



**Lenox Instrument Company, Inc.**  
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## **Remote Viewing Fired Heater Camera Systems** for color video monitoring of combustion in fired heaters / process heaters



Monitor View of Fired Heater Burners



Optional Hazardous Area Housing Shown

Increase fired heater / process heater reliability and performance by providing effective and safe visual inspection for diagnosing and solving problems with burners.

- Improve safety by eliminating manual site port inspections with 24/7 online monitoring
- Clearly distinguish flame color, helping to manage NOx and reduce fuel consumption by as much as 2%

By seeing directly into the inside of your fired heater / process heater you can optimize fuel / air ratios by viewing burner performance and identify potential problems such as:

- Burner light-off failure, flame out and lift-off
- Flame Impingement on tubes, tube displacement and leaks
- Irregular flame patterns, flame instability and smoky flames

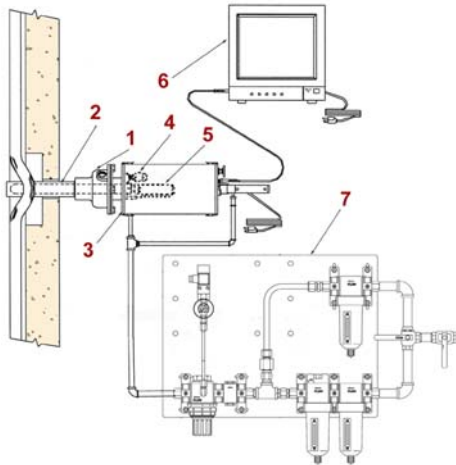
Specially designed for high-temperature environments - and backed by over ninety years of experience - **Lenox** Fired Heater Camera Systems view the inside of your heater and displays what it sees in real time on a color monitor 24 hours a day 365 days a year. A proven record of reliable performance that is unmatched by any other system available today and backed by a **two-year warranty!**

The **Lenox** air-cooled, Fired Heater Camera System for applications up to 3000°F (1649°C) requires a wall penetration of only 2-3/8 in. (61mm) and provides the highest image clarity in the industry. The Light Volume Control feature, a **Lenox** exclusive, consists of a remote-controlled motorized iris located in the furnace lens. With the Light Volume Control, an operator can easily adjust the amount of light transmitted to the camera, eliminating the flaring / blooming common with other systems and ensuring a high-quality image. The system features quartz optics, another **Lenox** exclusive, that withstands temperatures up to 1200°F (649°C) higher than the glass lens used in other systems. The compressed air-cooling system provides reliable performance while using considerably less air than competing systems. The Wall Box mounting assembly provides a protective housing for the system and serves as the primary coolant shroud. (For portable systems see Portable Diagnostic System brochure).

Optional system accessories include an Automatic Retract System that automatically pulls the Fired Heater Camera back should a loss of cooling occur, preventing possible over - temperature damage to the furnace lens assembly; a high efficiency compressed Air Filter System for removing oil, water and particulates providing clean air to the camera system; and color, LCD video monitors and a Digital Video Recorder.



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**Lenox Fired Heater Camera System Components:**

- 1 Wall Box
- 2 Furnace Lens
- 3 High-Temperature, Air Cooled Camera Housing or Hazardous Area Housing
- 4 Light Volume Control
- 5 Compact, High-Resolution CCD Camera
- 6 Video Monitor
- 7 High Efficiency Compressed Air Filter System with mounting plate

**Fired Heater Camera Systems Include:**

\*Specifications subject to change without notice.

- Air-cooled Furnace Lens Assembly (specify 24" or 36" – direct or right angle viewing)
- Air-cooled CCTV Housing Assembly or *optional* Hazardous Area Housing
- High-resolution CCD Color Camera Assembly
- Light Volume Control Motor Assembly – consists of a remote-controlled motorized iris located in furnace lens assembly – an exclusive to Lenox

Stock Number	Furnace Lens Length		Viewing Direction	FOV
	mm	(inches)		
6515FC-102	610	24"	Direct	90°
6515FC-402	610	24"	Right Angle	55°
6515FC-103	914	36"	Direct	90°
6515FC-403	914	36"	Right Angle	55°

Lengths up to 96 inches (243 cm) available – consult factory

**Wall Box Assembly Mountings**

Required for mounting the Fired Heater Camera – provides a protective housing and is the primary coolant shroud

Stock Number	Furnace Lens Length		Viewing Direction
	mm	(inches)	
6515A24-900	610	24"	Direct
6515A24-910	610	24"	Right Angle
6515A36-900	914	36"	Direct
6515A36-910	914	36"	Right Angle

**Fired Heater Camera System Options & Accessories**

Stock Number	Description
6515A-102	Air Filter System with mounting plate (removes oil, water and particulates)
6515A-208/12	Automatic 12" Retract System
6515A-208/24	Automatic 24" Retract System
6515A-208/36	Automatic 36" Retract System
516-0802	8" Color LCD Video Monitor
516-1502	15" Color LCD Video Monitor
516-2007	19" Color LCD Video Monitor
515-0187	Digital Video Recorder
515-HDVR	Digital Hard Drive Video Recorder
6515S-501	High-resolution CCD Color Camera & Hardware