



PROTECT YOUR PEOPLE AND PLACES...

SPARK EXTINGUISHING SYSTEMS
FOR FIRE PREVENTION

**“WE NEVER HAVE FIRES IN OUR COMPANY”
...AN OFTEN FATAL MISTAKE**



02/03

WE PROTECT YOUR MANUFACTURING PROCESS

“We never have fires in our company.” “There’s only a minor risk of fire - and if it happens, we’re insured.” All too often, these assumptions have proven to be wrong with disastrous consequences for companies. Of course, the insurance will pay out for a burnt filter. But what about the loss of production? Delivery delays? Loss of image? Loss of customers? Very few policies will pay out for these losses. Therefore, it is essential for your company as an ongoing concern to deal with fire protection. There are many approaches to be considered here. The optimal solution often consists of several measures that interact with each other:

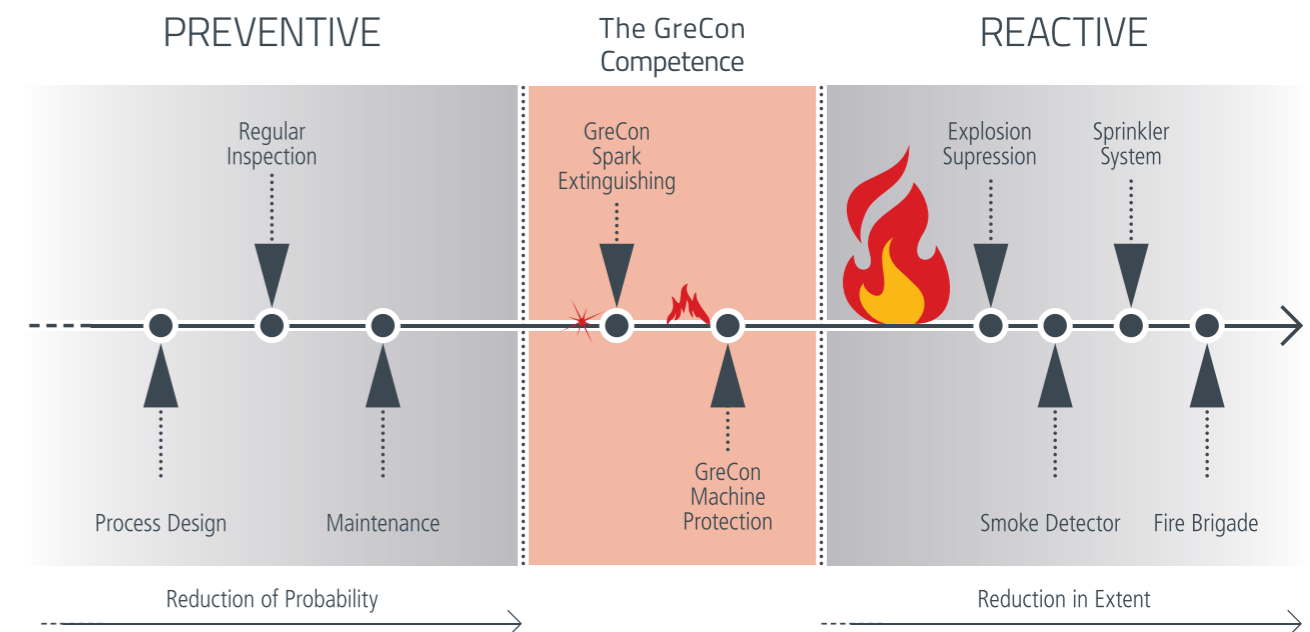
- Design measures
such as fire doors to prevent the spread of fire
- Organisational measures
such as cleaning to reduce the risk of fire and explosion
- Technical measures
such as sprinkler systems to extinguish the fire

