

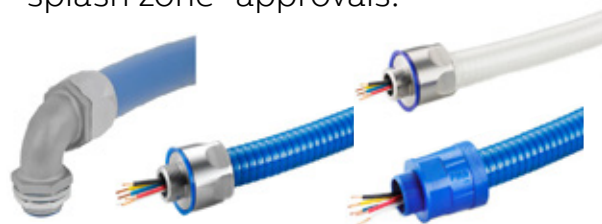
APPLICATION PROFILE

Food and beverage solutions

T&B Liquidtight Systems®



The T&B Liquidtight Systems® brand encompasses a complete range of food and beverage, metallic and non-metallic flexible conduit system solutions for applications requiring FDA antimicrobial materials, UL 4/4X and IP69 ingress ratings and NSF “splash zone” approvals.



Introduction

The T&B Liquidtight Systems portfolio includes one of the widest ranges of liquid-tight flexible cable protection system solutions for the food and beverage industry. Material selection and rigorous testing are the key factors to these highly engineered and superior performance cable protection solutions.

Typical applications

- Food and beverage equipment
- Pharmaceutical equipment
- Bottling lines
- Packaging equipment
- Meat packing
- Dairy processing
- Coolers and freezer systems
- Canning plants
- Mixers, blenders and fillers
- Brewing and distillery
- High-pressure washdown areas
- Commercial food service



System components

Food and beverage installations require system solutions considering critical application parameters such as material specifications, temperature ratings, ingress ratings, trade sizes and approvals.

Materials


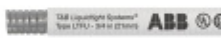






T&B Liquidtight Systems food and beverage solutions are primarily designed with ANSI 316 stainless steel and FDA-compliant compounds. Materials are selected with cleanability, antimicrobial active ingredients, high-pressure washdown and maintenance-free long-term durability as priorities.

Food and beverage protection system components

- Flexible metallic conduits
- Flexible non-metallic conduits
- Hygienic stainless steel liquid-tight fittings
- Stainless steel liquid-tight fittings
- Seal gaskets
- Locknuts
- Supports

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Metallic solutions

Food zone installation	Non-food zone			NSF food “splash zone”
System ingress rating	UL Type 4/4X/12, IP69			NEMA 4/4X/12, IP69
Liquid-tight flexible conduits (LFMC)				
Product Offering	LT6FE SS 316 antimicrobial	LTFU steel	LTFU steel antimicrobial	SAMHURL BioCote AM
	 ABB CE	 ABB CE	 ABB CE	 ABB CE
	CE NSF	UL SP CE NSF	UL SP CE NSF	cULus CE NSF
	Food and bev, SST 316L		Food and bev, steel galv.	Food and bev, steel galv.
Approvals and certifications				
UL 360	No	Yes	Yes	No
CSA C22.2, No. 56	No	Yes	Yes	No
UR component recognized	No	No	No	Yes
CE certification	Yes	Yes	Yes	Yes
RoHS	Yes	Yes	Yes	Yes
NSF approval	Yes	Yes	Yes	Yes
Trade sizes				
UL (inches)	3/8 to 4	3/8 to 4	3/8 to 4	3/8 to 2
CSA (mm)	12 to 103	12 to 103	12 to 103	12 to 53
Materials				
Core	Stainless steel 316L	Steel galvanized	Steel galvanized	Steel galvanized
Jacket material	PVC, FDA compliant	PVC, FDA compliant	PVC, FDA compliant	Hytrol, FDA compliant
Antimicrobial	Yes	No	Yes	Yes, BioCote
Jacket color (standard)	White	White	Blue	White, blue
UL bond wire (1/2 to 1 1/4")	—	Yes	Yes	—
Temperature — dry (see technical data sheets for complete ratings)				
General	-55 to +105 °C (-67 to +221 °F)	—	—	-50 to +130 °C (-58 to +266 °F)
CE	-45 to +105 °C (-49 to +221 °F)	-25 to +90 °C (-13 to +194 °F)	-25 to +90 °C (-13 to +194 °F)	—
UL (fittings and seal gaskets)	—	-30 to +80 °C (-22 to +176 °F)	-30 to +105 °C (-22 to +221 °F)	—
CSA (fittings and seal gaskets)	—	30 to +60 °C (-22 to +140 °F)	-30 to +105 °C (-22 to +221 °F)	—
Technical data sheet	TDS000086	TDS000021	TDS000569	TDS: TYPE SAMHURL
Liquid-tight metallic fittings				
Product offering	SS 316 LT fittings	SS 316 LT fittings	SS 316 one-piece fittings	SS 316 one-piece fittings
				
	UL SP CE NSF	UL SP CE NSF	UL CE NSF	UL CE NSF
	5300SST6, -HT	5300SST6-FB		SPLxxSAM
	SST316 (standard and high temp)			SST316
Approvals and certifications				
UL 514B listing	Yes	Yes	Yes	Yes
CSA C22.2, No. 56	Yes	Yes	No	No
UR component recognized	No	No	No	No
CE certification	Yes	Yes	Yes	Yes
RoHS	Yes	Yes	Yes	Yes
NSF 169	Yes	Yes	Yes	Yes
Materials				
Metal components	Stainless steel 316		Stainless steel 316	
Seals, insulators and gaskets	Nylon		Hytrel	
Thread types	NPT and metric		NPT and metric	
Ground cone options	Steel galvanized (Opt. -6, SS 316)		Stainless steel	
Ingress protection				
UL listed/CSA certified	Type 3, 3R, 4, 4X, 6, 12, 13	Type 3, 3R, 4, 4X, 6, 12, 13	—	—
NEMA 250	Type 3, 3R, 4, 4X, 6, 12, 13	Type 3, 3R, 4, 4X, 6, 12, 13	Type 3, 3R, 4, 4X, 12, 13	Type 3, 3R, 4, 4X, 12, 13
IEC/EN 60529	IP66, 67, 68, 69	IP66, 67, 68, 69	IP66, 67, 68, 69	IP66, 67, 68, 69
Technical data sheet	TDS000126	TDS000778		TDS: TYPE SAM

Note: Product must be installed in accordance with applicable national and local electrical codes.

