



Wind Power Solutions

WIND POWER

The future of sustainable energy has arrived. With wind power currently supplying millions of homes and businesses throughout the country with electricity, it's no wonder why it is the fastest growing electrical generation source in the world. This clean, mainstream supply of electric power is expected to provide up to 20% of U.S. energy by 2030. Wind turbines and farms are expanding throughout the United States at rapid rates and is rising to be a fundamental source of power for North America and the world.

HellermannTyton – a Leader in Supplying the Wind Power Market.

Globally, HellermannTyton is specified at key turbine manufacturers and is the preferred supplier for the different segments of the wind power market. From the turbine to the foundation and throughout the wind farm, HellermannTyton's products are used primarily in wire harness and protection, control panel, component/blade protection and data acquisition applications. HellermannTyton has stepped to new heights by providing exceptional and extremely durable products to ensure peace of mind when it comes to securing, protecting, identifying, and connecting cables, wires, and components needed in wind power installations.

With a global footprint, HellermannTyton utilizes its unique set of resources to deliver what you need –

- Innovative products offering lowest installed cost
- Global key account management
- Delivery from local facilities, wherever in the world you need them



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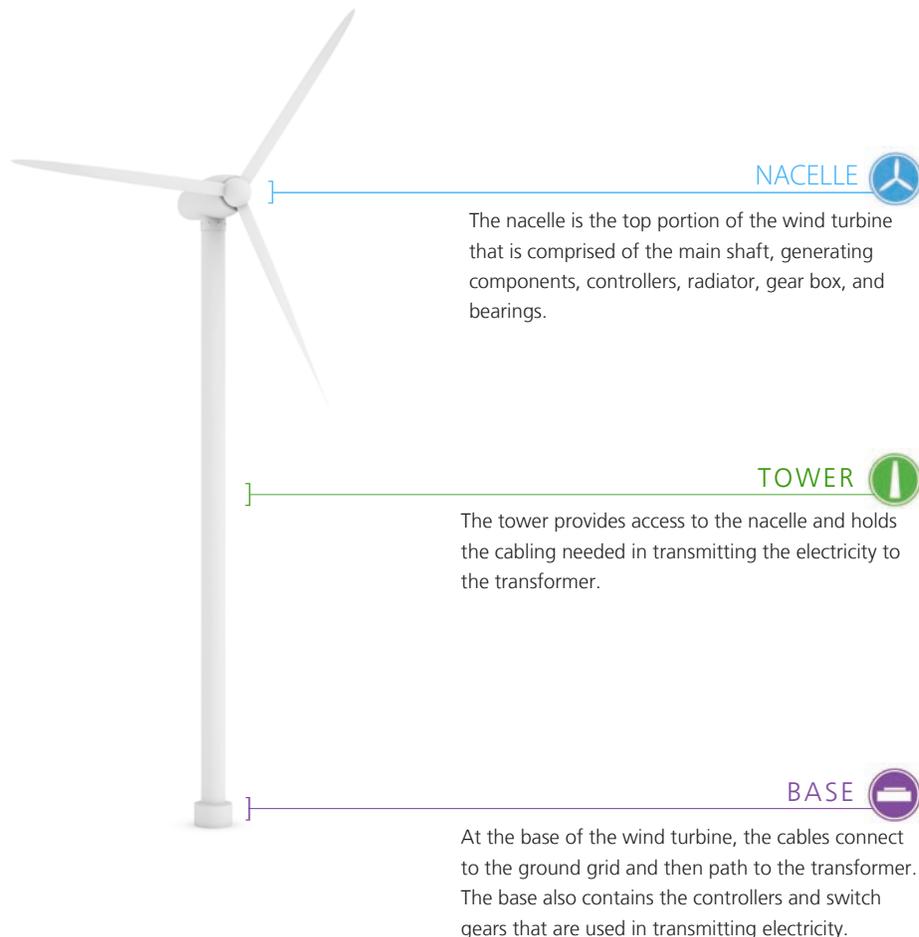
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BUILDING TOGETHER

HellermannTyton understands that the construction of each wind turbine and farm is crucial to its performance. With the extreme natural conditions the wind turbine has to withstand during its lifespan, it is vital to ensure that each piece of the configuration aims to perform reliably in these elements. HellermannTyton is dedicated to ensuring our products are fully tested and optimized for weather extremities - giving reassurance that each cabling system will remain secure and intact.

