

Electrical Solutions Wastewater Treatment Facilities

Thomas & Betts. Your best connection for innovative solutions.



Delivering value through system solutions based on engineering innovation

The

T&B Value

Commitment

Our Value Commitment

Renovating and reinvigorating Canada's wastewater treatment facilities is a challenge that demands a high level of commitment for all involved - government officials, operations managers, engineers, contractors and suppliers of products and services. Thomas & Betts is committed to helping you meet the unique challenges of the wastewater treatment environment with products and services that deliver value. These include:

T&B Engineered solutions — Our products are designed to perform dependably in marine and hazardous area environments and around high-vibration equipment. They can withstand harsh chemicals, extreme temperatures and ultraviolet penetration.

Tested reliability — Our products are rigorously tested for use in highly corrosive environments, with proven results in thousands of installations.

Expert support — Thomas & Betts technical experts are available at every stage of a project, from planning and site preparation through construction and MRO.

Training and certification — We conduct training programs on specific products and work closely with all accredited electrical industry associations. Contact us for details.

Product availability — Our industry-leading distributor network assures you of reliable and on-time delivery. This global electrical product support system ensures that our solutions are available when and where you need them.

Product Platforms

Thomas & Betts offers a complete range of products to connect and protect the electrical infrastructure of wastewater treatment facilities. We provide electrical system solutions to ensure continuous and sustainable operations, employee safety and adherence to government regulations.

Wire and Cable Management — Thomas & Betts invented the Ty-Rap® cable tie in 1958 and continues to lead the world in innovative wire and cable management. OEMs, panel builders, LOWER INSTALLED COS.

contractors and maintenance personnel depend on our electrical boxes, cable ties, weatherproof enclosures, cable tray and modular metal framing to do the job right and help reduce installation time and costs.

Cable Protection Systems —

Thomas & Betts Cable Protection Systems provide unsurpassed TRUS TRIBUTORS protection for wire and cables in the most demanding applications. They encompass industry-leading flexible conduit systems,

> PVC-coated conduit and fittings for oil and gas applications and explosion-proof conduit systems meeting worldwide standards for hazardous locations.

Power Connection and Control — For reliable connection and intelligent control of electrical power, Thomas & Betts' mechanical and compression connectors, grounding products, medium-voltage cable accessories, high-voltage fuses, vacuum interrupters, reclosers and capacitor switches are specified worldwide in the industrial, construction and utility markets.

Safety Technology — Protecting lives and property requires state-of-the-art technology. Thomas & Betts is a worldwide leader in emergency lighting and supporting central battery systems, and lighting for hazardous locations. Our Safety Technology products extend the life of your electrical system and protect your employees and assets.







• Biological Treatment

Disinfection

Site Preparation

Substation

• Motor Control Center

• MRO

Administration

At Thomas & Betts, we are focused on providing products that address the issues in every area of your wastewater treatment facility, so you can focus on cost, quality, flexibility and regulatory challenges. Our family of products matches specific application criteria from start to finish, ensuring the quality and reliability of the electrical system throughout your facility, from power substation to administration buildings. With the industry's most efficient distribution system, we are also prepared to meet your ongoing MRO needs down the road.



Wastewater Treatment Facilities Electrical System Issues



Corrosion & Harsh Environment Protection

Liquid Ingress Protection

Safety

Hazardous Location Protection

Power Quality, Efficiency & Reliability

Grounding & Bonding

Total Project Cost Reduction



Continuous Operation & Sustainability

Wastewater treatment facilities operate around the clock. In such demanding environments, downtime is never an option. A single point of failure can lead to costly and potentially critical consequences.

To help avoid cost-prohibitive, unscheduled downtime and to ensure compliance with environmental regulations, Thomas & Betts offers a range of electrical solutions aimed at safe and continuous operations.



T&B° Fittings

Liquatite® Flexible Metallic and Nonmetallic Conduit

- Ideal for continuous flexing or vibration applications
- Create a liquid-, dust- and oil-tight seal
- Suitable for operating temperatures from -20°C to 60°C

Silver Grip® Portable Cord and Tray Cable Fittings

- Designed for use in Class I, Gas and Vapour Environments
- Efficient strain relief for cables entering enclosures and raceways, and for cords used on portable equipment
- Corrosion-resistant, non-magnetic aluminum or type 316 stainless steel
- Tapered neoprene bushing and O-ring seal out moisture and dirt ingress
- Chuck grip provides high mechanical pull-out performance
- Hand tightens no tools required

Blackburn

Motor Lead Disconnects

- Quick, reliable change-out of electric motors with no bolting, taping or loose connections
- Complete line of motor lead disconnects for 600V and 5kV applications, covering wire ranges from #16 through 4/0 AWG
- · Total assembly fits into tight motor housings
- Featuring the Color-Keyed® Compression System that ensures proper connections

