

Macro Solutions

Product Guide

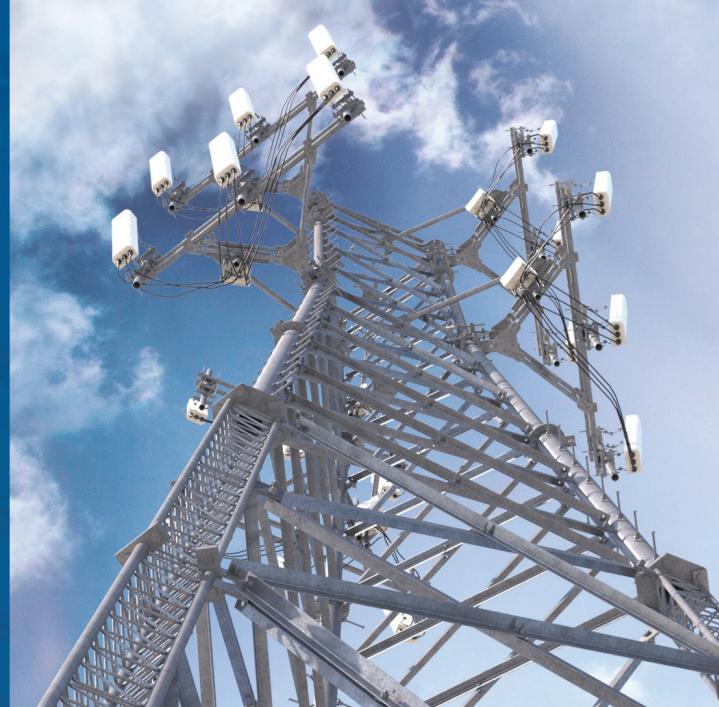




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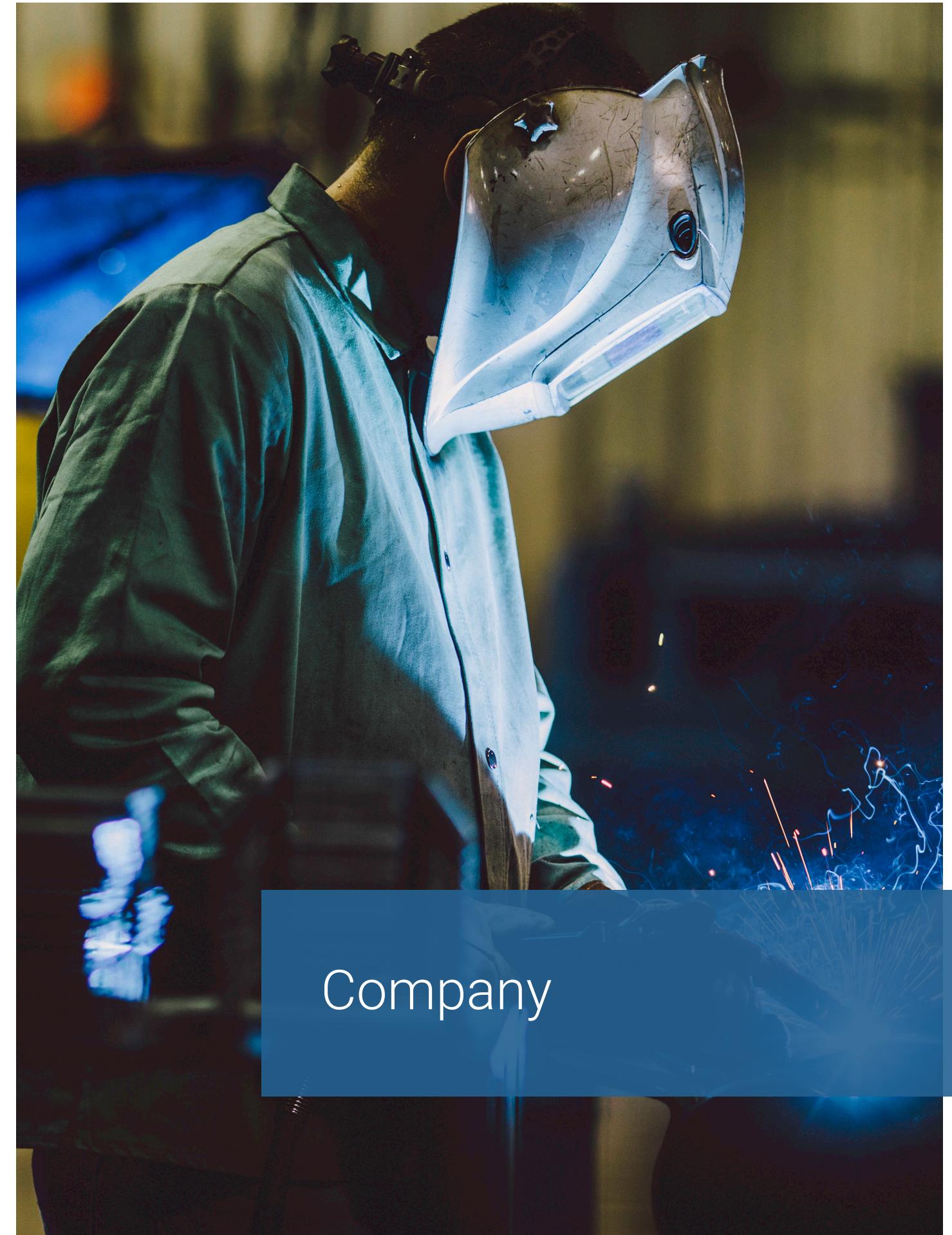
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Company

Meeting the Demand for Greater Connectivity



Valmont® began in 1946 when founder, Robert B. Daugherty, combined his \$5,000 savings with a wholehearted belief that business could and should be done better. From those modest beginnings, the company grew into a global leader, both designing and manufacturing highly engineered products, and providing exceptional services to support infrastructure development and agricultural productivity.

Two primary business segments comprise Valmont: Agriculture and Infrastructure. We have 84 manufacturing facilities in 21 countries, and do business in more than 100 countries across six continents.

Valmont is publicly traded on the New York Stock Exchange (NYSE) under the symbol (VMI). We are passionate about our products and pride ourselves on being people of integrity who excel at delivering results. We pursue opportunities for growth by taking products and processes to new markets, developing new products for existing markets, and continually improving across the company to foster innovation and efficiency.

2022 ANNUAL SALES (USD)

4.3B

GLOBAL MANUFACTURING SITES

84

GLOBAL EMPLOYEES

11,000+

COUNTRIES IN WHICH WE DO BUSINESS

100+

COUNTRIES WITH VALMONT FACILITIES

21

VALMONT BRANDS

31

Global Resources with Local Expertise

The Backbone of Modern Connectivity

Valmont Telecom's macro communication structures touch millions of lives worldwide, day and night. From our robust Olympus™ Towers and space-saving Denali™ Monopoles to our unique Larson™ concealed structures, we facilitate the connectedness that people depend on.

Our extensive in-house capabilities, combined with our complete line of engineering and inspection services, allow for superior quality control and the best lead times in the industry.

Valmont demonstrates responsibility at every stage of the process. Our recycling capabilities ensure we reuse 100% of steel materials, as well as the zinc used during galvanizing.

Engineering & Design Expertise

With decades of experience designing towers with superb structural integrity, we serve our customers by meeting the growing, modern-day demand for tower infrastructure and specialized engineering expertise.

Our Olympus™ Tower and Denali™ Monopole products are renowned for their durable designs and serve as the backbone for modern wireless communications.

We provide licensed engineer sealed prints for all 50 states and with our global presence, we are uniquely qualified to serve our international customers by offering local technical expertise backed by global design, engineering, and production resources.



valmont 
TELECOM



Olympus™ Self-Supporting Towers

With its unprecedented strength and structural integrity, our Olympus™ Self-Supporting Towers provide a low-maintenance, easy-to-install, highly reliable solution that can handle heavy loads and inclement environmental conditions.

