

## Food and Beverage Solutions

Safety and Reliability from  
Production to Consumption

**PANDUIT**<sup>®</sup>

# One Point of Failure Can Impact Your Entire Business

Food and beverage manufacturers are faced with countless product safety, quality and manufacturing challenges. Maximizing productivity while reducing downtime requires a robust integrated electrical and network infrastructure that can deliver optimum productivity, reliability, and profitability.

Whether your production line is down due to equipment malfunction or a changeover is taking place – downtime can quickly add up.

The total of direct and indirect costs due to downtime is approximately \$7800/hour:

- One event per month could cost \$93,600/year
- One event per week could cost \$390,000/year
- One event per day could cost \$1,950,000/year

Source: Reduced Effort Inc.

## Return on Investment

### What is Important to You:

With operational challenges of harsh environments, food and beverage manufacturers require that their infrastructure:

- Reduce Downtime
- Increase Efficiency
- Maintain Regulatory Compliance
- Ensure Workplace Safety

## Panduit's Influence

Playing an important role in the food and beverage industry is highly dependent on:

- Rugged systems and components that deliver high reliability and long service life
- Comprehensive, intuitive safety systems that are regulation compliant
- Remote monitoring of information that improves visibility and control
- Solutions that meet the most demanding industry specification's that aid compliance

Panduit Products are Engineered  
to Withstand the Harsh Demands  
Associated with Food Processing



# When there is NO TIME for DOWNTIME... Rely on Panduit

Panduit solutions deliver best-in-class quality for maximum reliability and defect-free installations that minimize rework and downtime. Significant investment in research and development, as well as participation in industry standard bodies, allows Panduit to provide products engineered for optimum performance, quick and dependable installations, and improved workplace safety.

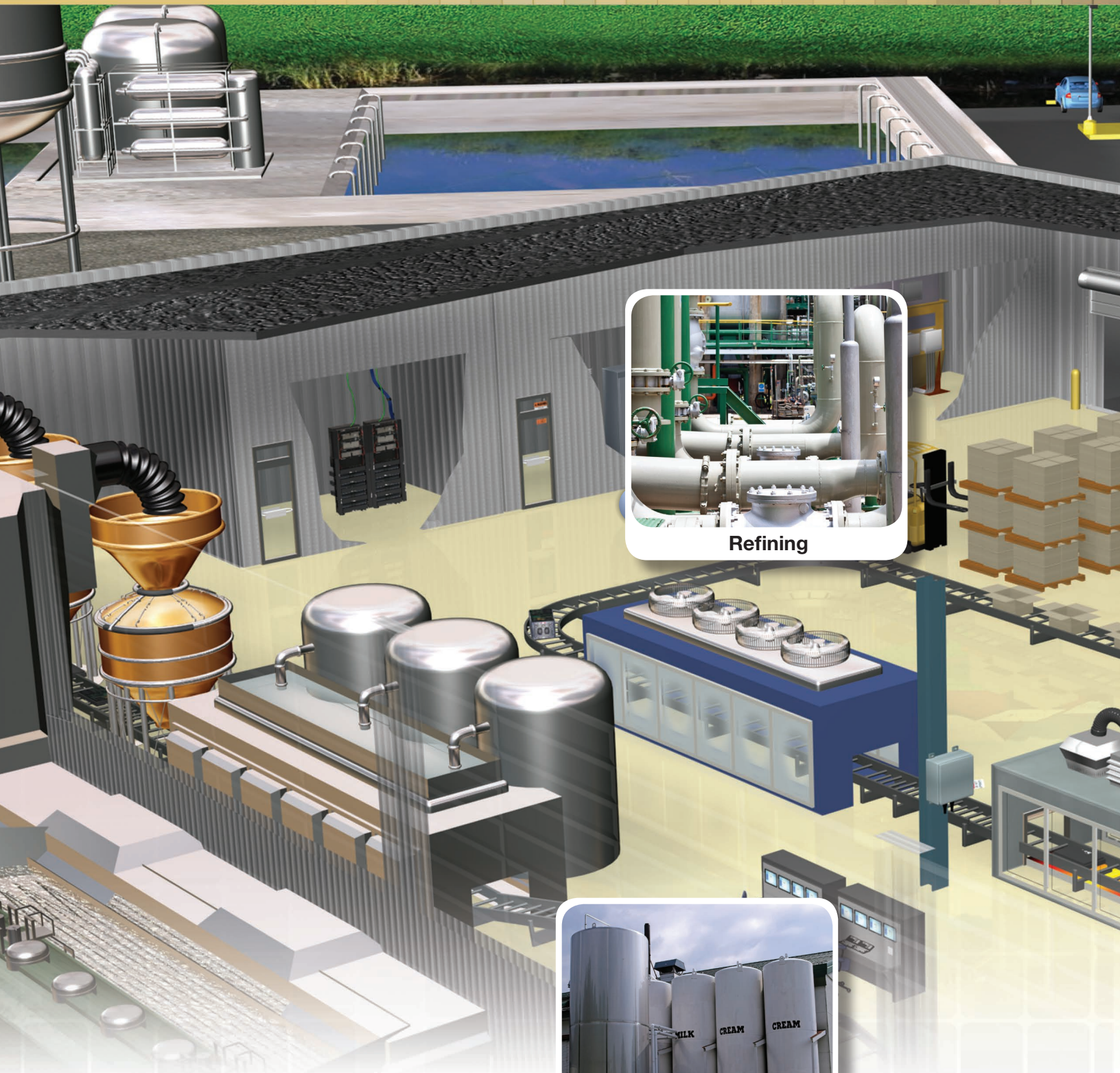
## Robust Solutions for Harsh Environments

