

APPLICATION PROFILE

# Aluminum solutions

## *T&B Liquidtight Systems®*



The T&B Liquidtight Systems® brand encompasses complete flexible metallic cable protection solutions designed for applications that require the use of aluminum — ideal for corrosion protection, lightweight requirements and more.



### Introduction

The T&B Liquidtight Systems portfolio includes one of the widest ranges of liquid-tight flexible metallic conduit solutions for aluminum applications. When used together, the fittings, conduits and accessories in this portfolio help ensure a trusted system solution.



### Typical applications

For use in indoor or outdoor installations:

- Corrosive environments
- Processing plants
- OEM equipment
- Portable equipment
- Suspended systems
- Mass transit
- Aviation
- Water/wastewater treatment
- Surveillance and lighting
- Ship and off-shore
- Locomotives and rolling stock
- Heavy vehicle
- Applications in which weight is a concern

### System solutions

Aluminum conduit systems are generally 35–45% lighter than steel systems while still providing excellent corrosion protection. General purpose and halogen-free products are also offered in this portfolio.

### Solutions designed for corrosive environments

ABB offers liquid-tight solutions in aluminum — perfect for corrosion protection, especially when lightweight requirements and cost-effectiveness are key factors for end-users.

### Aluminum system components

- Liquid-tight flexible metallic conduits
- Liquid-tight fittings
- Seal gaskets
- Locknuts
- Supports
- Wire mesh grips
- Hole plugs

## Aluminum solutions



### System components:

- Liquid-tight flexible metallic conduit
  - Aluminum core
  - PVC extruded smooth jacket
  - Trade sizes 3/8" to 6"
- Liquid-tight fittings
  - NPT threads
  - Trade sizes 3/8" to 4"
  - GR grounding versions
- Seal gaskets
- Conduit supports
- Mesh grips

### T&B Liquidtight Systems® product lines:

- Type LTAE
- Series 5200AL
- Series 5200ALGR
- Series 5260 seal gaskets
- Series HS100-SS conduit supports
- Series WMG-LT mesh grips

### System ingress ratings

Complete system solutions have been tested by ABB Installation Products and third-party test facilities.

	Test standard	Ratings	Approvals and certifications
UL	UL 50E	Type 3, 3R, 4, 12, 13	UL listed when using listed conduits
CSA	CSA C22.2 No. 18.3	Type 3, 3R, 4, 12, 13	CSA certified when using listed conduits
NEMA	NEMA 250	Type 3, 3R, 4, 12, 13	Third party verified, tested to UL 50E with all conduits
IEC IP	IEC/EN 60529	IP66, IP67	Third party verified with all conduits

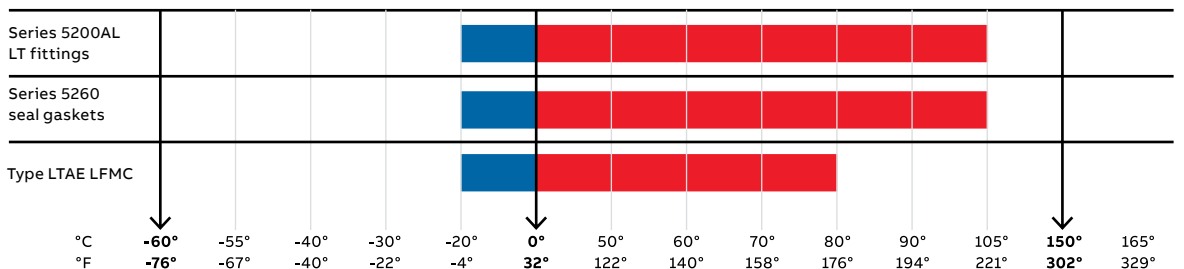


### System temperature ratings

System temperature ratings are achieved by ensuring that all components have been designed and tested to the appropriate product standard requirements or to the manufacturer's targeted performance characteristic. In the case of T&B Liquidtight Systems aluminum solutions, product standard performance tests were used. Diligent material evaluation and testing ensures that T&B Liquidtight Systems rating claims meet the highest performance standards possible.