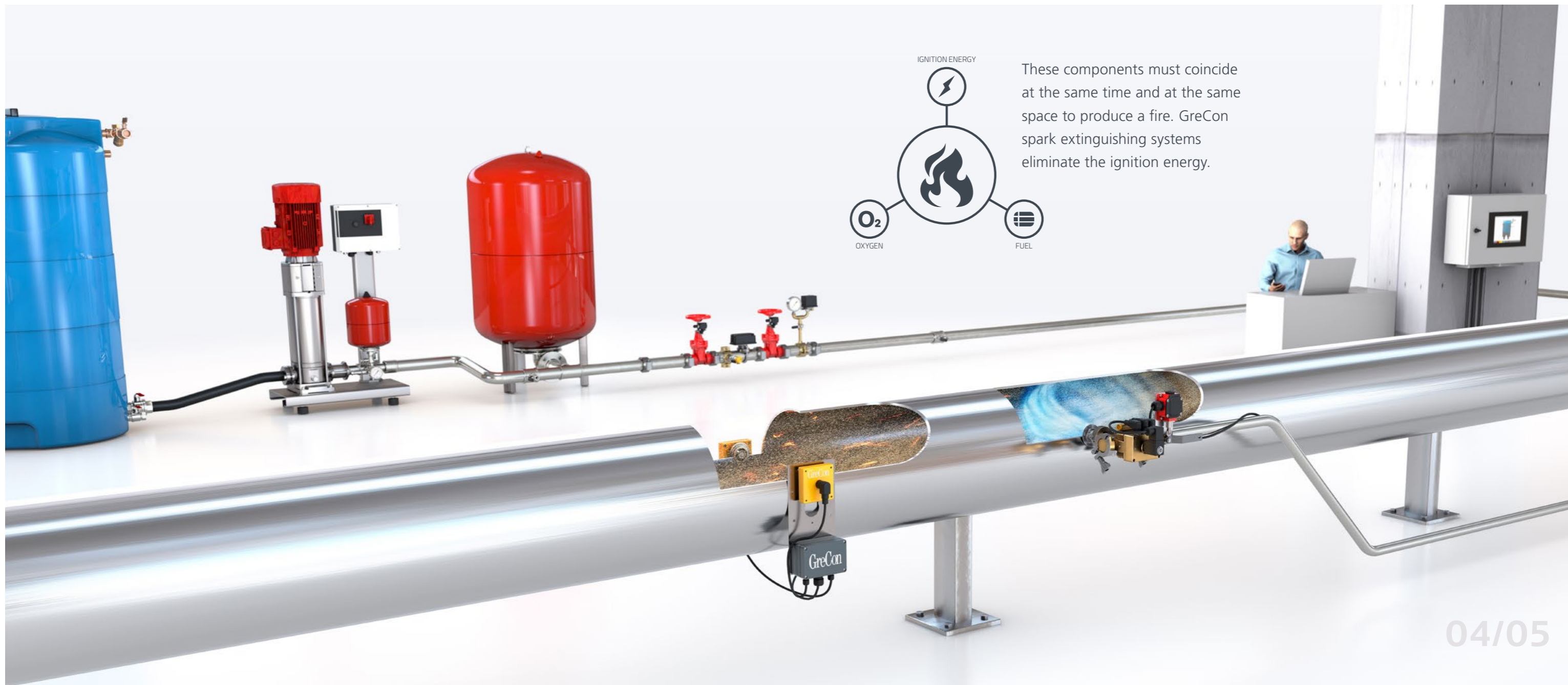
Each of these three groups of measures includes activities to reduce the fire risk or limit the extent of the fire. GreCon’s expertise lies in fire prevention. Extinguishment before a fire breaks out. We focus on detecting hazardous ignitable energy such as sparks, eliminating them within milliseconds - without interrupting your production.

FIRE PREVENTION - A COLLECTIVE RESPONSIBILITY

“The fact that no fire has broken out in many buildings for decades does not prove the absence of danger but is a stroke of luck for those concerned that could end at any time.”

Extract from the judgment of the OVG (Higher Regional Court) of Münster 10A 363/86 of 11.12.1987

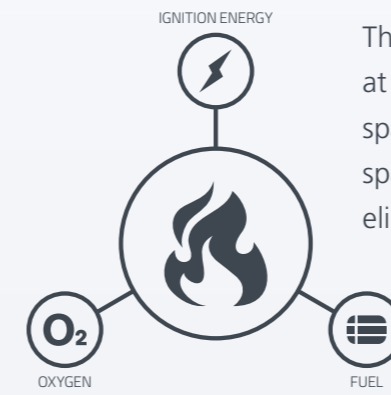




EXTINGUISHING WITHOUT INTERRUPTING PRODUCTION

QUICKLY AND UNNOTICED BEFORE A FIRE BREAKS OUT

The GreCon fire extinguishing system detects and eliminates dangerous ignition sources before a fire breaks out, or a dust explosion occurs. Wherever organic or inorganic bulk materials are suctioned off or transported pneumatically or mechanically, the fire extinguishing system detects dangerous ignition sources. It renders them harmless before they can cause significant fire damage in the filter systems, silos or other downstream areas of the plant.



These components must coincide at the same time and at the same space to produce a fire. GreCon spark extinguishing systems eliminate the ignition energy.

