

Small Cell Solutions

SimpleCell™ Product Guide



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Meeting the Demand for Greater Connectivity

Overview

For 75 years, Valmont has improved life by creating vital infrastructure and advancing agricultural productivity.

Our journey began in 1946 with a \$5,000 investment and the entrepreneurial vision of Robert B. Daugherty after his return home from the war. With the newfound determination to build his "American Dream," Daugherty worked for over a decade with engineers to develop the most reliable agricultural irrigation, complete with electric drive systems. By 1959, Valmont's refinement of the manufacturing process for steel pipe and tubing led to growth in other markets requiring durable structures.

Valmont is comprised of four primary business segments: Engineered Support Structures, Utility Support Structures, Irrigation, and Coatings. We manufacture products in 85 different facilities spread across six continents and do business in over 22 countries. Valmont is publicly traded on the NYSE under the symbol (VMI).

With an extraordinary combination of global resources and local expertise, Valmont Telecom is the industry leader in designing and producing engineered communications infrastructure. From our innovative SimpleCell™ small cell suite to our robust macro tower offerings and Site Pro 1 brand of telecom components, we offer the most comprehensive portfolio of solutions in the telecommunications industry.

MANUFACTURING FACILITIES

85

Valmont manufactures products in 85 facilities across six continents.

NET SALES

2.9B

Valmont generated more than \$2.9B in 2020 net sales.

EMPLOYEES

10K+

More than 10,000 employees work with Valmont worldwide.

Global Resources with Local Expertise

Capabilities

Your Small Cell Partner

As a global leader in the design and manufacturing of lighting standards, Valmont has experience working with local, state and federal agencies. Our network of specialists spans every major market around the globe, making us accessible and responsive to your needs as we navigate emerging technologies together.

You can find our small cell solutions wherever people congregate, including university campuses, commercial properties, sports venues, and transportation hubs. When you choose Valmont, you can expect the peace of mind that comes from knowing you have a knowledgeable and experienced partner to guide and support you through the entire process.

Engineering & Design Expertise

Like all products from Valmont, our small cell applications are renowned for durable designs created by our experienced team of engineers in both Lighting and Telecommunications.

With licensed engineers worldwide and 75 years of manufacturing expertise, Valmont has developed enduring specifications for major municipalities and utilities, making us a specified vendor in every metropolitan area. We can also tap into a vast network of local knowledge critical to the success of your project.

Our technical team will carefully consider your project specifications when beginning a custom project, ensuring that our recommendations comply with local permitting, zoning requirements, and design codes.

We Know Small Cell

We have assembled a dedicated, expert team for small cell manufacturing, integration, testing, and service support. We save you time and money before your project is even off the drawing board by thinking ahead and applying what we've learned from previous installations. And we never consider a project to be completed until every inspection has been completed and the system is working the way it is supposed to.

With an extensive catalog of standard items, finishes, and accessories, as well as fluting and tapering options, we provide an aesthetic that compliments any setting. Our goal is to provide a structure that fits effortlessly into its environment while meeting all your connectivity needs.

All of our small cell products are rigorously tested to guarantee safety, functionality, and performance. They are engineered to meet pertinent UL, Telcordia GR-487, and CSA specifications.

Topping off our extensive product offering, our in-house team offers a variety of ancillary engineering services like renderings, drawings, photo simulations, and foundation designs.

Excellence in Manufacturing

Our extensive in-house capabilities, combined with our complete line of finishing and inspection services, allow for superior quality control and the best lead times in the industry. Our global network of resources and many manufacturing locations enables us to respond quickly, fulfill specific requirements, and handle even the largest projects.

We fabricate steel, aluminum, wood, and composite small cell structures. Our technical team will work with you to fulfill specific material requirements and meet even the most exacting specifications.

As your partner, we will guide you through putting the finishing touches on your small cell structure. With extensive in-house galvanizing and paint options, we can match the color, durability, and finish requirements of your project, all while meeting your aesthetic needs.

We can also provide you with turn-key solutions to simplify installation. Upon request, our small cell structures leave our facilities containing all the technology required, including the mounting of components, cable, and accessories.



SimpleCell™ Small Cell Suite

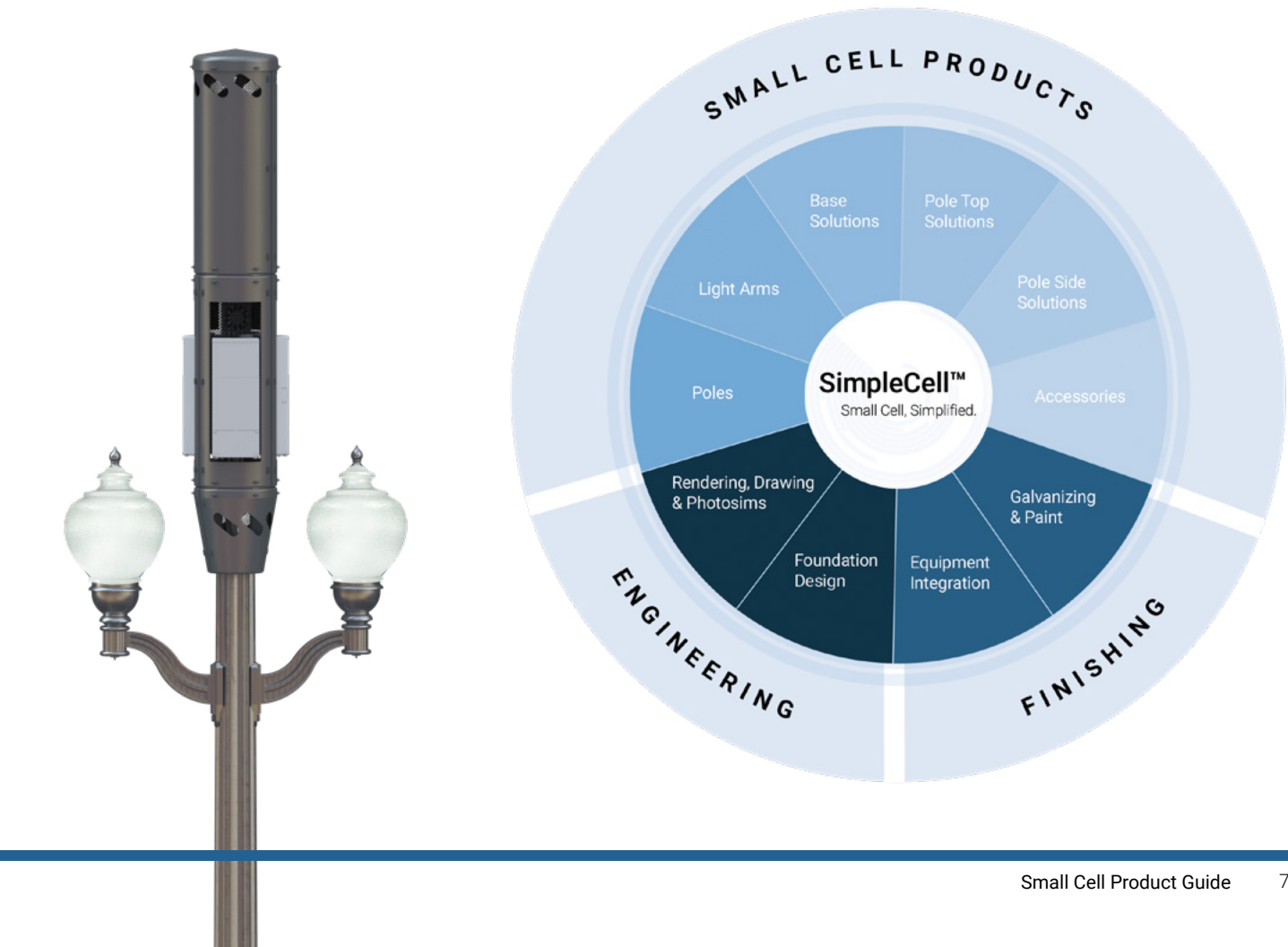


Bringing Simplicity and Ease to Your 5G Deployments

The SimpleCell™ Suite provides you with a complete, all-in-one solution that simplifies your 5G and 4G deployments.

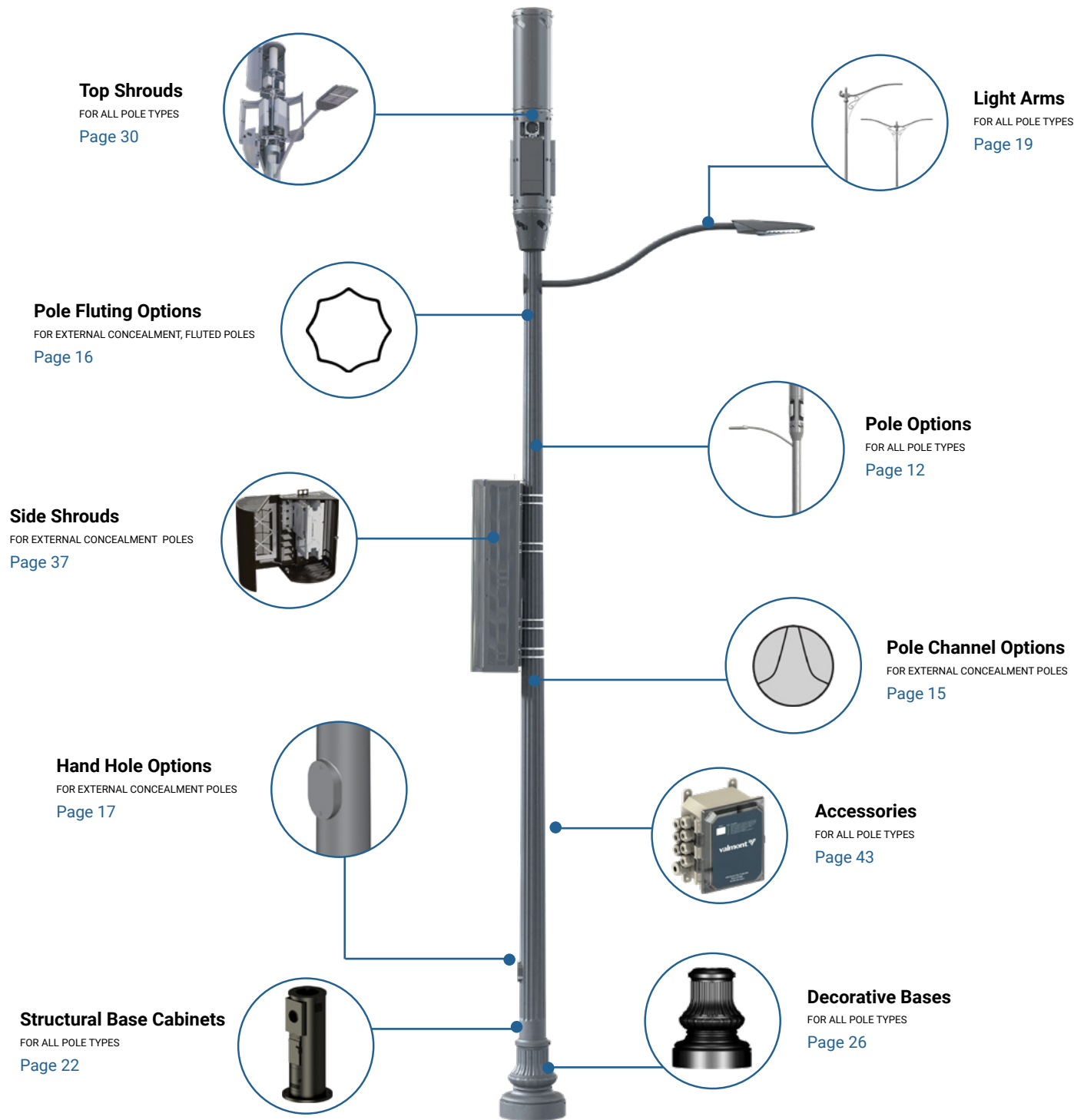
When it comes to meeting the increasing demands for faster connectivity in this new 5G world, Valmont can assist with the products, services, and guidance necessary to help you navigate these new technologies and ease the complexities of deployment.

Our comprehensive suite of small cell poles, concealment options, decorative elements, engineering, and ancillary services, takes a traditionally complex process and simplifies it, enabling rapid deployment and ensuring that the aesthetic values of the target environment are appropriately maintained.



Small Cell Pole Anatomy

Below you can see a breakdown of all the significant parts of a small cell pole. Beginning at the top shroud, down to the base cabinet, **you can click on each call-out to jump to the associated page.** Our external concealment pole is featured below, but where noted, many elements apply to both external and internal concealment poles.



Standard Configurations

Here you can see some of our standard configurations for 5G, 4G, and combination 5G/4G applications. They are pre-configured based on the most common use cases. These solutions are complete assemblies and contain everything you need for simple and rapid deployments. **These configurations showcase our capabilities and are customizable to your specific needs.**



The Stanton

Our standard configuration comes with everything you need to quickly mount small 5G antennas.

- 14" x 30" 5G W-Top Shroud
- 8" External Concealment, Round, Straight & Smooth Pole
- Can house antennas that are 8.5" x 21" or smaller
 - Compatible with Ericsson 1281

The Fremont

This standard configuration comes with everything you need to quickly mount small 4G antennas and radio equipment.

- 14" x 18" Radio Equipment Zone
- 6" External Concealment, Round, Tapered & Smooth Pole
- 4G zones can house the following antennas:
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Single Light Arm, DS30 Style
- Classic AC1 Decorative Base

Standard Configurations (Continued)



The Bourbon

This decorative configuration comes with everything you need to quickly mount 5G and 4G antennas with radio equipment installed in a structural base cabinet.

- 14" x 72" Antenna & Radio Equipment Zone
- 6" External Concealment, Round, Tapered & Fluted Pole (16 Sharp)
- 5G zone can house antennas that are 8-1/2" x 27" or smaller
 - Compatible with Ericsson 6701, 1281
- 4G zones can house the following antennas:
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Dual Light Arm, Burnsville Style
- Round XAA (18" x 36") Structural Base Cabinet w/Capital Decorative Base



The Bristol

This standard configuration comes with everything you need to quickly mount 5G and 4G antennas with radio equipment installed in a side shroud.

- 14" x 66" Antenna & Radio Equipment Zone
- 10" External Concealment, Round, Straight & Smooth Pole
- 5G zone can house antennas that are 11-1/2" x 21" or smaller
 - Compatible with Nokia AEWD/AEWE Pico
- 4G zones can house the following antennas:
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Single Light Arm, DS70 Style
- XA Side Shroud (46" x 14" x 14")
- Dart Square Decorative Base

Standard Configurations (Continued)



The Clinton

This dual carrier configuration comes with everything you need to quickly mount 5G and 4G antennas with radio equipment installed inside of the concealed pole itself.

