



Product Fundamentals

IEI Sales Reference Guide

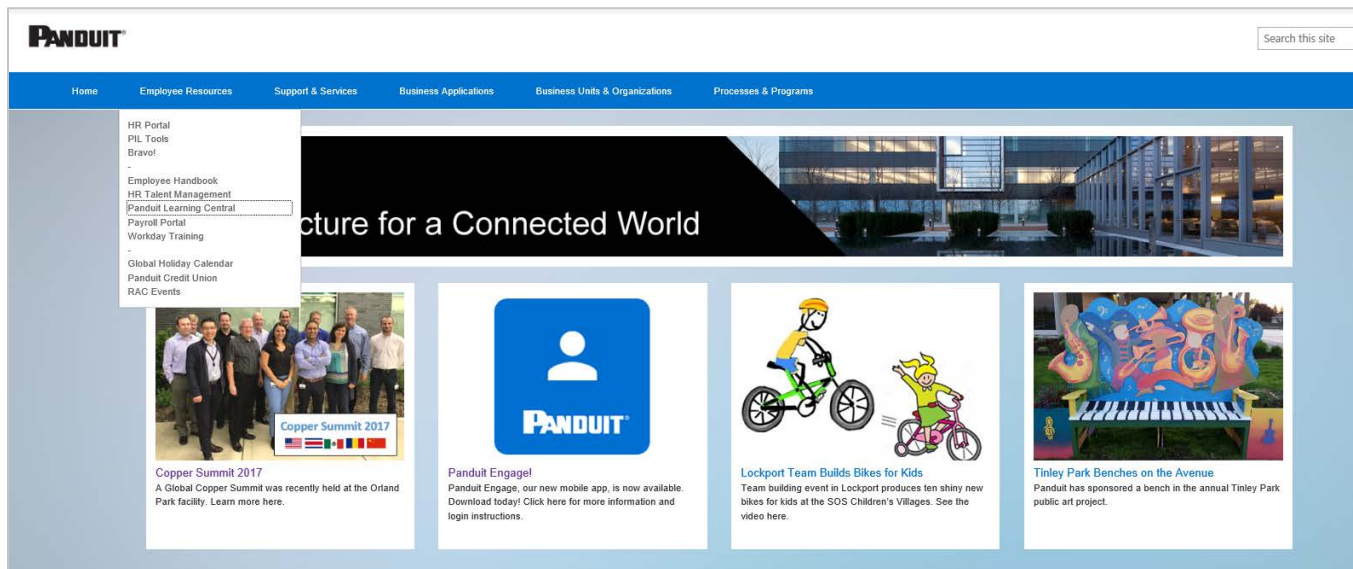
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Product Fundamental IEI Sales Reference Guide

The reference book will act as a portable resource for IEI sales people in the field. This book contains reference material on the entire Panduit IEI product line. Salespeople may consult this book for information on starting conversations with customers as well as key features and differentiators for all IEI products. This book also contains a comprehensive list of samples, literature, contacts, and technical terminology that may be quickly referenced at any time.

Please complete the thirteen accompanying eLearning courses for additional technical information on the products contained in this book. These courses can be accessed through Panduit Learning Central on the Connect Homepage (see screenshot or use direct link below).

Direct Link to Panduit Learning Central Product Fundamentals:
[PLC Product Fundamentals IEI](#)



IEI Product Fundamentals eLearning courses

(Cable Tie Products, Grounding and Bonding Products, Identification and Labeling Solution Products, Industrial Safety Solution Products, PAT Cable Tie System Products, Power Connector Products, Stainless Steel Products, Terminal Products, Wiring Duct Products, Abrasion Protection Products, Cable Accessory Products)

Cable Tie Products



Conversation Starters

Technical content for Cable Ties is located in the online training course titled "Cable Tie Products" in the IEI Product Fundamentals Training Track.

Identify the ideal customer for this product line.

- Original Equipment Manufacturers
- Wire Harness Builders
- Control Panel Builders
- Industrial Construction/ MRO
- Most Applications and Markets

Identify specific pain points experienced by customers in these markets.

- Sacrificing quality for cost
- Difficulty establishing speedy yet efficient installation practices
- Employee repetitive motion injury from the installation process
- Finding a tie with the correct combination of features (material, size, tensile strength) for a specific application

Identify the specific impacts of these pain points.

- Decreased revenue as a result of having to replace ties
- Decreased productivity as a result of inefficient installation processes
- Decreased productivity and revenue as a result of employee injuries
- Decreased quality of end product as a result of using a lower quality tie
- Decrease quality of end product as a result of using an inappropriate tie for the application

Identify questions a salesperson should ask to discover if a potential customer is experiencing any of the pain points Panduit cable tie products can solve.

- Would you like to increase your annual productivity and product output next year?
- Would you like to increase your annual revenue next year?
- Would you like to improve the overall quality of your product and your company's reputation?
- Would you like to simplify your manufacturing processes?

Cable Tie Products



Variations, Key Features and Differentiators

Cable Tie Products can be found in section B1 of the Industrial Electrical Solutions Catalog.

Cable Tie Installation Hand Tools (Manual)

- Lowest impact to installers hand in the industry
- Impact lowered by more than 40% from previous Panduit manual products
- Beveled Tie Entry: Allows quick side entry of tie into tool to speed installation
- Tension Setting Label: Easy to read, minimizes guesswork
- Tension Adjustment Knob: ½-Stop tension-setting increments simplifies process by having only one control to set
- Impact Resistant Resin Housing: Lightweight and Durable
- Long Narrow Nose: Improves installer’s visibility and access to confined areas
- Slip-Proof, Soft Handle and Rear Grip: Cushions fingers and hand during operation
- Ergonomically-Designed Grip: Allows hand to naturally and comfortably leverage the strength of all fingers when engaging the trigger
- Hanger Hook: Allows tool to be “hung-up” for easy storage

Loose Piece Cable Ties

Breadth of Product

- Panduit leads industry in breadth and depth of available cable tie designs created from customer feedback of their application requirements
- Panduit offers the most complete selection of cable tie styles, sizes, materials, and colors



Additional Assets

Contacts	Collateral
<p>Raymond Hill Product Manager Raymond.Hill@panduit.com</p>	<p>CTSG04-SA-ENG (Cable Tie Selection Guide)</p> <p>CTCB52-SA-ENG (Pan-Ty Cable Tie PLT4H Flexible Heavy Cross Section Product Bulletin)</p>
<p>Jodee Cizek PMA Primary Jodee.Cizek@panduit.com</p>	<p>CTCB62-WW-ENG (Cable Tie Installation Hand Tools Product Bulletin)</p>
<p>Louis Hovanes PMA Secondary Louis.Hovanes@panduit.com</p>	<p>CTCB60-WW-ENG (Metal Detectable Cable Ties and Mounts Product Bulletin)</p>

Grounding and Bonding Products



Conversation Starters

Technical content for Grounding and Bonding products is located in the online training course titled "Grounding and Bonding Products" in the IEI Product Fundamentals Training Track.

Identify the ideal customer for this product line.

- Electrical Contractors
 - High volume
 - Project based
 - Specializes in electrical grounding products
- Industrial Automation
 - Building construction
 - Re-working the electrical in an existing building
- Control Panel Builders for Original Equipment Manufacturers

Identify specific business problems and impacts customers in these target markets have that Panduit can solve.

- Reliability: Many products are buried and out of site for years, need long term reliability
- Safety: Products that do not meet industry safety standards can lead to employee injury
- Time: If grounding products or panel components do not meet regulatory requirements a customer faces potential shutdown while requirements are met
- Revenue: If productivity is reduced as a result of employee injury or a shutdown revenue will be lost

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Engineers
 - How concerned are you about the reliability of the grounding system?
 - How does it reflect upon you if your product specifications cause job holdups?
- Contractors
 - Is job safety a concern?

Grounding and Bonding Products



Variations, Key Features and Differentiators

Grounding and Bonding products can be found in section D3 of the Industrial Electrical Solutions Catalog.

Direct Burial Compression Grounding System (for construction)

- IEEE837-2014 Compliant
- Direct Burial (DB) rated
- UL467 listed
- 3-4 times faster installation times than exothermic method
- Range Taking: Fewer parts are needed than competitor’s system (fewer SKUs)
- Immediate Inspection possible: Advantage in field when projects must be assessed by inspectors

Mechanical Connectors (for construction or OEMs)

- Continually expanding breadth of product
- Reliable and economical connectors
- UL467 listed
- Direct Burial (DB) rated



Additional Assets

Contacts	Collateral
<p>Greg Sink Product Strategy Manager Greg.Sink@panduit.com</p>	<p>GRCB02—SA-ENG (Structured Ground DB Product Bulletin) GRSP01-SA-ENG (Universal Ground Bar Spec Sheet)</p>

Identification and Labeling



Conversation Starters

Technical content for Identification and Labeling is located in the online training course titled "Identification and Labeling Products" in the IEI Product Fundamentals Training Track.

Identify the target customer for this product line.

- High volume, industrial labeling users
- Control panel builders
- Wire harness manufacturers
- Maintenance departments of industrial facilities
- **All customers in the markets and applications that Panduit serves**

Identify specific business problems companies in the target markets have that Panduit can solve.

- Failure to comply with industry standards and associated expenses
 - Panduit labels are UL rated
- Costly network downtime
 - Properly identified buildings and control panels are easier to troubleshoot and minimize downtime
- Maintaining printing software amid continuous computer upgrades
 - Panduit label printers and software are compatible with windows 7, Windows 8, and Windows 10
 - Panduit provides free printer and software upgrades for existing customers
- Technical servicing of current printers
 - Panduit ID Technical Support provides post-sales setup assistance, training, and technical support at no additional charge

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Would you like to save time and effort when labeling?
- Would you like to reduce your number of labeling errors?
- Would you like one printer and software system for printing all the labels that you need for your construction project or control panel?
- Do you need a high-volume printing solution?

Identification and Labeling Solutions

Key Features and Differentiators

Identification and Labeling products can be found in sections E1, E2, E3, and E4 of the Industrial Electrical Solutions Catalog.

Easy-Mark Labeling Software

- Save up to 75% of the time needed for creating labels
- Future revisions, enhancements, and new label formats are available at no additional charge on the Panduit website; can be configured to automatically check for updates
- CAD-Connect labeling software automatically pulls label text from CAD drawings and puts it directly into Easy-Mark software for printing, eliminating the chance for errors
- Patented application wizards for control panels, construction and maintenance, and safety signs assist with the automatic design and formatting of labels for compliance to industry standards

LS8E and LS8EQ (Handheld Printers)

- Allows importing data, system upgrades, and printing labels from a wireless laptop or desktop computer
- Label cassettes contain an integrated memory device for automatic formatting, recall of last legend used, and number of labels remaining in cassette

TDP43ME (Desktop Printer)

- Print speeds of 4 inches per second
- Networkable: the Ethernet port allows the TDP43ME to be used as a network printer

Additional Assets

Contacts	Collateral
<p>Robert Whitaker Product Manager Robert.Whitaker@panduit.com</p> <p>Yvette Allison PMA Primary Yvette.Allison@panduit.com</p> <p>Deborah Whitmire PMA Secondary Deborah.Whitmire@panduit.com</p>	<p>SA-SSCB25 (Permanent ID Product Bulletin)</p> <p>IDCB61-SA-ENG (Arc Flash Labeling Solutions Product Bulletin)</p> <p>IDLC07-SA-ENG (Laser/Ink Jet Labels Brochure)</p> <p>IDLC06-SA-ENG (Thermal Transfer Line Card)</p> <p>IDCB84-SA-ENG (Easy-Mark Product Bulletin)</p> <p>IDCB79-SA-ENG (LS8E and LS8EQ Product Bulletin)</p>

Industrial Safety Solutions



Conversation Starters

Technical content for Industrial Safety Solutions is located in the online training course titled "Industrial Safety Solution Products" in the IEI Product Fundamentals Training Track.

Identify the ideal customer for this product line including target contacts.

- Customers in the MRO (Maintenance Repair and Operations) market
- Any customer dealing with the maintenance of equipment
- Industrial Customers
- Maintenance Department
- Safety Department and/or Safety Manager
- Plant Manager
- Operations Manager

Identify specific business problems companies in the target markets have that Panduit can solve.

- Failure to comply with OSHA safety requirements
- Employee injuries at the workplace

Identify the impacts of these business problems.

- Costs and fines associated with OSHA fines
 - Lockout Tagout violations are number 5 out of 10 of the most cited safety violations of 2016 (3,400 violations)

Identify questions sales people should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Do you have a Lockout Tagout program in place?
- Do you do your own maintenance on your equipment?
- Are you familiar with OSHA fines?
- Did you pay any OSHA fines last year?
 - If yes, what were the specific violations?

Industrial Safety Solutions



Variations, Key Features and Differentiators

Safety Solution Products can be found in the Safety Solutions Catalog (SFCB07—SA-ENG).

Circuit Breaker Lockout Devices

- PowerLOK Devices designed for superior engagement with the circuit breaker to deliver industry-leading pull-off resistance performance

Plug Lockout Devices

- Universal Device: Small form-factor, constructed of rugged polycarbonate providing strength, durability, added security and corrosion resistance
- Box Style: Device fully encloses the plug

Switch Lockout Devices

- Toggle Switch Lockout Device: Compact secure design fits most toggle switches and some small circuit breakers, rugged nylon and stainless steel provides strength, durability, added security and corrosion resistance
- Toggle/Rocker: Installs onto the switch faceplate using faceplate screws

Gate Valve Lockout Devices

- Gate Valve Lockout Device: Series can lockout the complete range of gate valve handles found in a facility
- Multiple Lockout Device: Used on electrical disconnects, large cumbersome devices, and rugged construction

Ball Valve Lockout Devices

- Can lockout most ball valve handles found in a facility
- Resistant to solvent, other chemical products, cracking, and abrasion

Lockout/Tagout Stations and Kits

- Stations provide access of necessary padlocks and tags for ease and convenience
- Allow permanent wall mounting where needed
- Rugged and rust-proof materials for enhanced durability
- Kits are application specific
- Provide everything needed for the job at a lower cost of ownership

Industrial Safety Solutions



Variations, Key Features, and Differentiators...(Continued)

Padlocks

- Safety Lockout Padlocks: Non-conductive material on lock body and shackle provides protection against electrical hazards for maximum safety
- High Security Aluminum Padlocks: Solid aluminum body with anodized aluminum finish can withstand extreme weather and environmental resistance
- Compact Aluminum Padlocks: Solid aluminum body with anodized aluminum finish for smaller areas requiring lockout

Safety Training

- Lockout/Tagout Training
- Electrical Safe Work Practice (One-Day Training)
- NFPA 70E+Plus (Three-Day Training)
- A Life is on the Line DVD
- GHS Training



Additional Assets

Contacts	Collateral
<p>Darron Wright Product Manager Darron.Wright@panduit.com</p> <p>Deborah Whitmire PMA Primary Deborah.Whitmire@panduit.com</p> <p>Yvette Allison PMA Secondary Yvette.Allison@panduit.com</p>	<p>CPFL104-SA-FRA (Top Selling Facility ID Product Offering)</p> <p>SA-IDCB33 (Lockout/Tagout Catalog)</p> <p>IDCB61-ENG (Arc Flash Labeling Solutions Product Bulletin)</p> <p>CPP06-SA-ENG (Safety Add-On Sales Guide)</p> <p>SFCB07-SA-ENG (Safety Catalog)</p> <p>CPFL61-WW-ENG (Panduit Advisory Services (Training) Product Bulletin)</p>

Power Connectors and Terminals



Conversation Starters

Technical content for Power Connectors is located in the online training course titled “Power Connector Products” in the IEI Product Fundamentals Training Track. Technical content for Terminals is located in the course titled “Terminal Products.”

Identify the ideal customer for these product lines.

- Any customer with a **requirement** for a **high-quality** connector or termination

Identify the specific challenges customers purchasing these product lines typically face.

- Terminations that are safe and reliable
- Getting high quality terminations (no-defects)
- Properly training installers to terminate
- Protecting installers from repetitive motion injuries while making terminations
- Getting terminations that meet required agency approvals for their application

Identify the questions salespeople should ask during discovery conversations to determine whether prospects face the challenges that Panduit can work with them to overcome.

- Are you looking for termination tools that mitigate repetitive motion injuries for your workers?
- Have your workers ever been trained in proper crimping techniques?
- Are you having quality issues with connectors?
- Are you looking for new termination solutions?
- Do you need product termination training for your installers?

Identify the questions salespeople should ask to ensure they are qualifying the full scope of available opportunity.

- What wire sizes/types are you terminating?
- What agency approvals do you need for your terminations?
- What space requirements do you need for connector application?
- What safety requirements do you need to meet to do installations?

Power Connectors and Terminals



Variations, Key Features and Differentiators

Terminals and Power Connector Products can be found in sections D1 and D2 of the Industrial Electrical Solutions Catalog.

Ferrules

- Panduit has one of the largest ferrule offerings available in the industry
- Over 180 variations available
- Can improve productivity by 600% when used with the Panduit ferrule strip and crimp machine

CP-881

- Strips pre-cut wires to proper length, installs insulated ferrule, and crimps in less than 2 seconds
- Ideal for 6,000 crimps per year

Terminals

- Performance exceeds UL and CSA requirements
 - Suitable for the most rigorous applications
- High conductivity and corrosion resistance to deliver reliable, superior performance
- Breadth of product
 - One supplier for all terminal requirements
 - Delivers lower procurement costs by consolidating with one supplier



Additional Assets

Contacts	Collateral
<p>Robert Klaviter Product Manager Robert.Klaviter@panduit.com</p>	<p>SA-TMSG10--SA-ENG (Terminal Material Selection Guide)</p> <p>TMCM05-SA-ENG (Terminal Counter Mat)</p>
<p>Diana Chandler PMA Primary Diana.Chandler@panduit.com</p>	<p>TMMM10-SA-ENG (Terminal Labels)</p> <p>TMSP04--SA-ENG (CP-881 Specification Sheet)</p>
<p>Louis Hovanes PMA Secondary Louis.Hovanes@panduit.com</p>	

Cable Accessories



Conversation Starters

Technical content for Cable Accessories is located in the online training module titled "Cable Accessory Products" in the IEI Product Fundamentals Training Track.

Identify the ideal customer for this product line including target contacts.

- Original Equipment Manufacturers
 - 70%-75% of Panduit Cable Accessories are sold to OEMs
- White Goods Manufacturers
- MRO- For maintenance and repair of facilities
- Control panel shops
- Engineers

Identify specific business problems companies in the target markets have that Panduit can solve.

- Most engineers struggle with finding a product that meets specific requirements made necessary by the control panel layout and design. These requirements typically include:
 - Bundling Capacity
 - Space (Footprint)
 - Product Materials (Temperature Requirements)
 - Installation Method

Identify the impacts of these business problems.

- Tradeoff between quality and cost
 - Customers want a high-quality product that does not need to be replaced multiple times at a reasonable price
- Replacement costs
 - Having to replace mounts multiple times increases labor and material costs as well as tarnishing a control panel manufacturer's reputation

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Are you having failures at the door? (Control Panel Applications)
 - Panduit's Dynamic Cable Manger (part # ABDCCM-INST) solves this problem

Cable Accessories



Variations, Key Features, and Differentiators

Cable Accessories can be found in section C3 of Industrial Electrical Solutions Catalog.

Adhesive Backed Cable Tie Mounts

- Adhesive backing allows routing of wires and cables where mounting holes cannot be drilled
- Premium Rubber Adhesive is suitable for most applications

Screw Applied Cable Tie Mounts

- Standard Trade Marked designs use cradle design for bundle stability
- Available in PEEK TM2S8-C71 for temperatures up to 500°F

Push Barb Cable Tie Mounts

- PUM push-tree style designed for low insertion force with 50 lb pull-out force
- Can be used where metallic fasteners are not allowed or where reduced installation time is required

Edge Clip Cable Tie Mounts

- Use where a mechanical fastening method is desired, an edge is accessible, and holes cannot be drilled into a panel
- Available in zinc plated steel

Stud Mounts

- Use with weld studs on equipment where a surface cannot be pierced
- Up to 5 separate cable tie mounting locations for individual routing of bundles

Connector Rings

- Two-piece solution for bundles crossing at any angle
- Prevents damage to wires from motion between adjacent wire bundles

Adhesive Backed Clips and Clamps

- Three types of preinstalled adhesives: Rubber, Acrylic and VHB
- Various designs include screw holes for optional secondary mounting

Cable Accessories



Variations, Key Features and Differentiators...(Continued)

Screw Applied Clips and Clamps

- Use a screw or similar mechanical fastener to secure a wire bundle without the use of cable ties

Push Barb Clips and Clamps

- 'PC' style uses a permanent push-mount latch
- HCAG style uses umbrella-shaped grommet to prevent ingress

Edge Clip Clips and Clamps

- Applied to panel edges to allow routing of wire along the panel edge
- Pre-punched apertures in a panel prior to corrosion treating, reduces risk of corrosion



Additional Assets

Contacts	Collateral
<p>Darron Wright Product Manager Darron.Wright@panduit.com</p> <p>Deborah Whitmire PMA Primary Deborah.Whitmire@panduit.com</p> <p>Yvette Allison PMA Secondary Yvette.Allison@panduit.com</p>	<p>CPCB158-SA-ENG (Cable Management for Heavy Duty Applications)</p> <p>WASP37-WW-ENG (Dynamic Cable Manager Specification Sheet)</p>

Wiring Duct



Conversation Starters

Technical content for Wiring Duct is located in the online training course titled "Wiring Duct Products" in the IEI Product Fundamentals Training Track.

Identify the target customer for this product line including target contacts.

- Control panel builder
 - Builds per customer specification for multiple industries
 - Builds many panels requiring a high volume and uses a variety of wiring duct
 - Utilizes many types, sizes, and colors of wiring duct
- Operations Manager
- Purchasing Manager

Identify specific business problems companies in the target markets have that Panduit can solve.

- Speed of installation
- Low quality product (sacrificing quality for a lower cost)
- Difficult to install product
- Avoiding injury during installation process
- Maximizing space within the panel

Identify the impacts of these business problems.

- Missed commitments
- Increased costs
- Time lost to panel layout re-works

Identify the questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Are you using multiple vendors for wiring duct, we may be able to consolidate with our breadth of offering?
- Do your technicians complain about abrasions on their hands?
- Do you have a need to save space in your panel?
- Do you have electrical noise related issues in the panel?

Wiring Duct



Variations, Key Features and Differentiators

Wiring duct products can be found in section C1 of the Industrial Electrical Solutions Catalog.

