



# SAMPLE TRANSPORT SOLUTIONS

- Sample Accuracy
- Sample Transport
- Sample Conditioning
- Compliance
- Dew Point Maintenance
- Heated Cabinets
- Best Practices





Sample transport systems present tremendous opportunities for improved analyzer accuracy. Chemical and petrochemical industries around the world have clearly identified that yield, scrap and compliance improvements can be directly attributed to the effectiveness of the sample transport system. Analyzers will function only as well as the transport system yet this same system is often the most overlooked and misunderstood component.

O'Brien Analytical™ is dedicated to all aspects of providing customers consistent sample streams. Maintaining sample dew points can present a myriad of process control challenges. O'Brien Analytical offers a wide variety of engineered solutions and products to ensure consistent sample delivery to the analytical device. O'Brien's heat transfer expertise with TRACEPAK® and STACKPAK™ tubing bundles and VIPAK® heated analyzer cabinets have made O'Brien Analytical the company of choice for the analytical industry.

From design to installation services, from expertise in heat tracing to tubing materials, O'Brien Analytical provides complete sample stream consistency.



- ▶ **TRACEPAK®** temperature controlled sample transport systems for process analyzers.
- ▶ **TrueTube™** electropolished and coated tubing.
- ▶ **VIPAK®** heated sample conditioning cabinets.
- ▶ **STACKPAK™** CEM sample and probe support bundles.
- ▶ **O'BrienSERVICES™** turnkey design, procurement, installation and warranty.



ISO 9001:2000  
REGISTERED

Sample Accuracy · Dew Point Ma





## STACKPAK / TRACEPAK Tubing Bundles

O'Brien supplies analyzer sample bundles for permanent or portable systems.

Process tubes of 316SS, Monel®, TrueTube™, Hastelloy®, fused silica lined SS, heavy wall Teflon®, and nylon are a few of the common choices.

Electric, steam, or recirculated fluid heater systems provide guaranteed temperatures in general purpose or hazardous areas.

Factory installed thermocouples and RTD temperature sensors are often supplied as are factory finished end connections.

## VIPAK Cabinets

O'Brien thermoformed or stainless steel VIPAK enclosures are ideal for probe, sample take off and sample conditioning cabinets. With integral insulation, explosion proof heaters, heat shrink entry boots, as well as panel and rail mounting systems, Vipak enclosures complete your sample conditioning system.

## Explosion Proof Heaters

Explosion proof heaters provide consistent temperature maintenance for any application. Choose NEC, CSA, ATEX and GOST approvals. Steam systems are also available.

## TrueTube™

O'Brien Analytical starts with select ASTM grade tubing and enhances its physical characteristics to improve dry-down, adsorption and corrosion resistance. We do this by controlling surface roughness, cleanliness, surface chemistry and reactive contaminants.

TrueTube is available in orbital weld fittings, straight sticks, and long continuous lengths of electropolished (TrueTube EP) and electropolished tubing with a deactivated fused silica lining (TrueTube EPS).



Monel® is a registered trademark of Special Metals Corporation  
Hastelloy® is a registered trademark of Haynes International  
Teflon® is a registered trademark of E.I. DuPont de Nemours

Integrated Solutions Improving Process Accuracy

### Probe Enclosures

Insulated enclosures provide a stable environment for the probe, piping components, and sampling equipment. Heated enclosures are also used to prevent temperatures from dropping below the dew point of the sample.



### Enclosure Heaters

Consistent temperatures. Up to 600 Watts.



### Installation Grips

End of line and mid line installation grips for bundles up to 3 1/2" (80mm) diameter.



### STACKPAK™ and Probe Support Bundle

Heated and unheated lines for dilution and extractive stack gas applications. STACKPAK will maintain uniform temperatures of gas samples such as SO<sub>x</sub>, CO<sub>2</sub>, NO<sub>x</sub> and Hg.

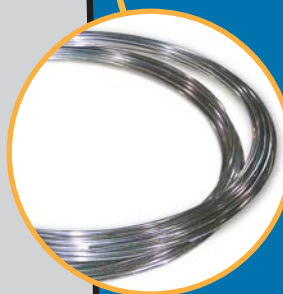


### Heat Shrink Entry Seals

Heat shrink entry seals provide a weatherproof entry where TRACEPAK or STACKPAK bundles enter an enclosure.

### TrueTube™

TrueTube is available in long continuous lengths of electropolished (TrueTube EP) and electropolished tubing with a deactivated fused silica lining (TrueTube EPS). Non-permeable TrueTube is used for measuring NO<sub>x</sub>, SO<sub>x</sub>, corrosives, ammonia and mercury.



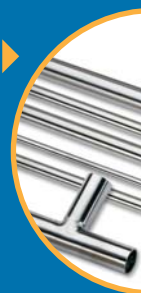
### Sample Cabinets

VIPAK thermoformed or metal sample cabinets are available insulated and uninsulated.



### TrueTube™

TrueTube EP and TrueTube EPS improve dry-down, adsorption and corrosion resistance. TrueTube is available in convenient sticks and weld fittings.



### ◀ Sample Point Heaters

Hazardous area heaters for sample point enclosures.



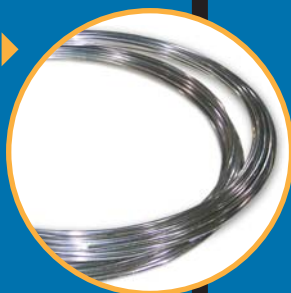
### ◀ Sample Point Enclosures

Provides a weatherproof and insulated enclosure for sample take off, piping components, and vaporizing regulators.



### ▶ TrueTube™

TrueTube is available in long continuous lengths of electropolished (TrueTube EP) and electropolished tubing with a deactivated fused silica lining (TrueTube EPS). TrueTube will improve response times when measuring sulfur, moisture, corrosives, and tailgas in the low ppm / ppb range.



### ◀ TRACEPAK®

Temperature controlled sample transport systems for process and gas analyzers. Single or multiple process tubes of 316SS, Monel, True Tube, Hastelloy, fused silica lined SS, heavy wall Teflon, and nylon are some of the choices.



### ◀ Bottle Cabinets

Uninsulated as well as insulated and heated double door cabinets with cylinder clamps.



### ◀ Hazardous Area Heaters

For traditional and modular design sample systems up to 600 Watts.





## O'BRIENSERVICES

An ISO 9001 Process

### O'BrienSERVICES™

O'BrienSERVICES provides a variety of specialty design, manufacturing, installation and warranty services. O'Brien Analytical, an ISO 9001 manufacturer, realizes that turnkey services are a critical component to the process and emissions analyzer markets. The O'BrienSERVICES team coordinates internal and external resources to ensure a cost effective and reliable sample transport system.

- ▶ Design review
- ▶ Heat transfer / dew point calculations
- ▶ Best practices training
- ▶ Insulated and heated cabinet assembly and installation
- ▶ Transport system installation, commission, audit and site support

### Worldwide Offices

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### ISO 9001

Certified to current ISO 9001 standards.

O'Brien's adherence to recognized international standards is your strongest assurance of our quality.

### Customer Service

O'Brien's reputation as a customer oriented problem solver has been long recognized.

Our customer-oriented approach offers:

- responsive, knowledgeable personnel
- unparalleled delivery service
- dependable, tested results of all product lines
- on-line order status and shipment tracking.

