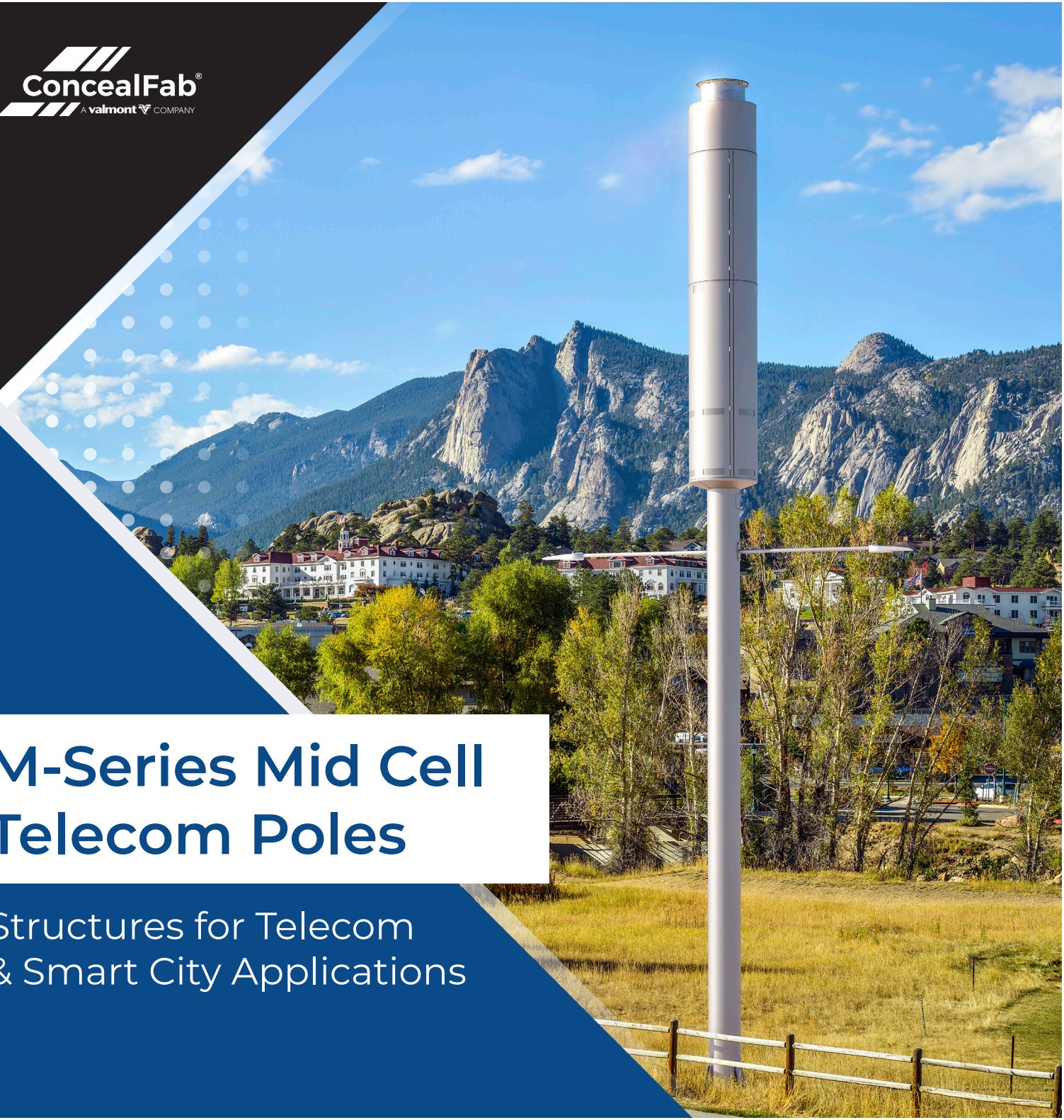
ConcealFab®
A valmont COMPANY



# M-Series Mid Cell Telecom Poles

## Structures for Telecom & Smart City Applications

# Overview

Mid Cell telecom poles help bridge the gap between small cell (short range) and macro (long range) infrastructure. M-Series Mid Cell poles offer a mid range application, enhanced capacity, and heights not typically found in small cell applications. These structures blend seamlessly into urban, residential, and rural enviroments eliminating the need for traditional towers.

