



adix[®]
● explosion protection

Industrial Safety in Explosive Atmospheres



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Over 20 years ensuring the safety of industrial processes

At Adix Explosion Protection, **we specialise in preventing and protecting against explosions in industrial environments.** With over 20 years' experience, we provide innovative, customised solutions tailored to each customer's specific needs, **ensuring the safety of people and processes.** Our commitment to safety, innovation and customer service drives us to continuously improve our products and provide effective solutions for sectors such as chemicals, food, pharmaceuticals and wood, to name a few.

We are renowned for our engineering, consulting and training services in ATEX environments, designing **solutions that comply with the most stringent international regulations.** We provide a **comprehensive service, from risk analysis to equipment maintenance, to minimise the risk of explosions and optimise operational efficiency.**

Global presence and personalised assistance in over 25 countries

Thanks to our experience of European and international regulations and our in-depth knowledge of production processes, we are able to provide effective solutions wherever they are needed.

Comprehensive support

From engineering and design to manufacturing, installation and maintenance, we offer a comprehensive solution for explosion prevention and protection in ATEX environments.

> Explosion Risk Management Consulting

We assess your facilities and design prevention plans adapted to ATEX and NFPA regulations.

> Training in Explosive Atmospheres

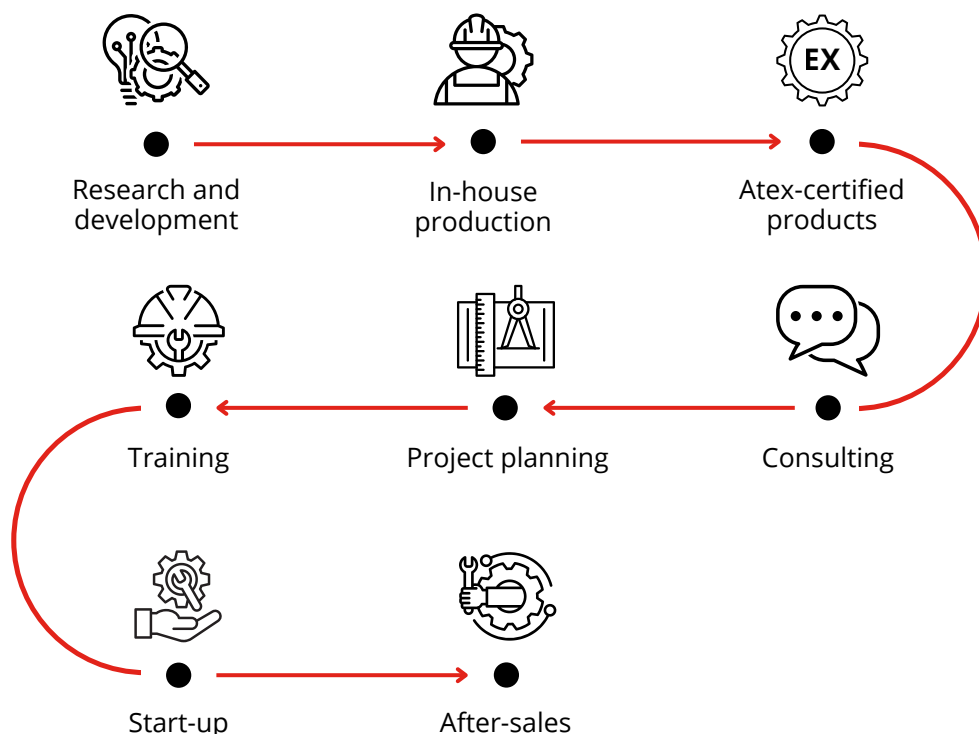
Practical programmes to train your team in the identification and safe management of ATEX risks.

> After-sales

Ongoing technical support, maintenance, and spare parts to ensure maximum reliability for your systems.



360° Solutions



Explosion Risk Management **Consulting**

At ADIX, we have over 20 years' experience helping industry minimise the risks associated with explosive dust and gas atmospheres. As specialist engineers in this field, we support our clients throughout the entire process, from risk assessment to implementing technical, organisational and documentary measures in accordance with current regulations.