T&B® CABLE TRAY

Wire Management Systems

- A more cost-efficient, reliable alternative to traditional conduit
- · Adapt easily to changing needs; easy to maintain
- Prevent moisture from channeling to electrical systems
 prevent corrosion and equipment failure
- Prevent channeling of corrosive, explosive or toxic gases
- Available in aluminum, HDG, PVC-coated, SS 316 and fiberglass



T&B® Fittings
Liquatite® Flexible Metallic
and Nonmetallic Conduit



T&B® **Fittings**Silver Grip®
Fittings



Blackburn® Motor Lead Disconnects



T&B® Cable Tray Systems



Thomas & Betts products for continuous operation and sustainability

Blackburn®

- E-Z-Ground® Compression Connectors
- Mechanical Grounding Connectors
 Exothermic Welding System
- Color-Keyed® Compression Lugs and Splices
- Motor Lead Disconnects

Carlon®

- Floor Boxes and ENT (Electrical Nonmetallic Tubing) System
- Rigid Nonmetallic Conduit Fittings
- NEMA 4X Nonmetallic Enclosures

• Underground Cable Accessories and Arresters

Emergi-Lite®

EMEX Central Battery Systems

Current-Limiting Fuses

- Copper Flood-Seal® Compression Splice Kits
- Substation Connectors

Kopex-Ex™

• Explosion-Proof Conduit and Coupling System

• ARGES Central Battery Systems

PVC-Coated Conduit and Fittings

• Nylon Cable Protection Systems

Ready-Lite®

Central DC Battery Systems

Red • Dot®

• Code Keeper® Weatherproof While-in-Use Covers

Reznor®

HVAC Area Unit Heaters

Shrink-Kon®

- Heat-Shrinkable Insulation
- Splice Insulators
- Self-Fusing Insulation Tape

• Nylon-, Vinyl- and Non-Insulated Wire Terminals

- 316 Stainless Steel, Aluminum, PVC-Coated and Nonmetallic (Fiberglass) Channel
- Hangers, Clamps and Seismic Bracing System

T&B® Cable Tray

Aluminum, Stainless Steel and Fiberglass Support and Wire Management Systems

T&B® Fittings

- Steel, Stainless Steel, Aluminum and Nonmetallic Liquidtight Conduit and Cord Fittings
- Silver Grip® Tray Cord Fittings
- Wire-Mesh Strain-Relief Cord and Conduit Grips
- XD Expansion/Deflection Coupling for Rigid Conduit
- BlueKote® and Stainless Steel LU® Conduit Bodies
- STAR TECK® and STAR TECK XP® Fittings for Jacketed Metal-Clad and Teck Cables
- Liquatite® Flexible Metallic and Nonmetallic Conduit



Corrosion & Harsh Environment Protection

Corrosion, the enemy of electrical systems, costs millions annually in lost equipment, labor and downtime.

Harsh environmental factors inherent in wastewater treatment applications can greatly accelerate corrosion and cause failures in the electrical and automation systems if not properly addressed. Thomas & Betts solutions are made with corrosion-resistant materials to extend the life and reliability of your electrical system.



T&B° Fittings

Stainless Steel Liquidtight Conduit Connectors

- Type 304 stainless steel body and gland nut resist corrosion
- Rated for temperatures up to 105°C

Ocal

OCAL-BLUE® PVC-Coated Conduit

- PVC-coated, hot-dipped galvanized conduit and threads
- Provides superior corrosion protection against many harmful elements
- Interior blue polyurethane provides corrosion protection around cables

Ty-Rap[®]

Stainless Steel Cable Ties

- Strong, fireproof and easy to apply for safe cable bundling
- Resist corrosion and UV light, with the ability to withstand temperature extremes
- Provide a strong, safe installation with a unique dual-locking mechanism

T&B Cable Tray

Nonmetallic (Fiberglass) Cable Tray

- · Ladder, ventilated and solid trough designs
- Full range of classes and associated loading capacities
- Complete selection of fittings and covers

Russellstoll*

DuraGard® Pin-and-Sleeve Connectors

- · Not just watertight, but waterproof, mated or unmated
- Tested to 1000 psi for washdown applications
- Full line of 20–60 A (600VAC/250VDC max.) connectors, plugs and receptacles in UL94V-0 flammability-rated, corrosion-resistant, nonmetallic housings



