



# FLIR

## APPLICATION STORY

# FLIR SYSTEMS



# COROMATIC

## Ensuring continuity : FLIR Systems infrared cameras used to keep server rooms up and running

*Numerous industries worldwide have discovered the benefits of integrating infrared cameras into their maintenance. As thermal cameras become handy, powerful and affordable, new industries and applications are following.*

Physical IT environments rely on electrical connections, condensers, compressors, heat exchangers to function properly on an uninterrupted 24/7 basis. Industrial infrared cameras observe such equipment and allow the user to see things before they become a problem and, accordingly, to take action before costly system failures occur.

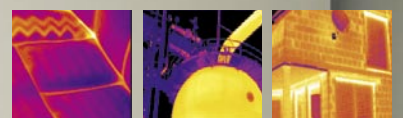
Coromatic AB, based in Stockholm, Sweden, specializes in the planning, design, construction and maintenance of physical IT environments such as server rooms and data centers. The company acts as a general contractor; it offers turnkey data centers, supplying all necessary equipment and services: rack systems, cabling, power supply, cooling and ventilation, fire protection and detection, monitoring and security, as well as service and maintenance programs.

With 62 employees and a 32m Euro turnover, Coromatic is the market leader in Sweden. Coromatic has built over 55 fully equipped data centers for the country's leading university hospitals and public institutions, as well as 2,000 m<sup>2</sup> data strongholds for Volvo and other Swedish flagship corporations. To pro-actively maintain these mission-critical environments in which absolute continuity is the standard and failures cost millions, Coromatic increasingly relies on ThermoCAM E-series infrared cameras.

**Securing uninterrupted power supply (UPS)**  
UPS systems are mandatory for all data centers. They are based on batteries which hold the load and keep the systems running until power supply is restored again. The infrared camera allows to check the connections and the status of the batteries quickly and easily and to replace bad batteries.



◆ UPS Battery block: a battery needs to be replaced



### Cooling management starts at the rack

Cooling is a major issue for a good server room function: "two years ago, we had 4 to 6 servers per rack, now, we have 8 to 12 servers per rack at an average of 5 to 6,000 Watts. As power requirements increase, heat production has to be kept under control" says Johan Andersson, Service manager at Coromatic. "Checking all relevant cooling systems is a must. The infrared camera allows us to visualize and measure temperature developments of the ventilators in operational conditions."



IR image shows oil and water level of compressor/ humidifier

### Saving time, saving costs with thermography

Server rooms do not only consist of racks and power supply. They are equipped with compressors, heat exchangers, and many other appliances that get hot before they fail. Coromatic uses infrared cameras for fault-finding during its contractual monthly, quarterly, or annual inspections at its customer's data centers.

Impressed by the thermal camera's ability to scan surfaces and prevent failure and breakdown, the company decided to integrate infrared inspections into its customer service package and to train two experienced UPS technicians to use the FLIR Systems ThermoCAM E-series properly.

### Reporting to the customer

The imagery, gathered at the customer's data center, has to be classified, assessed and presented. Coromatic relies on the ThermoCAM Reporter™ software suite for its customer reports. The report is built up in a Microsoft® Word® format and consists of imagery of the scanned objects in standard JPEG, basic thermographic data and comments. Andersson stresses that

knowledge of the inspected installations is needed to interpret the images: "We have 250 man-years of experience at the company, which we need it to interpret the imagery; not every hot spot is critical and you can only draw conclusions on the basis of experience and a thorough understanding of both the camera and the installations you inspect".

Although never just a routine, the careful thermal check of Coromatic's customers server installations has become a standard procedure. "The advantages are at hand", says Andersson: "infrared cameras allow us to inspect during operation, predict failure and take appropriate measures. The ThermoCAM E-series has even a built-in laser pointer for an accurate contactless measurement of cables and equipment. And last but not least, the customer feedback has been very positive."

More info at [www.coromatic.se](http://www.coromatic.se)  
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Thanks to Helena Wanerstrand and Anders Andreasson of FLIR Systems Sweden for providing contacts and support.

### About infrared thermography

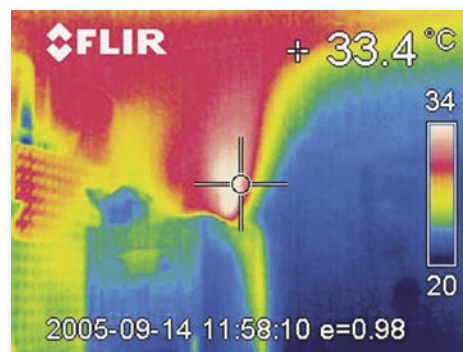
Thermal imaging, also called thermography, is the production of non-contact infrared or "heat" pictures from which temperature measurements can be made. Portable infrared cameras scan equipment and structures, then instantly convert the thermal images into pictures in a JPEG format for monitoring and analysis. Thermal imaging increases efficiency and maximizes safety in many industries and environments and is rapidly expanding into new markets.

### About FLIR Systems

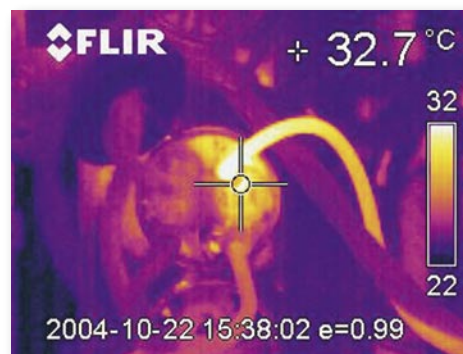
FLIR Systems is the world leader in the design and manufacturing of infrared cameras. The company has over 40 years of experience and more than 50,000 infrared cameras currently in use worldwide for applications including predictive maintenance, research & development, process monitoring, automation and many others. FLIR Systems has four manufacturing plants located in the USA and Sweden and operates direct sales offices in Belgium, France, Germany, Italy, the United Kingdom, China, Japan and Australia. The company numbers over 1,300 dedicated infrared specialists, and serves international markets through a network of 60 regional offices providing sales and support functions.



Infrared camera shows air flow on top of UPS system in a normal condition



Connection in normal and overheated mode



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