Our certified technicians combine field **experience and regulatory knowledge with a practical approach** to transform legal requirements into applicable, verifiable and sustainable technical solutions for each facility.

In addition to facility assessment, we work on equipment compliance, technical file review, and adapting solutions for use in classified areas.

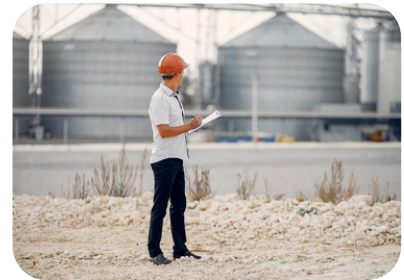


> **ATEX Directive compliance**

We can help you adapt your installation to comply with the ATEX Directives (1999/92/EC and 2014/34/EU) by providing technical and documentary solutions that go beyond mere compliance.

- ✓ This includes zone classification, DPCE, installation verification and equipment adaptation.

It is recommended for new installations, extensions or regulatory reviews.



> **Explosion Risk Assessment**



We carry out rigorous explosion risk assessments that are aligned with internationally recognised standards, such as ATEX, IECEx, NFPA 660 and 497. These assessments are always adapted to the specific processes of each plant.

- ✓ This includes a technical analysis of the process, identification of ignition sources and definition of measures.

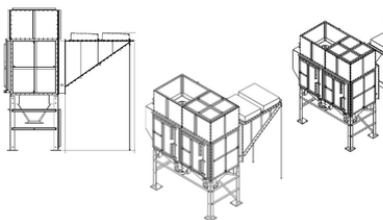
It is recommended for new plants, processes involving combustible dust and facilities that need to update their risk analysis.

> ADIX Technical Audits Ex

Our ADIX Ex audits confirm that the installation has been correctly designed and maintained, and is operating at the required safety level. It is more than just a review; it is a tool for continuous improvement.

- ✓ This includes a detailed inspection of installations in ATEX zones, including equipment, maintenance and traceability.

This is recommended as a periodic verification or as part of a continuous improvement cycle.



> ATEX Installation Design

From the project's outset, we support you in making technical decisions that anticipate risk and prevent problems in subsequent phases. This ensures regulatory compliance and safeguards your processes.

- ✓ We support you throughout the project: from prevention at the drawing board stage, to equipment selection and specification review, to technical assistance on site.

This service is recommended for new projects, extensions or redesigns in plants at risk of explosions.

> Technical Tests and Measurements

We have our own testing facility and work with specialised laboratories to obtain key data that validates design hypotheses, characterises products and confirms real-world conditions.

- ✓ This includes powder characterisation, ventilation, earthing and other relevant measurements to validate protections and classifications.

It provides the technical basis for designing protections using objective, verifiable data.



Every risk analysis, audit and technical design is carried out by people who combine regulatory knowledge, practical experience and sound judgement. **The ADIX consulting team** comprises certified specialists with international experience in sectors such as animal feed, recycling, chemicals and biomass.

They are committed to helping you make safe, justified and applicable decisions with technical expertise and meticulous attention to detail.

Training in explosive atmospheres

Protecting your plant begins with raising awareness and providing training for your team and any subcontractors who work there. In facilities where explosive atmospheres can be generated by gas or dust, it is crucial that workers are trained to recognise risks and act safely.

>> Basic training

This is essential for workers who carry out their work within ATEX zones, where it is important to be aware of the risks and the basic prevention measures.

>> Intermediate training

Aimed at technical personnel who install, repair or maintain equipment in classified areas and who need to understand the regulations, risks and procedures.

>> Advanced traininga

This is designed for designers, installation managers, safety officers and technicians who are responsible for defining processes, zones or protective measures.

Certified training under international schemes

> ISM-ATEX

Certification scheme for Explosive Atmospheres developed by INERIS (European Notified Body specialising in explosion risk safety) for the certification of persons.

> IECEx CoPC

Certification scheme developed by the IEC (International Electrotechnical Commission) for the certification of persons in the field of Explosive Atmospheres.



