

Firefly BakeScan[™] and OvenGuard[™]

Unique fire protection solutions within the baking industry



Why protection is needed

Baked products are exposed to high temperatures from ovens. Taking into account that almost all baked products have ignition temperatures very close to the average oven operation temperature, there is a constant latent risk that products will burn.

This risk increases due to accumulation of grease, oil, crumbs and dust, possible failures in the temperature control of ovens, and maintenance issues. This can lead to overheated baked products or flames in/around the oven, resulting into possible damages of the process, as well as bad product quality and possible fire problems in the storage area.

With a preventive protection solution from Firefly, baking industries can increase safety and save a lot of money by avoiding possible downtime related to fire, and effectively discover and eliminate burned products in the process.

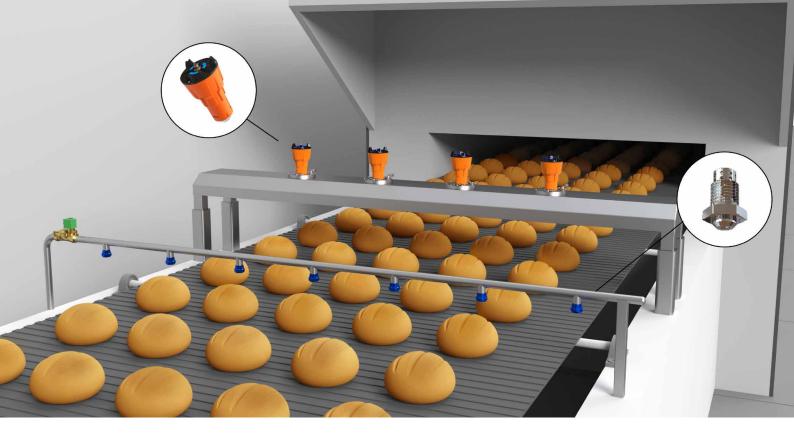
COMMON PROBLEM AREAS

Accumulation of grease, oil, crumbs and dust in combination with the higher oxygen level can cause a fire in the outlet of the oven. The fire can easily spread through the ducts and to the rest of the building

Products that stops in the oven due to failure

Products that are glowing or are on fire can imply problems later in the process, as for example in the cooler and/or in the storage area

The transport bands can be damaged by overheated, glowing or burning products



Firefly BakeScan[™]Solution

Glowing, burning or overheated products is the first indication of a beginning problem in the oven. Firefly BakeScanTM-solution is designed to detect overheated, glowing or burning products on transport bands of baked products being transported out from the oven, for example biscuits, tortillas, baked crisps, bread and cereals.

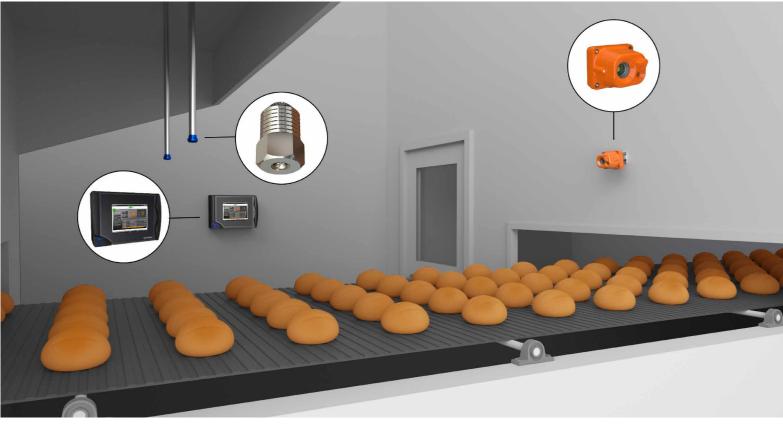
The system can be completed with quick acting water mist suppression. Water mist suppression enables the process to continue without warping the belt and avoids temperature stress on the cooling belts which can be very expensive to replace.

The Firefly BakeScan $^{\text{TM}}$ -solution is an extremely flexible system and can be adapted to any process within the baking industry.

Patented True IR detectors

Insensitive to daylight. Detecting overheated, glowing or burning products coming from the oven, transported on the belt.

Quick acting water mist suppression Installed above the transport band.



Firefly OvenGuard[™]Solution

Firefly OvenGuard TM -solution is designed for early detection and suppression of fire problems in the oven, at the outlet of the oven, and to suppress embers and flames in the extraction ducts. This by using a full automatic, high speed detection and suppression system. Both quick acting water mist suppression and full-cone water spray extinguishing can be used depending on the system design.

The Firefly OvenGuard TM system is extremely fast and the systems are designed to provide optimal safety against fire with minimal effect on machinery or production. The Firefly system is flexible and from a range of unique products the solutions are customized for each application.

Firefly Flame detectors

Fast-acting flame detectors, highly immune to external disturbances and designed to withstand tough industrial environments.

Quick acting water mist suppression
Installed at the outlet of the oven. Can also be installed inside
the extraction ducts.

A Unified Control System

Enabling a good overview of all protected zones. Operators will control the system via $IntuVision^{TM}$, an intuitive user interface with a colour touch screen, which comes as a standard in every Firefly System.



About Firefly

Firefly is a Swedish company that provides spark detection and industrial fire protection systems to the worldwide process industry. With over 40 years of experience, Firefly has specialized in creating customized system solutions of the highest technical standards and quality. Firefly owns more than 40 patents, creating a unique portfolio of innovative products and system solutions.

The company is listed on Nasdaq Stockholm First North and holds national and international approval on its products. In complement to worldwide sales, Firefly also provides its customers with field service, maintenance and guaranteed long-term spare part supply. Firefly are certified according to quality standards: ISO 9001:2008, EN ISO/IEC 80079-34 and holds third part certifications through FM, VdS, CSA and ATEX.

Do you have any questions about fire and explosion risks? Contact us! We will be happy to assist you with our knowledge and experience.

Firefly – Keeps you in production



Firefly AB Phone +46 (0)8 449 25 00 info@firefly.se | www.firefly.se