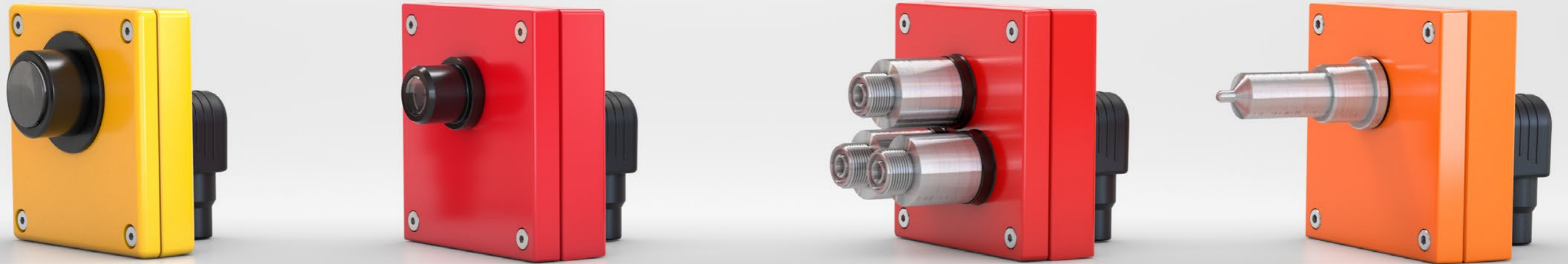
THE FUNCTIONAL PRINCIPLE

Infrared detectors monitor the conveying paths and activate high speed water extinguishing systems within milliseconds, where necessary. The GreCon system can effectively avoid any carryover of the ignition energy. The extinguishing processes take place in the background, usually without interrupting production.

PROVEN SECURITY

GreCon spark extinguishing systems have been a standard component of fire prevention technology for decades. They reduce the risk of fire and explosion and increase the availability of the production plant.

RELIABLE HAZARD IDENTIFICATION



06/07

IN EVERY ENVIRONMENT

- Highly sensitive spark detector for detecting sparks, glowing nests and hot particles
- Detection independent of the ignition source temperature
- Patented optical system for detectors and intelligent Detection Technology IDT® offer reliable detection in all environments with or without external light
- Long detector optical system life through flush assembly on the wall
- VdS approved
- Optionally with ATEX or IECEx certification

THROUGH MAXIMUM SENSITIVITY

- Highly sensitive spark detector for detecting sparks and glowing nests
- Detection independent of the ignition source temperature
- Highly reliable detection of ignition sources even with high transport speeds and material loads
- Long detector optical system life through flush assembly on the wall
- VdS and FM approved
- Optionally with ATEX or IECEx certification

AT HIGH PROCESS TEMPERATURES

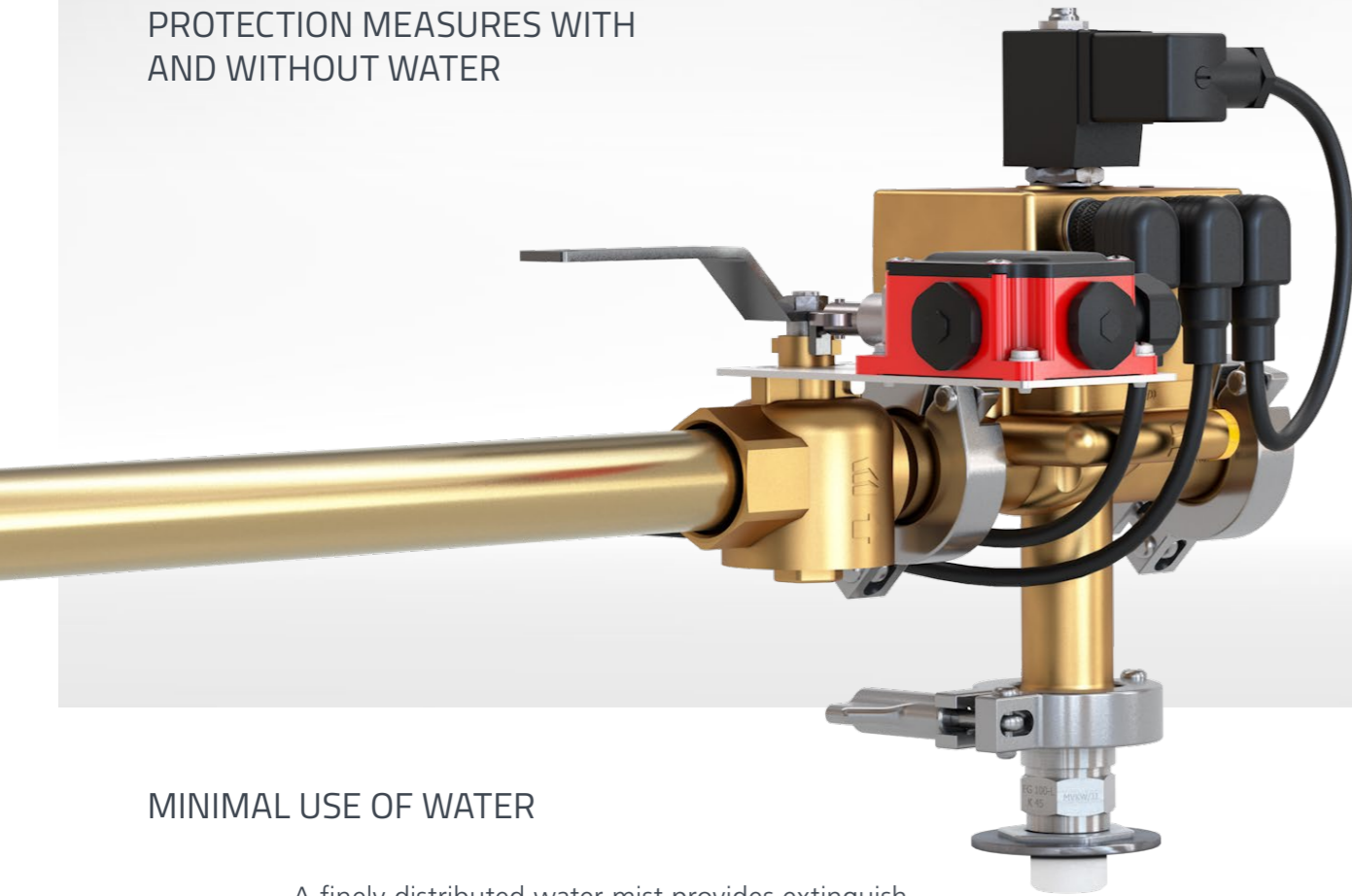
- Highly sensitive spark detector for detecting sparks and glowing nests by using optical fibres in applications with high process temperatures of up to 500 °C
- Detection independent of the ignition source temperature
- Highly reliable detection of ignition sources even with high transport speeds and material loads
- Long detector optical system life through flush assembly on the wall
- VdS and FM approved
- Optionally available with ATEX or IECEx certification for safe usage in explosive areas

