimum wavelength to penetrate fume for better, more accurate monitoring of the recovery bed. Using the superior images delivered by the SmeltCam AT III system, you can identify potential problems, control the bed and optimize lower furnace operation quickly and easily.

#### No vidicon tube replacements; no calibration

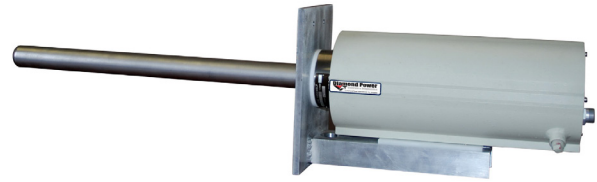
The solid-state components of this system eliminate vidicon tubes that require frequent replacement. Calibration isn't necessary either, so the images generated by the SmeltCam AT III won't drift.

#### Reduced operating and maintenance costs over conventional vidicon / lens tube camera systems

The SmeltCam AT III infrared camera system reduces maintenance hours as compared to conventional vidicon/lens tube camera systems. The redesigned optical probe has encased optics that are keyed for correct position internal to probes and has no loose components which could fall out and break during cleaning. There are minimal parts to handle, and each optical probe is environmentally sealed for maximum protection and shock resistance.

### System Contents

The SmeltCam AT III infrared camera system includes a solid-state infrared camera, a monitor, an air system for cooling the camera assembly and optical probe, an optional pneumatic or electric retract and control unit.



*B&W's Diamond Power SmeltCam AT III camera system is completely solid state.*

*The system can include an optional pneumatic or electric retraction device to protect the camera against high temperatures in the event of low cooling air pressure.*

### Features

- Retract system option protects the air-cooled camera assembly from air system failure
- 105° diagonal field-of-view
- 1.5 in. (3.81 cm) outer optical probe diameter
- Easily retrofits to existing vidicon IR camera systems
- Color options to further improve monitoring capabilities
- TemPro® II temperature measurement option allows the operator to see accurate temperatures over the entire imaging area based on a maximum of 15 user selectable temperature regions
- Dual-walled constructed housing
- Uses water or air cooling
- Networking capabilities available

*continued* ▶

## Specifications

|                           |   |   |
|---------------------------|---|---|
| Air requirements          | Camera housing assembly                         | 30 to 60 psi (207 to 414 kPa) @ 10 scfm (0.004 m <sup>3</sup> /s); instrument or filtered plant air   |
|                           | Optical probe                                   | 15 to 20 psi (103 to 138 kPa) @ 40 to 45 scfm (0.011 to 0.021 m <sup>3</sup> /s); based on instrument or filtered plant air at 90 to 100F (32.2 to 37.8C) ambient |
| Air connections           | Filtered air system                             | 1 in. (2.54 cm) NPT pipe  |
| Camera assembly           | Available lengths                               | 24 in. (60.9 cm), 36 in. (91.4 cm), or 48 in. (121.9 cm)  |
|                           | Optical probe outer diameter                    | 1.5 in. (3.81 cm) material 316L SS  |
|                           | Weight (including lens tube)                    | 24 in. (60.96 cm) unit: 19 lb (8.6 kg)<br>36 in. (91.44 cm) unit: 21.5 lb (9.7 kg)<br>48 in. (121.9 cm) unit: 24 lb (10.8 kg)                                     |
| Retract control unit      | Material  | NEMA-rated enclosure. Weight: 12 lb (5.4 kg)  |
| Operating temperatures    | Camera assembly ambient                         | 200F (93.3C)  |
|                           | Maximum internal furnace temperature            | 3000F (1648C)   |
| Electric retract assembly | Activated by low-pressure switch on air supply. |   |
|                           | Weight  | Approx. 85 lb (38.6 kg)   |
| Power requirements        | Camera housing                                  | 95 to 240 Vac, 47 to 63 Hz, 1.6A max.   |
|                           | Electric retract                                | 102 to 130 Vac, 50/60 Hz.   |

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