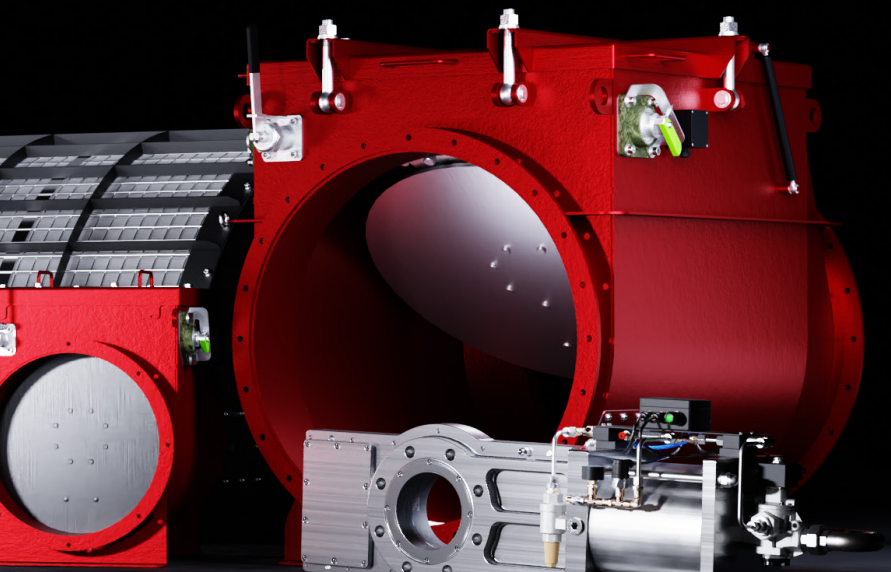
EXPLOSION PROTECTION

products portfolio

ATEX CENTER

PRODUCTS



FIRE AND EXPLOSION PROTECTION

Rational Industrial Safety Systems – that's RSBP. It's also the main idea that gave birth to this company in 1992. The vision has become a reality and we are proud to say that today RSBP is the market leader in explosion and fire protection of industrial plants. Our belief is that employees are the core of any company, anywhere in the world. Therefore, it is necessary to protect them and create safety conditions for them so that they can do their job fully and without fear.

We also have industrial facilities themselves in mind - our expert assessment of technological processes, our design of fire and explosion protection, expert installation and professional service all ensure that no irreversible damage occurs to property or assets. All our products and equipment are tested and comply with the applicable legislation in the Czech Republic and abroad – ATEX directive, VDI and NFPA regulations.

rsbp®
we limit risk

VENT PRO

explosion venting devices

The explosion venting devices are pressure sensitive and are one of the most basic types of explosion protection. When the static opening pressure is exceeded, the explosion venting device opens and the resulting explosion and pressure are released into the surrounding area in a controlled way without serious damage to the structure of the protected technology.

VENT PRO is an effective and economical solution providing protection against damage caused by combustible dust explosions.

Benefits & applications

- **dust class St1 / St2 / St3, hybrid mixtures, metallic / non-metallic dust**
- **static opening pressure variability**
- **operating temperature up to 240 °C**

- wide range of dimensions, specific dimensions on request
- abrasion resistance, weathering resistance
- easy installation, minimal maintenance
- accessories:
- opening indicators, thermal insulation, installation frames, flame deflector (DivEx)

✓ **EN 14797** ✓ **NFPA 68**

FLEX

flameless explosion venting devices

The FLEX II & FLEX PRO (S) flameless explosion venting devices are effectively and safely vent the explosion without the flames or pressure freely spreading to the surrounding area. Protecting production equipment with the FLEX II & FLEX PRO (S) devices is advised when venting explosions to a safe zone the conventional way is impossible, or there is not enough space for safely venting the explosion to the surrounding environment.

Benefits & applications

- **+ dust class St1 / St2 / St3**
- **+ recommended for facilities with metallic and non-metallic dust, including melting, fibrous and coarse-grained dust**
- **+ extremely low MIE, MIT**
- **+ effective flame and temperature capture**

- suitable for technologies with higher hygiene requirements
- use in outdoor and outside zone
- possibility of curved design
- minimum safety zone requirements to better facilitate the movement of personnel
- suitable for vertical conveyors
- standardly equipped with an explosion venting device with an opening indicator