As a major OEM and tier supplier to the wind industry, HellermannTyton offers global design expertise while providing a variety of materials that are specially formulated to meet challenging conditions. Our products are UL, CSA, and CE certified and have passed rigorous quality inspections so that we can deliver products which perform up to and beyond specification on a continual basis. HellermannTyton is certified to TS 16949:2002, ISO 9001:2000 and ISO 14001 and has received numerous recognitions from customers acknowledging the highest level of quality performance.

WIND TURBINE



Innovation, with an obsession for helping solve customers' needs, drives HellermannTyton's product development. Taking a systemic approach to growing its product line, HellermannTyton's range of products works well together to provide customers with the lowest installed costs in the industry. Utilizing the latest technologies in design and prototyping tools, HellermannTyton's experienced development teams work closely with customers to assure groundbreaking performance, lower labor rates, reduced administrative and inventory costs, and overall results which exceed expectations.



Cable Ties

HellermannTyton's cable ties are offered in a wide variety of styles, materials, and colors to accommodate the range of harnessing and bundling applications required in the wind power market. HellermannTyton's cable ties withstand 18 to 250 lbs of force and can secure bundle diameters up to 16". Whether the application demands mounting, releasable, or identification features, HellermannTyton has the cable tie to fit the requirement.



Mounting Bases

Mounting bases and bundle separators are used in conjunction with cable ties to stabilize and secure wiring bundles, both indoors and outdoors. These mounting bases can be secured to a surface using rubber based, acrylic, and heavy bonding adhesives, or also can be mechanically mounted.



Cable Tie Tools

Specially developed for maximum ergonomic and performance values, the Mark 7 and Mark 9 series tools combine reduced hand effort and durable components to ensure efficient assembly and a longer life cycle. The Mark 7 tools are used with T18 through T50 series HellermannTyton cable ties and is the preferred tool for harness manufacturers. The Mark 9 tools (shown above) can be used with nearly every HellermannTyton cable tie and are recommended for use at the turbine installation site.

CABLE BUNDLING SOLUTIONS



Construction of wind turbine utilizing bundling solution products to secure and manage wire harness.



Automatic Tools

Automatic Cable Tie Tools apply, tension, and cut-off cable ties in less than one second. They are compact, fast, reliable, and versatile, accommodating a variety of wiring harness and bundling and securing requirements. These tool systems are designed to provide significant labor and cost savings through process improvements, lower installed costs and greater application consistency. They also help to reduce repetitive motion injuries.