Multiple features are available to match any application or technology requirement and can be customized as required.

**Pole Features & Capabilities Include:**

- TIA222 110MPH
- GR487 Compliant
- Patented mounting system
- Patented dampener options
- Light arm mounting provisions
- Move in Kits for common radio units
- Supports mmWave, C-Band, & Common Microwave frequencies including E-Band

## CONCEALFAB'S STANDARD COLOR OPTIONS

| Jet Black-**001** | Terra Brown-**002** | Light Gray-**003** | Silver-**004** | Black Green-**021** | Tan-**040** |
|---|---|---|---|---|---|
| *Lightly textured* | *Lightly textured* | | | | |
| RAL 9005 | RAL 8028 | RAL 7035 | FED STD 36463 | RAL 6012 | FDR STD 30340 |

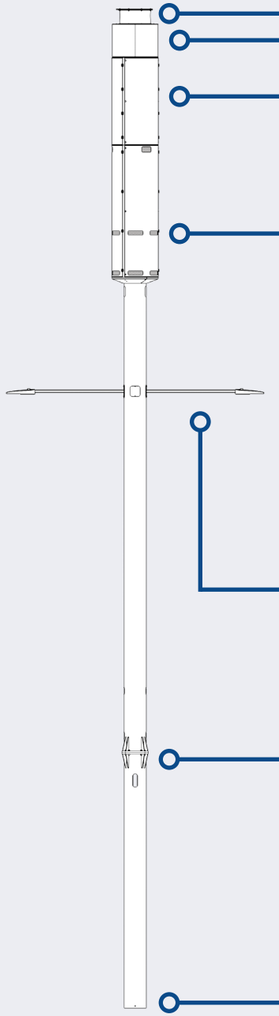
*Light Gray - 003 matches light concrete or aluminum poles
*Silver - 004 matches galvanized steel poles

**ASK ABOUT OUR CUSTOM COLOR OPTIONS**

*There may be minor differences between color options and finished goods due to formulation variations.*



## M-SERIES POLE ANATOMY



### Pole Top Dampeners

Enable vibration dampening to resolve vortex shedding and fatigue concerns to meet TIA-222 Rev I

### Pole Top Microwave Antenna Mounts & Shrouds

### Pole Top Antenna Bay

Optional shrouds, & move in equipment bracket kits. Optional antenna shroud can be removed for exposed antenna configurations

### Pole Top Radio Bay

Mounts, shrouds, & move-in equipment bracket kits for installing radios and other equipment. Includes active fan cooling system

### Light Arms

Used for lighting purposes. light arms come in a variety of styles to match muncipal requirments with straight round being the most common

### Mid Cell Pole

Pole structures are available in single and double 20" round pipe sections w/internal mating flange plates. Standard poles available in four standard lengths 31', 36', 41', & 46'. When combined with upper mast and shroud sections, these structures achieve total height ranges from 50' - 65'.

