Stratos-HSSD 2 ...the ultimate in high sensitivity aspirating smoke detection

ClassiFire-3D - Artificial Intelligence

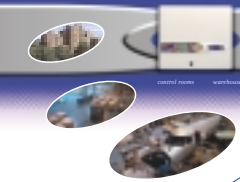
Real time viewing

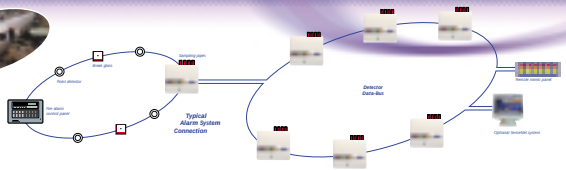
ClassiFire-3D Sense crosses a new horizon with its award winning Stratos-HSSD² High Sensitivity Smoke Detection system.

The team behind the Stratos-HSSD-2 system has almost 200 man-years experience in the field of aspirating High Sensitivity Smoke Detection systems. This unparalleled depth of experience has been drawn upon to produce the Stratos-HSSD series 2 system. Stratos-HSSD embodies many unique features to maximise performance and increase reliability compared to other aspirating detection systems. Stratos-HSSD is recognised as being easily the most sensitive laser based system available, but coupled to the unique ClassiFire-3D® Artificial Intelligence (AI) process, this need not mean a high rate of nuisance alarms. Stratos-HSSD is the only optical high sensitivity system which is routinely applied to the protection of very dirty and dusty environments. This is achieved by combining Laser Dust Discrimination (LDD™) with a patented dust management bypass and separation system. At the other extreme, Stratos-HSSD is capable of providing the very highest levels of sensitivity in environments such as computer areas and clean rooms. In these applications it is able to give warning to the very slightest trace of smoke. Stratos-HSSD is fully capable of reacting to true INCIPIENT fire situations, thereby preventing damage. Stratos-HSSD provides the EARLIEST warning.

ClassiFire-3D Artificial Intelligence

Stratos-HSSD-2 incorporates the unique ClassiFire-3D system, providing information on particle size. This allows greater information on the type of incipient fire situation... Select the appropriate response for flaming or smouldering situations.





View ClassiFire-3D Artificial Intelligence in real-time

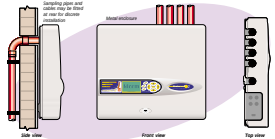
All Stratos detectors are supplied with PC Remote Software, permitting: easy system configuration, viewing of event log, diagnostic checking of system and the ability to view ClassiFire Artificial Intelligence in real-time.

ClassiFire-3D® - Maximising Sensitivity without nuisance alarms

ClassiFire-3D® is a unique patented 'Artificial Intelligence' (AI) system which enables Stratos detectors to condition themselves to suit the environment in which they are installed. Until the advent of ClassiFire, the setting of high sensitivity smoke detection systems was at best a hit or miss procedure, based largely upon the installers estimation of 'normal' smoke density. ClassiFire has revolutionised the setting of High Sensitivity Systems, taking guesswork out of the equation and simplifying system set-up. ClassiFire uses a dedicated microprocessor to continually manipulate data and adjust the sensitivity of the system for a simply defined level of performance. ClassiFire discriminates between 'dirty' and 'clean' operating periods such as day and night, automatically substituting appropriate system sensitivity without the need for external input or adjustment. The system literally 'thinks' for itself, even to the degree that the system will not be fooled by clock changes or prolonged holiday shut-down periods. ClassiFire ensures that Stratos-HSSD operates at maximum safe sensitivity to give warning of problems earlier than previously considered possible. ClassiFire is the most comprehensive intelligence found in any smoke detection system to-date... so sophisticated, that its invention was considered significant enough to allow AirSense Technology to be the first and only fire detection company to win the coveted Queen's Award for Technological Achievement.

THE QUEEN'S AWARD FOR TECHNOLOGICAL ACHIEVEMENT

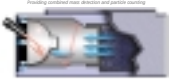
A first for the Fire Detection Industry, The Queen's Award is the highest accolade that can be bestowed on a UK Business for technological achievement.



STRATOS-HSSD 2 SPECIFICATION	
Supply Voltage	21.6V - 26.4V DC
Size	437W x 372H x 95D
Weight	5.2kg
Operating temperature range	-10 to +60°C
Operating humidity range	0 - 90% Non Condensing
Sensitivity range (%Obscn)	Min = 25%. Max = 0.03% FSD
Maximum sensitivity resolution	0.001% obs/m
Detection principle	Laser light scattering mass detection & particle evaluation
Particle sensitivity range	0.001fg to 10g
Dust discrimination principle	10th Laser Dust Discrimination (LDD)
Sampling pipe material	Black ABS pipe
Sampling pipe mass	250m @ 80 sampling holes - 200m @ 100 sampling holes
Sampling pipe inlets	4 on top and 4 at rear
Sampling pipe outlet	1 on top and 1 at rear
Sampling pipe internal diameter	15-20mm
Alarm levels	4 (Fire 2, Fire 1, Pre/Alarm and Aux)
Bargraph sensitivity range	0.001% - 25% obs/m
Bargraph segments	24
Chamber service intervals	greater than 8 years (dependant on environment)
Dust separator replacement intervals	Dependant on environment
Laser lifetime (MTTF)	greater than 1000 years
Laser wavelength	650nm visible red
Programming	front panel or PC via RS232/RS485
Data loop cable	RS485 data cable
Data loop maximum length	1,200m in 1,200m out
IP rating	IP52
Supported languages on internal programmer	Czech, Dutch, English, Estonian, Finnish, French, German, Hungarian, Italian, Norwegian, Spanish, Swedish

Unique Laser Detection

Providing combined mass detection and particle counting



The detection principle used in the Stratos-HSSD-2 system is a patented 'laser forward scatter' system. A powerful semiconductor laser is directed through an aperture in a specially designed reflector. Any combustion products present in the moving air sample will scatter a cone of light onto the reflector and from there it is focussed onto a single photo-receiver. This system has several advantages, including: inherent immunity to dust/dirt build-up, high signal to noise level and resistance to problems caused by vibration and high humidity. The signal from the detection transducer is processed by the unique ClassFire-3D™ Artificial Intelligence system. The system uses a patented 'waste-gate' system which bypasses the majority of sampled air, maximising service life and permitting operation in diverse environments.

The Queen's Awards are the highest accolades that can be bestowed on a UK business. Recognised as the gold standard of corporate achievement, and awarded only to those with a proven record of excellence. It is the award that every business wants to win.

1999 saw the first ever Queen's Award for Technological Achievement with a fire detection product. That product was the Stratos-HSSD™ aspirating smoke detection system.

Over 12,000 applications worldwide...

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France
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Italy
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Brazil

Belgium
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Hungary
Switzerland
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Denmark
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THE QUEEN'S AWARD FOR TECHNOLOGICAL ACHIEVEMENT

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