Heavy Duty Ties & Mounts

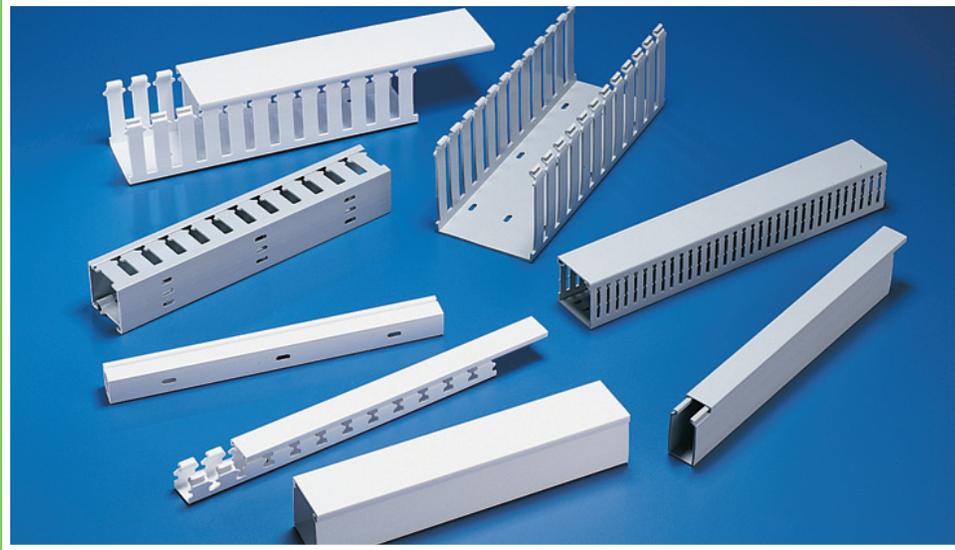
HellermannTyton's heavy duty cable ties and mounts eliminate the need to carry multiple sizes of fixed bundle diameter clamps, which reduces inventory and purchasing costs while simplifying the assembly process. Adding and servicing cables within the bundle is easy. Simply remove the cable tie, leave the mount in place, and replace the cable tie. Our high impact materials are more flexible and less susceptible to moisture fluctuations than standard cable tie materials.



Bundle Separation Products

HellermannTyton's bundle separation range of products are designed for applications that require cables to be run parallel to each other. These products separate the bundles to avoid abrasion or interference, ensuring reliable cable performance.

WIRE & CABLE PROTECTION SOLUTIONS



HellermannTyton offers a wide variety of wiring duct to accommodate color, width, and routing preferences.



Wiring Duct

Wire and cable management products allow users to neatly and efficiently manage wire and cable in many different ways. Solid wall Pro-Duct wiring duct is designed for straight wire runs where breakouts are not required. Slotted wall Pro-Duct features break-away fingers which provide additional access for wire leads. Each section of the duct is provided with two score lines. The upper score line is used to break away fingers when a greater opening is required. The lower score line allows the sidewall to be smoothly cut

for joints and "T's". High-density slotted wall Pro-Duct comes with narrow fingers, equaling a 2 to 1 finger ratio compared to standard slotted wiring duct. The narrow fingers reduce fanning of the wires to the terminal blocks for a neater appearance and to accommodate more compact designs and components in control panels, communications and other applications.