- 18" x 162" Antenna & Radio Equipment Zone
- 12" Internal Concealment Pole
 - 3 Internal Pole Equipment Bays
- 5G zones can house antennas with a:
 - Q-Top window opening of 13" x 26"
 - W-Top window opening of 12" x 27"
- 4G zones can house the following antennas:
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Dual Tapered Light Arm with APT Light Hub
- Renaissance AC1 Decorative Base



The Empire

This triple carrier configuration comes with everything you need to quickly mount 5G and 4G antennas with radio equipment installed inside of the concealed pole itself.

- 22" x 246" Antenna & Radio Equipment Zone
- 18" External Concealment Pole
 - 4 Internal Pole Equipment Bays
- 5G zones can house antennas with a:
 - X-Top window opening of 13" x 30"
- 4G zones can house the following antennas:
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Dual Tapered Light Arm with APT Light Hub
- Classic Low AC2 Decorative Base

Pole Types

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Here you can see our concealed pole options. Both options are highly configurable and can be used in dual-use scenarios for lighting and communications applications. The primary difference between both poles is where the equipment is housed.

External concealment poles allow the use of city standard pole systems made structurally viable for side cabinets and top shrouds. Internal concealment poles use specially designed pole shafts that house radio equipment inside the pole itself. Both can be deployed on top of our structural bases systems.



External Concealment Poles

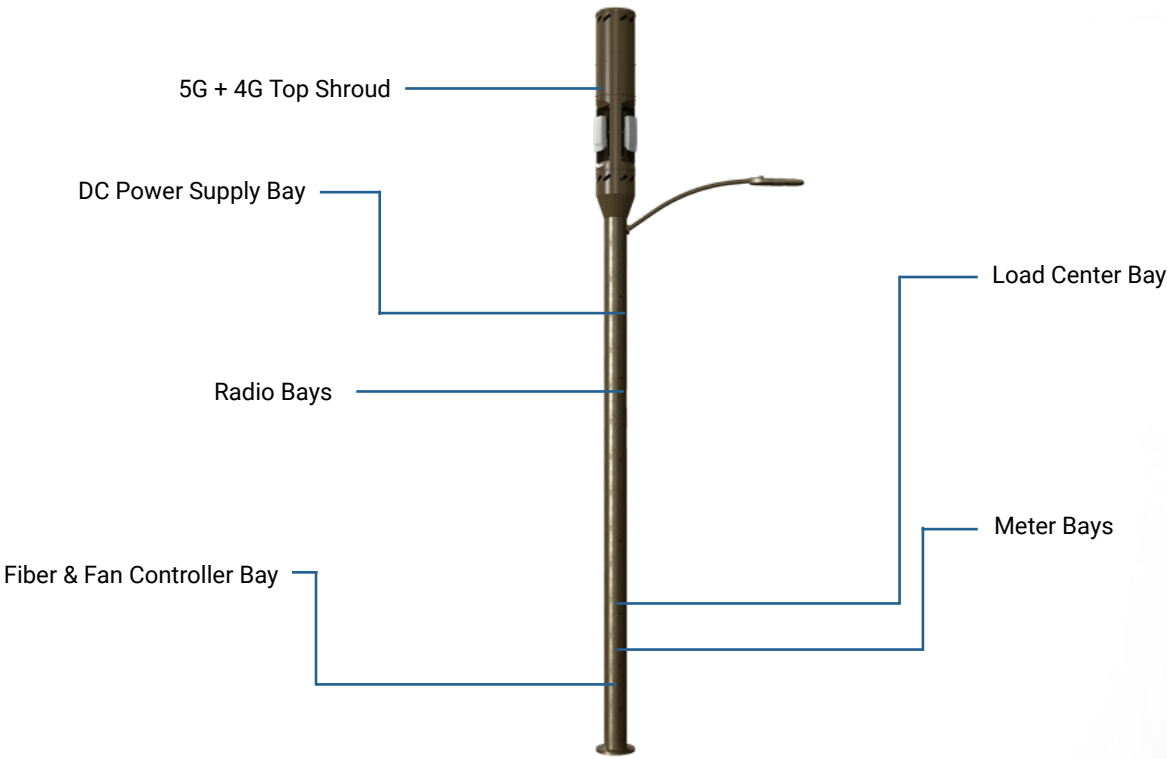


Internal Concealment Poles

Internal Concealment Pole Features

Our internal concealment poles provide a solution that completely hides all small cell equipment from public view. They are highly engineered and rigorously tested with features that include:

- Engineered to meet UL, Telcordia GR-487, and CSA specifications
- Available in 12.75" diameter (Up to 35') and 18" diameter (Up to 35')
- Configurable with 1 to 5 internal equipment bays
- Custom sizes are available
- Robust ¼ - ½" gauge steel galvanized structure
- Fully hinged doors equipped with Telcordia GR-487 certified wind latches
- Standard Bellcore 216 door hasp with optional padlock feature
- Universal equipment mounting plates (equipment kits sold separately)
- Stainless steel internal bracketry and hardware
- Optional equipment brackets for specific equipment configurations (custom available)
- GFCI outlet brackets are available
- Thermally certified to operate in any climate (-40 to +46C)
- Match any city aesthetic and warranty requirement on finishes
- UV resistant finishes on all external materials
- Compatible with our decorative bases to match any aesthetic
- Optional Valmont cooling systems available (AC and DC)
- Optional concealed or exposed electric utility meters, disconnects, and service panels
- Internal 5 or 10 position ground bars at each bay
- 1 year warranty included



External Concealment Pole Features

We offer external concealment poles which house all equipment within our base cabinets, top and side shrouds. These poles can be customized to match any city aesthetic and feature:

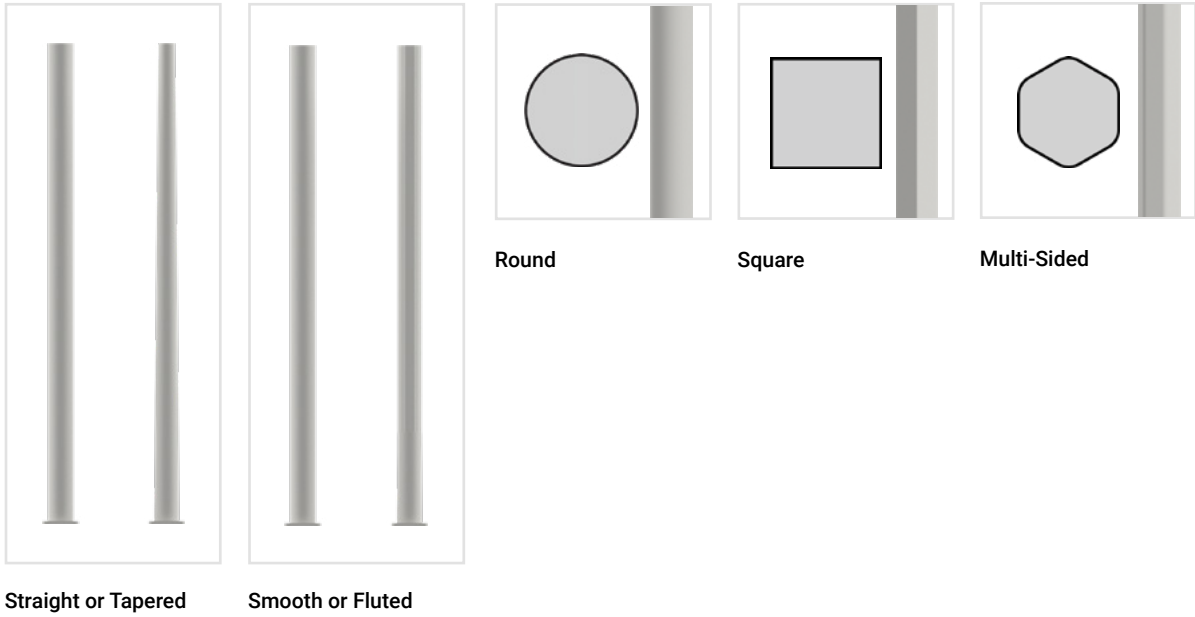
- Engineered to meet UL, Telcordia GR-487, and CSA specifications
- Choose between a variety of shapes (Straight, Fluted, Octagonal, Hexagonal, Square)
- Galvanized steel or aluminum build
- Wide variety of light arm options
- Decorative base options
- Structural base options which can be combined with decorative bases
- Optional cable port couplings for equipment and electrical components
- Variety of handhole options available to meet city standards
- Select between a variety of cable dividing options
- Telcordia GR-487 compliant hand hole options for top and side shrouds
- Match any city aesthetic and warranty requirement on finishes
- UV resistant finishes on all external materials
- GFCI outlet brackets are available
- 1 year warranty included



Shape & Style Combinations (External Concealment Poles)

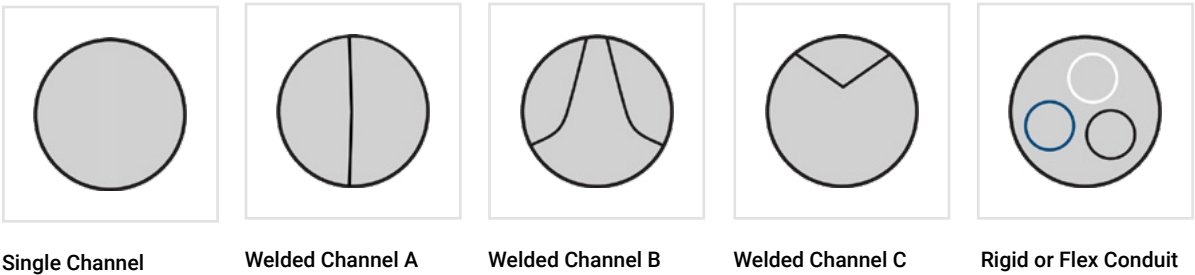
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Our external concealment poles come in a variety of shapes and styles, which can be further customized to meet your desired aesthetic. You can select a combination of the attributes below when configuring your pole, including round or square shapes, then straight, tapered, fluted, or smooth styles.



Internal Pole Channel Options (External Concealment Poles)

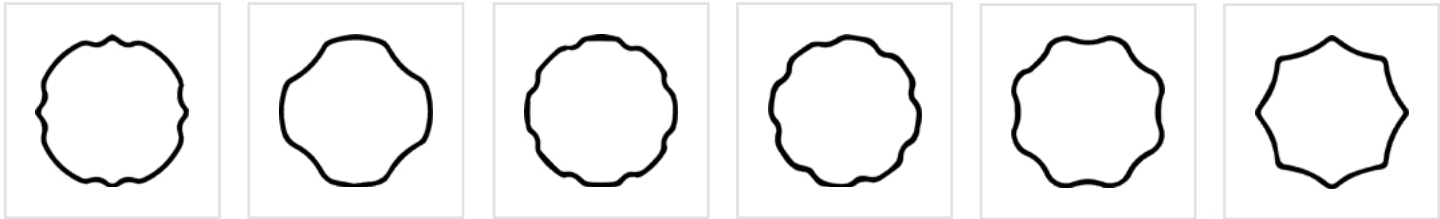
You can choose how the pole is internally divided for cable and wire separation. 5.75" minimum top OD. Please note that Welded Channel A, B, and C are steel-only options.



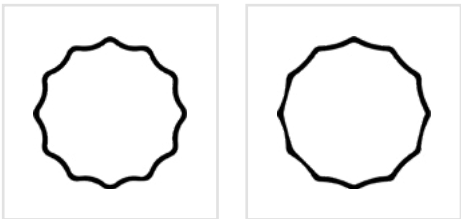
Fluting Options (External Concealment Poles)

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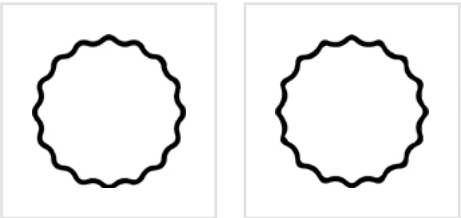
If the pole you select is fluted, you can choose how it is decoratively shaped. Fluting options feature clean and uniformed transitions with the ability to begin and stop anywhere along the pole shaft.



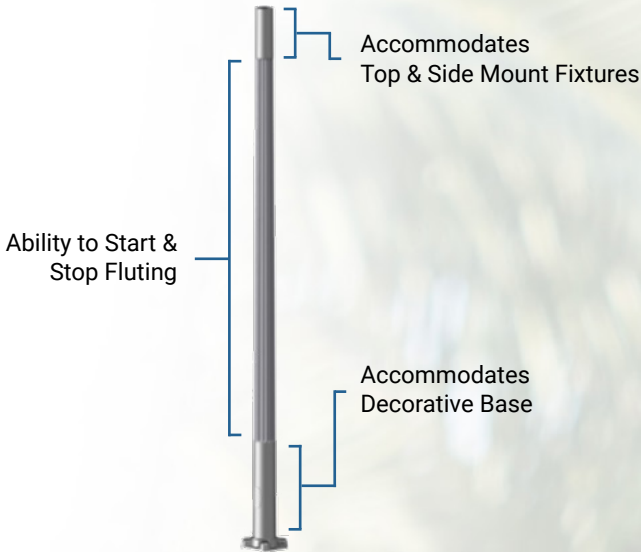
4W 4 Sharp 8 Flat 8V 8 Gear Tooth 8 Sharp



12 Flat 12 Sharp



16 Flat 16 Sharp



Cable Port Options

You can select between a variety of handhole cable port shapes, mount types, and festoon options. Festoon options allow for the mounting of GFCI outlets on the pole.

- Handhole cable ports are available in rectangular, oval, and circular shapes
- Flush mount, surface mount, semi-flush, and reinforcement mount covers available
- Multiple sizes available
- Cable pipe ports (couplings) available for typical 5G use
- Cable connection port available for side shroud use



Flush Mt. (Alum.) Surface Mt. (Alum.) Semi-Flush Mt. (Steel) Reinforcement Mt. (Steel)



Festoon Rim (Steel) Festoon Rim (Alum.) Swing Latch Dr. & Ground Nut Holder



Side Shroud Port Rim Hand Hole Rim Coupling



Traffic Structures

In addition to our standard pole options, we also offer a variety of traffic structures that can be heavily customized to match any city aesthetic. These structures can be customized in much of the same way as our external concealed poles. Some of the features include:

- Engineered to meet UL, Telcordia GR-487, and CSA specifications
- Variety of shape and style options including straight, tapered, fluted, round, or square
- Galvanized steel or aluminum build
- Match any city aesthetic and warranty requirement on finishes
- UV resistant finishes on all external materials
- Structural base options which can be combined with decorative bases
- Optional cable port couplings for equipment and electrical components
- GFCI outlet brackets are available
- Wide variety of light arm options
- Decorative base options
- Handhole options
- Cable divider options
- 1 year warranty included



Decorative Light Arm Options






















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Select between a variety of options and styles to meet any aesthetic. Available in single or double designs if shown below.

DS30	DS32	DS50	DS56	DS70	Windsor
12th Avenue	24th Avenue Long	24th Avenue Short	36th Avenue	48th Avenue	60th Avenue Large
60th Avenue Small	72nd Avenue	Alhambra	Burnsville	Chateau 1	Chateau 2
Clarksville	Vista 1 Steel	Lancaster	Marina 1	Marina 2	Paramount
Paseo 1	Paseo 2	Remo	Shepherd's Crooks	South River	Strada 1







Decorative Light Arm Options (Continued)

Select between a variety of options and styles to meet any aesthetic. Available in single or double designs if shown below.