T&B® FittingsStainless Steel Liquidtight
Conduit Connectors



OCAL-BLUE® PVC-Coated Conduit



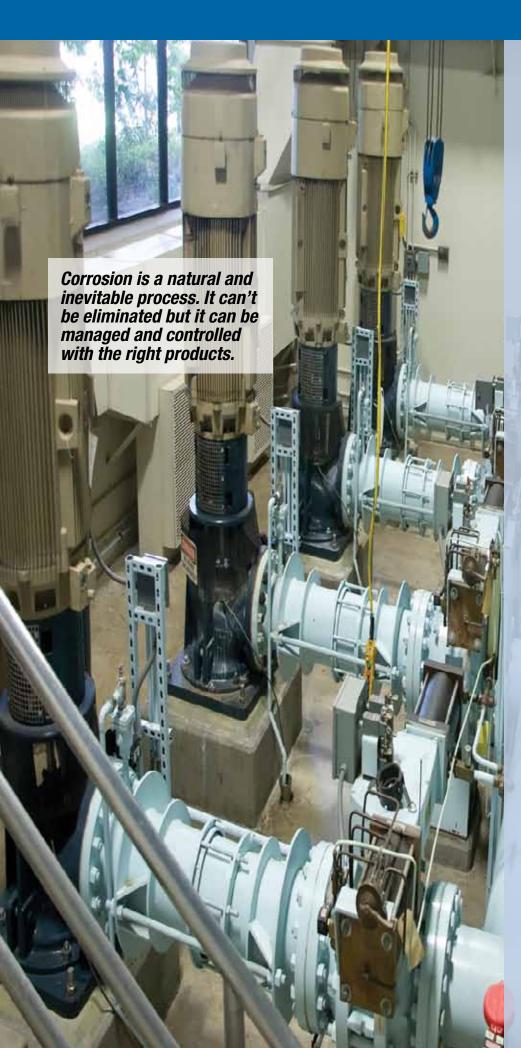
Ty-Rap® Stainless Steel Cable Ties



T&B® Cable Tray Nonmetallic (Fiberglass) Cable Tray



Russellstoll® DuraGard® Pin-and-Sleeve Connectors



Thomas & Betts products for corrosion and harsh environment protection

Carlon®

PVC Conduit Fittings and Accessories

Emergi-Lite®

• Hazardous Location Emergency Lighting and Exit Signs

Hazlux®

HazCote® Kynar-Coated Lighting Fixtures

Lumacell®

Hazardous Location Emergency Lighting and Exit Signs

- OCAL-BLUE® Conduit and Elbows
- OCAL-BLUE® Double-Coated GUA Series Conduit Boxes
- OCAL-BLUE® NEMA Type 4X Form 8 Conduit Bodies
- PVC-Coated Strut, Straps and Clamps
- PVC-Coated Liquidtight Conduit Connectors

• Flexible Nylon Cable Protection Systems

Ready-Lite®

Hazardous Location Emergency Lighting and Exit Signs

 DuraGard® Nonmetallic Pin-and-Sleeve Plugs, Connectors and Receptacles

Sta-Kon®

Corrosion-Resistant, Nickel-Plated Wire Terminals

• 316 Stainless Steel, Aluminum, PVC-Coated or Nonmetallic Channel, Hangers and Clamps

T&B® Cable Tray

· Aluminum, Steel, Stainless Steel and Fiberglass Support/Wire Management Systems

- Liquatite® Flexible Metallic and Nonmetallic Conduit
 STAR TECK® and STAR TECK XP® Stainless Steel,
 Aluminum and PVC-Coated Fittings for Jacketed Metal-Clad and Teck Cables
- Silver Grip[®] Stainless Steel Tray Cord Fittings
- Nonmetallic Conduit Fittings and Cord Connectors
- Ranger® Series Aluminum Liquidtight Cord Connectors
- Stainless Steel Cord Fittings
 Type 316 Stainless Steel Form 8 Conduit Bodies

Ty-Rap®

- Coated and Uncoated Stainless Steel Cable Ties
- Cable Ties for Harsh Environments



Allowing liquid to migrate into electrical components can have a significant impact on the reliability and longevity of electrical systems, resulting in premature deterioration, unscheduled maintenance and unplanned expense.

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.

Thomas & Betts offers a complete catalogue of components specifically designed to protect electrical equipment and systems from the corrosion and damage caused by liquid ingress.

