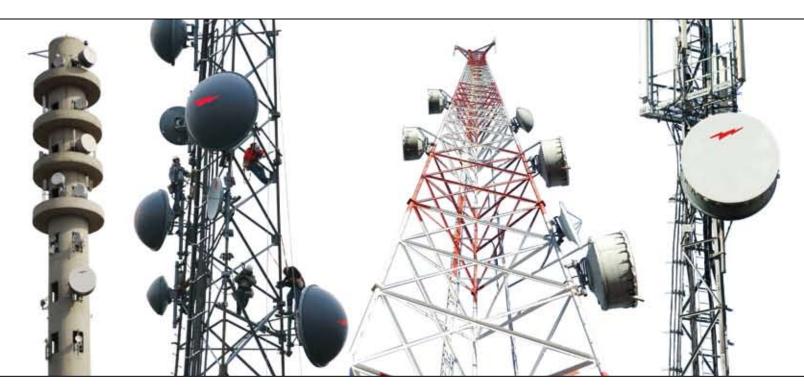


Steel Products



Microwave Antenna Application Guide Structural Support Products





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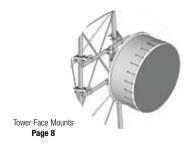










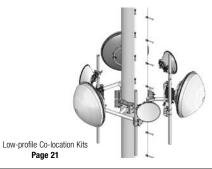


Universal Pipe Mount Kits Page 2

Monopole Mounts







Roof-top Mounts

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Wall Mounts Page 28



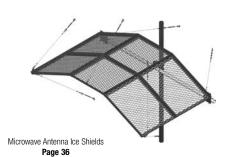
Waveguide



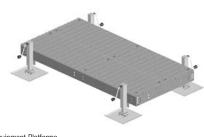




Site Related Components







Equipment Platforms Page 38





- Tower Leg Mounting Solutions
- Tower Face 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

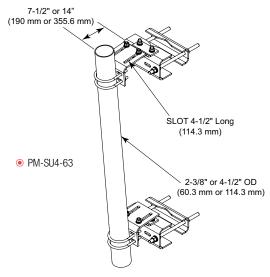
Includes: Universal saddle mount, sliding pipe mount

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





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

otana on, 2 5/0 (00.5 min) Antonia Mounting ripe				
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, K	it of 2	90 (4	0.9)
PM-SU4L-63	4-1/2	2" OD x 63" (11	4.3 mm 0D x	(1.6 m)	145	(65.8)
PM-SU4L-96	4-1/2	2" OD x 96" (11	4.3 mm 0D 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

	- (gpc	
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)





Universal 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: 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

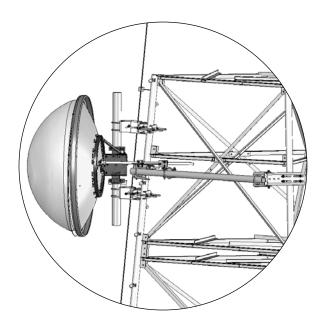
Includes: Universal saddle mount, taper adjustment

brackets, with or without pipe

Order Separately: Pipes for base kits

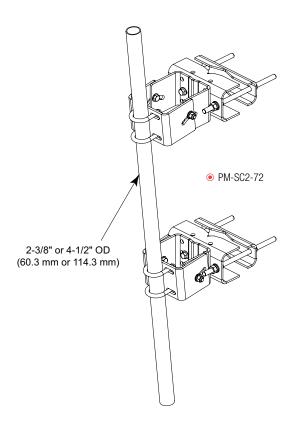
Wind Rating*: 120 mph (BWS) per latest revision of TIA/EIA-222 at 150' AGL

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



•	Kit With Open Face Taper Adjustment, for Round or " (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

•	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



Microwave Dish Support

Application: Lattice towers

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

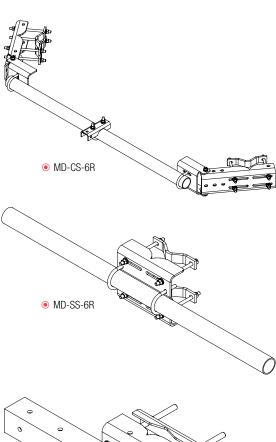
Feature: Tower face strut support kits

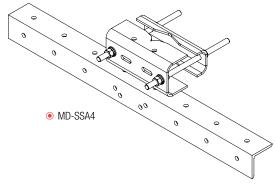
Mounts to: Straight or tapered legs up to 16" (406.4 mm)

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 $8^{\prime\prime}$ (203.2 mm) to $16^{\prime\prime}$ (406.4 mm) Round, or $8^{\prime\prime}$ (203.2 mm) to $16^{\prime\prime}$ (406.4 mm) 60° Angle Legs or $6^{\prime\prime}$ (152.4 mm) to $12^{\prime\prime}$ (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

JU Allyle Legs up to t	(203.2 11111), 01 0	(132.4 11111) 00	Allyle 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

UU	Allyle Legs of 0	(132.4 11111) to 12	(304.0 11111) 30	Aligie Lego
MD	L-SS-6R	6' (1.8 m) Pipe		
MD	L-SS-8R	8' (2.4 m) Pipe		

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

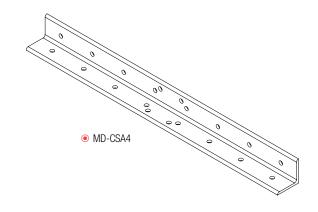
-	raigio Logo ap to o	(=00:= :::::); 0: 0	(102.11)
MD	-SSA4	4' (1.2 m) Angle	
MD	-SSA6	6' (1.8 m) Angle	

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

OU Aligio Logo oi o	(102.7 11111) to 12	(00 Tio IIIII) 50 Aligio Logo	
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 Strut Support

Application: Lattice towers

Size: 21" (533.4 mm) channel

Design: Universal support bracket

Feature: Universal strut attachment

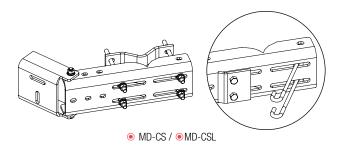
Mounts to: Straight or tapered legs up to 16" (406.4 mm)

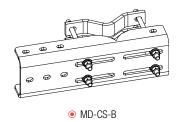
OD, 16" (406.4 mm) angle 60°, or 12" (304.8

mm) angle 90°

Material: Hot dip galvanized steel

Includes: Support bracket, attachment hardware
Order Separately: Microwave strut pipe or angle, u-bolt





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	CSL Universal, for Mounting up to 4-1/2" (114.3 mm)	

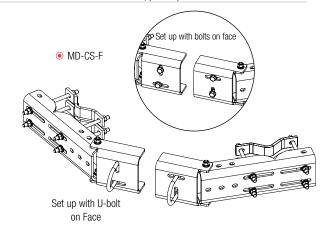
MD-CSL
Universal, for Mounting up to 4-1/2" (114.3 mm)
Face Pipes on Round or Angle Legs (Kit of 1)

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)