Your Adix-Atex Campus

Our new online training platform gives you access to technical content anywhere and at any time. You can work at your own pace and the platform will monitor your progress and provide a final assessment.

- ✓ Courses are available at different levels.
- ✓ There are explanatory videos, downloadable materials and assessment tests.
- ✓ You will receive access to the certificate once you have passed the course.
- ✓ You can purchase courses directly from the platform.

Adix solutions for industrial equipment at risk of explosion

In industry, certain types of equipment pose a high risk of explosion due to the presence of combustible dust. **Dust collectors, silos, bucket elevators and hammer mills are critical points** at which a combination of flammable material, oxygen and ignition sources could cause a deflagration.

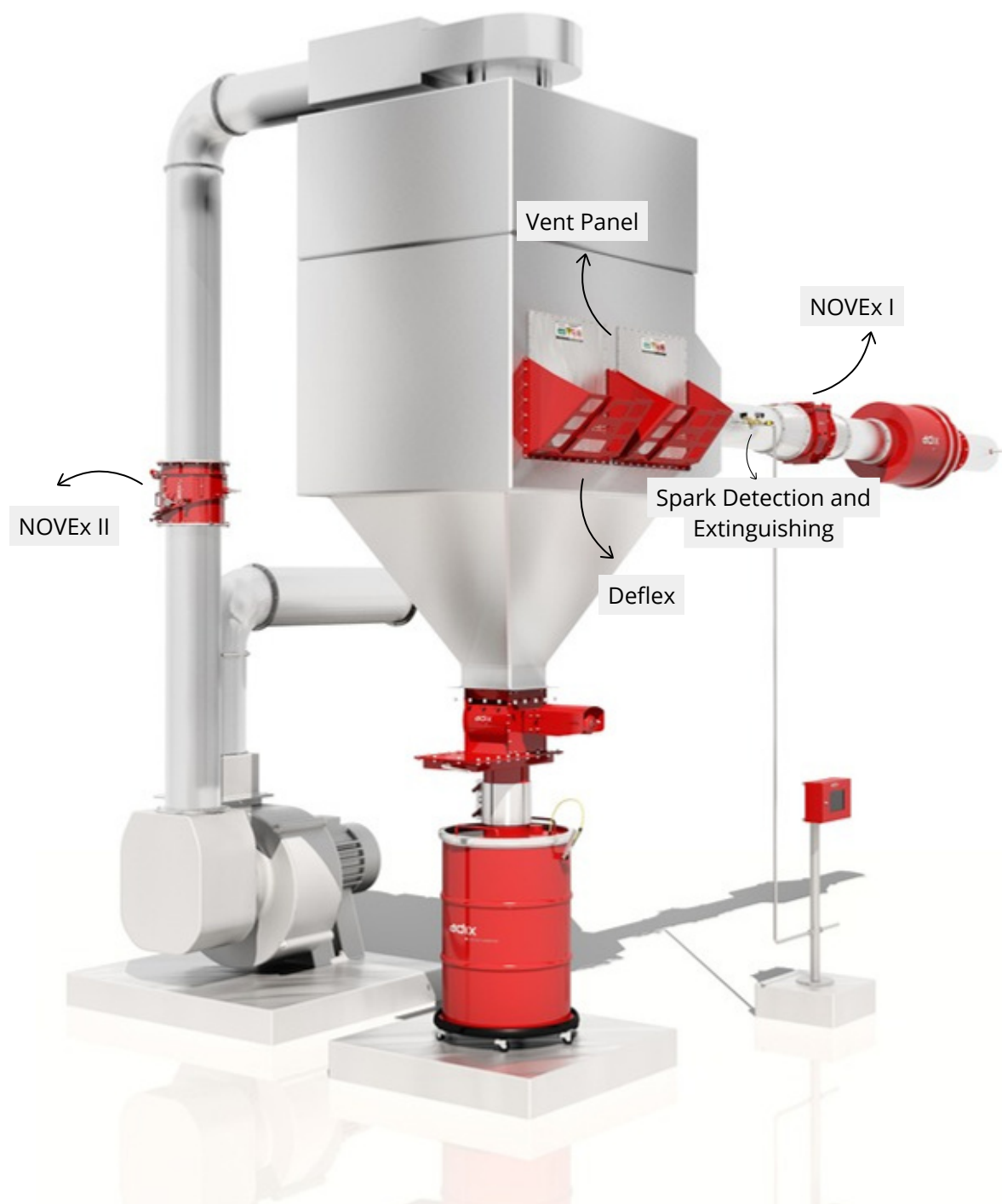
At ADIX, we reduce this risk by taking a comprehensive approach to certified explosion prevention and protection. We analyse each piece of equipment and process, identifying vulnerabilities and applying solutions to prevent explosions or minimise their effects.