Ocal

PVC-Coated Products

- Complete systems solution for superior corrosion protection and ease of wiring in conduit applications
- All product meet or exceed applicable industry ratings or specifications
- OCAL-BLUE® conduit, couplings and conduit bodies
- OCAL-BLUE® FS/FD device boxes and covers
- Ocal[™] liquidtight fittings and large-radius elbows
- Ocal[™] XJG expansion couplings
- PVC-coated teck fittings

T&B° Fittings

Portable Cord Fittings

- Available in steel, stainless steel, aluminum, PVC-coated, and nonmetallic
- Ranger® metallic liquidtight cord fittings allow for 1/4" more range of cord, providing an opportunity to reduce inventory, taking twice the cable range of ordinary strain relief connectors
- Black Beauty® nonmetallic cord fitting offers the convenience of tool-free installation, a segmented chuck for high mechanical pullout performance, and neoprene bushings for a secure, liquidtight installation



Ocal[™] OCAL-BLUE® Type 4X Form 8 Conduit Bodies



Black Beauty® Nonmetallic Cord Fitting



HOMAC

Flood-Seal® Multi-Port Connectors

- Ensure a fully insulated, watertight and submersible tap connection
- All connectors are 100% Hi-Pot Tested at 4000V for 60 seconds to ensure that connectors are 100% watertight and molded correctly

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Code Keeper® Weatherproof While-In-Use Covers

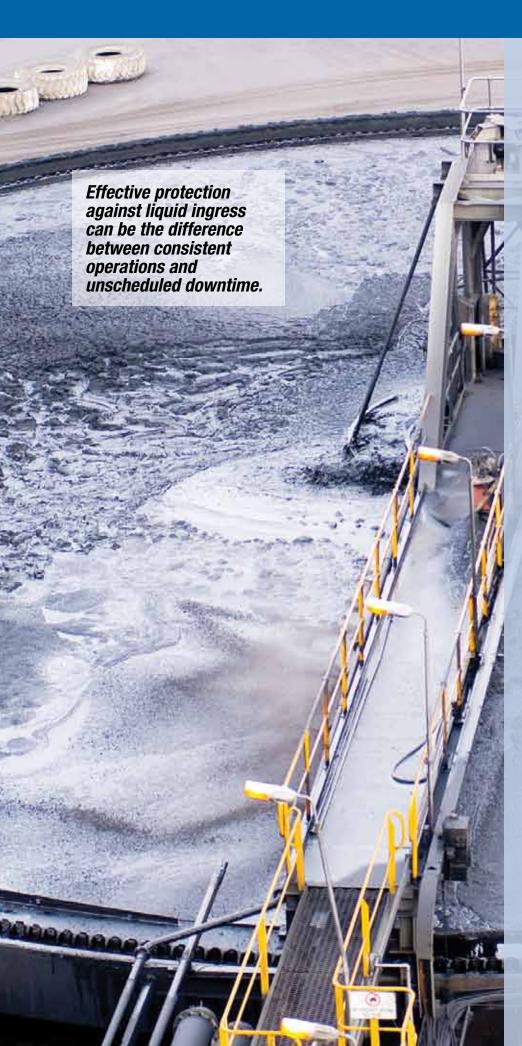
- The Code Keeper® series of while-in-use weatherproof products provides superior weather and liquid ingress protection
- "Extra-duty" metallic weatherproof while-in-use covers
- Alloy A380 aluminum and stainless steel springs for increased corrosion resistance and durability



Homac® Flood-Seal® Multi-Port Connectors



Red•Dot®
Code Keeper®
While-in-Use
Weatherproof Products



Thomas & Betts products for liquid ingress

Carlon®

- PVC Fittings and Conduit
 P&C® Flex Conduit

Elastimold®

• Switchgear and Cable Accessories

Emergi-Lite®

- Survive-All[™] Series NEMA-4X Rated Emergency Lighting
- SIPE Series Wet-Location Fluorescent Fixture

- Flood-Seal® Insulating Covers
- Flood-Seal® Multi-Port Connectors

- Liquidtight Fittings
- EMT Concrete-Tight Fittings

- LN Series NEMA-4X Rated Emergency Lighting
- SIPL Series Wet Location Linear Fluorescent Fixture

- PVC-Coated Conduit and Fittings
- OCAL-BLUE® NEMA Type 4X Form 8 Conduit Bodies

• Flexible Nylon Cable Protection Systems

- TUF NM Series NEMA-4X Rated Emergency Lighting
- SIPR Series IP65 Wet Location Linear Fluorescent Fixture

- Code Keeper® Weatherproof While-in-Use Covers
- Weatherproof Boxes and Conduit Bodies

Reznor®

• EWHB Wet-Environment/Washdown Area Heater

Russellstoll®

• Waterproof Pin-and-Sleeve Interconnections

Shrink-Kon™

- Submersible Insulation Products
- Self-Fusing Insulation Tape

Steel City®

• MopTite™ Floor Boxes

T&B® Fittings

- Cord Connectors

- Liquidtight Fittings
 Stainless Steel Liquidtight Fittings
 Liquatite® Flexible Metallic and Nonmetallic Conduit
- Silver Grip® Fittings for Tray Cable and Portable Cord Star Teck® and Star Teck XP® Fittings
- for Jacketed Metal-Clad and Teck Cable



Hazardous Location Protection

The Canadian Electrical Code® (CEC®) defines hazardous locations as areas where the possibility of explosion and fire is created by the presence of flammable gases, vapors, dust, fibers or flyings. In wastewater treatment facilities, the presence of gases and vapors is a significant concern.