Unparalleled Strength & Durability

Our Olympus™ Towers are available with solid-rod construction in our U-Series Self-Supporting Tower product line.

- Ideal for heavy equipment loading
- Reduced corrosion with solid members
- Lattice design enables safe and easy climbing, with designated safety climb tie-off points
- Provides increased protection against corrosion, making it ideal for deployment near coastal waters

SOLID ROD
OLYMPUS U-SERIES TOWERS

Suitable for a Wide Variety of Applications

- Platforms and catwalks available for almost any elevation
- Heights up to 600' available
- Ideal for heavy-duty wireless communication loading
- Suitable for light to heavy-duty microwave applications, radar, and other custom configurations
- Available in all-welded, in addition to knock-down segments

A Comprehensive Tower Solution

- Custom designed to meet your specifications
- Valmont Site Pro 1® mounting solutions available
- Foundation design, and other engineering services available

Ease of Installation & Maintenance

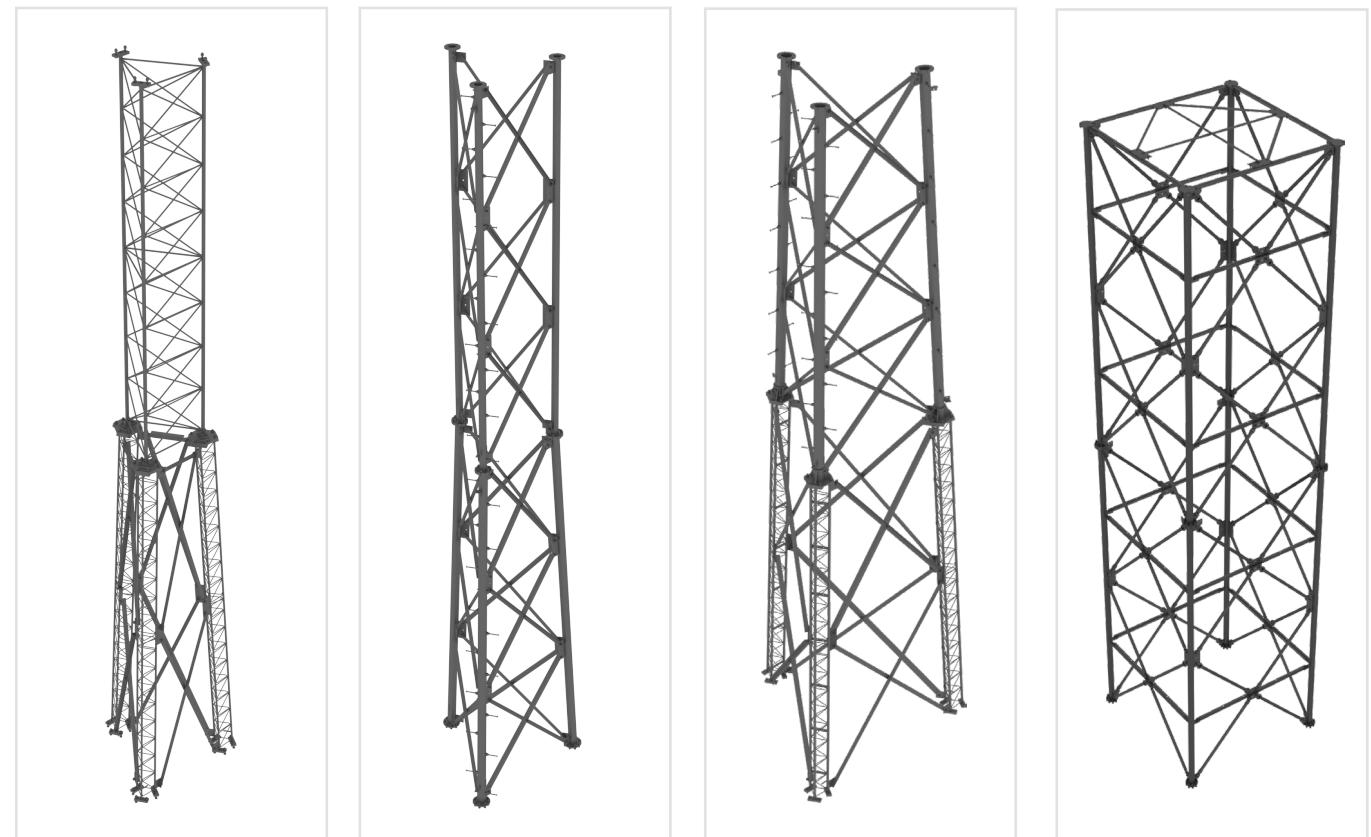
- Standard welded brackets and simple safety-climb system installation
- Breakdown leg designs can be easily taken apart for shipping
- Technicians can easily and safely climb with breakdown leg designs
- Step bolts and internal or external climbing ladders can be integrated



Design Flexibility with Olympus™ U, V, H & M Series

Building upon the rich heritage of expertly designed PiRod™ and Microflect™ communication towers, we've expanded our product offerings into several distinct lines of Olympus™ self-supporting towers, which can be further customized to meet your requirements.

- **U-Series:** Built with heavy-duty, solid-rod legs to accommodate large loading applications. The solid construction allows for greater capacity and features a minimal EPA with its slimmer member profile for less wind loading. Lattice sections enable easier climbing.
- **V-Series:** Built with pipe members for a greater strength-to-weight ratio. These towers, also known as the 900 series, provide a cost-effective solution when all solid rod is not required.
- **H-Series:** Our hybrid edition built with pipe and solid-rod members. This tower incorporates the best of both U and V Series into one. Depending on project requirements and deployment location, the H-Series provides an increased strength-to-weight ratio for upper sections while maintaining a slimmer profile and a minimal EPA for base sections. Lattice sections enable safer and easier climbing.
- **M-Series:** Specifically designed for supporting microwave dishes and other heavy-duty wireless communication loads, the M-Series, formerly known as the 800 series, can handle the heaviest loading and most extreme environmental conditions. Available in both three and four-leg designs and made using an all-pipe leg design for a greater strength-to-weight ratio.



U-Series
With Solid-Rod Members

V-Series
With Pipe Members

H-Series
With Pipe & Solid-Rod Members

M-Series
With Pipe Members

Olympus™ Guyed Towers

Manufactured for high durability and structural integrity, our Olympus™ Guyed Towers provide maximum height flexibility while minimizing costs.

Maximum Strength that Soars Above

Available in all-welded form, boasting the strength and added corrosion resistance of solid-rod construction throughout.

- Can accommodate a variety of current and future loading requirements
- Our engineers will assist you in crafting your custom structure after carefully analyzing site conditions, strength and loading requirements, mounting specifications, climbing provisions for maintenance, and future loading potential
- Available with face widths of 18" and 24" with pin and cup connections, enabling heights of up to 1,000'
- Also available with face widths from 30" through 48" in 6" face increments with foot-pad connections, enabling heights of up to 1,000'

SOLID ROD
OLYMPUS GUYED TOWERS



Ease of Installation & Maintenance

With its separated tower segments, our Olympus™ Guyed Towers are built for easy installation and maintenance.

- Can be easily pre-assembled on the ground and lifted in the air for installation
- Structures come standard with integrated or external climbing ladders and brackets for safety climb systems that provide easy access for maintenance
- Guyed tensioning wires are provided for structural support
- Lattice sections enable safer and easier climbing for technicians

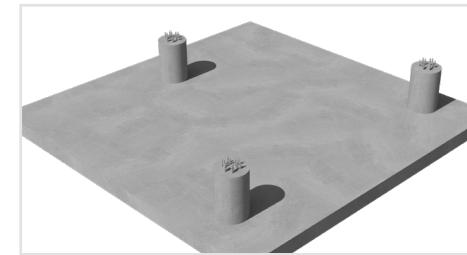
A Strong Foundation

The appropriate foundation type is crucial for ensuring structural stability, safety, and long-term reliability. We use the following foundation types for our self-supporting and guyed towers:

Mat Foundations

Mat foundations, also known as raft or pad and pier foundations, are flat concrete slabs that cover the entire footprint of the tower. They provide even load transfer throughout the foundation, reducing hardware stress and providing robust support.