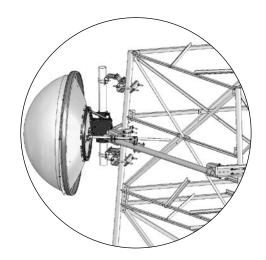
Microwave Dish Strut Support Bracket, for 8" (203.2 mm) to 16" (406.4 mm) Round, or 8" (203.2 mm), to 16" (406.4 mm) 60° Angle Legs or 6" (152.4 mm) to 12" (304.8 mm) 90° Angle Legs

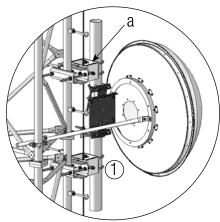
MDL-CS	Universal, for Mounting up to 3-1/2" (88.9 mm)
	Face Pipes on Round or Angle Legs (Kit of 1)
MDL-CSL	Universal, for Mounting up to 4-1/2" (114.3 mm)
	Face Pipes on Round or Angle Legs (Kit of 1)
MDL-CS-F	Face Mounted, for Mounting up to 3-1/2" (88.9 mm)
	Face Pipes on Round or Angle Legs (Kit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



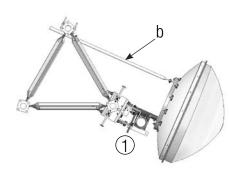


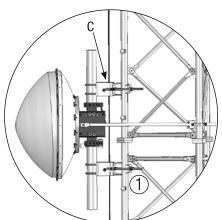






- a. Open face allows safety climb to pass through
- b. Strut returns back to tower at recommended angle
- c. Taper adjustment allows for vertical mounting solution

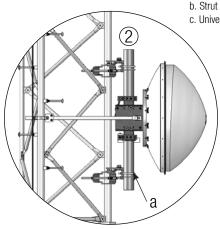


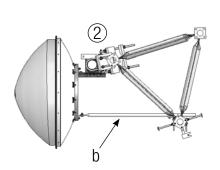


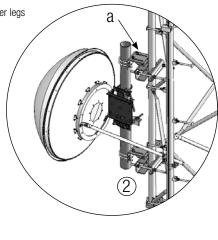
Key	Part Number	Description	Page #
1	PM-SC4-63	Universal Pipe Mount Kit With Open Face	3
2	PM-SU4-63	Universal Pipe Mount Kit	2

^{*} Shown with Andrew PX2F series antennas and supports

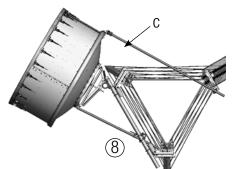
- a. Sliding taper brackets allow for 7° of non-incremental adjustment b. Strut returns straight back to tower c. Universal saddle mounts up to 8" (203.2 mm) dia. straight or taper legs



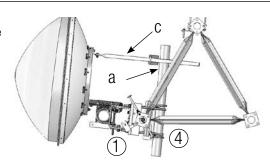


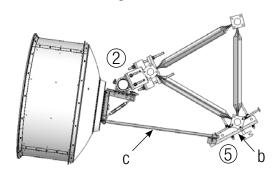


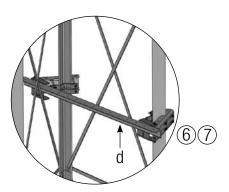




- a. MD-SS-6R Provides strut support for offset single leg attachments
- b. MD-CS-B Universal strut support for round or angle legs
- c. Strut returns straight back to tower at recommended angle
- d. MD-CS-F Will allow MD-CSA6 to attach to tower face with universal attachment brackets

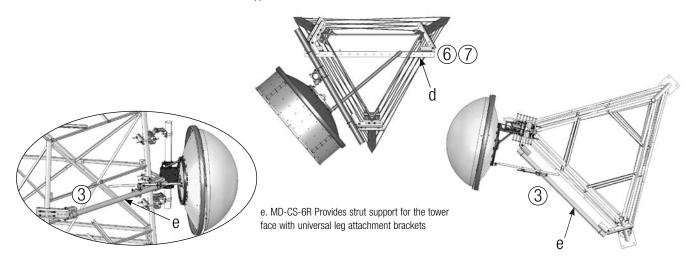






Key	Part Number	Description	Page #
1	PM-SC4-63	Universal Pipe Mount Kit With Open Face	3
2	PM-SU4-63	Universal Pipe Mount Kit	2
3	MD-CS-6R	Tower Face Mounted Dish Strut Support Kit	4
4	MD-SS-6R	Tower Leg Mounted Dish Strut Support Kit	4
5	MD-CS-B	Microwave Dish Strut Support Bracket	5
6	MD-CS-F	Tower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

^{*} Shown with Andrew VHLP and HPX series antennas and supports



Tower Face Mounts

Application: Lattice towers

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

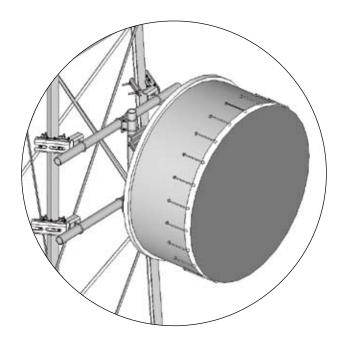
mm) angle 90°

Material: Hot dip galvanized steel

Includes: Universal saddle mounts, slider brackets, pipe,

crossover plates, hardware

Order Separately: Strut support kits, stand-off brackets



rai i Nuilibei – Description	Part	Number	Description
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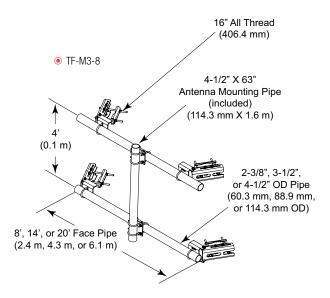
Tower Face Mour	t With Dual Face Supports. Includes 4-1/2" OD x 63"
(114.3 mm 0D x	I.6 m) Antenna Pipe up to 8" (203.2 mm) Legs
TF-M2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-M2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-M2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-M3-8	8' x 3-1/2" OD (2.4 m x 88.9 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 0D x 1.6 m) Antenna Pipe, for up to 16" (406.4 mm) Legs

(117.0 HIIII 00 X 1	io iii) Airicillia i ipc, ioi up io io (400.4 iiiii) Logo
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)

	Tower Face Mount							
Microwave Antenna Diameter	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)	Х	Х	Х	Х	Х	Х	Х	Х
4' (1.2 m)	Х	Х	Χ	Х	Х	Х	Х	Х
6' (1.8 m)	Х	-	-	Х	Х	Х	Х	Х
8' (2.4 m)	-	-	-	Х	Х	Х	Х	Х
10' (3.1 m)	-	-	-	Х	Х	Х	Х	Х
12' (3.7 m)	-	-	-	Х	Х	-	Х	Х
15' (4.6 m)	-	-	-	-	-	-	Х	-