EARLY DETECTION OF SUDDEN TEMPERATURE INCREASES

- Can be used for many applications by providing switching points between 60 °C and 135 °C
- Early alarm below the trigger threshold by detecting sudden temperature increases
- Precise temperature measurement by PT1000 sensors
- In situ detector status display via LED
- ATEX certified for use in zone 20 and VdS / EN 54-5 approved for temperature class B

FASTER THAN THE BLINK OF AN EYE

PROTECTION MEASURES WITH
AND WITHOUT WATER

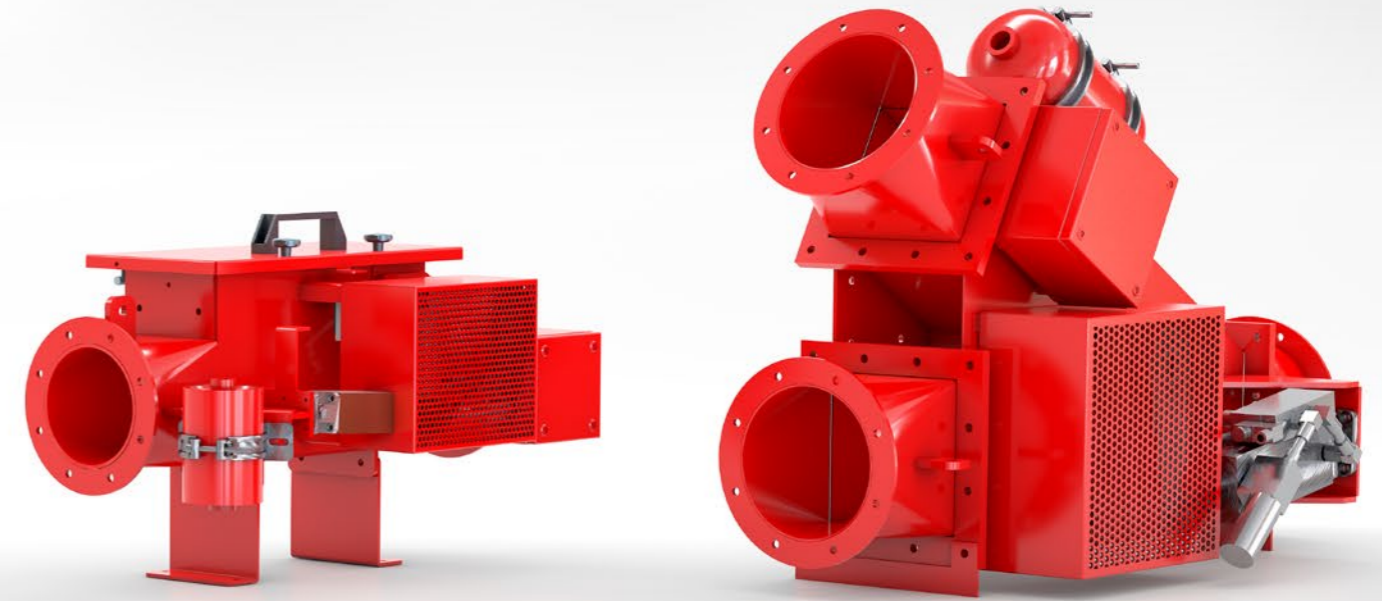


MINIMAL USE OF WATER

A finely distributed water mist provides extinguishment via automatic extinguishing devices within milliseconds. Depending on the application, various extinguishing nozzles are available to optimise the quantity of extinguishing water required. The extinguishing nozzles used are ideal for spark extinguishing systems in terms of spraying pattern, size of the droplets and water flow. As a result, we achieve the desired effect with minimal water usage.

ROBUST, RELIABLE AND INTELLIGENT

Our new GreCon IEM smart extinguishing module takes the intelligence and reliability of existing spark extinguishing systems to the next level. Powerful sensor technology makes it possible to improve the harmonization of two objectives which are currently perceived as conflicting: the reduction of unwanted downtimes & optimal use of components. Thanks to the early detection of wear, built-in sensor technology improves the operational safety of systems. Advancements in sensor technology make it possible to determine maintenance intervals on the basis of wear data. Not only do these dynamic maintenance intervals extend the servicing intervals within the framework of predictive maintenance, but they increase the service life of the wear parts which are monitored in this manner.



BYPASSING OR INTERRUPTING THE PRODUCTION FLOW

Pipe end caps and pipe diverters protect the production process if the use of water is not possible.

If an alarm sounds, pipe diverters feed the material flow out via an alternative transport path with almost no interruption to avoid endangering other plant areas. Pipe end caps close the transport line in the event of an alarm. Both components are also available in stainless steel, for example, for use in the food industry.

These pneumatically activated protection devices prevent the transfer of ignition sources even in large pipe diameters of up to 900 mm within a few hundredths of a millisecond. The short closing time allows for a short mounting distance, simplifying the challenge of fitment to existing plants.

CENTRAL FIRE PROTECTION CONTROL UNIT

CUSTOMISABLE

The GreCon CC 7000 TOUCH control consoles can be customised and are suitable for fire prevention solutions of all sizes. These control consoles are ideal for use in smaller specialist businesses as well as large industrial companies. The GreCon system can connect to external systems using PROFINET or Ethernet IP interfaces.

RELIABLE EARLY WARNING SYSTEM

Early detection of problems can prevent more serious damage from occurring, for example, due to increased flying sparks. This early detection can minimise downtime. The fourfold graded GreCon alarm concept that also identifies changes over a longer time provides the basis for these preventive functions.

IMPORTANT INFORMATION QUICKLY AVAILABLE

Important events are located quickly with the help of a flow sheet, which visualises the layout of the fire prevention system. The GreCon TOUCH Client application software provides rapid and spatially separated access where necessary.