Our strategy combines technical expertise, proprietary products and process knowledge. We install vents, suppression systems, isolation valves and other protective devices.

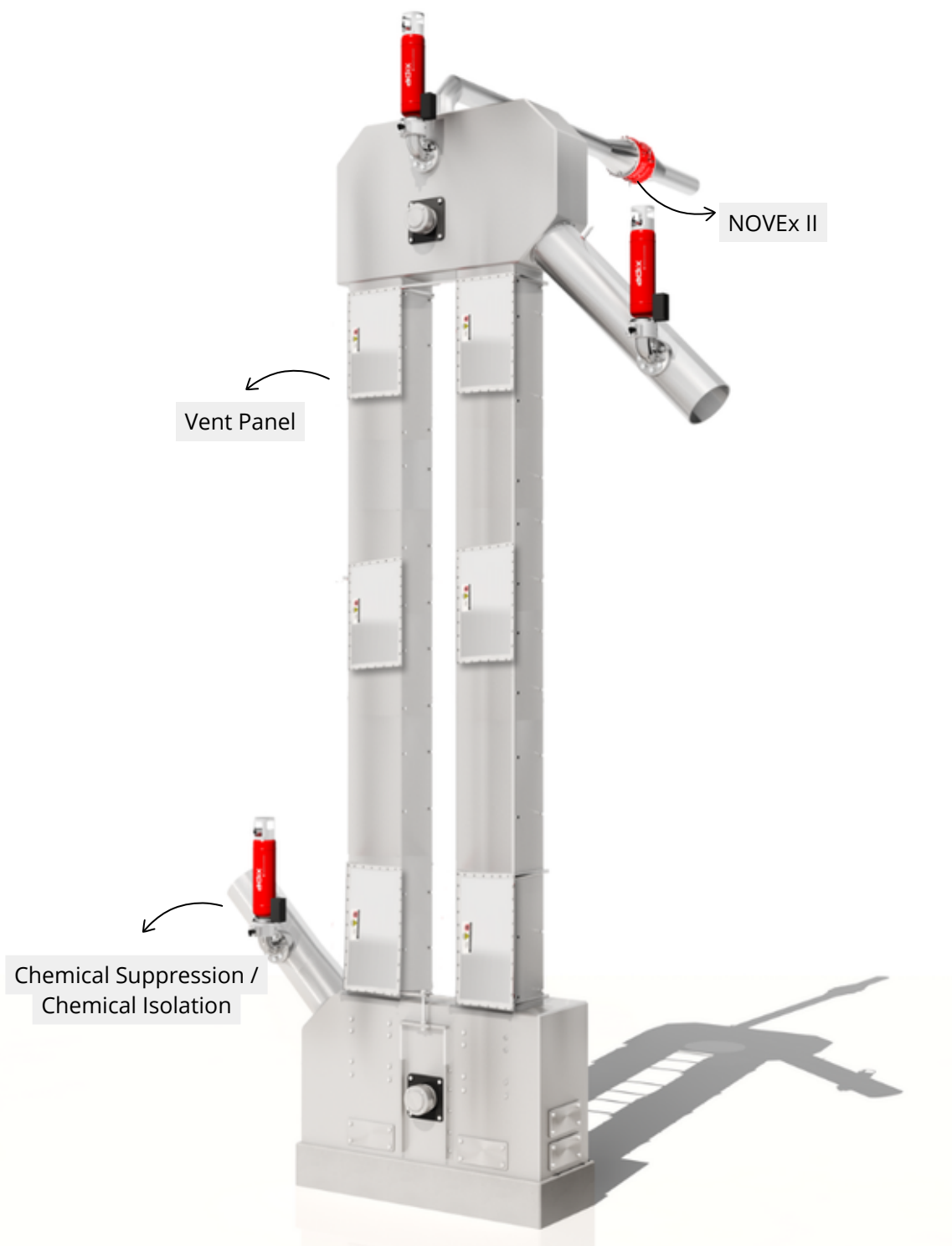
Explore our range of equipment to learn about its specific risks and how we address them.



