

Cyclone Plug-Up Detection
with Infrared technology



GreCon®

Cyclone Plug-Up Detector

The Problem

When material is collected in cyclone separators, there may easily be a blockage before the rotary valves. Should this happen, material will immediately escape from the air exhaust of the cyclone, which may cause severe environmental pollution. Downstream filters may become unusable and a production shut-down is inevitable.

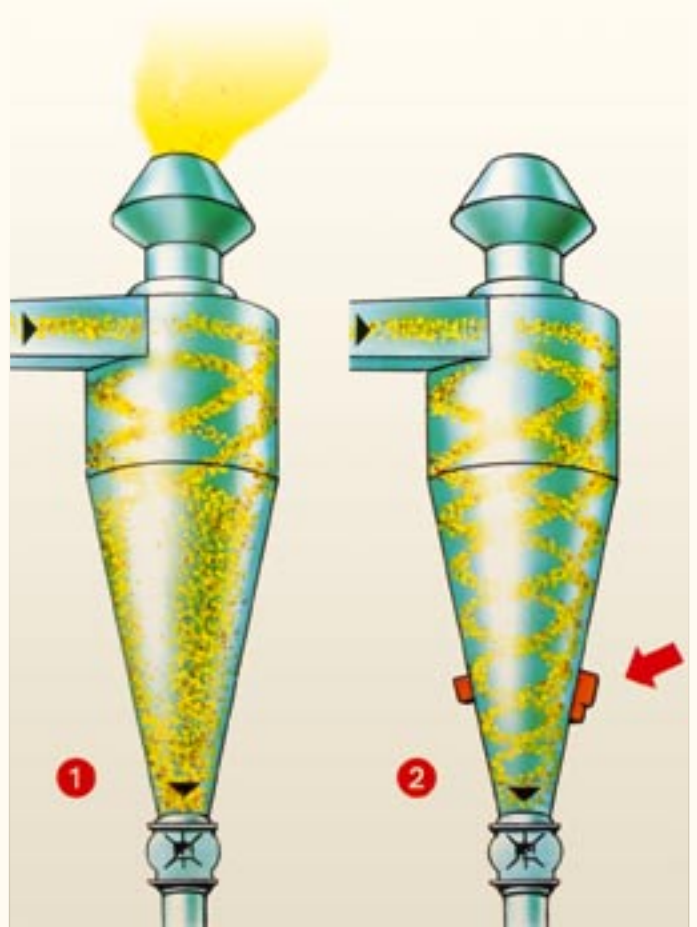
The solution

An infrared transmitter, which sends pulses to an opposing infrared receiver, is mounted onto the wall of the cyclone. Due to the high sensitivity of the receiver, the infrared radiation is detected even through dense material flow. Should troubles occur and the cyclone get blocked in the monitoring area, the infrared radiation is interrupted; the system will give an alarm, and the pneumatic system may be immediately shut down. The blockage is minimised and can be quickly removed, downstream filters are not affected, and a production interruption will be of short duration.

Design and Installation

The Cyclone Plug-Up Detector ABC 7 consists of one IR transmitter and one IR receiver per cyclone, which can be easily mounted onto the cyclone wall. Only a hole of 40 mm diameter is required for installation. If process temperatures exceed 60° C, the transmitters and receivers are equipped with fibre optic cables. Thus, cyclones with process temperatures of up to 350° C can also be monitored. Air purge adapters are available for special cases.

The control console can house a maximum of 12 monitoring zones and can be adapted to the local requirements by



Function Principle

means of plug-in cards. Two alarm contacts are provided per monitoring zone to activate alarms and additional measures.

1 Cyclone blocked

Emission of dust from the air exhaust of the pneumatic system, causing environmental pollution and production shut-down.

2 Cyclone monitored

Immediate alarm and shut-down of the pneumatic system in case of trouble. Production interruptions are reduced and environmental pollution is avoided.