^{*} TF-M and TFL-M Series typical applications







Face Mounts With Single Strut or Dual Strut Support

Application: Lattice towers

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

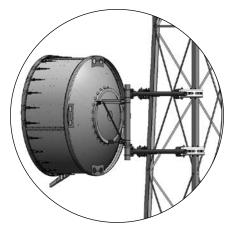
mm) angle 90°

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 \times 63" (114.3 mm OD \times 1.6 m) Antenna Pipe With One 2-3/8" \times 63" (60.3 mm \times 1.6 m) Strut Support up to 8" (203.2 mm) Legs

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)

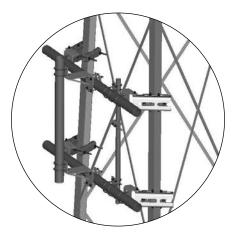
Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm 0D x 1.6 m) Antenna Pipe With Two 2-3/8" x 63" (103.3 mm v 1.6 m) Struct Support v 1.6 m) (100.3 mm v 1.6 m) Struct Support v 1.6 m) (100.3 mm v 1.6 m) Struct Support v 1.6 m) (100.3 mm v 1.6 m) Struct Support v 1.6 m) (100.3 mm v 1.6 m) (100.3 mm v 1.6 m) (100.3 mm v 1.6 m)

(60.3 mm x 1.6 m) Str	rut 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)

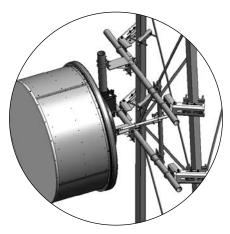
Tower Face Mount With Dual Face Supports. Includes 4-1/2" OD x 63" (114.3 mm 0D x 1.6 m) Antenna Pipe With Two 2-3/8" x 63" (60.3 mm x 1.6 m) Strut Support, for up to 16" (406.4 mm) Legs

(00.3 IIIII X 1.0 III)	Strut Support, for up to 10 (400.4 min) 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)	_





TF-ML4 Series



TF-ML3S Series

Part Number Description

Tower Face Mount With Dual Face Supports. Includes 4-1/2" 0D x 63" (114.3 mm 0D 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" 0D x 63" (114.3 mm 0D 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

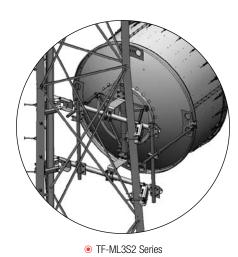
TF-ML2S-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)	
TF-ML2S-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)	
TF-ML2S-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)	
TF-ML3S-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)	
TF-ML3S-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)	
TF-ML3S-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)	
TF-ML4S-8	8' 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 0D 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

(,=090	
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)







Tower Face Mount Strut Support Kits

Application:	Lattice towers
Size:	Three versions

Design: Pipe with crossover plates

Feature: Can be adjusted to mount anywhere on tower

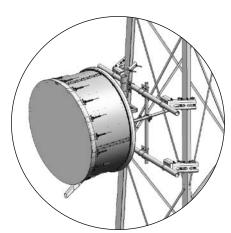
face mount

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" 0D x 63" (114.3 mm 0D 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

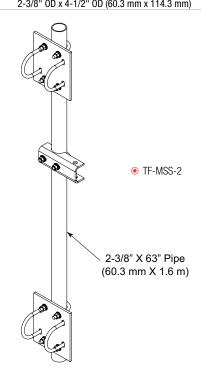
TF-ML2S2-8	8' x 2-3/8" OD (2.4 m x 60.3 mm OD)
TF-ML2S2-14	14' x 2-3/8" OD (4.3 m x 60.3 mm OD)
TF-ML2S2-20	20' x 2-3/8" OD (6.1 m x 60.3 mm OD)
TF-ML3S2-8	8' x 3-1/2" OD (2.4 m x 88.9 mm OD)
TF-ML3S2-14	14' x 3-1/2" OD (4.3 m x 88.9 mm OD)
TF-ML3S2-20	20' x 3-1/2" OD (6.1 m x 88.9 mm OD)
TF-ML4S2-8	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" 0D x 63" (114.3 mm 0D 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) Leas

(TOO.T IIIIII) LOGO	
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)	
TE-MCC-4	2_3/8" 0D v /L-1/2" 0D /60 3 mm v 11/ 3 mm)	/Q (21 Q)	



Tower Face Mount Stand-off Bracket

Application: Lattice towers

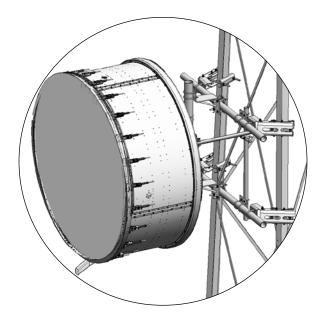
Size: 4-1/2" (114.3 mm) OD

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

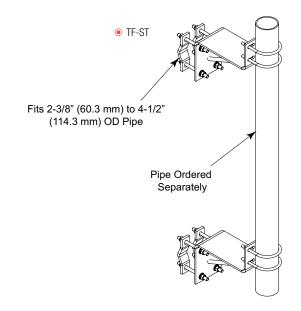
Includes: Stand-off, attachment hardware

Order Separately: Tower face mount kit





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



Part Number	Description	Weight, lb (kg)
Plain End Pipe	S	
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)





Microwave Dish Waveguide Shields

Application: Lattice towers

Size: Three versions (see table)

Design: Support and protection for waveguide
Feature: Protects waveguide from falling debris

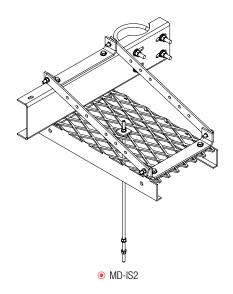
Mounts to: 4-1/2" (114.3 mm) OD pipe

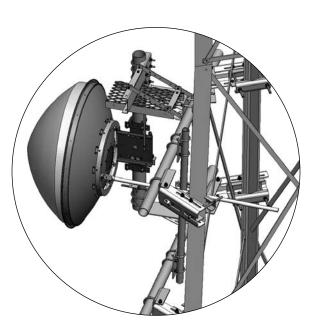
Material: Hot dip galvanized steel

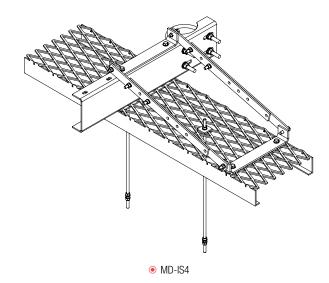
Includes: Ice shield and all attachment hardware

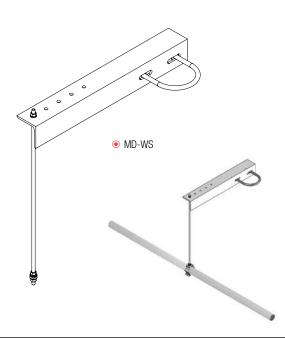
Order Separately: Pipe mount

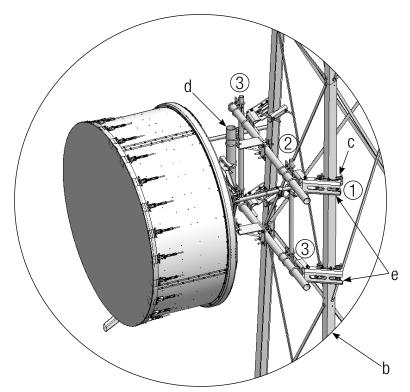
Part Number	Description	Weight, lb (kg)
Microwave Dis	sh Waveguide Shields	
MD-IS2	Microwave Dish Waveguide Shield, 12" x 24" Shield	42 (19.1)
MD-IS4	Microwave Dish Waveguide Shield, 12" x 48" Shield	61 (27.7)
MD-WS	Microwave Dish Waveguide Shield, 24" Angle	12 (5.4)