With application expertise in harsh environments and convergence on the manufacturing floor, best practice methodologies, and end-to-end support, Panduit helps our customers improve productivity and lower operational costs.

## Global Approvals and Certifications

Panduit products meet and exceed many performance standards set by regulatory agencies worldwide, to help ensure that your plant delivers with 24/7 reliability.





**Refining**



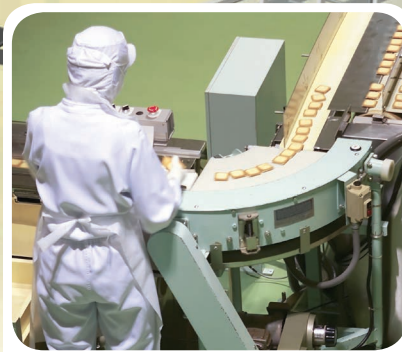
**Storage**



**Maintenance and Repair**



**Packaging**



**Processing**



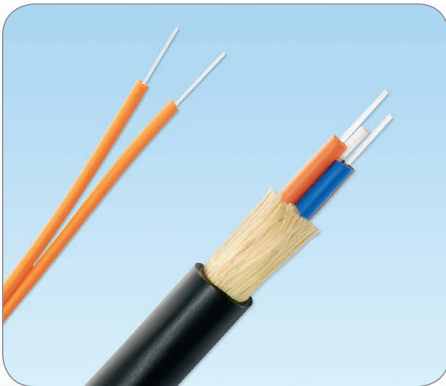
## Storage

### Challenges

- Real time sensing of material levels
- Industrial data communication
- Pathway management to/fro remote locations
- Integration into plant-wide systems

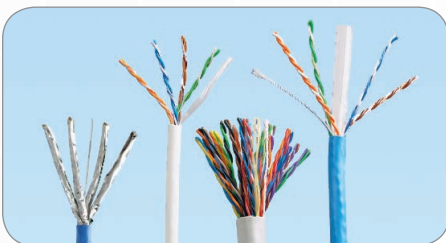
### Solution Leading Product

OptiCore® IndustrialNet™ Polymer Coated Fiber (PCFR) Cables are designed with technicians in mind and allow users to install high speed fiber optic permanent links quickly and with minimal training



