



PRESS RELEASE

Media Contact:

Steven Joseph, Director of Sales – North America

Voice: 503-293-7652 | Fax: 503-641-1253
Steve.Joseph@airsense.us | www.airsense.us

New Aspirating Smoke Detection Technology in USA is in a “Class” by itself

ClassiFire® perceptive artificial intelligence (AI) technology continuously monitors for changes.

March 1, 2007 - Portland, Oregon - AirSense Technology, leading manufacturer of aspirating smoke detection systems introduces to the North American market patented artificial intelligence technology for Aspirating Smoke Detectors.

Sensitivity threshold settings (the amount of smoke required to produce an alarm) for all other types of aspirating smoke detection systems are fixed by the manufacture or arbitrarily set by a technician during the system commissioning process, and once set, remain at the selected threshold until physically changed.

However, building occupancy, manufacturing processes and changes in detector or building air-conditioning filtration systems can cause significant fluctuations that are not indicative of a fire



event. The inability of such systems to recognize these normal, minor changes in the environment can lead to false alarms or decreased detector sensitivity.

The unique technology employed in the AirSense Technology Stratos Series Aspirating Smoke Detection System uses *relative sensitivity* to establish appropriate alarm thresholds. Only Stratos detectors use perceptive artificial intelligence (AI) technology to automatically maintain alarm levels at optimal levels, regardless of fluctuations in normal environmental smoke density.

Drawbacks of fixed sensitivity aspirating systems

Fixed sensitivity refers to a device that produces an alarm output when the measured smoke density in the protected area reaches a predetermined level. With the exception of Stratos, all other brands of aspirating systems use a fixed scale, or fixed sensitivity of smoke density to determine at what point an alarm is generated.

The major drawback with *fixed sensitivity* technology is that the bar graph scale starts at a measurement of 0% obscuration per foot, which is absolutely clean air. In “real-world” environments, the smoke detected by fixed sensitivity detectors must always include a degree of contamination cause by natural processes or shortcomings in ventilation in the protected area. Virtually all normal installations will have an ambient or fluctuating background density of particles of combustion present, which will have a significant effect on the performance of fixed sensitivity devices. Such devices will, in actuality, have *variable* sensitivity and performance in response to fires.



Additionally, by having sensitivity thresholds arbitrarily set by technicians in the field, a high degree of inaccuracy is possible in the event the sensitivity thresholds are inaccurately set for the environment being protected, making the detector either too sensitive, or not sensitive enough.

Advantages of the Stratos relative sensitivity aspirating detection system

Stratos is the world's only relative sensitivity aspirating system. The detector will continuously adapt to suit the environment in which it is installed. It provides alarm thresholds that are “relative” to the smoke density in the protected environment, as opposed to being relative to the arbitrary zero point used in a fixed system.

Among its many features, Stratos

- Utilizes ClassiFire[®], a patented process that uses artificial intelligence.
- Is fully automatic and does not need manual adjustment
- Adjusts sensitivity to suit day/night, occupied/unoccupied, and operational/non-operational levels (such as during holiday shutdowns) with no requirements for an external trigger input
- Provides substantially earlier warning than a fixed type aspirating system
- Easily complies with agency product certification tests that requires any system to pass a defined “slow-growth” fire test
- Proven in tens of thousands of installations - worldwide



The system utilizes ClassiFire®, a patented artificial intelligence system that continually monitors the environment and internal contamination, and automatically adjusts sensitivity to provide optimal performance at all times. No other aspirating smoke detection system is equipped with artificial intelligence.

ClassiFire® allows Stratos series detectors to closely adapt to the working environment, depending upon the degree of protection required, or to the type of facility being protected. The detector samples air once per second and passes smoke density information to ClassiFire®. The detector is then able to discriminate between normal ambient pollution levels and unusual occurrences typically caused by the early development of a fire.

Stratos, among other aspirating smoke detectors, use a filter to remove the majority of dust and contaminant from the sampled air. Over time, as the filter becomes contaminated, it begins to filter out particles of combustion from reaching the detection chamber. Only Stratos is equipped with the means of sensing filter loading and responds by applying compensation through ClassiFire to prevent sensitivity reduction. It also applies a dedicated filter replacement warning before there is a possibility of reduced compensation. Other brands of aspirating smoke detection systems utilizing a filtration system lack the intelligence of compensating or even supervising for “true” filter loading, subjecting the system to reduced sensitivity, without warning, possibly to the extent of not detecting a fire at all.



With its unique, award-winning technology, AirSense Stratos is able to provide a superior smoke detection system that can be adapted to virtually any environment and to any normal fluctuations within those environments.

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Company Contact – within USA

Steven Joseph
Director of Sales - North America
AirSense Technology USA Limited
10260 SW Greenburg Road, Suite 400
Portland, OR 97223 USA,
Voice: 503.293.7652 | Fax: 503.641.1253
steve.joseph@airsense.us | www.airsense.us

About AirSense

AirSense Technology USA Limited is a wholly owned subsidiary of the UK-based AirSense Technology Ltd, which has operations in Europe, Scandinavia, Hong Kong, Malaysia, China, North and South America. AirSense Technology Ltd was founded in 1993 by pioneers of Aspirating Smoke Detection systems, and at that time introduced the worlds first Artificial Intelligence (AI) equipped fire detection product. This brought acclaim because it introduced the substantial benefit of continuously updating, automatic sensitivity adjustment to a class of fire detection product, which had previously been criticized for being prone to nuisance alarms, or suitable only for use in 'clean' environments.



Stratos is the brand name for the line of Aspirating Smoke Detectors produced by AirSense. Stratos is recognized as the most sensitive laser-based aspirating system available, providing reliable very early warning of fire through ClassiFire™, a patented system of Perceptive Artificial Intelligence (PAI), making Stratos the “Intelligent” choice in aspirating smoke detection systems.