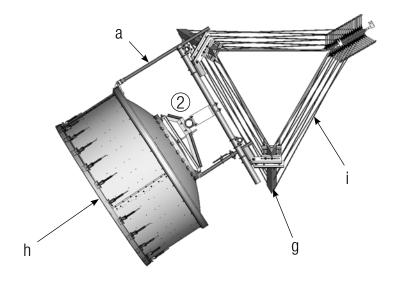


- a. Strut returns back to tower at recommended angle
- b. Tapered leg
- c. Channel supports adjust for inclination of tower leg taper
- d. True vertical antenna support
- e. Dual face support allows four point connection to structure
- f. Optional TF-ST allows greater work space and elliptical path

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)	8
2	TF-ST	Tower Face Mount Stand-off Bracket	12
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)	11

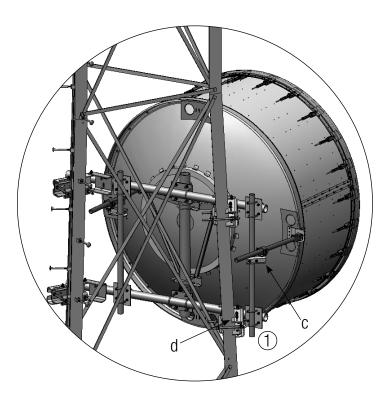
^{*} Shown with Andrew HSX series antennas and supports

- 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





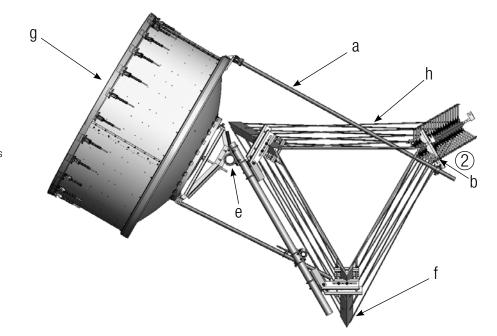




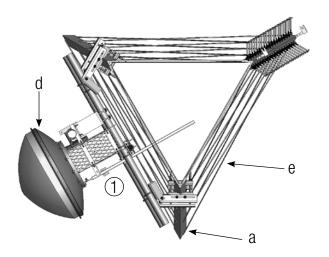
- a. Strut returns back to tower at recommended angle
- b. Optional strut attachment back to tower leg at recommended angle
- c. Strut attachment allows for vertical adjustment
- d. Universal saddle mounts up to up to 16" (406.4 mm) OD straight or tapered legs
- e. Mount can be positioned along horizontal 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	9
2	MD-CS-B	Microwave Dish Strut Support Bracket	5

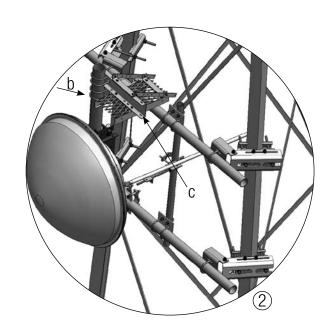
^{*} Shown with Andrew HP series antennas and supports



- 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

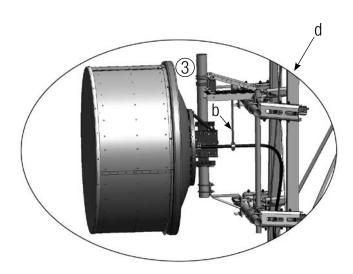


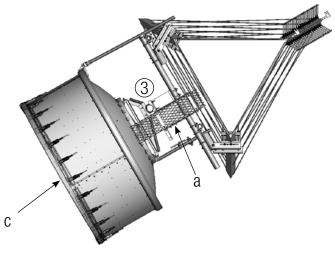
- a. 6" (152.4 mm) 60° Tapered tower leg
- b. Mounts to existing 4-1/2" OD (114.3 mm) vertical pipe mount
- c. Offers multiple attachment points on grating
- d. 3' (1.0 m) Dish
- e. 6' (1.8 m) Tower face



Key	Part Number	Description	Page #
1	MD-IS2	Microwave Dish Cable Ice Shield	13
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	9
3	MD-IS4	Microwave Dish Cable Ice Shield	13

^{*} 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





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



Low-profile Chain Mounts

Low-profile Chain Mounts

Application: Monopoles

Size: 2-3/8" (60.3 mm) OD pipe mounts

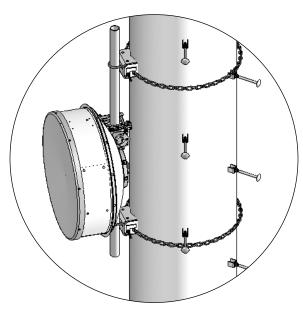
Design: Single antenna chain mounts

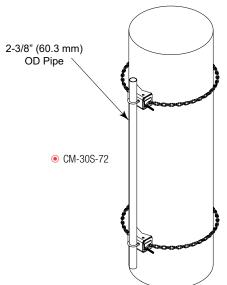
Feature: Universal, low-profile mount

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)
i ai t italiibu	DUSUIPHUI	WCIGILL ID (Kg)

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) 0D,	26.76 (12.1)
	Pipe Ordered Separately	
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) Pine	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) 0D, Pipe Ordered Separately 70 (31.8) CML-30S-72 One 2-3/8" 0D x 72" (60.3 mm 0D x 1.8 m) 90 (40.8)

Pipe Ordered Separately

CML-30S-72 One 2-3/8" OD x 72" (60.3 mm OD x 1.8 m) 90 (40.8)
Pipe

CML-30S-96 One 2-3/8" OD x 96" (60.3 mm OD x 2.4 m) 105.76 (48.0)
Pipe

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) 0D	38.78 (17.6)	
	Pipe Ordered Separately		
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,	80 (36.3)
	Pipe Ordered Separately	
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 6' (1.8 m) microwave antenna per sector





Light Duty Chain Mounts

Light Duty Chain Mounts

Application: 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



Part Number Description

Wt. lb (kg)

Light Duty Chain Mount Kits, 8" to 30" (203.2 mm to 711.2 mm) 0D, 25" to 94.2" (635 mm to 2393 mm) Circumference, 8' (2.4 m) Chain

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

Pipe Mount

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 CML-L30-63 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) 130 (59.0)