PanelMax DIN Rail Wiring Duct

- 30% control panel space and enclosure foot print savings
- Up to 25% material and 50% labor cost savings vs. conventional duct

PanelMax Corner Wiring Duct

- Up to 20% savings in enclosure foot print area when side panels are used
- One-piece base requires less time to install than multi-piece solutions

PanelMax Shielded Wiring Duct

- Up to 20 dB EMI noise reduction (20dB equal to 6 inches of air space)
- Fully enclosed channel with shielding on either side

PanelMax Noise Shield

- Up to 20dB EMI noise reduction (20dB equal to 6 inches of air space)
- Can mount direct to panel or within wiring duct (with optional bonding clip)
- Eliminates need to fabricate solution

Hinged Cover Wiring Duct

- Simplifies maintenance in MRO or under warranty service
- Easier access to cabling allows simple changes to be made up to 20% faster

Flush Cover Wiring Duct

- Rounded edges protect hands and wiring/cabling from abrasion
- Nonslip cover stays in place during shipment

Halogen Free Wiring Duct

- Meets enhanced fire safety needs, UL94V-0, nontoxic and non-corrosive during combustion
- Higher use temperature (95 degrees Celsius) for harsh environment or outdoor applications
- Meets Rail Transit specifications

Wiring Duct



Additional Assets

Contacts	Collateral
<p>Julie Love Product Manager Julie.Love@panduit.com</p> <p>Tanya Tatera PMA Primary Tanya.Tatera@panduit.com</p>	<p>WDSG03-SA-ENG (Wiring Duct Product Selection Guide)</p> <p>WDCB37-SA-ENG (Panduct PanelMax Corner Wiring Duct Product Bulletin)</p> <p>WDCB36-SA-ENG (Panduct PanelMax DIN Rail Wiring Duct Product Bulletin)</p> <p>WDCB26-SA-ENG (Panduct PanelMax Shielded Wiring Duct and Noise Shield Product Bulletin)</p> <p>CPCB98-SA-ENG (Smart Control Panel Solutions Brochure)</p> <p>WDCB34-WW-ENG (Flexible Wiring Duct Product Bulletin)</p> <p>WW-WDCB11 (Hinged Cover Wiring Duct Product Bulletin)</p>

Stainless Steel



Conversation Starters

Technical content for Stainless Steel product is located in the online training course titled "Stainless Steel Products" in the IEI Product Fundamentals Training Track.

Identify the ideal customer for this product line.

- Contractors and End Users in the following industries:
 - Energy
 - Telecommunications
 - Mining
 - Shipbuilding
- Any customer involved with cable management in harsh environments and extreme temperatures

Identify specific business problems companies in the target markets have that Panduit can solve.

- Unreliable and/or unsecure cable management
- Job site injuries
- Rising installation costs
- Failure to comply to industry standards
- Maintaining cable retention during a short circuit event
- Finding a safe and reliable solution for heat trace installation

Identify the impacts of these business problems

Rising Costs due to:

- Negative impacts on productivity
- Multiple or reoccurring safety issues
- Un-reliable product

Identify specific questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- What products do you use for cable management?
- What are the key challenges you face with cable management?
- Do you use Stainless Steel ties for securing cables distributing 3 phase power?

Stainless Steel



Variations, Key Features, and Differentiators

Stainless Steel products can be found in section B3 of the Industrial Electrical Solutions Catalog.

Pan-Steel System

- Lowest total installed cost over leading major competitor with similar product offerings
- Includes reliable, ergonomic tooling and an innovated cable tie design to provide fast and reliable installation
- Meets and exceeds most industry standards
- Lowest time to install compared to major competitor
- ABS, UL, DNV, BV Certifications for all products

Stainless Steel Cable ties

- Ties remain intact in a vibration environment due to ramp locking and ball locking features
- Delivers a useable life greater than 30 years
- Resistant to chemicals, vibration, radiation, weathering, and extreme temperatures
- Features rounded edges to prevent installer injury
- Rounded edges prevent damage to cable bundles or finished product
- Lower thread force than product from major competitor

Installation Tools

- Very low failure rate compared to major competitor
- Ergonomic tools available for low, medium, and high volume applications
- Reliability is designed into every tool

Heat Trace Installation System

- Installs 2-3 times faster than tie wire depending upon fixture
- Delivers approximately 30% lower overall installed cost versus tie wire depending on pipe diameter
- Significantly lower risk of health and safety concerns versus tie wire
- Prevents damage to electric heat trace due to installation

Stainless Steel



Additional Assets

Contacts	Collateral
<p>Amit Mehta Product Strategy Manager Amit.Mehta@panduit.com</p> <p>Patricia Hewitt PMA Primary Patricia.Hewitt@panduit.com</p>	<p>SSCB27-SA-ENG (Pan-Steel MS75 Metal Strapping System Product Bulletin)</p> <p>SA-SSCB25 (Permanent ID Product Bulletin)</p> <p>SSAG04-SA-ENG (Pan-Steel Application Guide)</p> <p>CPCB137-SA-ENG (Oil and Gas Brochure)</p> <p>CPCB138-SA-ENG (Shipbuilding Brochure)</p> <p>CPCB130-SA-ENG (Mining Brochure)</p>

Abrasion Protection



Conversation Starters

Technical content for Abrasion Protection is located in the online training course titled "Abrasion Protection Products" in the IEI Product Fundamentals Training Track.

Identify the target customer for this product.

- OEM
- Transportation
- MRO
- Wire harness assemblers

Identify potential applications for this product.

- Industrial automation control panel cabling
- Telecom/network cable harnesses
- Transportation harnesses
- Commercial appliances
- Industrial robotics
- Machinery equipment
- Manufacturing production equipment

Identify specific business problems companies in the target markets have that Panduit can solve.

- Employee injuries during the installation process
- Difficult or complex installation processes
- Difficulty re-routing or adding break-outs

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Are you experiencing a lag in production due to lengthy installation times?
- Are your employees suffering unnecessary injuries?
- What environmental factors do you need to take into account regarding your application?

Abrasion Protection



Variations and Key Features

Abrasion Protection products can be found in section C2 of the Industrial Electrical Solutions Catalog.

Pan-Wrap Split Harness Wrap

- Patented slot pattern along with patented installation tool allows for easy loading and speedy installation

Spiral Wrap

- Contractor grade
- 12 colors to allow color coding

Grommet Edging

- Standard and adhesive lined available
- Pressure sensitive adhesive allows for an easy, clean and secure application

Corrugated Loom

- Slit allows for easy installation of cable bundle or harness assembly
- Packaged on a reel for easy handling and dispensing of product

Braided Expandable Sleeving

- Lightweight, durable, and highly flexible for use with irregular shapes
- Fray-resistant design resists fraying when cut with scissors

Pan-Wrap Braided Sleeving

- Split wrap design allows for installation after cable routing is complete
- Allows for breakouts of single or multiple cables

Non-Shrink PVC Tubing

- All-purpose flexible and non-shrinkable
- Resistant to heat and moisture

Heat Shrink Tubing

- Available for multiple applications and markets in dry, damp or wet locations
- Can be used for color coding

Abrasion Protection



Additional Assets

Contacts	Collateral
<p>Julie Love Product Manager Julie.Love@panduit.com</p> <p>Tanya Tatera PMA Primary Tanya.Tatera@panduit.com</p>	<p>HSSG01-SA-ENG (Heat Shrink Product Selection Guide)</p> <p>SA-HSSG01 (Heat Shrink Selection Guide Slide Tool)</p> <p>WW-WASG03 (Electrical Wire Sizes and Selection Guide)</p> <p>WACB30-WW-ENG (Pan-Wrap Split Harness Wrap Product Bulletin)</p> <p>WASP41-WW-ENG (Pan-Wrap Braided Sleeving Specification Sheet)</p> <p>WACB29-WW-ENG (Grommet Edging Product Bulletin)</p> <p>WW-WASP16 (Weather Resistant Polypropylene Spiral Wrap Product Bulletin)</p> <p>HSSP903-WW-ENG (Halogen-Free Flame Retardant Nylon Spiral Wrap Specification Sheet)</p> <p>WW-HSSP02 (Thick Wall Polyolefin Heat Shrink Tubing Specification Sheet)</p> <p>WW-WASP08 (4:1 Heat Shrink Tubing Specification Sheet)</p>

PAT 4.0 and Reel Smart (Automated Tooling)



Conversation Starters

Technical content for PAT 4.0 is located in the online training course titled "PAT Cable Tie System Products" in the IEI Product Fundamentals Training Track. Content for Reel Smart is in the course titled "Terminal Products."

Identify the target customer for this product, including target contacts.

- High volume OEM and Contract Manufacturers (wire harness shops) specializing in or producing wiring harnesses
- Customers in the white goods, heavy truck, and aerospace markets
- Customers with automated tooling lines
- Target Contacts:
 - Design Engineering Department
 - Production Management Department
 - Process Engineering Department

Identify the primary concerns of target contacts.

- Reducing labor, downtime, price, and overall cost of doing business
- Balancing the cost of material with level of quality

Identify specific customer business problems that this product can solve.

- Increasing labor costs (having to do more with less)
- Using seasonal, contracted, or unskilled labor to combat rising labor costs
- Increased employee injuries, such as carpal tunnel
- Competition in the marketplace
- Bottlenecks in the process, decreased throughput

Identify the impacts of these business problems

- Increasing labor costs decrease companies' ability to compete in market
- Unskilled labor leads to lowered quality of product
- End user customers looking to bring product from offshore competitors

PAT 4.0 and Reel Smart (Automated Tooling)



Conversation Starters...(Continued)

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve?

- Do you have issues with proper terminations?
- Are you having concerns getting product out the door?
- Do you have a need to reduce the cost of your labor?
- Are you using temporary or unskilled labor?
- Are you seeing a large amount of repetitive motion injuries among your employees?

Identify questions salespeople can ask to ensure they are qualifying the full scope of available opportunity?

- Are you using more than 250,000 cable ties per year?
 - 250,000 cable ties per year brings a pervasive ROI for the customer. Tie price is substantially more than loose piece cable ties. Considering the cost of the tool and the price of the ties against the increased bundling capacity and labor savings will help substantiate the ROI.
- Are you terminating onto the harness?
- Are you using insulated terminations? (We do not have un-insulated reel fed terminals)
- Are those terminations Rings, Forks, Splices, or Disconnects?
- Are you using automated wire processing equipment?
 - Reel Smart can be used in a Komax style wire processing equipment to automate the termination process. That equipment in the industry is called a CST (cut, strip and termination)

PAT 4.0 and Reel Smart (Automated Tooling)



Key Features and Differentiators

PAT 4.0

- Improves Installation Rate 6x faster than manual tooling (GTS-E style cable tie tools)
- 25% Faster than comparable product from major competitor
- More compact design and user friendly interface than previous version
- Automated design reduces operator fatigue and repetitive motion injuries
- High speed, cable tie termination, tensions and cuts the cable tie flush (no sharp edges)
- Installs up to 84 ties/min, makes a cable tie connection in 0.6 seconds
- Tool head weight is 1.75 lbs vs. 3 lbs (nearly half the weight of comparable product from major competitor)
- Microprocessor-based controller monitors system performance through user-friendly LCD touch screen display; provides production data and reporting, including error detection and cycle count for improved reliability

Reel Smart

- Cycle times of less than one second (six times faster than using manual tools)
- Reels of up to 3,000 continuously molded terminals reduce the need to change reels, limiting downtime
- Automated crimp design provides a repeatable high-quality UL crimp each time
- Automated design reduces operator fatigue and repetitive motion injuries
- Designed to terminate all continuously molded terminals, disconnects, and splices in reels of 2,000 or 3,000 for high volume applications
- Panduit requires only one applicator for all terminals, competitors require a unique applicator for each terminal
- Panduit applicators have a universal base and can work with most competitive presses

PAT 4.0



Part Numbers

For use as a quick reference guide

Tool Heads
PAT1M4.0 (used with PLT1M-XMR Cable Ties)
PAT1.5M4.0 (used with PLT1.5M-XMR Cable Ties)
PAT1M4.0-BT (used with BT1M-XMR Cable Ties)
PAT1.5M4.0-BT (used with BT1.5M-XMR Cable Ties)
Dispenser
PDM4.0 (used with the following Tool Heads: PAT1M4.0, PAT1.5M4.0, PAT1.5M4.0-BT, PAT1.5M4.0-BT)
Feeder Hose
PHM1 (1 Meter Hose)
PHM2 (2 Meter Hose)
PHM3 (3 Meter Hose)
PHM4 (4 Meter Hose)
Accessories
PL283N1 (Air Regulator)
PATMBM (Bench Mount)
Cable Ties
PLT1M-XMR (Natural Nylon 6.6)
PLT1M-XMR0 (Black Weather Resistant)
PLT1M-XMR30 (Black Heat Stabilized)
PLT1M-XMR00 (Black MIL Spec Weather Resistant)
PLT1.5M-XMR (Natural Nylon 6.6)
PLT1.5M-XMR0 (Black Weather Resistant)
PLT1.5M-XMR30 (Black Heat Stabilized)
PLT1.5M-XMR00 (Black MIL Spec Weather Resistant)

Reel Smart



Part Numbers

For use as a quick reference guide

Applicators	Schleuniger Press
CA9 Air Fed Terminal Applicator	UC200 (top model), UC100 (entry model)
CA-800EZ Mechanical Fed Terminal Applicator	UC200
Uni-A FA Ferrule Applicator	UC200
Automated Ferrule Wire Strip and Crimp Tool	Reel Fed Ferrules
CP-881	FSD75-8-K, FSD76-8-K, FSD77-8-K, FSD78-8-K, FSD80-8-K

Schleuniger Partnership

Panduit has a Technology Encompass Partnership agreement (TEP) with Schleuniger for their terminal presses. According to this agreement, Panduit can sell Schleuniger presses, and Schleuniger can sell Panduit applicators. This works via a “Pass Through” detailed below:

Panduit Pass Through of UC200, UC100 Presses or Uni-A Fa Ferrule Applicator

- Panduit quotes a press to an End User
- End User provides a PO to Panduit
- Panduit submits PO to Schleuniger
- Schleuniger sends press to the End User
- Schleuniger provides support to the End User

Schleuniger Pass Through of CA9 Applicator

- Schleuniger quotes an applicator to the End User
- End User provides a PO to Schleuniger
- Schleuniger submits a PO to Panduit
- Panduit sends the applicator to the End User
- Panduit provides support to the End User

PAT 4.0 and Reel Smart (Automated Tooling)



Additional Assets

Contacts	
PAT 4.0	Reel Smart Tools and Terminals
<p>Raymond Hill Product Manager Raymond.Hill@panduit.com</p> <p>Jodee Cizek PMA Primary Jodee.Cizek@panduit.com</p> <p>Louis Hovanes PMA (Tool Quotations) Louis.Hovanes@panduit.com</p>	<p>Robert Klaviter Product Manager Robert.Klaviter@panduit.com</p> <p>Diana Chandler PMA Primary Diana.Chandler@panduit.com</p> <p>Louis Hovanes PMA (Tool Quotations) Louis.Hovanes@panduit.com</p>

Collateral
<p>CTCB58-SA-ENG (PAT 4.0 Cable Tie Installation System Product Bulletin)</p> <p>RSCB03-SA-ENG Reel Smart Product Bulletin</p> <p>PAT 4.0 ROI Calculator (Online Only - Sales Enablement Portal)</p>

Special Considerations for Automated Tooling

Automated tooling is sold direct to the end user. Lou Hovanes and the product manager will help with the quotation.

Reel Smart terminals and PAT System ties are sold through distribution via Distributor Book Pricing or via a SPA (Special Pricing Agreement).

Repair parts are sold either direct or via a SPA (special circumstances).

Quick-Build Harness Board System



Conversation Starters

Technical content for Quick-Build is located in the online training course titled "Cable Accessory Products" in the IEI Product Fundamentals Training Track.

Identify the target customer for this product.

- Contract manufacturers and wire harness shops
 - High mix / low- medium volume harness configurations
 - Small to medium in size
 - \$5-50M revenue per year
 - 5K-60K harnesses per year
 - Average 1,000 harness variations per year
- Original Equipment Manufacturer (OEM)
 - Industrial
 - White Goods
 - Military / Aerospace Wire Harness Contract Manufacturing
 - Non-automotive and non-medical

Identify specific business problems companies in the target markets have that Panduit can solve.

- Increasing board layout and build costs
- Inability to improve productivity of harness builds
- Rising storage space costs
- Decreasing revenue

Identify the impacts of these business problems.

- Increased costs of individual harnesses
- Limited profit centers within their facility
- Large percentage of harness shop floorplans (sometimes entire buildings) are dedicated to the storing of thousands harness boards

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Do you feel there is a better way to layout and build a harness than your current process?
- Do you have a designated area where you store plywood harness boards that are currently not being used?
- How often do you develop a new harness layout?

Quick-Build Harness Board System



Key Features and Differentiators

- 65% savings on material costs over traditional board layouts
- 50% savings on costs related to storing unused plywood harness boards
- Improves the productivity of wire harness assembly builds by up to 18% by bringing the harness up off the plywood to allow the cables to be easier to bundle and manipulate
- Most customers see recovered investment with 17th board build
- Faster setup time than traditional hammer and nail method
- Scalable-Easily expand capacity as needed
- Reusable and repositionable accessories designed to be rotated easily to accommodate cable routing pathway
- Patented system that is engineered for efficiency (Many customers have tried to develop and create their own proprietary solutions. Most will appreciate Panduit getting into this business and developing this line further for them)



Additional Assets

Contacts	Collateral
<p>Darron Wright Product Manager Darron.Wright@panduit.com</p> <p>Deborah Whitmire PMA Primary Deborah.Whitmire@panduit.com</p> <p>Yvette Allison PMA Secondary Yvette.Allison@panduit.com</p>	<p>WACB28-SA-ENG (Quick-Build Product Bulletin)</p> <p>Online Only- Sales Enablement Portal (Quick-Build Savings Calculator)</p>

Quick-Build Harness Board System



Part Numbers

For use as a quick reference guide

Part Number	Description	Quantity
QB-TILE	1x1 Tiles	1 Pkg. (8 Tiles)
QB-MOUNT-L	Mounting Pegs	25
QB-WASHER-Q	Replacement Washers	50
QB-SN1-Q	Single Nail Holder for 1" Nail/ White	25
QB-SN2-Q	Single Nail Holder for 2" Nail/ Black	25
QB-SN3-Q	Single Nail Holder for 3" Nail/ Gray	25
QB-FV1-Q	Five Nail Holder for 1" Nails/ White	25
QB-FN2-Q	Five Nail Holder for 2" Nails/ Black	25
QB-FN3-Q	Five Nail Holder for 3" Nails/ Gray	25
QB-WEH1012-Q	Wire End Holder/ 3 Wires/ 10- 12 Gauge/ Yellow	25
QB-WEH1416-Q	Wire End Holder/ 4 Wires/14- 16 Gauge/ Blue	25
QB-WEH1822-Q	Wire End Holder/ 6 Wires/ 18- 22 Gauge/ Red	25
QB-RER.5-X	Pre-Mounted Wire Elastic Retainer/ ½" Bundle	10
QB-RER.75-X	Pre-Mounted Wire Elastic Retainer/ ¾" Bundle	10
QB-RER1.25-X	Pre-Mounted Wire Elastic Retainer/ 1.25" Bundle	10
QB-RERBASE-X	Wire Elastic Retainer Peg Mount	10

QB-BASE175Q	Mounting Platform 1.75" x 1.75"	25
QB-BASE120Q	Mounting Platform 1.2" x 1.2"	25
QB-S6-500-C	#6 Screw; ½" Long	100
QB-S8-500-C	#8 Screw; ½" Long	100
QB-S8-750-C	#8 Screw; ¾" Long	100
QB-S25-500-C	¼" Screw; ½" Long	100
QB-S25-1000-L	¼" Screw; 1" Long	50
QB-CONN	Grid Tile Connector	1 Pkg. (5 Pieces)

Quick-Build Harness Board System



Part Numbers...(Continued)

QB-KIT2: Starter Kit Assortment that Includes Core Quick-Build Components	
Part Number	Quantity Included
QB-TILE	8
QB-MOUNT-L	35
QB-WEH1012-Q	10
QB-WEH1416-Q	10
QB-WEH1822-Q	10
QB-FN1-Q	2
QB-FN2-Q	5
QB-FN3-Q	2
QB-SN1-Q	2
QB-SN2-Q	5
QB-SN3-Q	2
QB-RER.5-X	3

QB-RER.75-X	3
QB-RER1.25-X	2
HBN1-T	12
HBN2-T	30
HBN3-T	12

BlackFin Installation Tools



Conversation Starters

Technical content for BlackFin Installation Tools is located in the online training course titled "BlackFin Installation Tool Products" in the IEI Product Fundamentals Training Track.

Identify the ideal markets and customers for this product line.

- Electrical Contractors
- Oil and Petrol Chemical Industry
- Harsh and Heavy Environments
- Waste Water Plants
- Food and Beverage
- General Commercial Construction
- Control Panel Builders (CT-2300ST)
- Wire Harness Builders (CT-2500-L/ CT-2600-L)

Identify Pain Points Felt by customers in target markets.

- Long turnaround times on tool repairs and servicing
- Frequently switching between multiple tools
- Maintaining speed and productivity while still adhering to OSHA safety standards

Identify the impact these pain points can have with target customers.

- Lost revenue due to long waits on repairs and servicing
- Lower productivity due to switching between multiple tools
- Employee injury and/or fines do to a failure to adhere to OSHA safety standards

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Are you interested in reducing the number of tools needed for your processes?
- Is your productivity hindered by having to switch tools?
- Are you experiencing long turnaround time on repairs and servicing?

BlackFin Installation Tools



Key Features and Differentiators

BlackFin Installation Tool Products can be found in section E of the Tool Solutions Catalog.

Servicing and Repair

- Have expanded to 4 US service centers (Previously Panduit had only 1)
- Turnaround time on repairs and servicing will be reduced

Additional Functions/Wider Breadth of Product Line

- More Dieless options
 - CT-3980 / Crimp still UL certified
- 2 multi-function tools available (3 in 1 tools)
 - Crimping/Cutting/Punching
 - CT-3001/CCP - CT2920CCB

Battery Capability/ Quantity

- Charging time is 22 minutes (versus 30 minutes from major competitor)
- 2 batteries included with most toll purchases (rather than the standard 1)

Enhanced Safety Standards

- First OSHA certified battery operated hand tool in the market
- Certified by CSA
- Meets requirements of Safety for Handheld, Motor-Operated Electric Tools (UL, CS C22.2 No 60745-1)
- Prevents fire shock, mechanical, and noise hazards to workers
- Meets ISO 12100 Machinery Safety Risk Assessment, including ergonomics

FINs (Fast and Intelligent Notification Software)

- USB Reader (Panduit Part Number CT-USB) must be purchased separately
- Software is free and downloadable from Panduit.com
- Keeps track of key performance metrics
 - Number of cycles
 - Last maintenance
 - Project status
 - Quality control documents: service log and test certificate
 - Waveform crimp performance

BlackFin Installation Tools



Additional Assets

Contacts	Collateral
<p>Robert Klaviter Product Manager Robert.Klaviter@panduit.com</p> <p>Diana Chandler PMA Primary Diana.Chandler@panduit.com</p> <p>Louis Hovanes PMA Secondary Louis.Hovanes@panduit.com</p>	<p>ELCB20—SA-ENG (BlackFin Tool Brochure)</p>

VeriSafe Absence of Voltage Tester



Conversation Starters

Technical content for VeriSafe is located in the online training course titled "VeriSafe Absence of Voltage Tester" in the IEI Product Fundamentals Training Track.

