

TRACEPAK[®]



O'BRIEN

Process Accuracy Through
Heat Transfer Expertise

TRACEPAK®

*An engineered,
preinsulated tubing
bundle system from
O'Brien Corporation*

Solves the problems of: Freezing, Dew point Component drop-out, Viscosity, and Personnel protection

Freezing, dew point, component drop-out and viscosity control are major considerations in instrument and small diameter process lines. A properly designed and selected pretraced tubing bundle offers an effective solution to these problems.

The economical choice to field fabrication

Maintenance free TRACEPAK not only saves money and time during the installation process, but it ensures consistent, repeatable performance. Field fabrication requires a pipe fitter to lay out, measure, cut, dress, bend and install the tubing. Next the tracer (steam or electric) has to be installed and insulation put on the tubing. Finally, a weatherproof covering needs to be applied over the insulation. Clearly the economics of the TRACEPAK system versus field fabrication are significant.

Provides predictable and repeatable performance

O'Brien Corporation, long recognized as the leader in providing reliable instrumentation protection, has simplified installation while offering predictable operation. TRACEPAK tube bundles are prefabricated, pre-engineered and preinsulated assemblies.

Installation is simplified by the unique parallel configuration, in which process and tracer lines are always parallel inside the bundle. The bundle is much easier to bend during field routing and hookup because all tubes bend together and not against one another.

Connections are easy because tubing stays round and is not work hardened

TRACEPAK's configuration allows the tubing to stay round and malleable when used in conjunction with compression and flare fittings. The installation of process and instrument connections requires only a simple, one-plane offset bend to engage tubing and fittings.

Can be installed at temperatures as low as -40°C

O'Brien Corporation utilizes the highest quality materials. The tough elastomeric jacket contains no halogens, eliminating the possibility of chlorides from the jacket causing stress corrosion in stainless steel tubing. This jacket has excellent abrasion and chemical resistance along with a wide, usable temperature range. TRACEPAK can be installed in temperatures as low as -40°C.

3 Types of tubing bundles

There are three common types of tubing bundles:

- Single preinsulated line, S-LINE, primarily for steam supply and condensate return.
- Steam traced lines, TPL and TPH, for freeze protection and temperature maintenance.
- Electric traced lines, TPE, for freeze protection and maintenance of temperature.





Systems approach

With the advent of TRACEPAK, O'Brien Corporation has closed the loop in providing the entire instrument installation and protection needs for your plant. VIPAK®, HEATPAK®, and HEATPAK®II are enclosure systems that provide protection and steam or electric heat for the instrument and manifold. FLEXPAK® provides a custom, flexible cover for instrumentation.

The following pages will help you decide exactly which TRACEPAK product is right for your application.

Utilize S-LINE when insulation is required for personnel protection or when temperature loss needs to be minimized, but temperature maintenance is not necessary. Typical applications are steam supply, condensate return, water

purge lines where flow is sufficient to prevent freezing, chemical additives, etc.

Use TPE, TPL or TPH when the process must be maintained within a specific temperature range or above a specific temperature.

Typical applications

Here are a few applications for the TRACEPAK System:

IMPULSE LINES

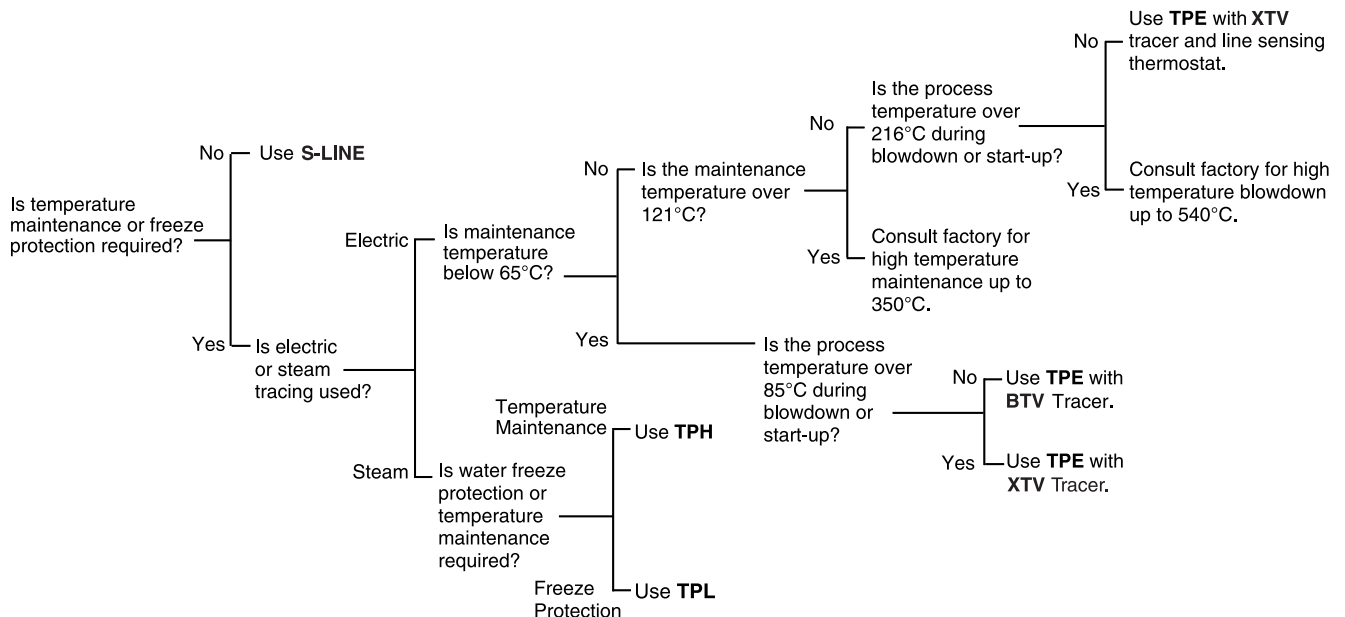
- flow transmitters
- pressure transmitters
- level transmitters
- pressure switches
- controllers

SAMPLE LINES

- analyzers
- chromatographs

PROCESS LINES

- steam supply
- condensate return
- water purge
- chemical feed
- air lines



A preinsulated tubing bundle with light steam tracing

The process tubes and tracer tubes are individually wrapped with insulation to purposely reduce heat transfer. TPL can maintain temperatures between 10°C and 93°C. It provides a more constant tube temperature over a longer length than heavy traced designs. It is suited for small diameter process lines such as those used for sampling and additives. TPL is recommended for freeze protection of instrument impulse lines as well as the process lines for analyzers.

