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 on the go

Steel Products



Microwave Antenna Application Guide
Structural Support Products

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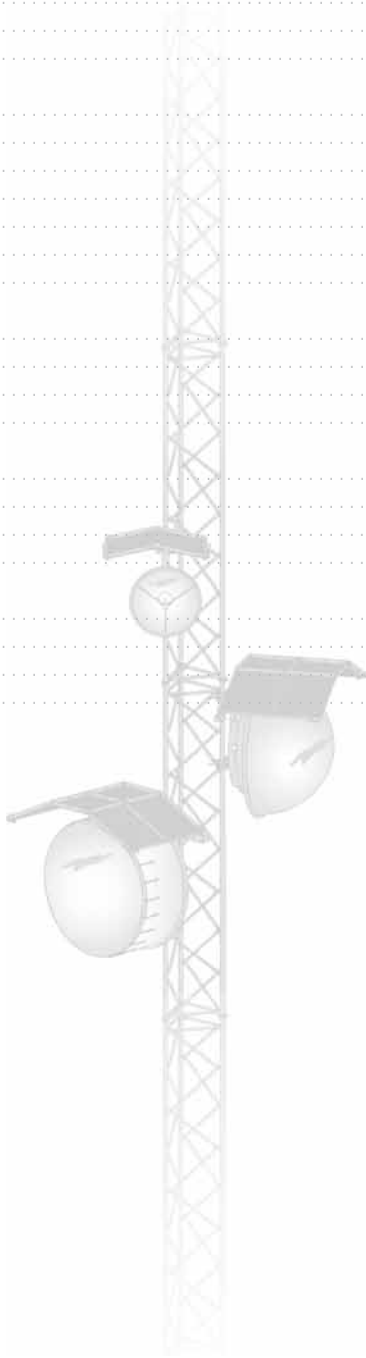
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Selection Guide

Tower Mounts



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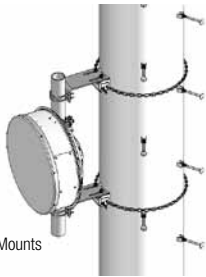


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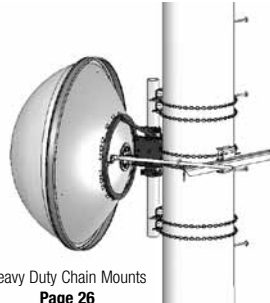


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Monopole Mounts



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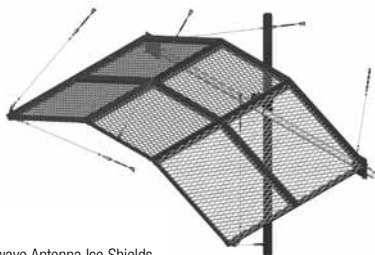


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Universal Cable Ladder Kits
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Site Related Components



Microwave Antenna Ice Shields
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- Tower Leg Mounting Solutions
- Tower Face Mounting Solutions

TOWER MOUNTS

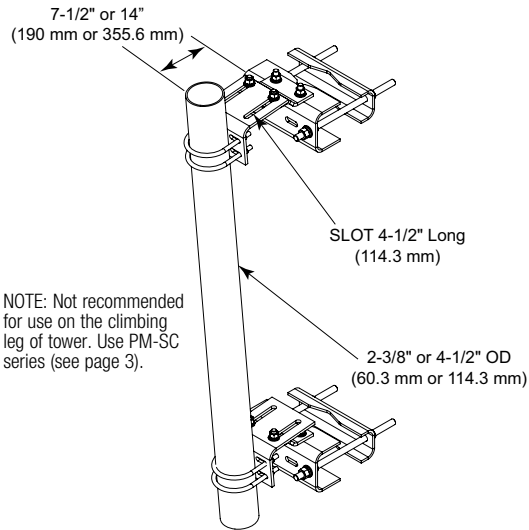
Leg Mounting Solutions

Universal Sliding Pipe Mount Kits

- Application:** Lattice towers
- Size:** 2-3/8" (60.3 mm) OD or 4-1/2" (114.3 mm) OD
- Design:** Pipe with saddle mount and adjustable clamps
- Feature:** Universal sliding bracket with up to 7° of taper
- Mounts to:** Straight or tapered legs up to 16" (406.4 mm) OD, 16" (406.4 mm) angle 60°, or 12" (304.8 mm) angle 90°
- Material:** Hot dip galvanized steel
- Includes:** Universal saddle mount, sliding pipe mount brackets, with or without pipe
- Order Separately:** Pipes for base kits

Wind Rating*: 120 mph (BWS) per latest revision of TIA/EIA-222 at 150' AGL

*Typical installation of one 8' microwave antenna with stiff arm



NOTE: Not recommended for use on the climbing leg of tower. Use PM-SC series (see page 3).



Part Number	Description	Weight, lb (kg)
-------------	-------------	-----------------

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs, 2-3/8" (60.3 mm) Antenna Mounting Pipe

PM-SU2-B	Base Kit, Order Pipe Separately, Kit of 2	80 (32.3)
PM-SU2-72	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	101 (45.8)
PM-SU2-96	2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	114 (51.7)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 16" (406.4 mm), or 12" (304.8 mm) 90° Angle Legs, 2-3/8" (60.3 mm) Antenna Mounting Pipe

PML-SU2-B	Base Kit, Order Pipe Separately, Kit of 2	80 (32.3)
PML-SU2-72	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	101 (45.8)
PML-SU2-96	2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	114 (51.7)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs, 14" (355.6 mm) Stand-off, 2-3/8" (60.3 mm) Antenna Mounting Pipe

PM-SU2L-B	Base Kit, Order Pipe Separately, Kit of 2	90 (40.9)
PM-SU2L-72	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	110 (49.9)
PM-SU2L-96	2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	121 (54.9)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 16" (406.4 mm), or 12" (304.8 mm) 90° Angle Legs, 14" (355.6 mm) Stand-off, 2-3/8" (60.3 mm) Antenna Mounting Pipe

PML-SU2L-B	Base Kit, Order Pipe Separately, Kit of 2	90 (40.9)
PML-SU2L-72	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	110 (49.9)
PML-SU2L-96	2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	121 (54.9)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs, 4-1/2" (114.3 mm) Antenna Mounting Pipe

PM-SU4-B	Base Kit, Order Pipe Separately, Kit of 2	81 (36.8)
PM-SU4-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m)	138 (62.6)
PM-SU4-96	4-1/2" OD x 96" (114.3 mm OD x 2.4 m)	169 (76.7)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 16" (406.4 mm), or 12" (304.8 mm) 90° Angle Legs, 4-1/2" (114.3 mm) Antenna Mounting Pipe

PML-SU4-B	Base Kit, Order Pipe Separately, Kit of 2	81 (36.8)
PML-SU4-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m)	138 (62.6)
PML-SU4-96	4-1/2" OD x 96" (114.3 mm OD x 2.4 m)	169 (76.7)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs, 14" (355.6 mm) Stand-off 4-1/2" (114.3 mm) Antenna Mounting Pipe

PM-SU4L-B	Base Kit, Order Pipe Separately, Kit of 2	90 (40.9)
PM-SU4L-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m)	145 (65.8)
PM-SU4L-96	4-1/2" OD x 96" (114.3 mm OD x 2.4 m)	175 (79.4)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 16" (406.4 mm), or 12" (304.8 mm) 90° Angle Legs, 14" (355.6 mm) Stand-off, 4-1/2" (114.3 mm) Antenna Mounting Pipe

PML-SU4L-B	Base Kit, Order Pipe Separately, Kit of 2	90 (40.9)
PML-SU4L-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m)	145 (65.8)
PML-SU4L-96	4-1/2" OD x 96" (114.3 mm OD x 2.4 m)	175 (79.4)

Tower Mounts

Leg Mounting Solutions

Universal Pipe Mount Kits

- Application:** Antenna leg mounting for round or angle towers
- Size:** 2-3/8" (60.3 mm) OD or 4-1/2" (114.3 mm) OD
- Design:** Pipe with saddle mount and adjustable clamps
- Feature:** Open face taper adjustment
- Mounts to:** Straight or tapered legs up to 16" (406.4 mm) OD, 16" (406.4 mm) angle 60°, or 12" (304.8 mm) angle 90°
- Material:** Hot dip galvanized steel
- Includes:** Universal saddle mount, taper adjustment brackets, with or without pipe
- Order Separately:** Pipes for base kits

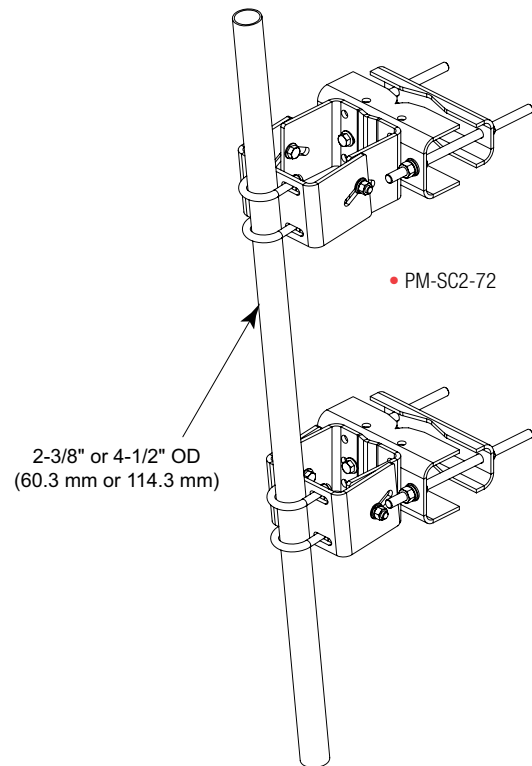
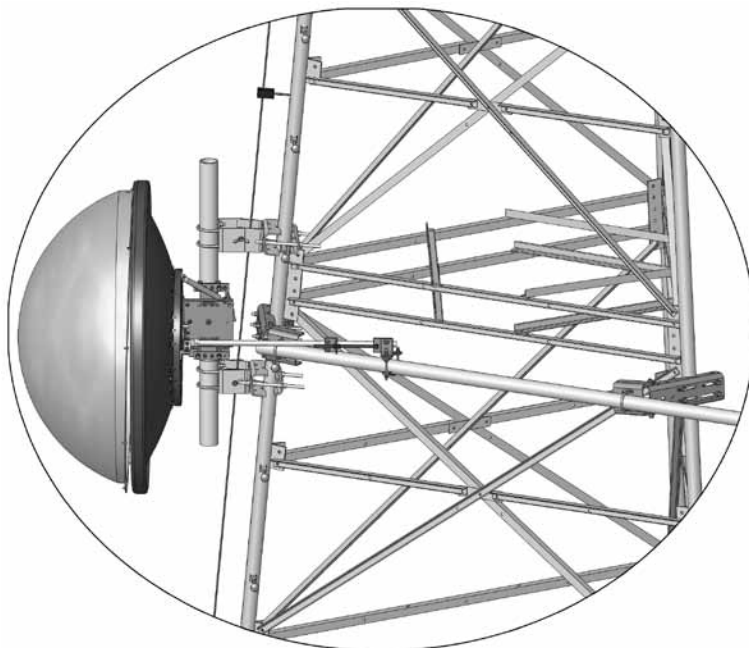
Wind Rating*: 120 mph (BWS) per latest revision of TIA/EIA-222 at 150' AGL

*Typical installation of one 8' microwave antenna with stiff arm

Part Number	Description
-------------	-------------

Universal Pipe Mount Kit With Open Face Taper Adjustment, for Round or 60° Angle Legs up to 8" (203.2 mm) or 6" (152.4 mm) 90° Angle Legs	
PM-SC2-72	2-3/8" x 72" (60.3 mm x 1.8 m) Antenna Mounting Pipe
PM-SC2-96	2-3/8" x 96" (60.3 mm x 2.4 m) Antenna Mounting Pipe
PM-SC2-B	Pipe Ordered Separately
PM-SC4-63	4-1/2" x 63" (114.3 mm x 1.6 m) Antenna Mounting Pipe
PM-SC4-96	4-1/2" x 96" (114.3 mm x 2.4 m) Antenna Mounting Pipe
PM-SC4-B	Pipe Ordered Separately

Universal Pipe Mount Kit With Open Face Taper Adjustment, for Round or 60° Angle Legs up to 16" (406.4 mm), or 12" (304.8 mm) 90° Angle Legs	
PML-SC2-72	2-3/8" x 72" (60.3 mm x 1.8 m) Antenna Mounting Pipe
PML-SC2-96	2-3/8" x 96" (60.3 mm x 2.4 m) Antenna Mounting Pipe
PML-SC2-B	Pipe Ordered Separately
PML-SC4-63	4-1/2" x 63" (114.3 mm x 1.6 m) Antenna Mounting Pipe
PML-SC4-96	4-1/2" x 96" (114.3 mm x 2.4 m) Antenna Mounting Pipe
PML-SC4-B	Pipe Ordered Separately



Leg Mounting Solutions

Microwave Dish Support

Application: Structural strut supports for round or angle tower legs

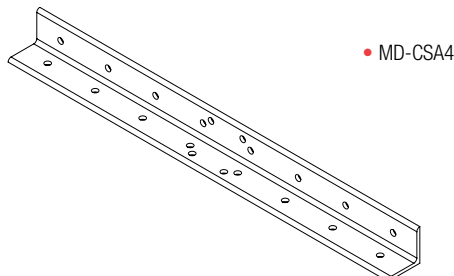
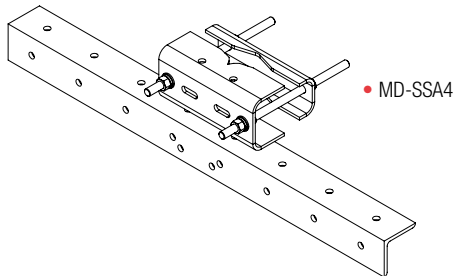
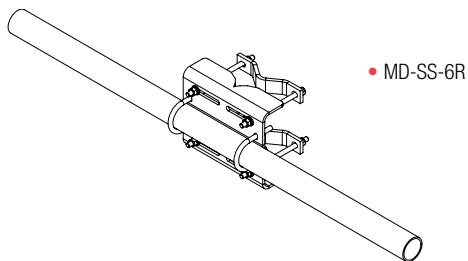
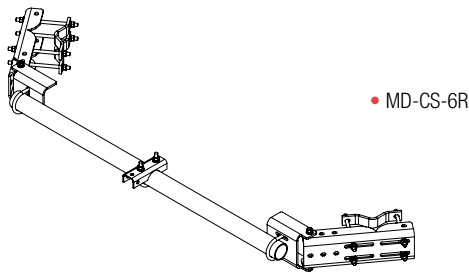
Size: 4', 6', 8', or 10' (1.2 m, 1.8 m, 2.4 m, or 3.1 m) Tower faces

Design: Round or angle strut support kits

Feature: Tower face strut support kits

Mounts to: Straight or tapered legs up to 16" (406.4 mm) OD, 16" (406.4 mm) angle 60°, or 12" (304.8 mm) angle 90°

Material: Hot dip galvanized steel



Part Number Description

Tower Face Mounted Microwave Dish Channel Support Kit, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs

MD-CS-6R	6' (1.8 m) Plain End Pipe
MD-CS-8R	8' (2.4 m) Plain End Pipe
MD-CS-10R	10' (3.1 m) Plain End Pipe

Tower Face Mounted Microwave Dish Channel Support Kit, for 8" (203.2 mm) to 16" (406.4 mm) Round, or 8" (203.2 mm) to 16" (406.4 mm) 60° Angle Legs or 6" (152.4 mm) to 12" (304.8 mm) 90° Angle Legs

MDL-CS-6R	6' (1.8 m) Plain End Pipe
MDL-CS-8R	8' (2.4 m) Plain End Pipe
MDL-CS-10R	10' (3.1 m) Plain End Pipe

Tower Leg Mounted Microwave Dish Strut Support, for Round or 90° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 60° Angle Legs

MD-SS-6R	6' (1.8 m) Pipe
MD-SS-8R	8' (2.4 m) Pipe

Tower Leg Mounted Microwave Dish Strut Support Kit, for 8" (203.2 mm) to 16" (406.4 mm) Round, or 8" (203.2 mm) to 16" (406.4 mm) 60° Angle Legs or 6" (152.4 mm) to 12" (304.8 mm) 90° Angle Legs

MDL-SS-6R	6' (1.8 m) Pipe
MDL-SS-8R	8' (2.4 m) Pipe

Tower Leg Mounted Microwave Dish Strut Support, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs

MD-SSA4	4' (1.2 m) Angle
MD-SSA6	6' (1.8 m) Angle

Tower Leg Mounted Microwave Dish Strut Support Kit, for 8" (203.2 mm) to 16" (406.4 mm) Round, or 8" (203.2 mm) to 16" (406.4 mm) 60° Angle Legs or 6" (152.4 mm) to 12" (304.8 mm) 90° Angle Legs

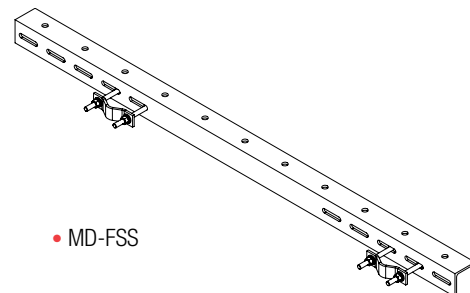
MDL-SSA4	4' (1.2 m) Angle
MDL-SSA6	6' (1.8 m) Angle

Angle for MD-CS Series

MD-CSA4	3/8" x 3-1/2" x 3-1/2" x 4' (9.5 mm x 88.9 mm x 88.9 mm x 1.2 m)
MD-CSA6	3/8" x 3-1/2" x 3-1/2" x 6' (9.5 mm x 88.9 mm x 88.9 mm x 1.8 m)
MD-CSA8	3/8" x 3-1/2" x 3-1/2" x 8' (9.5 mm x 88.9 mm x 88.9 mm x 2.4 m)

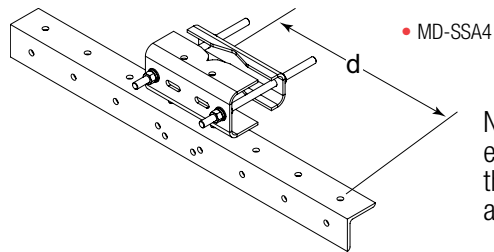
Microwave Dish Face Strut Support

MD-FSS	3/8" x 3" x 3" x 5' 6" (9.5 mm x 76.2 mm x 76.2 mm x 1.7 m)
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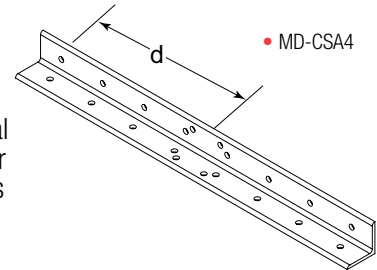


Tower Mounts

Leg Mounting Solutions



• MD-SSA4

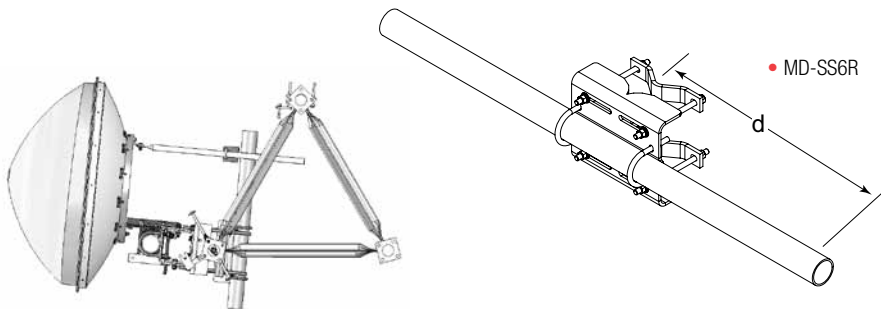


• MD-CSA4

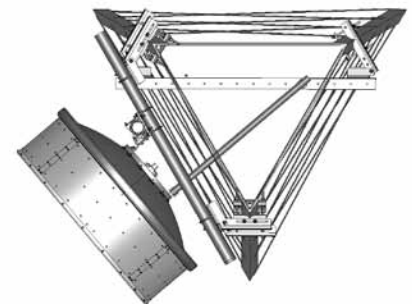
NOTE: It is assumed that a qualified structural engineer has reviewed the tower structure for the loads created by the microwave antennas and strut supports.

USAGE	MD-SSA4	MD-SSA6	MD-SSA8
Saddle Mount Attached in Center of Angle			
Max. distance from leg (d)	24"	36"	48"
Acceptable Load	2000 lb	1500 lb	1000 lb

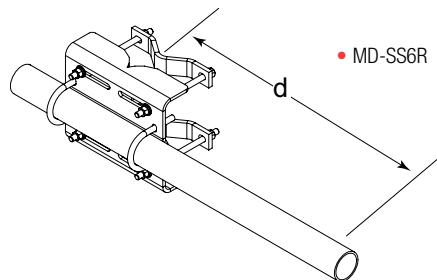
USAGE	MD-CSA4	MD-CSA6	MD-CSA8
Angle Attached at Each End to Tower Leg Mount			
Max. distance from legs (d)	24"	36"	48"
Acceptable Load	2500 lb	2500 lb	2000 lb



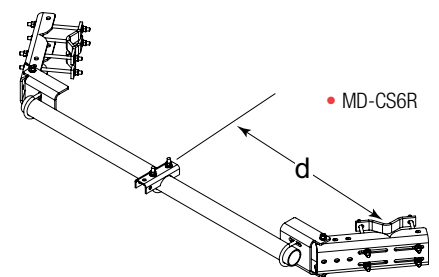
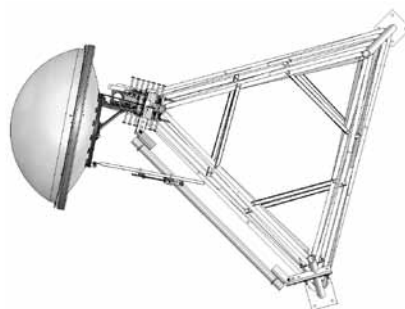
• MD-SS6R



USAGE	MD-SS6R	MD-SS8R	MD-SS10R
Saddle Mount Attached in Center of Pipe			
Max. distance from leg (d)	36"	48"	60"
Acceptable Load	2500 lb	2000 lb	1500 lb



• MD-SS6R

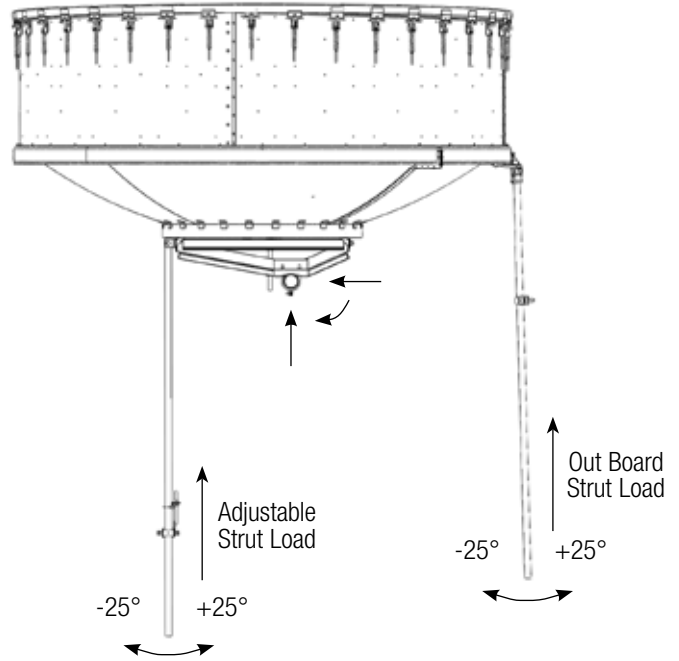
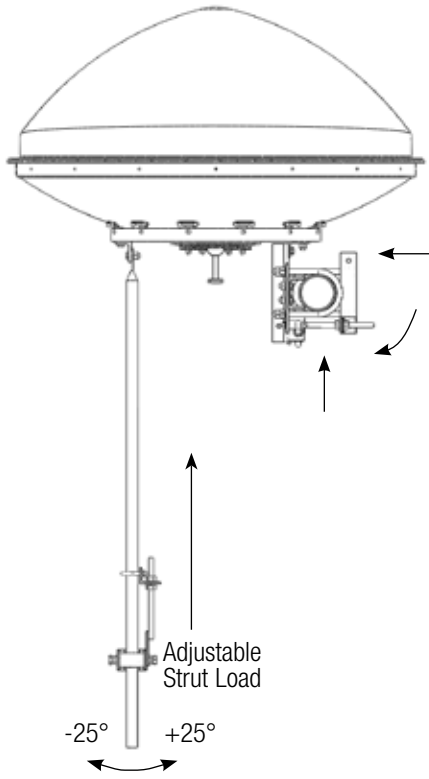


• MD-CS6R

USAGE	MD-SS6R	MD-SS8R	MD-SS10R
Saddle Mount Attached at One End of Pipe			
Max. distance from leg (d)	60"	84"	108"
Acceptable Load	1500 lb	1000 lb	500 lb

USAGE	MD-CS6R	MD-CS8R	MD-CS10R
Pipe Attached at Each End to Tower Leg Mount			
Max. distance from legs (d)	36"	48"	60"
Acceptable Load	2500 lb	2500 lb	2500 lb

Leg Mounting Solutions



Size ft. (m)	Adjustable Strut Force, lb (N)	Fixed Strut Force, lb (N)
4 (1.2)	500 (2200)	-
6 (1.8)	1400 (9207)	-
8 (2.4)	958 (4261)	1265 (5627)
10 (3.0)	1320 (5871)	1987 (8838)
12 (3.7)	1799 (8001)	2585 (11498)

NOTE:

A 4' dish stiff arm can see in survival winds up to 600 lbs. of load, and in working load wind conditions the mount cannot flex or deflect more than 0.1". A six foot dish stiff arm can see in survival winds up to 1400 lbs of load, and in working load wind conditions the mount cannot flex or deflect more than 0.1". In addition this arm must have a horizontal angle of less than 25° and less than 5° in the vertical direction."

