

## Consequences of fire and explosions

A fire or an explosion can have serious consequences for your company:

- Danger for human beings
- Damage to machines, transport facilities and storage space
- Production interruptions
- Repair/replacement costs due to damaged machines
- Loss of income
- Loss of customers

## The right solution for your recycling plant



To protect your production, your staff and your machines against fire and explosions, GreCon offers you...

- a fast, reliable spark extinguishing system, that is especially adapted to your production
- the detection of ignition energy in the areas at risk
- temperature monitoring in:
  - cyclones and filters
- spark extinguishing in:
  - mechanical and pneumatic conveying facilities
- a deluge system in:
  - shredders, cyclones, filters and conveying facilities
- recording of events down to the millisecond to help identify the cause of a problem

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**GreCon**  
Fire  
Protection

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Measuring  
Technology

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Service



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# GreCon

## Fire and Explosion Protection in Recycling Plants

## Different materials – similar risks

Wherever material is shredded, transported and stored, there is a permanent risk of sparks being generated. With different materials being recycled, the risk of fire is high in many recycling processes.

## Metal recycling



The mechanical processing can cause sparks and glowing embers by overheating.

## Wood recycling



Foreign objects in the mechanical processing cause fire and glowing embers that ignite the wood dust.

## Refuse recycling



Due to the proportion of unwanted components, such as gas cartridges, lighters or batteries, there is a high risk of fire in all process steps.

# Recycling



## Fire and explosion protection in the recycling industry

Due to the growing importance of recycling, the requirements of the plants are also increasing. Acceptance agreements demand a high availability of the production facilities.

To ensure a high production availability, facilities that are at risk have to be protected against fire and explosions.



Risks of fire are lurking in many sections of the recycling process. All processes in which material is

- comminuted
- sorted
- transported
- stored

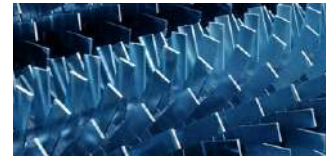
are at risk.

This risk makes an effective and reliable protection inevitable.

## Risks in the recycling industry

### Shredder

- Material accumulation
- Overload
- Friction
- Glowing embers



### Exhaust air

- Spark transportation to filters
- Sparks created by fans



### Cyclone

- Fire load by separated solids
- Dangerous dust-air ratio



### Filters

- Fire load by separated solids
- Dangerous dust-air ratio



### Sorting plants

- Friction between material and plant components
- Glowing embers
- Spark flight

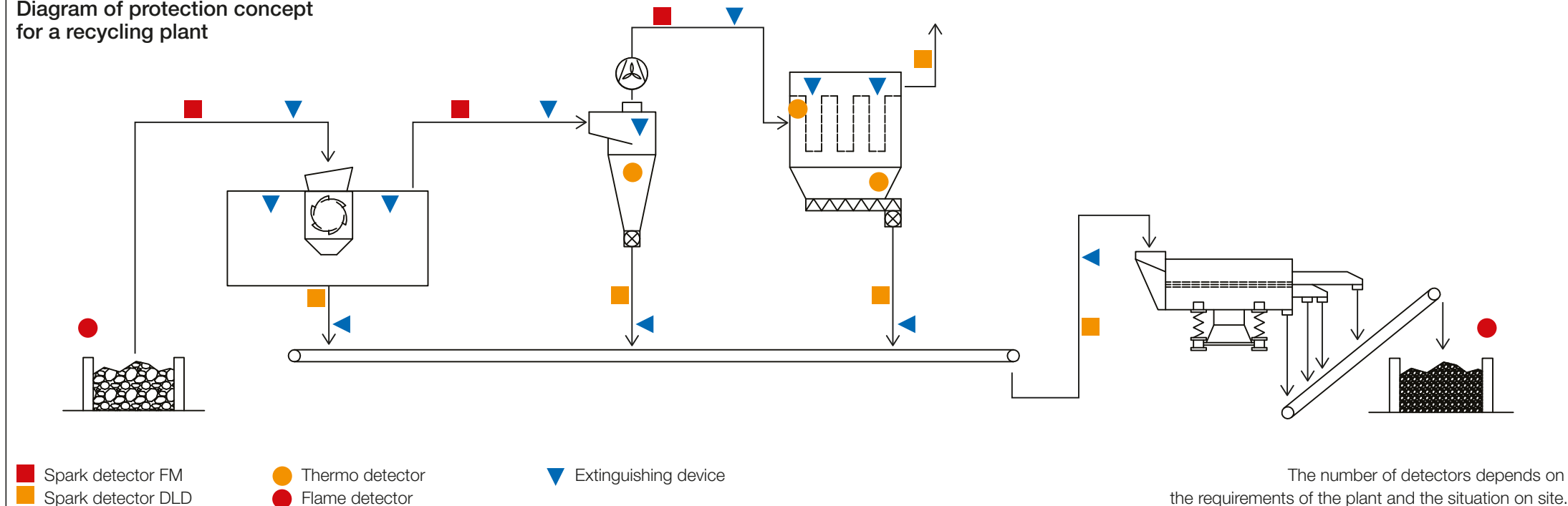


### Storage space

- Glowing embers
- Self-ignition



Diagram of protection concept for a recycling plant



The number of detectors depends on the requirements of the plant and the situation on site.