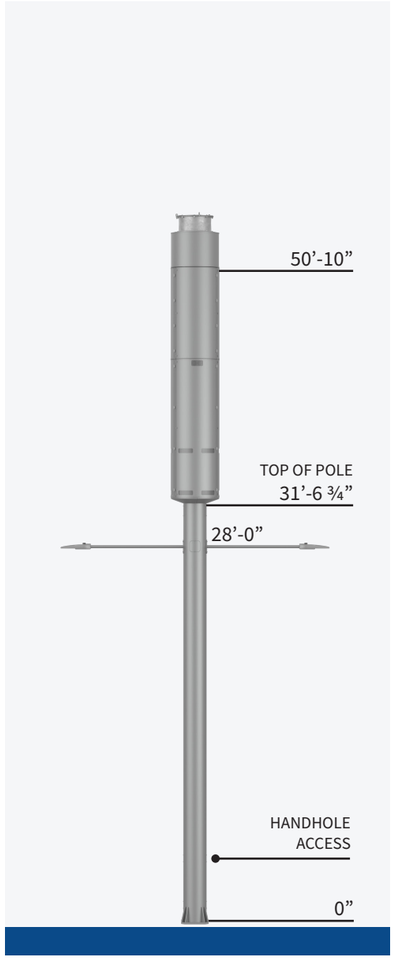
### Direct Bury Steel Foundations

Used as an alternative to concrete caisson and other foundation types. Direct bury steel foundations drastically reduce forming & installation time

# Mid Cell Poles

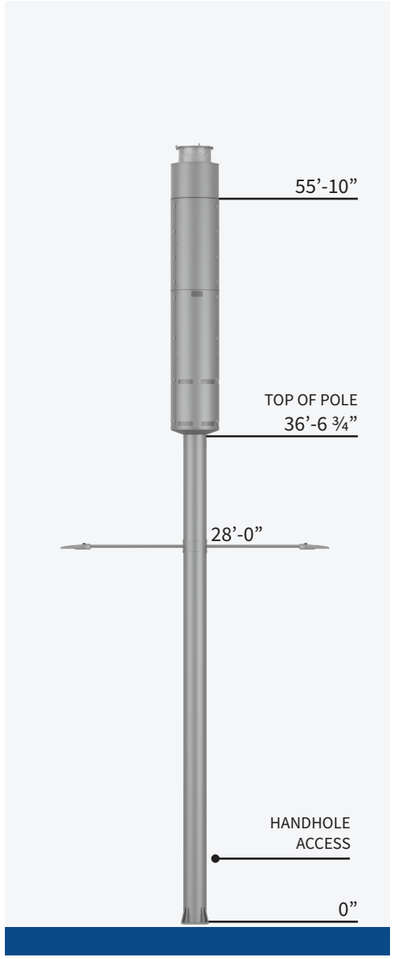
**Features:**

- Single section 20” poles for up to 36’ structures
- Double section 20” poles w/internal flange plate for structures exceeding 36’
- Microwave Antenna Section for typical 24” diameter dish 4” Sch 40 Pipe Mount *(Optional)*
- 80” & 120” Antenna Mast & Shroud Sections for typical 24” - 96”H panel antennas *(Optional)*
- 80” & 120” Radio Mast & Shrouds Sections for up to 9 radio units *(Optional)*
- Dampeners, shrouds, and light arms *(Sold separately)*



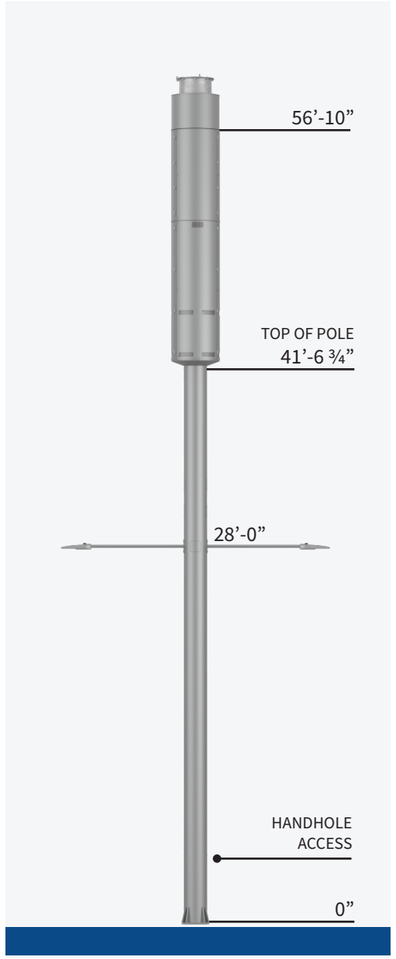

**901350_50**

20” Diameter x 31’ round 1 section pole
*(50’ height with complete top shroud/mast assembly)*