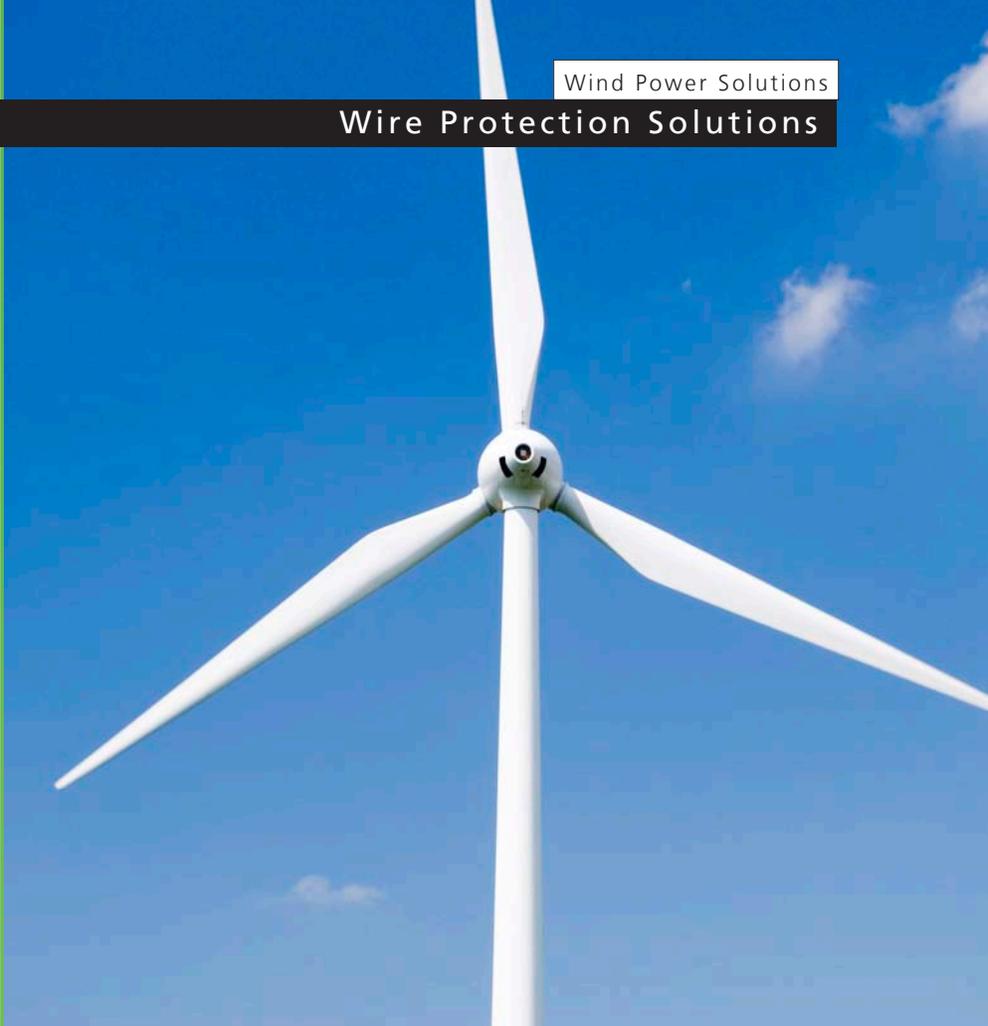
SpiralWrap

Spiralwrap provides necessary cable routing and protection when flexibility around corners and bends is desirable. Spiralwrap is a protective sheath which is wrapped around a group of cables to shield, organize and control it. It is also used to protect edges of components during the manufacturing process. Offered in many sizes and colors, Spiralwrap is very flexible and adaptable to most environments. UL recognized, HellermannTyton Spiralwrap is reusable and resistant to most chemicals.

Depending upon your requirements, HellermannTyton has a wide array of solutions to efficiently route and protect wire and cable. Our offerings from wiring duct to Spiralwrap will allow you to find the perfect fit for your next project.

Key Applications:

- control panels
- cable protection between cabinets
- cable protection from sensors to cabinets



Braided Sleeving

Braided sleeving offers flexible cable protection, resistance from abrasion, and ease of application. It is often used for EMC shielding of cables going from sensors to controls. The sleeving is specially woven to expand when compressed and contract when pulled apart. To receive optimal fit, HellermannTyton braided sleeving accommodates a variety of cable diameters and comes in different materials to perform in moderate to extreme environments.



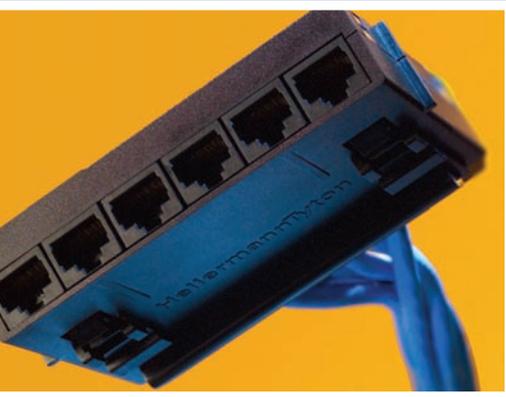
Convoluted Tubing

Convoluted tubing provides an efficient method of routing and protecting wire and cable, while reducing the chance of installation damage. It can also serve to protect valuable wiring circuits. HellermannTyton convoluted tubing offers excellent protection against vibration, wear, water, snow, ice and the effects of heat, cold and sunlight on cables and wires.