- Suitable for areas with a deep water table or high soil bearing capacity
- Can be an effective solution for sites where deep excavating is cost prohibitive
- Can eliminate the need for deep individual footings



Mat Foundation (Self-Supporting Tower)



Mat Foundation (Guyed Tower)



Pier Foundation



Dead Man Anchors (Guyed Towers)

Robust Towers with Expert Engineering Services

Our towers are designed to meet modern engineering standards and provide superb durability. Our licensed engineering team offers expert services for timely permit submissions and more.

Fabricated & Finished for Durability

Our towers are fabricated in the United States to meet AISC-certified manufacturing standards and are designed for maximum strength and longevity.

- Hot-dipped galvanized to ASTM A123 specifications
- Finish is chemical, corrosion, and abrasion-resistant
- Can be painted to meet FAA standards
- FAA lighting is available for nighttime visibility

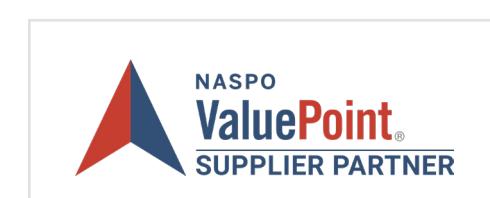
Meeting Modern Engineering Standards

We design our towers to meet all modern engineering standards.

- All of our SSTs and Guyed towers meet or exceed TIA-222-G and/or TIA-222-H, depending on jurisdictional and customer requirements
- Can be customized to meet various international building codes and design standards

Official NASPO Supplier

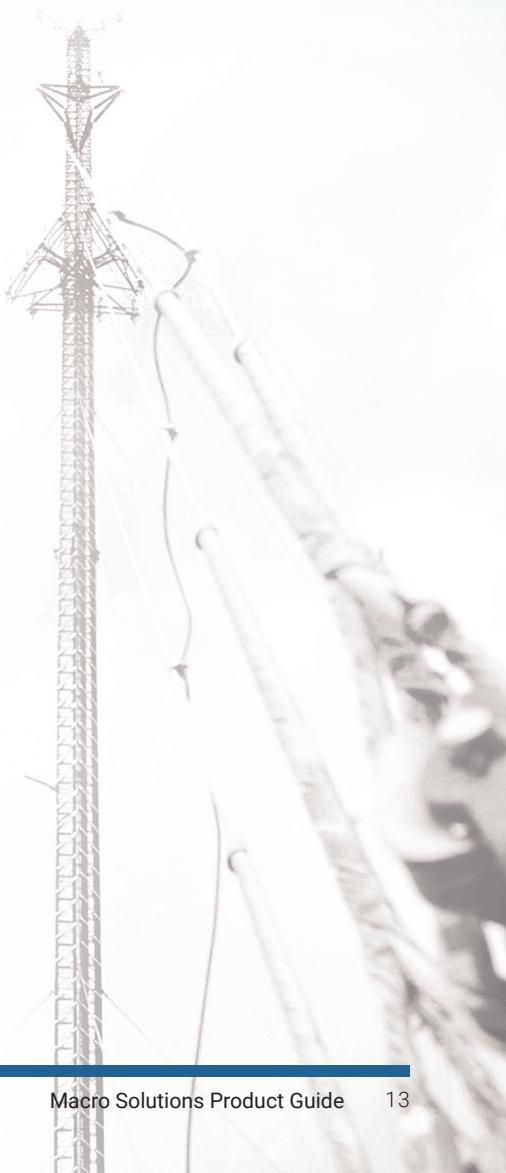
Valmont Telecom an official supplier of the National Association of State Procurement Officials (NASPO), provides participating state procurement offices with exclusive pricing options on our high-quality Olympus™ Self-Supporting and Guyed Tower product lines.



Dead Man Anchors

Dead man anchors are a type of guy anchor that use a weighted mass buried in the ground to provide resistance against the pull of the guy wires.

- Ideal to secure guy wires in locations with deep water tables
- Ideal for when soil conditions are not suitable for traditional anchoring methods
- Useful in areas where excavation is challenging or expensive



Site Pro 1® Tower Mounts & Components

When it comes to outfitting Olympus™ Towers with equipment and accessories, Valmont Site Pro 1® offers thousands of products, including sector frames, reinforcement kits, standoff mounts, tower mounts, ice shields, components, and more.

V-Frames™ Offer Strength & Innovation

The HD Series™ and SD Series™ Sector Frames provide an innovative solution that can handle a wide variety of today's loading.

- Includes our BCAM™ for easy taper adjustment
- Includes our Quick-Plate™ for easy grounding and addition of RRU mounting pipes or unistrut
- Round-member face offers lower wind resistance
- Frames rotate for easy azimuth adjustment



SD Series™ Sector Frames



BCAM™ Taper Adjustment System &
Quick-Plate™ RRU Pipe Mount

BCAM™ & Quick-Plate™ Innovations

The innovative BCAM™ & Quick-Plate™ come standard on all Valmont Site Pro 1® sector frames.

- The patented BCAM™ Taper Adjustment System allows for the easy adjustment of the sector frame taper with the tightening or untightening of a single bolt
- The Quick-Plate™ RRU Pipe Mount is a weldment on the arms of all V-Frames™ that enables the easy installation of RRUs and grounding bar attachments



Learn more at SitePro1.com/TowerSteel

Reinforcement Kits & More

Reinforcement Kits

When it comes to mount and tower reinforcement, Valmont Site Pro 1® offers a variety of kits that can reinforce both dead-load and wind load.

- The SFS Series™ provide a simple bolt-on solution that increases the weight capacity of the mount and braces the frame laterally and vertically
- For tower reinforcement, the BOB Series™ allows for an adjustable, bolt-on solution that increases tower capacity



Reinforcement Kits

Additional Mounts, Components & Consumables

Valmont Site Pro 1® also offers a host of additional mounts, components and consumables to outfit your site and meet the needs of your project.

- The BOG Series™ is a standoff mount for whip antennas, the CWT Series™ for compact tower loading, and tower leg adapters like the heavy-duty R6™ for universal flush installations
- Support arm kits, like the HRK Series™, provide an additional point of contact for antenna frame bracing. The SPTB Series™ offers adjustable, universal tie-back bracing
- We also offer additional solutions like RRU swivel mounts, ice shields, cable ladders, hardware, and more



Tower Gallery



Denali™ Monopoles

Denali™ Monopoles

When space is limited, but tower-sized performance is needed, our Denali™ Monopoles provide the ideal solution.

Maximum Flexibility with Minimum Required Footprint

Our Denali™ Monopole structures are fabricated from low-alloy, high-strength steel and can be custom-designed to meet a variety of single or multi-user configurations.

- Available in heights that exceed 200'
- Shaft sections are constant-tapered hollow steel, up to 53 feet in length
- Poles are available with either a slip-joint or flanged joint design
- The practical, slip-joint design for pole connections allows for faster installation and loading relief between sections
- The flange joint design features a bolt-together connection that allows for full loading transfer throughout the segments; they can be internally or externally flanged
- Polygon poles are available in 8, 12, 16, and 18-sided configurations
- Round poles are available as constant tapered or non tapered for lighter, smaller, specific applications
- Direct embedded poles are available by request

Installation & Maintenance

Denali™ Monopole structures are designed for simplicity of installation and ongoing maintenance.

