STACKPAK®

PRODUCT OVERVIEW

O'Brien's STACKPAK® is a sample transport bundle system used for stack gas, environmental and process monitoring. STACKPAK transport lines maintain uniform temperatures for gas samples such as NOx, SOx and CO_2 as well as providing temperature maintenance and freeze protection of liquid samples.

In addition to its superior temperature maintenance capabilities, STACKPAK is highly configurable. You can choose from a wide variety of process tubes. Single or multiple process lines can be combined for the heated core and other pneumatic and calibration gas tubes can be provided unheated. Power and signal wiring can be added to the design along with factory installed thermocouple and RTD temperature sensors for accurate temperature control. Standard STACKPAK can be easily configured for the exact requirement of your application.

Choose our flexible TPU urethane or proprietary SV47 blend of PVC to provide a weatherproof jacket. O'Brien Analytical makes STACKPAK easy to install by providing factory finished and weatherproofed probe or power ends. With factory finished ends a three-foot (one meter) power and temperature sensor lead connection is supplied as standard in a choice of materials from EPDM to armored flex.

O'Brien Analytical STACKPAK sample transport bundles utilize FEA analysis tools to ensure performance that has been verified in our environmental chamber at temperatures down to –60°F (-50°C). STACKPAK is an engineered industrial product that is suitable for permanent and temporary applications in general purpose or hazardous areas.

**Max water soluble chloride 30ppm.*

JACKET MATERIALS

O'Brien offers a variety of jacket materials ensuring reliable operation in a variety of environments, including in high operating temperatures, low ambient temperatures. Materials include polyurethane or PVC for outdoor applications.

APPLICATIONS

- Sampling Systems
- Emissions Gas Sampling
- Process and Portable Analyzers
- Automotive Emissions Testing
- Viscosity Control
- Petroleum products
- Asphalt
- Tar
- Paint Systems
- Printing Ink
- Coatings
- Polymers
- Oils
- Chemicals
- Food Products
- Hot Melt Adhesives
- Sanitary and High Purity Applications
- Corrosion Protection
- Harsh environments such as marine and offshore

STACKPAK MODEL NUMBER EXAMPLE

Model SU-H3S2(2)/S2(2)-TN18/200/K50/5M-XXXXX

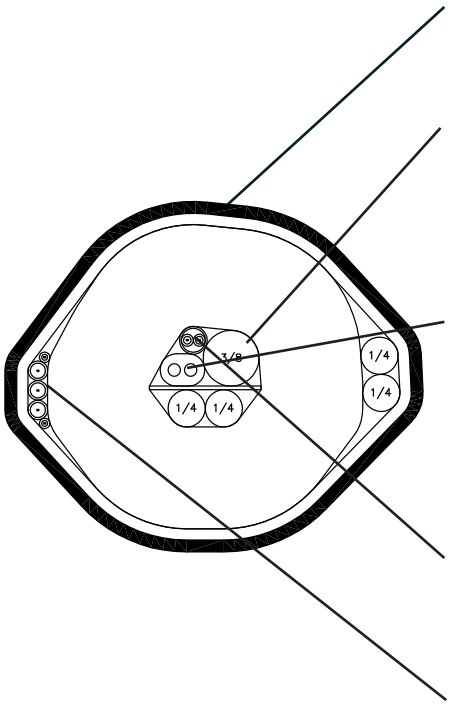
S	STACKPAK
U	TPU Jacket
—	Separator
H3S2(2)	Three heated tubes One H3 3/8” x 0.062 PFA Two S2 1/4” x 0.040 PFA
/	Separator between heated and unheated tubes
S2(2)	Two unheated tubes, two S2 1/4” x 0.040 PFA
—	Separator
TN18	240V 18W/ft zone heater for non-hazardous areas
/200	200’ overall length
/K50	Type K thermocouple w/ sensor located 50’ from power end
/5M	5 Messenger wires Size and configuration is defined during quotation and purchase order.
-XXXXX	Unique identification

IF YOU HAVE A ‘Z’ IN THE MODEL NUMBER

Some designs may contain tubes, tracers and other components not listed. These components will be designated by a “Z” in the model number and are defined in the packing list accompanying the shipment.

ELECTRIC CONNECTIONS AND TERMINATIONS

Electric tracers must be connected and terminated using approved power connection and termination kits. See instructions provided with the power connection kit.