Heatshrink Tubing

Heatshrink tubing is used as a protective covering over cable. Just shrink it down to size to form a tight seal that protects from abrasion and environmental conditions. It is offered in a variety of sizes and materials to ensure for a proper fit in any environment.



CONNECTIVITY

HellermannTyton's connectivity solutions are used in the general control of the wind turbine, as well as for data acquisition in the wind farm. With high quality and time saving options, proven performance and durability, HellermannTyton's solutions assure trouble-free installations that last.

Fiber Solutions

HellermannTyton offers a full range of fiber optic connectivity products to support both multimode and single mode applications. Solutions include rack mount and wall mount fiber enclosures, adapter panels, fiber modules and connectors.



Also available is the CableTyte line of underground and aerial fiber enclosures. These enclosures provide the ultimate protection for fiber optic splices in various environmental conditions.



Copper Solutions

When using HellermannTyton modular jacks, patch panels, and patch cords, the Deca¹⁰ Category 6A, Gigaband[®] Category 6 and Megaband[®] Category 5e systems, are independently tested to exceed the TIA requirements for structured cabling systems.



Patch Panels & Jacks

To connect point A to point B, HellermannTyton manufactures patch panels and other connectivity products to ensure that data is transmitted as intended. Whether your system requires fiber or copper, HellermannTyton's connectivity products assure reliable data transmission to the specifications stated in each category. Used in environments as tough as a nuclear test site under construction, HellermannTyton's solutions result in pleased customers. **"To me, one of the ultimate things that a company can say about its products is that they can survive the dirt, dust and harsh conditions of the construction environment. We've been installing HellermannTyton products in a typical construction environment for over three years now and, in that time, we've not had one single failure."**

The RackSnap is an accessory item popular for decreasing time to install a panel. The RackSnap comes preassembled in certain HellermannTyton patch panels and eliminates the need for cage nuts. With RackSnap, you avoid a hand or finger injury or losing the cage nut during installation. The patch panel can be taken out of the box and snapped directly into most cabinets.



Racks & Cable Management

Correct cable management is crucial for any project. To help manage vertical and horizontal cable, HellermannTyton offers a full range of wire managers. Available in a slotted duct version or an increased bend radius version, these wire managers properly route copper and fiber cabling.

RAPIDNET

Pre-Terminated Solutions

RapidNet is high performance pre-terminated "connect and go" system developed by HellermannTyton which offers fiber and copper solutions within the same footprint. Our pre-terminated solutions do not require on-site termination or certification testing which dramatically reduces installation time - up to 85%. Installations are completed in record time because quality and performance are never compromised. Cut to customer specified lengths; each individual link is terminated and tested by HellermannTyton before being delivered to the site.

Installer Benefits

- More projects completed with the same workforce
- Factory terminated and 100% tested in an environmentally controlled facility

End-User Benefits

- Verified to reduce installation by 85%
- Quality controlled and 100% factory tested
- 25 Year System Warranty

IDENTIFICATION

HellermannTyton's labeling systems produce clear, durable marking for wires, cables, and components. Available in different materials and sizes, HellermannTyton's labeling systems include label design and printing software, thermal transfer printers, including an automatic print and wrap system, labels which can be used on a variety of print systems, and pre-printed markers and labels.



Labels

HellermannTyton offers a variety of labels for temporary or permanent labeling and identification of cables, wiring, and components.



ShrinkTrak

ShrinkTrak™ heat shrinkable markers make it easy to mark wire, cable, and other components. These ladder-style markers are designed with side slits for easier application. All ShrinkTrak™ markers are military specified. They also reduce printer jams with their efficient and high performance design. For seamless labeling, ShrinkTrak™ can be printed using HellermannTyton's TagPrint™ Pro professional label creation software, thermal transfer printers and ribbons to create a permanent and solvent resistant print when shrunk and applied.