- Custom designed to accept and accommodate loading from various equipment use cases to hold radio equipment
- Each monopole is designed with port holes that provide an easy way to manage cable routing inside the pole and allow maintenance access for technicians and inspectors when needed
- Port holes enhance aesthetic appeal with cabling run inside of pole
- Slip-joint design and separate pole sections enable easier installation
- Available with integrated step-bolts for climbing ladders and brackets for safety climb systems
- Tie-off brackets available that provide easy and safe access
- Our innovative jacking device is also available for ease of construction

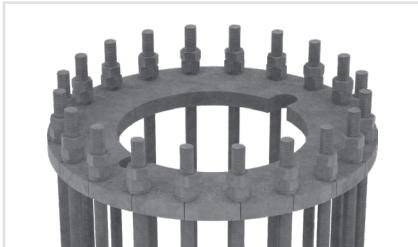


A Strong Foundation

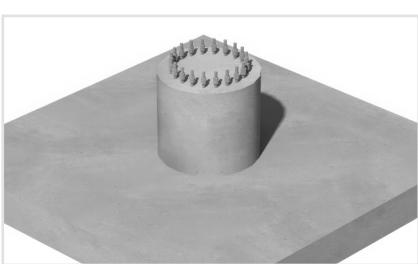
When it comes to designing strong and resilient monopole structures, selecting the appropriate foundation type is crucial for ensuring structural stability and reliability.

Base Plates

Flat plates that protect the foundation and ensure that stress is appropriately distributed and evenly transferred throughout.



Base Plate & Anchor Bolts



Mat Foundation



Pier Foundation

Meeting Modern Standards for Supreme Durability

Our monopoles are engineered to meet modern engineering standards and provide excellent durability and longevity.

- Hot-dipped galvanized to ASTM A123 for durability
- Weathering steel (corten) is an available option for pole and base plate material
- Chemical, corrosion, and abrasion-resistant finishes available
- Can be painted with standard, custom, or FAA-approved colors
- Designed to meet modern international building codes and standards
- All monopoles meet or exceed TIA-222-G and/or TIA-222-H
- Our licensed engineering team offers full permit submission services
- Pre-engineered components with detailed drawings
- Reanalysis available for existing Valmont Telecom products
- Foundation designs provided based on customer-provided soil reports

Official NASPO Supplier

Valmont Telecom is an official National Association of State Procurement Officials (NASPO) supplier and offers special pricing to participating state procurement offices for our Denali™ Monopole product line.



Site Pro 1® Monopole Mounts & Components

When it comes to outfitting Denali™ Monopoles with equipment and accessories, Valmont® Site Pro 1® offers a wide variety of antenna mounting and component solutions. The Valmont Site Pro 1® catalog boasts thousands of products, including platform mounts, reinforcement kits, components, and more.

The Fortress™ Platform Mount: Strength & Ingenuity

The flagship Fortress™ platform mounts from Valmont Site Pro 1® stand out as the world's strongest single-level monopole platform.

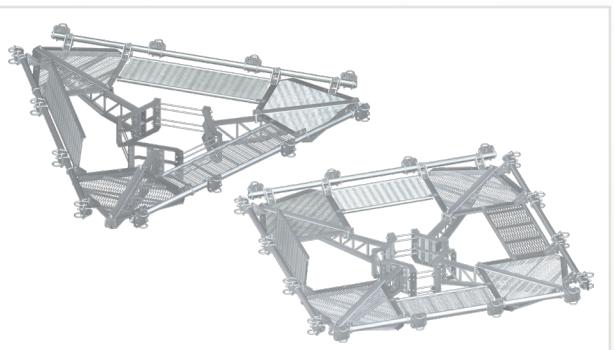
- Patented design is three times stronger than typical mounts
- There is no need for additional platform reinforcement or second ring mount
- Provides technicians with enhanced safety features and a simplified installation with minimal necessary hardware

Additional Mounts

In addition to platforms like the Fortress™, Valmont Site Pro 1® also offers a host of additional mounts like the RMPQ Series™, standard-duty t-arm kits like the RMV Series™, chain mount kits, and much more.



A valmont COMPANY



Fortress™ Platform Mounts



RMPQ Series™ Platform



Learn more at SitePro1.com/MonopoleSteel

Reinforcement Kits & More

Reinforcement Kits

When it comes to mount and pole reinforcement, Valmont Site Pro 1® offers a variety of kits that can reinforce both dead-load and wind load.

- The PRK Series™ provide a simple bolt-on solution that increases the mount's weight capacity
- The PRK-SFS offers a simple solution that braces the frame laterally and increases the wind load capacity
- Kits are easy to install, widely available, and provide a simple solution to existing sites that need additional loading capacity



Reinforcement Kits

Monopole Components & Consumables

Valmont Site Pro 1® offers a variety of components to outfit a monopole site and meet the needs of your project.

- Support arm kits like the HRK Series™ provide an additional point of contact for antenna frame bracing
- The BBPM Series back-to-back pipe mount kits provide an easy way to add RRUs to a platform
- We also offer a wide variety of monopole collar mounts, stand-off arms, hardware, and more



Monopole Gallery



Site Pro 1® Rooftops

Rooftops

Site Pro 1® Rooftop Mounts

When it comes to expanding network capacity in dense urban areas, Valmont Site Pro 1® offers a variety of heavy-duty rooftop mounts and solutions for easy and reliable deployments that will satisfy present and future loading equipment needs.

Designed for Faster Deployment

With innovations like the Valmont Site Pro 1® CSRT™ modular rooftop mounts, we make deployment easy and painless even for the most difficult-to-access sites.

- Modular components enable easy sectorization with all hardware bolting together quickly
- Can also be transported to a rooftop location in an elevator, neatly packaged on a ski.
- Unlimited configurations with modular components
- Innovative design enables easy sectorization

Expandable and Customizable

Valmont Site Pro 1® rooftop mounts have all been standardized for modularity and easy customization, reducing the cost of mount modifications.

All the Necessary Accessories & Consumables

Along with the steel components, Valmont Site Pro 1® offers a wide variety of accessories like cable trays for protection and organization, cable tray supports, consumables and more to support your rooftop build.

