

PORTFOLIO OVERVIEW

Installation Products

Food and beverage industry - Europe,
Middle East and Asia



Installation Products Division
for Food and beverage industry

- Wire and cable management
- Cable protection systems
- Connectivity and grounding

Thomas & Betts is now part of ABB's Installation Products Division, but our long legacy of quality products and innovation remains the same. From connectors that support wire buildings on Earth to cable ties that help put machines in space, we continue to work every day to make, market, design and sell products that provide a smarter, safer and more reliable flow of electricity, from source to socket.

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ABB Installation products for food and beverage industry

F&B plants are continuously challenged to keep up with evolving consumer demand for new products in greater varieties, with increasing quality and compliance pressures. F&B process equipment should operate as efficiently, safely and hygienically as possible, without compromising critical power and data connections. ABB offers you F&B dedicated installation products to protect and connect sensitive electrical wiring in complex processing equipment. Matching the high demanding environmental requirements in each product, to help your plant continuity and food safety.



Corrosion resistance

Harsh chemicals, pressurised washdowns and dissimilar metals in contact with one another accelerate the corrosion process. Save time and replacement costs with an array of corrosion preventive conduits, fittings, cable glands and cable ties that resist chemical attacks, extreme temperatures and washdown incursions.



Dust and liquid tight

Exposure to dust, water, condensation and accidental spills of machine oils and lubricants can all shorten the life of your electrical system. ABB provides you a broad range of materials from metallic / non metallic flexible conduits, explosion protective conduit systems to fittings and cable glands, to keep your system running.



Extreme temperature protection

ABB has created electrical components that work outside of standard temperature ranges, to make them effective in both the extreme cold and heat. Our offering range of conduits, fittings, cable glands and cable ties are designed with extreme temperatures, condensation protection and repeated thermal expansion / contraction in mind. Allowing you to run your operations no matter what the operational environment requires.



Chemical resistance

Harsh washdowns can quickly lead to failure. That is why ABB fittings, conduits and cable glands undergo rigorous testing in our state-of-the-art labs to help them meet the highest standards of ingress protection. ABB offers you a wide range of flexible metallic / non metallic conduits, explosion protective conduits systems / cable glands and fittings.



Liquid ingress protection - IP69

Effective protection of your electrical system can mean the difference between consistent operations, or unscheduled downtime while liquid-damaged components are replaced or the system is rebuilt. ABB offers you dedicated ranges of flexible liquidtight metallic / non metallic conduits as well as fittings and cable glands systems.



