

# Diamond Power® UtiliCam® AT SW

## Near-Infrared Camera for Utility Boilers

The Diamond Power® UtiliCam® AT SW solid-state near-infrared camera system from Babcock & Wilcox (B&W) delivers powerful images of the boiler superheaters and convection pass to better detect and prevent potentially costly damage. Our state-of-the-art camera system provides a wide field-of-view, allowing greater boiler coverage with fewer cameras for improved monitoring and reduced capital costs.

### Benefits

#### Improved boiler monitoring

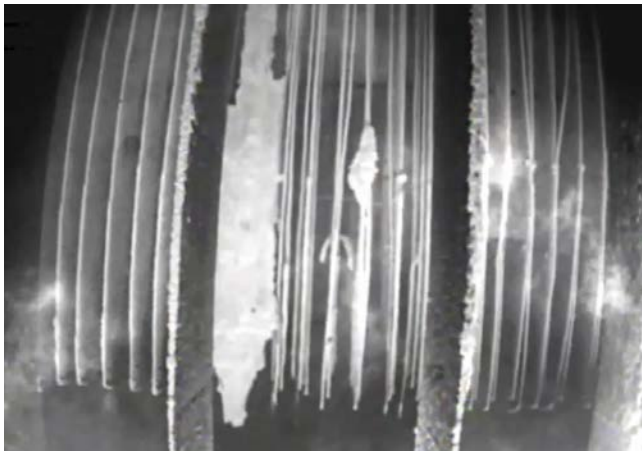
The UtiliCam AT SW near-infrared camera system provides the ability to see in both low- and high-temperature areas of the boiler. Using the superior high-contrast images delivered by the UtiliCam AT SW system, you can identify potential problems, control the boiler and optimize furnace operation quickly and easily.

#### Economical

The UtiliCam AT SW uses lower cost visible optics to provide an economical, yet still beneficial alternative to the higher cost cameras which use infrared optics.

#### Simple upgrade

The UtiliCam AT SW easily retrofits to replace the older style UtiliCam LT CCD NIR camera system.



View of the superheater from the Diamond Power UtiliCam AT SW camera system.



B&W's Diamond Power UtiliCam AT SW 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.

### System Contents

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

### Features

- Retract system option protects the air-cooled camera assembly from air system failure
- 90° diagonal field-of-view
- 1.5 in. (3.81 cm) outer optical probe diameter
- View in-furnace temperatures as low as 350F (177C)
- Color options to further improve monitoring capabilities
- Dual-walled constructed housing
- Uses water or air cooling
- Networking capabilities available
- Produces 640 x 480 line resolution

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## Technical Specifications

|                           |  |  |
|---------------------------|--|--|
| Air requirements          | Camera housing assembly                        | 30 to 80 psi (207 to 551 kPa) @ 20 scfm (0.009 m <sup>3</sup> /s) max.; instrument or filtered plant air   |
|                           | Optical probe                                  | 5 to 7 psi (34.5 to 48.3 kPa) @ 22 scfm (0.010 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                            | 0.5 in. (1.27 cm) NPT pipe   |
| Camera assembly           | Available lengths                              | 24 in. (60.9 cm), 36 in. (91.4 cm), 48 in. (121.9 cm)  |
|                           | Optical probe outer diameter                   | 1.5 in. (3.81 cm) material 316L SST  |
|                           | Weight (including lens tube)                   | 24 in. (60.96 cm) unit: 23.5 lb (10.6 kg)<br>36 in. (91.44 cm) unit: 26 lb (11.8 kg)<br>48 in. (121.9 cm) unit: 28.5 lb (12.9 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 130 Vac, 47 to 63 Hz, 0.5A max.<br>240 Vac, 47 to 63 Hz with stepdown transformer  |
|                           | Electric retract                               | 102 to 130 Vac, 50/60 Hz   |

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