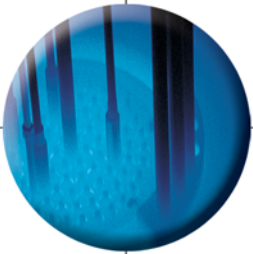


QUADTEK M554 Spyrometer³



SPYROMETER³

Patented High Temperature Imaging Pyrometer Camera



Process / Benefit

Rotary Kilns

Monitor cement and lime kiln product and temperatures. See potential kiln upsets early. Interface temperatures to your DCS

Glass

View for flame impingement and product flow. Accurately measure refractory temperatures.

Fossil Utility Boilers

Observe flame shape and temperature of each burner. Assign a temperature cursor to each flame to aid in controlling NOx levels.

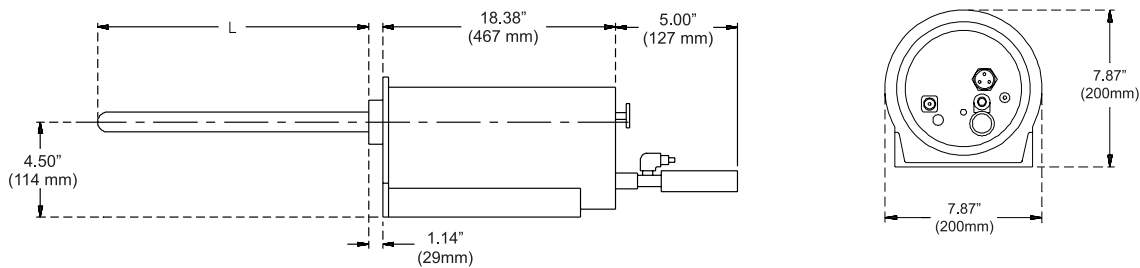
Steel Reheat Furnaces

See areas of non-uniform heating and adjust product speed or combustion accordingly. Position temperature cursors to accommodate size and shape of the load.

The Quadtek **Spyrometer³**, with its patented combination of a color video camera and a scanning pyrometer, gives the operator the ability to see process conditions while measuring the temperature of virtually any area in the field of view. The M554 imaging pyrometer takes the video image and the temperature information, multiplexes it and sends it, via coaxial cable, to the image processor in the control room and displays it on a VGA monitor. On-screen temperature measurement data is also accessible through 4-20mA outputs which can easily be interfaced to your control system.

QUADTEK M554 Spyrometer³

Specifications and Performance



Pyrometer Sensor

| | |
|-------------------------------|--|
| Temperature Ranges | /TR2: 1558°-3301°F (848°-1816°C) /TR1: 1225°-2291°F (663°-1255°C) |
| Temperature Accuracy | ±1.0% Full Scale |
| Measurement Technique | Dual wavelength ratio pyrometry |
| Spectral Regions | Narrow bands centered at 0.8 and 1.6 microns |
| Spot Size | Approximately 1/24 of horizontal image width |
| Spatial Scan Resolution | 47 horizontal x 35 vertical width of the image |
| Scan Rate | Scan speed varies with size and number of TMZ's or via operator adjustment |

Lens

| | |
|----------------------------|---|
| Construction | Air or water-cooled 304 stainless steel outer shroud; sapphire window for max. environmental protection |
| Type | Straight view lens: /L30M |
| Length (L) | 703mm (27.7") |
| Type | 45° offset lens: /OAL30W |
| Length (L) | 694mm (27.3") <i>For details on our full range of Spyrometer lenses, please contact your sales representative.</i> |
| Field of View | Wide: 75° H x 58° V Medium: 50° H x 38° V Narrow: 35° H x 26° V |
| Diameter | /L: 1.5" (38mm); /OAL: 2.0" (51mm) |
| Cooling Requirements | Instrument quality air*, 25-40 SCFM (12-19 dm ³ /sec) @ 5-15 psig (34-103 kPa), required for straight lens |
| Thermocouple | /TJ: Type J thermocouple option; /TK: Type K thermocouple option |

*To ISO 8573-1, Class 1•7•2

Camera

| | |
|--------------------------|--|
| Power | 115-230 VAC, 50/60 Hz |
| Camera Detector | Solid state color image sensor |
| System Resolution | 300 lines minimum throughout the image |
| Video | 1.0V p-p, 75ohm, CCTV signal /VTN: NTSC or /VTP: PAL video timing selected at time of order |
| Control | Iris adjustment on rear of camera; remote iris adjustment from the processor |
| Application Filter | Filters are provided to match your process and maximize performance. Contact your Sales Representative |

Enclosure

| | |
|---------------------------|--|
| Construction | /CEI: Corrosion-resistant, insulated, air-cooled, NEMA 4; /CEW: Corrosion-resistant, water-cooled, NEMA 4 |
| Cooling Type | Vortex cabinet cooler, 25 SCFM @ 100 psi (13 dm ³ /sec @ 690 kPa); instrument-quality air required or water cooled option available |
| Ambient Environment | Max. 140°F (60°C) with negligible radiant heat load. Water cooled option available to handle high radiant heat environment |

Mechanical

| | |
|-------------------------------|---|
| Video Output Jack | Female PL-259 "UHF" type |
| Power Input Jack | Removable waterproof miniplug (JOY type TP, female 3-conductor; mating power cord provided) |
| Enclosure Cooling Input | 1/4" brass quick-disconnect nipple; mating coupler (Snaptite BVHC4-4F) provided |
| Lens Cooling Input | 1/2" brass quick-disconnect nipple; mating coupler (Snaptite BVHC8-8F) provided |
| Weight | 30 pounds (14kg) for standard air-cooled configuration (lens and camera) |

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