Model Number

Product Family

TPL1- Preinsulated Light Steam Traced Single Process Tube

TPL2- Preinsulated Light Steam Traced Dual Process Tubes

Process Tube

Seamless 316 SS

- MF6** 6mm OD x 1mm wall
- MF8** 8mm OD x 1mm wall
- MF10** 10mm OD x 1mm wall
- MB12** 12mm OD x 1.5mm wall

- F1** 1/8" x 0.035 wall
- F2** 1/4" x 0.035 wall
- F3** 3/8" x 0.035 wall
- B4** 1/2" x 0.049 wall

Welded 316 SS

- A2** 1/4" x 0.035 wall
- A3** 3/8" x 0.035 wall
- A4** 1/2" x 0.035 wall

Copper

- MD6** 6mm OD x 1mm wall
- MD8** 8mm OD x 1mm wall
- MD10** 10mm OD x 1mm wall
- MD12** 12mm OD x 1mm wall
- J2** 1/4" x 0.030 wall
- C3** 3/8" x 0.032 wall
- M4** 1/2" x 0.049 wall

PFA Teflon®

- MG6** 6mm OD x 1mm wall
- MG8** 8mm OD x 1mm wall
- MG10** 10mm OD x 1mm wall
- MG12** 12mm OD x 1mm wall
- G2** 1/4" OD x 0.030 wall
- G3** 3/8" OD x 0.030 wall
- H4** 1/2" OD x 0.062 wall

Tracer

Seamless 316 SS

- MF6** 6mm OD x 1mm wall
- MF8** 8mm OD x 1mm wall
- MF10** 10mm OD x 1mm wall
- MB12** 12mm OD x 1.5mm wall
- F2** 1/4" x 0.035 wall
- F3** 3/8" x 0.035 wall
- B4** 1/2" x 0.049 wall

Welded 316 SS

- A2** 1/4" x 0.035 wall
- A3** 3/8" x 0.035 wall
- A4** 1/2" x 0.035 wall

Copper

- MD6** 6mm OD x 1mm wall
- MD8** 8mm OD x 1mm wall
- MD10** 10mm OD x 1mm wall
- MD12** 12mm OD x 1mm wall
- J2** 1/4" x 0.030 wall
- C3** 3/8" x 0.032 wall
- M4** 1/2" x 0.049 wall

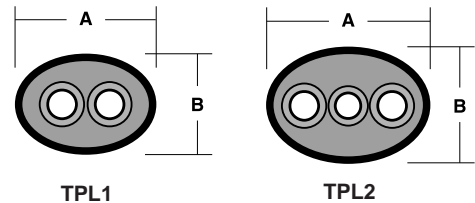
Example:

TPL2-MF6-MD8

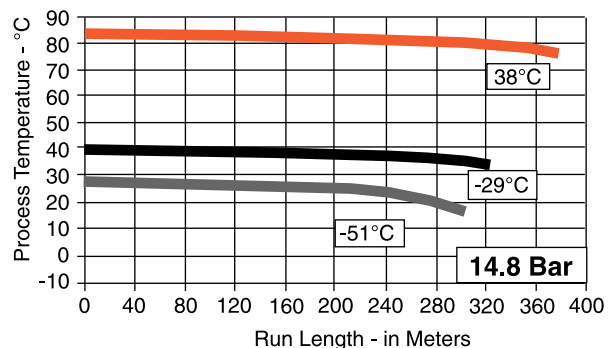
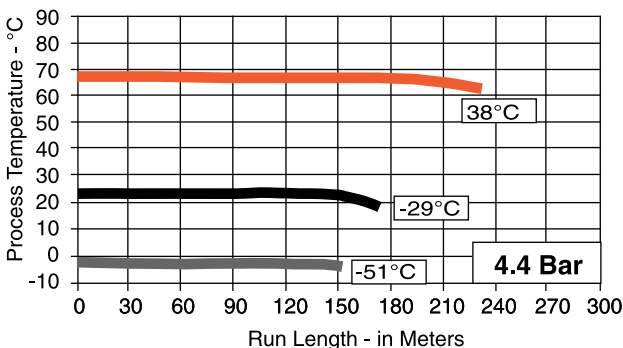
Two 6mm x 1mm wall 316 SS seamless process lines with a 8 x 1mm wall copper tracer.

Dimensions

	NOMINAL WT. KG/M	NOMINAL DIMENSIONS - MM	
		A	B
TPL1- One 8mm Process with 8mm Tracer	0.74	41	28
TPL1- One 12mm Process with 8mm Tracer	0.89	48	30
TPL1- One 12mm Process with 12mm Tracer	1.04	48	30
TPL2- Two 8mm Process with 8mm Tracer	0.89	58	30
TPL2- Two 12mm Process with 8mm Tracer	1.19	66	33
TPL2- Two 12mm Process with 12mm Tracer	1.34	66	33



TWO 12mm PROCESS LINES WITH 12mm TRACER TYPICAL PERFORMANCE



A preinsulated tubing bundle with heavy steam tracing



TPH is recommended for use on impulse lines for instrumentation, process lines for analyzers, sampling, additives and other small process lines where higher temperature maintenance is necessary. It is especially important for viscosity control. Heavy tracing keeps the process tubing in direct contact with the tracer and maintains higher process temperatures.