Meeting Modern Engineering Standards

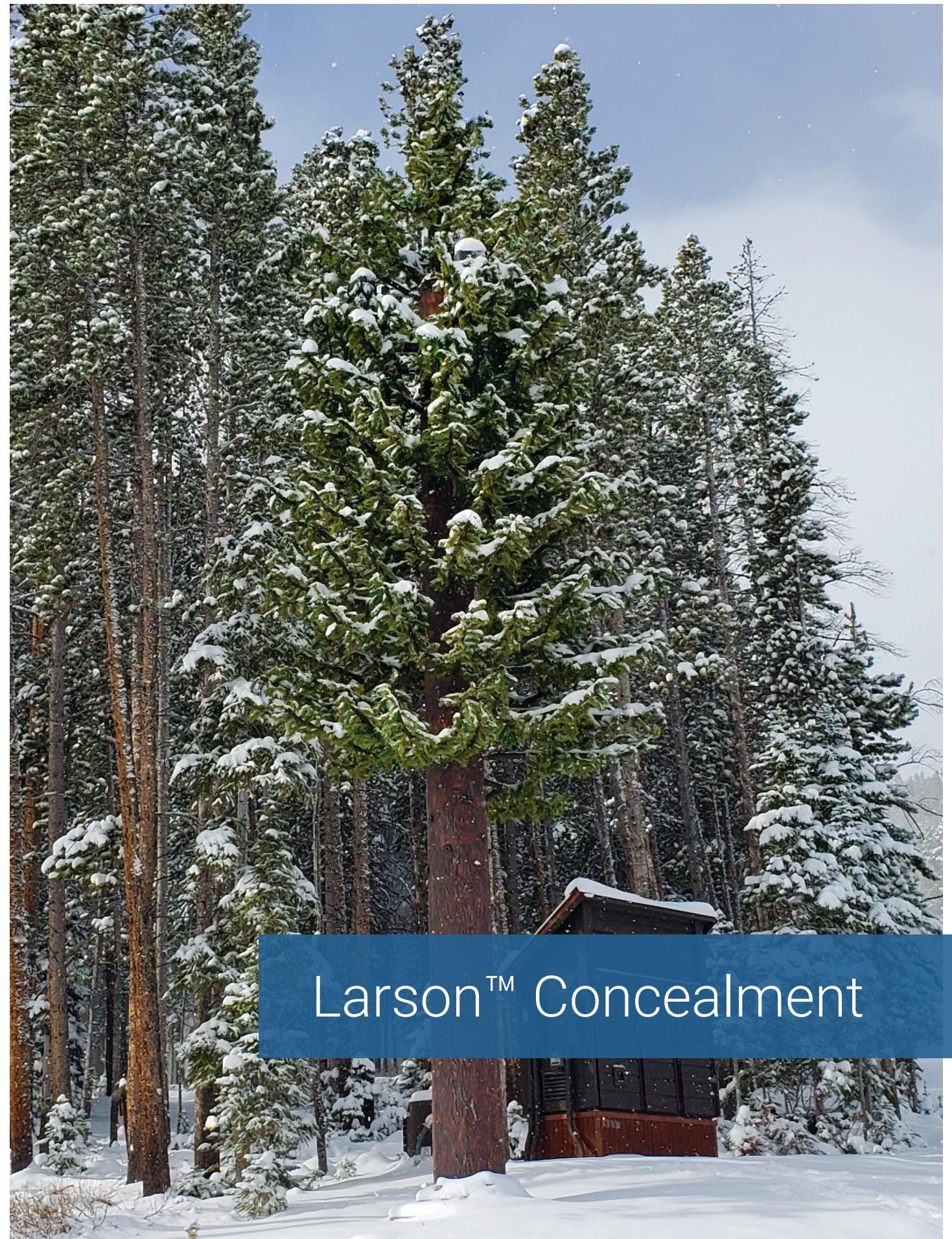
Valmont Site Pro 1® Rooftop Mounts are designed to meet modern international building codes and design standards. By default, all our mounts meet and exceed TIA REV-G-222, TIA-H-222, IBC, AISC, and CSA standards.

Expert Engineering Services

Our engineering team will provide pre-engineered component sections with detailed drawings and formal stress analysis for ease of installation.



Learn more at SitePro1.com/Rooftops



Larson™ Concealed Structures

Our Larson™ line of creative concealment solutions are designed to help your communications structures blend in with the landscape and surrounding environment while adding capacity to your network. They can be custom-engineered to meet your technical specifications on the inside, while on the outside appear to be anything you can imagine. The only thing your customers will ever notice is better wireless service.

- Pine Trees (Spruce & Fir)

- Broadleaf Trees (Elm, Magnolia & Eucalyptus)

- Palm Trees (Date Palm & Mexican Fan Palm)