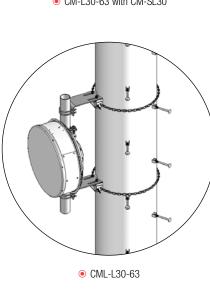
Pipe Mount

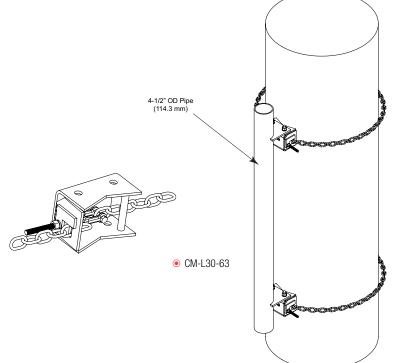
Light Duty Chain Mount Kits, 8" to 60" (203.2 mm to 1524 mm) OD, 25" to 188" (635 mm to 4785 mm) Circumference, 16' (4.9 m) Chain

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)	102.64 (46.6)
	Pine Mount	

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)	140 (63.5)
	Pine Mount	





Heavy Duty Chain Mounts

Heavy Duty Chain Mounts

Application: Monopoles

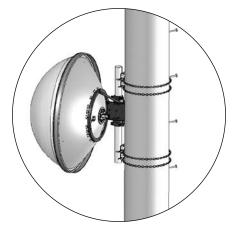
Size: 4-1/2" (114.3 mm) OD pipe mounts

Single antenna mount Design: 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



Monopole Stiff Arm Mounts

Application: 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



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

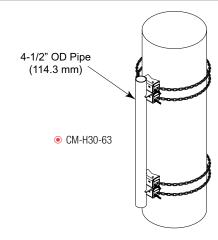
CM-H30-B Base Kit, Pipe Mount Ordered Separately 52.12 (23.6) CM-H30-63 4-1/2" OD x 63" (114.3 mm OD x 1.6 m) 116.62 (52.9)

Pipe Mount

Heavy Duty Chain Mount Kits, 8" to 60" (203.2 mm to 1524 mm) 0D, 25" to 188" (635 mm to 4785 mm) Circumference, 16' (4.9 m) Chain

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

Pipe Mount



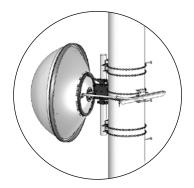
Part Number Description Weight, lb (kg)

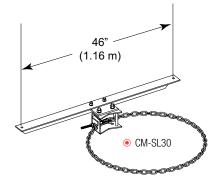
Monopole Stiff Arm Mount Kits, 8" to 30" (203.2 mm to 711.2 mm) OD,

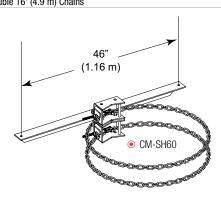
25" to 94.2" (635 mm to 2393 mm) Circumference CM-SL30 Light Duty Stiff Arm Mount, 37.0 (16.8) Single 8' (2.4 m) Chain CM-SH30 Heavy Duty Stiff Arm Mount, 50.0 (22.7) Double 8' (2.4 m) Chains

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











Microwave Components

Low-profile Adjustable Co-location Kit

Application: Monopoles

Size: 57" (1.4 m) face with 48" (1.2 m) separation

Design: Universal double antenna mount

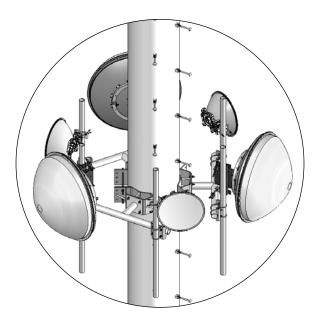
Feature: Down tilt capabilities

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

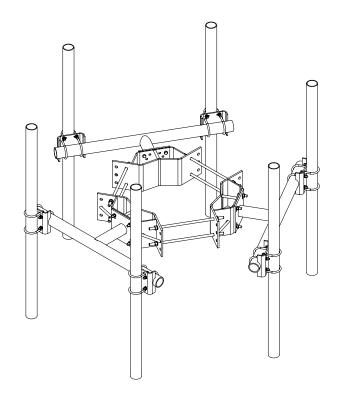
Part Number	Description	Weight, lb (kg
Universal Monopo	le Co-location Kit, 12" to 50" (304.8 mm to	1.27 m)
OD Pole, Without P	Pipe Mounts	
MC-DPMM-B	Pipe Mounts Ordered Separately	335 (152.0)
	<u> </u>	
Universal Monopo	le Co-location Kit, 12" to 50" (304.8 mm to 8" (60.3 mm) OD Pipe Mounts	, ,
Universal Monopo OD Pole, With 2-3/	le Co-location Kit, 12" to 50" (304.8 mm to	, ,
Universal Monopo	le Co-location Kit, 12" to 50" (304.8 mm to 8" (60.3 mm) OD Pipe Mounts	1.27 m)
Universal Monopo OD Pole, With 2-3/ MC-DPM2M-6-B	le Co-location Kit, 12" to 50" (304.8 mm to 8" (60.3 mm) OD Pipe Mounts Pipes Ordered Separately	1.27 m) 545 (247.2)

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

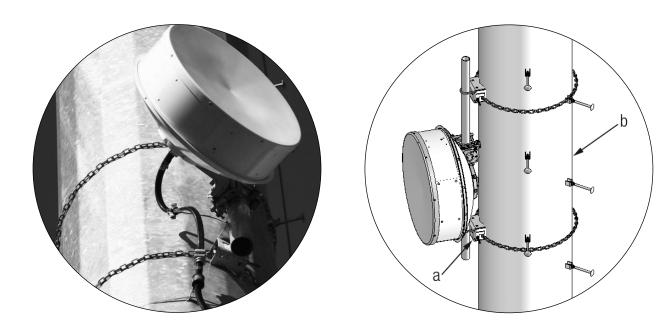
MC-DPM3M-6-B	Pipes Ordered Separately	555 (251.7)
MC-DPM3M-6-72	Six 2-7/8" OD x 72" (73 mm OD x 1.8 m)	765 (347.0)
MC-DPM3M-6-96	Six 2-7/8" OD x 96" (73 mm OD x 2.4 m)	835 (378.8)
MC-DPM3M-6-126	Six 2-7/8" OD x 126" (73 mm OD x 3.2 m)	925 (419.6)

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)



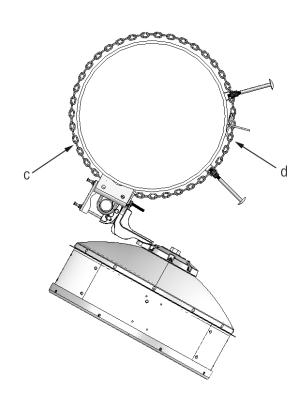


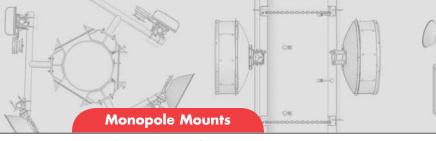


Key	Part Number	Description	Page #
1	CM-30S-72	Low-profile Single Chain Mount Kit	18

