

# 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 FM/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: 15 to 76m (50 to 250 ft)
  - Bundles can be cut to length in field
- CSA, IEC, FM, ATEX, and IECEx Certifications



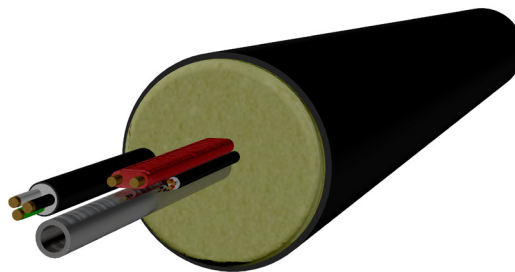
Sample Tubing Bundles are prefabricated assemblies designed to transport gas samples at a uniform temperature from a process sampling point to the inlet of a Tunable Diode Laser (TDL) analyzer's sample conditioning system. Manufactured by O'Brien Corporation, the Sample Tubing Bundles contain sample tubing, self-regulating heater, and an optional power cable for a sample extraction probe, all arranged coaxially and encased in insulation surrounded by a protective SV47 thermoplastic jacket.

Sample Tubing Bundles are available in lengths of 15 to 76 m (50 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 TDL analyzer.

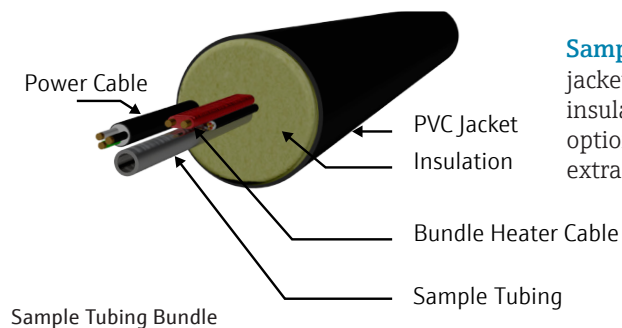
The Sample Tubing Bundles are available for installation and use in different hazardous area classification locations. Tubing Bundles are rated for use in FM/CSA Class I, Div. 1 or Div. 2 locations. They are also rated for use in ATEX / IECEx Zone 1 locations.

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, the bundle heater cable, and an optional power cable which can be used to power up the sample extraction unit from the analyzer's power.



SS2000e Sample Conditioning System

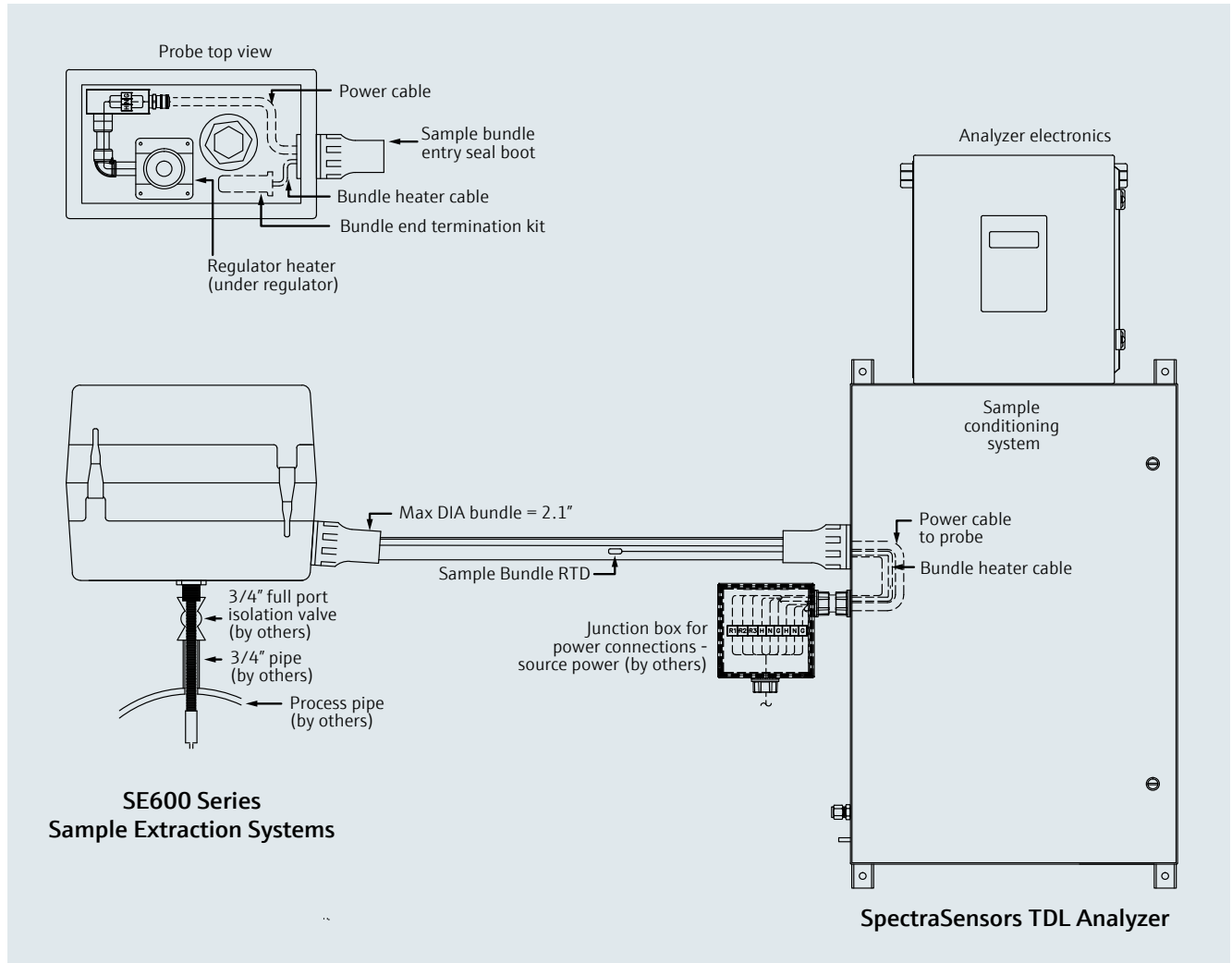
**At the analyzer** The Sample Tubing Bundles provide a tube end to connect the gas line directly to the SpectraSensors TDL Analyzer's Sample Conditioning System. The main power source at the analyzer power junction box can be directly connected to the bundle to power the bundles self regulating heater. Tubing Bundles can be ordered with an optional power cable which runs the length of the Tubing Bundles to the sample extraction unit.



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. The sample tubing heater wires can be terminated inside the sample extraction enclosure using a Termination Kit (sold separately).

**Overview of power input and distribution** The main power source is connected to a junction box that distributes power to the SpectraSensors TDL Analyzer and Sample Tubing power cable (optional) 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) without power cable Approximately 3.6 to 4.8 cm (1.4 to 1.9 in) with power cable
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	FM; 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 TDL 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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