Model Number

Product Family
TPH1- Preinsulated Heavy Steam Traced Single Process Tube
TPH2- Preinsulated Heavy Steam Traced Dual Process Tubes

Process Tube

Seamless 316 SS

MF6 6mm OD x 1mm wall
MF8 8mm OD x 1mm wall
MF10 10mm OD x 1mm wall
MB12 12mm OD x 1.5mm wall
F1 1/8" x 0.035 wall
F2 1/4" x 0.035 wall
F3 3/8" x 0.035 wall
B4 1/2" x 0.049 wall

Welded 316 SS

A2 1/4" x 0.035 wall
A3 3/8" x 0.035 wall
A4 1/2" x 0.035 wall

Copper

MD6 6mm OD x 1mm wall
MD8 8mm OD x 1mm wall
MD10 10mm OD x 1mm wall
MD12 12mm OD x 1mm wall
J2 1/4" x 0.030 wall
C3 3/8" x 0.032 wall
M4 1/2" x 0.049 wall

PFA Teflon

MG6 6mm OD x 1mm wall
MG8 8mm OD x 1mm wall
MG10 10mm OD x 1mm wall
MG12 12mm OD x 1mm wall
G2 1/4" OD x 0.030 wall
G3 3/8" OD x 0.030 wall
H4 1/2" OD x 0.062 wall

Tracer

Seamless 316 SS

MF6 6mm OD x 1mm wall
MF8 8mm OD x 1mm wall
MF10 10mm OD x 1mm wall
MB12 12mm OD x 1.5mm wall
F2 1/4" x 0.035 wall
F3 3/8" x 0.035 wall
B4 1/2" x 0.049 wall

Welded 316 SS

A2 1/4" x 0.035 wall
A3 3/8" x 0.035 wall
A4 1/2" x 0.035 wall

Copper

MD6 6mm OD x 1mm wall
MD8 8mm OD x 1mm wall
MD10 10mm OD x 1mm wall
MD12 12mm OD x 1mm wall
J2 1/4" x 0.030 wall
C3 3/8" x 0.032 wall
M4 1/2" x 0.049 wall

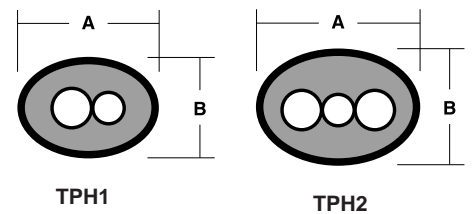
Example:

TPH2-MB12-MD8
 Two 12mm x 1.5mm wall 316 seamless process lines with a 8 x 1mm wall copper tracer.

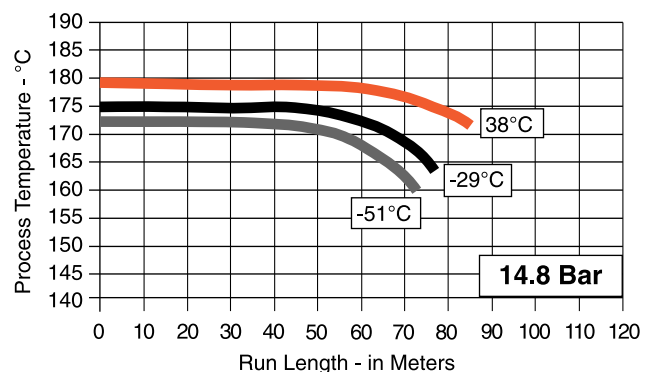
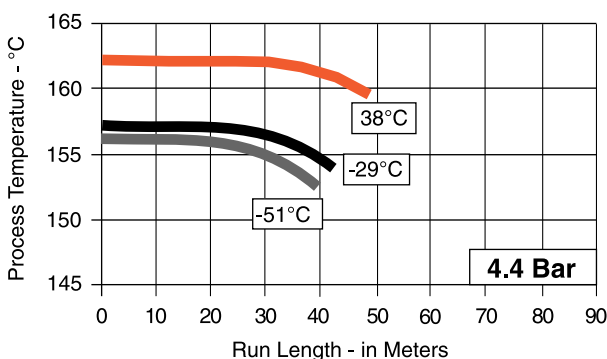
For specific information regarding each of these products, consult individual specification sheets.

Dimensions

	NOMINAL WT. KG/M	NOMINAL DIMENSIONS - MM	
		A	B
TPH1- One 8mm Process with 8mm Tracer	0.74	38	30
TPH1- One 12mm Process with 8mm Tracer	0.89	41	30
TPH1- One 12mm Process with 12mm Tracer	1.04	43	30
TPH2- Two 8mm Process with 8mm Tracer	0.89	51	30
TPH2- Two 12mm Process with 8mm Tracer	1.04	54	30
TPH2- Two 12mm Process with 12mm Tracer	1.19	56	30



TWO 12mm PROCESS LINES WITH 10mm TRACER TYPICAL PERFORMANCE



A preinsulated tubing bundle with self regulating electric tracing

TPE is designed to maintain freeze protection, close temperature tolerances or viscosity control. It provides an excellent means of maintaining very long, continuous lengths of impulse lines and piping at consistent temperatures end-to-end. TPE should be chosen when steam is not available or when the steam supply could be interrupted such as during shutdowns.

Use TPE if the allowable temperature ranges from 10°C to 120°C. Because it is self regulating, this system will lower its heat output as the material gets warmer. When close temperature control is necessary, TPE can be utilized with an optional line sensing thermostat.

TPE offers a choice of two standard tracers. A high temperature tracer (XTV) is capable of maintaining temperatures of up to 120°C and withstanding blowdown temperatures of 215°C. A low temperature tracer (BTV) will maintain temperatures up to 65°C and withstand process temperatures of up to 85°C.

Other designs are available to maintain temperatures up to 350°C and withstand 540°C blowdown conditions. Consult factory for specific design.

Electric tracer

Standard TPE-Self Regulating products utilize Chemelex® electric tracers. They are BASEEFA and PTB approved to CENELEC standards for Zone 1 and 2 heaters when installed with electric components approved by the country of use.

The high temperature, self regulating XTV tracer:

1. Withstands 215°C intermittent blowdown temperatures.
2. Can maintain temperatures up to 120°C.

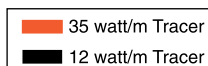
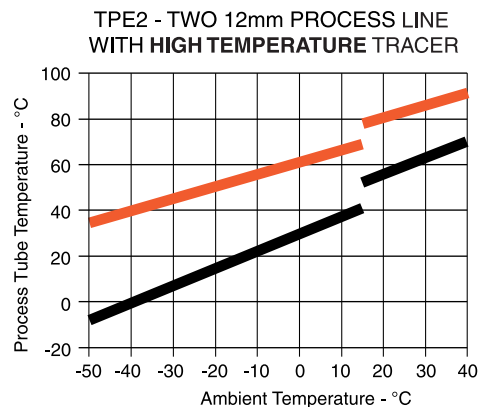
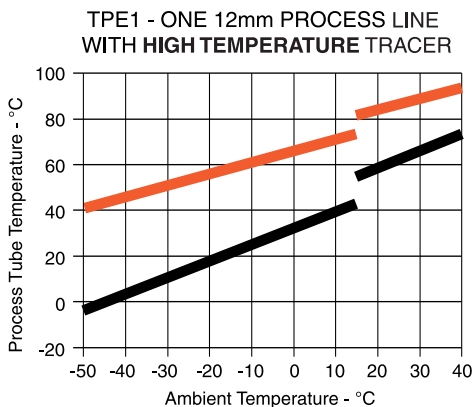
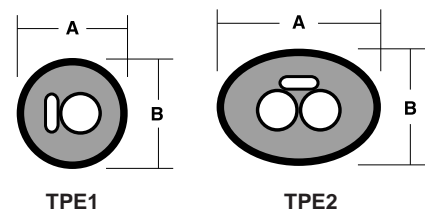
The low temperature self regulating BTV tracer:

1. Withstands up to 85°C blowdown temperatures.
2. Can maintain temperatures up to 65°C.

The choice between XTV and BTV must be made based on the desired performance and the conditions of the application. XTV and BTV are backed by a 10 year performance guarantee.

Dimensions

	NOMINAL WT. KG/M	NOMINAL DIMENSIONS - MM	
		A	B
TPE1- One 6mm Process Tube	0.45	28	25
TPE1- One 8mm Process Tube	0.60	33	25
TPE1- One 12mm Process Tube	0.74	36	28
TPE2- Two 6mm Process Tubes	0.60	33	28
TPE2- Two 8mm Process Tubes	0.89	38	30
TPE2- Two 12mm Process Tubes	1.19	43	36





Model Number
Product Family

TPE1- Preinsulated Electrically Traced Single Process Tube
TPE2- Preinsulated Electrically Traced Dual Process Tubes

MG12 12mm OD x 1mm wall
G2 1/4" OD x 0.030 wall
G3 3/8" OD x 0.030 wall
H4 1/2" OD x 0.062 wall

Process Tube
Seamless 316 SS

MF6 6mm OD x 1mm wall
MF8 8mm OD x 1mm wall
MF10 10mm OD x 1mm wall
MB12 12mm OD x 1.5mm wall
F1 1/8" x 0.035 wall
F2 1/4" x 0.035 wall
F3 3/8" x 0.035 wall
B4 1/2" x 0.049 wall

Welded 316 SS

A2 1/4" x 0.035 wall
A3 3/8" x 0.035 wall
A4 1/2" x 0.035 wall

Copper

MD6 6mm OD x 1mm wall
MD8 8mm OD x 1mm wall
MD10 10mm OD x 1mm wall
MD12 12mm OD x 1mm wall
J2 1/4" x 0.030 wall
C3 3/8" x 0.032 wall
M4 1/2" x 0.049 wall

PFA Teflon

MG6 6mm OD x 1mm wall
MG8 8mm OD x 1mm wall
MG10 10mm OD x 1mm wall

Tracer

XTV
MN4 12 watt per meter @ 10°C, 240 vac
MN12 35 watt per meter @ 10°C, 240 vac

MN designated tracers are approved by:
BASEEFA E x e II T3
PTB E x s II T3

BTV

P5 15 watt per meter @ 10°C, 240 vac
P10 32 watt per meter @ 10°C, 240 vac

P designated tracers are approved by:
BASEEFA E x e II T6
PTB E x s II T6

All tracers have a tinned copper shield and fluoropolymer outer jacket.

Example:
TPE2-MB12-P5

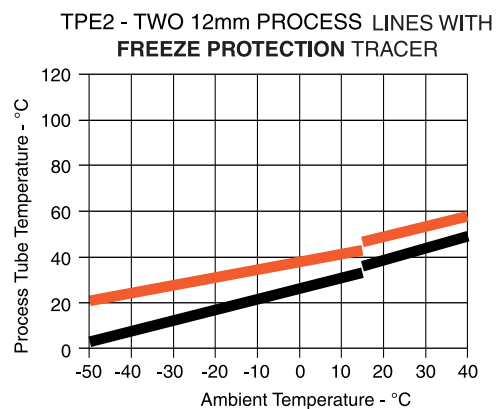
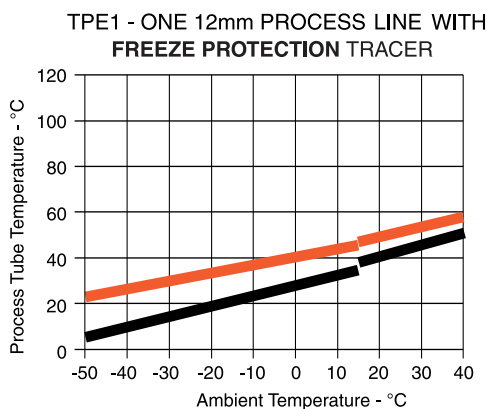
Two 12mm x 1.5mm wall 316 SS seamless process lines with a 15 watt/m tracer.

Typical Performance

Each graph shows typical performance splitting summer/winter ambients. Each line is separated at 16°C to designate the seasonal differences.

Winter ambients, below 16°C, assume a 40 Km/H wind and summer ambients, above 16°C, assume a 16 Km/H wind. For freeze protection, use 10°C as the minimum allowable process tube temperature. This will provide a sufficient factor of safety.

For specific information regarding each of these products, consult individual specification sheets.



— 32 watt/m Tracer
— 15 watt/m Tracer

S-LINE

A weather-proofed, preinsulated single tubing line



S-LINE is designed specifically for liquid and gas transport lines where heat loss and personnel protection are important. S-LINE offers an inexpensive alternative to field insulation and weatherproofing of small lines.

Model Number
Product Family
 S-Preinsulated Single Process Tube

Process Tube
Seamless 316 SS
MF6 6mm OD x 1mm wall
MF8 8mm OD x 1mm wall
MF10 10mm OD x 1mm wall
MB12 12mm OD x 1.5mm wall

Copper
MD6 6mm OD x 1mm wall
MD8 8mm OD x 1mm wall
MD10 10mm OD x 1mm wall
MD12 12mm OD x 1mm wall

Welded 316 SS
A2 1/4" x 0.035 wall
A3 3/8" x 0.035 wall
A4 1/2" x 0.035 wall

Seamless 316 SS
F2 1/4" x 0.035 wall
F3 3/8" x 0.035 wall
B4 1/2" x 0.049 wall

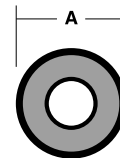
Copper
J2 1/4" x 0.030 wall
C3 3/8" x 0.032 wall
M4 1/2" x 0.049 wall

Example:
SMD8
 One preinsulated 8mm x 1mm wall copper process line.