To protect both your facility and your employees, Thomas & Betts offers a wide variety of highperformance, explosion-proof solutions designed to prevent or contain an explosion in classified hazardous locations.



Star Teck XP® Explosion-Proof **Teck Cable Fittings**

- · Easy to fill, integral sealing chamber and disconnecting design requires minimal cable preparation
- · Benchmark for ease of installation in hazardous locations
- · Provides grounding continuity of cable armor

Tray Star® Explosion Proof Tray Cable and Flexible Conduit Fittings

• Offer all of the advantages of Star Teck XP® for tray cable and flexible metal conduit applications

EMERGI-LITE" / SUMACELL" / READY-LITE **Emergency lighting and exit signs** for hazardous locations

- Emergency lighting
- Self-powered exit signs
- · Combination units emergency lighting and exit signage



Emergi-Lite®/Lumacell®/Ready-Lite® Hazardous Location **Emergency Lighting**



Hazlux[®]

Hazardous Location Lighting

- · Explosion-proof fixtures for Class I, II and III hazardous locations
- Enclosed, gasketed and rated NEMA 4X, IP66 and UL1598 for wet and marine locations

Russellstoll

MaxGard® Explosion-Proof Interlocked Receptacles

- Copper-free, cast-aluminum, epoxy-coated housing
- O-ring-sealed interior components ensure watertight protection whether connections are mated or not
- Explosion-proof systems for 30 A, 60 A and 100 A

KOPEX^{-Ex}

Hazlux®

Hazardous Location

Lighting

Stainless Steel Copper-Free Flexible Conduit

- Available for oil-resistant, high temperature, and low and limited fire hazard applications
- Type 316 stainless steel



Russellstoll® MaxGard® Explosion-Proof Interlocked Receptacles



Kopex-Ex™ Stainless Steel Flexible Conduit







Thomas & Betts products for hazardous locations

Emergi-Lite®

• Hazardous Location Emergency Lighting and Exit Signs

E-Z-CODE®

Danger/Warning Labels and Signs, Industrial/Wire Markers, Barricade/Burial Tape

- Explosion-Proof Lighting Fixtures for Hazardous Locations
- Strobe Lighting Fixtures

• Explosion-Proof Conduit and Coupling Systems

• Hazardous Location Emergency Lighting and Exit Signs

Hazardous Location Emergency Lighting and Exit Signs

• EXUB Explosion-Resistant Electric Unit Heaters

Russellstoll®

- MaxGard[®] Pin-and-Sleeve Connectors and Explosion-Proof Interlocked Receptacles
- GSUL Ground Indicator System

T&B® Cable Tray
• Aluminum, Steel, Stainless Steel and Fiberglass Support/Wire Management Systems

- T&B® Fittings
 Explosion-Proof Boxes, Elbows, Fittings and XP Explosion-Proof Flexible Couplings
- STAR TECK® and STAR TECK XP® Fittings for Jacketed Metal-Clad and Teck Cables



Accidents, disasters and occupational-related injuries can happen anytime, anywhere. They most often occur due to human error or equipment failure. The identification of and preparedness for such accidents would either prevent their occurrence or mitigate the impact in the case that they do occur.

From protecting electrical systems and equipment from unexpected failures that might lead to an environmental incident to providing hazardous material identification and emergency lighting systems, Thomas & Betts provides a wide variety of electrical systems and components to help ensure the safety of your plant, equipment, and, most importantly, people.

Hazlux®

HazFlash® M4 Strobe Lighting Fixture

- Ideal for use as warning of unsafe conditions in areas where noise prevents audible signals from being heard
- Enclosed and gasketed fixture for use in a wide range of industrial environments including marine and wet locations
- VXS model outdoor, wet and marine locations
- DXS model Class I, Zone 2, Division 2 and Class II, Division 1 locations

Quick Pole™ Light Fixture Mounting Assembly

- Suitable for 180km/h winds as per AASHTO LTS-4 2001
- Easy one-man operation no ladders or lifts required
- Frees up catwalks and walkways during maintenance

Emergency Lighting Systems

- Designed to withstand damp, corrosive conditions
- Safe to use in explosive environments
- Energy efficient with long, low-maintenance service life



Russellstoll*

GSUL Safe Ground Indicator System

- · Prevents operation of pumps without a safe ground
- · Lights indicate the establishment of a safe ground

Safety Interlocks

- 30 A and 50 A ranges and polarizations to 480VAC
- 22kA interrupt capacity breaker
- UL94V-0, NEMA Type 4X