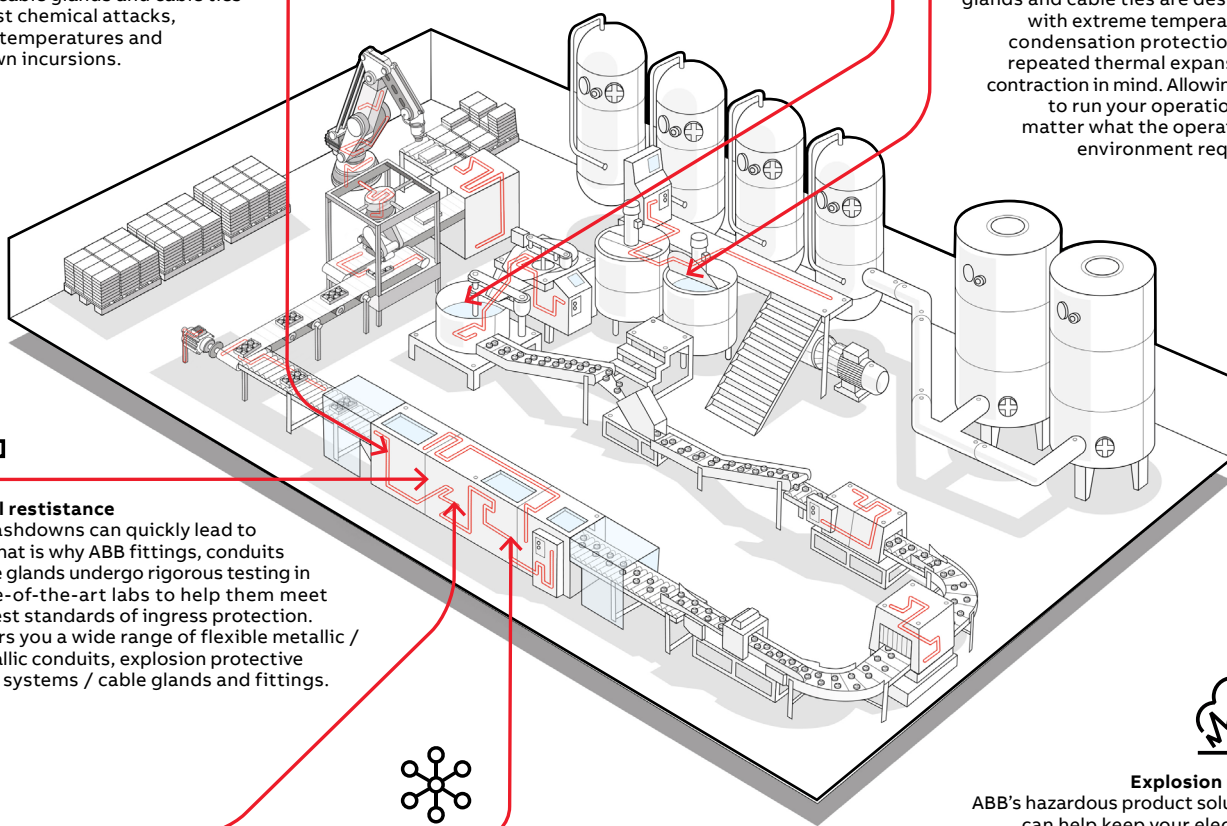
Antimicrobial

A single bacterial outbreak can eliminate decades of consumer trust and confidence, meaning the cleanability of all components and machinery is crucial. Our antimicrobial installation products are suitable for food zone non-contact areas. Integrated ionic silver antimicrobial protection into a new generation of cable protection and wire and cable management.













Explosion proof

ABB's hazardous product solutions can help keep your electrical connections safe and secure, even in areas where potentially hazardous dust, gases or chemicals are a concern. Our wide variety of high-performance explosion protective conduit systems, fittings and accessories are specifically designed to protect electrical equipment in NEC-defined hazard zones, even if frequent washdowns are involved.



Innovative technologies for daily practice

Hygiene and stringent health and safety standards are a core part of achieving the required efficiency and safety levels throughout the F&B supply chain. ABB Installation Products offer you the latest technologies and state-of-the-art materials that conform to the worldwide certifications and standards to keep your plant running: now and in the future.

	Product description	Product features
 	Adaptaflex antimicrobial conduit systems	<ul style="list-style-type: none"> – Antimicrobial liquidtight flexible metallic conduit system – NSF certified suitable for food zone non-contact areas – Bacteria in contact with the conduit surface cannot survive and reduce by up to 99.99% in just two hours of contact with its surface (by up to 86% in the first 15 minutes) – IP66, IP67, IP68 (10bar 30min) and IP69 rated – FDA, EC and FSA compliant DuPont Hytrel® thermoplastic jacket
 	JFBD nylon conduit	<ul style="list-style-type: none"> – Very flexible, smooth easy-to-clean over-extruded conduit - IP69 rated – For dynamic or static processing cable protection systems in food and beverage industry – Smooth food grade outer layer - Easy cleaning – High reversed bending stresses – Good flexibility in combination with high strength – High resistance to chemicals and cleaning agents – Corrosion free – For food zone - non-contact-application areas
 	Ty-Fast® Ag+ bacteria-resistant cable ties	<ul style="list-style-type: none"> – The industry's first cable tie that inhibits microbial growth – Protects itself against bacteria, mold and fungus which helps to reduce infection rate and spread of bacteria by not hosting microbial growth – Promotes a clean environment – 99.9% effective for bacterial reduction – Offers reliable Ty-Fast® cable tie design for easy cable management – UL® Listed, RoHS, FDA compliant, made from FDA-approved nylon resin, Patent pending
 	Ty-Met™ stainless steel cable ties SS316	<ul style="list-style-type: none"> – High mechanical strength combined with chemical durability and temperature resistance – International approvals such as UL, DNV-GL and Lloyd's Register – All types are available in 316 grade (marine grade) stainless steel, for extra corrosion resistance – Available in uncoated version for high temperature applications or in fully coated version with non-toxic, halogen free coating, for a superior protection of cables and installer's hands and for an improved insulation between dissimilar materials
 	Ty-Rap® Detectable cable ties	<ul style="list-style-type: none"> – Incorporates a unique compound that can be detected by x-ray equipment, metal detectors and visual inspection equipment – Bright blue color for an easy visual detection – Easy to detect by any metal detection equipment when calibrated to detect our cable ties. We advise the metal detectors are set at a minimum 1.5 mm diameter ferrous sphere – Help achieve the HACCP EU-Directive and to comply to the Food Safety Modernization Act (FSMA) – Direct food contact. The material used to produce Ty-Rap® detectable cable ties has recently been successfully tested for direct food contact – The raw material to produce our polypropylene detectable cable ties has an increased metal content making those cable ties twice as detectable