✓ **EN 16009** ✓ **NFPA 68**

B-FLAP I PRO

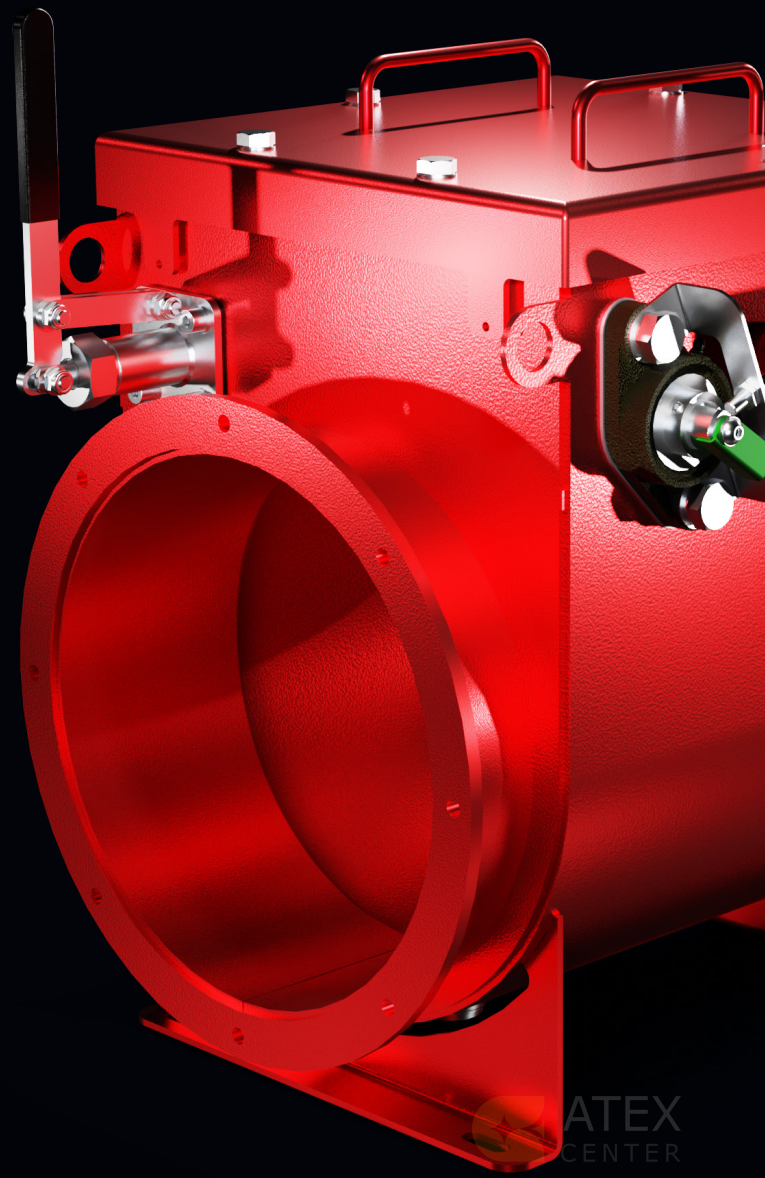
explosion isolation flap

The B-FLAP I PRO is a mechanical device designed to prevent flame and pressure transfer between technologies during an explosion. The B-FLAP I PRO is supplied with an RPD mechanism which reduces pressure losses in the piping system by securing the sealing part in an open-locked position. The flap isolates the explosion along the entire piping route, so it is suitable for inlet and outlet piping to and from the filter, cyclone, mill, dryer and others.

Benefits & applications

- **+ dust class St1 / St2 / St3 (metallic, non-metallic dust)**
- **+ horizontal / vertical installation**
- **+ suitable for push and pull system**
- **+ low MESG value**
- **+ possibility of application on pipes with elbows**

- certified for extremely low MIE and MIT values
- high-pressure resistance
- optional stainless steel and anti-abrasive treatment
- 16 dimensional designs
- with optional accessories:
  J-Box, dust sensor, position indicator, intrinsically safe relay, counter-flanges



✓ **EN 15089** ✓ **EN 16447** ✓ **NFPA 69**

GATEX PRO

quick-acting slide valve

The GatEx PRO quick-acting slide valve is an explosion isolation device used to completely close off the pipeline in the event of an explosion. The GatEx PRO is suitable for applications in pneumatic conveying, extraction systems, as well as for explosion isolation between technologies or for process units designed for maximum explosion pressure.