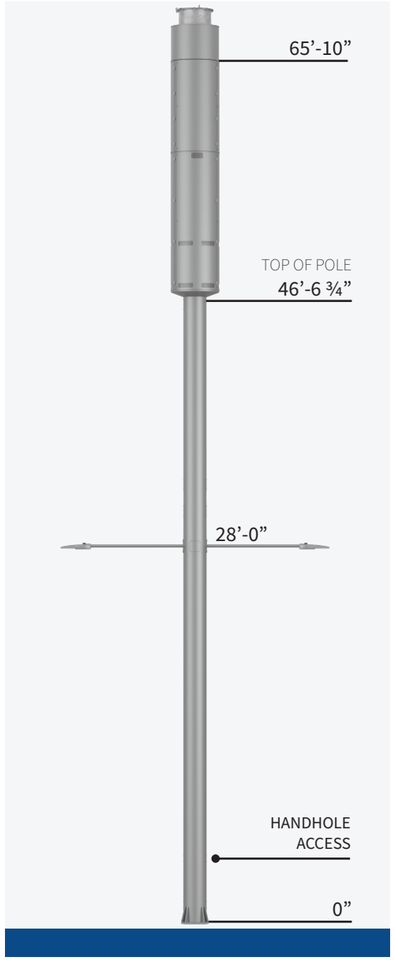

**901350_55**

20” Diameter x 36’ round 1 section pole
*(55’ height with complete top shroud/mast assembly)*




**901350_60**

20” Diameter x 41’ round 2 section pole
*(60’ height with complete top shroud/mast assembly)*




**901350_65**

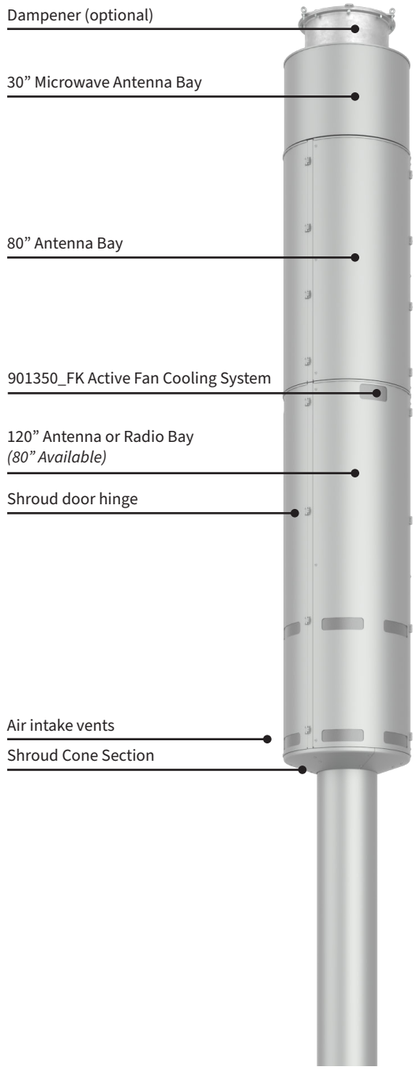
20” Diameter x 46’ round 2 section pole
*(65’ height with complete top shroud/mast assembly)*

# Pole Top Shrouds

Pole top shrouds are a subtle solution for installing and concealing RF equipment on pole tops. Engineered from materials conducive to RF transmission, these shrouds accommodate various frequencies, including E-Band. Stackable in various sizes and configurations, these shrouds offer flexibility and other options such as internal equipment mounting brackets.