- **Ideal for installation in harsh and industrial environments:** can be used external to the control panel or zone enclosure
- **Best choice for industrial data links:** suitable for applications that demand high mechanical integrity and reliability including factory automation, utility, and military
- **Electrician friendly field terminations:** fiber coating facilitates easy fiber terminations
- **Two and four-fiber breakout cables or two-fiber interconnect cables:** for specific industrial applications

### Supplementary Offering Copper Cabling System



Available in Category 6A, 6, and 5e unshielded and shielded twisted pair in a full complement of flame ratings for any application.

### Wyr-Grid® Overhead Cable Tray System



Easy-to-use overhead cable management system offers speedy deployment, structural integrity, and cable protection for copper or fiber optic data cables, or power cables within data centers.

### J-Pro™ Cable Support System



Complete horizontal and vertical 1" bend radius control helps prevent degradation of cable performance.



# Refining

## Challenges

- Static charge build-up during dry material delivery
- Ensuring proper grounding throughout the process
- Batch process configuration – equipment

## Solution Leading Product

Efficient and dependable electrical power and grounding are key building blocks for the refinement of raw food products



- **Meet IEEE Standard 837-2014:** direct burial ground system offers the speed and safety of a compression connection
- **Ensure maximum performance:** over the service life of the installation with Panduit power connectors
- **Reliably connect and manage power:** from the central plant throughout the manufacturing facility

## Supplementary Offering

### Lockout/Tagout



Comprehensive portfolio of products and services for the identification and control of hazardous energy, from mechanical and electrical to hydraulic

### Permanent Identification



Stainless steel and aluminum cable ties, marker plates and tags in a variety of shapes and sizes.

### Abrasion Protection



Insulate, protect and harness electrical and electronic components and cable.



# Processing

## Challenges

- Mitigation of unwanted contaminants
- Continuous system improvement
- IP67 and NEMA 4X/IP66 rated

## Solution Leading Product

Pan-Ty® Metal Detectable Cable Ties and Mounts are designed to help the food and beverage industry meet product manufacturing safety standards.



- **Identifiable:** by metal detectors and x-ray inspection equipment
- **Regulatory compliant:** comply with U.S. Food and Drug Administration HACCP\* standards and European Union (EU) hygiene monitoring regulations
- **Distinct blue color:** facilitates quick visual detection

\*HACCP = Hazard Analysis and Critical Points - a systematic preventative approach to food and pharmaceutical safety that addresses hazards as a means of prevention rather than finished product inspection.

## Supplementary Offering Stainless Steel Cable Ties



Delivers strength, long life and resistance to chemicals, vibration, radiation, weathering, and extreme temperatures.

## Control Panel



Saves valuable panel space, mitigate disruptions due to electrical/mechanical noise, enable and futureproof your network, and improve reliability.

## Abrasion Protection



Insulate, protect and harness electrical and electronic components and cable.





## Packaging

### Challenges

- Lot and batch traceability
- Product changeovers
- Throughput monitoring and tracking

### Solution Leading Product

From control panel labeling to plant wide facility identification, Panduit Easy-Mark™ Labeling Software and one of our hand-held or desktop printers can support all of your identification requirements



- **Ultimate performance:** label media is engineered for any application with formulations that are chemical, abrasion, and UV resistant
- **Design custom markers:** quickly and economically
- **Increase productivity:** print labels when and where they are needed with rugged hand-held printers

### Supplementary Offering

#### Permanent Identification



Deliver long-term durability and legibility for optimum identification of pipes, conduit, cables and equipment.

