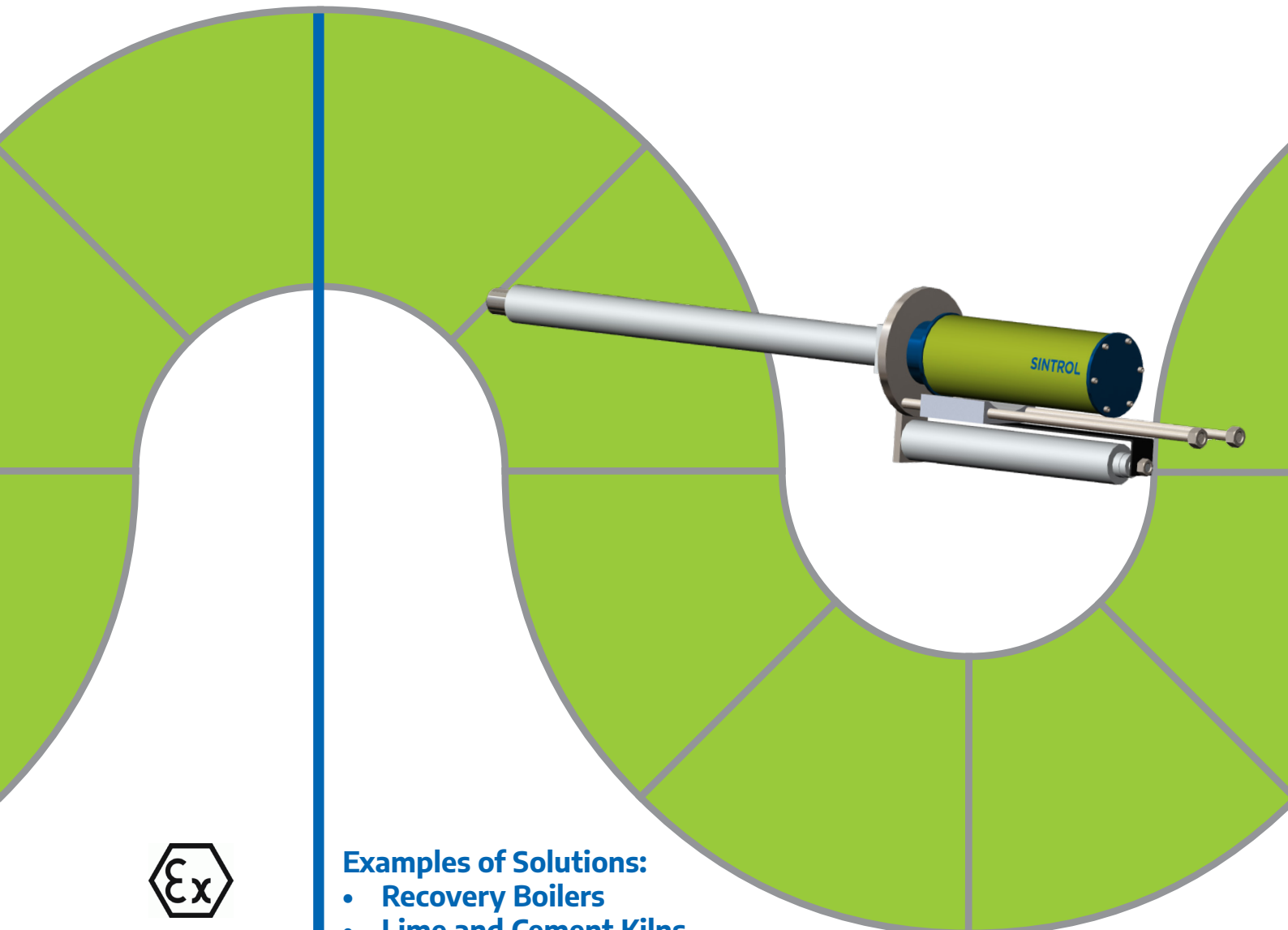


Sintrol Vulcan

High Temperature Imaging Systems



Examples of Solutions:

- Recovery Boilers
- Lime and Cement Kilns
- BFB boilers
- Grate incinerators
- Smelters