					
Vista 2 Steel	Strada 3	Strada 4	Strada 5	Vista 1A	Vista 2
					
Vista 3	Vista 4	Woodbridge	Alhambra Steel	Lantern	Marina 1
					
Marina 2	Paramount Steel	Paseo 1 Steel	Paseo 2 Steel	Remo Steel	Strada 1 Steel
					
Strada 2 Steel	Strada 4 Steel	Strada 6 Steel			

Decorative Light Scroll Options

Below you can select between a variety of decorative light scroll options which can be combined or customized.

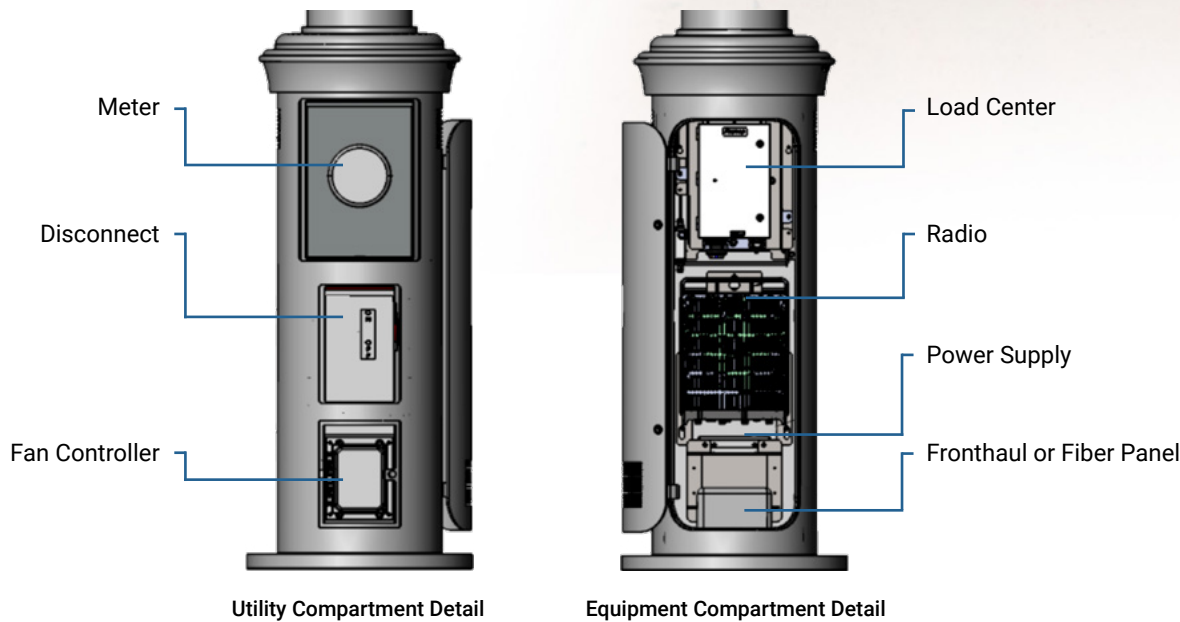
		
Nature	Augusta	Caius
		
Claudia	Renata	
		
Lucia		



Structural Base Cabinets

Our structural base equipment cabinets support standard area lighting poles and provide an aesthetic method to conceal equipment from public sight and protect against theft and the elements. Features include:

- Engineered to meet UL, Telcordia GR-487, and CSA specifications
- Supports cooling system, fiber panels, utility meters, 4G radios, diplexers, load center, disconnect and grounding
- Robust ¼ - ½” gauge steel galvanized structure
- Fully hinged doors equipped with Telcordia GR-487 certified wind latches
- Universal equipment mounting rails
- Stainless steel internal brackets and hardware are available
- Provides ground-level access for crews
- External or internal anchor bolt configurations available
- Standard Bellcore 216 door hasp with optional pad-lock
- Thermally engineered to operate in any climate (-40 to +46C)
- Match any city aesthetic and warranty requirement on finishes
- UV resistant finishes on all external materials
- Optional Valmont multi-zone smart cooling systems are available
- Optional concealed or exposed electric utility meters, disconnects, and service panels
- Internal 5 or 10 position ground bar
- Decorative bases can be used as a transition from cabinet to pole
- 1 year warranty included
- For equipment compatibility, see end of section



Structural Base Cabinets

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Our base storage cabinets come in multiple shapes and sizes. Custom sizes are available upon request.



Square XA (22" x 48")



Square XB (26" x 48")



Round XAA (18" x 36") w/Capital Base



Round XA (18" x 60")



Round XB (20" x 60")



Round XC (24" x 60")

Equipment Compatibility (Round Base Cabinets)

Below are many of the structural base cabinet bracket configuration kits we offer, along with equipment compatibility listing. Custom kits are available upon request. Ask your Valmont small cell rep about your specific equipment configuration.

- 18” x 36” round base bracket kits support:
 - x1 Nokia AHxxx (Select Models) Radio or x2 Nokia Airscale Micro Radios, Raycap or PTS Disconnect, Diplexer, Fiber Panel and Valmont Fan System
- 18” x 60” round base bracket kits support:
 - x1 Ericsson 4415/4426/8843/4449 Radio or x4 Ericsson 220x/440x Radios, x1 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x1 Nokia AHxxx Radio or x2 Nokia Airscale Micro Radios, x1 Delta 2kW PSU, Raycap or PTS Disconnect, Diplexer, Fiber Panel and Valmont Fan System
 - Samsung 160W/320W Dual Band Radio,x1 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
- 20” x 60” round base bracket kits support:
 - x1 Ericsson 4415/4426/8843/4449 Radio or x4 Ericsson 220x/440x Radios, x1 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x1 Nokia AHxxx Radio or x2 Nokia Airscale Micro Radios, x1 Delta 2kW PSU, Raycap or PTS Disconnect, Diplexer, Fiber Panel and Valmont Fan System
 - x1 Samsung 160W/320W Dual Band Radio,x1 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
- 20” x 60” round base (with exposed meter) bracket kits support:
 - x1 Ericsson 4415/4426/8843/4449 Radio or x4 Ericsson 220x/440x Radios, x1 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel, Valmont Fan System, Millbank U4801 Meter and GE TG-3222R Disconnect
 - x1 Nokia AHxxx Radio or x2 Nokia Airscale Micro Radios, x1 Delta 2kW PSU, Raycap or PTS Disconnect, Diplexer, Fiber Panel, Valmont Fan System, Millbank U4801 Meter and GE TG-3222R Disconnect
 - x1 Samsung 160W/320W Dual Band Radio, x2 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel, Valmont Fan System, Millbank U4801 Meter, GE TG-3222R Disconnect
- 24” x 60” round base bracket kits support:
 - x2 Ericsson 4415/4426/8843/4449 Radio (Only 1 8843) or x6 Ericsson 220x/440x Radios, x2 Delta 2kW or ABB CC1600 PSU, x1 Diplexer, Raycap or PTS Disconnect or Isco BAS Filter, Fiber Panel and Valmont Fan System
 - x2 Nokia AHxxx Radio or x6 Nokia Airscale Micro Radios, x2 Delta 2kW or ABB CC1600 PSUs, Raycap or PTS Disconnect or Isco BAS Filter, Diplexer, Fiber Panel and Valmont Fan System
 - x12 Samsung 160W/320W Dual Band Radios, x2 Delta 2kW or ABB CC1600 PSUs, x1 Diplexer, Raycap or PTS Disconnect or Isco BAS Filter, Fiber Panel and Valmont Fan System

Equipment Compatibility (Square Base Cabinets)

Below are many of the structural base cabinet bracket configuration kits we offer, along with equipment compatibility listing. Custom kits are available upon request. Ask your Valmont small cell rep about your specific equipment configuration.

- 22” x 48” square base bracket kits support:
 - x1 Ericsson 4455 Radio, x1 Ericsson 6487 Fronthaul, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x6 Ericsson 2203/440x Radios, x1 Ericsson 6487 Fronthaul, x2 Diplexers, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x1 Ericsson 4415/4426/8843/4449 Radio, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x4 Nokia AHxxx Micro Radios, x2 Diplexers, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x1 Nokia AHxxx 160/320W Radio, x1 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x1 Samsung 160/320W Dual Band Radio, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
- 26” x 48” square base bracket kits support:
 - x1 Ericsson 4455 Radio, x1 Ericsson 6487 Fronthaul, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x8 Ericsson 2203/440x Radios, x1 Ericsson 6487 Frontal, x2 Diplexers, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x1 Ericsson 4415/4426/8843/4449 Radio, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel, Valmont Fan System
 - x8 Nokia AHxxx Micro Radios, x2 Diplexers, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x2 Nokia AHxxx 160/320W Radio, x2 Delta 2kW PSU, x1 Diplexer, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x1 Samsung 160/320W Dual Band Radio, x1 Samsung CBRS Radio, x1 Samsung LAA Radio, x1 Delta 2KW PSU, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System
 - x2 Samsung 160/320W Dual Band Radio, x2 Delta 2kW PSU, Raycap or PTS Disconnect, Fiber Panel and Valmont Fan System

Decorative Base Options

Our bases can be installed at ground level and used in a standalone manner or stacked as a collar on our structural base cabinets to adhere to city aesthetic standards.



Armstrong 5M Classic AC1 Classic AC2 Classic AC2 Low



Deco Slip Over A Deco Slip Over B Dorchester Clam Shell Dorsey 4H



Classic A01 Classic A02 Contour Clam Shell



Ellington 3V Ellsworth

Decorative Base Options (Continued)

Our bases can be installed at ground level and used in a standalone manner or stacked as a collar on our structural base cabinets to adhere to city aesthetic standards.



Fairfax Freeport Gatsby Georgetown Harrisburg Hawthorn



Huntington Clam Shell Lake County Liberty MarketSquare Memphis Midtown



Mission Bay Osceola Reinhardt 3E Renaissance AC1 Renaissance AC2 Renaissance A01



Renaissance A02 Santa Fe Stanton Sterling ST Stylus SL Washington AC1

Decorative Base Options (Continued)

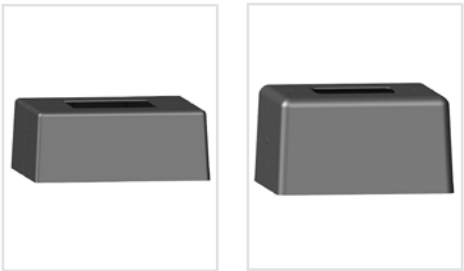
Our bases can be installed at ground level and used in a standalone manner or stacked as a collar on our structural base cabinets to adhere to city aesthetic standards.



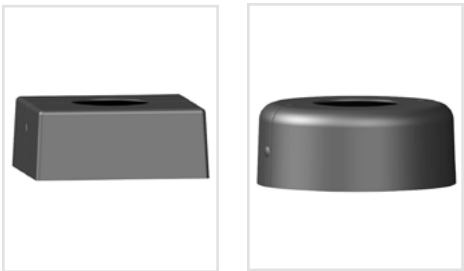
Washington AC2 Washington AC3 Athens 3F Avalon 2J Natchez NZ Tucson 3D



Washington 3J Huntington 3L Brookhaven 3C10EC Brookhaven 3C20EC Dart Square Dart Round



Plastic Square A Plastic Square B



Plastic Square C Plastic Round A



Lake County Base

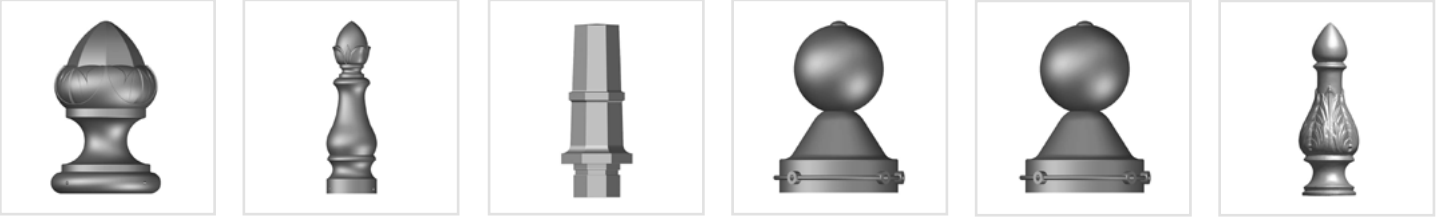


Huntington Clam Shell Base

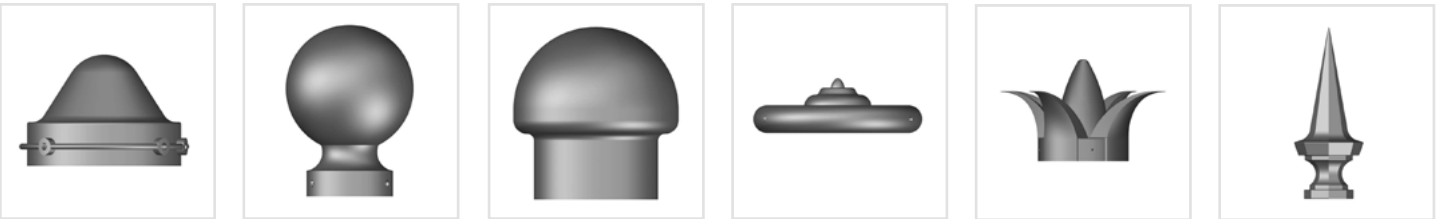
Finial & Cap Options

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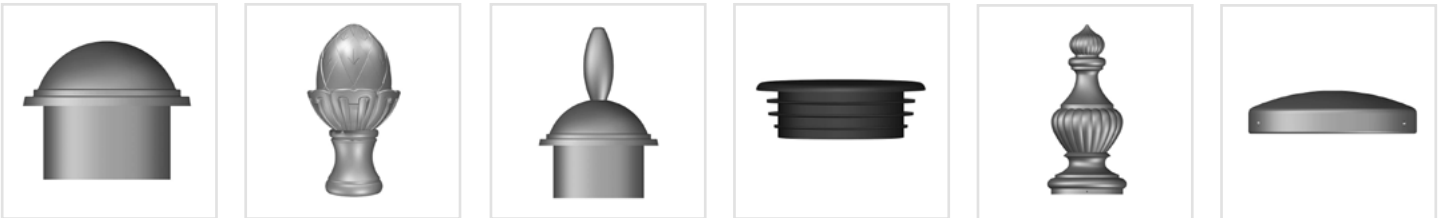
You may select between a variety of finials and pole cap options to top off the pole and add a decorative element to the overall structure when not using an Adaptive Pole Top solution.