For specific information regarding each of these products, consult individual specification sheets.

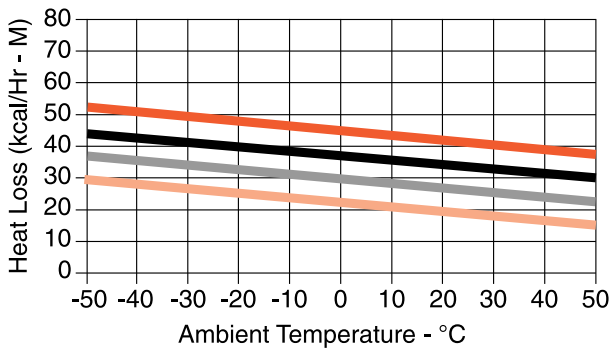
Dimensions

	NOMINAL WT. KG/M	NOMINAL DIMENSIONS A-MM
S-LINE- One 6mm Process Line	0.30	25
S-LINE- One 8mm Process Line	0.40	27
S-LINE- One 10mm Process Line	0.50	28
S-LINE- One 12mm Process Line	0.60	30

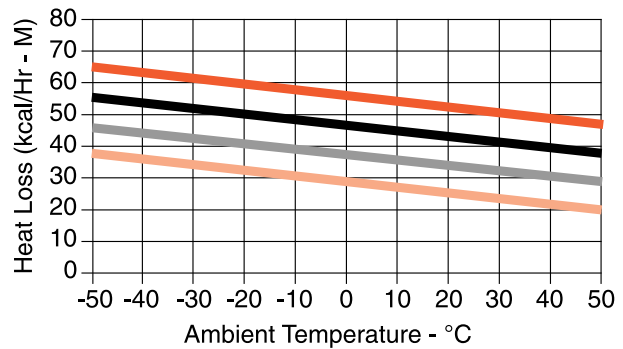


TPS1

10mm Tube



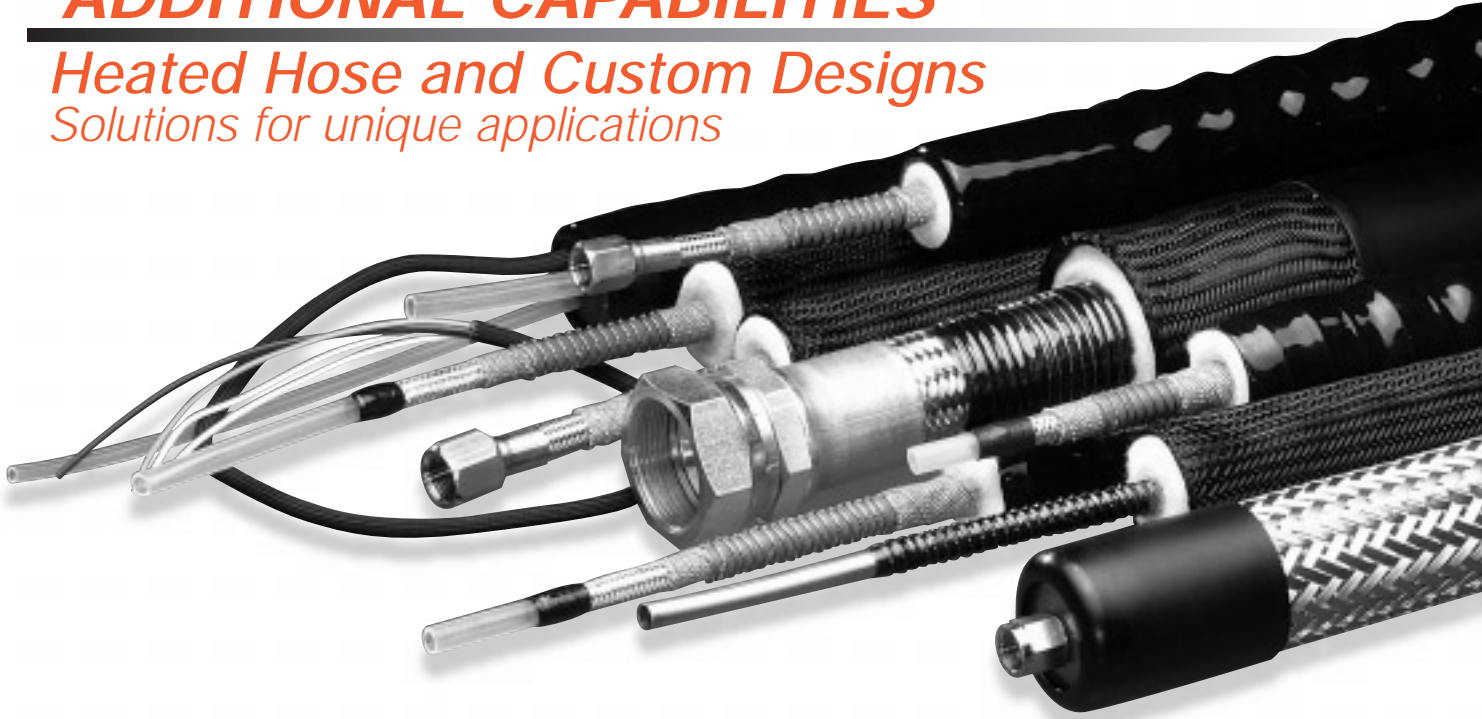
12mm Tube



- 14.8 BAR steam 198°C
- 9.6 BAR steam 178°C
- 4.4 BAR steam 148°C
- 2.0 BAR steam 121°C

ADDITIONAL CAPABILITIES

Heated Hose and Custom Designs Solutions for unique applications



In addition to conventional TRACEPAK designs, O'Brien can satisfy your special needs with custom solutions. These designs are verified in our environmental chamber under conditions that insure a tubing bundle that meets your exact requirements, with reliability and accuracy you can depend on.