Prevention and Protection of Explosions in **Dust Collectors**



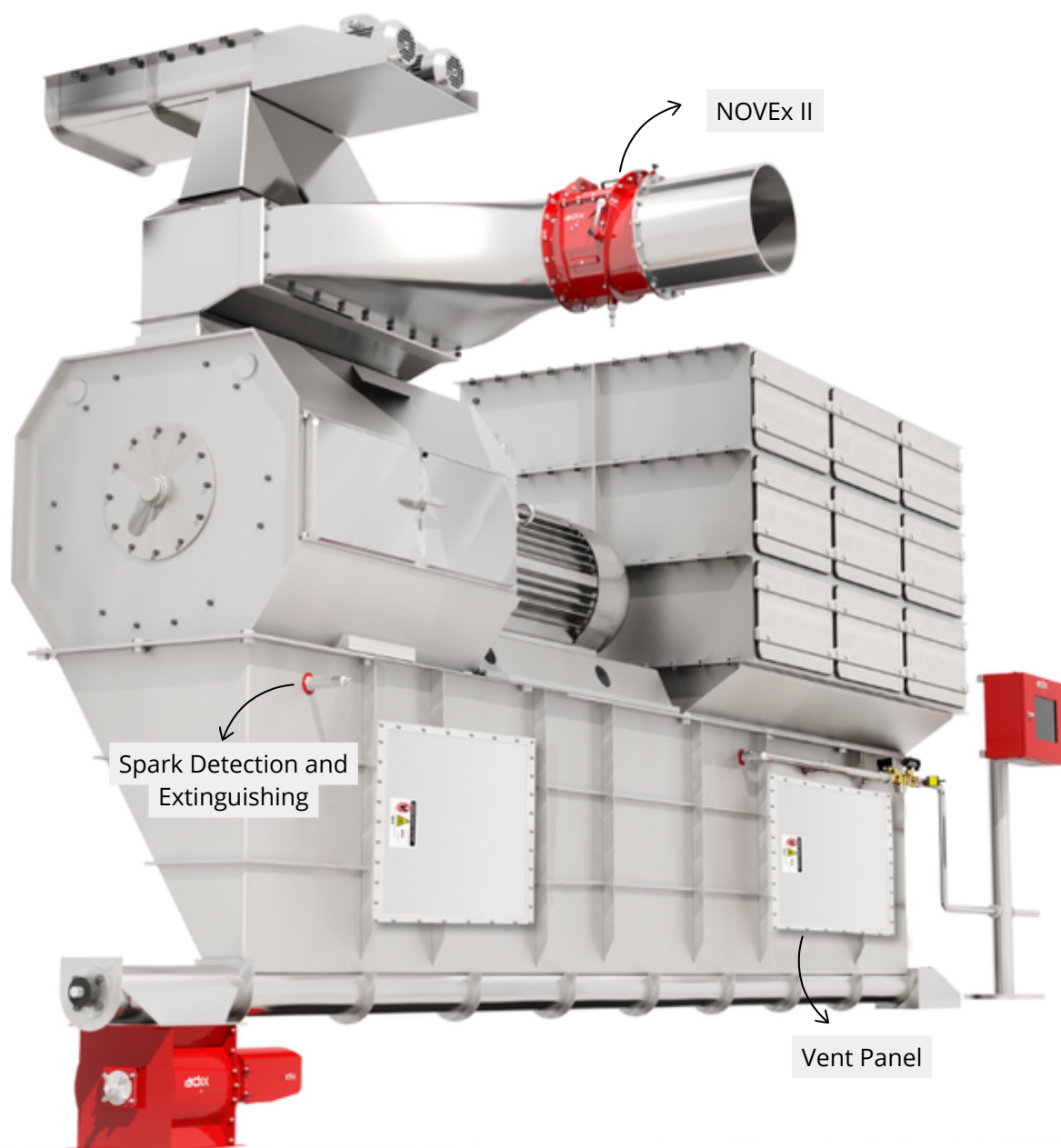
Prevention and Protection of Explosions in **Bucket Elevators**