Benefits & applications

- **+ dust class St1 / St2 / St3 (metallic, non-metallic dust)**
- **+ extremely fast response time**
- **+ pressure resistance up to 21 bar**
- **+ installation distance up to 40 meters**

- fail-safe design
- GatEx PRO activation:
  pressure detector, optical detector or explosion venting device
- 7 dimensional designs

✓ **EN 15089** ✓ **NFPA 69**

HRD SYSTEM

explosion suppression system

The HRD (high rate discharge) system is used for explosion suppression and is also ideal for use in technologies with increased hygiene requirements. Its function allows it to effectively suppress the explosion, thus limiting the explosion pressure inside the technology below its pressure resistance and preventing its destruction. The HRD system is ideal for use in combination with an explosion isolation device or a chemical explosion isolation system – HRD barrier.

The HRD explosion suppression system is FM approved according to Approval Standards 5700.

Benefits & applications

- **+ dust class St1 / St2 / St3 (metallic, non-metallic dust, hybrid mixtures)**
- **+ extremely fast response time**
- **+ explosion suppression for toxic and hazardous materials**
- **+ installation onto vibrating technology**
- **+ installation without the need for a safety zone around the protected technology**
- **+ CAN-BUS communication**

- hygienic design of components
- independent archiving of detection data from detectors
- variability of components

✓ **EN 14373** ✓ **NFPA 69** FM APPROVED

HRD BARRIER

chemical explosion isolation

The HRD barrier is an active system for preventing the transmission of an explosion. HRD barrier is characterized by the extremely rapid introduction of an extinguishing agent into the pipeline connecting to the protected technology, which stops the spread of the incipient explosion in the pipeline.

The HRD barrier is also ideal for use in equipment with increased operational hygiene requirements, such as those in pharmaceutical or the food industry. The HRD barrier can be used alone or in combination with an explosion suppression system or explosion venting devices.

Benefits & applications

- **dust class St1 / St2 / St3 (metallic, non-metallic dust, hybrid mixtures)**
- **very fast system response**
- **solution for isolating an explosion of toxic and otherwise hazardous materials**
- **zero pressure loss in the pipeline**
- **usage for large dimensions and complicated pipe geometries**

- variability of components
- suitable for indoor and outdoor applications
- independent archiving of detection data from detectors

✓ **EN 15089** ✓ **NFPA 69**

ELEVEX

system for the protection of conveyors and bucket elevators

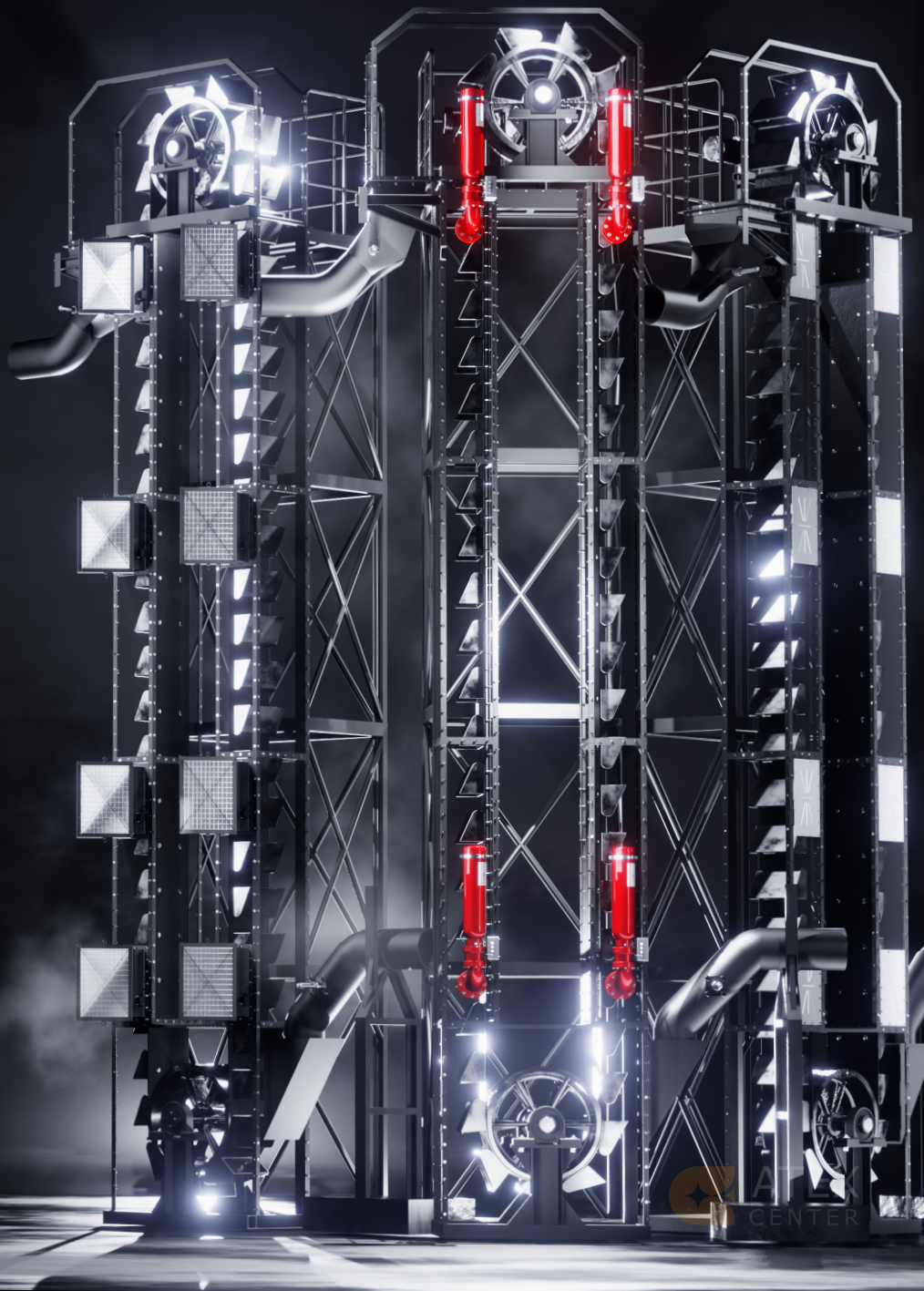
The ELEVEX system is a unique solution in the form of a comprehensive certified explosion protection system designed specifically for a given type of conveyor or elevator. This makes it suitable for both indoor and outdoor applications. The variability of the system lies in the possibility of using a wide range of components for explosion protection. ELEVEX provides maximum protection at minimum cost without the need for any structural modifications.