Custom Capabilities

- Indoor & Outdoor Jackets
- Operating Temperatures to 315°C
- Custom Lengths
- Choice of Process Connection Fittings
- Pre-terminated and Fitted Ends
- Factory Installed Temperature Sensors
- Communication, Monitor and Power Wires
- Alternate Jacket Colors

Unusual Tube Material Nonstandard Sizes

TRACEPAK can be manufactured with a wide range of uncommon materials and sizes to conform to your unique material requirements, including:

- Teflon® variations such as PTFE, PFA, TFE, and nylon.
- Hastelloy
- Incoloy
- Titanium
- Duplex
- 6% Moly
- Oxygen Cleaned Tubes
- Silica-Lined Stainless Steel

Multi-Component Bundles

Complex designs incorporate factory installed temperature sensors such as RTD's, thermocouples and thermistors with multiple process tubes, calibration gas supply tubes, tracers, communication wires, power wiring, and heat tracing.

High Temperature Heaters

Specialty tracers such as CPD, MI and resistance wires can be used to provide temperature maintenance up to 315°C and to withstand a high temperature blowdown of 540°C.

Jacket Materials for Diverse Applications

Jacket materials are available to withstand high operating temperatures, permit installation at low ambients or stand up to constant flexing. Materials include polyurethane, polyethylene or PVC for outdoor applications, and polyethylene braid or stainless steel braid for indoor applications.

Performance Enhancing Designs

Special buffered designs are available for applications with high intermittent process temperatures. These designs buffer the standard self-limiting tracer from the process tube to allow higher maximum exposure temperatures while still providing freeze protection.

Typical Applications

Sampling Systems

Automotive Emissions Testing, Stack Gas Sampling, Process and Portable Analyzers

Viscosity Control

Petroleum products, Asphalt, Tar, Paint Systems, Printing Ink, Coatings, Spray Foam Insulation

Product Transfer

Polymers, Oil, Urethanes, Wax, Chemicals, Food Products, Fat or Freeze Protection, Hot Melt Adhesives, Sanitary Applications.

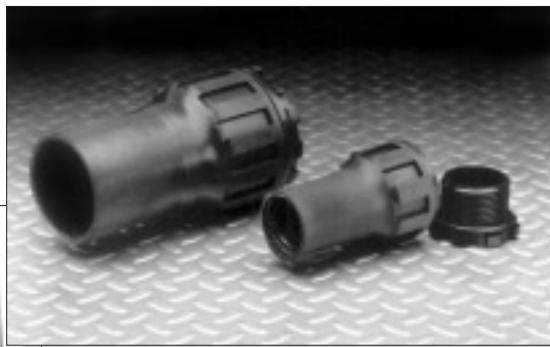
ACCESSORIES

Sealing the bundle

Although TRACEPAK products use a non-hygroscopic, non-wicking insulation, all bundle ends must be sealed to prevent any possible moisture contamination.

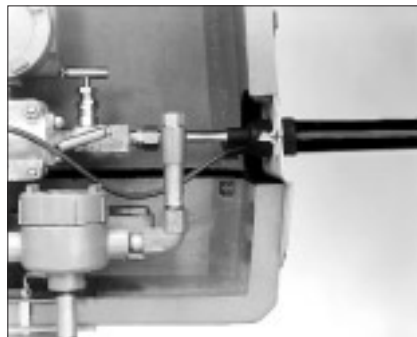
TPKSK - Silicone Sealant

This option is used to seal both ends of the tubing bundle from moisture. It is a black silicone RTV sealant. Cure time is approximately 24 hours at 25°C. Service temperature ranges from -60°C to 210°C. TPKSK offers excellent resistance to weather, oil and many chemicals.



TPKES - Heat Shrink Entry Seal

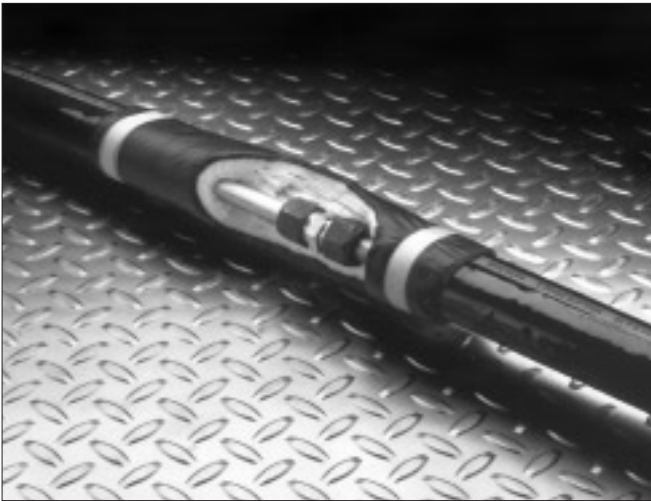
The heat-shrinkable entry seal provides a waterproof fitting where TRACEPAK enters an enclosure. They can be added to any enclosure with up to a 13mm wall. The thermally stabilized, modified polyolefin entry seal consists of an O-ring assembly that seals at the enclosure and a heat-shrinkable nose that seals to the TRACEPAK bundle.



TPKHS - Heat Shrink Boots

The heat-shrinkable boots provide a weatherproof end seal for TRACEPAK tubing bundles. They are made of thermally stabilized, modified polyolefin. Using a heat shrink end seal boot is recommended for all exposed ends. This installation will provide the best weather seal protection. The silicone end seal alone may be used to seal the end of the bundle inside of an enclosure.





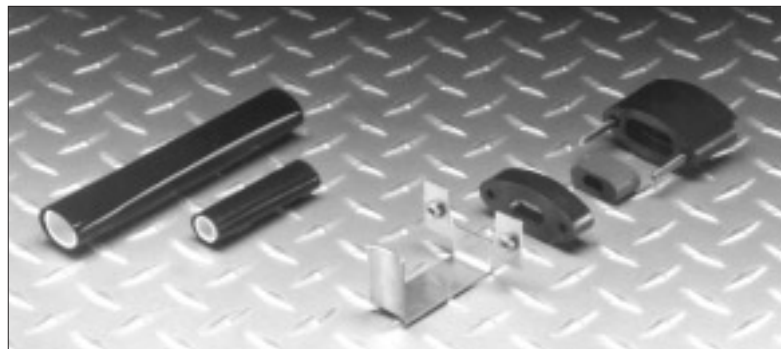
TPKJP - Jacket Patch

The jacket patch kits are used to seal a splice in a bundle or to extend the insulation and weatherproof jacket should the bundle be cut back too far during installation. They are used as a repair patch for any incidental field damage to bundles. The jacket patch kit is required with the optional line temperature sensing thermostat. Each kit contains thermal insulation, fiberglass tape and a self-sealing patch.

