

# Sample Tubing Bundles Datasheet

## Key Features

- Maintains uniform gas temperature from sample tap to analyzer
- Reduces measurement noise, improving analyzer readings
- SilcoNert® coating available for trace level analysis; reduces adsorptive effects
- Weather & UV resistant SV47 thermoplastic protective jacket
- O'Brien STACKPAK® and TRACEPAK® tubing bundles for use in CSA, Class I, Div 1 or Div 2 rated areas and ATEX/IECEX Zone 1 rated areas
- Suitable for gas analysis applications in many industries:
  - Natural Gas
  - Gas Processing
  - LNG
  - Refining
  - Olefin/Petrochemical
- Lengths offered: 30 to 76m (100 to 250 ft)
  - Bundles can be cut to length in field
- CSA, IEC, ATEX, and IECEX Certifications



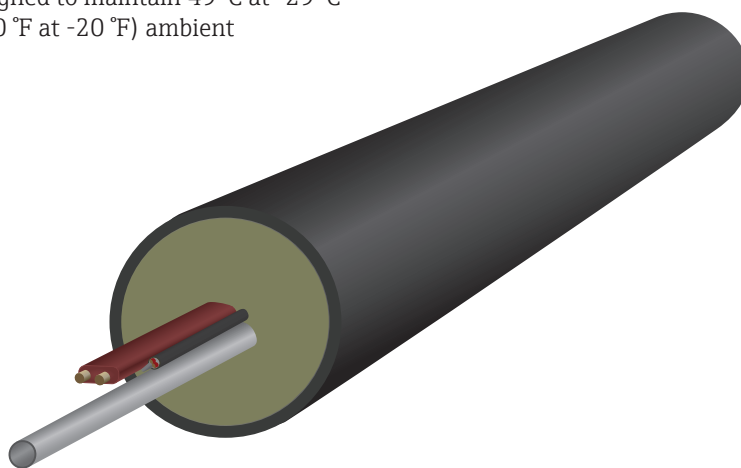
Sample tubing bundles are prefabricated assemblies designed to transport gas samples at a uniform temperature from a process sampling point to the inlet of a SpectraSensors tunable diode laser absorption spectroscopy (TDLAS) sample conditioning system. Manufactured by O'Brien Corporation, the sample tubing bundles contain sample tubing and a self-regulating heater all arranged coaxially and encased in insulation surrounded by a protective SV47 thermoplastic jacket.

Sample tubing bundles are available in lengths of 30 to 76 m (100 to 250 feet) to address differing installation and usage conditions encountered at plant sites. Tubing bundles can also be cut to length on site. A self-regulating heater is designed to maintain 49 °C at -29 °C (120 °F at -20 °F) ambient

temperature. This optimized design distributes a uniform temperature along the entire length of the tubing bundles, providing a representative gas sample to the TDLAS analyzer.

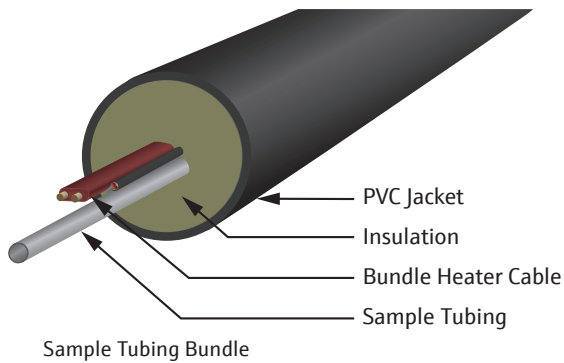
The sample tubing bundles are available for installation and use in different hazardous area classification locations. Tubing bundles are rated for use in CSA Class I, Div 1 or Div 2 locations. They are also rated for use in ATEX/IECEX Zone 1 locations.

Electropolished and SilcoNert® 2000 (TrueTube™ EPS) coated stainless steel wall tubing is an option for use in trace level analysis applications where analyte adsorption and desorption can compromise the accuracy and repeatability of measurements.



Sample transfer tubing bundles are available in various lengths to meet site installation requirements

## Connects sample tap to analyzer



**Sample tubing bundle** The tube bundle has an outer SV47 PVC jacket with a non hygroscopic insulation layer. Embedded in the insulation is the metal sample tubing and a bundle heater cable. Tubing bundles can be ordered from 30 to 76 m (100 ft to 250 ft) lengths.