CLEAR SYMBOLS

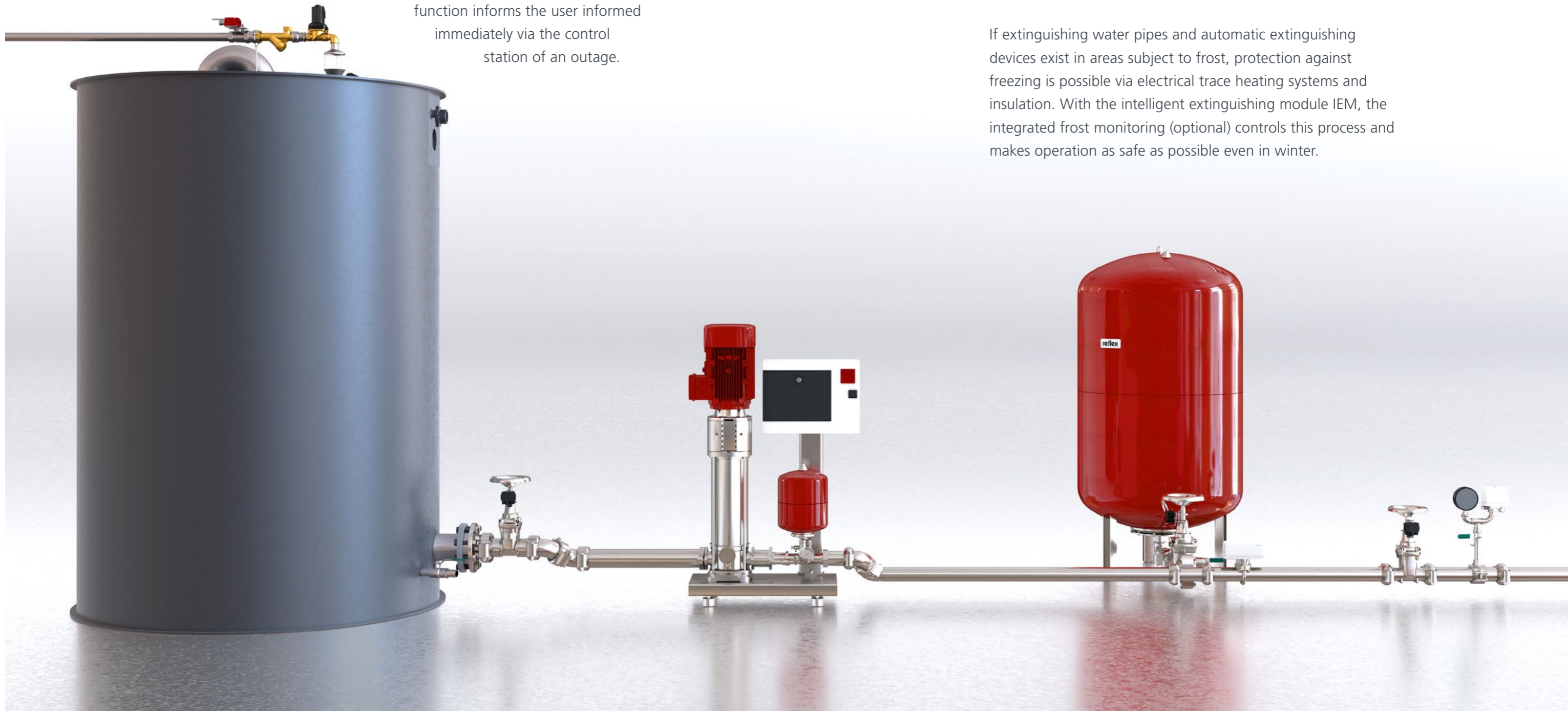
Important data is displayed ad hoc by directly selecting information via intuitive icons. Files such as operating manuals and instructions can be stored in the display memory and retrieved quickly and easily via the display when necessary.

SOLUTIONS FOR ON-SITE CHALLENGES

WATER SUPPLY