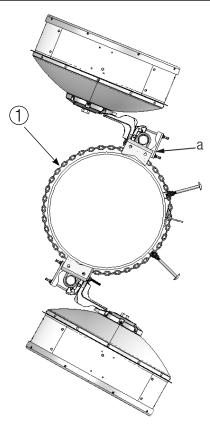
- * Shown with VHLP Series Antennas

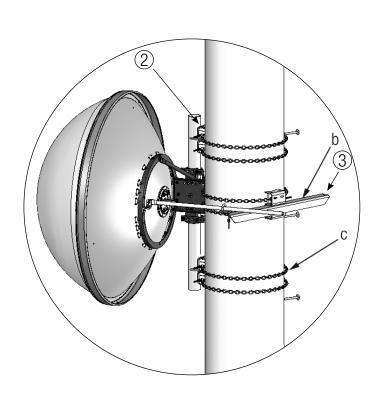
 - a. Single point locking adjustment
 b. Mounts to both round and polygon poles
 c. Chain support offers 360° of azimuth adjustability
 d. Low-profile clearance allows for unobstructed climbing











Key	Part Number	Description	Page #
1	CM-30D-72	Low-profile Double Chain Mount Kit	18
2	CM-H30-63	Heavy Duty Chain Mount Kit	20
3	CM-SH30	Monopole Stiff Arm Mount Kit	20

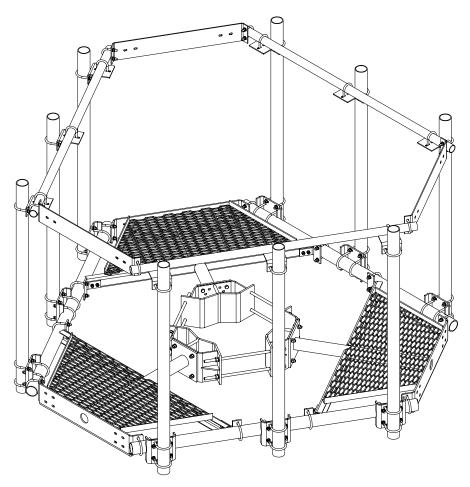
* Shown with VHLP and PXF2 Series Antennas

- 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





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 Frames

5' 1-1/4" (1556.3 mm)

Universal Tripod Mounts Part Number Description Weight, lb (kg) Universal Tripod Mount, 2-7/8" or 3-1/2" (73 mm or 88.9 mm) OD Application: Roof-top Base Only for 2-7/8" (73 mm) or TP-G300-B 114.3 (51.8) Size: 2-7/8" (73 mm), 3-1/2" 3-1/2" (88.9 mm) OD, Pipe Ordered Separately (88.9 mm, or 4-1/2" (114.3 mm) OD 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) Design: Heavy duty tripod mount TP-G300-126 2-7/8" OD x 126" (73 mm OD x 3.2 m) 170 (77.1) Feature: Interchangeable base unit 3-1/2" OD x 72" (88.9 mm OD x 1.8 m) 150 (68.0) TP-G312-72 Material: Hot dip galvanized steel 3-1/2" OD x 96" (88.9 mm OD x 2.4 m) TP-G312-96 170 (77.1) TP-G312-126 3-1/2" OD x 126" (88.9 mm OD x 3.2 m) 190 (86.2) Mount, with or without pipe Includes: **Order Separately:** Roof sled and pipe Universal Tripod Mount, 4-1/2" (114.3 mm) OD TP-G412-B Base Only for 4-1/2" (114.3 mm) OD, 173.4 (78.7) Pipe Ordered Separately 1-1/8" TP-G412-72 4-1/2" OD x 72" (114.3 mm OD x 1.8 m) 238.2 (108.0) (28.6 mm) 259.8 (117.8) TP-G412-96 4-1/2" OD x 96" (114.3 mm OD x 2.4 m) 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 35-3/8 (898.5 mm) 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 17-5/8" (449.2 mm) TP-G300-96

Non-penetrating Roof Ballast Sled for Tripods Part Number Description Weight, lb (kg) Non-penetrating Roof Ballast Sled for Tripods Application: Roof-top 171.7 (77.9) MT-416 Non-penetrating Roof Sled, Size: 87" (2.2 m) faces Tripod Mount Ordered Separately MT-F1637 Converts tripods to non-penetrating Rubber Mat, 1/2" x 18" x 48" 16.2 (7.3) Design: (12.7 mm x 0.5 m x 1.2 m), Feature: Three ballast trays Six Mats Required for Ballast Tray Hot dip galvanized steel Material: 18" Includes: Sled only (457.2 mm) 84-3/8" **Order Separately:** Tripod and rubber mats (2143 mm) TP-G412-72 with MT-416 42" (1067 mm)



ANDREW® A CommScope Company

Roof Frames

Roof-top Mon	nopole Tripods	Part Number	Description	Weight, lb (kg)
Application:	Roof-top	Monopole Trip	od Assemblies	
Design:	Spliced center pole with angle kicker legs	RT-MPT-3	Roof-top Monopole Tripod Assembly, 3 Meter (9'-9") Mast	380 (172.4)
Feature:	Splice vertical post	RT-MPT-4	Roof-top Monopole Tripod Assembly, 4 Meter (13'-1") Mast	405 (183.7)
Mounts to:	Roof-top	RT-MPT-5	Roof-top Monopole Tripod Assembly,	470 (213.2)
Material:	Hot dip galvanized steel	RT-MPT-6	5 Meter (16'-5") Mast Roof-top Monopole Tripod Assembly,	505 (229.1)
Includes:	Center post, kicker angles, hardware		6 Meter (19'-8") Mast	
	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,	
		DT MDT D2	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),	
		RT-MPT-BT	With Step Pegs Roof Top Monopole Tripod Kit for 157" (4.0 m	\
		NI-WIFT-DI	to 276-1/2" (7.0 m) Tall Monopole)
		RT-MPT-BT-3	Roof Top Monopole Tripod Kit for 78-1/2" (2.0 Tall Monopole) m)
		RT-MPT-C	Roof Top Monopole Section Cover	
		LR-1M	Lightning Rod, 39-1/2" (1.0 m)	
		Custom Assemb	olies Available	
		LR-1M	(* * * * * * * * * * * * * * * * * * *	
li.		RT	-MPT-C	
● RT-N	MPT-5			
121	\\\			
		<u>* </u>		
4				
]	● RT-MPT-B2	
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		4		



Mounting Components

Stand-off Wall Mount

Application: Roof-top

Size: 36" (914.4 mm) stand-off

Design: Welded stand-off mount

Feature: Heavy duty for microwave antennas

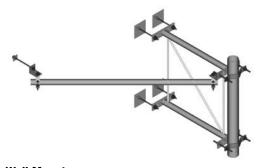
Mounts to: Walls

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



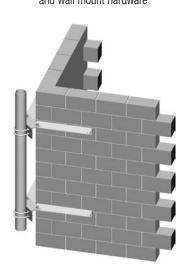
Corner Wall Mounts

Application: Roof-top

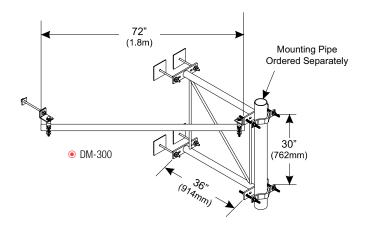
Design: V-shaped corner mount
Feature: Adjustable clamp spacing

