PANDUIT® PAN-STEEL®
Stainless Steel Ties are engineered to outlast the toughest corrosive and environmental extremes.

Now a revolutionary new locking head design makes them the highest rated loop tensile strength, tightest clamping, easiest threading ball locking ties in the world. The increased performance of the PAN-STEEL™ System provides an extra margin of safety and lower installed cost.

- Withstands harsh environments
- Unique locking ramp
- Self-locking with low thread force
- Fully rounded edges
- Type 304 and 316 stainless steel
- State-of-the-art tooling

A Revolutionary New Design in Stainless Steel Ties
Self-Locking Head Construction

1. New aggressive locking head*
   Quickier locking, tighter installation
2. Exclusive lead in design*
   Wider entrance for easier threading
3. Innovative displacement lock*
   Assures superior locking strength
4. Extended retaining tab
   Increases overall tie strength
5. Unique locking ramp
   Assures locking in any position
6. Strengthening ribs**
   Stronger head increases lock strength

* Patented
** Patent Pending

PANDUIT® is a Global Leader Providing Innovative Wire Management Solutions.

- Stainless Steel Systems
- Cable Ties and Accessories
- Raceway Systems
- Routing Systems
- Identification Systems
- Power and Grounding Systems
- Terminals
- Safety and Facility Solutions
The Pan-Steel System provides a strong, durable method of bundling, identifying and fastening, which can be used in virtually all indoor, outdoor and underground (including direct burial) applications, where severe environmental conditions exist. The ties are designed for use in critical applications where strength, vibration, radiation, weathering, corrosion and temperature extremes are a factor.

- High strength
- Long life
- Weather resistant
- Chemical resistant
- Temperature extremes
- Radiation resistant
- Permanent identification

Panduit offers unique products to meet customer needs:

**Metal Locking Ties** — Excellent performance in any environment

**Nylon 11 Selectively Coated Ties** — Strength of steel, protection of nylon

**WAVE-TY Stainless Steel Ties** — Maintains a high tension grip on non-resilient objects

**Fully Coated Ties** — Polyester coated for additional bundle protection

**Strapping** — Reduces installation time and leaves no sharp edges

**Mounts and accessories** — Used with Pan-Steel ties and straps to speed and simplify mounting

**Permanent identification products** — Custom identification for harsh environments

**State-of-the-art tooling** — Speed installation and lower installed cost
**PANDUIT® Pan-Steel® Applications**

**AIRCRAFT**

PANDUIT® Pan-Steel® Stainless Steel Ties (type MLT) are used to fasten thermal insulation blankets to jet engine manifolds and tubes.

**PRIMARY BENEFIT**

Installation tooling with controlled tension and auto cut-off capability significantly reduces cost of installation. The low weight, high strength of the ties makes them more efficient and reliable than conventional fasteners. The stainless steel ties have been temperature tested to over 1000° F (538°C) to provide excellent continuous service over the entire temperature range and to provide long life.

**AIRCRAFT**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to secure insulation envelopes to ducting in aircraft fuselages.

**PRIMARY BENEFIT**

The ties have been tested to over 1000° F (538°C) which provides excellent continuous service over the entire operating range. The single wrap, self-locking low weight design provides improved efficiency and reliability.

**TRUCK ENGINES**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to fasten thermal insulation blankets to truck engine exhaust pipes.

**PRIMARY BENEFIT**

The ties provide high strength, low profile and low weight design, which are more efficient than conventional fasteners. The ties are temperature tested to over 1000° F (538°C) for performance under continuous high temperature conditions.

**AUTOMOTIVE**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to fasten constant velocity (CV) boots on front wheel drive automobiles.

**PRIMARY BENEFIT**

The ties can be installed without disassembling the constant velocity (CV) joint which saves installation time and lowers installed costs. The stainless steel ties provide excellent weather resistance and corrosion resistance for long life with high strength and low weight.

**AUTOMOTIVE**

PANDUIT® Pan-Steel® WAVE-TY™ Stainless Steel Ties and the PPTMT Pneumatic Installation Tool are used to fasten heat shields on automotive exhaust assemblies.