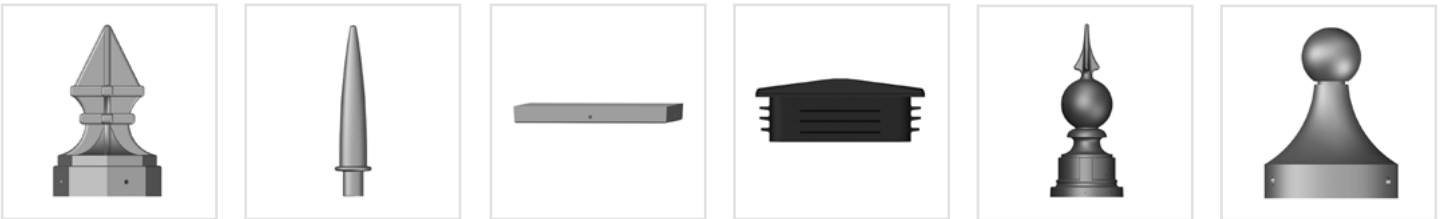
Acorn Alhambra Athens Ball Burnsville Capitol



Standard Globe Half Dome Lancaster Metro Needle



Pantheon Pineapple Point Round Plastic Push-In Shikra South River

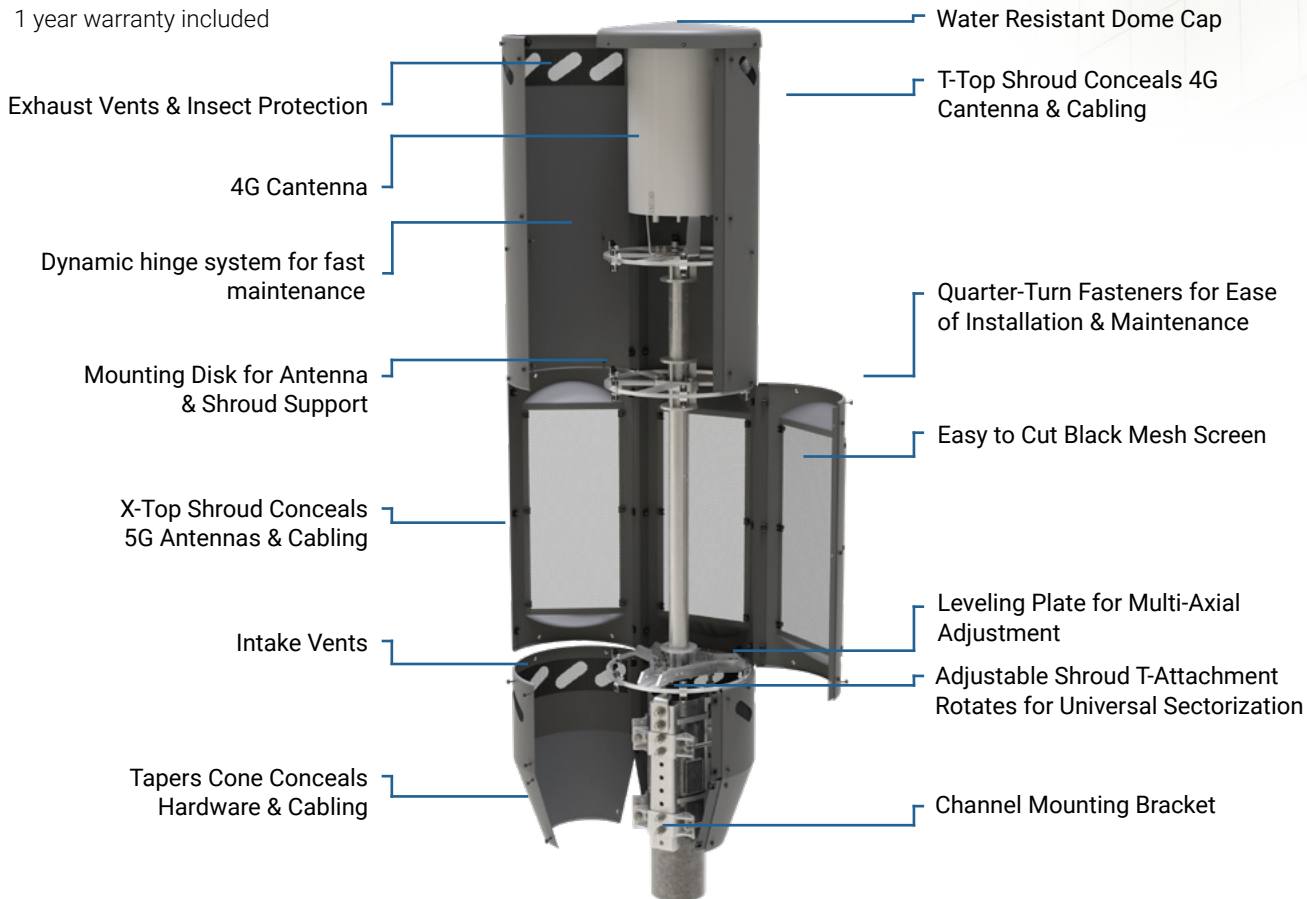


Spear Spike Square Square Plastic Push-In Tuscaloosa Woodbridge

Adaptive Pole Top™ System

Valmont Site Pro 1 offers a complete line of pole top concealment shrouds and solutions in various diameters and configurations to accommodate a variety of applications.

- 5G, 4G, or combination applications
- 14", 18", & 22" diameters are available
- Lightweight panels for easy installation and maintenance
- Engineered to meet UL, Telcordia GR-487, and CSA specifications
- Standard colors include black, gray, and dark bronze
- Custom colors are available
- Optional color matched screens available
- Match any city aesthetic and warranty requirement on finishes
- UV resistant finishes on all external materials
- Attaches via thru-bolt, banding, or compression clamp to existing poles (wood, metal, concrete, or composite)
- Attaches directly to new Valmont poles
- AC or DC powered cooling systems (2 & 3 Sector)
- 1 year warranty included

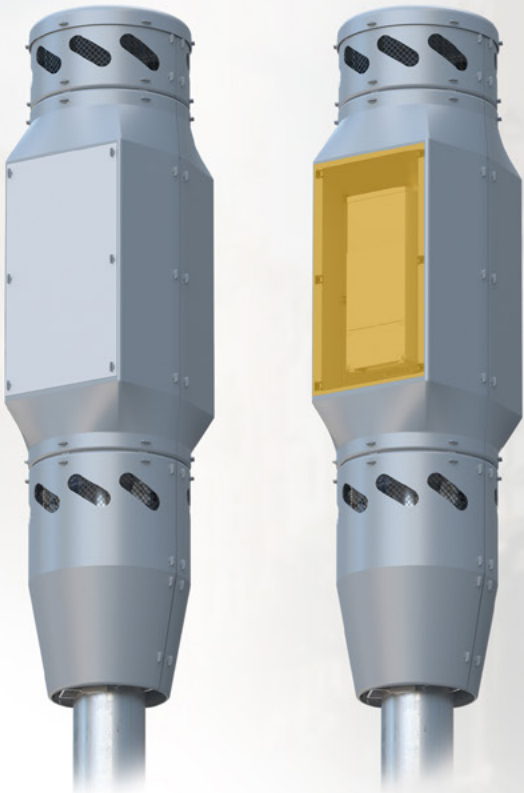


4G/5G 22" XT-Top Concealment Shroud

SpectraCell™ 5G Concealment Products

When deploying 5G nodes in the mmWave spectrum (24.25 GHz - 40 GHz), you must have access to solutions that balance aesthetics and RF propagation. Our Adaptive Pole Top™ (APT) shroud systems come with the option of using Valmont SpectraCell™. The products are specifically manufactured to reduce insertion loss when complete antenna concealment is required. Build your 5G network with Valmont SpectraCell™ and operate without sacrifice.

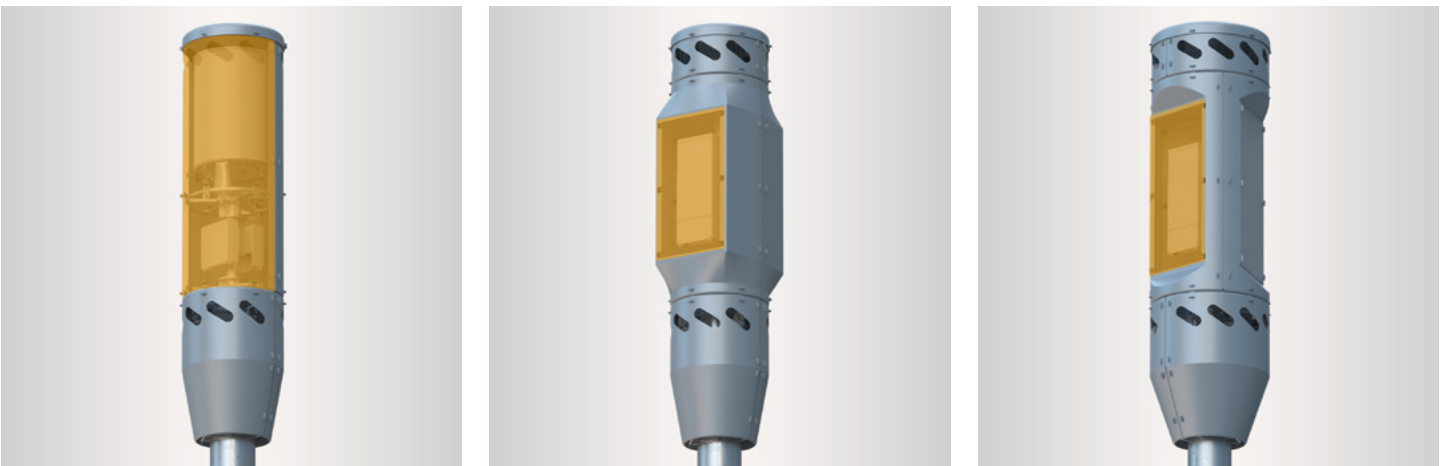
- UV resistant
- Water repellent
- Minimal db loss
- Several form factors
- Custom color-matching
- Easy equipment access
- Chemical resistant
- Impact Resistant
- Lightweight



Average Insertion Loss Rate

4G <small>.6 to 2.7 GHz</small> ~.05dB	CBAND <small>3.7 to 4.2 GHz</small> ~.18dB	CBRS <small>3.55 to 3.7 GHz</small> ~.18dB	24 <small>24.25 to 25.25 GHz</small> ~.44dB	28 <small>27.5 to 28.35 GHz</small> ~.15dB	39 <small>38.6 to 40 GHz</small> ~.36dB
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Sample Styles



T-Top

Q-Top

X-Top

5G / 4G Shrouded Pole Top Solutions

[VIEW ORDER GUIDE](#)

Standard W-Top, Q-Top, and X-Top with T-Top combination full concealment shrouds designed to house standard 5G antennas, cantennas, and low-powered radios.

14" x 78" W-Top

- 5G zone can house antennas that are 11-9/16" x 21" or smaller
 - Compatible with Nokia AEWD/AEWE Pico
 - Compatible with Ericsson 6701, 1281
 - Compatible with Samsung Pico HT5H01
- 4G zone can house antennas that are 13" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- 14" x 18" h-frame equipment zone
- Fits poles 4-1/2" to 12" with cone I.D. of 8-5/8", 10-3/4" and 12-3/4" dia.
- Designed for low-volume constraints.



18" x 108" Q-Top

- 5G zone can house antennas that are 13" x 26" or smaller
 - Compatible with Nokia AEUB/ASOD
 - Compatible with Ericsson 6701, 1281, 6337
 - Compatible with Samsung NR AU
- 4G zone can house antennas that are 17" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- 18" x 18" radio equipment zone.
- Fits poles 4-1/2" to 18" with cone I.D. of 8-5/8", 10-3/4" and 12-3/4" dia.
- Designed for medium-volume constraints.



22" x 90" X-Top

- 5G zone can house antennas that are 13" x 30" or smaller
 - Compatible with Nokia AEUB/ASOD
 - Compatible with Ericsson 6701, 1281, 6337
 - Compatible with Samsung NR AU
- 4G zone can house antennas that are 21" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- 22" x 18" radio equipment zone.
- Fits poles 4-1/2" to 22" with cone I.D. of 12-3/4" and 18" available
- Designed for high-volume constraints.



5G Shrouded Pole Top Solutions

Standard W-Top, Q-Top, and X-Top full concealment shrouds which are designed to house standard 5G antennas.

14" x 36" W-Top

- Can house antennas that are 8.5" x 27" or smaller.
 - Compatible with Ericsson 6701, 1281
- Fits poles 4-1/2" to 12"
- Transition cones designed for 8-5/8", 10-3/4" and 12-3/4" dia.
- Slide-in mesh and panel.
- Designed for low-volume constraints



18" x 42" Q-Top

- Can house antennas that are 13" x 26" or smaller
 - Compatible with Nokia AEUB/ASOD
 - Compatible with Ericsson 6701, 1281, 6337
 - Compatible with Samsung NR AU
- Fits poles 4-1/2" to 18"
- Transition cones designed for 8-5/8", 10-3/4" and 12-3/4" dia.
- Fastened mesh and panel.
- Designed for medium-volume constraints



22" x 42" X-Top

- Can house antennas that are 13" x 30" or smaller
 - Compatible with Nokia AEUB/ASOD
 - Compatible with Ericsson 6701, 1281, 6337
 - Compatible with Samsung NR AU
- Fits poles 4-1/2" to 22"
- Transition cones designed for 12-3/4" and 18" poles available
- Fastened mesh and panel
- Designed for high-volume constraints



4G Shrouded Pole Top Solutions

Standard T-Top full concealment shrouds which are designed to house antennas and low-powered radios.

14" x 48" W-Top

- Can house antennas that are 13" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Fits poles 4-1/2" to 12"
- Transition cones designed for 8-5/8", 10-3/4" and 12-3/4" dia.
- Designed for low-volume constraints.
- 14" x 18" h-frame equipment zone. (2 Radios Typ.)



18" x 48" Q-Top

- Can house antennas that are 17" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Fits poles 4-1/2" to 18"
- Transition cones designed for 8-5/8", 10-3/4" and 12-3/4" dia.
- Designed for medium-volume constraints
- 18" x 18" radio equipment zone. (3 Radios Typ.)



22" x 48" X-Top

- Can house antennas that are 21" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Fits poles 4-1/2" to 22"
- Transition cones designed for 12-3/4" and 18" poles available.
- Designed for high-volume constraints
- 22" x 18" radio equipment zone.



Partially Shrouded Pole Top Solutions

Exposed antenna pole top solutions with integrated cone for cable and mounting hardware concealment. They are easily adaptable for future shrouding or height change considerations.

5G Pole Extension & Cone

- 5G mast can mount antennas up to 54" height
 - Compatible with Nokia AEWD/AEWE Pico
 - Compatible with Ericsson 6701, 1281
 - Compatible with Samsung Pico HT5H01
- Fits poles 4-1/2" to 12"
- Transition cones designed for 8-5/8", 10-3/4" and 12-3/4" dia.



4G Pole Extension & Cone

- 4G mast can mount standard antennas at up to 42" height
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Mast used for radio equipment
- Fits poles 4-1/2" to 18"
- Transition cones designed for 8-5/8", 10-3/4" and 12-3/4" dia.