Prevention and Protection of Explosions in **Silos**



Prevention and Protection of Explosions in **Hammer Mills**



Explosion prevention

At ADIX, we provide explosion prevention systems that ensure the safety of facilities and processes, and guarantee maximum reliability in critical sectors such as food production, chemicals and pharmaceuticals.



> Bucket Elevator Monitoring System

The bucket elevator control system enables the monitoring of movement, belt alignment, plugs and bearing temperature, as well as ensuring the correct operation of its various detectors.

ATEX marking: ExII3D, enabling installation on the elevator and reducing the need for wiring.



> Truck Grounding System

The loading and unloading of non-conductive liquids or powders from lorries can generate electrostatic charges. If sufficient energy is generated, there is a risk of explosion.

Tanker lorries have an earthing system that provides a safe electrical ground connection during the loading and unloading of bulk liquids or solids.



> Spark Detection and Extinguishing

Incandescent particles or sparks can cause fires and explosions in mechanical equipment, as well as in pneumatic transport systems and dust collectors.

The spark detection and extinguishing system effectively extinguishes sparks and smouldering particles with a fine spray of water, without affecting the production process.

Explosion protection

Our systems are designed to contain and mitigate the effects of an explosion within milliseconds. These certified solutions ensure the protection of people, processes and equipment.



> Vent Panels

Explosion protection device in enclosed spaces, based on the release of explosion overpressure to a safe area, thereby preventing the design strength of the equipment from being exceeded.



> Flamecatch

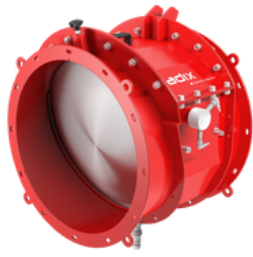
This explosion protection device is based on releasing explosion overpressure and cooling flames, thereby reducing the effects of explosions in enclosed spaces inside buildings.



> NOVEx – Flap Isolation Valve

The NOVEx explosion isolation damper effectively prevents explosions from spreading through ducts, thereby protecting the rest of the installation's equipment.

During normal operation, the damper remains open to minimise pressure loss and maintain system performance. In the event of an explosion downstream (e.g. in a filter), the expansion of the combustion gases and the resulting overpressure will push the damper shut. This creates a barrier that isolates and protects the rest of the equipment in the upstream installation.



> NOVEx II – Flap Isolation Valve

The flap valve is a passive, mechanical explosion isolation system. In the event of an explosion, the excess pressure closes the flap, thereby preventing the explosion from spreading to the rest of the installation. The design of the flap prevents dust accumulation.

It can be used with all types of organic, synthetic, and metallic dust. It can be installed in vertical, horizontal and pull/push configurations.



> ExPINCH Active Isolation Valve

The ExPinch isolation system can isolate an explosion within a piece of equipment or container.

It requires continuous monitoring of static and/or dynamic pressure sensors, which send a signal to the line controller. This activates a solenoid valve that releases compressed air into a boiler, causing the inner rubber jacket to close immediately.



> Ventex® Isolation Valve

It is used in installations where flammable dusts (including metal dusts), gases, or hybrid mixtures are processed.

It provides protection in one or both flow directions without the need for external energy. It is typically used to provide explosion isolation in pressurised equipment, or to effectively protect air inlet openings against pressure and flame discharge.



> Chemical Suppression / Chemical Isolation

The suppression system prevents high pressures caused by dust explosions from developing inside industrial equipment that is not designed to withstand them.

Chemical isolation systems are designed to prevent flames from spreading by discharging an extinguishing agent, which stops them spreading through the system's ducts.



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