Benefits & applications

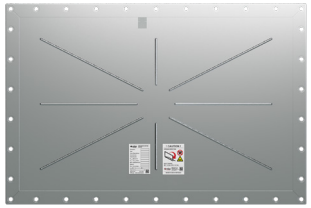
- **+ explosion protection tailored to the protected technology**
- **+ unique certified protection system**
- **+ ideal for bucket elevators, horizontal and inclined conveyors, redlers, and circular shaft profile elevators**
- **+ tested for intended use**
- **+ suitable for high elevators**

- independent archiving of detection data from detectors
- combination of explosion venting, suppression and isolation
- minimum requirements for pressure resistance of technology

✓ **VDI 2263 part 8** ✓ **NFPA 61** ✓ **CEN/TR 16829**

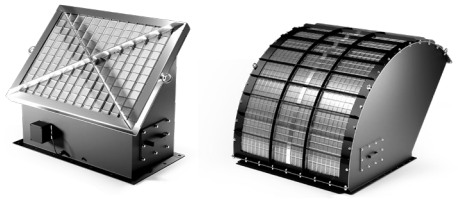


Conventional explosion venting



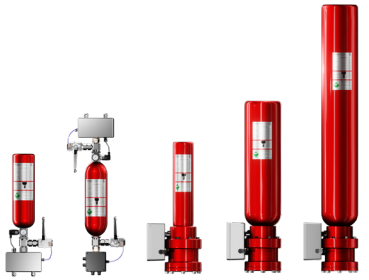
During explosion venting, the pressure wave and flame front are expected to be released through the vent area into the safe area. Such protection is used where explosion venting is possible – for example, outdoors and in areas with limited movement of personnel.
Explosion isolation is used on the inlet and outlet pipes of the elevator to prevent the flame front and pressure wave from spreading to downstream equipment.

Flameless explosion venting



FLEX F PRO or FLEX R PRO are used to prevent the spread of flames, pressure and heat fronts. At the same time, the protective device reduces the explosion pressure to the lowest possible level. It is used where conventional explosion venting cannot be used because the conveyor is inside a building or in areas with higher movement of personnel. Explosion isolation is used on the inlet and outlet pipes of the elevator to prevent the flame front and pressure wave from spreading to downstream equipment.

Explosion suppression



Explosion suppression is the most common method of protection against the devastating effects of an explosion in bucket elevators. Explosion suppression effectively eliminates the explosion at an early stage and at the same time reduces the explosion pressure inside the conveyor below the pressure resistance limit of the conveyor, thus preventing it from being destroyed.
Explosion isolation is used on the inlet and outlet pipes of the elevator to prevent the flame front and pressure wave from spreading to downstream equipment.

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