5G / 4G Pole Extension & Cone

- 5G mast can house antennas that are 13" x 30" or smaller
 - Compatible with Nokia AEUB/ASOD
 - Compatible with Ericsson 6701, 1281, 6337
 - Compatible with Samsung NR AU
- 4G mast can house antennas that are 21" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- 22" x 18" radio equipment zone.
- Fits poles 4-1/2" to 22"
- Transition cones designed for 12-3/4" and 18" poles available



Non-Shrouded Pole Top Solutions

Steel only, exposed antenna pole top solutions. They are easily adaptable for future shrouding or height change considerations.

5G Pole Extension

- 5G mast can mount antennas up to 54" height
 - Compatible with Nokia AEWD/AEWE Pico
 - Compatible with Ericsson 6701, 1281
 - Compatible with Samsung Pico HT5H01
- Fits poles 4-1/2" to 12"



4G Pole Extension

- 4G mast can mount standard antennas at up to 42" height
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- Mast used for radio equipment
- Fits poles 4-1/2" to 18"



5G / 4G Pole Extension

- 5G mast can house antennas that are 13" x 30" or smaller
 - Compatible with Nokia AEUB/ASOD
 - Compatible with Ericsson 6701, 1281, 6337
 - Compatible with Samsung NR AU
- 4G mast can house antennas that are 21" diameter or smaller
 - Compatible with most omni antenna OEMs
 - Fits standard 1" and 7/8" threaded rod connections
 - Fits common stand-off brackets (3/8" on 4" and 6" BC)
- 22" x 18" radio equipment zone.
- Fits poles 4-1/2" to 22"

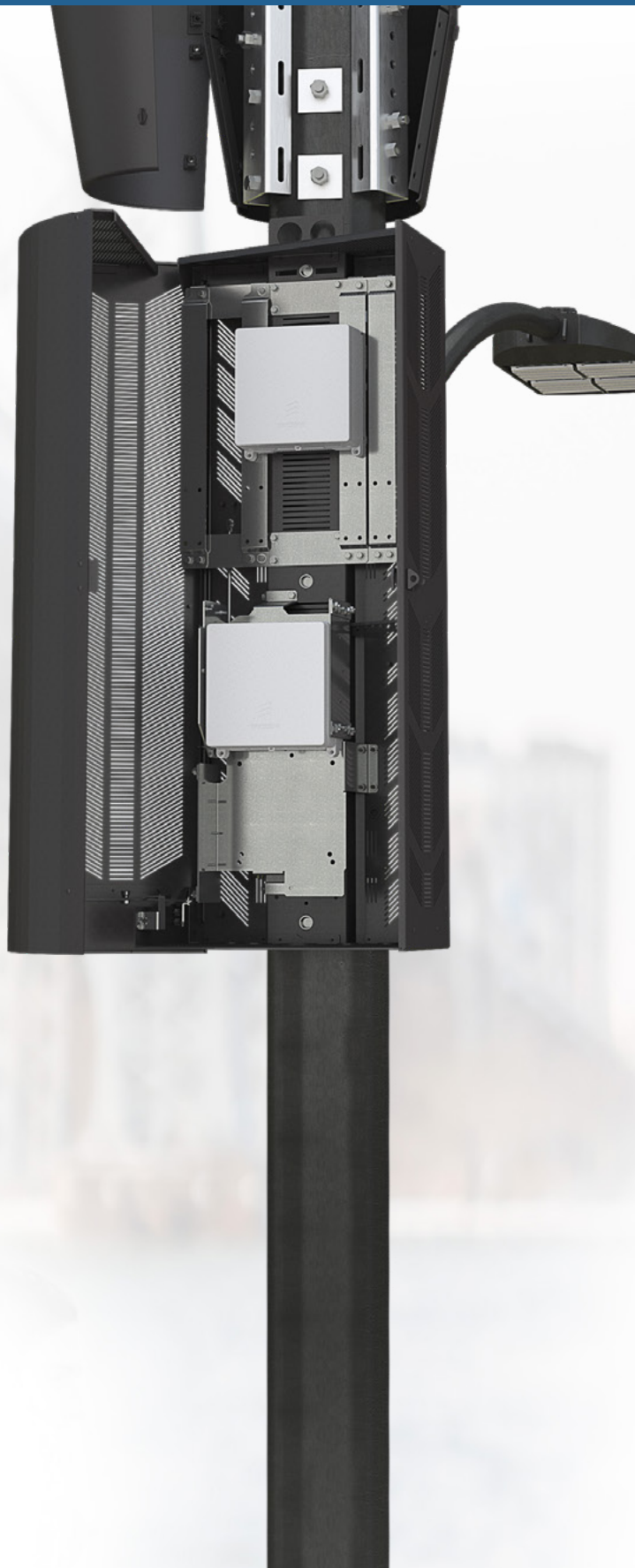
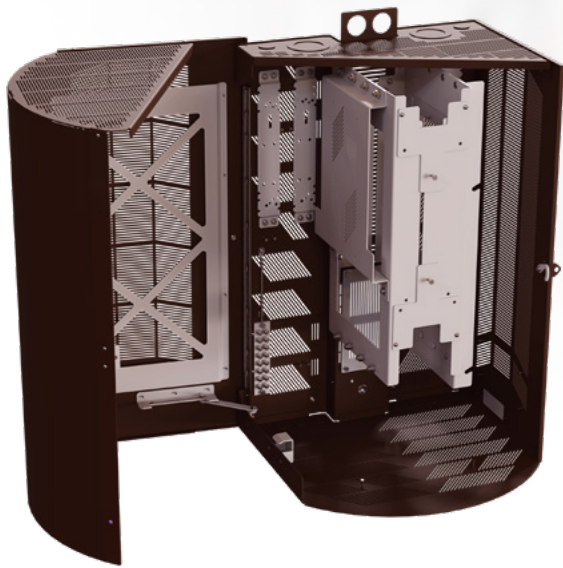


Universal Side Shrouds

[VIEW ORDER GUIDE](#)

Our side shrouds can be mounted to the side of any pole to conceal and secure equipment. They can be custom colored to match any aesthetic. Features include:

- Highly engineered and rigorously tested
- Engineered to meet UL, Telcordia GR-487, and CSA specifications
- Universal mounting (Wood, Steel, Aluminum, Concrete, etc.)
- Robust 12 gauge steel spline and mounting brackets
- .125" aluminum sides and door
- Thermally tested to operate in any climate (-40 to +46C)
- Equipment brackets are available for specific equipment configurations
- Standard colors include black, gray, and dark bronze
- Match any city aesthetic and warranty requirement on finishes
- UV resistant finishes on all external materials
- Fan-less design = zero maintenance (Except X-Large Side Shroud)
- Rear cable entry plate
- Internal ground bar
- Standard shroud mount can be thru-bolted or banded to pole or wall
- 1 year warranty included
- For equipment compatibility, see end of section



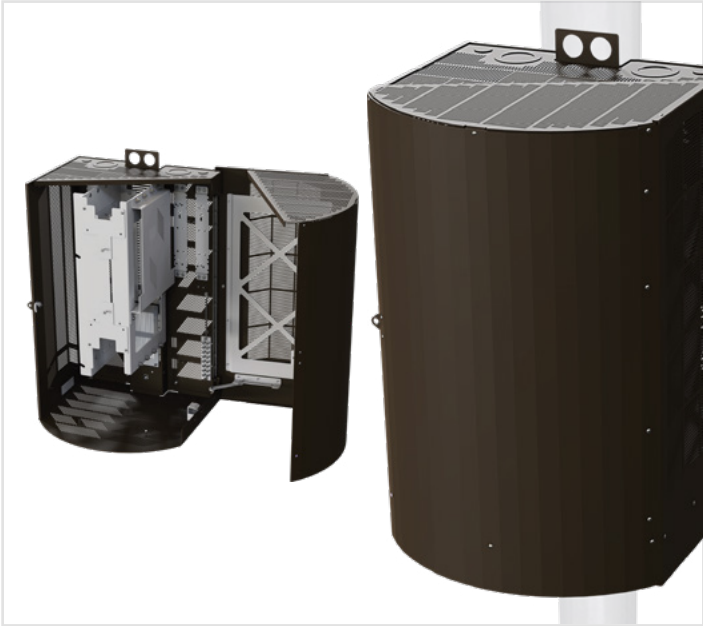
Universal Side Shroud Options

[VIEW ORDER GUIDE](#)

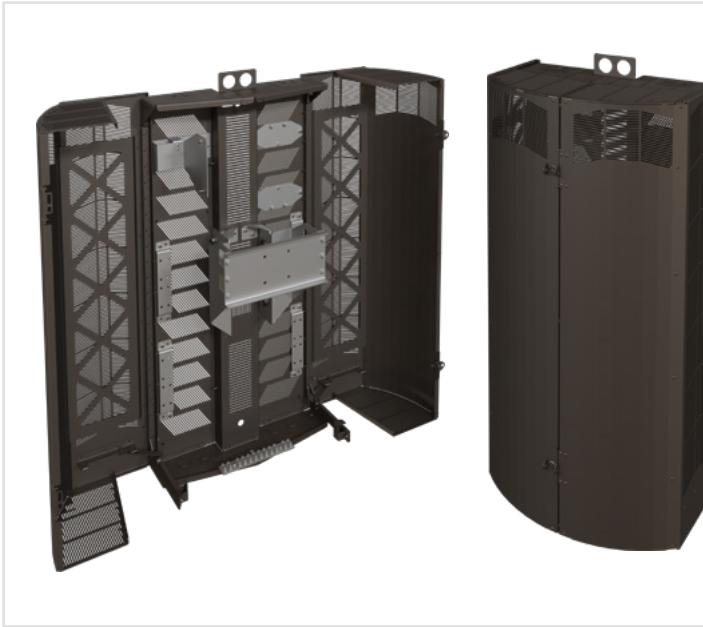
Our side shrouds come in multiple shapes and available options. Custom sizes and configurations are available.



Side Shroud XA (46" x 14" x 14")



Side Shroud XB (36" x 23" x 22")



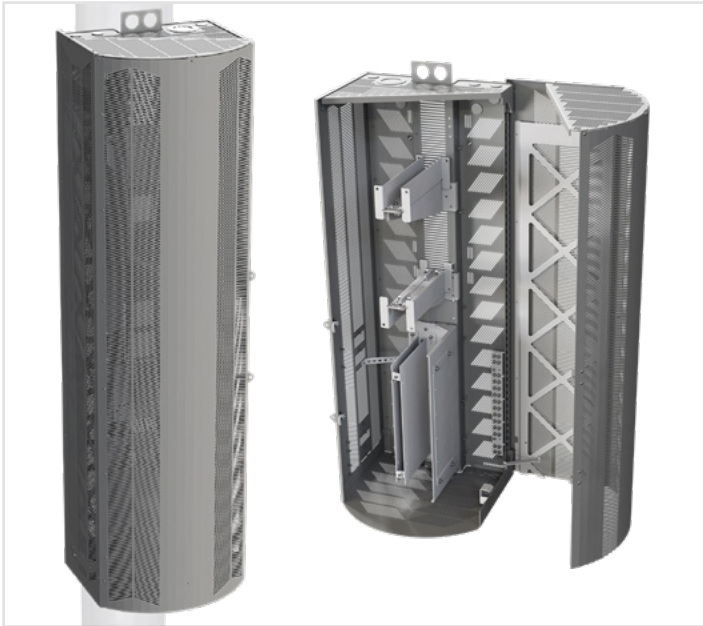
Side Shroud XC (48" x 24" x 15")



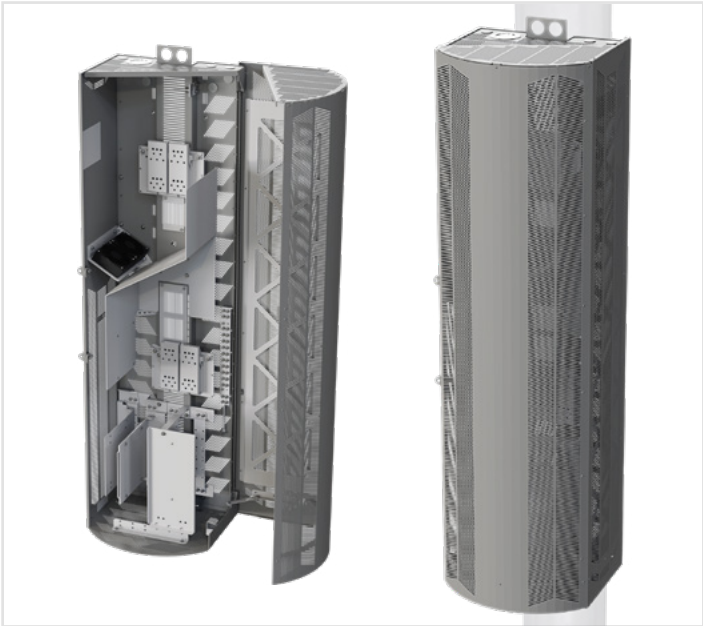
Side Shroud XD (48" x 24" x 20")

Universal Side Shroud Options

Our side shrouds come in multiple shapes and available options. Custom sizes and configurations are available.



Side Shroud XE (55" x 20" x 19")



Side Shroud XF (70" x 20" x 18")

Equipment Compatibility

Below are many of the shroud bracket configuration kits we offer, along with equipment compatibility listing. Custom kits are available upon request.

