

ADVANCED GRAIN SPOILAGE DETECTION

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General description

The iGRAIN SNIFFER is an advanced CO2 sensor system that will detect stored grain spoilage at an early stage. It supplements temperature monitoring, and will often find a HOT-SPOT before temperature monitoring.

It is based on detecting any unwanted biologic activity from insects, fungus etc. in the stored grain.

Because CO2 is a gas it will migrate through the grain mass so only one sensor is required in each bin or storage cell.

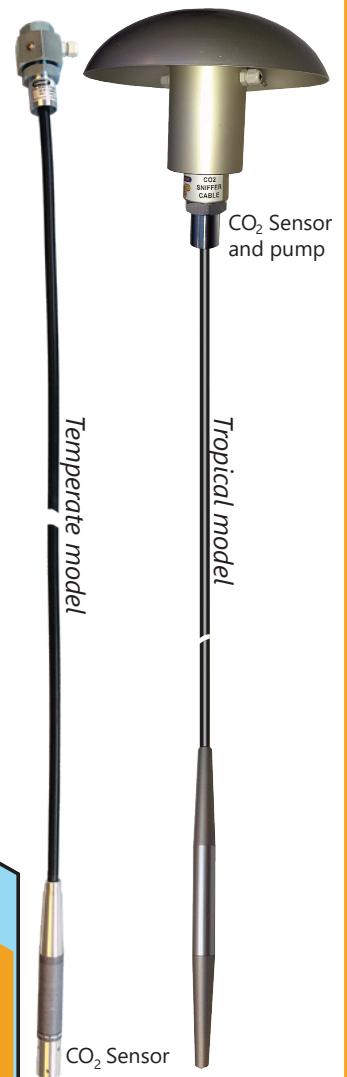
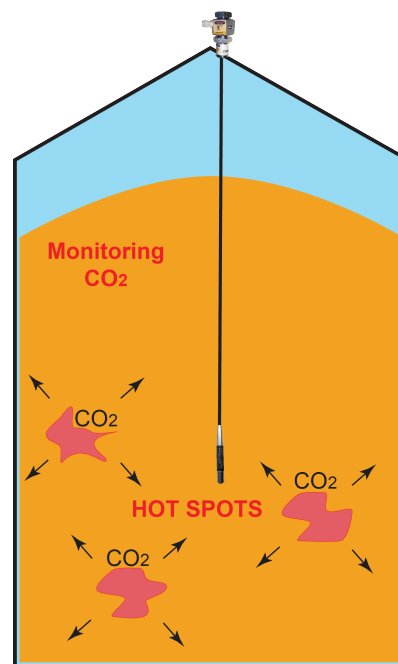
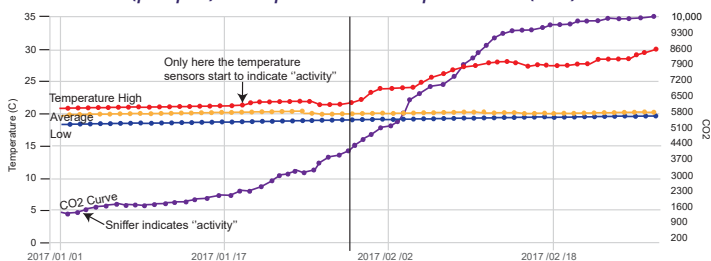
Because the generation of CO2 from unwanted biologic activity is rather small, and because the ambient level of CO2 changes, a sophisticated technology is required to detect the rise in CO2 levels in the early stage.

The iGrain CO2 sensor cables comes in two versions:

Version 1: extracts the air from inside the grain by vacuum to the CO2 sensor located in the cable head compartment.

Version 2: Measures the content of CO2 by a sensor(s) placed on the cable and inside the grain.

The curves indicates fast detection of increasing CO2 level (purple) compared to temperature (red)



ADVANTAGES

- **Earliest possible grain spoilage detection**
- **Reduces losses**
- **Improves possibilities for management to take correct decisions**

Technical Specifications

Version 1 comes in 2 different models for application in either tropical or temperate climate. Both models communicate via RS-485, Modbus with the iGRAIN MANAGER SOFTWARE.

Tropical Model Very accurate spoilage detection
 Measure range: 0 – 10000 ppm, and a response time of less than 15 min.
 Automatic compensation for background fluctuations in temperature or CO2

Temperate Very accurate spoilage detection
 Measure range: 0 – 10000 ppm, and a response time of less than 60 min.