SS2000e Sample Conditioning System

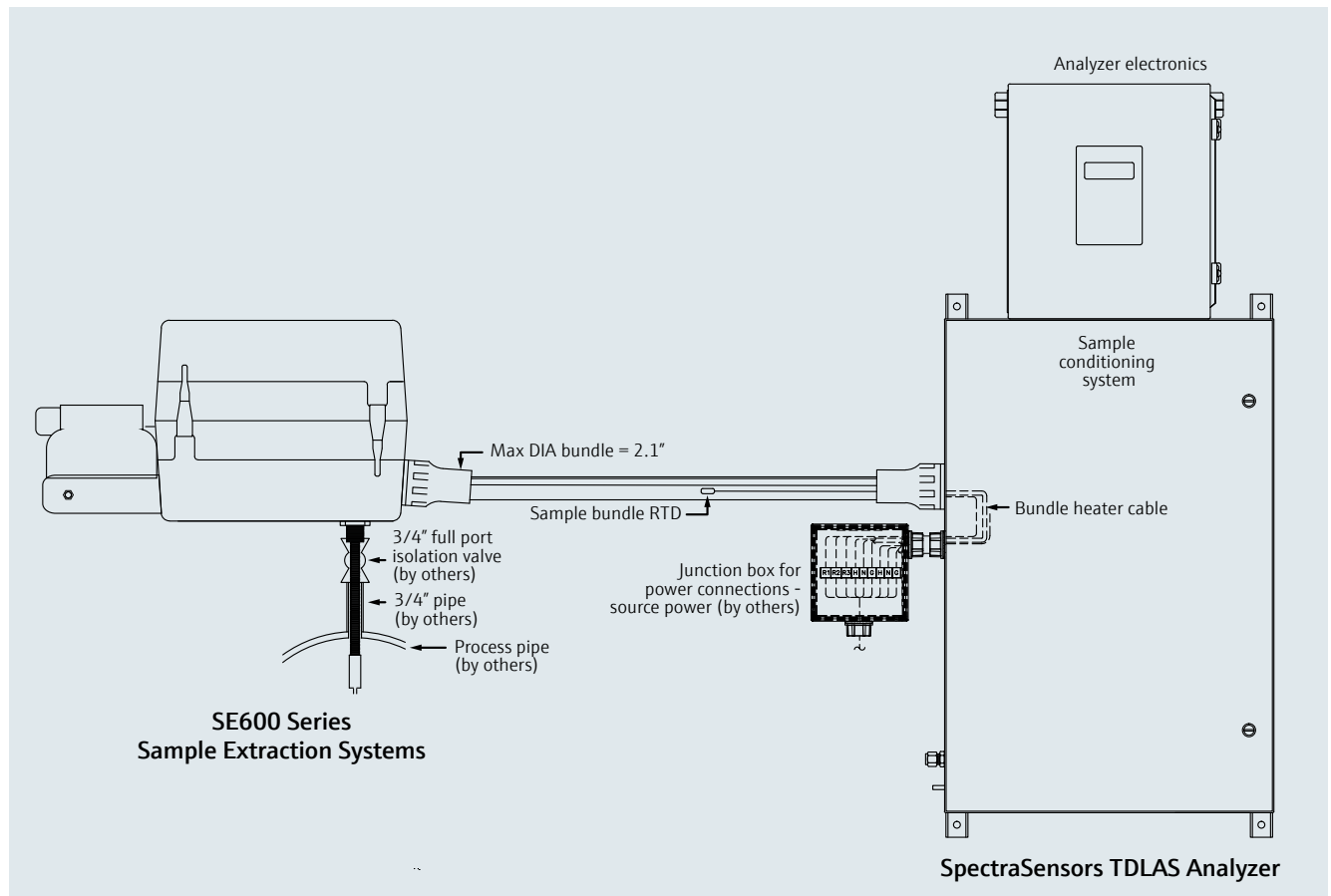
**At the analyzer** The sample tubing bundles provide a tube end to connect the gas line directly to the TDLAS analyzer's sample conditioning system. The main power source at the analyzer power junction box can be directly connected to the bundle to power the bundles self regulating heater.



SE600 Series Sample Extraction Systems

**At the sample extraction unit** The sample tubing can be connected directly to the sample extraction unit to transport process gas from the pipe to the analyzers sample conditioning system. A separate power line can run parallel to the tube bundle to bring power to the sample extraction system.

**Overview of power input and distribution** The main power source is connected to a junction box that distributes power to the TDLAS analyzer. A separate power cable is used for the SE600 sample extraction unit.



## Specifications

Materials	
Wetted Materials	316/316L SS; seamless tubing (ASTM A-213, A-269, A1016) or O'Brien Electropolished Tubing with or without SilcoTek SilcoNert 2000 lining (TrueTube EPS)
Self Regulating Heat Tracer	32 Watt/m (10 Watt/ft)
Power Cable (optional)	3 conductor, 12 gauge, 90°C (194°F) rated tray cable
Jacket	O'Brien SV47 proprietary thermoplastic formulation with UV resistance that exceeds standard PVC
Sample Tubing	6mm x 1mm, ¼ x 0.035 in or ½ x 0.035 in wall
Tubing Bundles (Diameter O.D.)	Approximately 3.3 to 3.6 cm (1.3 to 1.4 in)
Sample Tubing Lengths	15 to 76 m (50 to 250 ft)
Performance Data	
Low Ambient Design Temperature*	-29°C (-20°F) with 40 kph (25 MPH) wind
High Ambient Design Temperature*	40°C (104°F) with 16 kph (10 MPH) wind
Process Designed Maintained Temperature	49°C at -29°C (120°F at -20°F)
Operating Voltage	120 VAC, 208 VAC, 240 VAC
Maximum Inlet Temperature	121°C (250°F)
Minimum Bend Radius	20 cm (8 in)
Heat Loss at Low Ambient	23 Watt/m (7 Watt/ft)
Certifications	CSA Class I, Div 1 or Div 2, CSA Div 1 IEC; ATEX Zone 1 and 2

\* Other ambient temperatures are available - consult factory.



SpectraSensors TDALS analyzers measure H<sub>2</sub>S, H<sub>2</sub>O, NH<sub>3</sub>, C<sub>2</sub>H<sub>2</sub>, & CO<sub>2</sub> in many challenging Natural Gas, Gas Processing, LNG, Olefin/Petrochemical, and Refining applications.



Go to [www.spectrasensors.com](http://www.spectrasensors.com) for more information.

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