Flexible liquidtight metallic conduits

01 Type SSAMHL
Antimicrobial stainless
steel core conduit.

02 Type SAMHURL
Antimicrobial UL
recognised conduit.

03 Type SAMHL
Antimicrobial CE conduit.

04 SSPLHC High and
low temperature 316
stainless steel conduit.

05 SSPL 316 Stainless
steel core conduit.

06 SPLHC High and low
temperature conduit.

07 LFH-SPL Low fire
hazard and halogen
free conduit.

08 SPL Oil resistant
conduit.

09 SPUL UL compliant
conduits.

10 Type SAM one
piece fitting.

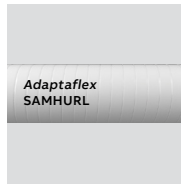
11 Type SSPL 316
Stainless steel fitting.

12 F&B P-Clip Stainless
steel - for liquidtight
conduit.

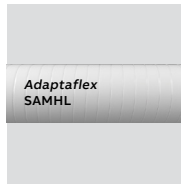
13 F&B Locknut.



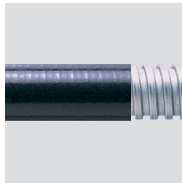
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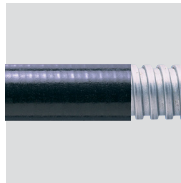
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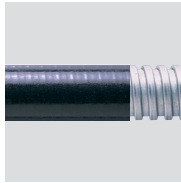
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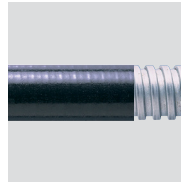
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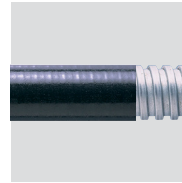
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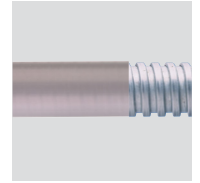
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ABB flexible conduits boost food safety and fight corrosion, which is the number one cause of downtime.

Designed to protect complex equipment with sensitive electrical wiring.

- **Food Safety.** Bacteria-eliminating protection reduces the level of microbes on the surface of Adaptaflex® conduit by up to 80% in the first 15 minutes and by 99% in just two hours.
- **Corrosion resistance.** Stainless steel and chemical resistant materials inhibit corrosion.
- **High Motion.** Nylon flexible conduits move with your machines, with a uniquely cleanable surface.

01 LTFU - Food &
beverage, UL listed.

02 Series 5300 9300SST6
Stainless steel.

03 Series 5300
9300SST6HT High
temperature.



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T&B Liquidtight Fittings®

Strength and flexibility for motion, vibration and bending.

The next generation in liquidtight conduits.

- **Dust and liquidtight.** Stainless steel 316 liquidtight and system solutions for the most demanding corrosive environments, where extreme temperatures are encountered.

Flexible conduit systems - non metallic

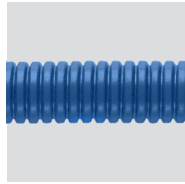
01 JFBD nylon conduit.

02 JENQ-316L Stainless steel fitting.

03 Type JKNH Nylon fitting - PMA®.

04 JSGB P-Clip stainless steel - for JFBD conduit.

05 GME Stainless steel lock nut.



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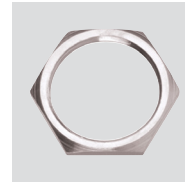
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PMA

Flexibility and cleanability for the food and beverage industry.

A global technology leader in cable protection systems.

- **Corrosion resistant.** Stainless steel and chemical resistant materials inhibit corrosion.
- **Dust and liquidtight.** Exposure to dust, water, condensation and accidental spills of machine oils and lubricants.
- **Ingress protection.** IP69 rating for wash downs.
- **Chemical resistance.** High resistance to chemicals and cleaning agents.
- **High strength.** For dynamic or static applications in the food & beverage industry.

Conduit systems, cable glands and accessories for hazardous areas

01 HA-G1 Barrier fitting.

02 EXQ-LT fitting.

03 EXR-LRT fitting.

04 EXS-LT fitting.

05 Explosion proof cable glands - C1 Series.

06 Explosion proof cable glands - C2 Series.

07 EXSB Ex e approved stainless steel core conduit.

08 EXLHC Ex e approved galvanised steel core conduit.



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KOPEX-Ex

For use in hazardous areas or where hazardous manufacturing processes are performed.