- Water Tanks

- Fire Watch Towers

- Parapet Panels

- Chimneys

- Smokestacks

- Cupolas

- Clock & Bell Towers

- Wrapped & Silo Towers

- Marquis Towers

- Steeples

- Wall Inserts

- Signage

- Office Building Spires

- Grain Silos

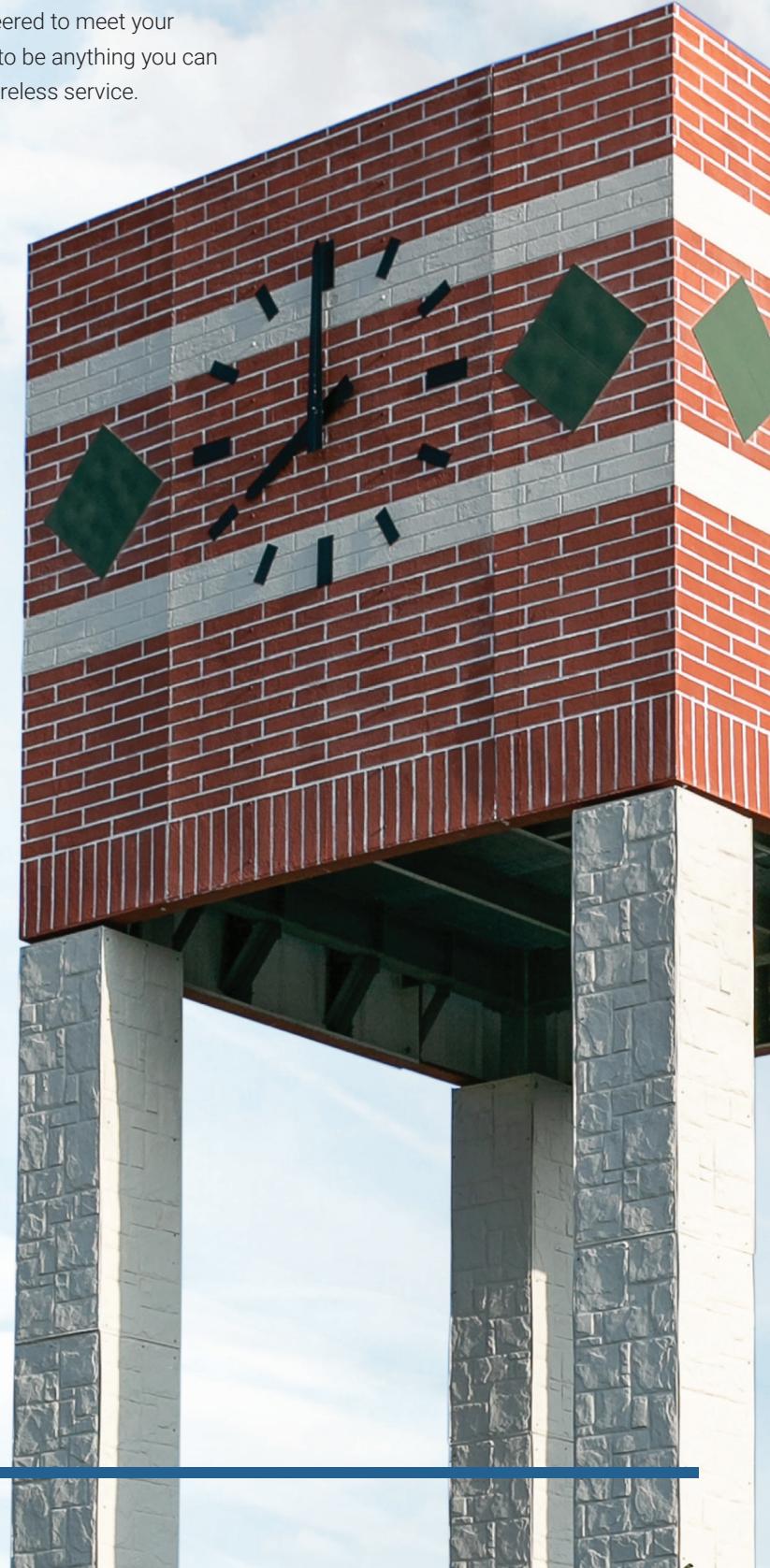
- Slimline Monopoles

- Cross-Shaped Monopoles

- Flag & Canister Poles

- Faux Wood Utility Poles

- Other Custom Designs



Pine Trees

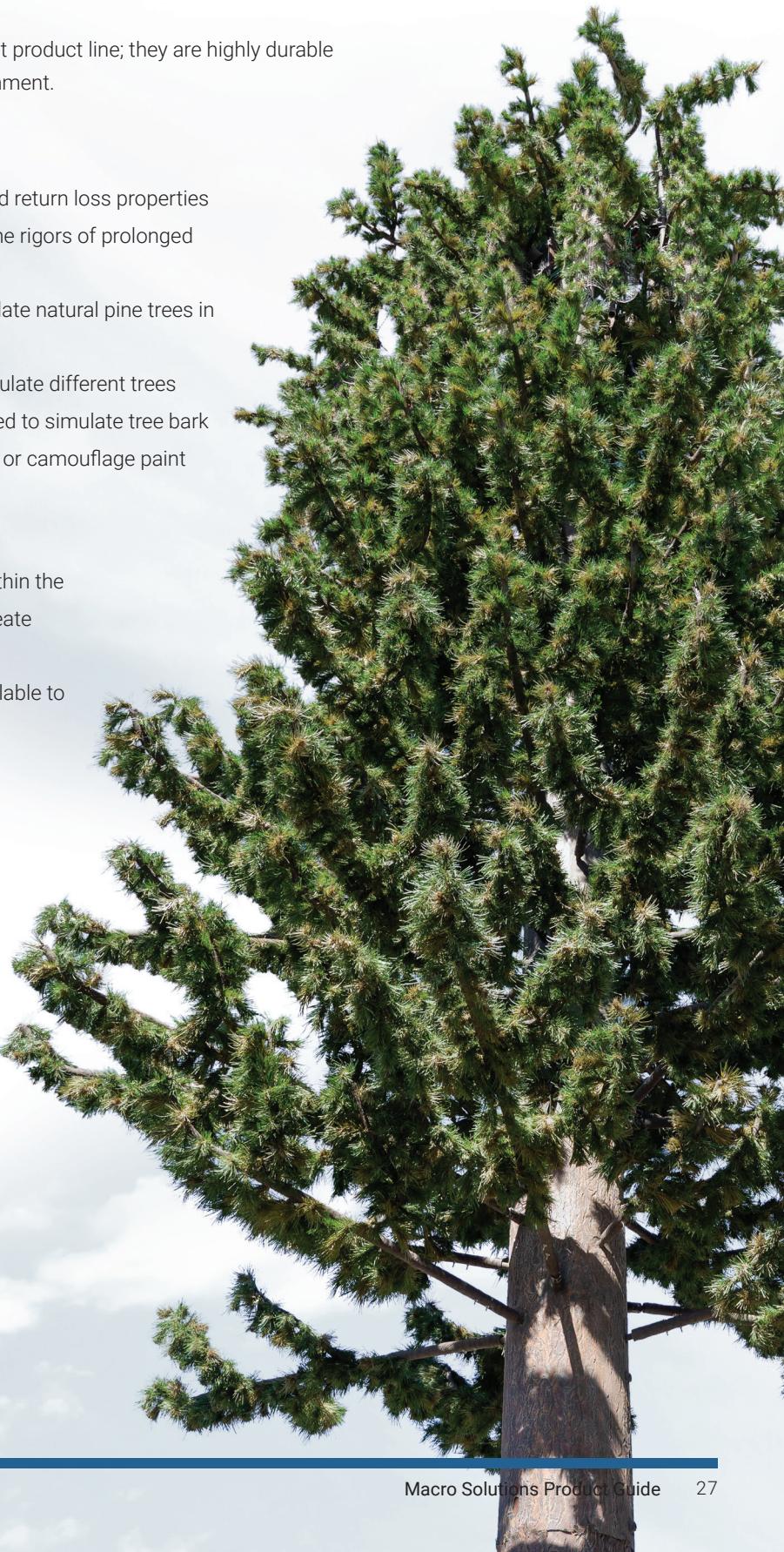
Our Larson™ Pine Trees are part of our natural concealment product line; they are highly durable and are carefully crafted blend into the surrounding environment.

Highly Durable & Realistic

- RF-friendly materials yield extremely low insertion and return loss properties
- Foliage is UV-resistant and designed to stand up to the rigors of prolonged outdoor exposure
- Multiple branch canopy options to aesthetically simulate natural pine trees in different geographical locations
- A variety of colors and diameters are available to simulate different trees
- Exterior grade epoxy composite is specially formulated to simulate tree bark
- Trees can be finished with realistic bark, brown paint, or camouflage paint

Accessories & Additional Services

- RF-friendly antenna "socks" camouflage antennas within the tree canopy, and additional antenna branches can create complete concealment
- RRU Socks, Microwave Socks, and Branches are available to help blend all equipment into the canopy
- Photo simulations and 3D renderings available



Pine Trees



Simulated Tree Bark & Foliage Options

We offer an array of foliage options in different colors and lengths as well as simulated tree bark to further help your communication structures blend in with the surrounding natural environment.



Antenna & RRU Sock Options

Our highly realistic, RF-friendly antenna and remote radio unit "socks" make equipment virtually invisible to the eye. Material is UV resistant and designed to stand up to the rigors of prolonged outdoor exposure.



Broadleaf Trees

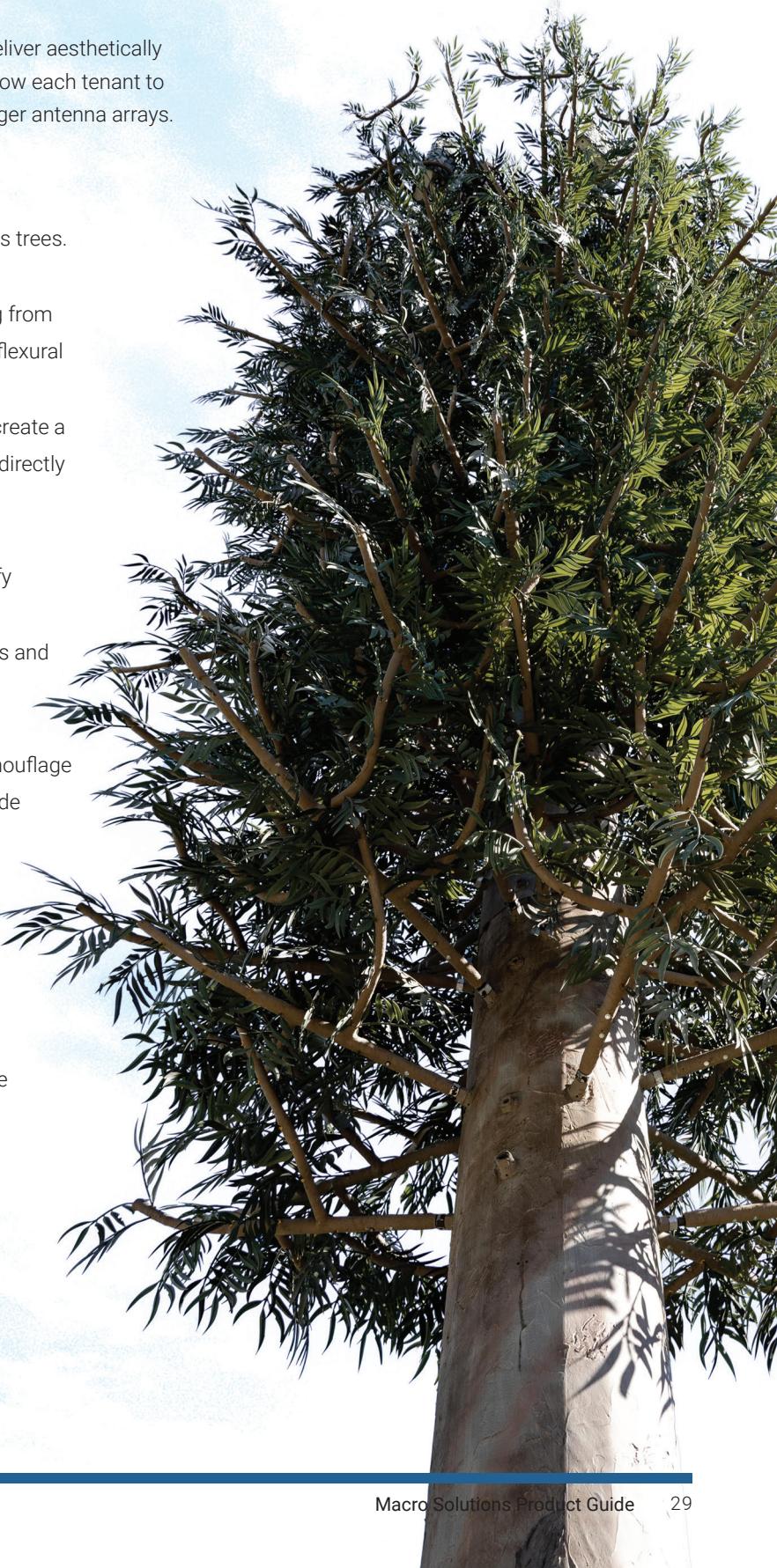
Our Larson™ broadleaf tree designs can be co-locatable and deliver aesthetically pleasing naturalistic branch canopies. Larson™ tree designs allow each tenant to position their arrays at any azimuth and can accommodate larger antenna arrays.