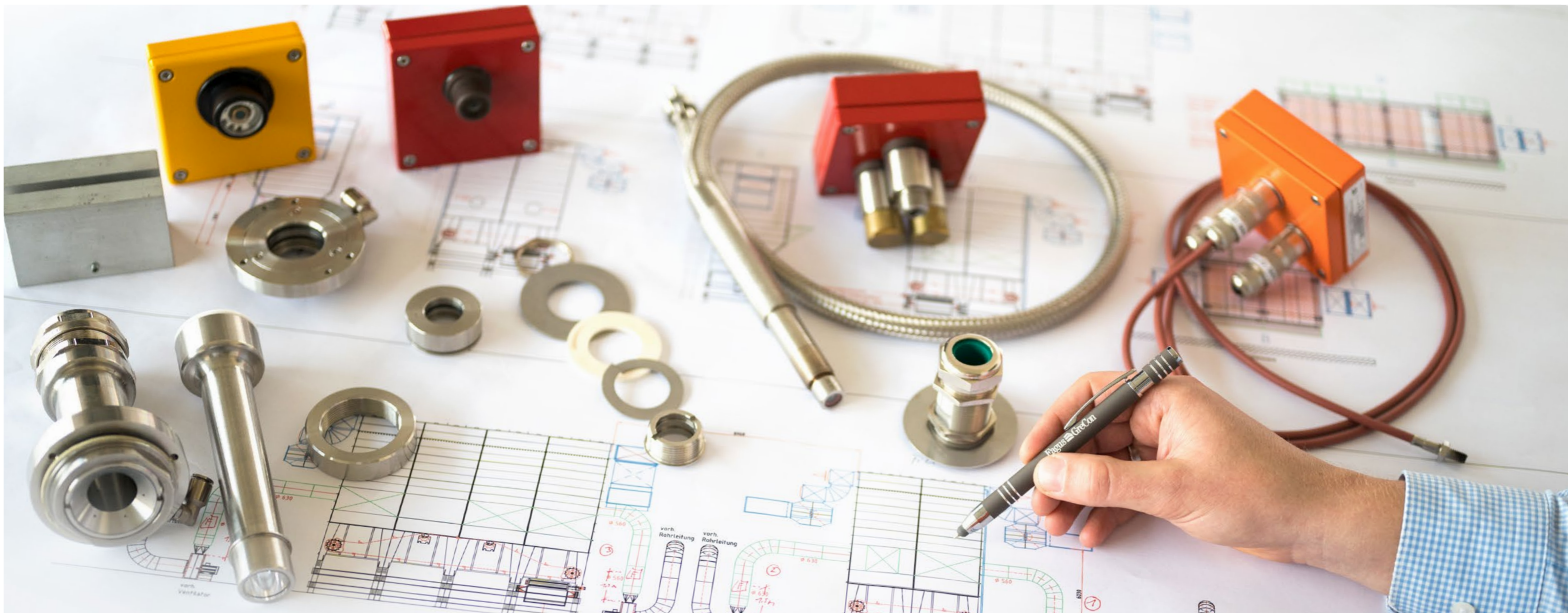
A pressure increasing system ensures the water supply and compensates for the water flow pressure depending on the local conditions. A feed tank ensures the necessary volume of water. A diaphragm pressure tank provides the water immediately with the required pressure, ensuring the system remains operational during a power failure.