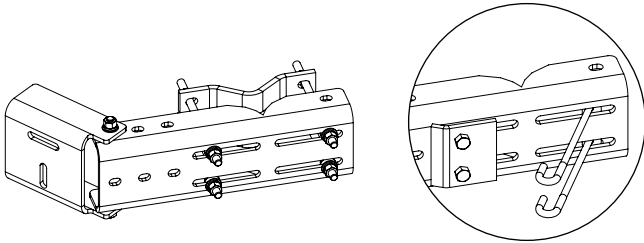
(Illustration on Page 19)

Tower Mounts

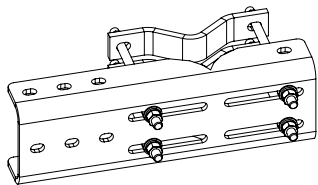
Leg Mounting Solutions

Microwave Strut Support

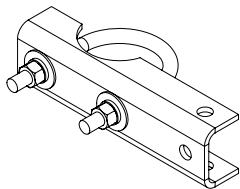
- Application:** Structural strut supports for round or angle tower legs
- Size:** 21" (533.4 mm) channel
- Design:** Universal support bracket
- Feature:** Universal strut attachment
- Mounts to:** Straight or tapered legs up to 16" (406.4 mm) OD, 16" (406.4 mm) angle 60°, or 12" (304.8 mm) angle 90°
- Material:** Hot dip galvanized steel
- Includes:** Support bracket, attachment hardware
- Order Separately:** Microwave strut pipe or angle, u-bolt



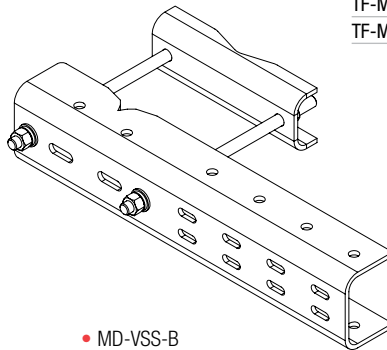
• MD-CS / • MD-CSL



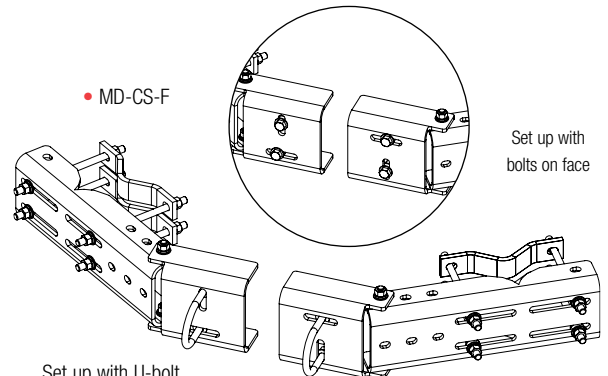
• MD-CS-B



• TF-MSS-BK



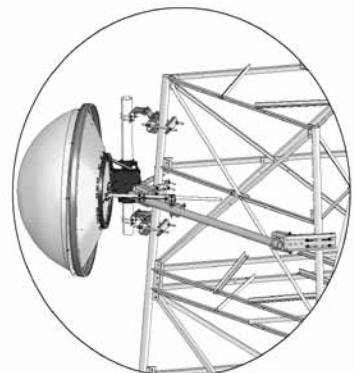
• MD-VSS-B



• MD-CS-F

Set up with bolts on face

Set up with U-bolt on Face



Part Number Description

Microwave Dish Strut Support Bracket for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs

MD-CS	Universal, for Mounting up to 3-1/2" (88.9 mm) Face Pipes on Round or Angle Legs (Kit of 1)
MD-CSL	Universal, for Mounting up to 4-1/2" (114.3 mm) Face Pipes on Round or Angle Legs (Kit of 1)
MD-CS-F	Face Mounted, for Mounting up to 3-1/2" (88.9 mm) Face Pipes on Round or Angle Legs (Kit of 2)
MD-CS-B	Face Mounted, (Kit of 1)

Microwave Dish Strut Support Bracket, for 8" (203.2 mm) to 16" (406.4 mm) Round, or 8" (203.2 mm), to 16" (406.4 mm) 60° Angle Legs or 6" (152.4 mm) to 12" (304.8 mm) 90° Angle Legs

MDL-CS	Universal, for Mounting up to 3-1/2" (88.9 mm) Face Pipes on Round or Angle Legs (Kit of 1)
MDL-CSL	Universal, for Mounting up to 4-1/2" (114.3 mm) Face Pipes on Round or Angle Legs (Kit of 1)
MDL-CS-F	Face Mounted, for Mounting up to 3-1/2" (88.9 mm) Face Pipes on Round or Angle Legs (Kit of 2)
MDL-CS-B	Face Mounted, (Kit of 1)

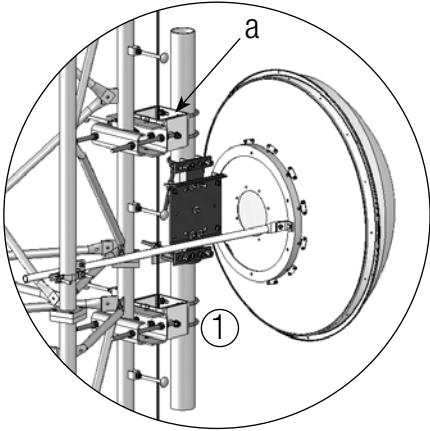
Microwave Dish Vertical Strut Support

MD-VSS-B	Microwave Dish Vertical Strut Support
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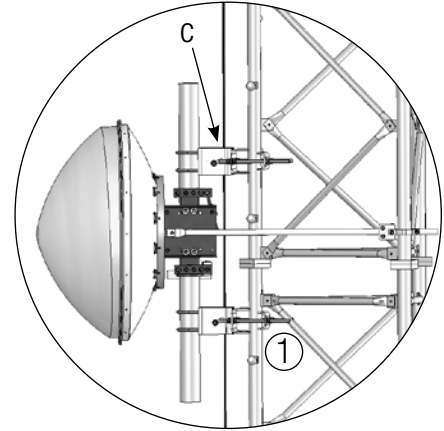
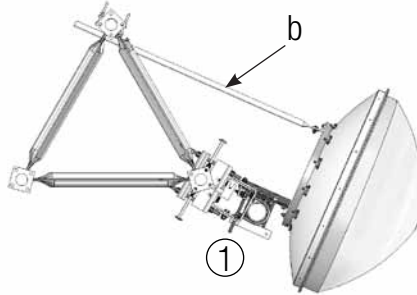
Microwave Strut Attachment Bracket

TF-MSS-BK2	For 2-3/8" (60.3 mm) OD Pipe
TF-MSS-BK	For 3-1/2" (88.9 mm) OD Pipe
TF-MSS-BK45	For 4-1/2" (114.3 mm) OD Pipe

Application Guide

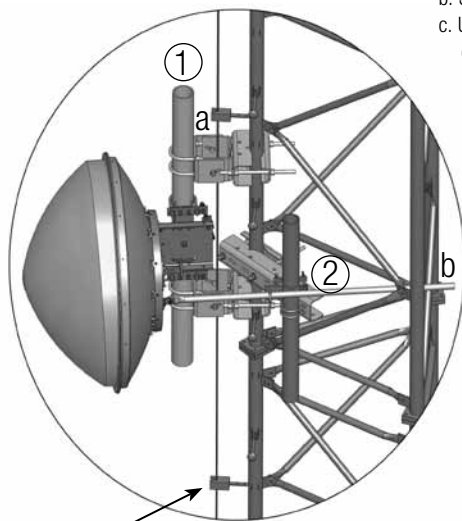


- a. Open face allows safety climb to pass through
- b. Strut returns back to tower at recommended angle
- c. Taper adjustment allows for vertical mounting solution

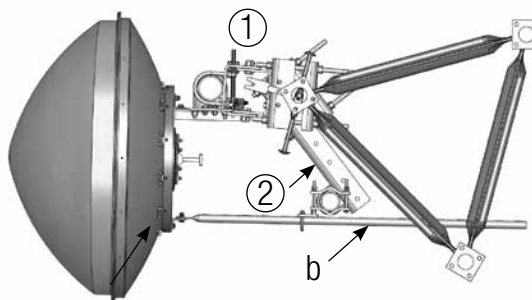
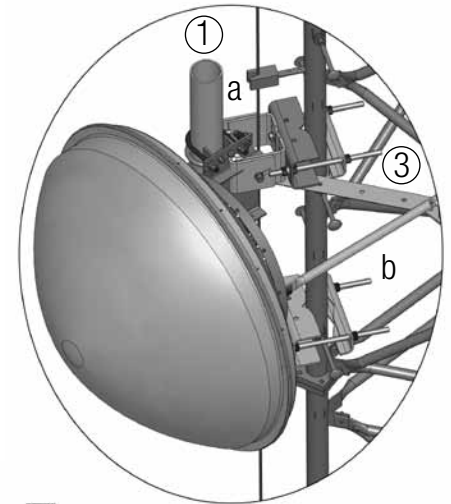


Key	Part Number	Description	Page #
1	PM-SC4-63	Universal Pipe Mount Kit With Open Face	2
2	MD-VSS	Microwave Dish Vertical Strut Support	7
3	MD-FSS	Microwave Dish Face Strut Support	4

* Shown with Andrew PX2F series antennas and supports



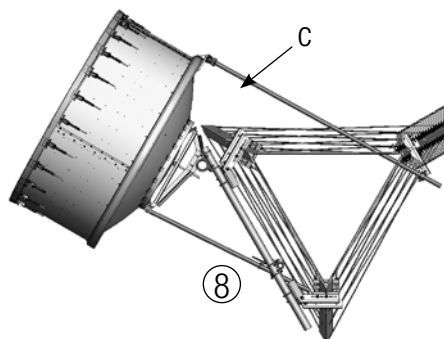
- a. Sliding taper brackets allow for 7° of non-incremental adjustment
- b. Strut returns straight back to tower
- c. Universal saddle mounts up to 8" (203.2 mm) dia. straight or taper legs



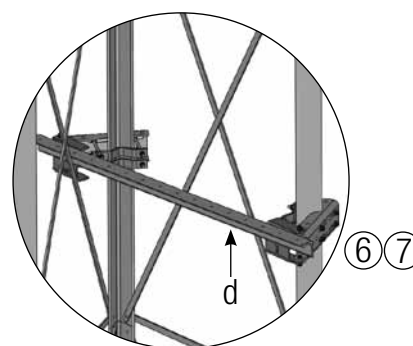
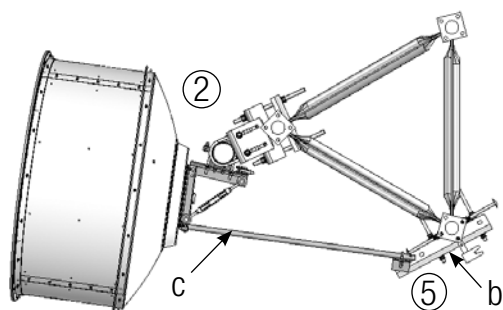
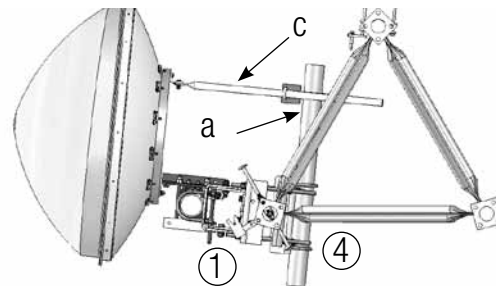
NOTE: If safety guide passes through mount it is recommended to add a cable guide above and below the mount to ensure the cable does not rub.

Tower Mounts

Application Guide

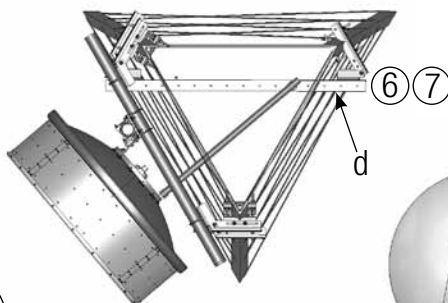
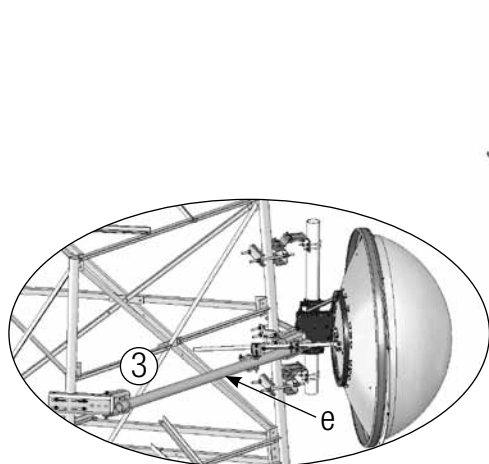


- a. MD-SS-6R Provides strut support for offset single leg attachments
- b. MD-CS-B Universal strut support for round or angle legs
- c. Strut returns straight back to tower at recommended angle
- d. MD-CS-F Will allow MD-CSA6 to attach to tower face with universal attachment brackets

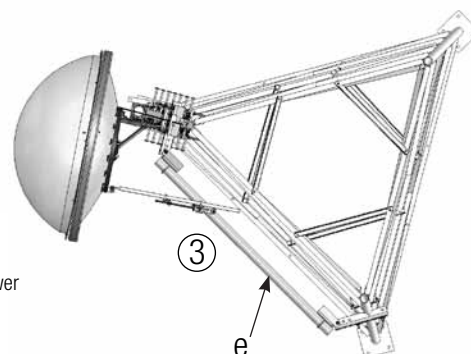


Key	Part Number	Description	Page #
1	PM-SC4-63	Universal Pipe Mount Kit With Open Face	34
2	PM-SU4-63	Universal Pipe Mount Kit	2
3	MD-CS-6R	Tower Face Mounted Dish Strut Support Kit	4
4	MD-SS-6R	Tower Leg Mounted Dish Strut Support Kit	4
5	MD-CS-B	Microwave Dish Strut Support Bracket	7
6	MD-CS-F	Tower Face Mounted Dish Strut Support Kit	7
7	MD-CSA6	Microwave Dish Strut Support Angle	4
8	TF-M3-8	Tower Face Mount with Dual Face Support	10

* Shown with Andrew VHLP and HPX series antennas and supports



- e. MD-CS-6R Provides strut support for the tower face with universal leg attachment brackets



Tower Mounts

Face Mounting Solutions

Tower Face Mounts

- Application:** Microwave antenna face mounting for round or angle, straight or tapered legs
- Size:** 8' (2.4 m), 14' (4.2 m), or 20' (6.1 m) face widths
- Design:** Pipe with saddle mounts and adjustable clamps
- Feature:** Universal taper adjustment for up to 9° of taper with 48" of separation
- Mounts to:** Straight or tapered legs up to 16" (406.4 mm) OD, 16" (406.4 mm) angle 60°, or 12" (304.8 mm) angle 90°
- Material:** Hot dip galvanized steel
- Includes:** Universal saddle mounts, slider brackets, pipe, crossover plates, hardware
- Order Separately:** Strut support kits, stand-off brackets

Part Number Description

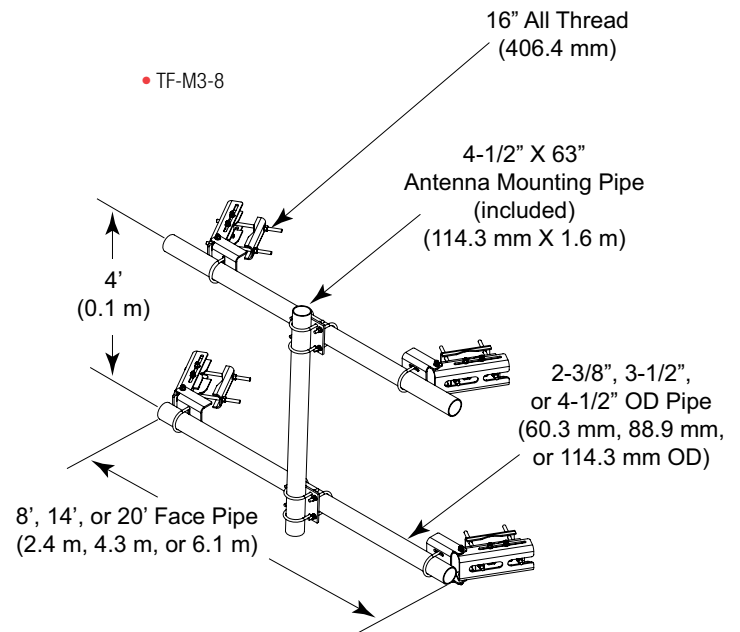
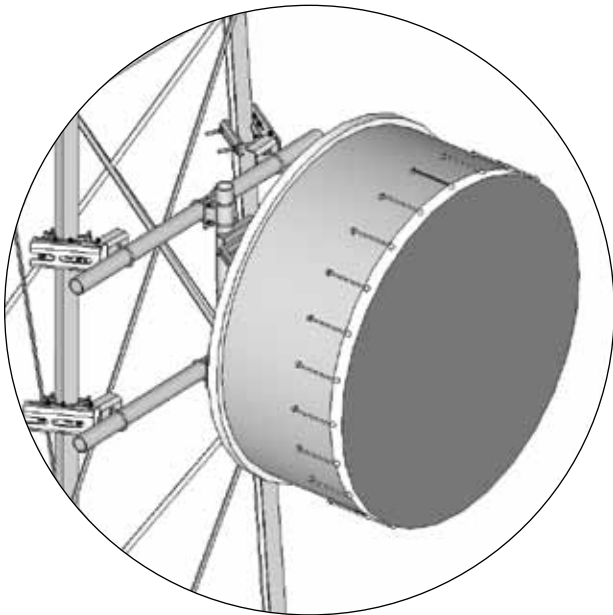
Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe up to 8" (203.2 mm) Legs

TF-M2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-M2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-M2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-M3-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TF-M3-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TF-M3-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TF-M4-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TF-M4-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe, for up to 16" (406.4 mm) Legs

TFL-M2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TFL-M2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TFL-M2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TFL-M3-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TFL-M3-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TFL-M3-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TFL-M4-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TFL-M4-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

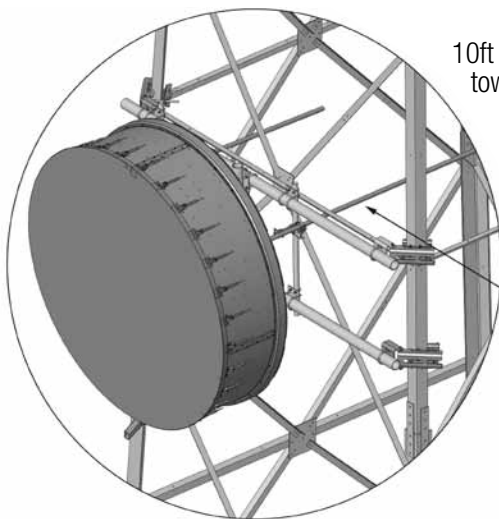
* TF-M and TFL-M Series typical applications



Tower Mounts

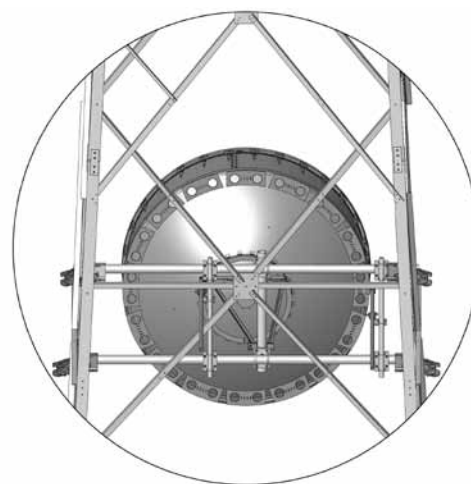
Face Mounting Solutions

Microwave Antenna Diameter	Tower Face Mount							
	TF-M2-8	TF-M2-14	TF-M2-20	TF-M3-8	TF-M3-14	TF-M3-20	TF-M4-8	TF-M4-14
2' (0.6 m)	X	X	X	X	X	X	X	X
4' (1.2 m)	X	X	X	X	X	X	X	X
6' (1.8 m)	X	-	-	X	X	X	X	X
8' (2.4 m)	-	-	-	X	X	X	X	X
10' (3.1 m)	-	-	-	X	X	X	X	X
12' (3.7 m)	-	-	-	X	X	-	X	X
15' (4.6 m)	-	-	-	-	-	-	X	-

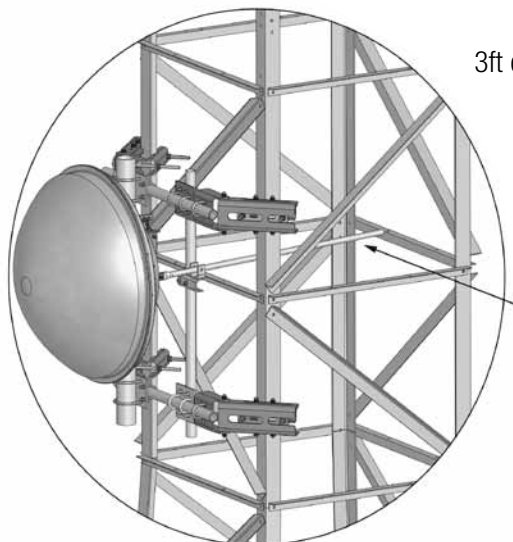


10ft dish shown on 20ft face tower using TF-M3S2-20 series mount.