Highly Durable & Realistic

- Designs include elm trees, magnolia trees, and eucalyptus trees.
- Bark undergoes extensive laboratory testing utilizing the EMMAQUA-NTW method, tested in temperatures ranging from -50°F to 180°F, environmental freeze/thaw cycle testing, flexural elongation, and tensile strength testing
- Bark can be painted with multiple colors and washes to create a natural appearance with a proprietary blend applied wet, directly to the pole, and then hand textured
- Eucalyptus trees can be designed with a cost-effective single main trunk to customize their appearance to satisfy jurisdictional requirements
- Highly realistic foliage is a mix of two leaf cluster patterns and includes details like insect damage, veins, and texture
- Foliage is made of UV-stabilized polyethylene plastic
- Can be finished with realistic bark, painted brown, or camouflage
- Our bark is made with a specially formulated exterior grade epoxy composite to simulate realistic tree bark

Accessories & Additional Services

- Available antenna branches and matching RF-friendly antenna "socks" make the antennas virtually invisible
- RRU Socks, Microwave Socks, and Branches are available to help blend all equipment into the canopy
- Photo simulations and 3D renderings available



Broadleaf Trees



Simulated Tree Bark & Foliage Options

We offer an array of foliage options and simulated tree bark to further help your communication structures blend in with the surrounding natural environment.



Antenna & RRU Sock Options

Our highly realistic, RF-friendly antenna and remote radio unit "socks" make equipment virtually invisible to the eye. Material is UV resistant and designed to stand up to the rigors of prolonged outdoor exposure.



Palm Trees

We offer a family of realistic, UV-protected date palms and Mexican fan palms as part of our Larson™ natural concealment line.

Highly Durable & Realistic

- Date palm fronds (leaves) are wind tunnel tested, and designed to withstand winds in excess of 140 mph
- Date palm fronds are fabricated from strong but flexible HDPE "leaves" over a high-strength fiberglass core
- Available in 7', 9', and 10' lengths and two colors to simulate live or dead fronds
- Available single or double safety tethers for date palm fronds provide a second level of security, keeping branches attached to the structure in the case of unforeseen breakage



Accessories & Additional Services

- Pineapples or frond balls are available as decorative or functional accessories to conceal antennas, RRUs, and other equipment
- Frond hoops can conceal one carrier and are available in custom diameters and lengths to fit your specific antenna array
- Front skirts allow for three or four carrier palm trees and are attached to galvanized steel mounting rings
- Proprietary Porcu-Palm™ Mount ("PPM") system can be used to convert an existing plain monopole into a mono-palm, add fronds to an existing mono-palm, or make the mono-palm tower more flexible for future expansion
- Photo simulations and 3D renderings available



Water Tanks, Fire Watch Towers & Multi-Legged Structures

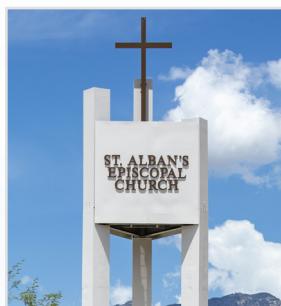
Our Larson™ architectural solutions include a full line of water tanks, fire watch towers and multi-legged camouflaged structure designs.

Highly Durable & Realistic

- Designed with laboratory-tested RF-friendly materials
- Fire watch towers can be designed to match fire houses, buildings or display their own unique look
- Structure designs range from a simple industrial look to realistic, highly detailed architectural wood
- Multi-carrier capacity with no equipment visible
- Coaxial cable or fiber lines can be concealed within the legs or a central stand pipe. Legs can be round or square tube construction
- Structures can house radio units, TMAs, or other support equipment

Accessories & Additional Services

- Passive or active cooling systems and venting are available
- County, town, or development signage and lettering can be added as a popular option to the water tank look
- Bird screening can be added to open-top tanks
- Photo simulations and 3D renderings available



Custom Architecture & Rooftops

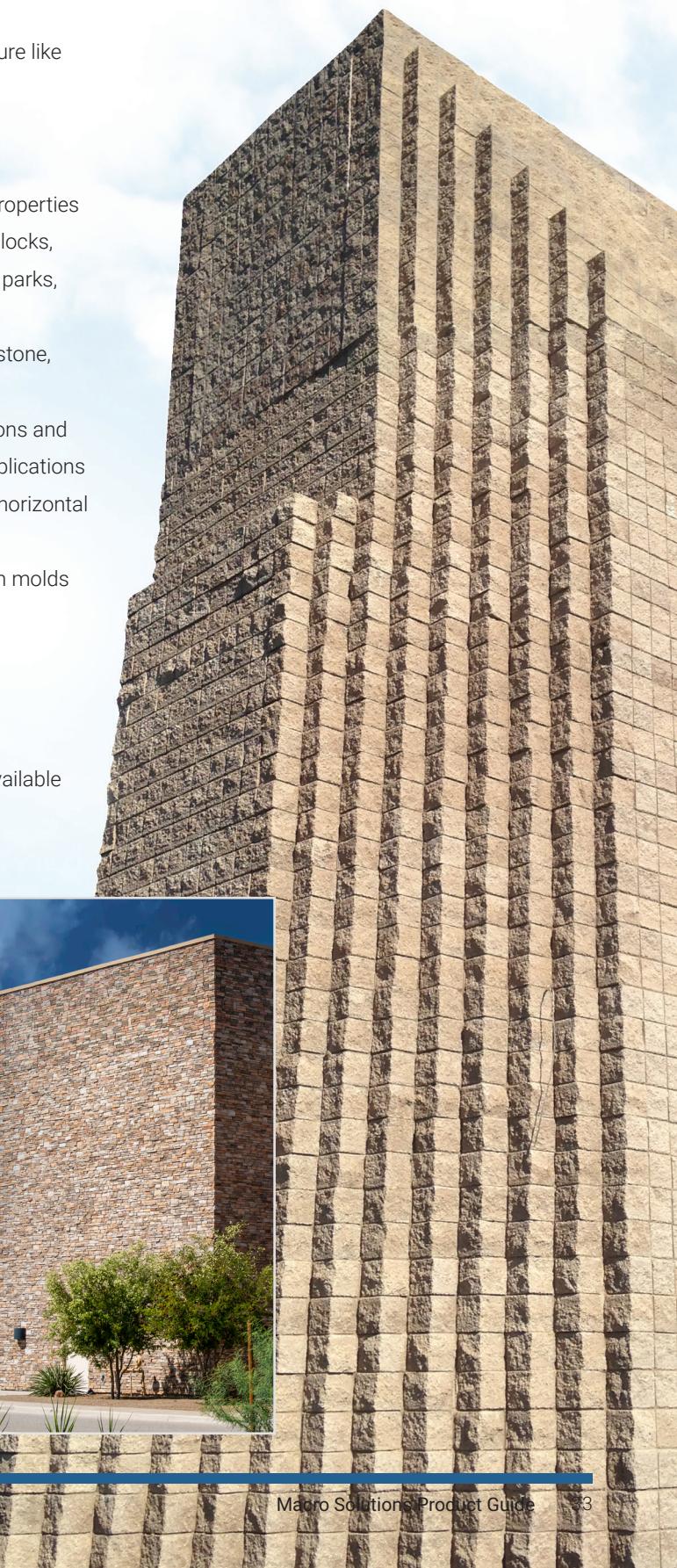
Our Larson™ architectural solutions include a full line of custom architecture like clock towers, church steeples, and more.