Product Summary: A permanently mounted tester used to verify a circuit is de-energized prior to opening an electrical ensure.

Identify ideal customers for this product.

- Industrial End User
- End Users who have their own plant automation network and control systems
- End Users installing new equipment into their process or doing a retrofit of existing control systems
- OEMs, Machine Builders, and Control Panel Builders building machine systems for target End Users

Identify personas to target.

- Control Engineers
- Electrical Engineers
- Maintenance Staff
- Safety Managers

Identify specific business problems companies in these target markets have that Panduit can solve.

- Keeping employees safe from injury when they access panels and equipment
- Safely using equipment with a single source of incoming power
- Operating equipment with a high risk associated with access
- Working with a power source in a remote or difficult to access location

Identify the impacts of these business problems

- Decreased productivity due to employee injury or inefficient processes
- Decreased revenue due to regulatory fines, employee injury, or productivity losses

Identify questions salespeople should ask during discovery conversations to determine whether prospects have any of the types of business problems Panduit can solve.

- Are you using any voltage indication method or equipment?
- How often to you access your equipment? (the more times they access the higher the value of the product)

VeriSafe Absence of Voltage Tester



Key Features and Differentiators

- Only product in the market that allows a worker to check the absence of voltage without opening the enclosure
- Only absence of voltage tester in the market with a UL listing
- Only automatic absence of voltage tester in the market
- UL Listed and Safety Rated: ensures compliancy with safety regulations



Additional Assets

Contacts	Collateral
<p>N/A Tech Support techsupport@panduit.com</p> <p>Hank Scott Sales Enablement Hank.Scott@panduit.com</p>	<p>SFCB06--WW-ENG (VeriSafe Product Bulletin)</p>

Jack E. Caveney Innovation Center Research and Development



*A Customer Visit to the
Innovation Center Should:*

- Shorten The Selling Cycle
- Cultivate an Opportunity

6200 W. 175th Street, Tinley Park, IL. 60477

"The labs in our complex include a copper transmissions lab, an optics lab, an anechoic chamber, a data center thermal lab, and an industrial automation lab, that is probably the most hands-on space where we visualize, test and architect converged solutions designed to benefit IT migration onto the factory floor... Hosting contractors and system integrators, along with our partners like Cisco and Rockwell helps us solve real-world challenges encountered in a variety of industrial environments."
–Excerpt from 2015 Panduit Press Release

Activity: Pan-Facts

Not every customer will be involved in an opportunity that qualifies for a visit to the Innovation Center. However, you can bring the experience to them by explaining the benefits of Research and Development. We've listed some Pan-Facts below to get you started. Add on any more you hear throughout the tour you think your customers may find interesting.

- Panduit holds more than 900 patents.
- Panduit has one of the most sophisticated fiber labs in the world.
- Many of Panduit employees sit on the review panels that determine industry standards for new products.
- Panduit's Tinley Park headquarters is a LEED Gold Certified building.

Vocabulary and Acronyms

For use as a quick reference guide

Quick-Build Harness Board System

Harness Board: Templates to lay out wire harnesses for white goods, automobiles, and other devices dependent upon electrical wiring

Wire Harness: Pre-fabricated collection of wires in a product (washing machine, kitchen appliances, automobiles, etc.)

Stainless Steel

MLT: Metal Locking Tie (Ball Locking Feature)

UL Listing: UL Listing means that UL has tested representative samples of the product and determined that it meets UL's requirements - Requirements are based primarily on UL's published and nationally recognized Standards for Safety

ABS: American Bureau of Shipping

DNV: An international accredited certification body

BV: Bureau Veritas-an international certification body

Wiring Duct

PVC: Polyvinyl Chloride- Most of our wiring duct is made from PVC - Used for most applications up to a UL recognized use temp of 122° (50°C)

PPO: Panduit has a halogen-free wire duct line that is used for high-temperature applications up to a UL recognized use temp of 203° (95°C) - Made from a modified Polyphenylene Oxide or (modified PPO)

UL Recognition: All Panduit wiring duct is UL recognized under UL 1565, "positioning devices" - Panduit duct has an UL 94 flammability rating of V-0

UL 508A: The standard for Industrial Control Panels - Sometimes a control panel shop will refer to themselves as a "UL Shop" - This means meaning they follow the UL508A standard

Automated Tooling (Reel Smart and PAT 4.0)

OEM: Original Equipment Manufacturer

Downtime: An interval during which a machine is not productive, as during repair, malfunction, maintenance

Efficiency: The ratio of the work done or energy developed by a machine, engine, etc., to the energy supplied to it, usually expressed as a percentage

Conductor: Copper wire either solid or stranded - Wire could be bare (BC) or tinned (TC)

Bare Copper: Copper wire that does not have a coating

Tinned Copper: Copper wire that is coated with tin to help with corrosion as well as good connection point for electrical soldering

Insulation: A coating applied to a conductor used as a protective layer

AWG: American Wire Gauge

MTW: Machine Tool Wire

UL: (Underwriter's Laboratories) Testing approval agency who certifies products for safety. UL's headquarters are in the US, but are relevant globally

CSA: (Canadian Standards Authority) Testing approval agency who certifies products for safety in Canada mostly

AWM Style: (Appliance Wiring Material Style) Specialized UL wire type that is designated for a certain application. Cables are marked with AWM Styles and are utilized mostly in OEM applications

Labeling and Computer Printables

TDP: Thermal Desktop Printer (Panduit desktop printers)

LS: Labeling Systems (Panduit hand-held printers)

TT: Thermal Transfer

L/IJ: Laser/Ink Jet

DPI: Dots Per Inch (for print resolution)

IPS: Inches per second (for print speed)

CAD: Computer Aided Design

TIA/EIA: Telecommunications Industry Association/Electronic Industries Alliance

Thermal Transfer: The type of printing that Panduit hand-held and desktop printers use

Label Media: The labels that are printed on

Ribbon Media: The ribbon that is used for printing

PC Connectivity: The ability to connect a printer to a computer

USB, Ethernet, Parallel, Serial: The different types of connection options for a desktop printer

[Abrasion Protection](#)

PET: Polyethylene Terephthalate - The primary material used for braided sleeving

PET FR: Flame Retardant Polyethylene Terephthalate - Flame retardant material used for braided sleeving

PTFE or TFE: Polytetrafluoroethylene (best known as Teflon) - A fluoropolymer material used in Panduit HSTTT heat shrink products

UL 94: Flammability standard that classifies plastics according to how they burn in various orientations and thicknesses; common material classifications for Panduit products include: HB, V-2, V-1, V-0

MIL-SPEC: A United States defense standard, often called a military standard or military specification (you may also see this written as MIL-STD)

ASTM: American Society for Testing and Materials - An international standards organization that develops and publishes technical standards for a wide range of materials

DIN: Deutsches Institut für Normung e. V. (German Institute for Standardization) develops norms and standards in industry, technology, science and government, as well as the public domain

[Cable Accessories](#)

Rubber Based Adhesive: General Purpose works to 120 degrees F

Acrylic Adhesive: Meant for High Temp or Outdoor works to 180 degrees F

VHB Adhesive: Very High Bond acrylic adhesive of a higher performance bond - Used on airplane panels

[Industrial Safety Solutions](#)

LOTO: Lockout/Tagout

OSHA: Occupational Safety and Health Administration: Provides safety requirements to employers to follow

NFPA70E: (National Fire Protection Association) Provides the details on how to comply with OSHA requirements

Terminals and Power Connectors

AWG: American Wire Gage - Used to specify wire size

Kcmil: One thousand circular mils – Used to specify wire size

Controlled-Cycle: Tool mechanism – Controls crimp cycle

Code Conductor: Class B and Class C strand wire described in the NEC Code

NEC: National Electric Code

UL: Underwriters Laboratories, Inc. – Safety testing organization in the U.S.

CSA: Canadian Standards Association – Safety testing organization in the U.S.

IEEE: Institute of Electrical and Electronic Engineers – Test Standard

NEBS: Network Equipment Building Systems – Test standard organization

ABS: American Bureau of Shipping – Test agency for the marine industry

Flexible Strand Conductor: Copper conductor made of fine strands of wire for greater flexibility – Known by ASTM classifications G, H, I, K and M

DLO: Diesel Locomotive Flex Cable – Cable developed by the rail industry commonly used in industrial applications

AL9CU: Dual Rated Connector – Aluminum connector rated for use with copper or aluminum conductor with a temperature rating of 90 C

Die Index Number: Number imprinted on connector and crimp die for matching crimp die to connector used – crimp dies emboss number in connector during crimping for inspection purposes

Dieless Crimp Tool: Crimp tool that incorporates an indenter device to crimp electrical connector – does not use crimp dies

Wire Range-Taking: Connectors that can terminate a range of wire sizes in a single connector

35 KV: 35,000 volts – Voltage rating given to compression connectors by UL/CSA

Hydroscopic: Material prone to absorbing moisture- Nylon insulation used with terminals, splices and disconnects

BlackFin Installation Tools

CS C22.2 No 60745-1: Common CSA and UL standard for Hand-Held Motor-Operated Electric Tools

ISO 12100: Specifies basic terminology, principles and a methodology for achieving safety in the design of machinery

Cable Tie Products

TEFZEL: Loose piece cable tie material – For applications requiring resistance to environmental stresses such as chemical attack, gamma radiation, ultraviolet radiation and extreme high and low temperatures

PEEK: Loose piece cable tie material- Non-conductive material ideal for high temperature applications up to 500°F

VeriSafe Absence of Voltage Tester

NFPA 70E: (National Fire Protection Association) Standard for Electrical Safety in the Workplace

Grounding and Bonding Products

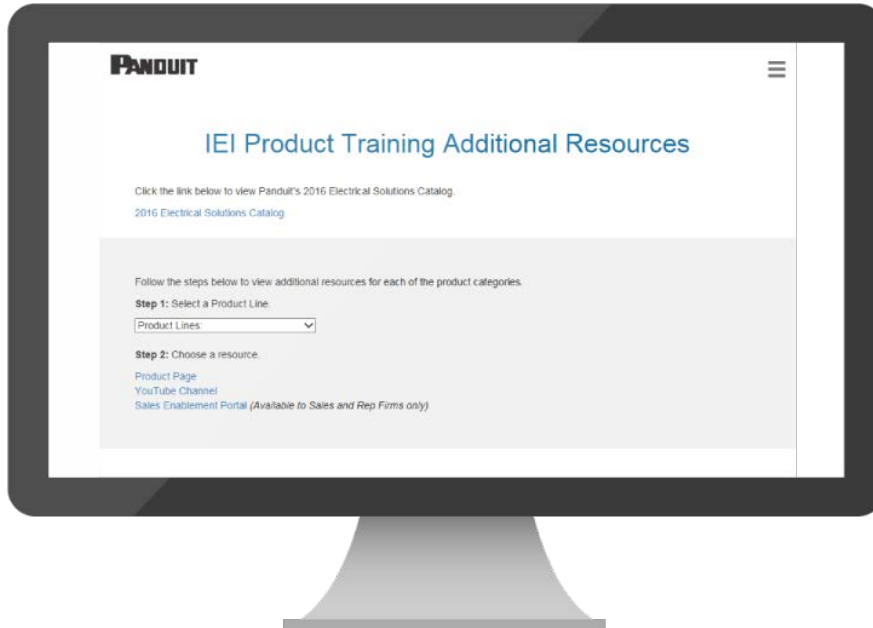
IEEE837 : Product safety standard for Grounding

UL508A: Safety System Standard (applies to end product- panel)

UL467: (Underwrites Laboratories) Product safety standard for Grounding

Additional Literature and Videos

All samples and printed literature can be ordered through Sales Support at North America.
SalesSupport@panduit.com



The IEI Product Training Additional Resources page provides links to Product Pages, YouTube Channel Videos, and portions of the Sales Enablement Portal for each IEI product category.

<https://pages.panduit.com/IEI-Additional-Resources.html>

Media Type and Description	Part Number/URL
Industrial Electrical Solutions Brochure	CPCB133--SA-ENG
Wire Harness Brochure	CPCB127-SA-ENG
Tool Solutions Catalog	ELCB19—SA-ENG
Smart Control Solutions Brochure	CPCB98-SA-ENG
Additional Video Resources	https://pages.panduit.com/IEI-Additional-Resources.html
Panduit YouTube Page (Videos)	https://www.youtube.com/user/PanduitVideos

Samples

Sample Type and Description	Part Number
Cable Tie Sample Assortment Bag	P-BAGY
Barb TY Sample Bag SS	TY-BAG
Metal Detectable Ties Sample Bag	MD86-BAG
Custom Coated Sample Bag	SP-COATED-BAG
Assortment of Stainless Steel Ties	MLT-KIT
Heat Shrink Sample Bag	HS-BAGY
Pan-Wrap Sample Bag	PAN-WRAP-BAG
Abrasion Protection Sample Bag	ABRASION-BAGY
High Bond Adhesive Sample Bag	HBAV-BAG
Accessories Sample Bag	ACC-BAG
Cable Accessories for Building and Construction Sample Kit	WA-CABC-BOX
Spiral Wrap Sample Bag	T25FCOL-BAGY
Adhesive Lined Grommet Edging Sample Bag	ADGROM-BAG
Direct Burial Grounding Sample Bag	DB-LL
Structured Ground Data Center Grounding Kit	DC-GROUND-KIT
Structured Ground Mini Rack Sample Kit	RGSMPK-1
Contract Manufacturing Sample Bag	SBAG-ED-CEM
EC&M Sample Bag	SBAG-ID-ECM
Network Identification Sample Bag	SBAG-ID-NETWORK
OEM Sample Bag	SBAG-ID-OEM
Oil and Gas Sample Bag	SBAG-ID-OIL
Transportation Sample Bag	SBAG-ID-OIL
USB Type B Blockout Devices: Removable Device Sample Bag	PSL-USBB-SS
2012 Compliant Arc Flash Product Sample Bag	ARCFLASH-SAMPLE
Facility ID Sample Bag	FACID-SAMPLE
Jack Blockout Device Sample Bag	PSL-DCJB-SS
LC Blockout Device Sample Bag	PSL-LCAB-SS
Lockout/Tagout DVD	SA-IDDV02
LOTO (Lockout Tagout) Sample Bag	LOK-BAG
LS8E Sample Sheet	LS8E-SAMPLE
Photo Luminescent Sample Sheet	GLOW-SAMPLE
Plug Lock-In Device Sample Bag	PSL-DCPLX-SS
Raised Panel Labels Sample Bag	RP-SAMPLE
SC Sample Bag	PSL-SCBD-SS
Thermal Transfer Desktop Printers Sample Sheet	TDP-SAMPLE
Turn-Tell Label Sample Bag	TURNTELL-SS

Sample Type and Description	Part Number
USB Type 'A' Blockout Device Sample Bag	PSL-USBA-SS
Power Connector Kit	PANLUG-KIT-1
Power Connector Kit-Empty Box	PANLUG-KIT-1
Power Connector Sample Bag	PC-BAG
Factory Custom Marked Tags and Ties Bag	SP-MKR-BAG
Success Depends on the Crimp Student Kit	CRIMP-TRNG-KIT
Pan-Term Sample Bag	T1-BAG
Reel Smart Continuously Molded Terminals and Ferrules	RS1-BAG
Wiring Accessories Sample Box	KP-509
Pan-Clamp Sample Bag	PAN-CLAMP-BAG
Harness Board Accessories Sample Bag	HBA-BAG
Marker Plate Sample Bag	MP-BAG
Harness Assembly Solutions Kit	WA-HARNESS-KIT
J-MOD Cable Support System Sample Box – PIA	J-MOD-BOX
J-PRO Cable Support System Sample Box- PIA	J-PRO-BOX
Automatic Reel-fed Cable Ties (on strips) plus Mounts	AT-BAG
Contour-Ty Sample Bag	CONTOUR-BAG
Dura-Ty Cable Tie Sample Bag	DURA-BAG
Network Cable Ties Sample Bag	TAK-TY-BAG
Imprint-Bag Sample Bag	IMPRINT-BAG
Hyper-V Cable Ties and Mounts	HYPER-BAG
Metal Detectable Cable Ties and Mounts	MD86-BAG
Plenum Cable Tie Sample Bag	PLENUM-BAGY
Super-Grip Cable Ties and Mounts Sample Bag	SUPER-BAG
Corner Duct Samples	CWD3LG8INWC
Corner Duct Samples	CWD4LG8INWC
Hinged Cover 2x2 Wiring Duct with Cover- Light Gray and White	H2X2SAMWC
37 mm x 37 mm NNC Sample Base and Cover- Light Gray and White	NNC37X37SAM20CM
Flexible Wiring Duct Bag	FLEX-BAG
Type G and F Bases, Type C Covers with Protective Film, and an Insert Card with Product Features and Parts Listing	GF2X2SAM8INWC
Metric Duct w/ Cover-INTGRY	MC100X100IG20CM
Metric Duct w/ Cover-INTGRY	MC75X75IG20CM
Metric Duct w/ Cover-INTGRY	MC50X50IG20CM
Metric Duct w/ Cover-INTGRY	MC25X25IG20CM
Noise Shield Sample	EMI-SAM
DIN Rail Wiring Duct Sample	DRD-SAM

Battlecards

The following pages include battlecards for IC/MRO and OEM. For additional battlecards and other resources, visit: <https://panduit.sharepoint.com/sites/seportal/Pages/home.aspx>.

Contractor Battlecard

Revision 9.0

Overview/Market Trends

- Consistent requirement for up-to-date training for diverse/expanded services
- Increasing crossover between electrical and network specialties; ~50% of electrical contractors now handle datacomm work.
- Need for products and solutions that allow them to meet developing needs
- Work site productivity relies heavily on speed and ease of installation, and timely product availability
- Having the right tool at the right time, ergonomic tooling reduces repetitive strain injuries and fatigue
- Tight timeline requirements are often enforced by financial penalties for time overage - downtime can be extremely costly.

Anixter Sales Opportunity

- Focus on tools, lugs, & printers
- Avg. sale opportunity of Panduit products per electrician is \$1500.00

Anixter Value Proposition

- Anixter is a globally recognized leader in the distribution of electrical/electronic wire and cable, networking cabling solutions, support and supply components. Anixter has unparalleled industry experience and our highly trained sales specialists are prepared to help you make informed decisions about the vast offerings available for the Industrial/Commercial marketplace. Our product offerings meet stringent engineering and manufacturing standards from the best-in-class manufacturers in the industry.
- Our Supply Chain Services provide customers with the most cost-effective solution for their needs. Our services include but not limited too cable management, reel returns, logistics, consignment and vendor manage inventory. We also offer speed pull, custom reels. Our vast global inventories allow us to provide the best service and quality for our customers in the marketplace.



PANDUIT Value Proposition

- PANDUIT solutions deliver **best-in-class quality** for maximum reliability and defect-free installations, that minimize rework and downtime.
- **Rigorous performance testing** ensures products meet and exceed industry standards, helping customers meet ever-changing compliance requirements.
- The **breadth of product and installation tools** help our customers perform maintenance and repair operations faster, easier, and more cost effectively.
- Significant investment in R&D, as well as participation in industry standards bodies, allows PANDUIT to provide innovative products engineered for optimum performance, quick and dependable installations, and improved workplace safety.



Targeted Solutions

Power connectors

UL and CSA approved crimps with both PANDUIT and specified competitor tools and dies to ensure safe, consistent, and reliable terminations. Compression connectors are tested by Telcordia and meet Network Equipment-Building Systems (NEBS) Level 3, the most stringent test requirements in the industry.



Crimp Tools

Ergonomic tooling including controlled cycle hand tools, battery operated hydraulic, and pneumatic crimping tools. Automated termination tooling for use with reel fed terminals and ferrules provides a one applicator/press system to accelerate repetitive operations, improve productivity, and reduce downtime



Structured Grounding

Meets the recently revised IEEE Std 837™-2002 performance requirements through an enhanced crimp process using patent pending technology, for maximum reliability. PAN-LUG™ Compression Connectors are the first and only to pass the NEBS Level 3 as tested by Telcordia Technologies.



Metallic & Non-Metallic Raceway

PAN-WAY Metal and Non-metallic Surface Raceway provides maximum flexibility for routing, protecting and concealing high performance copper, voice, video, fiber-optic and electrical wiring within any enterprise market.



Identification, Safety, & Lock-out/Tag-out

High quality print and industrial materials provide long-lasting identification of wiring, cabling, and terminations. Software simplifies the creation of general purpose labels for facility applications or directly from a CAD file. Hand-held printers facilitate on-demand label creation during field repairs.



Cable Ties, Installation Tools, Accessories

Comprehensive selection of cable tie styles, sizes, and materials for fastening, bundling and clamping to satisfy a broad range of applications and environments All PANDUIT cable ties are designed and manufactured to meet or exceed industry standards to deliver maximum reliability.



Purchase Pattern

Pattern	Leading Questions	Customer Challenges	Benefits
<p>Day-to-day / Discretionary</p>	<p>Q: What problems are you having today that we can assist with? Quality? Warranty? Productivity? Part reduction?</p> <p>Q: How can Anixter help take the cost out of your business?</p>	<ul style="list-style-type: none"> • Varied requirements, both electrical and network components required • Requirement to fulfill emergency requirements; on-demand product availability for pickup. • Dealing with too many suppliers • Distribution being a “me too” player 	<ul style="list-style-type: none"> • Best in class inventory support; Anixter carries extensive line of Panduit targeted solution products • Anixter carries both Electrical (ECS) and network (WCS) product lines • Consolidated pricing • Pricing being held over a period of time • Schedule of deliveries • Volume incentives • Multi-site roll-out
<p>Project</p>	<p>Q: What is the next new program/project? When will it start? What are you looking to do differently?</p> <p>Q: Can Anixter’s engineering services be helpful to your business?</p>	<ul style="list-style-type: none"> • Depth of inventory - Can they quickly get sufficient quantity of product to satisfy project requirements. • Tooling challenges; requirement to carry product-tooling match to maintain CSA certification on completed jobs. • Safety • Understanding of cable specification with certain applications • Dealing with damaged material 	<ul style="list-style-type: none"> • Anixter Ready! Services • Best in class inventory support; Anixter carries extensive line of Panduit targeted solution products • Panduit Lugs hold CSA approval even when installed by select competitor tooling. • Certified engineering • Help with Canadian standards • Direction with calculations and design

Industrial MRO & Harsh Environment

Revision 9.0

Metals & Mining Market Facts

- Globalization: Since 2002 industry has gone international, easier to target firms on a global basis
- Long-term play: By 2012, global metals market forecast to increase in value 116.3% over 2007, should result in more selling opportunities over long-term
- Weak demand: Sweeping production cuts over past 12 months could lead to slowdown on future plant buildouts/upgrades
- Pricing weakness: Metals pricing power is weakening globally, opportunities exist to more tightly partner with leading firms and supply broader/deeper solutions
- Harsh environments include one or more of the following environmental stresses: mechanical stress, shock & vibration, temperature extremes, radiation, outdoor weathering, chemical attack, salt spray

Battlecard applicable to other environments including: oil & gas, shipbuilding, infrastructure, and energy.