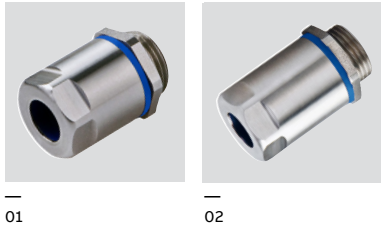
Liquidtight hazardous area flameproof conduit fitting.

- **Corrosion protection.** Stainless steel and chemical resistant materials inhibit corrosion.
- **Dust and liquidtight.** For high hygienic requirements.
- **Chemical resistance.** High resistance to chemicals and cleaning agents.
- **Extreme temperatures.** For more demanding applications there is a wide temperature range.
- **Explosion proof.** Group I flameproof glands, ideal for all hazardous area applications.

Fittings and cable glands

01 Cable glands - FSCG Series.

02 Cable glands - FSEM Series.



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Compactness and hygienic design providing rigorous, dependable electrical connections.

- **Corrosion resistance.** Stainless steel and chemical resistant materials inhibit corrosion.
- **NSF approved** for food and beverage industry.
- **Suitable** for splash zones.
- **EMI Version available.** Extended radial contact with the shielding for improved EMI protection.
- **One piece, fully enclosed,** smooth hygienic external casing.

ABB Cable Glands®

Hygienic, corrosion-resistant cable glands for food processing machinery and preparation stations.

Wire and cable management

01 Ty-Rap® detectable cable ties.

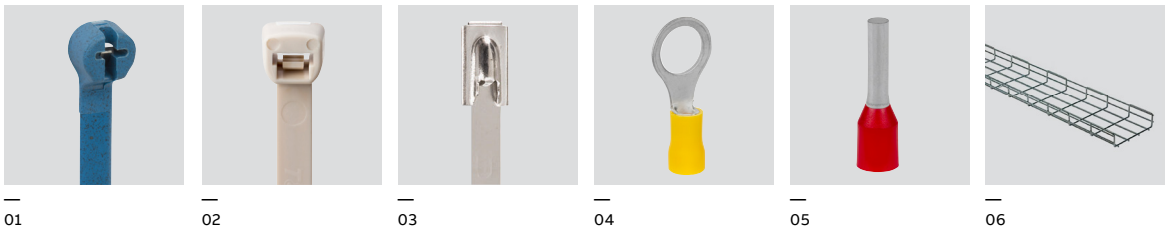
02 Ty-Fast® Ag+® bacteria-resistant cable ties.

03 Ty-Met™ stainless steel cable ties and tools.

04 Spec-Kon® metric terminals.

05 Spec-Kon® metric ferrules (cord end terminals).

06 ABB Wiring Duct® Wiring duct and trunking.



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Ty-Rap® Spec-Kon®

Ty-Met® ABB Wiring Duct®

Innovative design and engineered materials for safety and continuity.

Easily bundle, secure and manage your cables.

- **Safety.** The material used to produce Ty-Rap® detectable cable ties has recently been successfully tested for direct food contact.
- **Antimicrobial.** Ty-Fast® Ag+® cable ties are the industry's first cable ties to inhibit microbial growth, which helps to reduce infection rates and the spread of bacteria by not hosting microbial growth.
- **Complete termination system.** Highly conductive cover with corrosion-resistant tin plating. Wide range of styles, materials and application tools.
- **Light weight and compact.** Non-metallic and metal cable duct and trunking.

Collateral overview

01 **ABB Fastening catalogue** - Easily bundle, secure and manage your cables.



02 **Adaptaflex® Flexible metallic conduit systems**
Liquidtight and superflexible solutions for demanding applications.



03 **PMA® Flexible cable protection systems**
For applications with high requirements.



04 **T&B Liquidtight Systems™** Global products for global solutions.



05 **ABB Cable glands** for global applications.



06 **Kopex-Ex®** Flexible conduit systems, cable glands & accessories for hazardous areas.



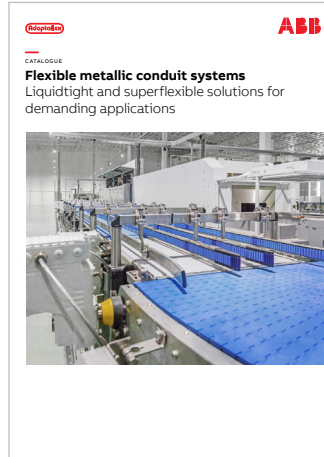
07 **F&B landing page** Installation products.