- 30" x 18" x 14" (Custom) shroud bracket kits support:
 - x4 Ericsson 220x/440x, Raycap or PTS Disconnect, Fiber Panel and 2 Diplexers
 - x4 Nokia Airscale Micro, Raycap or PTS Disconnect, Fiber Panel and 2 Diplexers
- 46" x 14" x 14" (Page 12) shroud bracket kits support:
 - x4 Ericsson 220x/440x, Raycap or PTS Disconnect, Fiber Panel and 2 Diplexers
 - x4 Nokia Airscale Micro, Raycap or PTS Disconnect, Fiber Panel and 2 Diplexers
- 46" x 18" x 14" (Custom) shroud bracket kits support:
 - x2 Ericsson 4426/4415, x2 AC-08 PSUs
 - x4 Nokia Ahxxx Radio, x1 Nokia Airscale Micro LAA Radio, x1 CCI 1200W PSU
- 36" x 23" x 22" (Page 12) shroud bracket kits support:
 - x1 Ericsson 8843/4449, 4478, 4426/4415, x2 220x/440x, x1 6302 or x2 AC-08 PSUs and Fiber Panel
 - x2 Nokia Ahxxx 160W, x2 Nokia APAF PSUs, Fiber Panel or x1 Nokia Ahxxx 320W, x1 Delta 2kW and Fiber Panel
 - x1 Samsung 160/320W Dual Band Radio, x1 Samsung CBRS Radio, x1 Samsung LAA Radio, x1 Delta 2kW PSU, x1 Fiber Panel and x1 Diplexer
- 48" x 24" x 15" (Page 12) shroud bracket kits support:
 - x1 Ericsson 4455 Radio, x4 Ericsson 220x/440x and 1 Fiber Panel
- 48" x 24" x 20" (Page 12) shroud bracket kits support:
 - x2 Nokia Ahxxx Radios, x1 Nokia ASOD, x1 Nokia AZQC, x1 Delta 2kW PSU and x2 Commscope Diplexers
 - x1 Samsung 130/320W Dual Band Radio, x1 Samsung CBRS Radio, x1 Samsung LAA Radio, x1 Delta 2kW PSU, x1 Raycap Disconnect, x1 Fiber Panel and x1 Diplexer
 - x2 Samsung 130/320W Dual Band Radio, x2 ABB CC1600 PSU, x1 Fiber Panel, x1 Diplexer and x1 ISCO BAS Filter
- 55" x 20" x 19" (Page 13) shroud bracket kits support:
 - x2 Ericsson 4455, Raycap or PTS Disconnect and Fiber Panel
 - x2 Nokia Ahxxx Radios, x2 Nokia APAF or Delta 2kW PSUs, Fiber Panel and Diplexer
 - x2 Ericsson 8843/4449, 4478, 4426/4415, x2 220x/440x, x2 6302 or x4 AC-08 PSUs, Fiber Panel and x2 Diplexers

Universal Pole Banner Camouflage Kits

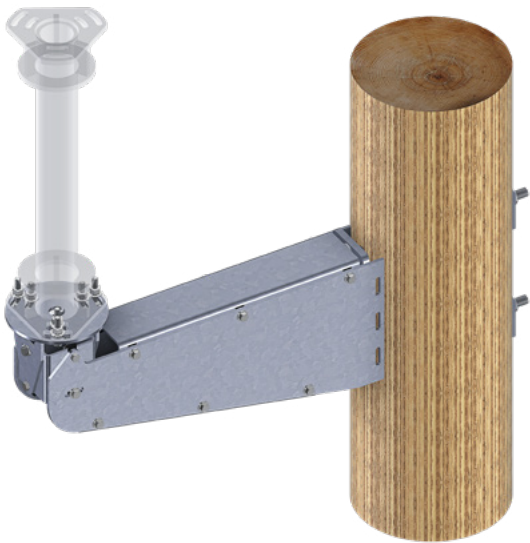
Our banner camouflage kits come in a variety of configurations and include everything necessary to attach up to three banners on a pole. The kits accommodate a variety of pole and banner sizes.

- Fit poles 3-1/2" to 9-1/2" in diameter
- Standard banner sizes are 18", 24", & 36"
- Single and dual-sided available
- Custom sizes are available to accommodate non-standard banners
- Equipment mounting solutions purchased separately
- Breakaway banner arms available
- Custom banners are sold separately
- Equipment mounting solutions purchased separately
- Custom mounting solutions are available
- 1 year warranty included



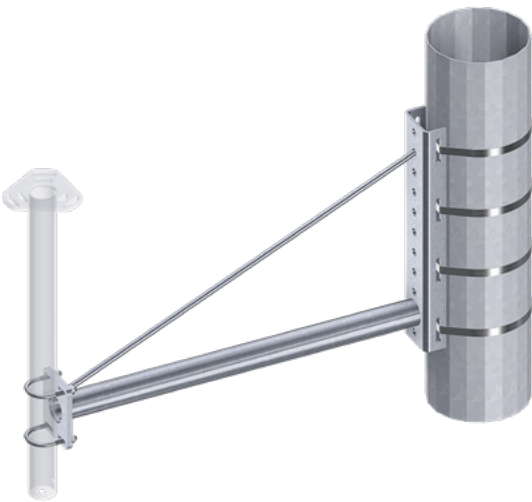
Concealed Side Arm

- Provide 10° multi-axial adjustment
- 24" or 36" versions are available
- Attaches to wood, steel, aluminum, concrete, or composite poles
- Cables can easily be run inside of the arm
- Fit standard 4G antennas using 3/8" mounting hardware on 4" and 6" bolt circles or 3/4" – 1" center stud
- Kits include threaded rods and lag bolts for direct mounting
- Can also be mounted with banding (purchased separately)



Pipe Side Arms

- 24" or 36" versions are available
- Attaches to wood, steel, aluminum, concrete, or composite poles
- Kits include threaded rods and lag bolts for direct mounting
- Can also be mounted with banding (purchased separately)



AC Fan Kits for Pole Top Shrouds

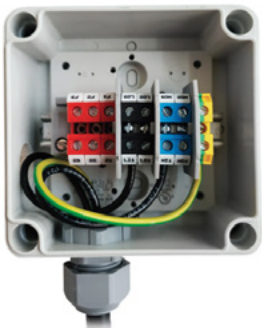
[VIEW ORDER GUIDE](#)

We offer highly tested and reliable AC fan kits that are built to work with our APT (Adaptive Pole Top) top shrouds.

- Attach to the APT leveling plate (18" or 22" Shroud) or vertical above radio bay (14" Shrouds)
- Variable speed fan control based on temperature 20% at 95°F up to 100% at 115°F with on board thermistor
- IP66 junction box with DIN rail terminal blocks, IP68 Cable Glands and mounting hardware for quick and easy installation
- Long life IP68 fans with salt fog certification



3 Fan Kit

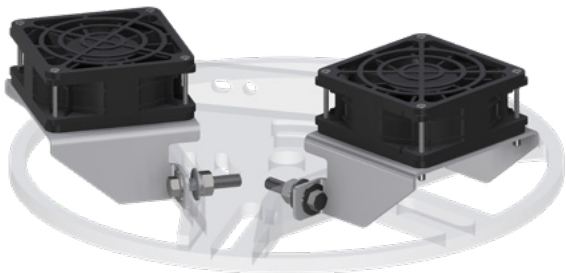


Junction Box

DC Fan Kits for Pole Top Shrouds

We offer highly tested and reliable DC fan kits that are built to work with our APT (Adaptive Pole Top) top shrouds.

- Attach to the APT leveling plate (18" or 22" Shroud) or vertical above radio bay (14" Shrouds)
- Variable speed fan control based on temperature 20% at 95°F up to 50% at 115°F
- Redundant high speed 100% bypass for fan failure or high temperature (131°F) condition, with fan failure alarm
- Valmont NG2 fan controller and pre-terminated cable assemblies required (Variable sizes available)
- Long life IP68 fans with salt fog certification



2 Fan Kit

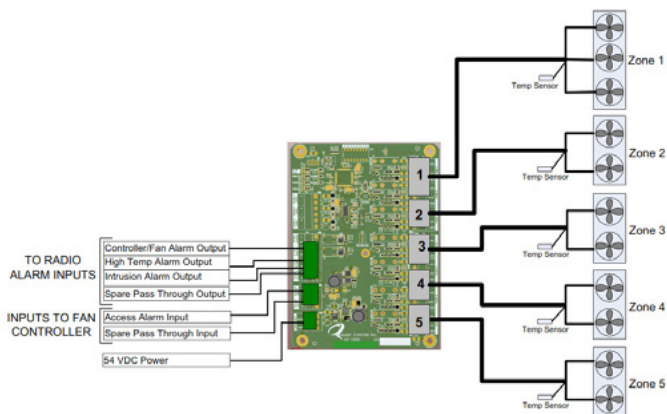
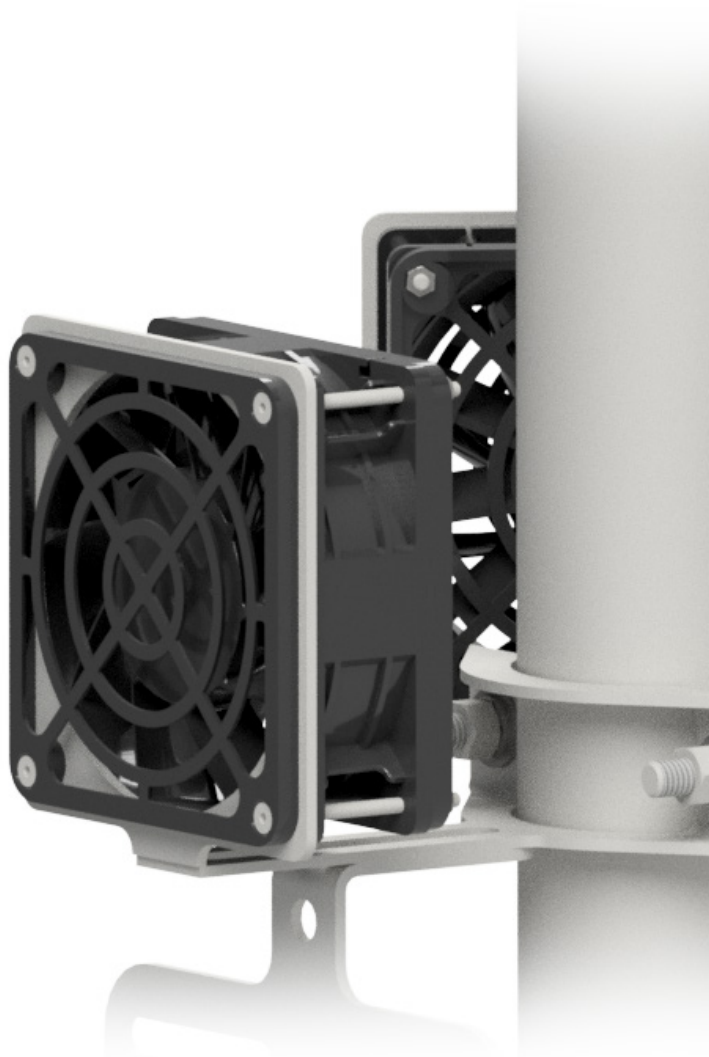


Wiring

Valmont Smart Cooling Systems

The Valmont AC and DC cooling systems are highly engineered and rigorously tested. They are available in multiple options with the ability to control up to 5 Zones and 11 fan units.

- Engineered to meet UL, Telcordia GR-487 and CSA specifications
- NG2-11 (Controls 5 Independent Cooling Zones & Up to 11 Fan Units) 8.5"H x 7.25"W x 5.19"D
- NG2-5 (Controls 2 Independent Cooling Zones & Up to 5 Fan Units) 6.5"H x 7.25"W x 5.19"D
- NG2-3 (Controls 1 Cooling Zone & Up to 3 Fan Units) 4.63"H x 5.2"W x 4.13"D
- Standard 48-54V Input or 120/240V AC w/DC Power Supply
- High reliability and redundancy with fan failure protection and alarming
- Variable-speed fan control based on temperature (Fans on 20% at 35°C, 50% at 40°C)
- Fan failure protection at high temperature (55°C 100% Fan Speed Bypass with Alarm)
- Plug and play connectors on all system components
- Standard and custom control and power cables with temperature sensor available.
- AC & DC input terminals
- Polycarbonate UL 94V-0 IP 68 Enclosure
- Fully hinged doors
- IP 68 cable glands
- High and low operating temperature support (-40°C to +85°C)
- 1 year warranty included



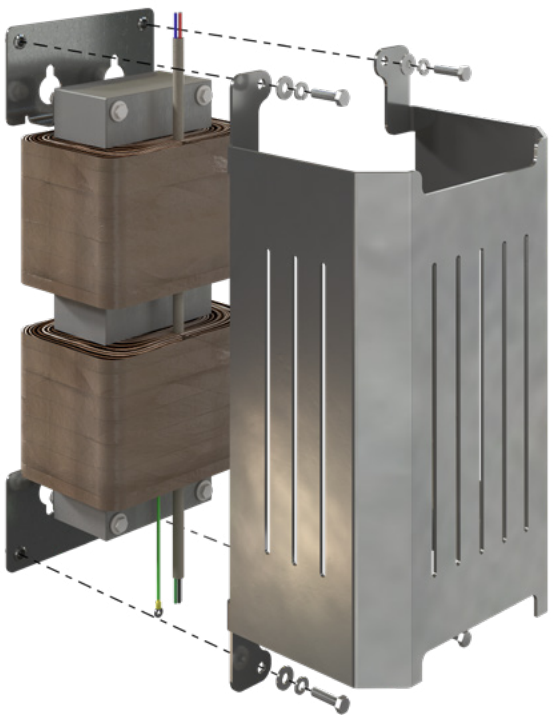
Valmont Power Transformers

The Valmont T-277-7-5-KVA 7.5kVa 277V transformer is a unique product that supports 277/480V 60 Hz primary side utility circuits with full 120/240V 60Hz secondary output.

This UL-listed outdoor-rated product is perfect for stepping down 277V or 480V power circuits with traditional 120/240V power output fed directly into panel boards for electrical distribution via pre-terminated 6 AWG input/output cables. The unit is small enough to fit in standard shrouds, and pole shafts with sizes as small as 10" in diameter and can be ordered with an optional heat shield.

All transformers include vertical wall-style mounting brackets and hardware. Optional HS-277V-7-5-KVA heat shield includes mounting hardware.

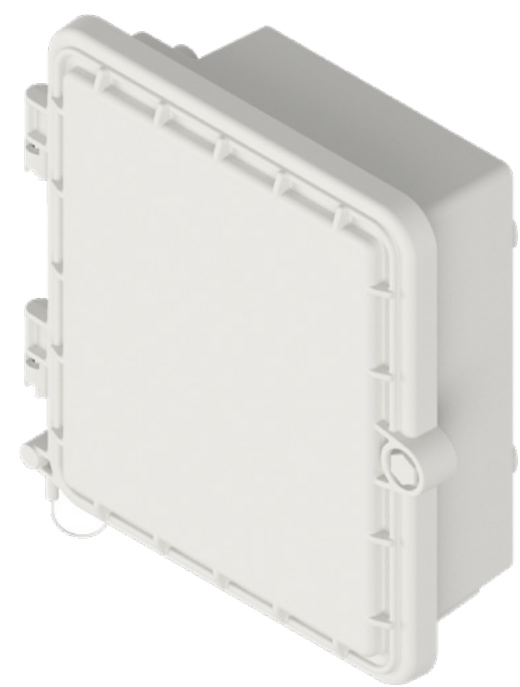
- Meets UL and CSA specifications
- Standard 277V single phase input or 480V 3 Phase (Single Leg Tap)
- Standard 120/240V output up to 7.5kVA (30A) 120 or 240V output
- Includes stainless steel mounting bracket and hardware
- -40°C to +85°C Operating Temperature
- 4.5' 6 AWG input and output Cables with mesh sleeve sheath
- Stainless steel heat shield is available
- High and low operating temperature support (-40°C to +85°C)
- 70°C transformer temperature rise
- Low heat dissipation 90W at 100% capacity
- 60lbs weight
- 1 year warranty



Outdoor Rated Fiber Demarcation Panels

We offer tested and reliable outdoor rated fiber demarcation panels in multiple sizes, with and without service dividers.

- NEMA rated enclosures
- Rated -40° to 70°C (-40°F to 158°F)
- Available in multiple sizes:
 - Small (12 Port)
 - Medium (24 Port)
 - Large (48 Port)
- LC UPC and LC-APC port options are available
- Hinged door with padlock hasp



Outdoor Rated IP68 Fiber Distribution Panels with Pre-Terminated Fiber Cable

We offer tested and reliable outdoor rated IP68 fiber distribution panels with pre-terminated fiber cable available in two sizes.