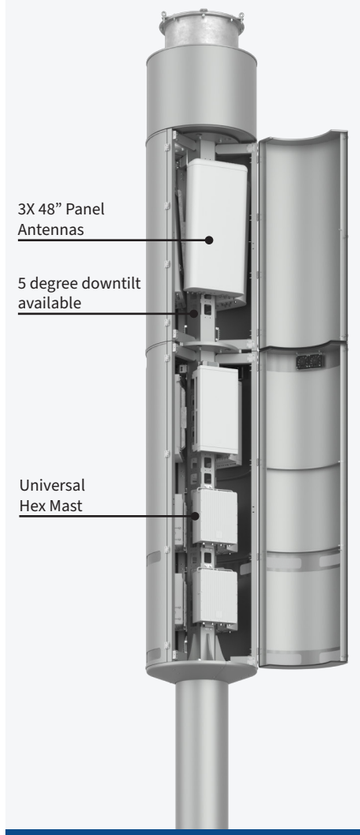
**Features:**

- Patented hex mast mounting system for strength & flexibility
- Shroud fan control systems meet GR487 thermal requirements
- Hinged doors w/wind latch for easy maintenance
- Patented TC1 Mitigator dampener meets TIA 222 Rev I requirements - *Structural analyisis required.*

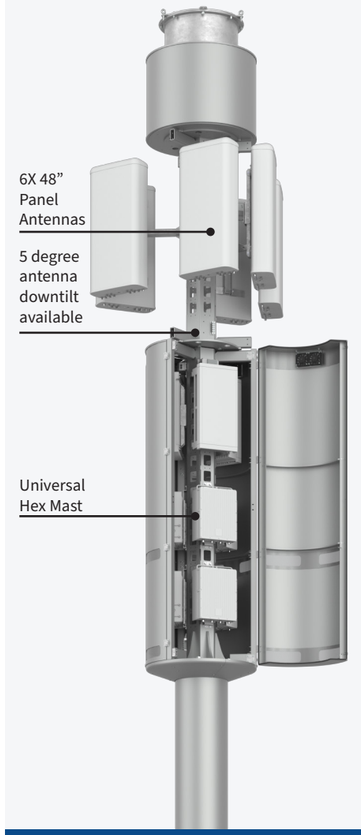





**(No Equipment)**




**3X 48” Panel Antennas**
with optional antenna mounting bracket kit
*(see pages 10 & 11)*



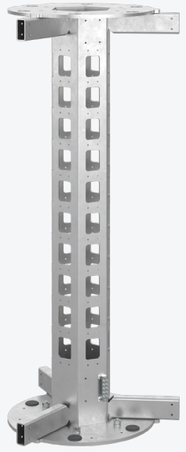

**6X 48” Panel Antennas**
with optional antenna mounting bracket kit
*(see pages 10 & 11)*

# Pole Top Mast Systems



**901350_MW_SHRD**

30” Microwave Antenna Mast & Shroud





**901350_MAST_EMP_A**
**Requires R Mast System*

80’” Radio & Antenna Pole Mount Hex Mast System *(Equipment Brackets Sold Separately)*

**901350_ASHRD_NW**

42” Diameter x 80” Antenna Shroud System *(Equipment Brackets Sold Separately)*





**901350_MAST_EMP_R80**

80’” Radio & Antenna Pole Mount Hex Mast System *(Equipment Brackets Sold Separately)*

**901350_RSHRD_NW80**

42” Diameter x 80” Radio Shroud System *(Equipment Brackets Sold Separately)*





**901350_MAST_EMP_R**

120’” Radio & Antenna Pole Mount Hex Mast System *(Equipment Brackets Sold Separately)*

**901350_RSHRD_NW**

42” Diameter x 120” Radio Shroud System *(Equipment Brackets Sold Separately)*

# Equipment Bracket & Fan Move-in Kits

Equipment move-in bracket kits are available for a variety of radio and antenna configurations. Move-in kits can be mounted to our patented universal hex mast system for simple equipment installation and maintenance. Most antenna configurations are designed to support up to 5 degrees of downtilt.



