PRODUCT CODES: 56501, 56502, 56503 & 56504

# Spark Detection and Extinguishing System

## APPLICATIONS

The **Raptor Spark™ Detection** and **Extinguishing System** is an **FM APPROVED safety device** that is designed to detect and extinguish sparks and glowing embers that are traveling through a duct system. The hazard is detected by infrared sensors and extinguished with water spray nozzles within milliseconds of detection. The **High Power Raptor Spark™ Detection** control module has the capacity to receive hazard alert signals from multiple components (Dust Probes & Thermal Probes) and monitor multiple duct-zones and vessels.

The **Raptor Spark™ Detection and Extinguishing System** is an essential Fire Protection, Fire Isolation and Diversion device that is commonly installed with **EcoMAXX® High Speed Abort Gates**, **FireBreak Shutters**, **EcoMAXX®/ VigilEX Explosion Vents** and explosion certified **EcoMAXX®/VDL Rotary Valves**. Typical automatic functions include hazard detection, system shut-down, isolation/abort, and extinguish and/or suppression.

## *CERTIFICATIONS & STANDARDS*

***Models P and MA***

***ATEX EN 1366-2, EN 13501***

***CSI 1643FR, REI 120-RE 120***

***CE***

## *STANDARD FEATURES*

- Output for Pre-Alarm
- **4-20mA** proportional output
- **IP65** Enclosure
- Output for Alarm
- Bus **RS485**

## *OPTIONAL FEATURES*

- Magnetic
- Pneumatic
- Fusible Link

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## Raptor Spark™ Detection & Extinguishing Control Unit RS-PCUSP1L

The **Raptor Spark Detection & Extinguishing Control Unit (RS-PCUSP1L)** is designed to minimize the risk of fire and explosion in dust filtration and pneumatic conveying systems. This control unit communicates with a variety of components to monitor and protect up to six individual zones. **The Control Units, RS-PCU1610SD & RS-PCUSP1L, are FM Approved**.

## Raptor Spark™ Extinguishing Assembly RS-EXT02

The **Extinguishing Assembly (RS-EXT02)** is designed to work in conjunction with the **RS-CUSP1L control unit** and **RS-SD02 Spark Detectors**. When the control module gets a signal that a hazard has been detected, the extinguishing assembly is activated. A water spray is initiated inside the piping system to extinguish sparks or glowing embers that could cause fire or explosion. **The Extinguishing Assembly (RS-EXT02)** is **FM Approved and ATEX Certified**.

## Raptor Spark™ Dust Probe RS-DP03

The **Dust Probe (RS-DP03)** is a charge displacement probe that uses the principle of the displacement of the electric charge in the electrode. It signals the **RS-PCUSP1L Control Unit** when there is an increase in the concentration of dust levels which could potentially indicate the rupture or ineffective operation of dust filters and/or dust bags. **The Dust Probe (RS-DP03)** is **FM Approved and ATEX Certified**.

## Raptor Spark™ Thermal Probe RS-TP02

The **Thermal Probe (RS-TP02)** is designed to work either as a thermovelocimetric output (rapid raise in temperature in a short amount of time), or as a thermostatic output (fixed temperature threshold) to alarm the **RS-PCUSP1L Control Unit** of potential fire hazards in the ductwork, dust collector units, hoppers, cyclones and etc. The **Thermal Probe (RS-TP02)** is **FM Approved and ATEX Certified**.

## Raptor Spark™ Spark Detector RS-SD02

The **Spark Detector (RS-SD02)** is designed to work with the **RS-PCUSP1L Control Unit**. The **Spark Detector** uses advanced technology and circuit, sensitive to infrared light to detect sparks, flames, and incandescent material that passes in front of its optical element. The **Spark Detector (RS-SD02)** is **FM Approved and ATEX Certified**.

## Raptor Spark™ Test Lamp RS-TL02

The **Test Lamp (RS-TL02)** is designed to work in association with the **Spark Detectors (RS-SD02)**. The **Test Lamp** provides a function check to ensure the cleanliness of the **Spark Detector** lenses by emitting high infrared radiation into ducting or pneumatic conveying lines across from the spark detectors to simulate a spark or glowing ember in the line. The **Test Lamp (RS-TL02)** is **FM Approved and ATEX Certified**.

## EcoMAXX® Firebreak Shutter EM-FBS-00

The **FireBreak Shutter** is engineered to isolate fires and fire hazards in process ventilation and dust collection applications. The **Fire Break Shutter** can be activated by the **EM-FCS-CU1610 Control Unit** or **RS-PCUSP1L** via **Spark Detection** or sensing activation by **Thermal Probe**.