**PRIMARY BENEFIT**

Pneumatic installation tooling with controlled tension and automatic cut-off capability speeds installation time and lowers installed costs. WAVE-TY™ Stainless Steel Ties retain tension on a solid bundle where other stainless steel ties will not function.
PANDUIT® Pan-Steel® Applications (continued)

**TELECOMMUNICATIONS**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to secure fasten cables to telecommunication towers.

**PRIMARY BENEFIT**
The ties provide long life, corrosion and chemical resistance in outdoor harsh environments and temperature extremes. The self-locking design provides fast and easy installation. State-of-the-art tooling further reduces installation time.

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**MAINTENANCE AND REPAIR (MRO)**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to fasten pipe markers in pulp and paper mills, refineries, power plants and breweries.

**PRIMARY BENEFIT**
The ties provide extended service life, which reduces the need for periodic rework. The single wrap self-locking design provides fast and easy installation. The ties provide excellent chemical resistance in harsh environments and in high temperature extremes.

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**MAINTENANCE AND REPAIR (MRO)**

PANDUIT® Custom Marked Marker Plates attached with Pan-Steel® Stainless Steel Ties are used to identify conduit and circuits in petrochemical plants, pulp and paper mills, refineries, and breweries.

**PRIMARY BENEFIT**
The products are marked to meet customer specifications with one of two computer controlled systems (laser or embosser), which provides permanent identification to resist corrosion, abrasion, and radiation in harsh environments.

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**PETROCHEMICAL PROCESSING**

PANDUIT® Pan-Steel® Stainless Steel Ties, Strapping and Marker Plates are used in chemical plants to bundle cables to cable trays and to identify conduit and cables.

**PRIMARY BENEFIT**
The ties provide long life, corrosion resistance and high temperature extremes and allow the ties to be used in many different applications.

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**NUCLEAR PLANTS**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to secure heat trace cable and replace wing seal strapping methods. A complete selection of state-of-the-art tooling makes installation quicker and easier and reduces the amount of exposure time for plant maintenance personnel in containment areas.

**PRIMARY BENEFIT**
The ties have high radiation resistance (2X10⁸ RAD) for excellent use in containment areas.
PANDUIT® Pan-Steel® Applications (continued)

**TRAFFIC SIGNALS**

PANDUIT® Pan-Steel® Stainless Steel Ties are used for bundling and fastening cables to messenger strand in traffic signal applications.

**PRIMARY BENEFIT**
The ties provide a 40 year service life, which reduces the need for periodic rework. The smooth fully radiused sides are safe to use and will not injure installer's hands or abrade cable insulation.

**AERIAL SUPPORT**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to fasten cable and/or splice closures to the messenger strand in aerial support applications.

**PRIMARY BENEFIT**
The ties provide a 40 year service life, which reduces the need for periodic rework. The ties are unaffected by sun, acid rain, or most chemicals, which allows them to be used in many different environments.

**OFFSHORE OIL**

PANDUIT® Pan-Steel® 316 Grade Stainless Steel Cable Ties, Straps, and Nylon 11 Selectively Coated Ties are used to fasten cables and hoses on offshore platforms.

**PRIMARY BENEFIT**
The ties provide superior corrosion protection in salt spray environments, which extends service life and reduces need for periodic rework.

**SHIPBUILDING**

PANDUIT® Pan-Steel® Stainless Steel Cable Ties are used to fasten cables to cable trays and cable hangers in shipbuilding applications.

**PRIMARY BENEFIT**
The ties provide extended service life, which reduces the need for periodic rework; are non-flammable so no toxic or harmful gases are released in case of fire; and have fully rounded sides, which are safe to use and will not injure installer's hands or abrade cable insulation.

**RAILROAD**

PANDUIT® Pan-Steel® Stainless Steel Ties are used to bundle, fasten, and secure cables and hoses on trains, especially in exposed areas underneath engines and cars that are subjected to harsh environmental conditions. The ties have passed Japanese Industry Standard for salt spray (JIS-C-5028) and vibration (JIS-C-4031).