The pressure increasing systems come preassembled for quick and easy assembly and include shut-off and monitoring devices necessary for time-saving maintenance. A monitoring function informs the user informed immediately via the control station of an outage.



ANTI-FREEZING MEASURES

If extinguishing water pipes and automatic extinguishing devices exist in areas subject to frost, protection against freezing is possible via electrical trace heating systems and insulation. With the intelligent extinguishing module IEM, the integrated frost monitoring (optional) controls this process and makes operation as safe as possible even in winter.

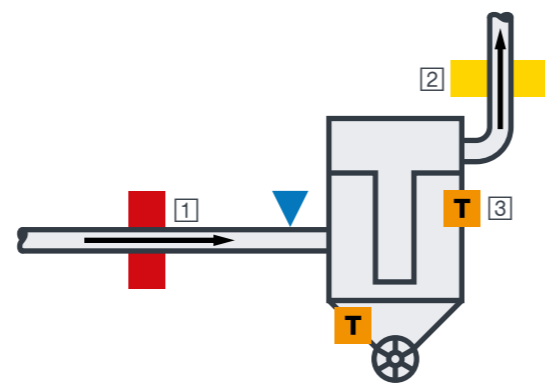


PROTECTION SOLUTIONS

FILTERS

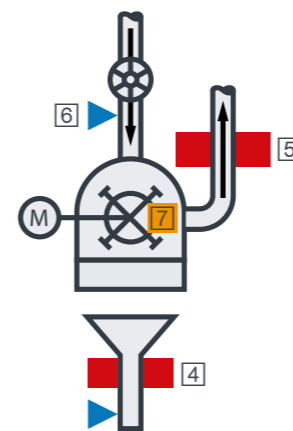
Within filter systems, there is a high risk of fire and explosion. A harmonised protection solution is therefore essential to prevent sparks entering, and this also provides early detection of fires inside the filter.

- 1 Spark detection and extinguishing with GreCon FM spark detectors to protect filters against external ignition sources
- 2 GreCon DLD spark detectors to detect fires during operation
- 3 GreCon TM thermo-detector to detect fires during operational standstill



SHREDDING

Mills shred or grind coarse material to fine-grained or even powdery intermediate products and end products. There is a constant risk that dangerous sparks or overheating will occur in the product due to the mechanical production processes or foreign bodies, resulting in fires or dust explosions in the mill or the adjacent system areas. A harmonised protection solution to secure the various hazard areas of the mill is therefore essential.



- 4 Spark detection and extinguishing with the GreCon FM spark detectors to protect downstream processes
- 5 Spark detection and extinguishing with the GreCon FM spark detector to protect downstream filter systems and detect fires in the mill
- 6 Mill extinguishing to suppress fires
- 7 Preventive motor temperature monitoring



SOLUTIONS
RISIKOANALYSE
HILFE
CUSTOMER
HOTLINE
ZUFRIEDENHEIT
DGUV3 MEASUREMENT
FERNWARTUNG
PIPELINE INSPECTION
APP
EXPERIENCE
INSPECTION
24/7
COMPETENCE
SATISFACTION
ROHRLEITUNGSPRÜFUNG
TURNKEY SOLUTIONS
PREDICTIVE MAINTENANCE

SERVICE QUALITY

KOMPLETTMONTAGE
DGUV3 PRÜFUNG
UPGRADES
KOMPETENZ
SERVICEBERATUNG
SPARE PARTS
SATELLITE
ERSATZTEILE
ERFAHRUNG
DRUCKBEHÄLTTERPRÜFUNG
REMOTE SUPPORT
KUNDE
RISK ANALYSIS
INSPEKTION
HELP
VORBEUGENDE INSTANDHALTUNG

PROVIDING ASSISTANCE WHENEVER YOU NEED US

WORLDWIDE

A worldwide network of qualified service partners ensures fast local support. We maintain our product knowledge as well as knowledge of current regulations up-to-date thanks to regular training programmes.

