

SmeltCam™

infrared camera system
for recovery boilers



Diamond Electronics' SmeltCam™ is virtually trouble-free because no lens tube maintenance or calibration is ever needed.

The SmeltCam™ from Diamond Electronics is the first no-lens-tube, solid-state infrared camera system that delivers vastly improved images of the smelt bed, the superheater area or the liquor guns.

With our state-of-the-art camera system, you'll get a clearer view. That means more accurate monitoring of the recovery bed and of slagging and pluggage conditions.

Benefits

Improved bed monitoring

The Diamond Electronics SmeltCam™ infrared camera system uses an optimum wavelength that really penetrates fuming for better, more accurate monitoring of the recovery bed. Using the superior images delivered by the SmeltCam™ 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 altogether. No tubes means no

replacements. Period. Calibration isn't necessary, either, so the images generated by the SmeltCam™ won't drift.

Reduced operating and maintenance costs

As if eliminating the need for replacement of expensive vidicon tubes wasn't enough, the SmeltCam™ infrared camera system saves man-hours, too. Since there's no lens tube, there's no need for disassembly, cleaning and reassembly — a job that can take hours to complete. And there's no technician time spent making adjustments, either.

Features

- Pneumatic retract system protects the air-cooled camera assembly from electrical system failure, air system failure and high temperatures.
- Soft-start valve for safer operation when applying air to the retract unit.
- Camera control box alarm/character generator board to monitor the camera temperature and air

supply pressure and to display needed alarm messages on the video monitor.

- Programmable, 20-character camera title may be added to the video signal for more informed monitoring.
- Color and temperature vision options are available to further improve monitoring capabilities.

Availability

The SmeltCam™ infrared camera system consists of a solid-state infrared camera, an air system for cooling the camera assembly and camera control box, and a pneumatic retract device. For more information on the SmeltCam™ infrared camera system or for engineered solutions to your boiler-cleaning problems, contact your Diamond Power International, Inc. representative or call us at (800) 700-2791.

The SmeltCam™ system comes standard with a rod-less, pneumatic retraction device to protect the camera against high temperature, low cooling air pressure and electrical power failure.



Specifications

Air requirements

Camera assembly: 30 to 80 psi (207 to 552 kPa) @ 32-42 scfm (0.015 to 0.020 M³/S). Instrument or filtered plant air.

Retract assembly: 60 psi to 80 psi (414 kPa to 552 kPa).

Air connections

Camera air inlet: 1" (2.54 cm) NPT pipe.

Wall sleeve: 1/4" (0.63 cm) NPT pipe.

Filtered air system: 1" (2.54 cm) NPT pipe.

Camera assembly

Available in lengths of 36" (91.4 cm), 48" (121.9 cm) or 60" (152.4 cm).

Wall sleeve outer diameter: 2.87" (7.3 cm) material 316L SST.

Weight: 36" Unit: 28 lb (12.7 kg).

48" Unit: 35 lb (15.8 kg).

60" Unit: 43 lb (19.5 kg).

Control unit

Material: NEMA 4 metal. Weight: 28 lb (12.7 kg).

Operating temperatures

Camera assembly ambient: +200°F (+93.3°C).

Camera head: -40°F to 131°F (-40°C to + 55°C).

Maximum internal furnace temperature: +2700°F (+1482°C).

Control unit: +14°F to 115°F (-10°C to +46.1°C) without cooling and +150°F (+65.5°C) with cooling.

Pneumatic retract assembly

Activated by low-pressure switch on air supply, by thermal sensor near the camera, by AC power failure or by operator via the control unit.

Length: 54.3" (137.9 cm), 66.3" (168.4 cm), 78.3" (198.8 cm). Corresponds to length of camera.

Weight: 36" Unit: 76.7 lb (34.8 kg).

48" Unit: 83.8 lb (38.0 kg).

60" Unit: 90.7 lb (41.1 kg).

Power requirements

Control unit: 95 to 240 Vac, 47 to 63 Hz, 1.6A max.

Camera power source: 5 Vdc from control box.

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Diamond Power International, Inc. is the leading name in the design, manufacture and service of ash-handling and boiler-cleaning systems, knowledge-based control systems, and boiler diagnostic, sensor and imaging technology. Diamond Power, headquartered in Lancaster, Ohio, U.S., has more than 80 field sales, service support, distribution, and manufacturing locations worldwide. For more information, visit www.diamondpower.com.

For over a century: *Trusted for experience. Preferred for performance.*

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