Mounts to: Wall corners

Material: Hot dip galvanized steel
Includes: Two brackets, pipe mount, and wall mount hardware



Part Number Description Weight, lb (kg) 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



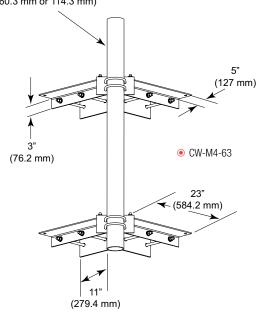
Part Number Description Weight, lb (kg)

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)







Mounting Components

Adjustable Wall Mounts

Application: Roof-top

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

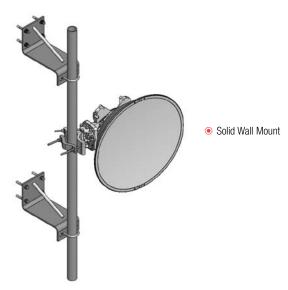
Mounts to: Versions for hollow or solid walls

Material: Hot dip galvanized steel

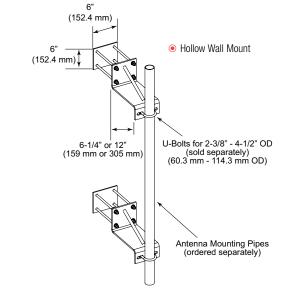
Includes: Two wall brackets and backing plates or anchors

Order Separately: U-bolts and 2-3/8" through 4-1/2" OD

(60.3 mm through 114.3 mm) pipe



Description **Part Number** Weight, lb (kg) Adjustable Wall Mounts, 6" (152.4 mm) Stand-off MT-221 For Hollow Walls, Includes Backing Plates, 68.6 (31.1) Kit of 2 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, 75.3 (34.2) Kit of 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)



Non-penetrating Roof-top Peak Frames

Application: Roof-top

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)

Non-penetrating Roof-top Peak Frames

RT-PM-B Non-penetrating Roof-top Peak Frame, Base Kit. 105 (47.6)

2-3/8" to 4-1/2" OD (60.3 mm x 114.3 mm OD) Pipe Ordered Separately

Pipe Ordered Separately



Customs







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

Coaxial Support Components

Star Support Brackets

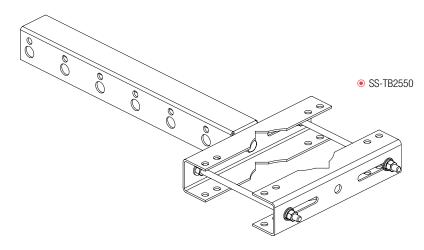
Application: Lattice towers

Size: 3/4" (19.1 mm) and 7/16" (11.1 mm) holes

Design:Bolt together stand-off mountFeature:Six or twelve hole solutionMounts to:Round and angle membersMaterial:Hot dip galvanized steel

Includes: Bracket

Part Number	Description	Weight, lb (kg)
Star Support T	ee Bracket	
SS-TB2550	1-1/2" to 5-9/16" OD (38.1 mm to	8 (3.6)
	141.3 mm OD) Round Members and 2-1/2"	
	to 5" (50.8 mm to 127 mm) Angle Members	
SS-TB6080	4" to 10-3/4" OD (101.6 mm to	10 (4.5)
	273.1 mm OD) Round Members and 4"	
	to 8" (101.6 mm to 203.2 mm) Angle Members	



Universal Round Member Support Bracket

Application: 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

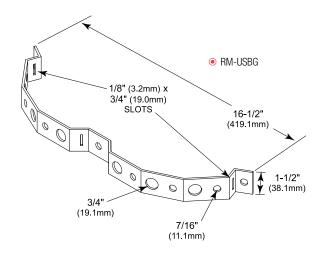
Mounts to: Round members

Material: Hot dip galvanized steel

Includes: Bracket
Order Separately: Banding



Part Number	Description	Weight, lb (kg)
Universal Rou	nd Member Support Bracket	
RM-USBG	Universal Round Member Support Bracket for 6 Runs, Kit of 10	9.0 (4.1)





Weight, lb (kg)

325.0 (147.4)

308.0 (139.7)

Waveguide

Waveguide Bridge Kits

12" or 24" Two-post Waveguide Bridge Kits

Application: Waveguide bridge

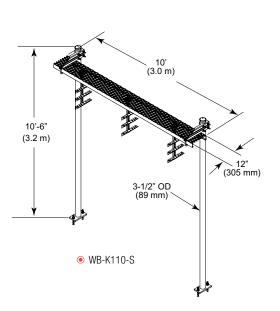
Design: Two-post, 10' (3.0 m) safety grating **Feature:** Complete kit for coaxial cable support

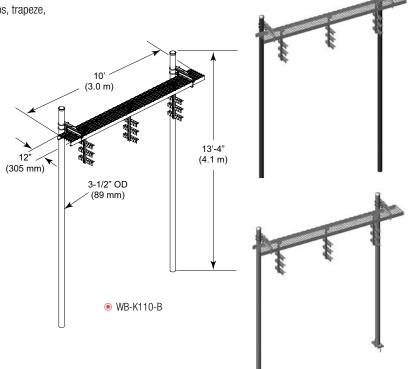
Material: Hot dip galvanized steel

Includes: Channel, posts, support brackets, caps, trapeze,

and hardware

Order Separately: Additional accessories





Description

12" (0.3 m) Wide Two-post Safety Grated Waveguide Bridge Kit

Two 13'-4" (4.1 m) Direct Burial Posts

Two 10'-6" (3.2 m) Base Shoe Posts

Part Number

WB-K110-B

WB-K110-S

GPS Antenna Wall Mount

Application: Roof-top

Size: 3/4" OD x 48" (19.1 mm OD x 1.2 m)

Design: Welded mount with 6" (152.4 mm) stand-off

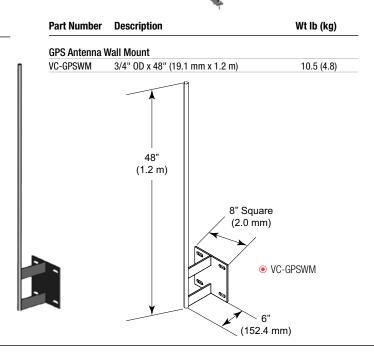
Feature: Threaded end for GPS antennas

Mounts to: Walls

Material: Hot dip galvanized steel

Includes: Mount

Order Separately: Anchoring hardware



Cable Ladder Kits

Universal Cable Ladder Kits

Application: Lattice towers

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)