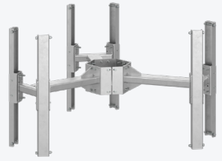
**901551_FK**

Dual High Capacity Dual Fan Kit



**901350_MIK_ERC1**

Radio Bracket Kit



**901350_MIK_PRO2**

Antenna Bracket Kit



## PRODUCT INDEX

### MID CELL POLES

| CF SALES # | DESCRIPTION |
|---|---|
| 901350_65 | 20” Diameter x 46’ round 2 section pole (Achieves 65’ height w/complete top shroud/mast assembly) |
| 901350_60 | 20” Diameter x 41’ round 2 section pole (Achieves 60’ height w/complete top shroud/mast assembly) |
| 901350_55 | 20” Diameter x 36’ round 1 section pole (Achieves 55’ height w/complete top shroud/mast assembly) |
| 901350_50 | 20” Diameter x 31’ round 1 section pole (Achieves 50’ height w/complete top shroud/mast assembly) |

### POLE TOP MAST SYSTEMS

| CF SALES # | DESCRIPTION |
|---|---|
| 901350_MW_SHRD | 42” Diameter x 30” Microwave mast & Shroud System w/ 4” Sch 40 Pipe Mount (Shroud Inc) |
| 901350_MAST_EMP_R | 120’” Radio & Antenna Pole Mount Hex Mast System (Equipment Brackets Sold Separately) |
| 901350_MAST_EMP_R80 | 80’” Radio & Antenna Pole Mount Hex Mast System (Equipment Brackets Sold Separately) |
| 901350_MAST_EMP_A | 80’” Radio & Antenna Pole Mount Hex Mast System (Equipment Brackets Sold Separately) |

### SHROUD SYSTEMS

| CF SALES # | DESCRIPTION |
|---|---|
| 901350_ASHRD_NW | 42” Diameter x 80” Antenna Shroud System (Equipment Brackets Sold Separately) |
| 901350_RSHRD_NW | 42” Diameter x 120” Radio Shroud System (Equipment Brackets Sold Separately) |
| 901350_RSHRD_NW80 | 42” Diameter x 80” Radio Shroud System (Equipment Brackets Sold Separately) |
| 901350_RSHRD_CN | 42” Diameter shroud to pole transition cone 20” pole diameters |

### LUMINAIRE ARMS

| CF SALES # | DESCRIPTION |
|---|---|
| 901350_SA7 | 7’ Round Light Arm w/American Electric ATB0 P202 MVOLT RE NL P7 Luminaire |

### EQUIPMENT BRACKET & FAN MOVE IN KITS

| CF SALES # | QAUNTITY | DESCRIPTION |
|---|---|---|
| 901350_MIK_PRO1 | 3 | Prose 2D4WC-21-AN (3)Antenna Bay Bracket Move in Kit |
| 901350_MIK_PRO2 | 6 | Prose 2D4WC-21-AN (3)Antenna Bay Bracket Move in Kit |
| 901350_MIK_ERC1 | 3 | Ericsson 4460/4480 Radio Bay Bracket Move in Kit |
| 901350_MIK_ERC2 | 3 | Ericsson AIR6488 Radio Bay Bracket Move in Kit |
| 901551_FK | 3 | Dual High Capacity Dual Fan Kits (1 per door assembly - Use when active heat producing equipment is installed in shroud) |

### POLE TOP VIBRATION DAMPENERS (Requires Structural Anaylisis to Determine Configuration)

| CF SALES # | DESCRIPTION |
|---|---|
| 901350_DMP_70R10P | TC1 70R 10P Damper & Ball |
| 901350_DMP_20R10P | TC1 20R 10P Damper & Ball |
| 901350_DMP_70R30P | TC1 70R 30P Damper & Ball |
| 901350_DMP_20R30P | TC1 20R 30P Damper & Ball |
| 901350_DMP_LID | TC1 Damper Lid (1 Required Per Dampener Assembly) |

### FOUNDATIONS

| CF SALES # | DESCRIPTION |
|---|---|
| 901350_FN | 20” diameter x 19’ Direct Bury Foundation (Includes Pole Attachment Hardware) |

**Other pole lengths, structural requirements, and mounting kits available upon request.*

**CONTACT A SALES REPRESENTATIVE**

ConcealFab®
A valmont COMPANY

ConcealFab, Inc.

10205 Federal Drive, Building B,
Colorado Springs, CO 80908

+1.719.599.3400
cf.sales@valmont.com