See Note Below



3ft dish shown on 4ft face tower using TF-M2S-8 series mount.

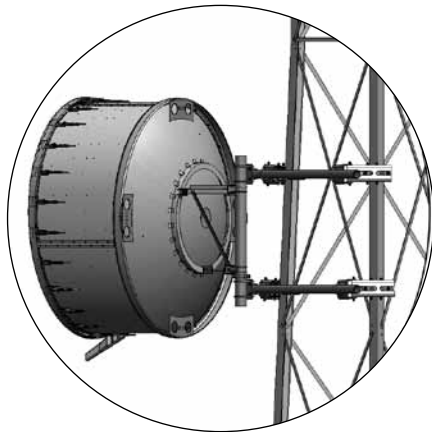


NOTE: A good practice, after the path is set, is to cut the excess stiff arm 12" past the mount point, to prevent falling ice from hitting the strut and affecting the path. Treat cut edge per ASTM A123.

Face Mounting Solutions

Face Mounts With Single Strut or Dual Strut Support

- Application:** Microwave antenna face mounting for round or angle, straight or tapered legs
- Size:** 8', 14', or 20' (2.4 m, 4.2 m, or 6.1 m)
Face widths
- Design:** Pipe with saddle mounts and adjustable clamps
- Feature:** Universal taper adjustment for up to 9° of taper with 48" (1.2 m) of separation
- Mounts to:** Straight or tapered legs up to 16" (406.4 mm) OD, 16" (406.4 mm) angle 60°, or 12" (304.8 mm) angle 90°
- Material:** Hot dip galvanized steel
- Includes:** Universal saddle mounts, slider brackets, pipe, crossover plates, tieback supports, hardware
- Order Separately:** Stand-off brackets



• TF-M3S Series



• TFL-M3S2 Series

Part Number Description

Tower Face Mount, Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With One 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support up to 8" (203.2 mm) Legs

TF-M2S-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-M2S-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-M2S-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-M3S-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TF-M3S-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TF-M3S-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TF-M4S-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TF-M4S-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With One 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support, for up to 16" (406.4 mm) Legs

TFL-M2S-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TFL-M2S-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TFL-M2S-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TFL-M3S-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TFL-M3S-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TFL-M3S-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TFL-M4S-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TFL-M4S-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With Two 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support up to 8" (203.2 mm) Legs

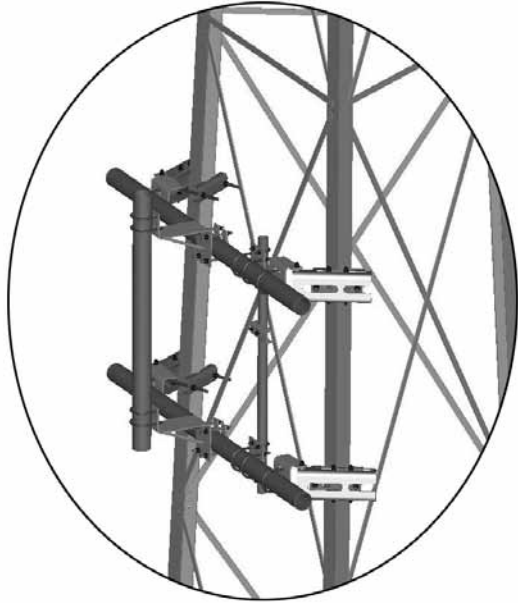
TF-M2S2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-M2S2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-M2S2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-M3S2-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TF-M3S2-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TF-M3S2-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TF-M4S2-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TF-M4S2-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With Two 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support, for up to 16" (406.4 mm) Legs

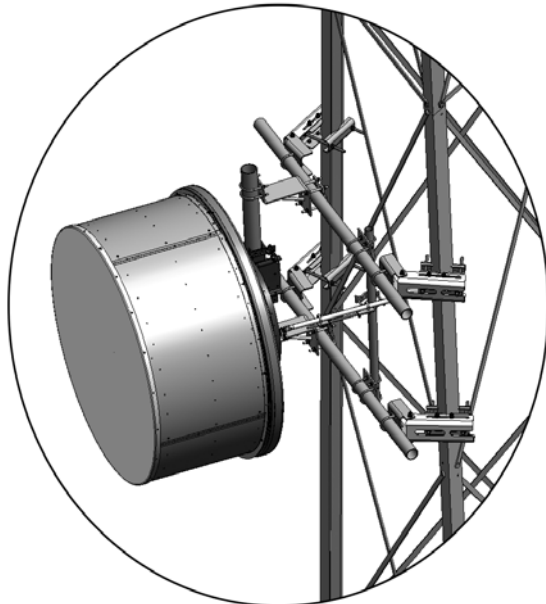
TFL-M2S2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TFL-M2S2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TFL-M2S2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TFL-M3S2-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TFL-M3S2-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TFL-M3S2-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TFL-M4S2-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TFL-M4S2-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Tower Mounts

Face Mounting Solutions



• TF-ML4S Series



• TF-ML3S Series

Part Number	Description
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Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With 14" (355.6 mm) Stand-off

TF-ML2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-ML2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-ML2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-ML3-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TF-ML3-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TF-ML3-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TF-ML4-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TF-ML4-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With 14" (355.6 mm) Stand-off, for up to 16" (406.4 mm) Legs

TFL-ML2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TFL-ML2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TFL-ML2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TFL-ML3-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TFL-ML3-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TFL-ML3-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TFL-ML4-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TFL-ML4-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

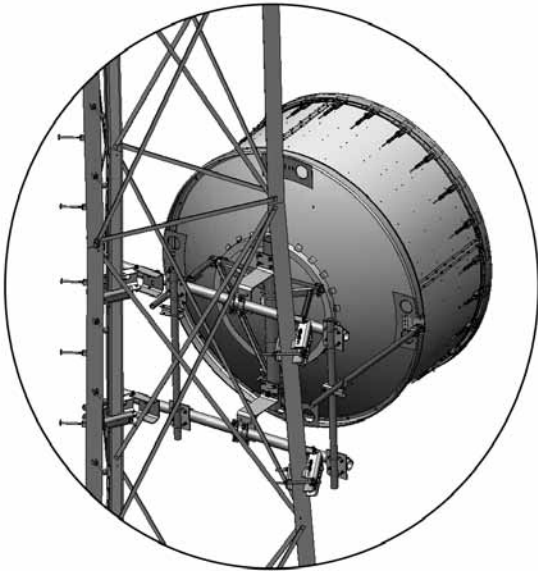
Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With 14" (355.6 mm) Stand-off, One 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support

TF-ML2S-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-ML2S-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-ML2S-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-ML3S-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TF-ML3S-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TF-ML3S-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TF-ML4S-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TF-ML4S-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With 14" (355.6 mm) Stand-off, One 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support, for up to 16" (406.4 mm) Legs

TFL-ML2S-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TFL-ML2S-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TFL-ML2S-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TFL-ML3S-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TFL-ML3S-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TFL-ML3S-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TFL-ML4S-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TFL-ML4S-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

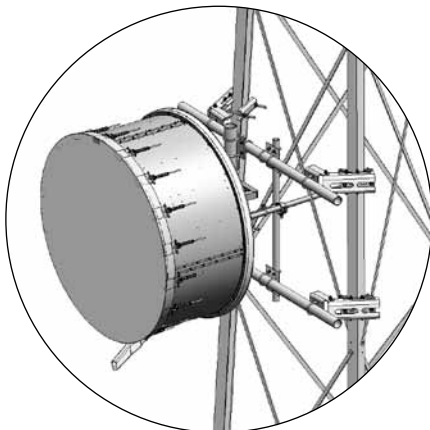
Face Mounting Solutions



• TF-ML3S2 Series

Tower Face Mount Strut Support Kits

- Application:** Support for mounting strut of TF-M series face mount
- Size:** Three versions
- Design:** Pipe with crossover plates
- Feature:** Can be adjusted to mount anywhere on tower face mount
- Mounts to:** Tower face mount kits
- Material:** Hot dip galvanized steel
- Includes:** Plates, strut support, hardware, pipe
- Order Separately:** Tower face mount kit



Part Number Description

Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With 14" (355.6 mm) Stand-off and Two 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support up to 8" (203.2 mm) Legs

TF-ML2S2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-ML2S2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-ML2S2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-ML3S2-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TF-ML3S2-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TF-ML3S2-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TF-ML4S2-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TF-ML4S2-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

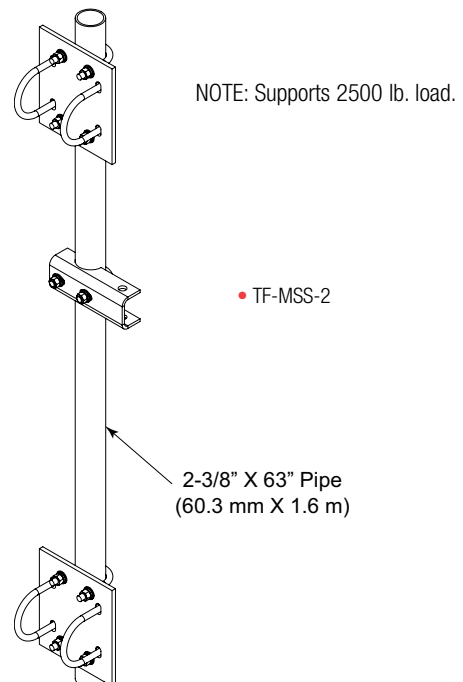
Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Antenna Pipe With 14" (355.6 mm) Stand-off and Two 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support, for up to 16" (406.4 mm) Legs

TFL-ML2S2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TFL-ML2S2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TFL-ML2S2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TFL-ML3S2-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TFL-ML3S2-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TFL-ML3S2-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TFL-ML4S2-8	8' x 4-1/2" OD (2.4 m x 114.3 mm OD)
TFL-ML4S2-14	14' x 4-1/2" OD (4.3 m x 114.3 mm OD)

Part Number Description Weight, lb (kg)

Tower Face Mount Strut Support Kits, 2-3/8" OD x 63" Pipe

TF-MSS-2	2-3/8" OD x 2-3/8" OD (60.3 mm x 60.3 mm)	42 (19.1)
TF-MSS-3	2-3/8" OD x 3-1/2" OD (60.3 mm x 88.9 mm)	44 (20.2)
TF-MSS-4	2-3/8" OD x 4-1/2" OD (60.3 mm x 114.3 mm)	48 (21.8)

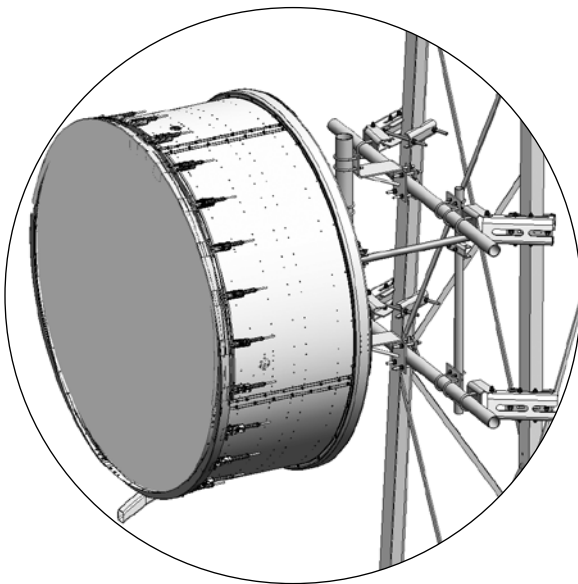


Tower Mounts

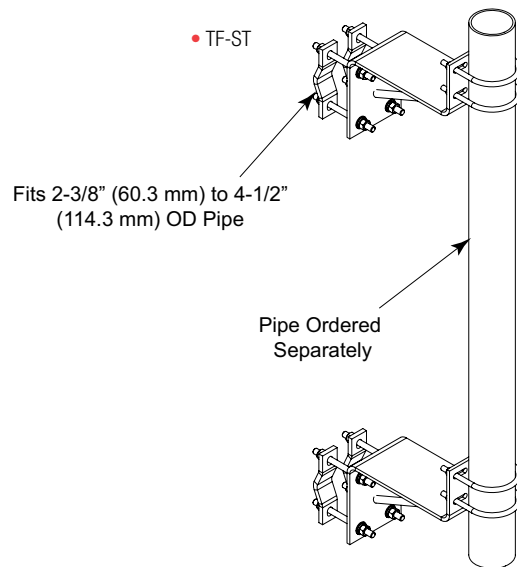
Face Mounting Solutions

Tower Face Mount Stand-off Bracket

- Application:** Support for standing microwave antenna off of TF-M series face mount
- Size:** 4-1/2" (114.3 mm) OD
- Design:** 4-1/2" (114.3 mm) OD pipe mount stand-off
- Feature:** 14" (355.6 mm) stand-off
- Mounts to:** Tower face mount kits
- Material:** Hot dip galvanized steel
- Includes:** Stand-off, attachment hardware
- Order Separately:** Tower face mount kit



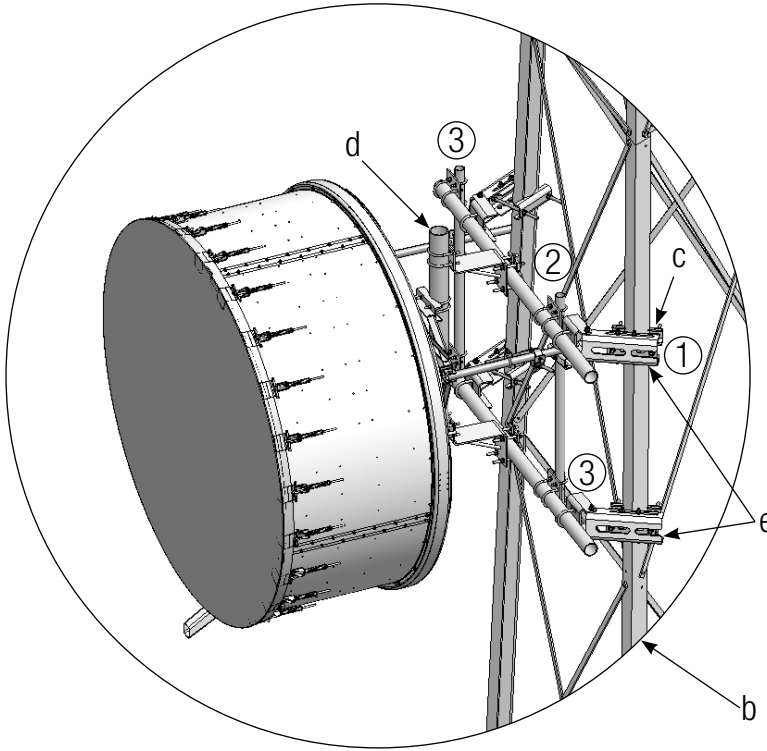
Part Number	Description	Weight, lb (kg)
Tower Face Mount Stand-off Bracket		
TF-ST	14" (355.6 mm) Stand-off	65 (29.5)



Part Number	Description	Weight, lb (kg)
Plain End Pipes		
MT-650	2-3/8" OD x 48" (60.3 mm OD x 1.2 m)	14 (6.4)
MT-651	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	21 (9.5)
MT-651-96	2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	33.5 (15.2)
MT-537	2-3/8" OD x 126" (60.3 mm OD x 3.2 m)	39.7 (18)
MT-537-170	2-3/8" OD x 170" (60.3 mm OD x 4.3 m)	52.7 (23.9)
MT-538	2-3/8" OD x 21' (60.3 mm OD x 6.4 m)	77.7 (35.2)
MT-547-48	3-1/2" OD x 48" (88.9 mm OD x 1.2 m)	46.7 (21.2)
MT-547-72	3-1/2" OD x 72" (88.9 mm OD x 1.8 m)	70 (31.8)
MT-547-96	3-1/2" OD x 96" (88.9 mm OD x 2.4 m)	93.3 (42.3)
MT-547-126	3-1/2" OD x 126" (88.9 mm OD x 3.2 m)	125 (56.7)
MT-547	3-1/2" OD x 21' (88.9 mm OD x 6.4 m)	158.8 (72.1)
MT-653-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m)	57 (25.86)
MT-654-96	4-1/2" OD x 96" (114.3 mm OD x 2.4 m)	88 (39.92)
MT-539	4-1/2" OD x 126" (114.3 mm OD x 3.2 m)	114 (51.71)
MT-654-150	4-1/2" OD x 150" (114.3 mm OD x 3.8 m)	156 (70.76)
MTC987205	4-1/2" OD x 14' (114.3 mm OD x 4.3 m)	
GUB-4240	1/2" x 2-1/2" x 4" (12.7 mm x 63.5 mm x 101.6 mm) Galvanized U-bolt	0.6 (0.27)
GUB-4355	1/2" x 3-5/8" x 5" (12.7 mm x 92.1 mm x 127 mm) Galvanized U-bolt Assembly	0.8 (0.36)

NOTE: The length of pipe must be considered for the type of dish used and the loads from the dish and or the stiff arm attached.

Application Guide

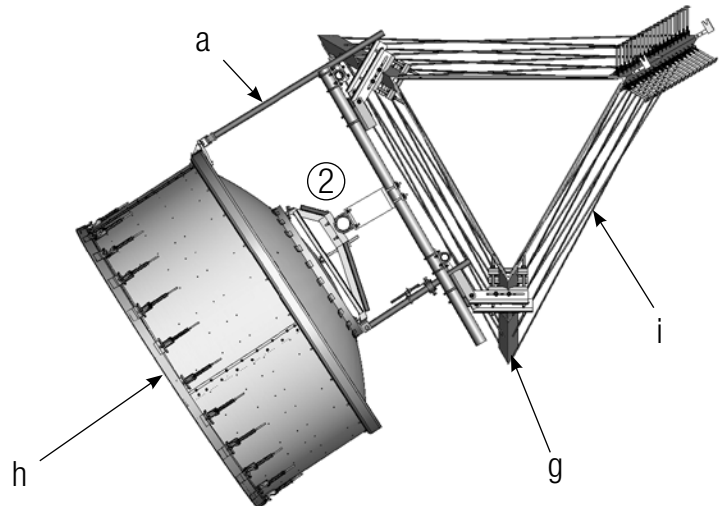


- a. Strut returns back to tower at recommended angle
- b. Tapered leg
- c. Channel supports adjust for inclination of tower leg taper
- d. True vertical antenna support
- e. Dual face support allows four point connection to structure
- f. Optional TF-ST allows greater work space and elliptical path

Key	Part Number	Description	Page #
1	TF-M3-14	Tower Face Mount With 14' (4.2 m) Face Pipes 3-1/2"OD (88.9 mm)	10
2	TF-ST	Tower Face Mount Stand-off Bracket	15
3	TF-MSS-3	Tower Face Mount Strut Support Kit 2-3/8" OD x 3-1/2" OD (60.3 mm x 88.9 mm)	14

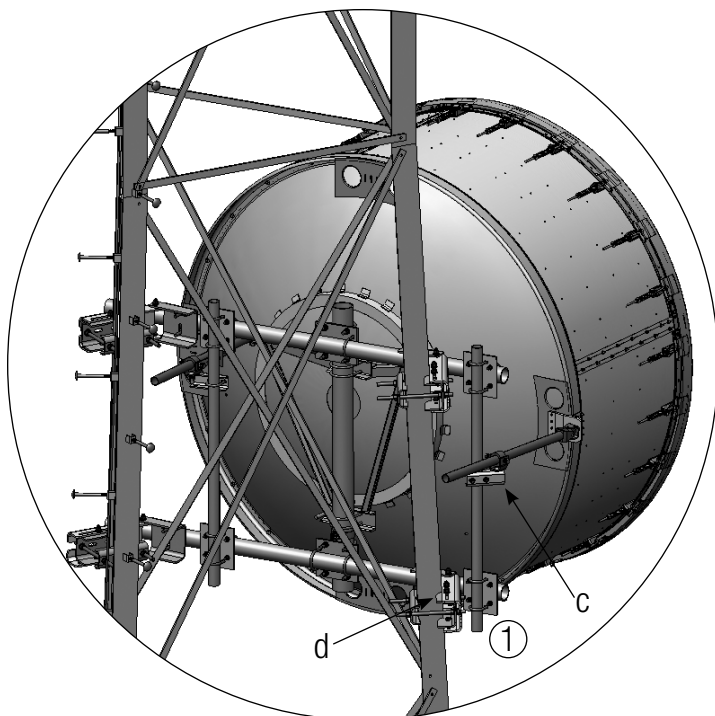
* Shown with Andrew HSX series antennas and supports

- g. 6" (152.4 mm) 60° Angle tower leg
- h. 8' (2.4 m) HSX8 series antenna and supports
- i. 10' (3.0 m) Tower face



Tower Mounts

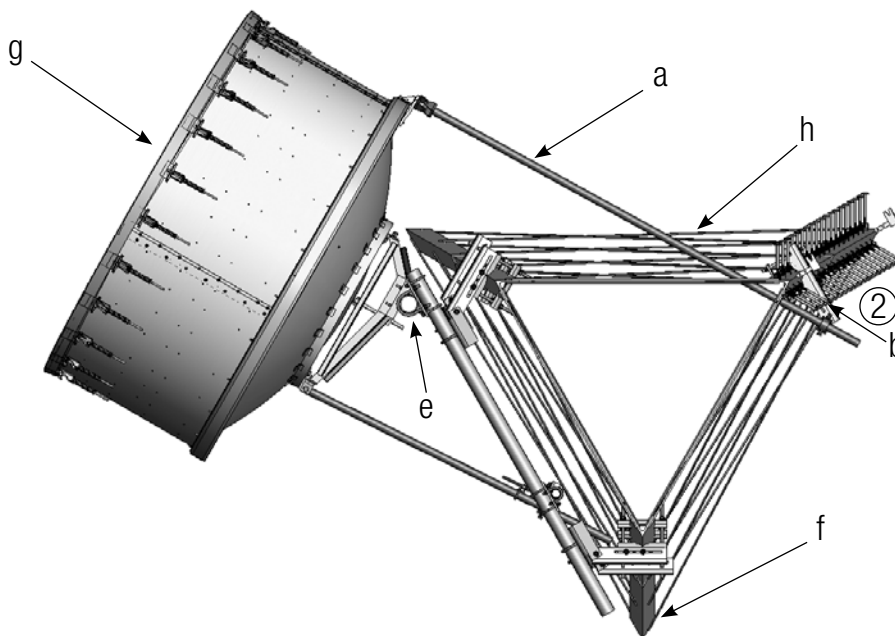
Application Guide



- a. Strut returns back to tower at recommended angle
- b. Optional strut attachment back to tower leg at recommended angle
- c. Strut attachment allows for vertical adjustment
- d. Universal saddle mounts up to up to 16" (406.4 mm) OD straight or tapered legs
- e. Mount can be positioned along horizontal support for azimuth adjustment