#### Safety Services Arc Flash Assessment



Comprehensive review and data collection includes transformer data, electric utility data, conductor sizes and length, and fuse/circuit over current protection information on all equipment per Institute of Electrical and Electronics Engineers (IEEE) 1584

#### Industrial Automation



System comprised of expertise and innovations that improve reliability, security, and safety while reducing costs. Targeted to specific plant needs,



## Quality Control

### Challenges

- FDA and regulatory compliance
- Network security and integrity
- Communication and data transfer reliability

### Solution Leading Product

Ensure safety and security of the network infrastructure with innovative designs of the blockout and lock-in devices



- **Enhance information security measures:** prevent unauthorized network access and physical system changes
- **Block unauthorized access:** save time and money associated with network downtime, data security breaches, infrastructure repair, and hardware replacement due to theft
- **Devices formats:** copper (RJ-45), fiber optic (LC and SC), and USB Type A and B connections

### Supplementary Offering Integrated Zone



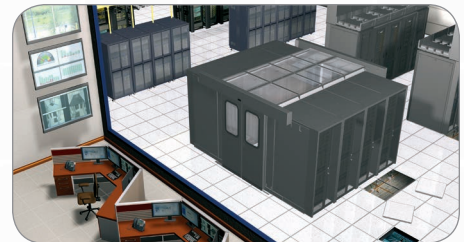
Fully assembled for rapid deployment to meet tight schedules, and has been tested and validated for thermal performance, vibration and electrical safety.

### Micro Data Center



Physical infrastructure components of a plant wide network, provide a structured approach to IT convergence in Factory Automation.

### Enterprise Data Center



Holistic set of solutions that enhance safety and security in the workplace, meet regulatory compliance requirements, reduce downtime, increase efficiency, and reduce operating costs



## Maintenance and Repair

### Challenges

- Maximize facility uptime
- Create and a a safe and secure work environment
- Eliminate repetitive repair calls
- Harsh operating environments

### Solution Leading Product

Panduit provides a comprehensive system which includes necessary training materials to enable facility wide safety compliance



- **Mitigate risk of fines:** leverage Panduit's Safety Services to become compliant with workplace safety standards
- **Control and identify energy in a workplace:** with lockout/tagout devices, facility signage, and labeling systems
- **Leverage safety expertise:** become compliant with workplace safety standards (OSHA, ANSI, and NFPA) with Panduit's safety services

### Supplementary Offering

#### Power Connectors



UL and CSA approved aluminum and copper connectors for code and flex wires. Telcordia NEBS Level 3 rated and meets or exceeds most military performance requirements.

#### Labeling and Identification



Hand-held or desktop printers can support all of your identification requirements for control panel labeling to plant wide facility identification.

#### Terminals



UL and CSA listed, tin-plated, vinyl-insulated, copper connectors designed for long-term reliability.



## Let Us Help!

Panduit backs all products with world class customer service and technical support to insure a seamless process from order inquiry to installation.

Comprehensive Panduit food and beverage solutions include everything necessary to bundle, identify, route, protect and terminate wire/cables, supporting the most demanding application requirements and delivering customer benefits:

- **Reduced installation time**
- **Decreased operator error**
- **Lower total installed costs**
- **Adherence to industry standards**
- **Promoting safer working conditions**
- **Minimized operator fatigue**

# Everything is Easier With the Right Tool for the Job!

## Cut and Strip

- Ergonomic shape for safe comfortable use
- Optimized design for cutting the largest conductors with minimal force
- Designed for one-hand operation
- Low friction stripping of difficult insulations like rubber and silicon



## Terminate

- CT-1000 semi-automatic ferrule crimping tool delivers maximum efficiency
- Controlled cycle mechanisms ensure reliability and repeatability in every crimp made
- Crimping dies are color-coded to easily match the compression connector to the proper die
- Complete termination system ensures compliance with UL and CSA requirements



## Identify

- Portable and desktop marking tools for quick and easy on-site identification
- Easily identify moves, adds, or changes
- Fast, high quality label production for all your identification requirements
- Solutions for the harshest environments



## Bundle Stainless Steel and Nylon Cable Ties

- Used in maintenance and construction applications
- Full line of lightweight, ergonomic hand tools
- Highest reliability in the industry
- Flush cut-off of ties limits exposure to sharp edges





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