FROM A SINGLE SOURCE

We provide turn-key solutions on request. In addition to assembly, our team also handles electrical and water installation as well as commissioning. We can coordinate the acceptance and certification of your new fire prevention system.

TIME & COST SAVINGS

Should any questions or minor problems arise, the GreCon SATELLITE digital service platform ensures a rapid remote intervention. If you require this support, our service technician will access the control console of your fire prevention system and provide

support to resolve the issue. Service interventions on-site can be better prepared and planned with the data from GreCon SATELLITE. GreCon SATELLITE is one of the safest systems currently on the market and is TÜV certified.

ACADEMY

The Fagus-GreCon Academy provides a range of training for your team to handle and operate your GreCon system safely. This training can be offered on-site, in your production facility or at our Academy facility. Online training is possible for many courses too.

QUALITY

We ensure long life and reduced cost of ownership of your system by consistently using high-quality installation material such as stainless steel or UV-resistant aluminium.



FIRE PREVENTION REFERENCES:

RIVERRIDGE

Cecil McBurney, Corporate Operations Director

According to the adage “Don't wait for a fire to happen”, GreCon's fire prevention solutions effectively address the inherent risks from the recycling process. GreCon's relationship with RiverRidge started in 2014, protecting the shredding process at our Portadown and Garvagh sites. RiverRidge then made a significant investment in a fluid bed dryer and associated extraction system to process refuse-derived fuel and were keen to find a dependable fire prevention solution to protect this investment. Based on the existing good cooperation, RiverRidge again sought help from GreCon.

Relying on decades of experience in providing turnkey solutions, GreCon listened to the requirements and devised a suitable protection concept working in a partnership approach. A 16-zone fire prevention system was installed and commissioned. GreCon's comprehensive range of highly sensitive detectors reliably detects a range of ignition sources such as sparks, hot and glowing particles and deals with the challenges posed by a range of temperature and ambient lighting conditions. GreCon is on hand to offer guidance and assistance at all stages of a project, from planning to installation and commissioning. Regular service then satisfies insurance requirements and ensures the ongoing reliability of the system.

KIRSCHAUER TEXTIL

Daniel Münzberg, Managing Director

“Since the spark extinguishing systems were installed, we have had two incidents in our company where the system detected sparks and extinguished them automatically. This convinces us that investing in preventive fire protection was the right decision.”

JELU

Hubert Ehrler, Technical Manager

“We protect all areas that are potentially in danger with spark extinguishing systems. We have been able to reduce the fire risk significantly. GreCon spark extinguishing systems exclude 99 to 99.5% of all fires in advance.”

PELZ GROUP

Matthias Kelch, Head of Facility Management

“We regularly encounter incidents which are quickly rendered harmless thanks to the GreCon spark extinguishing system. By extinguishing the first spark there is no compromise in terms of safety.”

MARTIN BAUER GROUP

Konrad Ohlmann, Production Manager

“We are one of the largest producers of tea worldwide. Glowing nests that cause fires or dust explosions can occur during mechanical processing. We cannot afford any loss of production; that's why we work with Fagus-GreCon.”

PIONEERING SPIRIT, PASSION AND INNOVATION

We are more than just a company, we are a community where pioneering spirit and passion for excellence are our driving forces. Our employees are the key to our success, and our customers are our partners on the path to outstanding solutions.



In 1911, Carl Benscheidt founded Fagus GmbH for the production of shoe lasts and punching tools. His great-grandsons Ernst and Gerd Greten integrated the companies GreCon-Anlagenbau and GreCon-Elektronik. Numerous inventions originate from this merger, including shoe lasts for the right and left foot; measuring technology to record thickness, surface characteristics or the weight by X-ray; the industrial spark extinguishing system.

Today's Fagus-GreCon Greten GmbH & Co. KG is a family business in its fifth generation. Fagus has stood for precision and fit for over 100 years and is an established partner for the international shoe industry. GreCon has been supplying sophisticated solutions for a wide range of applications in various industries in the "fire protection" and "measurement technology" sectors for 50 years. Thanks to numerous innovations and the commitment of our more than 700 employees worldwide, we have been able to establish ourselves as a leading international partner for our customers in each of these areas.

The UNESCO World Heritage Fagus Factory is a special fourth business unit as a cultural enterprise within an industrial setting. In 2011, the building complex at the Alfeld site was listed as the "UNESCO World Heritage Fagus Factory". The Fagus factory built in 1911 as the first building of the architect and founder of the Bauhaus, Walter Gropius, is considered the origin of the modern era of architecture.

Fagus-GreCon Greten GmbH & Co. KG

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