Anixter Sales Opportunity

- Avg. sale opportunity of Panduit products per Technician is \$2000.00
- Medium to large MRO facility would range from \$30K - \$50K
- Products to focus on Printers, Stainless Steel, Safety Signage

Anixter Value Proposition

- In a variety of underground and surface mining operations, the combination of equipment stresses, limited spaces and environmental conditions can pose serious interruptions to the mining process. Without the highest quality products, a failure can put safety and production of a mine in jeopardy. Anixter recognizes these potential problems and provides solutions to the mine to remove the uncertainty. Anixter provides best in quality of products and technical services to make sure our customers are comfortable in the product and services they are receiving by dealing with qualified manufacturers of mining products.
- Our customized Supply Chain Services provide customers with effective scalable and repeatable solutions to eliminate costs, stay competitive in the marketplace and enhance productivity through deployment and replenishment processes. Anixter can also provide engineering and assistance with product specifications to suit your needs.



PANDUIT Value Proposition

- PANDUIT solutions deliver **best-in-class quality** for maximum reliability and defect-free installations, that minimize rework and downtime.
- **Rigorous performance testing** ensures products meet and exceed industry standards, helping customers meet ever-changing compliance requirements.
- The **breadth of product and installation tools** help our customers perform maintenance and repair operations faster, easier, and more cost effectively.
- Significant investment in R&D, as well as participation in industry standards bodies, allows PANDUIT to provide innovative products engineered for optimum performance, quick and dependable installations, and improved workplace safety.



Targeted Solutions

Stainless Steel

Fully rounded smooth edges that promote installer safety and assure bundle protection. Patented self-locking cable tie is 3 times faster to install than conventional strapping. Controlled-tension installation tools provide faster, tighter, and more reliable installations. Permanent ID solutions for legibility in harsh environments



LOTO and Safety Signage

Aid in compliance with OSHA 1910.147, NEC, NFPA and other safety standards to provide a safe working environment. Durable pre-printed tags, signs, and warning labels for improved workplace safety. Create custom signs, tags, and labels with PANDUIT software and printers.



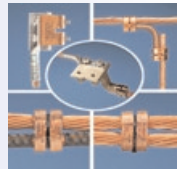
Industrial Networking

Reliable, high performance network cabling infrastructure and enclosures. IP and NEMA rated solutions to withstand harsh factory conditions. Proven interoperability with industrial automation and industrial Ethernet applications. Copper (Category 5e and 6 in UTP and STP) and fiber optic (50µm and 62.5µm) network connectivity options



Power Connectors and Grounding

Compression connectors provide UL and CSA approved crimps with both PANDUIT and specified competitor tools and dies. Compression connectors are tested by Telcordia and meet NEBS Level 3 test requirements. PAN-LUG™ products include copper and aluminum compression and mechanical connectors for use with conductor sizes #14 AWG – 1000 kcmil.



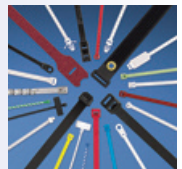
Crimp Tools

Ergonomic tooling including controlled cycle hand tools, battery operated hydraulic, and pneumatic crimping tools. Automated termination tooling for use with reel fed terminals and ferrules provides a one applicator/press system to accelerate repetitive operations, improve productivity, and reduce downtime.



Cable Ties & Accessories

Comprehensive selection of cable tie styles, sizes, and materials for fastening, bundling, clamping and identifying to satisfy a broad range of applications and environments All PANDUIT cable ties are designed and manufactured to meet or exceed industry standards to deliver maximum reliability.



Fast Fact

The maintenance, repair and overhaul (MRO) of aircraft and aircraft systems and components is a Canadian strength. There are more than 1,100 certified Aircraft Maintenance Organizations (AMO) in Canada, these firms generate more than \$3 billion in annual revenues and employ some 17,000 highly skilled workers.








Maintenance, Repair and Operations (MRO) Overview

Summary	MRO Top-of-Mind Issues	Solution Benefits
<ul style="list-style-type: none"> Maintenance, Repair and Operations (MRO) defined: generally refers to materials and services that do not go directly into the end product but are used by the plant to maintain, repair or operate the machinery and processes used in the actual manufacturing activity. This would include repair or unscheduled/scheduled/preventative maintenance. 	<ul style="list-style-type: none"> Improve Productivity and Performance Increase Reliability in Harsh Environments Create a Safer Work Environment Comply with Industry Standards Eliminate Repetitive Repair Calls Maximize Facility Uptime Reduce Inventory Costs 	<ul style="list-style-type: none"> Maximizing facility uptime while containing maintenance and repair costs is a big challenge facing industrial and manufacturing facilities. Electrical and control systems repair, reconfiguration, and preventative maintenance comprise a substantial portion of the total facility spend. PANDUIT solutions deliver best-in-class quality for maximum reliability and defect-free installations, minimizing rework and reducing downtime. The breadth of product lines and materials selection provides extensive application and environment-specific solutions for faster, easier, and more cost-effective maintenance and repair operations (MRO).

Customer Challenges

Target Audience	Leading Questions	Customer Challenges	Benefits
<p>Production Facility / Plant Floor</p> <ul style="list-style-type: none"> Project Manager Operations Manager Engineering Manager 	<p>Q: Are you retooling any factories or mfg. processes during the slowdown?</p> <p>Q: Can your bandwidth meet the needs of more users needing real time information?</p>	<ul style="list-style-type: none"> Excess capacity Hazardous environment, stringent safety regulations Maximizing uptime and process efficiency 	<ul style="list-style-type: none"> Make mfg. process more efficient and reliable Safety and LOTO solutions; protect and meet regulations Most reliable physical foundation for industrial network
<p>Corporate HQ / Regional Offices</p> <ul style="list-style-type: none"> Data Center Manager IT Manager Facilities Manager 	<p>Q: With strict safety standards at mines and factory floors, how do you protect workers?</p> <p>Q: With firms being more global, how have your network security needs changed?</p>	<ul style="list-style-type: none"> Project constraints: reduced timelines, fewer resources, tighter budgets Power and cooling capacity outstripped by server and storage hot spots Data centre real estate limitations 	<ul style="list-style-type: none"> Tooling save installation time & manpower while training improves productivity Cabinet / rack design - optimize thermal management by improved air flow Reference architecture with key partners

Bundling: Panduit Loose Piece Cable Ties and Stainless Steel Ties

<p>“What type of cable ties do you need?”</p>	<p>Designed for use in numerous applications to meet a variety of needs in the OEM, MRO, and construction markets</p>		<p>Approved for the demanding MRO and construction requirements as typified in the oil and gas markets</p>		<p>delivers strength, long life and resistance to chemicals, vibrations, radiation, weathering and extreme temperatures</p>		<p>The Panduit® Pan-Steel® Stainless Steel Strapping is the ultimate solution for strapping applications.</p>	
								
	<p>Plastic One Piece</p>		<p>Metal Barb</p>		<p>Pan-Steel Metal Locking Ties</p>		<p>Pan Steel Metal Strapping</p>	
<p>User Benefits</p>	<ul style="list-style-type: none"> • Largest selection of styles, materials, and sizes • One-piece construction for consistent performance and reliability • Lowest threading force of any one-piece cable tie in the industry 		<ul style="list-style-type: none"> • Stainless steel lock barb provides consistent performance, reliability, and infinite adjustability through entire bundle range applications • Dome-top head features unique patented design with smooth, round edges 		<ul style="list-style-type: none"> • Self-locking head design speeds installation and locks into place at any length along the tie body • Can be used in a wide range of indoor, outdoor, and underground (including direct burial applications) • Smooth surfaces and rounded edges assures cable protection and worker safety 		<ul style="list-style-type: none"> • The buckle design and tension controlled installation tool offer a quick and safe installation for all harsh environments • Available in four widths (9.5mm), 1/2" (12.7mm) 5/8" (15.9mm) and 3/4" (19.1mm) in base 201 (3/4" width only), 304, or 316 stainless steel • protection rating up to 156kA peak current 	
<p>PART #S</p>	<p>PANDUIT PART #S</p> <ul style="list-style-type: none"> • PLC2S-S10-C • PLT1M-C • PLT2S-C • PLT3S-C • PLT4S-C • PLT4H-L • PRT3S-C 	<p>DISTRIBUTION PART #S</p>	<p>PANDUIT PART #S</p> <ul style="list-style-type: none"> • BC2S-S10-C • BT1M-C • BT2S-C • BT3S-C0 • BT4S-C • BT4LH-L 	<p>DISTRIBUTION PART #S</p>	<p>PANDUIT PART #S</p> <ul style="list-style-type: none"> • MLT2S-CP • MLTC4H-LP316 • MLTFC4S-CP316 • MLT4WH-LP 	<p>DISTRIBUTION PART #S</p>	<p>PANDUIT PART #S</p> <ul style="list-style-type: none"> • MS2W38T15-L6 • MSC2W38T15-L6 	<p>DISTRIBUTION PART #S</p>
<p>User Benefits</p>	<p>These industry-leading ergonomic tools are designed to reduce operator fatigue, promote worker safety, and improve productivity, optimizing bundling and fastening in industrial and harsh environments.</p>							
								
<p>Tools</p>	<p>PANDUIT PART #S</p> <ul style="list-style-type: none"> • GS2B • GTS-E • GS4H • GTH-E 	<p>DISTRIBUTION PART #S</p>	<p>PANDUIT PART #S</p> <ul style="list-style-type: none"> • GSMT 	<p>DISTRIBUTION PART #S</p>	<p>PANDUIT PART #S</p> <ul style="list-style-type: none"> • BT2HT 	<p>DISTRIBUTION PART #S</p>		

Reference Materials

- [Industrial Electrical Solutions Brochure](#)
- [Cable Tie Selection Guide](#)
- [Pan Steel Application Guide](#)

Panduit® BlackFin™ Tool Replacement/Expansion for Construction and MRO

Panduit's BlackFin™ Battery Powered Hydraulic Tools

New line of battery powered tooling that offers revolutionary technology and agency approvals not seen by competitors in the market. The tools have also been offered with more compatible options for global use.

Panduit's Other New Tools and Accessories

Recently expanded offering with good revenue potential. Ask for these whenever you talk about wire termination or grounding. Most jobs use either battery or manual operated tooling to apply Power/Grounding consumables.



In-line series featuring Die-type, Die-less and CCP models



New Pistol Grip models



New CCP Cut-Crimp-Punch Tools



New Hydraulic and Regular manual tools



New Hydraulic crimp heads including a CCP model



New battery and cordless adapter options allow for use in other countries without outlet plug adapters

Expanded Offering –we have nearly doubled our tool and accessory offering— provides a more diverse option of tools with enhanced capabilities for termination, punching, or cutting needs. Each tool model can be sold bare or with 2 batteries and a charger relative to type A, F/C, G, and I style outlet plugs.

The expansion of compression tools into newer and more versatile models implies the need for more accessory pieces such as Punch drive adapters, Cutter Blades, and new Aluminum compression dies. These accessories also help support the new hydraulic and regular manual tools and crimp heads.

All new battery powered tools meet OSHA mandated electrical and mechanical product safety requirements (UL 60745-1 and CSA No. 60745-1). The products also meet the EU machinery and EMC directive certified to IEC/EN 62841-1, meet ISO 12100, and are tested to ENV 61000 series.

The new battery tools make use of new battery chargers and AC adapters. The tools can now be charged anywhere in the world or can be plugged directly into a power source with A, F/C, G, and I style outlet plugs. The new Makita batteries are 18 volt direct current, 3 amp-hour, and can be fully charged in 22 minutes.

The new tools also include the new FINS System software that allows for an evaluation of tool and worker performance through the software that can be downloaded from the Panduit website.

Be sure to note that each new battery tool that utilizes the new FINS system requires the CT-USB in order to read the Infra-red optical interface.

The new line is complimented by Global Service Centers responsible for 41 countries, in order to ensure customer satisfaction with tool repairs.

Panduit® BlackFin™ Tool Replacement/Expansion

The Competition for Panduit Compression Grounding Connectors



Left: Burndy In-line model. Not cULUS certified, and recharges slower than new Panduit models.



Left: The New FINS system allows for full diagnostics and record keeping of crimps and users of each tool.



With these new selection of tools, **Panduit will be the first to the market with OSHA compliant battery powered tools.** The new FINS system also provides an edge for winning business with more technologically inclined and safety oriented companies or private contractors. The new battery/adaptor options allows for the opening of new channels to distributors **outside of the US.** These are also supported by **Global Service Centers.** The new variety of tools with **enhanced capabilities** also allows for increased business for those **preferential to certain model types.**

All New BlackFin Additions

With the addition and replacement of tool parts and accessories, our Power Connector and Terminal Line have filled most gaps that were from our competitors. The new tools are positioned very well to be competitive with Burndy and TnB due to the following key areas of strength. You can emphasize our strengths by using the competitive cross reference ([BlackFin Competitor Tool Cross Rev 5.xlsx](#)) that even highlights the transition of the older Panduit tools.

Some key areas of Panduit BlackFin tooling strengths are shown below.



New models cut down on the competitive gap



Meets a wide variety of safety standards (OSHA compliant)



New FINS system helps manage tools



New adapters make Global use more convenient

Finally, try to increase the value we bring to the contractor by leveraging the unique new features of our tools. When combined with new dies and Terminal tools, the value prop for the BlackFin additions becomes, "Panduit's new extended tool line allows for a global use of advanced tooling that meets a variety of new safety standards, while also providing a means of diagnostically analyzing the tools performance to increase tool lifespan and manage users."

Panduit® BlackFin™ Tool Replacement/Expansion

Things you may hear or think:

“We need to improve jobsite safety.”

Ask question 1.

“We require the most reliable tools and accessories for our applications.”

Ask questions 1 and 3.

“What differentiates these tools from others (Burndy)?”

Ask questions 1, 2, and 3.

“I have particular needs for the task I am trying to accomplish”

Ask questions 2 and 4.

“I have particular electrical requirements for my location”

Ask question 5.

“ ”

Ask question .

“ ”

Ask questions 2, 4, and 5.

?#	What to ask given what you hear	How Panduit’s new tools can help get the job done	Collateral to help the conversation
Start the conversation with the project manager or estimator. These people inherently understand the common requirements asked of power connector tooling and can help you with the purchasing agent later in the sale.			
1	“Would you be interested in hearing about our new tooling line that was developed with safety and management in mind?”	The new BlackFin battery powered tools all feature the new FINS system and meet: <ul style="list-style-type: none"> • OSHA safety requirements • UL and CSA No. 60745-1 • IEC/EN 62841-1 	White Paper, PPT, Bulletin or Brochure?
2	“Did you know that Panduit now has a broad offering of Die-type, Die-less, and Universal tools?”	Panduit added dozens of new tools and accessories to fit the broad range of needs that power connector tooling often faces.	“
3	“Would you be interested in hearing about the new FINS diagnostic and management systems?”	The FINS system allows for better project management by reporting tool and user performance during any given time.	“
Do we need another question here or should we include a prompt for moving the conversation on. EX. Grounding ppt originally had a topic to discuss engineering specs at this stage.			
4	“Would you like to hear about our new tool accessory options that may be able to help with your specific needs?”	The new CCP tools are designed to cut, crimp, and punch holes; each of which is accomplished through a variety of adapters, blades, and dies.	“
5	“Are you based outside of the US? If so, would you like to hear about our new battery charger and adapter options?”	Panduit tools can be bundled with batteries and adapters that meet the correct shapes and output of outlets all around the world.	“

Panduit® BlackFin™ Tool Replacement/Expansion

Description	Name	How to Find It
Battle Card – updated versions of this document	Sales Enablement only	Type “StructuredGround Grounding Connector Battle Card” in the search field
Distributor suggested stock list	Sales Enablement only	Type “Distributor Suggested Stock Lists” in the search field

BlackFin Battery Powered Tools System Collateral

StructuredGround™ Direct Burial Compression Grounding System Product Bulletin	GRCB06-SA-ENG	Order from Customer Service or download from www.panduit.com (type “GRCB06-SA-ENG” in the search field)
Crimp cross-section samples	DB-LL	Order from Customer Service
Compression grounding white paper (IEEE Std. 837-2002)	WW-CPWP-22	Download from www.panduit.com (type “WW-CPWP-22” in the search field)
High-resolution Panduit vs. exothermic welding video	SA-PCCD06	Order from Customer Service
Low-resolution Panduit vs. exothermic welding video	Web version	Download from www.panduit.com (type “Panduit Compression Direct Burial Grounding System vs. Exothermic” in the search field)
Compression grounding installation training	Web version	www.youtube.com . Type “panduit grounding” in the search field. Select the one named “Training video: Panduit Direct Burial Grounding System”

New Tool and Accessories System Collateral

StructuredGround™ Mechanical Connectors Product Bulletin	GRCB02--SA-ENG	Order from Customer Service or download from www.panduit.com (type “mechanical grounding” in the search field)
Mechanical Grounding Connectors Customer Presentation	Sales Enablement only	Type “Mechanical Grounding Connectors Customer Presentation” in the search field
Mechanical grounding connector cross reference vs. Burndy, T&B, and IlSCO for contractors and distributors	Sales Enablement only	Type “Mechanical StructuredGround Connector Cross Reference” in the search field
StructuredGround™ Access Floor Grounding Clamps	SA-GRSP11	Order from Customer Service or download from www.panduit.com (type “SA-GRSP11” in the search field)

Panduit Electric Heat Trace Installation Solution Battlecard

Confidential – Internal Use Only

Background

What is it?

- Electric heat tracing is a system used to maintain temperature of fluids in pipes and vessels
- Trace heating takes the form of an electric heating element in physical contact with the length of a pipe then insulated

Who uses it?

- Oil & Gas facilities
 - Upstream – extraction/wells
 - Midstream – pipelines
 - Downstream - refineries
- Chemical processing plants
- Power generation, water treatment and food / beverage

Why is it needed?

- In industrial applications, electric heat trace is used to maintain a minimum temperature for flow (viscosity) or process control
- Without it, materials could become thick and viscous and would not flow

Who supplies it?

- Pentair (PNR), Thermon (THR), Chromolox, Nelson Heat Trace, and more

Value Proposition

Safety

- No punctures/lacerations
Rounded edges and recessed cutoff with no exposed hazards

Value Construct

High Availability

Return on Investment

Easy Integration

Market Problem

Safety

- Cut tie wire is a potential puncture hazard
- Tire wire has a residual coating that can cause blood poisoning
- Banding is a cut hazard
- Pulling and twisting on tie wire can result Repetitive Strain Injury (RSI) or carpal Tunnel Syndrome (CTS)

Speed

- 50% of the cost of installing heat trace is labor
- Team of 2 electricians install 5 feet/hr (in field) to 10 feet/hr (in mod yard)

Reliability

- Tensioning with linesman pliers is highly dependent on skill and experience
- Over tensioning of tie wire can damage mineral insulated heat trace
- Typically 10% of damage during inspection, 10% at commissioning and 80% online and operating

Speed

- Installation 2 to 3 times faster
- 33% total cost savings

Who to Talk to

Market Segments:

- EPCs
- Facility Operator - Plant or Operations Manager
- Electrical Contractors
- Heat Trace Manufacturers – Pentair, Thermon, etc.

Things You Should Know

- No sharp edges, ergonomically designed installation tools reduce risk of injury during installation (RSI, CTS, lacerations, etc.)
- Heat Trace Wave Ty installation faster than conventional tie wire (2 – 3 times)
- Heat Trace Wavy Ty does not damage mineral insulated heat trace making installation more reliable
- Low cost tool available shortly (3 – 6 months)

Reliability

- No damage to mineral insulated heat trace
- Consistent thermal coupling to pipe
- Allows for thermal expansion relative to heat trace

Panduit Electric Heat Trace Installation Solution Battlecard

Confidential – Internal Use Only

Questions

Electrical Contractors

- Do you install electrical heat trace? What is the installation rate for a work crew? (ft/hr)
- Do you use tie wire to install mineral insulated heat trace? Banding?
 - If so, what issues do you encounter when installing heat trace?
 - Safety?
 - Speed of installation?
 - Reliability after installation?
- What is the electric heat trace used for?
 - Temperature maintenance/viscosity control?
 - Freeze protection?

EPCs

- What kinds of safety issues result from the installation of electric heat trace?
- Do you use tie wire to install mineral insulated heat trace? Banding?
 - If so, what issues do you encounter when installing heat trace?
 - Safety?
 - Speed of installation?
 - Reliability after installation?
- What is the total cost of installation for mineral insulated heat trace?
- What is my risk of downtime due to damaged heat trace?

Facility Operators

- Do you use tie wire to install mineral insulated heat trace? Banding?
 - If so, what issues do you encounter when installing heat trace?
 - Safety?
 - Speed of installation?
 - Reliability after installation?
- What is the total cost of installation for mineral insulated heat trace?
- How long does it take a typical work crew to install electrical heat trace?
- What is my risk of downtime due to damaged heat trace?

Reasons for Panduit Solution

Improved Safety

- Reduced risk of RSI/CTS due to no pulling and twisting motion
- No punctures or lacerations

Speed/Total Cost of Installation

- Installation 2 to 3 times faster
- Total installed cost less than tie wire

Reliability

- No damage to mineral insulated heat trace
- Consistent thermal coupling to pipe
- Allows for thermal expansion of pipe relative to heat trace

Handling Objections

- Price – It's too expensive
 - Material cost is higher than tie wire however installation time is 2 to 3 times faster than tie wire making the installed solution less than that of tie wire
- Safety – Prevents punctures
 - Lower risk of RSI/CTS injuries due to ergonomically designed hand tools
 - Rounded edges and recessed cutoff with no exposed edges
- Unproven – I've used tie wire for years
 - Panduit heat trace solution has been tested for installation speed, safety and reliability

Reference Materials

The following materials can be found on the Sales Enablement Portal

- Video (3-minute, customer-facing)
- [Distributor Presentation](#)
- [Part Drawing](#)
- Product Bulletin ([SSCB28--SA-ENG](#))
- White Paper ([CPAT21--SA-ENG](#))

PANDUIT[®]

VALUE PROPOSITION

Panduit is committed to delivering innovative end-to-end solutions for electrical and networking installations that exceed industry demands. Our comprehensive range of products and installation tools meet the daily challenges of our Contractor Partners head on, and surpass their expectations in the most demanding applications and environments. This consistent performance assures our partners of their ability to provide solutions to their customers' toughest business challenges.

Comprehensive Portfolio

Panduit provides innovative electrical and network solutions and products that exceed general performance requirements to maximize the long-term viability of a facility's infrastructure.

Market Focused Solutions

Whether the solution is for electrical or networking systems, Panduit offers a unique understanding of the complexities of infrastructure construction. We continually offer new application systems focused around meeting the ever-changing installation and maintenance needs of our customers.

Unmatched Expertise

Panduit continually invests in resources to solve our customers' greatest business and technology challenges. Our network of sales, technical support, distribution, and manufacturing teams makes Panduit solutions readily accessible to help our customers meet their project deadlines.