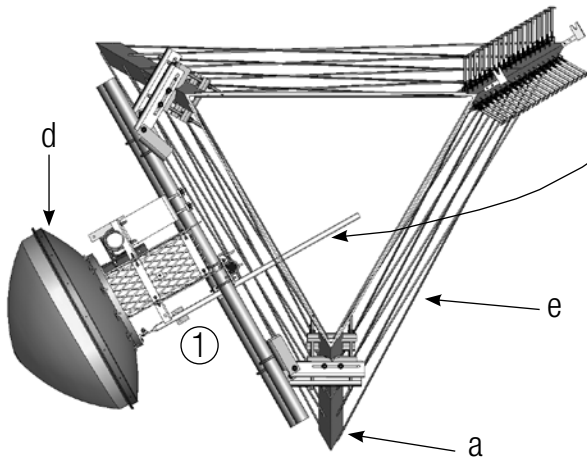
Key	Part Number	Description	Page #
1	TFL-M3S2-14	Tower Face Mount Kit With 14' (4.2 m) Face Pipes 3-1/2"OD (88.9 mm) Kit Includes Two TF-MSS-3's	12
2	MD-CS-B	Microwave Dish Strut Support Bracket	7

* Shown with Andrew HP series antennas and supports

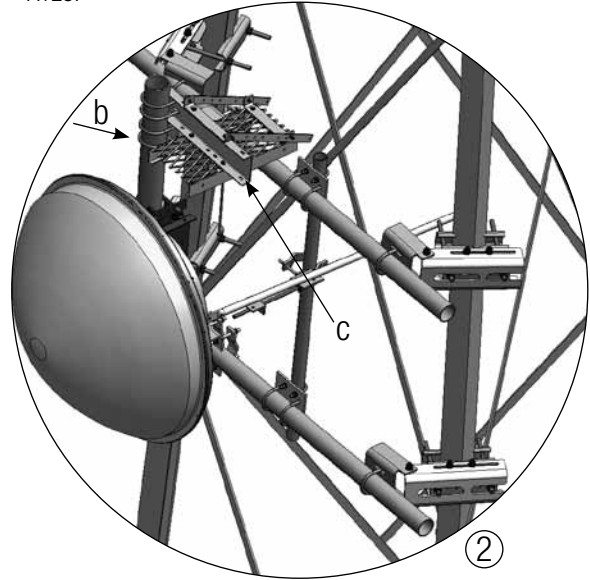


- f. 10" (254 mm) 60° Angle tapered tower leg
- g. 10' (3 m) HP10 series antenna and supports
- h. 12' (3.6 m) Tower face

Application Guide



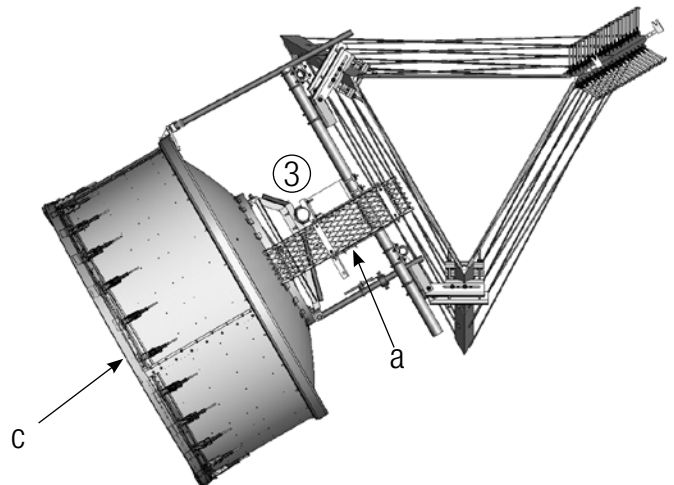
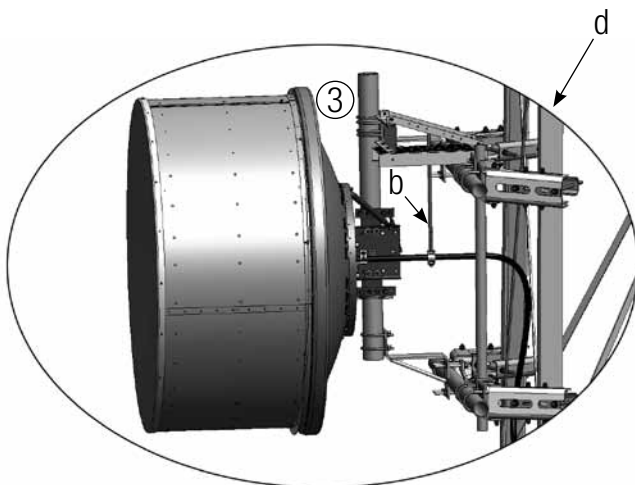
NOTE: A good practice, after the path is set, is to cut the excess stiff arm 12" past the mount point, to prevent falling ice from hitting the strut and affecting the path. Treat cut edge per ASTM A123.



- a. 6" (152.4 mm) 60° Tapered tower leg
- b. Mounts to existing 4-1/2" OD (114.3 mm) vertical pipe mount
- c. Offers multiple attachment points on grating
- d. 3' (1.0 m) Dish
- e. 6' (1.8 m) Tower face

Key	Part Number	Description	Page #
1	MD-IS2	Microwave Dish Cable Ice Shield	16,41
2	TF-M2S-8	Tower Face Mount Kit With 8' (2.4 m) Face Pipes 2-3/8" OD (60.3 mm) Kit Includes One TF-MSS-2	12
3	MD-IS4	Microwave Dish Cable Ice Shield	16,41

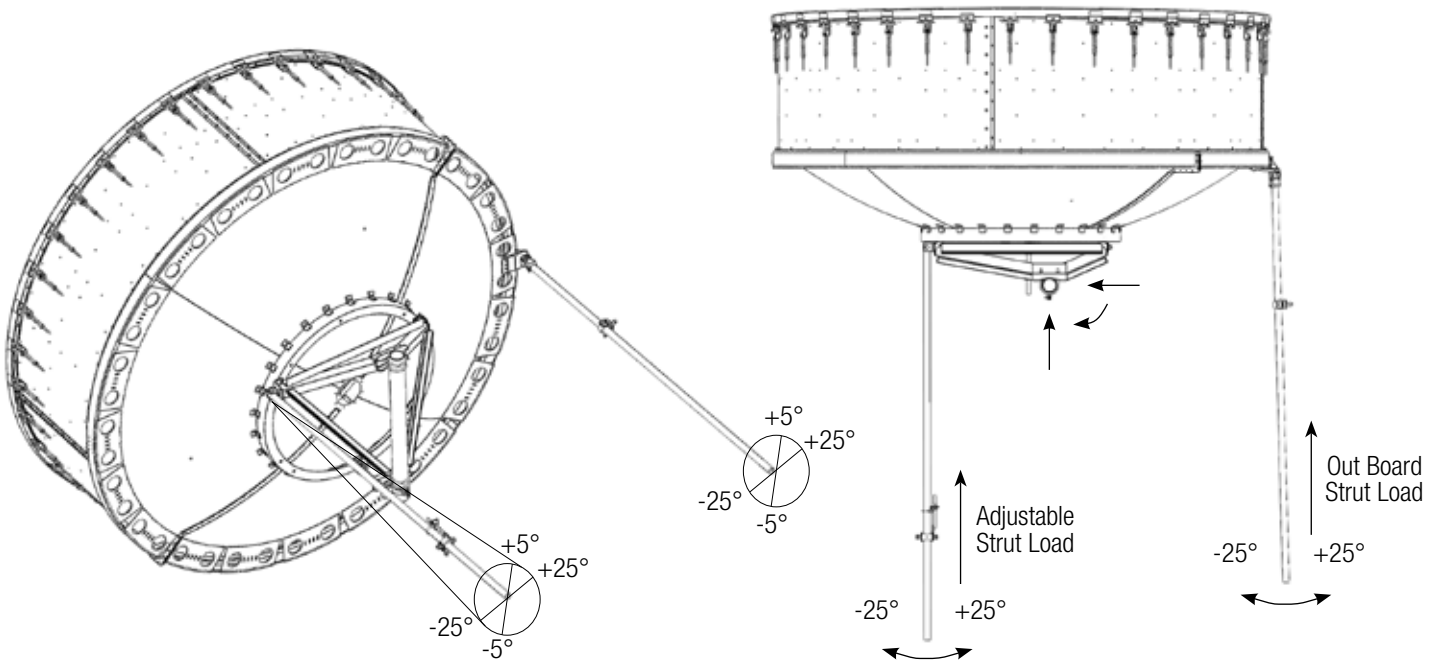
* Shown with Andrew PX2F and HP series antennas and supports



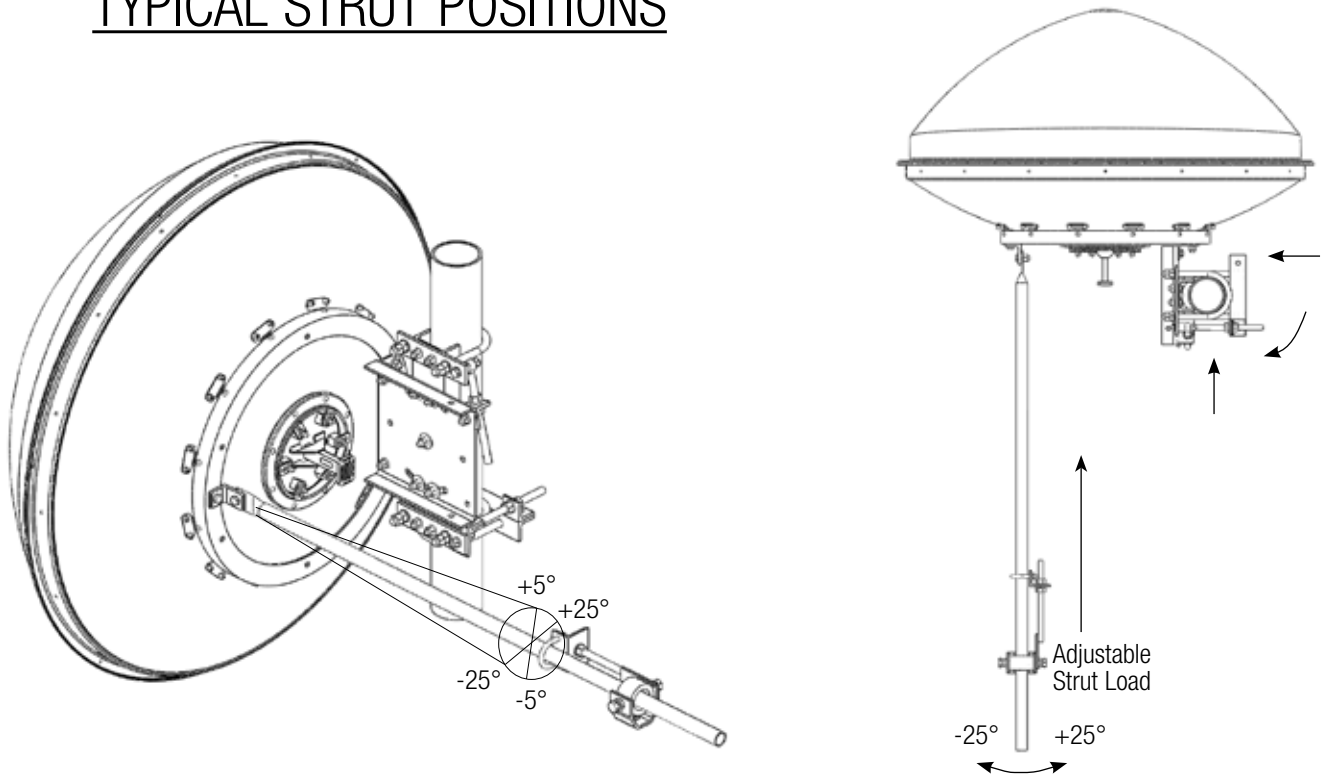
- a. Grating can be mounted at any azimuth to protect and follow elliptical waveguide
- b. Threaded support rod for elliptical waveguide
- c. 10' (3.0 m) HP series dish
- d. 6" (152.4 mm) 60° Tapered tower leg

Tower Mounts

Application Guide



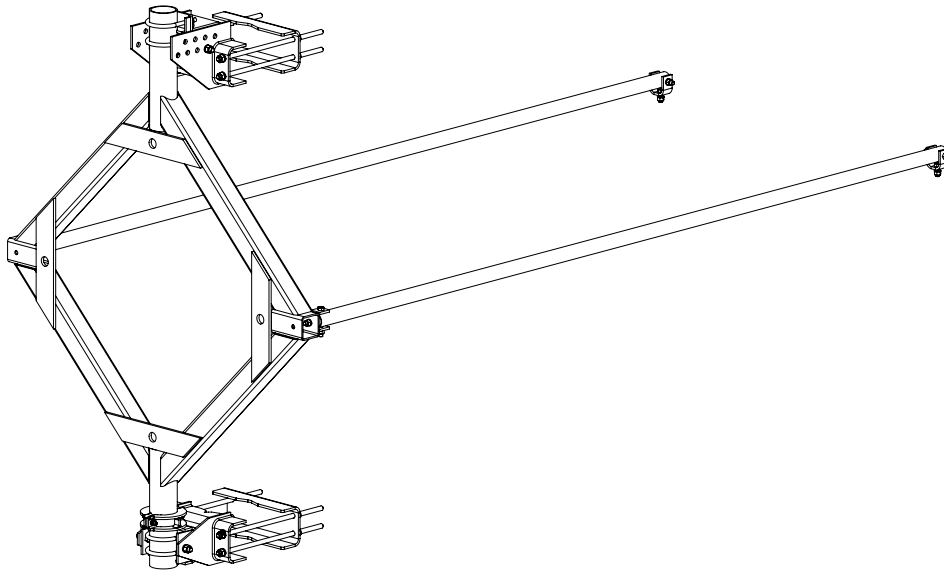
TYPICAL STRUT POSITIONS



Leg Mounting Solutions for SE-Series Microwave Antennas

Leg Mounting Solutions for SE-Series Microwave Antennas

- Application:** Pipe mount for mounting SE-series antenna to round or angle tower legs
- Size:** Three sizes
- Design:** Four point mounting solution
- Feature:** Up to 8" of taper adjustment
- Mounts to:** Straight or tapered legs up to 12" OD round, 12" angle 60° or 9" angle 90°
- Material:** Hot dip galvanized steel
- Includes:** Saddlemount, attachment hardware, struts
- Order Separately:** Strut brackets as needed

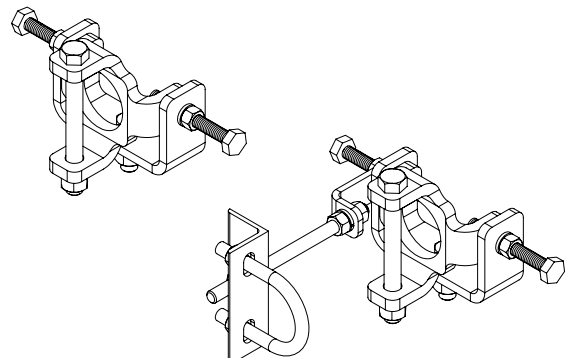


Part Number	Description	Weight, lb (kg)
Leg Mounting Solutions for SE-Series		
DMHD-46	Heavy Duty Dish Mount, 4' - 6' (1.2 m - 1.8 m)	503 (227.8)
DMHD-810	Heavy Duty Dish Mount, 8' - 10' (2.4 m - 3.1 m)	557 (252.3)
DMHD-12	Heavy Duty Dish Mount, 12' (3.7 m)	598 (270)

Microwave Antenna Strut Adjustment Bracket

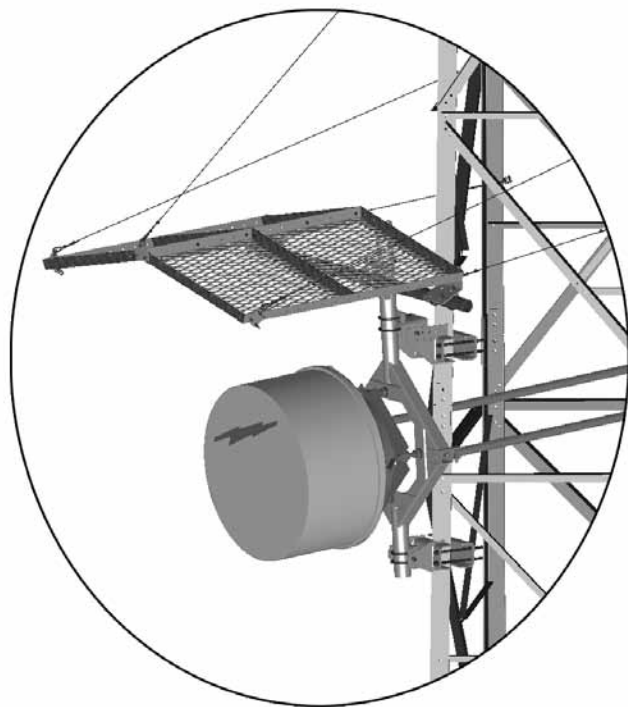
- Application:** Lattice towers
- Size:** 2-3/8" (60.3 mm) OD
- Design:** Adjustable clamps
- Feature:** Allows for strut adjustment
- Mounts to:** 2-3/8" (60.3 mm) OD strut pipe
- Material:** Hot dip galvanized steel
- Includes:** Adjustable brackets, attachment hardware
- Order Separately:** Microwave strut

Part Number	Description	Weight, lb (kg)
Microwave Antenna Strut Adjustable Bracket		
MD-AK-2	Microwave Antenna Strut Adjustment Bracket for 2-3/8" OD Struts	16 (7.3)



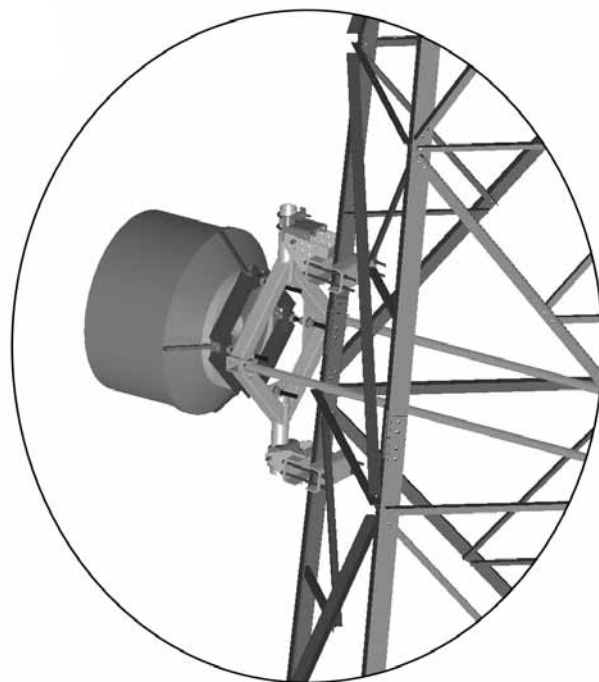
Tower Mounts

Leg Mounting Solutions for SE-Series Microwave Antennas



Front view of DMHD-46 shown with an SE-Series Microwave Antenna and a MD-S6 Ice Shield

Rear view of DMHD-46 mounted on tower leg



SE-Series Antennas:

Feature a wind speed rating of 320 km/h (200 mph). They also feature a corrosion resistance package. The SE-Series antennas attach to the tower interface via four stainless steel studs instead of the standard 115 mm (4.5") OD diameter pipe

General features for the SE-Series are listed below.

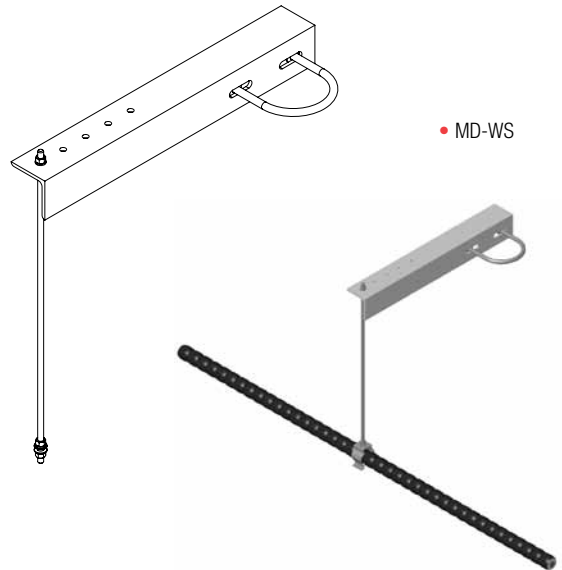
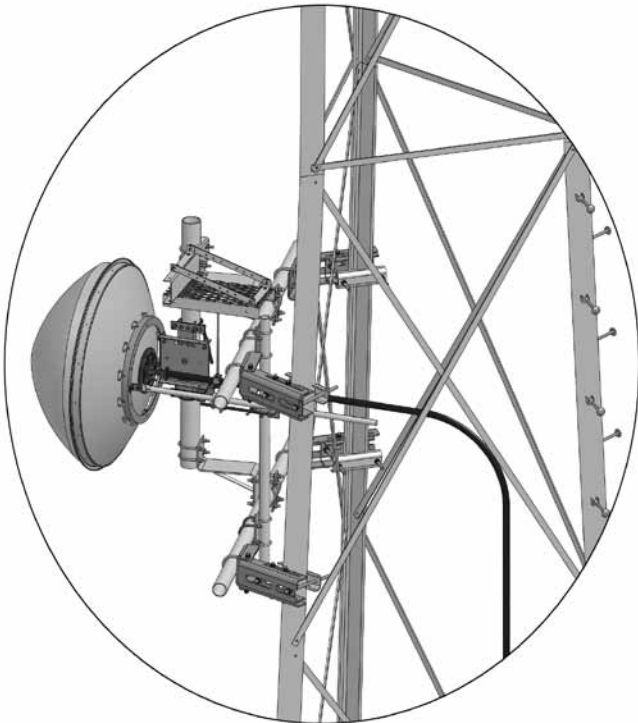
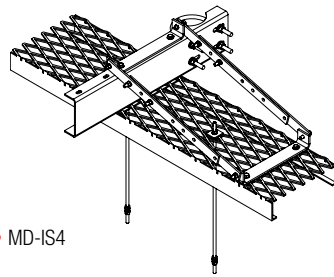
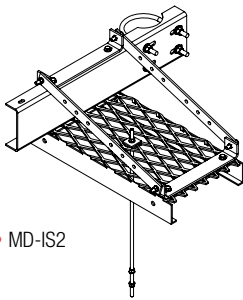
Antenna	Reflector & 4-Point Mount Assembly	Teglar Radome	Feed Bumper	Radome Edge Protection
1.2 m (4')				
Shielded	1	1		
1.8 m (6')				
Shielded	1	1	1	1
2.4 m (8')				
Shielded	1	1	1	1
3.0 m (10')				
Shielded	1	1	1	1
3.7 m (12')				
Shielded	1	1	1	1

Waveguide Protection Solutions

Microwave Dish Waveguide Shields

- Application:** Waveguide protection for behind microwave antenna
- Size:** Three versions (see table)
- Design:** Support and protection for waveguide
- Feature:** Protects waveguide from falling debris
- Mounts to:** 4-1/2" (114.3 mm) OD pipe
- Material:** Hot dip galvanized steel
- Includes:** Ice shield and all attachment hardware
- Order Separately:** Pipe mount

Part Number	Description	Weight, lb (kg)
Microwave Dish Waveguide Shields		
MD-IS2	Microwave Dish Waveguide Shield, 12" x 24" (304.8 mm x 610 mm) Shield	42 (19.1)
MD-IS4	Microwave Dish Waveguide Shield, 12" x 48" (304.8 mm x 1.2 m) Shield	61 (27.7)
MD-WS	Microwave Dish Waveguide Shield, 24" (610 mm) Angle	12 (5.4)



NOTE:

It is recommended that the EW line is supported every three feet in the horizontal and within 12" of the connector so there is no stress on the feed horn.