- UL listed NEMA 4X gray PVC plastic enclosure
- Rated -40° to 70°C (-40°F to 158° F)
- Available in two sizes:
 - Small 4 port enclosure (3.15" x 7.09" x 3.35")
 - Large 5 port enclosure (5.91" x 5.91" x 3.94")
- LC-LC UPC/ACP fiber terminations with others available upon request
- Senko IP-LC IP68 fiber bulkhead connectors (mating male connector IP-LC-CSM)
- Corning Freedom One fiber cable - 31' standard cable length with 1' breakout cable and others available upon request
- Factory terminated and tested connectors



Outdoor Rated Load Centers

We offer safe and reliable outdoor-rated load center boxes for proper electrical distribution. Features include:

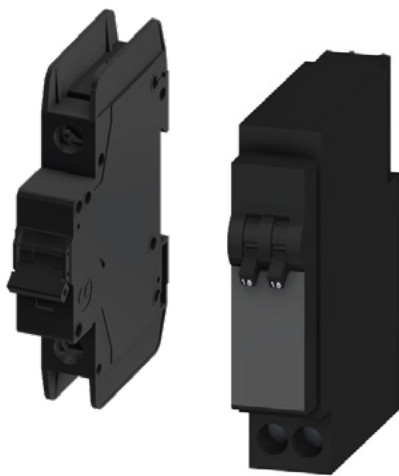
- UL 67 service entrance rated
- NEMA rated enclosures
- 30A to 100A, 120V or 120v/240V main disconnect
- Surge protection options
- Universal mounting bracket included
- Additional circuit breaker kits are available



Circuit Breakers

We offer compatible several circuit breakers for protection against damage from excess current, overload or short circuits.

- Single pole or tandem breakers available
- Several types are available:
 - 120V 7A Single Pole 18mm DIN Rail
 - 120V 10A Single Pole 18mm DIN Rail Breaker
 - 120V 16A Single Pole 18mm DIN Rail Breaker
 - 120V 15A/15A Tandem Circuit Breaker
 - 120V 20A/20A Tandem Circuit Breaker



GRCS Pole Mounted Capstan Kit

We offer a portable hoist kit that enables the safe lifting or lowering of equipment on sites. Features include:

- Two-speed self-tailing capstan winch; 4:1 and 10:1 gear ratios
- Winch straps onto the base of the pole
- Can be operated manually or with a 1/2" drill
- Pole mount included
- Winch and handle
- Drill adapter and tensioning bar
- 2,000 lb working load limit



GRCS Truck Mount Adapter Assembly

To expand the capability of the pole-mounted hoist kit, we offer an adapter that enables truck mounting.

- Allows the GRCS Capstan Kit to be mounted to a truck hitch
- Tube assembly included
- Winch receiver plate included



Ancillary Services

Rendering, Drawing & Photo simulations

Our team of engineers can provide you with complete product design, drawings, renderings, and photo simulation support for your project upon request.

Photo simulations help bring your ideas to life by allowing you to see the proposed configuration simulated in real scenarios at the location of deployment before delivery.

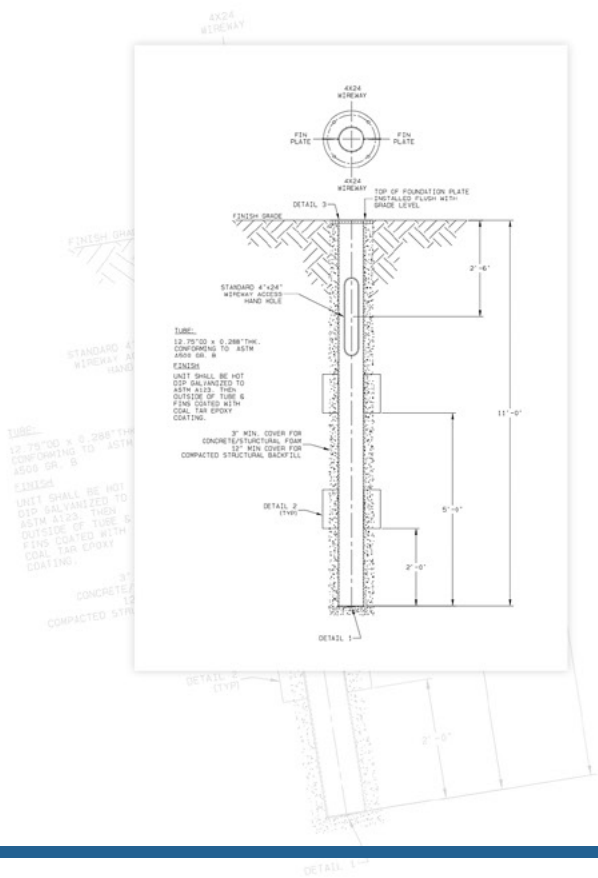
Simulated renderings are the core of all new projects and are provided to our customers as part of the product design process. This ensures the customer is assured of the system being designed and can leverage these documents with cities or tenants to ensure a successful deployment.



Foundation Design

Our team can provide you with an engineered foundation design with drawings and PE stamp upon request.

Valmont can assist you in a turn-key solution from foundation to pole system. We can support you with traditional concrete pier and spread foundations or design direct bury foundations that enable you to install a pole in a single day.



Factory Equipment Integration

We provide equipment integration in specialty small cell facilities, enabling you to save money and increase speed to market.

Valmont can provide you with fully assembled solutions with all electrical, fiber, and RF components installed and ready for deployment.

Rest easy using an integrated Valmont solution engineered to meet UL, Telcordia GR-487, and CSA specifications. Our integrated solutions ensure full compatibility, reduce field errors and save time.

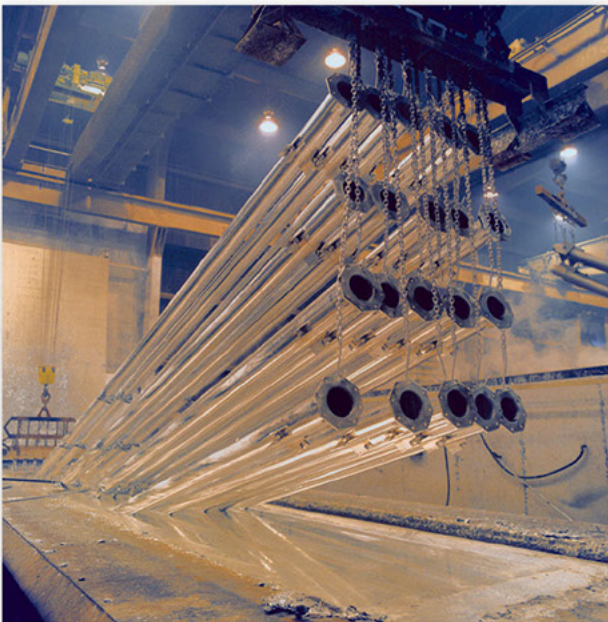


Galvanizing & Paint Options

We offer extensive in-house finishing capabilities, which extend the service life and visual appeal of our communication structures.

Whether your specifications call for an anti-corrosive finish or a specialty paint, Valmont can provide you with the best finishes in the industry.

We can match colors with 99.9% accuracy, meet the durability and finish requirements of your project all while meeting your aesthetic needs.



Rigorous Testing to Guarantee Safety and Performance

Overview & Certifications

Through our thorough testing procedures, all of our SimpleCell™ Small Cell products have been engineered to meet and exceed UL (Underwriter Laboratories), Telcordia GR-487-CORE and CSA (The CSA Group) specifications. Through our processes, we ensure that the products we provide are safe to use, can stand the test of time, and withstand the harsh stresses of nature.

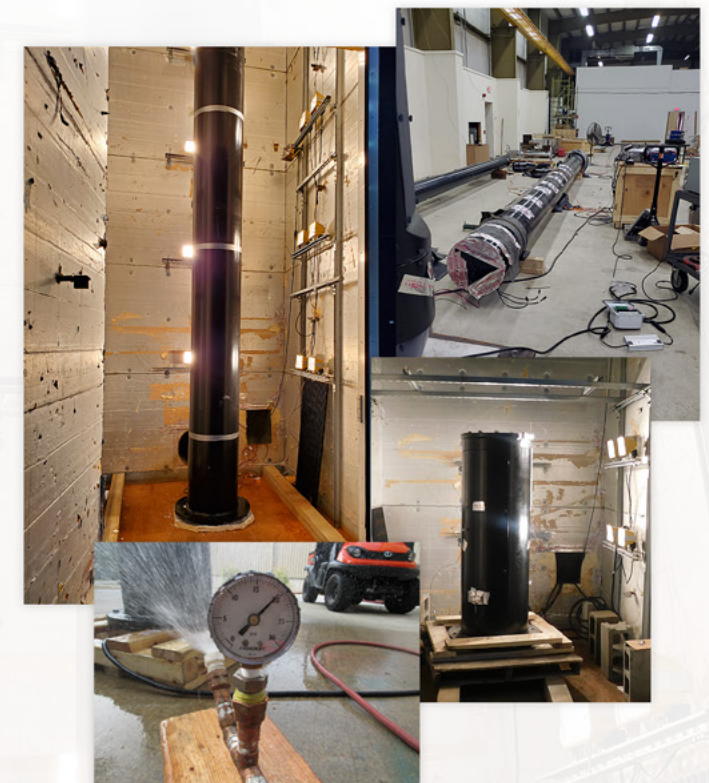
Test Types

The entire SimpleCell™ Small Cell line of products undergo an extensive stack of testing at both 3rd party facilities as well as our own facilities at Valmont. These tests are expertly designed to simulate realistic environmental stresses to ensure product integrity. Some of our tests include:

- Acoustical Noise Testing & Measurement
- Surface Temperature
- High Temperature
- Thermal Shock Chamber
- Abnormal High Temperatures
- Temperature Cycling & High Humidity
- Impact Resistance
- Transportation & Installation Shock
- Salt Fog Spray Testing
- Grounding & Bonding
- Door Restraint
- Alarming, Fans & Insect Intrusion
- Installation, Maintenance, & General Quality
- Component Compliance
- PE Certified Structural
- Sprinkler & Rain Water
- Dielectric Voltage Electrical
- Polymeric & Non-Polymeric Material
- Paint Adhesion, Finish, & UV
- Marking, Labeling, & Packaging



Test Lab



Abnormal High-Temperature Testing

Fire or electrical hazards can pose danger to individuals and lead to costly damage. At Valmont, we go to great lengths to ensure the safety and integrity of our products. Our entire small cell product line is engineered to meet UL 1598 and UL 62368 safety specifications.

As part of the certification process, abnormal high-temperature tests are conducted on our products with all equipment installed and operating at over 6000W (combined top shroud and pole shaft internal heat load). The structure's intake and exhaust openings are closed off with all fans operating and run for several hours to ensure the product remains operational and does not pose electrical or fire hazards.

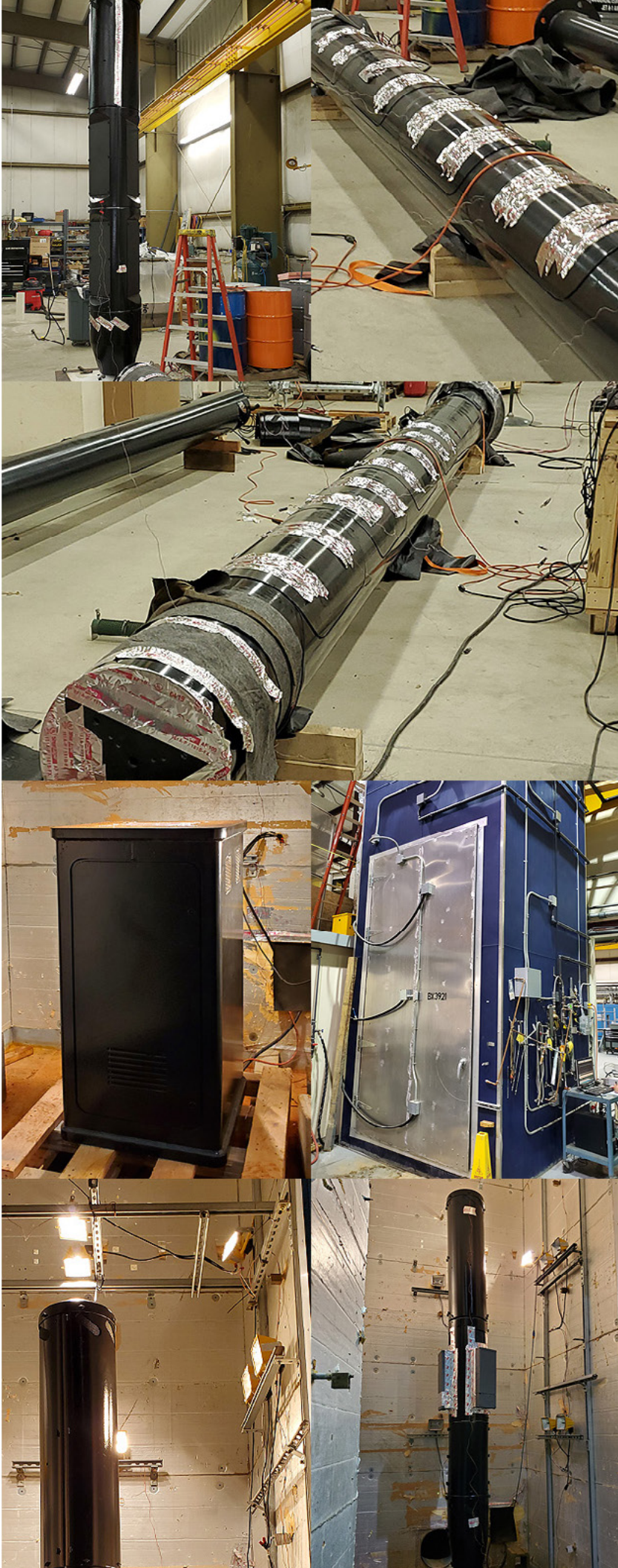
Immediately following testing, high voltage testing is conducted on the electrical system to ensure product integrity.

Climatic Chamber Environmental Simulation

Our small cell products undergo climatic simulation testing to ensure proper performance amid all possible environmental or weather conditions. Per Telcordia GR-487 test specifications, we have conducted high-temperature testing on our small cell poles in a certified climatic equipment chamber. The pole is exposed to high ambient temperatures, internal equipment thermal load and full solar loading is applied on three sides to simulate the stresses of the sun.

The internal pole design, along with our Valmont cooling systems, can maintain proper internal equipment operating temperatures even in the worse-case ambient condition.

Our NG2 fan control systems have full fan redundancy and high-temperature bypass features, enabling the redundant fan to operate up to 100% in a fan failure scenario. Both fans can run at 100% in a high-temperature condition with alarm outputs to your network.