### Type LTAE temperature ratings

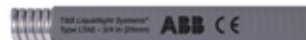
IEC/EN 61386-1, -23	CE certified	-15 to +60 °C (+5 to +140 °F)
T&B engineered and tested:	General	-20 to +80 °C (-4 to +176 °F)



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### Product line overview

#### Liquid-tight flexible metal conduit



	LTAE	LTGU	LT6GE
Product line	Aluminum GP- CE	Steel GP- UL	SST6 GP- CE
<b>Approvals and certifications</b>			
UL 360	No	Yes	No
CSA C22.2, No. 56	No	Yes	No
CE certification, IEC/EN 61386	Yes	Yes	Yes
RoHS	Yes	Yes	Yes
Halogen-free	No	No	No
<b>Trade sizes</b>			
UL (Inches)	⅜ to 6	⅜ to 4	⅜ to 4
CSA (mm)	12 to 155 mm	12 to 103 mm	12 to 103 mm
BS EN (mm)	16 to 100 mm	16 to 100 mm	16 to 100 mm
<b>Materials</b>			
Core	Aluminum	Steel	Stainless steel 316L
Extruded jacket (UL ID/OD)	PVC	PVC	PVC
UL bond wire (½ to 1¼")	No	Yes	No
<b>Documentation</b>			
Technical data sheet	TDS000008	TDS000001	TDS000087
Quick select table	LTAE QST 0222	LTGU QST 0222	LT6GE QST 0222
CE certificate	EC-012-16-100	EC-012-16-156	EC-012-16-177

#### Liquid-tight fittings and accessories



	Series 5200AL	Series 5200ALGR	Series 5260
Product line	Aluminum	Aluminum, grounding	Seal gaskets
<b>Approvals and certifications</b>			
UL 514B	Yes	Yes	Yes
CSA C22.2, No. 18.3	Yes	Yes	Yes
CE certification, IEC/EN 61386	Yes	Yes	No
RoHS	Yes	Yes	Yes
Halogen-free	Yes	Yes	Yes
<b>Materials</b>			
Metal components	Aluminum	Aluminum	Stainless steel 316
Seals, Insulators and gaskets	Nylon	Nylon	Thermoplastic rubber
<b>Documentation</b>			
Technical data sheet	TDS000118	TDS000119	TDS000232
CE certificate	EC-012-7187	EC-012-7187	---
<b>System ratings</b>			
<b>Temperature — dry (see technical data sheets for complete ratings)</b>			
General	-20 to +105 °C (-4 to +221 °F)	-20 to +105 °C (-4 to +221 °F)	---
CE	-25 to +105 °C (-13 to +221 °F)	-25 to +105 °C (-13 to +221 °F)	---
UL	-20 to +105 °C (-4 to +221 °F)	-20 to +105 °C (-4 to +221 °F)	-20 to +105 °C (-4 to +221 °F)
CSA	-20 to +105 °C (-20 to 221 °F)	-20 to +105 °C (-4 to +221 °F)	-20 to +105 °C (-4 to +221 °F)
<b>Ingress</b>			
UL/CSA (tested per UL 50E)	Type 3, 3R, 4, 12, 13	Type 3, 3R, 4, 12, 13	Type 3, 3R, 4, 4X, 12, 13
NEMA	Type 3, 3R, 4, 12, 13	Type 3, 3R, 4, 12, 13	Type 3, 3R, 4, 4X, 12, 13
IEC/EN 60529	IP66, IP67	IP66, IP67	IP66, IP67, IP68, IP69

## Aluminum solutions

### Sample kits

T&B Liquidtight Systems® solutions meet global application requirements for aluminum installations, -20 to +105 °C.



### Sample kit available

Part no.: LTSAL-KIT

Materials included:

- 5232AL — ½" straight aluminum liquid-tight fitting
- 5252AL — ½" 90° aluminum liquid-tight fitting
- 5262 — ½" seal gasket
- LTGUS02G-C — ½" general purpose steel, UL LFMC
- LTAES02B-C — ½" aluminum, CE 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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