Download your catalogue



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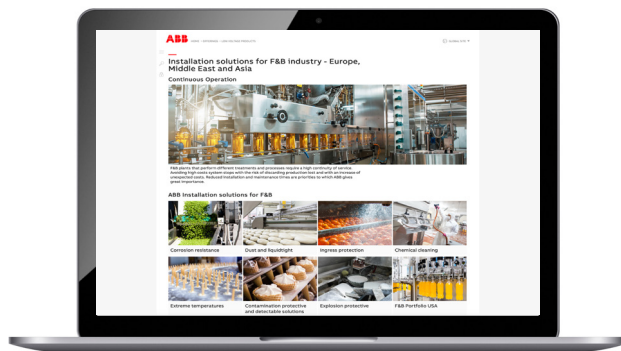


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Online overview in one glance



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Continuous operation

Corrosion resistance

Dust and liquidtight



Ingress protection

Chemical cleaning

Extreme temperatures



Antimicrobial

Explosionproof

Product selection guide

for food and beverage industry

Product selection guide



Product description	ABB Brand	Corrosion resistance	Dust and liquid tight
Flexible liquidtight metallic conduits			
Type SSAMHL Antimicrobial stainless steel core conduit	Adaptaflex	•	•
Type SAMHURL Antimicrobial UL recognised conduit	Adaptaflex	•	•
Type SAMHL Antimicrobial CE conduit	Adaptaflex	•	•
SSPLHC High and low temperature 316 stainless steel conduit	Adaptaflex	•	•
SSPL 316 Stainless steel core conduit	Adaptaflex	•	•
SPLHC High and low temperature conduit	Adaptaflex	–	•
LFH-SPL Low fire hazard and halogen free conduit	Adaptaflex	–	•
SPUL UL compliant conduits	Adaptaflex	–	•
SPL Oil resistant conduit	Adaptaflex	–	•
Type SAM One piece fitting	Adaptaflex	•	•
Type SSPL 316 Stainless steel fitting	Adaptaflex	•	•
F&B P-Clip Stainless steel for liquidtight conduit	Adaptaflex	•	–
F&B Locknut	Adaptaflex	•	–
Explosion protective conduit systems, cable glands and accessories			
HA-G1 Barrier fitting	Kopex-Ex	•	•
EXQ-LT fitting	Kopex-Ex	•	•
EXR-LRT fitting	Kopex-Ex	•	•
EXS-LT fitting	Kopex-Ex	•	•
EXN... C1 + EXS... C1	Kopex-Ex	•	•
EXN... C2 + EXS... C2	Kopex-Ex	•	•
EXSB Ex e approved stainless steel core conduit	Kopex-Ex	•	•
EXLHC Ex e approved galvanised steel core conduit	Kopex-Ex	•	•
Flexible metallic conduits			
LTFU - Food & beverage, UL listed	T&B Liquidtight Fittings®	•	•
Series 5300 9300SST6 Stainless steel	T&B Liquidtight Fittings®	•	•
Series 5300 9300SST6HT High temperature	T&B Liquidtight Fittings®	•	–
Flexible conduit systems - non metallic			
JFBD Nylon conduit	PMA	•	–
JENQ 316L Stainless Steel fitting	PMA	•	•
Type JKNH Nylon fitting	PMA	•	•
JSGB P-Clip Stainless steel for JFBD conduit	PMA	–	–
GME Stainless steel locknut	PMA	–	–
Fittings and cable glands			
Cable glands - FSCG series	ABB	•	–
Cable glands - FSEM series	ABB	•	–
Connectivity & Wire and cable management			
Ty-Rap® Detectable cable ties	Ty-Rap®	–	–
Ty-Fast® Ag+® Bacteria-resistant cable ties	Ty-Fast®	•	–
Ty-Met® Stainless steel cable ties and tools	Ty-Met®	•	–
Spec-Kon® Metric terminals	Spec-Kon®	•	–
Spec-Kon® Metric ferrules (cord end terminals)	Spec-Kon®	•	–



Adaptaflex



ABB Cable Glands®

PMA

T&B Liquidtight Fittings®

Ty-Rap®

Ty-Met®

For optimum performance, we recommend that our products are used together as an integrated system for their designed application. Installation should be carried out with reasonable care and to recommended guidelines and products should be used within their published recommended working tolerances, working conditions and environmental factors, which are outlined in the table.



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