INDUSTRY TRENDS

- **Design Build** integrates engineering and construction. Once a model for only the largest companies, *Design Build* is now becoming more important for small to mid-size companies.
- **Team Construct** is similar to Design Build, but the electrical contractor is not the "engineer of record". They employ engineers that work with an engineering firm to primarily ensure local compliance. This gives the contractor earlier vision on the project which helps with planning.
- **Specialization** – The requirements of increasing scale and costs on projects, contracts and subcontracts are more likely to be awarded to companies with expertise in a particular specialty.
- **Joint Ventures** – On-time completion has escalated in importance. Costs for late completion, including penalties, rise disproportionately to actual construction costs. The larger scale and complexity of projects leads to more joint ventures among construction companies.
- **Guaranteed Maximum Price Contracts** limit the owner's exposure and put a premium on a construction company's ability to accurately estimate and manage project costs. Project management skills become more important relative to actual implementation.

BUYER: PROCUREMENT – Conversation Starter

MOTIVATORS: INCENTIVIZED TO MEET COST TARGETS, TRANSACTIONAL EFFICIENCY, INTERNAL CUSTOMER SATISFACTION, SUPPLIER CONSOLIDATION TO LEVERAGE SPEND

- What "construction model" does your firm generally follow? (Design Build, Standard Design/Bid/Build) Can you define the process?
- With regard to the "Physical Infrastructure" Build, are you involved with the Network products, as well as the Electrical? And are they ever purchased on the same BOM?
- Are you incentivized to meet cost targets and if so how would your decision change if products or solutions could help meet these targets?
- What is the process for adding a new manufacturer and/or part to the specification?
- How are items purchased? (All at once/ in stages with job/ last minute from whatever is in stock locally)

BUYER/USER: ESTIMATOR - Conversation Starter

MOTIVATORS: BID WIN, PROFITABILITY

- What type of product information do you look for or need from your suppliers to make your job easier?
- How are installation tools purchased? (Determines if client considers system solution approach)
- How do you estimate cost for "consumables" on a job?
- When does Panduit need to get involved for inclusion on the specification?
- Do you utilize tools such as *Trade Services* in the estimation process?
- Are these products generally put out for quote, or chosen by preferred vendor?

USER: PROJECT MANAGER - Conversation Starter

MOTIVATORS: MEETING BUDGET TARGETS, ON-TIME COMPLETION, MINIMAL LOST TIME INJURIES

- What types of products have the largest impact on your business and why?
- Is product ALWAYS there when you need it on the jobsite?
- Are there dramatic differences in the product, applications or installation methods based on the job type? (Industrial Manufacturing, Wastewater Facility, Petro-Chem, etc). Please explain
- Are there any specific standards to which products used must comply? (UL, CSA, IEC, CE, RoHS, BN, etc)
- Is the Network (Data / Comm) Infrastructure installed by the same people that install the Electrical & Mechanical Infrastructure? If not, who does? Challenges?

INDUSTRY PAIN POINT	PANDUIT SOLUTION
<ul style="list-style-type: none"> • Cost Overruns – Some of the largest contractors have up to one-third of their projects based on fixed price contracts, so they bear the risk for cost overruns. 	<ul style="list-style-type: none"> ✓ Panduit Product training eliminates product surprises that cause delays, and globally-available technical support solves problems immediately anywhere in the world.
<ul style="list-style-type: none"> • Specifications include the explicit description of material characteristics and where they are to be used. Most specifications name acceptable manufacturers and products while also specifying certain standards and design criteria that must be met. 	<ul style="list-style-type: none"> ✓ Panduit products have relevant UL, CSA, IEEE, ABS, DNV, and US Military Specifications.
<ul style="list-style-type: none"> • Product Availability Supply chains are leaner, requiring contractors to inventory goods or accept “just in time” standards. 	<ul style="list-style-type: none"> ✓ Panduit uses a global distribution network to ensure product availability anywhere in the world, and it backs those organizations up with regional warehouses.
<ul style="list-style-type: none"> • Safety / Liability is critical to the construction industry, which continues to have the largest share of fatalities in the United States. Safe work practices limit exposure to risk by protecting employees from injuries. 	<ul style="list-style-type: none"> ✓ Panduit offers the Lockout/Tagout line and other products designed with safety in mind (no sharp edges on cable ties, stainless products. Compression grounding as an alternative to exothermic welding).

OFFERING	CONSTRUCTION PHASE		VALUE PROPOSITION	TARGET PERSONA
Direct Burial Grounding	<ul style="list-style-type: none"> • Project Definition • Design 	<ul style="list-style-type: none"> • Procurement • Construction 	<ol style="list-style-type: none"> 1) The first electrical product installed 2) All weather installation 3) Stringent IEEE 837-2002 standard 	<ol style="list-style-type: none"> 1) Procurement 2) Estimator 3) Project Manager
Wyr-Grid	<ul style="list-style-type: none"> • Project Definition • Design 	<ul style="list-style-type: none"> • Procurement • Construction 	<ol style="list-style-type: none"> 1) Installs 50% faster than competitive systems 2) Complimentary design tools generate BOM 3) System scalability, modular component flexibility 	<ol style="list-style-type: none"> 1) Procurement 2) Estimator 3) Project Manager
Power Connectors	<ul style="list-style-type: none"> • Design • Procurement 	<ul style="list-style-type: none"> • Construction • Inspection 	<ol style="list-style-type: none"> 1) Breadth of product line (3,500 SKUs) 2) UL, CSA (when installed with Panduit tools) NEBS Level 3 qualified 3) Lithium Ion Tools provide 135% more crimps per charge & 30% faster 	<ol style="list-style-type: none"> 1) Estimator 2) Project Manager
Stainless Steel Cable Ties	<ul style="list-style-type: none"> • Design if application specific • Oil & Gas, Petro-Chem, Shipbuilding 	<ul style="list-style-type: none"> • Procurement • Construction • Inspection 	<ol style="list-style-type: none"> 1) UL, ABS, DNV, US Military tested and approved 2) Highest loop tensile strength with over a 30yr service life 3) Short circuit withstands levels of 71.5kA 	<ol style="list-style-type: none"> 1) Estimator 2) Project Manager
Identification (Permanent ID/Labeling)	<ul style="list-style-type: none"> • Design (opportunity to drive in this phase) 	<ul style="list-style-type: none"> • Procurement • Construction • Inspection 	<ol style="list-style-type: none"> 1) Meets UL, MIL, RoHS, OSHA, Nuclear, and other requirements 2) Integrates with CAD design program 3) Create custom identification on-site and on-demand 	<ol style="list-style-type: none"> 1) Estimator 2) Project Manager
Cable Ties & Accessories	<ul style="list-style-type: none"> • Design if application specific • Halar, Detectable, etc 	<ul style="list-style-type: none"> • Procurement • Construction 	<ol style="list-style-type: none"> 1) Available in a wide range of sizes, styles, and materials 2) Optimize safety and speed, contributing to lower total cost of ownership when used with Panduit installation tools 	<ol style="list-style-type: none"> 1) Estimator 2) Project Manager
NetKey Network Components	<ul style="list-style-type: none"> • Design (opportunity to drive in this phase) 	<ul style="list-style-type: none"> • Procurement • Construction 	<ol style="list-style-type: none"> 1) Complete cabling infrastructure for voice, data and video applications 2) Meets industry specifications 3) Discretionary spend, flow business 	<ol style="list-style-type: none"> 1) Procurement 2) Estimator 3) Project Manager

MEHT187: Battlecard

Metal Embossing Hand Tool

Background

The Panduit Metal Embossing Hand-Tool (MEHT187) is an affordable, entry-level solution for on-site, on-demand metal label embossing. The MEHT187 is lightweight and ergonomically designed. It is operated by a simple one step cutting and punching process. Though designed for optimal comfort, the tool is rugged and able to withstand harsh operating conditions.

Panduit offers a range of metal tape consumable products for use with the MEHT187, including stainless 304 grade, stainless steel 316 grade, and aluminum. The tape design allows users to define any desired length of label and cut it to size. The MEHT187 is ideal for users in Oil & Gas, Shipbuilding, Maintenance, Construction, and Food & Beverage industries.

Key Value Propositions

Ease of Use:

- Marker plates are cut to length and raised cable tie slots are punched all in one step.
- Design allows simple tape feeding and character selection.

Product compatibility:

- Able to create marker plates in either stainless steel or aluminum, depending on requirements or preferences.
- Stainless steel available in either 304 grade or 316 grade.

Durability

- Tool and consumables are designed for use in harsh environments.

Competition

DYMO

- Offers lower cost, lower quality tool.
- Model number M1011
- Tool is more difficult to use.
 - Heavier, less comfortable in hand, more difficult to feed tape or turn embossing character wheel.
- Requires 3 steps to create a single marker plate.
- Easy to make an error, such as punching cable tie slots upside down. This causes material and labor to be wasted.
- Panduit metal embossing tapes are compatible with the Dymo tool.

BAND-IT

- Offers a buy-out version of the Dymo tool mentioned above
- Model number ID400
- Same limitations as Dymo.
- Panduit metal embossing tapes are compatible with the Band-It tool

3M

- Previously offered a buy-out version of the Dymo embossing hand tool.
- Model number PLE-SNNA.
- Same limitations as Dymo and Band-It, mentioned above.
- This product has been discontinued.
- Panduit metal embossing tapes are compatible with the 3M embossing tool.

BRADY

- Brady does not offer a metal embossing hand-tool.
- Brady does not offer an on-demand permanent ID solution.

Target End User Customers

- **Industrial Construction:**
 - Project Engineers
 - Project Managers
 - Electricians
- **MRO:**
 - Maintenance Managers
 - Safety Managers
- **Oil & Gas customers**
- **Food & Beverage customers**
- **Shipbuilding customers**
- **Current users of Dymo, Band-It, or 3M embossing tools.**
 - Panduit metal tapes are compatible with these tools

What to Look For

1. Engineering design requirements or project requirements for metal labels.
2. Projects or customers with need for on-site, on-demand embossing.
3. Projects or customers with repeated metal plate volume needs versus one-time users who may prefer to use the Panduit custom embossing process.
4. Projects or customers that prefer manually operated hand-tools versus automatically operated systems like the Panduit PES197. The customers that prefer hand-tools may have lower labor costs and/or need to provide tools to a larger number of users.
5. Opportunities to convert existing customers of competitive embossing hand tools to Panduit metal tape consumables.

MEHT187: Battlecard

Metal Embossing Hand Tool

Things You Should Know

1. Panduit offers a complete line of permanent identification embossing solutions.
2. Panduit embossing solutions cover a range of customer needs and applications from low volume to high volume and from blank plates to fully integrated on-demand embossing systems to custom embossed products from the Panduit factory.
3. The MEHT187 metal embossing hand tool is a great entry level, on-demand solution for permanent ID.
4. The 187 in the part number of MEHT187 stands for 0.187 (3/16" or 4.8 mm)) character size. This is the size of the characters that are embossed on the metal marker plates
5. The MEHT187 metal consumables are provided in packages of 10 rolls.
6. The MEHT187 metal tapes are only available in a width of 0.50" (12.7 mm).
7. Stainless steel marker plates can withstand extreme temperature exposure from -80°C (-112°F) to 538°C (1000°F)
8. Panduit offers a wide range of metal cable tie solutions. Panduit cable ties and metal marker plates are compatible and designed for use together.
9. Panduit offers a variety of stainless steel cable tie installation tools as well.
10. Panduit offers a comprehensive line of safety and facility identification products providing customers with a single source for all project needs.

Conversation Starters

1. Do you have project requirements or specifications for permanent identification, such as metal marker plates?
2. Does your application have very high or very low temperatures?
3. Do you need to create marker plates on-site or on-demand?
4. Are you using metal cable ties?
5. What type of metal marker plates or cable ties are you using (stainless steel or aluminum)?

Related Products

Permanent ID

- MEHT187 metal tape consumables
 - METS3-X Stainless Steel 316 grade
 - METS4-X Stainless Steel 304 grade
 - META-X Aluminum
- PES197 automated embossing system
- Custom embossed or laser marked metal plates and tags
- Blank metal plates and tags
- Safety and Facility Identification Products
- Portable and Desktop Printers and Labels

Supporting Marketing Tools

- Permanent ID Product Bulletin (SSCB33--SA-ENG)
- Stainless Steel Harsh Environment Application Guide (SSAG04--SA-ENG)

Need Help?

ID Technical Support Team

- Phone: 1-866-871-457
- E-mail: GA-TechSupport@Panduit.com

Metals & Mining BATTLE CARD

What It Is	Value Proposition (Elevator Pitch)	Key Market Facts
<ul style="list-style-type: none"> • Three major segments present in supply chain: <ul style="list-style-type: none"> ○ Steel ○ Nonferrous Metals ○ Mining • Five years ago, industry was geographically and financially fragmented • String of mergers has increased level of vertical integration, changing competitive dynamics and cost structures • Highly cyclical Industry , big boom and bust cycles • Leading Companies: Arcelor Mittal, Nippon Steel, JFE, POSCO, Baosteel, U.S. Steel, BHP Billiton, Rio Tinto, Alcoa, Nucor 	<ul style="list-style-type: none"> • <i>PANDUIT</i> is a world-class developer and provider of leading-edge solutions that help metals and mining organizations optimize the physical infrastructure through simplification, agility and operational efficiency • <i>PANDUIT's UNIFIED PHYSICAL INFRASTRUCTURESM (UPI)</i> based solutions provide metals and mining organizations with the capability to connect, manage and automate communications, compute, power, control and security systems for a smarter, unified business foundation • Strong relationships with technology leaders (such as Cisco and Rockwell) complemented with its global staff and unmatched service and support, make <i>PANDUIT</i> a valuable and trusted partner 	<ul style="list-style-type: none"> • Globalization: Since 2002 industry has gone international, easier to target firms on a globalized basis • Long-term play: By 2012, global metals market forecast to increase in value 116.3% over 2007, should result in more selling opportunities over long-term • Weak demand: Sweeping production cuts over past 12 months could lead to slowdown on future plant buildouts/upgrades • Pricing weakness: Metals pricing power is weakening globally, opportunities exist to more tightly partner with leading firms and supply broader/deeper solutions

Audience Level	Top of Mind Issues/ Pain Points	Panduit Solution Benefits
<p>Production Facility / Plant Floor</p> <ul style="list-style-type: none"> • Project Manager • Operations Manager • Engineering Manager 	<ul style="list-style-type: none"> • Excess capacity • Hazardous environment, stringent safety regulations • Maximizing uptime and process efficiency 	<ul style="list-style-type: none"> • Make mfg process more efficient and reliable • Safety and LOTO solutions; protect and meet regulations • Most reliable physical foundation for industrial network
<p>Corporate Headquarters / Regional Offices</p> <ul style="list-style-type: none"> • Data Center Manager • IT Manager • Facilities Manager 	<ul style="list-style-type: none"> • Project constraints: reduced timelines, fewer resources, tighter budgets • Power and cooling capacity outstripped by server and storage hot spots • Data center real estate limitations 	<ul style="list-style-type: none"> • Tooling saves installation time, manpower while training improves productivity • Cabinet / rack design – optimize thermal management by improved air flow • Reference architecture with key partners

Metals & Mining BATTLE CARD

Top Questions To Initiate Sale	Sales Goal & Keys	Panduit's Competition
<ol style="list-style-type: none"> Are you retooling any factories or mfg processes during the slowdown? *Discuss Industrial Automation solution Can your bandwidth meet the needs of more users needing real time information? *Discuss high performance copper and fiber With strict safety standards at mines and on factory floors, how do you protect workers? *Discuss Safety, Signage, LOTO With firms being more global, how have your network security needs changed? *Discuss physical security devices 	<p>Goal</p> <ul style="list-style-type: none"> Position Panduit as preferred manufacturer and develop brand equity with key decision makers <p>Keys</p> <ul style="list-style-type: none"> Establish greater brand recognition as premium provider of UPI based solutions Present breadth & depth of line – total systems solutions for networking and electrical that connect, manage, and automate Promote global service and support capabilities (sales force, SEs, AEs, customer service, partners) Provide information on industry best practices <ul style="list-style-type: none"> ✓ Data Centers, Connected Buildings Provide training on Panduit solutions <ul style="list-style-type: none"> ✓ Connectivity termination, grounding 	<ul style="list-style-type: none"> Highly fragmented competition with large number of competitors in Electrical and Networking area Significant price competition and market share battles at the product level End-Users may treat products as commodity, especially on EG side, which makes UPI strategy and solution approach critical to success <ul style="list-style-type: none"> ✓ Broad messaging is necessary to develop wide customer footprint and deep account penetration <p>Key Competitors</p> <ul style="list-style-type: none"> Electrical – Thomas & Betts, Burndy, HellermanTyton, Brady NCG: Systimax, Siemon, Levitton, Tyco-Amp
Industry Structure	Key Products / Solutions	Product Level Benefits
<p>Steel</p> <ul style="list-style-type: none"> Unlike nonferrous, steel is not pure elemental metal. It is an alloy of iron. Carbon – most common, easy to weld & form Coated – limit corrosion, zinc or paint common Stainless – chromium & nickel, superior hardness Specialty – high % of alloying metals like Cobalt <p>Nonferrous Metals</p> <ul style="list-style-type: none"> Aluminum, Zinc, Lead, and Copper are most widely used metals in this segment Main End-Markets: wires, cable, batteries, motor vehicles, construction. <p>Mining</p> <ul style="list-style-type: none"> Oil & Gas Extraction – 75% industry revenue Coal Mining – stockpiles building, prices down '09 Metal Ore Mining – downward pressure on sales Nonmetallic Mineral – tied to nonresidential const. 	<p>Connect</p> <p>Terminals / Ferrules Power & Grounding Connectors Grounding & Bonding – Braided grounding strap Copper / Fiber Connectivity – Dataport, QuickNet Standard Cable Copper UTP, STP and Fiber</p> <p>Manage</p> <p>Wiring Duct – PanelMax DinRail Duct, Corner Duct ID Labeling Systems – Labels, Software, Printers Cable Ties & Accessories – Dynamic Bundler Abrasion Protection – Heat Shrink, Split harness Safety – LOTO complaint OSHA 1910.147 Installation Tools – Ferrule semiautomatic tool Racks and Cabinets Cable Management – Promis-e design tool</p>	<ul style="list-style-type: none"> Save time, reduce errors, and optimize design flexibility w/ ID solutions, software, & printers. DIN Rail or corner wiring duct can achieve up to 30% reduction in enclosure footprint or use space to mount additional control panel components. Hinged Cover Wiring Duct can reduce maintenance costs by up to 20% by allowing convenient wire access. Promis-e CAD software partnership allows users to design and document systems with up to 50% time savings. Installation tools designed to reduce handle effort to crimp by 50% when compared to plier-type tools, reducing repetitive motion injuries. Low thread force, high tensile strength cable ties provide highest quality - maximize design options.

StrongHold™ Supports & Fasteners

Background

This StrongHold™ family is a complete line of supports and fasteners for the **commercial/industrial construction** market. These products are considered “flow goods” business **for electrical and data contractors**.

Panduit is adding this product line to --

- Increase our **offering/relevance to the electrical contractor**
- Show **Panduit commitment** to expanding within the **electrical market**
- **Increase Panduit presence** within **electrical distribution**

Panduit's existing product family of J-Pro™ & J-Mod™ J-Hooks are considered part of this offering. The new parts complete the solution to **fix, route, secure, and manage both power & communication cabling in commercial/industrial facilities**.

Panduit StrongHold™ offering is positioned to take market share by leveraging:

- Panduit's PCI network and contractor community to drive **DEMAND**
- Panduit's strategic relationships with electrical distributor partners to establish **STOCK** position

Competition

There are 3 primary competitors:

Erico – Caddy (50% market share)

- Well known, long-standing brand
- Only solution in some accounts
- Limited sales force reach
- Redemption program CADDY® STUFF

Cooper B-Line (30% market share)

- Leverages Cooper breadth and strong channel position to gain a strong #2 market position
- Cooper Connection drives growth
- Pre-fab offering – Ruff-IN™

Thomas & Betts (15% market share)

- Highly respected brand
- Compliments Steel City® line
- Less focus on this market
- ABB acquisition may further strengthen channel position

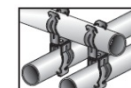
Caddy is the targeted competitor -- Why?

- Niche player with minimal product breadth
- Less influence with distribution
- Vulnerable loyalty with contractors
- Represented primarily through rep agencies

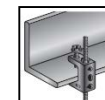
What are the products?

This product line consists ~500 SKUs arranged in the following categories:

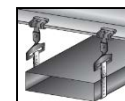
- Cable/Conduit



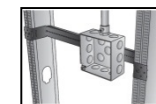
- Beam/Purlin



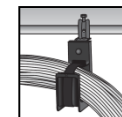
- Hangers/Hanging Systems



- Stud Wall



- Communication/Low Voltage



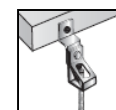
- Dry Wall



- Acoustical



- Miscellaneous



StrongHold™ Supports & Fasteners

How to engage DISTRIBUTORS?

Important factors to consider...

- Stocking decisions for this product are typically made at the **branch level**
- **Create demand** by engaging contractors – this will further enable stocking conversations at the branch
- Panduit Distributor Book **Price is equal** to Caddy
- Parts are **eligible for SPAs and [PowerBoost](#) program**
- **Part numbering** scheme is similar to Caddy

What is the **value proposition** to distributors?

- ✓ **Lower Procurement Costs**
 - ✓ **Vendor consolidation** (Caddy is a niche player)
 - ✓ For **SCO distributors** – VMI eliminates costs associated with material management
- ✓ **Supporting Programs**
 - ✓ Sales apply to Panduit's [PEP](#) program
- ✓ **Product Differentiation**
 - ✓ ex. J-Pro/J-Mod bend radius, colors, snap fit chain ability etc.
 - ✓ Unique **packaging** (handles, breakdown feature)
 - ✓ **Lower SKU count** to cover the same applications

How to engage CONTRACTORS?

Important factors to consider...

- Leverage relationships and contractors now using **J-Pro/ J-Mod J-Hooks**
- Panduit **Price is equal** to Caddy
- **Part numbering** scheme is similar to Caddy

What is the **value proposition** to contractors?

- ✓ **Lower Procurement Costs**
 - ✓ **Vendor consolidation** (Caddy is a niche player)
- ✓ **Program Differentiation**
 - ✓ [Panduit Business Partner Program](#)
- ✓ **Product Differentiation**
 - ✓ ex. J-Pro/J-Mod bend radius, colors, snap fit chain ability etc.
 - ✓ Unique **packaging** (handles, breakdown feature)
 - ✓ **Lower SKU count** to cover the same applications

StrongHold™ Supports & Fasteners

What sales PROGRAMS are available?

What is the sales STRATEGY?