## Water Pressure Booster Pump RS-CPR

The **Raptor Spark™ Water Pressure Booster Pump RS-CPR** was designed to regulate water pressure going into the extinguishing unit. It is the best solution for facilities that have over or under pressure water lines available for installation of the **Spark Detection and Extinguishing System**.

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# APPLICATION AND GUIDELINES

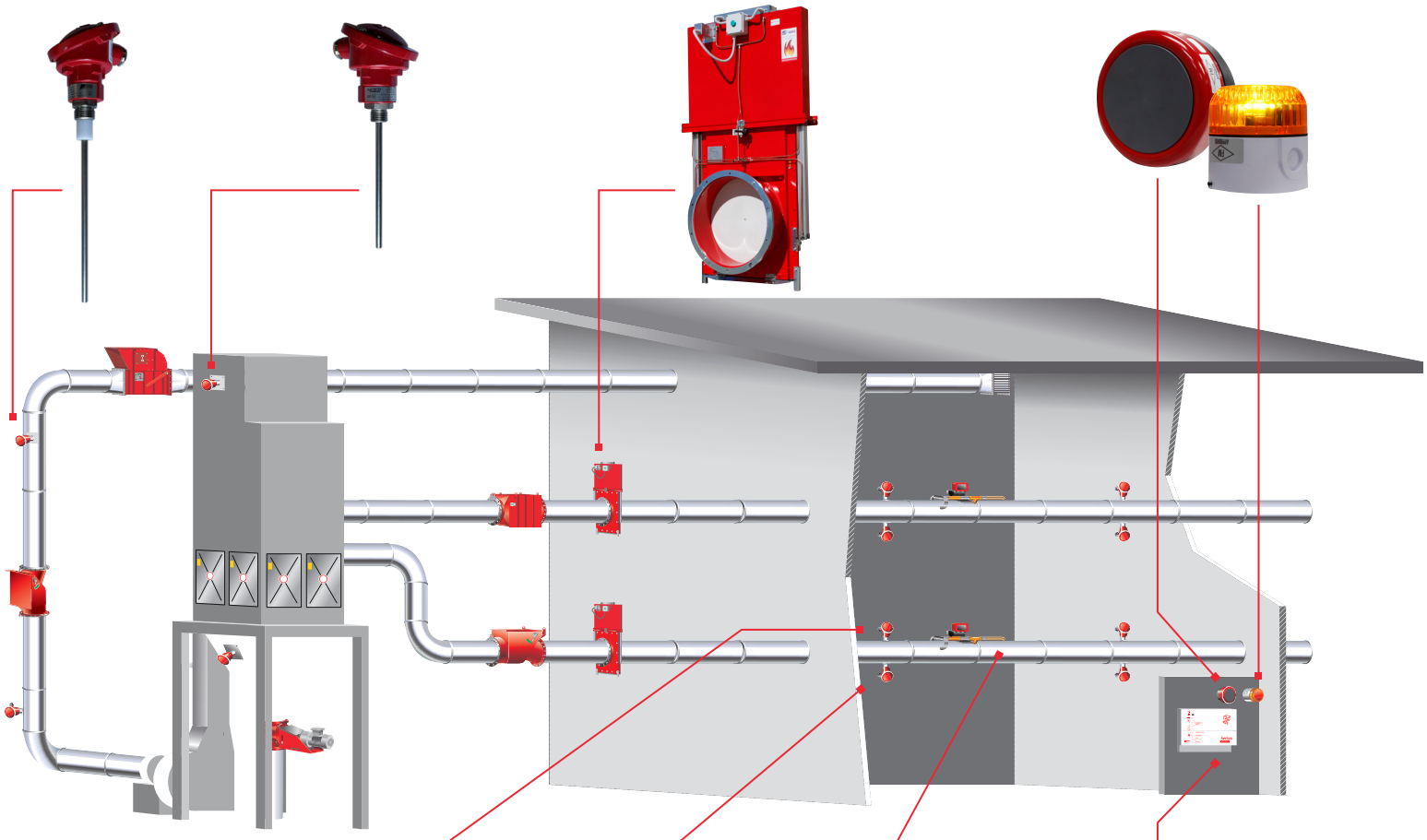
Raptor Spark™
*Dust Probe*

Raptor Spark™
*Thermal Probe*

Ecomaxx®
*FireBreak Shutter*

Raptor Spark™
*Alarm Bell*

Raptor Spark™
*Alarm Light*



Raptor Spark™
*Spark Detector (Infrared Sensor)*

Raptor Spark™
*Test Lamp*

Raptor Spark™
*Extinguishing Assembly*

Raptor Spark™
*Spark Detection and Extinguishing Control Unit*

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6729 GUADA COMA DR. - SCHERTZ, TX 78154 -USA - Main # 210-664-4200
info@bossproductsamerica.com