X - Alpha # Numeric	Description
X/	Unit of measure - only used for bundle sold and marked in Meters. No prefix designates product is sold and marked in feet M/ = meters
S	STACKPAK Product Designation
X	Jacket Material S = SV47 O’Brien PVC U = TPU Jacket Material
—	Separator
X#	Heated tube material, construction and diameter. For tube designations see page 3. Multiple like tubes are designated by multiple number codes: (e.g. H33S2 designates two H3 tubes and one S2 tube. Tube diameter is in 1/8” increments or millimeters if metric
/	Separator only if unheated tubes are present.
X#	Unheated tube(s) use the same designation method as heated tubes described above.
—	Separator
X#	Electric tracer type and wattage output. See pages 4 - 5. X = unheated
Special Options	
/	Separator between each option
X	Exact and continuous length (Default is in feet. If M/ prefix selected then length is in meters.)
X##	Temperature Sensor J = Type J thermocouple K = Type K thermocouple R = 100Ω / 100PT 3 wire RTD XX = distance from power end in chosen units (maximum 50’ / 15m)
#M	Messenger wires (e.g. /3M indicates 3 messenger wires required. Specify type, size and color as notes.)
X	Jacket Color - default is black A = Gray L = LightBlue P = Purple N = Orange B = Blue N = Orange R = Red Y = Yellow G = Green W = White U = Brown
LC	Large Crosshead (internal designation for manufacturing)
	Specials Identifier

TUBE LIST

Designation	Material	Construction	OD	Wall	Max. Pressure*	Max. Continuous Length Possible**	Specifications
A2	316/316L SS	Welded	1/4"	0.035"	4,080 psig	2,500 ft	A269, A1016, EN 10204-3.1
A3	316/316L SS	Welded	3/8"	0.035"	2,640	2,500	A269, A1016, EN 10204-3.1
A4	316/316L SS	Welded	1/2"	0.035"	2,080	2,000	A269, A1016, EN 10204-3.1
B2	316/316L SS	Seamless	1/4"	0.049"	7,500	1,300	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
B3	316/316L SS	Seamless	3/8"	0.049"	4,800	1,000	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
B4	316/316L SS	Seamless	1/2"	0.049"	3,700	750	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
C3	Copper	Seamless	3/8"	0.032"	900	2,000	B68, B75, EN 10204-3.1
D4	Copper	Seamless	1/2"	0.035"	800	1,000	B68, B75, EN 10204-3.1
E4	316/316L SS	Welded	1/2"	0.049"	2,975	1,000	A269, A1016, EN 10204-3.1
F1	316/316L SS	Seamless	1/8"	0.035"	10,900	900	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
F2	316/316L SS	Seamless	1/4"	0.035"	5,100	2,200	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
F3	316/316L SS	Seamless	3/8"	0.035"	3,300	1,300	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
F4	316/316L SS	Seamless	1/2"	0.035"	2,600	1,000	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
G2	PFA	Extruded	1/4"	0.030"	155	1,000	
G2S	PFA	Extruded	1/4"	0.030"			SensorTube™ Color: BLACK
G3	PFA	Extruded	3/8"	0.030"	95	1,000	
G4	PFA	Extruded	1/2"	0.030"			
H2	PFA	Extruded	1/4"	0.062"			
H3	PFA	Extruded	3/8"	0.062"			
H3S	PFA	Extruded	3/8"	0.062"			SensorTube™ Color: BLACK
H4	PFA	Extruded	1/2"	0.062"	155	1,000	
J2	Copper	Seamless	1/4"	0.030"	1,400	2,600	B68, B75, EN 10204-3.1
K4	316/316L SS	Seamless	1/2"	0.065"	5,100	250	A269, A213-EAW, A1016, MR0175, EN 10204-3.1
M4	Copper	Seamless	1/2"	0.049"	1,100	1000	B68, B75, EN 10204-3.1
MA12	316/316L SS	Welded	12mm	1mm	170	300	A269, A1016, EN 10204-3.1
MB10	316/316L SS	Seamless	10mm	1.5mm	410	150	A269, A213-EAW, A1016, MR0175, DIN 17458 1.4401/1.4404, EN 10204-3.1
MB12	316/316L SS	Seamless	12mm	1.5mm	330	120	A269, A213-EAW, A1016, MR0175, DIN 17458 1.4401/1.4404, EN 10204-3.1
MD6	Copper	Seamless	6mm	1mm	95	600	B68, B75, EN 10204-3.1
MD8	Copper	Seamless	8mm	1mm	60	455	B68, B75, EN 10204-3.1
MD12	Copper	Seamless	12mm	1mm	55	300	B68, B75, EN 10204-3.1
MF6	316/316L SS	Seamless	6mm	1mm	460 Bar	300M	A269, A213-EAW, A1016, MR0175, DIN 17458 1.4401/1.4404, EN 10204-3.1
MF8	316/316L SS	Seamless	8mm	1mm	330	210	A269, A213-EAW, A1016, MR0175, DIN 17458 1.4401/1.4404, EN 10204-3.1
MF10	316/316L SS	Seamless	10mm	1mm	260	165	A269, A213-EAW, A1016, MR0175, DIN 17458 1.4401/1.4404, EN 10204-3.1
MF12	316/316L SS	Seamless	12mm	1mm	210	150	A269, A213-EAW, A1016, MR0175, DIN 17458 1.4401/1.4404, EN 10204-3.1
MG6	PFA	Extruded	6mm	1mm	10	300	
MG8	PFA	Extruded	8mm	1mm			
MG10	PFA	Extruded	10mm	1mm			
MG12	PFA	Extruded	12mm	1mm			
N2	Monel	Seamless	1/4"	0.035"	4,800	1,000	B163, B165
N3	Monel	Seamless	3/8"	0.035"	3,100	600	B163, B165
P4	Monel	Seamless	1/2"	0.049"	3,210	600	B163, B165
S2	PFA	Extruded	1/4"	0.040"	180	745	
TrueTube® EP: *Electropolished, A269, A213-EAW, A1016, EN 10204 3.1 (GREEN identification in bundle)*							
TE1	316/316L SS	Seamless	1/8"	0.020"	10,900	100	
TE2	316/316L SS	Seamless	1/4"	0.035"	5,100	660	