E-Z-CODE®

Safety Labels, Tags, Signs and Barricade Tapes

- Help to ensure personnel and workplace safety, as well as regulatory compliance
- · Visible and long-lasting materials
- · Custom labels, tags and signs available
- Barricade and burial marking tapes in a variety of materials and colors



Hazlux®
Hazardous Location
Lighting



Emergi-Lite®/Lumacell®/Ready-Lite® Emergency Lighting Systems



Russellstoll® GSUL Safe Ground Indicator System



Russellstoll® Safety Interlocks



E-Z-CODE®
Safety Labels, Tags, Signs and Barricade Tapes



Thomas & Betts products for safety

Blackburn®

- E-Z-Ground® Compression Connectors
- Mechanical Grounding Connectors
- Exothermic Welding System
- Metallic Gradient Control Mat
- Ground Rods

Carlon®

• Hal-Free Riser Gard™ Metallic Flexible Raceway

Emergi-Lite®

- Hazardous Location Emergency Lighting and Exit Signs
- Nexus® Emergency Lighting Management System

E-Z-Code®

 Danger/Warning Labels and Signs, Industrial/Wire Markers, Barricade/Burial Tape

Hazlux®

 Industrial Lighting Fixtures for Hazardous and Adverse Environments

Hi-Tech

Current Limiting Fuses

Homac

Storm Safe® Break-Away Device for Overhead Service Drops

Kopex-Ex™

Explosion-Proof Conduit and Coupling Systems

Lumacell®

- Hazardous Location Emergency Lighting and Exit Signs
- Nexus® Emergency Lighting Management System

Marrette®

Luminaire Disconnects

Ready-Lite®

- Hazardous Location Emergency Lighting and Exit Signs
- Nexus® Emergency Lighting Management System

Red•Dot®

- Explosion-Proof Boxes, Conduit Fittings, Unions and Sealing Fittings
- Code Keeper® Weatherproof While-in-Use Covers

Reznor®

EXUB Explosion-Resistant Electric Unit Heaters

Russellstoll®

- GSUL Safe Ground Indicator System
- Safety Interlocks
- Pin-and-Sleeve Interconnections

Shrink-Kon™

Insulation Products

Sta-Kon®

• Push-In Luminaire Disconnects

Steel City®

• Fire Alarm Boxes and Fittings

Superstrut[®]

- 316 Stainless Steel, Aluminum, PVC-Coated or Nonmetallic Channel, Hangers and Clamps
- Seismic Bracing System

T&B® Cable Tray

 Aluminum, Steel, Stainless Steel and Fiberglass Support/Wire Management Systems

T&B® Fittings

- Star Teck XP® Explosion-Proof Teck Cable Fittings
- Tray Star® Explosion-Proof Cable Fittings for Tray Cable and Flexible Metal Conduit
- Liquatite® Type ZHLA and ACEA Non-Halogen, Low-Smoke, Flame-Retardant Flexible Conduit

Ty-Duct™

Halogen-Free Wiring Duct

Ty-Rap

- Extra-High Temperature and Flame-Retardant UL94V-0 Nylon Cable Ties
- Stainless Steel Cable Ties



Power Quality, Efficiency & Reliability

Wastewater operations provide an essential service to the communities in which they are present. Electrical continuity and reliability are critical to ensuring that service is maintained and downtime avoided.

Thomas & Betts offers a wide range of proven products to eliminate power interruptions, protect critical electrical equipment, meet regulatory obligations, keep employees safe and extend the life cycle and effectiveness of your assets.





Switchgear and Cable Accessories

- Solid-dielectric, maintenance-free switchgear for application in vault, riser pole and pad mount installations
- A full line of loadbreak and deadbreak separable connectors, cable joints and cable terminators
- Developed for 5 to 35 kV distribution systems



Overhead Switches and Reclosers

- Capacitor switches for distribution and substations
- Reclosers
- Interrupter accessories for disconnect switches

FISHER PIERCE®

Faulted Circuit Indicators

- · Fault circuit indicators
- · Voltage and current sensors
- · Overhead and underground units available

Blackburn[®]

Compression Lugs Featuring the Color-Keyed® Compression System

- High quality, reliable connections at a low installed cost
- Accommodate both code and flex cable on the same lug



Elastimold®

Solid Dielectric Switchgear

Joslyn Hi-Voltage™ Recloser



Fisher Pierce® Faulted Circuit Indicators



Blackburn® Compression Lugs



Thomas & Betts products for power quality, efficiency and reliability

Blackburn®

- E-Z-Ground® Compression Connectors
 Color-Keyed® Compression Lugs and Splices
 Exothermic Welding System
- Ground Rods

Boreal®

Flexible Braided Connectors

Elastimold®

- Switchgear and Cable Accessories

Emergi-Lite®

EMEX Central Battery Systems

Fisher Pierce®

• Faulted Circuit Indicators

Hi-Tech®

Current-Limiting Fuses

Homac[®]

