



Firefly BakeScan™ and OvenGuard™

Unique fire protection solutions within the baking industry



Why protection is needed

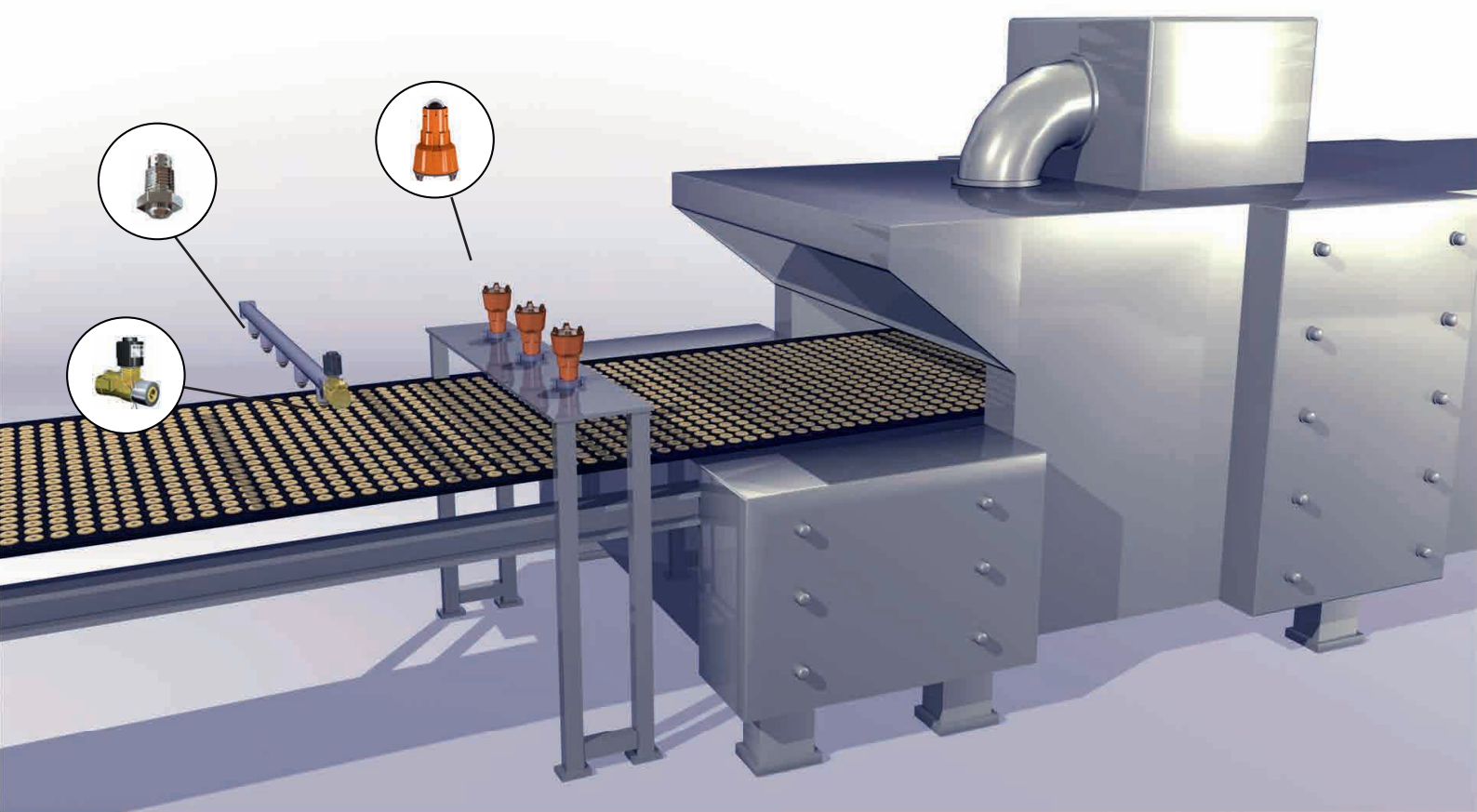
Baked products are exposed to high temperatures from ovens. Taking into account that almost all baked products have ignition temperatures very close to the average oven operation temperature, there is a constant latent risk that products will burn.

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 BakeScan™-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™-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.