**PRIMARY BENEFIT**
The ties provide high strength with low weight and low profile for improved efficiency and reliability. The extended service life reduces the need for periodic rework.
**Stainless Steel Systems**

**Metal Ties**

**Pan-Steel® Stainless Steel Ties (MLT Series):** Metal locking ties, ball lock version in .17" (4.4mm), .25" (6.4mm), .31" (7.9mm), .50" (12.7mm), and .63" (15.9mm) widths

**Custom Length Banding System:** Provided in reels in .17" (4.4mm), .25" (6.4mm), .31" (7.9mm), .50" (12.7mm), and .63" (15.9mm) widths

**Metal Straps**

**Stainless Steel Straps (MS Series):** Fold-over buckle design in .38" (9.5mm), .50" (12.7mm) and .63" (15.9mm) widths

**Custom Length Strapping System:** Provided in reels in .375" (9.5mm), .50" (12.7mm) and .63" (15.9mm) widths
**PAN-Steel® Self-Locking Stainless Steel Cable Ties (MLT Series)**

PANDUIT® is a leading producer of stainless steel ties for harsh environments. New designs are continually introduced to meet the application challenges encountered by our customers, while providing the lowest installed cost.

- Self-locking
- Fully rounded edges
- Low thread force
- 100% Stainless Steel construction
- Patented displacement lock
- Unique locking ramp
- Patented lead-in design
- Extended retaining tab
- Patented aggressive locking head
- Patent pending strengthening ribs
- Complete line of installation tools

PANDUIT® offers unique products to meet customer needs:

**General Purpose Ties** — Excellent performance in any environment

**WAVE- Ty® Stainless Steel Ties** — Unique wave form spring maintains a high tension grip on non-resilient objects

**Patented Nylon 11 Selectively Coated Ties** — Strength of steel, protection of nylon

**Fully Coated Ties** — Polyester coated for additional bundle protection

**Double Loop Ties** — Tighter tensioning and higher loop tensile strength

**Complete Line of Installation Tools** — Manual and pneumatic installation tools for controlled tension, automatic cut-off and lower installed cost.

For service and technical support, call 800-777-3300 (outside the U.S. and Canada, see back cover).
A revolutionary new design in stainless steel ties!

Engineered for the most extreme applications...
- World's highest rated loop tensile strength ball locking tie for an extra margin of safety
- Aggressive head design provides higher retained tension for a more secure bundle
- Exclusive lead-in design for quick, easy threading for fastest installation time

Advantages of the Rounded Side of Pan-Steel® Stainless Steel Ties

The Pan-Steel® Stainless Steel Cable Tie is designed for superior comfort and safety when handling due to its fully rounded sides and smooth surfaces. Smooth surfaces and rounded sides assure cable protection and operator safety. PANDUIT® not only removes the burr, but actually passes the material through a secondary process which removes the top and bottom corners of the material.
Self-Locking Head for Fast Installation

1. Place tie around bundle, put tip through head and pull up tight by hand.

2. Use one of the PANDUIT® Pan-Steel® installation tools to tension and cut off excess tail quickly.

The stainless steel metal locking tie series can be fastened by hand as shown in Photo 1. No tools are required. Just place around bundle, pull the tip of the tail through the locking head and pull up tight by hand. The self-locking head secures the tie in place. Photo 2 shows the metal locking tie series being installed with the PANDUIT® GS4MT tool, which automatically tensions and cuts off excess tie. The system provides adjustable tension control and automatic cut-off for quick, consistent and secure installation with the lowest installed cost.

Part Number System Example – MLT Series

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Bundle Diameter Reference (Inches)</th>
<th>Cross-Section</th>
<th>Package Qty.</th>
<th>Material</th>
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<tr>
<td>Metal Locking Tie</td>
<td>S = Standard</td>
<td></td>
<td>Q = 25</td>
<td>(blank) 304</td>
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<tr>
<td></td>
<td>LH = Light Heavy</td>
<td></td>
<td>L* = 50</td>
<td>316</td>
</tr>
<tr>
<td></td>
<td>H = Heavy</td>
<td></td>
<td>LP** = 50</td>
<td>= 316</td>
</tr>
<tr>
<td></td>
<td>EH = Extra Heavy</td>
<td></td>
<td>CP = 100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SH = Super Heavy</td>
<td></td>
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</tr>
</tbody>
</table>

*Standard Cross-Section
**Heavy Cross-Section