

HRD EXPLOSION SUPPRESSION SYSTEM

fire and explosion protection



This is a tested system for explosion suppression - the HRD system efficiently provides protection of industrial equipment related to explosion danger.

Suppression of combustible dust explosions is necessary to protect industrial equipment in an enclosed or almost enclosed vessel from an increase of explosive pressure which could result in catastrophic loss of life or property.

A dust explosion must be detected and then suppressed in the very early stage of development to provide effective protection.

HRD System

This system is suitable for protection of: silos, powder material storage tanks, filtration units, cyclones, mills, elevators, mixers, crushers, dryers, and other industrial equipment.

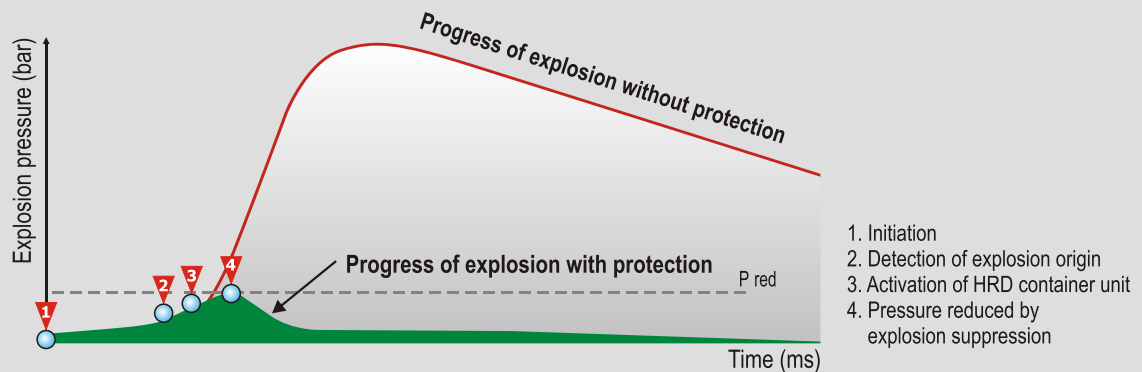
Function of the system:

The principle of operation of the HRD system (HRD - high rate discharge) is detection of pressure rise during the initial stage of the explosion inside the protected equipment, followed by fast injection and homogeneous distribution of an extinguishing agent into a protected space (within milliseconds). This fast reaction time of the system is necessary to effectively suppress an explosion. Explosion pressure inside of the equipment is limited to a lower value that is less than the pressure resistance of the equipment, therefore, the protected equipment is not breached.

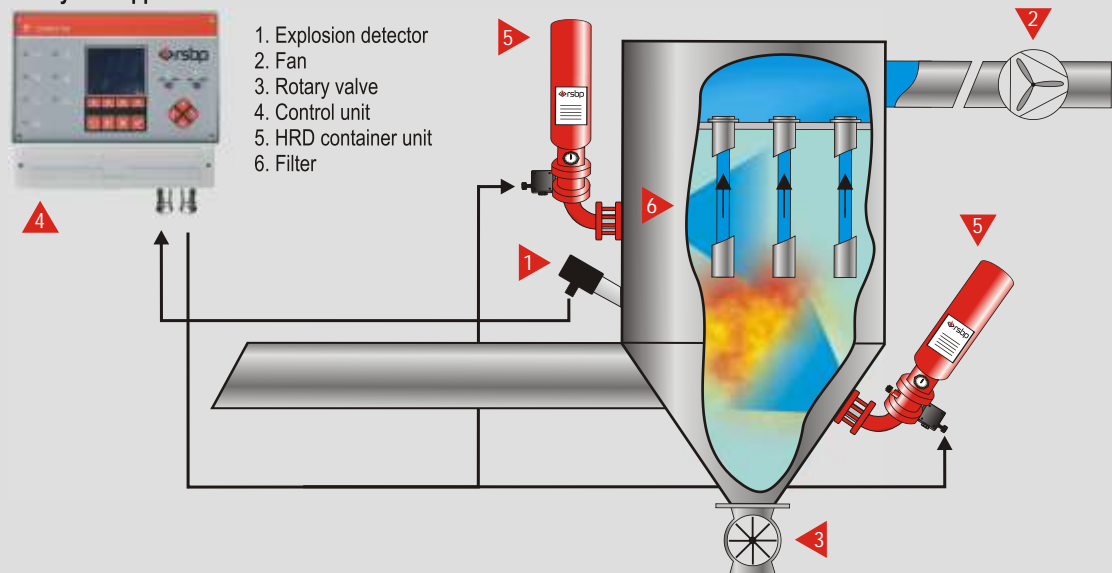
ADVANTAGES

- » time tested technology
- » fast reaction time of the system
- » high reliability of the system
- » independent archiving of data coming from detector
- » wide range of system components
- » customization according to customer wishes
- » use for indoor or outdoor areas
- » simple and fast recommissioning of components after activation
- » the system is easy to handle and to transport
- » the system can be used for toxic or otherwise dangerous materials

Increase of explosion pressure depending on time



HRD system application on a filter



Basic parts of HRD system:

Optical and pressure detectors



Combined explosion detector



Flame detector



Spark and flame detector

Control units



CONEX



CIE 01



CIE 02

HRD container units



5l - 1 valve



5l - 2 valves



8l - 3" valve



20l - 3" or 4" valve



50l - 3" or 4" valve

Nozzles

- Wide assortment of stainless and brass nozzles
- Nozzle sizes 1", 2" and 6.5"

Application examples



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