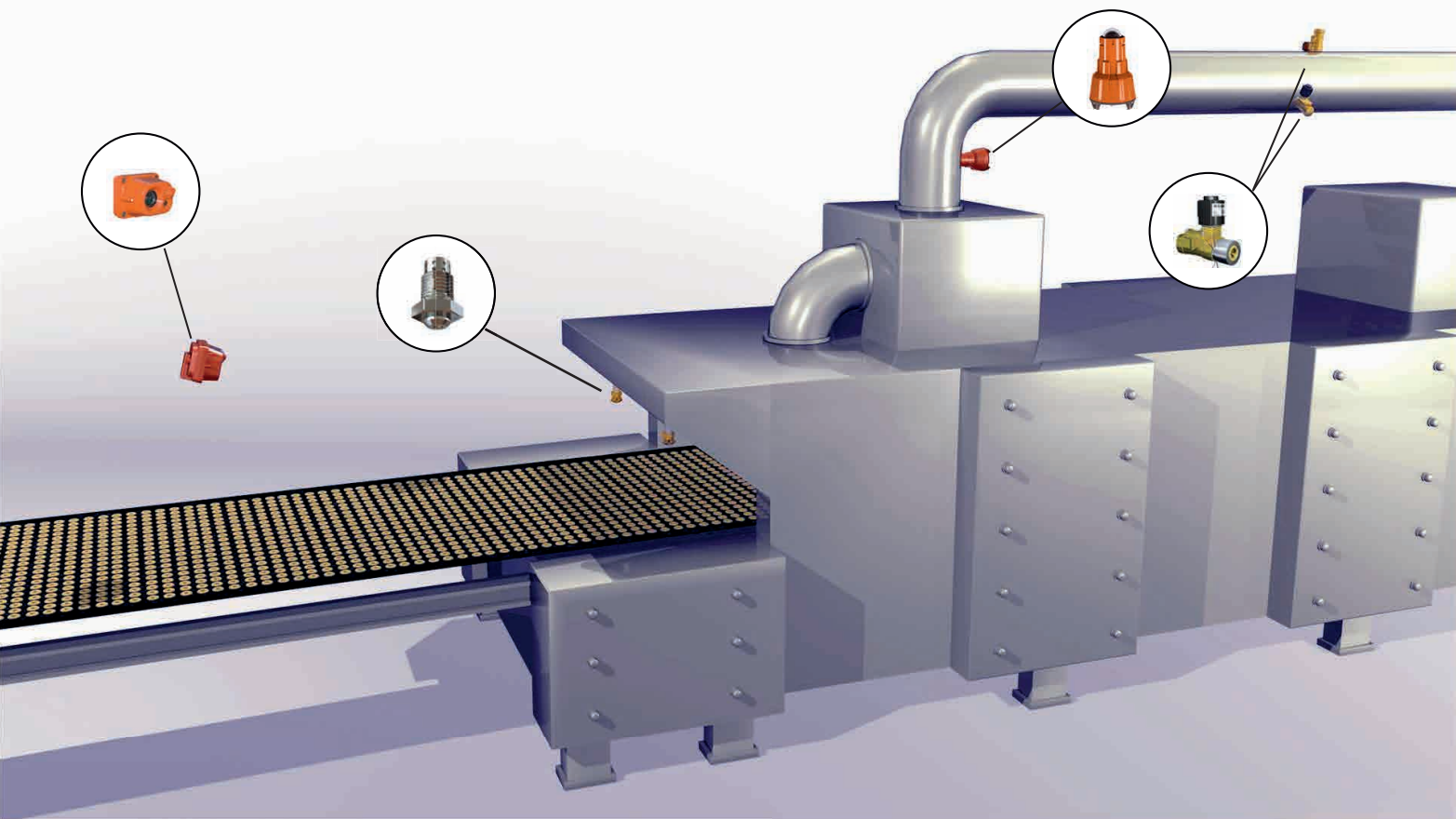
Quick acting water mist suppression

Installed above the transport band.



Full-cone water spray extinguishing





Powerful extinguishing with a unique nozzle design and placement, avoiding fire to be spread through the ducts and to the rest of the building. Activated within milliseconds after detection.