- Substation Connectors
- Copper Flood-Seal® Compression Splice Kits

Joslyn Hi-Voltage™

Switches and Reclosers

Lumacell®

ARGES Central Battery Systems

Microlectric®

- Meter Sockets
- Pole Line Hardware and Accessories

Ready-Lite®

Central DC Battery Systems

Russellstoll®

Computer System Plugs, Connectors and Receptacles



The saying "the devil is in the details" has a perfect application in the areas of grounding and bonding. Ensuring a facility is properly grounded and bonded at the design and construction phase can reduce expensive downtime and equipment failure in the future. Most important, it can eliminate any potential safety issues.

Thomas & Betts has a wide range of proven grounding and bonding products for commercial, industrial and communications applications.



Blackburn®

E-Z-Ground® Compression Connectors

• High-conductivity copper and bronze connectors for direct burial

Mechanical Grounding Connectors

- High-strength split-bolt connectors for copperto-copper connections
- Service post connectors for steel structures, fence posts or transformers using one or two cables
- ViceLock® connectors for cable tray, channel and strut applications

Exothermic Welding System

• Simple, self-contained system to form high-quality electrical connections

Grounding Components

- Ground Rods
- · Metallic Gradient Control Mat
- Electrode Boxes
- · Compression Tools and Dies

T&B° Fittings

Grounding Fittings

- Bond Star® grounding lock-nut for use in data and control applications sensitive to floating voltage differences
- XD expansion/deflection coupling for rigid conduit with internal bonding strap
- · Liquidtight flexible metal conduit fittings with ground cone
- Liquatite[®] LAS and EMPS flexible metallic conduit with tinned copper shielding braid over inner steel core minimum shielding effectiveness of 90% coverage



High-Quality Flexible Connectors

- A wide variety of grounding and bonding straps
- Extra-flexible links for heavy-duty applications up to 3600 A
- Standard flexible links for medium-duty applications up to 2350 A



Blackburn®

E-Z-Ground®

Compression Connectors

Blackburn® Mechanical Grounding Connectors



T&B® Fittings XD Expansion / **Deflection Coupling**



Boreal™ High-Quality Flexible Connectors

An improperly installed or grounded electrical system can cause power failure, which often leads to significant environmental and operational concerns.



Thomas & Betts products for grounding and bonding

Blackburn®

- E-Z-Ground® Compression Connectors
 Compression Lugs and Splices
 Mechanical Grounding Connectors
 Exothermic Welding System

- Metallic Gradient Control Mat
- Ground Rods
- Compression Tools and Color-Keyed® Die-Code System

• Flexible Grounding Connectors and Bonding Jumpers

• Danger/Warning Labels and Signs

Iberville®

- Grounding Bushings
 Water Pipe and Ground Rod Connectors

Russellstoll®

• GSUL Safe Ground Indicator System

Sta-Kon®

- Insulated and Non-Insulated Terminals
- Shield-Kon®
- One and Two-Piece Coaxial Grounding Connectors
- Ergonomic Crimp Tools

T&B® Fittings®

- Bond Star® Grounding Lock Nut
- Liquatite® LAS and EMPS Shielded Flexible Conduit
- Liquidtight Flexible Metal Conduit Fittings with Ground Cone
- XD Expansion/Deflection Coupling for Rigid Conduit



Total Project Cost Reduction

Today's competitive environment requires everyone to work harder — and smarter. Every aspect of the way we do business must be examined to identify and eliminate waste. Whether it's labor, material, logistics or the process, managers must look for the most efficient way to get the job done. At the same time, codes are becoming increasingly stringent, allowing little room for deviation.

Innovative, high quality products can help to reduce the overall costs associated with maintaining the electrical systems within wastewater treatment facilities. From reduced maintenance and installation time to reduced inventory investment, savings can add up quickly.

Hazlux®

Quick Pole Light Fixture Mounting Assembly

- Suitable for 180km/h winds as per AASHTO LTS-4 2001
- Easy one-man operation no ladders or lifts required
- Frees up catwalks and walkways during maintenance

EMERGI-LITE® ✓ **QUMACEL** ✓ **QUESTITE**Nexus® Emergency Lighting Management System

- Remote monitoring and control from one central unit
- Enhances safety while decreasing maintenance costs
- Can contribute to LEED credits



Shrink-Kon®

Self-Fusing Insulation Tape

- Instant low-cost durable solution for repairs to deteriorated insulation on cables and conductors
- Insulates and seals underground and above-ground bonding installations
- Insulates harnessing, bundling, cabling and wiring in industrial machinery and equipment
- · Ideal for motor connections
- · Protects against vibration, scratching and moisture

