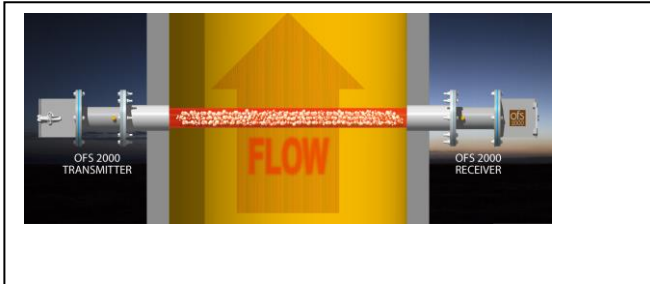


OFS-2000 series - Optical Flow Sensors



Optical Scientific's patented Optical Flow Sensor (OFS) makes drift free optical scintillation measurements across the entire distance between the transmitter and receiver. OFS is the only flow sensor that gives a true non-contacting complete cross stack flow Measurement.

OSI's OFS-2000 series flow meters have long been recognized as a superior method for monitoring air/gas flow for environmental compliance and process control. OFS technology is not limited by basis physics and is immune to the effects of:

- Temperature (No high temp limit)
- Differential Pressure
- Design DP, Beta Ratio, speed of sound
- Humidity, Gas Density (unaffected by hydrogen)
- Path Length (3" - 40')
- Turbulent Flow
- Media composition (varying gases, dust, steam, or liquid droplets)

OFS technology offers essentially a drift-free measurement. All OFS models include continuous internal self-diagnostics and calibration checks to assure the operator of accurate reporting day in, day out, 24/7/365. **OFS technology can report velocities from 0.03 m/sec to 170 m/sec with +/- 2% accuracy.** Response time of 0.3 seconds with 3 second updating, combined with full-path averaging make OFS the ideal sensor for emission monitoring, process control and environmental compliance.

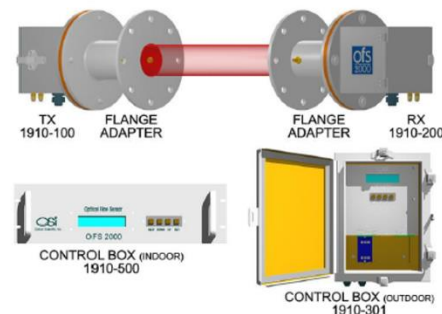
- **OFS-2000** 0-100 m/sec Environmental Compliance
- **OFS-2000W** 0-100 m/sec High Opacity/ wet scrubbers
- **OFS-2000F** 0-03 – 170m/sec extended low and high flow rates for flare applications

Applications for OFS

- Thermal Oxidizers
- Boiler Stacks
- Flare Stacks
- Primary & Secondary Air Ducts/Pipes
- Incinerators
- Furnaces
- Incinerators
- Cat Crackers
- Sulphur Recovery Units (SRU)
- Bag Houses
- Roof Vents
- Kilns
- And more..

Plant and Personnel safety

OFS can be installed on live process pipes using hot tap procedure and gate valves for isolation. No shutdown needed!



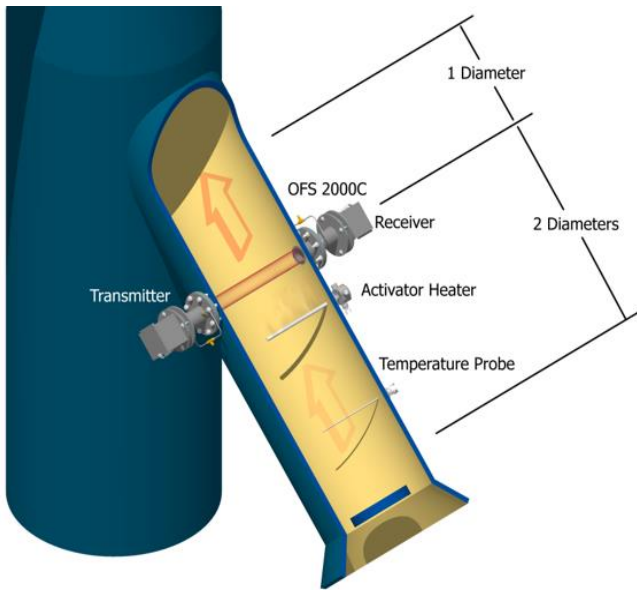
OFS technology:

- Non-interfering measurement
- Isolation from flow media
- NIST tested and approved
- Optional Particulate Mass emission rate
- 4/20mA and digital Modbus RTU data output
- Internal Calibration and Continuous Self-Test and Diagnostics built into the sensor
- Rugged packaging for harsh environments
- No re-piping required
- Hazardous Area Classification Options available
- Ultra-Low maintenance design

OFS & Combustion/Process Control

OFS technology offers the operator unparalleled capability in metering flow and controlling the process. With OFS technology, air/gas mixtures are closely monitored and burning efficiency can be increased significantly, with greater accuracy in reporting, and enhanced confidence in regulatory compliance.

OFS can handle high opacity and suspended liquid droplets. It also has a 5000/1 turndown ratio, and OFS will not create a pressure drop on critical processes.



OFS is a velocity sensor. However, if you need to report mass flow all OFS models come standard with two 4-20mA inputs for added temperature and pressure inputs. This allows OFS to report velocity and SCFM (Standard Volumetric Flow) there is a plug in number for density or pair your OFS with a concentration analyzer for more accurate Mass Flow of the process.

OFS Placement Advantages

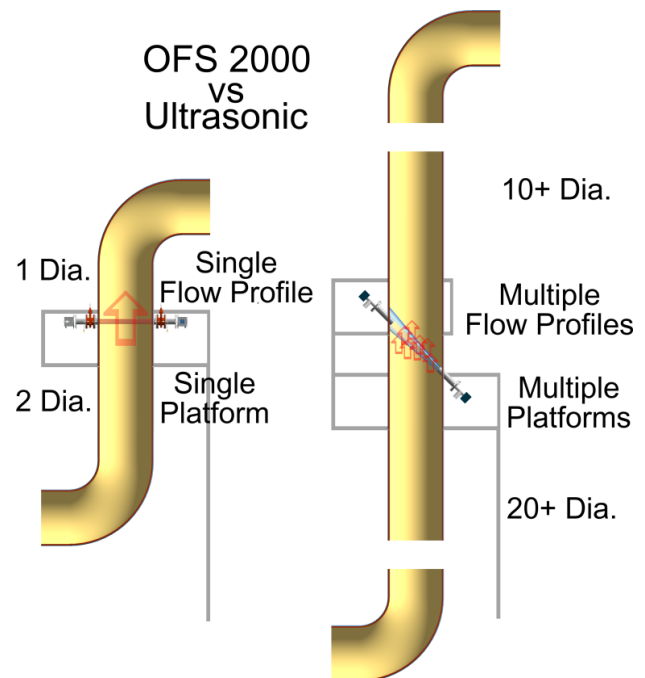
OFS can be installed in tight spaces with minimum space requirements of 2 upstream / 1 downstream diameters. No re-piping needed. Installation is to standard ANSI pattern 4" pipe flange. OFS technology does not need two platforms and can be placed close to bends or elbows if required.

MEDIA / ENVIRONMENTAL

Stack / Duct / Pipe Diameter 0.3 to 10 m, standard -- consult factory for other ranges
Media Temperature / Pressure / Humidity No effect on measurement
Media Transparency Up to 95% opacity (OFS-2000-W is recommended for high opacity)
Ambient Temperature / Humidity -50 to 60 C (-58 to 140 F) / 0 - 100% condensing

OFS meets or exceeds:

EPA method 14
 EPA MACT RSR 40 CFR 63.670
 EPA 40 CFR part 60 & 75
 EPA 40 CFR part 60 sub part J & Ja (flow)
 SCAQMD rule 1118.



Optical Scientific Inc.

2 Metropolitan Court Suite 6
 Gaithersburg, MD 20878 USA
 Tel: +01 301 963 3630 Fax: +01 301 948 4674
 website: www.opticalscientific.com
 email: envirosales@opticalscientific.com

For the most rugged, responsive, accurate flow meter in the world contact OSi today