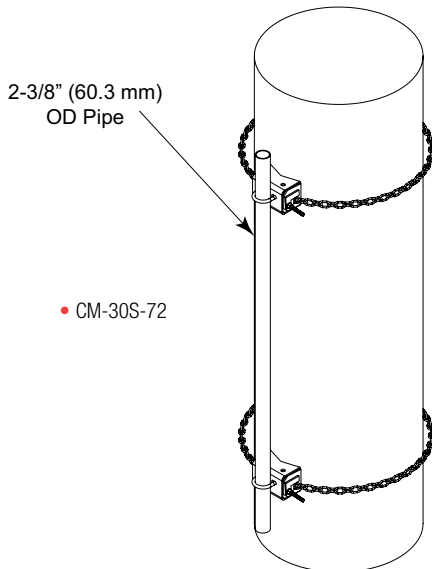
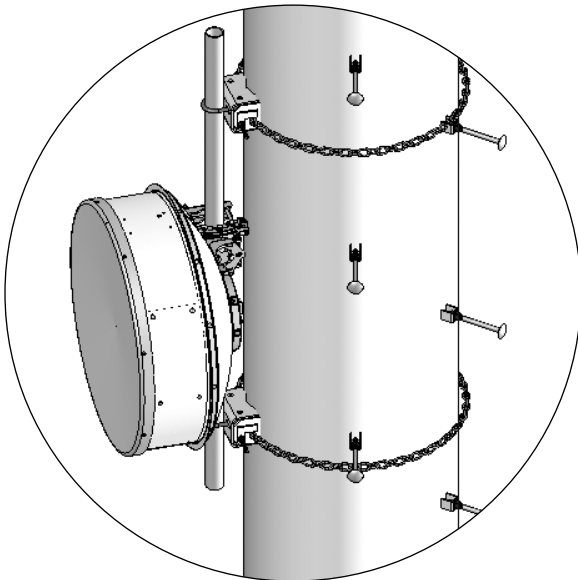
- **Low-Profile Chain Mounts**
- **Light Duty Chain Mounts**
- **Heavy Duty Chain Mounts**
- **Microwave Components**

Monopole Mounts

Low-profile Chain Mounts

Low-profile Chain Mounts

Application:	Chain mount solution for mounting antennas or monopoles
Size:	2-3/8" (60.3 mm) OD pipe mounts
Design:	Single antenna chain mounts
Feature:	Universal, low-profile mount
Mounts to:	8" to 60" (203.2 mm to 1524 mm) OD
Material:	Hot dip galvanized steel
Includes:	See description



Part Number	Description	Weight, lb (kg)
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Chain Mount Kits, 8" to 30" (203.2 mm to 711.2 mm) OD, 25" to 94.2" (635 mm to 2393 mm) Circumference, 8' (2.4 m) Chain

Single Chain Mount Kit

CM-30S-B	Base Kit, 2-3/8" (60.3 mm) OD, Pipe Ordered Separately	26.76 (12.1)
CM-30S-72	One 2-3/8" OD x 72" (60.3 mm OD x 1.8 m) Pipe	47.76 (21.7)
CM-30S-96	One 2-3/8" OD x 96" (60.3 mm OD x 2.4 m) Pipe	60.26 (27.3)

Single Chain Mount Kits With Stand-off, 8" to 30" (203.2 mm to 711.2 mm) OD, 25" to 94.2" (635 mm to 2393 mm) Circumference, 8' (2.4 m) Chain

CML-30S-B	Base Kit, 2-3/8" (60.3 mm) OD, Pipe Ordered Separately	70 (31.8)
CML-30S-72	One 2-3/8" OD x 72" (60.3 mm OD x 1.8 m) Pipe	90 (40.8)
CML-30S-96	One 2-3/8" OD x 96" (60.3 mm OD x 2.4 m) Pipe	105.76 (48.0)

Chain Mount Kits, 8" to 60" (203.2 mm to 1524 mm) OD, 25" to 188" (635 mm to 4785 mm) Circumference, 16' (4.9 m) Chain

Single Chain Mount Kit

CM-60S-B	Base Kit, 2-3/8" (60.3 mm) OD Pipe Ordered Separately	38.78 (17.6)
CM-60S-72	One 2-3/8" OD x 72" (60.3 mm OD x 1.8 m) Pipe	59.76 (27.1)
CM-60S-96	One 2-3/8" OD x 96" (60.3 mm OD x 2.4 m) Pipe	72.26 (32.8)

Single Chain Mount Kits With Stand-off, 8" to 60" (203.2 mm to 1524 mm) OD, 25" to 188" (635 mm to 4785 mm) Circumference, 16' (4.9 m) Chain

CML-60S-B	Base Kit, 2-3/8" (60.3 mm) OD, Pipe Ordered Separately	80 (36.3)
CML-60S-72	One 2-3/8" OD x 72" (60.3 mm OD x 1.8 m) Pipe	105 (47.6)
CML-60S-96	One 2-3/8" OD x 96" (60.3 mm OD x 2.4 m) Pipe	117.76 (53.4)

Man Rating: 250 lb vertical man load at 15 mph (BWS)

Wind Rating*: 120 mph (BWS) 1/2" radial ice at 100' AGL per latest revision of TIA/EIA-222

*Typical installation of one 3' (1.0 m) microwave antenna per sector

NOTE 1: Low Profile Chain Mounts can be used with microwave antennas 3' and smaller.

NOTE 2: To avoid future maintenance issues, excess chain should be removed after final installation.

NOTE:

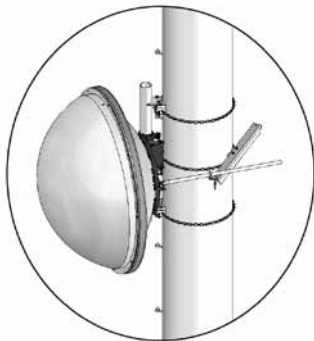
Monopoles can sway due to wind loading. The amount of sway is dependent on the monopole design, antennas, and the wind speed. A typical 100 ft. monopole can sway 2-4 ft. during 90 mph wind conditions.

Monopole Mounts

Light Duty Chain Mounts

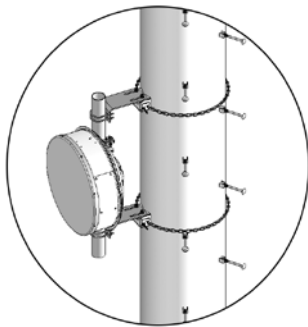
Light Duty Chain Mounts

- Application:** Chain mount solution for mounting antennas on monopoles
- Size:** 4-1/2" (114.3 mm) OD pipe mounts
- Design:** Single antenna mount
- Feature:** Single chain support
- Mounts to:** 8" to 60" (203.2 mm to 1.5 m) OD
- Material:** Hot dip galvanized steel
- Includes:** Pipe mounts and chains
- Order Separately:** Stiff arm and pipe mounts as needed



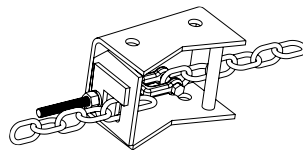
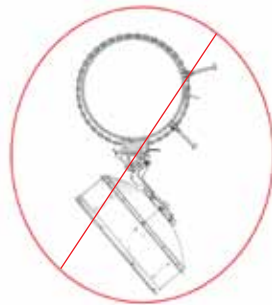
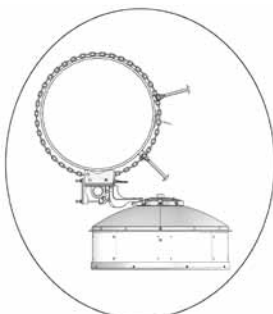
• CM-L30-63 with CM-SL30

NOTE: Shown with 3' (1.0 m) microwave antenna.

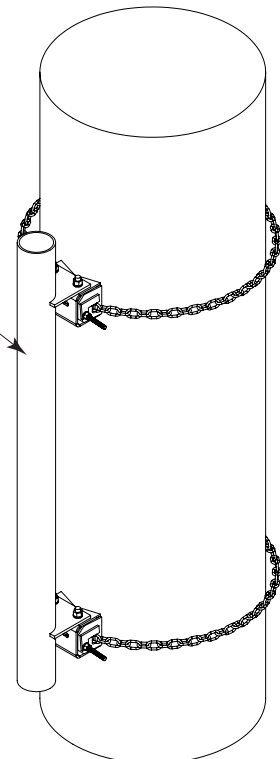


• CML-L30-63

NOTE: Antenna should mount with load plane of dish as shown below



4-1/2" OD Pipe
(114.3 mm)



• CM-L30-63

Part Number	Description	Wt. lb (kg)
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Light Duty Chain Mount Kits, 8" to 30" (203.2 mm to 711.2 mm) OD, 25" to 94.2" (635 mm to 2393 mm) Circumference, 8' (2.4 m) Chain

CM-L30-B	Base Kit, Pipe Mount Ordered Separately	26.14 (11.9)
CM-L30-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Pipe Mount	90.64 (41.1)

Light Duty Chain Mount Kits With Stand-off, 8" to 30" (203.2 mm to 711.2 mm) OD, 25" to 94.2" (635 mm to 2393 mm) Circumference, 8' (2.4 m) Chain

CML-L30-B	Base Kit, Pipe Mount Ordered Separately	30 (13.6)
CML-L30-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Pipe Mount	130 (59.0)

Light Duty Chain Mount Kits, 8" to 60" (203.2 mm to 1524 mm) OD, 25" to 188" (635 mm to 4785 mm) Circumference, 16' (4.9 m) Chain

CM-L60-B	Base Kit, Pipe Mount Ordered Separately	38.14 (17.3)
CM-L60-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Pipe Mount	102.64 (46.6)

Light Duty Chain Mount Kits With Stand-off, 8" to 60" (203.2 mm to 1524 mm) OD, 25" to 188" (635 mm to 4785 mm) Circumference, 16' (4.9 m) Chain

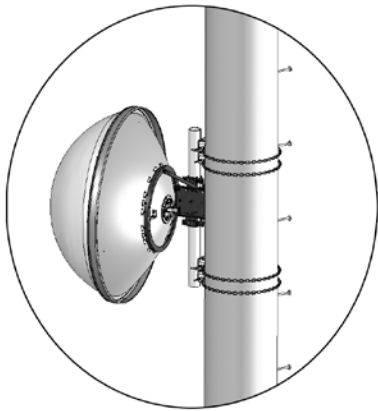
CML-L60-B	Base Kit, Pipe Mount Ordered Separately	40 (18.1)
CML-L60-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Pipe Mount	140 (63.5)

Monopole Mounts

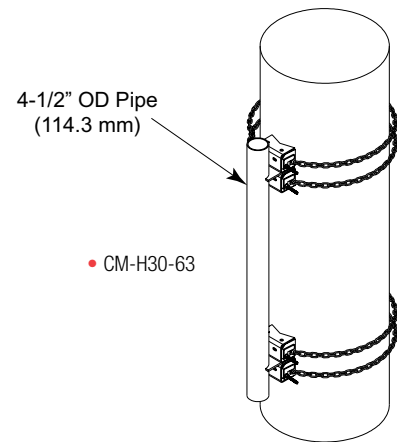
Heavy Duty Chain Mounts

Heavy Duty Chain Mounts

Application:	Chain mount solution for mounting antennas on monopoles
Size:	4-1/2" (114.3 mm) OD pipe mounts
Design:	Single antenna mount
Feature:	Double chain support
Mounts to:	8" to 60" (203.2 mm to 1.5 m) OD
Material:	Hot dip galvanized steel
Includes:	Pipe mounts and chains
Order Separately:	Stiff arm and pipe mounts as needed



NOTE: Use Heavy Duty Chain Mounts for 3' (1 m) and larger microwave antennas



Part Number	Description	Weight, lb (kg)
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Heavy Duty Chain Mount Kits, 8" to 30" (203.2 mm to 711.2 mm) OD, 25" to 94.2" (635 mm to 2393 mm) Circumference, 8' (2.4 m) Chain

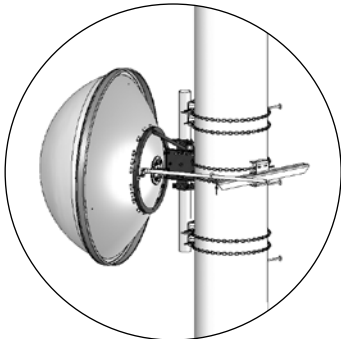
CM-H30-B	Base Kit, Pipe Mount Ordered Separately	52.12 (23.6)
CM-H30-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Pipe Mount	116.62 (52.9)

Heavy Duty Chain Mount Kits, 8" to 60" (203.2 mm to 1524 mm) OD, 25" to 188" (635 mm to 4785 mm) Circumference, 16' (4.9 m) Chain

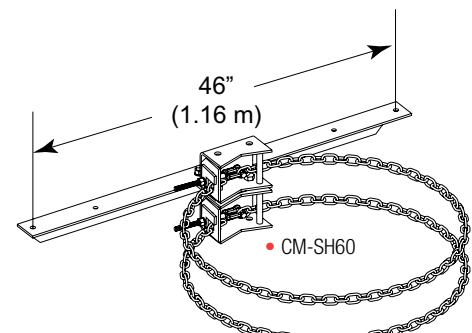
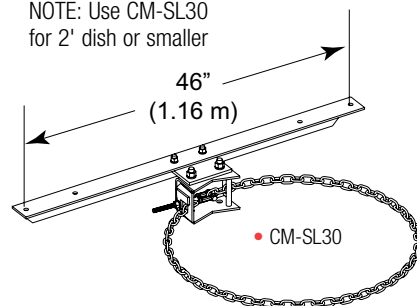
CM-H60-B	Base Kit, Pipe Mount Ordered Separately	76.12 (34.5)
CM-H60-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m) Pipe Mount	140.62 (63.8)

Monopole Stiff Arm Mounts

Application:	Chainmount solution for attaching struts on monopoles
Size:	48" (1.2 m) arm
Design:	Chain mounted support arm
Feature:	Adapts stiff arm to monopole
Mounts to:	8" to 60" (203.2 mm to 1.5 m) OD
Material:	Hot dip galvanized steel
Includes:	Arm and chains
Order Separately:	Antenna chain mount and stiff arm



NOTE: Use CM-SL30 for 2' dish or smaller



Part Number	Description	Weight, lb (kg)
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Monopole Stiff Arm Mount Kits, 8" to 30" (203.2 mm to 711.2 mm) OD, 25" to 94.2" (635 mm to 2393 mm) Circumference

CM-SL30	Light Duty Stiff Arm Mount, Single 8' (2.4 m) Chain	37.0 (16.8)
CM-SH30	Heavy Duty Stiff Arm Mount, Double 8' (2.4 m) Chains	50.0 (22.7)

Monopole Stiff Arm Mount Kits, 8" to 60" (203.2 mm to 1524 mm) OD, 25" to 188" (635 mm to 4785 mm) Circumference

CM-SL60	Light Duty Stiff Arm Mount, Single 16' (4.9 m) Chain	43.0 (19.5)
CM-SH60	Heavy Duty Stiff Arm Mount, Double 16' (4.9 m) Chains	62.0 (28.1)

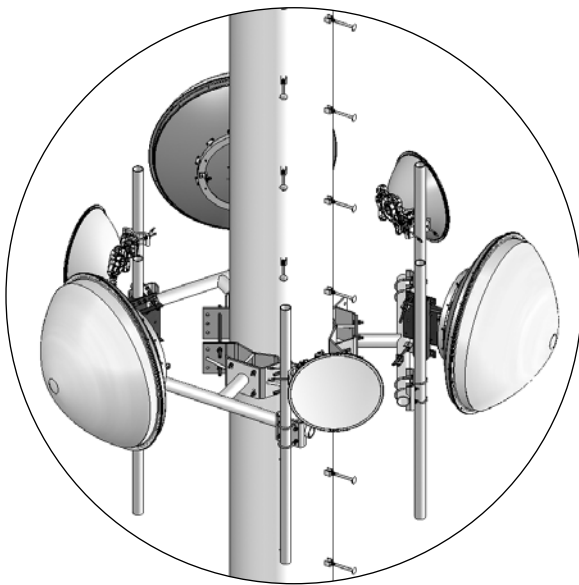
NOTE: Supports up to 1,000 lbs. load at end, or 2,000 lbs. 10" from end

Monopole Mounts

Microwave Components

Low-profile Adjustable Co-location Kit

- Application:** Co-location kit for monopoles
- Size:** 57" (1.4 m) face with 48" (1.2 m) separation
- Design:** Universal double antenna mount
- Feature:** Down tilt capabilities
- Mounts to:** 12" to 50" (304.8 mm to 1.27 m) OD monopoles
- Material:** Hot dip galvanized steel
- Includes:** Mount, weldment, hardware
- Order Separately:** Available with or without pipe



- Man Rating:** 250 lb vertical man load at 15 mph (BWS)
- Wind Rating*:** 120 mph (BWS) per latest revision of TIA/EIA-222
140 mph 3-second gust, Exposure "D" per FBC, at 150' AGL

Part Number	Description	Weight, lb (kg)
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Universal Monopole Co-location Kit, 12" to 50" (304.8 mm to 1.27 m) OD Pole, Without Pipe Mounts

MC-DPMM-B	Pipe Mounts Ordered Separately	335 (152.0)
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Universal Monopole Co-location Kit, 12" to 50" (304.8 mm to 1.27 m) OD Pole, With 2-3/8" (60.3 mm) OD Pipe Mounts

MC-DPM2M-6-B	Pipes Ordered Separately	545 (247.2)
MC-DPM2M-6-72	Six 2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	675 (306.2)
MC-DPM2M-6-96	Six 2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	720 (326.6)
MC-DPM2M-6-126	Six 2-3/8" OD x 126" (60.3 mm OD x 3.2 m)	775 (351.5)

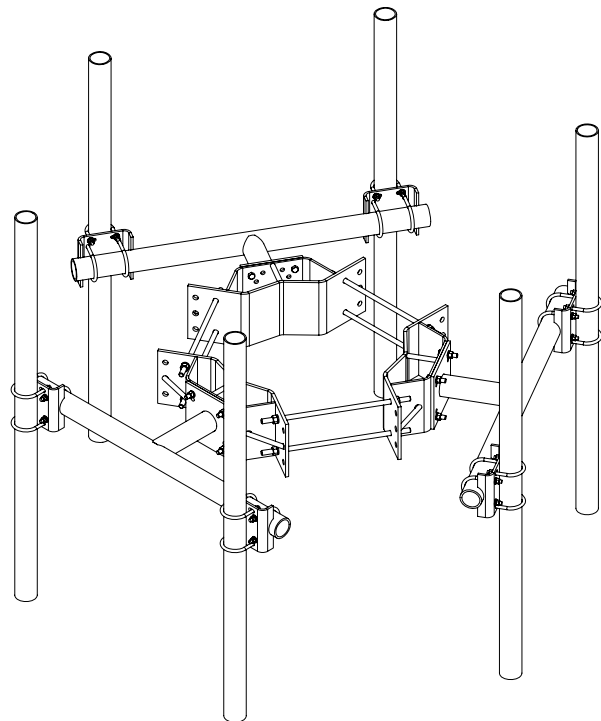
Universal Monopole Co-location Kit, 12" to 50" (304.8 mm to 1.27 m) OD Pole, With 2-7/8" (73 mm) OD Pipe Mounts

MC-DPM3M-6-B	Pipes Ordered Separately	555 (251.7)
MC-DPM3M-6-72	Six 2-7/8" OD x 72" (73 mm OD x 1.8 m)	765 (347.0)
MC-DPM3M-6-96	Six 2-7/8" OD x 96" (73 mm OD x 2.4 m)	835 (378.8)
MC-DPM3M-6-126	Six 2-7/8" OD x 126" (73 mm OD x 3.2 m)	925 (419.6)

Universal Monopole Co-location Kit, 12" to 50" (304.8 mm to 1.27 m) OD Pole, With 3-1/2" (88.9 mm) OD Pipe Mounts

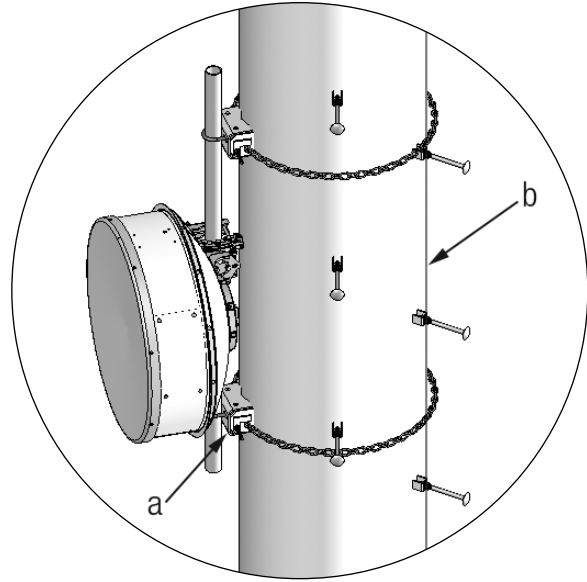
MC-DPM35M-6-B	Pipes Ordered Separately	555 (251.7)
MC-DPM35M-6-72	Six 3-1/2" OD x 72" (88.9 mm OD x 1.8 m)	830 (376.5)
MC-DPM35M-6-96	Six 3-1/2" OD x 96" (88.9 mm OD x 2.4 m)	925 (419.6)
MC-DPM35M-6-126	Six 3-1/2" OD x 126" (88.9 mm OD x 3.2 m)	1035 (469.5)

NOTE: Shown with 3' (1 m) microwave antenna



Monopole Mounts

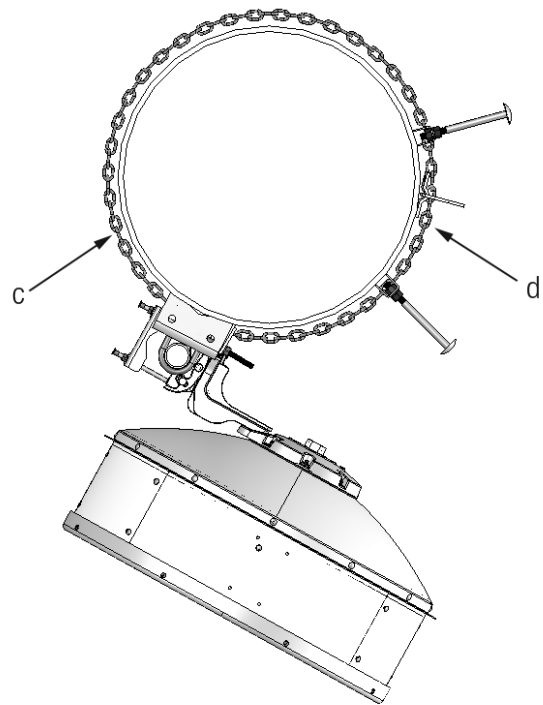
Application Guide



Key	Part Number	Description	Page #
1	CM-30S-72	Low-profile Single Chain Mount Kit	22

* Shown with VHL Series Antennas

- a. Single point locking adjustment
- b. Mounts to both round and polygon poles
- c. Chain support offers 360° of azimuth adjustability
- d. Low-profile clearance allows for unobstructed climbing

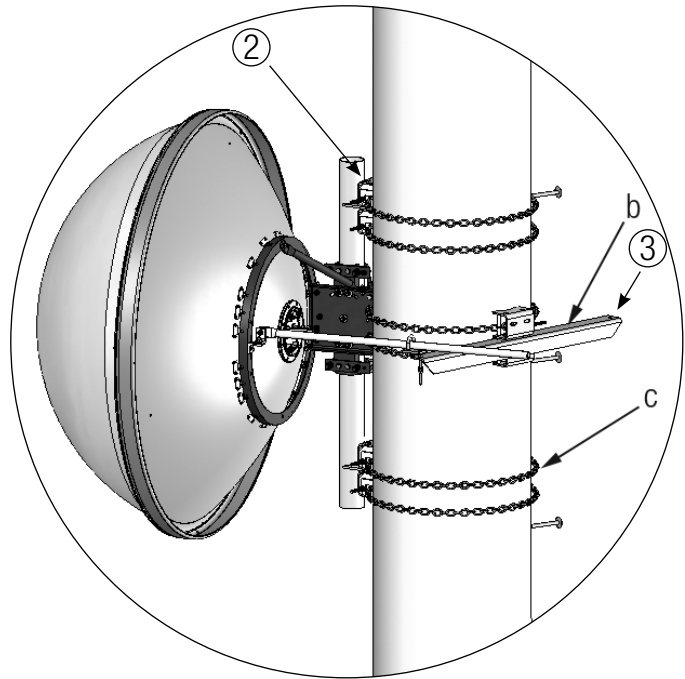
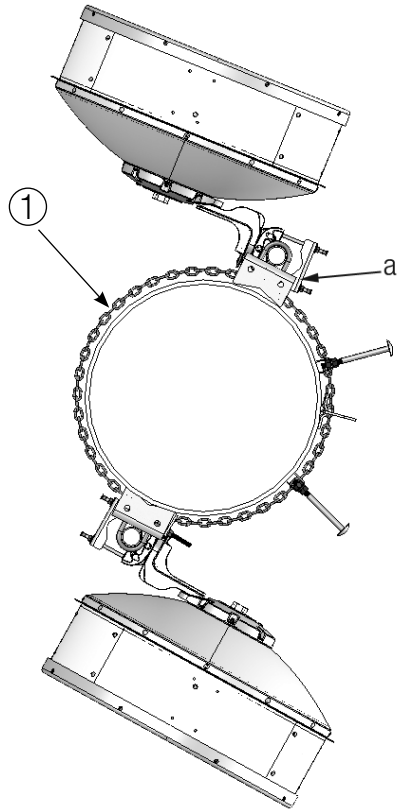


NOTE:

It is recommended that the EW line is supported every three feet in the horizontal and within 12" of the connector so there is no stress on the feed horn.