TagPrint Pro

This label creation and printing software is powerful, multi-functional and extremely easy to use. Used to provide solutions for industrial identification, TagPrint Pro speeds production and offers many options for a wide variety of labeling requirements. "What You See Is What You Get" label creation, barcoding, serialization, label sets, wire lists, graphics, and text choices are just some capabilities of TagPrintPro software.



Thermal Transfer Printers

The printers are suitable for printing detailed information such as barcodes, alphanumeric characters, and graphics. They guarantee smear resistance immediately after printing along with resistance to weather, chemicals, and mechanical abrasion. Thermal transfer printing provides good print quality at high speeds with ability to print on almost all materials permanently.



SWIFTMARK

Automatic Label Printer and Applicator

The SwiftMark Automatic Label Printer and Applicator prints self-laminating vinyl labels and applies them to various sizes of wire and cable, increasing labeling productivity by up to 400%. With a cycle time of just over 4 seconds, the SwiftMark can print and apply labels in a fraction of the time required to manually print and apply label this increases productivity and reduces label errors, while providing the highest printing and application quality.

Labels can be quickly and easily designed in the accompanying Tagprint Pro software, and label files can be downloaded and stored on the SwiftMark via a USB, parallel port, or serial connection. Simply select the file and label quantity using the user-friendly touch screen, and labeling is as simple as placing the cable in the machine and pressing a button or foot pedal.

The SwiftMark has a simple interface which make it very easy to use, yet it is capable of printing advanced label sequences such as label sets with different serial numbers and text on each label.

CONTROL PANEL MANAGEMENT



Industry Experts - Control Panel Management

HellermannTyton is recognized as a superior supplier to control panel builders. By offering unparalleled product breath, HellermannTyton has mastered what it takes to deliver exceptional and innovative products while saving our customers vital time and money - all in a one stop solution. HellermannTyton prides itself on developing aesthetically pleasing products that are practical and durable which has earned the company a reputation of quality heard around the world.

Key Products

- Wiring Duct
- Mounts
- Cable Ties & Tools
- Spiralwrap
- Labeling Systems



WIRE HARNESS MANAGEMENT



Industry Experts - Wire Harness Management

As an industry leader in the development and manufacture of cable ties, cable tie installation tools, specialty fasteners and identification solutions, HellermannTyton provides products tailored to increasing quality and reducing installation time with wiring harness manufacturers throughout the world. Automatic cable tie and labeling systems increase quality and dramatically decrease installation time, offering significant savings. HellermannTyton's standard cable tie and tool systems are designed to work together to provide optimal consistency, quality, and safety. HellermannTyton's installation tools ensure that the cable tie is properly tensioned while creating a flush cut that won't leave sharp edges. Our ergonomically designed tool systems assure high quality installations which prevent damage to wire and cable and potential rework due to inappropriately applied cable ties – all lowering installed costs while improving performance.

Key Products

- Cable Ties & Tools
- Automatic Tool Systems
- Labeling Systems



Located in over 30 countries, HellermannTyton brings the best to its customers through global resources channeled to local implementations. Flexibility, agility, and ability to create value-added, market driven solutions are the hallmarks of every HellermannTyton company across the world.



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TS16949:2002, ISO 9001:2000, and ISO14001 Certified

Warranty Policy

HellermannTyton products are warranted to be free from defects in material and workmanship at the time sold by us; but our obligation under this warranty and that of the seller is limited to the replacement of the product, and neither we nor the seller are bound by any other warranty, expressed, implied or statutory. Under no circumstances are we or the seller liable for any loss, damage, expenses or consequential damages of any kind arising out of the use or inability to use these products. All are sold with the understanding that the user will test them in actual use and determine their adaptability for the intended uses.

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Mixed Sources
Product group from well-managed
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