General Collateral

[Pocket Catalog](#) (WACB24--SA-ENG)

[Cross Reference](#)

[Panduit.com StrongHold™ Landing Page](#)

[StrongHold™ Video](#)

[J-Pro™ J-Mod™ J-Hook Video](#)

[J-Pro™ Bulletin](#) (WACB23—SA-ENG)

[J-Pro™ Part Number Change Communication](#)

Internal Sales Tools

Sample Box – STRONGHOLD-BOX and STRONGHOLD-BOX2

[Product Training Presentation](#)

[Made in the USA Components](#)

Distributor Collateral

[Elec Disty Stocking List](#)

[Data Disty Stocking List](#)

[Distributor Presentation](#)

Contractor Collateral

[Contractor Presentation](#)

[Contractor Ad](#)



Distributors

Target Distributor Accounts

- ✓ J-Pro/J-Mod Branches
- ✓ VMI/SCO Distributors
- ✓ CSC, Wesco, Graybar, Accutech










Contractors

Target Contractor Accounts

- ✓ J-Pro/J-Mod Contractors
- ✓ Contractors who received SAMPLES
- ✓ PCIs
- ✓ CSC Joint Targets

Bundling: Panduit Loose Piece Cable Ties and Stainless Steel Ties

<p>“What type of cable ties do you need?”</p>	<p>Designed for use in numerous applications to meet a variety of needs in the OEM, MRO, and construction markets</p>	<p>Approved for the demanding MRO and construction requirements as typified in the oil and gas markets</p>	<p>delivers strength, long life and resistance to chemicals, vibrations, radiation, weathering and extreme temperatures</p>	<p>The Panduit® Pan-Steel® Stainless Steel Strapping is the ultimate solution for strapping applications.</p>				
								
	<p>Plastic One Piece</p>	<p>Metal Barb</p>	<p>Pan-Steel Metal Locking Ties</p>	<p>Pan Steel Metal Strapping</p>				
<p>User Benefits</p>	<ul style="list-style-type: none"> • Largest selection of styles, materials, and sizes • One-piece construction for consistent performance and reliability • Lowest threading force of any one-piece cable tie in the industry 	<ul style="list-style-type: none"> • Stainless steel lock barb provides consistent performance, reliability, and infinite adjustability through entire bundle range applications • Dome-top head features unique patented design with smooth, round edges 	<ul style="list-style-type: none"> • Self-locking head design speeds installation and locks into place at any length along the tie body • Can be used in a wide range of indoor, outdoor, and underground (including direct burial applications) • Smooth surfaces and rounded edges assures cable protection and worker safety 	<ul style="list-style-type: none"> • The buckle design and tension controlled installation tool offer a quick and safe installation for all harsh environments • Available in four widths (9.5mm, 1/2" (12.7mm) 5/8" (15.9mm) and 3/4" (19.1mm) in base 201 (3/4" width only), 304, or 316 stainless steel • protection rating up to 156kA peak current 				
<p>PART #S</p>	<p>PANDUIT PART</p> <ul style="list-style-type: none"> • PLC2S-S10-C • PLT1M-C • PLT2S-C • PLT3S-C • PLT4S-C • PLT4H-L • PRT3S-C 	<p>WESCO PART</p> <ul style="list-style-type: none"> • 7498355098 • 7498354004 • 7498354045 • 7498354066 • 7498354083 • 7498354091 • 7498354889 	<p>PANDUIT PART</p> <ul style="list-style-type: none"> • BC2S-S10-C • BT1M-C • BT2S-C • BT3S-C0 • BT4S-C • BT4LH-L 	<p>WESCO PART</p> <ul style="list-style-type: none"> • 7498352314 • 7498341302 • 7498341176 • 7498341207 • 7498341227 • 7498341267 	<p>PANDUIT PART</p> <ul style="list-style-type: none"> • MLT2S-CP • MLTC4H-LP316 • MLTFC4S-CP316 • MLT4WH-LP 	<p>WESCO PART</p> <ul style="list-style-type: none"> • 7498354400 • 7498322128 • 7498359334 • 7498376512 	<p>PANDUIT PART</p> <ul style="list-style-type: none"> • MS2W38T15-L6 • MSC2W38T15-L6 	<p>WESCO PART</p> <ul style="list-style-type: none"> • 07498344669 • 07498344669
<p>User Benefits</p>	<p>These industry-leading ergonomic tools are designed to reduce operator fatigue, promote worker safety, and improve productivity, optimizing bundling and fastening in industrial and harsh environments.</p>							
								
<p>Tools</p>	<p>PANDUIT PART</p> <ul style="list-style-type: none"> • GS2B • GTS-E • GS4H • GTH-E 	<p>WESCO PART</p> <ul style="list-style-type: none"> • 07498376000 • 07498375817 • 07498376020 • 07498375818 	<p>PANDUIT PART</p> <ul style="list-style-type: none"> • GSMT 	<p>WESCO PART</p> <ul style="list-style-type: none"> • 07498376045 	<p>PANDUIT PART</p> <ul style="list-style-type: none"> • BT2HT 	<p>WESCO PART</p> <ul style="list-style-type: none"> • 07498310240 		

Reference Materials

- [Industrial Electrical Solutions Brochure](#)
- [Cable Tie Selection Guide](#)
- [Pan Steel Application Guide](#)

Panduit® Wyr-Grid® Overhead Cable Tray System Battlecard

“We need a way to route and manage high volumes of cables.”

“We need a way to reduce the installation time of our cable pathways.”

“Wire basket requires too much cutting.”

“Ladder rack doesn’t provide enough continuous support for the cables.”

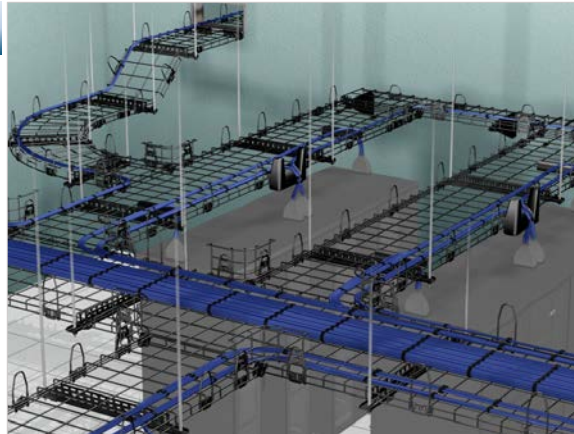
“I need a pathway system that doesn’t compromise its strength when cut.”

“Ladder rack is difficult to route around obstructions.”

What it is and Why

The Wyr-Grid® Overhead Cable Tray System minimizes installation time and simplifies cable management for

- Minimal cutting and assembly steps reduces installation time
- Pathways are bonded as they are assembled eliminating need for grounding jumpers, thereby reducing installation cost
- The steel wire mesh pattern allows greater amounts of cables and QuickNet™ Cassettes to pass through the pathway openings
- Multiple sizes and accessory options provide design flexibility and system scalability
- Waterfalls protect cables transitioning down to racks and cabinets
- Intersection bend radius control sidewalls protect cables at intersections and can be easily attached without cutting or fabrication
- Offered in a black powder coated finish that matches Panduit cabinets, racks, and cable manager aesthetics for datacenter applications
- Also offered in a 12 micron electro zinc finish that provides corrosion resistance for industrial and enterprise applications



Value Proposition

The Wyr-Grid® Overhead Cable Tray System is designed to route and manage copper, fiber and power cabling overhead within data center, connected building and industrial automation applications. Innovative features provide fast, easy assembly that reduces installation time by up to 74% resulting in lower installation costs and faster network implementations. Multiple pathways sizes and accessories enable network flexibility and scalability. The system is engineered to seamlessly integrate with FiberRunner® Pathways, Panduit Cabinets, High Speed Data Transmission and accessory offerings to provide a complete physical infrastructure solution.

Application Pain Points

- Complex design and specification
- Costly labor intensive installations
- Limited space above the cabinets to deploy cable pathways
- Seamless integration with cabinets and building structure
- Structural strength to support high cable capacities
- Pathways do not provide adequate cable support or bend radius control for high performance cabling
- Consistent aesthetics among all infrastructure elements
- Lack of scalability as the network grows or equipment is upgraded requiring additional pathways

Panduit® Wyr-Grid® Overhead Cable Tray Routing System Battlecard

Positioning Wyr-Grid® Overhead Cable Tray System in Panduit Solution Sale

The general selling strategy is to position the Wyr-Grid® Overhead Cable Tray System with the Architectural, Engineering and Consulting Firms, Facilities Manager or Engineer as a component of an end-to-end Physical Layer Infrastructure solution to maintain price level and prevent the product from being “cherry

Positioning the Wyr-Grid® System Against the Competition

When sold as a stand alone product, the Wyr-Grid® Overhead Cable Tray System will be competing on price and against competitive offerings that are typically the default specification. To offset these advantages, position the Wyr-Grid® System as a premium grade cable tray solution that offers significant installation time savings. In addition, it offers cable protection features that enhance network reliability and superior aesthetics.

Competitive Advantage:

Against Wire Basket – Wyr-Grid® System has been proven to take **57% less** time than the same sized Cablofil wire basket system to install. Provides better protection for cables and is safer for installers as cables are never routed past a pathway wire that has been cut.

Ladder Rack – Wyr-Grid® System has been proven to take **74% less** time than the same sized CPI ladder rack system to install.

Cable Tray – Wyr-Grid® System provides greater installation versatility by offering field fabrication of vertical and horizontal directional changes without need for dedicated directional fittings.

Conduit - Wyr-Grid® System is an open pathway system allowing fast moves, adds, and changes.

Questions to start the conversation

How the Wyr-Grid® System can help

What is the labor rate to install your current overhead pathway?

Installs in 50% less time than alternative solutions.

What types of cabling are you planning on routing overhead?

Can accommodate a wide range of cabling including copper data cabling, fiber trunking cabling, and power cabling.

What cable densities are you planning?

Can accommodate up to 1,298 Cat 6A cables (.298” Dia.).

How will cabling be protected as it transitions from horizontal to vertical?

Snap-on waterfalls provide bend radius control, protecting cables from physical damage.

How will cabling be protected as it transitions around intersections?

Intersection bend radius control sidewalls protect cabling from physical damage.

How complicated is your pathway design?

Offers the ability to be configured to virtually any network design with a minimum amount of parts.

How important are data center aesthetics?

The black powder coated finish is designed to match other Panduit® infrastructure products for a consistent appearance.

PANDUIT CONFIDENTIAL –INTERNAL
USE ONLY

CP-881 Ferrule Strip and Crimp: Battle Card

Background

The Panduit CP-881 is an automated ferrule installation tool that utilizes reel fed ferrules. System supports five sizes of ferrules from 14-20AWG ferrules.

The Panduit semi-automatic ferrule strip and crimp installation tools **improves worker productivity by 600%** over manual tooling.

The Panduit CP-881:

- **Automatically Strips the wire for Improved Reliability**
- **Easy Setup**
- **Change Over in under 1 minute**
- **Light Weight**
- **Portable**
- **Up to 1200 Crimps per hour**

Target Customers

- **Contract Manufacturers and Wire Harness Shops**
 - Small to Medium in Size (up to 50M revenue, up to 200 employees)
 - Operations Manager
- **Original Equipment Manufacturer**
 - White Goods
 - Aerospace
 - Transportation (Non-automotive)
 - Gaming
 - Panel Builders

Competition

One primary competitor:



- Known brand
- CF 3000-2,5
 - Electric tool (no air reqd.)
 - Modified handle with counter display
 - Flexible and Portable
 - Book Price \$12,500
 - Average selling price \$8,800
 - Crosses to CP-881
- Focusing heavily on Panel Builders
- Ferrules are CSA Certified
- Ferrules are not UL486F Listed at this time.

[Pictured]
Phoenix Contact
CF 3000-2,5



Value Prop & Positioning

CUSTOMER NEW TO AUTOMATION:

- **Improved Productivity**
 - 600% improvement in worker productivity
 - Automatically strips wire end to proper strip length
 - Automatically places and crimps ferrule
- **Lightweight portable solution**
- **Reduced repetitive motion injuries**
- **Consistent quality ferrule installation**
- **Optimal for EAU of XXXk+ ferrules/year with short ROI**
- **Standard Listing and Approvals:**
 - DIN 46228 & IEC60999-1
 - CSA C22.2 No. 158-1987 (R2004)
 - Adopted by DIN
 - UL-508 Approved for use in control panels
 - UL-486F & CSA C22.2 No 291
 - Developed by NEMA
 - Released in March 2014
 - Only UL Listing specific to Ferrules

CURRENT PHOENIX CONTACT CUSTOMER:

- **System is priced 20% higher than Panduit**
- **Panduit Ferrules are UL486F & CSA-C22.2 No. 291-14 Listed.**
 - Panduit is currently the only manufacturer with this new Bare and Covered Ferrule Listing.
 - Competition is CSA approved based on meeting DIN 46228-4

CP-881 Ferrule Strip and Crimp: Battle Card



Sales/Quoting Process

1. **Profile the customer** and determine the following:
 - Ferrule size required
 - Estimated Annual Volumes
 - Preferred Distributor (if any)
 - Target Ferrule Price (if applicable due to competition)
 - Target Tool Price (if applicable due to competition)
2. **Get distributor lined up with margins and on board with opportunity**
3. **Explain productivity increase message to customer** (Lowest Installed Cost)
4. **Walk customer through ROI Calculator**
5. **Explain the system** (components and functionality)
 - Product video
 - Customer presentation
6. **Work with customer regarding ferrule and tool pricing** based on recommended price points via price tables or customer direction.
7. **Agree on price point and EAU and submit SPA for ties.**
8. **Get customer lined up for a demo unit** for production trial run
9. **Submit official SPA letter** to product management to obtain tool quote as well as providing to distribution
10. **Provide end user with tooling quote and distributor pricing** for the ferrules
11. **Conduct tooling demo** at the customer facility
12. **Close the deal**

Collateral and Support

GENERAL COLLATERAL:

- **CP-881**
 - Product Videos
 - Product Specification
 - System Setup and Operational Videos



INTERNAL SALES TOOLS:

- **Sale Enablement Tools**
 - Demo Tool Kit
 - ROI Calculator
 - Battle Card
 - Customer Presentation
 - Success Depends on the Crimp Training Program

Pull-Through Products

QUICK-BUILD

- Product Bulletin
- Sales Sample Kit
- Battle Card
- Product Video

REEL SMART

- Product Bulletin
- Sales Sample Kit
- Battle Card
- Product Video

PAT System

- Product Videos
- Product Bulletin
- Product Selector / BOM Configurator

Design Registration Program: Battlecard

Background

- The Design Registration program is to provide the distributor, that aggressively works on Panduit's behalf to achieve **new design wins** for our products, with recognition, through margin enhancement.
- The margin protection is to be awarded based on the distributor's providing *demonstrable proof* of specific actions relative to the product, customer, and opportunity.
- The margin protection of 15% will be available on all Electrical Products and administered by Pricing (as other SPAs) (15% discount applies to only registered part number)

Target Personas

- Distributor Product Managers
- Distributor Product Marketers
- Distributor Inside Sales People
- Distributor Outside Sales People
- Distributor Field App Engineers
- Distributor Tech Support
- OEM Market Focus – Wire Harness, Control Panel

Competition with Registration Programs

- Molex, TE

Value Prop for Distribution

- Limited distribution roll-out of the program
- Margin differential of 15%
- No other distributor awarded cost for same opportunity
- Panduit Field support to secure new business win
- Vertical Market Alignment with Panduit
- Demonstrates value to customers
- Demonstrates technical expertise to customer
- Ongoing annuity sales
- Recognition for efforts on Panduit's behalf

Positioning

- Working with customers to provide quality while delivering value
- Working with customers to provide technical assistance in achieving best design
- Panduit product solutions provide total cost of ownership savings

Design Registration Process

- Distributor identifies design opportunity while meeting with OEM
- Distributor identifies/quantifies opportunity potential (Part, Qty, Start date, Duration, Target (Price, Competitor))
- Distributor provides Panduit product options that may meet customer requirement
- Distributor provides performance specs and product samples
- Distributor engages with local Panduit TAM through direct relationship or through corporate
- Panduit TAM provides technical assistance, Design Registration submittal assistance
- Registration form completed by Distributor and submitted to Panduit Sale Rep, who submits to Pricing through CRM (Form# C2-0730 See below)(Attach end-user BOM or Print to CRM)
- Panduit Pricing verifies no other registrations exist for product and customer, Provides pricing as appropriate, Logs registration to the Distributor
- Panduit TAM required to obtain Sale Management approvals
- Panduit TAM passes registration on to Distributor, and order process begins.

GTS-E Cable Tie Hand Tools Battlecard

Background

The GTS ergonomic cable tie hand tools have been a benchmark product for cable tie hand tooling for many years. However, Tyton recently introduced a new cable tie hand tool EV07 with ergonomic improvements. This tool set a new standard for operator comfort.

In response, **Panduit redesigned the GTE with improved performance and operator comfort features:**

- Reduced force required to operate the tool, significantly reducing the force associated with the cable tie cut off process.
- Reduced handle throw to lower work input and improve comfort for operator's hand
- Lowest cable tie cut off force in the industry

Bottom line:

The new GTS-E product performance and operator ergonomic features positions it as THE bench mark cable tie tool in the market.

Competition

HELLERMAN-TYTON

- EV07 cable tie hand tool with ergonomic features.
- Good performance and operator ergonomic features.
- Priced significantly higher than most cable tie hand tools in the market at \$186.00 DBP
- Mark 7 older design cable tie hand tool is a price leader in select markets.

T&B

- ERG50 cable tie hand tool
- Offers a swivel nose to allow more flexibility for installers.
- Low performance and early product failures reported for this design.
- Pricing similar to current GTS pricing.
- Ergonomic features need updating.



KEY SELLING POINT:

The GTS-E has been tested and validated to reduce impact force shock to operator by more than 40%, making it “The lowest impact shock hand tool in the industry.”

Target End User Customers

- **Contract Manufacturers and Wire Harness Shops**
 - All wire harness manufacturers
- **Original Equipment Manufacturer**
 - Transportation Accounts
 - Industrial Equipment
 - White Goods
 - Military / Aerospace
- **MRO Accounts**
- **Contactors**
 - Large Solar and Wind projects

Distribution Channels

- **Promote New POP-5 Pack Display on counter**
- **Encourage distributors to take advantage of new quantity discounting**
 - Up to 20% savings with purchase of 25 or more
- **Creative distributor POP display along with volume discounting**
 - Provides significant advantages over competitive offerings.

GTS-E Cable Tie Hand Tools Battlecard

Pricing Strategy

Qty	GTH-E Discount	GTH-E Price	GTS-E Discount	GTS-E Price
1-4	0%	\$ 257.52	0%	\$ 138.61
5-24	25%	\$ 193.14	15%	\$ 117.82
25+	30%	\$ 180.26	20%	\$ 110.89

Collateral

- [Product Bulletin GTS-E/GTH-E](#)
- [CPI-Competitive Product Information](#)
- [Battlecard](#)

Conversation Starters

1. Panduit has significantly improved the performance, reliability and operator ergonomic features of the cable tie hand tools
2. Shorter handle throw eliminates the need for the current short throw "L" versions
3. 15% lower handle force than EV07 tools, lessening the risk of repetitive motion injuries .
4. Consistent performance, minimizes rework
5. Quick, easy and accurate tension setting with a pull and twist of the tension setting knob
6. Meets Mil Spec MS90387-2 .
7. Rugged design reduces maintenance and replacement costs over years of use

Battlecard

Heavy Duty Application Audit Program

Background



Panduit is investing in new products and expanded programs for Heavy Duty OEM applications like Truck, Bus and Heavy Equipment. This program builds on Panduit's position as a trusted advisor to our customers by providing free consultative engineering support.

Value Prop: *Increased design productivity and lower total installed cost through Panduit's consultative engineering support and heavy duty cable management solutions.*

Program Overview



- **Applications** – The Application Audit is primarily targeting the mechanical fastening applications at Truck & Heavy Equipment OEM's. This would include management of cables, hoses, wires and wire bundles in the cab, engine, and chassis areas.
- **Distributor selection** – Typically mechanical fastening products are purchased through a specific type of distributor who: 1) provide high volume OEM logistics support, 2) provide other mechanical fasteners in a package (cable ties and nuts & bolts). Examples include: Bossard, Fastenal, Würth, Wes-Gard.
- **Application Audit Team**- The application auditor team includes MJPF, JRF, MJK, RRE, KLN. **To begin an engagement**, contact Mark Pfaller; mjpf@panduit.com, 770-889-1800 x87429.

Target End-User Customers



OEM Customers in USA and Canada with a projected OEM wire management spend of Panduit type products of \$200K or more. Verticals include:

- | | |
|---|--------------------------|
| • Heavy Truck | • Construction |
| • Bus & Coaches | • Equipment |
| • Specialty Trucks (Dump Trucks, Concrete Trucks, Utility Trucks) | • Agricultural Equipment |
| | • Industrial Equipment |

Customer Benefits

Customer benefits include:

- Product Cost Reduction – Design assistance to identify lowest installed cost options
- Material Review– Review product applications to assess material capabilities
- Process Improvements – improved operational productivity
- Part Consolidation–identify opportunities to consolidate parts/reduce part numbers.