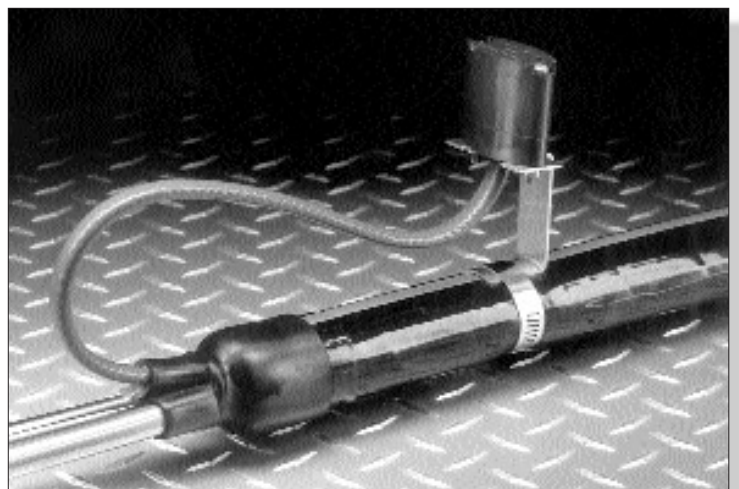


Tracer End Seal Kits

End seal kits are approved and selected for country of use. For P5 or P10 tracer select heat shrink end seal E-06 or mechanical end seal E-12 for P5 or E-14 for P10. For MN4 or MN12 tracer select heat shrink end seal E-19 or mechanical end seal E-23. Consult your local representative for proper selection.



TRACER	POWER CONNECTION		TRACER TERMINATION	
	M25 THREADS	PG16 THREADS	HEAT SHRINK	MECHANICAL
P5	C25-21	C16-29	E-06	E-12
P10	C25-21	C16-29	E-06	E-14
MN4	C25-21	C16-29	E-19	E-23
MN12	C25-21	C16-29	E-19	E-23



ACCESSORIES

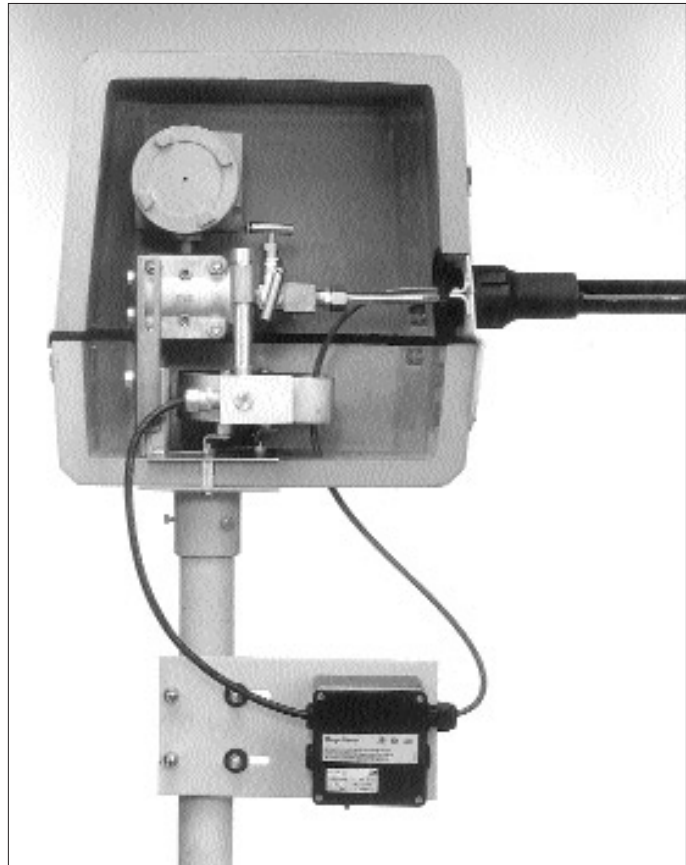
Thermostats

When used with electrically traced tubing bundles, optional thermostats are used to control the temperature of the process tube or to turn on the heater at a specific ambient temperature. Consult your local representative to select the appropriate thermostat for your application.



Power Connection Kits

Power connection kits are approved and selected for the country of use. For P or MN tracer, select connection kit C25-21 with M25 threads or C16-29 with Pg16 threads. Power connection kits and tracer end seal kits are BASEEFA and PTB approved to CENELEC standards.



Combination Power Connection Kit

An outside junction box is available to connect the power feed to both the tracer and the O'Brien enclosure heater.

Installation Tools

TRACEPAK is designed to be installed using standard bending tools. We have designed two special tools that make installation of TRACEPAK tube bundles easier and more compact.

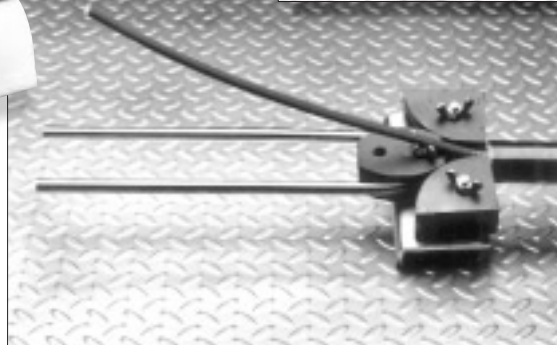
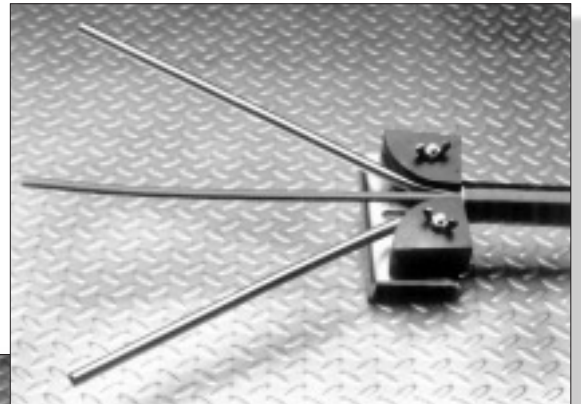
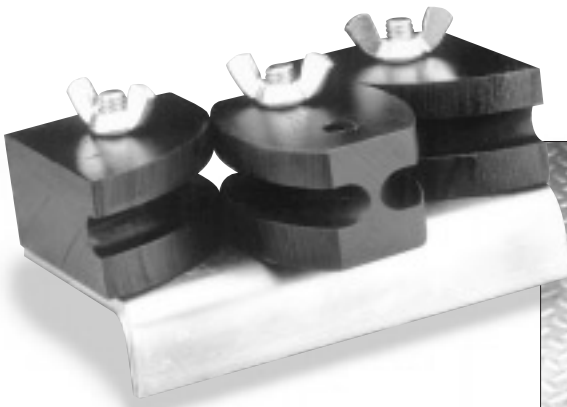


Bundle Bending Tool

Similar to a common electrical conduit bender, this tool is compact and easy to use. It eliminates the need for larger and heavier benders that have the required 200mm minimum bending radius.