	Tracer	Votage	W/ft	W/m	Max. Maintain and Exposure	Max. Intermittent Exposure	T Rating	Connection Kits Power	Termination	Approvals
Zone Tracers	**JV5**	120	5	16	445F (235C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PC	T250-ET T250-ET	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G
	JV10	120	10	32	400F (200C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PC	T250-ET T250-ET	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G
	JV15	120	15	49	335F (170C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PC	T250-ET T250-ET	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G
	JV20	120	20	65	300F (150C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PC	T250-ET T250-ET	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G
	JN5	240	5	16	445F (230C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PC/T9355-PC	T250-ET T250-ET T355-ET T350-ET14	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G CENELEC EEx es II T*
	JN10	240	10	30	400F (205C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PC/T9355-PC	T250-ET T250-ET T355-ET T350-ET14	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G CENELEC EEx es II T*
	JN15	240	15	49	335F (170C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PCT9355-PC	T250-ET T250-ET T355-ET T350-ET14	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G CENELEC EEx es II T*
	JN20	240	20	60	300F (150C)	500F (260C)	T*	T210-PC or T9255-PC T210-PC or T9255-PCT9355-PC	T250-ET T250-ET T355-ET T350-ET14	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 2, Gr. A, B, C, D, E, F, G CENELEC EEx es II T*
	T18	120	18	-	400F (200C)	450F (230C)	T*	T9G90-UC		Non-Hazardous Areas
	TN18	240	18	-	400F (200C)	450F (230C)	T*	T9G90-UC		Non-Hazardous Areas
	TY18	208	18	-	400F (200C)	450F (230C)	T*	T9G90-UC		Non-Hazardous Areas

	Tracer	Votage	W/ft	W/m	Max. Maintain and Exposure	Max. Intermittent Exposure	T-Rating	Connection Kits Power	Termination	Approvals
Low Temperature Tracers	**J5**	120	5	16	150F (65C)	185F (85C)	T6	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1	T210-ET T210-ET or TPC1	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 1, 2, Gr. A, B, C, D, E, F, G
	J8	120	8	25	150F (65C)	185F (85C)	T6	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1	T210-ET T210-ET or TPC1	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 1, 2, Gr. A, B, C, D, E, F, G
	J10	120	10	32	150F (65C)	185F (85C)	T6	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1	T210-ET T210-ET or TPC1	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 1, 2, Gr. A, B, C, D, E, F, G
	P5	240	5	16	150F (65C)	185F (85C)	T6	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET10	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T6
	P8	240	8	25	150F (65C)	185F (85C)	T6	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET10	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T6
	P10	240	10	32	150F (65C)	185F (85C)	T6	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET10	FM Appvd. Cl I, II, III Div. 2, Gr. B, C, D, F, G CSA Cert. Cl I, II Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T6

	Tracer	Votage	W/ft	W/m	Max. Maintain and Exposure	Max. Intermittent Exposure	T-Rating	Connection Kits Power	Termination	Approvals
High Temperature Tracers with Fluoropolymer Overjacket	**B5**	120	5	15	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1	T210-ET T210-ET or TPC1	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G
	B10	120	10	37	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1	T210-ET T210-ET or TPC1	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G
	B15	120	15	47	250F (120C)	482F (250C)	T2D	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1	T210-ET T210-ET or TPC1	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G
	B20	120	20	63	250F (120C)	482F (250C)	T2C	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1	T210-ET T210-ET or TPC1	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G
	MN4	240	4	12	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET13	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T3
	N5	240	5	15	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET13	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T3
	MN8	240	8	24	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET13	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T3
	N10	240	10	30	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET13	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T3
	MN12	240	12	36	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET13	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T3
	N15	240	15	47	250F (120C)	482F (250C)	T3	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET T210-ET or TPC1 T310-ET13	FM Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II T3
	N20	240	20	63	250F (120C)	482F (250C)	T2C	T210-PC or T9255-PC T210-PC or T9255-PC or TPC1 T9355-PC	T210-ET FM T210-ET or TPC1 T310-ET13	Appvd. Cl I, II, III Div. 2, Gr. A, B, C, D, F, G CSA Cert.. Cl I, II, III Div. 1, 2, Gr. A, B, C, D, E, F, G CENELEC EEx e II 240°C (T2)

+1-314-236-2020 • sales.obrien@ametek.com