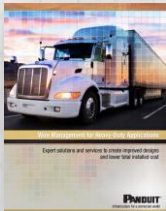
Battlecard

Heavy Duty Application Audit Program

Sales Process

1. **Assessment** – review situation/opportunity at the targeted end user, consider distributors involved, investigate key issues for the customer, decide on approach
2. **Customer Introduction** – Provide a brief overview of the program to the customer, identify audit depth (see *program options*) and areas of interest by the customer. Schedule the audit date. (30-45 minute phone call or meeting)
3. **Conduct Audit** – Panduit team to do onsite review per the *program options* selected by the customer.
4. **Customer Presentation** – Top findings and overall Audit report are presented to the customer, including the following elements (1 hour meeting)
 - Audit Report
 - Bill of material
5. **Follow up** – Based on customer interest, complete the needed follow up, including: Tooling and part samples for trial use, present BOM which includes quoted pricing

Collateral



- Heavy Duty Brochure (CTCB52--SA-ENG)
- Part Sample Pack (TRUCK-BAG)

Program Options



1. **Full Audit** – 2+ person team to do onsite review OEM sub assembly or finished product, document all findings within scope. (4 to 8 hours)
2. **Application Audit** - 2+ person team to do onsite review OEM sub assembly or finished product SPECIFIC TO identified area of concern, document all findings within scope. (4 to 8 hours)
3. **Walk-Through** – 1 or 2 person team to do onsite walkthrough that would allow for notetaking and produce areas of recommendation for Panduit solutions. (2 to 4 hours)
4. **Solutions Presentation** – based on dialogue with the customer, present Panduit solutions that match customer needs. (1 hour)

Program Content



1. **Comprehensive Program** – complete customer conversion which takes advantage of Panduit products, tooling and tooling program matched to their application.
2. **Product Recommendations** –customer conversion which takes advantage of Panduit products matched to their application.
3. **New Products only** – customer conversion of only the Panduit products identified to provide cost savings/application improvements, but leaves the other products as is, even if with a competitor (use as a first step in a complete conversion)

OEM BATTLE CARD

What It Is	Value Proposition (Elevator Pitch)	Key Market Facts and Implications
<p>OEM's are companies that are in the business of manufacturing and selling discrete products.</p> <p>Examples: automobiles, airplanes, washers/dryers, vending machines, gaming machines, welders, material handling equipment, wind energy turbines, wiring harnesses, control panels, medical equipment and much, much more.</p> <p>Scope: get Panduit products specified (preferred) or at least approved for use in the OEM's end product.</p> <p>Remember: OEM's are businesses. They have data centers, enterprises, factory floors and buildings. They have need for Panduit DC, CB, IA and MRO solutions.</p>	<ul style="list-style-type: none"> • Broad line of electrical/communication products: minimize the suppliers required to handle all the infrastructure needs. • Globally positioned: facilitates product availability and insures proper support to partners and subcontractors. • Value Engineering: service to assist the OEM in optimizing parts used, new parts needed, overall productivity, quality improvement and warranty reduction. • Lowest Total Costs: Solutions offer increased worker productivity , superior quality and global availability .. Lowering total procurement and installation costs. 	<ul style="list-style-type: none"> • Consolidation of suppliers <ul style="list-style-type: none"> ✓ Increases the need for Panduit presence at the account • Global, pro-active suppliers <ul style="list-style-type: none"> ✓ Looking for suppliers who provide more overall value in helping them with their business needs • Outsourcing/reverse outsourcing <ul style="list-style-type: none"> ✓ Must insure we are approved and them follow the business to where it is done • Environment & Reduced energy consumption <ul style="list-style-type: none"> ✓ Need products/solutions that allow them to meet the growing needs • Increasing intelligence <ul style="list-style-type: none"> ✓ Need products/solutions that allow them to meet the growing needs

Audience Level	Top of Mind Issues/ Pain Points	Panduit Solution Benefits
Design Engineering	<ul style="list-style-type: none"> • Putting new features in the next model. New design challenges. → • Saving Money / Reducing Costs → • Differentiate from competitor's offering → 	<ul style="list-style-type: none"> • Early involvement on new designs, assist in the engineering process, get designed in. • Increase productivity, reduce parts used, and allows volume consolidation • Offer solutions that facilitate new product designs
Manufacturing	<ul style="list-style-type: none"> • Productivity, reduced defects, reduced warranty costs → 	<ul style="list-style-type: none"> • Thought leadership, broad solution offering • Videos and training on proper techniques (e.g., crimp training) as well as superior tooling and field technical support

OEM BATTLE CARD

2

Top Questions To Ask To Initiate The Sale

1. What is the next new program/project? When will it start? What are you looking to do differently? How can we assist?
2. What problems are you having today that we can assist with? Quality? Warranty? Productivity? Part reduction?

Your Competition

- **Highly fragmented competition** with large number of public and private companies
- High degree of price competition / rivalry
- Challenging to differentiate products

Key Competitors – Key Strength

- Hellermann Tyton – focus on innovation
- FCI Burndy – excellent power connector offering
- Brady – focused ID niche, defined brand
- IlSCO – focused, strong relationships
- Iboco – extensive wiring duct, components offer
- Tyco/AMP/Raychem/Critchley - extensive product offering, leading brands

Benchmark Competitor (Hellermann Tyton)

Strengths

- Broad cable tie & accessory line
- Established brand
- Focus on OEM market, especially transportation
- Will take business direct
- Will make new products specific to market
- Very price competitive
- Active in alternate channel distribution

Weaknesses

- Not strong with electrical distribution

Product Level Benefits

- **Low thread force, high tensile strength cable ties** provide highest quality - maximize design options.
- **Save time, reduce errors, and optimize design flexibility** w/ ID solutions, software, & printers.
- DIN Rail or corner wiring duct can achieve up to **30% reduction in enclosure footprint** or use space to mount additional control panel components.
- Hinged Cover Wiring Duct can **reduce maintenance costs by up to 20%** by allowing convenient wire access.
- Installation tools designed to **reduce handle effort to crimp by 50%** when compared to plier-type tools, reducing repetitive motion injuries.
- Automatic tooling for true lowest installed costs

Key Products / Solutions

Connect

Terminals / Ferrules
Power & Grounding Connectors

Manage

Wiring Duct – PanelMax DinRail Duct, Corner Duct
ID Labeling Systems – Labels, Software, Printers
Cable Ties & Accessories – Dynamic Bundler
Auto ties via PAT systems
Abrasion Protection – Heat Shrink, Split harness
Installation Tools – Ferrule semiautomatic tool

Other Information

- Leverage the strength of channel partners, they can serve as one single source for a multitude of products – satisfying the need for consolidation.
- For more information, please go to Panduit Sales Enablement Portal

PAT 4.0 System Battle Card (NA and LATM)

Background

The PAT System is an automated cable tie installation tool that utilizes reel fed XMR cable ties. System is offered in 4 sizes to accommodate bundles up to 3" in diameter.

Automated cable tie installation tools **improve installation rate 6x** over manual tooling.

The new PAT4.0 in the 1M and 1.5M sizes have been improved via:

- **Improved Reliability**
- **25% Faster than Tyton AT2000**
- **User Friendly Interface (Touch Screen)**
- **Operator Accessibility**
- **More Compact Design**
- **Aesthetics**

Target Customers

- **Contract Manufacturers and Wire Harness Shops**
 - Non-automotive focused
 - Small to Medium in Size (up to 50M revenue, up to 200 employees)
 - Operations Manager
- **Original Equipment Manufacturer**
 - White Goods
 - Aerospace
 - Transportation (Non-automotive)

Competition

One primary competitor:

HellermannTyton

- Well known, long-standing brand
- Ability to discount deeply
- AT2000 & 2060:
 - Electric tool (no air reqd.)
 - Direct Feed, Hand held
 - Flexible and Portable
 - Cost effective old model (\$5,000 – book)
 - New LCD Model (\$8,000 – book)
 - Crosses to PAT1M & 1.5M
- Tyton used to support the AT2000 tools with replacement tools and repair. Moving away from this model with the introduction of their new LCD display model.
- Focusing on larger OEM accounts in urban areas, less focus on smaller customers

[Pictured]
HellermannTyton
AT2000



Value Proposition & Positioning

CUSTOMER NEW TO AUTOMATION:

- **Improved Productivity**
 - 6x faster than manual operations
 - Lightweight tool head minimizes fatigue
- **Reduced repetitive motion injuries**
- **Consistent quality tie application**
- **Optimal for EAU of 250k+ ties/year** with short ROI

CURRENT HELLERMANN AT2000 CUSTOMER:

- **20% Overall Bundling Productivity Improvement over AT2000**
- **PAT tie installation rate up to 84 ties/min**
 - 25% faster than AT2000 (54 ties/min)
 - 55 hours labor savings over AT2000 for 500k ties EAU
- **Tool Head weight is 1.75lbs (half that of the AT2000)**
 - Reduced operator fatigue
 - Improved mobility (AT2000 is top heavy)
- **PAT ideal for cell based manufacturing**
 - Determine what percentage of work environment is cell based, push the PAT to this application.
 - No need for counter balancer or reel support structure as required with AT2000
 - Ties are fully enclosed in tube to eliminate risk of dragging ties through the work area
- **HellermannTyton doesn't offer a barbed tie**
- **PAT Tip Collector holds 300 pcs vs. AT2000 holds 120**
- **PAT has longer life wear components than AT2000** (e.g. AT 2000 mechanical pusher to be replaced at 300k cycles)
- **Troubleshooting done via touch screen** on PAT vs. referring to the manual w/ Tyton

PAT 4.0 System Battle Card (NA and LATM)

Sales & Quoting Process

1. **Profile the customer** and determine the following:
 - Tie size required
 - Tie type (style and color)
 - Estimated Annual Volumes
 - Preferred Distributor (if any)
 - Target Tie Price (if applicable due to competition)
 - Target Tool Price (if applicable due to competition)
2. **Get distributor lined up with margins and on board with opportunity**
3. **Explain productivity increase message to customer** (Lowest Installed Cost)
4. **Walk customer through ROI Calculator**
5. **Explain the system** (components and functionality)
 - Online configurator
 - Product video
 - Customer presentation
6. **Work with customer regarding tie and tool pricing** based on recommended price points via price tables or customer direction.
7. **Agree on price point and EAU and submit SPA for ties.**
8. **Get customer lined up for a demo unit** for production trial run
9. **Submit official SPA letter** to product management to obtain tool quote as well as providing to distribution
10. **Provide end user with tooling quote and distributor pricing** for the ties
11. **Conduct tooling demo** at the customer facility
12. **Close the deal**

Collateral and Support

GENERAL COLLATERAL:

- **PAT System Online Landing Page**
 - Product Videos
 - Product Bulletin
 - System Setup and Operational Videos
 - Product Selector/BOM Configurator

INTERNAL SALES TOOLS:

- **Sale Enablement Tools**
 - Demo Tool Kit
 - ROI Calculator
 - Battle Card
 - Customer Presentation

Pull-Through Products and Solutions

QUICK-BUILD

- Product Bulletin
- Sales Sample Kit
- Battle Card
- Product Video

REEL SMART

- Product Bulletin
- Sales Sample Kit
- Battle Card
- Product Video

Battlecard

Pan-Ty PLT4H Flexible Heavy Cross Section Cable Tie

Background

The Flexible PLT4H provides excellent tensile strength that is expected with a Heavy Cross Section design. These cable ties install quickly and more easily than the typical Heavy Cross section ties. This innovative design allows no-slip gripping of the tip along with the ability to cinch with one hand.

The Flexible PLT4H was developed due to customers with heavy duty applications that needed the 120 lbs. / 534 N load rating of the Heavy Cross section, but in a more flexible design to allow easier, one-hand installation.

Target End-User Customers

- Truck & Bus
- Heavy Equipment
- Rail
- Wind
- Heavy duty applications

Product Offering

- During initial work with customers for this product, a non-standard part was used. However, standard part numbers are now available for order using the information below.
- Panduit will continue to offer both the standard PLT4H and new flexible PLT4H models

Part Number	Length In. (mm)	Width In. (mm)	Max. Bundle Diameter (mm)	Min. Loop Tensile Strength Lbs. (N)	Material	Std. Pkg. Qty.	Std. Ctn. Qty.
PLT4H-TL0/147	14.5 (368)	0.300 (7.6)	4.11 (104.5)	120 (534)	Weather resistant nylon 6.6	250	2500
PLT4H-TL30/147					Heat stabilized nylon 6.6	250	2500

Competition

Traditional Heavy Cross Section Cable Ties

Panduit, HellermannTyton and Thomas & Betts all offer a traditional 120 lbs. / 534 N cable tie with an approximate width of .30" / 7.6mm that are used in many applications. These are more stiff to handle and more difficult to tighten than the new Flexible PLT4H.

HellermannTyton

HellermannTyton is the only competitor that offers 2 styles of the Heavy Cross section cable tie similar to the offering from Panduit: traditional and flexible. However, this flexible heavy cross section cable tie is only offered in EMEA at this time. (Note - HT also has a third Heavy Cross Section version which is 150 lbs. cable tie)

Battlecard

Pan-Ty PLT4H Flexible Heavy Cross Section Cable Tie

Features and Benefits

- **Flexible strap body** Allows installation of the cable ties with one hand
- **Improved tip design** No-slip gripping of tail on initial insertion
- **Flexible locking design** Provides a low thread force for quick and easy installation to improve productivity and worker safety
- **Lower tool tension settings required** Easier, faster installation with lower installer effort to install ties to proper tension settings.

Conversation Starters

- Do you have high volume, heavy duty applications that need a quicker installation alternatives?

Collateral

- Product bulletin(CTCB52--SA-ENG)
- Product samples(15 pc bag)
- Competitive Product Information
- Customer drawings
- Global Success Story

Pricing Strategy

- Sales message is higher feature set for new PLT4H/147 part
- List Price/MSRP/DBP pricing strategy: EQUAL for PLT4H & PLT4H/147 (all markets)
- SPA pricing guidelines: competitive pricing will be considered in conversion situations
- Selling the new PLT4H should be per the scenarios below:

<p style="text-align: center;"><u>YES</u></p> <p style="text-align: center;">Sales Scenarios to Sell the new PLT4H/147</p>	<p style="text-align: center;"><u>NO</u></p> <p style="text-align: center;">Not a reason to sell the new PLT4H/147, stay with the current PLT4H</p>
<ul style="list-style-type: none"> • New Customers • Current Panduit business under threat by the HellermannTyton thin 4H equal • Current Panduit customers that prefer the features of the new PLT4H/147 over the existing PLT4H and are willing to pay the same price 	<ul style="list-style-type: none"> • New customers that have application requirements that need the existing PLT4H design • To provide current customers of the existing PLT4H that have no competitive or application issues with reduced pricing

Quick-Build Harness Board System

Background

The Quick-Build™ Harness Board System is a modular way to build harness boards. Harness houses can prevent the need to designate a separate piece of plywood for each harness they manufacture. With the Quick-Build™ System, the customer can secure the drawing of a harness to the top of a grid tile base. This grid tile base accepts Quick-Build™ mounting pegs that allow harness board nails and accessories to be used to layout and efficiently route wiring for a harness configuration.

The Quick-Build™ Harness System is designed to work effectively with the traditional harness board accessories, including all of the existing Panduit Elastic Retainers, Corner Posts, Bundle Retainers, Wire End Holders, and Harness Board Nails. These accessories help bring the harness up off the surface to make it easier to install cable ties, labels, abrasion protection products, etc.

The Quick-Build™ Harness Board System can be utilized in production workstations to assemble harnesses or can also be used in prototyping and R&D areas to efficiently prove out an initial harness layout.

Competition

Plywood and Nails

- The typical harness house uses the standard plywood and nail harness board.
- The savings calculator compares this most common method of harness manufacturing with the Quick-Build™ System.

Cirrus

- System designed for test fixtures and not general assembly of harness solutions
- Small (4" x 4") tiles are cumbersome to install.
- Very limited selection of accessories available for harness assembly applications.

Magnetic Systems

- Vendors provide systems with harness board nails and accessories secured to magnets that can attach to a metal sheet.
- Magnets can move or become disengaged if under a heavy load or accidentally hit

Home-made Systems

- There are customers who have created their own modular solution utilizing pegboard or other materials -since there were no vendors offering an acceptable solution.
- These customers know that there is a better way to manufacture harnesses and are prime candidates to show the Quick-Build™ solution.

What Are the Products?

Patents have been applied for and are currently pending

- **Grid Tiles**
 - QB-TILE
 - 1' x 1' modular tile
- **Mounting Pegs**
 - QB-MOUNT-L
 - Inserts into Grid Tiles and accepts Quick-Build™ Mounting Platforms and Nail Bases
- **Mounting Platforms**
 - QB-BASE120-Q (1.2" x 1.2")
 - #8 screw holes
 - QB-BASE175-Q (1.75" x 1.75")
 - #4, #6, #8, ¼" screw holes
- **Single Nail Base**
 - 1" –QB-SN1-Q (white)
 - 2" –QB-SN2-Q (black)
 - 3" –QB-SN3-Q (gray)
- **Five Nail Base**
 - 1" –QB-FN1-Q (white)
 - 2" –QB-FN2-Q (black)
 - 3" –QB-FN3-Q (gray)
- **Connector**
 - QB-CONN
 - Not required, but allows tiles to be connected without plywood
- **Starter Kit**
 - QB-KIT1 – Kit of various harness board accessories and Quick-Build components.

Quick-Build Harness Board System

Target End-User Customers

Contract Manufacturers and Wire Harness Shops

- High Mix / Low-Medium Volume
- Small to Medium in Size
 - \$5 - \$50M revenue/year
 - 5K – 60K harnesses/year
 - Average 1,000 harness variations per year

Original Equipment Manufacturer

- Industrial
- White Goods
- Military / Aerospace Wire Harness Contract Manufacturing
- Non-automotive and Non-Medical

Pricing Strategy

- No SPA strategy
- Pricing set at market value levels (priced to sell)
- Volume based pricing (3 levels with pre-determined discounts)
 - List Distributor and Resale Pricing
 - Carton Quantities allow for 10% discount
 - Large opportunities or Distributor Stock Packages at 20% discount
- Existing Harness Board Accessories will be revised to a similar approach
- Today, approximately 70% of Harness Board Accessories are sold at book price
- Utilize Savings Calculator to help justify price of Quick-Build™ solution

Target Distribution Channels

Today, 60% - 70% of existing wire harness customers go through Electronic distribution channels.

- **Electronic high volume OEM focus**
 - Heilind, TTI/Sager, Arrow
- **Electronic low volume OEM focus**
 - Allied, Newark
- **Industry Specialty and VARs**
 - BE/KLX, Wesco Air, Tri-Tech, AE Petsche (Arrow)
- **Other OEM partners**
 - Graybar, Wesco/Carlton Bates, Hardware Specialty

Conversation Starters

- How many harness configurations does your company build?
- Do you feel that there is a better way to layout and build a harness than what you currently deal with?
- Do you have a designated area where you store plywood harness boards that are currently not being used?
- How often do you develop a new harness layout?

Quick-Build Harness Board System

Collateral and Support

General Collateral

- Sample Box (QB-SAMPLE)
- Landing Page with the following:
 - Product Bulletin (WACB28—WW-ENG)
 - Savings Calculator
 - Product Videos

Internal Sales Tools

- Sales Enablement with the following:
 - Battlecard
 - Customer / Distributor Presentation

Benefits and Savings

- Up to 65% savings related to harness board layout and board builds
- 50% savings related to storing plywood harness boards that are not utilized
- 18% savings in productivity by bringing the harness up off the plywood to allow the cables to be much easier to bundle and manipulate
- Recovered investment with 17th board build

Note: Numbers above can be verified with Quick-Build™ Savings Calculator

Customer May Also Like..

Automated Cable Tie System

- Product Bulletin
- Sales sample kit
- Battlecard
- Product Video

Reel Smart™

- Product Bulletin
- Sales Sample Kit
- Battlecard
- Product Video

Other

- Identification Solutions
- Abrasion Protection
- Terminals
- Loose Piece Cable Ties

How to Engage

- Utilize sample box to demonstrate functionality of new Quick-Build™ Harness System
- Show video to spark interest in Quick-Build™ Solution
- Utilize Savings Calculator to prove the benefits translate to real cost savings
- Offer QB-KIT1 as a great option to integrate Quick-Build System into prototyping or R&D workstation

OEM Rail Market: Battle Card

Manufacturers of Passenger Rail Cars and Locomotive Engines and Infrastructure

Background

There is a growing demand in the Rail Industry based on changing standards requirements.

EN 45545-2 is Europe wide rail standard has been adopted and is replacing country specific standards for train passenger safety requirements – this is driving new engineering activity to specify products that meet the EN45545-2 standard.

There is also an ongoing trend in this market, in order to optimize and consolidate the product usage, but also to find new technical solutions, in order to reduce cost.

Panduit cable management products deliver innovative cable management solutions that deliver regulatory compliance and lower total installed cost

Bottom line:

Panduit continues to aggressively pursue market share growth in the rail industry by continuing to certify products to the latest industry standards to help rail manufacturers with compliance and lowest installed cost

Competition

HellermannTyton

- Main competitor in the Railway Market in Europe
- Able to develop “on demand” products/solutions

Thomas&Betts

- Still specified by some end users
- Lost some influence in this market, but try to come back (now owned by ABB)

Other competitors

- Depending on the products/solution you will face a large number of competitors as Tyco / TE Connectivity
- Raychem / Texit / AGRO Sleeving

Target Customers

- **Key OEM Rail applications, needing passenger safety standards compliance:**
 - Passenger Rail Cars
 - Locomotive & Engines
- **Primary specifying influence:**
 - Design Engineers
 - Purchasing
- **Panduit Strategic Accounts with current sales engagement**
 - Alstom
 - Bombardier
 - Hitachi
- **Other Key Rail accounts with current sales engagement**
 - Stadler
 - Skoda Transportation
 - China Railway
 - Nippon Sharyo



KEY to Panduit Opportunity

EN 45545-2: Europe wide rail standard vs. country specific standards (new engineering activity to specify products)

OEM Rail Market: Battle Card

Manufacturers of Passenger Rail Cars and Locomotive Engines and Infrastructure

Collateral

- [Rail Brochure](#) (available in English, German, French)
- www.Panduit.com/Rail Dedicated Web Landing Page (available in English, German, French)
- [Rail Test Report](#): EN 45545-2 European Union Standard Fire Testing to Railway Components
 - Detailed test results - delivered “on demand” if requested by end users
- Rail Battle Card
- Sales Presentation with large appendix in order to offer the possibility to adapt the presentation to the audience (available in English, German, French)

Conversation Starters

1. New Europe wide rail standard (EN45545-2) vs. country specific standards is creating new engineering activity to specify compliant products
2. Panduit is testing product materials to help ensure compliance with rail industry standards
3. New cable management products and materials that comply with EN45545 requirements and deliver lower total installed cost
4. With his broad selection of solution, Panduit is a single-source partner for the railway companies, to help them organize, connect, and protect electrical and mechanical systems

Product Offering

Product Line	Product Type
Non-Metallic Product Lines with Passenger Rail Testing	
Cable Ties & Accessories	Natural, -0, -30, -300, -69
Abrasion Protection	Braided Sleeving, Spiral Wrap
Wiring Duct	Type TNC, NNC, NE
Product Lines not needing Testing	
Stainless Steel	All
Ferrules	
Identification	Printable Heat Shrink
Installation Tools	Crimp tools, CT tools, Printers

Contacts

- Frederic Kalb (F-FK) +33 6 73 89 66 09
- Mark Pfaller (MJPF) x87429

Computer Printable Terminal Block Markers: Battlecard

Background

Computer Printable Terminal Block Markers are a unique and innovative solution for fast and easy labeling of terminal blocks in control panels. This solution can be printed on a TDP43ME thermal transfer desktop printer using Easy-Mark Plus Labeling Software and a standard thermal transfer resin ribbon. Using Panduit terminal block markers, customers can improve productivity and reduce labeling waste and costs.

Together with terminal block markers, Panduit offers a complete solution for control panel identification, including heat shrink labels, self-laminating wire markers, raised panel labels, voltage markers, arc flash labels, safety signs and more,

Key Value Propositions

Thermal Transfer Printable

- Use a single printer for all control panel labels
- Print on demand, using Panduit labeling software
- Allows easier setup and faster printing
- Crisp, clear thermal print – provides higher resolution print for smaller font sizes and better readability, and eliminates ink smearing
- Allows user of standard thermal transfer resin ribbon – no need for difficult, messy, or expensive ink pens and ink cartridges

Continuous Reel of Markers

- Easy loading in Panduit TDP43ME printer
- Print the exact number of markers needed
- Reduces marker waste
- Allows faster installation of markers into terminal blocks

Durability

- Flexible markers have superior holding strength, eliminating markers that fall out of terminal blocks
- Chemical and abrasion resistant
- Shock and vibration resistant
- Meets UL94-V0 for flammability

Competition

Weidmüller

- Offers an expensive, dedicated terminal block marker printer
- Also offers thermal transfer terminal block marker printer
- Panduit terminal block markers fit in Weidmuller terminals blocks

PHOENIX CONTACT

- Offers an expensive, dedicated terminal block marker printer
- Also offers thermal transfer terminal block marker printer. This printer is not able to print labels on rolls. For this, a second printer is needed.

