Whether you're building a new facility or making changes to an existing process, DenTech can help you integrate appropriate measures to manage combustible dust.

EXPLOSION PROTECTION

CAPABILITIES

As a systems integrator, DenTech does more than buy parts. We'll develop a custom solution that fits with your facility's system and processes.

We'll start with identifying combustible dust hazards in your facility. After reviewing your dust collection system, we'll recommend improvements and mitigation devices for your production process.

WHY WORK WITH DENTECH?

- Turnkey solutions
- Single point of responsibility
- One purchase order
- Custom solutions to meet your needs
- 35+ years of expertise

EXAMPLES OF MITIGATION DEVICES FOR EXPLOSION PROTECTION:

EXPLOSION VENT

In the event of a deflagration, these vents are designed to rupture at a specific pressure to minimize damage and direct the fireball and pressure into a safe area.

FLAMELESS EXPLOSION VENT

This vent relieves pressure and includes a steel mesh to contain the flames. Flames are extinguished instead of moving outside the vessel. Steam may escape from the vent.

EXPLOSION PRESSURE DETECTOR

These devices monitor the system for conditions that indicate a potential explosion, such as a sharp increase in pressure over a short amount of time. The detector sends a signal to selected explosion protection or suppression devices.

EXPLOSION SUPPRESSOR

When an emerging explosion is detected, the suppression tank receives a switching signal and rapidly releases pressurized extinguishing agent into the protected area.
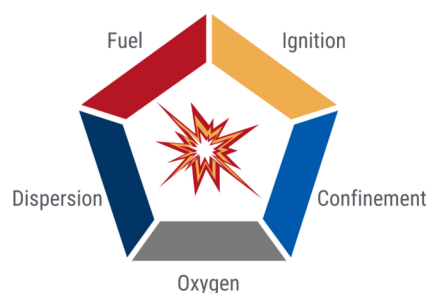
ISOLATION VALVE

In the event of a deflagration, the isolation valve will close and block the pressure wave from moving back through the ductwork, into the building, and into workers' areas.

INDUSTRIES WITH COMBUSTIBLE DUST HAZARDS INCLUDE:

- Agriculture
- Chemical
- Food
- Grain
- Plastics
- Wood
- Textiles
- Metal processing
- Pharmaceuticals

Fuel — Ignition — Confinement — Oxygen — Dispersion

EXAMPLES OF FIRE PROTECTION DEVICES:

DONALDSON TORIT® POWERCORE® TG SERIES DUST COLLECTOR

The TG series is designed for thermally generated dust, such as in metal fabrication applications. The TG series offers many benefits including energy savings, quiet motor, smart controls, smart filter cleaning, filter packs that are easy to change out, and high performance flame-retardant Ultra-Web® filter media.

CARBON DIOXIDE (CO2) SYSTEM

CO2 systems suppress or extinguish a fire by releasing CO2 into the protected area to reduce the oxygen level to a point where combustion cannot occur.

Because CO2 is a gas, there's no residue or clean-up after the system discharges. This makes CO2 systems ideal to use in place of water sprinklers in environments with sensitive equipment, such as server rooms, engine rooms, or data centers. But since high concentrations of CO2 are hazardous to humans, CO2 systems are used only in areas that are not occupied by people.

Kidde offers High Pressure CO2 systems and optional smoke detectors as standardized packages to be used with Donaldson Torit dust collectors.

FIRETRACE™ FIRE DETECTION AND SUPPRESSION

Firetrace™ systems have specially designed tubing to automatically detect fire at the source. The system activates to release clean chemical agents that are safe for people, equipment, and the environment. Firetrace systems are independent of power, water, and electricity, which makes them ideal for use with high-risk equipment, like CNC machines, electrical cabinets, vehicles, and data centers.

SPARK ARRESTOR

A spark arrestor is a passive fire protection device that is connected to ductwork in dust collection systems. Plates within the spark arrestor cause air turbulence. When sparks enter the spark arrestor, the turbulence slows them down, so they lose heat.

COMPRESSED AIR DUMP VALVE

The compressed air dump valve ensures pneumatic components are exhausted and de-energized as quickly as possible in an e-stop situation. Exhausting the compressed air from the system prevents further machine movements. Compressed air dump valves are an add-on for the AyrDyne monitoring system HMI.

SUPPLIERS

Our integrated fire protection and explosion protection solutions use high quality components from leading companies, including:

Donaldson FILTRATION SOLUTIONS

BOSS PRODUCTS LLC

Fagus GreCon

Fike

FIRETRACE International

FLAMEX® INC.

Kidde Fire Systems

LET'S TALK

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