54mm Centerline Tool

A replacement for the standard tube bender, it brings the process tubes to the correct centerline for connecting to typical transmitters. This tool makes back-to-back bends easier accomplishing the bends in a much shorter distance than possible with a standard tube bender.



Installation Video

Helpful information on the installation of TRACEPAK tubing bundles. The video deals with general installation procedures and gives a good overview of the products and accessories available to complement and complete the total package.



O'BRIEN CORPORATION
 1900 Crystal Industrial Court
 St. Louis, MO 63114
 Phone (314) 423-4444 FAX (314) 423-1144
 Email obcorp@obcorp.com

Date _____
 Quotation due _____
 Delivery required _____

TRACEPAK CUSTOM DESIGN REQUEST

From _____ Contact _____ Rep _____

Phone # _____ Fax # _____ Email: _____

Application notes: _____

AMBIENT CONDITIONS

Indoor Outdoor Low ambient _____°C High ambient _____°C

Outdoor wind speed **40** km/hr at low ambient

TRACER

Select one:

Electric _____ Voltage _____ Area class _____ Division _____

Steam _____ Pressure _____ Bar _____ Temperature _____°C

Consult factory or local representative if another heating media is used.

PROCESS TUBE DESIGN TEMPERATURE

Desired maintenance temperature _____°C Maximum process temperature during blowdown _____°C

Minimum allowable temperature _____°C Maximum allowable temperature _____°C

If process fluid is flowing and heat must be added or removed to change temperature of process, consult factory or local representative.

TUBE MATERIAL

Quantity _____ m (±5%) Specific lengths required _____ m

Number of process tubes _____ Number of tracer tubes _____

Process:

Tube #1 Size _____ mm Wall _____ mm Material _____ Welded Seamless

Tube #2 Size _____ mm Wall _____ mm Material _____ Welded Seamless

Tracer:

Tube #1 Size _____ mm Wall _____ mm Material _____ Welded Seamless

Tube #2 Size _____ mm Wall _____ mm Material _____ Welded Seamless

Notes _____

ACCESSORIES

Heatshrink boots _____ 54mm centerline tube bender _____

Silicone end sealant _____ Thermostat _____

Power kits _____ Entry seals _____

Termination kits _____ Jacket patch kit _____

Bundle bending tool _____ Other _____

For custom designs, complete this form and contact your local representative.

Material specifications

The following specifications apply to all members of the TRACEPAK family.

JACKET

Thermoplastic Polyether Urethane Elastomer

Hydrolytically Stabilized

Halogen Free

Abrasion Resistant

UV Resistant

Low Temperature Flexibility

INSULATION

Fibrous Glass

Water Soluble Chlorides less than 100 ppm.

Non-hygroscopic

TUBING

OD	WALL	CONSTRUCTION AND MATERIAL	ASTM
6mm	1mm	seamless 316 SS	A-269
8mm	1mm	seamless 316 SS	A-269
10mm	1mm	seamless 316 SS	A-269
12mm	1.5mm	seamless 316 SS	A-269
6mm	1mm	copper	B-68,B-75
8mm	1mm	copper	B-68,B-75
10mm	1mm	copper	B-68,B-75
12mm	1mm	copper	B-68,B-75
6mm	1mm	6mm OD PFA Teflon	
8mm	1mm	8mm OD PFA Teflon	
10mm	1mm	10mm OD PFA Teflon	
12mm	1mm	12mm OD PFA Teflon	
1/4"	0.035	welded 316ss	A-269
3/8"	0.035	welded 316ss	A-269
1/2"	0.035	welded 316ss	A-269
1/4"	0.035	seamless 316ss	A-269
3/8"	0.035	seamless 316ss	A-269
1/2"	0.049	seamless 316ss	A-269
1/4"	0.030	copper	B-68,B-75
3/8"	0.032	copper	B-68,B-75
1/2"	0.035	copper	B-68,B-75
1/4"	0.030	1/4" OD PFA Teflon	
3/8"	0.030	3/8" OD PFA Teflon	
1/2"	0.062	1/2" OD PFA Teflon	

Metric tubing is provided with inspection certificate 3.1.B per EN10204. Tubing meeting NACE MR-01-75-90 and ASTM A-213-EAW specifications are also stocked. Consult factory for the availability other materials and specifications.

TEMPERATURE LIMITS

Minimum installation temperature
-40°C

Maximum jacket surface temperature
60°C at ambient temperature of
27°C with maximum process or
tracer tube temperature.

TPH, TPL and S-LINE

Maximum process tube
temperature
204°C*

TPE

Continuous exposure power on.
XTV 120°C*
BTV 65°C*

Intermittent exposure power on
or off.
XTV 215°C*
BTV 85°C*

Maximum TPE tracer
temperature
XTV T-rating T3, 230°C
BTV T-rating T6, 85°C

*Consult factory for higher
temperature limits.

Customer Service

Customer service takes on a whole new meaning at O'Brien Corporation. Our reputation as a customer-oriented problem solver has been long recognized.

O'Brien's customer-oriented approach offers these benefits:

- responsive, knowledgeable personnel
- unparalleled delivery service
- dependable, tested results of all product lines

ISO 9002 Unparalleled Quality

Certified to current ISO 9002 standards.

Our adherence to recognized international standards provides one of the strongest assurances of product and service quality available.

Total Solution

As a result of our heat transfer expertise O'Brien products and solutions improve accuracy from the instrument installation to the impulse and sample line.

Our total engineering package will reduce field installation costs and provide a dependable solution for your needs.

Process accuracy through heat transfer expertise.



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