WAGO

- Continuous reel of snap-in, rigid markers
- Limited part number and size offering
- Printer is not able to print all labels for control panels
- Printer is only 2" wide

BRADY®

- Offers continuous adhesive tape only
- Difficult to adjust terminal spacing
- No snap-in, terminal block markers

Target End User Customers

- **OEM Customers:**
 - Control Panel Builders
 - Control Panel Designers and Engineers
 - Equipment Manufacturers
- **IA Customers:**
 - Design Engineers
 - System Integrators
- **Allen Bradley and Weidmuller Terminal Block Users**
- **Panduit Control Panel Identification Customers**
- **Easy-Mark Plus Labeling Software Users**

What to Look For

1. Panduit control panel identification solution customers that are also labeling terminal blocks
2. Users of difficult terminal block marking systems
3. Customers that want to reduce scrap from wasted markers and wasted ink
4. Customers that experience marking system downtime with their current system
5. Customers that purchase pre-printed terminal block markers – Panduit solution offers greater flexibility to print custom markers on demand, as well as potential marker cost savings
6. Customers looking to consolidate suppliers or streamline production processes

Computer Printable Terminal Block Markers : Battlecard

Things You Should Know

1. Panduit terminal block markers are compatible with Allen Bradley and Weidmuller terminal blocks. Allen Bradley and Weidmuller terminal blocks are identical. Weidmuller is the manufacturer.
2. Panduit terminal block markers can be printed with your existing TDP43ME thermal transfer printer.
3. Terminal block markers are provided on a continuous reel, allowing you to print the exact number of markers needed, without waste.
4. You can print terminal block markers using standard thermal transfer resin ribbon, avoiding the problems of messy and expensive ink pens or ink cartridges.
5. Panduit offers multiple widths of thermal transfer resin ribbon, including 1" wide, 2" wide, and 4" wide, allowing users to choose the best width for their application. With the new 1" wide ribbon, terminal block markers can be printed with minimized ribbon waste. With 2" or 4" wide ribbons, terminal block markers can be printed using the same ribbon as other larger labels.
6. With the Panduit TDP43ME, you only need one printing system for all control panel identification needs.

Conversation Starters

1. How do you currently label terminal blocks?
2. What frustrations do you have with terminal block marker plotters and printers?
3. Do you ever have to purchase pre-printed terminal block markers?
4. Do you already print other types of labels for control panels, such as wire markers, raised panel labels, arc flash labels, or continuous tapes?
5. Would you like to be able to print all labels for a control panel with one printer and software?
6. Would you like to be able to create your terminal block markers in the same software, using the same label data, as you use for wire markers?
7. Panduit terminal block markers are unique and innovative.
8. Panduit offers a complete control panel identification solution.

Pull-Through Products

Desktop Printers and Labels

- TDP43ME Printer
- Easy-Mark Plus Labeling Software
- CAD-Connect Labeling Software
- Heat Shrink Labels
- Self-laminating Labels
- Turn-Tell Labels
- Raised Panel Labels
- Voltage Markers
- Safety Signage

Control Panel Solutions

- Wiring Duct
- Cable Ties
- Cable Accessories
- Terminals
- Abrasion Protection

Supporting Marketing Tools

- Specification Sheet
- Customer Presentation
- Distributor Presentation
- Control Panel Label Sample Bag
- J6 Demo Kit
- Product Videos
- Web Banners and Landing Page
- Thermal Transfer Line Card

Need Help?

ID Technical Support Team

- Phone: 1-866-871-457
- E-mail: GA-TechSupport@Panduit.com

Battlecard

2017 Panduit Tooling Program



Internal Use Only

Background

- **Overview** . This program builds on Panduit's position as a trusted advisor to our customers by providing consultative engineering, which includes Tooling Programs related to their OEM cable tie and terminal installation.
- **Value Prop:** Panduit provides higher quality tooling and installation processes, which maximize uptime and minimize downtime.
- **Applications:** The Panduit Tooling Program is ideal for OEM applications requiring quality installations that meet OEM specifications, including applications such as: Wire Harness and Mechanical fastening for white goods, Aerospace, Industrial and Heavy Equipment, Automotive and Truck industry verticals.

Customer Benefits

- **Certified Tool Calibration** – The Tension Checker Tool supports Quality Control and ISO certification processes. The Tension Checker Tool may be certified once per year by Panduit.
- **Blade Changing** - Blade changing program ensures consistent performance of the tool during the wire harness construction.
- **Professional Tool Repair** - Professional Tool Repair is provided for Tooling Program participants, which includes providing backup tools to minimize downtime.
- **Tool Savings** - Tooling packages are customized to fit each OEM/customer's requirements and are tailored to maximize their capital tool investment.

Contacts

- **Team: Cable Tie Hand Tool (CTHT) Tooling Program-** Team includes Jose Medina, Robert Rensa (Global), Hank Scot (NA), Frederic Kalb (EU) and Mark Pfaller. To begin an engagement please fill out the "Opportunity Assessment Form C2-1135" and contact **Jose Medina**; Jose.medina@Panduit.com, 708-532-1800, X88417.
- **Tooling Program Pricing** – Contact **Jose Medina**, and he will coordinate with pricing managers in theaters.
- **Tool Repair Procedures** – Cable tie hand tools that can no longer be adjusted using Tension Checker Tool should be returned to Panduit for repairs. Repair procedure will be according to contract agreement. To complete tooling repair at Panduit, contact customer service to receive a **Return Authorization Number**:
 - ✓ **North America:** Debbie Workman at Customer SVC.
 - ✓ **Europe:** To be available Q3'2017.

Collateral



Tooling Program Collateral

- Tooling Program Bulletin (External use approved)
- Opportunity Assessment Form C2-1135 (Internal use only)
- Tool Program Process Framework Template (External use approved)

Referenced Collateral

- Application Audit Program Brochure (Internal use only)

Battlecard

2017 Panduit Tooling Program

Internal Use Only



Sales Process and Steps

The notes below relate to recommended sales discussions in preparation for and delivery of the Panduit Tooling Program to the customer. While these notes pertain specifically to the Tooling Program, there are also other opportunities expected to be uncovered through this engagement with the customer – such as the Heavy Duty Application Audit program, and Wire Harness Demo program.

1. **Opportunity Assessment** - Panduit sales person fills out the “Opportunity Assessment Form C2-1135 ” and consults with Jose Medina to review the opportunity with the targeted customer including the distributor engagement.
2. **Customer Visit** -The completion of the “Opportunity Assessment Form C2-1135” will require a customer visit by the sales person to assess the following:
 - a) Understand the complete scope of tool variety (hand tools, pneumatics, auto tools, etc.) that are used throughout the facility.
 - b) Determine the general condition of existing tooling within the facility. This could have a major impact on the value of the capital investment for a tooling upgrade.
 - c) Determine opportunities for upgrade to pneumatics and auto tools.
3. **Distributor Involvement and Commitment** – Review potential products and programs (ex Tooling Program, Application Audit Program, etc.) with distributor to discuss and gain distributor support.

Tooling Program May Include

1. **Blade Changing options:** Blade changing may be done by the OEM or the by the Distributor. However, the process of changing blades is simple and it’s explained on the insert within each blade changing kit and should be advocated for the OEM to adopt.
2. **Tool Calibration Measurements and Adjustments:** OEMs may use Tension Measurement Tool (TMI-XXX) to measure the cable tie hand tool tension status and adjust the hand tool tension knob up to an acceptable available tension level.
3. **Procedures & Training** – Panduit, in conjunction with the customer establishes a set of procedures and assists in delivering needed training to understand and implement the new procedures. Procedures include: Tool Maintenance Program, and Cable Tie Installation Procedures.
 - a) Customized procedures may be reviewed with key OEM personnel remotely via SKYPE or onsite if required by the OEM.
 - b) A signed Mutual Non-Disclosure Agreement (MNDA) with the OEM is required before delivering the final procedure and training to the OEM.
4. **Tooling Repair** – Options to explore:
 - a) Specialized pricing for tool repairs (fixed on a per tool price)
 - b) Backup inventory arrangements made with OEM to provide immediately replacement as required to eliminate downtime.
 - c) Replacement inventory may be held at distributor for end of life replacements.
5. **Price Proposal** – Contact Jose or your pricing manager to build a quote. Considerations:
 - a) Same price for multiple manufacturing sites under the same program.
 - b) Specialized pricing for tool repairs.

VeriSafe™ Absence of Voltage Tester Battlecard



Background

When servicing electrical equipment, workers must comply with safety regulations that require a voltage verification test to validate the absence of voltage. This process includes a number of stages that can be complex, time-consuming, and dangerous when using hand-held electrical test equipment. The VeriSafe™ Absence of Voltage Tester minimizes risk by verifying the absence of voltage before the panel door is opened.

Value Propositions

- Reduce the risk of exposure to electrical hazards for improved worker safety
- Reduce testing procedure time and complexity to improve productivity
- Supports compliance when used as part of the lockout/tagout process described in NFPA 70E

Components



- The **Isolation Module** connects to the power conductors of the electrical system and contains the test and verification circuitry.
- The **AVT System Cable** connects the Indicator Module to the Isolation Module.
- The **Indicator Module** is mounted on the exterior of the electrical system and with a push of a button initiates the test process and provides visual indication.

How VeriSafe Product Works

Pressing the test button on the Indicator Module activates the testing process:

- 1) Self test
- 2) Verifies installation of sensor leads on power conductors
- 3) Checks for voltage – phase to phase, phase to ground
- 4) Verifies installation of sensor leads on power conductors
- 5) Self test
- 6) Visual indicator provided



RED LEDs indicate presence of AC voltage (Voltage Indicators)



YELLOW LED

- Flashing yellow LED indicates test is in progress.
- Solid yellow LED after the test indicates the absence of voltage could not be confirmed.



GREEN LED confirms the absence of voltage (AVT function)

Additional Product Information

Go to panduit.com or VeriSafe landing page: www.panduit.com/verisafe

- Product Bulletin
- Videos
- CAD Files
- Instruction Manual
- FAQs

VeriSafe™ Absence of Voltage Tester Battlecard



Target Vertical Markets

Indoor industrial environments. VeriSafe is sold to but not limited to the following target verticals:

OEM

- Control Panel Manufacturers
- Machine Builders
- System Integrators

IC/MRO

- Oil and Gas
- Paper and Pulp Industry
- Industrial Manufacturing
- Automotive
- Water/Wastewater Facilities
- Food/Bev & Packaged Goods



Target Buying Personas

VeriSafe is sold to but not limited to the following customer buying personas:

OEM

- Design Engineering
- Controls Engineer
- Production Manager
- Purchasing

IC/MRO

- Facilities Maintenance Manager
- Electrical Maintenance
- Safety Management
- Controls Engineer



Key Selling Points

Absence of Voltage Testers (AVTs) are permanently-mounted test devices used to verify a circuit is de-energized prior to opening an electrical enclosure

What VeriSafe is:

- VeriSafe is a tester, not just an indicator.

What does VeriSafe Provide?

- Verify the absence of phase-to-phase and phase-to-ground AC and DC voltage **up to 600V circuits.**
- Built-in test circuit verifies operation on a known voltage source before and after absence of voltage test
- Contain provisions to ensure tester is properly installed and in direct contact with the circuit at time of testing
- Absence of Voltage confirmed with green light (active indication).
- Safety functions meet SIL 3
- Automated test sequence helps reduce operator errors

Panduit is the only manufacturer who:

- Provides active testing to confirm de-energized voltage
- Verifies Installation
- **Safety functions meet IEC 61508 (SIL 3)**
- **Listed as an AVT per UL 1436**
- **Meets the requirements for installed testers NFPA 70E-2018 120.5 (7) Exception 1**

Statements on Personal Protective Equipment (PPE):

- Panduit does NOT provide any recommendations on PPE.
- Each user will have their own set of safety procedures. Therefore, Panduit cannot account for all the variables in each application a customer will have.



Competition – Voltage Indicators

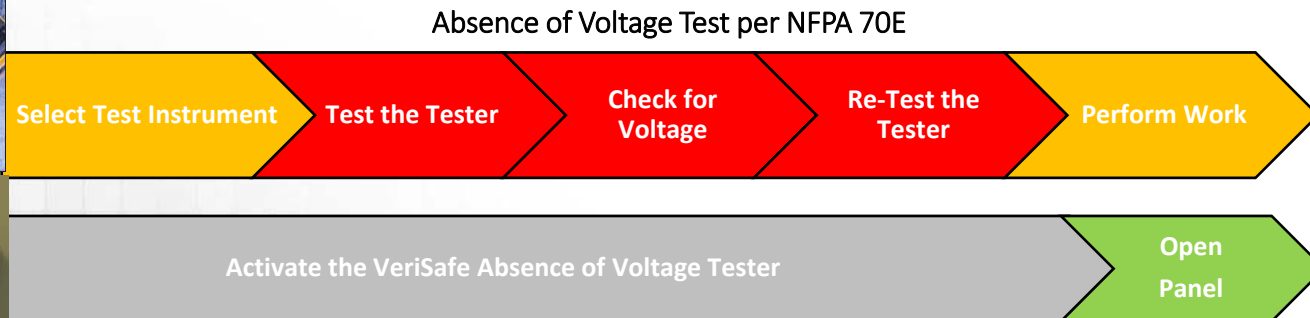
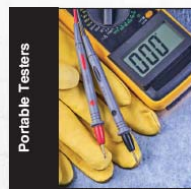
- Panduit VeriSafe is not a voltage indicator. It is an Absence of Voltage Tester (AVT).
- Voltage indicators do not meet the requirements of UL 1436 and cannot be used to comply with NFPA 70E.
- Voltage indicators only tell you if voltage is present on the system. There is no active test to verify absence of voltage.
- Voltage indicators do not perform TEST-THE-TESTER verification.
- When the lights are off on an indicator device, there could still be voltage due to hardware failure (e.g. device malfunction or LED burn-out), or improper installation (e.g. loose leads).

Product Features	Other Voltage Indicating Products			Panduit
	Voltage Indicator	Optical Indicator	Voltage Test Station	VeriSafe AVT
External Footprint	1 footprint	1 footprint	3 footprints	1 footprint
Voltage presence indicators	✓	✓	✓	✓
Test for absence of voltage			✓ <small>Requires additional tool</small>	✓
Absence of voltage indicator				✓
Verifies installation <small>(confirmation tester is in direct contact with circuit)</small>				✓
Safety functions meet IEC 61508 SIL 3				✓
No hazardous voltage on door		✓		✓
Install without overcurrent protection		✓		✓
UL 1436 listing / NFPA 70E-2018 120.5 (7)				✓
Cost	\$	\$\$	\$\$\$	\$\$

Comparison to Portable Voltage Testers

Note:

- VeriSafe AVT offers a faster process of verifying absence of voltage than using a portable tester.
- VeriSafe does not replace portable testers. Portable Voltage testers are still needed to troubleshoot circuits inside the panel.



VeriSafe Battlecard for North America

Background

When servicing electrical equipment, workers must comply with safety regulations that require a voltage verification test to validate the absence of voltage. This process includes a number of stages that can be complex, time-consuming, and dangerous when using hand-held electrical test equipment. When power is disconnected, the VeriSafe™ Absence of Voltage Tester minimizes risk by verifying the absence of voltage before the panel door is opened.

VeriSafe™ Absence of Voltage Testers

- Reduce the risk of exposure to electrical hazards for improved worker safety
- Reduce testing procedure time and complexity to improve productivity
- Supports compliance when used as part of the lockout/tagout process described in NFPA 70E

Target Vertical Markets

Indoor industrial environments. VeriSafe is sold to but not limited to the following target verticals:

OEM

- Control Panel Manufacturers
- Machine Builders
- System Integrators



IC/MRO

- Oil and Gas
- Paper and Pulp Industry
- Industrial Manufacturing
- Automotive
- Water/Wastewater Facilities
- Food/Bev & Packaged Goods

Target Buying Personas

VeriSafe is sold to but not limited to the following customer buying personas:

OEM

- Design Engineering
- Controls Engineer
- Production Manager
- Purchasing

IC/MRO

- Facilities Maintenance Manager
- Electrical Maintenance
- Safety Management
- Controls Engineer

Distribution

VeriSafe will be sold through the following channels:

- **Electrical Distribution (examples)**
 - Graybar
 - WESCO
 - Rockwell Dist.
 - Independent Dist.
- **Electronic Distribution (examples)**
 - Heilind
 - TTI
 - Carlton Bates
- **Industrial Distribution (examples)**
 - Fastenal
 - Grainger



Key Selling Points

Absence of Voltage Testers (AVTs) are permanently-mounted test devices used to verify a circuit is de-energized prior to opening an electrical enclosure

What VeriSafe is:

- VeriSafe is a tester, not just an indicator.

What does VeriSafe Provide?

- Verify the absence of phase-to-phase and phase-to-ground AC and DC voltage **up to 600V circuits.**
- Built-in test circuit verifies operation on a known voltage source before and after absence of voltage test
- Contain provisions to ensure tester is properly installed and in direct contact with the circuit at time of testing
- Absence of Voltage confirmed with green light (active indication).
- Safety functions meet SIL 3
- Automated test sequence helps reduce operator errors

Panduit is the only manufacturer who:

- Provides active testing to confirm de-energized voltage
- Verifies Installation
- **Safety functions meet IEC 61508 (SIL 3)**
- **Listed as an AVT per UL 1436**
- **Meets the requirements for installed testers NFPA 70E-2018 120.5 (7) Exception 1**

Statements on Personal Protective Equipment (PPE):

- We should NOT provide any recommendations on PPE.

Why do we want to take this position?









- Each customer will have their own set of safety procedures
- We cannot account for all the variables in each application a customer will have

Above all, focus on the functionality of the VeriSafe device and what regulatory/agency approvals we have obtained.

VeriSafe Battlecard Competition - Grace is the Key Competitor



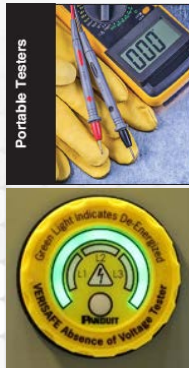
- Grace Engineering is the market leader in Voltage Indicators. Voltage Indicators do not meet the requirements of UL 1436 and cannot be used to comply with NFPA 70E.
- Grace products only tell you when voltage is present on the system. There is no active indicator to detect absence of voltage.
- When the Grace lights are off, there could still be voltage if there is a hardware failure (the Voltage Indicator didn't function normally or the LEDs failed).
- Could be improper installation/loose leads (Voltage Indicator became disconnected from its source – no installation test).
- Grace products do not perform TEST-THE-TESTER verification and eliminating them from the SIL 3 rating.

Product Features	Grace Engineering Products			Panduit
	Voltage Indicator 	Optical Indicator 	Voltage Test Station 	VeriSafe AVT 
External Footprint (size of knockout on door)				
Voltage presence indicators (red lights)	✓	✓	✓	✓
Test for absence of voltage			✓ Requires additional tool	✓
Absence of voltage indicator (green light)				✓
Verifies installation (confirmation tester is in direct contact with circuit)				✓
Safety functions meet IEC 61508 SIL 3				✓
No hazardous voltage on door		✓		✓
Install without overcurrent protection		✓		✓
UL 1436 Listing / NFPA 70E-2018 120.5 (7)				✓
Cost	\$	\$\$	\$\$\$	\$\$

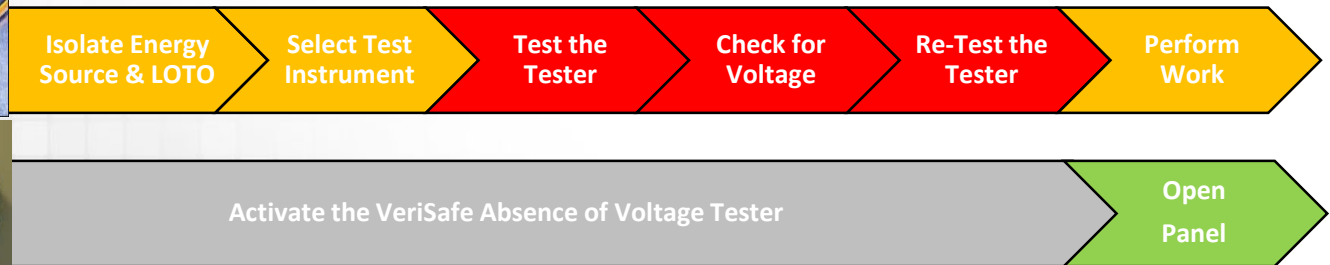
Other Competition - Portable Device Testing Methods

Note:

- Portable Voltage Testers are not competitors.
- Only the process of verifying absence of voltage with a portable device is.
- Portable Voltage testers are still needed to troubleshoot circuits inside the panel.



Comparison of VeriSafe (AVT) and Portable Device Testing Methods (NFPA 70 Requirements)



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VeriSafe Battlecard - Additional Information and Support



Components



- The **Isolation Module** connects to the power conductors of the electrical system and contains the test and verification circuitry.
- The **AVT System Cable** connects the Indicator Module to the Isolation Module.
- The **Indicator Module** is mounted on the exterior of the electrical system and with a push of a button initiates the test process and provides visual indication.

Identify Sales Targets

- Review target account list from BU
- Work with distributors on contacts/targets
- Contact high-volume control panel manufacturers, end-users, and consultants
- Review OSHA voluntary protection program and citations for local contacts
- <https://www.osha.gov/dcsp/vpp/index.html> and <https://www.osha.gov/oshstats/index.html>
- Contact local IBEW safety leaders, NECA chapters, IEEE chapters, and other relevant professional societies
- Share high-level presentation or video with customer.
- Follow up with detailed in-person conversation.

External Resources

External resources are located at product landing page:

www.panduit.com/verisafe

- Product Bulletin
- Videos
- CAD Files
- Instruction Manual
- FAQs

Additional External Resources:

- Eligible for the Control Panel Partner Program
- Add on items like: Grounding Bus Bars, Duct, ID, etc.
- Application Add On's will be available before launch

How It Works

Pressing the test button on the Indicator Module activates the testing process:

- 1) Self test
- 2) Verifies installation of sensor leads on power conductors
- 3) Checks for voltage – phase to phase, phase to ground
- 4) Verifies installation of sensor leads on power conductors
- 5) Self test
- 6) Visual indicator provided



RED LEDs indicate presence of AC voltage (Voltage Indicators)



YELLOW LED

- Flashing yellow LED indicates test is in progress.
- Solid yellow LED after the test indicates the absence of voltage could not be confirmed.



GREEN LED

confirms the absence of voltage (AVT function)

Internal Resources

Refer to Sales Enablement Portal for internal resources:

- **VeriSafe demo** for in-person meetings.
- Mechanical Product Sample
- Competitive Analysis
- Distributor Presentations
- Battle card
- Technical Documents



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