Food and beverage solutions

Non-metallic solutions

Food zone installation	Non-food zone	NSF food “splash zone”		
System ingress rating	UL 4/4X/12, IP69	NEMA 4/4X/12, IP69		
Liquid-tight flexible conduits				
Product offering	Non-metallic conduit (LFNC-A)	Non-metallic conduit (LFNC-C)		
	TYPE A	JFBD - PA12		
				
				
	Food and bev non-metallic	Food and bev non-metallic		
Approvals and certifications				
UL 1660	Type A	Type C		
CSA 22.2 No. 227.2	Yes	No		
UR component recognized	No	Yes		
CE certification	No	Yes		
RoHS	Yes	Yes		
NSF approval	Yes	Yes		
Trade sizes				
UL (inches)	3/8 to 2	3/8 to 2		
CSA (mm)	16 to 63	12 to 63		
Materials				
Core	Mesh web, dual layer	Dual layer		
Jacket material	PVC, dual layer	PA12, FDA compliant		
Antimicrobial	Yes	Yes		
Jacket color (standard)	Blue	Blue		
UL bond wire (1/2 to 1 1/4")	—	—		
Temperature — dry (see technical data sheets for complete ratings)				
General	-37 to +105 °C (-35 to +221 °F)	-20 to +95 °C (-4 to +203 °F)		
UL (fittings and seal gaskets)	-18 to +105 °C (0 to +221 °F)	-18 to +90 °C (0 to +194 °F)		
CSA (fittings and seal gaskets)	-18 to +105 °C (0 to +221 °F)	-18 to +90 °C (0 to +194 °F)		
Technical data sheet	TDS000630	TDS: JFBD - 16310-08		
Liquid-tight non-metallic and metallic fittings				
Product offering	SST Bullet® fittings	NM Bullet® fittings	PA12 nylon fittings	SST 316 one-piece fittings
				
				
	Series 6300SST	Series 6300	JKBH, JKNH	JENQ
	SST 316/304	Reinforced resin	PA12	SST 316
Approvals and certifications				
UL 514B Listing	Yes	Yes	No	No
CSA C22.2, No. 56	Yes	Yes	No	No
UR component recognized	No	No	Yes	Yes
CE certification	No	No	Yes	Yes
RoHS	Yes	Yes	Yes	Yes
NSF 169	No	No	Yes	Yes
Materials				
Components	Stainless steel 316/304	Reinforced compound	PA12 nylon fittings	Stainless steel
Seals, insulators and gaskets	TPR	Neoprene	—	Hytrell
Thread types	NPT	NPT	NPT and metric	Metric
Ground cone options	—	—	—	—
Ingress protection				
UL listed/CSA certified	Type 4/4X/12	Type 4/4X/12	—	—
NEMA 250	Type 4, 4X, 12	Type 4, 4X, 12	Type 4, 4X, 12	Type 4, 4X, 12
IEC/EN 60529	IP66, 69	IP66, 69	IP66, 67, 68, 69	IP66, 67, 68, 69
Technical data sheet	TDS000628	TDS000592	TDS - JKBH, TDS - JKNH	TDS: 52300-01

Note: Product must be installed in accordance with applicable national and local electrical codes.

Food and beverage solutions

Sample kits available

T&B Liquidtight Systems® and PMA® food and beverage solutions provide premier cable protection for most demanding metallic and non-metallic applications.

PMA non-metallic sample kits



Part no. KIT-SAMPLE BOX FB



Part no. KIT-SAMPLE JFBD

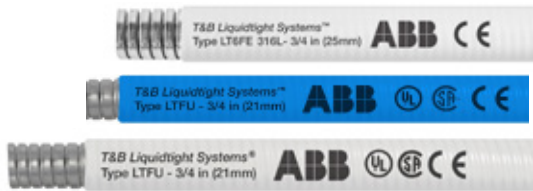


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T&B Liquidtight Systems metallic sample kit

Part no. LTSF&B-KIT

Materials included:

- 5332SST6-FB — ½" straight, SST 316 LT fitting
- 5352SST6-FB — ½" 90° elbow, SST 316 LT fitting
- 142-SST — ½" SST 316 locknut
- SAMHURL — ½" UR antimicrobial BioCote LFMC
- LTFUS02L-C — ½" UL/CSA antimicrobial LFMC
- LT6FES02W-C — ½" CE antimicrobial, CE SST 316L LFMC
- Technical data sheets

Sample kits are in stock and available for immediate delivery.

How to order:

1. Contact your local ABB sales representative to order
2. Supply your contact information and mailing address
3. ABB sale representative to order sample kit from EP Sales Portal

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