Highly Durable & Realistic

- RF-friendly materials yield extremely low insertion and return loss properties
- Designs include parapet panels, chimneys, smokestacks, cupolas, clocks, steeples, wall inserts, signs, office building spires, grain bins, theme parks, aquariums, and more
- Textures available are brick, stucco, wood, concrete block, dressed stone, split-faced block and more
- We offer a cost-effective, lightweight panel system for flat applications and structurally integrated custom-molded panels for more complex applications
- Custom-molded panels can be easily assembled and include V-Rib horizontal and vertical stiffeners that protect against deflection
- Custom designed and built according to your specifications; custom molds can be taken on-site or sculpted
- Can be painted and finished to customer specifications

Accessories & Additional Services

- Detailed graphics, wraps, and RF-friendly signage capabilities are available
- Photo simulations and 3D renderings available



Monopole Based Concealment Structures

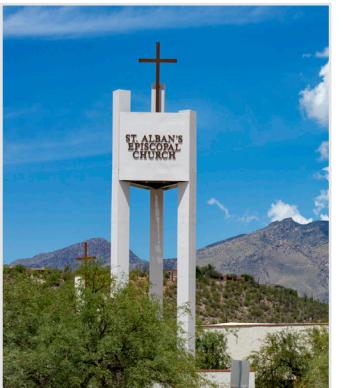
Our Larson™ slimline, monopole-based concealment structures are custom engineered and manufactured to provide optimal performance and seamlessly blend into the surrounding environment.

Highly Durable & Realistic

- Designs include slimline monopoles, cross-shapes, flag poles, uni-pole structures, lint rollers, faux wood poles, sports lighting, lampshade and more
- Laboratory and field-tested RF-friendly materials yield extremely low insertion and return loss
- Customizable designs are available in straight or tapered steel.
- Hot dipped galvanized poles can be powder coated or painted
- Cables, antennas, and RF front-end units are all concealed internally
- Single or dual light arms may be added
- Tongue and groove canister design solve vertical seam separation issues
- Bisected or trisectioned designs accommodate different antenna configurations
- FRP finishes may include painted, textured, faux wood, and faux concrete
- Custom slimline flagpole designs help in suburban jurisdictions and accommodate a variety of flag styles

Accessories & Additional Services

- Passive or active cooling systems with thermostat controls and venting are available
- Photo simulations and 3D renderings available





Getting Started

We're Here to Help Every Step of the Way

Getting Started with your Macro Project

We've put together a handy guide to make the order process as easy as possible. We have a team of macro experts, located around the world that are ready and able to help you with your project. These experts possess deep knowledge of the relevant technologies and local deployment considerations.

Step 1

Connect with a Representative

The first step is to get connected with a Valmont Macro representative in your region. To do this, find your representative on the next page.

Step 2

Discuss Requirements & Configure Solution

Once connected with your representative, you'll discuss requirements, and we will help you configure your complete and ideal solution from the bottom to the top of your structure.

Step 3

Engineering Package Sent for Review

After your solution is configured, our team will prepare your personalized engineering design package for your review.

Step 4

Finishing Up

If there are any last-minute modifications required, we can address them at this point for acceptance. Once approved, you can place your order.

Connect with a Representative

Reach out to a Valmont Macro expert below or call us at +1 833.864.8353 for assistance.

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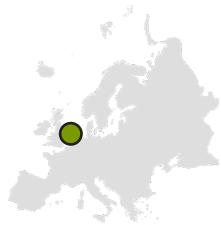
Please note: Product lines differ by region. Please contact your local representative for more information.

Connect with a Representative

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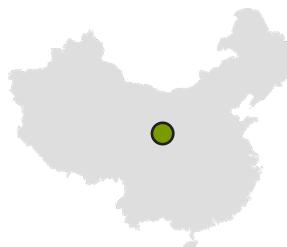
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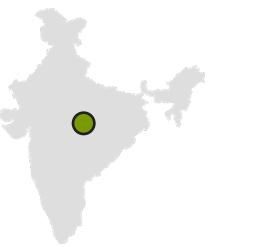
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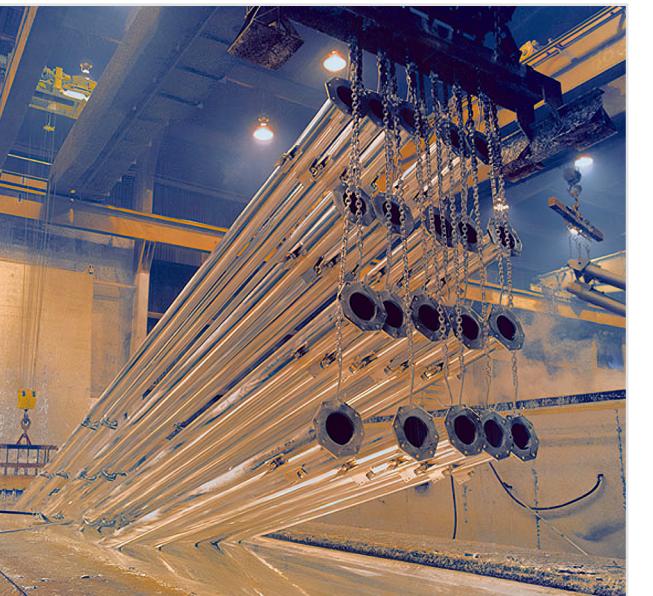
Hot-Dip Galvanizing Process

Valmont® Telecom macro products are galvanized and finished to extend our structures' service life and resilience through our sister company, Valmont® Coatings, one of the world's largest custom galvanizers. Their processes and transportation capacities are designed to efficiently handle steel products of all shapes and sizes for customers around the globe.

Surface Preparation

For high quality hot-dip galvanizing, steel must be properly prepared prior to being immersed in a bath of molten zinc. During the surface preparation stage, material goes through degreasing/caustic cleaning, pickling, and fluxing.

- Degreasing/Caustic Cleaning: A hot alkali solution, mild acidic bath, or biological cleaning bath removes contaminants from the steel such as dirt, grease and oil.
- Pickling: To remove mill scale and iron oxides, the steel goes through a diluted solution of heated sulfuric acid or ambient hydrochloric acid.
- Fluxing: Through the final surface preparation step, any remaining oxides are removed in a zinc ammonium chloride solution and a protective layer is deposited on the steel to prevent any further oxides from forming prior to galvanizing.



Notes

Galvanizing

Following surface preparation, the steel will be immersed in a bath of molten zinc. The zinc kettle contains at least 98% pure zinc and is maintained at a temperature between 815°-850° F (435°-455° C). While steel is immersed in the kettle, the zinc reacts with the iron in the steel to form a series of metallurgically bonded zinc-iron alloy layers with the final top layer 100% zinc.

Inspection

The inspection process of galvanized steel is fairly simple. Zinc will not react with unclean steel, therefore a visual inspection of the product will provide a good assessment of the quality of the coating. Tests for coating thickness and adherence to ASTM standards will also be performed.

Service Life for Galvanized Coatings



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Valmont is committed to providing products and services that enhance the lives of our customers, employees, and communities and to do so in an increasingly efficient and environmentally friendly manner. For more information about our commitment to sustainability, please visit valmont.com/sustainability.