Monopole Mounts

Application Guide



Key	Part Number	Description	Page #
1	CM-30D-72	Low-profile Double Chain Mount Kit	22
2	CM-H30-63	Heavy Duty Chain Mount Kit	24
3	CM-SH30	Monopole Stiff Arm Mount Kit	24

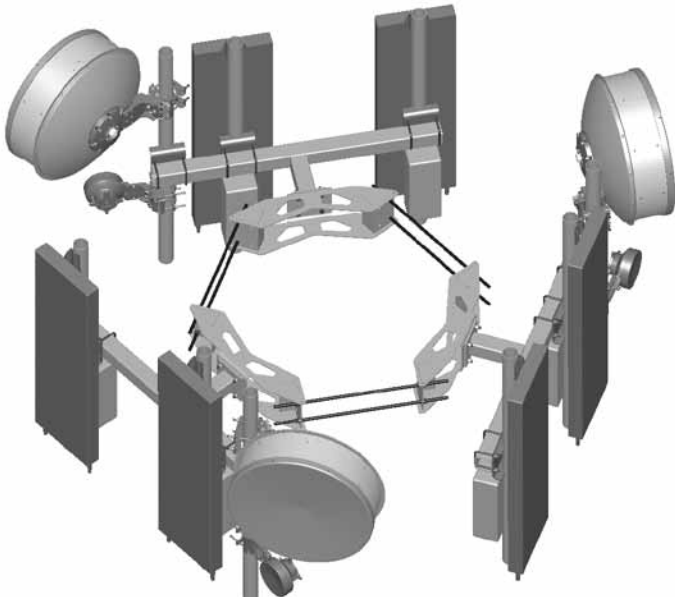
* Shown with VHLP and PXF2 Series Antennas

- a. Sliding brackets allow for double supports at desired azimuth
- b. Stiff arm mount provides strut support at recommended angle
- c. Dual chain supports for larger antenna

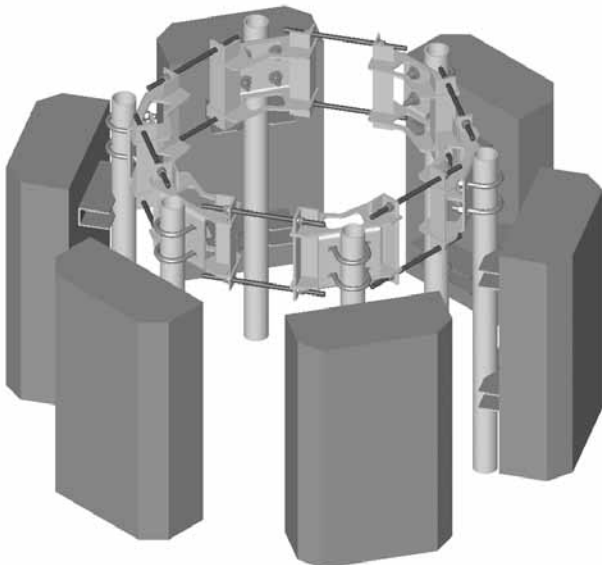
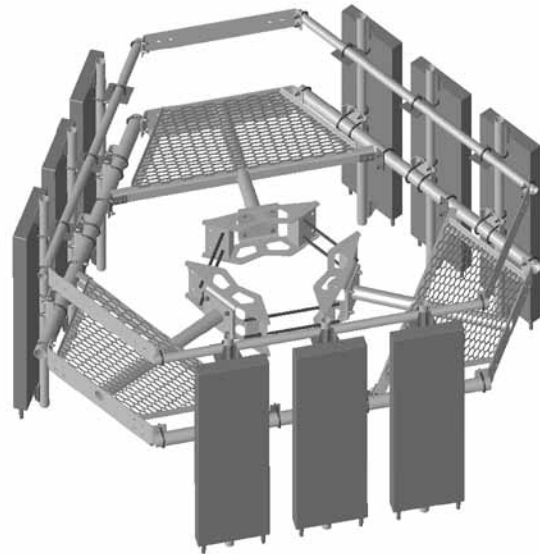


Monopole Mounts

Customs



Custom Mount for
Multiple Dishes With 84" (2.1 m)
Face and 3-1/2" (88.9 mm)
Vertical Pipe





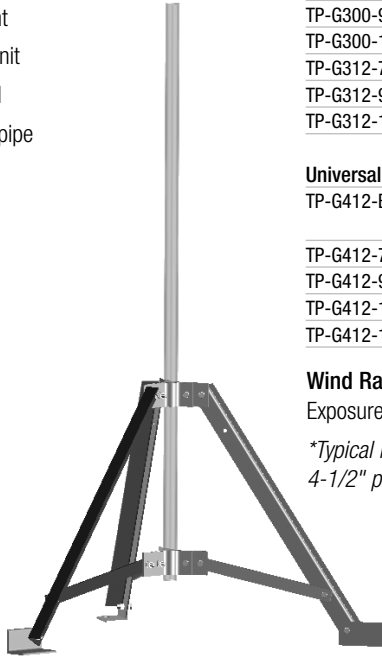
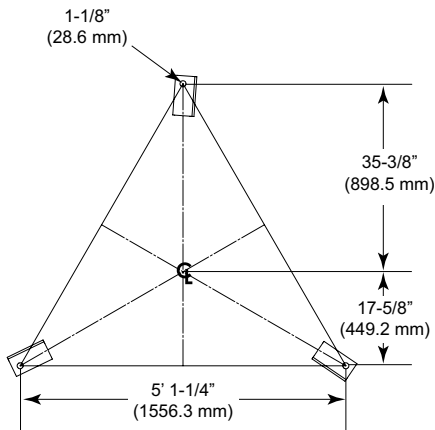
- Roof Frames
- Mounting Components
- Customs

Roof-Top Mounts

Roof Frames

Universal Tripod Mounts

- Application:** Roof-top mounting for one antenna
- Size:** 2-7/8" (73 mm), 3-1/2" (88.9 mm), or 4-1/2" (114.3 mm) OD
- Design:** Heavy duty tripod mount
- Feature:** Interchangeable base unit
- Material:** Hot dip galvanized steel
- Includes:** Mount, with or without pipe
- Order Separately:** Roof sled and pipe



Part Number	Description	Weight, lb (kg)
-------------	-------------	-----------------

Universal Tripod Mount, 2-7/8" or 3-1/2" (73 mm or 88.9 mm) OD

TP-G300-B	Base Only for 2-7/8" (73 mm) or 3-1/2" (88.9 mm) OD, Pipe Ordered Separately	114.3 (51.8)
TP-G300-72	2-7/8" OD x 72" (73 mm OD x 1.8 m)	145 (65.8)
TP-G300-96	2-7/8" OD x 96" (73 mm OD x 2.4 m)	160 (72.6)
TP-G300-126	2-7/8" OD x 126" (73 mm OD x 3.2 m)	170 (77.1)
TP-G312-72	3-1/2" OD x 72" (88.9 mm OD x 1.8 m)	150 (68.0)
TP-G312-96	3-1/2" OD x 96" (88.9 mm OD x 2.4 m)	170 (77.1)
TP-G312-126	3-1/2" OD x 126" (88.9 mm OD x 3.2 m)	190 (86.2)

Universal Tripod Mount, 4-1/2" (114.3 mm) OD

TP-G412-B	Base Only for 4-1/2" (114.3 mm) OD, Pipe Ordered Separately	173.4 (78.7)
TP-G412-72	4-1/2" OD x 72" (114.3 mm OD x 1.8 m)	238.2 (108.0)
TP-G412-96	4-1/2" OD x 96" (114.3 mm OD x 2.4 m)	259.8 (117.8)
TP-G412-126	4-1/2" OD x 126" (114.3 mm OD x 3.2 m)	286.8 (130.1)
TP-G412-150	4-1/2" OD x 150" (114.3 mm OD x 3.8 m)	308.4 (139.9)

Wind Rating*: 85 mph (BWS) per latest revision of TIA/EIA-222 Exposure "C" per UBC, at 100' AGL

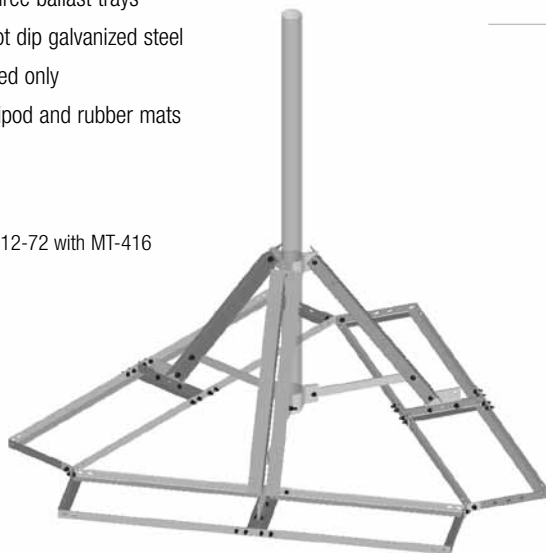
*Typical installation of one 6' standard microwave antenna using 4-1/2" pipe mast. See Engineering Data Table for ballast

• TP-G300-96

Non-penetrating Roof Ballast Sled for Tripods

- Application:** Non-penetrating solution for TP-G series mounts
- Size:** 87" (2.2 m) faces
- Design:** Converts tripods to non-penetrating
- Feature:** Three ballast trays
- Material:** Hot dip galvanized steel
- Includes:** Sled only
- Order Separately:** Tripod and rubber mats

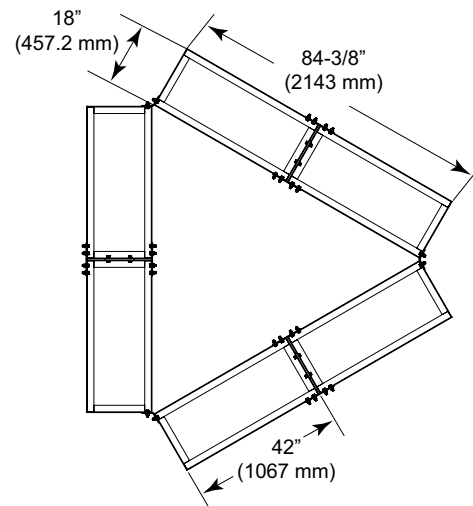
• TP-G412-72 with MT-416



Part Number	Description	Weight, lb (kg)
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Non-penetrating Roof Ballast Sled for Tripods

MT-416	Non-penetrating Roof Sled, Tripod Mount Ordered Separately	171.7 (77.9)
MT-F1637	Rubber Mat, 1/2" x 18" x 48" (12.7 mm x 0.5 m x 1.2 m), Six Mats Required for Ballast Tray	16.2 (7.3)



Roof-Top Mounts

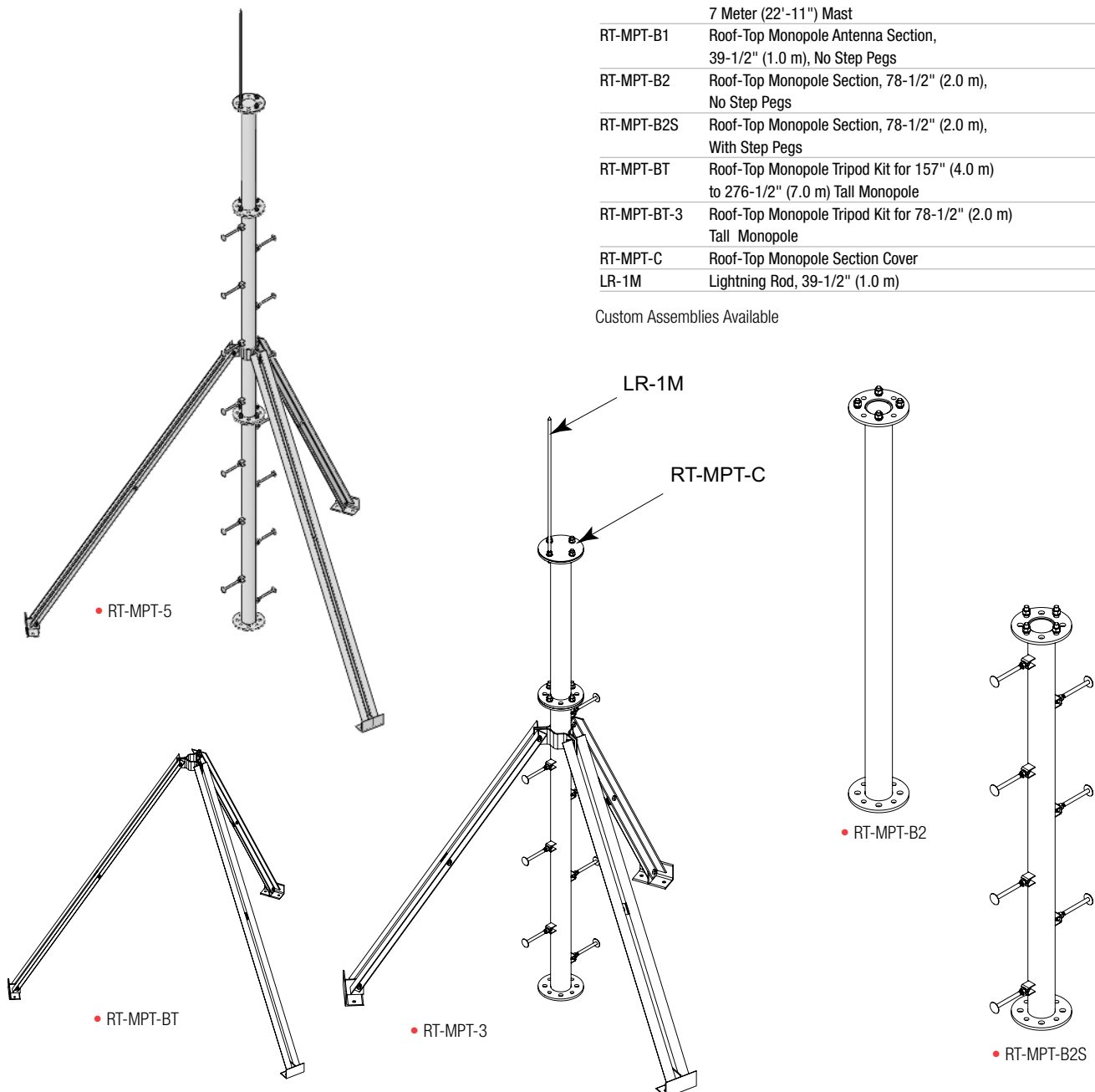
Roof Frames

Roof-top Monopole Tripods

- Application:** Single antenna mount for roof-tops
- Design:** Spliced center pole with angle kicker legs
- Feature:** Splice vertical post
- Mounts to:** Roof-top
- Material:** Hot dip galvanized steel
- Includes:** Center post, kicker angles, hardware

Part Number	Description	Weight, lb (kg)
Monopole Tripod Assemblies		
RT-MPT-3	Roof-top Monopole Tripod Assembly, 3 Meter (9'-9") Mast	380 (172.4)
RT-MPT-4	Roof-top Monopole Tripod Assembly, 4 Meter (13'-1") Mast	405 (183.7)
RT-MPT-5	Roof-top Monopole Tripod Assembly, 5 Meter (16'-5") Mast	470 (213.2)
RT-MPT-6	Roof-top Monopole Tripod Assembly, 6 Meter (19'-8") Mast	505 (229.1)
RT-MPT-7	Roof-top Monopole Tripod Assembly, 7 Meter (22'-11") Mast	565 (256.3)
RT-MPT-B1	Roof-Top Monopole Antenna Section, 39-1/2" (1.0 m), No Step Pegs	
RT-MPT-B2	Roof-Top Monopole Section, 78-1/2" (2.0 m), No Step Pegs	
RT-MPT-B2S	Roof-Top Monopole Section, 78-1/2" (2.0 m), With Step Pegs	
RT-MPT-BT	Roof-Top Monopole Tripod Kit for 157" (4.0 m) to 276-1/2" (7.0 m) Tall Monopole	
RT-MPT-BT-3	Roof-Top Monopole Tripod Kit for 78-1/2" (2.0 m) Tall Monopole	
RT-MPT-C	Roof-Top Monopole Section Cover	
LR-1M	Lightning Rod, 39-1/2" (1.0 m)	

Custom Assemblies Available

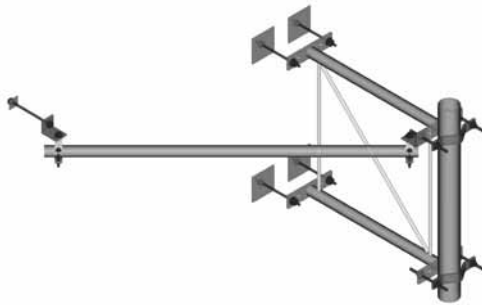


Roof-Top Mounts

Mounting Components

Stand-off Wall Mount

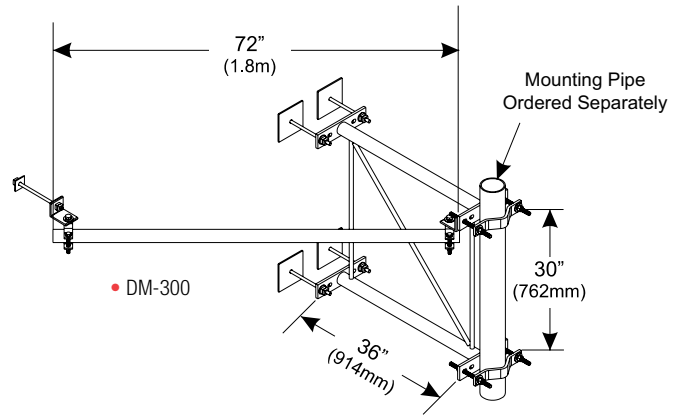
- Application:** 3' Stand-off for wall mounting antennas
- Size:** 36" (914.4 mm) stand-off
- Design:** Welded stand-off mount
- Feature:** Heavy duty for microwave antennas
- Mounts to:** Walls
- Material:** Hot dip galvanized steel
- Includes:** Bracket, stiff-arm, and wall mount hardware
- Order Separately:** 3-1/2" (88.9 mm) or 4-1/2" (114.3 mm) OD pipe



Part Number	Description	Weight, lb (kg)
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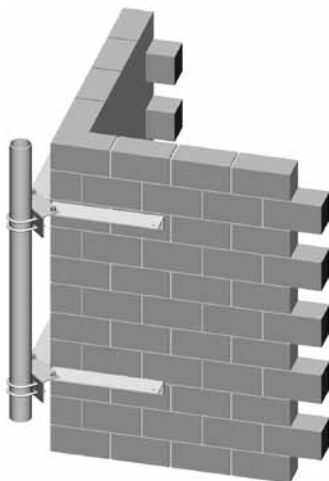
Stand-off Wall Mount

DM-300	Stand-off Wall Mount, 36" (914 mm), for Solid and Hollow Walls, Includes 72" (1.8 m) Stiff Arm	151 (68.4)
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Corner Wall Mounts

- Application:** Antenna mounting for corners of buildings
- Design:** V-shaped corner mount
- Feature:** Adjustable clamp spacing
- Mounts to:** Wall corners
- Material:** Hot dip galvanized steel
- Includes:** Two brackets, pipe mount, and wall mount hardware



Part Number	Description	Weight, lb (kg)
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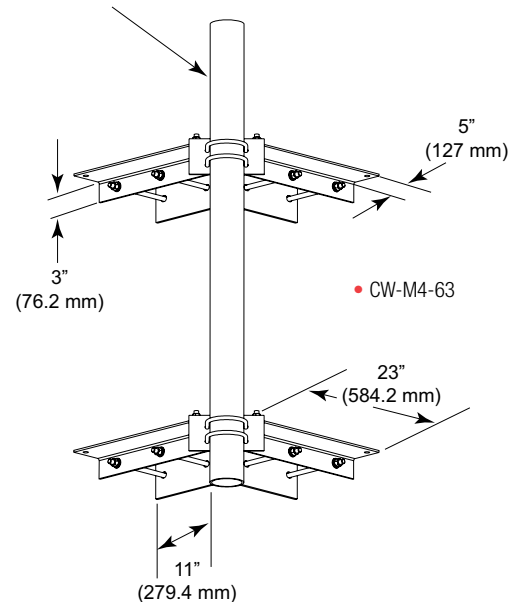
Corner Wall Mount With 2-3/8" (60.3 mm) OD Antenna Pipe