+ Temperature Analysis Software



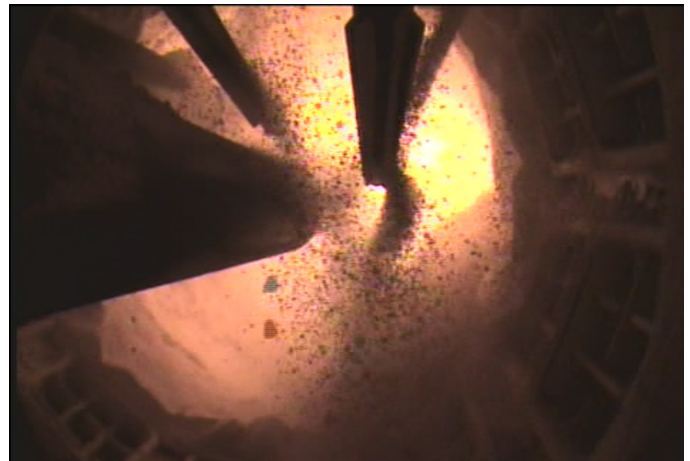
Sintrol Vulcan

The Most Advanced Imaging Systems for High Temperature Processes

- Reduced emissions by improving performance
- Temperature Analysis Software for real-time temperature measurement and control
- Accommodates the reduction of build-up resulting in fewer shutdowns and lower maintenance costs
- Helps maximize efficiency and capacity

System Features

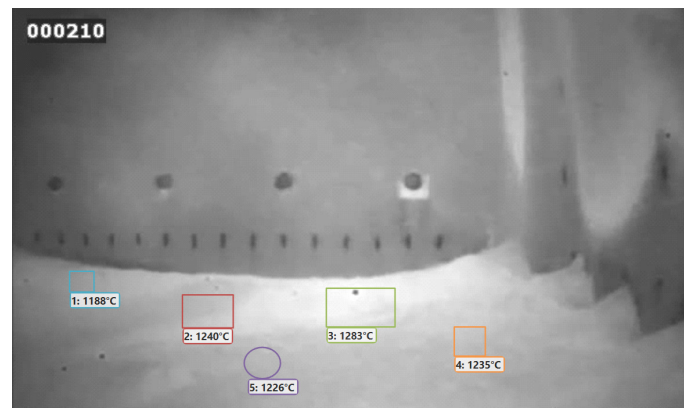
- Quick-change system design for easy installation and maintenance.
- Proprietary Bright Image Optical System for sharp video.
- Wavelength optimized electro/optical system.
- Indestructible STEELON™ housings.
- Advanced lens design for low air consumption.
- Wide field of view.
- Easy assembly/disassembly.



Lime Kiln (Vulcan 12C-2C)

System Options

- Analysis software for temperature measurement, image processing and data management.
- Automatic retract assemblies.
- Automatic Deslagger.
- Portable system configuration and cart assembly for diagnostics and testing.
- Air filtration systems.
- Digital recorders, monitors, switchers and other video equipment.
- Fiber optic, coax, Ethernet, or wireless options for video and data transmission.



Recovery Boiler (Vulcan 12MP)

All Vulcan camera systems are custom designed to match your needs from the process all the way up to control room.

Other solutions

Sintrol offers a variety of imaging opportunities including also CCTV and IPTV equipment. Solutions are always customized to the customer's specific needs. Contact us for more information.

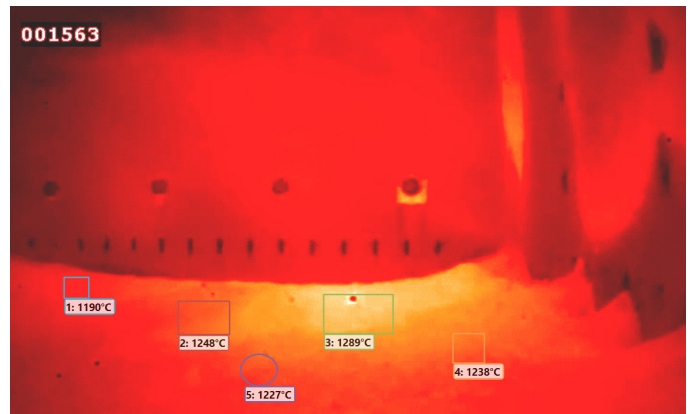
Vulcan 12MP

Vulcan 12MP is designed to be used especially in recovery boiler burning process tracking as a smelt bed camera but is also used in power boilers and various steel industry applications.

Furnace camera enables high-quality video and data from inside the boiler even in very challenging situations by using a combination of high technology, optics, and protection. The camera is used typically together with a temperature analyzing program which allows high temperature measuring seen from the video.