Rain Simulation

In the real world, severe rain can be encountered at any time, and for communications equipment, it's essential that products can withstand harsh storm conditions. To validate product integrity amid these conditions, our small cell products undergo extensive water testing to simulate and assess the effects of falling rainwater.

Through this testing, our products are certified to meet UL1598 & 62368 specifications. Immediately following testing, we ensure that all of our integrated components, cables, and installation practices meet these standards, and water ingress does not propose safety or product hazards.

High voltage testing is conducted on the electrical system immediately following the rain simulation to ensure product integrity.



Acoustical Noise Measurement

To ensure products operate at acceptable sound levels, it's essential to properly test and measure sound emissions that radiate from equipment while operating under certain environmental stresses.

Audio emissions from our small cell product line are measured while exposed to high-temperature conditions in a certified climatic equipment chamber per Telcordia GR-487 test specifications. These high temperatures, coupled with full solar loading and all products fully loaded with internal equipment, generate maximum power consumption and heat.

Under these conditions, our NG2 Smart Fan control system is able to meet Telcordia GR-487 acoustical noise specifications and typically operates at 50db or less during normal operating conditions.



Salt Fog Spray Testing

To ensure the safety of the general public and prevent costly damage, it's essential to ensure that communication structures can withstand the corrosive stresses that naturally come from the constant exposure to outdoor elements, including extreme salt fog conditions.

As part of the salt fog spray testing, all materials used in our products are placed inside a certified chamber for nearly a month, validating our high-quality materials, components, and the coatings used - down to the mounting hardware itself.

Insect & Dust Intrusion

To ensure proper function and minimize the entrance of dust or insects in any openings, we undergo full insect intrusion testing on all of our small cell products. As a result, we are certified to meet Telcordia GR-487 specifications for insect intrusion restriction on all vented openings.

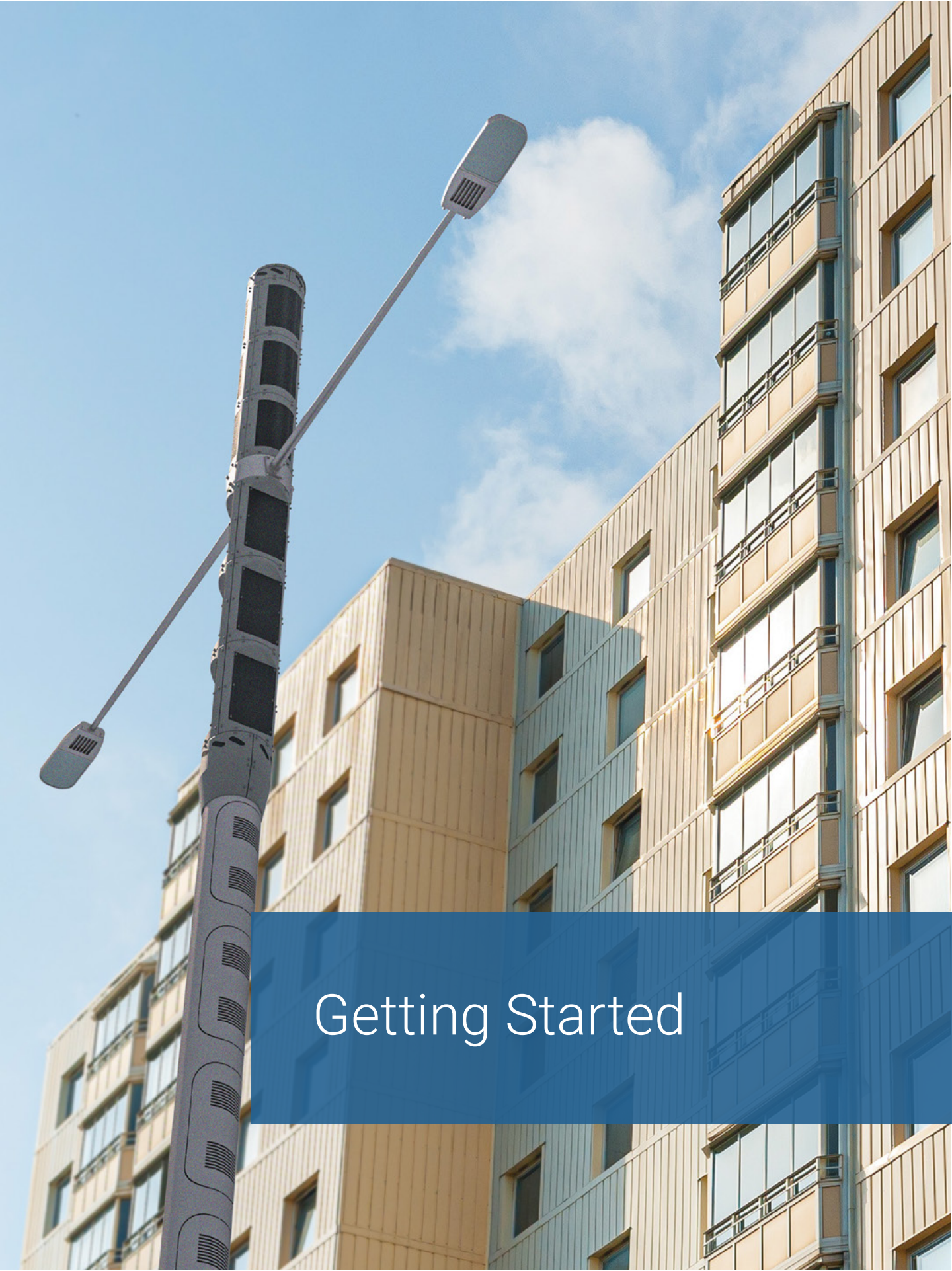
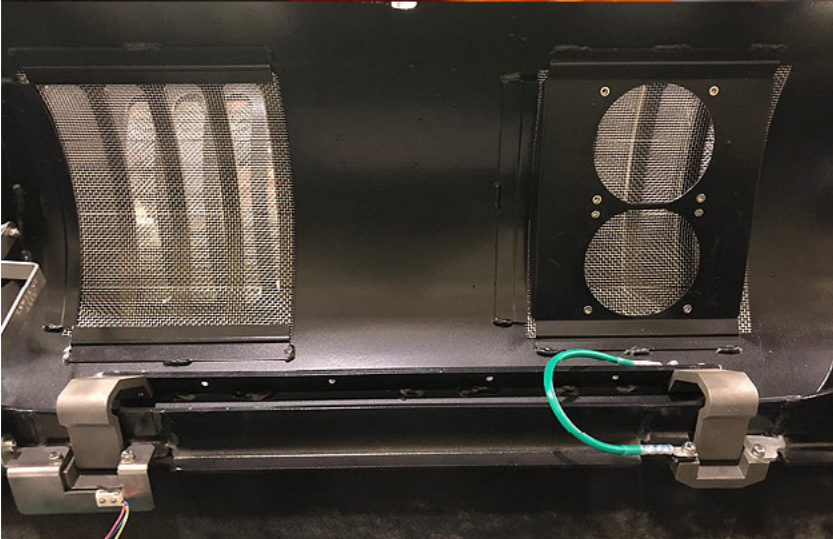
Door Restraint Testing

We conduct testing on all doors and openings to apply pressure, penetrate and distort the object to disengage the door from its mountings and enable access.

Transportation Simulation

We have tested our small cell products with state-of-the-art transportation simulation machines. These devices are built to simulate the environment during shipping.

The multi-axis device shown here simulates the realistic vibration that occurs during transport.



Getting Started

We're Here to Help Every Step of the Way

Getting Started with your Small Cell Project

We've put together a handy guide to make the order process as easy as possible. We have a team of small cell 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 Rep

The first step is to get connected with a Valmont Small Cell expert in your region. To do this, please locate our rep listing on the next page.

Step 2

Discuss Requirements & Configure Solution

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

Step 3

Renderings & Drawings Provided for Municipal Approval

After your solution is configured, our team will move ahead and prepare your personalized rendering and drawing package for approval by the local municipality.

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.

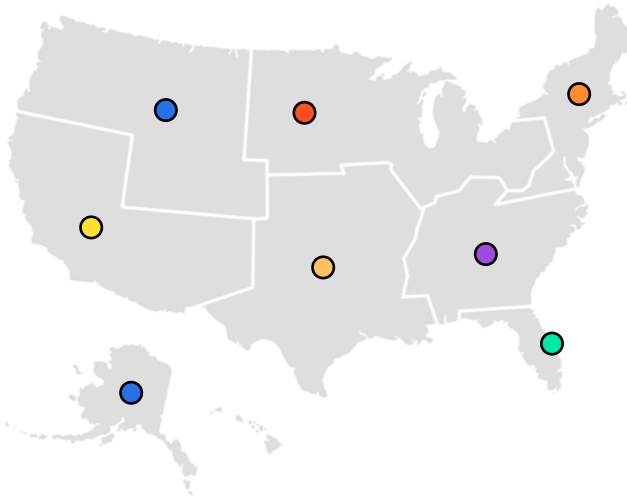
Connect with a Rep

Reach out to a Valmont Small Cell expert below or call us at +1-402-359-2201 for assistance.

Step 1

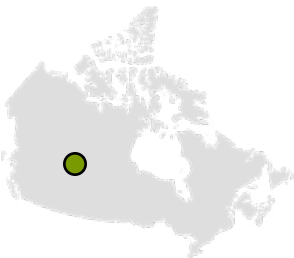
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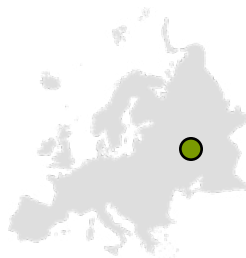
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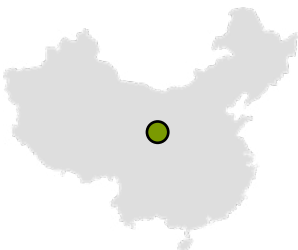
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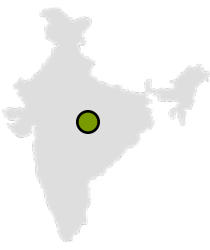
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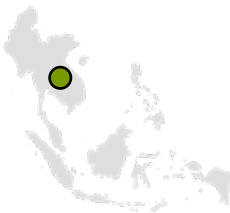
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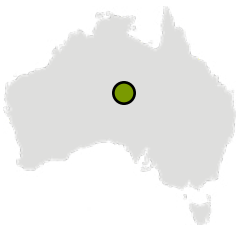
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Project Questionnaire

After connecting with your Valmont Small Cell rep, you can then work with them to discuss the details of your project in this questionnaire.

Step 2

Scope of Work

Please include any details about the scope of your project.

Municipal Requirements

Please provide specific requirements of the local municipality. Include all applicable city, county, and/or DOT codes.

Deployment Location

Country

City

State / Province

Purpose of Structure

Telecom, Lighting, Smart City, other?

Wireless Operators

#

Qty. & Delivery Request

Qty.

of Shipments

Design & Engineering Req.

☐ AASHTO

☐ TIA

☐ Other

PE Stamp Required?

☐ Yes

☐ No

Foundation Design Required?

☐ Yes

☐ No

Project Questionnaire (Continued)

Defining pole detail and requirements will assist us in providing the best end product. To order standard poles, use our guide below to review options and specify your custom selections.

Step 2

POLE

LEARN MORE

Type

☐ External Concealment Pole ☐ Internal Concealment Pole

Material

☐ Steel ☐ Aluminum ☐ Concrete ☐ Composite

Shape & Style Combination

☐ Round Straight ☐ Round Tapered ☐ Square Straight ☐ Square Tapered
☐ Fluted ☐ Multi-Sided

Fluting Shape

(If Fluted)

Style

SEE STYLES

Equip. Required

(If Concealed)

Specify equipment including meters, power supplies, electrical, wireless equipment, etc.

Equip. Provided by Valmont

(If Concealed)

Equip. Integrated by Valmont

(If Concealed)

Meter Type

(If Concealed)

None, Glass, Smart Meter

Model Number

Meter Ht. Elevation

(If Concealed)

of Ft.

Security Type

(If Concealed)

☐ Arm Lock ☐ Pad Lock ☐ Smart Lock ☐ Other

Equipment Elevation

of Ft.

Channel Selection

Style

SEE STYLES

Pole Height *

20', 25' or Custom

* Entire structure measured top to bottom, including all equipment.

Pole Top Diameter *

6", 8", 10", 12", 18" or Custom

* Minimum 5.94" diameter recommended for cable routing.

Cable Ports & Handholes

Describe quantity, height elevation, type, size and shape for each.

Project Questionnaire (Continued)

Defining pole detail and requirements will assist us in providing the best end product. Please work with your Valmont Small Cell rep to fill out the below details.

Step 2

Cooling System

(If Concealed)

☐ AC ☐ DC ☐ None

SEE STYLES

* May be required based on thermal analysis.

LIGHT ARMS

LEARN MORE

Need a Light Arm?

☐ Yes ☐ No

Single or Double?

☐ Single Arm ☐ Double Arm

Light Arm Style

Decorative Additions

Light Arm Elevation

of Ft.

Mounting Style

BASE

LEARN MORE

Decorative Base or Collar?

☐ Yes ☐ No

Specify Style & Size

SEE STYLES

Structural Base for Equip.?

☐ Yes ☐ No

Specify Style & Size

SEE STYLES

Equip. Required

(If Structural Base)

Specify equipment including meters, power supplies, electrical, wireless equipment, etc.

Equip. Provided by Valmont

(If Structural Base)

Equip. Integrated by Valmont

(If Structural Base)

Meter Type

(If Structural Base)

None, Glass, Smart Meter

Model Number

Meter Ht. Elevation

(If Structural Base)

of Ft.

Security Type

(If Structural Base)

☐ Arm Lock ☐ Pad Lock ☐ Smart Lock ☐ Other

Project Questionnaire (Continued)

Defining pole detail and requirements will assist us in providing the best end product. Please work with your Valmont Small Cell rep to fill out the below details.



POLE TOP

LEARN MORE

Pole Top Shroud?

☐ Yes☐ No

Specify Style & Size

SEE STYLES

Equip. Required

Specify equipment including meters, power supplies, electrical, wireless equipment, etc.

Equip. Provided by Valmont

Equip. Integrated by Valmont

POLE SIDE

LEARN MORE

Pole Side Shroud?

☐ Yes☐ No

Specify Style & Size

SEE STYLES

Equip. Required

Specify equipment including meters, power supplies, electrical, wireless equipment, etc.

Equip. Provided by Valmont

Equip. Integrated by Valmont

Banners?

☐ Yes☐ No

Banner Selection

FINISHING

LEARN MORE

Hot Dip Galvanizing

☐ Yes☐ No

Paint Color Code

RAL, RGB or CMYK Code

Anti-Graffiti Option

☐ Yes☐ No

Project Questionnaire (Continued)

Defining pole detail and requirements will assist us in providing the best end product. Please work with your Valmont Small Cell rep to fill out the below details.



Additional Notes

Please provide any additional notes and change tracking.



valmontstructures.com scsmallcell.com

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