CW-M2-63	63" (1.6 m) Pipe	123.7 (56.1)
CW-M2-96	96" (2.4 m) Pipe	133.6 (60.6)

Corner Wall Mount With 4-1/2" (114.3 mm) OD Antenna Pipe

CW-M4-63	63" (1.6 m) Pipe	161.5 (73.3)
CW-M4-96	96" (2.4 m) Pipe	191.2 (86.7)

2-3/8" or 4-1/2" OD Pipe
(60.3 mm or 114.3 mm)



Roof-Top Mounts

Mounting Components

Adjustable Wall Mounts

- Application:** Mounting antennas on hollow or solid walls
- Size:** 12" (304.8 mm) Square plate, 6-1/4" (158.75 mm) or 12" (304.8 mm) deep
- Design:** Welded dual brackets
- Feature:** Variable spacing flexibility
- Mounts to:** Versions for hollow or solid walls
- Material:** Hot dip galvanized steel
- Includes:** Two wall brackets and backing plates or anchors
- Order Separately:** U-bolts and 2-3/8" through 4-1/2" OD (60.3 mm through 114.3 mm) pipe



Part Number	Description	Weight, lb (kg)
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Adjustable Wall Mounts, 6" (152.4 mm) Stand-off

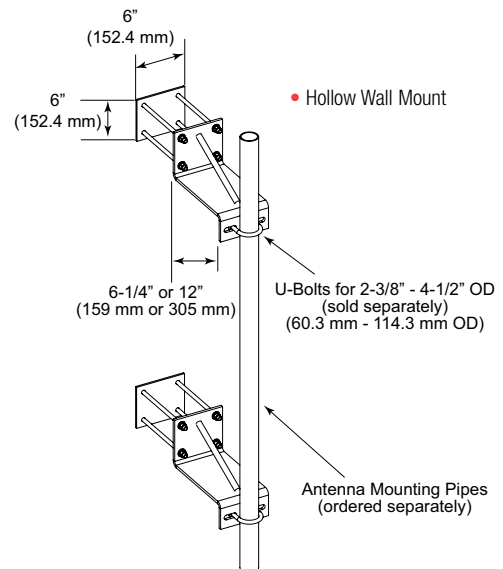
MT-221	For Hollow Walls, Includes Backing Plates, Kit of 2	68.6 (31.1)
MT-222	For Solid Walls, Includes Wall Anchors, Kit of 2	45.5 (20.6)

Adjustable Wall Mounts, 12" (304.8 mm) Stand-off

MT-221L	For Hollow Walls, Includes Backing Plates, Kit of 2	75.3 (34.2)
MT-222L	For Solid Walls, Includes Wall Anchors, Kit of 2	50.7 (23.0)

Optional Backing Plate

MT-223	Backing Plate Kit	23.1 (10.5)
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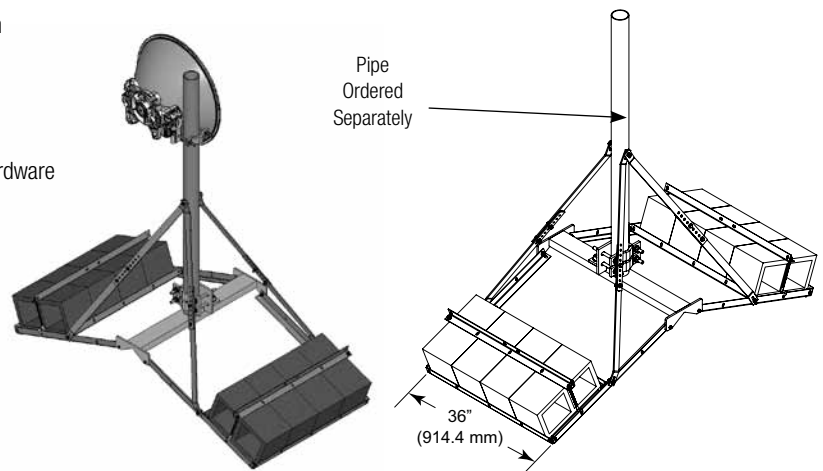
Non-penetrating Roof-top Peak Frames

- Application:** Mounting of antennas on roof-top peaks
- Size:** 36" (914.4 mm) Wide ballast trays
- Design:** Non-penetrating design
- Feature:** Accepts 2-3/8" to 4-1/2" OD (60.3 mm to 114.3 mm) antenna mounting pipes
- Mounts to:** Peaked roofs
- Material:** Hot dip galvanized steel
- Includes:** Ballast tray, tie down angles, mount, hardware
- Order Separately:** Antenna mounting pipes

Part Number	Description	Weight, lb (kg)
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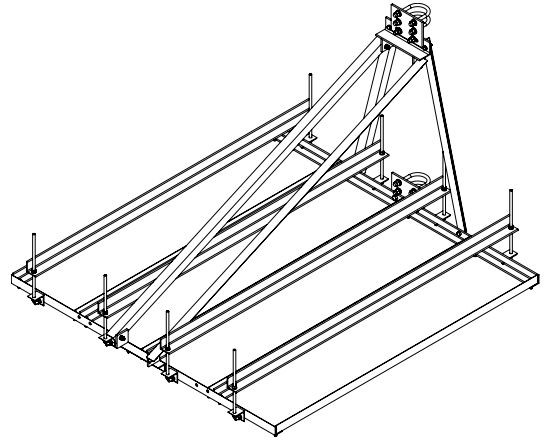
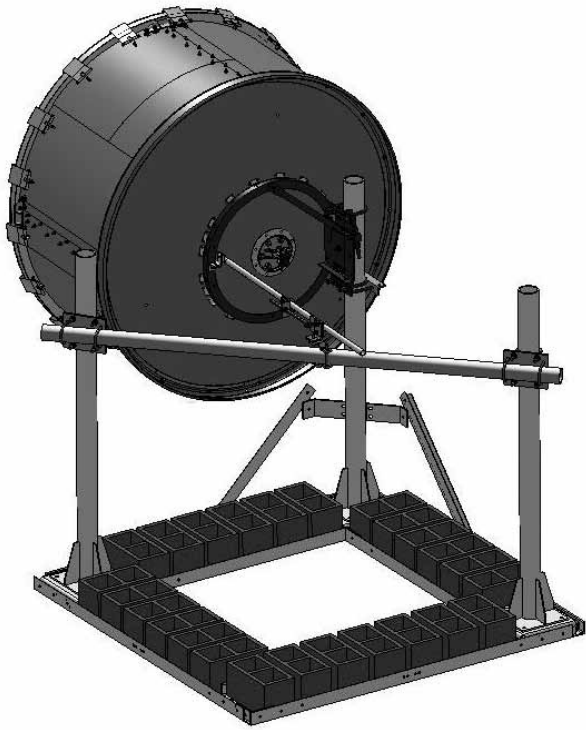
Non-penetrating Roof-top Peak Frames

RT-PM-B	Non-penetrating Roof-top Peak Frame, Base Kit. 2-3/8" to 4-1/2" OD (60.3 mm x 114.3 mm OD) Pipe Ordered Separately	105 (47.6)
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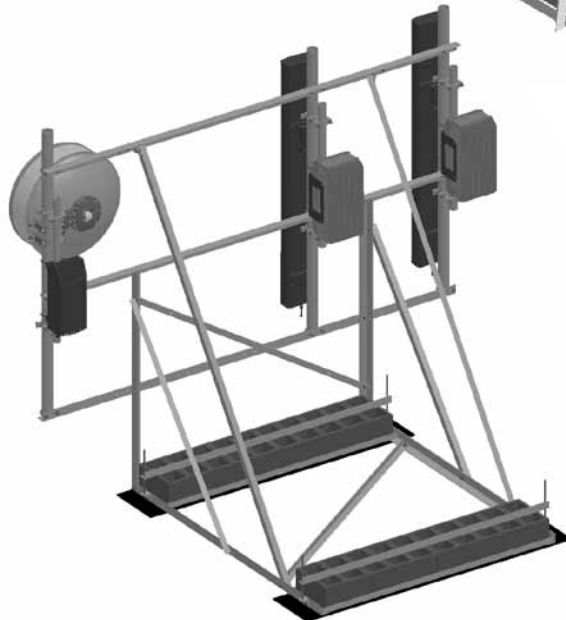
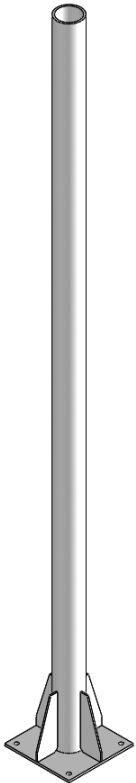


Roof-Top Mounts

Customs



Custom Mounts for Specific Applications





- Coaxial Support Components
- Waveguide Bridge Kits
- Cable Ladder Kits

Coaxial Support Components

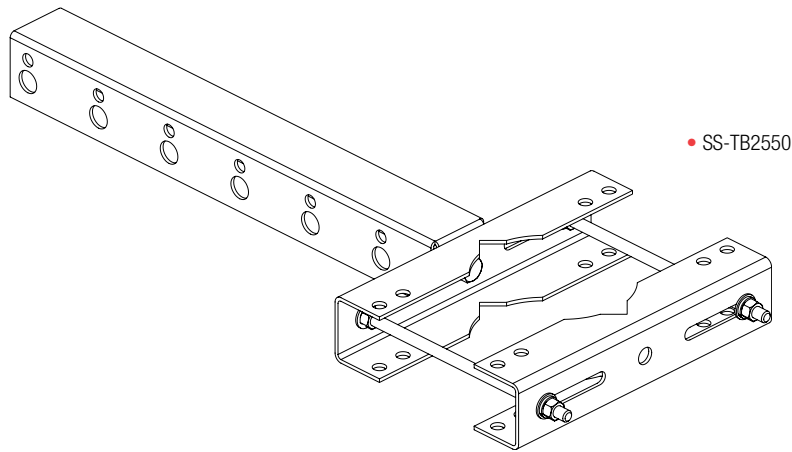
Star Support Brackets

Application: Coaxial support on round or angle members
Size: 3/4" (19.1 mm) and 7/16" (11.1 mm) holes
Design: Bolt together stand-off mount
Feature: Six or twelve hole solution
Mounts to: Round and angle members
Material: Hot dip galvanized steel
Includes: Bracket

Part Number	Description	Weight, lb (kg)
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Star Support Tee Bracket

SS-TB2550	1-1/2" to 5-9/16" OD (38.1 mm to 141.3 mm OD) Round Members and 2-1/2" to 5" (50.8 mm to 127 mm) Angle Members	8 (3.6)
SS-TB6080	4" to 10-3/4" OD (101.6 mm to 273.1 mm OD) Round Members and 4" to 8" (101.6 mm to 203.2 mm) Angle Members	10 (4.5)



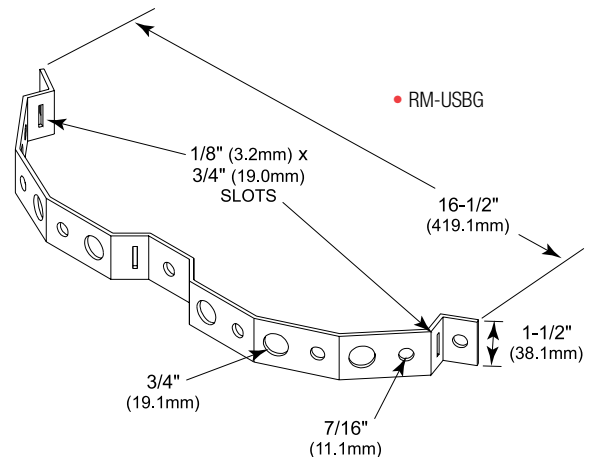
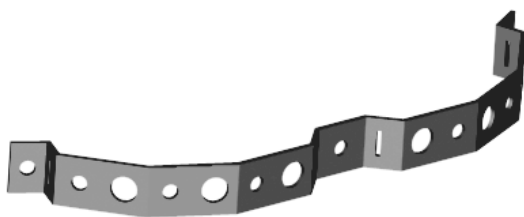
Universal Round Member Support Bracket

Application: Coaxial support for monopoles
Size: 3/4" (19.1 mm) and 7/16" (11.1 mm) holes
Design: Coaxial cable support for round members
Feature: Ideal for co-location
Mounts to: Round members
Material: Hot dip galvanized steel
Includes: Bracket
Order Separately: Banding

Part Number	Description	Weight, lb (kg)
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Universal Round Member Support Bracket

RM-USBG	Universal Round Member Support Bracket for 6 Runs, (Kit of 10)	9.0 (4.1)
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Waveguide

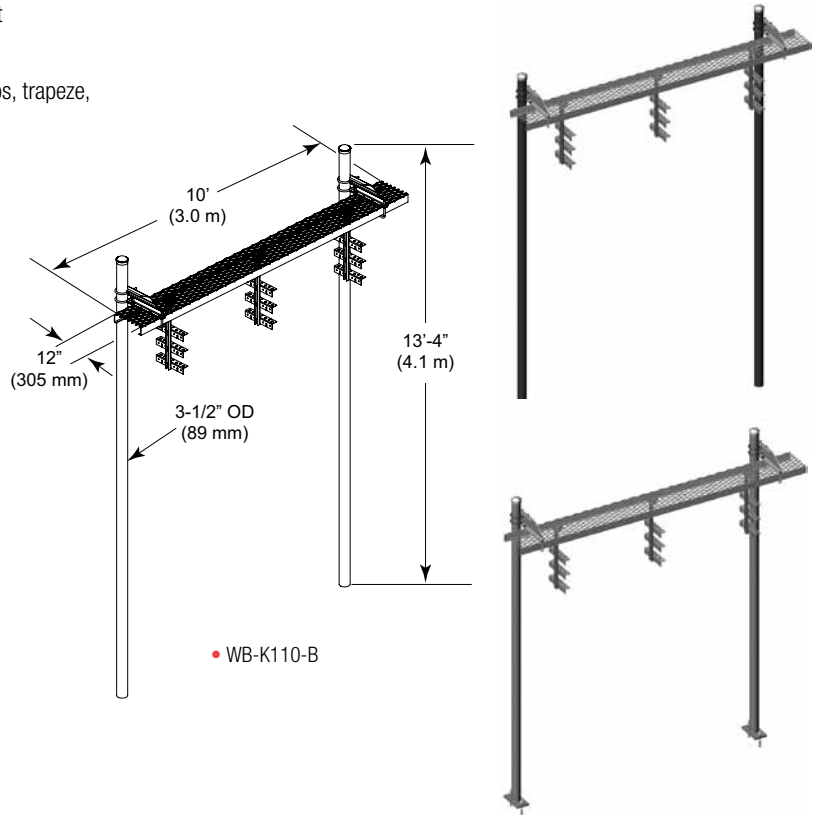
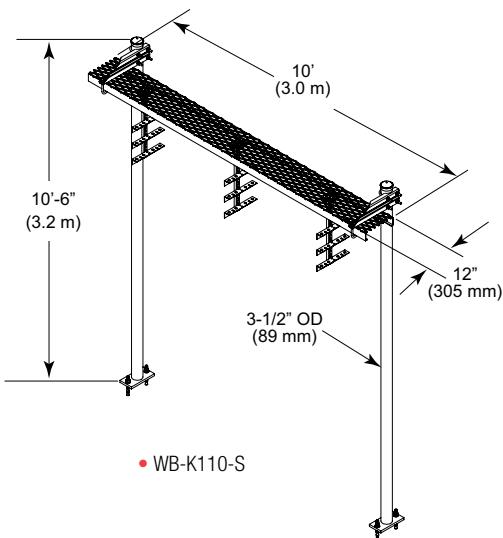
Waveguide Bridge Kits

12" or 24" Two-post Waveguide Bridge Kits

- Application:** Covered waveguide support from tower to cabinets
- Design:** Two-post, 10' (3.0 m) safety grating
- Feature:** Complete kit for coaxial cable support
- Material:** Hot dip galvanized steel
- Includes:** Channel, posts, support brackets, caps, trapeze, and hardware
- Order Separately:** Additional accessories

Part Number	Description	Weight, lb (kg)
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12" (0.3 m) Wide Two-post Safety Grated Waveguide Bridge Kit		
WB-K110-B	Two 13'-4" (4.1 m) Direct Burial Posts	325.0 (147.4)
WB-K110-S	Two 10'-6" (3.2 m) Base Shoe Posts	308.0 (139.7)

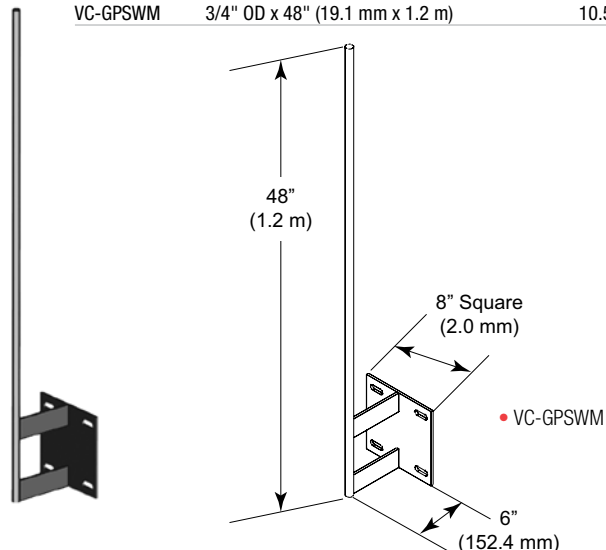


GPS Antenna Wall Mount

- Application:** Solid or hollow walls GPS mount
- Size:** 3/4" OD x 48" (19.1 mm OD x 1.2 m)
- Design:** Welded mount with 6" (152.4 mm) stand-off
- Feature:** Threaded end for GPS antennas
- Mounts to:** Walls
- Material:** Hot dip galvanized steel
- Includes:** Mount
- Order Separately:** Anchoring hardware

Part Number	Description	Wt lb (kg)
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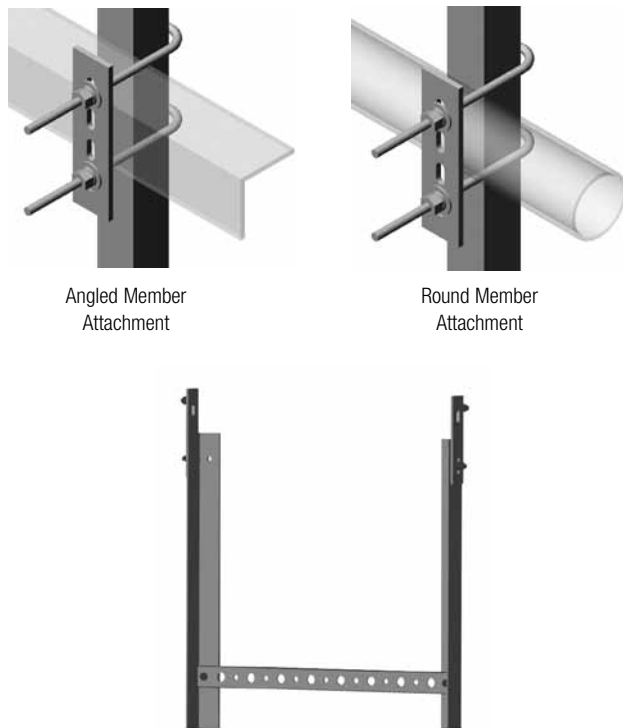
GPS Antenna Wall Mount		
VC-GPSWM	3/4" OD x 48" (19.1 mm x 1.2 m)	10.5 (4.8)



Cable Ladder Kits

Universal Cable Ladder Kits

- Application:** Coaxial support for round or angle members
- Size:** 10' (3 m) and 20' (6 m) in three widths
- Design:** Angle rails with bolt-on channel rungs
- Feature:** Complete ladder kit
- Mounts to:** Round and angle legs
- Material:** Hot dip galvanized steel
- Includes:** Ladder, splice plates, and attachment kits



Part Number	Description	Weight, lb (kg)
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10' (3 m) Universal Cable Ladder Kits

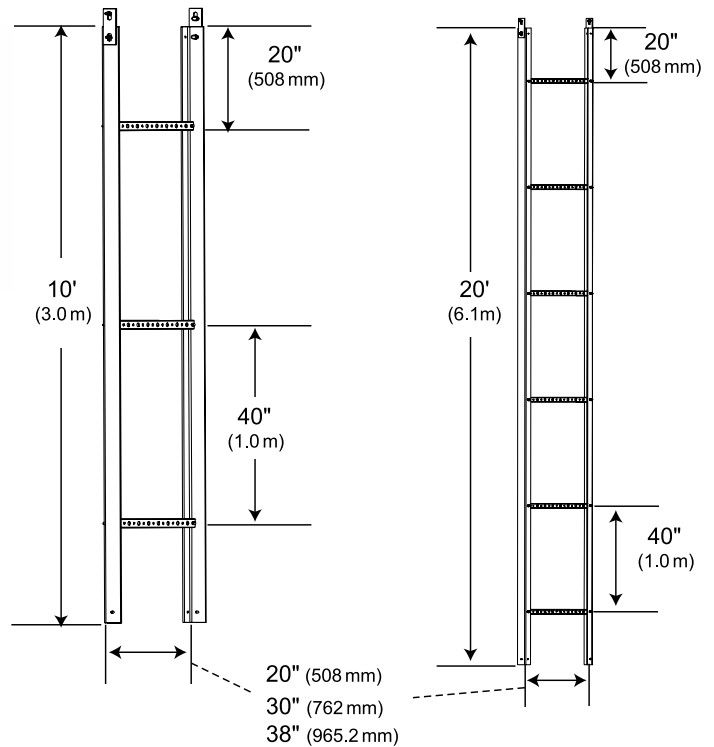
Includes Universal Hardware Kit for Round and Angle Members

CL-0610-U	20" Wide (355.6 mm), 6-Hole Rung	57 (25.9)
CL-0910-U	30" Wide (762 mm), 9-Hole Rung	59 (27.0)
CL-1210-U	38" Wide (1 m), 12-Hole Rung	62 (28.0)

20' (6 m) Universal Cable Ladder Kits

Includes Universal Hardware Kit for Round and Angle Members

CL-0620-U	20" Wide (355.6 mm), 6-Hole Rung	112 (50.8)
CL-0920-U	30" Wide (762 mm), 9-Hole Rung	117 (52.9)
CL-1220-U	38" Wide (1 m), 12-Hole Rung	121 (55.1)



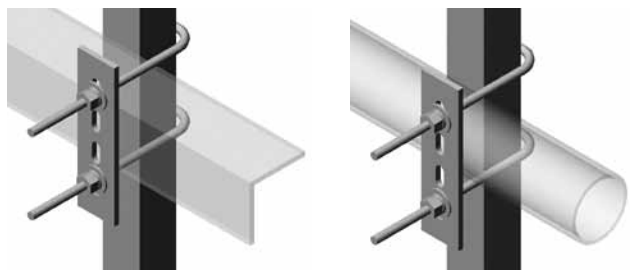
Universal Cable Ladder Hardware Kit

- Application:** Universal cable ladder hardware
- Size:** 1" to 4-1/2" (25.4 mm to 114.3 mm) round or angle members
- Design:** One piece plate
- Feature:** Universal attachment plate
- Mounts to:** 1" to 4-1/2" (25.4 mm to 114.3 mm) round and angle legs
- Material:** Hot dip galvanized steel
- Includes:** Plate and J-bolts
- Order Separately:** Cable ladder