The data generated by the software works perfectly as a support in process control as well as in process safety, detecting for example possible water leaks in real-time.

The **Vulcan 12MP's** wavelength-optimized infrared optical system is designed to see through the smoke, ash, and haze produced within even the most volatile boilers and furnaces.



Vulcan 12MP is used as smelt bed cameras in the world's largest recovery boilers. Ask us for references.

Vulcan 12C -range

Vulcan 12C -range is designed for monitoring temperature and combustion process in lime kilns and incineration plants where the shape of the flame is an important parameter.

Vulcan 12C -range furnace cameras are suitable for high-temperature combustion control applications where it is desired to monitor, for example, the temperature and shape of the flame. The system utilizes a high-tech combination of electronics and optics. This provides high-quality and reliable video from inside the boiler in the area of visible light and / or IR light. In addition to monitoring the burning event in the visible light area, the device can simultaneously use infrared technology, allowing temperature data to be obtained from the entire image area. The camera is then used with temperature analysis software to support process control.

Good combustion control can improve process performance and reduce both fuel consumption and emissions. Well-maintained combustion control also reduces maintenance costs by reducing the number of required downtimes.



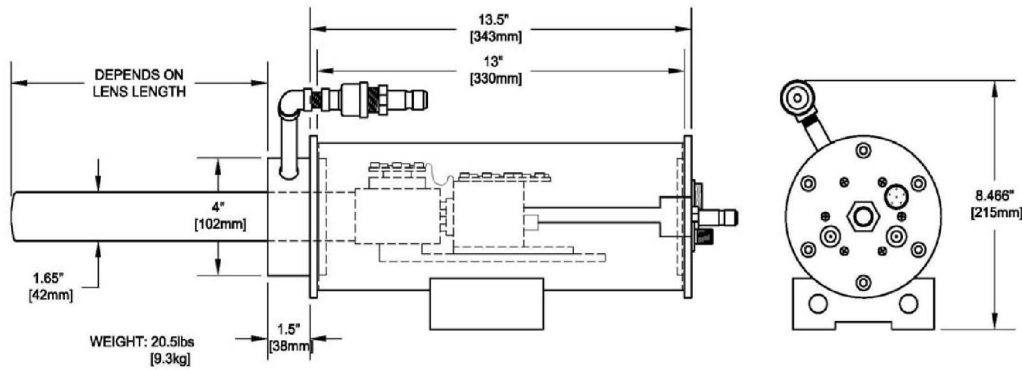
The Vulcan 12C -range is specially designed for the conditions in which you want to see the flame itself.

Vulcan 12CS - High Quality Video only

- Optimal solution for process monitoring and flame adjustments when temperature data is not necessary.

Vulcan 12C-2C - High Quality Video with Embedded Temperature Data

- Provides excellent video quality with temperature data using double camera core technology.
- Can be used to adjust the flame shape and direction using visual data and temperature shape and info.



Product Name	Sintról Vulcan High Temperature Cameras
Sensor	Solid State IR and/or CCD
Power	12 VDC with 100-240 VAC adapter – 50/60Hz
Available Lenses	
Overall length	Custom. Usually 24”- 60”
Diameter	42 mm (1,650”)
Field of view	Custom. See Lens Selection Guide
Line of Sight	Straight ahead (standard). Obtuse (45°) and Right Angle (90°) available
Process Temperature	Temperature measurement from 600 °C up to 2000 °C
Air purge	34 m ³ /h @ 1bar - straight ahead line of sight lens Instrument quality air only <40°C
Enclosure	
Material	PHASE III = STEELON™ (stainless steel over high temperature synthetic) Nylon (IP66) available
Installation temperature	Ambient temperatures up to 290° C
Air purge	5 m ³ /h @ 0,2 bar
All Cameras Include	<ul style="list-style-type: none"> • High resolution sensors • Air cooled stainless steel furnace lens (wavelength optimized) • Quick change lens system • High temperature camera housing (IP66) with slide trac mount • Quick change back plate • 12 VDC power supplies with NEMA 4X enclosure • Factory assembled, pre-adjusted and ready for installation
Options and Accessories Include	<ul style="list-style-type: none"> • Wallbox mount and customized mechanical installation equipment • Air Filtration System • Automatic Retract System • Automatic Deslagger System • Video and data transmission system with all the necessary components (coax, Ethernet, Fiber Optics) • Recording devices and monitors • Thermal Imaging Software

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