T&B Fittings

Ranger® Cord Connectors

- Allow for 1/4-inch more range of cord, providing an opportunity to reduce inventory
- Take twice the cable range of ordinary strain relief connectors
- Straight, 45° and 90° designs

Star Teck Extreme Director™

- Fitting adjusts from 90° to 180°
- Saves on installation time by up to 50%



Hazlux®
Quick Pole
Mounting Assembly



Management System



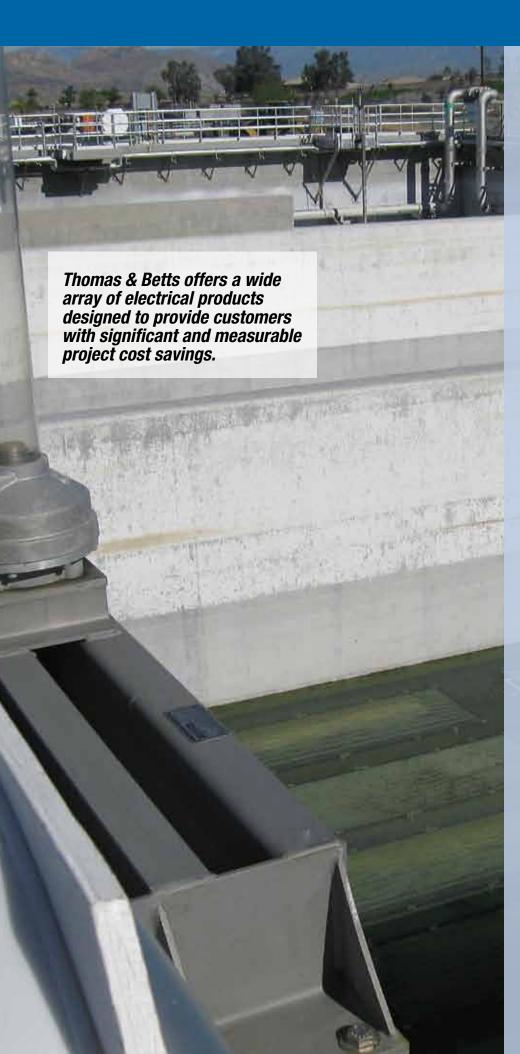
Shrink-Kon™ Self-Fusing Insulation Tape



T&B® Fittings
Ranger®
Cord Connectors



T&B® Fittings STAR TECK EXTREME DIRECTOR™



Thomas & Betts products for total project cost reduction

Blackburn®

- Color-Keyed® Compression Connector and Tool System
- Comfort Crimp® Tools
- HEX-FLEX® Die System
- Motor Lead Disconnects

Carlon

- ENT (Electrical Non-Metallic Tubing) System
- While-in-Use Outdoor Covers
- Media Boxes
- PVC Conduit

Emergi-Lite®

- Emergency Lighting and Exit Signs
- Nexus® Emergency Lighting Management System

Hazlux

• Quick Pole Light Fixture Mounting Assembly

lherville[©]

- Roughing-In Components
- Steel Stud Boxes

Lumacell®

- Emergency Lighting and Exit Signs
- Nexus® Emergency Lighting Management System

Marrette®

• 833™ Wide-Range, Twist-On Winged Wire Connectors

Microlectric®

- Meter Sockets
- Pole Line Hardware and Accessories

NuTek"

Nonmetallic boxes

PMA®

• Flexible Nylon Conduit Systems

Ready-Lite®

- Emergency Lighting and Exit Signs
- Nexus® Emergency Lighting Management System

Shrink-Kon™

• Self-Fusing Insulation Tape

Sta-Kon®

- Push-In Luminaire Disconnects
- Hand Crimping Tools

Steel City®

• Floor Boxes

Superstrut®

- Metal Framing System
- Cobra® One-Piece Cable and Pipe Clamp
- Quick-Clamp® Conduit Clamp
- Trapnut® Strut Fastener

T&B® Cable Tray

- Express Tray® Steel Wire Basket Tray
- Speed Tray® Light-Duty Aluminum Cable Tray

T&B® Fittings

- LU® Universal Conduit Elbow
- Ranger® Portable Cord Fittings
- Star Teck Extreme Director™
- Teck Cable Fittings

Ty-Rap⁶

- Hand-Held Installation Tools
- Ty-Tote® Cable Tie DispenserTeck Cable Fittings



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Industry codes and specifications

All Thomas & Betts products for use in wastewater treatment facilities meet or exceed applicable industry specifications or codes detailed in the appropriate Thomas & Betts product literature.











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All information and specifications contained in this catalogue are subject to change due to engineer design, errors and omissions. Illustrations and diagrams within this catalogue may vary from actual products.

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