Part Number	Description	Wt. lb (kg)
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Universal Cable Ladder Hardware Kit

HK-CL-U	1" to 4-1/2" (25.4 mm to 114.3 mm) Round or Angle Members	4 (1.7)
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- **Microwave Ice Shields**
- **Power Telco Rack**
- **Equipment Platforms**

Microwave Ice Shields

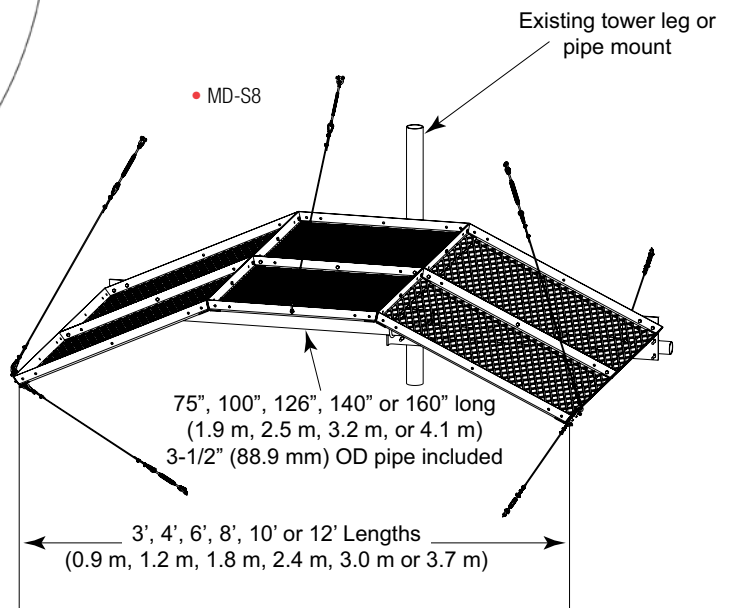
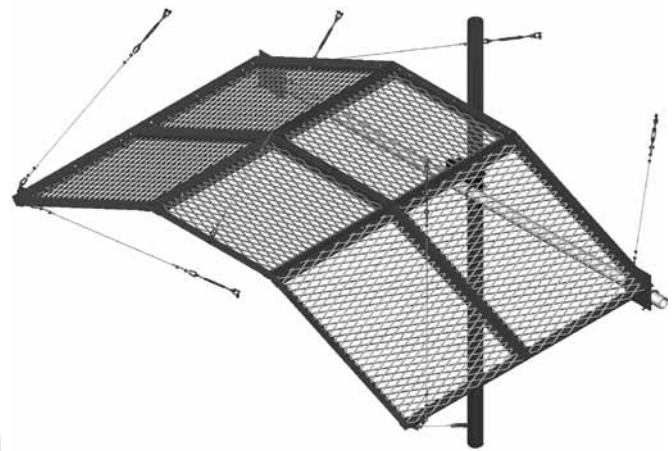
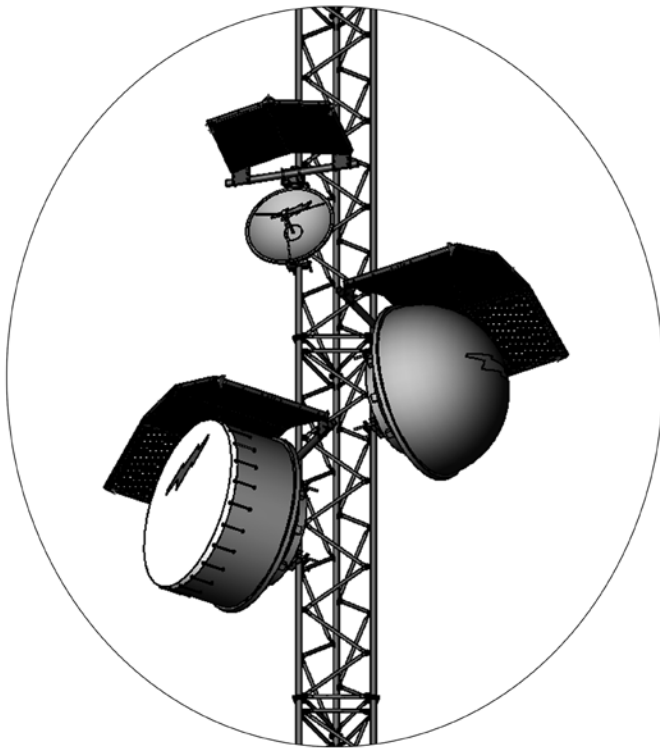
Microwave Antenna Ice Shield

- Application:** Protection microwave antenna from falling debris
- Design:** Heavy duty
- Feature:** Bolt together, light weight panels
- Mounts to:** 4-1/2" (114.3 mm) OD pipe
- Material:** Hot dip galvanized steel
- Includes:** Ice shield and all attachment hardware
- Order Separately:** Pipe mount

Part Number Description Weight, lb (kg)

Microwave Antenna Shields		
Part Number	Description	Weight, lb (kg)
MD-S3	Microwave Antenna Shield, 3' (914.4 mm) Antenna	260 (117.9)
MD-S4	Microwave Antenna Shield, 4' (1.21 m) Antenna	290 (131.6)
MD-S6	Microwave Antenna Shield, 6' (1.8 m) Antenna	443 (200.9)
MD-S8	Microwave Antenna Shield, 8' (2.4 m) Antenna	571 (259.1)
MD-S10	Microwave Antenna Shield, 10' (3 m) Antenna	649 (294.4)
MD-S12	Microwave Antenna Shield, 12' (3.6 m) Antenna	763 (346.1)

Custom lightweight or additional sizes available.
Contact our Customer Support Center for details.



Site Related Components

Microwave Shield Mounts

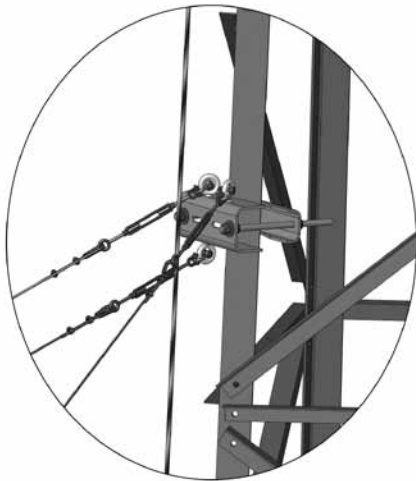
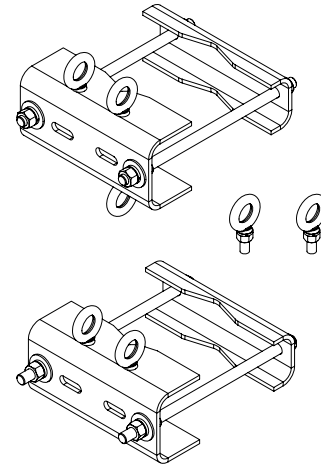
Universal Saddle Mount Attachment Kit

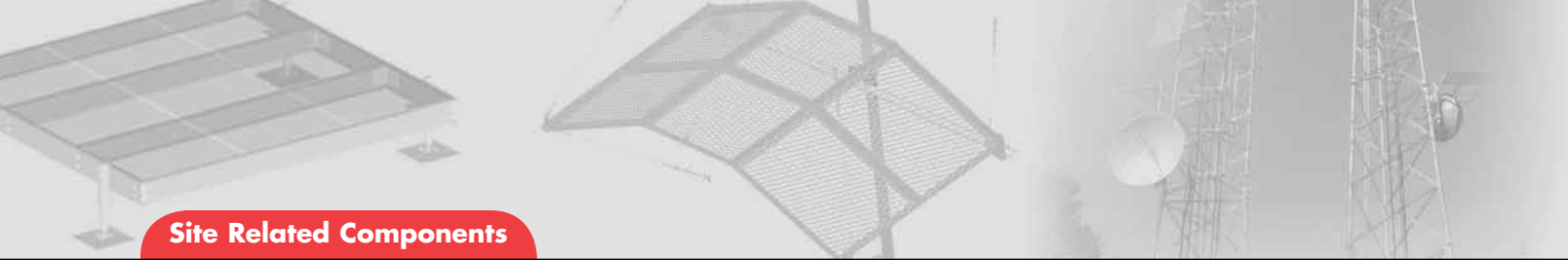
- Application:** Lattice towers
- Design:** Saddle mount and eye bolts
- Feature:** Two piece formed saddles
- Mounts to:** Straight or tapered legs up to 8-5/8" OD (219.1 mm OD), 8" (203.2 mm) angle 60°, or 6" (152.4 mm) angle 90°
- Material:** Hot dip galvanized steel
- Includes:** Universal saddle mount, eye bolts
- Order Separately:** Microwave dish shield

Part Number	Description	Weight, lb (kg)
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Universal Saddle Mount for Attaching MD-S Series Mounts

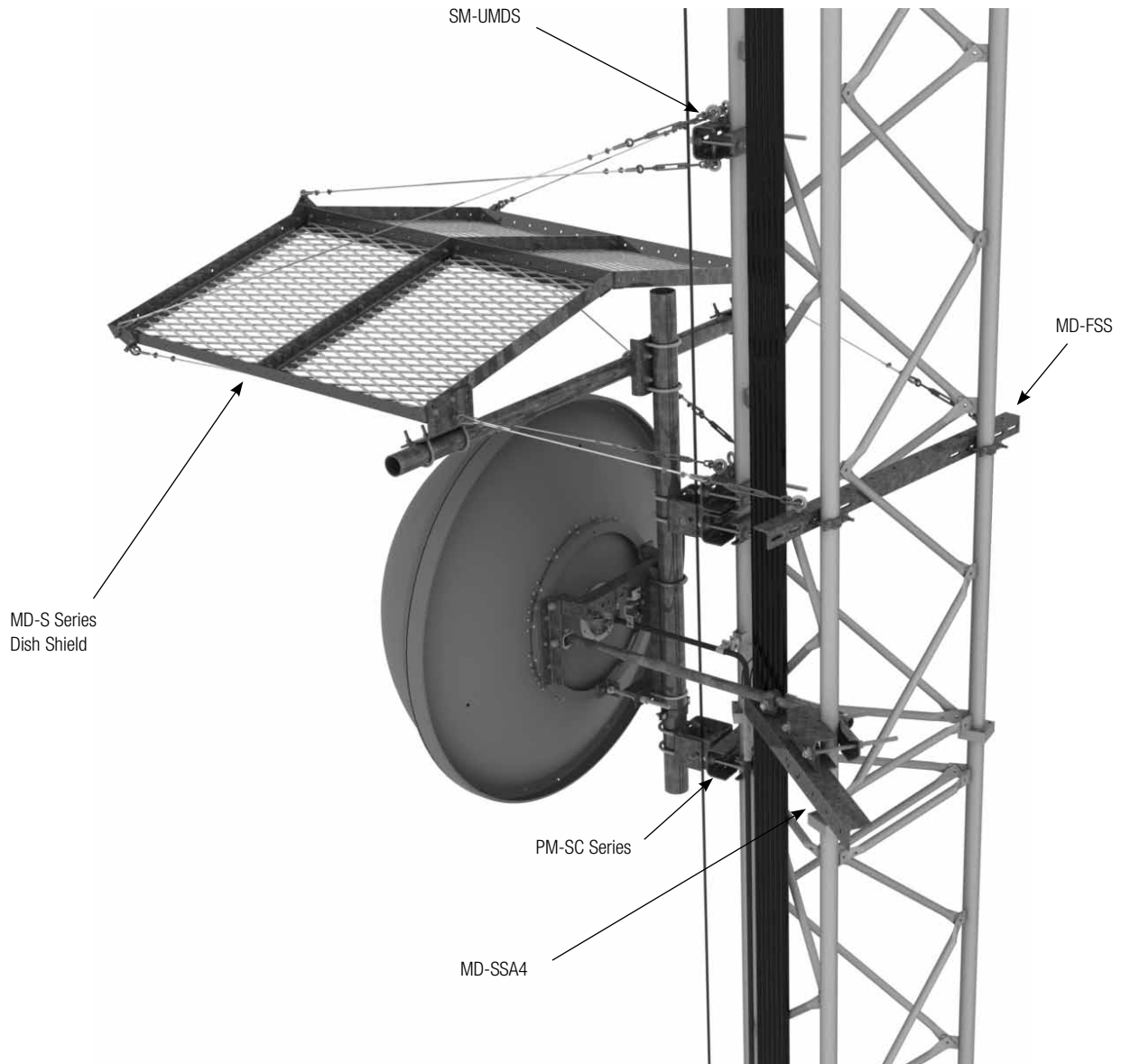
SM-UMDS	Universal Saddle Mount for Attaching MD-S Guy Wire Supports. Includes Seven Eye Bolts	55 (24.9)
GB-05SB	5/8" x 1-3/4" Shouldered Eye Bolt	





Site Related Components

Microwave Ice Shields



Site Related Components

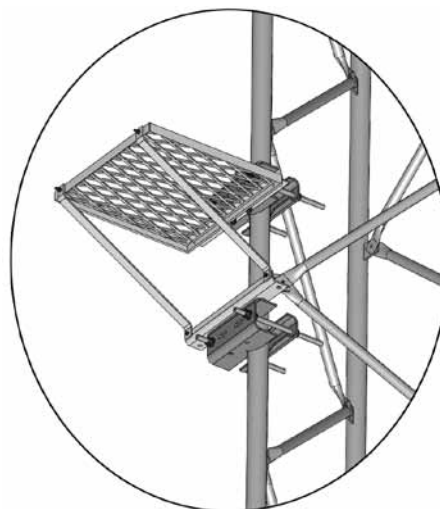
Microwave Ice Shields

Square Antenna Ice Shields

- Application:** Protection from falling debris
- Design:** Heavy duty
- Feature:** Protects antenna from falling ice
- Mounts to:** 4-1/2" (114.3 mm) OD pipe
- Material:** Hot dip galvanized steel
- Includes:** Ice shield, mounting hardware
- Order Separately:** 4-1/2" (114.3 mm) OD pipe mount

Part Number	Description	Weight, lb (kg)
-------------	-------------	-----------------

Square Antenna Ice Shields		
MD-SQ2	Square Antenna Ice Shield, 2' (609.5 mm) Square	125 (56.7)
MD-SQ3	Square Antenna Ice Shield, 3' (914.4 mm) Square	150 (68.0)
MD-SQ4	Square Antenna Ice Shield, 4' (1.21 m) Square	190 (86.2)

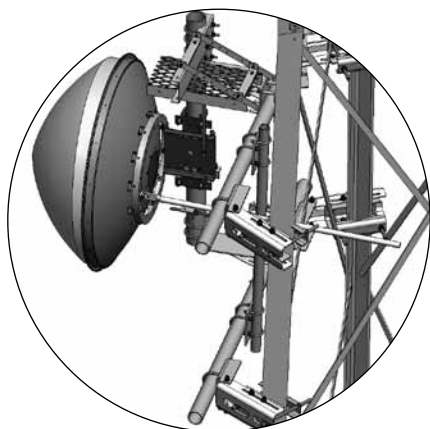


Microwave Dish Waveguide Shields

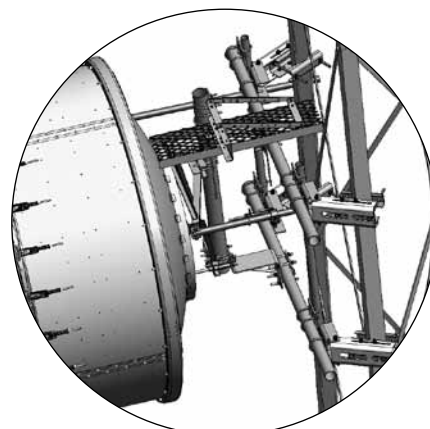
- Application:** Waveguide protection from falling debris
- Size:** Three versions (see table)
- Design:** Support and protection for waveguide
- Feature:** Protects waveguide from falling debris
- Mounts to:** 4-1/2" (114.3 mm) OD pipe
- Material:** Hot dip galvanized steel
- Includes:** Ice shield and all attachment hardware
- Order Separately:** Pipe mount

Part Number	Description	Weight, lb (kg)
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Microwave Dish Waveguide Shields		
MD-IS2	Microwave Dish Waveguide Shield, 12" x 24" (304.8 mm x 610 mm) Shield	42 (19.1)
MD-IS4	Microwave Dish Waveguide Shield, 12" x 48" (304.8 mm x 1.2 m) Shield	61 (27.7)
MD-WS	Microwave Dish Waveguide Shield, 24" (610 mm) Angle	12 (5.4)



• MD-IS2



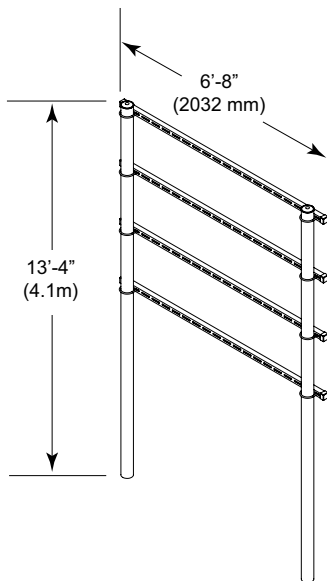
• MD-IS4

Site Related Components

Components

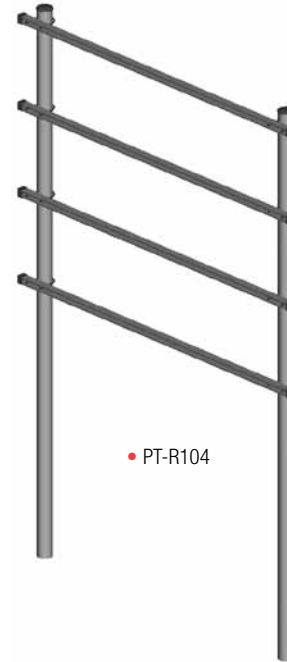
Power Telco Racks

Application: Rack for mounting telco racks
Size: 13'-4" (4.1 m) Posts
Design: Two posts, unistrut
Feature: Burial posts
Material: Hot dip galvanized steel
Includes: Posts, horizontal struts, mounting hardware



Part Number	Description	Weight, lb (kg)
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Telco Racks With 13'-4" (4.1 m) Burial Posts and 80" (2 m) Horizontal Rails		
PT-R102	Power Telco Rack, Two 80" Rungs, 13'-4" Burial Posts	135 (62.0)
PT-R103	Power Telco Rack, Three 80" Rungs, 13'-4" Burial Posts	150 (68.0)
PT-R104	Power Telco Rack, Four 80" Rungs, 13'-4" Burial Posts	165 (75.0)



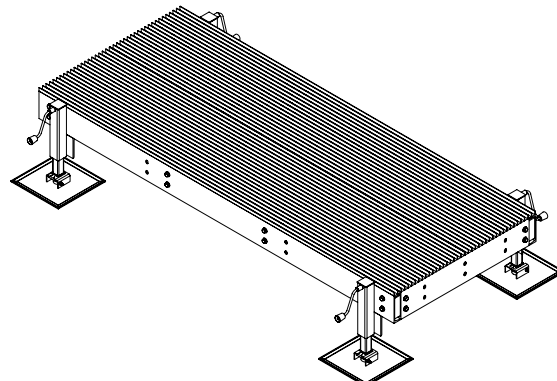
4" Channel Equipment Platforms

Application: Base or elevated platform for cabinets
Design: Platforms with or without jackable legs
Feature: Easy-to-assemble, bolt together design
Material: Hot dip galvanized steel
Includes: Frame, grating, hardware
Order Separately: Adjustable legs for base platforms

Part Number	Description
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Equipment Platform Bases, 4" (101.6 mm) Channel, Light Duty, for Up to 3500 lb (1587 kg) Loading

EQ-P4C0404-B	4' x 4' (1.2 m x 1.2 m) Base Only
EQ-P4C0404-AL	4' x 4' (1.2 m x 1.2 m) Base With Four Adjustable Legs
EQ-P4C0406-B	4' x 6' (1.2 m x 1.8 m) Base Only
EQ-P4C0406-AL	4' x 6' (1.2 m x 1.8 m) Base With Four Adjustable Legs
EQ-P4C0408-B	4' x 8' (1.2 m x 2.4 m) Base Only
EQ-P4C0408-AL	4' x 8' (1.2 m x 2.4 m) Base With Four Adjustable Legs





Pipe Dimensions

Pipe Size	OD (Inches)	OD (mm)
1/2"	0.84	21.34
3/4"	1.05	26.67
1"	1.32	33.40
1-1/4"	1.66	42.16
1-1/2"	1.90	48.26
2"	2.38	60.33
2-1/2"	2.88	73.03
3"	3.50	88.90
3-1/2"	4.00	101.60
4"	4.50	114.30
5"	5.56	141.30
6"	6.63	168.30
8"	8.63	219.08



Fraction/Decimal/Metric Chart

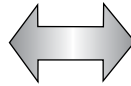
Inches Fraction	Inches Decimal	Millimeters
1/16	0.0625	1.6
1/8	0.1250	3.2
3/16	0.1875	4.8
1/4	0.2500	6.4
5/16	0.3125	7.9
3/8	0.3750	9.5
7/16	0.4375	11.1
1/2	0.5000	12.7
9/16	0.5625	14.3
5/8	0.6250	15.9
11/16	0.6875	17.5
3/4	0.7500	19.1
13/16	0.8125	20.6
7/8	0.8750	22.2
15/16	0.9375	23.8
1	1.0000	25.4

NOTE: Not applicable to coaxial cables



Steel Thicknesses

Gage	Thickness (Inches)	Thickness (mm)
10	0.1345	3.416
11	0.1196	3.038
12	0.1046	2.657
13	0.0897	2.278
14	0.0747	1.897
15	0.0673	1.709
16	0.0598	1.519



Conversion Factors

Convert From	Convert To	Multiply By
Length		
foot (ft)	meter (m)	0.3048
inch (in)	meter (m)	0.0254
inch (in)	centimeter (cm)	2.5400
meter (m)	foot (ft)	3.2808
meter (m)	inch (in)	39.3700
centimeter (cm)	inch (in)	0.3937
millimeter (mm)	inch (in)	0.0393
Area		
square foot (ft ²)	square meter (m ²)	0.0929
square meter (m ²)	square foot (ft ²)	10.7639
Circle		
radius	diameter	2.0000
diameter	radius	0.5000
diameter	circumference	3.1416
radius	circumference	6.2832
Weight		
pound (lb)	kilogram (kg)	0.4536
kilogram (kg)	pound (lb)	2.2046



AWG Wire Sizes

AWG Size	Stranded, OD (overall)		Solid, OD	
	Inch	Millimeter	Inch	Millimeter
4/0	0.528	13.41	0.460	11.68
2/0	0.419	10.64	0.409	10.39
1/0	0.373	9.47	0.324	8.23
2	0.292	7.42	0.257	6.53
4	0.232	5.88	0.204	5.18
6	0.184	4.66	0.162	4.11
8	0.146	3.70	0.128	3.25
10	0.116	2.94	0.102	2.59



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