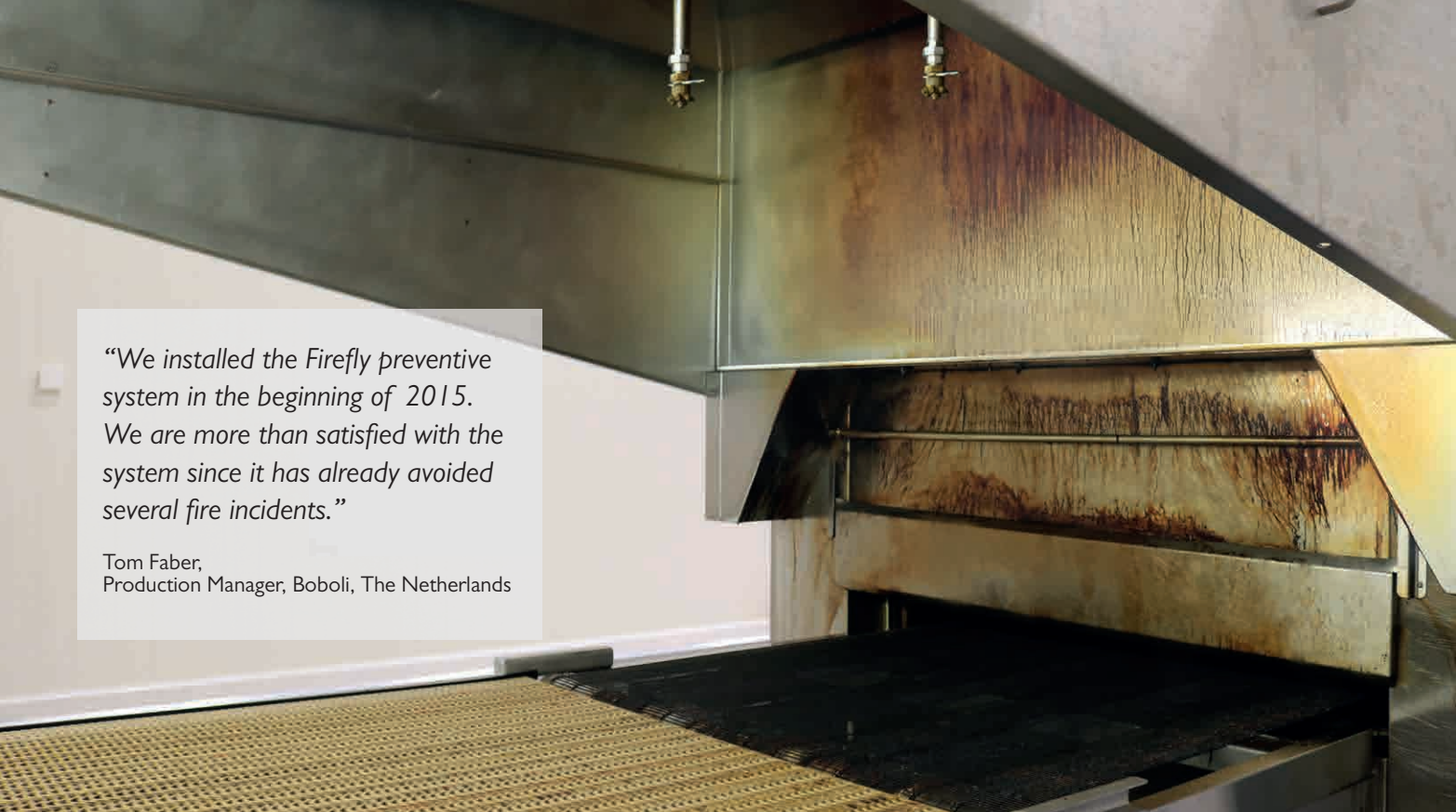


Firefly OvenGuard™-solution

Firefly OvenGuard™-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™ 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.
-  **Patented True IR detectors**
Insensitive to daylight. Detecting flames as well as sparks and hot particles.
-  **Full-cone water spray extinguishing**
Powerful extinguishing with a unique nozzle design and placement, avoiding fire to be spread through the ducts and to the rest of the building. Activated within milliseconds after detection.



“We installed the Firefly preventive system in the beginning of 2015. We are more than satisfied with the system since it has already avoided several fire incidents.”

Tom Faber,
Production Manager, Boboli, The Netherlands

About Firefly

Firefly is a Swedish company that provides industrial fire prevention and protection systems to the process industry worldwide. Since 1973, Firefly has specialized in creating customized system solutions of the highest technical standards and quality. Based on customer needs and research Firefly has developed and patented products and solutions, creating a unique portfolio of innovative products and system solutions to increase the level of safety.

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.

The Firefly quality management system is certified according to ISO 9001 and EN ISO/IEC 80079-34. Firefly's products hold national and international third party certifications through FM, VdS, CSA, DNV-GL among others.

For more information on our certifications and approvals, please visit: www.firefly.se/en/company/approvals

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



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PREVENTIVE PROTECTION SYSTEMS FROM
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SWEDEN