10' (3 m) Universal Cable Ladder Kits

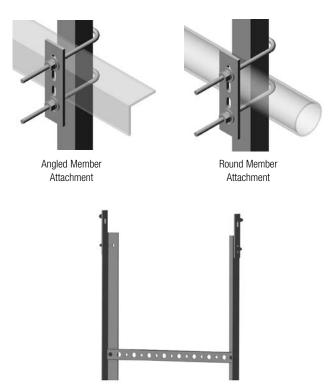
Includes Universal Hardware Kit for Round and Angle Members

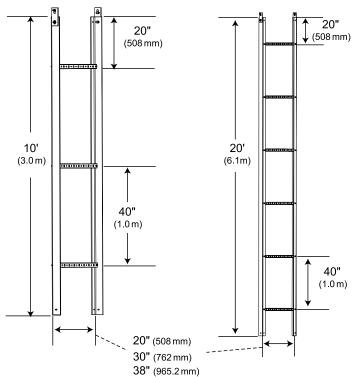
CL-0610-U	20" Wide (355.6 mm), 6-Hole Rung	57 (25.9)
CL-0910-U	30" Wide (762. mm), 9-Hole Rung	59 (27.0)
CL-1210-U	38" Wide (1 m), 12-Hole Rung	62 (28.0)

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: Lattice towers

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 steelIncludes:Plate and J-boltsOrder Separately:Cable ladder

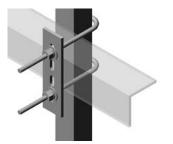
Part Number Description

Wt. lb (kg)

Universa	Cable	Ladder	Hardware	Kit

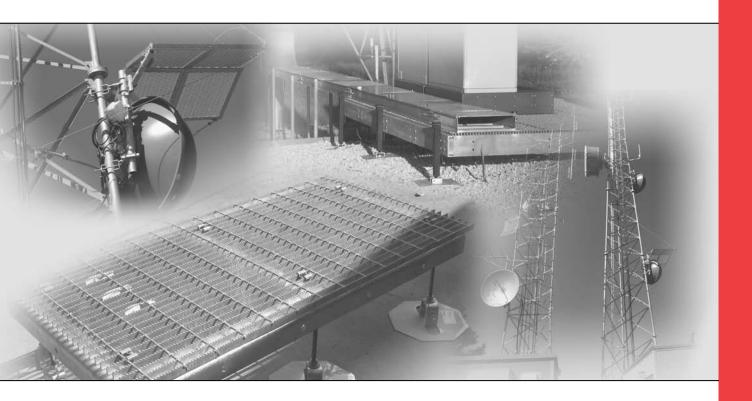
HK-CL-U 1" to 4-1/2" (25.4 mm to 114.3 mm) 4 (1.7)

Round or Angle Members









- Microwave Ice Shields
- Power Telco Rack
- Equipment Platforms

Site Related Components

Microwave Ice Shields

Microwave Antenna Ice Shield

Application: Lattice tower **Design:** Heavy duty

Feature: Bolt together, light weight panels

Mounts to: 4-1/2" (114.3 mm) OD pipe

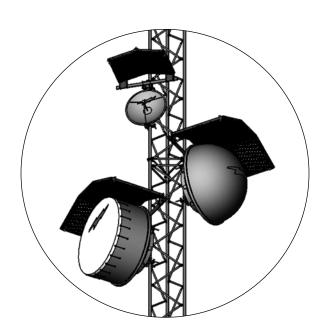
Material: Hot dip galvanized steel

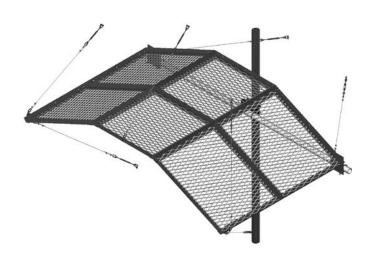
Includes: Ice shield and all attachment hardware

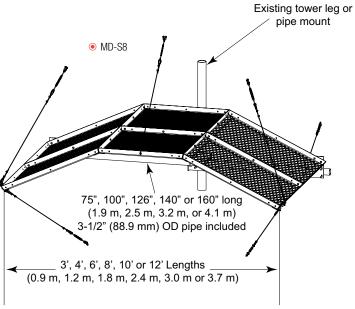
Order Separately: Pipe mount

Part Num	ber Description	Weight, lb (kg)
Microwav	re Antenna Shields	
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 Ice Shields

Square Antenna Ice Shields

Application: Lattice towers **Design:** Heavy duty

Feature: Protects antenna from falling ice

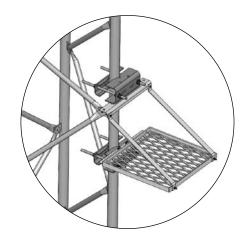
Mounts to: 4-1/2" (114.3 mm) OD pipe

Material: Hot dip galvanized steel

Includes: Ice shield, mounting hardware

Order Separately: 4-1/2" (114.3 mm) OD pipe mount

Part Num	ber Description	Weight, lb (kg)
Square Ar	ntenna 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: Lattice towers

Size: Three versions (see table)

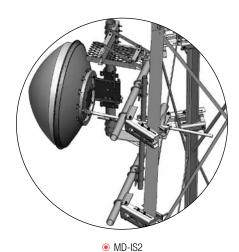
Design: Support and protection for waveguide
Feature: Protects waveguide from falling debris

Mounts to: 4-1/2" (114.3 mm) OD pipe

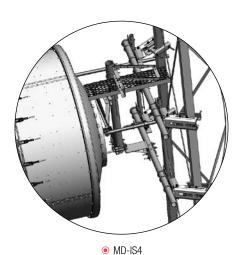
Material: Hot dip galvanized steel

Includes: Ice shield and all attachment hardware

Order Separately: Pipe mount



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



Site Related Components

Components

Power Telco Racks

Application: Site related

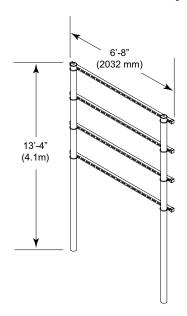
Size: 13'-4" (4.1 m) Posts

Design: Two posts, unistrut

Feature: Burial posts

Material: Hot dip galvanized steel

Includes: Posts, horizontal struts, mounting hardware



Part Number Description Weight, lb (kg)

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: Equipment support

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

cription

 for Up to 3500 lb (1587 kg) Loading

 EQ-P4C0404-B
 4' x 4' (1.2 m x 1.2 m) Base Only

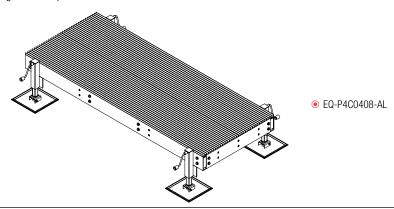
 EQ-P4C0404-AL
 4' x 4' (1.2 m x 1.2 m) Base With Four Adjustable Legs

 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

Equipment Platform Bases, 4" (101.6 mm) Channel, Light Duty,

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



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



AWG Wire Sizes

	<u> </u>			
AWG Size	Strande	d, OD (overall) Millimeter	Soli	id, OD 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



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



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') square meter (m') Circle	square meter (m²) square foot (ft²)	0.0929 10.7639
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



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